May 8, 2018

Via Electronic Mail

Steven Pearson, MD
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RE: Comments on the Draft Evidence Report: “Migraine Treatment: Effectiveness and Value”

Dear Dr. Pearson,

On behalf of Allergan plc, we are submitting this letter in response to your request for comments on the Draft Evidence Report (DER) for the review titled “Calcitonin Gene-Related Peptide (CGRP) Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine: Effectiveness and Value.” Our aim is to provide the Institute for Clinical and Economic Review (ICER) important considerations that we strongly believe should be incorporated prior to releasing the Final Evidence Report.

We appreciate ICER’s revisions in response to our previous comments. However, Allergan believes that ICER’s economic analysis for this review still contains several simplifying assumptions that are favorable to the CGRPs. While Allergan recognizes the value of innovation, we are concerned that this approach may produce misleading results for the relative cost-effectiveness of the CGRPs compared with existing migraine preventives, such as BOTOX® (onabotulinumtoxinA). Therefore, Allergan has offered several recommendations for revising assumptions in the analysis that will result in a most plausible estimate of the cost-effectiveness of the CGRPs.

Recommendation 1: The migraine severity data of the scenario analysis in Table 4.12 of the DER should be used in the base-case analysis rather than as a scenario analysis.

As noted in the Allergan letter re: comments on the model analysis plan (Recommendation 3, pages 11-12), the migraine severity data provided in Table 4.3 of the DER (page 60) do not represent proportions of migraine days that are mild, moderate and severe. Rather, they represent proportions of patients by “the severity of the pain they experience when their most severe type of headache is at its worst”[1] (see the footnote to Table 4 in the source paper). The study by Blumenfeld at al. was sponsored by Allergan and the responses are based on the survey question, “When your most severe type of headache is at its worst, how severe is the pain?” The data collected address a completely different question and therefore should not be used for the migraine severity distribution. Using these data to inform the distribution of migraine severity does not simply constitute a limitation, but rather results in an erroneous assumption and an overestimation of severity that compromises the robustness of ICER’s analysis.

In contrast, the alternate data for severity of migraine used in a scenario analysis (Table 4.12, columns “Scenario Analysis”, page 66, in the DER) represent an appropriate source of data and are consistent with published results for the proportions of migraine days at baseline that were mild, moderate, and severe in randomized controlled trials of chronic migraine patients.[2–4] We recommend that these data be used in the base case analyses for the distribution of migraine severity to ensure the credibility and robustness of the analyses conducted by ICER. These estimates would be internally consistent with the trial populations and the efficacy estimates.

Recommendation 2: Revise the definition of the failure population for chronic migraine to include patients who failed up to three preventive therapies.

The DER defines the patient population modelled in the cost-effectiveness analysis as patients that "had at least one but not more than two prior preventive treatments result in failure" (page 51). This definition is said to be based on the anticipated place in therapy.

As noted in Table D5 of the DER (page 122), the erenumab and fremanezumab trials in chronic migraine did not exclude patients who had previously failed 3 preventive medications, and the PREEMPT trials of BOTOX® placed no exclusion criteria on the number of prior preventive medications. Furthermore, the payer policies summarized in Table 2.1 of the DER (page 14) do not exclude patients who have failed more than 2 prior preventive therapies from treatment with BOTOX®. Therefore, the exclusion of patients with 3 prior failures from the chronic migraine population in the cost-effectiveness analysis is neither consistent with the patient populations of the chronic migraine trials nor with representative payer policies. Allergan recommends that ICER change the definition of the failure population in chronic migraine to include patients who failed 3 prior preventive medications.

Allergan has conducted network meta-analyses (NMAs) comparing BOTOX® to the published data for erenumab 140 mg[5] at weeks 4, 8, and 12, and at the end of the placebo-controlled period in patients who failed 1 to 3 prior preventive medications. Bayesian models were performed in WinBUGS 1.4.3.[6] Both fixed effect and random effects models were based on code from the National Institute for Health and Clinical Excellence (NICE) Decision Support Unit.[7] For each analysis, the model with the lower deviance information criterion and residual deviance was selected as the best fit. Allergan has also conducted meta-analyses of the treatment effects for BOTOX® at weeks 16 and 20. Inverse-variance weighted fixed effect and DerSimonian and Laird random effects meta-analyses were performed using CMA software.[8,9] The inputs for the analyses are provided in Table 1, and the results of the analyses are provided in Table 2. Allergan suggests incorporating the treatment effects for BOTOX® at weeks 16, 20, and 24 into ICER's model, as the ICER model provides inputs for each cycle up to month 6.

Recommendation 3: Include BOTOX® PREEMPT 24-week data in the cost-effectiveness analysis.

In the Clinical Effectiveness section of the DER, the NMA of the change from baseline in monthly migraine days in all migraine patients uses the PREEMPT results at week 24, the end of the placebo-controlled period (Table 3.1, page 26). However, the NMA of the change from baseline in monthly migraine days in patients who have failed at least one, but no more than two, prior preventives used in the cost-effectiveness analysis (Table 4.4, page 58) only uses the first half of the PREEMPT placebo-controlled period: week 4 through week 12. The PREEMPT trials show that the relative efficacy of

Table 1: Data inputs for the change from baseline of monthly migraine days† in chronic migraine patients with 1 to 3 prior failures

	PREEMPT 1[8]		PREEMPT 2[8]		Ashina et al., 2017[5]	
Time period	Placebo	BOTOX®	Placebo	BOTOX®	Placebo	Erenumab 140 mg
Week 4	-4.3 (0.47)	-5.5 (0.49)	-4.5 (0.44)	-5.7 (0.55)	-2.6 (0.41)	-5.3 (0.51)
Week 8	-6.0 (0.46)	-6.7 (0.52)	-5.3 (0.49)	-7.9 (0.56)	-2.9 (0.40)	-6.7 (0.50)
Week 12	-5.7 (0.49)	-7.2 (0.57)	-5.0 (0.55)	-7.7 (0.54)	-3.5 (0.41)	-6.8 (0.48)
Week 16	-7.4 (0.60)	-5.9 (0.52)	-8.5 (0.62)	-6.1 (0.55)	No data	No data
Week 20	-8.6 (0.57)	-6.5 (0.56)	-9.2 (0.60)	-6.1 (0.55)	No data	No data
End of trial‡	-5.8 (0.57)	-7.8 (0.58)	-6.2 (0.58)	-8.6 (0.59)	-3.5 (0.41)	-6.8 (0.48)

† Data represent least squares means and standard errors

‡ End of trial compares week 24 in PREEMPT 1 and PREEMPT 2 with week 12 in Ashina et al., 2017.

Table 2: Results of NMAs and meta-analyses of the difference from placebo in the change from baseline of monthly migraine days in chronic migraine patients with 1 to 3 prior failures

Time period	Model	BOTOX® Mean (SE)	BOTOX® 95% CI/CrI	Erenumab 140 mg Mean (SE)	Erenumab 140 mg 95% CI/CrI
Week 4	Fixed effect‡	-1.20 (0.49)	[-2.17, -0.24]	-2.68 (0.66)	[-3.97, -1.39]
Week 8	Random effects‡	-1.64 (1.91)	[-5.76, 2.47]	-3.79 (2.66)	[-9.57, 1.96]
Week 12	Fixed effect‡	-2.09 (0.54)	[-3.14, -1.03]	-3.33 (0.63)	[-4.57, -2.09]
Week 16	Fixed effect§	-1.93 (0.57)	[-3.04, -0.81]	No data	No data
Week 20	Fixed effect§	-2.59 (0.57)	[-3.71, -1.48]	No data	No data
End of trial†	Fixed effect‡	-2.20 (0.58)	[-3.35, -1.06]	-3.33 (0.63)	[-4.57, -2.09]

† End of trial compares week 24 for BOTOX® with week 12 for erenumab 140 mg.
‡ Bayesian network meta-analyses of PREEMPT 1, PREEMPT 2, and Ashina et al., 2017.
§ Meta-analyses of PREEMPT 1 and PREEMPT 2 only. $I^2 = 0$ for both models.
Abbreviations: CI, confidence interval; CrI, credible interval; NMA, network meta-analysis; SE, standard error

BOTOX® shows further improvement after receiving a second treatment.[10,11] In order to capture all the consequences of the interventions being evaluated, as guidelines recommend, this continued improvement warrants inclusion in ICER's modeling of BOTOX® efficacy. Allergan also notes that the ICER model, provided to us for review, already includes inputs for treatment effects at months 4, 5, and 6+, allowing for the inclusion of the entire PREEMPT placebo-controlled period. It is inappropriate to compare multiple treatments of the CGRPs to a single treatment of onabotulinumtoxinA, given the availability of placebo-controlled evidence from the PREEMPT trials and the model structure.

Recommendation 4: Include BOTOX® PREEMPT OLE data in the cost-effectiveness analysis.

The PREEMPT placebo-controlled trials were followed by an open label extension (OLE) that showed further decreases of migraine days associated with continued treatment with BOTOX®. While the OLE results are acknowledged in the text of the DER (page 27), they are not used in the cost-effectiveness

Table 3: Treatment effect of BOTOX® in the OLE phase of PREEMPT 1 and PREEMPT 2 (pooled) in patients with 1 to 3 prior prophylaxis medications

Time period	Change from baseline n	Change from baseline Mean (SD)	Difference vs. Week 24 Mean (SE)	Difference vs. Week 24 95% CI	Treatment effect Mean (SE)	Treatment effect 95% CI
Week 24†	245	-8.2 (6.49)			-2.20 (0.58)	[-3.35, -1.06]
Week 28	245	-9.8 (6.61)	-1.60 (0.59)	[-2.76, -0.44]	-3.80 (0.83)	[-5.43, -2.17]
Week 32	245	-10.0 (6.71)	-1.80 (0.60)	[-2.97, -0.63]	-4.00 (0.83)	[-5.63, -2.37]
Week 36	245	-10.1 (6.78)	-1.90 (0.60)	[-3.08, -0.72]	-4.10 (0.84)	[-5.74, -2.46]
Week 40	245	-10.5 (6.40)	-2.30 (0.58)	[-3.44, -1.16]	-4.50 (0.82)	[-6.11, -2.89]
Week 44	245	-11.3 (6.33)	-3.10 (0.58)	[-4.24, -1.96]	-5.30 (0.82)	[-6.91, -3.69]
Week 48	245	-10.7 (6.65)	-2.50 (0.59)	[-3.67, -1.33]	-4.70 (0.83)	[-6.33, -3.07]
Week 52	245	-11.9 (6.25)	-3.70 (0.58)	[-4.83, -2.57]	-5.90 (0.82)	[-7.50, -4.30]
Week 56	245	-11.9 (6.27)	-3.70 (0.58)	[-4.83, -2.57]	-5.90 (0.82)	[-7.50, -4.30]

† Week 24 is the last time point in the placebo-controlled phase. The treatment effect is from the network meta-analysis at end of trial (Table 2).
Abbreviations: CI, confidence interval; SD, standard deviation; SE, standard error

analysis. Allergan recommends including the OLE results with observations up to week 56 from randomization in the cost-effectiveness model, which has a two-year time horizon. Allergan previously provided a pooled analysis of the estimated treatment effect of BOTOX® in the PREEMPT 1 and PREEMPT 2 OLE for the intent-to-treat population (see Allergan letter to ICER re: comments on the model analysis plan, Table 3, page 10). Comparable data for patients with at least one but no more than three prior preventive medications are provided in Table 3.

Recommendation 5: Discontinuation rates for should be revised.

The cost-effectiveness analysis uses constant monthly discontinuation rates (Table 48, page 60 in the DER). As noted in our earlier letter to ICER, the results of the PREEMPT and COMPEL studies indicate that the discontinuation rate for BOTOX® decreases over time (see Recommendation 6, pages 24-25), and Allergan provided these data (Table 17, page 25). In contrast, the erenumab OLE in episodic migraine exhibits increasing discontinuation rates over time,[12] biasing the current ICER model in favor of CGRPs. Allergan recommends accounting for the observed changes in the rates of discontinuation.

Based on the discontinuation data extracted from Tepper 2017[13] (Table D13, page 142 in the DER), a patient without a post-baseline diary assessment and those who did not receive erenumab were excluded by ICER (Table D13, page 142 in the DER). To quantify discontinuation correctly, Allergan recommends inclusion of the patient without a post-baseline diary assessment, as the patient who did receive treatment. Further, ensuring an approach comparable to the discontinuation data reported in PREEMPT trials (Intent to Treat) requires inclusion of all patients who were randomized to erenumab and discontinued.

Recommendation 6: Include the effect of BOTOX® on migraine severity in the cost-effectiveness analysis.

The DER states that for the cost-effectiveness analysis, “it was assumed that the treatment effects result in a reduction in migraine days across all severity levels and do not change the distribution of migraine severity” (page 56). In the Allergan letter re: comments on the model analysis plan, Allergan noted that this assumption is contradicted by the evidence available for BOTOX® (see Recommendation 4, pages 15-16). A pooled analysis of PREEMPT 1 and PREEMPT 2 demonstrated that at week 24, compared to placebo patients, the proportion of headache days rated as severe was 3.9% lower in BOTOX® patients ($p<0.001$), the proportion of headache days rated as moderate was 1.4% higher ($p=0.066$), and the proportion of headache days rated as mild was 2.5% higher ($p<0.001$).

The beneficial effect of BOTOX® on headache severity is also supported by a published analysis of PREEMPT patients who failed to achieve at least a 50% reduction in the frequency of headache days from baseline to week 24.[14] At week 24, the proportion of severity responders was significantly higher in BOTOX® patients than placebo patients (41.1% vs 31.4%; $p=0.011$), where a severity response was defined as at least a 1-grade improvement in the item “When you have headaches, how often is the pain severe?” from the 6-domain Headache Impact Test (HIT-6). Please note that the impact of this issue is compounded by the issue raised in Recommendation 1.

Recommendation 7: The differences in the available evidence for CGRPs compared to BOTOX® should be acknowledged as a limitation of the economic analysis.

The clinical evidence currently available for the CGRPs in chronic migraine patients is limited to one Phase 2 trial for erenumab and one Phase 3 trial for fremanezumab, both of which were limited to 12 weeks in duration. In contrast, the evidence available for BOTOX® includes two Phase 3 trials with a 24-week placebo-controlled period and an open label extension through 56 weeks, as well as observational studies of up to two years in duration. The economic analysis presented in the DER omits some of the available evidence for BOTOX® due to the unavailability of data for the CGRPs for the same periods of time. This should be noted as a key limitation of the comparisons of the CGRPs with BOTOX®, as it understates the long-term benefits of BOTOX®.

<u>Additional suggestions for clarification.</u>

The Draft Questions for Deliberation and Voting related to the Clinical Evidence and the Long-term Value for Money describe the patient populations broadly as patients “for whom other preventive therapies have failed.” However, the economic analysis in the DER uses a more restricted definition of the patient population that limits the number of prior failures to at least one, but not more than two, preventive therapies (page 51).

Furthermore, it should be noted that the ICER assessment focuses exclusively on monthly migraine days as the measure of treatment efficacy. In the PREEMPT trials of BOTOX®, the primary endpoint was monthly headache days, and the reductions in headache days were nearly identical to the reductions in migraine/probable migraine days used in ICER’s analysis.[15] Allergan recommends addressing these data in the final report given important implications for patients.

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In summary, Allergan would like to remind reviewers that across multiple etiologies, BOTOX® efficacy and safety has been established in more than 80 randomized, placebo-controlled clinical trials spanning nearly 30 years. It is currently approved in 94 countries for 26 different indications, including the prevention of headache in adults with chronic migraine. Since October 2010 in the U.S., over 2.0 million BOTOX® treatments have been given to over 500,000 chronic migraine patients. Long-term clinical trials and real-world studies have established that BOTOX® is a consistently effective and well-tolerated treatment for the prevention of headaches in adults with chronic migraine.[15–19]

Allergan would like to remind reviewers that the comparative clinical effectiveness evaluation performed by ICER indicates that the efficacy and safety of BOTOX® are comparable to the CGRPs. On Page 27 of the DER, it is stated that “results comparing active therapies were not statistically significant.” In addition, serious adverse event “results were not significant” except for amitriptyline (page 46 of the DER). Finally, ICER “rated the evidence comparing erenumab and fremanezumab to onabotulinumtoxinA as insufficient” (page 51 of the DER).

We appreciate your serious consideration of the issues raised within this letter. If you have any questions, please contact Priti Jhingran, PhD, Executive Director – US Health Outcomes and Value via e-mail at Priti.Jhingran@allergan.com or Jonathan Kowalski, PharmD, Vice President US Health Outcomes and Value via email at Jonathan.Kowalski@allergan.com.

Regards,

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Amgen Response to ICER's Draft Evidence Report and Voting Questions on CGRP Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine

SUMMARY OVERVIEW

Amgen, jointly with Novartis, appreciates the opportunity to comment on ICER's draft evidence report and voting questions on Calcitonin Gene-Related Peptide (CGRP) Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine. Migraine causes profound disability, impaired quality of life and personal suffering.[1] Treatment experienced migraine patients who are unresponsive to current therapy face the grim reality of living with this disabling condition without relief. Patient sentiment captures the need for additional treatment options and desperation of sufferers: succinctly expressed by one patient, "*For a chronic migraine, there are no triggers, life is my trigger. For chronic migraineurs there are no cures, there are only patches that will get you through to the next bout. Have we tried, acupuncture, herbal remedies, diets, standing upside down on our heads? Yes*."[2] CGRPs could serve as transformative new options for these patients. It is for this reason that payers have indicated to us that erenumab is an important innovation that could make a meaningful difference in the lives of patients.

Consideration must also be given to employers. One of the largest healthcare payers of migraine costs is the self-insured employer, who have the additional burden of costs from lost productivity in migraine.[3,4] Each employee with frequent migraine costs employers as much as $13,000, a hidden cost representing nearly three times what individuals pay in insurance premiums.[5,6,7] Yet migraine sufferers are comparatively silent in their healthcare cost footprint in comparison to other conditions. A full 70% of costs of migraine are incurred by the patient, employer and society.[8] It is critical that patient voices are heard in the attribution of value of CGRPs: this disabling condition and the value of new treatment options goes beyond the scope of the healthcare payor perspective.

We would like to commend ICER for accurately reflecting the position of erenumab in the treatment paradigm in the base-case, which is patients who have failed previous preventive therapies. There are further opportunities for ICER to strengthen the analysis and accurately reflect migraine's burden. Our comments and recommendations are summarized below:

1. **ICER's base-case does not include indirect burden: <u>ICER should capture patient indirect costs in the base-case so as not to underestimate the value of CGRPs to patients.</u>**
2. **ICER's estimate of productivity costs is derived from patients with very low disease severity (2 MMDs as opposed to 8 MMDs in the erenumab clinical trials): <u>ICER should adjust these costs to the baseline severity of migraine in CGRP trials.</u>**
3. **ICER's analysis underestimates direct health care costs: <u>ICER should revise its hospitalization, drug and ED costs and rates and conduct a robust sensitivity analysis around these.</u>**
4. **ICER's analysis does not quantify uncertainty in the network meta-analysis (NMA) nor its implication on clinical effectiveness results: <u>ICER should focus the NMA on the base-case analysis, remove the comparison in all-comers and adjust for heterogeneity in the studies analyzed.</u>**
5. **ICER's model estimates utility based on a distribution of migraine severity, which does not capture the treatment effect of erenumab: <u>ICER should map QALYs from quality-of-life scales measured in the relevant population (erenumab Phase III studies).</u>**
6. **Patients seeking care for CGRPs or generic prevention will experience a placebo effect even in clinical practice: <u>ICER should exclude these effects in the base-case for consistency.</u>**
7. **ICER's model overestimates the number of CM patients treated with preventive migraine therapy in the budget impact analysis: <u>ICER should revise the size of the patient population that may be treated by CGRPs to be consistent with published prevalence numbers and other market analyses reports.</u>**

As part of this assessment, ICER have also invited us to participate in the transparency pilot allowing access to the model that was used for this assessment. We are grateful to ICER for this opportunity and will be providing feedback as a companion piece to this letter as follow-up.

DETAILED COMMENTS AND RECOMMENDATIONS

1) ICER's base-case does not include indirect burden: ICER should capture patient indirect costs in the base-case so as not to underestimate the value of CGRPs to patients.

ICER's exclusion of indirect burden of migraine in the base-case does not align with established, accepted methodologies in economic evaluations of new treatments.[9,10,11,12] This approach is inconsistent with ICER's previous assessment of Botox® for migraine, which included indirect/lost productivity costs in all scenarios. Comprehensive capture of all productivity costs should form the backbone of the base-case rather than a scenario analysis. Lost productivity costs are 70% of total costs in migraine.[8] Omitting these from the base-case captures only 30% of CGRP value and could result in migraine patients experiencing discrimination in favor of treatments that offset more costs to the healthcare system. The gold standard for health economic assessment methodology, the Second Panel on Cost-Effectiveness in Health and Medicine, recommends that all cost-effectiveness analyses capture both the healthcare payor and the societal perspective (in this case, societal is defined as all costs incurred by society due to migraine, including the often overlooked costs to patients).[9,10,11,12]

2) ICER's estimate of productivity costs is derived from patients with very low disease severity (2 MMDs as opposed to 8 MMDs in the erenumab clinical trials): ICER should adjust these costs to the baseline severity of migraine in CGRP trials.

ICER productivity costs for episodic migraine patients of $245 per month (used in the scenario analysis) underestimates the real burden in prevention-eligible episodic migraine patients by a factor of two.[13] ICER used the International Burden of Migraine Study (IBMS)[14,15] for indirect costs in which a headache day frequency per month was 2.1 for episodic migraine (EM) and 14.56 for chronic migraine (CM). In contrast, the average monthly migraine day (MMD) in the erenumab pivotal studies was 8.36 (SD= 2.5) in EM[16] and 17.8 (SD=4.7) in CM.[17] Moreover, EM patients in erenumab randomized controlled trials (RCTs) had to have at least 4 MMDs during the baseline period to be enrolled into these studies. Hence, ICER applies costs of a significantly less severe migraine population leading to the undervaluation of erenumab in EM, especially when applied to indirect costs. Using monthly productivity costs for EM patients with 8 MDs (derived from STRIVE)[16] gives a productivity cost of approximately $490 per month (derived from Lipton *et al.*,[18] see Appendix A for further explanation).

The accuracy of ICER's analysis could be strengthened by incorporating data from the treated erenumab EM patient population given a wide variation observed in lost productive time (LPT) across EM patients. In a study by Stewart *et al.*,[19] among employed individuals with migraine, the average LPT (absenteeism and presenteeism) per worker per week specifically due to headache was:

- 2.2 (SD=4.5) hours for those with 0–3 days of headache/month
- 3.5 (SD=6.5) hours for those with 4-9 days of headache/month
- 4.9 (SD=7.3) hours for those with 10-14 days of headache/month

Variability in LPT is considerable, especially in the EM population. Hence, ICER's use of a single number for lost productivity across the whole EM population grossly understates the burden among these patients. Lipton *et al.*,[18] more accurately reflect this variation at a migraine day level in their model, calculating the average costs of absenteeism and presenteeism days assuming the median hourly gross wage obtained from the US Bureau of Labor Statistics over an 8-hour working day (the degree of productivity loss on each presenteeism day, *i.e.*, days where productivity is reduced by at least 50%, is not known). The publication uses question two from the Migraine Disability Assessment (MIDAS) which defines a presenteeism day as lost productivity of at least 50%. We would highlight that this is not an overestimation of the impact of migraine but consistent with the definition from the well-validated MIDAS questionnaire. If ICER took this approach basing the number of days of productivity losses on erenumab clinical trial data (capturing the sex, age and employment status of the clinical trial populations and the baseline migraine days of 8 mentioned above) it would make productivity costs more accurate.

3) ICER's analysis underestimates direct health care costs: ICER should revise its hospitalization, Botox® and ED costs and rates and conduct a robust sensitivity analysis around these.

ICER's direct cost estimates are too low owing to underestimates in the main cost drivers of emergency department visits, hospitalization and Botox® cost shown in Table 1 and summarized below:

1) Emergency Department (ED) cost: ICER uses $473 for migraine related ED from Messali *et al.*[14] which is 1.5 to nearly four times less than the estimates from Insigna[20] and Bonafede *et al.*[21]. This difference is attributable to Messali *et al.'s* value excluding services in the ED for migraine patients such as fees for provider administered injectables, MRI and CT scans, which the latter two references include.
2) ED visit rates: ICER's ED visit rates for migraine patients in EM are too low. ICER uses 14/100 patients per year[14] in EM and 19.6/100 patients per year in CM, whereas other references estimate this as 17/100 patients/per year. 34% of migraine patients have at least one ED visit in a 12-month period compared to 14.3% among non-migraine controls.[21]
3) Hospitalization rates: ICER uses a rate of 0.342 hospitalizations per day per 100 patients (from AHRQ Statistical Brief #111).[28] This is an inaccurate reflection of migraine hospitalization rates because a) it is an ED visit rate not a hospitalization rate; and b) it is the migraine hospitalization rate as a proportion of the general US population, not the higher reported hospitalization rate among migraine patients.[22] ICER's model input should be specific to the population it is modelling. We recommend ICER use the rate from Munakata *et al.*, which is seven migraine-specific hospitalizations per 100 migraine patients.[22,23]
4) Drug costs: ICER estimates the cost of Botox® based on the Federal Supple Schedule (FSS) which underestimates its cost.[24] We recommend instead using the WAC cost which is more representative of the costs payors would incur. The current Wholesale Average Cost (WAC) or List price for a 200 unit vial for Botox® is $1,202 for an annual drug cost of $5,169[25] and annual administration cost of $649.[26,27]

These differences are important as combined, they work to diminish the costs that CGRPs offset, which results in an underestimation of the value of these innovative treatments to patients. This is especially important as these inputs are unavailable by migraine frequency and previous treatment status. Hence, we also suggest conducting robust sensitivity analyses around medical resource use and direct cost estimates.

Table 1: Comparison of Hospital and ED Rates in ICER's model vs. other published sources

	ICER	**Published resource**
Hospitalization rates	0.342 / 100 US population per year[28]	7 / 100 migraine patients per year[22]
ED visit rates	EM: 3.5 % per 3 months – 14 / 100 per year[14] CM: 4.9% per 3 months – 19.6 / 100 per year[14]	17 / 100 patients per year[22]
ED costs per visit	$ 473.82[14]	$ 775[20] $ 1700[21]

4) ICER's analysis does not quantify uncertainty in the network meta-analysis (NMA) nor its implication on clinical effectiveness results: ICER should focus the NMA on the base-case analysis, remove the comparison in all-comers and adjust for heterogeneity in the studies analyzed.

We commend ICER for recognizing the relevant patient population for CGRPs (those who have failed a prior preventive therapy) and rating the evidence as *promising but inconclusive* for EM and *comparable or better* for CM (See Appendix B, Table A). Aligning with this, in evaluating clinical effectiveness we recommend that ICER removes the comparison of CGRPs to current preventive therapy (as presented in the scenario analyses). Comparison of erenumab and CGRPs against generic prevention should not be undertaken given their place in the treatment paradigm and observed heterogeneity in the results.

The NMA includes studies conducted over two decades during which methods for collecting outcomes and design of clinical trials have evolved tremendously. The methods to define outcomes and included patient populations (in terms of baseline number of MMDs, medication overuse, use of concomitant therapy, *etc*.) vary substantially between the studies. This introduces significant heterogeneity in the networks. ICER has acknowledged that the heterogeneity in the CM model was fairly high (0.68 [0.03, 3.02]). We recommend that ICER accounts for the resulting heterogeneity in the NMA.

Lastly, ICER's rating of the evidence could be enhanced by: 1) adding clarity on what was considered as a comparator for each phenotype and patient subgroup; and 2) adding clarity on the derivation of the efficacy numbers highlighted in ICER's draft report, page 48, *"Efficacy: Results suggest a modest reduction in monthly migraine days* ***(1.3-2.4 fewer migraine days per month)****, a modest reduction in days using acute medications (0.9-2.5 fewer days per month), and a greater proportion of patients experiencing a reduction in migraine days by at least 50% (OR 1.9-2.3) with erenumab compared with placebo."*[29]

5) ICER's model estimates utility based on a distribution of migraine severity, which does not capture the treatment effect of erenumab: ICER should map QALYs from quality-of-life scales measured in the relevant population (erenumab Phase III studies).

Reduction of interictal burden is an important benefit with prevention which is not captured in ICER's analysis. ICER uses utilities in the model collected from patients and the general public to form a QALY for a given state of health. These utilities are not representative of the erenumab patient population recruited in the Phase III studies or patients who are eligible for prevention. ICER misinterprets Lipton *et al.* stating, *"Lipton et al. derived utility estimates from the International Burden of Migraine Study that included participants from 10 countries,"*[30] This is not where Lipton *et al.* derive these utilities. It is correct that the algorithm to map utilities from Migraine-Specific Quality-of-Life Questionnaire (MSQ) and Headache Impact Test 6 (HIT6) was based on the IBMS data, however, the treatment effect on utilities for erenumab and placebo map from the MSQ and HIT6 collected in erenumab Phase III trials. This is critical since as pointed out by ICER, *"Lipton et al. derived utility measures that are different across placebo and treatment, such that patients had 1) a utility gain associated with the treatment that was independent of migraine day reduction."*. This treatment effect for erenumab is likely due to the effect on interictal burden, reduction of other migraine symptoms and reduced severity. ICER's approach to modeling utility does not account for this treatment benefit. Hence, ICER should map from HRQoL scales collected in the relevant population (erenumab Phase III studies) in order to capture this treatment benefit that goes beyond a reduction in MDs.

ICER overestimates baseline QALY values for chronic migraine patients when not experiencing a migraine, which underestimates the benefit of erenumab. ICER uses QALY values on pain-free migraine days of 0.95 from patients averaging 1-6 migraine attacks from Xu *et al.*[31] versus 0.87 from patients averaging 5 MMDs from Stafford *et al.*[32,33] Stafford *et al.*'s value for a non-migraine day is lower than Xu *et al.* because patients in the Stafford *et al.* manuscript were more severe and are a better proxy for the patients enrolled in the erenumab Phase III trials (averaging 8 MMDs). Hence, ICER's use of Xu *et al.*, does not adequately capture the impact of migraine on a patient's quality of life and interictal burden. Moreover, the values in Stafford *et al.* are consistent with other studies in representative populations that report a mean utility of migraine patients when not experiencing a migraine day (MD) as 0.82.[34] This is further supported by Amgen Phase III studies, which measured a utility of 0.84 for patients with zero MDs.[35]

6) Patients seeking care for CGRPs or generic prevention will experience a placebo effect even in clinical practice: ICER should exclude these effects in the base-case for consistency.

Clinical trials in migraine prevention typically have strong observed placebo effects.[36] Migraine placebo response is predominantly due to regression to the mean since migraine day frequency and severity vary markedly over time within individual patients.[37] ICER uses placebo adjusted rates from erenumab studies but not for clinical practice. These also occur in clinical practice but are not measurable because administration of placebos, such as sham injections, is not a plausible treatment option. This severely underestimates the efficacy of erenumab as it accounts for placebo effects in the erenumab clinical trials but not those in clinical practice: these occur in both settings and ICER should standardize the approach for consistency.

7) ICER's model overestimates the number of CM patients treated with preventive migraine therapy in the budget impact analysis: ICER should revise the size of the patient population that may be treated by CGRPs to be consistent with published prevalence numbers and other market analyses reports.

The ICER report states that 95.6% of CM patients currently receive preventive treatment, which is an overestimate. While this number is based on the Adelphi Migraine Disease Specific Programme (DSP), a real-world, cross-sectional survey of physicians and their patients with migraine, it only samples patients who present at a doctor's office, *i.e.*, are trying to access care for their migraine. Hence, this number vastly overstates the percentage of patients with chronic migraine who are receiving preventive migraine therapy. Considering a one million patient plan, approximately 3% of patients currently or previously on migraine preventive therapy would start an anti-CGRP in year one.[38] These estimates are consistent with independent analyst estimates at 2%.[39] This would apply to the base-case scenario where patients with at least 4 MMDs and experience with one prior preventive therapy are eligible for an anti-CGRP. Another study, estimates that only 12-13% of patients who need prevention are currently receiving it.[40]

Areas for further clarification

- Since the efficacy estimates for the base-case analysis were not transparent, we are unable to comment if the efficacy data were used appropriately. Amgen provided ICER data in treatment experienced patients from Amgen publications. However, it is not clear what the efficacy estimates are for this base-case. It is also unclear if NMA results for efficacy for treatment experienced patients were used in the base-case analyses.
- It is unclear how the erenumab open label extension (OLE) data were incorporated in the clinical and value assessments. Erenumab is the only CGRP with robust published data. We recommend that these data be included in the evaluation of benefit that erenumab brings to patients.

CONCLUSION

Migraine remains an extremely disabling condition, especially for those who have exhausted all treatment options. It is of paramount importance that the perspective of migraine patients is heard and actioned. This is also critical to employers as additional prevention could reduce the impact of migraine on productivity by reducing disability. ICER has the opportunity to provide a more complete and thorough analysis by ensuring that patient, employer and societal considerations are fully captured in their base-case. In addition, we have highlighted several technical recommendations that will strengthen ICERs analysis and more accurately reflect the value of CGPRs.

Appendix A

Indirect cost derivation from Lipton *et al*.[18] Since erenumab episodic pivotal trials had an average of 8 monthly migraine days (MMD) at baseline, these patients are predicted to have 0.95 (95% CI: 0.94–0.96) absenteeism days and 2.34 (95% CI: 2.32–2.35) presenteeism days (derived from MIDAS question 1 and question 2). This represents a conservative estimate since these are based on Q1 (for absenteeism) and Q2 (for presenteeism) from the MIDAS questionnaire. The model estimates are consistent with episodic trial data presented in the poster by Buse *et al*,[41] where the change from baseline in absenteeism over months 4, 5, and 6 for 140 mg was –4.2 (0.2), $p < 0.001$; and for placebo, –2.6 (0.2). Presenteeism change for 140 mg was –3.3 (0.2) days; and placebo was –2.0 (0.2) days; $p < 0.001$ for each erenumab group vs placebo. Based on the average wage, these productivity losses are expected to result in average costs per month of $197.52 ($196.38– $198.65) and $242.86 ($241.46–$244.26), for absenteeism and presenteeism respectively. These productivity losses are expected to result in average costs per month of $490 (CI$) in EM patients representative of the erenumab EM trials (average MMD 8).

Appendix B

Table A: ICER's rating of the evidence

	All patients	Patients with prior treatment failure
EM	Insufficient	Promising but inconclusive
CM	Insufficient	Comparable or better

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May 8, 2018

Response to ICER Draft Evidence Report (CGRP Inhibitors as Preventive Treatments for Migraine)

Eli Lilly and Company appreciates the opportunity to respond to ICER's Draft Evidence Report titled 'Calcitonin Gene-Related Peptide (CGRP) Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine: Effectiveness and Value' released April 11, 2018. As noted in the Evidence Report, CGRP inhibitors have not yet been FDA-approved. In addition, there is limited information (e.g., pricing not set) on which to base a comprehensive assessment of product efficacy and value, and no data on effectiveness. For these reasons, we previously requested that ICER ***delay conducting this review until results have been published for all pivotal clinical trials for all CGRP inhibitors being evaluated. In particular, we requested that galcanezumab be removed from this assessment until Phase 3 randomized controlled trial (RCT) data have been published in peer-reviewed journals.*** The results presented in this assessment highlight the limitations associated with prematurely conducting a review without all of the pivotal clinical trial and other data needed for this purpose. As a result, it is our opinion that ICER has conducted a suboptimal assessment that lacks appropriate scientific rigor and full transparency. To that end, we offer the following comments:

Comparative Clinical Effectiveness

- ***Limited published data from Phase 3 RCTs across all compounds leading to inconclusive findings***
    - Multiple Phase 3 RCTs have been conducted across the CGRP inhibitors; however, at this time, only a few articles have been published for erenumab and fremanezumab and none for galcanezumab.
    - Although grey literature may provide some insights into efficacy and safety, it does not provide the same level of detail (e.g., baseline characteristics, inclusion/exclusion criteria) as peer-reviewed published articles that would be needed to conduct a comprehensive assessment. In addition, although ICER policies state that they will consider grey literature as part of their review, it is apparent that it was not factored into this particular review despite the fact that the evidence is rapidly evolving. Numerous abstracts are available on galcanezumab Phase 3 data (citations provided to ICER in correspondence dated February 6, 2018); however, only Phase 2b data were used in the comparative clinical assessment with the exception of a mention of Phase 3 trials/results

  - in the appendix. Thus, when comparing clinical efficacy, only Phase 2b data for galcanezumab were shown in tables that included both Phase 2 and Phase 3 data for other molecules without adequate documentation of this key difference. **To improve transparency, a column should be added to the comparative clinical tables that clearly shows when Phase 2 or Phase 3 data are being used. At minimum, a footnote should be added to the tables to highlight this issue**.
  - On page 22, you mention the galcanezumab Phase 3 chronic migraine (REGAIN) trial and state that the results are shown in Appendix C; however, information on the REGAIN study is not included in Appendix C. Please include a summary of this trial in the Appendix.
  - We acknowledge the data in confidence policy that ICER developed during this review; however, we believe that a redacted report would not meet the appropriate standards of transparency. In addition, it is our opinion that the current policy does not adequately mitigate the risks associated with jeopardizing future publications.
- ***No pricing information***
  - Currently, there is no pricing information available for the CGRP inhibitors. It is premature to conduct cost effectiveness or budget impact modeling and to draw conclusions on the potential value of the products without pricing information or other contributors to price (e.g., labeled dose).
- ***No final dosing information***
  - Each of the respective trials across the CGRPs used different doses and different dosing regimens. At this time, final dosing is not known for the products. As a result, there is no way for ICER to know which of the many efficacy and safety results are relevant.
  - In the assessment, ICER used galcanezumab 120mg in the comparative clinical section; however, Phase 3 trials evaluated both 120mg and 240mg. Given that ICER only used a Phase 2b dose ranging study in the evaluation of galcanezumab, the 240mg dose that was used in subsequent Phase 3 trials was not even acknowledged in the comparative clinical section.
- ***Confusing use of the term "insufficient" in the summary and comments***
  - In the summary of the results, ICER refers to the evidence of net benefit for galcanezumab and the other two CGRPs as being "insufficient." The use of this term may be confusing because in Figure 3.1 ICER defines "insufficient" as "any situation in which the level of certainty in the evidence is low." In the case of galcanezumab, in particular, ICER does not have published Phase 3 data to adequately evaluate the evidence. Thus, it is not uncertainty in the efficacy and safety evidence that is the issue, but rather the timing of the assessment which is resulting in a lack of evidence that ICER has access to use in the review. We respectfully request that ICER clarify this point and not "rate" galcanezumab in this assessment. If ICER chooses to rate galcanezumab, then we would strongly suggest the following editorial change to ensure clarity in interpretation: "Given the limited data currently available for galcanezumab, the amount of evidence upon which its net benefit could be assessed was rated as insufficient ("I")."

<u>Cost Effectiveness</u>

- The model includes utilities based on migraine severity. Consider doing a scenario analysis evaluating utilities based on migraine frequency similar to the Lipton et al (2018) article that you reference in the report.

- Health care resource utilization in the model is based on a proportional reduction in migraine days. It is unclear how a correlation can be made between reduction of migraine days and reduction in health care resource utilization such as emergency room visits or hospitalizations. It would be more appropriate to consider HCRU reduction associated with the use of preventives.
- The model is based on a health system perspective with a scenario analysis using the societal perspective. Given the substantial impact of migraine on workplace productivity and other indirect costs it would be important to emphasize those results in the conclusion or to consider using a societal perspective as the base case.

We appreciate the opportunity to provide comments on this report. We feel that consideration should be given to the issues we have raised to ensure a scientifically sound assessment of these treatments. It is our opinion that this assessment was conducted prematurely without adequate data, thus leading to results that are questionable and inconclusive. Given the challenges associated with interpreting the results of this review, it will be important for ICER to be transparent about the limitations of the assessment and to emphasize those limitations when communicating the findings to stakeholders.

Sincerely,

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May 8, 2018

Steven D. Pearson, MD, MSc, FRCP
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RE: Draft Evidence Report for Calcitonin Gene-Related Peptide (CGRP) Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine: Effectiveness and Value

Dear Dr. Pearson,

Thank you for the opportunity to review and comment on the draft evidence report on the use CGRP inhibitors as preventive therapy in patients with migraine. After reviewing the draft report we have outlined a few aspects for ICER to consider in finalizing the analysis and report.

Impact of Treatment on Severity of Headache

The current modeling framework has accounted for a reduction in migraine days due to the use of preventive migraine therapies. However, the treatment-specific impact on the severity of subsequent migraines or headaches is not considered. Different therapies have different mechanisms of action and may have a unique impact on severity of headaches post-treatment. We strongly suggest to include any impact of preventive therapies in not only reducing the number of migraine/headache days but also for reducing the severity post preventive therapy use based on treatment-specific available data. Including this effect of therapies in the analysis will allow for a more complete estimation of treatment benefits.

Accounting for Differences in Baseline Migraine Days

The ICER model also relies on the mean reductions in monthly migraine days as a measure of clinical benefit to estimate the cost-effectiveness of preventive therapies in chronic and episodic migraine. The same absolute change in monthly migraine days may mean different things to patients across the distribution of migraine days per month at baseline. Differences in baseline migraine days have been observed across trials that were included in the analysis for estimation of treatment efficacy of therapies. For example, in chronic migraine, the baseline monthly migraine days across different trials were:

- fremanezumab trials (monthly dosing arm) (Silberstein 2017, Bigal 2015a): 16.0 and 16.4 days
- erenumab trial (140 mg dose) (Tepper 2017): 17.8 days
- onabotulinumtoxinA trials (Aurora 2010, Diener 2010, Cady 2014): 19.1 to 23.4 days.

For two different therapies with the same reduction in absolute number of migraine days, the corresponding percent reduction in the number of migraine days would be greater with the therapy that was used in patients with fewer number of baseline migraine days. Given the observed differences in baseline migraine days as noted above, efficacy estimates that are adjusted to account for differences in monthly migraine days at baseline would allow a more robust comparison of efficacy across these preventive agents.

We suggest that percent change in monthly migraine days from baseline be used in place of the absolute change in migraine days from baseline to allow for a more valid comparison across trials with different baseline migraine days.

Phase 2 Data Considerations

In the comparative effectiveness analyses, evidence from Phase 2 and Phase 3 studies were given equal consideration (ICER 2018, Table 3.1 in appendix). It should be noted that trial phase may have an important impact on the observed treatment effect. The FDA itself notes that “pre-market clinical testing usually progresses in phases, with increasingly rigorous methods at each phase” (FDA 2017) thereby potentially leading to an overestimation of treatment effects in Phase 2 as compared to Phase 3. Indeed, in one example from oncology, there was a significant overestimation of the mean difference in response rates for Phase 2 as compared to the subsequent Phase 3 trials (Zia 2005). This “phase effect” is further supported by a recent FDA report (FDA 2017) and a recent review of over 200 drug candidates 2013-2015 (Harrison 2016). Using data on efficacy estimates of a therapy with only Phase 2 trial data (e.g., erenumab in chronic migraine) and comparing it to efficacy estimates of therapies pooled from both Phase 2 and Phase 3 data (e.g., fremanezumab in chronic migraine) may be biased given the potential for overestimating the efficacy in Phase 2. A more robust approach would be to test the sensitivity of results to the potential bias introduced due to overestimation of efficacy in Phase 2.

Furthermore, in the context of the current chronic migraine analysis, the topiramate Phase 2 trial (Diener 2007) is a clear outlier in terms of observed efficacy. The Diener study has very small sample sizes [e.g., topiramate (n=32), placebo (n=27)], and it is the only trial in which the placebo arm experienced an increase in migraine days (ICER 2018, Table 3.1, p26). Together, this suggests that Diener 2007 should be excluded from the analyses to allow for a robust efficacy estimate for comparison with other preventive agents.

Treatment Discontinuation Rate Considerations

Treatment discontinuation is one of the variables impacting cost-effectiveness outcomes. ICER calculated monthly discontinuation rates using the odds ratios estimated in the network meta-analysis of clinical studies in episodic migraine and chronic migraine. However, the estimated results lack face validity. For example, in the ICER analysis the monthly discontinuation rate for the fremanezumab monthly arm in episodic migraine is estimated to be 17.5% (ICER 2018, Table 4.8, p60), whereas the discontinuation rate for the fremanezumab monthly dosing regimen observed over a 12 week period in the fremanezumab episodic pivotal trial is substantially lower. The ICER analysis should ensure that the discontinuation rate estimates are appropriately derived and used in the analysis. In addition, to reflect discontinuation rates that are more indicative of those observed in real world clinical practice, the impact of a lack of therapy response on discontinuation should also be included in the discontinuation estimation and economic modeling.

Therapy Cost Estimates of onabotulinumtoxinA

The current analysis uses the therapy cost of onabotulinumtoxinA as per the Federal Supply Schedule which is very relevant for the US Federal Government and Veteran's Administration (VA). Though this is an important audience, to make the results more relevant to the commercial payers, a more relevant price estimate that reflects the likely cost of onabotulinumtoxinA cost to the commercial payers should be used in the analysis.

Including Efficacy Data Over the Entire Observation Period

In the estimation of efficacy, it is important to consider the benefit of therapy over the entire observation period (e.g., over the entire 12 week period) as opposed to efficacy observed only at a latest observation period (e.g., over last 4 weeks at week 12). This is important because including efficacy observed over the entire observation period ensures that the estimates of early benefits of therapy are reflected in the assessment and also ensures that the efficacy estimate is not an artifact of the treatment observation period selected. Failure to account for observed differences at these earlier time points disregards potentially meaningful benefits of therapy across the entire course of treatment, and underestimates the overall treatment effect and impact. This assessment approach should be applied consistently across all preventive therapies included in the assessment.

Inclusion of Efficacy Data on Impact on Comorbidities

Impact of reducing migraine days and severity can have significant positive impact on migraine related comorbidities like depression and anxiety. Recently, fremanezumab therapy has been shown to decrease the score on the Patient Health Questionnaire (PHQ-9) in patients with moderate to severe depression in chronic migraine patients (Cohen 2018). Cost and quality of life implications of such benefits of preventive therapies should be modeled to assess the full benefit of preventive therapies in the evaluation.

Consistency of Outcome Time Point

Time point of follow-up utilized in the comparative effectiveness assessment is an important factor in determining the magnitude of the effect relative to baseline. ICER's analysis of change in monthly migraine days by time point presented in Appendix D (ICER 2018, Tables D28-D30, pp173-175) suggests that time point of assessment has an impact on the derived efficacy estimate. This emphasizes that analyses using data from consistent periods of observation (e.g., 4, 8, 12 weeks) across trials should be used in the assessment.

In the primary analysis for chronic migraine, onabotulinumtoxinA trial results at 24 weeks were compared to topiramate at 16 weeks and the other drugs at 12 weeks. The validity of the analysis comparing onabotulinumtoxinA at week 24 to the other drugs at 12 or 16 weeks is questionable. Consistency in time point of assessment across trials would allow for a more meaningful comparison of efficacy estimates across trials.

Consistency in Estimates for Monthly Cycles in Cost-Effectiveness Model

Estimation of monthly costs and rates for use in the cost-effectiveness model should be carried out in a consistent way. This includes specifying a common definition for a "month" and applying this definition consistently throughout the analyses. For example, it appears as if the effectiveness rates are estimated based on reported 4-week (28-day period) data, scaled to a 30-day period and applied accordingly. Whereas cost inputs are calculated assuming a 30-day month. In any given cycle, this imprecision may seem insignificant, however, over the course of the model calculations (analysis time horizon - 2 years) inconsistencies in benefits and cost estimations may add up to significant levels.

We respectfully request that ICER consider the above suggestions in finalizing the analyses and developing the evidence report.

Sincerely,

Sanjay Gandhi, PhD

Sr. Director, Global Health Economics and Outcomes Research
Global Medical Affairs
on behalf of Teva Pharmaceuticals

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8-May-2018

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Submitted electronically to: publiccomments@icer-review.org

Steven D. Pearson, MD, President
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Two Liberty Square, Ninth Floor
Boston, MA 02109

Dear Dr. Pearson,

The American Headache Society (AHS) and the American Migraine Foundation (AMF) appreciate the opportunity to comment on ICER's Draft Evidence Report - **Calcitonin Gene-Related Peptide (CGRO) Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine: Effectives and Value**.

For 60 years, the American Headache Society has been and continues to be the leading professional society of health care providers dedicated to the study and treatment of migraine, headache and face pain. With over 1400 members and associates, the Society's education, research and advancement programs engage medical professionals throughout their careers, from the world's most sought after thought leaders to those at the beginning of their professional work in headache medicine. As the largest professional headache society of health care providers in the United States, and holding the distinction of CME credit provider with commendation from ACCME, AHS uses its strengths to design and deliver programs that teach, train and advance the field, whether designed to train professionals on the latest diagnostic methods, supporting and promoting the latest in headache research or educating on the newest of migraine and headache therapies, the Society is committed to advancing the expertise of its members and the field of headache. The American Migraine Foundation advocates for, supports, educates and engages the 47 million Americans who suffer the debilitating effects of migraine and other headache diseases. Founded by AHS in 2010, the AMF strives to mobilize a community for patient support and advocacy, as well as drive and support impactful research that translates into treatment advances.

We appreciate ICER's engagement with various stakeholders from the migraine community and the ongoing communication between ICER and AHS and AMF throughout this process. We provided feedback via email communication on March 16 after reviewing a pre-publication summary of ICER's economic model. After reviewing the full Draft Evidence Report, we have remaining concerns over the current quantitative analysis. We urge you to please consider the following points:

Patient Values Should be Top Consideration in Evaluation

> The most important treatment outcomes for those living with migraine are improved quality of life and functional performance through the relief of the pervasive and disabling symptoms of migraine. AHS/AMF believes that the use of QALY as a methodology for a value assessment doesn't account for these important treatment outcomes. We highlight that any treatment that provides improvements to those living with migraine, including greater quality of life, productivity at work and at home, and more time spent with loved ones, provides enormous value to this

community. A successful therapeutic outcome depends not only on a reduction in migraine headache days (MHD) frequency, but also on the persistence and severity of pain and associated symptoms, level of disability and functional capacity. AHS/AMF urges ICER to utilize a more patient-centered approach with endpoints that represent incremental gains valued by patients.

The DER Does Not Fairly Account for Indirect Costs and Societal Burden of Migraine.

We remain concerned that the current framework will not adequately address the immense indirect costs and societal burden of migraine, and reemphasize our argument submitted to you in our December 2017 comment letter. The majority of direct costs due to migraine are incurred by public and commercial payors. Direct medical costs for individuals with migraine are significantly higher overall (40%) compared with matched non-migraine patients, both overall and within specific cost categories, such as emergency department (ED) visits (28%), inpatient (36%) and outpatient (45%) visits, and pharmacy expenses (36%). Indirect costs have been shown in previous studies to be substantial. In fact, migraine is unique in that a large majority of its economic burden is attributed to costs that are directly attributed to indirect costs. This translates to a significant burden on employers, as indirect costs are primarily calculated as absenteeism and presenteeism. Approximately 113 million workdays are lost annually in the United States due to absenteeism from individuals with migraine. The cost of this to employers exceeds $13 billion each year. Moreover, individuals with migraine are 2.5 and 2.4 times more likely to have a short-term and long-term disability claim, respectively, with an average cost of $26,543 per claim, compared with non-migraine individuals. In addition, more than half of migraine sufferers state that their work or school productivity is reduced by at least 50%. In addition, because 10% of children and adolescents experience migraine and some develop chronic migraine, clinical experience suggests there is a significant impact on career choices and wage growth among those the most disabled.

Lack of Long-Term Data Undervalues New Migraine Treatments.

As with all new and emerging therapies, long-term data regarding the safety and efficacy of the anti-CGRP monoclonal antibodies (mAbs) is limited. However, long-term open-label extension studies do provide some important evidence of long-term efficacy and safety. For the first of these antibodies expected to be approved, erenumab safety and efficacy are being evaluated over 5 years. In an interim analysis of one-year data, 383 patients had a median exposure of 575 days (28-822 days). The mean monthly migraine day at baseline was 8.2 and after 64 weeks, declined to 3.7. At the 64-week time point, after patients had first been randomized to either placebo or erenumab and then continued in the open-label phase, the ≥50%, ≥75%, and 100% responder rates were 65%, 42%, and 26%, respectively. Safety profile in the open-label phase was similar to the double-blind phase. Overall, safety of erenumab has been evaluated in 2,310.3 patient years exposure, including 2,066 patients who have received the treatment for ≥6 months. We use erenumab as an example as efficacy and safety profiles of the three additional anti-CGRP monoclonal antibodies since the efficacy, safety and tolerability profiles are similar, and since approval is expected within weeks for erenumab. Given the high rate of adherence compared to currently available oral preventive drugslong-term outcomes, as seen in this interim analysis, are expected to be robust and accrue over time. Therefore, we respectfully disagree with the ICER grade on efficacy and safety as being “inconclusive”. We believe the long-term data on these new treatments will support our point of view.

The Emphasis on “Therapeutic Gain” Values from Placebo-Controlled Trials May Lead to Underestimation of Efficacy

Placebo-controlled trials in pain (especially those delivered via injection) have a high and highly variable placebo response. However, the anti-CGRP monoclonal antibodies studies were powered to detect a clinically meaningful and minimally important difference between the active intervention and placebo. There has not been a single controlled trial with any of the antibodies in either episodic or chronic migraine that has failed to meet its primary endpoint and demonstrate highly statistically significant superiority of active intervention over placebo.

The use of placebo-subtracted responses or ‘therapeutic gains” to extrapolate the clinical impact of an active intervention has severe limitations. The response to active intervention has been remarkably consistent with and between each of the anti-CGRP monoclonal antibodies and it is the magnitude of the treatment response, the proportion of patients who respond, and the impact on the quality of life and disability of the patient that determines the clinical utility of a treatment. This has been expressed by The Initiative on Methods, Measurement, and Pain Assessment in Clinical Trials (IMMPACT). The recommendations from this consensus initiative involved representatives from academia, regulatory agencies (US Food and Drug Administration, European Medicines Agency), US National Institutes of Health, US Veterans Administration, consumer support and advocacy groups, industry, and more than multiple scientific, legal and medical disciplines. Their mandate was to develop consensus reviews and recommendations for improving the design, execution, and interpretation of clinical trials of treatments for pain. IMMPACT recommends that when evaluating the clinical meaningfulness of a treatment benefit, statistically significant group differences in a primary efficacy endpoint cannot be considered in isolation, as this may obscure meaningful individual patient improvements and other benefits and risks. Rather, the overall body of evidence with regard to outcomes must be considered to fully understand therapeutic benefit. We highly recommend ICER adopt an approach and model that follows these recommendations to determine the real-world value of any active intervention, especially for those where the primary endpoint is a pain measurement.

Acute and prophylactic treatment for migraine, in both historical and contemporary clinical trials are consistent for individual drugs and within drug classes. The placebo-response however varies considerably from trial to trial for preventive migraine medications. Therefore, it is difficult to compare different treatments with very different placebo responses unless they are studied in head-to-head trials. Furthermore, placebo-subtracted response rates provide an incomplete picture that typically underestimates the overall efficacy. In addition, those that respond to the treatment should be considered when calculating the QALY. When considering all patients randomized, it artificially and dramatically lowers the number of days gained over 2 years down.

Lack of Consideration of Discontinuation of Migraine Treatments Overestimates Costs

Most patients discontinue prescribed oral preventative medication within a year because of lack of efficacy, side effects or improvement. Most, if not all payers, stop covering more expensive treatments such as OnabotulinumtoxinA if there is not significant improvement in 6 months. Thus, you must cut the number of patients receiving drug by at least 50 to 60 % and raise the efficacy of those who remain with greater than 50% improvement. This is the only way to give an honest estimate of QALY. As stated above, only those that respond to the treatment should be considered when calculating the QALY since non-responders will not continue to receive the treatment.

There remains an enormous unmet need in preventive migraine treatment. While approximately 38% of individuals with migraine should be offered preventive therapy, only 3-13% of individuals are receiving such treatments. Among the most severely affected individuals with chronic migraine who do receive preventive treatment, over 80% discontinue the medication within one year. While there may be several reasons for this poor treatment adherence, chief among them are suboptimal efficacy and tolerability. The recommendations for when to initiate preventive therapy are unchanged. Patients with migraine should be considered for preventive therapy in any of the following situations:

- Attacks significantly interfere with patients’ daily routines despite acute treatment
- Frequent attacks (>4 headache days/month)

- Contraindication to, failure, or overuse of acute therapies
- Adverse events with acute therapies
- Patient preference

The American Headache Society and American Migraine Foundation will soon publish a consensus document that outlines the criteria for selecting patients who should be eligible to receive an anti-CGRP mAb for migraine prevention. We hope this will guide patients, clinicians in practice who prescribe for patients with migraine, and the payor community.

In conclusion, the need for improved migraine treatments is imperative. Many people living with migraine have received inadequate treatment options and outcomes for far too long. The ability for those with unmet treatment needs to have access to safe and effective therapy is our collective responsibility to patients in need. We agree that cost effective care is essential and that all stakeholders play a role. It is important that ICER establish a clear understanding with payers on the full value of these therapies.

Thank you for the opportunity to provide public comments regarding ICERs Draft Evidence Report. If you have questions, please contact Dr. David Dodick at Dodick.David@mayo.edu, Dr. Kathleen Digre at Kathleen.digre@hsc.utah.edu, or Meghan Buzby at mbuzby@talley.com.

On behalf of the Executive Board of the American Headache Society and the American Migraine Foundation,

Allan Purdy

R. Allan Purdy, MD, FAHS
President, American Headache Society

David Dodick

David Dodick, MD, FAHS
Chair, American Migraine Foundation

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[2],

NATIONAL
HEADACHE
FOUNDATION ™

May 8, 2018

Steven D. Pearson, M.D., President
Institute for Clinical and Economic Review
Two Liberty Square, Ninth Floor
Boston, Massachusetts 02109

Dear Doctor Pearson:

The National Headache Foundation (NHF) is the largest patient organization dedicated to headache in the United States. Its mission is to educate and advocate for the 40 million headache sufferers in this country. The NHF website is the most targeted in the world with more than 12,000,000 visits per year. Because of our mission to Cure Headache and End Its Pain and Suffering, we would like to comment on the recent ICER report regarding the calcitonin gene-related peptide (CGRP) monoclonal antibodies in the prevention of migraine headaches.

Migraine is not a trivial illness. It is the number one cause of disability among neurologic disorders worldwide. Migraine has an enormous impact on the lives of persons afflicted with the disorder causing missed work days, time away from family, and profound suffering of these individuals. Clearly, migraine is not just a headache. On the contrary, it is probably best characterized as a disruption of normal brain activity that leads to a constellation of symptoms impacting the entire body. Can you imagine experiencing repeated episodes of up to 72 hours of continuous, crushing head pain with extreme nausea, vomiting, as well as light and noise sensitivity that worsens with even the most minimal amount of physical activity? This is the life of the typical migraine sufferer. And to make matters worse, these attacks occur unpredictably but relentlessly during the prime working/family years of life. Even between migraine episodes, the migraine sufferer's quality of life is hindered by numerous other comorbid disorders such as depression, anxiety, asthma, allergies, sleep disturbance, and other pain conditions. All of this needs to be considered when describing the impact of migraine on the individual.

The NHF recently conducted an online survey of almost 1800 persons with migraine and found that two-thirds of responders were not satisfied with their current preventative therapies. One of the most common reasons for discontinuation of a preventive therapy was side effects such as weight gain, memory loss, fatigue, dizziness upon standing, and kidney stones. It is not uncommon for persons with migraine to try two to four preventative therapies before finding the one that is most effective. Each preventive trial may take 3 to 4 months or more to determine if it is effective. It may take years to successfully navigate the quest for effective, well-tolerated preventive medications for migraine. Clearly, there is a significant unmet need for preventive therapies in this population.

The Calcitonin Gene Related Peptide (CGRP) monoclonal antibodies represent the first preventive therapy developed for the prevention of migraine in the last 35 to 40 years. These agents have a low side effect profile and substantial improvement has been observed in less than one week after starting these medications. Across studies, the CGRP antibody class provides a 50% reduction in the frequency of migraine days in approximately 35 to 60% of individuals with both episodic and chronic migraine headache.

The NHF has concerns about several issues related to the ICER report concerning CGRP monoclonal antibodies.

1. The impact of migraine on an individual is not fully represented in the ICER report's current models. They do not account for the impact of the prodromal symptoms that may occur several days before the migraine attack, which themselves can impair quality of life. They also do not account for the impact of psychiatric disorders that may result from attacks of migraine headache that are not adequately treated by existing preventative therapies.

2. Both acute and chronic migraine are compared to onabotulinum toxin A in the report. Since this therapy is not indicated for episodic migraine, this represents an inadequate comparator for these analyses.

3. A more appropriate comparator would have been currently indicated preventative therapies for episodic migraine as well.

4. We are concerned that analyses were performed separately for only two groups of migraine patients – those with episodic and chronic migraine. This dichotomization may not be entirely justified as those with high migraine frequency (10 to 15 days per month) have a similar disability to those with chronic migraine. We understand that these population definitions are not conceived or implemented by ICER, but we feel that though they may be useful for clinical trial design, they have little applicability in the real world. The ICER report should take this into account.

5. The effect of migraine on a given individual depends not only on the frequency of migraine days, but on the effectiveness of their abortive treatments that can vary from patient to patient. Models should have been done to stratify for differential response rates to abortive medications.

6. Opioids are frequently used to treat persons with migraine, which can lead to abuse and dependence in a small percentage of persons with migraine. These costs should have been included in the economic analyses. We feel that the CGRP antibodies could play a significant role in reducing the impact of the opioid crisis in the U.S.

7. The current economic analysis includes costs for every person started on CGRP monoclonal antibodies and assumes all individuals will continue on this medication for 1 year. One year might be too long of a time period to assess efficacy. You may want to limit its use to 6 months in the analysis, which would be a more appropriate duration for a preventive trial.

8. It is likely that only 40 to 60% of those with migraine may actually be responders (e.g. those with a 50% or more reduction in migraine days) to this therapy. Costs will be much lower in this group as response rates are much higher. You may want to consider performing a separate analysis in the responders to determine cost per quality of life year saved. This will be much more reflective of ongoing costs for CGRP monoclonal therapies.

There still remains significant suffering encountered by persons with migraine in part due to inadequate preventative therapies. The NHF does not endorse the promotion of any specific CGRP medication, but we certainly share in the excitement of the advent of the first ever migraine specific prophylactic medications to be made available to our constituency. Accordingly, the NHF wants to ensure that persons with migraine have appropriate access to these medications if deemed reasonable by their physician. We believe that there are significant limitations to the current ICER report that must be considered when interpreting its results regarding CGRP monoclonal antibodies. We further hope to provide these additional comments in an effort to shed additional light on the topic, ultimately assisting many migraine sufferers who struggle to live normal lives.

Sincerely,

Seymour Diamond M.D.

Seymour Diamond, MD
Executive Chairman and Founder

Society for
Women's Health
Research

May 8, 2018

Submitted electronically to: publiccomments@icer-review.org

Steven D. Pearson, MD, MSc, President
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Dear Dr. Pearson:

The Society for Women's Health Research (SWHR) appreciates the opportunity to provide input to the Institute for Clinical and Economic Review (ICER) on a range of chronic, debilitating, painful conditions disproportionately or exclusively affecting women.

SWHR, a nonprofit organization based in Washington, DC, is widely recognized as a thought leader in promoting research on biological differences in disease and eliminating imbalances in care for women through science, policy, and education.

SWHR appreciated the opportunity to submit an open input letter on migraine to ICER on November 30, 2017, and continues to closely follow the methodology ICER is employing to assess the effectiveness and value of calcitonin gene-related peptide (CGRP) inhibitors, the new class of preventive therapies for episodic and chronic migraine.

As we stated in our previous letter, because women are disproportionately affected by migraine, any value assessment of new therapies for migraine, including ICER's, must take into account sex and gender differences as well as the unique patient experience, disease burden, and impact to society.

Current preventive treatment options are suboptimal for many patients, and there has been no real innovation in the past two decades in migraine prevention. No preventive drug class currently available has been designed to specifically prevent migraine. New treatment options are long overdue.

The Burden of Migraine on Women

Migraine is one example of a chronic, debilitating, painful condition that affects women differently than men.[1] Migraine is three times more common in women than men, and the pathophysiology, presentation, and management of the disease is different in women and men. Migraine ranks as the second leading cause of global burden of disability, making it a serious public health issue with social and economic consequences. SWHR urges ICER to consider the burden of migraine on women as it prepares to finalize its model and valuation of CGRP inhibitors:

1) **Peak prevalence for women with migraine occurs during one of the most active stages of their lives.** The peak occurs between 30 and 39 years of age, a time when many women are at the height of their careers and balancing work, family, and social obligations.[2]

2) **Women experience migraine differently than men.** Women are more likely than men to experience longer and more intense migraines, report more migraine-associated symptoms such as nausea and visual aura, and have higher levels of headache-related disability.[3,4]

3) **Women with migraine have more comorbid conditions than men with migraine, with an average of 11 and 5 comorbid conditions, respectively.**[5] In addition, certain comorbid conditions are more prevalent in women and others more prevalent in men. For example, research shows women are more likely to have comorbid psychiatric conditions such as depression and anxiety, whereas men are more likely to have comorbid somatic symptoms such as obesity and blurred vision.[6,7] Restless leg syndrome is comorbid with migraine and is approximately twice as prevalent in women.[8,9,10,11]

4) **Female sex hormones play a large role in the development of migraine and are likely contributors to observed differences between women and men in this disease.** Nearly two-thirds of all people with migraine have hormonal triggers, and these factors are part of what makes migraine more common in women.[12,13,14]

5) **Women account for 80 percent of direct and indirect costs associated with migraine in the United States, which are upwards of $78 billion each year.**[15,16,17] Migraine can be disabling and costly for patients, employers, and society as a whole.[18] Most of these costs are indirect, with lost productivity (presenteeism and absenteeism) playing a large role.[19]

6) **Seeking and receiving care for migraine varies by gender.** Women are more likely than men to receive a migraine diagnosis, but less likely than men to receive appropriate treatment.[20,21]

Key Issues and Recommendations on ICER Migraine Draft Evidence Report

SWHR has the following concerns about the methodology ICER employed to analyze the potential budget impact of CGRP inhibitors.

1) **Because migraine is more common in women and affects women differently than men, data should be stratified by sex.** In previous reports, ICER has shown a willingness to stratify the cost-effectiveness results by subpopulation. Given the ways that migraine and migraine treatments affect women differently than men (as described above), we strongly encourage ICER to stratify the final results of its cost-effectiveness analysis (CEA) by sex.

2) **Migraine quality of life data used in ICER's analysis may not adequately capture the disproportionate effect this disease has on women.** The Headache Impact Test 6 (HIT-6) and Migraine Disability Assessment Test (MIDAS) are two of the most commonly used quality of life questionnaires for migraine, but they are not without flaws.[22,23,24] For example, the HIT-6 and MIDAS ask about the quality of life from the past four weeks and three months, respectively, which may not appropriately capture lost productivity and missed work that occurred *prior to* these windows of time. Importantly, these instruments only evaluate the effects on the person with migraine and only *during* attacks, meaning the burden of migraine on the family is not adequately captured, nor is the burden of disease *in between* attacks. Individuals with migraine may have lost productivity and/or miss family or social obligations in between migraine attacks because of prodromal symptoms or anxiety about the uncertainty of the next attack.

   Limitations in the current quality of life measures for migraine are important for ICER to recognize and account for in its analysis given the significant effects migraine has on physical, emotional, and social aspects of daily life for women.

3) **CEA based on quality-adjusted life years (QALY) may not adequately capture the differences in preferences and clinical characteristics of women with migraine.** While we recognize that ICER has committed to using CEA as the basis for its value framework, we would strongly encourage ICER to develop novel approaches to assessing value. Many stakeholders have acknowledged the limitations of QALY-based CEA, particularly in accounting for heterogeneity.[25,26] Women with migraine vary in age, employment, caregiver status and socioeconomic status. A simple cost-effectiveness ratio cannot capture those differences.

4) **Flawed assumptions used by ICER regarding the price of migraine treatments may have significant implications for a woman's access to care.** ICER's estimation of the budget impact of migraine treatments (and therefore the number of women and men who can access treatment) is based on the wholesale acquisition cost (WAC) of a drug. Not taking the rebates and discounts frequently negotiated between payers and pharmaceutical manufacturers into account may lead to inaccurate estimations of the budget impact of these

treatments. Similarly, the CEA appears to be based on a placeholder WAC estimate, which is likely to result in incorrect estimates for the value of these treatments.
If payers rely on flawed estimates, it could have significant implications for women's access to important treatments for migraine. We encourage ICER to consider accounting for likely rebates and discounts in its estimates.

5) **ICER's analysis should accurately reflect the direct health care costs of migraine.** Emergency department visits, hospitalization, and therapeutics are the main direct cost drivers of migraine. An underestimation of their combined costs will result in an incorrect valuation of CGRP treatments. We urge ICER to conduct robust sensitivity analysis around medical resource use and direct cost estimates using published sources.

Migraine prevention with appropriate treatments has the potential to improve health quality significantly and thus reduce the burden of migraine on individuals, families, and employers. We urge ICER to refine its methodology so model estimates can fully reflect improvements in a woman's quality of life and work productivity as a result of CGRP inhibitor intervention. Recognizing the full potential of this new class of preventive treatment options for migraine sends a strong signal to payers to scrutinize patient access to innovations that may correct suboptimal care for many women.

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Thank you for considering the above input as ICER finalizes its evidence report of therapies for migraine. We look forward to serving as a resource on this and other topics affecting women's health.

If you have questions or if we can provide further information to inform ICER's value assessment, please contact Sarah Wells Kocsis, Vice President of Public Policy, at 202.496.5003 or swellskocsis@swhr.org.

Sincerely,

Amy M. Miller

Amy Miller, PhD
President and Chief Executive Officer
Society for Women's Health Research

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May 3rd, 2018

<u>VIA Electronic Mail</u>

Steven Pearson, MD
Institute for Clinical and Economic
Two Liberty Square, Ninth Floor
Boston, MA 02109

RE: Comments submitted during the Open Input Period for the ICER Draft Evidence Report for Migraine Prevention.

Dear Dr. Pearson:

Allow me to introduce myself to you. I am Director of the Headache Center of Southern California. Previously, I was Chief of neurology at Kaiser Permanente, San Diego. While at Kaiser Permanente I helped to establish 18 headache centers across southern California. I am the founder of the largest private practice headache center in California. I was the founding and two-term former Chair of the American Headache Society Special Section: Peripheral Nerve Block & Other Interventional Procedures for Headache & Facial Pain. I also served as Chairman of the Bioethics Committee at Kaiser Permanente. I have authored extensively in headache science and received the American Headache Society Member's Choice Award for the Best Paper Published in Headache. I am certified in psychiatry and neurology by the American Academy of Neurology with subspecialty certification in headache medicine. I am a fellow of the American Headache Society.

I am writing to you concerning the ICER Evidence Report for Migraine Prevention. Migraine is both highly prevalent and disabling[1] and affects 1 in 7 Americans annually.[1,2] While we have made great progress in the treatment of migraine, there are still many migraine patients who could benefit from new treatments.[1]

While I am pleased that the International Burden of Migraine Study (IBMS)[3] was referenced in the report, I am concerned that the data for headache pain severity have been misinterpreted and as a result, used incorrectly by ICER. The data cited in the IBMS publication represent responses to the survey question, "When your most severe type of headache is at its worst, how severe is the pain?"[4] The respondents' data **did not** represent the proportions or frequency of migraine attacks or days with attacks that were mild, moderate, or severe, as shown in Table 4.3 of the Draft Evidence Report.

As the first author of this paper and on behalf of my co-authors, it is important for me to highlight that the way these data have been used in the ICER model results in an error in ICER's evaluation and significantly overestimates the proportion of migraines that are severe in the patient population, because a patient who experienced one severe migraine is counted as though all the patient's migraines are severe. The IBMS survey question is not an appropriate data source to inform ICER's assumption of the distribution of severity for the cost-effectiveness evaluation of migraine preventive treatments.

I recommend that ICER use an alternate source of data, specifically daily diary data reported at baseline from clinical trials of migraine preventive treatments. Daily diary data from trials more accurately represents the distribution of migraine severity in the patient population of interest for ICER's evaluation. In addition, the distributions are fairly consistent across trials.

I appreciate your consideration of these comments and look forward to the final report. Please feel free to contact me for any further clarification you may need from me on the issue outlined in this letter.

Sincerely,

ABlumenfeld.

Andrew Blumenfeld, MD
Director
Headache Center of Southern California
6010 Hidden Valley Road, Carlsbad, CA 92011.

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AIMED ALLIANCE
Alliance for the Adoption of Innovations in Medicine

May 8, 2018

Steven Pearson, MD
Institute for Clinical and Economic Review
2 Liberty Square, Ninth Floor
Boston, MA 02109

Dear Dr. Pearson:

The Alliance for the Adoption of Innovations in Medicine ("Aimed Alliance") is a nonprofit organization that works to expand access to quality health care in the U.S. On behalf of Aimed Alliance, I respectfully submit the following comment in response to the "Calcitonin Gene-Related Peptide (CGRP) Inhibitors as Preventive Treatment for Patients with Episodic or Chronic Migraine: Effectiveness and Value Draft Evidence Report," ("Migraine Draft Report") published by the Institute for Clinical and Economic Review ("ICER").

Over 37 million Americans have migraines, with two to three million individuals experiencing chronic migraines.[1] Despite common misperceptions, migraines are not just "bad headaches"—they are a major cause of disability, with symptoms such as severe pain, nausea, vomiting, light sensitivity, throbbing, and visual disturbances.[2] When left untreated, more than 91 percent of individuals who experience a migraine are unable to function.[3] Given that 63 percent of individuals with migraines have an attack one or more times per month, the condition can substantially limit the ability to lead a normal life, maintain relationships, and sustain a sense of well-being.[4] Coverage of migraine treatment is of vital importance, and therefore, we make the following recommendations regarding the Migraine Draft Report.

A. ICER Must Consider Patients' Perspective

While ICER acknowledges the patient perspective, it should incorporate the direct and indirect costs to patients into its calculations. As ICER notes in the Migraine Draft Report, patients expressed that migraine disorders prevent them from living normal lives. They often experience depression, anxiety, and difficulties in interpersonal relationships.[5] One study found that as many as 40 percent of patients with migraines also experienced depression, and that depression often preceded the migraine diagnosis.[6] The economic costs of depression and anxiety are among the highest of any health conditions in the workforce.[7] Yet, only one study considered by ICER evaluated patients with such comorbidities.

Additionally, migraines can impact an individual's ability to make a living. In addition to missed

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[5] https://icer-review.org/wp-content/uploads/2017/11/ICER_Migraine_Draft_Report_041118.pdf
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[7] https://www.ncbi.nlm.nih.gov/pubmed/19369892

work days or loss of productivity, many individuals are unable to attend school due to their migraine disorder. School absenteeism should be taken into account because the inability to finish a degree significantly impacts an individual's ability to make a living. Moreover, unemployment rates are high due not only to the inability to work during an episode, but also from the resulting stigmatization and feelings of frustration, depression, and isolationism.[8] Additionally, due to the loss of productivity at work, individuals may not eligible for the promotions that their peers receive. These factors should be considered in the indirect cost analysis.

B. Use of QALYs Is Inappropriate

Aimed Alliance reiterates its longstanding recommendation against relying on quality-adjusted life year ("QALY") measures to evaluate preventive migraine treatments. The use of QALY measures to evaluate migraine disorders raises significant ethical concerns. QALY measures put a price tag on the value of a human life that merely reflects the individual's diagnosis and deems those with chronic, debilitating, and rare conditions, as being worth less than those with common diseases. They treat individuals' lives and health as a commodity and ignore patients' and practitioners' individualized concept of the value of treatment.

As ICER acknowledged, individuals with migraines often have difficulties obtaining coverage of their treatment. Health plans may impose high copays, prior authorization, step therapy, or pill quantity limits on coverage.[9] As a result, patients ration their medications, and this lack of adherence to a treatment plan can result in deteriorating health and adverse events.[10] In fact, those who cannot access their medications are more likely to attempt to access opioids.[11] QALYs are used to justify coverage limitations that prevent individuals from obtaining treatments most appropriate to their individualized needs. For these reasons, we recommend against using QALYs.

C. A Value Assessment Is Premature

While clinical trials have provided evidence of the safety, effectiveness, and value of CGRP inhibitors, these treatments are still in their infancy. The U.S. Food and Drug Administration has not yet approved any CGRP inhibitors, and therefore, none are for sale in the U.S. market yet.

Over time, valuable data will fully emerge in clinical practice. However, if CGRP inhibitors are deemed inadequately cost-effective now, then the likelihood of third-party payers covering these treatments without imposing significant benefit utilization management policies increases, creating barriers to access for individuals who need them. Without market uptake, data cannot be collected and analyzed. Therefore, we recommend that ICER refrain from making a determination on the value of treatments until mature data emerges.

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[9] https://icer-review.org/wp-content/uploads/2017/11/ICER_Migraine_Draft_Report_041118.pdf
[10] https://americanmigrainefoundation.org/understanding-migraine/role-adherence-triggers-headache-management/
[11] https://www.webmd.com/migraines-headaches/news/20171018/skip-opioid-treatment-for-migraine-in-the-er#1

D. Conclusion

Thank you for the opportunity to comment on the Migraine Draft Report. We are available for discussion to address our shared goals of access to high quality health care at a price that accurately reflects public and personal benefits in the final version of adapted methods.

Sincerely,

Stacey L. Worthy
Counsel

CHAMP
Coalition For Headache
And Migraine Patients

May 8, 2018

PUBLIC COMMENT FROM CHAMP ON ICER'S DRAFT EVIDENCE REPORT ON CGRP INHIBITORS

Submitted electronically to: publiccomments@icer-review.org

Steven D. Pearson, MD, President
Institute for Clinical and Economic Review
Two Liberty Square, Ninth Floor
Boston, MA 02109

Dear Dr. Pearson:

The Coalition For Headache And Migraine Patients (CHAMP) is writing in response to the Draft Evidence Report (DER) that ICER published on April 11, 2018 covering the new class of CGRP inhibitors as migraine preventive medicines. CHAMP was formed in July 2017 to serve as a convening and organizing entity to unite the migraine and headache patient advocacy community. CHAMP focuses on enhancing communication, coordination and collaboration for the benefit of patients and caregivers that are confronting headache, migraine and cluster diseases.

We are disappointed that ICER declined our request that the CTAF Voting Panel include a migraine patient and a headache specialist physician. In medicine, it just doesn't make sense to exclude both patients and disease specialists from making determinations that impact care. Because the CTAF Voting Panel does not have a personal or specialist understanding of migraine disease, this is why we have been so active in engaging people with migraine to share their stories and struggles with ICER, so those who vote better understand the widespread and desperate need for access to improved migraine medicines.

CHAMP has worked collaboratively with the Headache and Migraine Policy Forum (HMPF) on the joint letter they are submitting on behalf of the migraine patient advocacy community. The HMPF joint letter contains our most important critiques of the DER and I encourage ICER and the CTAF Voting Panel to give those points careful consideration and adjust the model and inputs accordingly.

This letter is intended to be a supplement to the HMPF joint letter, sharing an important study we recently became aware of, and also providing feedback on the Draft Voting Questions (DVQs).

Ensuring the ICER Model Has Appropriate Discontinuation Rates

CHAMP is very concerned about how the DER models discontinuation rates for CGRP inhibitors. The model assumes that all patients will stay on the CGRP inhibitors for a year, minus a small discontinuation rate of those who experience adverse side effects. The importance of this model choice is that the DER assumes many patients who are experiencing little or no benefit from the CGRP inhibitors will stay on them for the full year, which adversely skews the cost-benefit analysis.

It is well known that many patients fail to take prophylactic medication for sustained lengths of time. The HMPF letter shares data about high discontinuation rates by migraine patients for the preventive medicines topiramate, amitriptyline and divalproex sodium. It is our understanding that the DER does not include discontinuation rates from those who aren't experiencing medicine efficacy because supposedly studies with Botox don't show high discontinuation rates. While it is true that the PREEMPT Phase 3 studies for Botox did have high completion rates of about 90%, a recent poster presented at the American Academy of Neurology conference in Los Angeles looked at real-world and longer-term usage rates of Botox and this data is a better predictor of what ICER should model for CGRP inhibitors.

The poster was titled, "Long-Term Safety and Tolerability of OnabotulinumtoxinA Treatment in Chronic Migraine Patients: COMPEL Analysis by Treatment Cycle." The authors are Paul K. Winner, Andrew M. Blumenfeld, Eric J. Eross, Amelia Orejudos, Aubrey Manack Adams and Mitchell F. Brin. This COMPEL analysis is a post-approval study looking at OnabotulinumtoxinA treatment by 716 enrolled participants over a 108-week period. Only 52.1% of the enrolled patients completed the study, meaning that there was a discontinuation rate of almost half over the less than two-year time period. The study provides information about the causes of discontinuation, and lack of efficacy (4.9%) was a higher cause of discontinuation than adverse events (3.5%).

This COMPEL analysis reinforces that discontinuation rates for migraine preventives are high and that lack of efficacy is a bigger factor than adverse events. Therefore, it is misleading to assume that all patients who try CGRP inhibitors will use them for a full year (minus a small rate of those who experience adverse events). Instead, the patient population on CGRP inhibitors will over time self-select towards including a higher percentage of patients that are positively responding to the medicines (while non-responders stop taking medicines that aren't providing any clinical benefit for them). The ICER model must be updated to reflect that patients who are not experiencing benefit from CGRPs will discontinue use over the course of a few months. We suggest the model and medical practice allow for six months of opportunity for patients and doctors to determine the effectiveness of CGRP inhibitor treatments for individual patients.

FEEDBACK ON THE DRAFT VOTING QUESTIONS

For the first two sections of DVQs on Clinical Evidence (questions 1-3 and 4-5), CHAMP suggests that the questions should be phrased more specifically to say, "patients that have been failed by two or more other migraine treatments." As detailed in the HMPF joint letter, it is our understanding that payors will likely require two levels of step-therapy prior to approving access to these CGRP inhibitors. While step-therapy (also known as fail-first) is a process that we generally disagree with, if it is what the payors will require, then this is the population that should form the base case for ICER's analysis. Compared to patients with just one documented failed therapy, this will have the effect of reducing the efficacy of the placebo, while the efficacy of the CGRP inhibitors stays consistent, resulting in a higher efficacy rating for the treatment.

We understand that there are limitations in the clinical trial data that is available to ICER, but we request that an analysis of CGRP cost-effectiveness also be conducted for the sub-population of high-frequency episodic migraine patients (10-14 headache days per month). Multiple pieces of research establish that high-frequency episodic migraine patients are more similar to chronic migraine patients in the disability and functional impact of their migraine disease, than they are to low-or-medium-frequency episodic migraine patients.

For Question 6, we request the specific addition of two "other benefit(s)" to be voted on:

"This intervention will reduce the exposure of migraine patients to opioids and the risks and costs of substance abuse disorders that are associated with opioid treatment."

"This intervention will reduce the incidence of co-morbid conditions with migraine, and these co-morbid reductions will contribute to reducing health costs and increasing quality of life."

CHAMP is eager to work with all stakeholders to advance better treatment options and robust therapeutic access for people with migraine disease. We encourage ICER and the CTAF Voting Panel to carefully consider the issues and implement the suggested changes in the HMPF joint letter and this letter from CHAMP. We look forward to continuing to engage with ICER throughout this important review of an exciting new treatment option for people with migraine.

Sincerely,

Kevin Lenaburg
Executive Director
Coalition For Headache And Migraine Patients (CHAMP)
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May 7, 2018
Submitted electronically to: publiccomments@icer-review.org

We wish to thank ICER for allocating time for patient groups to comment on its latest Draft Evidence Report on erenumab for migraine. We have participated in several of these public comment sessions, and are always hopeful that our thoughts on how to better respect patient needs will be followed.

As you know, we have substantial differences of opinion regarding your mission and its inherent lack of objectivity which makes ICER more payer-centric than patient-centric. Understanding this bias, we offer these comments. We have funded our own travel here today, and are representing migraine patients.

First a review of our previously-stated objections to ICER methodology which is used in all studies we are familiar with:

1. ICER's use of short-term or under-represented studies to create economic models. If we put this process into practice and looked at just Dr. Pearson and GHLF's Director of Digital Content and Advocacy, we would conclude that all men are balding (we looked at two), and they have been since birth (we looked at them for a few seconds). This is the result of short-term, under-represented studies.

2. ICER's exclusion of indirect costs associated with disease such as decreased or increased productivity, and the emotional burden on patients, caregivers, family, employers and society. Even in this room, the rent is reflective of the cost to construct it, maintain it, clean it, repair and replace the furniture. If the rent were based on the cost of the utilities alone, the fee would be dramatically lower, but landlords know it is prudent to include indirect as well as direct costs.

Specifically addressing the Draft Evidence Report on erenumab for migraine, we have concerns that can potentially translate into poor care for patients if they are not addressed.

Perhaps ICER will follow NICE's lead, as it has in many other instances, and invite commenters to advocate for indirect costs for migraine not only in its scenario analysis but in its base case, too.

However, our concerns go deeper than indirect costs. We are questioning the value assigned to direct costs. Because of your opacity, we don't know why or how ICER chose to assign a ridiculously low dollar amount to a migraine patient emergency department visit. Less than $500 is not a number anyone, much less a self-admitted data-driven group such as ICER, would credibly apply to a visit to an emergency room for any health issue. Four years ago, a 2013 National Institute of Health study put the median ED cost at $1,233. This was 40 percent higher than the average rent payment in the United States then. No one doubts that ED costs have risen since the 2013 NIH study.

Starting with an unreasonably low ED visit cost is only the beginning. ICER has chosen to base its study on patients from the IBMS study with 2-3 migraine episodes a month. The CGRP study group has 8-9 episodes per month. Two episodes a month would usually not even qualify a patient for a CGRP drug. Focusing on ED visits alone, we must conclude that the difference between two and eight episodic patients will result in more ED visits, regardless of the cost basis used in the model. So not only is the individual cost understated, but the number of patients potentially visiting the emergency room who could be helped by a CGRP class drug, is, too.

Worse for patients, this is not an oversight. You, ICER, are not going to say, “good point, that never occurred to us. Let’s modify this so it more accurately reflects the disease, the eligible patients, and the treatment protocol we are studying.”

It is not an oversight. You designed the study this way – to disadvantage patients who need this drug class the most, and provide cover for payers who need to justify not respecting prescriptions written for the drug class.

Migraine is a disease without a bulwark of data. It was a headache, take-an-aspirin malady until a few years ago. Today there are only approximately 500 headache specialists in the United States to treat an estimated 39 million migraine patients. We invite ICER to join us in University-partnered research on migraine so we can all benefit from better decisions as a result of better and more complete data.

One area bereft of data is the impact of migraine on productivity. We have a much better sense of the impact of arthritis, diabetes, obesity, and even social media, on productivity than we do for migraine. But a lack of data is not a license to estimate low or high. It demands a responsibility to engage in range estimation. ICER is not doing this when it comes to looking at the benefit of the cost of a migraine day avoided – either directly or indirectly. Neither is ICER doing this when it calculates, or ignores, the personal, societal and economic impact of a migraine recovery day/days and the fear of a trigger or an attack.

As with our previous public comments, we are opposed to ICER’s methodology as well as its appearance of objectivity, and while we are concerned about being a player in a melodrama with a dramatic arc that consistently ends at the same pro-payer, anti-patient point, we submit these comments in the spirit of improving the process that brings life-saving and life-changing medications to patients.

The Headache
& Migraine
POLICY FORUM

May 8, 2018

Submitted electronically to: publiccomments@icer-review.org

Steven D. Pearson, MD, President
Institute for Clinical and Economic Review
Two Liberty Square, Ninth Floor
Boston, MA 02109

Dear Dr. Pearson:

The Headache and Migraine Policy Forum (HMPF) appreciates the opportunity to comment on the Institute for Clinical and Economic Review's (ICER) Draft Evidence Report (DER) on therapies for migraine prevention. HMPF is a group of diverse stakeholders who work to advance public policies and practices that promote accelerated innovation and access to treatments for headache and migraine patients. A recent study shows that migraine disease is the second leading cause of all global disability and neurological burden indicating that in the U.S., approximately 47 million Americans experience migraine attacks, with about 3 million experiencing migraine attacks 15 or more days per month."[i] There exists an urgent need for improved migraine therapeutics.

We appreciate ICER's intent to seek multi-stakeholder input as part of its process to assess the value and effectiveness of different migraine therapies. HMPF has previously submitted correspondence to ICER on several recurring issues with its value assessment framework. We also understand that CTAF Voting Panel members will be provided these public comments but may not have access to previous materials unless requested; we encourage them to review them. They are:

- November 23rd – HMPF Response to Draft Scoping Document
- December 20th – HMPF Response to Final Scoping Document
- March 23rd – HMPF Additional Data Submission to ICER

HMPF remains concerned that the current DER quantitative model does not adequately assess the true cost of migraine and neglects to consider important data (included herein). We therefore respectfully request that ICER amend its report to address the following:

Use of QALY Leads to Insufficient Consideration of the Patient Definition of Value.

As stated previously, HMPF does not support the use of QALY as a methodology for a value assessment that is meaningful to patients. For persons with migraine and other chronic and disabling diseases there is a delicate balance between quality and quantity of life. The use of QALY has been found to be discriminatory against people with disabilities by the U.S. Department of Health and Human Services.[ii] Migraine patients are more than twice as likely to be disabled compared to those without migraine.[iii] QALYs result in lower ICER valuations for regenerative or life-enhancing therapies. We emphasize that any therapy that improves outcomes for the migraine patient population that is chronic or high/medium-frequency episodic or poorly responds to existing therapies has tremendous value to this community. It is important to understand that migraine is not a homogenous disease that all patients experience similarly. People with migraine have different symptoms, severities, limitations and responses to treatments. The migraine experience of individual patients often varies over time. This is why it is essential that migraine patients and their doctors have access to the full range of treatment options to find and use the care that best manages their specific migraine disease.

For individuals living with migraine, the return on investment from more time with loved ones, a higher quality of life, and increased productivity in both work and home life has great worth. HMPF respectfully requests that ICER utilize a more patient-centered approach that assigns value to endpoints that represent shorter, incremental gains that may be more meaningful to patients.

The DER Unfairly Discounts the Indirect Costs and Societal Burden of Migraine.

We are encouraged that the ICER value framework includes both quantitative and qualitative comparisons across treatments to ensure that the full range of benefits and harms - including those not typically captured in the clinical evidence such as innovation, public health effects, reduction in disparities, and unmet medical needs – but remain concerned that the framework does not adequately address the immense indirect costs and societal burden of migraine. Direct costs are far exceeded by indirect costs to employers including missed work and presenteeism (loss of productivity)[iv]; *the loss of productivity can be up to 70% of the total costs of migraine, a staggering number.*[v] This is further exacerbated by the fact that migraine prevalence occurs during the most productive work years (ages 30-49)[vi] for many female patients already experiencing a wage gap.

The DER Does Not Accurately Model the Likely Patient Population Or Discontinuation Rates That Will Occur in the Real World, Which Skews Both the Efficacy and Cost Sides of the Analysis.

HMPF is concerned that the DER models a migraine patient population that has failed one other treatment. We know that many migraine patients have been failed by multiple preventive treatments and that payors are likely to restrict access to CGRP inhibitors to patients that have failed at least two other treatments (a restriction with which we disagree). This issue matters because the CGRP studies show an important difference in the placebo efficacy based on how many past failed treatments patients had experienced. For patients who had two or more past failed treatments, the placebo efficacy rate was significantly lower (presumably because they have less faith in medicine because they have been disappointed before), thus showing a significantly higher efficacy rate for CGRP treatment. We request that ICER update the baseline scenario model so that it focuses on patients that have been failed by two or more preventive treatments, which we believe is more likely to match the real world patient population that uses these new medicines.

HMPF is also concerned with how the DER models discontinuation rates for CGRP inhibitors. The model assumes that all patients will stay on the CRP inhibitors for a year, minus a small discontinuation rate of those who experience adverse side effects. The importance of this model choice is that the DER assumes many patients who are experiencing little or no benefit from the CGRP inhibitors will stay on them for the full year, which adversely skews the cost-benefit analysis. It is well known that many patients fail to take prophylactic medication for sustained lengths of time. Based on data from pharmacy claims, more than half of patients discontinue migraine prophylactic treatment by 2 months. The rate of topiramate treatment persistence at 2 months in one study was 46.4%, and the treatment persistence of other common preventatives such as amitriptyline (34.1%) and divalproex sodium (42.7%) were even lower.[vii] Another study showed that the top reason for discontinuation of migraine preventives is not side effects, but rather lack of effect.[viii] These studies clearly demonstrate that discontinuation of migraine preventive medicines is very high and lack of efficacy is the top reason for discontinuation.

Therefore, it is misleading to assume that all patients who try CGRP inhibitors will use them for a full year; rather, the patient population on CGRP inhibitors will likely self-select towards over-representation of those who are responders - thus increasing the value of the medicines. The DER model must be updated to reflect that patients who are not experiencing benefit from CGRPs will discontinue use over the course of a few months. We suggest the model and medical practice allow for six months of opportunity for patients and doctors to determine the effectiveness of CGRP inhibitor treatment.

HMPF is also concerned that the DER does not provide an accurate comparison due to incomplete data. Phase 3 trials include data comparing CGRP inhibitors to placebo, but there is no head-to-head data within the drug class. There is also no direct data of CGRP inhibitors compared to the existing preventive therapies; importantly, *Botox* is only approved for chronic migraine, so it also cannot be a comparator for the episodic sub-population of migraine patients. Due to the fact that many migraine patients have failed on multiple preventives, using these as comparators to the CGRP blockers is meaningless for patients who know from experience that these therapies are not effective (and therefore cost *in*effective).

The DER Underestimates the Impact of a Severe Migraine Attack and Uses Wrong Utility Value for a Comparator Non-Migraine Day.

The DER model uses utility values (derived from the Xu study) that do not accurately capture the patient experience of a severe migraine attack. On a 0 to 1 point scale, a severe migraine day renders someone functionally much closer to a 0 (severe pain, limited to a dark and quiet room, cognitive impairment, unable to work or engage in household/family responsibilities) than the 0.440 score that ICER is using. We request that other studies be consulted and that the utility score of a severe migraine attack be reduced significantly below 0.440.

HMPF is also concerned about the utility value ICER is using in the DER for a healthy day. The DER describes a “Pain-Free Migraine Day,” which has a utility value confidence interval of 0.896-0.967, with an oddly high mean value of 0.959. The whole concept of a “Pain-Free Migraine Day” does not make sense to the patient community. If a preventive medicine eliminates a migraine attack for a patient, then it stops the migraine attack day(s), as well as associated prodrome and postdrome days. An attack averted means that the proper comparison day to the migraine days is a “Healthy Day,” which should have a utility value of 1.000. By not properly scoring the very low utility value of a severe migraine day (should be much lower than 0.440) and not fully valuing the utility of a healthy day (should be 1.000), ICER is under-valuing the efficacy of CGRP inhibitors. Both sides of ICER’s equation must be adjusted, because the impact is significant.

The Omission of Costs Associated with Opioid Use / Abuse Within the Economic Model Unjustly Reduces the Value of New Migraine Therapies.

ICER’s Draft Scoping Document grossly omitted any reference to the opioid epidemic even though it is known that opioids account for nearly 10 percent of total medications prescribed to treat chronic migraine.[ix] HMPF included this in our response to ICER and it was subsequently included in the contextual section of the report *but not the economic model*, which is discouraging.

ICER’s previous migraine assessment of *Botox* in 2014 included significant attention paid to opioid use and the costs associated with long-term use of opioids as rescue therapies[x]. While the DER mentions costs associated with side effects from interventional therapies[xi], it does not explicitly indicate whether opioids and their impact on productivity / non-direct costs (broad costs associated with substance use disorders) would be included in the model, even while acknowledging that “although data are lacking on the long-term impact of CGRP inhibitors on opioid use and addiction, preventive therapies that reduce the number of migraines and acute medication use may also reduce the opioid dependence in this population” (DER p. 83). The ICER model must be updated to account for benefit / cost reduction of reduced exposure to opioids.

Lack of Long-Term Data Should Not Justify Undervaluing New Migraine Therapies.

We are concerned that a premature assessment based on inadequate evidence could result in delayed treatment access for migraine patients who have already waited years for a viable therapy. We are especially concerned that this has in part led to the lower grade of “Inconclusive” for these new therapies.

ICER has used a short time frame (a two year period) to evaluate the long-term impacts from CGRP inhibitors “…because there is a lack of data on the long term use of preventive medications for the management of migraine (DER pp. 52-53). However, ICER is still extrapolating long-term effects from this short-term data, creating unknown biases into its analysis. ICER itself admits “the models were based on clinical trial results that may not hold true for longer time horizons or in particular patient populations different than those seen in the trials” (DER p. 81).

New Data on Co-Morbidities Related to Migraine Should Have a Substantial Impact on ICER’s Quantitative Model Including a New Sub-Analysis on the Link Between CGRP Reduction of Depression.

The costs of treating chronic migraine increase sharply with the number of co-morbid chronic conditions.[xii]

A recent large population, long-term international study (1995-2013) showed higher risks observed among patients with migraine than in the general population.[xiii] Nearly 88% of those with chronic migraine have *at least one* co-morbid condition that has an impact on health care costs associated with the disease, including mental disorders (37%), mood disorders (27%), and arthritis (28%), as well as heart-related problems such as hypertension (24%), hyperlipidemia (18%), and coronary heart disease (9%).[xiv] One of the most expensive co-morbidities associated with migraine is cardiovascular disease including both heart attack and stroke. While medical costs for treating chronic migraine were estimated at $5.4 billion in the United States in 2015, total costs associated with migraine and co-morbid conditions *exceeded $40 billion*.[xv]

Dawn C. Buse, PhD, from the Albert Einstein College of Medicine of Yeshiva University, co-investigator in the Chronic Migraine Epidemiology and Outcomes (CaMEO) Study and American Migraine Prevalence and Prevention (AMPP) Study,[xvi] emphasized the role that co-morbidities may play in chronic migraine treatment:

> In general, people with more co-morbid conditions use greater health care resources including medical appointments, hospitalizations, medications, and even phone calls to providers. Co-morbidities are more common in chronic migraine. They make treatment more complicated and are associated with worse outcomes. I recommend that all providers screen for common co-morbidities and treat or refer as appropriate.[xvii]

Importantly, a sub-analysis of the clinical trial data presented during the American Academy of Neurology Annual Meeting held in Los Angeles last month showed that treatment with a CGRP inhibitor led to reduction in co-morbid depression (critically important as depression is a known indicator of suicide).[xviii] The analysis found that CGRP treatment led to a statistically significant reduction in depression for some of the treatment groups. Using this new data, the DER model should be updated to show the reductions in co-morbidities that result from the use of CGRP inhibitors and the corresponding lower costs of treating these co-morbid health conditions.

In the largest national study designed to examine the association between migraine and suicidal behaviors and the impact of co-morbid mood (depression, anxiety) and stress (PTSD) disorders on this association among a nationally representative sample of adult inpatients from 2007 to 2012,[xix] researchers found that hospitalizations with migraine had statistically significantly increased odds of suicidal behaviors (OR:

2.69; 95%CI: 2.55-2.86; Table 2). After adjusting for confounders, people with migraine had a *2.07-fold increased odds of suicidal behaviors* (95%CI: 1.96-2.19; Table 2). [xx]

Depression, anxiety and, in the case of veterans, post-traumatic stress disorder, are common co-morbidities for patients with migraine. The ICER model should be updated to reflect that the CGRP inhibitors will improve these co-morbid conditions and the benefit / savings of these improvements needs to be factored in.

HMPF appreciates that ICER encourages stakeholders to provide input on potential other benefits and contextual considerations in their public comment submissions but remains concerned that many of these issues do not carry the same weight as its quantitative model analysis.
There is an urgent need for improved migraine therapeutics. Unnecessary suffering and lives will be lost if access barriers are placed in front of migraine patients. ICER has an important role in ensuring payers understand the full value of the therapy.

Thank you for the opportunity to provide input during this process. If you have questions, please contact Lindsay Videnieks, Executive Director of The Headache and Migraine Policy Forum, at (202) 299-4310 or Lindsay@headachemigraineforum.org.

Alliance for Balanced Pain Management
Alliance for Headache Disorders Advocacy
Alliance for Patient Access
American Migraine Foundation
Association of Migraine Disorders
Chronic Migraine Awareness, Inc.
Clusterbusters
Coalition For Headache And Migraine Patients
Danielle Byron Henry Migraine Foundation
Global Healthy Living Foundation
GoldenGraine
The Headache and Migraine Policy Forum
Health Union, LLC / Migraine.com
MigraineAgain.com
MigraineDisease.com
The Migraine Diva
Migraine Ninja
The Migraine Research Foundation
The Migraine Warrior
Migraine World Summit
Miles for Migraine
National Headache Foundation
National Migraine Coalition
Runnin' for Research
SoldierStrong ACCESS
Southern Headache Society
U.S. Pain Foundation

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headsUPmigraine
a national, patient-led activist organization &
member of the Alliance for Headache Disorders Advocacy

We've studied ICER's initial report on CGRP Inhibitors for migraine, and we are deeply concerned by multiple material omissions that skew your conclusions.

1. Your report fails to accurately describe migraine disability and makes no reference to the following facts:

- **Severe migraine ranks in the *highest* category of disability burden, alongside acute psychosis, schizophrenia, terminal-stage cancer, and quadriplegia**, according to the World Health Organization's Global Burden of Disease Report.[1]
- **Migraine suffers have more pain and restriction of daily activities than patients with depression, osteoarthritis, or diabetes.**[2]
- **Migraine far outranks every other neurological disease in years lost to disability. US migraine patients lose more than twice as many years to disability as do patients with ALS, MS, and epilepsy *combined*.**[3]
- **Migraine is the third leading cause of disability for working-age Americans.**[3]

You can't assess the value of CGRP without understanding the severity of disability caused by the disease.

2. **Your report fails to discuss disease progression and chronification.**

This is an astonishing error. Migraine is chronic neurological disease. For some, this disease manifests episodically, but for a significant portion of patients, **migraine is a "clinically progressive disorder" in which "episodes increase in frequency over time until the individual is in nearly constant pain."**[4]

The brain doesn't return to "normal" between migraine attacks because there is no "between": "Interictally, migraineurs have an enduring predisposition to attacks, abnormalities in cortical processing, and impaired health-related quality of life."[5] Each attack makes the brain more susceptible to future attacks. This physiological progression also causes "changes in the central nervous system which manifest themselves through alterations in nociceptive thresholds (allodynia) and alterations in pain pathways (eg, central sensitization)."[5]

Your report fails to mention *either* allodynia or sensitization, which is akin to assessing cancer prevention without ever mentioning metastasis. Allodynia causes migraine patients to feel pain from stimuli that "shouldn't" hurt. Some 80% of migraineurs feel pain similar when their clothes or glasses or hair or husbands touch their skin.[6] We feel pain when we shower or when we're outside on a windy day. We feel pain when sunlight touches our skin. Just as migraine makes more migraine, allodynia makes more allodynia, and as the disease progresses, we experience allodynia not only during attacks, but constantly.

Allodynia is itself responsible for significant disability. I've been housebound by migraine for 13 years in part because simply putting on a shirt or pair of pants can suddenly make light, sound, and smell intolerable and cause blinding pain, not only in my head and face, but in my abdomen, hands, and feet. And if you can't change out of your inside-out pajamas, you can't do much at all. (Facebook migraine groups are filled with discussions about how to find clothes without seams.)

Allodynia targets areas where patients have had injuries in the past. (Since breast cancer surgery 5 years ago, I've had to wear lidocaine patches on my right arm and hand.) But areas of allodynia can crop up anywhere. (For more than a month this winter, I had such severe allodynia in my hands and fingertips that I was unable to type, write, knit, or hold a book. I tried every trick I could—I iced my hands, I made little fingertip protectors out of lidocaine patches, I wore plastic gloves and knit gloves—and nothing worked. Try getting anything done without your hands for 5 or 6 weeks.)

Just as allodynia amplifies migraine, the more allodynia migraineurs suffer, the more their risk of comorbid complications rise. Migraineurs with severe allodynia are more likely to become depressed, for example, and this depression, in turn, exacerbates their migraine. Similar feedback occurs between allodynia and sensory hypersensitivities. In one recent study, allodynia and osmophobia (hypersensitivity to smell) were found to be the strongest predictors of suicidality in migraineurs.[7] The presence of allodynia isn't simply painful. Once it sets in, acute medications like triptans become less effective. Patients disabled by allodynia deserve to see whether CGRP can return them to work, school, and life.

Your report also makes no mention of the *anatomical* progression of migraine, including the presence of brain lesions in patients. Researchers hypothesize that repeated migraine attacks are "associated with permanent neuronal damage," which cause "poor modulation to pain" and contribute to disease progression.[5]

Your final report must include an assessment of CGRP's potential to stall disease progression and protect patients from permanent damage to their brains.

4. Your report fails to detail the complexity of migraine disability, wrongly mistaking one symptom (headache) for the disease.

Because most of the papers cited in your discussion of the disease date back to 2001-08, you're relying on an outdated understanding of migraine. Though officially still classified as a headache disorder, migraine is now understood as a "whole nervous system disease," "primarily affecting the sensory nervous system." During an acute attack, our brains "switch, within a few minutes, from a state of relative equilibrium to one in which there is both spontaneous pain and amplification of percepts from multiple senses."[8] That is, we are suddenly swamped by pain (primarily in the face and head, but also throughout the body) and *simultaneously* completely overwhelmed by our senses.

Torture takes advantage of just such sensory overload: continual high-watt strobe lights and high-decibel sounds produce pain in healthy individuals. Migraine dramatically lowers our threshold for coping with sensory stimuli, so that normal and even very low levels of light, sound, smell become painful and disorienting. The “sensory changes that occur in a migraine attack become a near-constant experience in chronic migraine.”[8]

Your report makes no mention of the following symptoms which are central to the *diagnosis* of migraine: photophobia, phonophobia, hypersensitivity, and allodynia. You omit vertigo, tinnitus, hyperacusis, and aphasia. Absent, too, is the wobble of ataxia, double vision, brain fog, and coma-like deep sleeps. There’s no mention of visual auras that arrive without warning and sometimes end with no pain, but obscure vision so profoundly that my own mother’s life was in jeopardy when aura nearly blinded her while she was driving in heavy, 4-lane traffic.

Absent, too, is any reference to hemiplegic migraine, which mimic stroke with garbled speech and loss of function—“motor weakness”—in parts of the body. For me, this means “losing” my right side quite frequently. One eye refuses to open. I drag my right foot or find it impossible to lift my right leg. My right arm and hand are no longer part of my body, but objects appended to me, and this is particularly disabling for me because I’m right handed. Like *all* HM patients, I’m unable to speak clearly during the hours or the days I lose to the disease, and (again like *all* patients) I’m sometimes unable to speak at all.

I urge your panel to take 10 minutes and visit the HM support groups on Facebook. It will help you better understand why WHO data determined that severe migraine carries the heaviest burden of disability. These motor symptoms—the speechlessness, the “lost” arms and legs and hands—happen *simultaneously* with severe pain and complete intolerance of even minimal levels of light, noise, and smell. Many people with HM are worse off than I am, but no one reading your report would have any clue that these profoundly disabling symptoms are, in fact, *common* among the severely impaired population of patients who are most in need of new preventive therapies like CGRP.

Because you fail to recognize the sensory hypersensitivity that *is* migraine, you have no way of understanding how vitally important an effective preventive treatment like CGRP really is for so many sufferers. In a recent study, patients identified photophobia and phonophobia as the “most bothersome” migraine-associated symptoms (with light sensitivity identified by 66% and noise sensitivity by 57%).[8] Pain can be combatted with ice, analgesics, yoga, meditation, and distraction, but there’s absolutely nothing you can do when low levels of light, sound, smell, touch, and motion are *themselves* painful. If daylight makes you dizzy and sound makes you vomit, you’re part of a club that no one wants to join.

5. While your report acknowledges the many comorbidities of migraine that contribute to disease burden and progression, you omit any discussion of migraine-associated <u>morbidities</u> such as suicide and increased cardiovascular and coronary heart disease mortality.

Migraine patients are at least four times more likely to attempt suicide than controls, and the absolute risk of suicide attempt attributable migraine is as high as 8.6%.[8] Chronic migraine is “an independent risk factor for suicide,” even when the patient has no underlying diagnosis of mental illness. The risk of suicide attempts by migraineurs increases by 79% for each 1 point rise on the standard 10-point pain-intensity scale.[9] Part of my work is suicide prevention. Because many migraineurs are disabled, many have no health insurance. I often ask Congressional staff devoted to constituent services to connect patients with support services in their own communities.

Likewise, your report fails to address evidence suggesting that migraine with aura increases cardiovascular and coronary heart disease mortality. Available data "indicated an increased risk of ischemic stroke in subjects suffering from migraine with aura. In addition, evidence suggests an association between migraine with aura and cardiac disease, intracerebral hemorrhage, retinal vasculopathy and mortality."[10]

Finally, like all disabled people, chronic migraineurs are more likely to be sick but less likely to "receive basic primary and preventive care others take for granted, such as weigh-ins, preventive dental care, pelvic exams, x-rays, physical examinations, colonoscopies and vision screenings."[11]

In their response to your initial report, Amgen notes that migraine "incurs little directly identifiable cost to the payer if left untreated."[12] That's true only if insurers fail to understand the high cost of migraine-associated comorbility and morbidity. In 2013, the car ride to the local hospital for a routine mammogram trigged such a severe migraine that I fell when trying to transfer from the car to my wheelchair. The hospital asked if I could rest and return in an hour, and I agreed to try, but only because I had so many cancelled doctor's and dentist's appointments that I had no idea how I was going to catch up. I was 51 with no family history of the disease. I'd had a baseline screening the year prior and a breast exam the month prior. But if severe migraine had made me skip a year of screening, my insurer would've been stuck with a much higher bill for my care because I had invasive cancer that had begun to metastasize to my lymph nodes.

Your final report must consider migraine-associated mobidity and comorbidity, and it must address the indirect costs of the disease to insurers.

6. Your report fails to address the disability caused by drugmakers who've overpriced triptans and insurers who've instituted artificial and harmful quantity limits on this gold-standard acute therapy.

Despite lifelong chronic migraine, triptans allowed me to earn merit scholarships for an BA, MA, and PhD. All told, universities invested more than $100,000 in my training, and taxpayers kicked in several thousand more through Pell Grants and the National Endowment for the Humanities. I'd recently earned tenure when insurers nationwide began instituting triptan quantity limits, dropping coverage from the FDA-allowable 30 days to 3. Because migraineurs have no other treatment options, insurers can stop covering our medications without seeing their costs rise. As Amgen puts it, migraine is "more expensive to payers when effectively treated."[12] Triptan quantity limits saved insurers $12.25 per patient per month,[13] but cost me my life.

The 3 weeks I went without Zomig before winning coverage on appeal lead to 3 months in bed. I returned to teaching briefly, helped by colleagues who gave me their sick days, by a dean who allowed me to buy myself out of 40% of my workload and, most of all, by my husband (who is still on the faculty), who'd teach in the morning, then spend the rest of the day getting me out of bed, to campus and classes, and then back to bed. After 2 additional 3-month leaves, I finally retired at age 43.

I co-founded headsUP with a group of other women whose lives were cut short not simply by disease, but by the collusion of drug companies and insurers. Pharmaceutical companies continue to overprice *generic* triptans for the US market, charging Americans 10 times what they charge Canadians for the same tab of zolmitriptan and 135 times what they charge UK consumers (see table). Insurers initially covered triptans for use at up to 30 days per month, since the only set dosage was a daily limit. But as more doctors and patients discovered the remarkable benefits of a drug that helped stave off disability, insurers went looking for a way to cut costs. Patients with more than 3 migraine days monthly had been excluded from triptan trials. Insurers used this exclusion criterion to carve back the 30-day limit to a 3-day limit, initially claiming this wasn't a "quantity," but a "quality" limit. The *Journal of Managed Care* published a "study" in 2003 written by pharmacists at Florida Blue Cross-Blue Shield, showing that their utilization costs didn't go up and they saved a lot of cash, when they stopped covering triptans.[12] *That's because migraineurs have no other medical options.*

When pharmaceutical and insurance companies prize their shareholders over their customers and people become disabled because they don't have access to medically necessary treatment, individuals, families, companies, and government agencies pay the price. My employer (the State of Maine) paid an insurer to keep me at work. My insurer restricted my access to my medication. Now my employer pays for my health and disability insurance, despite the fact that I haven't shown up for work in 13 years. Many members of our group weren't lucky enough to be tenured faculty with union-protected benefits. Because migraine isn't on the Social Security Listing of Impairments (on the grounds that there's no test to confirm a diagnosis of migraine), disabled migraineurs end up applying and reapplying for benefits across many years and relying on Medicaid and Food Stamps in the meantime.

"We're fucked" was our official response to reading your initial report. Instead of *finally* having an effective preventive medication that might help us and protect the next generation of our family from disability, we realized we're where we've been all along. Profanity seemed the most accurate way of describing something truly obscene: *corporations setting high prices and insurers protecting their profits, and countless real people feeling real pain all life long as a consequence.*

CGRP development was funded by the American people, through the National Institutes of Health. American families and businesses buy insurance precisely to help when medically necessary care comes at a high cost. You're in a position to do something historic. You can make the world a fairer place for people with migraine. Please insist on pricing and coverage that makes this breakthrough treatment accessible to those who need it most.

We're hurting. We need your help.

Jill Piggott
Co-Founder & Director, headsUPmigraine

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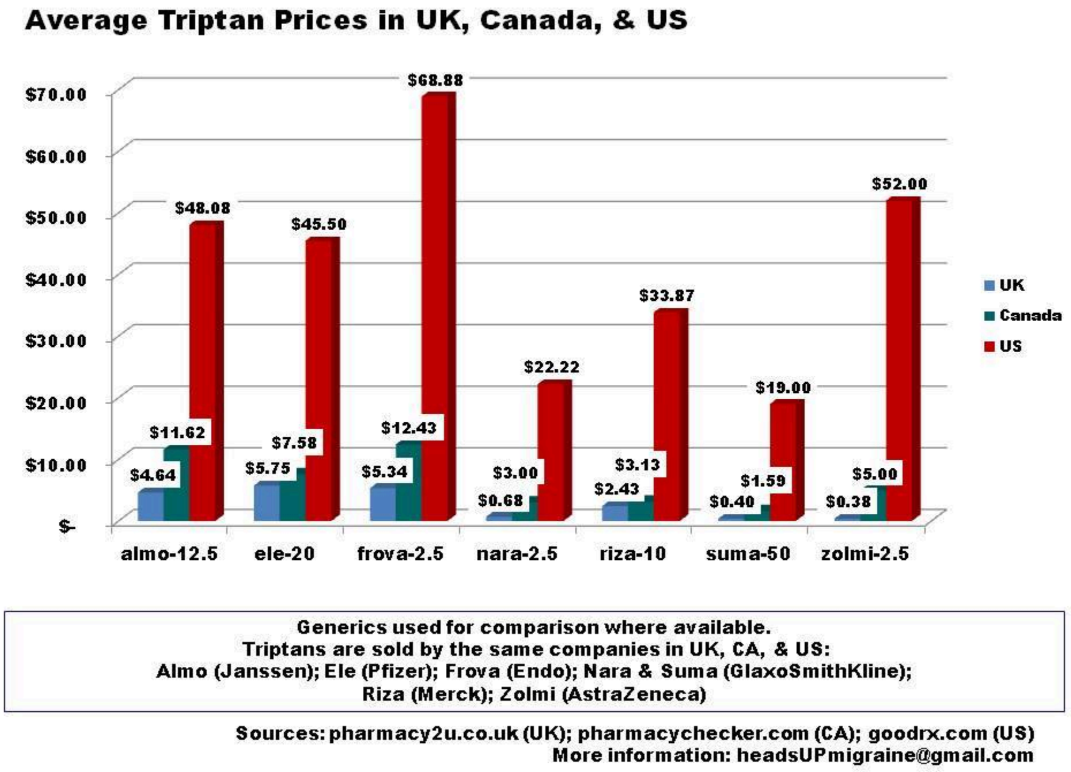
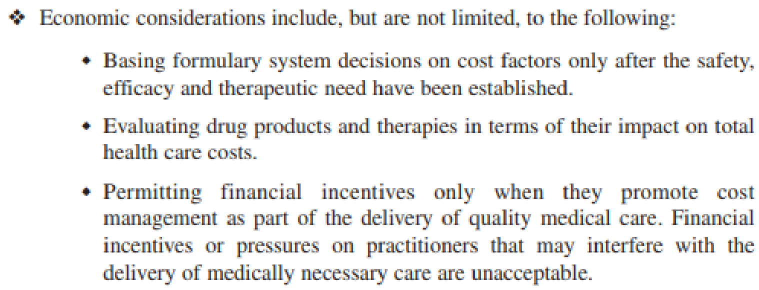


Generics used for comparison where available.
Triptans are sold by the same companies in UK, CA, & US:
Almo (Janssen); Ele (Pfizer); Frova (Endo); Nara & Suma (GlaxoSmithKline);
Riza (Merck); Zolmi (AstraZeneca)

Sources: pharmacy2u.co.uk (UK); pharmacychecker.com (CA); goodrx.com (US)
More information: headsUPmigraine@gmail.com

Our members don’t know how to square coverage limits on medically necessary treatment with the “Principles of a Sound Drug Formulary System.”
http://www.amcp.org/WorkArea/DownloadAsset.aspx?id=9280

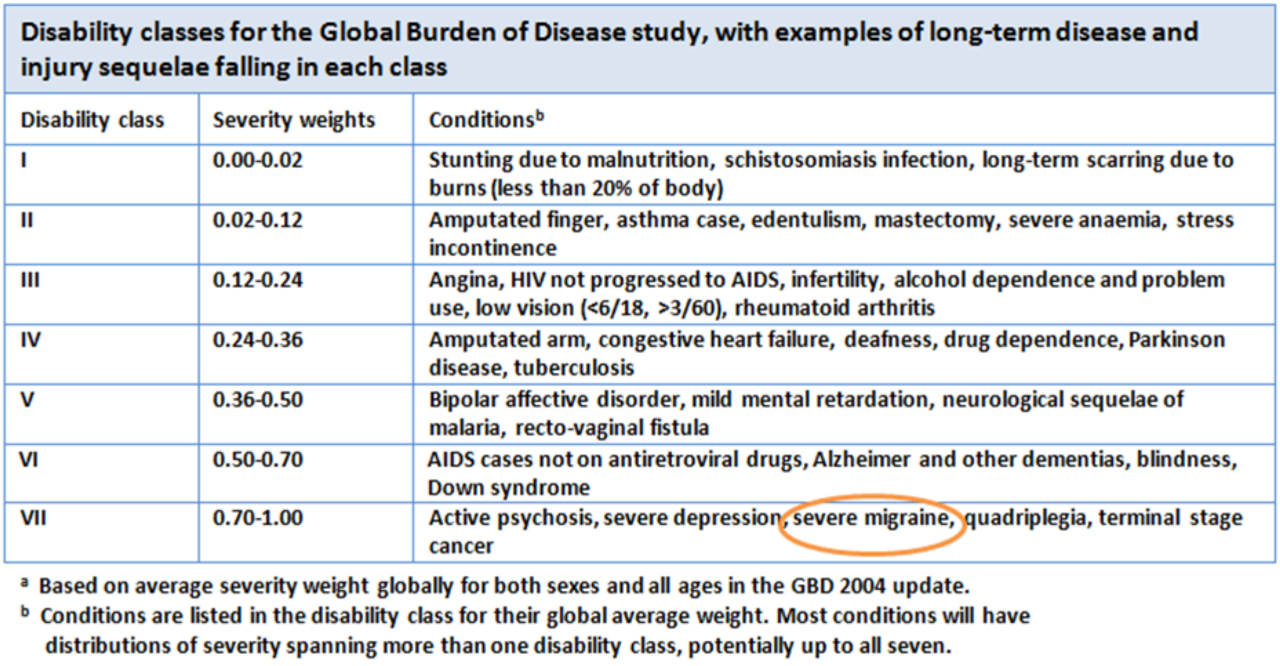


❖ Economic considerations include, but are not limited, to the following:

- Basing formulary system decisions on cost factors only after the safety, efficacy and therapeutic need have been established.
- Evaluating drug products and therapies in terms of their impact on total health care costs.
- Permitting financial incentives only when they promote cost management as part of the delivery of quality medical care. Financial incentives or pressures on practitioners that may interfere with the delivery of medically necessary care are unacceptable.

These principles have been endorsed by the following organizations:

- Academy of Managed Care Pharmacy
- Alliance of Community Health Plans
- American Medical Association
- American Society of Health-System Pharmacists
- Department of Veterans Affairs,
  Pharmacy Benefits Management
  Strategic Healthcare Group
- National Business Coalition on Health
- U. S. Pharmacopeia



Disability classes for the Global Burden of Disease study, with examples of long-term disease and injury sequelae falling in each class

Disability class	Severity weights	Conditions[b]
I	0.00-0.02	Stunting due to malnutrition, schistosomiasis infection, long-term scarring due to burns (less than 20% of body)
II	0.02-0.12	Amputated finger, asthma case, edentulism, mastectomy, severe anaemia, stress incontinence
III	0.12-0.24	Angina, HIV not progressed to AIDS, infertility, alcohol dependence and problem use, low vision (<6/18, >3/60), rheumatoid arthritis
IV	0.24-0.36	Amputated arm, congestive heart failure, deafness, drug dependence, Parkinson disease, tuberculosis
V	0.36-0.50	Bipolar affective disorder, mild mental retardation, neurological sequelae of malaria, recto-vaginal fistula
VI	0.50-0.70	AIDS cases not on antiretroviral drugs, Alzheimer and other dementias, blindness, Down syndrome
VII	0.70-1.00	Active psychosis, severe depression, severe migraine, quadriplegia, terminal stage cancer

[a] Based on average severity weight globally for both sexes and all ages in the GBD 2004 update.
[b] Conditions are listed in the disability class for their global average weight. Most conditions will have distributions of severity spanning more than one disability class, potentially up to all seven.

Global Burden of Disease Study 2004 Update: Disability Weights for Diseases and Conditions

IfPA | Institute for Patient Access

May 2, 2018

Submitted electronically to: publiccomments@icer-review.org

Steven D. Pearson, MD, President
Institute for Clinical and Economic Review
Two Liberty Square, Ninth Floor
Boston, MA 02109

Re: Feedback on Calcitonin Gene-Related Peptide (CGRP) Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine: Effectiveness and Value, Draft Evidence Report Dated April 11, 2018

Dear Dr. Pearson:

On behalf of the Institute for Patient Access, I thank you for the opportunity to provide feedback on the Institute for Clinical and Economic Review's draft report on the effectiveness and value of CGRP inhibitors as preventive treatments for patients with episodic or chronic migraine.

About the Institute for Patient Access

The Institute for Patient Access (IfPA) is a physician-led policy research organization dedicated to maintaining the primacy of the physician-patient relationship in the provision of quality health care. To further that mission, IfPA produces educational materials and programming designed to promote informed discussion about patient access to approved therapies and appropriate clinical care. IfPA was established in 2012 by the leadership of the Alliance for Patient Access, a national network of more than 800 physician advocates committed to patient access. IfPA is a 501(c)(3) public charity non-profit organization.

Feedback on Draft Report

Migraine is one of the most prevalent neurological disorders worldwide, associated with substantial health, sociological and economic consequences.

Yet ICER's draft evidence report, dated April 11, 2018, inaccurately assesses the benefits that migraine patients can receive from CGRP inhibitors. This inaccuracy arises because: (1) the evidence that is necessary to evaluate the cost-effectiveness of CGRP inhibitors does not yet exist; (2) the draft evidence report inappropriately assumes that the CGRP inhibitors will have no impact on mortality rates; (3) the draft evidence report does not adequately consider the comorbidity of depression; and, (4) the draft evidence report does not consider the impact of

CGRP inhibitors on the vast and costly opioid crisis in the United States. A further concern is: (5) the draft evidence report fails to report fundamental data relied upon when performing the analysis.

1. **Due to the timing of ICER's study, data limitations meaningfully restrict the draft evidence report's ability to evaluate the cost-effectiveness of CGRP inhibitors.** Specifically, the CGRPs studied were either in phase II or III clinical trials, and none had yet secured FDA approval. Therefore, the clinical and safety data that is available for these medicines is limited; and importantly, the information on these medicines that will be gained from post-marketing studies is not yet available.

In particular, due to the novelty of these medicines, there is no available data on the long-term benefits of CGRP inhibitors. Nor is there information on patients' long-term adherence rates to these medicines. These data limitations raise other concerns, including:

- As noted in the draft evidence report, a short-term time frame (a two-year period) was used to evaluate the long-term impact of CGRP inhibitors "…because there is a lack of data on the long-term use of preventive medications for management of migraine" (p. 52-53). Extrapolating the long-term effects from short-term data introduces unknown biases into the analysis. In fact, in the limitations sections, ICER notes that "the models were based on *clinical trial results that may not hold true for longer time horizons* or in particular patient populations different than those seen in the trials" (p. 81, emphasis added). Simply noting this limitation does not eliminate the concerns, however.

- When creating the five-year annualized potential budget impact, the draft evidence report states "since people with migraine tend to cycle through several preventive therapies and since we have no long-term data on CGRP usage, we assumed that each sub-cohort (i.e., 20% of the prevalent cohort) remained in the model for two years, and a new cohort entered the model every year, resulting in larger patient populations for years two through five" (p. 86). No evidence justifies whether such assumptions are valid or not. Since usage is a fundamental input into the model, it should be based on actual long-term usage data, or reasonable proxies of this data, rather than arbitrary usage assumptions.

- CGRPs do not, as of yet, have publicly available prices. To overcome this problem, ICER uses an "analyst-estimated" price of $8,500 per year for all three drugs. There is no way to know whether these estimated prices reflect the actual market prices that will prevail for the CGRP medicines once they are available. If the estimated prices vary significantly from the actual market prices, then the validity of the cost-effectiveness calculations will be compromised. The draft evidence report notes these concerns as well, stating "the placeholder price estimate for the drugs may not reflect actual market prices" (p. 81).

Given the lack of data on CGRPs, it is not surprising that the draft evidence report rates the net benefit of these medicines as "I [Inconclusive]". However, as the data concerns raised in this section illustrate, such a rating is nothing more than a result of these medicines' stage of development.

2. The draft evidence report assumes that "the treatments had no impact on mortality rates" (p. 60). Contradicting this assumption, large numbers of studies have linked migraine to increased health risks.

For instance, migraine has been linked to higher risks of dying from heart problems and strokes. Covering this issue in 2016, a report in the Telegraph summarized the findings from "a team of German and U.S. researchers [who] followed more than 115,000 women aged between 25 and 42 for more than 10 years. They found those who suffered migraines were 50 percent more likely to die during the period."

According to the National Migraine Association, "migraine can induce a host of serious physical conditions: strokes, aneurysms, permanent visual loss, severe dental problems, coma and even death." The National Migraine Association further notes that,

> according to the New England Journal of Medicine, "migraine can sometimes lead to ischemic stroke and stroke can sometimes be aggravated by or associated with the development of migraine." Twenty-seven percent of all strokes suffered by persons under the age of 45 are caused by Migraine. Stroke is the third leading cause of death in this country. In addition, twenty-five percent of all incidents of cerebral infarction were associated with Migraines, according to the Mayo clinic. Most recently the British Medical Journal reported that after evaluating 14 major Migraine & stroke studies in the U.S. and Canada that Migraineurs are 2.2 times greater risk for stroke than the non-migraine population. That risk goes up to a staggering 8 times more stroke risk for women Migraineurs on the pill!

Given the mortality risks associated with migraine, the assumption that CGRP inhibitors, which based on early indications may control migraines better, will not reduce the risk of death is assuming away a very important potential benefit. The draft evidence report should instead incorporate an estimate of the benefits in terms of reduced mortality risk from better controlling migraine.

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3. The draft evidence report does not incorporate the potential impact of CGRP inhibitors on depression and, consequently, fails to consider a significant potential benefit of the drugs.

Depression is a common comorbidity of chronic migraine. Studies indicate that up to 80 percent of chronic migraine patients exhibit the symptoms of depression. Further, depression is associated with worsened migraine-related disabilities and reduced patients' quality of life. Depression is also an important risk-factor for suicide. Through improvements in the number and severity of migraine symptoms, CGRP inhibitors may also help patients' depression symptoms.

Study results summarized in a poster prepared for *The American Academy of Neurology 2018 Annual Meeting* (P4.097: "Efficacy of Fremanezumab in Patients with Chronic Migraine and Comorbid Moderate to Moderately Severe Depression") were consistent with this potential benefit. Specifically, the study found that patients treated with fremanezumab "experienced significant reductions in the monthly average number of headache days of at least moderate severity and migraine days, with effects observed by Week 4." Further, "patients with moderate to moderately severe depression treated with fremanezumab also showed improved patient-reported outcomes on level of depressive symptomology."

***

4. Despite recognizing that CGRP inhibitors have the potential to reduce the costs associated with the opioid crisis, the draft evidence report does not attempt to incorporate the potential benefit into the analysis.

Due to a lack of current effective treatment options, some patients with migraines are prescribed opioids for their headache pain despite the well documented problem of opioid abuse. In 2015 alone, over 33,000 Americans died due to opioid overdoses. The economic cost created by opioid abuse is also large – according to Altarum (a nonprofit health systems research and consulting organization) the total economic costs of the opioid crisis have exceeded $1 trillion since 2001.

It is, consequently, logical to expect that medicines that reduce the need for opioid prescriptions will help reduce these costs. The draft evidence report concurs with this possibility stating that "although data are lacking on the long-term impact of CGRP inhibitors on opioid use and addiction, preventive migraine therapies that reduce the number of migraines and acute medication use may also reduce opioid dependence in this population."

***

5. The draft evidence report also violates basic reporting standards – which is particularly relevant if these results are meant to influence actual pricing decisions. Specifically, according to the report (emphasis added), "The treatment effects for each of the medications used in the base-case analyses are listed in Tables 4.4 and 4.5, with *those for the CGRP inhibitors redacted in the tables and text since they were submitted as academic-in-confidence data to ICER* by the respective manufacturers."

Redacting the data on "mean reduction in migraine days" is troubling. The reduction in migraine days is a fundamental benefit that CGRP inhibitors provide patients, and releasing this data helps readers better understand the benefit analysis ICER performed. Releasing the data also helps ensure that other academics and analysts have the necessary information to reproduce ICER's results. Replicability is a core tenet of sound scientific analysis.

Conclusions

The Institute for Patient Access has reservations regarding the conclusions of the draft evidence report on CGRP inhibitors and its potentially negative impact on patient access to these important medicines. We encourage ICER to amend the draft report to reflect the considerations raised in this letter.

If IfPA can provide further detail or aid the Institute for Clinical and Economic Review in incorporating any of the above recommendations into its final draft, please contact us at 202-499-4114.

Sincerely,

Brian Kennedy
Executive Director

May 8, 2018

Steven D. Pearson, MD, MSc, FRCP
President, Institute for Clinical and Economic Review
One State Street, Suite 1050
Boston, MA 02109 USA

RE: Draft Evidence Report "Calcitonin Gene-Related Peptide (CGRP) Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine: Effectiveness and Value"

Dear Dr. Pearson:

Patients Rising Now advocates on behalf of patients with life-threatening conditions and chronic diseases for them to have access to vital therapies and services. Access to treatments is a matter of survival for those patients, and a requirement for them to have better and more productive lives. We believe access spans affordability, insurance coverage, and physical access, and one of our main areas of work is analyzing information and publicly communicating those analyses.

We are committed to engaging patients, caregivers, physicians, the media, health policy experts, payers, providers and other health professionals to foster realistic, patient-centered, solution-oriented discussions so that those facing critical medical needs can amplify their collective voice to create lasting improvements for health care in the United States. That is, our goal is to advance a balanced dialogue that illuminates the truth about health care in a just and equitable manner.

We appreciate the opportunity to provide our comments on ICER's April 11th draft evidence report, "Calcitonin Gene-Related Peptide (CGRP) Inhibitors as Preventive Treatments for Patients with Episodic or Chronic Migraine: Effectiveness and Value." At the outset, we want to recognize the patient-oriented perspective that migraines are a very difficult area of pain management to evaluate and treat. Therefore, evaluating treatment options with different mechanisms of action – either individually, in combination, by analyzing individual trials, or with meta-analyses – complicates this activity. An additional complication ICER undertook in this draft report was including three biopharmaceuticals that have not been approved by the FDA – which means there is essentially only efficacy data (i.e., from ideal clinical trial situations) and scant information about the effectiveness of those treatments in real-world situations.

An additional foundational complication for evaluating value in this area – either clinical utility or cost-effectiveness – is the great uncertainty about the biological causes of migraines. As a 2013 article stated, "the neural and vascular mechanisms underlying the development of [migraine attacks] remain to be elucidated."[i] This is an important point because the range of existing treatment options spans multiple mechanisms of actions – ranging from systemic broad-based beta-blockers, to systemic anticonvulsants with unknown mechanism of action,[ii] to locally injected nerve toxins that prevent the release of acetylcholine, as well as FDA approved devices.[iii] While ICER included some devices and injections in its base cost calculations,[iv] it failed to discuss them as part of treatment options, also excluded were alternative and complimentary treatments that have demonstrated varying degrees of effectiveness.[v]

We raise those points to illustrate the challenge ICER (or anyone else) has for doing a health technology assessment for migraines.[vi] And the discontinuation data in ICER's draft report illustrates this challenge: "Discontinuations among patients on placebo ranged from 0% to 53% between four and 26 weeks. Discontinuations among patients on a CGRP inhibitor ranged from 3% to 11% between 12 and 24 weeks. Discontinuations among patients on other preventive therapies ranged from 0% to 59%."[vii] The lower discontinuation rate for the CGRP inhibitors may reflect their greater physiological specificity, and hopefully, in the future, like other complicated diseases and disorders, research advances will enable clinicians to more accurately diagnose and treat migraines in a more precise manner. As WebMD points out, "No specific test can diagnose migraine. So your doctor needs to ask a lot of questions and rule out other problems to know if you have them."[viii] Until there are better diagnostics and more specific therapies, it is critically important that patients and clinicians have ready access to all treatment options since it is well known that different patients respond differently to existing therapeutic alternatives.

Our specific patient-focused comments about this draft report are below, organized into sections about Complexity of Migraines and Treatments, Patient-Oriented Information and Perspectives, and Data Uncertainty and the Utility of QALYs.

Complexity of Migraines and Treatments

The biology of migraines is complex, and it may represent multiple underlying conditions or causes all leading to vascular changes and pain. This underlying uncertainty is mirrored in the multiple mechanisms of action for the therapies noted above. This uncertainty also complicates the diagnosis of migraines since it can mimic other conditions. As NINDS states, "There is no absolute cure for migraine since its pathophysiology has yet to be fully understood."[ix]

BCBS of South Carolina recently communicated this information in their newsletter to Medicaid providers, stating that a migraine "is generally thought of as a headache problem, but it has become apparent in recent years that many patients suffer symptoms of migraine who do not have severe headaches as a dominant symptom. These patients may have a primary complaint of dizziness, ear pain, ear or head fullness, "sinus" pressure or even fluctuating hearing loss."[x] This newsletter also noted that "that only 48 percent of people with migraine have had a diagnosis and treatment for migraine. Unfortunately, only 29 percent of U.S. migraine sufferers are very satisfied with their treatments. This is usually a reflection of a lack of understanding of the nature of migraine and its treatments, or lack of commitment to effective treatments."[xi]

Patient-Oriented Information and Perspectives

We are once again disappointed that ICER again minimizes the importance to patients of improved function and quality of life, even though the report states that ICER understands, "that there remains a gap between those outcomes reported in the trials and the outcomes that patients seek."[xii] As noted above, a fully formed analysis that appropriately considered patient perspectives would encompass the full scope of treatment options.[xiii]

Limited Data Used in Analyses: One examples of how ICER's analysis skews against patient perspectives is the exclusion of Open Label Extension (OLE) data (which are the closest clinical trial data can come to real-world evidence), and the specific quality of life data – both of which were excluded from the draft report's quantitative analysis.[xiv] For example, the draft report states "Our model estimates may not fully reflect the improvements in quality of life or work productivity with the CGRP inhibitors."[xv] Those omissions – as examples of the report's very narrow input data – raises serious questions about the report failing to distinguish between "outcomes" that are statistical significant versus all those that are actually important to patients.

ICER's narrow selection of information for its analysis contrasts with the clinical guidelines from the U.K.'s NICE which states as the very first thing under prophylactic treatment, "Discuss the benefits and risks of prophylactic treatment for migraine with the person, taking into account the person's preference, comorbidities, risk of adverse events and the impact of the headache on their quality of life."[xvi] In addition, an important consideration for personal choices about treatment options are potential adverse events, and as the Nottingham clinical guidelines states regarding preventative options, "The potential for teratogenic effects should be noted particularly with anti-epileptic medications." And, "Advise women of childbearing potential that topiramate is associated with a risk of foetal malformations and can impair the effectiveness of hormonal contraception. It is contraindicated in pregnancy and in women of childbearing potential if an effective method of contraception is not used."[xvii] However, nowhere in ICER's draft report is this potential serious adverse effect from topiramate mentioned even though three times as many women suffer from migraines as men.

Additional Areas for Offsetting Savings – Productivity and Patients Lives: ICER requested other information about services that could be reduced or eliminated to produce savings.[xviii] Therefore, we want to highlight research about lost productivity from chronic migraines from Serrano et al., that found men aged 45-54 with chronic migraine had estimated lost productive time (absenteeism and presenteeism) costs of $277 per person per week, while women in the same age group had lost wages of $137 per person per week.[xix] We also recommend reviewing the 2002 Headache article that concluded "two-thirds of the financial burden [of migraine] is linked to indirect costs,"[xx] as well as Landy's work on absenteeism and presenteeism and migraines.[xxi]

Furthermore, a Mayo clinic study that found that migraines impacted the patients ability to be a parent or spouse, and caused worry about their family's financial security because of their migraines, and it concluded that there is a "pervasive burden of migraine on the family," and "Not surprisingly, the impact was greatest in families of people with [chronic migraines]."[xxii] As Mandelblatt et al., noted, "in frameworks to evaluate drug treatments, economic impacts would include drug costs, provider time and delivery costs, staff time, facilities and equipment overhead and costs, costs of treatment-related side effects and supportive care medications required, patient time and travel costs, and costs of all downstream events until death from the disease or other causes. To the extent that frameworks exclude portions of these costs, they result in biased recommendations."[xxiii]

Patients' Actual Costs: A related area of patient perspectives is actual costs to patients versus payer, insurance company or nationally aggregated costs. Unfortunately, ICER's clearly states that "we used a health care system third-party payer perspective in which only direct medical care costs were included."[xxiv] We recognize that understanding the pluralistic system of private and public payers in the US, and how the resulting system of rebates, discounts, and other factors influences patient costs and access is not a simple analysis. However, if estimated net acquisition costs are included in ICER's cost-effectiveness analyses, then those analyses should also include estimated actual patient costs. That type of analysis would be in-line with discussions about value-based benefit design, and we strongly believe that value-calculations only looking at silos of health financing or delivery are incomplete unless they also reflect other aspects of health care value improvement.

Therefore, we strongly urge that those aspects of value important to patients be given considerable discussion at the June 14th Public Meeting and during the voting by the California Technology Assessment Forum (CTAF) – and specifically related to final question under Contextual Considerations, i.e., "There are additional contextual considerations that should have an important role in judgments of the value of this intervention: _________________________." We also are again concerned by the lack of depth of expertise for the specific clinical conditions on ICER's review and advisory groups, e.g., Dr. Klingman is the only neurologist, and he practices within the Kaiser system, which represents only one type of US care delivery.[xxv]

Data Uncertainty and the Utility of QALYs

As we've previously written – and others have expanded upon – we support systematic cost effectiveness evaluations <u>as part of</u> determining value for patients – as long as it is done in a transparent and responsible manner. And since QALYs were developed solely for economic analysis in the UK's National Health Service, using QALYs as the core of value assessments related to the pluralistic US health care environment is very un-patient centered. As Garrison et al. noted earlier this year, "QALYs may not always fully capture the health (or well-being) of patients, or incorporate individual or community preferences about the weight to be given to health gain - for example, about disease severity, equity of access, or unmet need."[xxvi]

We are particularly concerned about ICER's use of QALY's for migraines. As noted above, there is a disconnect between the analysis and conclusions, and the uncertainty of the input data. For example, in Section 4 of the Draft Report ("Long-Term Cost Effectiveness") much of the data cited is clearly described as uncertain, short term, or inconclusive.[xxvii] In simple terms, just because numbers are analyzed and yield "results" from a formula or algorithm, doesn't mean that those "results" provide accurate insights, or even if statistically significant, provide meaningful knowledge for patients and clinicians.

This uncertainty, we believe, is also demonstrated in the draft report's sensitivity analyses.[xxviii] The extensive ranges in the sensitivity analyses – and what they mean for uncertainty of ICER's conclusions – should be highlighted in the body of the report rather than relegated to the end. This would better reflect the clinical perspectives for migraines where there is so much individual variability and uncertainty that the reality of patients' responses are best described as a curve or a cloud rather than a single data point.

Conclusions & Recommendations

Patients Rising Now believes that ICER's draft report on some migraine therapies inadequately reflects patients' perspectives about quality of life, personal and work productivity, and the complexity of migraine treatments from the patient's perspective. We believe patients' voices need to be a part of defining and assessing the value of their treatment plans along with the cost of all aspects of their care – including patient's direct out of pocket costs and indirect costs related to patients' ability to work, etc. Analyses designed to support patients and clinicians – across the range of clinical decision making, benefit design, reimbursement policies, and coverage choices or limitation – need to encompass real patient's choices and goals, the spectrum of financial implications for new therapies, and practical options for increasing value for patients within the pluralistic U.S. health care system. **The U.S. health care system is criticized for many things, but we should not add to the list that it sacrifices quality or specificity of individual care on the altar of uniformity, siloed vision, or illusionary cost-effectiveness calculations masquerading as comprehensive value analyses.**

Sincerely,

Terry M. Wilcox

Terry Wilcox
Co-Founder & Executive Director, Patients Rising Now

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[i] Noseda and Burstein, Pain, Dec 2013; 154 Suppl 1

[ii] "The precise mechanisms by which topiramate exerts its anticonvulsant and migraine prophylaxis effects are unknown." https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/020505s057_020844s048lbl.pdf

[iii] www.americanmigrainefoundation.org/understanding-migraine/spotlight-neuromodulation-devices-headache/

[iv] Draft Evidence Report – CGRP Inhibitors for Episodic or Chronic Migraine, p.62

[v] https://www.webmd.com/migraines-headaches/heading-off-migraine-pain#1

[vi] CVSHealth's migraine pipeline overview: https://payorsolutions.cvshealth.com/insights/migraine-relief-in-sight

[vii] Draft Evidence Report – CGRP Inhibitors for Episodic or Chronic Migraine, p. 44

[viii] https://www.webmd.com/migraines-headaches/heading-off-migraine-pain#1 also see Mayo Clinic: https://www.mayoclinic.org/diseases-conditions/migraine-headache/diagnosis-treatment/drc-20360207

[ix] https://www.ninds.nih.gov/disorders/all-disorders/migraine-information-page

[x] March 2018 BlueBlast^{SM} Newsletter: News Providers Can Use, "Migraine — More Than a Headache"

[xi] March 2018 BlueBlast^{SM} Newsletter: News Providers Can Use, "Migraine — More Than a Headache"

[xii] Draft Evidence Report – CGRP Inhibitors for Episodic or Chronic Migraine, p. 47

[xiii] https://www.webmd.com/migraines-headaches/heading-off-migraine-pain#1

[xiv] Draft Evidence Report – CGRP Inhibitors for Episodic or Chronic Migraine, p. 20

[xv] Draft Evidence Report – CGRP Inhibitors for Episodic or Chronic Migraine, p. 83

[xvi] "Management of migraine (with or without aura)", NICE Pathway last updated: 17 April 2018

[xvii] http://www.nottsapc.nhs.uk/media/1040/adult-headache-pathway.pdf

[xviii] Draft Evidence Report – CGRP Inhibitors for Episodic or Chronic Migraine, p. 11

[xix] Serrano et al., Value in Health (16) 2013, 31-38.

[xx] Edmeads and Mackell, Headache, (42) #6, June 2002, pp 501-509

[xxi] Landy et al., J Occup Environ Med. 2011 Jan;53(1):74-81. https://www.ncbi.nlm.nih.gov/pubmed/21187794

[xxii] Buse et al., Mayo Clin Proc. May 2016;91(5):596-611

[xxiii] Mandelblatt et al., Value in Health, (20) 2017 185-192

[xxiv] Draft Evidence Report – CGRP Inhibitors for Episodic or Chronic Migraine, p. 55

[xxv] https://icer-review.org/department/ctaf-members/

[xxvi] Garrison et al., Value in Health (21) 2018, 161-165.

[xxvii] Draft Evidence Report – CGRP Inhibitors for Episodic or Chronic Migraine, p. 51

[xxviii] Draft Evidence Report – CGRP Inhibitors for Episodic or Chronic Migraine, p. 68

RECEIVED FROM SARAH A.
publiccomments@icer-review.org

1. Briefly describe your disease experience, including your diagnosis, treatments you've used, etc. Be as specific as you feel comfortable with.

I was diagnosed with migraines far too late. I had been suffering from them since I was a teenager, but I simply thought that the headaches, confusion, and dizziness were just something that I had to deal with. I tried to force myself to concentrate more, pay more attention, work harder and longer. I had back and neck pain, but I thought I just had to again just deal with it. It wasn't until nearly 15 years later that I began to see shadows and sparkles of light, and I thought I was suddenly losing my vision. I went to the optometrist, who thought I maybe had a retinal detachment. It was only months later that I could get in to see a neurologist, who properly diagnosed me with migraines. Since then it has been a constant daily struggle to get access to treatments to manage the daily migraines, with little success.

2. How do the disease/condition and the available treatments affect your day-to-day life?

I have migraines daily, constantly. Sometimes it is worse, sometimes better. Always better if I can be distracted, but migraines are running in the background. I have spent now 4 years under expert care, seeing migraine-specialty trained neurologists at tertiary care centers, but there is no treatments that have worked. I have made trips to the ER for emergency treatment, been hospitalized for migraines for 5 days. My regimen includes taking pills twice daily, giving myself injections, doing a sleep study, on and on. I can summarize all these things in a straightforward way, but this has been years of pursuing treatments that have been mostly fruitless, very disheartening, and all the while I still have migraines.

3. What impact does the disease have on family or caregivers?

Unfortunately, I have chronic severe migraine, and this makes it hard for people to understand. Many people can relate to migraine, of course, but have migraines episodically. I have migraines constantly, and the wax and wane. They are also characterized by confusion ("brain fog") more than pain. So when I can't find the words that I want to use because I am having a migraine, or I insist that I need to sleep or my migraines will worsen, it is hard for people to relate, and they think I am just complaining rather than knowing that I truly have severe migraines! The result is I mostly feel isolated and alone in having an experience of deep suffering. My neurologists understand, though.

5. What outcomes are most important to patients? For example, is the top priority improved quality of life, longer survival, or relief of a specific symptom?

For me as a patient, my top priority is to increase my functioning by limiting frequency and severity of migraines. My target symptoms in my case are back and neck pain (migraine equivalent) and confusion ("brain fog") although I also have severe head pain frequently. I would love to be able to simply think clearly and without chronic pain and be able to participate in life without these symptoms.

6. Are there new/emerging treatments that the patient community is anticipating? What are the benefits or disadvantages of the new treatments (e.g. more or fewer side effects, convenience, effectiveness, etc.)? Do you think the benefits will outweigh side effects or risks?

The emerging treatment is the calcitonin gene-related peptide. I have actually heard from one of the trial participants (I was not a trial participant) and they said that they actually wish they had not tried to CGRP medication, as when they had to go back to regular treatment, it was so inferior that it made them miserable. Right now, despite excellent care and proceeding through the treatment algorithm as recommended by the American Academy of Neurology, I simply do not have good control of migraine pain and symptoms. I know there are many out there who are like me.

For Patient Advocacy Groups

9. Do you know of any relevant, unpublished information that helps describe patient needs, preferences, or issues? Does your organization collect patient-related data, or do you know of a group that does this?

Not applicable.

10. Are there any other patient groups working in this disease area that we should include in outreach efforts?

I hope there are patient representatives and migraine-fellowship trained specialists on your ICER panel and included in your outreach efforts.

May 1, 2018

Carol S Allore

RE: ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Dear ICER (The Institute for Clinical and Economic Review),

I am writing to you in regards to the new CGRP migraine medications for Migraine Disease. I am a 49yr old female who has been plagued with debilitating migraines my entire life. I was very ill throughout my infancy and toddler years. At the age of five my family doctor diagnosed me with Migraine.

The migraine pain has always been the same for me. They are always located on the left side of my head, neck and shoulder. It is a constant stabbing pain and feels like a dagger is burrowed right through the middle of my left eye. At the same time, it feels like a constant bolt of lightening is striking through the top of my head on the left side. Finally, there is pain radiating from my left shoulder and neck up into the back of my head. As well as the sharp pain, there are also the following symptoms that accompany a migraine attack: severe nausea and vomiting, light and sound sensitivity, extreme fatigue, clinical depression and anxiety. When I have a migraine attack (which occurs several days each month and lasts for weeks at a time), the only way to cope is to take my medications and hide away in my bed with black-out curtains and a completely silent house. Sometimes the attack will wake me from a sound sleep in the middle of the night at 3 or 4am. I wake up screaming to my husband to get me some medicine. It may seem weird, but sometimes I feel like beating my head against the wall to relieve the pain. At other times the attack will come on slowly, over the course of a few hours. I constantly live with the fear of when the next one will strike. It sincerely feels like a life sentence in the depths of Hell.

Migraine has stollen an untold number of days and weeks from my life. I am so looking forward to the new CGRP medications in hopes that they will give me my life back. I am unable to work and am on Social Security Disability. Very seldom am I able to go to family or social events. When I am able, it drains me completely and I have to come home and sleep for several hours. It is a successful day when I'm able to attend an event without it causing a migraine attack. I am unable to do everyday chores like grocery shopping and laundry. My husband does all of that for me. I also have a cleaning lady who comes in to help with cleaning my home.

My goal is to be able to work full-time, and enjoy my family, friends, church services, Bible studies, etc. I also want to be able to go bike riding, swimming and hiking. I would love to host holidays in my home and have a backyard B-B-Q.

Throughout my life I have been seen by multiple doctors and therapists. We have spent thousands of dollars on countless non-traditional treatments including acupuncture, manual manipulation, vitamins, herbs, etc. without success. Also without success are all of the different oral medications, injectable medications, nerve block treatments, and IV treatments. Currently I'm trying to manage with Candasartin as a preventative, along with Botox treatments. My rescue meds include Haldol and Zyprexa, along with Benadryl, Advil, and Tylenol. When my home medications do not cut through the pain, I then go to my neurologist's infusion center for IV treatments that take place over four days, five hours each day. I am given numerous pain medications through the IV. Currently, my last resort if the infusions don't cut the pain, is to be admitted to the hospital for seven or more days for infusions of Lidocaine and a handful of other pain medications. I am unable to drive myself to my appointments and treatments, so I always have to find a driver.

There are also some residual effects from having Migraine Disease: While trying the nerve block treatments, I ended up with Diabetes. Now I am bound to taking insulin several times every day. I am also very overweight. If I could just get up, get out, and get going......I could exercise, move around more, and hopefully lose weight. All of which would help the Diabetes and the migraines. As it is now, I spend most of my time simply eating and sleeping. One goal with Migraine treatments is to help me sleep. That allows my body to relax and the medicines to do their work.

I urge you to consider my pain and disability, along with all episodic and chronic Migraine patients. We need to have access to the new CGRP inhibitor medicines. We all need approval for these medications prescribed by our doctors, without any step-therapy ahead of time. We have waited long enough to find real help for this disease. We also MUST have these medications affordable. So many of us are on Disability and cannot afford to pay for the meds or for the high co-pays.

Thank you for your work to help us access and afford this new breakthrough class of medications! They are our only hope, next to finding a cure for Migraine Disease. PLEASE don’t hesitate to contact me with any questions, clarifications, or for more details.

Sincerely,
Carol S Allore

Monday, May 7, 2018

To the Institute for Clinical and Economic Review

I am writing to document my experience of migraines and my search for a way of managing them through the past more than 40 years, and to convey to you how crucial to my life it is to find an effective migraine preventative treatment that does not have intolerable side effects.

I began having migraines when I was about 20 years old and in college. I thought I just had bad headaches that did not go away with aspirin or other common headache medications. The migraines became worse through the years, more frequent, more severe in pain, more systemic, and more persistent, lasting through 3 days or more at a time. At present, they are coming on almost always during the night, after about 4 hours of sleep. I go to sleep, and then awaken in the early hours, in pain or in building pain. I then take a Maxalt, and try to go back to sleep. Usually, I cannot sleep due to pain, as it takes about an hour to diminish, if the med is effective. I have had frequent problems with heart palpations after taking the Maxalt in the wee hours of the morning, so I head into the day exhausted. I have about 10-12 days of feeling sick from migraines per month. I usually have 3 nights out of 4 with migraine, and then 4 to 7 days without. In those 3 days, they grow progressively worse, so that I feel systemically ill, queasy, and unable to think clearly as the migraine days go on. During the migraine night, as morning comes, I am hit with intense depression which lasts into the days until I am truly out of the 3-4 days of migraine.

When I am free of migraine for a few days in a row, I have energy and can do creative work, ride my bike, kayak, and see friends. On those precious days, I am in awe of how exquisite it is to just feel ok. I try not to think about how soon the next bout of migraines will come. However, I have not been able to plan events with any confidence that I can follow through. I cannot go to movies or watch television because that can bring on a migraine. I must limit my time on the computer, which is really difficult, because that seems to cause more of them. I recently had to withdraw from volunteering for a weekend event because every year I have done it has been hell, with migraine ebbing and flowing through the time. I was an elementary art teacher for many years, but had to retire before I wanted to because I was debilitated with the migraines and often struggling to teach through them. With my children, I have hated to be unwell, and want to be able to travel to see them and be an active grandparent. This has been a challenge, and I have lost time with them because of the migraines. My husband has had to watch me go through the emotional and physical pain and sickness of the migraines for 40 years, getting worse each year, and he has felt sad, worried, and helpless about not being able to make it better. Because of the stigma of migraines, I have felt like a failure, and different than anyone I know. During the hours before forcing myself to get up after a painful and sleepless night, I contemplate not continuing to live if they become more frequent. The sickness and depression that accompanies them is indescribable.

Here’s what I have tried through the years:

Darvon for years over 40 years ago.
Butalbital for decades, taking around 5 through 2 ½ days of migraine once or twice a month over 35 years ago up to around 3 per week 10 years ago. (Now, Butalbital makes my migraine worse.)
Imatrex, then Maxalt, which I take now, around 10 per month. I tried Frova, but had a bad reaction.

For prevention, I have tried Venlafaxine, Amitriptylene, Topririmate, and Zonisamide, which did not reduce migraines and some caused head pressure, and other negative side effects. Also, Atenolol, Verapamil, Nadolol, and Gabapentin for prevention, but the frequency and severity of migraines continued to increase through all.

I have gone to an Osteopath, have gotten Chiropractor treatments, Acupuncture Treatments, Therapeutic Massage, much physical therapy, Trigger Point treatment, and have done Yoga, Tai Chi, and Qigong.
I've taken Ribolflavon and Magnesium, CoQ10, Butterbur, and used Tigerbalm.

Each year, I have more days of being sick with migraine than in the previous year. Last year it was 114 days. This year so far, is worse. The migraines have been a part of my life for too many years. My life would be so much better if the frequency and severity of the migraines could be diminished. I don't expect them to disappear, but I want them moved to the edges of my life, and no longer take away my basic sense of well-being. I am nearly 70 years old and have much to do in the world. I have a student who is counting on me to keep on teaching him to read, and I want to feel my life is enjoyable, without the migraines taking over. My use of Maxalt is heading into what is called "overuse", which can possibly cause more migraines, and yet without an effective preventive medication, I have no choice but to take the Maxalt when I have a migraine. A few months ago, I was worried about overuse, so I didn't take a Maxalt when a migraine was beginning. I thought I would just live through it. The pain was horrific. I was vomiting repeatedly and couldn't keep any water down or take a Maxalt. I never want to go through that again, and fear when the Maxalt will no longer be helpful in at least abating that level of pain. I would not want to live with that level of pain.

I, and others who suffer from migraines, need an effective migraine preventive medication and it must be covered by insurance so that we can live our lives in better health and happiness.

Elizabeth Alpert

1. Briefly describe your disease experience, including your diagnosis, treatments you've used, etc. Be as specific as you feel comfortable with.

I am the caregiver for my daughter, who first experienced migraine at the age of 11. Her migraine progressed to chronic migraine when she was 16. She is now 31 years old. In 2011 her condition worsened: she is always in a state of migraine--constant head pain with frequent (in most instances more than one per day) and unpredictable severe attacks that cause extreme head pain, nausea, disorientation and light/sound sensitivity. She has been under medical care since the inception of the migraine and has tried every medication and technique known to the medical community, as well as alternative approaches to care (e.g., acupuncture). She has tried many of the more standard medications more than once. For a time (when she was a teenager) Botox was very helpful, but it no longer brings any relief.

2. How do the disease/condition and the available treatments affect your day-to-day life?

My daughter is dysfunctional without round the clock pain medication. By "dysfunctional" I mean that she usually must be in bed in a dark and quiet room. On her daily regime of pain medication she can function on an average of about 6-7 hours a day, that is, take care of herself, get her own meals, attend appointments, participate in some family activities, etc. However, she usually must rest or lie quietly off and on to keep going during the day. When things are going well, she can be somewhat active for up to two days; then she must have a day of complete rest. She can sometimes drive, but most of the time I drive her and she frequently suffers from carsickness (nausea) and increased head pain while in the car. Because of the completely unpredictable nature of chronic migraine, it is very difficult for my daughter to be engaged with the world outside of her family and support system. My daughter is the most courageous person I have ever known.

3. What impact does the disease have on family or caregivers?

I am retired. My daughter is my most important responsibility. I frequently need to help her make appointments, pick up medication for her, shop for essentials, food, etc. I usually drive her to her therapist and doctor appointments, errands, etc. My husband and I have limited our time away from home for several years, though we now do go on a week of vacation once a year. We have lived with her condition for 20 years, so her care is built into our lives, but we still suffer from stress and anxiety about her. Naturally it has been difficult and painful; we have regular therapists who support us.

4. What else should ICER know about living with the disease or condition (e.g. impact on your ability to work, exercise, care for family, etc.)?

After struggling for several years my daughter had to leave her college in 2010. She cannot hold down a job, even a part time one, though she can sometimes bake for friends on commission

5. What outcomes are most important to patients? For example, is the top priority improved quality of life, longer survival, or relief of a specific symptom?

Relief from pain and nausea (and the other symptoms of chronic migraine) will provide my daughter with improved quality of life. She is so eager to lead her own life and will make the most of any relief the new MAB medications will afford her.

6. Are there new/emerging treatments that the patient community is anticipating? What are the benefits or disadvantages of the new treatments (e.g. more or fewer side effects, convenience, effectiveness, etc.)? Do you think the benefits will outweigh side effects or risks?

The emerging monoclonal antibody CGRP agonist medications have been shown to reduce the number of days of migraine for many chronic migraine patients. We hope they will help her.

7. Do patients have trouble getting insurance coverage for treatment? Do costs affect patients' choice of treatment, or their ability to access treatment?

My daughter has insurance that covers the standard medications for migraine and pain. She uses some medication not covered by insurance. Coverage for medication not primarily targeted for migraine is not always approved by her insurance company and in some instances has been unavailable for her. She has no income of her own. Given her condition, we will do everything we can to pay for medication that will actually help her.

8. Please share any other information that you think is important for us to know from a patient perspective.

It is somewhat shocking to read about cost and insurance coverage for the first-ever medication proven to help patients with chronic migraine, and that such decisions may be made, if I understand it, based on industry calculations and standards. Not to be dramatic--but what price do we put on giving a person back her life? Chronic migraine takes away life and replaces it with a brutal challenge just to survive. Our institutions must be able to address the needs of those who struggle with this relentless disease.

My journey began long before I knew it. Today, we believe I suffered migraines as early on as during infancy through young adulthood when a migraine specialist finally diagnosed me. My parents state I was a "colic" baby and as my toddler and elementary years progressed my "colic" was further diagnosed as "stomach aches that were from nerves."

Although I firmly believe we are under the care of the best pediatricians in Connecticut, not one of the practicing providers ever diagnosed nor treated me correctly or effectively. My medication regimen at home as well as at the school nurse office was a combination of Benadryl and Motrin straight through high school. I had many episodes where I could not leave my darkened room for 1-2 weeks at a time due to my impaired vision, head pain, nausea, and vomiting. I was disabled. I was a prisoner in my own home and yet, our doctors kept saying it was nerves and our insurance kept paying to treat stomach aches from nerves while we spent unnecessary money on countless bottles of Motrin and Benadryl.

The turning point for me was all a meeting by chance; not a provider or insurance referral. My mom works in clinical research at Yale University and when she was asked to assist Dr. Christopher Gottschalk with a new clinical trial, she quickly realized I had many of the criteria one would experience if participating in this new research opportunity. After a discussion with Dr. G, I was quickly scheduled to see him at his migraine clinic and truly, that day changed my life.

Not only did I learn that I had been suffering for my entire life while being treated by excellent pediatricians who DO NOT train nor specialize in migraines but had the pediatricians been educated, they would have recognized the signs and sent me to a specialist early on in life. My parents also felt like they failed me because they trusted the pediatricians for so many years.

The combination of Motrin and Benadryl along with every over the counter migraine that you can purchase were literally toxins I put into my body countless times and it was all for nothing! Dr. G educated me on the many directed types of migraines as well as the medications that are very specific to the type of headache and with his medical decision making, I was sent off with a medication regime that was the ultimate slayer to my migraines. As a college student, it is impossible to miss 1-2 weeks of class and catch up so you can imagine the worry I carried around daily hoping and praying a migraine would not surface.

I was unable to ambulate and driving was out of the question because it simply was not safe. Truly, this is a disability and should be recognized as such. I was afraid to sleep over friends' homes because there were too many occasions where I had to leave sleepovers because of my symptoms. It was embarrassing and I felt like something was wrong with me because none of my friends had these symptoms and after being told for years that I was just a “nervous kid” or I had a “nervous stomach” it was hard not to feel ashamed and confussed about that.

Now, I say, BRING IT ON! With the prescribed medication, I have not had a migraine for more than 15 mins because the medication is a perfect match for my type of headaches. Had my mom not been employed at Yale, I am uncertain we would have figured this out and since our pediatrician had failed to find and treat me approrpaitely and our current insurance, which we have had for 12 years has never once reviewed my medical bills and noticed a red flag from my misdiagnosis and mistreatment. The same goes for our prior insurance carrier of 8 years. Imagine if a specialist could advocate for people like me and give back quality of life and what an impact that would be!!

To ICER:

My migraine journey began when I was a teenager. I am now a 62 year old woman.

I have been having headaches for over 40 years. In my 20s I began going to doctors to find out the reason, and had eye exams to rule out that cause. I was given Fiornal, butalbital to take at the time. In my 30's I started going to a neurologist and was diagnosed with migraines.

I have taken triptans starting with Imitrex and Maxalt and now take Zomig which seems to help most of the time. I have taken several drugs in the search for prevention including Topamax, gabapentin, Effexor, Lyrica, Botox injections, and more that I cannot even remember. I have also tried natural supplements such as Butterbur, Feverfew, and vitamins B2, magnesium, Migralief, etc. I have had MRI's of my brain.

I still have between 10-12 migraines per month.

During a migraine I have severe pain usually on side of my head, and feel nauseous. I find it hard to concentrate, making it difficult to perform my job. My eyes are usually in pain also. I often have to work, and then as soon as the day is done, I go to bed with ice on my head. I cancel plans with my family on a regular basis due to having migraine pain. Exercise is often impossible due to throbbing pain.

I feel as though one third of my life is stolen each month by having this disease.

I feel that a medicine that would actually help decrease my migraine attacks would be a life changing situation for me and fellow migraine sufferers. It is not just a headache that we suffer with. It is a whole body experience that robs us of so much of life's experiences. We often keep it silent because the world at large does not understand migraine disease. Most people think it is just a small headache that an aspirin would help. We usually only share our pain with close friends and family members. I think the time has come that we ask for a solution to this widespread medical problem.

Thank you for your consideration of this issue.

Sincerely,

Deborah Andrade

April 30, 2018

Dear ICER,

If you've ever had a migraine, you know what the agony feels like of having your own body attack itself. And, it's not just an isolated feeling of stabbing pain on one side of the head – it's an "all systems failure" feeling. You lose your sense of who you are, how to speak, how to think, how to move. You become a shell of your former self. The light hurts, that woman's perfume on the subway makes you sick, the sound of a baby's cry sends you into paralysis.

And, if you've never had a migraine, I'd very much appreciate your time to allow me to explain to you a little bit about my life and journey with this very misunderstood disorder.

I'm a 28-year-old Caucasian female born and raised in suburban New Jersey. I remember always being very nauseous and sensitive to many things as a child – strong smells, lights, car rides, you name it. I never realized these were hallmark symptoms of migraine, until I finally put together my life memories of retreating to dark rooms with a weird sort of unexplainable pain, my mother rushing to put a wet washcloth on my head. I couldn't have been more than 10 or 11 at the time.

No one in my family, that we know of, has a history of migraine – so it's hard to explain to them what it felt like then and what it feels like now, what I see, what it makes me want to do – especially as my migraine severity and frequency has increased, ironically as I've gotten older and busier. What was misdiagnosed as "sinus issues" after numerous ENT visits as a child, was finally diagnosed as Chronic Daily Headache (CDH) after trips to four different neurologists, and eventually landing at New York Headache Center.

This means I spend 15+ days a month with a migraine.

I feel sharp, shooting pains, I see flashing white lights (aura or paranormal activity, who knows), and I feel like my body, mostly my brain, is trying to self-destruct. I often wonder how what is incurring inside and around my own head can't possibly be causing some longer-lasting damage.

Or maybe it is?

Maybe it's the reason I'm tired all the time or feel myself struggling to retain memories or facts. Maybe it's the reason I don't ever feel quite "on" at any given moment. It's like a little piece of me is missing somewhere far off in the distance. I keep hoping it will come back one day. But, I don't think it will.

At my worst, over the past few years or so, I plateaued at about 15-18 migraines a month. Some lasting for a span of 3-4 days without reprieve. A constant cycle of sleeping and waking up with the same agonizing pain in the same spot, or occasionally, the pain, almost as if it were alive, its own creature, morphing into a different type of ache, finding a home in another part of my head.

I tracked every morsel of food that went into my body. The weather. How much sleep I got. If any type of exercise or over-exertion could have ticked off my migraine monster in the slightest. There were no patterns. No explanations.
I've tried all the non-traditional avenues like acupuncture and essential oils, as well as traditional medications in your conventional order of trial and error:

- *Triptans* (Imitrex, Zomig, Maxalt, Relpax, Treximet, and Frova, to name a few).
- *Antidepressants* like Elavil, even though I've never been diagnosed with depression, only anxiety because my migraines keep me in a constant state of feeling "on edge" for when my next attack will come.
- *Anti-epileptics* like Topamax – at my worst, taking 200mg a day (enough to knock out a small horse, causing me to drop 20 plus pounds, and making it incredibly difficult to retain new knowledge or fish for old stuff, carry a conversation at work, and go about my day with any semblance of an energy level).
- *Beta blockers* like Inderal, normally used to treat high blood pressure – even though I'm in great health otherwise, despite my migraines, and have normal if not exceptionally healthy blood pressure levels.
- *Butalbitals*, like Fioricet, which are dangerously addictive and serious cause for rebound headaches if taken too often.

There's an endless list of existing migraine medications that almost seem antiquated in that they fail to fully treat migraines, seeing as no one really understands what causes them to begin with – hyperactive brain? Vascular issues? Bacteria in the gut?

At the end of the day, it can be so many things, and it's different for so many people – it's usually never just one thing in isolation. Weather, that small piece of milk chocolate you ate three days ago, the cigarette smoker you just walked by on the sidewalk.

And, forget the terrible side effects of medication. Most will endure the gastrointestinal discomfort, lethargy, or the like to get some semblance of migraine relief. But, we shouldn't have to. There *has* to be a better way. I'd like to believe there always is.

After years and years of no relief, I am now at the neurologist once or twice a month for a magnesium IV (I've got dangerously low levels, of which they know no cause), B12 shots, and Botox injections – which, after five rounds at about 30 tiny stabs a pop, have finally begun to decrease my migraine frequency – at an extremely high financial cost. I also take daily vitamins, magnesium supplements, Omega-3s, and eat a well-balanced, gluten-free diet. I go to yoga and meditate on a regular basis. My social life is fairly limited due to needing to sleep regularly and due to my fear of doing anything to awaken the beast within me. I plan my whole life around my migraines. It's just what I have to do.

Migraine has not only cost me a great deal financially as a young person still in student debt from college and trying to begin her life, but it has cost me a great deal emotionally. It has strained relationships – with my family, with my friends, and romantically. It has affected my ability to operate at my fullest potential as an intellectual, as a writer, as a coworker (especially with the amount of days I reluctantly miss). It has prevented me from being where I want to be, where I'm supposed to be, with the people I'm supposed to be with at any given time. It's prevented me from being me, but then again, it's also so very much a part of me now. Who am I to know who I'd be without them?

I've given up hoping for a cure, because the triggers and causes of my migraines, like for so many of those who suffer, are tremendous and elusive. I'm armed with enough knowledge now to do my best to prevent them, but try to maintain calm when they do come full force.

I'm trying to find peace in understanding that most of the time it's not my fault, and there is nothing I can do to control or prevent them.

But, a new and potentially better, or even more affordable existing option, would offer the migraine community so much hope – hope that we all desperately need. The downsides to my current treatment now are the frequency of neurologist visits as well as cost of visits, treatments and medications. And, let's not forget the unwanted side effects – not even immediate ones. One can only wonder down the road what will happen to the rest of their organs from taking too many triptans, even if they follow proper dosing for the rest of the years of their life.

Something has to give.

What's most important to me now, in order to be a productive member of society and maintain some level of normalcy as a young adult – whatever that means – is to reduce my migraine frequency and be able to function as best I can. To have more "good days," "okay days," and less "one of the worst days of my life ever" if I can.

I read all the migraine books, watch all the online seminars, read all the articles. I talk to other sufferers. We commiserate, we hug, we swap secrets – but I wonder if they're really even secrets at all, or just little nuggets of hope we pass to one another as we knowingly glance into the other's eyes. We all know how tired the other one is – of the charade, of it all, of just being some days.

But, I'm proud that I'm up-to-date, I'm informed, and I'm still thirsty for knowledge – not only for myself, but for all the other people, about 39 million, out there in the same boat as I am. A boat with unacceptable paddles as a means of moving forward, keeping afloat.

ICER must value our pain and disability as something that is severely inhibiting our ability to be productive, happy, lively humans – of all ages, ethnicities, and walks of life.

I've been denied medications due to my insurance's unwillingness to cover. I've gone days in excruciating pain because of an inability to get access to treatment because of insurance issues. I've been required to try other medications (after trying dozens of others first) before finally obtaining approval for a viable option. And I've also struggled with affording medicines that offered even a bit of promise. Those living with migraine need viable options, access, and most importantly, hope – hope is the thing we are so desperately needing at the moment. It's time for something new, something innovative. It's what we all need… a little light in the dark we retreat to so frequently.

Thank you for your time and lending a sympathetic ear. It makes all the difference in how the community moves forward and finds wellness together.

Sincerely,
Daniella Appolonia

May 7, 2018

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I have suffered from migraines for thirty years. They started when I was 23 years old and now I am 53. I still remember my first migraine: I was at a Christmas party when my head started hurting and I vomited into the toilet. We left and all I could do was lay in the car in pain while my friend drove me home. Another memorable moment was twenty years ago. I had eaten a nice meal at a diner with a friend. A migraine came on and I proceeded to vomit along the side of the road in three different states (DC, VA, and MD) as he was driving me home.

Migraines are debilitating. The pain can be sharp and feel like an icepick is being trust into my brain. Or it can feel like a hand on the inside of my head is squeezing my eyes, sinuses, temples, or my entire head. Sometimes the pain is agonizing like all the nerve endings in my head are on fire. And there’s nothing I can do, but lay down and endure it.

I have tried many treatments over the years: chiropractic, acupuncture, body work, energy work, emotional clearing, faith healers, psychics, Botox, food journals, herbs, supplements, hormones, etc. And of course, there have been the medicines: Ergotamine, Imitrex, Relpax, Maxalt, and my new favorite, Frova. Most of the triptans cease working after a while. Frova works the best for me, but my insurance company will only allow me four pills a month even though I get ten migraines a month. So, I have to choose which migraines to endure and which ones to medicate. I also get a weird edema in my feet and ankles from an accumulation of the medication.

Fear has become a part of my life. Fear of not knowing when one will strike. When one does, I am out of commission for 12-15 hours. I also horde my medication for vacations and important events. Therefore, I usually endure the pain and save the pills for when I really need to be well.

Obviously, new breakthroughs need to be made in the treatment of migraines. The quality of my life is directly dependent upon the access I have to an effective and affordable migraine treatment.

Sincerely,
Kristine Barbieri

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I have a complex mix of medical conditions. I had my first diagnosed migraine attack when I was only ten. I had frequent hard to treat sinus headaches through my teens and early twenties that were probably actually mild migraines. In my mid-late twenties I went back to school to finish my bachelor's and become an art teacher which had been my dream for a long time. What I now know to be episodic migraine attacks became very severe and terrifying. Each one taking many days to recover from physically and emotionally because it was like being attacked by a person in that I felt some risk that it might actually kill me. There wasn't as much information available back then and I didn't have my own computer for a while. Also I did not have a regular doctor when they became severe to ask about it. A pulmonologist prescribed most of what I needed at the time and he found me a regular doctor to see about migraine care. I'd made the connection between migraine disease I was diagnosed with as a child and these impossible to treat headaches I was having now even though a lot of the symptoms were different. And the new doctor confirmed they were migraine attacks. So I was diagnosed with migraine disease twice. When I was ten half of my body went numb. The severe migraine attacks as an adult were like the pain of having my hand slammed in a car door twenty times concentrated in one tiny spot on my left forehead with streams of pain radiating out from that spot all over the left side of my head. I threw up and had diarrhea at the same time as the head pain. All that happening as I wake up. Every part of my body was nauseous but I didn't go numb.

It's important to note that everyone with migraine attacks including me has certain trends to their migraine attacks, certain patterns to when they happen and where the pain is etc. but no two migraine attacks are exactly the same and lots of them can fall outside of the pattern. I have some later in the day and some on my right side as well as my left, some of less severity, differing ability to eat anything and even some in which the nausea and diarrhea is more disabling than the pain because I can't leave the bathroom to lay down and get away from light and sound and smells so I can reduce the severity. All those make it worse. Sometimes the migraine attack comes with a bone chilling cold feeling that is hard to shake. It feels like being warm has become impossible because I've piled on covers and still can't get warm. The worst ones tend to have that feature. That is especially hard when I have that bone chilling cold and can't leave the bathroom because of course you can't have all the blankets with you in the bathroom because getting there was important to accomplish quickly. I will not go into too much detail there. I had one migraine attack that was completely unique. I had one or two small areas of pain at a time for minutes at a time, for large portions of the day. I hadn't had one like that ever before and never exactly like that since.

This worsening of the episodic migraine attacks combined with other health challenges I faced forced me to drop out of all but one of my classes. That one class allowed me to sit far away from others to avoid triggers and attendance wasn't taken so I missed many lectures and still had a B because I had done well at the beginning.

Migraine disease progressed to chronic migraine (more than 15 headaches a month) that I still have now more than ten years later. Each one still terrifies me and leaves me shaken and causes panic feelings while it's going on. Migraine attacks destroy interaction with the world around me. I couldn't interact with my little niece and nephew or anyone else. I have to go into my cocoon as

I call it. That's a dark bedroom with black-out curtains, in bed with earplugs and a mask over my eyes to keep out even the small amount of light still in the room. In-between the attacks I still have the phonophobia / sound sensitivity for weeks at a time. Sound at normal level hurts my ears in a way excessively loud sound would hurt someone else, but without permanent damage. I’ll wear earplugs all day. I still have frequent nausea, trouble with remembering words, low mood and feel drained of energy. It takes me much longer than it should to complete small tasks. I would welcome any decrease in frequency, lessening of severity or increase in my ability to be functional. I'm often barely having time to get something to eat, check in with online support groups and get some rest before the next one hits me. I can't work because I miss too many days completely out of it and disabled. I get out to an event or social gathering less than five times a year. I have had to rely on family to pick up medicine from the pharmacy and take me to the emergency room. I grieve for the life I would have been able to live if migraine attacks weren't interfering. I have struggled with some depression most of my life but when my health got worse it was so deep and dark a depression that I was close to catatonic for many years.

I became very forgetful and confused a lot of the time. I couldn't remember words when talking. I would repeat the same question because I couldn't remember having asked it. I lost a lot of hair. I was soon diagnosed with hypo-thyroidism on top of everything else.

Excedrin and other NSAIDs do nothing for most of my migraine attacks and can even make them worse. NSAIDs only work on lower level regular headaches. I also have those.

The main problem with the current rescue treatments is that even when they do get rid of the pain they put me to sleep. All of the triptans type medicines do this to me, but they are the only medicine that helps the pain or at least reduces it. Imitrex, Maxalt, Amerge, Relpax, Axert, I have tried all of these. I wake up with a terrible migraine attack, take a triptan and then have to sleep another 4-8 hours because of the medicine. It does not make me functional. Quite the opposite, it seems to reset my day night cycle because I end up waking again in the afternoon or evening and that now feels like morning and I can't return to bed again in only a few hours. It's very very disruptive to any normal schedule at all. The migraines for me are mostly waking migraines and I get no warning the night before that one is coming. I still have many problems with remembering things and being able to focus. It takes me longer to do things than it should and I get confused. I still completely blank on a word I'm trying to use. Sometimes a word with a similar sound or related meaning will come out instead of the word I intended. “Three” instead of the letter “C” and “parsley” instead of “basil” Either the before or after effects of the migraine attacks themselves or the treatments could be causing that. I also have to take a muscle relaxer for the painful neck spasm that comes with the migraine attack pain phase and at other times. That aspect of my migraine attacks has gotten worse in recent years and that medicine also puts me to sleep instead of making me functional. All of these immediate treatments for the pain nausea and neck spasms also take an hour or more to work when they help leaving me in pain and nauseous in the mean time and sometimes do not help leaving me in pain for the natural course of the migraine attack which is about 10 to 12 hours usually for me and sometimes days.

Medications and treatments to prevent the migraine attacks have failed to prevent migraine attacks or had too many intolerable side effects that were making me just as disabled. Among the many I've tried are various blood pressure pills, Topamax, cefaly device, Venlafaxine, Divalproate, Amitriptyline, Wellbutrin, and will soon start Mementine.

Listing every one of the changes in supplements and combinations of those and over the counter drugs and diet tweaks would take up a lot of space here. Some of the alternative treatments are: magnesium, B-2, melatonin, feverfew, DLPA, kava kava, pantothenic acid, peppermint oil, vegetarianism for four years, and avoiding certain additives.

What is so important to remember is that all of us with migraine disease are fighting to get our time back from this monster that has stolen it from us. Even mild migraine attacks rob you of your ability to concentrate and cause you to have to do things slower because focus is taken away by the nagging pain. Pain that just lingers like this has a different effect than momentary pain. It saps your energy away as well.

In conclusion I want to say the most important thing that I hope you will gain from my letter. If you've read this far you know that I have suffered thousands of severe terrifying migraine attacks over a more than decade long battle with this disease. Trips to the Emergency Room are not an appropriate gauge of how severe a person has migraine disease because no one intentionally puts themselves in more pain unless there is very very good reason that you have to. The ER cannot cure or prevent the attacks. When I was there the migraine cocktail they gave me only helped the pain a few hours and it all came back including the neck pain. Home remedies and medications weren't working at all but the ER wasn't much better and increased the severity due to the unavoidable auditory, visual and olfactory stimulation that the visit entails. That time I went because with it I was having the worst neck pain I had ever had and thought I could have injured it while doing stretching yoga to relieve back pain. Although I've been in excruciating pain thousands of times; I haven't been to the ER very often specifically for migraine because it just doesn't help. I was having a migraine while at the ER one other time but was there only to get checked out for the worst chest pain I had ever had. Really the only way I would ever go again to the ER is if it is significantly different than any other migraine attacks I've ever had. That's not to say that others shouldn't go if they are concerned about their migraine attack symptoms, but to me the having to be out of bed, the unavoidable sounds, visuals and scent stimulation makes the pain so much worse that I will avoid it. It's an absolute last resort.

I've thought to myself many times during a migraine attack: "I would rather die at home in less pain than go to that awful place." I've heard from other migraine sufferers in support groups that this restriction of reasons for going to the ER is shared by many of my fellow sufferers. I'm definitely not alone in thinking of it as basically torture. Thinking always goes more negative during migraine attacks and I recently learned why that is. The scientists discovered that levels of neurotransmitters that normally keep a person well drop dramatically during attacks. During some of my attacks many years ago I did experience completely new to me symptoms (the going very very cold, my fingertips from the last joint on out went bluish in color), but did not go to the ER to get them checked out. There are three reasons for this. First the visit there makes the pain so much worse. Secondly is that I had to be there for other reasons and I knew that if you are there often they start treating you badly. Third, I was so depressed at the time that if it was going to kill me I kind of just wanted it to hurry up. I was so fed up with being in pain over and over that I had very little will to live. Any way out of the pain was preferable even if it sent me to the great beyond or wherever you go when that happens. I still lose the will to live in the painful portion of migraine attacks but I know that mine usually end in a day and that has helped me stay alive so far.

One of my cousins did not survive his last migraine attack. He took too many pills and is no longer with us. Whether he knew for sure it would kill him we do not know. I’ve been through similar attacks so many times that I can understand how he might have been at the point of wanting out. Please also remember the life of my cousin in your calculations.

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My Life with Migraine Disease

I am a 60 year old woman. **I have suffered with Migraine Disease for 48 years!** I remember when I was twelve years old, our family physician would try to treat my severe migraines with long q-tips placed in my nose as I laid for an hour under a sunlamp. I received no relief. And so began a very long, arduous journey to find the reasons for my excruciating pain and to try to elevate it.

Heredity is definitely at play as my grandmother, mother and daughter have had to experience this disease.

Throughout the many years I have had migraines; I have seen six Neurologists and was admitted to the Diamond Headache Clinic Inpatient Hospital. I have sought out the most knowledgeable Migraine Specialists and have had limited success. I have been and am proactive with my disease and do everything I can to follow protocols and treatments accurately and fully.

I have been put on three or more preventatives in each of the classes: Beta Blockers, Channel Blockers, Anticonvulsants, Antidepressants, SSRIs and Botox. Some of these were combined and effective dosages were tweaked many times. Some would work for about six months and then would lose effectiveness. Botox has been the one preventative that has lasted longer but the results are lessening as I have had it administered for 10 years.

I have tried all kinds of alternative treatments including Biofeedback, Acupuncture, Massage, Physical Therapy, Meditation, and Neurostimulators, Trigger control, all with little to no relief.

My Migraines have changed and worsened through the years. The pain used to be focused in the front of my head, then progressed to ice pick pain to the eye and now to the occipital area of my skull. I experience severe sound, light and smell sensitivity. I used to have several migraines a month and now suffer every single day with a low-grade migraine every morning. For 4 to 5 days, I have to decide how to both live with the increasingly disabling pain and drop out of life or try to spread out my Sumitriptan dose so that I do not have more than the allowable two a week. I have gone to ER many times, have had nerve blocks and steroid packs more times than I can count.

This disease affects my life in so many ways. It has controlled my career, my marriage, my family and has robbed me of so many of my days.

My Neurologist told me about the advent of the new promising studies being done on the CGRP inhibitor medicines a few years ago and I have followed news on them ever since. Never have I been so excited to try a new prescription. These prescriptions will be the only preventative that has been created *just* for Migraines. They look so promising.

Again, I have lived with Migraine for 48 years. I can't convey in words how wonderful it would be to get more control over them. My hope is for myself but also for all the people who also live with Migraine and for those to come. Maybe my granddaughters will have them and it brings me to tears to think that they would have to live the kind of life their Mother and Grandmother have lived.

I pray that ICER will value my pain and disability and realize the enormity of Migraine disease and how many lives it touches. I hope that everyone who needs this new medication will be able to receive it economically. No one should have to suffer with severe pain because they cannot afford the medicine they so desperately need.

ICER Open Comment Period for CGRP Inhibitors for Migraine

I am writing to you to share our experiences as a parent of two children who both suffer from daily chronic migraine. Both of our children experience chronic migraine 24 hours a day, 7 days a week, without any breaks from their chronic migraine or their daily migraine pain. Watching your kids live in constant pain and being unable to help them, is one of the worst things for both the parents and children to endure. In order to shed light on this, I'd like to share a little about each of our children and their individual paths with chronic migraine.

Our son developed chronic migraine at the age of 12 years old and is now almost 17 years old. His migraine started with spanning several days to weeks and months at a time and then developed into daily chronic migraine about 4 years ago. He suffers with constant migraine head pain, light and sound sensitivity, peripheral darkness, nausea, prolonged aura, and tingling and pain in his hands and feet. Over the past five years, he has seen about 6 different neurologists including the Stanford Headache Center and is now under the care of a pediatric neurologist who is a headache specialist at the UCSF Brain Center. He has had his current migraine for over 4 years now without ever a day or even a moment of relief and has had to learn to function with daily pain. He missed a year and a half of school where he was on home hospital and has been at a private high school where they could offer him the flexibility to work with his illness and disability. As an unseen disability, he's also experienced a loss of numerous friendships and the support of extended family due to our society's confusion of the significant difference between migraine and "just a headache" pain. He has also had to give up participating in sports, band, and countless activities and milestones that teens without a chronic illness take for granted,. After countless medications and treatments exceeding a list of three pages in length and including several nerve blocks, plus 4 week long in-patient hospitalizations for migraine treatments, his migraine pain is now reduced to a level 5 at best, but he still has days and weeks where his pain is much higher making day to day functioning impossible. He has had to learn to function with this constant pain and is still unable to participate in normal activities and outings that teens take for granted, due to his constant disability and migraine triggers.

Our daughter has experienced living with a sibling with a chronic illness and unfortunately is now following in much the same path as her brother, due to heredity associated with migraine. She developed chronic migraine at the age of 13 years old and has had a daily chronic migraine for the past 9 months. She suffers with constant migraine pain, severe nausea, prolonged visual aura with black out spots and floaters in her vision, light and sound sensitivity, and peripheral darkness. She too is being seen by the same pediatric neurologist at the UCSF Brain Center as our son. Despite trying the same medications that helped manage the severity of her brother's migraine, these same treatments and medications have had no positive effect on her migraine pain and many have had adverse side effects as well. Though she has tried numerous medications, 6 nerve blocks to date, and 3 in-patient week long hospitalizations, they have been unable to reduce her head pain with the current treatments and she lives daily with constant high pain level. She has missed an entire year of school at this point and we are hopeful that the CGRP inhibitor medications will have a positive effect for her this summer, so that she doesn't have to continue to miss out on life and the many things we've seen her brother give up due to migraine pain.

Our wish for both of our children is that they no longer need to live with daily chronic migraine pain and can have months without any migraines. Our hope is that the new CGRP inhibitor medications can help with this. It's also important to us that our children have acute medication options that break a new migraine upon on-set, so that they only miss a day of life, rather than months or years.

Chronic migraine has had a huge impact on our children's education and impact on their daily quality of life, as well as the financial burdens on our family. Our children have missed years of being unable to attend school, due to the natural triggers of noise and lights in the classrooms. The schools generally propose 5 hours of home instruction per week, which is not nearly enough time to help a teen keep up with their required coursework. We tried online schooling, but it is too difficult when your medical treatment and disability limits screen time. We have lived in two different school districts since our son first started his chronic migraines and after years of trying to work with the school districts decided to enroll him in a private school that was able to offer pacing and work with his disability. This was an unfortunate, additional financial burden to our family that was already dealing with high health care costs and many additional medical expenses not covered by our insurance.

Our children have had to wear sunglasses indoors and outside, earplugs and noise reducing headphones along with anti-nausea medications and devices just to travel to their doctor appointments, and experience their teenage years with a disability. Recently our family had a 4-month appeal process and delay from our insurance company to approve a prescribed in-patient migraine treatment for our daughter. The extreme delay in this treatment has only prolonged her daily chronic migraine and is now making it more difficult to treat.

Our family has been greatly affected financially, as we are only able to have one parent work, due to the daily medical care and regular appointments needed for both of our children. This financial burden is further impacted by the medical expenses of having two children with a chronic illness. When we recently figured out our medical expenses for the past year, it equals close to the second income that we have had to give up for our household. Without the new CGRP inhibitor medications being covered by health insurance, we do not know how we can afford this for our children. It is very clear to us by their doctors who specialize in the treatment of migraines that both of our children need this new migraine treatment in hopes of reducing the frequency and severity of their migraines.

We are asking ICER to appropriately value the pain and disability of our children and other migraine suffers and ask for the support of chronic and episodic migraine patients in having access to these new CGRP inhibitor medicines and better treatment options designed specifically for migraine. Throughout this journey, we have realized that there is only one migraine preventative FDA-approved for use in teens and none for use in children. Our children have been prescribed medications for migraines that were developed for depression, epilepsy, Alzheimer's, and for cancer patients making it difficult to get coverage from insurance companies and often having negative side effects. In addition, we have tried prescribed devices such as the Cephaly and TMS device ($250 a month) and many other therapies (biofeedback, acupuncture, cranial sacral therapy, etc) that are not covered under insurance. All these strategies we pursue in a desperate attempt to find a treatment or cure for our children's chronic migraines, so that they can lead a normal life without living in constant pain. We are hopeful that the ICER and insurance companies will understand the need to cover the costs of the new CGRP inhibitor medications, so that families and individuals are able to access the new medications designed specifically for migraine, without adding an accessibility or financial burden to an already disabling illness.

Sincerely hoping for your support,

Jennifer Berson

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I first began experiencing migraine attacks as a young adult in my twenties. They would occur about twice a year. I developed the traditional aura and spotting in my vision, so I always had about 30 minutes to prepare. I would take a pill and go to bed before the pain hit. It usually lasted a couple of hours before breaking. I would then have a lingering “regular” headache for several days afterwards which I treated with OTC medicines. When I had children, I would have the 30 minute warning to get my children to grandmother’s house, who fortunately lived close by and was usually available to babysit on short notice.

After menopause, my migraine pattern worsened. I have begun to develop long-term migraines. The first one last about six months. My first son was getting married and I spent his wedding weekend on narcotics because I was unable to get the migraine under control. Two courses of steroids lessened the pain, but it only returned. It took weeks to find an appropriate mixture of drugs to get it under control. My husband would come home and find me crying in bed. Weeks of debilitating pain are soul crushing. I am now on two daily prescription meds and I take a magnesium supplement. My headaches are hard to stop once they get started, so I stay on a preventative medicine. I have tried weaning myself off, but the headaches begin to creep back in. Migraines are so debilitating I am basically non-functioning. Unfortunately, the medicines affect my cognitive abilities. My memory, concentration, and reasoning are impaired. It may not seem important, but I have enjoyed participating in community theatre for over ten years, and find that I can no longer memorize lines. Migraines are a life-altering disease. I look forward with great anticipation to new treatment options, including appropriate access and insurance coverage.

I am writing in connection with ICER's review of CGRP medications for the insurance industry, to urge ICER to report favorably to the industry to provide affordable insurance coverage of these medications in the US, to make them accessible to people, like me, who have chronic, intractable migraines.

I am 62, and have had disabling migraine headaches since I was 17 years old, in 1973 – so, all my adult life. My attacks include severe pain, sleep interruption, inability to tolerate light, sound and smells, and inability to think and speak clearly and understandably. These attacks can and usually do last for days on end, triggered by weather, smells, food, and probably other triggers that I have not yet identified.

This means spending time alone, miserable, not moving, being useless. This is a major reason my husband and I decided not to have children – and so, I don't. It means repeatedly cancelling and missing out on activities with family and friends, for years. It has caused me to be unable to practice law; I had to leave the practice in 1994 to avoid damaging clients' interests and possibly committing malpractice. I was unemployable for 10 years – 10 years of spending most of the time in pain, alone, in bed or on the couch, unable to go outside to walk the dog or play with her, take care of the house or garden, or spend time with my husband, family or friends. In 2004 my husband left his job with the State and we bought a small bed-and-breakfast with day spa, in the hope that we could work together and on my bad days he could cover for me. Until he became ill in 2007, and died in 2008, we were able to manage well, despite my being unavailable due to extreme pain for days on end, over and over again during this period.

The effect of this condition on my life has been immeasurable. It has ruined almost all the enjoyment and productivity an otherwise healthy, well-educated, middle-class woman can have in this day and age. I can't plan to go out to dinner; can't plan to work as a volunteer at the library; can't even be sure I can keep doctor appointments. I can't be sure I can keep any commitments to friends, to work, to volunteer organizations. I have missed so many holidays with family over the decades. I can't drive, go to the grocery store, interact appropriately – or at all – with people.

Further, and very disturbingly, the migraines and the medications I've taken over the decades have affected my ability to think clearly and remember my life. I am on medication daily, and have been for years, and I still get terrible migraines. The available abortive medications work irregularly and unreliably, and have problematic side effects – in addition to the thinking process issues, they nauseate and make me "spacey". I have tried virtually all the available daily and abortive medications over the decades, have spent a lot of time in various emergency rooms receiving opioids intravenously, and I STILL HAVE MIGRAINES. Treatment at the ER is terribly expensive (my most recent visit was over $6000.00), and just an awful experience. ER treatment can sometimes stop the migraine, and sometimes not, so even as a last resort, it just isn't good enough

This is a miserable condition to exist with, as it interferes with each and every aspect of my life. And it is so unpredictable – it is always in the front of my mind as I try to plan events and ordinary days, work and personal life, because I never know whether I'll be able to participate at all in anything. It has seriously negatively affected my relationships with co-workers, family, friends.

I have tried migraine treatments as they have progressed since the 1970s, both conventional – meaning drugs - and alternative (diet, hypnotism, massage, acupuncture, biofeedback, meditation, yoga, etc., etc., etc., ad infinitum, ad nauseam) have been unable to control my migraines and give me a life. I need a treatment that works.

Please take this condition seriously – my various GPs and neurologists over the decades have tried their best with what has been available, and the fact that I STILL HAVE MIGRAINES indicates that what is and has been available is ineffective to allow me – and others like me – to have a liveable, life, not just a miserable existence, with no light at the end of the tunnel. Living without hope is not really living. And now I've learned of CGRP inhibitor medications – a ray of hope in an otherwise dreary and drab world.

Please recognize that I would have had a much better life had these medications been available to me earlier on in the now 40+ years that I've been subjected to these attacks – and I would like to have a much better life from now on, for however long I live. And I would like other people like me to have access to medication that might actually improve their lives. Especially people who are young, and have their whole lives ahead of them. If CGRP inhibitor medications work as demonstrated in the recent trials, to actually prevent migraines, they can give people their lives back, affecting not only their lives, but the lives of the people around them – children, spouses, friends, co-workers. And reducing the need to take acute migraine-specific medications, lessening the number of ER visits, can only be a good thing – taking pressure off ER personnel, who should be dealing with people who are actually sick or injured, instead of suffering extreme pain.

Please urgently encourage the insurance industry to cover CGRPs (and other medicines in this class that are expected to follow), at a reasonably accessible tier the medicine will be in on their respective plans' formularies, and after a simple, easily achievable, prior authorization or step therapy. There are so very many people's lives that can be improved if CGRPs work as they seem to do, that it would be inexcusable not to make them readily accessible to this large segment of the US population. Please take action to help us.

My name is Destiny Bradford, I am 26 years old and have had a migraine everyday for the last 14 years. This has destroyed my life, has hurt my closest relationships and has destroyed my dreams. I can not work, I don't leave my house for days at a time and can only be out for a couple of hours, my husband has to take care of me like I am a child. There have been times where I have been suicidal from the nonstop agony.

I have spent close to 60k dollars now, took a second mortgage out on my house just trying to find something that will give me one day pain free. I've tried all of the preventatives labeled for migraines, all the abortives labeled for migraines, any medications off labeled for migraines, botox, nerve blocks, lumbar punctures, physical therapy, chiropractic therapy, Daith piercings, diet changes, Cefaly device, acupuncture, essential oils, supplements and many more I can't remember. This med has been the only treatment that offers some semblance of hope that I might have a normal life. Please allow me to try it, I cant afford to pay out of pocket

ICER OPEN COMMENT FOR CGRP INHIBITORS FOR MIGRAINE

My migraine journey.
I experienced my first migraine when I was 17 years old. I was told by my doctor that it was stress and that I should take a mental health day off from school. When my headaches became daily, 8 years later, I was told it was because I had the stressful job of an elementary school teacher and headaches were to be expected. It would be several years before I would be properly diagnosed with migraine and 18 years before I was given a prescription for acute migraine medication.

When my migraine symptoms began, I was able to maintain a fairly "normal" life. I learned my triggers and found ways to adjust my lifestyle to my condition. By my 20s, I was struggling more with my migraine symptoms and was bedridden for a day or two each month. In spite of my condition, I was taking great pride in teaching and in my free time I taught waste reduction in my community, I took dance classes, baked, ate amazing foods, went backpacking, traveled, and volunteered with Habitat for Humanity and the National Park Service. I was active in, and contributed to, my community.

When I developed chronic migraine, I struggled to teach for as long as I could. In the end, I couldn't keep up with the demands of my job while dealing with overwhelming pain, cognitive impairment, compromised judgement, decreased emotional control, and extreme fatigue. Migraine effects my whole body; it is not just a headache. In 2010, I left the teaching profession and worked part time, missing many days of work due to migraine but being blessed with very supportive managers. Even with a less demanding job, however, my symptoms forced me to leave the work force entirely in 2015.

Due to migraine, I've lost the ability to do the activities I used to love. Almost everything that used to bring me joy, now brings me pain. It feels like I'm in a migraine prison! I miss my former self and I miss teaching!

The negative/disabling impact that migraine has on my life.
I experience symptoms of chronic migraine every minute of the day and night with no reprieve. My pain level fluctuates from 5-9 on a 10 point scale. My symptoms include: pain behind my eyes, pressure on my temples, pulsing and throbbing throughout my head, irritability, fatigue and sleepiness, vertigo, ringing in ears, pain in my ears, crying for no reason, nausea, extreme sensitivity to light, extreme sensitivity to sounds, extreme sensitivity to smells, painfully sensitive taste buds, mental sluggishness and confusion, difficulty thinking, tension in neck and facial muscles, and increased pain with movement. It is hard to complete even the most basic of daily tasks.

Migraine also has many co-morbidities. I have IBS, anxiety, and depression. My whole life has been impacted. Leaving my house, which has been modified to meet my migraine needs, presents exposure to the many triggers that make my symptoms even worse. It is like entering a torture chamber. It is hard to be around others, especially their scents from perfume and laundry detergent. There is little I can eat from a restaurant or friends' houses because I have so many food triggers. I'm fatigued and have to fight pain and irritability all the time. It is hard to imagine why anyone would want to spend time with me and, it is worth noting, that my relationships with family, friends, and my dating life have all been greatly impacted due to migraine. I do everything in a special ‘migraine friendly’ way to prevent my symptoms from increasing. When I was able to work, accommodations were made for me. My friends and family make adjustments constantly so that I can be included in their lives, but it isn’t enough. There is no amount of managing to adequately fight my migraine. I hope this will change and I will have access to treatment which will increase my quality of life.

Being independent is really important to me. Unfortunately, I’m not. I’ve been on Social Security Disability Insurance for 5 years and Medicare for 3. I lived in affordable housing for 2 years until I had to move into my parents’ house for financial reasons and so I could be closer to medical treatment. None of us were expecting me to be in my childhood bedroom at age 43! Family and friends help me when I get overwhelmed by the most basic of tasks, like washing the dishes. It is a blessing that I don’t have a spouse or children. I can’t imagine fulfilling those roles while experiencing this disease. Attacks of severe symptoms are impossible to predict. I’ve missed out on the festivities of Halloween, Thanksgiving, and Christmas- having to spend the holiday alone in agony, while my family and friends celebrated without me. I have been forced to become very self centered in order to manage my migraine. It saddens me that I’m no longer able to contribute to my community. In fact, I’m now a financial burden. I planned to spend my adult life in public service, not desperately trying to find a way to ease my pain, while relying on others!

How existing migraine medicines fail to fully treat my migraine symptoms.

During severe attacks, acute medication gives me limited relief. 2.5 hours after taking a mix of a triptan, muscle relaxant, and anti-inflammatory, I am relieved of excruciating pain, but I am still left disabled. Unfortunately, I have to restrict my use of acute medication as much as possible because I am very susceptible to rebound headache (where the pain relievers actually cause head pain) which makes my situation even worse.

I’ve tried a wide range of preventative interventions, but have yet to find one that can bring my pain level down more than one point on the 1-10 pain scale or reduce the number of days that I experience symptoms. I’ve tried over 130 different treatments for migraine, including prescription medications, meditation, massage, limited diet, the Cefaly device, oxygen, yoga and yoga breathing, supplements, biofeedback, cognitive behavior therapy and pain psychology, homeopathic treatments, special glasses, acupuncture, inpatient hospitalization, physical therapy, Botox, nerve blocks, and neurostimulation that required wires to be shoved into my head. Most of the medications I’ve tried were not designed for migraine and have side effects, including extreme depression, scary dreams, cognitive impairment, dizziness, extreme fatigue, and G.I. problems, that make my condition even worse.

My life feels like a science experiment. I’m constantly fighting to get access to new treatments, eventually trying the treatment, enduring side effects that further disable me, discontinuing the treatment, recovering from it, and trying new, equally poor, options. In my pursuit to feel better, I end up experiencing even worse symptoms. Some of the most effective treatments, like Botox, require patients to try and fail other less expensive treatments before insurance will approve them (step-therapy). In such cases, many patients must suffer through the ‘science experiment’ cycle I just described, just to gain access to an effective treatment. Migraine patients deserve to be freed from this crazy cycle. We deserve to have easy access to treatments that will help us live better, more healthy, lives!

Another issue is that many of my treatments have not been covered by my insurance and others have high co-pays. I've spent tens of thousands of dollars trying to get my symptoms to improve. Some of the treatments that I had to fund myself were/are: supplements, massage, meditation classes, Cefaly device, biofeedback, non-formulary prescription medication (for example, vyvance @ $290/month), psychologists, homeopathic doctors, and special glasses. With my current treatment plan, each day I take 38 pills in an effort to prevent my migraine symptoms from becoming more severe. In a single month, I have spent over $1900 on my treatment. When I was able to work, I saved so I could one day buy a house. Those savings is how I fund treatments that are not covered or have high co-pays. It is hard not to feel bitterness about spending my savings on healthcare that isn't even meeting my needs.

It is as though insurance companies and many health centers think that migraine is just a headache; but it is not. It has made me question the purpose of my life and brought me to thoughts of suicide. I think of the burden of this disease. The pain it causes, the quality of life it robs, the thousands of dollars spent, by me and my fellow citizens, to fund my treatments and my lack of ability to work. There has to be more that can be done. That's why I'm taking time to submit feedback to ICER. I have had migraine for 26 years. I don't want to spend the rest of my life like this. Please do all you can to make better treatment options readily available to people with migraine.

Please appropriately value my pain and disability by supporting both episodic and chronic migraine patients access to the new CGRP inhibitor medicines.

I often day dream about how my life would be without migraine. How I could get back to doing the things I love and I'm struck that my hope isn't to be migraine free, it is just to be better than I am now. To be able to enjoy my time around family and friends, to have a romantic relationship, to be around music and dancing. I want more joy in my life. I want to feel like I'm savoring everyday of my existence, not like I'm stuck in a dark, quiet, scentless waiting room all alone while I wait for a treatment that can improve my quality of life.

I am so excited about the new CGRP antibody medications. I first heard about their development 3 years ago, and though clinical trail results show that they aren't effective for every migraine patient, there have been very promising findings from the trails. There are many days when the hope that one of these new medications will reduce my pain, and increase my quality of life, is all that gets me through.

The thought of these treatments existing, but not being available to patients because of policy or economic restraints is devastating to me. I have tried so many treatments, with very limited results and the CGRP antibodies could change my life. How could anyone defend denying me, and others with migraine, a chance at relief from the terror of this disease? I worry that the stigma and misconceptions around migraine, that contributed to it taking years for my healthcare providers to properly diagnose me and to medically treat me, will also limit access to new migraine treatments. Please ensure that these new interventions will be among the first line of treatment available to patients and that they will be reasonably priced. We have an opportunity to make significant progress in the fight against migraine by ensuring that promising treatments, like the CGRP antibodies, are accessible and affordable to everyone who could benefit from them.

ICER OPEN COMMENT FOR CGRP INHIBITORS FOR MIGRAINE

Thank you for the opportunity to submit my comments to The Institute for Clinical and Economic Review regarding CGRP Inhibitor Medicines for migraine prevention.

My personal experiences are painful to think about, to live with and to observe. My mother suffered from migraine for as long as I can remember until they finally subsided as she reached her early-70s. In the prime years of her life I watch her experience pain that effected her work, her family and her social life. The distress caused by her migraine attacks was exacerbated by the fact that there wasn't a medication that would help prevent, treat or relieve her pain.

I have been more fortunate because my migraine with aura occur much less frequently than my mothers' episodes did. That doesn't mean that I am in less pain when I have them or that I don't feel anxious about when my next one will occur. I suffer from the same symptoms and feel the same misery.

For the last 20 years I have watched my daughter deal with a much more severe case of migraine than either my mother or myself. Over the years her migraines escalated to chronic migraine with co-morbidities. Now she spends a good part of her time in a dark, quiet room. The house is scent free and almost sterile-like. The joy of the everyday does not come in the door.

She is still in the prime of her life. But her career as a teacher is gone, her social life is extremely limited and her association with her "normal" way of life has been greatly altered. She is living on social security disability insurance. But even with that financial assistance, the costs of medications, supplements, treatments and doctor bills is astounding.

Like many people, and as you know there are millions, she has tried to prevent an attack by diligently adopting life-style changes. She has worked closely with neurologists and headache specialists experimenting with drugs and procedures but unfortunately her body has not responded. I have seen her apply for prescription drugs that might help her, and some that do help her, and I have seen Medicare refuse to cover the payment.

It is so impressive to experience how people with migraine have worked, and are working, to find relief. I have attending Headache on the Hill, have watched numerous relevant videos on the subject of migraine, participated in conferences sponsored by Miles for Migraine, and have spoken with individual patients and doctors about migraine disease. They are asking for and deserve your help.

We don't, and won't, give up. Progress is happening slowly and promising new drug treatments are very close. Maybe even next month! I am asking for your help in making the CGRP inhibitor medicine for migraine available to all who may benefit from it, and this includes making it affordable. I feel this is not only a justified request but also a necessity for millions of people who suffer from this debilitating disease. Let us take responsibility. This is an opportunity to help millions of people who have suffered for too long.

I'm Eileen Brewer and migraine disease has been a part of my life for as long as I can remember. I can remember attacks when I was five years old, but I didn't get a diagnosis until I was fifteen, and by that time I was chronic, meaning I was experiencing more than 15 headache days per month. If you look at my school records, you can see the days I missed double year after year. In high school I was missing so much school they wanted to put me in a home study program, but I desperately wanted to be with my friends, to socialize and have a normal life, so my parents fought the school to allow me to stay. I wasn't allowed to participate in extracurricular activities though. My grades suffered anyway. It wasn't that I wasn't smart or capable of doing the work, but I didn't have the focus or time to do the work required of me between school and managing my disease. It was incredibly frustrating, especially without treatment options.

While I was in high school a new treatment was released that was developed specifically for migraine, but sadly it did not work for me. It actually had a dangerous side effect for me. It was disheartening to learn that this new medication would not be the wonder-drug that I had hoped.

After that, over the years I have worked with headache specialists to try different medications that are not actually designed to treat migraine. I've tried medications for blood pressure, depression, seizure disorders, other mental health disorders, acute pain, muscle aches, and more. I've tried complimentary therapies like biofeedback, acupuncture, massage therapy, cranial sacral therapy, and mindfulness. I've taken supplements like CoQ10, magnesium, different B vitamins, D3, and butterbur. I've tried elimination diets and exercise and maintain many of these strategies today.

My current treatment plan is to get Botox injections every 3 months, take 100 mg of topiramate ER daily, and take migranol nasal spray for attacks if I can catch them at onset, and Zofran for nausea. I am still experiencing 25 migraine days a month. My hair is falling out and I can't remember words a lot of the time. I just finally got approved for Botox in January. It took years. Since I had been pregnant and breastfeeding I had stopped using other medications for treatment, and then when I went back to the doctor and requested treatment, my insurance told me that I had to have tried and failed an antidepressant and an anti-seizure medication in the past two years in order to qualify for Botox. Since I hadn't due to pregnancy and breast feeding, I then had to go back and try and fail those medications all over again, which was ridiculous and costly. Not only this, but the last time I tried an antidepressant it made me suicidal and I wound up in a mental hospital, so I was extremely wary of being forced to try this again. Having an insurance company dictate which medications you need to try is terrifying when they don't consider the person and just consider the disease. Then, after I tried and failed these medications, my insurance company at first told me that they were only going to cover something like 20% of the total cost, leaving me with a bill that was more than I could afford. I cried. Then I researched and learned that they were trying to run it through my medical coverage rather than my pharmacy benefit, which also covered it. It made no sense, but if I hadn't done the research I would have just given up. It was so overly complicated and frustrating. What's worse is that now that I'm trying Botox, it isn't actually helping. It's just another borrowed medicine I guess.

I have two beautiful children. They are two years old and six years old. They are compassionate and active. They'd rather be outside running around than inside playing with electronics, which is amazing. Unfortunately, they have a mother that often has to resort to offering them television rather than a park or even the back yard. I do my best, but some days I am laying on the couch trying my best to not move while they play quietly. They have so much but they deserve more. They watch me on the couch or on the floor in the bathroom vomiting in the toilet and wonder when things will change.

I have laid on the bathroom floor for hours wondering myself when things will change or if they ever will. A lot of my migraine friends spend time remembering when they had a "normal" life and could do whatever they wanted. I don't have those memories. This has always been my life. I've never been able to eat an onion without knowing that it will lead to excruciating pain and vomiting. I've never been able to weather a thunderstorm without knowing that the next 24 hours of my life has been ruined. I've never been able to do the things that other people take for granted and I am pretty jealous actually.

I'm smart and motivated and active when I'm not sick, and I'd really like my chance to shine. I'd like to take better care of my kids, but I'd also like to contribute more to society. Right now I spend a lot of my free time volunteering in my local community and in the headache and migraine community. I am the president of a preschool, I am the leader of a daisy scout troop, I am on the board of a national non-profit cluster headache organization, and I lend my graphic design skills to another non-profit migraine organization. Volunteering is a value that I take seriously and I know that I could do a better job if I were well.

I know that I could also contribute more financially to my family if I were well. I'd love to go back to work after my son starts elementary school, but I'm not sure that is an option for me at this point. I'm a great event coordinator, but I don't know that the demanding hours and high stress atmosphere is something I can cope with while still meeting the demands of my disease and family life.

What I'm hoping for with the new medication is more days where I feel like everyone else appears to feel. I want more days where I can just get out of bed and make breakfast for my kids and take them to the park. I want more days when I can do more for my community and be a better wife, mother, and friend. I want something that is closer to the "normal" that most people get. I know that this isn't a cure, but even if it gave me 5 more days a month that would be AMAZING to me. It would give me more life than I've ever had in my 42 years and that would be really something special. If I can't afford the medication that would allow this, that would be a tragedy, because I know that I have something great to offer.

I'm just one person. There are 4 million more of me, and 36 million more that would benefit in a similar way. This has the potential to be life changing. We've waited a really long time and we hope the barrier isn't money.

1. Briefly describe your disease experience, including your diagnosis, treatments you've used, etc. Be as specific as you feel comfortable with.

I am 69 years old and I have suffered from migraines since I was a teenager. After menopause, I have suffered from debilitating pain from a migraine throughout the year. Approximately two years ago, my neurologist prescribed Nortriptyline for me to take to prevent the headaches. I take 25 mg.daily and to increase to 50 mg. if needed. I am an active retiree. I walk frequently and take yoga and In spite of these preventive measures, I continue to have migraines that are usually caused by changes in the weather. Currently, I am on my 25th consecutive day of having a migraine. In addition to the severe pain that I have, I also have vertigo and nausea. I have been on medication almost daily, although when I feel well enough to continue my usual activities, I survive on aspirin and take Rizatriptan when I know that I will be at home. Rizatriptan causes me to feel sleepy so I don't take when I have to drive.

2. How do the disease/condition and the available treatments affect your day-to-day life?

Taking the Nortriptyline causes severe dry mouth. I have a part-time job working with the public and it is annoying to have to stop to drink water when I am trying to provide assistance to customers. In addition, I have to buy Biotene as a mouthwash to counter the side effects of the Nortriptyline. In addition, the Rizatriptan makes me drowsy so I cannot work at all, if the pain is severe, because taking it makes it impossible for me to drive. Over the years, I have taken a variety of medications, whenever there is something newer to try. Before Rizatriptan, I took Imitrex, but nausea and dizziness only exacerbated nausea and vertigo caused by a migraine.

3. What impact does the disease have on family or caregivers?

I have canceled working my part-time job and volunteer work, several times because I was unable to work with a migraine. I have also had to cancel family gatherings several times for the same reason. It is frustrating because in spite of the fact that I have taken the Nortriptyline, and the Rizatriptan, I still am suffering from a headache after 25 days. At times, I can function somewhat, but other days I cannot at all.

4. What else should ICER know about living with the disease or condition (e.g. impact on your ability to work, exercise, care for family, etc.)?

It is frustrating for me because I am a very active person and I have had to reschedule and miss work frequently and I feel disappointed when I am unable to keep my work and volunteer commitments.

5. What outcomes are most important to patients? For example, is the top priority improved quality of life, longer survival, or relief of a specific symptom?

I am hopeful that medication to prevent a migraine will be found. If nothing stops a migraine, then something that provides relief yet doesn't make it impossible to function doing daily activities, work, and volunteer work.

6. Are there new/emerging treatments that the patient community is anticipating? What are the benefits or disadvantages of the new treatments (e.g. more or fewer side effects, convenience, effectiveness, etc.)? Do you think the benefits will outweigh side effects or risks?

Recent trials of CGRP drugs seem hopeful.

7. Do patients have trouble getting insurance coverage for treatment? Do costs affect patients' choice of treatment, or their ability to access treatment?

Currently, I have been able to get the medication that my neurologist prescribes. I believe that I have been more fortunate than many.

8. Please share any other information that you think is important for us to know from a patient perspective.

A migraine is a lifelong illness and it can have a major impact on an individual's quality of life. Migraines are not just a bad headache. More attention needs to be focused on this illness.

Organization (if applicable): Patient

1. Share your migraine journey (when did you first start experiencing migraine attacks, what does a migraine attack feel like to you, how often do you experience migraine attacks.

I had my first migraine attack when I was in my early teens when I started menstruating at the age of 13, I am now 59 years old. The attacks were intermittent until my early twenties and started my career. What I remember during my twenties is driving to customer sites and having the symptoms of a migraine start. I lived on Tylenol and aspirin which never helped take the pain away and the high doses of aspirin I was taking gave me ringing in my ears. Having to drive several hours to see a customer would leave me in situations where I would be driving home in the dark and because of the light sensitivity that comes with a migraine attack I had to wear sunglasses for the glare from oncoming headlights and hold a cold can of soda against my temple. This continued until I saw my first neurologist who told me I had migraine headache and put me on a high dose of blood pressure medication. The medication helped with my migraines but left me with extremely low blood pressure, vivid nightmares and fatigue throughout the day making work and driving difficult. I was fortunate enough to have been told about a headache clinic specifically dedicated to headache disorders in Connecticut and thus began my journey through medications and headache diaries. A headache diary is a monthly capture of my migraines throughout a month. I track level of pain (0 through 10 with 9 indicating a visit to the emergency room and a 10 indicating something like an aneurysm), symptoms (nausea, light/noise sensitivity), location of pain in my head, medications taken. On the back I list what I think might be possible triggers (a food, environmental such as odors, noise or weather, change in sleep pattern, etc.). Over the years I have tracked close to 400 months of my life in migraine.

My migraines are on the right side off my head 95% of the time. The time of day of onset has changed over the years. These days I wake up with them and they are typically rated an 8 on the pain scale. When this happens taking an abortive migraine medication doesn’t typically work because thee migraine is in full force. Other times they can come on slowly with pain in my right temple. Light, noise and odor sensitivity starts right away as well. As the pain worsens I can feel my heartbeat in my temple and it sounds like a drum beating inside my head. The pain is throbbing and thobbing and any movement I make only worsens it. I can’t believe how my body can create so much pain by itself! It’s as though there is a small monster trying to dig its way out of my head through my temple, digging and digging nonstop for hours or days. I use bags filled with ice and press it as hard as I can against my temple to help ease the pain, almost as though I’m trying to stop the blood from flowing through the now widened blood vessels in my brain that cause the horrendous pain. I pray for sleep because that is my only escape. The room must be totally dark, noise and odor free. The dimmest light can seem like a bright summer day, the opening of the bedroom door can sound like a cannon. Ear plugs are always in reach because I can’t control the environment outside my home. The pain can last as little as 8 hours or as many as three days. During an attack I can only tolerate ginger ale and saltines because of nausea. Once the actual throbbing pain stops the post drome or what I call a hangover starts. The hangover can last a day or two and leaves me feeling fatigued, unable to concentrate, and unable to eat. Making simple decisions is difficult because I cannot think that clearly. If I'm not careful to avoid triggers during this time I can easily be sent back into a migraine attack.My migraines have been as often as daily or down to 3 or 4 a month. I have never gone more than a couple weeks without some type of headache pain. At least twice a year I fall into status migraine – a two to three week period of nonstop 7-8 level pain migraine. The only thing that can help bring the pain down and break the cycle is a high prednisone steroid taper for 16 days. Prednisone makes me unable to sleep, irritable, achy and anxious but it's the only thing that will help. It has also contributed to the osteoporosis I now have.

I live in fear of my migraines and they have stolen bits and pieces of my life over the 40 plus years of having them. They affected my ability to work productively. Even though I may have a migraine attack and miss a day of work the next day at work was a low productivity day not being able to concentrate or focus on the job. I once had a career running training classes in the graphic arts field and it was embarrassing to stand up and forget what you were talking about all the time. When travelling I would often leave work right away only to find myself in a noisy hotel desperately trying to find ice for my head and then praying for sleep. Co-workers thought I was a freak because I couldn't tolerate any type of perfume, fragrance, room freshener or even scented deodorant. They assumed taking to Excedrin would take away a migraine a concept still held by too many people.

After getting married and deciding in having a family I had to go off all medications before becoming pregnant. Dealing with not only the stress of infertility issues but also the increase of migraines made work nearly impossible. My biggest fear about being pregnant wasn't just about having a healthy child but what happens if I have a migraine attack during labor. How could I handle the contractions and pushing while in the throes of a migraine attack?

I was fortunate enough to stay home with my children after they were born but my migraines continued to be chronic. I would fight through the pain until my husband came home from work and retreat to the bedroom in complete exhaustion. Without close family nearby or close friends that understood how disabling my migraines were he would take over. He would typically take our daughters out to dinner to keep the house quiet interrupting their evening schedule or the amount of homework they acquired at school that day. Not only did I miss out on family time but between the pain and medication side effects, sexual intimacy took a backseat.

Over the years I have missed my daughter's birthday parties, school events, Thanksgivings, Christmas's, social gatherings, my anniversary, and days during vacation. I have been in emergency rooms in various states while on vacation when the three day migraine won't stop. Emergency departments can vary from place to place as they have a tendency to think of someone like me seeking narcotics. Narcotics don't do anything for my migraines and I have a specific "cocktail" of drugs and an IV of saline started when they finally do get me into a room which at times has been up to five or more hours.

I have strict "rules" in my environment – no fragrances of any type. All house cleaning supplies, laundry detergent, personal care products, bath and body lotions must be scent free. If someone comes to my house that doesn't know me and they're wearing perfume I have to ask them politely to wipe it off. If I happen to carpool with people I have to ask that no one where perfume. If I go to a social gathering and they have a scented candle my husband makes up an excuse that we can only stay awhile. Things have to be quiet, especially during an attack. My husband will have the TV volume somewhere around two or three and I still wear earplugs in case it wakes me. He always sleeps in the guest room when I'm sick and over the years that has added up to more nights than I can remember.

My daughters have never known me without migraines. Because I couldn't take care of them during an attack and didn't have family or the ability to call on someone to help me all the time they had no choice but to fend for themselves. They had to learn to make themselves meals and entertain themselves while I was in bed. They learned to bring saltines, ginger ale, and ice packs to me by the time they were 11 years old. My oldest daughter to this day comes in and presses hard on my temple where it hurts. She knows exactly where it hurts because she inherited her migraines from me.

I've entered into a new chapter of my life with my husband retiring and looking at grandchildren in the future. A life without migraines would mean that we would could actually plan our dream trips without wondering what happens if I have a 3 day migraine in a foreign country with a group of 30 strangers. We live in an active community with many social gatherings and not only would I like to attend them but I would like to be able to know that I could have a number of people at my house and not worry that I would have to cancel last minute because of a migraine. Even a 50% reduction in my migraine attacks gives me a better quality of life and that's what I really want, quality of life. I want to know that I can wake up tomorrow morning without pain.

2. Describe the negative/disabling impact that migraine has in your life?

It's been extremely difficult over the years to make plans from one day to the next, or week to week. Work, vacations, motherhood, marriage, socializing have all been affected. Migraine has affected my ability to be a mother, wife, lover and friend. It's robbed me of quality time with my girls growing up and time with my husband. I've lost friends of my inability to make plans or their lack of understanding that migraine is a disease. One friend told just don't think about it.

3. Detail how existing migraine medications fail to fully treat your migraine disease and have many unwanted side effects.

Since I saw my first neurologist in my 20's I have lost count of how many medications I have been on. From what I can recall some have been:

Inderal
Cambia
Topomax
Fioricet
Reglan
Nadolol

Metropolol
Prednisone
Sumatriptan
Gabapentin
Ergotamine
Norotyriptyline

Calan
Oxycontin
Maxalt
Frova
D.H.E.
Midrin

Celebrex
Oxycondone
Methergine
Cyclobenzaprine
Atenonol
Paxil

Zoloft

Supplements: Feverfew, Vitamin B2, Coenzyme Q10, Magnesium, Butterbur

I have tried various round of Botox injections (40 injections into the scalp at one doctor visit) until I developed dermal hypersensitivity and could not tolerate the needles any longer.

In addition I have tried acupuncture, Chinese herbs, chiropractor adjustments, massage therapy, and cranial sacral therapy. I have done two inpatient hospital stays to come off medications in hopes of "resetting" my brain and then restarting on new ones. Neither stay worked and cost thousands of dollars.

As of today I take 5 preventative medications plus one for depression and one for anxiety.

Amitriptyline (side effects include dry mouth, decreased libido, weight gain and constipation, hemorrhoids)

Verapamil (side effects include fatigue, reduced libido and constipation, hemorrhoids)

Memantine HCI

Naltrexone

Lexapro (for depression from chronic pain, decreased libido)

Clonazepam (for anxiety)

MiraLAX stool softener twice daily

Dulcolax stool softener every other day

Prednisone 16 day Taper, 2 to 3 times yearly (osteoporosis)

On top of this I have at least 3 visits to the emergency room at a cost of about $3000 per visit.

Although I am taking FIVE preventative medications it does not stop the migraines. Today is May 4 and I am just finishing a 16 day prednisone taper because of a two week cycle of status migraine. There are ZERO medications that have been developed for prevention of migraine, ZERO! All the medications that are given to me are specifically used for another condition/disease because they happen to find that the medication also reduced migraine attacks in the person with that condition! The only medications developed for migraines in the last 50 years are the triptans which are strictly for aborting a migraine. According the to Migraine Research Foundation migraine is the 6th most disabling disease in the world but has been largely ignored in terms of treatment. The current drugs are costly, don't always work and are limited by insurance companies as to how many pills they will pay for per month.

The constant constipation and reliance on stool softeners has me worried that I will always be dependent on them. I always am drinking water or sucking on hard candy because my mouth is so dry. The decrease in libido has totally destroyed my sexual relationship with my husband.

4. Call on ICER to appropriately value your pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines.

I first heard of the new CGRP inhibitor medicines several years ago when it was only a light at the end of the tunnel. My first thought was wow, a drug specifically designed to prevent migraines, this is a real breakthrough. I realized it would take several years, trials and phases before it became a reality. That reality has now arrived and has given me so much hope and I'm afraid that I won't be given a chance for a life without migraine. I've read as much information on the CGRP drugs as possible and all the trials indicate NO or FEW side effects!! The other information I read is that is could cost as much as 10,000 dollars a years and MAY NOT be covered by insurance except by a certain criteria.

The cost of my current medications are high and warrant many unwanted side effects. ANY potential side effects of this new drug is worth the risk to me because of the potential to have a better quality of life. With 37 million migraine sufferers in the United States and 3-4 million of them being chronic (more than 15 migraines per month) ICER has a real opportunity to give people like me a chance at life free of pain.

Judith Brown

May 6, 2018

Date: May 5, 2018

RE: ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Dear ICER Committee,

I am writing as a person with migraine disorder, a genetic neurological condition that affects my life in many ways. I had my first migraine in my early 20s, then suffering from a very occasional attack. The severity, duration, and frequency has varied over the past 20 years. I am now in my mid-40s and experience an average of 5-6 episodic migraine headaches per month, with more days of other symptoms. This is far less than patients with chronic migraine, but the possibility of them increasing always looms over me, as the disorder shifts and changes with age and circumstance. As you likely know, there is no cure.

Migraine headaches are the most commonly known symptom of this confusing and miserable disorder, but most sufferers like me experience many other symptoms as a result. I also get visual auras, nausea, vomiting, vertigo, "brain fog", and deep fatigue. When you combine the days directly before and after a headache attack (the prodrome and postdrome periods), migraine disorder can affect up to half the days in my month, where I am functioning at a lower than normal, or non-functional.

It's difficult to explain the range of the experience of migraine to those who have never had it. Some days bring a mild headache where it's possible to muddle through my day with medication, or sometimes even without, just feeling fragile and tentative. Some days bring a severe headache that won't budge and require me to be in bed with eyes closed, a heating pad on neck, an ice pack on forehead. Some days bring nausea and vomiting that can come on literally out of nowhere—at the dinner table, on the side of the road out an open car door, during a conference, on a hiking trail. Not being able to predict symptoms and when they will worsen produces anxiety about planning things, because of always have to account for the chance that you could get much worse without notice.

Migraine disorder impacts my career, my family life, my finances, my sense of trust in my own body, and sometimes my self-esteem. Migraine receives very little press or research funding proportionate to how many people it impacts and disables. Additionally, it is heavily stigmatized. In a recent study, only 27% of American employers thought that migraine was a legitimate reason to miss work. People ask "isn't it just a bad headache?" and migraine is often dismissed as a "women's problem," pinned on everything from hypochondria to depression to "hyper-sensitivity." In reality, migraine sufferers are some of the toughest people I know. We not only fight pain and debilitating unpredictability, we have to remain mentally strong in the face of burdens that could easily wreck self-esteem and sense of purpose if we let it.

I am one of the lucky ones. My migraines are generally tractable and episodic. I have a very strong support system, including a partner who understands the details of the disease and has my back in every way. I am healthy psychologically, and do not suffer from the common comorbidities of chronic depression or anxiety, though a bad stretch of migraine can produce very low periods. I am self-employed so I have some control over my schedule when I need it.

And I have good medical support—a terrific naturopath manages my overall care and I am going to see a migraine specialist next month—and at least passable insurance coverage.

Even with all of the above resources, I live with the constant knowledge that a migraine could strike at any time, though I manage my lifestyle for all the factors I can control (diet, exercise, stress response, meditation, positive self-messaging, sleep, hydration). I live with the constant struggle of when to take abortive medications, early enough so that they catch the headaches before they are intractable, but not so often that I am at risk for medication overuse. I am mostly able to manage my pain with a combination of lifestyle for prevention and NSAID-caffeine for attacks, but it doesn't always work and I know my condition could "outgrow" this at any time. I also take ondansetron for nausea/vomiting when I have to perform a task in the midst of an attack. However, these meds have little to no effect on symptoms like brain fog, irritability and fatigue. I have not had much luck with triptans, as I am very sensitive to pharmaceuticals and often get egregious side-effects from "heavy" medications.

I am very hopeful that the new CGRP inhibitors will offer a more predictable and effective treatment option for those of us who suffer from migraine disorder. I have not been involved in any trials and I know about the treatment only from its mention by many specialists who I have encountered through the advocacy and support groups I am involved in, like the Migraine World Summit, Migraine.com, and the American Migraine Foundation.

I am writing to give the committee, which to my knowledge has no migraine patient or specialist on it, insight into what it's like to live with this misunderstood, underfunded, and terribly debilitating disorder. Migraine disease is real, it is pervasive, and it is not "in our heads." Please support the process of making more and better treatment options available for us. My hope is that CRGPs will become available for both chronic and episodic migraine sufferers, and that they will be affordable enough that those who need them most can get them.

One migraine patient on a forum I am involved with also had cancer, and she admitted that having cancer was easier than having migraine—people who heard of her cancer diagnosis had sympathy for her; she had many treatment options and a great medical team; people offered so much help she had to turn it away; it was widely understood socially; and it was eventually curable. Her migraine, on the other hand, is minimized, misunderstood, and stigmatized; it cannot be cured, only managed; and she lives with her symptoms with very little help. Migraines do not kill people, but they kill people's productivity, possibilities, imaginations, future plans, sense of optimism, and quality of life in so many ways.

Please do what you can to help. Thank you for your time,

Christine Byl

Hello,
I just turned 70 and still have not gotten migraine relief. My neurologist said a new group of medications was coming out but they might not be covered by insurance so not to get my hopes up.
I started getting migraines at age 5, they became frequent at 14 as so often happens and almost unbearable by 20. I was lucky to see most of the well known neurologists across the country, from the Menninger foundation to Dr. Graham at the Faulkner. Later because of a good friend I had access to the chiefs of neurology at major hospitals in Boston and San Francisco.

I actually wrote my dissertation on Migraine and the artist, but the minute I got married, and did not have to work a job with regular hours I stopped. It was just too hard. Back in those days of hormone fueled migraines, the pain was so debilitating I could spend a couple of days in bed at a time.

Even today I still have 12-13 headaches a month. They are not as violent but I feel like half my life has been in pain. I never make plans, I have become more anxious, more phobic and less prone to take chances. I do things that I can do when I have a good day.

I put up with hospitals that think I am a drug seeker and friends who think I am a complainer.

I often wonder who I could have been professionally if I had not been so debilitated.

The one drug that works is topiramate but it only works for 4 months at a time.

My son is getting married so I am holding off.

Any help you can provide would be so welcome, to get help in my lifetime. My grandfather became a drug addict as he was trying to run a hoisery mill during the war with his migraines. The country doctor gaves him shots of morphine and then died. He died in a sanitorium. I had thought in my lifetime, there might be a preventive that could work for me.

Best,
Karen Cadenhead

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My name is James, and I am a survivor of a violent childhood. I suffer from chronic migraines, and have had them since childhood.

I was a Park Ranger (security/EMT/guide/customer service) at the NC Zoological Park for 14 years. I was also a student of martial arts since June 13th 1981, beginning with 6 years of Japanese jujitsu, and moving on to another 7 years of Kung Fu, 3 years of aikido, 3 years of mixed shotokan karate, and judo. I have a nidan (2nd degree black belt) in jujitsu, and am certified to teach it, as well as a black sash (equivalent to 1st degree black belt) and teaching certificate from Shixi-zin Kung Fu.

When I was 9 years old, my 15 year old brother had beaten me so badly I was hospitalized for 3 days. In 1980 in rural North Carolina, child-on-child abuse was not a recognized thing. Law enforcement met with us and told my brother, me and my mother that if occurred again we would be removed from the home, and that was all that was done about.

My mother blamed me for being weak and not able to defend myself, so she researched all the martial schools in the area and found the most brutal dojo. For my 10th birthday my gift was my first year of study at the Muratomo-Ryu Ji-an Jujitsu school. I would be a student there for 6 years until the school closed down.

My mother wanted me to be strong and capable, and I took to the training. It became a passion for me. By age 12 I was so obsessed with the training that I would get up at 4am to practice for 2 hours before getting ready for school. I would have classes at the dojo 3 nights a week, and practice alone or with friends for hours at a time during the weekends. This pattern continued into my 30’s, adding in new martial art styles. I would find a good school and stay with it, until each closed down.

In my duties as a Park Ranger I was certified and functioned as an EMT and became a captain responsible for the daily activities of up to 10 other rangers, as well as coordinating emergency response with local EMS/Fire and Law Enforcement to the park which is over 500 developed acres with nearly 3 miles of trails. The park could have up to 14000 visitors per day. Rangers were responsible for emergency medical care for visitors and 200+ employees. We also were responsible for evacuations due to weather, for response in case of an animal escape, or native wildlife interacting with people. We coordinated searches for lost children, during my 14 year tenure there, we had a 100% recovery rate for any children that were lost/separated from their parents or group.

As a martial artist I focused on practical self-defense, and eventually became a teacher. I focused on self-defense for women and children, and would go on to teach select individuals privately and for free. If I thought they needed the practical skills to protect themselves, or just needed the confidence or focus, then my door was open to them.

I also enjoyed rock concerts. I used to love to go to live shows in clubs. I never drank, but I enjoyed the music and the vitality of the events.

My point is before, the migraines crippled me, I was a very active, dynamic, strong, physical and social person.

I began having extremely painful headaches in childhood, possibly as early as kindergarten. I remember not being able to play or focus on anything and sometimes getting sick, even passing out once at school. But I also felt ashamed and weak and felt like I had to hide them. Most of the time I could, but sometimes the migraines were so extreme that it could not be concealed.

At first the migraine attacks were rare, very infrequent, but I remember pain that could be crushing or stabbing, nausea, vomiting, and dizziness. When I was younger I would often get a warning sensation-before the migraine attack would hit. I would get an extreme sense of euphoria, and then the pain would hit.

When I was 14 years old, the migraines began occurring more often and were disrupting both normal school and my jujitsu practice.

I was formally diagnosed with migraines, and given a beta-blocker (tenoramine I believe) as a preventative and Ergotamine as a rescue med.

I was unable to tolerate the beta-blocker, even at low doses as it lowered my blood pressure to dangerous degrees. I had problems with the Ergotamine as well. While it did help with the migraine attack, it also altered my judgement to a dangerous degree. Ultimately I was forced to stop taking those meds.

Over the years I have gone from doctor to doctor, trying a multitude of medicines. I tried diets, chiropractors, acupuncture, acupressure, meditation, prayer, and even more meds and more doctors.

As I got older the migraine attacks became much more frequent, even now while taking Prozac, gabapentin, verapamil, quietapine, and magnesium, as well as Botox every 3 months, the migraines are chronic. I have them every day. I will sometimes get a few hours break between attacks, but truth is I pretty much always feel the migraine or its “aura”.

The pain is variable at times, ranging from barely noticeable to nearly soul crushing extremes.

But worse than the pain are the other effects of the migraine attack. I get dizzy and suffered falls at random times. I would just be walking to the bathroom and fall face first on the floor, for example. Combining that with bad knees, I am now forced to walk with a cane to keep balance.

The aura also affects my vision. I become very sensitive to light. At its mildest I must wear dark glasses when I go outside. At its worst, the digital numbers on my alarm clock are painful enough to cause me to vomit.

The migraine aura typically affects my left eye more than right. I often lose vision in the left eye, with it becoming a gray blur.

These symptoms are so constant now that I walk with a cane and no longer feel safe to drive a vehicle on most days.

The migraine also affects my ability to focus and think clearly. I often struggle to find the right words when talking, and have difficulty with even basic math. It has taken me almost 4 hours to write this letter!

Simple smells, perfume, deodorant, air fresheners, these cause a migraine attack, or make an existing worse. Strong smells such as cigarette smoke or car exhaust is enough to cause intense pain and vomiting.

During an attack, sounds have extreme effects. It’s almost as if I can “see sound” sometimes. A dog barking or child squealing is enough to turn my vision blue for a few seconds, and can cause vertigo and nausea.

In addition, the migraines have killed my sex drive. I am married to a wonderful woman who I adore and she adores me as well. We are both very physical people, and had a fantastic sex life. But now the migraines are so frequent and so intrusive that I just don’t feel sexual very much anymore.

Ultimately, the migraines have become so pervasive that it affected my attendance and job performance and I was terminated from the NC Zoo after 14 years of service. It wasn’t just a job to me. It was a career, as much a calling as my martial arts study.

I loved being a Park Ranger, it was part of my identity. My radio call-sign 108, is as much my name as James is. The job became a part of me. I took pride in it. And migraines took that away.

My current medical regimen helps with the migraines, to a degree. I still suffer from migraine every day, but the severity is lessened, and I have fewer hours each day where I am forced to lie down. So the medicines help.

Still I have to deal with constant side effects of the medications: I battle constipation with the verapamil, which is a constant everyday fight that is marginally controlled with diet. The Prozac and quetiapine make me drowsy and sleepy all the time. In addition the Prozac has dulled my interest in anything.

I have sumatriptan injections for rescue meds, but I receive a very limited amount per month. Since my migraines are daily, I have to be very selective about when I use the shots, both to ration them out and make the best use of the limited functional time the shots provide.

And even when I take the sumatriptan shots, it helps with the migraine but at the same makes me feel weak and ill, almost like I have a cold or early stages of the flu. It's an improvement that allows me to function for a limited time, but it is not pleasant.

To sum up: I used to be a very physical, active, social person, an athletic martial artist, teacher, EMT/Park Ranger. I used to be capable of dealing with life threatening emergencies; I have literally fought for my life, and fought to protect others from violent situations.

Now because of migraine- I don't feel like I am really alive anymore. I am a shadow of who and what I was. I can't drive, can't work, and can't practice my martial arts, can't go to concerts or hike, and my sex drive has been crippled. Most days I am isolated and alone. I feel like the James that I was, that person was murdered by migraine, and whatever it is that I am now, is just a ghostly reminder.

I have a beautiful 5 year old granddaughter that I want to pass on my knowledge and traditions too. But I am extremely limited by my migraines. It is a rare occasion when I feel well enough to keep up with her. She is too young to understand my limitations, so I push my limits to spend time with her, and pay for it in pain and nausea for days after.

If I could ask anything of the ICER panel, it would be to please make it easier to get access to the medicines and doctors we need to treat this disease. And to please help spread awareness that migraine is not "just a headache". It is so much more devastating than that.

We who suffer from migraine often face a dismissive attitude from people that don't understand. They seem to think we should be able to just take an aspirin and move on. They don't understand how persistent, pervasive and difficult to treat this disease is. The word headache doesn't do it justice and leads people to believe it is something simple, when in reality migraine is a neurological disease with many symptoms and effects on the brain and body.

I am tough. I was a fighter; mentally, physically and spiritually. Now I am a 46 year old man, unable to work, on Disability and Medicare. Instead of doing and teaching amazing martial arts feats, I hobble around on a cane. Instead of saving lives as an EMT or spending time with my granddaughter, I live in the dark on the couch trying not to throw up from light, sound, smell or motion.

New drugs are on the way that offer hope, but I have no idea when or if they will be a realistic option for people like me who may not be able to afford them. It took me years to get access to Botox. How long will it take before I have affordable access to CGRP inhibitors?

Thank you for reading my story. I know I am not alone; many others literally share my pain. Please fight for us.

Sincerely,

The Migraine that used to be James

May 8, 2018

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

To whom it may concern:

I had my first migraine in 1999 while traveling. I was 26. I landed in Dublin with the worst headache of my life and asked my friend if I could just go to sleep. I tried over the course of my visit to be happy and energetic, but I could barely stand or mumble out a few sentences. I slurred like I was drunk. I barely ate. I have no memory of that trip other than pain, woozy feelings, and laying in various beds as I made the rounds. The headache lasted over a week.

I did not have another until 2001. It was an intense stabbing at the back of my head. It lasted three days. I did not think it would ever end. I could barely function at work.

About two years later, I felt a bad headache coming on. I thought I just needed to eat. I grabbed a sandwich and went to my dance studio to eat it and to wait for flamenco class and company rehearsal, the pain in my head worsening with every minute. I ate part of the sandwich and felt the urge to vomit. I dropped everything and locked myself in a stall and vomited repeatedly. The pain worsened. I told a fellow dancer I couldn’t stay. I made my way to the metro train as quickly as I could to go home, pain and nausea worsening. I caught a train. I couldn’t hold the vomit back any more and puked into my leftover sandwich box, then into the bag for the box. About halfway home I got off the train and puked repeatedly onto the tracks, having no more containers for the vomit. I finally made it home and was between the bed and the toilet for three days.

The years mush into one another after that. The headaches with vomiting became more frequent. At first it was every few months. Then it was every month. Then every week. I would turn off my office lights to keep the fluorescent light flicker from irritating my head. I became sensitive to smells. Perfumes began to trigger the headaches. Each sniff of a scent was like a dagger up my nostril into my brain. I started having to close my office door and rest on the floor. Productivity dropped. I tried to power through work and dance, but it wore me out.

The company was failing, so I went looking for a new job and landed one. I took a week off between jobs and was hit with a horrendous headache. I went on and on, and the vomiting would not stop. I became severely dehydrated and had to go to the emergency room. I was in agony. They patted me on the head and handed me some ibuprofen. The ER doctor said I had a migraine and suggested I visit a neurologist. Soon after that, the headaches became constant. Everyday became a fight with my body.

Aura preceded the migraines. The aura did and still does present as colorful circles flashing in my left eye, like my own fireworks show. Migraines at that time began like a buzz at the back of the skull on the left side. The buzz would increase and become pain which radiated between the base of my skull across the left hemisphere. I felt like I had ice picks jabbing into my skull and eye. I would vomit until there was nothing left and continue dry heaving for hours. The world distorted with objects in the room looking larger or smaller than they should. I would be cold then on fire. I would have auditory hallucinations. This would go on for approximately three days when in full swing. I could not work or do anything else during an attack.

The neurologist tried verapamil and topiramate for prophylaxis. Neither helped. The topiramate made me stupid. I would fall asleep at my desk and at traffic lights; I had trouble remembering simple words and stringing sentences together; I couldn’t remember simple tasks. The last straw with topiramate was when I got lost driving home from work. There were four turns to make between the office and my home. I could not remember how to get home and couldn’t tell anyone how to get me home. I was on it for only three weeks.

I changed neurologists, as the one I had threw up his hands and told me I was “just lucky” and he didn’t know what to do. The new one started me on steroid injections. Because I responded well, I was a candidate for nerve decompression surgery. In 2012 and 2013 I had surgery to decompress the greater occipital nerve and frontal nerve. The lesser occipital and temporal nerves on my left side were removed. I wish the surgeon had removed all of the nerves in my head. While the duration decreased and frequency temporarily decreased and kind of pain changed, the migraines continued. And after a while they increased in frequency again. I stopped dancing, as migraines made me unreliable for the dance company. It’s hard to stomp around in flamenco when your head is pounding and you’re off puking.

My migraines have changed some. Aura is persistent. The flashing lights never really go away at all. There’s nothing wrong with my vision. The migraines generally begin as nausea and a pain above my left ear. Both worsen. My vision distorts, I begin vomiting and vomit for hours until the dry heaves take over. Even a drop of water will send me into dry heaves again. I have gone to the ER three times for dehydration. I never ask for them to stop the pain. I know they can’t. Just make the puking stop. I lay in bed or on the bathroom floor in agony. I hear and smell things that aren’t there. My words slur, and I can’t form coherent thoughts or sentences. It usually lasts a day and a half.

I’m 44 now. I got married in November. My migraines are now approximately 19 per month. We have decided not to have children, as I would not be able to care for a child. Work is a struggle. I’ve missed work, church, and social activities. I have tried verapamil twice, topiramate twice, Imitrex, Treximet, sumatriptan injections, decompression surgery, daith piercing, nutritional changes, vitamin/mineral supplements, butterbur, feverfew, drinking ice water to give me brain freeze, and more. I’m limited in the drugs I can take. I have a severe allergic reaction to any and all dairy, including pharmaceutical grade lactose. Nearly all triptans (which do work to abort the migraines) contain lactose; same with SSRIs. I was on Imitrex until the insurance company decided I could no longer have it due to generics (containing lactose) being available. Never mind the reaction my body has to the lactose. I was switched to Treximet, which does not have a high enough dosage to effectively work; it only takes the edge off. And I can only get 9 per month. I can’t get the insurance company to cover Imitrex. I hate taking pills, but I have now been placed on Depakote to see if it helps. Hopefully it will. I’m running out of options. We migraneurs NEED access to new and better medications. Please help.

Sincerely,
Katherine J. Cardell

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I first began experiencing migraine attacks when I was five years old. About five years ago, the frequency and severity of my migraines increased to 3-5 migraines a week. Migraines are a complex disease that includes the infamous incomprehensible head pain. This part of a migraine is excruciating, it can bring me to the point of desperation. There are so many other symptoms that come with the diseasde, lights, sounds, smells are also unbearable. Nausea and vomiting are common, vertigo, panic attacks, depression, my digestive track stops working. I've had a complete loss of appetite for many years. My thoughts become fuzzy, something people have termed 'brain fog'. My quality of life has gone down but I persevere in hoping to find a treatment that can return me to a better state.

Migraine disease ended my successful career of over fifteen years as a Producer. I was also an avid traveler, ongoing student, dancer, and socialite. All of these came to a complete halt. I've lost close friends over the disease, as I can no longer maintain plans or engage in activities I used to. I know have to be very mindful of the activities I engage in and limit what I do. Not to mention the financial hardships this has taken on my family. I desperately want to get back to work.

I have tried copious amounts of treatments, to no avail. It has been a real struggle to afford to pay for all of these treatments. Unfortunately monetary limitations continue to impact what I can try, and when. These include 3 rounds of 31 botox shots all over the head and neck. Five days with a constant IV of medication that made me unbearably nauseous. Multiple trigger point injections, occipital nerve blocks. A multitude of heavy duty prescription medications like Topimirate, which gave me awful side effects. Others I've tried include blood pressure medications, Alzheimer medications, antidepressant medications I've also tried multiple supplements like magnesium citrate, B2, CoQ10, and on. I try all meds and supplements for at least three months at a time. I continue to try medications and supplements for prevention. So far with no success. I have been to two headache clinics, five different neurologists, along with chiropracters, acupuncturists, physical therapists, hypnotists, naturopaths. I'll try anything! Twice even! My current headache specialist (and a neuroligst) is hopeful the new CGRP meds will be the relief I am hoping for. As medical insurance costs keep increasing every year, I'm nervous about being able to afford the new treatments. I need better treatment options and access to them!

Thank you for your time,

Yuri Cárdenas

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My name is Carolyn and I am 64 years old. I have had a headache some portion, or all of every day for 34 years. It started as frequent headaches, several days a week and gradually over a couple of years progressed to a daily headache. It varies in intensity throughout the day. I wake up with it and I go to sleep with it. On a scale of 1 to 5 it is usually a 2 or 3. If it is a 2 or below I try not to take pain medication. If it is 2 plus or above I have to do something. Sometimes I have to lay down in a dark room with an icepack on my head and try to sleep. Sometimes that will help bring the level down a bit. Usually I have to take something for it. In order to avoid re-bound headache I am limited (by my doctors) to taking acute pain meds only 2 to 3 days a week. I keep on hand, Excedrin Migraine, a compound medication, (orphenadrine, aspirin and caffeine), Maxalt and something for nausea and vomiting. I keep a headache diary every day of intensity level and meds taken.

Depending on severity or other unknown factors each of these meds might be very effective or slightly effective in reducing pain. When the headache (HA used for headache from here forward) is very severe I have to go to bed. That is all I can do. Take some meds, get the ice pack(s), get in pjs, darken the room and go to bed and try to sleep. Sleep it off. Usually takes 8-10 hours to feel better but then I am in a HA hangover for a couple of days. Groggy, sleepy, tired, listless with foggy thinking and processing. After all that I return to my regular number 2-3 HA.

My HA is usually across my forehead and behind the eyes equally on both sides and goes around my head to behind the ears. Sometimes it lands behind one eye and feels like a dagger in my eye. Sometimes it radiates down my face into the cheek bones and hurts between each of my teeth. Sometimes I get an ice pick HA pain in various areas around my head that are short lived.

It has been recommended that I express to you in this letter what is most important to me of these three issues: Reducing my migraine frequency, lessening the severity or increasing my functional ability. To this I answer, yes. Yes, they all are most important.

My life has been overwhelmingly impacted by migraine. I feel like half a person. Or some days less that half. Imagine if you had to plan every day like you only have about 4 hours to get things done. That’s all you are good for. The rest of the time you spend in bed or behind an ice pack wrapped around your head. It’s hard to think. It is hard to make decisions or plan. For me, it is hard to wake up. It is hard to shop, clean, try to exercise or socialize. I used to work full time as a graphic designer and loved my job. I have one daughter and 3 step children, and now 8 grandchildren. Each year that goes by with HA I am able to do less and less. I am totally exhausted and depressed.

The list of meds, supplements, doctors, therapies, surgeries and other attempts to treat my HA is long. When I look at the list I can't believe this has been my life. I'll make an attempt. It is simpler to say what I am taking now as all other meds have been stopped for lack of efficacy or intolerance due to side effects. I currently have a daily HA that varies in severity mixed with severe HA that requires acute medications.

Currently taking daily for HA: Zoloft, Losartan, fish oil supplements, Vitamin D, CO-Q10

As needed for pain: Excedrin Migraine, compound RX -(orphenadrine, aspirin,caffeine), Maxalt,
For nausea and vomiting: Phenergan and Zofran

Medications I have tried in the past for the treatment of daily HA:

Anti-depressants:
Nardil, Marplan, Prozac, Amitriptyline, Desipramine, Norpramin, Wellbutrin, Pamelor, Nortriptyline, Paxil, Zoloft, Triavil, Desyrel, Vivactil, Deprol, Effexor, Surmontil, Luvox, Serzone, Celexa, Seroquel, Cymbalta, Lexapro, Pristique, Vibryd.

Pain: Chlorzoxazone, Midrin, Butalbital/aspirin, Voltaren, prednisone, naprosyn, cafergot, orudis, soma compound, Decadron, Carisoprodol/aspirin, compound of orphenadrine, aspirin and caffeine, Imitrex, Maxalt, Indocin, Ansaid, Dexone, Relafen, Ultram, Indochron, Betachron, Duract, Daypro, Naprelan, Zanaflex, Bextra, Robaxin, Baclofen, Orphenadrine.

Others: Lithobid, Lorazepam, Lopressor, Klonopin, Florinef, Cardene, Verapamil, Thorazine, Vistaril, Depakote, Betachron, Norvasc, Singulair, Cardizem, periactin, Topomax, Neurontin, Ritalin, Trileptal, Tranxene, Geodon, Toprol, Provigil, Razadyne, Strattera, Methergine, Zonisamide, Namenda, Abilify, Keppra, DHE.

supplements tried: fish oil, magnesium, CO-Q10, Vitamin D, 5HTP, calcium,

Other therapies, procedures, surgeries:

hospitalized twice for HA treatment: once for 7 nights in an inpatient HA clinic

surgery: inplanted a vagus nerve stimulator for HA as part of a study. It was explanted after a couple of years because it wasn't effective for me.

sinus surgery: ethmoidectomy which was not helpful for head pain

numerous MRI scans and CT scans of head and brain several ER visits for bad drug interactions of prescribed meds or migraine HA treatment

trigger point injections

epideural injections

sphenopalatine ganglion block

Botox injections (3 different trials)

accupuncture with and without electrical stimulation

Chiropractic treatments including cranial adjustment (with several different chiropractors)

Physical Therapy regimens with several different therapists

Cranial - sacral therapy

massage with various therapists

Evaluation for TMJ - from several dentists and an orthodontist - have worn 3 different styles of night guard mouth pieces and worn partial braces for realignment of bite all without any pain relief

auricular electrostimulation

extensive allergy tests and self administered allergy injections

followed tyramine free diet

removal of all old dental fillings possibly containing mercury and replaced.

behavioral and cognitive psychotherapy including a stay in an inpatient hospital depression unit

hypnosis

EFT - Emotional Freedom Therapy (Tapping Therapy)

Reflexology

Biofeedback

Meditation

Sleep study in an overnight hospital sleep lab

visit with a psychic healer

visit with a faith healer

prayer

I have been reading and following the development of the CGRP inhibitor drugs for several years with great anticipation and hope. I am anxiously awaiting the release of these drugs but am also so anxious about the possibility of not getting a chance. A chance to try one or more of these drugs denied because of cost and accessibility. Up until Imitrex there were no real drugs developed to target migraine. The triptans have been a life changer for many and saved untold numbers of trips to ERs for sufferers. The CGRP inhibitor drugs are the first to focus on chronic HA and migraine conditions. Most of the drugs used in HA clinics and by HA specialists were developed for other conditions and are used off label. Many with debilitating side effects that often cause patients to stop treatment. Finally we have something developed for us, for our specific condition, for the chronic migraineur. It is often a hopeless feeling that we carry, thinking about our condition. It affects one's self esteem, thinking processes, productivity, motivation, drive, relationships, careers, ability to cope and desire to learn. It compromises one's overall health. It challenges one's sense of self and reason for being.

Yes, it has been said, " a headache never killed anyone". But it does consume a person and slowly you disappear.

It would be so nice to have some hope for those of us who have "tried everything" without any lasting relief. We need more options for treatment and more research into causes. Please give us the chance and access to these new meds.

Respectfully submitted,
Carolyn

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My name is Jill and I am writing on behalf of myself, and especially of my 24 year old daughter Cate.
It is past 11pm on May 8th 2018, and this is the last few minutes until your deadline for open comment submission. It's with a heavy heart that I start to write this, and as my husband likes to remind me that people won't read too much content, I'll try to keep this to his favorite format, bullet points.

- **Our family's genetic component to migraine**. Our whole family suffers from migraine. My husband's migraines stopped when he was in college. My mother-in-law says her migraine continued until menopause. My migraines continue into middle age, and my mom in her 80's still gets an occasional migraine.
- **Impact of migraine on our lives**. Cate, my 24 year old daughter is the one who has lost her life in many ways to migraine. Cate has a migraine that never goes away. The impact of this pain is such severe disability that Cate spends most of every day at home in the dark. Often her window of functioning is about 2 hours on a good day, of ability to leave the house. She has been in constant pain since she was 12 years old. We first spoke of "too many headaches" to her pediatrician when she was 5 years old. She was too young to write very well, so her doctor asked her to keep a headache journal of pictures. She drew pictures of her head, and chose to color in red where it hurt.
- **Pursuit of cure, even any level of better quality of life:** We have taken Cate to see countless doctors and health practitioners. She's been to top neurologists in Philadelphia, New York City, Cincinnati, Boston, Delaware, Connecticut and New Jersey. In addition, she's been treated by chiropractors, acupuncturists, eye doctors, rheumatologists, psychologists, psychiatrists, integrative doctors, a lyme disease specialist, allergists, cranial sacral massage therapists and physical therapists. Cate's been admitted for hospital stays at 4 different hospitals starting at age 13 at Jefferson Hospital's Headache Clinic for an "unsuccessful" 15 day stay. It's become a blur, Cate has seen around 85 different health care providers in our quest to alleviate her pain, and to help her regain some quality of life.
- **Nothing helps!** Cate does not respond to any medication. She does not have a magic bullet to make her migraine go away.
- **CGRP:** Cate participated in a CGRP Teva trial from August 2016 through December 2017. We saw the quality of Cate's life change during that trial. Though it may not seem like much to the person reading this, Cate went from being in bed all day, to being mostly inside, but out of bed. She was able to graduate from a top university while participating in the CGRP trial. We are hoping that when it becomes available, we will be able to afford it!!!!
- **Cate's story. Robin Roberts of Good Morning America produced a series for WebMd about migraine. Cate was featured in this episode, which ran on GMA in June last year.**
  Here is the link: https://www.webmd.com/migraines-headaches/inside-migraines-17/video-migraine-genetics-robin-roberts

I have had migraine disease for almost 50 yrs. My mother, grandmother and aunts had them. I have managed to live through 45 years of migraine with lots of missed or compromised events, friendships, vacations, & work. I was also prescribed daily medication in the form of ergotamine, a drug that constricts blood vessels in the head and all over the body. I left my job because of migraines, so I could have less stress. I stopped seeing people rather than cancel out at the last minute. I decided not to have a child because of migraines and fear that I would pass this insidious disease on. People think of migraine as just a headache, but it really slowly kills you. It snuffs out the joy in life, the people you love, the experiences you seek, the purposefulness of waking up each day and anything else you may have planned because it's a victory getting out and feeling well enough to get my teeth cleaned or my hair cut. Migraines isolate me. My husband is as understanding as he can be, and I feel less of an active partner in our marriage because of migraine. Finally the daily medications caught up with me and I was sent to the Emergency Room where I passed out from septic shock, acute renal failure, bowel perforation and sepsis. I was 65 yrs old and in ICU for 22 days & in acute rehab for 2 weeks. Headaches subsided for a while because, as one doctor said, "I was on everything." Gradually, my headaches returned and I needed to find another neurologist as the one I was with moved away. After consulting with my Primary Care Doctor, I decided to apply to Stanford's Headache Center in 9/2014. I have been there since and receive Botox treatments in my head and neck every 3 months. It seems to decrease the severity of the headache somewhat. The bottom line is that my quality of life is non-existent. I don't know from one hour to the next how I will be feeling. I am depressed and lonely from the pain & isolation that is my daily life. I signed up for a clinical trial of the new CGRP antibody and was accepted until abnormal kidney function lab test disqualified me. My doctors are supporting my request for compassionate use, although I realize that the chances of including me in the trial are highly doubtful. I have to try to do things that living people do. Make choices to try and live within the scope of mounting disability, and a doctor who is sending me for another opinion because I have exhausted all the therapies that Stanford had to offer. Where do I go from here? I've been told that, until CGRP antibodies are available, I am at the end of the line. This is no way no live. I have one medication that I can use twice a week to help with the pain, an ergotamine Migergot. I do as much as i can until the pain leads me to ice my head. When the pain becomes unbearable, I take medication. I have to not be able to stand the pain before I can take medication. Sometimes that means a day in bed and in high levels of pain for hours at a time. This is my life while waiting for this one chance to help change the course of my life.

To Whom It May Concern:

I first started experiencing severe migraine attacks two years ago, when I was 29. When I get a migraine, I get severe dizziness or vertigo and feel like my head is not attached to my body. I get very nauseated and vomit. I also get throbbing pain on the right side of my head, like banging my head on a concrete floor over and over, as well as light and sound sensitivity. I can't think clearly, my words don't come out right, and I can't concentrate. My entire life comes to a halt and I go to bed.

Migraine disease has taken so much away from me. Bright light is a trigger for me. I used to be very into going fishing and I can't do that anymore because being outside in the sunlight gives me a migraine. I used to love hiking and I can't do that anymore either. I feel like I'm not as good an employee as I was before migraine because there are days I'm forced to call off without warning. Before I had migraine, I never called off work. I've also lost most of my friends to migraine disease because I can't do the things they can do- stay out late, drink alcohol, eat takeout, spend lots of time outside, ect. Those are all migraine triggers for me. I have a difficult time dating because guys have a hard time understanding my limitations. In short, I feel like I'm a migraine that gets to act like a person sometimes.

Without new, ACCESSABLE, treatments, my life is not going to change for the better. I have already done everything I can- I take magnesium glycinate (400 mg per day), coq10 (200 mg per day), B2 (400 mg per day), and a multivitamin. I have gone throught the Charleston Neuroscience Elimination diet to narrow down my food triggers and avoid them. I exercise every day. I go to bed and wake up around the same time every day and get about 8 hours of sleep every night. I eat meals regularly and at the same time every day. I used my Cefaly every day. I'm on 100 mg of Topamax every day as a migraine preventative. I also tried and failed Depakote as a migraine preventative.

My current treatment plan helps but I still feel like a migraine with a person. I feel like migraine runs my life. My current treatment plan does not allow me to be my best self and have maximum control of my migraine disease. Plus, Topamax comes with it's share of side effects including- hair loss, memory issues, fatigue, kidney stones, and tingling, just to name a few. In fact, I've already had one kidney stone on Topamax and my doctor told me if I have one more, he's taking the Topamax away. When I was on Depakote, I gained 20 pounds in 2 months and had unbearable heartburn every day.

EVERY migraine patient should have access to the new migraine medications coming onto the market. There are NO good options currently for migraine preventative therapy- the current medications used are all for other conditions and don't reliably work well for migraine patients. We have been forced to suffer through taking seizure meds, antidepressant meds, and blood pressure meds for way too long. If there is a targeted therapy, it's wrong to only offer it to a few. It's wrong to say, you have to fail a certain number of meds first when those meds can have dangerous side effects are not made for the condition we have! I do not have seizures, depression, or high blood pressure. Every migraine patient deserves to feel better and move on with their life, despite their migraine disease. Imagine if other disease were treated like migraine disease- would you tell a diabetic patient who needed insulin that they had to try and fail antidepressant meds before they could get their insulin? No. You would give them the gold standard treatment right up front. What makes a migraine patient less deserving? What makes us less valuable to society? What about a person with depression- would you tell that person they needed to try and fail three beta blockers before they could try an antidepressant to treat their depression? Of course not.

Please make anti-CRPG meds available to everyone with a migraine diagnosis. Whether we have 4 migraines per month or 24 migraines per month, we are struggling to live with an incredibly disabling, disruptive disease. Knowing there’s a medication that can help us and that it is not accessible would only add insult to injury.

Sincerely,

Kaitlyn Clarke

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Dear Ladies and Gentlemen of the Committee:

Hell.

To some, it's fire and brimstone. To others, eternal isolation. And to some, "hell is other people." Everyone fears it differently. But I have been there, many, many times. For perspective, I've also survived a burst appendix and a perforated colon, both with bouts of peritonitis severe enough to have nearly offed me. So I may have a broader base of comparison than most people.

But this is the personal hell of my migraines.

The first headaches I remember began when I was in kindergarten. They were bad enough to send me to bed but I don't recall throwing up. By second grade, the attacks roared in with full fury. Don't ever let anyone tell you a child's migraines are not as severe as an adult's. That is simply not true. The headaches would come on slowly during school, and I'd have to call my mom to bring me home. She'd give me a baby aspirin and an icepack and I'd retreat to bed with my stuffies, alone. The pain in my head would gradually build until it was unbearable, yet there was nothing to do but bear it. I was sucked uncontrollably down, down, spiraling violently into a black hole where the Devil was inside my head banging on a gong with evil glee, grinning and delighting as every GONG! of my throbbing head made it want to explode, my white-hot eyeballs like grenades ready to detonate any second as the waves of nausea rushed over me. I fought to control my convulsing stomach as I staggered from the bed to the toilet to throw up. Like a brief salvation, this knocked the pain in my head down a notch, so I could clean myself up and stumble back to bed. I remained trapped in the depths of this desperate darkness, a child alone in a terrifying place with only my stuffed animals to cling to, as the cycle of building pain and retching — hour after hour — exhausted and depleted me. By the early evening, I'd finally fall asleep. A blissful reprieve, though pain still tormented my dreams. The next morning I'd awake, spent and drained. But I was delivered from hell. A tortured and injured soul, I returned to this world to soldier on. Until the next time.

When I was a young child, this trip down the black hole of unimaginable pain and torment was not only incredibly painful but incredibly terrifying. At first, I had no idea when or if it would ever end. Was I dying? Was I really being sucked into Hell, in the Biblical sense? If so, what horrible sin had I committed — by age 7 — to damn me to such a fate? I couldn't think of anything, and we weren't a very religious family, so I had my doubts about this. But as the episodes continued, the terror began to subside as I learned from experience that somehow I always managed to survive these migraines.

Others in my extended family got headaches, but nothing like this. No one got this sick. So my condition was sort of treated like, "Oh, Lynne's got one of her headaches. She gets those." Yeah. So. Kid's kinda lame that she can't deal a little better, was sorta the general attitude. Except for my mom, who was very sympathetic, but couldn't help much — even once she started giving me adult aspirin. The pediatrician just told her it was “highly unusual for such a young child to get such severe headaches.” Peculiar. No follow-up. This was the 1960s. My headaches weren’t diagnosed as migraines until my freshman year of high school, when I was getting a couple a week and they began to interfere with school. I was finally tried on two drugs for a short while. Neither helped and the Cafergot made me really sick. After that failure, the doctor told me, “Well, you have migraines, learn to live with them.”

In other words — you’re on your own. Just like during your trips down the black hole. No one’s gonna help you. Deal with it yourself. And so ever since, I have.

I got through college by taking aspirin and tylenol as the severe attacks gradually lessened in frequency and morphed into a constant, lower-level background ache. When you’re a headache person, and by the time you’re old enough to have your own bottle of aspirin you’re taking one every time a headache starts in hopes of averting a killer, you don’t really notice when things become daily. If the aspirin is working, you go about your business. If I thought about every headache I ever had, I’d never think of anything else. No. You try to live your life and forget about it, block out as much of the pain as you can. You only realize your headaches have become daily when they’ve gotten so bad that you’re gobbling handfuls of OTC painkillers and still having a headache all day long. By that time, I was in my late 20s and it was becoming very difficult for me to work.

So began the visits to the doctors. “Your headaches can’t be migraines, because it’s not possible to get a migraine every day.” “You don’t need medication, you need to exercise more and those headaches will vanish in no time.” “Any person who keeps such detailed track of her headaches in a log book must have an obsessive-compulsive personality disorder. I’m referring you to a psychologist.” Again, more of the same: you’re not gonna find any help here, girl. You’re the mutant. Your problem. Deal.

Twenty years. Nearly as many doctors. Therapies, therapies: PT, biofeedback, TENS, neck exercises, guided relaxation, hypnosis, acupuncture, vitamins, herbs, diet. A few things helped a little, but my daily headaches kept worsening. I quit work and got a master’s, but couldn’t accept my dream job, because I couldn’t handle the hours with my headaches and two little girls. A PhD was totally out of the question. Nearing middle age, I finally found a doctor who believed I suffered from chronic daily migraines and was willing to prescribe medication. And so began the long search. Tricyclics, beta-blockers, calcium channel blockers, SSRIs, antiseizures…plus the experimental drugs in the studies, botox, ONS implant. I finally began to find some relief, just a tamping down of the daily burden of pain so I could drag through the days better. When the triptans appeared they were fabulous. But to take them daily was very expensive, not covered by insurance (they allow you to have 6 migraines a month! I wish!), and the cost drained our budget so badly that it eventually contributed to the collapse of our marriage.

In the seven years since, I’ve soldiered on — as always, because I have to. I haven’t been able to work in years so I rely on alimony and will have only Social Security in three years. My medical costs eat up nearly half my $33K income, but I get by. Our tiny, old mountain cabin is a happy place that I share with my daughter, her dog and our seven ferrets. I was supporting myself on minimum wage when I was 19, so I know how to live low on the hog. Most people might expect a lady who was a top student, had an IQ of 160 and earned both a BS and MS in scientific fields to perhaps not just be barely scraping by at age 62. But that's the burden of migraine. The drugs are better now than they were when I was a child and was violently sucked down the maelstrom into hell. But they aren't yet nearly enough. I still drag around with a headache all day long, on top of my fibromyalgia and the mucked-up digestive system I have after two ulcers — one perforated — from decades of heavy OTC painkiller use. But I get by. I always have. When you've been in hell, everything else is a walk in the park, even being nearly offed by a burst appendix or a perforated colon.

Please approve CGRP inhibitors for people like me, and to save other innocent children from lives like mine.

Sincerely yours,

Lynne M. Clos

V. C.
Parent of three daughters and husband with migraine

Although my husband and two adult daughters have spent countless days suffering with migraine, missing work, miserable and sometimes "power retching" in the emergency room, it is my youngest you need to know about.

Milly has suffered with migraine as far back as she can remember. In retrospect she probably even had them as a toddler but couldn't tell us. The impact on her life is profound. To quickly give you an idea of her situation:

- She spent two and a half years nearly constantly in bed unable to attend school and wound up needing to spend five weeks in rehabilitation at Stanford. She has never been the same after an intense period of migraine in 2015.
- Her migraine medications have had many severe impacts including "cognitive slowing" that reduced her processing speed from above average to below the 1st percentile. One even caused her to have curly hair. It sounds fun until you know this medication also caused severe problems; she had difficulty speaking, long delays with answering questions, literally lost her ability to sing, it changed her voice to a soft whisper, set her writing skills back from 8th grade to the 1st grade level and much, much more.
- She has not developed along with her peers; she is behind with learning many life skills and in several specific areas of development, attention and executive regulation. She has missed several major components of her education like learning a foreign language and formal sex education.
- She has abdominal migraine too. Severe belly pain doubles her up and the vomiting soon follows. This is much more than a headache, it is absolutely debilitating. She sometimes describes a "full body" migraine with diffuse effects through one side of her body. She has auras that at first were scary, literally blinding her suddenly.
- She has lived with frequent severe pain, nausea and intense sensitivity most of her life. There is nothing like having your 12 year old daughter ask you to "Put her to sleep." like you would an ill dog.
- There is no way my 16 year old can learn to drive; the migraine impact on her processing speed makes that impossible. Every time we travel with her she winds up extremely ill with migraine.
- My highly gifted daughter is not passing at school, even with many adjustments for her situation; she has completed only a few assignments this year. She still misses 35% of school days with migraines and spends more days trying to survive with a more moderate migraine at school.
- She spends 20 days a year in the hospital receiving DHE treatments to suppress her migraines
- She developed POTS, or Postural Orthostatic Tachycardia Syndrome as a result of years of deconditioning. My formerly energetic and athletic daughter has trouble remaining upright at school. She literally lies down on the floor to work. She now takes long-term steroids and has to cope with those side effects too.

I could go on and on but you get the idea, migraine has absolutely ruined her education, social development and health. It has irreparably changed her future. With an IQ once measured at 144 she should be enjoying AP classes, thinking about what to study in college and what to do with friends this weekend, instead we are worry about setting up a life long annuity to provide financial support for our disabled daughter.

You have the option to improve her situation. New, more effective migraine treatment options are essential for her. We are financially drained, without insurance coverage she can't have them.

It's also important that her adult sisters with episodic migraine have access to effective medications.

- One sister routinely visits the Emergency Room with "power vomiting", vomiting so severe she is urgently rushed in for treatment. Most visits she is still vomiting after leaving the ER. The four or five advanced anti emesis medications used to help her only slow it down.
- Both sisters routinely worry that so much missed work will cause them to lose their jobs and careers.
- One was forced to change careers, as a nurse she couldn't tolerate the long shifts and missed meals that are frequent in that profession. She started over and now works for her county in adoptions. She struggles to not let families down.
- Motherhood is a tremendous challenge; one has a five-month-old son who doesn't understand when mom can't care for him like she wants.

As my teen wrote, "Migraine does not need to be life threatening to ruin a life." My family needs better and accessible options to treat this disease. This is far more than a headache. The friend or family member you have seen with migraine is likely suffering far more than is apparent. Help them; help all of us.

Please make new treatments available to all who need them so they can regain their lives.

VC

These comments are from my wife, Paula Cross

My life experience with migraines: My migraines started around the age of 15 and initially tended to cluster around my cycle. They have increased in frequency and duration each decade with my 50s and 60s being the worst. I have 2 – 4 migraines a week. I experience sensitivity to light and sound, blurred vision, nausea, stabbing pain in my temples, stiff neck and throbbing, usually over my right eye. If I can't take an abortive (triptan) because I have already taken the allowed number within any given seven day period, I am bedridden with ice, sometimes for longer than 24 hours and vomit if I move at all. The pain engulfs my entire head and is horrible. Reduction in frequency is most important to me.

The impact of migraines on my life: Migraines have changed who I am. My life is mostly just managing my head and avoiding potential migraine triggers on a daily basis. Some of my triggers are flashing lights, some odors, certain foods and drink, including alcohol and chocolate, weather changes, and stressful situations. I can no longer work outside the home. I travel only when required for family reasons. I have stopped making plans in advance for social engagements or entertainment. I rarely socialize. I can no longer raise my heart rate through exercise because I now have exercise-induced migraine. Anxiety and depression go hand in hand with migraine. For me, I often feel like a failure as a human being because I can't accomplish what other people can.

Problems with Existing Treatments: Migraineurs feel like guinea pigs. I have tried at least 16 off label medications for migraine prevention, including Verapamil, Topamax, Zoloft, Celexa, Lexapro, Effexor XR, Inderal, Tixanidine, Prozac, Amrix, Neurontin, Amitriptyline, Flexeril,. Going off Cymbalta was horrible and I still have side effects from it years later. Depakote caused intense vomiting. I lost half my hair with Toprol. I have also tried supplements – Feverfew, Petadolex, COQ10, Magnesium, B2, Fish Oil. I have also tried Biofeedback, Occipital Nerve Blocks, Acupuncture, Atlas adjustment with Atlas Orthogonist, NTI, Cefaly. I am currently using the Spring TMS and receiving Botox treatments. Botox has helped the frequency in some weeks. Different treatments must be used concurrently to achieve any kind of reduction in migraines.

Access to CGRP I can't begin to tell you how hopeful and excited I have been about the very first preventative expressly created for migraine prevention. There was serious disappointment and loss of hope after each failed off-label medication I tried as a preventative. The side effects of some were awful, as I mentioned above. I am really hoping for a return to a better quality of life with the new CGRP inhibitors.

Insurance Insurance limits the amount of triptans available to me. I went through a very lengthy appeal process to receive partial reimbursement for the Spring TMS. The justification for the original denial was that the Spring TMS was not medically necessary, presumably because I was also receiving Botox treatments, although I rely on multiple approaches on a daily basis to fend off and endure migraines.

Specialists It has also become harder and harder to find and keep migraine specialists, even though I live in a major metropolitan area. Once you find a specialist, it is difficult to get timely appointments. I feel the CGRP inhibitors should be available to anyone diagnosed with migraines and should be allowed to be used concurrently with other treatments like Botox because migraine disease must be addressed from all possible angles to achieve a better quality of life.

May 7, 2018

RE: **ICER Open Comment Period on CGRP Inhibitors for Migraine**

Dear ICER Committee,

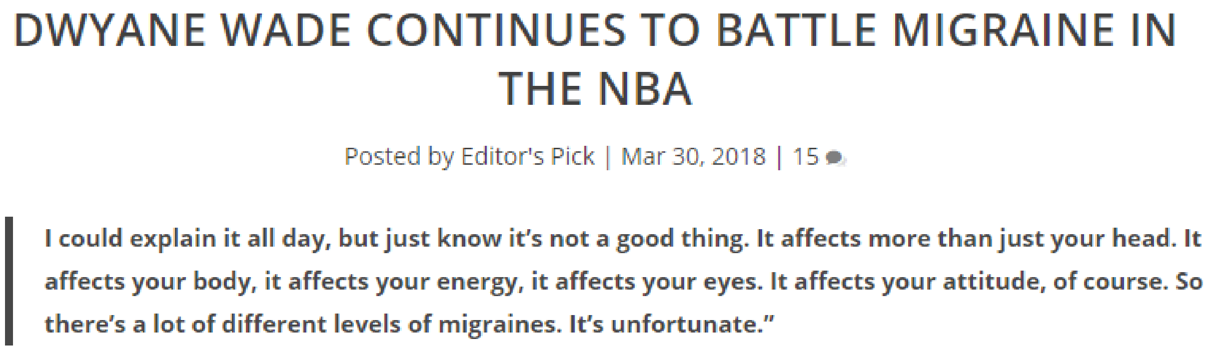
I am writing today to share my story about migraine, how it affects my life, and to implore you to make the CGRP medications coming out this year as accessible as possible to patients.

I started experiencing migraines as a child, about 9 years old, when I started having abdominal migraines. I didn't even know that was a type of migraine until just recently, but now it all makes sense. I remember times when I had such sharp stomach pain for no apparent reason that I thought must have been hunger pangs, since there was no other symptom or issue going on. I remember being miserable, not being able to clearly explain the pain, and having to practice controlled breathing to get me through the episodes of pain. Nothing would help and I simply had to wait for the pain to subside.

Now as an adult, I have outgrown the abdominal migraines, and have graduated to the three day long episodic migraines featuring 10/10 pain, photophobia, phono phobia, nausea, disorientation, and occasionally aura (a visual disturbance that prevents me from being able to see for about 30 minutes). I still have to practice controlled breathing to get through the worst of the pain as the medication I take at this time does not touch the pain. On my migraine days I have to focus hard on getting through the day and trying to be productive. I am lucky that I only have episodic migraine. I can only imagine how difficult life would be if I had chronic migraines. Fifteen days or more per month of these symptoms? No thank you.

As I stated, I have to completely focus on getting through a work day with migraine symptoms, but I want to share a snippet of my life last week that I'm afraid is all too common with chronic migraine sufferers, about how it can affect other facets of life. Last Monday was my son's final concert of his college career as a music major. It was in a wonderful venue in downtown Denver and I was very much looking forward to the evening. Except I had a migraine. Even though I know two of my triggers are stress and lack of sleep, life happens, and it happened in a big way the weekend before when I had to pack up my entire house for a move. Stress + no sleep = migraine. At least for me anyway. Despite several times popping as many ibuprofen as recommended, I could not fully enjoy this night, by a long shot, which as a parent of a very talented young artist made me sad and frustrated.

Migraine is a neurological condition that affects over 36 million people in our country, and it doesn't discriminate. I found this headline in the news recently. Professional basketball player Dwayne Wade said it well:



DWYANE WADE CONTINUES TO BATTLE MIGRAINE IN THE NBA

Posted by Editor's Pick | Mar 30, 2018 | 15

> **I could explain it all day, but just know it's not a good thing. It affects more than just your head. It affects your body, it affects your energy, it affects your eyes. It affects your attitude, of course. So there's a lot of different levels of migraines. It's unfortunate."**

This is just an occasional problem for me personally, so I am not writing this letter so much for myself, but for the millions of chronic migraine patients who need these new CGRP medications even more than me. I have worked in the Headache Division of a Neurology practice for three years now and have dealt with denials of medications and procedures for headache and migraine. I understand the concept of step-therapy, that novel drug therapies might be costly, and that insurance companies will not be quick to approve payment for everyone in every circumstance. However, these **CGRP inhibitor medicines are the first of their class**, a class of medications that actually targets the structures involved in migraine pathophysiology.

I plead for the ICER committee to make the process as streamlined and simple as possible for patients to access this innovative treatment. Forcing patients into step therapy may create unwanted side effects or simply be a waste of time and resources. Migraine patients have not had an innovative pharmaceutical therapy in almost 30 years. This class of medicines seems to be "knocking it out of the park" with its effectiveness and lack of side effects. It's a hopeful time to be a patient because of these medications, so please make access to this medication hopeful as well.

Thank you for your time and consideration,

Elise L. DePree

A Life of Pain by David Deutsch

My Experience with Headaches

I don’t remember what it feels like to not have a headache. When I see other people laughing, playing around, and enjoying life with their friends and family, I imagine that is what it must be like to not have a headache. I remember growing up and having days that I just didn’t feel well and the noise of the radio in the car would bother me, but I assumed that was normal when you don’t have anything else to base it on.

Sometime between 1980 and 1983, I started having more regular headaches. I first thought that it was allergies, because my headaches felt like pressure between my nose and my eyes. If you have ever had a head cold or a stuffy nose, that was how it felt. I went to several allergists and ENT’s and they gave me allergy shots and the ENT’s cure was to perform sinus surgery. In 1984, I guess you can say my journey began with sinus surgery to relieve the pressure in my head by opening up my sinuses. That failed as well as the allergy shots, but that was just the beginning.

34 years later things have only gotten worse. At first these headaches would not be as intense and would not be everyday. Doctor’s always ask to rate your headache from 1-10 with 10 being the worst. When I have a day that I don’t go above a two or a three, it is a good day. At least 2-4 days a week, my headaches reach about a 7 or an 8. Having a 9 or 10 means a trip to the ER because I can’t find enough different drugs to take to give me some relief. At least a few times a year, my wife would take me to the ER with most of the visits in the middle of the night. After convincing the ER staff that you are not an opium addict, they get the IV running through your veins with some medication that you don’t even care what it is because you know eventually you will fall asleep and start the process all over again.

Headaches Impact on my Life

People who do not live in daily pain do not take headache sufferers seriously. I frequently tell my wife that I wish I had cancer instead of headaches because people have empathy for these other “real diseases”. I know people mean well when they tell me about a friend or relative that had headaches and they did so and so, the headaches went away. I could write a book filled with all of these stories, suggested doctors to go to, alternative diets, treatments, etc.

Headaches impact every part of my life from work to my wallet. They impact your relationship with your spouse, your children, your family, your friends, and your coworkers. I consider myself lucky compared to other headache sufferers. I have had my own businesses since 1984. If I worked for someone else, who knows how many jobs I would have lost. On most days, I am able to go home when by headaches are too bad, or I try to work from home. At home, I can lie down with an icepack on my head (which doesn’t really help very much, but at least you feel like you are doing something about it). On real important days in my business, I try to put on an academy award performance and act like I am not in pain. My coworkers can see in my face that I am not well, but customers, and suppliers do not know any better. I am also blessed to have a wife who puts up with me being grumpy, mean, high maintenance, and just someone in general whom you wouldn't want to be around. Frankly, I do not know why she still sticks around. Unfortunately, these headaches are genetic. I have very clear memories of my mom needing to lay down in a dark room because of her pain. I cursed two out of three of my children with these headaches. They are about at the ages that mine took a turn for the worst. I pray that something will help them and they do not have to go through life the way I do.

I have a few old friends that know what I go through and have empathy, but I have given up entirely on the possibility of making new friends. I know how miserable I can be and how high the chances are that when we go out with new people, that I will have a very bad headache and will not be very fun to be around. My wife and I are at the point that she does social things without me and I stay at home with an icepack on my head looking for something to ease the pain. It is better for everyone.

Medications, Alternative methods, surgery and procedures, and inpatient facilities.

I think I have been on every drug available that have the slightest chance of working. I obviously have tried every prescription, non-prescription drug, and frankly several not legal drugs that have ever been sold. At some point, I have tried Fioricet, ibuprofen, acetaminophen, butalbital, advil, naproxen, Fioricet with Codeine, aleve, aspirin, caffeine, Fiorinal, Motrin, Trazodone, Tylenol, Advil Migraine, Excedrin, guaifenesin, triptans, anti-inflammatories, muscle relaxers, almost all the anti-seizure medications, many different Anti-Depressants including various tricyclic antidepressants, SSRIs, Anti-Anxiety, opiods, Beta Blockers, Calcium channel blockers, sedatives, Botox, steroids, injectable Benadryl, injectable Toradol, Baclofen, diomax, and many, many more.

I have tried reducing all kind of food groups and have been on many 'headache diets'. I have taken vitamins and supplements like magnesium, B12, CoQ10, feverfew to name a few. I also have tried alternative treatments like yoga, massage, biofeedback, acupuncture, chiropractors and others from multiple people because everyone knows someone better so you have to check it out. Sinus surgery was not the only non-drug approach that I took. I have had nerve blocks, nerve stimulators, disc surgery, other sinus related surgeries and very recently tried Cefaly. I am sure I have left out a few. I have tried every suggested idea, drug, treatment, inpatient programs, and anything else.

Besides the expense of all of these treatments, the time and emotional toll it takes going through all of these medications and procedures is enormous.

I have been to many outstanding doctors over the years. If my doctors have seen, read, or heard about a success story, they bring it up to me and I will try anything. Most of the drugs that I am on including Excedrin and Steroids have extremely long term impacts on my body, but I am willing to do anything to relief the pain. I have told my wife that if I could take a magic pill that will give me 10 good headache free years but I would die after those 10 years, I would do it. I am desperate.

I am also frustrated. I am frustrated on getting and going to appointments with my doctors all the time. I am very frustrated when I finally get a plan with my doctor, I have to battle my insurance company because somehow without ever examining me or treating me, feel like there is a cheaper alternative to relive my pain. I am frustrated how long a product takes to get to market and the prices that we must pay.

I have been following CGRP medicines over the last year. It appears to me that we are close to having CGRP drugs coming to the market, I Google everyday to get the latest. I hear it will be expensive and I know the insurance companies will fight it the whole way. I wouldn't wish my daily headaches on anyone, but if anyone who is not a headache sufferer was in my shoes, you would do anything too. It is amazing that doctors can replace hearts, cure many cancers, and many other medical miracles, and there are millions of people who suffer headaches like me and it is not taken seriously by the medical and insurance industries.

When I die, my family will have a picture planted in their heads with me in pain and with an ice pack on my head instead of the person that I could be.

Please help me and all the people like me and quickly and affordably get the CGRP medications to market.

My name is Eliana Donner-Klein and I have had chronic migraine for 6 years. I am currently a junior at Wesleyan University, but my life has been heavily impacted since my first migraine at age 15. My initial episode lasted over a week and I have no memory of it because of how painful it was. Over my junior and senior years of high school, I was diagnosed with chronic, intractable migraine, meaning that my migraines did not respond well, if at all, to most medications. I spent months being bed bound, unable to read, write, focus, or function. I was unable to live my life like every other normal teenager that I knew. Instead of enjoying high school and my passions of playing violin and soccer, I was stuck in bed, being shuttled back and forth from doctor to doctor who would try to find a medication that would work. At my worst, I was having 7 migraines a week, with some continuing for up to three months without relief. I almost did not graduate high school, in fact, I almost did not even go to college. Instead of enjoying normal high school activities, I practically lived in the Headache and Orofacial Pain Center at Cedars-Sinai. I was there for acute treatments every week, and it got to a point where I was prescribed intramuscular injections that my parents would administer because I needed acute treatment so much and because they could not keep driving me to the Pain Center for treatment as they both work full-time jobs. The burden that my family has taken on by supporting me and my medical treatment is enormous. They have been there when I have needed to be held down to get treatment because I am screaming and crying from the pain that I am in. When I am migraining, I can’t communicate. It’s impossible to say words, to understand anything, to make sense of anything other than the pain that I am in.

6 years later, I am in college, but my life is still extremely impacted by my migraines because I have not been able to find a regimen that reduces the amount of migraine days per month. My friends, teachers, and deans who have seen me in a migraine state are so surprised by

how incapacitated that I am when I am in a migraine state. They say that I am a different person, that I am so different from my “normal” self that they know and love, and seeing me in such a state where I am helpless and unable to function is terrifying. It can take days, if not weeks, to recover from episodes, and during those episodes and recovery, I am alone and socially isolated because of my need for quiet, dark environments. More often than not, I have to cancel plans and not go to classes due to migraines. Not everyone understands that I can’t plan far into the future; I never know when, where, or for how long that I will be incapacitated for. Most of my professors are understanding, and know that I have absolutely no control over my migraines and that I try and do everything that I can to be able to do my work on time and show up to class. However, not everyone has been understanding. I currently have a professor who is trying to lower my grade because I have missed classes this semester due to a 3 week long migraine that I was almost hospitalized for. Instead of being hospitalized, I did the acute treatment myself using dihydroergotamine intramuscular shots 3 times a day for 5 days instead of IVs like they would do in the hospital. These shots, while effective at breaking the cycle, come with their own host of side effects. When I have to do this acute regimen, I have to inject myself in the thigh three times a day for a week. DHE burns when it enters the vein, so it is extremely painful. I also am left with large bruises and extreme nausea. But it’s worth it because it allows me to become semi-functional again. Being in college and living with chronic migriane has been extremely difficult and frustrating. I can’t function like my friends can, I have to take more breaks, and when I am experiencing a migraine, I’m not able to do anything at all.

Prophylactically, I have done trials almost every class of medication available. I had adverse reactions to beta blockers, topamax, stimulants for chronic fatigue, and even had a blood clot due to my hormonal birth control that was preventing hormonal migraines. I currently am on the Botulinum Toxin protocol, and take Namenda, Nortriptyline, and Nexplanon. I have had to fight with my insurance because they have stopped covering my birth control, the Botox, and almost every medication that I take. I cannot take triptans because they led to central sensitization and rebound headaches, and did not actually stop the migraines. Every step of the way, I have to fight them to prove that my medications are medically necessary. The problem that they always say though, is that I'm not getting better so how are these medications necessary? The answer is that as of now, I do not have any drug that minimizes the amount of migraine days that I have a month. There has been no drug that has ever been able to do that for me. CRGP antibody drugs are my last hope.

For the last 6 years, nothing has been able to help my migraines. They've become a part of my life to the point where my friends know how to take care of me when I cannot take care of myself in college. My professors know that I want to be in class but that more often than not I can't because I am incapacitated due to a migraine. I have dreams. Big dreams about what I want to do with my life. I'm only 21, but I feel as if my options are limited. I am planning on writing a thesis next year, and my biggest concern is not the thesis itself, but being healthy enough to actually be able to complete it. I desperately want to be able to fulfill my dreams of going into health policy, but as of now, at least half of every month I have head pain that stops my from living my life. I've tried step-therapy, I've changed medications hundreds of times, I've paid obscene out of pocket prices just to be able to get the drugs that I need to function at a basic level. I'm only 21. My life is defined by my health, by the need to coordinate with pharmacies, doctor's offices, insurance companies, and professors. It's like an extra job, but it's one that has matured me much too quickly. Because of migraines, I didn't have my teenage years. I need better treatment options because I deserve a better quality of life. I want to be able to not have to plan out my life in case, or more accurately, inevitably when, I trigger a migraine. I have a debilitating chronic illness that negatively affects my life in ways that I can’t even fully describe to you. You don’t know about the depression, the anxiety, the pain that I go through every day, and somehow I keep getting out of bed every morning. I keep trying to beat my illness in every way that I can, but I can’t do that by sheer willpower itself.

You are in a unique position to change the lives of millions of people with this review. If my story, written quickly in between preparing for my finals, has only one takeaway for you, I hope that it is that migraineurs deserve better treatment options at a more affordable rate. CRGP drugs have the ability to completely change our lives for the better. I know that I am hoping that my life will be changed by my ability to take CRGP drugs. Right now, I’m a college student with migraines, struggling to be able to write all of my essays because of the three weeks of migraines that I experienced. In the future, I hope to be working in health policy, with dreams of becoming the President one day. I can’t reach my dreams without your help. So help me, and help millions of Americans gain the possibility of a better life with access to these life-changing medications. Thank you.

Paula K. Dumas

May 7, 2018

The Institute for Clinical and Economic Review (ICER)

RE: CGRP inhibitor medicines for migraine prevention

Dear ICER Committee Members:

Thank you for welcoming people with migraine to share our experience with this perfectly evil disease. My story is not unlike millions of others, whether you hear from them or not.

What My Migraine Attacks Feel Like

Searing lights, itching clothes, tender hair follicles, uncontrollable yawning, a craving for crunchy carbs, phantom smells – these are all the signs that a migraine is preparing to attack during my waking hours. More often than not, an intense dream wakes me to extraordinary pain behind my left eye that no pillow can extinguish.

First, my digestion stops, and then suddenly reverses itself into vomiting that sears my throat and erodes teeth enamel. The worst attacks are best spent on the bathroom floor with a blanket for the chills between puking sessions.

These migraine days are like nasty hangovers without any party or dumb decisions the night before. Another tally mark on my scorecard of over 4000 days of my life already lost to migraine. That's over 10 years of life lost to migraine, which began with abdominal migraine from age 12 – 23, morphed with a severe concussion at age 23, worsened to chronic migraine in my 30s and 40s, and continue after menopause now at age 56.

At my worst, I experienced migraine 25 out of 30 days a month. Last year, I had reduced them down to 6 less severe attacks a year. Now they've escalated once again, with no apparent explanation. Patterns like this make people with migraine feel hopelessly defeated, even when they do everything "right."

With better treatments, I hope to get back some of those lost days to work, live and love those around me. Being able to commit to a friend, family member, work or community meeting is one of the many important things that migraine snatches away.

It's awfully hard to be authentic and effective when you're faking feeling well. I've never been a great actress, but I attempt it every single week of my life. Admitting my pain opens me up to bias in the workplace and judgment from friends, family and strangers who think a migraine attack is just a bad headache. That can me as painful as the physical pain.

People who don't get migraine don't "get" migraine. It's truly disabling.

The true impact of migraine is rarely observed by people who don't have it, because it disables us one attack at a time. It's an incremental loss rather than a sudden one. While I hate to compare, many of my professional colleagues from my 20s and 30s are now thriving in the prime of their careers. While they're running large companies and nonprofit organizations, I'm limited to flexible, independent work I can do on the days when I'm feeling well.

Before migraine consumed my life, I led global marketing for a $14 Billion consumer products company and managed a team of 400+ people. Forced to shift down to consulting and non-profit work, I've made a new path – but still imagine what I might have been able to do if I had access to better treatments at a younger age.
My children never knew whether Mom would be able to trick or treat on Halloween, take them to school, witness their biggest competitions, or help them with their homework. Even as young adults today, they recall the days I spent in the dark and the family reunions I couldn't attend. They remember the trips to the Emergency Room at incredibly inconvenient times.

Failed treatments extinguish hope and drain bank accounts.

Migraine can make a self-confident woman or man feel like a failure, over and over again. We think: “if I’m the only one struggling, it must be my fault.” And generally speaking, it’s simply untrue. We just lost the genetic lottery and inherited a brain that’s incredibly sensitive to the universe around us.

What actually failed me? Fioricet with codeine, which caused me to fail a corporate drug test. Cafergot suppositiories, were not only gross but resulted in four miscarriages as I struggled to become a mother. When I finally did become pregnant, repeated attacks landed me in the hospital as they ravaged a body that couldn’t battle migraine without putting my baby at risk.

Pretty much every preventive therapy was futile. Beta-blockers, anti-depressants, and anti-seizure drugs all failed to control attacks. Inderal, amitriptyline, Topamax, gabapentin and Botox were tested along with acupuncture, Chinese herbs (from the Institute of Herbal Medicine in Beijing), myofascial therapy, hormone therapy, eyeglasses, biofeedback, NTI-TSS dental appliances and more.

In great desperation, I went to the leading in-patient Headache Clinic in the world at that time, the Diamond Headache Clinic in Chicago. After eight days of rather brutal, expensive treatments, they discharged me with less hope than I arrived. On the plane ride home, I had such a severe attack with vomiting and convulsions that a doctor was called to assist. My family was horrified as I arrived in a wheelchair.

Losing hope and feeling isolated

The “polypharmacy” care plan from Diamond Headache Clinic included 10 prescriptions plus daily oxygen. It actually triggered suicidal thoughts I’d never experienced before. I begged God repeatedly to take away this “thorn” if it was His will for my life. Still, I struggled daily, often waking with attacks that would cancel that day’s plans.

After navigating perimenopause I desperately hoped that menopause would ease my attacks. I left my corporate job to reduce stress, began a series of diet and exercise trials. I became even more vigilant about sleep hygiene, light exposure, hydration levels and trigger identification. Even a Sunday worshipping at church could trigger a sudden and severe attack that sent me to the emergency room with blinding pain, tears and convulsions. The anxiety of returning to the same ER where I flatlined on a gurney from too much Dialaudid doesn't happen without some understandable anxiety. Had my husband not been with me, I probably wouldn't be here today.

My first attack after surgical menopause was a truly depressing day. Still experiencing eight days of attacks each month, something needed to change. A short time later, my husband and I made a decision to invest our time, talent and personal savings to launch an online community for people with migraine and severe headache disorders.

Today, I've been one of the fortunate few with access to world-leading experts and the budget to try most emerging therapies. I pay out of pocket for daily supplements, including magnesium, butterbur, melatonin, riboflavin, Omega-3 fish oil and CoQ10. In addition, I use the Cefaly neuromodulation device daily for 20 minutes. And I employ the SEEDS protocol developed by Dr. Lawrence Newman at NYU Headache Center: Sleep hygiene, Eating Clean, Exercise, Diary tracking and Stress Management. None of it is covered by insurance. Side effects are few, but effectiveness isn't great. When I have attacks, Treximet, menthol and ginger are my abortives of choice – and only the Treximet is covered.

Given the failure of western medicine treatments, I've tried a great variety of alternative and complementary therapies that have been marginally effective at best, and never covered by insurance. The most frustrating denial I've experienced was ten years ago, when my family planned a brief reunion cruise to celebrate my mother's birthday. The insurance company refused to cover Zomig nasal spray, forcing me to choose a cheaper substitute for the only triptan that helped manage my attacks when I was throwing up from migraine.

Instead, the plan formulary changed mid-year, suddenly only covering Stadol nasal spray. When sunshine, heat, humidity and sleep disruption triggered an attack aboard the cruise ship, Stadol was all I had to take. It made me even sicker and unable to get out of bed. I missed a 3-day celebration, confined to my stateroom with an intractable migraine.
The family portrait of 16 is only missing one person: the one with migraine.
These are the irreplaceable moments migraine steals.

The chance to make a difference for millions.

We simply need better treatment options, and the ability to afford them. CGRP medications offer people like me the hope to keep commitments, keep our jobs, reduce family strife and contribute to society. But we won't have that option if the people who need them most are denied access.

Please give people with migraine the dignity and respect that we are so rarely offered in public. Hear us. Trust us. Believe us. As you review our letters, consider how your decision has the power to liberate us with the treatment options we deserve. These CGRP medications represent hope of living a semi-normal life again. That gives those who feel beaten by this disease the courage to keep fighting every day.

Sincerely,
Paula K. Dumas
Wife, Mom, Migraine Warrior and Health Advocate

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

May 8, 2018

Good Morning,

I am writing to share with you the importance of having the new CGRP Inhibitors covered by my insurance, which is the government mandated coverage, or “Obamacare”, as it is more commonly known. I was diagnosed with migraine at the age of 10, when I would suffer from visual auras of wavy lines and “stars” that would cause me to be unable to read or see clearly. This would be followed by an excruciating headache and nausea that would send me to bed in a darkened room for the rest of the day.

At first the migraines occurred about once a month, then more often in my teen years. By the time I married and started a family in my mid-20’s, I had learned to dread that visual aura and what it meant: the loss of another day. My husband would have to come home from work to care for our children because I was physically unable to do so. When I was in my 30’s I sought help from a neurologist who was able to diagnose not only my “aura” migraines, but also the additional, debilitating headaches I was having weekly without the visual aura as migraines too. This began a journey seeking relief that would go on up until today, lasting almost 30 more years.

I have lost count of the number of preventative medications I have tried. Many had such terrible side effects that I was unable to continue with them. Often I lost weeks and months out of my life while trying yet another drug, dealing with the side effects, then having to wean off of it when it was either not effective or had such a negative impact on my life I couldn’t continue on it. Impacts such as extreme fatigue, dizziness, muscle weakness, tremors, violent mood swings, crying jags, or inability to concentrate. All this while trying to raise four children.

In the meantime my migraines went from episodic to chronic, meaning I have on average 15 or more headache days a month. Fifteen. Often over half the month is spent trying to deal with this excruciating pain accompanied by a sensitivity to light and sound that makes me retreat from the world. I have been hospitalized twice for my migraines, once in 2007 and again in 2014, both for a 5 day stay on a specialized Headache Unit run by the Diamond Headache Clinic in Chicago. I have tried biofeedback, massage therapy, acupuncture, physical therapy and Botox all to no avail. Nothing seems to help decrease my headache frequency below 15 a month. I had high hopes that the Botox would work; even though it was such a process to go through to get special authorization from my insurance company to approve it. Even then, with my then $5500 deductible (now $6500), I had to pay the $1170 cost per treatment every three months. And it didn’t even work.

My migraines are more than just pain, although that in itself is disabling enough. During an attack , which usually lasts anywhere from 3-12 hours or longer, I have extreme difficulty concentrating. I am unable to think clearly and I am often unable to find the right word I want to say. My short term memory seems to disappear. As a direct result of my migraine disease I lost my last job two years ago as an operating room nurse. I have not been able to work since then, which has been an added hardship to my family. It is almost impossible to make plans since I never know if I will feel well or not. I have lost count of the number of times I have had to cancel plans with family or friends because of this disease.

Although I am on several medications to prevent my migraines and lower the number per month, I am unable to get to a truly therapeutic dose due to how I struggle with the side effects. My “rescue” medications, those I take to abort an attack, are limited by insurance to 9 tablets a month. This dictates that I pay out of pocket for the additional medication that I need. An alternate medication that I use, an injection called DHE-45, is so expensive ($800+ for 10 doses) that I order it from Canada. Even so, I spend $200 for 10 doses.

I was very excited to hear about the CGRP Inhibitor medicines and have been following their progress from research trials to FDA approval to their pending availability to consumers. I am concerned that despite the fact that my life could be changed by these medications, they will be unavailable to me due to insurance constraints and price. I have lived with this disease for over 57 years. I have tried everything I know to manage it. Its impact on my life, my family, my career, cannot be measured. I am pleading with you to support all episodic and chronic migraine patients in having access to these new CGRP Inhibitor medicines.

Please do not allow this hope to be out of reach.

Thank you for your time.

Sincerely,

Patricia A. Durkin

To: ICER - Subject – CGRP Medications – re: Insurance Coverage.

I would like to share with you my experience with Migraine. I started experiencing severe Hemiplegic Migraines around 20 years ago. Since then my life has changed drastically. I had to quit my job and give up the hopes of finishing college which I had always planned to do after my kids were grown. I haven't been able to drive safely for as many years. It's hard to give up your independence and to not be able to pursue your dreams.

Migraines are debilitating for me and my symptoms are many. Other than head pain, I have trouble walking, seeing, speaking and understanding when people speak to me. I have memory and cognitive issues sometimes daily. I have extreme vertigo at times and have to be very careful about falling.

Nothing comes easy to me anymore. It's like my brain blew its circuits and no longer tells my body what to do. Being able to function on a daily basis is a huge and wearing task that I live with almost every day. Even with all of this, the worst symptom for me is the brain fog which can last for a long time after an episode making it hard to read or even have a conversation. My quality of life is not good.

Migraine is a debilitating neurological disease. It is not just a headache. My lifestyle has changed so much. I don't get to spend time with my family and friends like I used to and I miss out on so many important events. My children are having to live a lot of their lives without their mother and my grandchildren without their grandmother. This may be the hardest of all. For them and me. I think there is something unique to migraine disease as we have to lie down in the dark and quiet of our rooms which leads to isolation and of course depression follows.

Many migraine sufferers are working hard to raise their children while trying to manage this disease. It is also sad and alarming that so many children are having to deal with migraines. They miss school and cannot do the things that other children do. I've been working with a woman in my group this past week who's 12 year old son was just diagnosed.

Up until now, migraine medications have been used "off label" to treat us. I have tried many throughout the years with very little success and then there are the horrible side effects. For prevention, I have tried: Verapamil, Topiramate, Amitriptyline, Propranolol and the list goes on. I have also tried many supplements and some natural remedies of which none have helped much. My current treatment consists of Amitriptyline, Magnesium, Riboflavin CoQ10, Advil and Benadryl (as needed) and I am still chronic and somewhat homebound.

As a person with migraine who also moderates a support group, I can tell you that the new CGRP medications being made specifically for migraine are very much needed and we are excited about them. We love the fact that few side effects have been noted, but they must be made affordable and accessible. Many migraine patients are disabled and have a hard time making ends meet. Insurances need to cover these medications or why have them?

Did you know that migraines actually have four phases? With those, a migraine episode can last for days, weeks and some of the symptoms like brain fog can last for months. Migraine isn't a one hour or a one day disease. Migraines also cycle and once that happens it's so hard to break that cycle. We need affordable preventatives.

I would ask you to please value the pain and disability that we face on a daily basis. We need better treatment options and access to them. We also need our doctors to be the ones to determine which medications are best for us without being told we have to try a laundry list of other medications first, some of which we have already tried and either weren't effective or caused side effects that were not tolerable.

Thanks so much for reading and for your consideration.

Sincerely,

Glenda Eakle

May 7, 2018

Dear Committee,

I am writing to help you understand my experience with migraine disease and ask you to support me and millions of people like me to have access to the new CPRG inhibitor medications.

I began having migraines in undergraduate and graduate school. They usually took me out of commission for the day, but medicine and sleep took away the pain and I was able to mostly function the next day. I did not get many migraines back then. However, when I was in my 40’s, I got the worst migraine I have ever had, and it has persisted daily, for the past seven years. It is extremely painful, it often feels like someone is literally drilling a hole in my head. What is even worse than 24/7 pain, is that it affects my whole body. Before I get one of the really bad ones (3-4 times/week) I spend a day feeling awful, fatigue, brain fog, constipation, anxiety, irritability, etc. Then I get an aura, where I can no longer see for a period of time. I have had to pull over and get someone to come pick me up. After that the pain hits. My whole body aches, I feel nauseous, I am over sensitive to light and noise.

The most difficult part of this is that I have tried every migraine abortive medication and none of them will stop the attack anymore. I’m very careful not to take too much, I can only use them 2 times/week (when I have some level of a migraine every day). They might bring the pain down a level or 2, but I never receive full or even half relief. Once it does resolve, usually after a day or more, I have a day of “hangover” from the migraine. I feel like I’ve been hit by a truck or ran a marathon. Sore muscles everywhere, exhausted, irritable.

I am a Licensed Professional Counselor Supervisor. I work with children and adults who have experienced complex trauma, mostly adoptive families. I also work on-line supporting many people working for NGO’s overseas who have adopted children with trauma. I also train interns, helping them to develop their skills. My migraines have caused me to have to quit work completely for 1.5 years. I now am attempting to work with just a few clients, but it is very difficult. Migraines have cost me and my family a great deal of income, tens of thousands of dollars in treatment, quality time together, and loss of outside relationships who do not understand why I have to cancel engagements. I have had to stop volunteering at my church, because I cannot be reliable. My husband has to do most of the housework and cooking as well as yardwork etc. We were hoping to be able to spend this time in our lives enjoying life together, but he has had to become a caregiver.

To address my migraines I have gone through TMJ surgery, sinus surgery, procedures on my neck and occipital nerves. I have done food allergy testing and elimination, and received hormone therapy. I have tried EVERY preventative medication out there, including Botox. Giving each of them at least 6 months to work. I have gone to multiple alternative treatments, including acupuncture, massage, counseling, supplements, physical therapy, etc. I have done infusions of powerful medicines. I have multiple doctor appointments/week as I continue to pursue something that will work. I have tried all the triptans, NSAIDS, and other abortive medication with very little reduction in symptoms. I also have a cefaly device I use daily, though it has not reduced frequency or severity. Most of the things I have tried have had side effects, some severe. Such as weight gain, joint issues, depression, loss of libido, nausea, etc. The migraine medications which are currently being used simply are inadequate.

I have had difficulty accessing medications which were somewhat promising. Such as Cambia, which actually was helpful when I tried samples from my doctor. However insurance would not pay for it and it would have cost me over $300 for 6 doses. Because I am not working, it is very difficult for me to pay for treatments and medications.

Please value my experience, my pain, and my disability as well as that of the millions of other migraine warriors, many of whom deal with worse situations than I do. We need access to the new CPRG inhibitor medications. If we are forced to prove we are unsuccessful on other medications, those with only episodic migraines have the risk of them converting to chronic daily migraine like me, due to lack of effective treatment. We need to be able to use the most effective treatment from the beginning. Once migraines become chronic, it’s almost impossible to reverse the process, costing us and the economy a great deal of time and money.

Because many of us have lost income, even spouses, because of our migraines, we cannot afford to pay for expensive medications. We need insurance to take responsibility and cover these necessary medications which have proven efficacy. Please help provide us with access to better treatment options so we can once again be contributing members of society. I could help so many people if I could reduce my migraines.

Thank you so much for your consideration.

Sincerely,

Allison Eckelkamp MA, LPC-S, RPT-S

Virginia Keller Essink
May 8, 2018

To: The Institute for Clinical and Economic Review

Re: Upcoming review of CGRP medications

I am writing to ask you to grant access to CGRP medications to people suffering from both debilitating episodic and chronic migraine. I am sharing my story to give you an idea of what it has been like to live with this neurological condition for the last 58 years.

I first began having identifiable migraine attacks at puberty, when I was thirteen years old. They were severe (vomiting and pain for 24-36 hours) but relatively rare in my teens. My mother had them too and she taught me how to let the pain roll over me and not fight it. I was able to excel at school, with a scholarship to UCLA and being voted "most likely to succeed." It was when I began my time at college that the migraines began to affect my life much more often. I had a three-day migraine every month around my menses, which included being mostly bed-ridden, with vomiting and pain on one side of my head. These resulted in my frequently missing classes when I was at university and when I began working. I really didn't have any effective medication until I neared 30 years old. Fortunately then I vomited only once or twice with each migraine attack, and then the nausea left me. I was given Cafergot as I neared my early 30's, which was initially helpful at curbing the pain.

In my 30's, I began working in several high stress jobs (one was a two-year stint with the Los Angeles Olympic Organizing committee (LAOOC).) I found then that I could make it through most work-weeks (except around my menses), but that I had headaches on weekends. When I worked at the LAOOC, as we entered the last year before the games, I had a migraine attack every single weekend. I worked long hours during the week and was disabled during the weekends. (I was newly married then and this state of affairs didn't exactly help with relationship-building.) After the games were held, I had a migraine every day for sixty days; I took Cafergot every day during that time. I didn't have a neurologist, didn't know I needed one, and my internist did not know how to manage the condition.

During my 30's the nature of my migraines continued to change and I began to vomit uncontrollably with migraine attacks two or three times a year. Once the vomiting began it continued, about every 25 minutes, for hours, until my husband was able to contact a physician and obtain Compozine for me. We were driving on vacation once, and I remember having to pull over and vomit twice an hour for about six hours. The worst was in my early 40's when he was out of town and I vomited every 25 minutes for nine hours, until my child care provider arrived. When I could not keep liquid down I became dehydrated and had to have IV infusions in an emergency room. The migraine attacks that did not result in vomiting had much more intense pain—which I referred to as my “rail-road tie through the eye” pain, which were incapacitating—I could not move, and Codeine plus icepacks were all that helped. In my late 30’s we tried to get pregnant and ended up with hormones which caused even more migraine attacks; we adopted instead.

The attacks increased in frequency during my 40’s with other side-effects I didn’t understand at the time. I was working at a stressful job and though I had childcare I found every day to be difficult. It was hard getting out of bed feeling like I had been run over by a truck, every day. At work I found I was no longer the optimistic, successful person I had been in school. I found it harder and harder to function at work, and my once-fine mind didn’t work very well. I was often overcome by anxiety and began having panic-attacks in addition to the days spent in bed, not taking care of my family or job. My husband said it just wasn’t fair that I “could just check out of life” and he had to do all the work. We sought counseling and the psychologist advised that we had to treat the migraines as a third entity in our marriage. I was desperate, depressed, barely functioning.

In my 40’s I was finally referred to a neurologist (we were then living in Maryland), who then referred me the Jefferson University Headache Center. My headaches were chronic by then, at 15-20 affected days a month; I nearly cried at being understood for the first time: I was advised I needed to do a four part management of my condition: 1) a proper preventive, 2) a proper rescue medication, 3) exercise, and 4) the internal work (stress management, meditation, counseling.) I was put on Imitrex (self-injecting at the time) and began a series of preventives. I tried just about everything available over the next two decades: Inderal (could hardly move as even low doses caused my heart-rate to drop to around 45, Amitriptyline (even on a low dose I got lost in my own neighborhood several times and was terrified), Topamax (was this the one that made my already reduced brainpower even less?), or one that made my hands shake uncontrollably, something that made me gain a lot of weight (I had always been slim). I can’t say anything made much of a difference. I also did physical therapy, acupuncture, massage, yoga, and trigger point injections in my upper back/shoulders. I ran, then later walked, worked out at the gym, had bio-feedback, learned to meditate. The frequency of migraine attack-days moved up to about 25 days a month. I found some relief on an anti-inflammatory that was subsequently taken off the market due to it causing heart attacks. The best days of my life were the nearly-monthly Prednisone tapers—Prednisone was the ONLY thing that seemed to work.

By my 50’s, the headache days and the non-headache days were almost alike. I no longer had frequent vomiting, but rather a constant low-grade nausea, malaise, and inability to do anything difficult—like think clearly, manage my staff, or manage my family life. I finally quit work, despite living in a two-income house. The strain on my marriage from that was intense.
In my 60’s I was diagnosed as having osteoporosis and a cataract—both due to the Prednisone. I was put on a drug for osteoporosis, which after several years was determined to be causing severe reflux. I was advised that I now had rebound-headaches and had to stop taking any kind of

pain medication more than twice a week. I was given Phenergan and Zyprexa and told to take these for the headaches in-between Imitrex. I was constantly exhausted as a result of these, and I found my life barely worth living. In my mid-late 60's I was put on a series of new medications— Gabapentin--I became like a zombie on that ("what's WRONG with you?!" my husband cried in frustration—so I finally went off that.) I went on several anti-depressants, including Cymbalta—which I remain on. I also began having Botox injections in my late 60's. These didn't really help as I couldn't get off rebound: the side effects of the Phenergan and Zyprexa were unbearable so I would go back to daily use of either Imitrex +/- Excedrine or Alkaseltzer. I also tried a Cefaly unit for several years, but it didn't make much difference either. I also read every headache book I could find, and began to study the brain to try to better understand the books—actually textbooks—I was reading

I remained in rebound most of the time, with daily headaches, nausea, and an inability to think clearly or do anything hard--until several months ago. At that time my headache specialist at Jefferson had me begin using the sTMS unit by eNeura; I also decided to completely change my diet—to only plant-based foods. After three months my life finally seems to be changing: I have experienced more days where I have low pain and nausea and can function pretty normally, and a few days with NO pain, nausea, brain fog at all. I still get Botox shots, take Cymbalta and another anti-depressant, but for the last month I have finally able to manage to take medication only two days/week. I am in my 70's now though, and things go wrong and I have non-headache reasons to take pain medications (e.g. root canal, a fall at the gym, arthritis) so I am worried about whether I can continue on only a two day/week schedule.

My life would have been completely different had Migraine been considered a condition warranting drug companies actually trying to develop a migraine-specific preventive medication before now. I am worried that I might be unable to continue to afford the eNeura device if it is not covered by my insurance. I am worried that non-Migraine reasons for needing pain medication will cause me to revert to rebound with the nearly continual nausea, low energy, poor-thinking state of living--UNLESS, unless, you can understand what an impact Migraine has had on me and others, and unless you can see how this condition could be changed by CGRP medications (and neuro-stimulator devices). And unless you allow us to have access to these by having our health insurance, including Medicare, cover most of the cost of these promising new treatments. I was voted most likely to succeed, but I could not fulfill that dream with Migraine. With new treatments now available or in development, I could have lived up to my classmates' – and my—expectations. This condition is so widespread and affects so many people and you have the ability to change the lives of a large percentage of the population, their families and their workplaces.

Please support us.
Thank you.

To whom it may concern:

I have had migraines since I was 3 (I'll be 42 in a few weeks; that is 39 years of suffering). My mom figured out that I had migraines when I would complain of a headache and then throw up. She thought I was confused and wondered if I had my body parts mixed up in my young brain. It took a few times before she recognized in me what she had seen in my dad sometimes: crippling headaches coupled with extreme nausea and frequent vomiting. To see this manifested in a three year-old broke her heart, but what could she do? Medications to treat migraines were fairly non-existent. The only things that helped were sleep and ice packs.

My migraines struck relatively infrequently as a child, but they were often enough to cause hardship in my young life. One of my biggest triggers was excitement, so I got a migraine on my brother's birthday, when I had a friend over to spend the night, when we went to the local amusement park, when my elementary school celebrated "Fun Nite." This led to some hard feelings: thoughts that I was putting on a show for attention. This could not have been further from the truth. Always an introvert, I vehemently dislike being the center of attention. Surely I could have come up with a less painful, less graphic way to gain attention.

If I had a migraine at school and my mom was not home to receive the call that I needed to be picked up, I would suffer in the school nurse's office until my mom could be reached. Once the PE teacher found me in the nurse's office and reported that I looked positively green. Still I never visited a doctor for my migraines. My mother feared my needing to be dependent on medication for the rest of my life, but I was getting to the point that I needed some sort of intervention other than Excedrin.

As I got older and hormones raged through my body, my migraines got worse. I wrote several paper about migraines in high school; write what you know, isn't that the best advice for authors? They hit a peak in my late teens and early 20s. I had such a bad one when I was home for Thanksgiving one year that I – very fleetingly – contemplated suicide as a potential opportunity to end the pain. I ended up admitted to the hospital with suspicion of a brain tumor. I actually kind of hoped they would find something so at least it could be treated. But I knew they would find nothing other than my old nemesis: migraines.

My migraines had officially progressed to the point that my mom and I agreed that I needed to visit a doctor. I did and I was prescribed my first prophylactic medication: propranolol. This caused acute mood problems and depression and this was quickly replaced by something new: sertraline, which was eventually changed to paroxetine due to a formulary issue. I was so impressed by my experience at the doctor's office and the doctor's explanation of the medication and how it worked and possible side effects that I was actually inspired to learn more. Eventually, I changed my major to study pharmacy and have been a pharmacist for 18 years!

Still, I had horrible attacks. Countless time I ended up in the ER. Finals week was the worst; the stress got to me. Once a friend from my dorm drove me to the hospital, but was not able to stay when the nurse came to give me an injection of Demerol due to a needle phobia. I was always treated with suspicion in the ER; was I just a junkie looking for a fix? Sharp questions, notations that I had visited the ER multiple times within one weekend. It didn't help that I needed increasingly larger doses of medication to touch the pain. Once, the doctor felt I had received a generous amount of Demerol comparatively for my size and threatened to do a spinal tap if the headache didn't get better soon. What choice did I have other than to say the headache had improved, even though it hadn't? I didn't want a spinal tap and I knew I didn't need one. My boyfriend and future husband (who sympathized because his mother also suffers from migraines) started to figure out ways to get better treatment in the ER. He would make sure to dress up, wear a tie, before we left to go to the ER. Because of my bad experiences there, I have only been to the ER twice in the last 20 years, and was treated only once. Most people I know that have chronic migraines refuse to go to the ER unless it is the absolute last resort due to the poor treatment they receive. It is a sad state of affairs.

I started seeing a doctor at my college who was very sympathetic and understanding and determined to help. She prescribed amitriptyline as prophylaxis. What a revelation! One of my biggest triggers was lack of sleep, which happened a lot because I had insomnia. No longer with this medication. However, taking this medication meant that I needed to get 8 hours of sleep; otherwise I would be too groggy to function the next day. I started to go to bed at 9:00. Imagine that! A college student in her early 20s being forced to forgo all of the excitement that happens in a college town in the late hours of the night and wee hours of the morning. No pulling all-nighters, studying. Sleep was too important. I was beginning to realize that sacrifices had to be made in order to preserve my health. Unfortunately, lack of sleep was not my only trigger. Stress, hormones, strong smells, flashing lights, red wine, raw onions, tight shoulder muscles, low blood sugar, also often resulted in a migraine and some of those are not so easy to control, so I still suffered from frequent migraines.

It was around this time that I was finally prescribed something that I could take to abort a migraine: Midrin. Wow! This changed my life. The only problem was that Midrin contained a sedative. This meant that I was fairly incapacitated for a couple of hours if I had to take it. But, the reality that my headache could be alleviated without a several hour nap, packing my head in ice, and vomiting multiple times, was so sweet. It was what I had always hoped for. And, as quickly as the magic appeared, it disappeared. Midrin was increasingly less effective. Eventually, it stopped working altogether. I was crushed. Back to square one.

My doctor explored some non-drug methods for managing migraines. I talked to a therapist to try to help manage my stress. He taught a class about meditation. Regrettably, this did not work for me. Though I felt less stressed, I often ended up with a migraine; I hypothesized that this was due to the increased circulation of my blood through my head. I was proving to be a difficult patient.

Around this time, a sumatriptan self-injector became available. I was excited and nervous about learning to inject myself but I knew that 90% of migraine patients respond to sumatriptan. I even gave a speech about how to use the auto-injector for my speech class. Unfortunately, I was part of the 10% that it doesn't touch. Another round of bad luck.

Fortunately, a new triptan was on the market: naratriptan. And, at long last, I was in luck! Amerge worked for me! It had some nasty side effects, the worst of which was terrible heart palpitations. The suffering from palpitations was less than the suffering from migraines, so this became an acceptable, if uncomfortable and troubling, tradeoff for me. However, my circumstances had changed. I had turned 23 and was no longer eligible for my parent's insurance. I had to pay for my own insurance plan, and it only covered 25% of drug costs. As I had not graduated from pharmacy school yet, I only had limited income from summer jobs. Insurance only allowed six naratriptan pills a month, and they cost me approximately $250. For someone who had by then been suffering for 20 years from this devastating condition, this was a heartbreaking situation. I finally had found something that worked to treat an acute migraine, but it was almost cost-prohibitive. Even though I knew that abortive medications work best when taken at the first sign of an attack, I would wait to take the medication so that I wasn't wasting the valuable medication. To try to make it last longer, I would cut the pills in half. Once I dropped a half pill in my boyfriend's apartment, which led to a frantic, fruitless search. I was so upset that I had essentially just lost $20. The medication situation was a cause of great stress and concern for me, which just caused more migraines. I never wanted to be in the position ever again that I could not afford an effective treatment.

Finally I graduated from pharmacy school and had a steady income, so paying for medication was no longer such a concern. But, I was still having frequent migraines, and Amerge was becoming less effective. I was no longer eligible to see my physician from college, so I found a doctor at the hospital where I worked. He diagnosed me with irritable bowel syndrome (IBS), so now I was dealing with two chronic medical conditions. He also recommend that I see a neurologist, finally, at age 24.

As luck would have it, a new neurologist had just started, and one of her areas of specialization was headaches. This led to a beautiful relationship. This neurologist was full of unique, creative approaches for my migraines. I saw a social worker to learn biofeedback techniques. She wrote a letter to my supervisor recommending that I not be scheduled for back-to-back shifts so that I could be guaranteed a full night's sleep. I was started on and subsequently taken off many medications for migraine prophylaxis: feverfew, betaxolol, topiramate, divalproex, zonisamide. Kerlone cause depression, Topamax made me uninterested in food and I lost weight; I also developed a kidney stone. Depakote was actually a wonder drug for me! It stopped all headaches, not just migraines. But, it all came to an end when I left my medication at the hotel when attending an out-of-town wedding and ended up getting one of the worst migraines of my life. After that, the Depakote no longer helped. Zonegran reduced the migraines some, so I stayed on that for years. DHE became available in a nasal spray. It was messy and uncomfortable and helped inconsistently. I also tried all of the new triptans; some worked, some didn't. Here's the thing about migraines; they are hard to treat because their pathophysiology is still not well understood. We don't really know why they happen or the changes that occur in the body during an attack or why some medications work and some do not. This makes migraines an incredibly tricky and frustrating disease to treat.

One of the triptans that worked was rizatriptan; MAXALT CHANGED MY LIFE! However, I worried about availability of medication again; although Maxalt worked like a dream, insurance would only allow 12 tablets per month. My neurologist wrote to my insurance company and I was approved for 24 tablets per month, but I had to call the outpatient pharmacy every month to remind them to order enough medication for me. I also discovered that eletriptan was effective for me; I was able to get 6 tablets per month of this as well, although, as a “Tier 3” medication, it was considerably more expensive, and it wasn’t carried at the hospital’s outpatient pharmacy, so I was forced to go to two different pharmacies every month. Additionally, I had to pick up the medication in a specific order and spent countless hours on the phone with the insurance company, fighting to receive an adequate supply of both necessary medications at a reasonable price, rather than having to choose between the two. It was exhausting.

Eventually, my brilliant neurologist moved on and I had to find a substitute. This neurologist wasn’t super interested in headaches, and it was painfully obvious pretty quickly that I knew more about migraines than she did, though she did her best to help me. Frustratingly, none of the neurologists at the hospital specialized in headaches, either. I made no progress while under her care. At some point, it became promising to treat chronic migraines with Botox, and this therapy was eventually recommended for me. As scary as the idea of having a toxin injected directly in my head, I was hopeful. What a cruel therapy. 31 injections per treatment. It was kind of like torture. And, it didn’t work. Not surprising, considering my lack of response to other treatments that usually worked for others.

Eventually my migraines progressed to the point that I felt like I needed to see someone else, so I sought help from a local neurology institute and a neurologist who also suffered from migraines. I thought he might have some insights as a sufferer himself. While he had some new ideas, he never examined me, which was very odd. I was switched from amitriptyline to doxepin, which seemed to help a lot. By this point I was married and we were trying to get pregnant, so many of the common prophylactic medications were not a possibility. I was tried on verapamil per the recommendation of a high-risk perinatologist, but this did not help; nor did I get pregnant. I was eventually diagnosed with polycystic ovarian syndrome (PCOS), which brought my serious chronic illness count to three. Eventually, without warning, this neurologist moved out of town and I had to find yet another neurologist.

I see my new neurologist for the second time tomorrow. He didn’t really agree with the treatment I was receiving when I transferred to his care, but did not really have any new suggestions. I get the feeling that headaches aren’t really a particular interest of his, so I am looking for a neurologist in town that does specialize in headaches. As ubiquitous as migraines are, most neurologists are not interested in specializing in something that can be so difficult to treat. Lack of providers who are versed in the latest treatments is a serious problem.

Currently I am taking doxepin, riboflavin and magnesium for prophylaxis and eletriptan and rizatriptan as abortive therapy. I have about 3 to 4 migraines per week, and they are usually responsive to a triptan. Sometimes it takes multiple doses and multiple medications and adjunctive therapies, but it is rare for an attack to last more than 4 hours. Usually if I have to take several medications, I have an IBS attack the next day. To me, the number and severity and consequences of my migraines is not acceptable, but I know this unequivocally: I AM ONE OF THE LUCKY ONES! Lucky! So lucky not to have 5 migraines a week or an average pain score of 8 or attacks that last 3 days or a headache that is not responsive to any medication. Lucky that

I can usually stay at work if I have a migraine because my medication usually works. Lucky that I have a supportive and understanding husband. Lucky that I have found some solace and support from other sufferers in online communities. I am so lucky. And that is so, so sad.

For the first time in a long time, good news is on the horizon in the form of CGRP-inhibitor medications. This class of medication appears to help both prevent migraines in episodic and chronic migraine patients alike. Migraineurs desperately need, and deserve, affordable access to these medications, which could be life-changing for so many sufferers. (It is telling that people who have migraines are often referred to as sufferers, isn't it?) Access to effective prophylactic medications will ultimately save thousands of healthcare dollars when patients are preventing attacks rather than seeking help for acute attacks. Being granted affordable access to effective migraine medication has often been roadblocked by insurance formulary restrictions, insurance quantity restrictions, and even restrictions by providers due to lack of knowledge. Please, please, please, this cannot happen with these medications. Please.

HEATHER FARRELL

I am a 41-year-old Caucasian wife and mother of a very busy and healthy 9-year-old little girl.

I work full time as a program manager for a major technology company. I work very hard to ensure that my chronic migraine does not affect my work.

I have managed my medication in such a way that I can function with not much more than a dull pain most days.

This allows me to continue to be a good wife, homemaker, employee and mother.

While not ideal, I refuse to go hide in a dark room while my life passes me by.

My Migraine Story

MIGRAINE JOURNEY

- I have daily chronic migraines which have persisted for the last eight years.
- Prior to the daily migraines, I have had migraines from the time I was 13-years-old.
- I had my first MRI at 13 and was told that I had migraines, nothing else showed on the MRI. They were diagnosed as prepubescent migraines.
- The migraines came once a month around my period for the next few years then became sporadic (2-3 times/year) after that.
- At the age of 28 years old I was diagnosed with fibromyalgia but wasn't sure if that was a real diagnosis after the all-over pain disappeared a few years later when I became pregnant with my daughter.
- When I was 32-years-old (shortly after my daughter was born) the migraines became chronic and daily.
- They were brought on by a bout of vertigo. The vertigo went away with in a couple of weeks however migraines never did.
- After this point, I went to many neurologists and have most recently been a patient of the Headache and Pain Center at the University of Michigan for the last four years (after being on the waiting list for a year and a half)
- During this time, I have taken countless medications for prevention and to just make it through the day without going to bed.

NEGATIVE IMPACT MIGRAINES HAVE MADE ON MY LIFE

- First let me start off by saying, I am not a wimp, I'm not a complainer, I will not go to bed because I have a migraine, nor do I run to the

Emergency Room. To me, my life is more than hiding in my bedroom or laying on a hospital gurney for hours just to be looked at as someone abusing the system. Which is how I felt I was treated by numerous doctors before I could get into the University of Michigan Headache and Pain clinic. I'm forever looked at as someone looking to get high. Thankfully the people and doctors in my life are supportive and do not treat me any different than someone else with a disease that doesn't have as much of a stigma attached.

- The pain never goes away, not even for a second. Apart from when I have my once a month migraine blocks. At that point, the pain goes away in a section of my head (because it is numb) but it is never my whole head at once. I try hard to not complain but I do…it happens.
- Every time a drug is presented, my doctors and I have hope that it will prevent migraines, however, thus far we haven't had any luck. Sometimes they work for a little while and sometimes, they don't work at all.
- Most of the medications I take scare me to death. They have crazy side effects and often are anti-psychotics or something given to addicts (Suboxone). As I have been known to say, "If I was told that amputating my arm would get rid of the pain the rest of my life, I would do it."

EXISTING MEDICATION FAILURE

- I am currently taking the following medications:
    - Lamotrigine - 200 mg
    - Duloxetine – 120 mg
    - Suboxone- 4 mg/3 times a day
    - Naproxen- 1000 mg
    - Tylenol – as needed
    - Excedrin Migraine – as needed
- In the past I have taken all types preventative medicine and opioids which wore off long before time to take another dose.
- I can't recall all the medications I've taken however, below are a few:
    - Topiramate in several doses most recent 300 mg
    - Cyclobenzaprine- 10 mg
    - Prednisone – 10 mg
    - Many other types of preventive medications
- I have seen general practitioners, neurologists, chiropractors, massage therapists, and physical therapists all in trying to relieve this pain over the course of eight years.

Morgan Fitzgerald

May 7, 2018

TO: Institute for Clinical and Economic Review
Via Email publiccomments@icer-review.org

RE: CGRP Class Medications

Dear Ladies and Gentlemen,

After several years of episodic migraine and trying to treat with OTC drugs that destroyed my stomach lining, I was diagnosed with chronic migraine in my junior year of high school (2013). I was placed on a drug prevention program of Amitriptyline and Propanolol and given Sumatriptan and other OTC drugs for acute care. My doctor did not warn me about side effects. I was only handed prescriptions for different medications plus supplements and told to come back in 90 days. Over the next four years, I was given more and more medications, but the daily preventative remained Amitriptyline and Propanolol and go to acute care remained Sumatriptan.

These drugs only worked marginally well with miserable side effects including heart palpitation's, painful muscle tension in my upper body, nausea, dizziness, and rebound pain, but I thought I could manage. What else could I do? There wasn't a better treatment available. I pursued aggressive academic and athletic goals and made it all the way to my junior year at Vassar College - recruited as a starter on the Women's Tennis Team and as pre-med student. What I didn't know is that the cumulative side effects of all the drugs especially Amitriptyline and Sumatriptan could lead to something even worse than chronic migraine.

On September 17 2016, I experienced what some have called a "thunderclap" headache. It was the afternoon of a college tennis match at the start of my junior year. Suddenly I experienced extremely sharp, stabbing pain on the left temple and left front of my forehead at a level 10. Nausea, dizziness, heart palpitations, blurred vision, slow mental processing, weakness and fatigue accompanied the pain.

The pain has never stopped. I am never below a pain level 7 anymore. On that day on these drugs, my life as I knew it stopped. I have not set foot on a tennis court since that day. I had to leave Vassar on a medical leave of absence that has since expired. All my friends and classmates graduate this month. I am not well enough to travel to see them.

My family and I are very resourceful and have exhausted many, many alternative therapies over the last two years. Other suffering patients may take years to see so many different specialists, have so many tests, or the opportunity to try so many drug and alternative protocols to address this acute migraine condition. However in spite of the best efforts by some of the best physicians in the country and hundreds of thousands of dollars wasted, I remain in horrible pain and completely disabled - home bound - unable to return to college, unable to work, unable to exercise, unable to socialize. I live with my parents, primarily in the dark with few people around me and little sound. I am constantly in pain. My mind is mostly dull as if I am trying to think through a fog. I am constantly nauseous. My energy level is limited. I have been this way for nearly two years, and I am only 22 years old.

Below you will find a summary of the various diagnoses, drugs and treatments attempted since that day in September. I have suffered terribly not just from this disease but also from the crippling side effects of the array of drugs and therapies intended to make me better.

Summary

Diagnosis and Treatment Plans

- Dr. Christy Jackson, Scripps Clinic, San Diego and Dr. Hussein Ansari, UCSD Neurological Institute suspect **New Daily Persistent Headache with Chronic Migraine.**
- Dr Maria-Carmen Wilson, University of So. Florida suspected **MOH**. Between September and December 2016 I was using OTC meds in addition to prescription acute medications and steroids to try to complete my fall semester while suffering this new constant pain. In January 2017 I stopped Amitriptyline and Propanolol.and all acute meds except Sumatriptan at 2 doses per week because nothing else worked for acute care. During this same time I was taking Trokendi, but my baseline pain level stayed at a 7.
- Dr. Molly Johnston, Neurology Pain Medicine, UCLA, and Dr. Lauren Green, USC Headache & Neuralgia Center at Keck offered differing opinions on daily preventative medications to treat **Daily Chronic Migraine**. All suggested preventatives have been tried without benefit.
- Dr. Mark Green, Mt Sinai School of Medicine, suggested several **tests to detect an underlying cause** including looking at the **pituitary** and checking for a **spinal fluid leak** because of similar symptoms. Nothing was found.
- Dr. Hussein Ansari, UCSD Neurological Institute, ordered additional **blood tests** and a **MRV**. All tests have been normal.
- An autonomic reflex screen raised a concern that caused Dr. Jackson to refer me to a cardiologist. Dr. Thomas Ahern, Scripps Cardiology diagnosed me with **POTS**. This condition developed over time following the thunderclap event on September 17, 2016.
- Dr. Brad Napier, retired ENT, Hawaii, is publishing a paper on **migraine and a link to HSV**. He has had success treating chronic migraine with antiviral and anti-inflammatory drugs. He suggested I try both which I did without success.
- Dr David Dodick, Mayo Clinic Scottsdale felt I had exhausted all the best available treatments and put me in the hospital to try infusions of lidocaine and then ketamine. Both treatments failed and left me with even further debilitating side effects for several months.

Daily Medications (Current) I have stopped everything because nothing has worked. I actually feel somewhat better since I am not fighting side effects, pain and POTS. Now it is just pain and POTS.

Preventative Medications that Failed:

~~**Amitriptyline**~~ 20 mg 2013-Dec 2016, 25 mg April 2017 to July 2017. Discontinued because of cardio vascular side effects.

~~**Nortriptyline**~~ Discontinued because of cardio vascular side effects.

~~**Propranolol**~~ 20 mg 2013-Dec 2016 then 30 mg Dec 2016-Jan 2017. Discontinued because of dizziness and cardio vascular side effects.

~~**Topiramate (Trokendi)**~~ 100mg to 150mg Dec 2016 to March 2017 Discontinued because it was ineffective and caused extreme sedation, lack of coordination, mood/personality changes, tingling, AND irregular heartbeat!

~~**Mematine**~~ (Namenda) 2x20 mg May 2017 to July 2017 Discontinued because it was completely ineffective. Baseline level 7+. Side effects included nausea, dizziness, rapid

heartbeat!
~~Melatonin~~ 12 mg 2017 for sleep and pain. Discontinued because it was completely ineffective.
~~Duloxetine~~ 60 mg Aug 2017 to October 2017,30 mg July 2017 to Aug 2017. Discontinued because it was completely ineffective plus side effects of restless leg syndrome, insomnia, mood swings, fatigue, and nausea.

<u>Acute Medications</u>

- **Sumatriptan** 100 mg Typically using this 1-2 times per week when pain hits 8 or above. Usually lowers pain 1 level for 1 day. I often have rebound headaches.
- **Diazepam** Using only occasionally as muscle relaxer for neck and shoulder tightness with migraine
- **Pepto-Bismol** daily.

Acute Medications that Failed:

~~Treximet~~ 500 mg . Not as effective as Sumatriptan.
~~Ketorolac~~ 2x 10 mg No longer effective
~~Tramadol~~ 2x 50 mg. No longer effective
~~Migranal Nasal Spray~~ failed
~~Acetaminophen-Isometheptene-Dichloral~~ 65-100-325 mg (generic Midrin) prescribed June 2017. I am afraid to waste the acute med day on something that might not work so I rarely use this.
~~Diclofenac~~ 50 mg with **Metoclopramide** 10 mg Has a mild dulling effect on pain but does not decrease pain level.
~~Excedrin Migraine~~ Told to discontinue
~~Aleve~~ 2x220 mg not found effective
~~Promethazine~~ 25 mg Not as effective as Pepto-Bismol.

<u>Other Treatments Performed</u>

- **Emergency Room –** October 2016 **:** Pain level 10, vomiting, dizzy, and shaking with sharp throbbing at both temples. **Acute Medication:** Tramadol 100 mg, 12 pm**,** Ketorolac 20 mg, 2 pm**,** Sumatriptan 100 mg, 4 pm Followed by **ER Medication:** Sumatriptan 6 mg about 1 am. That reduced the pain to a level 5. Then…Sodium Chloride 0.9% 1000 mL, metoclopramide 10 mg, diphenhydrAMINE 25 mg, ketorolac 15 mg, methylPRENDISolone 40 mg. This finally reduced the pain to a level 1. Pain gradually increased over the next three weeks to a level 5, and I was back on Sumatriptan, Excedrin Migraine and nasal sprays.
- **Prednizone** November 2016 with improvement, December 2016 with no improvement, October 2017 with minimal improvement.
- **Occipital Nerve Block** January 2017 No improvement Initially increased pain then nothing.
- **Botox** Dec 20, 2016, March 12, 2017 No improvement Actually made the pain worse for several days with each treatment. Neurologist stopped after 2 treatments.
- **Outpatient Acute IV treatments –** January 2017 and May 2017 Saline, magnesium, benedryl – no improvement Side effect – exhaustion.
- **DHE** Infusion May 10-13 2017 Inpatient at Scripps Green Hospital Baseline level 6 during treatment but no lower. <u>Rebound pain level 9 three days later with all accompanying misery of vomiting, dizziness, sleeplessness, irregular heart rate</u>

- **Lidocaine Nerve Blocks** May 29, 2017 Held baseline pain level at 7 for 1 week Lidocaine nerve block Tried again August 2018 Mayo Clinic Hospital moved pain up to a level 10 while in the acute care ward.
- **Famiciclovir** 500 mg 3x per day plus **Celecoxib** 200 mg 2x per day as experimental treatment July 13, 2017 to August 10, 2017. No improvement
- **Salt** 10 grams, **Water** 2 Liters, **Compression** Wear – daily to treat POTS Aug 3 2017 to present.
- **Lidocaine Infusion** Inpatient Mayo Clinic Hospital August 2017 – pain increased from 7 to a 9
- **Ketamine Infusion** Inpatient Mayo Clinic Hospital August 2017 – pain decreased from a 9 to a 7. Rebound pain level 9 one day after leaving the hospital that lasted more than a week before it started to lower to a level 8 with all the accompanying misery. After 30 days, Mayo Clinic prescribed a round of Prednizone to intervene.

Non-medical Treatments

- **Acupuncture** Jan-Feb 2017 Tried twice a week No improvement. Occasionally use when I need acute relief from level 9 pain.
- **Mindfulness Meditation** 8 week course Jan-Mar 2017 Continuing practice
- **Biofeedback -** Tried this twice with two different practioners with no improvement.
- **Neurofeedback –** Went to two sessions but this treatment made my pain materially worse, and I had to stop.
- **Nutritionist** Vegan/Gluten-free/Dairy free 9 months No improvement. Transitioned to Keto that seems to have improved my energy, but so far no improvement with pain.
- **Psychologist** Jan 2017 to June 2017 Found to be managing emotionally well considering.
- **Modulation –** Using Cefaly daily and for acute pain with no meaningful improvement. Considering rTMS, Spring TMS, Gammacore but have not found a doctor who can or will prescribe these.
- **Other -** Peppermint Oil, Hemp Oil. Pepper nasal spray, **yoga**

Supplements

- Magnesium 500 mg, Thorne Q-Best 10 100mg, Acetyl L-Carnitine 1500 mg, Metasalt (330 mg salt)

Tests

- **Ultrasound pelvic complete non OB** Aug 2015 - Amenorrhea from Dec 2014- Nov 2016. No visualization of the left ovary/Otherwise normal
- **Blood test for Lyme disease** Nov 2016 - Negative
- **X-Ray cervical spine with oblique and flexion or extension** Dec 2016 – Mild reversal of the normal cervical lordosis/otherwise normal.
- **MRI of Head** Nov 2016 – Normal
- **Blood tests** (May 2014 to July 2017 reports attached) June 2017 **ANA 1:160 titer Positive** prior tests in 2016/2017 were negative with no value, **HSV** and other viral tests all negative. **MTHFR** tests negative. **Prolactin, TSH, T4** tests in normal range.
- **MRI Angio neck/carotid with and without contrast/MRI Angio Head with and without contrast/MRI brain with and without contrast** April 2017 – Normal
- **Autonomic Neurolab with Antenatal Testing SHCV** June 2017 evaluating for dysautonomia. Test was negative, but raised some concern about cardio.

- **MRI of spine with contrast** June 2017 evaluating for low CSF headache done by Dr. Wouter Schievink, Cedar Sinai. It took 90 days to get this appointment. MRI was negative but not conclusive. Dr. Schievink recommended blood patch as the next step in evaluation if no other cause for the pain is identified.
- **MRV** without contrast July 2017 normal.

Can you imagine what I have been through? Can you imagine how much I have lost, and what my future looks like now? The promise of CGRP is a shinning point of light that I pray will give me some kind of life.

Please do what is needed to make sure this treatment is a real option for me and every migraine sufferer so they never have to be me. No one should have to bear these consequences now that a drug therapy is available that does not cause greater harm.

Sincerely

Morgan Fitzgerald

For as long as I can remember, I have had migraines. As a child and young adult, no one really believed me about how bad my head hurt. Even today, at 44, I find a lot of misconceptions and a great lack of understanding. Things really started getting bad, however, in 2000, just after my son was born. I have had 14 2 week or longer hospital stays in 9 years, before I stopped repeatedly going back to treatments that proved themselves ineffective. There really isn't a day that goes by that I don't have some kind of head pain, and at least 2-3 days a week, the pain is a 7/10 or higher.

When migraine flares, I feel like someone is jamming an ice pick into my skull repeatedly. Or, for variety, I get to feel like construction demo with a jackhammer is going on. In the thick of things, I am light, smell, and sound sensitive. I experience nausea and vomiting, and literally, even my hair hurts. Before migraine, I am susceptible to sound, smell, and visual hallucinations. My biggest triggers are weather, cigarette smoke, and perfume – all things I cannot control.

When migraine is present (more than the daily normal), I **cannot** function – no track meets or school events, no family plans, no work; more often than not just moving exacerbates the impact. It would be life-changing if there were better/more effective treatment options available to me.

Currently, there are very few migraine specific treatments available. And I have tried them all. Anti-depressants (Elavil, Prozac, Wellbutrin…), Depakote, Topamax (which led to very large kidney stones that needed to be lasered), MAOI's, DHE-45 (starting with at least 18 doses, not the usual 9)…the list goes on and on. As those stopped working, I have tried physical therapy, biofeedback, Botox, Facet injections, radio-frequency rhizomotmies, chiropractic care…

Currently, my medical insurance covers about 6 migraine medications. Most of them are a $200 copy, and I am only allowed 4 every 11 days. 4, if they work, might last me 2 days. And, who can afford $600.00 a month for medication that **might,** but probably won't, work? Also, it is almost impossible to actually get anything I know will work; by the time I have jumped through all of the insurance hoops, it becomes a moot point.

What this means or me is that my only option to deal with migraine is the "Suck it up, Buttercup" approach. I have to ride it out, with no real viable treatment.

If there is a new treatment on the horizon that has even a slight possibility of working, the medical community is obligated to help us attempt to lessen our pain and return function to our lives. No more step therapies, denials because there are cheaper alternatives, no more 4-in-11-day-limits, no more outrageous copays.

When a new treatment is shown to work, Migraine Warriors should have access, not roadblocks.

Dear ICER,

I am writing regarding the ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE. I began suffering from debilitating migraines when I was 23 years old. They came on suddenly and fiercely disrupting the course of my life. I am currently 43 and the past 20 years have been filled with much pain and disrupted dreams for my life. My head throbs daily, I constantly wonder if I need to take more medication, I am highly sensitive to my environment, bright lights and flashing lights trigger more pain, scents and smells are devastatingly painful, changes in weather are harsh and cause great pain and then sometimes I don’t know what brings on the intensity of my increasing head pain. You see I always have some level of head pain. It varies by the hour and minute each day. Then there are other symptoms such as fatigue, low energy, difficulty thinking clearly, etc. I have been unable to work for 14 years. I have been unable to drive for 4 years. I have been unable to have children due to always being on so much medication that it would be unsafe to become pregnant as well as not being able to be the quality of mother I would like to be for my children due to my dysfunction. I can no longer read printed material because it escalates my pain levels and I used to really enjoy reading. I cannot go to the movies or any crowded events. Being around people is difficult because they smell due to cigarettes, perfumes, lotions, deodorants and other smelly things they use on their hair or bodies. In my own home I have to use unscented and fragrance free products for everything and I have to limit who I allow into my safe domain.

Over time I have been on over 50 different medications most of which have not been even slightly helpful. I have had Botox, countless nerve blocks, seen chiropractors, allergist, numerous neurologists, acupuncturist, physical therapist, massage therapists, kinesiologist, etc. I have had doctors to tell me there is nothing more they can do for me and not to come back. I have tried all sorts of treatments, ice packs, tinted glasses and even had surgery. I have an implanted neurostimulator to help me cope with the pain. I am on preventative medication and take abortive medication when my pain level increases. My options for treatment are slim and running out. I am hopeful the new CGRP inhibitors will help reduce my pain levels and help me function better in life. Living with pain and having so many parts of a normal life taken away is depressing and difficult to deal with. At times I have hoped to die so the pain would end and I would not have to wake up another day feeling so miserable. I have heard of the positive results from the trials of the new CGRP medications and this brings me hope for my future.

Having chronic migraines is expensive. Medications, insurance, treatments, doctor visits, traveling to my headache specialist (who is two hours away to the closest one to where I live), and trying lots of things to improve my daily life really adds up. I hear the CGRP treatments are going to be very expensive. I hope insurance will help to cover the cost so I can try this much needed medication and hopefully improve my quality of life. If the treatments are successful it would be nice to come off of some of the current medications I am on that have lots of harmful side effects like weight gain, increased risk of diabetes, other possible medical issues down the road from extended use of the meds. I hope ICER will appropriately value my pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines. In the past when Botox first came available I really had to plead with my insurance company for coverage to try the treatment. It was quite difficult to even get the opportunity to try the new treatment. Unfortunately after all the effort I, my husband, and my doctor put into getting approval it did not help me. There is a great need for better treatment options and access to them.

Sincerely,

Anna Maria Gilstrap

To: Institute for Clinical and Economic Review

From: Angela Glaser

Date: May 5, 2018

Re: Open Comment Period on CGRP Inhibitors for Migraine

1. I experienced my first migraine attacks and subsequent diagnosis when I was three years old. I was recovering from a bad bout of the chicken pox when I was hit with three "classic" migraines in a period of two weeks. Around puberty my migraine attacks returned, and I was diagnosed with migraine with aura. Throughout adolescence and young adulthood, my migraine attacks would last multiple days and would occur 2-4 times a year. Throughout college, my attacks increased in frequency and I started taking my first preventative medication. By the time I turned 23 years old, I had progressed to chronic daily migraine.

   My symptoms include sensitivity to light and sound, nausea, fatigue, vertigo, throbbing pain in temples and behind eyes, neck pain, face and jaw pain, difficulty finding words, delayed cognitive processing, allodynia, anxiety, loss of appetite, weight loss, visual auras, sensitivity to motion and visual stimulation, and constant pain at the base of my skull.

   Despite working with neurologists, headache specialists, and a handful of trips to the ER, I have had very limited success with both abortive and preventative measures. I now have symptoms every day and am unable to differentiate between "attacks." My symptoms vary in severity and require constant management.

2. At 28 years old, I have been experiencing migraine symptoms every day for five years. I have been unable to hold down a full-time job since progressing to chronic migraine – a reality I never considered, despite living with episodic attacks for so long. I have bachelor degrees in environmental studies and political science that I am unable to fully utilize.

   Migraine has an intense impact on my quality of life, my financial situation, my work, and my family. My partner, friends, and family have all had to adjust to my limitations, which are constantly changing. For the past 18 months, I have been able to live outside of my parents' home thanks to significant help from my partner and financial support from my parents. I am on disability and also work part-time from home within the online migraine community. Even with flexibility and an understanding environment, I struggle with deadlines and frequently take sick time. My symptoms make looking at a screen difficult and concentration difficult, and I must pace myself and take breaks even on my best days. My difficulties managing even part time work are a constant source of stress.

   My partner has changed his life significantly, too. He cooks most meals for me, acts as my caregiver, and moved to an urban area with me to be closer to doctors. We are both aware that motherhood is something I may not be able to take on.

3. No, available medications have absolutely not fully treated my disease. For prevention I have tried: beta-blockers, anti-depressants (at least 5), supplements (at least 5), Namenda, dextromethorphan + quinidine, topiramate (twice), spironolactone, Depakote, Botox (3 rounds), Cefaly, gammaCore, acupuncture, cognitive behavioral therapy, cannabis/CBD, aerobic exercise, mindfulness meditation, eliminating triggers, and a ketogenic diet.

   For acute treatment I have tried: triptans (multiple times, each formulation at least once), sumatriptan injections, DHE nasal spray, DHE injections, steroids, methergine, anti-emetics, NSAIDs, opioids (mostly in the ER) and caffeine.

   I have discontinued several drugs due to side effects. Depakote and topiramate caused brain fog, tremors, and weight loss, so I discontinued them. Botox made my migraine worse, so I discontinued it (and then tried it again). I discontinued ibuprofen, Vicodin, and Percocet due to stomach pain. My blood pressure was too low on a beta-blocker, so I had to discontinue it. I stopped using triptans because of neuralgia, nausea, fatigue, and lack of efficacy. I have also had to decrease doses of anti-depressants due to insomnia.

   I now manage my nausea with an anti-emetic that causes severe drowsiness. I have not discontinued it because the nausea is worth than the nap it induces, but it is not a medication I can function on.

4a. Yes, I have had coverage denied by insurance companies. I have been unable to afford the price of a drug even after insurance. I have paid out of pocket for neuromodulation devices, supplements, acupuncture, and massage therapy not covered by insurance.

b. Yes, I have had to change drugs because the one prescribed was not covered.

c. Yes, I have had doctors file prior authorization forms on multiple occasions.

d. Yes, my migraine has progressed significantly despite access to preventative and abortive therapies.

5. This disease has taken over every aspect of my life. I spend more time, energy, effort, money, tears, and prayers on migraine than anything else. For me, it is constant.

   A 50% reduction in migraine days would allow me to start dreaming about my future again. It would mean that for half of the month, I could participate fully in my life the way I always imagined that I would be able to. It would mean taking years of my life back from the dark sickroom, years that I am free to invest in myself and what I love.

   I have always been an active, outdoors-loving person, and I still try to be as much as possible. A 50% reduction in migraine days would help me get outside more, increase my ability to work and support myself, decrease my depression, and increase my overall quality of life.

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I had my first migraine attack with aura at age five. My vision was obstructed by a sparkling crescent moon shape. Within 20 minutes it had disappeared. Next it felt like someone was pounding a nail into my skull, over and over again. My parents held me in their arms for hours as I screamed in pain. I became dehydrated from crying, only making the searing pain in my head worse. The daylight streaming in from the window felt like more daggers. After six hours of torture, I vomited until my stomach was empty and the demon inside lessened his hold on me.

I slept. I had no appetite. I didn't leave my room for three days. I was weak. I missed school. I felt like I had been run over by a truck. I remember this vividly because the pattern was the same for every attack I had growing up.

The same pattern of migraine attacks followed me into adulthood. I learned to save vacation days for migraine days, because I always ran out of sick time. I had an employer deny me reimbursement of tuition for college courses taken relating to my job, citing that I took too many days off for migraine attacks.

Right before my 30th birthday, I had a migraine attack that has never ended. No trauma had occurred to propel the attacks to become continuous. I missed work for two months straight. At the third month mark, I will never forget the day that my headache specialist told me that my condition was now chronic. I cannot describe the desperation and loss I felt in that moment.

Saying Goodbye to My Career

This was not my plan in life. I was the youngest vice president at a small community bank, with an expertise in commercial and construction real estate financing. I was in my second semester of graduate school at Georgetown University. I had an active social life. I was involved in community theatre. I loved my job and my life. All of this disappeared away within a matter of weeks. My quality of life was stolen from me the day the never-ending migraine hit.

When my health changed overnight, my employer bent over backwards to accommodate me. My normal 50-60-hour work week became a roller coaster of inconsistency. My boss was gracious enough to let me work on a flexible schedule that would accommodate frequent doctor's visits and allow me to recover when I was completely incapacitated. If I was not in the office, I was working from home every waking hour to catch up on my duties. I used vacation, sick and personal days to cover the hours I didn't work or make up. I used FMLA intermittently for two years.

I was unreliable and my work product suffered tremendously. My ability to multi-task, manage employees, and maintain one of the largest client portfolio's in the company quickly became overwhelming.

In March 2013, my doctor insisted that I stop working. With hope that my health would turn for the better during 90 days of short-term disability, I didn't even clean out my office. On my way out the door on my last day of work, I ran into an executive who was very concerned about my health. I told him this was temporary and I'd be back in a few months. Yet, I remember the feeling in the pit of my stomach that told my condition was worse than I was willing to admit. That was the last time I set foot in my office.

My condition actually worsened during what was supposed to be a three-month break. I was forced to apply for Social Security disability benefits, which I was awarded as of September 2013. However, during a recent re-assessment of my condition and ability to work, I was denied benefits. I am currently appealing this decision as my condition has not substantially changed. I wish it had.

Impact of Migraine on Daily Life

On average, I spend 70% of my time in my apartment. The other 30% has to be carefully planned. Will there be any noise, lighting, food or other triggers that will make the migraine attacks worse? I have to take medication before I leave and have all medications with me for any possible scenario when I leave the house. I need an exit strategy. Will I be able to lie down if the pain is suddenly unbearable? Do I have a way home if I feel I can't drive? Will my impaired cognitive function cause me to become disoriented, forgetful, or lost?

I've been forced to make drastic changes in my daily life. I have a small radius (about 5 miles) around my house where I am comfortable going by myself. Anywhere outside of my comfort zone, I prefer to have someone with me no matter what my pain level is that day. I always carry a notebook with me because I can easily forget my tasks or what people tell me. I build in extra time because any task now takes me twice as long to complete. Restaurants or places with crowds cause sensory overload and I have to walk away to find a quiet respite.

I use sleep as a coping mechanism. Even while sleeping, my body is tensed up to battle the pain. I curl into a ball to protect myself and often find fingernail marks in my palms because I've been clenching my fists while I was asleep. I also grind my teeth and need to wear a mouth guard.

During long stretches of time with high levels of pain, my sleep cycle is interrupted, my food intake is altered, showering is a chore and my body feels like it has been beaten up. Simple house chores drain me of energy. My long-term partner picks up the slack, but he didn't sign up for this when we met. My parents didn't imagine that I would still need their help at this point in my life. My chronic migraine disease has altered their lives as well.

Why "Headache" and "Migraine" Should Never Be in the Same Sentence

For the past seven years I have not had a reprieve from the pain associated with chronic migraine.

I belong to an exclusive club I call the 24/7/365 club in which our "lucky" members are not only chronic (experiencing 15 or more migraine days per month), but they are in a constant state of intractable migraine, never experiencing any relief from migraine attacks and related symptoms. The symptoms can be just as bad or worse than the head pain. These are the associated symptoms I experience on a daily basis:

- Impaired Cognitive Dysfunction
- Olfactory & Gustatory Hallucinations-I smell cigarette smoke and burning trash when neither are present. Food can sometimes taste like metal
- Paresthesia-Tingling in hands and feet

- Phonophobia-Sensitivity to sound
- Photophobia-Sensitivity to light
- Scintillating Scotoma-Visual disturbance or aura
- Tinnitus
- Akathisia-Need to be in constant motion
- Alloydynia-Sensitivity to touch
- Aphasia-Trouble finding words

Does the list does this seem like something a simple Tylenol would alleviate? The words "migraine" and "headache" are NOT synonymous. "Headache" fails to capture the effect migraine has on my entire body.

The Search for Better Treatment

I've lived with varying degrees of migraine disease now for 32 years. I take 15 pills a day just to enjoy a few hours of lower pain. I know that I haven't tried everything, but the lists below show that I am pretty close to having explored all of the options that are currently available to someone with my level of chronic migraine. The lack of prolonged efficacy and side effects seems cruel as my quality of life hasn't significantly improved.

Previously Tried Medications		
Imitrex- pill & injection	Morphine	Melatonin
Axert	Wellbutrin	Vitamin B-12
Maxalt	Feverfew	Vitamin D
Inderal	Magnesium	Compazine - Allergic
Percoset	Reglan - Allergic	Benadryl
Butterbur	Zonegran	Gabapentin
Plavix	Topamax	Dialudid
Clonidine	Cambia	Haldol
Ambien	Depakote	Namenda
		Methergine

Current Daily Medication/ Treatment Regimen

Daily Medications for PREVENTION	**Daily Medications for Co-Morbidities**	**Other Prevention Treatments**
Amitriptyline HCL	Famotodine - Acid Reflux	Botox Injections every 3 months
Venlafaxine HCL ER	Pramipexole ER -Myoclonus	Nerve Blocks once a month
Vyvanse	Clonazepam - Myoclonus	Complementary & Alternative Methods
Spironolactone	Amantadine – Myoclonus	Yoga
Magnesium Supplement	Dulcolax - Constipation	Deep Breathing
Iron Supplement		Light Exercise (as tolerated)

Rescue Medications/ Treaments		
Rescue Medication	**Type**	**Average Usage**
Toradol IM	Anti-Inflammatory	Average 2 shots per week
DHE IM	Ergotamine used as main line of defense for bad migraine attacks	Average 2 shots per week
Ondansetron	Anti- nausea	Average 4 per week
Ketamine Nasal Spray	Pain Management	40 nasal sprays per week
In-patient, 5-day ketamine infusions	Pain Management & Migraine prevention	Twice per year

Negative Side Effects Experienced	
Lost my hair in clumps	Severe dry mouth has caused tooth decay
Constipation	Metallic Taste
Weight Loss and Loss of Appetite	Weight Gain
Severe Impaired Cognitive Function	Irritability
Feeling of skin crawling – allergic reaction to Reglan and Compazine	Numbness and Tingling
Acid reflux	Skin on fingers and toes shedding

I do NOT want to be on all of these medications in order to survive my day. The negative side effects of many medications have been difficult to manage at times. At one point, I have stopped all medications only to find that they were absolutely necessary in managing my illness.

What matters more?

I recently had a headache specialist ask me if I would rather have one day a month that was symptom free or to be more functional overall. More productive everyday or one day without pain? It’s a trick question. When I was episodic, I would have said more functional. Now that I’ve been chronic for seven years, my answer was the opposite. Holding back tears, I told him I would give anything to have one day a month without pain. I don’t remember what that’s like.

I’m almost 37. Will I live for decades without ever experiencing a day without pain? I’ve learned to manage the days where I struggle to put a sentence together. That’s the devil I know. Looking forward to one pain-free day a month would give me hope, something to look forward to, a reason to be optimistic.

On the flip side, of course I would be ecstatic if there was a medicine or treatment that could reduce the severity and/or frequency of my daily migraine. Even a 30% reduction would be life-changing for me. I realize CGRP inhibitor drugs might not work for me. However, I deserve the chance to try it if my doctor thinks I’m a good candidate and so do a large population of those with migraine. I advocate for me, but also for my community.

Access Issues

To date, the two treatments that have helped me most significantly have been Botox injections every three months and in-patient ketamine infusions with a ketamine nasal spray to use at home.

However, access to both of these treatments were denied by insurance at every turn. Providing documentation, filing appeals, requesting letters from my doctors – this became a full-time job at a point in my life when I was the most sick I had ever been. I fought for years to get these treatments approved.

I was relentless and determined to gain access to these two treatments. I eventually won my appeals for both treatment plans. Again, Botox and ketamine have turned out to be the most effective treatments in managing my migraine disease. I still am in some level of pain every single day, however the severity of the attacks lessen for a period of time after receiving these two treatments.

What if CGRP inhibitor drugs make an even bigger impact on the severity and frequency of my chronic migraine disease? Will I have to jump through these same hoops? Will I have to spend the limited good hours I have daily on fighting for access? Will the practice of step-therapy, fail-first, or outrageous co-pays deny me months or years of potential improvement in my health?

Cost of Migraine

In 2017, my medical expenses totaled approximately $100,000. Of that, I paid $16,000 out of pocket for insurance premiums, medication co-pays, doctor visits, hospitalization and emergency room visits. That's over $1,300 a month. My Social Security disability income is all but eaten up in paying for these expenses.

Does it make sense for insurance to pay $100,000 per year for the next 30-40 years to manage my chronic migraine? Of course not. It makes more sense for insurance companies to responsibly cover and provide access to new preventative medications that could reduce my need to take 15 pills a day and maybe keep me out of the emergency room or hospital. I shouldn't have to physically suffer when a CGRP drug could improve my functionality enough to return to work.

Measuring My Life

Migraine doesn't discriminate. It takes and it takes. It's not a headache. It's an attack. It's not a female issue, it's a disease. I measure my life in quality, not quantity.

I ask that ICER uses their role responsibly by supporting both episodic and chronic migraine patients in getting access to these desperately needed medications.

Sincerely,

Katie M. Golden

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Submission on behalf of: Jeremy G. – 13 years old

1) Share your migraine journey (when did you first start experiencing migraine attacks, what does a migraine attack feel like to you, how often do you experience migraine attacks, etc.).

Jeremy began experiencing migraines in Kindergarten. When they started they were episodic and manageable with over the counter NSAIDs. They began to increase in frequency, duration and pain progressively as Jeremy aged. Jeremy's frequency was either having a tolerable headache without typical migraine symptoms to a full-blown migraine with visuals, nausea and complete incapacitation. Since October 26, 2017, Jeremy's migraine has been constant and intractable. He has ceased attending school on a daily basis and tries to achieve as best he can with home school services. Otherwise, Jeremy is mostly in bed in a darkened room. Sometimes he feels like watching TV or using other mobile devices but more often than not he doesn't. Jeremy's migraines have taken away his whole life as a otherwise healthy young man.

Jeremy has described his migraine in shifting types of pain. Most often Jeremy has intense pain and pressure in the center of his forehead. This pain often radiates to his temples and sometimes the pain flicks around Jeremy's head like shockwaves. The pain is intense and Jeremy rates it a constant 9 on a scale of 1-10. Sometimes it's more than 9 and then we often have to go to the Emergency Room for the migraine protocol. This combination of IV fluids, NSAIDS, anti-emetics and sometimes steroids get Jeremy out of crisis but provide no sustained relief. Jeremy is typically bad to his standard 9 pain level by the next morning. Jeremy's suffers migraine attacks constantly since October 2917. There just is no time he is without migraine pain. Not a day, or an hour, minute or second. Jeremy is in constant pain with a constant migraine.

As more fully described below, no migraine treatment ever work effectively. Some made Jeremy feel less bad. Some dulled the pain. But none helped prevent or lessen his migraines and any positive effect if any would be short lived and then disappear. A new treatment that could provide some relief would be life changing to Jeremy. It would allow him to return to his life and to be a kid.

2) Describe the negative/disabling impact that migraine has in your life.

Jeremy began to miss participating in sports or doing so while in pain. Jeremy began as time progressed to miss school more frequently. Although Jeremy is a good student he began to lose social contact with friends and peers. Jeremy became more and more isolated and as the pain increased he would not even feel like socializing in any setting. Jeremy's migraines have been very isolating for him. His migraines have taken away being able to attend school; play sports; socialize with his friends and enjoy family events. Jeremy does not even feel well enough to leave the house for a meal out most of the time. We have tried a movie to distract from the pain but the lights and intense noise made the movie between unenjoyable to unbearable. The migraine has taken away almost everything from Jeremy's life. When you have a migraine constantly, you just don't feel like doing anything. It's a sad lonely existence, now imagine that existence for a 13-year-old child. A new treatment that could be effective but could be denied to him because of his age is simply cruel. We advocate that this new treatment be available for all suitable patients.

3) Detail how existing migraine medicines fail to fully treat your migraine disease and have many unwanted side effects.

Jeremy has used the following medications, supplements, procedures, neurostimulators, and complementary alternative methods none of which have had more than a passing effectiveness:

Promethazine, Rizatriptan, Amitriptyline HCL, Cyproheptadine, Isometheptene, Naproxen 375mg, Alleve, Naproxen, Maxalt, Propanolol, Sumatriptan, Topomax, Zomig Nasal, Meloxicam, Metoclopramide, Naratriptan, DHE Nasal, Doxepin, Vitamin D, B-2, CoQ10 Enzyme, Verapamil, Sumavel, Hospitalized 5 days for IV DHE infusion, Flurbiprofen, Magnesium, Biofeedback, Etodolac, Diamox, Melatonin, Physical Therapy, Acupuncture, Trexamet, Nortryptilline, Cefaly device, Gamma Core device, Botox.

The downsides to having taken all of the above is the roller coaster of emotions as well as dashed hopes for relief. Each medicine usually takes three months to titrate up to an effective dose and then if no relief is provided then another long period of titrating down has to be undertaken. All the while Jeremy continues to suffer from a constant migraine. This is an emotionally exhausting process and seems likened to throwing darts hoping one of the treatments will work.

4) Call on ICER to appropriately value your pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines.

There must be given value to Jeremy's and all migraine patients pain and disability and the only way to do that is to seek to make available to all migraineurs under the care of an appropriately trained doctor to have access to all available medicines including the new CGRP inhibitors. It is stunning that dozens of people and hundreds of thousands of dollars is spent in the US to save a single life in an emergency situation, but migraine sufferers have plead with health insurers and pharmaceutical companies to make available medicines. It's unfair and amoral. We write in the hopes that Jeremy's and other migraine patients' experiences will convince ICER and all involved parties to support migraine patients of all types to get affordable access to the new CGRP inhibitor medicines. The migraine patient, like Jeremy at 13 years old, cannot fathom why a company with the power to provide relief and improve quality of life would price a medicine so it is unaffordable to those who need it or so expensive that insurers have to consider whether to cover it for their participants. This pure mercenary viewpoint has to be put aside and the human suffering has to take precedence in the decisions around the pricing and availability of these new treatments.

Dear ICER Panel for CGRP therapy in migraine:

My name is Chelsea and I have been a migraine sufferer since I was 10 years old. About 3 years ago, I shifted from frequent episodic migraine to chronic, intractable migraine and occipital neuralgia. I have been on every type of preventative treatment, with varying degrees of success. My migraines have become increasingly more debilitating - impairing my ability to eat and drink adequately, to sleep well, to concentrate and to safely perform my duties as a pediatric RN. In fact, I have been entirely work disabled since January of this year. I am only 31 years old.

I have head pain daily, which only fluctuates in severity and accompanying symptoms. I battle nausea, fatigue, bouts of depression, light and odor sensitivity. I am unable to make plans without caveat, gently replying “yes, unless…” to every future event. I am unable to try to get pregnant until we have “better control” over my migraine and it’s ability to shut me down and render me utterly useless. I have slowly, painfully watched as my life has become more a series of “I can’t” thoughts rather than “I can.”

I grew up with migraine. I am used to the pain. When I was in high school, they were chronic, almost daily attacks that prevented me from going to school much of my senior year. I worried about how I would be able to go to college. I sobbed and lamented as we tried preventative medication after preventative medication, each pill’s side effects worse than the one before. We finally found a combination that worked and I took my fear and stashed it aside, conquering each quest I embarked on – college, traveling to Africa, entering the work force. Episodes plagued me, sure, but I trudged on. I traveled to Haiti and came home, resolute to be a nurse. But my migraines and the fear of what they could become clouded my desire to pursue this dream. With more medication tweaking I was off, exclaiming that I have migraine, but migraine does not have me.

I graduated from nursing school in 2013 and worked for nearly two years with episodic migraine. I handled the stress, the pressure, working night shift and the constant and unrelenting fatigue that comes with it. When I left night shift and moved away, starting my job at UNC Health System in Chapel Hill, something changed. We have tried medication after medication to no avail. I applied for FMLA the day I reached my one-year anniversary at UNC. Now, at year three, I’ve applied for short-term disability.

I was hospitalized for a week in January with intractable migraine and have since even been to the Mayo Clinic in Rochester, MN for evaluation. A new MRI of the brain showed several chronic infarcts in my cerebellum due to chronic migraine with aura. This has since added another layer of barriers – limiting what I can use to prevent and treat migraine and the added fear of continuing to have strokes when they are so poorly controlled.

Through it all, neurologist after neurologist has coaxed me along, promising relief with a new class of medication that works entirely different than any migraine medication before it. “CGRP was made for you,” they say. I’ve been waiting for this drug for the past year and a half, praying that it will 1) be covered appropriately by my insurance and 2) work miracles for me like my headache specialists think it will.

I try each new medication with tempered optimism. Most migraine medications are used off-label in a way that no one quite understands. The side effects of weight gain or weight loss, tingling in hands and feet, worsened brain fog, vomiting, muscle tremors, etc. have to be weighted against their efficacy. Dealing with the side effects with very little or no improvement in my migraines is just not worth the poison in the long run. My hope with CGRP inhibitor medicines is that I will see a significant enough reduction in migraine symptoms that I will be able to return to work and take back my life.

You all are getting inundated with letters from migraine sufferers about how important this medication is to patients like me. My fear with this is two-fold: that these letters will sound to you like the wailings of a crazy person, someone resigned to their plight; or that you will simply pity us. Both of these fears come from the stigma attached to this disease and how that stigma has affected my life and interactions with people who do not suffer migraine and therefore cannot quite understand it. I don’t want to be pitied. I don’t want to appear weak and incapable – because I was once, not so long ago, strong and incredibly capable. I simply want to be given the best chance possible to fight this debilitating disease. I want the opportunity to work, safely and effectively, in my chosen and well-earned profession. I want the opportunity to go back to school so that I can be the best nurse I can be. Most importantly, I want to get back my life; to be a wife and mother that my family deserves for me to be.

I urge you to value my disability – and that of patients like me – and support adequate access to CGRP inhibitor medications for patients with both chronic and episodic migraine. I urge you to take stock of the millions of people affected by migraine, who are struggling sometimes just to get out of their beds, let alone having to fight their insurance companies on their treatment and prevention strategies. I urge you to not make more difficult the pain and strife for migraine sufferers.

This class of medication is hopefully just the tip of the iceberg in terms of new, groundbreaking treatments made specifically for migraine. Please open the door and allow us to reasonably access this medication – without the added barriers of cost and coverage prohibition.

Thank you for serving on this panel and for taking the time to hear my story, and those of my fellow migraine warriors.

All the best,
Chelsea Grinnan

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I began my journey with Migraine Disease at the age of 6 with what I came to discover was Abdominal Migraine. The Medical Community did not know about Abdominal Migraine in 1974. As the years went by, my Migraine Disease morphed into severe headaches. Weeks before I would get the horrific headache, I would have what I called “flashbacks”. I thought that everyone had them. They don’t, it turned out that I was having partial seizures and the “flashbacks” were déjà vu. The seizures would start out of the blue and become more and more frequent over a few weeks until I would be slammed by a horrific, pounding headache and the seizures would happen every 10-15 minutes accompanied by vomiting and diarrhea. The headache would last about 24 hours and then after a period of extreme exhaustion, everything would resolve until the next wave of seizures began, usually several months later.

In August, 1986, I had a 3 day Headache. I called out sick from work – twice , because I couldn’t remember the first time. That day, I dragged myself to my Primary Care MD who referred me to a Neurologist. When I went to the Neurologist, he told me that I was having Migraine Headaches and possibly seizures, which was confirmed a few months later and I was started on anti-seizure medication.

Fast forward 7 years and in August of 1993, I was on vacation in Vermont, horseback riding with friends. I fell off and landed on my head. I remember standing up and putting my hand to the back of my head and saying “whoa, headache!”. I also immediately began having seizures but didn’t realize it at first. Then I had one that lasted about a minute in my estimation and I told my friends that I had to go back to the house. I went to the local Emergency Room of a 40 bed hospital a couple of hours later – after I called my Neurologist and he told me to! I dreamt that night that I would have a headache for 37 days. I didn’t, I had one for 3½ years.

By this time I was established with a Headache Specialist in Philadelphia. We tried multiple medications and combinations of medications to try to get control. I often had to go for IV infusion for 3 days. I would get up at 4AM, catch a 5:30AM train, then switch trains and arrive in Philly around 7:40AM. I would see my Headache Doc and then try to sleep in the waiting room waiting for insurance approval. Then I would go down to the Infusion Center, where they would start an IV and then pump me full of sedating drugs to try to abort the Headache. At the end of the day, the Nurses in the Infusion Unit would wake me, often give me a Coke for the road, and I would walk the 2 or 3 blocks back to the train station for the return trip home. And then repeat the process 2 more times. Very often, the Infusion failed to relieve my Headache. After about 4 years of this, my veins were shot from the caustic medications that were infused and I could no longer do infusions. I had to be admitted for IV therapy with a PICC line in my arm. It was a miserable existence.

My employer was not very forgiving and I eventually had to go out on disability. I had thought I might be out for a month. One month turned into over 10 years. I lost my job, my career and almost my life. I was hospitalized 17 times in about 8 years. I would have severe headaches 24/7 until my Headache Doc would admit me. It could be anywhere from 3 weeks to 5 months. In 2004, I had a severe reaction to one of the classes of medications often used off-label for Migraine treatment, Neuroleptics. I went into Acute Renal Failure, followed by Respiratory

Failure. I was in a coma for 4 days, my family say by my side in the ICU praying that I would live.

So often, I would just lose hope but my Headache Doc never gave up on me. I’m one of the rare lucky ones, after years of treatment and well over 100 different medications, we finally got control of my Chronic Migraine. I never thought it would happen and I never would have gotten back to work because of the side-effects of the medications. After a few years of per diem work, I finally got back to full time work. I’m on several preventative medications and supplements, but the fear of going back to that awful, dark place shatters me sometimes. Now I get Migraine Attacks every month or so, with some of them lasting 4 or 5 days.

As a result of years of Chronic Migraine treatment, I’ve lost a lot of myself. I am a Registered Nurse and I’ve had to fight to regain the knowledge and skills lost to medications.

The Migraine Community needs new treatments very badly. Not treatments off-label, but targeted Migraine therapies. Affordable therapies that are not out of reach to patients on Social Security Disability. There were many times that I couldn’t afford medications and was fortunate to have family that could help. Many people do not have anyone they can rely on.

Dawn M Hadland BSN, RN

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My Journey

My migraine attacks started when I was 21 years old (2006), after the birth of my first and only child (now 11 years old). I would experience one migraine maybe two a year. The pain would be debilitating. Causing me to lose the day by sitting in a dark room with no noise and no meds. They soon progressed into monthly migraines in 2011 just two months after my mother passed away suddenly of a cerebral cortex aneurism rupture in February of 2011. She too was a lifelong migraine (silent) sufferer. It was not until in her death that we found out that her battle that she was waging with migraines would ultimately kill her. I now have more than 25 days of migraine pain. After several neurologists, I found that I have Chronic Migraines as well as Occipital Neuralgia. I have more pain days than pain free by far. If I have 24 full hours of pain a month that is a great month in terms of my pain.

I struggle to keep myself afloat in my job as a sales manager with a casino company. I cannot bathe every day as too hot water or too cold water is a trigger. Soap is a trigger. Shampoo is a trigger. The only thing I can do consistently is brush my teeth. (For now). I have lost irreplaceable time with my family. I cannot go to movies or concerts or be in the sun for more than 10 minutes without spiraling into chaos of a migraine attack. I cannot cook food because that is a trigger. I can only lay in bed after a long 9 hours a day at work to recoup to be fit for the next day at work. My weekends are spent resting for the next weeks work schedule to not suffer.

I used to play sports I even in my earlier days of migraine suffering used to coach my daughters softball team. That is now nonexistent. I cannot enjoy life music or even radio music above a 3 in the car. I cannot enjoy the sunrays due to the exposure.

My life has changed into an introvert, hermit with migraines. I seem to my used to be friends as flaky and unsociable. How depressing right.

I have tried countless triptans and any other brain-altering preventative out there. I have been doing Botox for years. As well, I do the nerve blocks, take my preventatives, and sleep medicines. I do chiropractic therapy along with IOVERA (nerve freeze). None of these treatments has come close to curing my pain or lifestyle challenges. Often times I am left feeling more pain that when I started. Botox hurts more and more every time I go. Told I am getting a condition that makes my scalp more and more sensitive to the injections every three months. How sad, that on top of the already migraine and already needle pokes that my scalp will stay sore for months after the injections. At 33 years old I take four medications for my preventive measures and then the countless in an attack. At one time 11 used to be in my regimen. Thank goodness for something clicking right. Not that we will ever know why I have to go down just a bit to the four I take now.

I am tired of feeling like a zombie when I take Imitrex. What a horrible drug. 100 MG for a 95lb female is torture. Just about worse than the actual migraine that particular day. The smell and taste of bleach or the loss of movement in your own body with no apparent reasoning.

I as that ICER can see the pain and daily disability I share with so many other sufferers. Please support the patience and giving them access to the new CGRP inhibitor medications coming down the pipeline. I am on my neurologist first patient list for this new medicine. In addition, he knows I will try anything; I have tried it all to feel some resemblance of my past life.

I hate that we all have to go thru so many other medications prior to obtaining approval for the right therapy repeatedly. You cannot get this done again until we do this this and this because you are insurance says so. How terrible when we know what works and still there is a yearlong process before we can do the treatment that my neuro and I knows will work every time.

We need better treatment options under all insurance programs and access to all treatments with all insurances. I will have to take out a second type of insurance just to try treatments now covered underneath my current. How taxing on my family to lose those funds to treatments.

Thank you for reading my story.

Icer,

I started having migraines in June 2006. Since then I have had nothing but pain. It's everyday not just some days. It started out small then with time worsened. The pain started with ache and then sharp pains. I usually have some discomfort, then nausea. Sensitivity to light and sound. Vomiting can also result from the pain I am in. Many days I want to cut my head off.

I have chronic daily headaches/migraines. My pain does not go away. I go through headache cycles, they can last months, because nothing takes it away. I am in and out of the hospital and emergency rooms. It is not a life I choose. I see my headache doctor every three months, sometimes after the visit I am admitted to the hospital. My stays are 11 to 14 days at a time. I would not wish this on anyone.

I do have food triggers, for the most part I stay away from those triggers. Many of my days, I spend home in my dungeon. Most days my house is closed up. My bedroom stays shut up so no light comes in. I don't do family things or do things with friends because of the pain.

I keep hoping for something to change my life. I also deal with depression. Not only head pain, but a life full of unworthiness. The only way I get thru the day is helping others. If my mind is on someone else, my problems are shoved to the side. The moment I dwell on my life, I go to a place so dark. It is hard to come back. My pain feeds my depression. So if my pain can be controlled, my depression will be better.

My life changed in 2006, when it started and ended in 2011 when I had to quit my job. Every day since, it is just going thru the motions. Not a life anyone should have. You want to be in your life, not just existing. That is all I do is exist. Mostly a shell going through the motions. Get up, go thru the day, go to bed. Every day is the same.

I spend most of my time alone. My husband and friends work, so loneliness is my friends. My heart is heavy most of the time. I have learned to put on a happy face even though I hurt. Doing this so people don't have to worry or say sorry.

The pain is just overwhelming.

This CGRP medicine could be what we have been waiting for. I have tried all kinds of medicines and Botox. Still no luck with cutting the headaches down. My medicine puts me to sleep. Sleeping my life away is not a life.

I have been in a cycle since October 2017. Using cycle breakers or abortives is just not working.

I can't complain about my insurance, they have never denied anything. But there are others who are not so lucky. No one deserves to be in pain every day. Making medicine and pricing it so everyone can get it is what we need. Having pain every day is exhausting. We need relief, not more pain because of not getting meds that work and price that everyone can afford.

RE: ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Dear Panel Members,

It is impossible to understand what it is like to suffer from Migraine if you have not experienced it yourself. However, I would like to share my personal experience so that you can consider this when completing your final report regarding CGRP inhibitors.

I started to experience Migraine in my mid-20's and I have now suffered for 20 years. I suffer extreme head pain (you cannot compare to the pain of a normal “headache”), nausea, upset stomach, visual disturbances, and sensitivity to light and sound. It feels like there are scorpions on my brain. This is not the type of pain that is touched by OTC medications and I cannot function, work, sleep, etc. These migraines last 48-72 hours each and increased from 2 days per month in my 20's, to over 15 days per month in my 30's (despite excellent medical care).

I have been treated by a Neurologist who is a Migraine Specialist. We have tried just about every medication out there for both preventing and aborting my migraine attacks, with little success. A partial list includes neurontin, propranolol, midrin, countless triptans, topamax, fioricet, naproxen sodium, nabumetone, prednisone, indocin, cambia, migranal, tricyclic antidepressants, SSRIs, SNRIs, verapamil, flexeril, and reglan. I have also tried devices such as the SpringTMS and the Cefaly. I receive 30+ Botox injections every three months to help control the frequency, intensity, and duration of my migraines. I have also tried trigger point injections and consulted with surgeons regarding nerve surgery. It is discouraging (to say the least) to search unsuccessfully for 20 years for an effective treatment.

Like many who suffer with Migraine, I have turned to alternative medicine for help since I still suffer immensely despite all that is available to us currently in the medical community. I have tried acupuncture, chiropractor, biofeedback, neurofeedback, magnesium infusions, cranio sacral massage, essential oils, CBD oil, therapeutic massage, and numerous “migraine diets.” Like most individuals who suffer with migraine, I have identified many of my triggers and I manage every day of my life with great caution – what I eat and drink, when I sleep, how long I can be active or outside, etc. etc. I eat “clean” and avoid alcohol and I am religious about my sleep. So, even on my “good” days, I am always 100% aware that I suffer from this horrible disease. I am always working to prevent the next attack.

Planning is pointless. Whether it is a holiday celebration, dinner out for a special event, having friends over, or volunteering on your child's school field trip, I just never know if I will be hit with a Migraine that day. My options are 1) to avoid scheduling anything or 2) to cancel on people about 50% of the time. It brings tears to my eyes to think of how much I have missed across the past 20 years.

Thankfully, I have managed to get married and have 3 children despite this disease. They bring great joy to my life, but it is also heartbreaking to see them cope with my Migraine disease. The kids do not understand why “mommy always has a headache.” I know that it is not my fault, but I do wish that I could be healthier so that we could better enjoy our time together.

Thinking about how much Migraine has taken from me and my family takes my breath away. “I AM ALIVE.” At my darkest and saddest moments, I remind myself that I am still alive and that I can live for the good moments. Migraine has not killed me, and it probably will not. However, please do not underestimate the impact on my quality of life – this is a devastating disease. We have high suicide rates and we are often unemployed or underemployed. I graduated at the top of my class, I have a Masters degree, and I do not feel that I am able to hold a job or contribute much to society because of Migraine. I feel like I could have been so much more, done so much more – if only there had been an effective treatment for me.

That brings me to CGRP inhibitors. And hope. I never give up hope that the next drug or treatment that I try could be the one that works for me. I have been watching the news of the CGRP inhibitors for years, hoping that it will be the medication that will make a difference for me. The treatment that will let me live and plan and work and enjoy my family.

I beg you to do what you are able to encourage insurance companies to cover these new CGRP inhibitors for Episodic and Chronic Migraine.

Please do not undervalue my pain and the impact of this disease on me and my family. I need better treatment options and I need for my insurance to cover them. This is not a want or a preference – this is a need.

Respectfully,

S. W. Higgins

Christine Holtkamp
May 7, 2018

Dear ICER,

I am a migraine patient who is writing to you regarding the Updated Patient Guide for ICER Review of Migraine Prevention Medicines. I wanted to be heard during this second review period.

I have had migraines since I was 39 years old. I had a sudden onset as an adult that was severe and without warning of any kind. I did not know what was happening to me. It was the worst pain I had ever experienced in my life and the most disabling. I cannot move due to the pain. I can only hope to get through each second at a time. I have to be in a quiet, dark room with no one else around to make any noise or movement. Light is extremely painful, sound makes me nauseated and increases the pain, and any movement anywhere around me is unbearable. I get dizzy, I see double or lose vision in an eye. I get numbness is my tongue and cheek. The migraines started out once every couple of weeks and increased from there to several a week. The neurologist tried everything on me from many different triptans (oral and injectables), to ergots (ergotamine, Migrainal), nausea medicine, non-steroidal anti-inflammatories like Excedrin migraine or naproxen but I will not take opioids. I have tried herbal remedies and even a neurostimulator which did help some but I could not afford to rent the machine. I currently take 240 mg Verapamil SR, the calcium channel blocker and the anti-convulsive Topiramate 25 mg in the AM and 75 mg in the PM and magnesium supplements. This has decreased the frequency of my migraines and the severity. I get migraines now maybe once a week but not as severe, although this regimen does not get rid of my auras, the visual problems, the dizziness and the numbness and tingling. The visual auras are very disturbing and effect my daily activities.

These migraines have impacted my life in quite a negative way. I have had quite a bit of trouble at work as they do not understand migraines and how disabling they can be. I have been accused of faking my illness, exaggerating the situation, and was denied promotion because of my migraine/absences. I have always make up all my work and my co workers have always vouched for me that I have never gotten behind or has my work suffered due to them. But the company would not accept migraines and had me do some very belittling and embarrassing things when I had my migraines. I was forced to sit in the nurse’s office on returning from a migraine absence and then describe my migraine in detail to the nurse who thought he was a doctor. He would make me wait for 30 minutes to 1 hour at a time. I was denied privileges others were allowed because of my migraines. As for my social life, this is also affected. I missed my nephew’s wedding due to a severe migraine and have missed many other events and participating in volunteer services due to my migraines.

I do have medication that has helped me in that I can now tolerate the pain of my migraines. It has also decreased the frequency of these devastating events. They do have their side effects and the worse one for me is the lack of concentration I get with topiramate and the drowsiness it can cause me when I have to increase the dose. Never-the-less, I still suffer from them and from the aura related to these migraines. I have found no medication that will relieve me of these auras. I would only ask that there be continued development and release of new migraine medications for those of us who suffer from these terrible events that impair our lives. Please appropriately value our pain and our disability and support both those of us with episodic and chronic migraine headaches in having access to these new CGRP inhibitor medicines. We count on your help.

Kind regards,

Christine Holtkamp

Dear Dr. Pearson:

My four-year-old knows more about migraine pain than he should. Not because he suffers but because I do. The first thing he asks me in the morning is how I'm feeling. He wonders if I will be there for him or hiding away in a dark room because the pain is unbearable. This is what it's like being raised with an invisible debilitating condition that affects everyone it touches.

I suffer from daily migraines and this pain has changed me as a mother and a wife. My pain level dictates my mood and ability to participate in my own life. During a full-blown migraine attack my body will only allow me to lie in a darkened room and wait for it to be over. I miss out on Christmases, Birthdays, Date Nights, Anniversaries, and my son growing up. I miss out on my life—all while in horrible pain.

Most believe a migraine is simply a bad headache that's easily pushed through. I've been told to simply take two Advil, have my husband rub my shoulders, or take a hot shower. That'll do the trick! If any of these worked I would do them simultaneously while riding a unicycle standing on my head for good measure. A migraine is simply not that fixable. I have a two-page typed list of all the prescription and non-prescription medicines and procedures I've tried. I've seen many doctors over the last ten years, been misdiagnosed, and been to the ER for these.

Right now, I'm on a cocktail of meds that range from beta-blockers, anti-seizure medications, birth control to triptans and all of these I take daily. None of these were specifically developed for the migraine sufferer and then of course there are the side effects: brain frog, sleepiness, heart palpations and thinning hair.

Without the medications I would be a pile of jelly on the floor not able to survive; however, they are far from perfect. I have several breakthrough days a month (and my one migraine last days) and more often then not I'm struggling to fight a migraine daily. I must curtail my activities and tell my son, "No, I can't play with you right now," and it's heartbreaking as a mother to watch her son's face fall upon hearing that.

Migraines have not only stolen time from me, but also my acting career as a stage actor I cannot commit to a two-week rehearsal process and an eight-week run of any show when a migraine might take me down at any moment. It also has changed the way I raise my son. I must have constant back-up in case my husband is unavailable which limits his ability to travel and changes his work schedule constantly.

My family and I have decided to move closer to my parents due in part to my health and the fact that we need more consistent help with raising my son as my migraines make it a challenge.

I’m hopeful that this new line of injectables will be able to help men and women who suffer as I do with little side effects. I’m hopeful that doctors and the general public will begin to understand how debilitating migraines are.

Sincerely,

Tonilyn Hornung

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My story starts at age 32 with the first of many migraines. The pain is so intense that it makes your stomach do flip flops! You can't move without feeling like you are going to vomit, you want silence or very little noise so you try to turn on music only that is too much stimulus so you turn the music off. Then to ice or not? A lot of times the ice would help but if the migraine has gone too far you can't tolerate the touch of the ice. Oh then smells!!! My husband frying bacon one morning sent me into a full blow migraine. And trying to get away from that smell is almost impossible (when you are close to a migraine it can be any smell) Then light, trying to get things as dark as possible in the middle of the day is tough. And sometimes even putting on an eye mask hurts. So you curl up in a ball and pray for it to pass. And then there is the brain fog that comes and goes without a migraine. When you know the word you want to say but for the life of you it won't come out or you know what you want to say but you can't remember word???

Then there are all the missed activities! Recently my migraines have become chronic. I usually lose at least 1 -2 a week sometimes more. I am currently am able to work due to having intermittent FMLA to secure my job due to absences. Then on the weekends it is just a guess if I will be able to function at family gatherings or do I end up in bed? I am now 54 so that means for 22 years I have been trying to guess when and if I will have an attack. Currently have more bad days then good. I usually have some time of headache every day and on average about 4 migraines a week and some weeks 1 migraine that last for 4-5 days.

I have tried every migraine medication on the market and nothing helps and several I have had bad side effects that caused me to have to quit using those medications. Some of the side effects I have personally experienced are numb hands, water weight gain, weight gain, dizziness, severe nausea, and rapid heartrate. A lot of times the medications don't help or help very little so not worth the taking. So now I get Botox every 3 months but it is not working very well but I am afraid to quit. And when I have an attack I usually take a muscle relaxer and Phenergan and hope it will not me out. And with the opioid problem and some of my allergies can't take those either.

It is my hope and prayer that the ICER can see what a need new affordable treatment is needed for all migraines. There are so many of us that just suffer (and I do mean SUFFER) in silence hoping for new treatment and help. And new treatments options that are highly expensive will only help a select few. Those of us that struggle to work but never seem to be able to work full time and so many or on disability the cost needs to be fair and attainable otherwise none of us will be able to use it.

Thank you for your time

Lisa A Houston

I have chronic daily migraine. Most months I have a migraine every day of the month. Working with my doctors I have tried every preventive and acute medication and treatment reasonably available. Many people in my position consider suicide. Honestly, there are times I do. To know there is now a treatment out there but may not be covered by insurance for someone like me is unreasonable. This is a treatment that can cut my migraines down 50% or more. That’s unimaginable! It’s also unimaginable that an insurance company would even consider taking this away from someone like me.

Vicki Hudson

Dear ICER Review Committee,

My name is Kimberly, and I am a 56-year-old female. I am happily married with four children and six grandchildren.

My migraine journey began at age twelve. As a teen, and into my early adulthood, I had only one migraine a year. It was generally a terrible headache, with nausea, and which always landed me in bed for a day or two, making me miss school or work.

However, when I was about 40 years old, the migraines began to occur more and more frequently. I tried abortive medicines from my primary care doctor, but even they were not always able to take away the pain. Many times I ended up at the doctor or urgent care to receive a shot of toradol and an anti-nausea medicine. My migraines generally were pre-ceded with a "pre-drome" day. Then I would end up in bed, in the dark, with no noise around me for at least an entire day. That was followed by what I called my "hangover" day—recovering from the after-effects of the migraine.

As a mother of four small children at the time, it was very difficult to "mother" from bed with a sickening migraine.

I finally went to a neurologist. He tried medicine after medicine to try to prevent the migraines. These medicines included anti-depressants. Many of them had terrible side effects or were not effective. I was now having at least 8 to 14 headaches a month, which did not allow any normal activity for at least half a month.

I started becoming a hermit. I stopped teaching piano lessons because I was" unreliable" according to one of my student's mothers. I could never travel with my husband. I had a migraine on an anniversary trip to NYC. I spent a day locked in a dark hotel room. I dropped out of church activities, and never planned to go anywhere or do anything because I was afraid of having an attack. How could I plan anything ahead of time when I was spending so much time in bed? It felt like I was a terrible mother, wife, and friend. I felt like I was always letting everyone down.

Migraines have been an all-consuming part of my life. Even on my "good days" many of them were filled with a dull pain, or a post-migraine feeling.

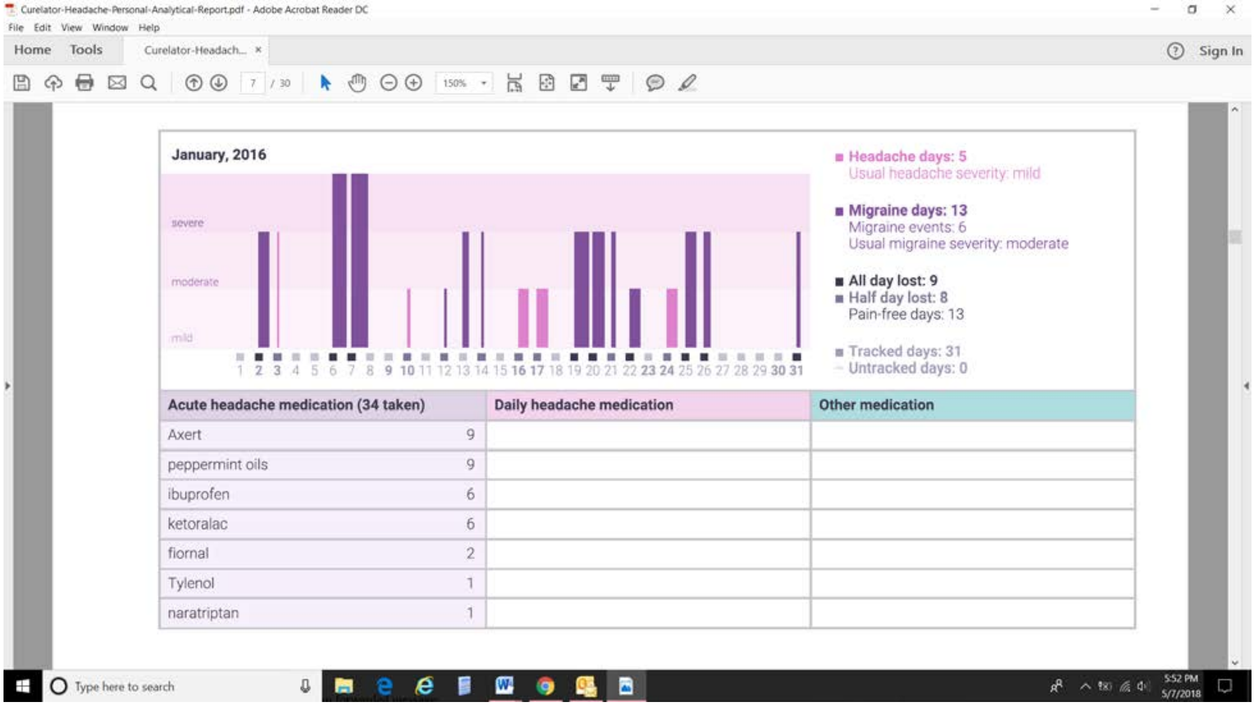
I went from doctor to doctor trying to find someone who understood my pain, who could give me some relief when a migraine hit. I tried Zomig, Frova, Midrin, Naproxen, Toradol, Imitrex, Butterbur, Neurontin, Ondansetron, Cymbalta, Paxil, Zoloft and even tried the opioid Avinza (with terrible side effects as well.) I found one medication that was helpful relieving migraine symptoms (Axert), but my co-pay was $75 per prescription—and the insurance only allowed me 9 pills in 30 days. So I had to "ration" myself and not take the medicine because I never knew when a "really bad" headache would hit. I couldn't take the risk that I would run out of the medicine in the 30 day window. How was I to decide which few days I should get relief?

I decided to try to control my migraines naturally. I changed my diet, wrote down what I ate, and tried elimination diets to figure out what I was eating that might trigger a migraine. I eliminated LOTS of foods. This helped a little.

I have been keeping an online migraine journal (Curelator) for more than 3 years, and a manual journal of "migraine days" for more than a decade to try to learn what other triggers might be causing migraines.

I took all kinds of supplements, went to the chiropractor, a homeopathic doctor (no insurance), had occipital nerve blocks, and went to massage therapists and physical therapists. While they All seemed to help a little, I was still having up to 14 migraines a month. And all of the triptan drugs that I took after a migraine hit, only worked part of the time, or were effective only after a day in bed.

Here is a sample of one month from Curelator journal:



January, 2016

■ Headache days: 5
Usual headache severity: mild

■ Migraine days: 13
Migraine events: 6
Usual migraine severity: moderate

■ All day lost: 9
■ Half day lost: 8
Pain-free days: 13

■ Tracked days: 31
Untracked days: 0

Acute headache medication (34 taken)		Daily headache medication	Other medication
Axert	9		
peppermint oils	9		
ibuprofen	6		
ketoralac	6		
fiornal	2		
Tylenol	1		
naratriptan	1		

I joined support groups by email. I read hundreds of articles and blogs about others suffering from these debilitating headaches. My husband considered applying for Social Security disability for me because there was no way I could ever return to work as a school teacher, my profession. Then I learned about a new class of medicines designed to *prevent* migraines. I began to receive a few emails regarding clinical trials. I tried to qualify for one. Finally, I received a call from a doctor's office who invited me to participate in a trial for TEVA's CGRP medicine. I was praying that this would be the thing that would finally give me the freedom to have a normal life again.

I first began in Phase 2 of the trial. I got my first shot, and waited, day after day, no migraine. One day turned into a few weeks. I cried with my husband when I went for the first month with only 1 migraine. The NEXT month I had NO MIGRAINES. The 3rd MONTH I had no headaches. In the fourth month of the trial, I had my first migraine, which lasted 2 days. But for the first time in 14 years I started to feel like a "normal" person again. I would wake up in the morning, day after day with NO migraine. This drug was a miracle for me.

I continued in the CGRP study (I was invited to take part in Phase 3). All together I was in the study for 14 months. I was never sure how much medicine I was receiving, or how often, as the study was double blind—even the doctor didn't know who was receiving medicines or in what dosages. However my migraines went down to a little over ONE headache per month and those headaches were less intense than before the CGRP study. And I had NO side effects from the drug, which was remarkable given my reaction to other prescription drugs.

When I reached the end of the Phase 3 study, I was panicked and heartbroken. I wondered if my headaches would return. They did. Last month I had 5 migraine headaches—one very severe that did not seem to respond to the multiple doses of triptan that I took.

I wondered WHEN this new medicine would come out and if my insurance (Anthem Healthkeepers HMO) would cover it. Initial reports said the injections would cost $2000 per month! Of course if my insurance would not cover, there was no way I could afford to pay for this out of pocket. I have been living in FEAR again. I cannot make plans for birthdays even one week away. We cannot book reservations for our upcoming 30th anniversary.

HELP! PLEASE!

Will you please make every effort to give **ACCESS** to CGRP's who live on a modest income (my husband works for a non-profit organization). There is no way I could even consider working outside (or inside) the home without some type of preventative medicine to reduce my headache days per month.

Will you please help make CGRP's **AFFORDABLE** for those who HAVE insurance? I would gladly pay my top tier price for the drug, or pay for weekly or monthly injection co-pays. I cannot begin to tell you what freedom from headaches and freedom from FEAR has meant for me over the past 14 months. It is a GIFT.

Will you please help people like me who have up to 15 migraines per month, and who have already have a track record of taking "steps" to end suffering, to have **IMMEDIATE** access to this amazing drug? I have tried everything available, several times over many years. NOTHING has every prevented migraines, until CGRP's. I cannot go another year going through the "steps."

It has been SO life changing for me that I have been looking for the day that I can begin taking it. I am looking forward to getting my life back again, now that the headaches have returned. PLEASE help me.

Desperate in Virginia Beach, VA

DATE: May 7, 2018
TO: Institute for Clinical and Economic Review (ICER)
RE: CGRP and other medications for migraine, headaches, and cluster headaches

Hello, my name is Sydney Hysell, and I am a 25-year old who has suffered from chronic migraines and chronic daily headache since October 2, 2012. Sadly, you will find MANY chronic pain sufferers know the EXACT date in which their pain began. As you know, 5 ½ years ago, I was 20 years old. What should have been some of the best years of my life, have been the worst.

Have you ever heard "You find out who your real friends are"? Living in chronic pain DAY IN and DAY OUT, I have lost MANY friends. Friends and family get tired of you canceling plans with them. So they just don't ask you to do anything with them again. Forget about having a boyfriend too. It's very tiresome to try and hide the symptoms of migraine and headache. When and "if" you feel comfortable enough to tell a friend or boyfriend, you may as well just stand there and hold the door open for them to exit out of your life. There is a stigma associated with migraines and headaches. There are many different kinds of signs and symptoms that people do not know about. Not only that, who would believe that it would be possible to have a migraine and/or daily headache EVERY DAY??? I was not even aware of this until it happened to me. My mom has been my advocate at most doctor's appointments because I have been unable to focus or talk intelligible about my symptoms. However, there are a lot of people that do not have someone to drive them to appointments or help advocate for them on the phone when needed.

Since I was young, I have always wanted to be a Registered Nurse (RN). My personal experience has strengthened my passion even more to take care of others in pain. Unfortunately, I have had to put my dreams and passion of becoming an RN on hold. Along with the excruciating pain, I endured brain fog, dizziness, nausea and vomiting. Sometimes the pain would feel like an ice pick stabbing my forehead above my left eyebrow. In the beginning of 2013, because of these and other varying symptoms, I had no other choice but to drop my college courses. Thus, my dreams of successfully completely college and working in the healthcare field as an RN are still dormant.

Changing my lifestyle has not been easy. Being bedridden most days in the past 5 ½ years, I gained a lot of weight. (Of course, being overweight has a stigma all its own). When you are unable to leave your house you can experience depression and anxiety. Though I have lost many old friends, I have gained many new friends that suffer with migraines and headaches. This has allowed me to network on social media with a lot of great people, forums and groups that advocate for those who suffer with migraines and headaches. What about "work"? I haven't been able to provide myself with an income by working since before my symptoms started and rely on my mom for my needs. I want to work and become a successful, independent working woman.

I have had NUMEROUS appointments to neurologists, headache specialists, otolaryngologists and plastic surgeons. With UNSUCCESSFUL results, I have tried over 60 medications for my chronic pain. In addition, none of the triptan medications work for me either. Many "off label" medications have been prescribed to me and others because of the lack of prescription medications on the market to specifically treat migraines and headaches. I want some relief from this constant pain and misery in which I having been living.

Thank you for taking the time to read from someone who has personally experienced migraines and headaches. There is definitely a great need for CGRP and other medications for migraine, headaches and cluster headaches. New medications and devices must be made affordable for every economic background (no jumping through hoops). We need more government funding and pharmaceutical companies willing to invest the time and money to help the millions of us that miss work, college and the joys of everyday living. We deserve it!

Respectfully,

Sydney Hysell

April 25, 2018

The ICER Review Board for Migraine Prevention Medication
Institute to Clinical and Economic Review
Two Liberty Square, 9th Floor
Boston, MA 02109

Dear Review Board:

I had my first migraine in college. The pain was so blindingly bright and escalated so suddenly that I dropped to my knees while out with friends. I thought I was dying. I was diagnosed with migraine that day. The attacks continued after that first one. I have *Migraine with Aura*, so I get a bit of warning before the pain. Little blue dots come sparkling into my vision just before an attack. And then I am hit with horrific, sickening pain.

This pattern happened for years, but I powered through by sheer force of will. I graduated in the top 15 of my university with both my BA and a Graduate Certificate. I co-published a textbook for non-literate English language learners. And I helped found a non-profit. All before I was 30. I was going places.

And then came 30, and it all crumbled. You cannot fight migraine by sheer force of will. You can be strong, but it comes relentlessly like water against stone. Your body just gives up on you. I began passing out multiple times a day, often ending up in the Emergency Room. My speech was confused. My mind was confused. My body had had enough. My whole world shrunk to the four walls of my bedroom.

I am lucky. I am under the care of one of the very few Headache Specialists in the United States. With his care and expertise, I am no longer stuck in my bedroom. But I am not yet back to the life I had lost. I have tried an assortment of migraine preventative and abortive medications, neurostimulators, alternative medicines, complementary treatments, and therapies. You know the lists. You know my options. I have tried them. I am allergic to some. Others might as well have been sugar. Some are doing a fair job.

But being on so many medications is difficult on your body. Especially these medications. They cause weight gain, a distressing side-effect given my already high risk for diabetes and heart disease (thanks, genes!). They make food taste terrible (I swear everything tastes vaguely like fish now). They make it hard to think, making me feel stupid and insecure. They cause stomach upset regardless of if I take them with food or without, one hour before or after, with a fox or in a box. I worry about my stomach. I worry about my liver. I worry about my brain. I continue to take the medications because my life is better on them than off. But I need a better solution.

When I see my doctor now, though, there is no better solution. There is nothing else. They tell me, “Hang in there, CGRP medications are coming.” Coming, they say. But I know the truth: unless my insurance is willing to cover a bulk of the costs, I will never get the medication. My life will continue as it is. I will hurt so badly when I move that I will continue to need to use handicap parking. I will be so restricted in my activities that I will continue to need my service dog because I cannot do normal, everyday life tasks. Things will continue just as they are. Because I am out of options. There is nothing else of me. CGRP inhibitor medicines are it.

Maybe you have never met someone with migraine. If so, thank you for taking the time to read my story. I thought at first that migraine was just a bad headache. I hope you understand now that it is so much more. And that I, and others like me, desperately need access to this new treatment.

Thank you for giving me an opportunity to share my voice.

Amanda

My Journey with migraines began when I was about 10 years old or so. I can't ever remember not having headaches. The migraines became much more severe when I was 12 years old and sustained a head injury during a bike accident. This was before helmet laws etc. I was hospitalized with a concussion, amnesia, vomiting, and head pain that was excruciating. Since then, I have experienced thousands of migraines. I am now 49. Migraines make my life different from others. I never know when my head will begin pounding like I want to die. I need to lay down in a dark room. The pain renders me not able to function at times. Sometimes my head just hurts and makes it so I feel awful, but have to continue what I am doing. I have no choice because If I didn't choose suffer through pain day after day, while I'm at work, I certainly would not have a job. (I can't call in sick every time my head hurts) I have migraines at least 3-4 times a week, and I know I live a different life than of those who do not suffer from migraines. My head is rarely pain free. It is like having a massive hangover, nausea, motion sickness, feeling terrible, without having been to the party! Several times a week, over and over and over. There is no end….

The impact migraine has on my life is indescribable. People always ask "do you still get those terrible headaches?" Friends from high school recall me being down and out with pain. I literally can't make plans because I never know how I will feel or if my head will be hurting. About half the time I don't feel well because my head hurts, and I won't be up to doing anything. My children would want to know why I had to lay down in my room all the time. It was because I was in so much pain! Migraines are life altering. I recently earned a Master's Degree, and since any kind of stress aggravates migraine, I was plagued with pain and suffering while obtaining my degree. The same with my undergraduate degree (in nursing). I had migraines and felt awful at school most days. Migraines limit activity, making plans, future plans, vacations, going out, socializing etc. When there is stress at work I will get a migraine, even normal stress is a migraine trigger. My brain is ultra sensitive. People talk about child birth? I'd give birth if I could trade these migraines in! IN fact after I gave birth I had the worst migraine and couldn't even enjoy the moments after I had my daughters due to severe migraine pain. My wedding day? I had a migraine. I literally had to suffer and pretend I was okay as to not ruin the day.

I have taken medications: Ibuprofen, Tylenol, Percocet, magnesium, Relpax, Elavil, Topamax, Verapamil, Propranolol, Botox, Muscle relaxers, Inderal, Imitrex, Maxalt, Injectables, Nasal Sprays, … you name it, I've tried it, or been on it. I've had to endure a multitude of side effects: being tired, having low blood pressure, having tachycardia, (fast heart rate), drowsy, constipated, trouble finding words, loss of appetite, severe anxiety, weight gain, apathy, etc. All in the attempt to experience less pain and have my life back. At least people with cardiac disease & diabetes, do not have daily severe pain. Give me some other ailment. Give me Hypertension…. I'll exercise, I'll eat better, I'll exercise (I do all of these things already!) Please take away my pain!

Accupuncture, massage, chiropractors, physical therapy, regular exercise, are all other measures I have attempted as well. Most migraine sufferers are searching for a solution or a reduction in the pain.

I believe migraine patients have suffered enough and if there is a new medication (CGRP) which will significantly decrease disability and pain, it should be offered to as many patients as possible. Some patients have only a migraine once a month or once every several months. I think the CGRP inhibitors should be certainly offered immediately to those who suffer multiple migraines a month or have chronic migraines. All current preventative migraine medications are not made for migraines! They are medications for BLOOD PRESSURE, SEIZURES, CARDIAC ISSUES, DEPRESSION, ETC. In fact PAIN medications like ibuprofen and Tylenol, and narcotics are actually contraindicated in migraines! They actually cause the migraine patient to have increased frequency of migraines when utilized more than 2x a week! WE NEED ACCESS TO CGRP INHIBITORS which are designed for migraines specifically! Imagine being in severe pain, and being told pain medications are not to be used?? When patients seek emergency treatment for severe pain, they are told they cannot be given PAIN medication? Because Dilaudid and Morphine shouldn’t be used in migraine? This is a very discriminating disorder and I am begging to be considered as a patient who can have access to this new medication. I am truly hopeful for cure (with CGRP) or a decrease in frequency and for my life back.

Sincerely,

Jeannie Jagers

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Please note that I am submitting this public comment using a pseudonym because migraine is a highly stigmatized disease and I have legitimate concerns about connecting my name publicly with migraine.

My name is Amy Jones and I am a 58 year old mental health professional, wife and mother of 2 children in their 20's. My migraine experience involves me as well as my 27 -year-old son, who transformed to chronic migraine on his 24th birthday. I am writing this to plead with ICER and anyone else who will listen to understand the horrible, liferuining impact migraines have had on me but even worse for my son, who is desperate to decrease his severe migraine attacks which he has 4-6 out of 7 days a week. He is otherwise healthy and strong, just starting his adulthood and career, but dealing with the severe pain his migraines cause him have been a major roadblock to every aspect of his life. I too have had my worst migraines during the most important times of my life. I have had to switch careers to have more flexibility due to migraines, which I have been lucky enough to be able to do. My son, however, had to go on short-term disability when his migraines began to turn chronic. He was in such constant, debilitating pain, he couldn't perform at his job and it was his only option at that time unfortunately. His career path was halted just as he was beginning. He has since been working, but has had to "push through" and endure so much just to stay on top of his career and not miss more days due to severe migraine symptoms. The fact that new preventative treatments are actually around the corner that are being developed solely for migraines is giving us hope that his and my migraines will improve in frequency and severity, without the negative side effects of all the current preventative medications we have tried that were meant to treat other medical disorders.

My own migraine journey began when I was around 12- although I did not know it was migraine- I remember having horrible pounding head pain for 3 days, (my mom told me it was a stomach virus in my head-I think to just calm me down).
Then I vaguely remember having times in my teens where I had low energy, extreme nausea and pounding headache on my right side that aspirin didn't touch. I had no idea what it was, and asked my Dr to check my blood sugar, had my eyes checked, had all kinds of other tests and there were no answers.

During college, I had what I thought were weekend hangovers (like many of my friends, although alcohol wasn't the reason for me…), but they all took alka seltzer and felt better, and I would have this searing head pain for 1-2 days at least 3 times a month. I remember sending away for information on headaches, I signed up for the National Headache Society I think it was called so I got monthly magazines sent to me. Meanwhile, I don't think I told anyone –not any of my friends- I felt different and weird, and I felt like a weak person for having so many debilitating headaches and nausea. Looking back, I think I felt shame for some reason, as if I was choosing to be a downernot a fun, reliable friend.

The severe headaches seemed to die down for a while after college and I began working.

It wasn’t until I was 26 and finally my life was coming together, fell in love and became engaged that my migraines came back with a vengeance and I had to seek help. My brother flew to New York for the weekend to meet his future brother in law and we were going to celebrate my engagement. I developed one of my most severe headache attacks; I could not get out of bed the entire weekend. IT felt as if someone was inside my head with a sledgehammer! I also experienced severe nausea (like those dreaded 24 hour stomach viruses but add the sledgehammer pounding your temple). My Dr. prescribed Fiurinal, which didn’t touch the pain (just made me groggy). During those 3 days, when I was supposed to be celebrating, all I could think of was taking a knife to cut my right temple out of my head to stop the searing pain! My poor brother who flew in to celebrate, I barely saw him. AND my poor fiancé- what was he getting himself into I kept thinking?

After that episode my primary care physician sent me for an MRI (this was 1986 so MRI’s were newish I believe). He then told me I have migraines and gave me prescription for Cafergot. My migraines became more frequent, about 3 times a month that lasted about 2-3 days, pain level 8-9, and the Cafergot didn’t touch the pain. The next whopper of a migraine I had (that was like the engagement weekend) was my wedding night. We were at the airport going on our honeymoon. My new husband had to spend the next 2 days rubbing my temple and I was in agony (definitely not the ideal, romantic wedding night, that’s for sure.)

Somehow I don’t remember migraines being too bad my first 2 years of marriage and even through my 2 pregnancies –I had headaches during the first trimester but not migraines. Then in the mid to late 90’s I had one of those whopper migraines. I got in to see a neurologist and I got my first prescription of Imitrex, 25 mg. IT WAS A MIRACLE! My migraine was gone in 30 minutes after I took the Imitrex! My migraines finally didn’t scare me anymore; I found a solution and was so happy! I could enjoy my life again without the fear of the torture of 2-3 day horrible, excruciating, head pain. **When I say excruciating, I mean more painful than labor and childbirth, more painful than a broken jaw and broken arm, more painful than getting root canal…seriously bad pain- these are not just a headache!**

In my 30’s my migraines were not bad, about 3-4 a month, but the Imitrex took them away, so it didn’t impact my life like it did. However, in my 40’s the migraines increased in frequency. A new neurologist switched me to another triptan, and wanted me to start Topamax. But as soon as I started, my brain was foggy, and I would have speech issues and word retrieval issues so I stopped soon after. The Dr. then prescribed a blood pressure medication, which did nothing to help my migraines and made me too dizzy (blood pressure went too low) and had to stop. I also tried Nortriptaline for 3 months, did nothing to help my migraines – so I tapered off.

My 40’s into my 50’s, my migraines were increasing in frequency, I was getting about 2-3 a week, and was taking triptans and Advil a lot (more than I was told to take- but when you have that level of pain, YOU WILL DO ANYTHING TO TAKE THE PAIN AWAY!). I started and stopped several preventative medications such as Effexor, Amitriptyline and Gabapentin, which I had to stop mostly due to very unpleasant side effects, and they didn't help my migraines! I tried Botox, but it caused uncomfortable side effects and I had to discontinue. Currently, (as I turn 58 today), I get anywhere from 1-2 migraines a week, and they are fortunately for me, helped by triptans, but I also take way more than the recommended 4 times a month, as well as too much Ibuprofen and pray that I am not ruining my kidneys and liver, as I wait for the new treatments to be approved and available.

Although migraines stole way too many days of my life, my main reason for writing this is about my son, and the rest will focus on him, because his life has been so terribly impacted, and my heart is just broken watching helplessly as he suffers and struggles through pain while trying to build a career, have some sort of a social life and go on dates…NOTHING HE HAS TRIED TO PREVENT AND REVERT HIM BACK TO EPISODIC MIGRAINES HAS WORKED!

My son 's migraines started when he was about nine or 10. It was his first day of 4th grade, I am waiting for him at the bus stop, excited to hear about his day, and the bus driver carries my son off the bus, telling me he is real sick and I should take him to the ER. My son was green, clammy, and crying holding his head. I called a pediatric neurologist who told me to bring him right in. By the time we got there it subsided a bit after Motrin. The neurologist assured us it was migraine, considering my history, his symptoms, and after a thorough neurological exam.

My son through high school would get his migraines on the weekends…we attributed it to his sleeping in on the weekends. He would also get one hours after something exciting, like a great soccer game that he scored a hat trick (3 goals). He would also get migraines on school trips, from the bus ride, on vacations, during camp. His migraines increased in frequency in his teens. I took him to several neurologists, a headache specialist, and they started him on triptans. Basically his migraines stole his weekends, and his social life. By the time he went to college, his migraines subsided; He would get a severe migraine only once or twice a year. Then he stopped having any migraines at all for almost 2 years! We thought he outgrew them (they say 3 out of 4 boys outgrow them). But when he started working, beginning his career, and had to get up really early to commute to work, his migraines came back. He went to several different headache specialists, and they had him try blood pressure medicine, (he has low blood pressure). All they did was make him tired, take away his ability to participate in sports, but didn't decrease the migraine frequency. He was getting about 2-3 a week, and took triptans and over the counter pain relievers, which both helped but they kept returning. Then in June 2014, he had a migraine that would not go away. 3 months later, having steroid tapers, infusions, acupuncture, and a host of other suggested remedies, his migraines were diagnosed as "transformed, Chronic Migraines.

Since his 24th birthday, his life changed as he constantly battles either the prodrome tiredness, pain of the migraine attack, exhaustion from the migraine, GI symptoms that are part of his migraine, or anxiety about a severe migraine coming on at the worst moments (during a job interview, a date, a business meeting, etc.) He was prescribed anti-seizure meds as a preventative, but the side effects were intolerable (he lost too much weight and had brain fog and cognitive issues). He was also prescribed different antidepressant meds, all which were minimally helpful, and all had unpleasant side effects. The problem with the current “approved” preventative treatments for migraines are that they are not designed for migraines. The preventatives available are either anti seizure meds, antidepressant meds, or heart/blood pressure meds, and my son as well as myself have none of those medical issues. He has tried diets, acupuncture, physical therapy, several neuro stimulators, and different combinations of the above classes of medications, all with minimal improvement. He also takes way to much ibuprofen and too many triptans, but when that pain comes on strongly, YOU TOO WOULD DO ANYTHING TO LESSEN THE HORRIFIC PAIN OF MIGRAINE! He needs to gain control of the frequency and severity of migraines to get his life back. He is hopeful that the new anti CGRP medication will finally do that, but insurance companies must understand how desperate we are to find better and more targeted treatment.

As horrible as a journey this has been for my family, through social media and other advocacy groups, we have learned about the millions of others here in America (And worldwide!) that suffer as much or even more than my son and myself. So many millions of people in their most productive decades have such a diminished quality of life due to migraines.

I am 58 now, I have lived half my life and was able to successfully raise a family and find a career that is flexible which was necessary because of the unpredictability of migraine attacks. However, its my son who has his whole adult life ahead of him, who desperately needs a preventative that is designed to treat migraines so he can get his life back and continue to be the productive, hard-working, career-oriented person he wants to be. …Chronic migraines stole 3 years of his twenties, please help him and all those who suffer by supporting these new migraine specific preventatives that work and improve quality of life especially during the most productive years! We are so grateful that pharmaceutical companies are finally researching and developing new migraine treatments for the billions who suffer! I have read everything possible about the anti CGRP therapies and feel strongly they will lessen the frequency and severity of our migraine attacks and give back our quality of life. Please help us by getting them to the people who need it the most, and for insurance companies to cover this new, targeted migraine prevention therapy! Thank you!

My Journey With Migraine Disease

By Roni A. Jones

I'm thankful for this ICER open comment period on CGRP inhibitors for migraine, so that I might tell my story and journey with migraine. I first began having migraine when I was sixteen, at first, I thought that they were sinus headaches. I would take an OTC sinus medication, go into a dark room and sleep for several hours. I always felt better after this, not knowing that sleep is often a good way to rid one's self of a migraine. I was working with an Ophthalmologist through a Vocational Education class, in the afternoons. He recognized my symptoms has being migraine not sinus related and sent me to an Internal Medicine doctor. After doing a complete history and physical, she agreed that yes, I was having migraine. I was placed on Propranolol, which worked beautifully for many years.

The beginning of 2001 I was diagnoses with Adult Onset Asthma, Propranolol being a beta blocker exacerbates asthma, and I had to stop it immediately. At this point my life changed dramatically, I began to have migraine attacks that basically haven't stopped since then. Sometimes with aura, and sometimes without. Severe attacks of nausea and vomiting, that caused me to be hospitalized to receive fluids and pain medication for the migraine. The migraine attacks were much worse, than those that I experienced in high school. It was like my entire body was under siege, I would lie in my bed tying to be as still as possible, moving meant I would vomit, my head pain was horrid, as if someone was playing bongo drums, while driving a red-hot porker into my right temple. I alternated between praying for it stop and wishing I was dead, the pain was that bad. Then there were the stomach cramps and diarrhea, as if vomiting wasn't enough.

Today I have a better doctor, but the migraine continues to be chronic and at times intractable, meaning that no matter what medications we try, it will not abort the migraine. These days are horrid, constant unrelieved pain with no relief in sight. Not being able to sleep through the night without being awaken by pain. It becomes a vicious cycle, horrid pain that leaves you in a fetal position, to nights without sleep due to pain. There is nothing you can do but wait it out. My baseline pain level is 4, that is the level of pain I have every day, whether I'm having a migraine attack or not. On my very bad days, I'm forced to stay in my "cave" a darkened, quiet room, away from my family. This has been the norm lately, as my migraine has been staying intractable. Is this the quality of life that I want to have? Living like a shut in at age 54? No, it is not! Do I like living in daily chronic pain, absolutely not! CGRP could mean having the quality of life, that I had before chronic migraine enter the picture. I could once again do the things I used to enjoy, being outdoors, camping, fishing, picnics, shopping in the mall, instead on having to shop online, spending time with my husband, instead of being separated by a dark room. Being able to look forward to holidays, without the worry of a debilitating attack hitting. Being able to enjoy the rain once again, not dreading it, because I know with the change in barometric pressure, the migraine is going to worsen.

Due to the sudden onset of chronic migraine, I lost my job at an institution I had worked for since I was sixteen. This was devasting to me, I was treated very badly, by a company that I had always given 100% to and had never received a negative performance evaluation. This left me with deep seeded feelings of grief, anger and guilt. Grief and anger at the way I was treated, and guilt over the loss of income. I sank into a deep depression, it was one of the worse times of my life. I began to have suicidal thoughts, the overwhelming pain and depression were dragging me into a deep, dark hole. When I made a plan, it scared me enough to seek help and check myself into a mental health facility. Therapy was very good for me mentally and helped me with coping skills for pain. But these are just stopgap measures, they don't replace a migraine preventive, certainly not one like CGRP. That was made specifically for migraine and has virtually no side effects.

The migraine preventives that I use now, do not stop my chronic/intractable migraine. Come with a multitude of side effects and keep me from living the life that I used to. Let me share these with you.

Topiramate 200mg 1 tab twice daily ~ migraine preventive ~ side effects; impaired thought process, this side effect has caused me to make the decision not to drive. I feel that I am a hazard to myself and others. This took away a huge part of my independence, but was the right thing to do.

Amlodipine 5mg 1 tab once daily ~ migraine preventive, blood pressure

Venlafaxine ER 150mg 1 capsule daily ~ depression, migraine preventive; many migraine patients also have depression, especially if their migraines are not well controlled, liked mine

Clonazepam .5mg 1 tab three times daily ~ anxiety; many migraine patients also have anxiety, especially if their migraines are not well controlled, like mine and another reason I don't drive

Omeprazole 40mg 1 capsule daily ~ GERD; migraine patients are more likely to have stomach issues

Tizanidine 4mg 1 ½ twice daily 2 at bedtime ~ fibromyalgia; many migraine patients have comorbidities and another reason I don't drive

Diphenhydramine 75mg IM injection ~ migraine abortive; I have adverse reactions to Triptans, crushing chest pain, as well as, allergies. Diphenhydramine is not a TRUE abortive, but it is all that is left to me. CGRP would mean a world of difference to me, like night and day, in finally being able to get pain relief.

Promethazine 25mg I tab every 6 hours as needed for nausea

Ondansetron ODT 1 tab 3 times as needed for nausea ~ I use this one when nausea comes on very fast, it is faster acting

Flonase Nasal Spray 50 mcg 1 spray each nostril twice daily ~ allergies

Temazepam 15mg 2 capsule daily at bedtime ~ migraine and fibromyalgia patients have chronic insomnia

Amitriptyline 25mg 1 tab at bedtime ~ to help with pain nightmares, migraine preventive

Vitamin D3 1000 units 1 gel tab daily ~ maintain vitamin D levels

Vitamin B12 1000 mcg 1 gel tab daily ~ maintain vitamin B12 level

Folic Acid 1mg 1-tab daily ~ maintain folic acid level

I have shown you that I take four medications daily that are migraine preventives, yet I have a baseline pain level of a 4, every day. Most days my pain level is a 7 or above, that pretty much tells us that these medications are not doing there job effectively. I also don't have access to a good abortive medication to help knock a migraine down, when it strikes. You may have noticed the Amitriptyline that I take at bedtime, I began to have horrible nightmares as my migraines worsened. I would awaken punching, kicking and screaming, as you can imagine this was very frightening for myself, as well as my husband. I am also admitted to the hospital three to four times a year, for infusion treatment when I'm in a long migraine cycle, each of these visits are between five to nine days.

So you can see how important having access to CGRP is to me, no more nightmares, not living in agony every single day, no longer living in isolation, shut away in a dark room away from my family. To feel and be a productive part of society once again. The key word here in access! I won't be able to get access, if CGRP is priced so that insurance companies balk at it. Especially Medicare, many migraine patients are on disability and Medicare decides which drugs its going to cover. Please keep all of this in mind as you make your decisions.

Thank you for giving me this chance to tell my migraine story!

Dear Review Committee:

As a child growing up I used to get what were thought to be headaches most days in elementary school. I was told maybe I just was straining to see the board at school and needed to wear my glasses all day. By middle school, I was getting sick every day on the school bus because I was sensitive to the gas fumes. Little did I know at the time that people with migraine disease are sensitive to smells so I did homework after school each day with a throbbing headache that made me nauseous. I noticed my mother getting sick a lot, having days where she had to stay in a dark room, running to the toilet to throw up. It would go on for the whole day, and when it finally stopped, she was still unable to take care of things around the house. She told me it was a migraine. It was the only time I would ever see my mom truly sick or unable to "be a mom". She could have the flu and she would still be trying to do everything. Not when she had a migraine. It just isn't possible when your entire nervous system is being assaulted. Unfortunately, I would inherit the disease. My mom and I would treat it by taking Advil and other over the counter drugs. About two years ago, we found out my mom has kidney disease, which doesn't run in my family and is likely from overuse of the kind of drugs that are available for people to manage migraine disease. It is upsetting to know that one day my mom may die as an indirect cause of migraine disease that could have been prevented had treatments been available to her that doesn't damage your organs. This has further driven me in my search to try to manage my own symptoms the best I can as become a chronic sufferer of migraine.

The first time I had a "migraine attack", I was 14 years old. I was at the grocery store with my mom and I started to experience a headache that was worse than all the others I had ever experienced before that. It felt like my whole brain was swollen and scraping against my skull. My mom knew what was happening, she gave me both Advil and Tylenol and told me to go out to the car and wait for her. Every time I had taken that medicine before for a cold or virus headache it had helped but this time it did nothing. Before long I was vomiting. With every wretch the stabbing got more intense. This went on for hours before subsiding. I went to sleep for the rest of the day waking up the next day still feeling like I was getting over a stomach virus. As a 14 year old, I really hoped that would be the end of it. But the impact would be far worse than the occasional vomiting episode. Migraines aren't just head pain. Head pain is just one of the predominant, well known symptoms of migraine disease. The next time I had an episode like that, it started out as a little blind spot in my vision, like a smudge on glasses, which grew larger and larger until I was completely blinded and the head pain set in. My vision came back when the pain subsided, but it has happened again and again. Every time it happened, I had a limited amount of time to find a safe space I could be to vomit and be blinded for hours at a time, and back then I was only a kid with limited know-how on how to advocate for myself, especially for such a stigmatized disorder that even I myself hardly understood at the time. But for a long time I accepted the disorder for what it was. I went to college. Sometimes I had to run out of class because of it. But all in all I never thought of it as disabling at that time. I started planning my life and career.

Then I started getting daily headaches again in my early 20s that would never go away. I actually didn't really know at the time that I was living with a mild migraine as my baseline at all times because I had grown so accustomed to being in pain. At least four days out of the week, the intensity was unbearable. I was taking Aleve, and Advil just to bring daily pain down from a 9 to a 7 on a scale of 1 to 10. I just wanted to function like a normal young person. They make me dizzy, and nauseous constantly. I'm just trying to be a normal young adult. I'm trying to grow in my career, pay off my student loans, and travel. I'm an active person, or at least, I was. I like to hike and be outdoors. I want to be able to do things I used to like to do, like exercise regularly. But it gets really hard when you wake up every single day and you know the second you become consciously aware of the fact that you are alive you will also become aware of the fact that your brain feels like it literally on fire. First I tried counseling to manage stress and anxiety. That was helpful, for that, but it didn't help my migraines. I went on an antidepressant, Zoloft. Maybe that helped with the anxiety, but it did nothing for the migraines. I did biofeedback, learned autohypnosis from a psychologist, and saw a chiropractor to the cap of my insurance. Nothing was helping. One day at work about two years ago after days of a high intensity headache, I left work and went to my primary care doctor out of desperation. At this point, another constant symptom was neck and shoulder pain. They gave me a muscle relaxer and a something with a narcotic in it. I have never taken the narcotic and never will. Research shows that are detrimental long-term for helping people with migraines, they are simply the wrong drug to be using. I took the muscle relaxer. It made my neck and shoulder pain temporarily feel less horrible, but not my migraine, and suggested I see a physical therapist and neurologist. The neurologist had me do an MRI to make sure there was no pathology in my head or neck and started me with some Imitrex as needed, which was laughable because I needed it multiple times a week but only used it when desperate. They told me to try CoQ10, magnesium and riboflavin. I'm still taking it, because they don't have side effect but it hasn't done anything. I went on nortriptyline. It didn't make a dent in the migraines but it did my heart rate uncontrollably fast and gave me anxiety so I quit that after six months of giving it a fair shot. I tried acupuncture after that and went once a week for about a year. It was another thing that was nice and all but didn't actually do anything at all. I thought great for the physical therapist they know exactly what to do, it's just going to take some time and I am going to fix this without medications. After a year and about $1500 out of my pocket of going to physical therapy twice a week, I had better posture and better mobility in my neck and by the time I was through, logically, it would make sense based on what I was told that my migraines would have improved as a result, but that didn't happen.

I was going further downhill instead of getting better. I was having more and more intense episodes again with constant, relentless headaches. I woke up with or developed a migraine during the day 5 out of 7 days a week with a dull headache at all times. I was getting sensations now in different parts of my body whether I had intense head pain that day or not. The auras came back. They were getting stranger. I get tingling and burning sensations in any part of my body. Migraines can cause referred pain in other parts of your body. Once I thought I had a sinus infection because I had pain in my teeth and my tongue went numb. Since my migraines are constant, auras aren't just a warning a migraine is coming, because I always have them, so the auras are ever-present too. When I look at straight lines, they might go zigzagged. I see bright flashes of light that aren't really there or bursts of colors. Sometimes what I am looking at almost bubbles out at me. Then I also have days where it causes muscle weakness, extreme dizziness, and causes my depth-perception to be off. I might be trying to walk through a door frame, but because everything is slightly off with my vision, I might walk into the wall instead of through the doorway. I might go to put a pile of papers on my desk and be looking directly at my desk and miss by an inch. I went back to a neurologist and I decided to try Topamax. Finally something gave me some relief. It took about a month to build up enough to start giving me some days where the headaches were mild and when it did and knew what it felt like to not have a migraine it's was actually so overwhelming I cried. But it was short lived. Topamax, while giving me a glimpse of what it would be like to have a functional life back without head pain again, isn't stopping the other symptoms, such as auras and the side efforts are so bad that I won't be able to continue to stay on it. Further, on average, it has only brought me down from 21 migraine days a month to 15, which is still pretty chronic. One of the side effect can be weight loss. I'm doing everything I can to try to stop it but it has caused me to be less than 100 pounds in three months. Because I've failed all of these treatments at this point, my next step is Botox injections. I write this letter today after my first round of 31 Botox injections. I won't know until the next round in round in 90 days and track those days if those headaches will be lessened in comparisons to what I am experiencing now. So for the moment, I'll have to keep suffering and hope that the Botox helps, or that a future medical treatment, such as CGRP inhibitor treatments will be accessible to people like me.

In addition to the chronic baseline migraine I have almost, the migraine attacks I have had in the last year alone have been brutal and rival those I had gotten as a child. Episodic migraine attacks are terrifying, the most painful things I have experienced, and because they are so misunderstood, they are downright embarrassing. Try explaining to a TSA agent in an airport, when your brain can't put words together because you have aphasia, that you aren't vomiting and unable to stand up not because you are drunk but because you have a migraine when their understanding of a migraine is that it's just a bad headache. To detail what that is like, it might start as a more intense headache than I have on a daily basis. Maybe I will start icing my head and neck if I have access to ice, drinking a lot of water, doing everything I can to stop it from getting worse. So I'll take Imitrex next to ward it off. Then that doesn't work. Then I start getting sick to my stomach, so I take Zofran too to try to stop from needing to vomit. But the migraine isn't going to stop and I'm not going to be able to keep any of my medications down. I might start slurring my words like an intoxicated person would. Any kind of light at all feels like staring directly into the sun. Sounds of any sort feel like I have taken a Qtip directly to my own eardrum. It's worse than just vomiting now. When some people get a migraine, because your body's nervous system is essentially short-circuiting, your digestive system shuts down and needs to evacuate everything in it. That doesn't just mean what is in your stomach, that means your entire digestive system and everything in it down to the bile and you will have no control over this process and your body doesn’t care where you are. I’m 27 years old and I don’t have an inflammatory digestive disorder. I’ve gotten a colonoscopy and endoscopy to check (another waste of insurance money looking for pathology that isn’t there), and I need to carry around emergency adult diapers with me because of a neurological disease that is often misunderstood, underdiagnosed, under-validated, undertreated, and underfunded. All the while, you may find that some of your body parts go paralyzed temporarily during the duration of the migraine so getting yourself somewhere proper to relieve one’s self is sometimes not an option, you can’t see where you are vomiting because you lost your vision, and you can’t communication with those around you for help. If that isn’t bad enough, you consider yourself pretty lucky if you just happen to be home when it happens or you can get home before it gets to that point, but migraines don’t care where you are.

Just to give an idea of how disruptive this was in the last year alone due to a migraine attack striking, they happen at work and impact my ability to do my job and interact with people weekly, and I have nowhere I can go while all of the above is occurring. Driving home isn’t exactly safe either if that isn’t obvious. I was hit with one at the baby shower of my sister-in-law but I spent the day hugging a toilet instead. I spent my own brother’s wedding in a corner just trying to survive it. On Thanksgiving, after leaving and trying to get home before it became full-blown, I found myself on the side of the highway, kneeling on a pile of broken glass, vomiting and defecating myself instead of spending it with my family. Later, I was able to upgrade to the floor of a gas station with an actual toilet only because my boyfriend was able to relocate me there and I had to try to explain to an attendant that I was, in fact, not having a stroke as it appeared and an ambulance would be useless to me. This is what happens to me, on top of the daily headaches I get, with everything I have already tried, with all the medication I am already on to supposedly prevent something like this from happening with all the side effects they come with. I still have to live in fear of when and where and how the next one will strike.

It is pretty clear that I have been doing everything I can to mitigate the symptoms of my illness. Those who don’t understand migraine tell me I must be stressed or tell me I just need to avoid “my triggers”. Most certainly, anyone wants to have healthy practices in place. Most nights, I go sleep at 8 pm because I have had enough of being in pain all day that I’d prefer to just be asleep, so I can say, I’m not sleep deprived. I drink about 3 liters of a water a day, and make sure to add electrolytes when needed, especially if I lost them due to gastric distress. I practice yoga, and despite the pain I am in, I have been trail running a couple times a week. It's a bit tough with the visual disturbances and dizziness. I figure I work full-time through the pain, so I run through the pain. On that note, I work full-time as a counselor. It’s a rewarding profession and being that I am educated in that, I know a thing or two about healthy and mindful habits, managing stress and recognizing that in others and myself. But I still do see my own counselor, because while I don’t find myself to be more stressed than the typical young person on day-to-day life things, what I am stress about it my chronic health condition. But being stressed about having migraines didn’t cause me to have a migraine disorder, it’s genetic. It's no wonder migraine disease is comorbid with depression and anxiety because having a chronic illness causes you both to be depressed about the fact that you have little to no control over your life, the disease does, and your treatment options are at the mercy of what insurance deems appropriate. And anxiety over things like triggers and going out places where you might get sick. What is stressful is not knowing how it is going to affect me that day. What is stressful is not knowing when and how the next attack is going to hit. What is stressful is not knowing if my insurance is going to cover something, what hoops I am going to have to jump through and if I am going to be able to afford a treatment, and what the side effects will be. What is stressful is worrying about how this is going to affect me in the future, if I will be able to having a family or not because of this, if I will ever be able to advance in my career or own a home thanks to medical debt because of this disease, if society will continue to see me as someone who exaggerates just having a headache and force me to continue hiding what I actually go through on a daily basis to not be labeled crazy or thought of have some psychosomatic disorder when there are millions of other Americans out there experiencing symptoms and disturbed lives just like me and don't know where to turn to because medications to target their actual disease haven't existed up until now and what is offered is a half-fix, if at all.

If my insurance was paying for one thing that might actually work because it is a preventive that actually targets the disease specifically as opposed to a multitude of doctors, specialists, and treatments to help me deal with my symptoms (which isn't even working at present) and not the actual disease and a therapist to deal with stress that comes with having a chronic disease that would make a lot more sense for me holistically and the insurance company financially. I understand some of the frontline treatments work well for some people, but not all, and I have suffered now for a lifetime and tremendously over the course of the last two years before even being able to get Botox covered and I will still have to wait to see if that even makes a difference of any amount, and then where do I go from there? Then for people, such as my mother, who can't take and first fail these frontline drugs or abortives because of her kidney diseases would she be made to fail other treatment options too? It's unethical to make this a one-size-fits-all approach. We don't know enough about migraine disease to-date, have enough doctors per patient who specialize in migraine disease, or have even have enough treatment options intended for migraine disorder to consider not allowing patients affordable access to medical care that could give them their lives back. If CGRP Inhibitors weren't fully covered by my insurance, something I already pay a lot of money for better coverage than most Americans due to my disorder, I'd have to live like this knowing there is medicine out there that could give me my life back to some degree, but I simply can't afford it. I'm even more afraid for my fellow Americans who do not have good insurance coverage or who don't qualify for chronic migraine treatment when the reality is any day lost to a migraine is a day of you don't get back. I still hold on to some kind of hope for my future, and I want us all to be able to. Thank you for taking the time to read my story.

Sincerely,
One in 37 Million Americans

To: ICER migraine review

Dear Sirs,

I'm seventy four years old and have a headache or migraine almost every day. By almost, I mean that I have daily headaches for weeks at the time. They are interrupted, now and then, by a blessed few days without pain in my head.

I started having migraines in my late teens. These incapacitating episodes of sharp pain—an ice pick stuck into my temple describes them well—accompanied by nausea and a variety of other symptoms forced me into my bed with the shades drawn because I couldn't tolerate light or smells during these severe two, or three day long attacks.

I managed to marry and have three children—alas they all suffer from migraines albeit to different degrees; my middle daughter is as bad as I ever was—but my incapacitating illness put them in severe danger while growing up: while I took to my bed, they played with knives, climbed onto collapsing furniture or left the house at age three to ride their big wheels down the street. It's a miracle they survived my lack of supervision as I laid in my bed, in my dark room, with ice packs on my head.

I've noticed that describing migraines to those lucky enough never to have experienced one is almost impossible. Some family and friends thought, and weren't shy about expressing those thoughts, that my laying in bed was nothing more than laziness and the effect on my children, well, that went beyond being irresponsible. How to explain that taking care of my children, or my house, while suffering a stabbing pain in my head, while having to keep my eyes closed against the least light and my nose against almost any smell while, at the same time, feeling as if I was about to throw up at any moment, was a torture beyond endurance.

Perhaps a very different incident may help illustrate.

Once I had the rare opportunity to travel with my husband on business. I was tempted and excited because this was a trip to Paris, France. Half way through our first day, we entered the Louvre museum through IM Pei designed glass pyramids entrance. Something about the place, either the heat or the strange light, triggered a migraine that sent me directly to my room where I spent the next three days while my poor husband tried to console me, not knowing what to do. In truth, I preferred to suffer on my own. When the worst of the migraine finally subsided, he treated me to a meal in a fine restaurant, something I'd always dreamed off but, when the food arrived, I was overcome with nausea. Fortunately I made it outside in time. From there I went back to my dark hotel room, located one block away from the Champs Elysee; being that close to all those sites I'd imagined visiting one day, made everything even worse.

I have tried Topamax and Naproxen and prochlorperazine and Tramadol and Venlafaxine and others too numerous to list here, either as preventives or pain relievers; none helped or if they did, whether medically or as a placebo, their efficacy waned within a few weeks. I've tried Botox as well as steroids and Novocain head injections as means to interrupt the cycle. Opiates, which I also tried, don't work at all.

The invention of Imitrix and triptans was a godsend. I cannot tell you how much they helped. Alas, they are no longer as effective. Sometimes they work, sometimes they don't. I try to limit their use to the prescribed two times a week maximum but, at some point I reach for them even though I've been warned of the risks of overuse. It is difficult to convey the desperation I feel, the need to try anything to alleviate the pain. Excedrin, which helped with simple headaches, led to rebound headaches.

That’s why I’m writing this letter: please approve and allow easy access to these promising CGRP drugs. My neurologist is excited by their potential. I cannot tell you how hopeful I am that their promise will translate into much needed relief from these awful pains I’ve suffered for almost six decades now.

Please consider my plea: I’m hoping these CGRPs will add to my limited arsenal, that at the very least they will reduce my use of triptans, which will hopefully increase their efficacy.

Ruth Kempner
(Address and phone number available upon request)

Migraine has played a huge role in my family as both my grandmother, mother and two younger sisters suffer from this debilitating disease. There is not a day that goes by where I do not personally witness the affect that migraine has. Watching the people that I love the most struggle with such a horrible disease has been heartbreaking. Furthermore, there is not a cure for migraine, and the remedies that do exist are very limited, which is why migraine is such a difficult disease to live with.

I first understood the severity of migraine when I was a young girl and would come from school in the afternoon to find my mother in her bedroom with all of the lights off. My sisters and I would quietly do our homework downstairs, trying not to disturb my mother in hopes she would get better. Although as young children, we did not understand the complexities of the disease, we knew she was ill. My understanding of migraine heightened as I saw the disease impact each generation of my family.

When I was in high school, my middle sister, Julia began to have migraine. Julia always excelled academically and was the star of the cross-country team at school. As I saw her struggling to complete assignments and skip practice because of the grueling pain, I watched helplessly, knowing that migraine had taken her too. Migraine greatly hindered Julia's self-confidence, as she became unsure of her abilities, since in the back of her mind she always feared when her next migraine would come.

I then witnessed the effect of the disease on yet another member of my family, my youngest sister, Sydney. In high school, her disease became so grueling that she had to stop going to school and become home-schooled. Watching Sydney, who is so charismatic and full of life, stay in bed day after day was heartbreaking. Migraine almost took her will to live as she became severely depressed and no longer enjoyed the things she used to. I will never forget when I came home from college to surprise her for her birthday and she had locked herself in her room, ashamed and saddened by the person migraine had forced her to become.

Thankfully, Sydney enrolled in a clinical trial for migraine treatment, and the medication she received changed her life. Sydney was lucky, however most people with migraine are not as lucky, and will suffer from migraine for the rest of their lives as the treatment options are so limited. As a practicing physician, I have seen the lack of knowledge amongst my colleagues regarding migraine. I remember learning about headache in medical school as part of the neurology module. Unfortunately, headache only made up a brief portion of the module and we briefly discussed the different types of headache and basic treatments. However, growing up in a household where migraine played such a big role, I know that migraine is not just a headache.

I hope that going forward more research is dedicated to migraine and that doctors are better educated on the treatment options which currently exist. I have seen too many people come into the emergency department with the complaint of migraine who do not receive the proper care or referral they need in order to manage their disease. I am very proud of the work that my mother is doing for MilesforMigraine, and I hope that more people like her will advocate for this important cause.

Julia Kessel

I first began experiencing migraine attacks when I was 8 years old. Today, at age 27, I remember my first migraine attack clear as day. I was in grade school and I just could not describe the extent of the head pain I was experiencing. The school nurse proceeded to take my temperature and when she discovered I did not have a fever, she called my mom and I went home for the day. I remember feeling so grateful, because there was no way I would have survived the remainder of the school day. Little did I know that my migraine journey had just begun and I would suffer with chronic migraine for nearly two more decades of my life, and face debilitation as a result in my day-to-day life.

Migraine disease has taken so much away from my quality of life. For example, living with migraine has taken away the pleasure of spending time with friends and family, attending important events, and making it inevitable to have to deal with mood swings and depression. It saddens me that I, and millions of other individuals do not have access to the treatments of today's rapidly-advancing scientific-based society certainly has the potential to provide. The most important benefit of a better treatment would be to increase my functional ability to perform daily tasks, thereby improving my quality of life.

Due to migraine, I am unable to always keep plans with friends and family and fully commit to long-term goals, such as my educational pursuits. I oftentimes feel guilty when I cannot keep plans that I have made with friends or family members due to a sudden migraine attack. The need to cancel plans or being unable to attend an important event or milestone makes me feel defeated. As a result of missing out on so many fun and cherished events, I often ask myself, "How would life be different if I was not plagued by this disease?"I have also had to restart graduate school twice, change my major and school, and alter the format of my in-person graduate program to an online program, as a means to accommodate for my medical needs as a person with migraine.

I have tried nearly all of the "triptans" (oral and injectable) with nausea/vomiting and tingling hands and feet as unwanted side effects. I cannot tolerate these drugs. I have tried Botox once, and am now trying it again with the hope that it will reduce the severity and/or frequency of my migraine attacks. I am now taking Abilify, Lamictal, Propanolol ER, Qudexy, and Zanaflex, all as preventatives and have been on most of these for years. (with the exception of Qudexy, which I began about 6 months ago). I have tried many abortives/Bridges, including NSAIDs, Compazine, Benadryl, Prednisone, intranasal lidocaine, DHE, etc., The downside of my current treatment regimen is that it involves so many drugs that have not helped me and have made me feel worse with their side effects.

May 6, 2018

RE: Migraine Affecting My Life/ICER

To whom it may concern:

My wife and two of my daughters suffer from chronic persistent migraine. Migraine has drastically affected not only my relationship with my wife and daughters, but our entire family dynamics.

My first recollection was during my first year of marriage and my wife being admitted to a local tertiary care hospital by her neurologist for a DHE infusion. She was not premedicated and suffered an immediate episode of tardive dyskinesia. The new interns had no idea what was going on, and if hadn't convinced them to infuse Benadryl, the outcome would have been worse.

Since that time, Shirley has suffered from chronic persistent migraine constantly. This has effected every aspect of our marriage from child care, gainful employment, and lack of marital bliss. Despite my medical background, this scenario got old quickly. My wife visits many specialists, including multiple neurologists, psychologists and psychiatrists, endocrinologists, rheumatologists, and holistic medical personnel. She has been admitted to the hospital for countless DHE infusions along with outpatient procedures.

My daughters have had a similar history. It too has effected their daily lives, including relationships and schoolwork. This has also caused significant depression, especially since they constantly feel “lousy”. They constantly are heard saying, “why me?” Both of them are classified as disabled, which has a negative stigma associated to it.

In summary, migraine has become the “center of our universe”. Despite many caring practitioners offering multiple approaches and medicines for the disorder, nothing has been helpful for longer than a few months with many negative side effects. In my opinion, the treatment has been like “throwing darts,” and I've become quite pessimistic.

Please contact me directly if further input is requested.

Respectfully,

LK

Lawrence J. Kessel, MD, CMD, FACP
Assistance Professor of Medicine
The Lewis Katz School of Medicine
At Temple University

When I was 25 I was diagnosed with chronic migraine. I had a headache every day for a year, including my wedding day. I could not wait to crawl into bed, because I was in so much pain, not to mention how much my feet hurt from the cheap, shoes I was wearing. I never told anyone that this one of the worst migraine attacks I could remember because I did not think anyone would want to hear me complain on the happiest day of my life.

During this time, I was offered 20 different treatment options and a hospitalization, all of which I failed

After the birth of my first child my disease became episodic and I had a reduced frequency from ages 29 to 50 , however I was not able to work outside of the home due to the unpredictability of attacks.

At 50 I begin to experience chronic migraine again and have failed these different treatments options so far.

I have tired the following:

Abortive Meds:

- almotriptan (Axert)
- eletriptan (Relpax)
- frovatriptan (Frova)
- naratriptan (Amerge)
- rizatriptan (Maxalt, Maxalt-MLT)
- sumatriptan (Imitrex)
- sumatriptan and naproxen (Treximet)
- zolmitriptan (Zomig)
- Fiorecet
- Naproxen
- Diclofenac
- Excedrin Migraine
- Cambia
- Cafergot
- Benadryl
- Prednisone
- Migranol
-

Preventive:

- Topiramate
- Propranolol
- Amitriptyline
- nortriptyline
- Norvasc
- Verapamil

- Botox
- Depakote
- Zonegran
- Calan
- Atenolol
- Zonisimide
- Clonidine
- Lisinopril
- Pamelor
- Effexor
- Lexapro
- Celexa
- Myobloc

Alternative:
Acupuncture
Cupping
Chiropractic
Massage
Biofeedback
Yoga
Meditation

At age 16 I learned how to give my mother IM shots for migraine since she would vomit so much, that she could not take oral meds. She spent 3-4 days a month in bed, and since I was the oldest I learned to care for not only her, but also my siblings and even my father.
As an adult with chronic migraine and a mother of 2 kids with this disease, I have had a very limiting life. I have missed at least 7 total years of my life due to lost days with this disease: to me a lost day is when I cannot perform 70% of my daily activities.
This disease had put on a strain on my marriage and caused a marital separation.

I have chosen a job which enables me to work from home. I cannot work outside the home due to aggravation of symptoms. I am not able to exercise to daily and have gained weight over time. My daily life is limited, and I live a quiet life. I work from home to reduce my exposure to triggers. The current treatments have all failed for me.

An improved quality of life is vital to happiness. My life is mediocre at best. My parenting duties are reduced, and my role as a spouse is also diminished. Less migraine would mean a life at baseline, and right now I am living too far below this line.

The new CGRP blockers are vital to my survival as I am only 56, and the current meds do not control my symptoms. I need a new option with better outcome and any side effects that would emerge from the new class drugs is worth a try.

My husband is an internist physician and has to intervene on my behalf when I have been denied meds for my disease. My insurance company has refused to pay for some treatments.

I am a member and/or participant of every NPO in the headache space: AHDA, NHF, MRF, AMF, AHMA, Migraine Again, US PAIN, and many others, to help myself and others advocate and increase the "noise" so that perhaps we may secure more research funding and better treatment options.

Respectfully submitted,
Shirley Kessel
5.7.18

This letter is to advocate for insurance coverage of the soon to be released GGRP medications for migraine treatment.

I am 64 years old, employed full- time and married with grown children. I have been suffering with migraine for over 30 years. What was initially most likely hormone-exacerbated episodic migraine has now evolved to a chronic condition of pain that can range from moderate to severe. As anyone with migraine can tell you, it is not a headache but rather a disorder that effects all parts of your body in different ways and to different degrees. My pain starts in the back of my neck, then involves my head, shoulders and then radiates throughout the body. An attack is typically preceded by visual aura, insomnia and restless leg syndrome. Directly before the attack, I can become somnolent and fall asleep, waking up to severe pain. For the past year or better, I have developed significant pain in my lower back and legs during migraine. I experience lack of equilibrium, fluctuation in body temperature, profound weakness and fatigue, impaired cognition and memory, and have had episodes of dysarthria. My stomach is upset with loss of appetite, I may have vomiting and diarrhea. Although I can control the worst of the pain with use of triptans, those also exacerbate my fatigue and cognitive function. I am unable to drive and perform normal daily activities that require movement, thereby am unable to engage in social activities, recreation and exercise, and work- related tasks. While I have a demanding job with many responsibilities, I am fortunate to be able to work from home when necessary. I would not be able to meet the requirements of this or any other job without that accommodation, and it is increasingly difficult to schedule meetings and other job duties requiring my direct involvement around my migraine days.

My migraine is a chronic condition with some degree of pain and impairment most days of the month, which I control with sumatriptan and Zomig. Despite the use of medication to abort the worst of the pain, the impairment typically lasts throughout the day. Several times a month I have severe migraine that does not respond to my usual dose of sumatriptan and can last 24 hours or more. Many weekends I remain at home nursing a migraine with medication and rest, unable to perform household tasks let alone participate in normal weekend activities.

Migraines have required me to make significant adjustments in my professional and family life. While the use of triptans has saved me from a life of chronic, unrelenting severe pain, they do not abort the other symptoms I have when I have a migraine episode. I may not have severe head pain, but I feel very sick.

I fear the possibility of Triptans losing their effectiveness for me, as I would not have other options. I have tried all available preventive medicines, including antidepressants (Elavil, amytriptyline), Topomax, Atenolol, Botox to name a few) without success, either due to lack of response or intolerable side effects. At age 64, I am well aware that my time to be productive on this planet is finite. To think I will spend a majority of my remaining days in pain and impairment, not able to function at anywhere near my best potential, is very disturbing to me. The few days when I am migraine free makes me acutely aware of how severely impaired I am on most of the other days of my life. The potential of these new medications has offered me and so many others real hope, and insurances should cover this medication for anyone suffering this chronic and disabling condition.

My Migraine History

I have been fighting migraines for 28 years. When I first experienced migraine, I was diagnosed with tension headache and treated as such. After a few years the "headaches" occurred on a more regular basis and with more severity. After about five years, I was about age 26, I was diagnosed with migraine and then the merry-go-round began. I say merry-go-round because I got on a merry-go-round of trying different treatments, medications, therapies, and doctors. All the while, my migraine severity (pain) got worse as did the frequency, and they began to impact all aspects of my life in a significant way. At the age of 30 I was in the ER one to two times a year for intractable migraine.

I have sought many different treatments for migraine, as discussed below. I even went so far as to seek help from the world-renowned Diamond Headache Clinic located in Chicago, IL (I live 1500 miles from Chicago). I was admitted to a five-day hospital stay two times under supervision of doctors at the Diamond Headache Clinic, to no avail.

How a Migraine Feels

Each person experiences migraine in a different way. I experience migraines most of the time with severe head pain. The pain may start out as a dull pain in the back of head, or occipitals, then moving to the top of the head and finally my entire head feels like it is going to explode. At the same time noise and light makes the pain worse. In addition, any odors, however slight are bothersome and also make the head pain worse. Sometimes the migraine will start out with shooting pains in my head. I call these "lightning pains". Eventuallly the shooting or lightning pains grow to sharp pains on one side of the head. There is pain behind my eyes and my jaws hurt. My forehead aches. The pain is so severe I can barely move. With the most severe headaches I experience nausea and vomiting. On occasion the vomiting becomes uncontrolled, I cannot hold down even the smallest sips of water and dry heaving results. Obviously at this point oral medication is not an option.

How Migraine has Impacted My Life

In the first years of getting migraine, they did not impact my life except for occasionally having to miss out on an activity or so. Eventually missing out on activities increased into lying in bed for the entire weekend with "letdown" migraine after the workweek. Then the migraines began to impact my social life and other activities. I once could mountain bike up to 13,000 feet. I could hike 10 miles a day. I could snowshoe all day long. These activities came to a stop because they triggered migraine. My social life had to be modified because I had to have a strict sleep schedule. No staying up past 10 pm or waking up past 7 a.m. No going to loud places or movie theatres. I even had to limit TV watching.

Slowly my friends would not call as often and invitations diminished. I could not be relied on to show up at an activity due to the frequency of migraine. My relationship with my husband became strained and eventually was a factor in divorce.

Migraine also impacted my career. I missed out on work days. This did not happen often because I would "tough it out" as long as I could or find a quiet room to hide out in for awhile. Eventually I could not concentrate as was required and started to miss out on work more often. I had to forego a major promotion to a supervisory position. I was bypassed given major responsibilities that I was once given. Then….one day my manager asked me if I had ever considered taking disability. I talked to my doctor and made the choice that killed my career...I took the disability offered by my company. I now have been on disability for nearly 10 years. I get paid a portion of my former salary and do fortunately receive medical benefits.

Once on disabilty my life was further altered due to finances. I had to cut back on spending. Medical costs and insurance cost me $7,000 to $8,000 per year, 98% due to migraine.

At present I get migraine 40 to 50% of the days, and 5-8 days are disabling where I cannot function at all. Excessive stressful situations results in migraine frequency to increase.

I have pondered obtaining a part-time job but lack of insurance that comes with a part time job is not an option. In addition, my condition is likely to prohibit a holding a job.

Treatments I have tried

Over the years I have tried many treatments, drugs, and therapies.

The following is a non-inclusive list of failed therapies:

accupuncture
herbal supplements
TENs
yoga
EMDR
radiofrequency ablation
biofeedback
In-hospital daily DHE treatment

The following is a list of therapies that have had some success in treating migraine (either short-term success in pain management or fair pain management)

nerve block
massage
physical therapy

The following is a list of therapies that have had significant success, but not enough to make my life “normal”.

Botox
Sumatriptan
Preventative medications
Ice Pack

The above therapies do have drawbacks. I have found that overtime Botox has been losing its effectiveness. Sumatriptan can only be used 9 times per month and the more you use it has the risk of causing rebound. Preventative medications are not enough without additional therapies. Ice pack is for when migraine is already in progress.

In addition to the above therapies, over the course of the years I have tried **20-30 different preventative** medications for migraine. Some of these completely failed while others had unacceptable side effects including but not limited to loss of cognitive abilities, nightmares, fainting spells, and insomnia.

The latest therapy I have tried is the GammaCore vagus nerve stimulation device. The company who makes the GammaCore allowed me to try the device for no charge for 30 days. Over the 30 days I was able to reduce my sumatriptan use by half. Although I tried the device only for 30 days, I do have hope that it would help me in the long run. However, this device is not covered by insurance and costs $600/month, something I do not have. This is a pity because the device is made of simple electronic parts. The company even had me “throw away” the device after the 30 day trial period ended. I would urge the ICER to support migraine patients to have access to this type of device. At a $600 price it is simply not an affordable option.

I Call on ICER to appropriately value my pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines any other migraine treatments.

Often migraine patients do not have access to treatments such as I have had. The up and coming CGRP inhibitor medications are reported to cost thousands of dollars per year. Like the GammaCore nerve stimulation device mentioned above, this is out of reach for patients. When considering support for migraine treatments and their costs ICER needs to know that migraine impacts each patient differently. Each patient reacts differently to medications. My story is just one of many. However, the commonality is that most migraineurs do not have the economic or medical means to try the latest and greatest methods in migraine relief. Also all migraineurs experience a variety of horrific symptoms including intense pain, nausea, temporary blindness, cognitive numbing and other co-morbid diseases.

Lifelong Migraine Patient

I was first diagnosed with atypical chronic migraines without aura after I could no longer attend medical school after having almost daily bouts of “headaches” that would not go away after trying a whole host of over-the-counter medications, relaxation techniques (yoga, working out, breathing exercises), and sleep. My schooling was disrupted to the point where I had to repeat classes after leaving in the middle of the school year, returning, and then ended up maxing out on the school’s medical leave absence policy such that I would no longer be able to attend unless I reapplied for another starting school year. This condition has taken away my dream of becoming a physician. Where once I was a driven, capable, happy and healthy individual, I came back home-a shell of the person I was. I was not only newly diagnosed with migraine, but also determined to have anxiety and depression. Suddenly, I was searching everywhere for an answer to treat, and get back on the horse-get back into school. Not so simple. It’s now been 10 years, and I still have up to three migraines per week. And ultimately, have given up on my career aspirations on becoming a physician.

In my time trying to manage my migraines, I’ve tried every drug-class possible and ended up now having to have regular nerve block and trigger point injections, along with deep-tissue massages (not covered by insurance) - not the relaxing kind, the painful kind- to help release and encourage better absorption of the medications. This is all to help maintain a state where half my week can hopefully stay pain-free. Unfortunately, this does come at a cost. An expensive cost. I worry that one day soon, I will no longer be able to skate by and just barely afford my current treatments. And this will lead to me spiraling yet again into a dark, depressing path of almost daily migraines. ICER has choice to properly do right by migraine-sufferers and hear our personal perspectives on how our day-to-day life is impacted by this condition. Consider how individuals of all types would benefit considerably if access to these new CGRP inhibitor medicines are made widely available and accessible. It could mean all the difference to millions of people. Even one less pain-free day truly means so much. With a new treatment, you deliver hope. Hope that is cherished by not only the person dealing with chronic migraine, but also all the family, friends, co-workers, and neighbors that also care for him/her. Please do understand the weight of your decisions, and the positive impact it could have on the individual level and community as a whole.

Grace

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Hello… Thank you for soliciting comments for ICER. I am immensely grateful for this opportunity!

I first began to suffer migraines when I was 26. Originally, they would be debilitating for just about a day a month. After 15 years of this, I estimate that I'd spent 180 days in bed.

Since then, however, they've escalated into chronic migraine, defined as 15 or more headache days a month. When they happen, I can't stand up without pain and can't handle light and sound. What's even worse is their cognitive impact: I'm a teacher and when they happen I have difficulty thinking and talking.

Migraines are devilishly difficult to diagnose and treat because they usually don't have one single cause and there are few doctors who are experts in every possible contributing factor. I've had medical Botox and occipital nerve blocks, use a CPAP machine, had my sinus tissues cauterized, broadspectrum allergy testing, my eyes checked, MRIs, and more. I've seen chiropractors and accupuncturists. I take indomethacin and fioracet, but have been forced to give up imirex rescue sprays because they are no longer covered by my insurance. And migraines still force me to be in bed all day 2-3 a month.

As you can see, my quality of life and economic productivity has been deeply sacrificed by migraines. Access to new CGRP inhibitors could help me immeasurably to control both acute and chronic migraines.

Thank you for appropriately valuing my ongoing pain and disability, and I urge you to make these new CGRP inhibitor medicines available.

Sincerely,
Michelle A. Laughran

To Whom it May Concern:

Thank you for the chance to address you on behalf of migraine sufferers for fair access to treatments. It is alarming when patients are victims to pharmaceutical and insurance companies' greed and left suffering when they perhaps don't have easy access. It is shameful that a company would be more concerned with padding their pockets, rather than allow lives to be changed through their products.

I come from a family migraine suffering and, I myself, have suffered from migraines since my early 20s. They have been random and sudden, disrupting my life and causing me to cancel plans at the last minute and miss work as well as time with family and friends. My migraines settle in my eyes, cause me to feel dizzy and nauseous, and lose sleep. I am sensitive to light and noise, as well as smells. It is isolating and hard to describe to those that do not suffer from migraines.

I also have very close friends and, as I've previously stated, friends who suffer from migraines. Their suffering bleeds into my life as well – last minute plans being cancelled, absence from birthdays or holiday celebrations, feeling helpless because they are limited in their treatment options due to the side effects, just to name a couple ways.

For the first few years of migraines, I was able to treat with Excedrin, thankfully since I was just out of college and didn't have tremendous means to be purchasing expensive drugs for treatments. As the years passed, Excedrin's ability to help my migraines decreased and I had to stop taking it completely in the past 3 years, as I've developed a very high sensitivity to caffeine, which is Excedrin's primary ingredient. And even though I've been able to find relief for my migraines through a prescription drug, I still suffer side effects that prevent me from taking said drug during working hours and am not able to function at 100% due to those side effects. While the pain subsides, the isolation that a migraine brings along with the pain, continues.

I've been lucky enough to have good insurance as I faced the task of finding a new strategy to fight my migraines and a doctor that truly cares about helping me find relief from the pain. I know that is not the case for so many who are forced to miss work, special moments with their family and friends, and on top of all of that, having to worry that a migraine might hit while they are away from their home and treatment methods. It baffles me that migraines are not considered a disability, when it often times prevents those that suffer from leading full and vibrant lives that include working and enjoying daylight and the loud laughter of a family celebratory meal.

I call on ICER to consider the lives that could be changed with the fair access to CGPR inhibitor medicines. It is not only the nice thing to do, but it is the RIGHT thing to do – why would you keep someone that so desperately wants to lead a better life from doing so, just because they don't have the financial needs that others do?

I thank you for your time and your consideration to this matter and I look forward to hearing of fair access to this treatment soon.

Sara

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Hi, my name is Cindy C. Lawler and I am 58 years old. I am married and have 3 grown children and 2 wonderful grandchildren. I live in Michigan. I was in my early teens when I experienced my first migraine. We were in Canada at our family cottage for Father's day. I was about to miss my first of many family functions. My head started to hurt and became so bad I had to lie down. I ended up sleeping through the whole day. Little did I know from that one headache my life would get to the point I am today. Over the years I would get headaches off and on until in my late 20's I was diagnosed with Migraine Disease. I had a migraine at least 3 or 4 times a month. When I did have them it meant NOT participating in life. I would lie down and try to sleep it away which was difficult as I had 3 small children to take care of.

The hardest thing about this disease is you never know when it is going to hit you. About 6 years ago I had a migraine come on and it has NEVER left. I have been diagnosed with constant daily migraine which basically means I have a pounding, pulsing pressure in my head 24 hours 7 days a week. This has affected my life in so many ways. I work a 40 hour a week job. You probably wonder how I get thru a day with this disease. Well, I will tell you what I HAVE to do EVERYDAY. I carry an ice cooler back and forth to work EVERYDAY with my ice hat and ice headbands because I know I am going to need them during the day as my pain in my head will start to climb and I need a way to try to keep it low to complete my job. I also have a bed in the back of my car that I use on my lunch hour EVERY day. I sleep in my car in any kind of weather and in Michigan we have all kinds from freezing days to extremely hot days. I will sleep in there so that I can go back after my lunch and finish out the day at work.

My husband is wonderful he had taken on so much more that he should have to. I can no longer clean my house by myself. My sister has been cleaning for me but that is no longer an option as she passed away in February so now what do or can I do to clean my home. My mother who is 80 years old has been cooking meals for us that I picked up on my way home from work.

Trying to get treatment is a challenge from trying to find a doctor who can treat you or even knows about Migraine disease or medications. I have to travel over an hour each way to see my neurologist and when I do it means I miss work which means I have to use up my vacation time for doctor's appointments. I recently had to travel over 600 miles one way from Michigan to Philadelphia, PA to see a doctor there for treatment. The costs involved from gas, hotels, food and missed time from work and for my mother who traveled with me so I had a driver with me. I stayed in the hospital for a week there for treatment. Why should I have to travel all that way for treatment?

I and many others with this disease have been on so many different types of medications but these medications have not been developed for this disease so we take them and hope they will work for us which in many cases do not.

I ask of you, NO I BEG of you to please help me and others with this horrible disease to get medications and treatments like the CGRP inhibitors and allow insurance companies to cover the cost of this type of treatment. Help us so we do not have to take medications that are not developed for migraine disease and don’t always work for us, but to have medications and treatments developed specifically for Migraine and headache disease’s.

Cindy C. Lawler

To Whom It May Concern:

I have had migraines for the last 10 years. They started out sporadically but have increased in frequency so I now have them daily. I have seen several neurologists, including one who specialized in headaches and migraines, all to no avail. I have tried every known medication for migraines that I can. I currently get Botox injections every 90 days, have Radio Frequency Ablations each year, and take pain medications daily. At one point the headache specialist even had me try Namenda! They have all told me there is nothing therapeutically that they can recommend.

I am lucky enough to have the opportunity to work from home. That allows me to control my environment so that, with meds, I can work. Prior to working from home I would have to call in sick at least 1 to 2 times each month due to the inability to drive in and take the rescue meds that would alleviate the migraine. Often, migraines would last 2 or 3 days where I would be holed up in dark room in pain. I still miss days from work but not as many as I would if I had to go into the office. I have 4 ice packs in the freezer at all times and I use most of them nightly on a rotating basis. I get up every few hours and switch out the ice packs for a colder one. I get up in the morning tired from lack of a good nights sleep. I rarely go outside during the day as the sun is too strong and makes my migraine worse. As you can imagine, I miss out on a lot of daily living and social outings. When I do accept an invitation I always have to preface it with " if my migraine allows me to".

At the beginning I tried over the counter meds, like Excedrin Migraine. That was taken off the market so I switched to Advil. They didn't really do anything, but at least I tried. I went to a Neurologist who prescribed the usual, Toprimate, etc. there were some meds I couldn't try due to heart disease. When those meds failed, the Neurologist sent me to another Neurologist with more experience. Again, the usual meds were tried and failed. That was when I had my first set of injections. These were injected into my scalp. The reaction was immediate. A migraine so severe I was in agonizing pain. They gave me an injection, likely Firocet, and that helped but I was still miserable for the rest of the day. That Neurologist referred me to a Neurologist specializing in headaches in Milwaukee. I drove the 2 hours to see her and spent the first visit getting tests, seeing a physical therapist, a psychologist, and getting various labs. About 4 hours in total.I was given injections in my scalp, again, and a higher dose of toprimate. The injection didn't help and the meds made me forgetful. The next visit was shorter but the same routine. This time the injection worked but only for a short time. After 2 years of no progress the doctor dismissed me from care in a letter. I went to Pain Management and was advised to have RFA, radio frequency ablation. The testing was promising. I had total relief for one week so the full procedure was scheduled. I got some relief for awhile. Over the next few years the migraines became more frequent and more severe. Today I am taking hydrocodone daily and Firocet when the migraines are more severe. I am only able to take 10 each month due to my heart condition. All of these medications have concerning side effects. I would love to be off them! I outdone also live to have my life back. I feel excluded from most of the world.

I spend too much time hiding in dark rooms, lying down with ice packs on my head, and avoiding anything that might trigger an increase in my migraines. This is no way for anyone to live. When I heard about anti CGRP studies I became hopeful for the first time in years. I know cost is always a factor when insurance carriers consider medications. The costs to employers with lost time, less productivity and less engagement by those with migraines is huge. I encourage that these new meds not only be approved but also be accessible and affordable to those who have migraines. Don't make us jump through hoops with step therapy requirements and prohibitive costs. Most people have high deductibles and out of pocket costs. Why make us suffer even more by dangling a medication made just for migraines for us to see but not able to obtain? Please allow us to obtain a life saving and altering medication without giving us added migraines.

Sincerely,
Elizabeth Lax

To Whom It May Concern:

The CGRP drugs to treat chronic migraine are about to hit the market this year, and their proposed price tag, even with insurance, makes it far beyond the reach of the millions, including myself, who suffer from this severe, life-changing neurological disorder. I call upon ICAR to heed the many voices of sufferers like myself and make this potentially life-changing (and life-saving) product available at a reasonable cost.

I'm a third generation migraine sufferer whose migraines became chronic seven years ago. Both my grandmothers were hospitalized multiple times. My paternal aunts suffered from it. My Dad spent most of my formative years in dark rooms curled up from pain. My sister spent her childhood in darkness, eyes pressed closed, vomiting against the pain in her head. My mother, as a child, had repeated migraines. I had my first one at age sixteen; it lasted approximately five minutes. I thought I would die from the pain. They went from episodic to chronic by the age of twenty-two during my last year of graduate school, and just as I had graduated from Excedrin migraine to Relpax, I graduated to Topomax, trading mental acuity for aphasia, brain fog, and 60 pounds of weight loss while completing a Master's degree and working.

Several years later, Topomax stopped working, and I began the horror show that is my life today: one filled with unrelenting pain, sensitivity to light and sound, and nausea – carelessly called "headaches" by neurologists and parents. I have yet to meet someone in the medical field who takes my pain seriously. I have six pages of Excel notes detailing the types and combinations of prophylaxis, anti-depressants, nausea meds, ER visits, alternative medicine, and other failed efforts – efforts resulting in several episodes of major depression, the loss of at least one job, the inability to work full-time, having to delay having a family, and missing major events. There is nothing that can give that time back to me. Instead, I have 70 pounds of weight, major depression, an inability to work, student loan debt, and a ticking biological clock. And this is on top of the migraine pain that has not relented for a single moment since July 31, 2011.

This is not a headache. This is a migraine.

CGRP is the first medicine to offer hope. A return to the woman I once was – happy, with a full plate of things to do and accomplish, not bent over in darkness every day fighting back tears of pain. A woman who could work, not just incapacitated by light, sound, and nausea. Someone who could stop taking handfuls of pills morning and evening just to do something as simple as take a shower or do a load of laundry.

Migraine is currently not on the Blue Book for disability, though migraineurs are profoundly disabled. This medicine offers a real chance to have even one normal hour. Consider letting us out of this hell.

With sincere thanks,
Claire Lewis

Sheila Jones Lineberry

May 8, 2018

Institute for Clinical and Economic Review

Dear ICER Panel:

I have suffered for more than 40 years with the incurable and excruciating pain of migraine headaches with very limited relief from numerous medications over the years.

I remember my first migraine at age 22. This unbearable pain felt like a jack-hammer inside my head. I could not stand any light, talking-not even a whisper. I could not stand up. Had to lay down. Took aspirin and Ibuprofen with absolutely no relief. I vomited repeatedly. Could not eat, not even drink water. Could keep Sprite down. The pain accelerated. I thought I was going to die. At the time I just had to endure the pain for over 3 days-I was totally non-functional. I had these migraine headaches repeatedly. These severe headaches were eventually diagnosed as migraines and I began the journey of trying diverse drugs to get just a little relief, but not much from the intense debilitating pain.

My migraines have greatly adversely impacted my life and work. Because I have repeated migraines monthly lasting sometimes 3-5 days, I missed a lot of work and many family times with my husband and two daughters. I am completely non-functional when under attack. A tremendous caregiver burden exists for my husband and for my children when they were growing up and into adulthood. I was helpless and they felt even worse during these times.

There is a need for new medication to treat and prevent migraines. All medications I have been on over the years have had significant side effects. Some cause heart intense heart palpitations or pain in my jaws. None of the medications give quick relief-they may dull the pain to a barely bearable level. None prevent my migraines.

I am asking you to support me and other episodic and chronic migraine patients in having affordable access to the new CGRP inhibitor medications.

Thank you.

Sincerely,

Sheila Jones Lineberry

My migraine experience started out as a teenager (about 25 years ago). They started out as tension headaches about once or twice per week, which was not really life altering. However, they continued to get worse in frequency as well as severity, and when I entered my 30's, they became debilitating migraines rather than tension headaches, and the frequency went up to every day.

The migraine disease has affected my life greatly. I often find myself lying in bed with a pounding headache, and as a result, my wife has to carry out all of the responsibilities, such as doing the dishes, putting the kids to bed, etc. In addition, we often cannot go out to eat very often, as I will need to stay home to treat my migraines. A new migraine treatment would allow me to live a normal life and take some of the daily burden off of my wife. It would also allow me to spend more time with my children. I have often had to miss work because of my migraines. Since I am a teacher, I have to rely on substitute teachers, which also impacts the education of my students.

I have tried just about every type of medication available for migraines. They come with many negative side effects. For example, I was on Topomax for a number of years. Not only was it completely ineffective at treating the migraines, but I believe it was the direct cause of about six kidney stones with which I was diagnosed shorty after taking the medication. Another example of medication I have tried is Elavil (Amitryptaline). This causes severe dry mouth, and I have to take another medication to combat the dry mouth. It also causes severe drowsiness, which impacts my work, family, recreation, etc. Botox is another method I have tried. It was completely ineffective at reducing the frequency or severity of the migraine attacks. In addition to the preventative medication I have tried, I am also forced to take Excedrin Migraine and Imitrex on a daily basis, which comes with adverse side effects as well, including negative effects on the liver.

Another major downside to not having access to effective migraine treatments like the CGRP inhibitors is the cost of the aforementioned medication. Between all the medications I am taking, I am spending roughly $200 per month out of pocket for the cost of these medications. I am also taking numerous vitamins that are all supposed to help with migraines. These are very expensive as well and do not seem to be very effective.

The CGRP inhibitors have provided me with a tremendous benefit since I started taking them. They have reduced both the severity and frequency of the migraine attacks. It is the closest thing to a "cure" that I have experienced. They have already had an impact on my daily life. For example, last summer, I was able to go on a vacation for the first time in a long time without having a migraine attack limiting my activities. I am already very worried about this clinical trial ending and going back to the ineffective treatments previously prescribed to me.

Since starting on the CGRP inhibitors, it has greatly reduced the number of sick days I need to take and has made me far more productive at work. I strongly urge you to have these CGRP inhibitors available for use, as they would give patients, such as myself, a chance at having a “normal life” not consumed by migraines as well as give us a chance to function better in the workplace and in our family lives.

Sincerely,

David Locken

May 6, 2018

Dear

After 64 years of a life devastated by migraines, many failed therapies, and an almost complete loss of hope that a better day would ever come for me, my family, and friends, I've been made aware of a promising new treatment.

After 62 years of suffering, when I am catapulted into hell with a migraine, I am filled with rage and hopelessness. My children have suffered with me, becoming parentified as they saw me writhe in pain, having to stop playing with them because movement was a trigger. Even now, they will change their attitude and behavior when they know I have a migraine.

The pain starts on the side of my left nostril, just below my left eye. It ranges from a tap, warning me of what is to come, all the way to an explosion of unrelenting pain as if an ice pick is slowly being plunged down the length of my face in the middle of the night.

The side effects of the medications, both preventative and acute have proven intolerable, so much so that I often could not continue to work or care for my children as I was either far too groggy all the time, or the medication created a migraine of its own. I was even unsafe as a special education teacher at school because I was so sleepy.

It is my strong belief that my failed marriage was, in large part, due to the intense and frequent suffering with the migraines and the negative personality changes that invariably accompany the medications. Because I had to raise my two children, I could not leave work on disability.

My late mother told me that I'd had headaches since about age two. I recall almost daily headaches throughout elementary, middle, and high school. I was finally diagnosed with migraines at age 22 by a university health center doctor as she prescribed my first of decades worth of Demerol injections.

I was diagnosed with chronic migraine in 2013 by my current neurologist. It was then that I started Botox injections per FDA protocol. There was about a 50% reduction in frequency and intensity. That was wonderful. However, the impact of the migraines that occurred even with the Botox, especially when I am due for injections, continues to plague my family, friends, and me.

As you can see by my migraine calendar samples, I have as many as 22 migraines each month, each one pain-ranked from 4 to10.

The preventative medications trialed and failed were: Nortriptyline, Amitriptyline, Tegretol, Topamax, Neurontin and Gabapentin. I'm positive there were many more medications but cannot recall them just now. If needed I can request them from my neurologist.

The preventative medications trialed and failed were:

Nortriptyline, amitriptyline, Tegretol, Topamax, gabapentin, Neurontin, Depakote, Lamictal, Zonegran, baclofen, Inderal, Lyrica, I know there are many, many more from over the years, but I cannot recall them just now. I'm sure I will when I press send on this email.

Side effects of preventative medications (including, but not limited to):

- Extreme fatigue,
- lethargy,
- increased depression,
- anxiety
- irritability,
- increased migraines,
- not effective,
- **word-finding**
- **expressive language deficits,**
- **almost dysarthric speech,**
- **poor short-term memory,**
- inability to work effectively or work at all.

Those in bold have some level of continuation today. Those were from the Topamax, which I took for about a year. As a speech and language pathologist having those deficits were indescribable. Of course, the others were terrible, too.

I greatly appreciate your taking the time to read this letter and hope I have been able to convey the terrible quality of life I have had to endure due to this horrific disease. I have attached migraine calendars to provide you with data, both qualitative and quantitative, if that helps. I hope you can hear my plea for you to enable this new preventative medication, and any others to be covered by insurance.

Sincerely yours

Sandra Lulow

Sandra Lulow, M.A. CCC-SLP

Speech and Language Pathologist

I got my first migraine in my mid-20s. I felt like I had been hit by a truck. I spent 12 hours in bed, wondering if I was dying or if I had a brain tumor. It seemed like it had to be one of the two. Finally, it broke. That was the only migraine I go that year. The next year I got two. Four the year after that. Then 8. Now I get 6 per week, on average. The symptoms are varied. Head pain, neck pain, dizziness, nausea, sensitivity to light, sensitivity to sound, loss of appetite, lethargy and irritability are all par for the course. Prodrome and postdrome can be severe or non-existent. Migraine is a disease and one of the symptoms is headache. There are literally hundreds of other symptoms.

"So, it's just a headache?" Migraines are "just headaches" in the same way that breaking your spine is "just back pain." Due to my migraines I have missed work, stayed home from hundreds of events and outings in my life. I have spent tens of thousands of dollars on vitamins, massage, chiropractors, neurologists, Chinese medicine practitioners, acupuncture, books, apps for my phone, travel to and from a million appointments to treat migraines, ice packs, heating pads, special foods, therapy, hypnosis, biofeedback sunglasses, etc. etc. "But you have health insurance, right?" Yes…and it covers none of the above completely and few of the above at all.

I can confidently say that there hasn't been a day in the last 15 years that I haven't thought about my migraines. I've feared for my unborn children. Do I want them in this world if they inherit this disease from me? I've worried about the effect on my marriage. It isn't just me how is affected by migraines.

I have not yet found a preventative medication or treatment that had helped my migraines. I've tried tens of drugs. I've seen 5 headache specialists, searching for the magic pill or overlooked thing that I do that could be causing these migraines.

I take triptans nearly every day to get rid of the migraines when I get them. My liver probably wants to take out a restraining order on me. But I have no choice. My migraines without triptans last from 12 to 36 hours. It's a hell I wouldn't wish on anyone. Actually, I take that back. I would wish for insurance company CEOs and doctors and those that call migraines "just a headache" to get a migraine for 15 minutes. The conversation we're having now would be drastically different.

As I read through this, I realize, I am one of the lucky ones. I have health insurance. I have a stable job that allows me to deal with my migraines without being fired. So many have it so much worse than I do.

But, all of us want to spend our time on other things. All of us want to spend our money on other things.

The CGRP inhibitors are the ship full of life-saving supplies, glimpsed on the horizon. Do they see us? Are they coming this way? Are they getting closer or is it an illusion? Do they understand we need them? Do they know there isn't another ship behind them?

Please consider us thoughtfully when making your decisions. You're captaining that ship.

- Steven M.

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I have had migraine for over twenty years. I was formally diagnosed with daily refractory migraine in 2012 by a neurologist who specializes in migraine. I have no other co-existing illnesses or conditions. I have tried both common and novel treatment options for migraine. So far, all have failed. With each passing year, my condition continues to worsen. As of today, there are no more viable treatment options on the market for me. Using the universal pain scale where 1 is *mild pain* and 10 is *worst pain possible*, since February 2018 my pain level has never been below 8. Prior to February 2018, my average pain level range was between 5 and 7. I live in a persistent migraine state without relief. For me, I never wake up wondering **if** I will have a migraine. I wake up and wonder how severe the day's pain will be. Migraine disease has negatively impacted every aspect of my life. It has stolen from my family life, it has destroyed my professional goals, and it has taken away the basic quality of my life.

Below is just a normal day for me.

4:00 a.m. alarm. I get out of bed, turn on the light and simultaneously squeeze my eyes closed and double over in pain; photophobia accompanied by severe, stabbing pain to my eyes. I immediately do a quick self-check to see what other migraine symptoms I have today. Pressure behind my eyes, severe; right side of my head throbbing, severe; pressure at the back of my head, severe; neck stiffness, moderate; facial pain and pressure, moderate; dizziness, none; vertigo, none; nausea, mild. Since I am not dizzy and have no vertigo I conclude I can safely make it to work even though I feel too sick to actual do work. I review my migraine diary and see that I am at the triptan limit for the month. I do not want to risk the pain of rebound headaches again. I take a shot of Toradol for the pain. I just have to use coping skills to deal with photophobia, stiffness and other symptoms.

1:00 p.m. Given the combination of symptoms I work up with, work is challenging. The photophobia and visual disturbances are so bad today that I can hardly see what I am doing. I have to take frequent, long breaks with my eyes closed to allow the visual disturbances to fad so I can see what I am doing. The longer I am at work, the worse my symptoms get. I now have both a throbbing head and sinuses. The back of my head and neck are killing me. I can hardly move. The Toradol did little to ease my pain. I do another quick self-check to see what level my migraine symptoms are at. Photophobia with pain, extreme; a wide array of visual disturbances making it extremely hard to see; pressure behind my eyes, extreme; right side of my head throbbing, severe; pressure at the back of my head, severe; neck stiffness, severe; sinuses throbbing, severe; ear pressure, severe; dizziness, occasional; vertigo, occasional; nausea, mild; cognition, possibly moderately to severely impaired (but to self-check in my current condition); concentration, severely impaired; numbness and tingling of extremities, moderate.

I remind myself how lucky I am to work for an "accommodation friendly" employer. I have full control over my work environment. This means I can work behind closed doors, wear headphones, cover my window, control my lighting, have screen filters on my computer to block the brightness, and have an adjusted schedule. I also have a very understanding supervising who helps with my workload when I go through weeks of really bad days. However, migraine disease has robbed me of what should be the most productive years of my career. I know that I will never receive another promotion. I also know that I am only eligible for cost of living pay increases. I used to be the employee who went "above and beyond" expectations. Now, I just hope I can meet minimum expectations so I can keep my job. I have a mortgage and kids in college. We need two incomes in our family to stay afloat financially.

5:00 p.m. I have collapsed on the sofa. I am in too much pain to move. On the universal pain scale I am a Level 9 out of 10. Insurance does not cover Toradol and the pain is too great for Toradol to be really effective so I treat the pain with ice. I call my 16 year old son downstairs so we can talk about his day and everything on his mind. This is also the time of day when I "parent" my child. I have not been able to raise my youngest child like most parent get to do. I have not been well enough to see my son play on his high school tennis team or track team. I cannot attend school events and functions like his friends parents' do. His mother does not cook or bake for him. Instead of me taking care of him, he takes care of me. I am missing his childhood. I will never get this time back.

9:00 p.m. I relocate from the sofa to my bed where I hope I can sleep. I am still a Level 9 so my expectations are low. As usual, my husband would like intimacy. I cannot because I hurt too much. Migraine has robbed this from my life. My husband is very understanding but this does cause a serious strain on our marriage.

My quality of life is significantly diminished due to migraine. I cannot tolerate light and sound so I have had to give up much of the things that give me joy such as art, writing, and listening to music. I am in moderate to severe pain most of the time so I can no longer hike, camp, bake, or cook. I feel an enormous amount of guilt because I cannot care for my family in the way I used to. Migraine has no external symptoms so no one knows you have it. The world assumes you are lazy when you are not. Those who know you have migraine do not understand just how much pain you are actually in every single moment of your life. It is a very isolating condition. You feel like half a person. I am half a wife, half a mom, half an employee. I am just half here. I need something, anything that will help me be more here, more of a person, more of a wife, more of mom, more of an employee. I need my life again.

Currently there are no medications on the market designed specifically to **prevent** migraine. In their absence, doctors have had to borrow medications that were researched and developed for completely different illnesses. For me, they have not worked very well. Here is the list of preventatives I have tried: amitriptyline, bupivacaine nerve blocks, candesartan, cefaly, clonazepam, D.H.E. 45, Depakote, Duloxetine, haloperidol IV, Ketamine, Lamictal, lidocaine IV, lyrica, magnesium shots, memantine, methylergonovine, mexiletine, migranal, Naprosyn, olanzapine, prednisone, saphris, Seroquel, SPG Blocks, topiramate, and verapamil. I have tried the following supplements: combination of magnesium, riboflavin and CoQ10, and CBD oil. I have tried the following non-traditional treatments without success: massage, chiropractic adjustments, Spring TMS, yoga and meditation. I also tried an extreme doctor supervised diet that was gluten-free, low-fat, low-carbohydrate, and low sugar. I am not overweight. I eat regular healthy meals and stay well hydrated throughout the day. Cost and likelihood of success are the only reasons why I have not tried even more options.

With rare exception, I gave the majority of the treatments at least a three month try in order to get each treatment option to reach a therapeutic level. The following treatments did not work at all but came with noted side effects: bupivacaine nerve blocks (injection site pain), cefaly (none), Duloxetine (nausea, drowsiness, dizziness, headaches), Depakote (severe confusion), , Ketamine (giddiness), lidocaine IV (blurred vision, drowsiness, dry mouth), Lyrica (dizziness, drowsiness, weight gain, severe confusion), magnesium shots (weakness, flushing), memantine (none), migranal (none), Naprosyn (none), olanzapine (extreme weight gain, drowsiness), prednisone (none), saphris (none), Seroquel(extreme weight gain, extreme drowsiness), SPG Blocks (none), topiramate (confusion, permanent loss of some fine motor skills, drowsiness),vitamin supplements (none), massage (none), chiropractic adjustments (none), Spring TMS (none), yoga (none), meditation (none), and diet change (extreme weight loss).

The following medications had to be stopped due to negative side effectives: D.H.E. 45, methylergonovine: worked but caused severe swelling of legs; Lamictal: had to immediately stop due to severe, debilitating depression; Mexiletine: nausea, vomiting and dehydration; haloperidol IV: worked but caused dyskinesia; verapamil: fainting, uncontrolled blood pressure.

I currently take zonisamide, nortriptyline, propranolol and botox. These medications only provide me with nominal relief. The side effects are minimal to none so I take because they are all I have now. I am in desperate need of relief from my symptoms. It is inhumane to live in a persistent state of Level 8 to Level 10 pain. Yet, this is where I find myself because there is no medicinal option to treat migraine yet. However there is hope. CGRP inhibitors are my only hope. I need a better treatment option than what is currently available and I need to have access to it. That means, not only do I need for CGRP inhibitors to be FDA approved, but I need insurance companies to consider CGRP inhibitors to be a treatment option particularly for patients like me who have refractory migraine that do not respond to conventional treatment.

A. Makiyama

ICER Input: Erenumab for Migraine
(Susannah Lipson)

My Migraine Journey

My earliest memories are of migraines; literally as young as around seven years old. That was 45 years ago and it's been a long, exhausting and devastating journey in every sense of the word. My migraines have progressed in severity and frequency at the same time as I have experienced multiple severe side-effects from the various medications used to try and control them, as well as problems accessing appropriate healthcare. These migraines occur multiple times a month, not only around my menstrual cycle, but also in response to multiple triggers such as perfume, cologne, scented cleaning products, scented personal care products, smoke, neck pain, physical therapy, exercise, bright sun, bright lights, wind, humidity, high temperature, change in barometric pressure, change in sleep patterns, sinus infections, and more.

On average I get 5-6 severe migraine attacks each month, and they last anywhere from 4 hours to 5 days, requiring use of strong medication to control the symptoms. I get a total of 12-15 severe migraine days every month when I am completely disabled and have to remain in bed. I track my migraines on three different apps to try and identify triggers and patterns: Migraine Buddy, Curelator, and a beta app through a clinical trial I am in which is evaluating the impact of weather factors related to migraine. This frequency and severity of migraines occurs despite my minimizing contact with other people and doing everything I can to avoid or reduce the multiple triggers. When I was working full-time I had more exposure to these triggers and had almost daily migraines.

A typical migraine starts with the prodrome phase when I experience symptoms such as mood change, excessive yawning, either fatigue or unusual energy, a pounding and/or racing heart, and sometimes an aura called teleopsia (Alice in Wonderland Syndrome) where everything and everyone suddenly appears very small and far away. After this, about a day later, the attack phase begins when I suddenly start feeling a severe sharp stabbing behind my left eye (70% of the time) or right eye (30% of the time). As this pain rapidly progresses I also feel extremely nauseous, sometimes to the point of vomiting, my heart races, I get dizzy, blurry eyesight, painful neck, fatigue, very high blood pressure, and slurred speech. Together with these symptoms comes extreme photophobia, phonophobia, and smell sensitivity. I have to be in a dark, quiet, smell-free place, lying down. The pain ranges from a 6/10 to 10/10 in severity, resulting in my lying down in bed in a dark and quiet place until it is under control. It takes between 45 minutes to an hour for the severity to reduce when the acute medication is successful, although it is often not completely controlled. If I get up from bed and start moving around the pain returns quickly. Not only does the migraine cause fatigue, but the medicine I take to control the pain causes exhaustion, dizziness, and often abdominal pain due to the strength of the NSAID injections. It is not unusual for the severe symptoms to return after the medicine starts to wear off later in the day, and normally by the end of the 2nd day of migraine I start taking a high dose prednisone steroid taper since I will have maxed out on the pain medication allowed. The steroid taper takes about 36 hours to start working. After the attack phase comes the postdrome phase where I am exhausted, ache all over, and have blurry eyesight. This normally lasts about a day.

It's difficult to say whether I would prefer a reduction in frequency or a lessening of severity, but if I had to choose it would be for less frequency. Really, I just want my life back! With this many migraine days every month I am unable to work, spend quality family time, or plan anything in advance with family or friends. It is not unusual for me to have to cancel medical appointments because I am disabled with a crippling migraine. This disease is frightening, lonely, and life-devastating. It has cost me the ability not only to work, but also to maintain any significant friendships because people simply do not understand chronic illness where you cannot make commitments and everything has a “proviso” clause. For any events or activities that are important enough for me to commit to, such as a child’s graduation, a wedding, or a funeral, not only do I need to be driven by my husband since there is a good chance I’ll need to take strong medication which precludes driving, but I am also likely to “pay” for the activity with a migraine the next day or few days. Even going to church is a challenge with the extent of perfume exposure, noise, and bright lights. Until I stopped working in 2014, employment was a daily challenge with perfume and other scents aggravating my migraines, trying to sit for hours on end in front of a computer with resulting neck stiffness and migraine, driving distances by car while taking strong medication, and endless frequent absences or the need to leave early. As my last employer stated, “It’s just not working out.”

On top of the physical symptoms, the depression and anxiety which follows this disease with all its ramifications is all too real, as is the constant need to have hope despite endless medical failures and terrible side effects from drugs and treatments. I have experienced respiratory failure, problems with my heart valves, trouble breathing, a blood clot, reduced vision, brain fog, loss of “words” when talking, memory problems, tingling in hands and feet, and massive weight gain. I watched my son go into hyperammonia poisoning from being treated with Depakote for his migraines, and for almost a week thought I had lost him; a year later he collapsed from heat stroke as his body was unable to sweat any more as a result of being treated with Topamax for his migraines. My first husband could not cope with the impact on our life with frequent emergency room visits, in-patient hospital stays, and plans constantly being cancelled; our marriage ended. My sons lost much of their childhood helping take care of me while sick, cleaning our home, cooking for themselves, and worrying about day-to-day survival. If I had to describe the impact of migraine disease on my life, I would use the term, “life-robber.”

My children have given up hope on me getting better, but what keeps me going each day is determination never to give up hope. Eleven years ago while a migraine in-patient for three weeks I was told that I was coming to the end of the line for potential treatments. There was nothing new in the immediate pipeline and all I could do was hang on as long as I could until research moved ahead and clinical trials started to see positive results. The arrival in the past year of potential new and better treatments, including the first ever migraine preventative drug designed specifically for migraine, has renewed my hope for at least partial restoration of my life; even possibly the chance to return to work. The thought of that is beyond exhilarating. The value is priceless. Every time I get a migraine and inject myself with super strong medication I worry about kidney or liver failure, I am endlessly concerned about the resistance I have to pain medication and in recent surgeries it has been a tremendous challenge to control post-operative pain. I dream of returning to work and being functional once more. Again, the value of a new and potentially better treatment that doesn’t bring with it devastating side effects is PRICELESS.

The Negative & Disabling Impact Migraine has had in My Life

Before my migraines were this frequent and lasted this long, I was able to work, have a social life, interact with my family on a regular basis, and make commitments. I used to be a high level executive, volunteer extensively in my church, go on vacations, travel long distances by car or plane.

Now I am unable to work because of the frequency and severity of my migraines. I have an extremely sporadic social life at best, am constantly cancelling or refusing activities with my family or needing my sons to take care of me when they come to visit. Volunteering is on an “as able” basis, and while travelling long distances by car is challenging at best, travelling by plane is out of the question because of potential exposure to scents among other things. I have had to completely alter my lifestyle, taking each day as it comes, and making the most of my good days while deciding never to make any major decisions or lose hope on the bad days. I would love to go back to school to do a Master’s degree or other certification, but that also is not possible. I have remarried since my first husband walked out, but I am unfairly dependent on my spouse to take care of me while sick while dealing with all the limitations that come with being there for someone migraine disease at this level of severity. At one point I lost my home because my inability to work with resulting lack of income devastatingly changed our financial situation, and my family was homeless for many months before we were able to move into a small 2-bedroom apartment just large enough for my husband and myself and his two daughters. My sons had to move out at 15, 17 and 18, and two of them had to become self-supporting immediately while trying to begin college that year. The guilt of lost family time, inability to support my three sons, and the pain they have watched me go through for their entire lives, is overwhelming.

Existing Migraine Medicines and Treatment Failure/Limitations

The list of preventative and rescue medications, supplements, surgery and other treatments I have tried is extensive, bearing in mind I have had migraines for about 45 years:

- Preventative medicine tried includes: three different tricyclic anti-depressants, two beta-blockers, three forms of ergotamines, four anti-epilepsy drugs, one calcium channel-blocker, two muscle relaxants, one ACE inhibitor, one hypertensive drug, one nerve pain drug, and one alzheimer’s drug. (Note: Botox is contraindicated due to other medical conditions I have.)
- Rescue medicine tried includes: six NSAIDS ranging from OTC to prescriptions taken orally or by injection, at least four different triptans, three anti-emetics, two steroids, and five different opioids.
- Supplements used are: butterbur, feverfew, magnesium riboflavin, turmeric and CoQ10.
- Other treatments tried include: trigger point injections, occipital nerve blocks, radiofrequency ablation, cervical epidural nerve blocks, physical therapy, chiropractic, biofeedback, acupuncture and massage. All these treatments either didn’t work or was only partially and/or temporarily effective. Many of the procedures are extremely painful to go through. Neurostimulators are not covered by my insurance.

The downsides of my current treatment regimen (supplements for prevention and multiple prescriptions for rescue), is that I do not have my migraines under good control, and the medications cause side-effects either now or potentially in the future. I had to stop taking Topamax because of side-effects which left me without any preventative treatment other than supplements. When I get a migraine I have to take a cocktail of ketorolac/toradol injection, oxycodone, and Zofran with bed rest. When the migraine doesn’t stop after two days I have to go on a prednisone taper to break it since I have maxed out on the other drugs. Since I’ve been taking ketorolac frequently my kidney function has reduced and at one point I had to see a nephrologist. Ketorolac also causes bruising, problems clotting, and stomach pain. Oxycodone helps stop the migraine when taken in conjunction with the ketorolac, but I have been using codeine variations since a young child, and although not addicted, I have a very high resistance to pain medication now. It also causes severe constipation, as well as rebound headaches after two days of use. The acute medications combined cause extreme fatigue and sleepiness. It is a constant frustration to me that I do not have a sufficient treatment regiment, that I live in fear of serious side effects from the medications I do take, and that there is no preventative that can help control my migraines at this point in my life.

ICER and Migraines

Throughout the past 27 years since I have immigrated to the USA and become a citizen, I have had frequent medication denials; both partial denials resulting in too little medication for treatment each month, and full denials resulting in complete denial. There have been many times where I have had to request my doctors to intervene, submitting medical evidence of my migraines as well as the medications and treatments I have already tried. A partial denial example would be not receiving enough Sumatriptan/Imitrex each month and running out of medication regularly resulting in excruciating pain and often emergency room visits. Even recently, I was told by my pharmacy that my prescription for ketorolac was denied and it took days to resolve the problem, even though I had a prior authorization for it. At other times I have been forced to try medications which I know do not work (from prior experience under other insurance plans) before I am allowed access to the drugs I need and satisfy the insurance company's requirements of step therapy. There are multiple instances of arriving at my pharmacy to pick up medication and discovering that my insurance company requires it to be switched to an alternative which they deem either more affordable or in a better "tier." In addition, I have been refused surgical treatments and neurostimulators, even when FDA approved. Migraine medications are frequently simply unaffordable when not covered by insurance, and even with insurance coverage, the price is still far too expensive such as Sumatriptan/Imitrex injections, Maxalt, Zomig, etc, due to the tier insurance companies frequently put these medicines.

As a patient with severe migraine disease, it is essential that I have better treatment options as well as access to them. Migraine is not a disease of the rich but crosses economic, ethnic and global boundaries. There is little more frustrating than knowing that there is a treatment which could help but which is denied because of lack of insurance coverage and finances. Migraine causes disability which causes changes in insurance, often government insurance, and that causes few treatments being approved, which then aggravates migraines, which minimizes any chance of reducing the disability caused by the disease. It is a vicious circle. With the upcoming CGRP inhibitor medicines, patients such as myself finally have hope that our disease will be better controlled, but we are relying on ICER to appropriately value our pain and disability, as well as supporting access to these medicines for both episodic and chronic migraine patients. Not only do these medicines improve our chances at any reasonable quality of life, but also dramatically increase the chances of us returning to the workforce and becoming self-supporting functional members of society. Not only are the clinical trial results from the CGRP inhibitor medicines remarkable in the high percentage of patients experiencing at least a 50% reduction in migraines, but they are also remarkable in that there is a high percentage of patients who are super-responders and never get any more migraines while on the medicine. Finally, the CGRP inhibitor medicines are remarkable not only because of the lack of any serious side effects, but also because they are the first ever class of medicines specifically designed for migraine prevention.

I am asking ICER to give weight to my migraine journey and information as you consider supporting insurance coverage of these new migraine medicines that are expected to be FDA approved this year and next (2018 and 2019.) The potential of the CGRP inhibitors is literally life-transforming. Access to them is priceless, and a dollar amount cannot be placed on their value to migraine patients such as myself. I am asking you to help me get my life back.

To: The Institute for Clinical and Economic Review Assessors

Re: Public Comment for review of CGRP inhibitor medicines for migraine prevention

Dear Assessors,

When the doctors told me that, "Getting to level 0 pain for you is no longer the goal." it felt as if my world was going to end.

This was after a week as an inpatient, hooked up to a picc line, my vein itching and wishing to reject the line snaking up towards my heart, because the drugs would burn smaller veins apart. Even to get to the point of being accepted for inpatient therapy required a merry-go-round of doctor visits, trying (at this point around 12) various medications that have all failed, outpatient visits, and drug side effects that greatly affect my ability to work. So far, the intervention that gives me back my life remains elusive.

My headaches began with puberty and have only increased in severity as I've aged. A couple of years ago, I got a migraine that did not end. It began in September and was unrelenting. Not one day was pain free until sometime in February the next year. That massive migraine changed me. It nearly wrecked my life and transformed me from an otherwise healthy, active, free-loving person into someone with a chronic illness. Psychologically it is a hard thing to grasp, that all the sudden you are weak, you are broken, and most of all, current science cannot really do that much for you.

Gratefully, I am self-employed which means I have some flexibility in my schedule. I know that if I had a 'normal' 8-5 career I would have lost my job by now. But also, being self-employed has meant that I do not have paid sick days. If I cannot work (which can be often,) I do not get paid. This has had serious impact upon my ability to support myself. My vision is so sensitive I often cannot drive at night (HID headlights are the bane of my existence). I am unable to work under fluorescents, and I have to take a hat and polarized lenses with me wherever I go so high energy lights don't trigger me. I have to pack syringes and had to learn how to give myself shots of Toredol. Every conference, every holiday, every vacation is tinged with my treatment plan and keeping my neurology as calm as possible.

The word ‘carefree’ no longer exists in my world view. When I am in the midst of months-long chronic pain, it is a crippling and humbling experience. It is hard for people who are not in chronic pain to understand so I will try to make it clear: imagine that you had the worst stomach flu of your life-for months on end, unrelenting, but migraine is even worse. There were days I fantasized about putting my head on a railroad track so it could be run over, or putting my head through a wall. The pain is incredible and cruel. I have had broken arms, recovered from surgery, dealt with sciatica but nothing, nothing compares to what I endure with chronic migraine.

Like an animal stuck in an iron trap, we suffer immensely, but we cannot gnaw off our own heads.

The fact of the matter is that there are no known medicines currently on the market that work for me. I have had to use a patchwork of medications to try to regain a level of functionality in my life: off-label uses, strange medicinal bed fellows, all shots in the dark.
Being on Botox means half of my face is frozen, or sometimes droops. I look in the mirror and I do not know who that is. I cannot raise my eyebrows in surprise, or furrow them when I am puzzling out a problem.

I miss my face.

But Botox is not enough. It cannot treat my breakthrough pain.

Migranal is one small glimmer of hope in my arsenal of broken remedies. It works sometimes, and at $1200 for a box of 8 treatments is a cure that I am only able to get due to my privilege. I have no other remedies besides Botox and Migranal which provide me relief. And when they fail, nothing works but time and deep-in-the-night pleading to a God who feels as distant as the cold stars. One day, it is possible that not even time and begging to the heavens will work. I live in fear of that day.

Migraine is a wicked beast of a problem. If we take too many rescue medications or pain killers it contributes to the migraine cycle and makes it worse. The medicines that are supposed to help us, can also increase our pain. What devil designed such an illness? My migraine is a despotic Galactic Overlord, a capricious and whimsical sadist. I am controlled by it and my illness.

Not only do we deal with this despotic disease, but we also have to contend with the stigma around migraine. Well-meaning friends ask whether I drank enough water, or had my full 8 hours of sleep, or gave up gluten. These kindly offerings speak from a place that assumes chronic migraine is the result of something I am doing wrong, assuming in some cases that Migraine is the refuge of weak women, a modern day hysteria for those who can't deal. When in fact, chronic migraineurs are some of the strongest people I know. We have to be.

The opioid crisis has meant that people like me are suspect upon arrival when we go to the local ER or Urgent Care. We are not treated as true urgent cases but instead are often treated with suspicion and given inadequate care because of callous and uninterested health care providers.

I went to the ER once in tremendous pain and was given an IV bag of Reglan. No one told me that there is a potential side effect of anxiety. It felt as if stark mad fear was snaking through my veins, but I did not know it was the drug. I thought I was having a panic attack. The protocol (I later learned) should have included Benadryl. I tore out of that ER like my hair was on fire, pacing and pacing my house like a dog bedding down for the night, but I could not rest.

It was months before I realized what had happened to me. Only after I was given Compazine (for the same chronic migraine) and started having the same results. How many antipsychotics can you be prescribed before actually becoming psychotic?
The preventative darling of Migraine protocol is the anti-seizure medicine Topamax. I took it, unable to remember common names. I work in a business that I need to be razor sharp for, but this medicine lops off a good 20 IQ points. It works wonders for some, but all it did was dull me, make my face and toes tingle uncontrollably while it did nothing to alleviate my migraine.

The high blood pressure meds, the anti-seizure meds, the neuropathy meds, the triptans, and so on are a patchwork quilt of off-label medications to alleviate migraine. They are used with minimal research or oversight,, mainly promoted due to anecdotal evidence from other sufferers. This is astounding to me. We deserve and demand funding and research for medications that actively target the migraine cycle. I honestly wonder if it were a problem that 90% of men got (instead of the inverse) if we would be seeing the same lowly state of research and funding.

Migraine is in the black box of the mind. We can’t knit its bones or test its blood for failures. It is the ultimate ghost in the machine, and the sufferers pay the price for this lack of understanding.

When I peruse the migraine reddit or Facebook groups, there is a collective holding of breath for CGRP inhibitor medicines. There are people in real, significant, life crippling pain. It is not uncommon for sufferers to consider suicide because chronic migraine robs you of joy, of life. It requires much of our loved ones and caregivers. Mostly, I think many of us feel unheard and disbelieved. Some snap under the strain of that, understandably.

And while this may not be the miracle cure some people are hoping for, the results are promising. I need to have reasonable access to this medication. My fellow sufferers need to have reasonable access to this medication. It can be a lifeline in an otherwise drowning life.

Please throw it.

Respectfully Yours,
Jenna Matlin

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

For as long as I can remember, I have always carried headache medicine and taken it multiple times weekly. So I would say my headaches started when I was a teenager. The first time I obtained actual migraine medicine and saw a neurologist I was in my early twenties, so that was the start of my episodic migraines. When I experience a migraine, I get nauseous for hours, days even. I have extreme ringing and buzzing in my ears that renders me what I call deaf, because I cannot hear anything, for lack of a better way to explain it. I can only hear the buzzing, which sometimes alternates and sometimes is present in both ears “in stereo”. I essentially read people’s lips if I have to be around anyway. Typically I hide away in my bedroom due to the pain in my head, the nausea and the buzzing in the ears until it subsides. I take my medicine, hope it works, avoid all lights and noise, and rest in agony.

When I turned forty, my migraine went from episodic to chronic, literally from one to three times monthly to daily in a month. The severity went from able to function at times if I took medicine right at the start of a migraine to bed ridden, unable to do anything with all medications taken. At this time I fell behind at work and increased sick days led to threats of an action plan. Parenting my two small children was very difficult and guilt set in that I was not giving them the attention that they deserved. Any thought of recreational or social activities came to a screeching halt, as did exercising. I quickly gained fifteen pounds as depression at my condition set in. I gave up my plans to enter the graduate school that I had been accepted to. I struggled to make it through the workday, and then I came home and collapsed, spent from trying to keep it together all day and trying to avoid getting a migraine each night. Right now I still have migraine every day, the severity fluctuates. One difficult thing is that I cannot make plans. For example, if there is an event and tickets cost 100$, I cannot purchase tickets because I do not know if I will feel bad that day or not. When the daily migraine started so did daily nausea. In addition, one of the medications I am taking has the side effect of constipation, so I am now seeing a gastroenterologist for irritable bowel symptoms. The prolonged straining due to the constipation then led to a gynecological issue that I am now seeing my gynecologist for, and am considering a urogynecological surgery in the future. Basically I do not do anything. I work, that is all my brain and body can handle right now. I would like to have less that thirty days of migraine per month and be able to exercise, have a date with my husband, or an outing with friends.

So far I have tried chiropractic care, acupuncture, Botox, outpatient infusion, inpatient infusions (twice), and the following medications: relpax, Topamax, mexilitine, imitrex, atacand, Cymbalta, DHE injection, toradol injection, indomethacin, DHE nasal spray, and several others.

As a person diagnosed with chronic migraine who has tried and failed multiple forms of treatment, I urge you to offer CGRP inhibitor medications to patients in a fair and affordable manner. Access to medication should be easy, quick, and affordable. It should not require lengthy pre-authorization processes or step therapies. Migraine patients have been suffering for a long time without an effective preventative medication aimed specifically at treating migraine and migraine alone. Thank you for your time.

I started getting migraines around age 7. I would only get one or two a year. The pain would get very intense, then I would vomit, and pass out. When I woke up, I would feel better. I only took baby aspirin from what I remember.

They became chronic in my 20s. I no longer would vomit, but I would give anything to pass out. Now I just suffer through the pain, if my medicine doesn't work. I also have to be careful not to take too much, due to rebound. So I spend many days just "toughing it out".

Along with the severe head pain, I have sensitivity to light, smell, sound, hot, and cold. My heart races, my head pounds, I go from freezing to sweating. I can't sleep. Ice doesn't help, heat doesn't help. I have to hope my medicine will work.

There isn't one day that goes by that I don't think about migraine. I have a saying: *I'm either in the middle of a migraine, I am recovering from one, or I am nervously awaiting the next one.* I have to watch what I eat, I don't drink alcohol at all, and I try to avoid as much light as possible. I have Theraspecs sunglasses for day time, and yellow filter glasses for night driving. I have room darkening shades in my bedroom, filters on the computer, and my medicines in my nightstand for those migraines that wake me in the middle of the night. I can't exercise due to strenuous activity bringing on a migraine. When my menstrual cycle is close, I start to panic about the impending doom of menstrual migraine, which basically means 2 weeks of predictable suffering.

I have tried over 30 different treatments since I started going to headache clinics about 17 years ago. Antidepressants gave me heart irregularities, another caused memory problems, anti-seizure meds gave me unbearable tingling in my fingers, along with a constant flu-like feeling. Chiropractic treatment started to make my migraines worse. I can't tell if the Botox is working, but after 7 treatments, I am afraid to stop in case it is helping even a little bit. Magnesium causes diarrhea, the lowest-level birth control pills caused constant bleeding and headaches, facet injections make them worse, and steroids, which I use to break a bad cycle, don't work either.

While being a guinea pig for all the above treatments, there is never any testing. I just keep trying things that cause many side effects and then weaning off to try something else causes more migraines.

Please know that this is more than just getting a headache. It's even more than just getting 20 headaches per month. IT IS OUR WHOLE LIFE! We need a medicine that is designed just for us. CGRP is the first in decades that gives us hope.

To whom it may concern from ICER,

My wife has chronic migraines. I don't have them and cannot fathom her pain, but I, too, am affected by them, so I would like to share the journey we've been down to paint a picture of her life as a migraine sufferer. Her migraines have always been around since she was a teenager. She would get them infrequently, probably about once or twice a month, and I believe her hormones and cycles had an impact on that. The migraines didn't really start taking off until she experienced a fall down a flight of stairs 5 years ago. Consistently, as each year passes, the migraines are perpetually worse. She is less mobile, less able to think clearly, less able to take care of herself in 2018 than she was in 2017. The same can be said for 2017 to 2016, etc. Her migraines seem to penetrate across her entire head instead of fixating on a specific location. Nowadays she even complains of the pain of her migraines reaching her teeth. Her migraines unfortunately don't seem to come and go anymore; they are with her most hours of the day and night. Relief seems to come briefly when she takes a pain killer, but that doesn't last very long.

These migraines have absolutely 100% affected her quality of life for the worst. Her and I are married, but unfortunately, she spends a lot of time at her parent's house since I'm gone for work 7am to 6pm Monday through Friday, so her parents who work part time can take care of her. Her social life has significantly been impacted as well. She used to have a lot of friends; these days I can't recall the last person that has reached out to her to hang out, nor can I remember the last time she's reached out to a friend. She wants to stay in bed and watch TV shows and movies since that's about the only thing she's capable of doing now. She can't muster the energy to exercise, cook, clean, grocery shop, etc., since doing physical activities makes her migraines flare up. Finally, her work has noticed she's unable to withstand more than a few hours of work at a time, so they have drastically cut back on her hours. She used to work 40-hour weeks, now she's getting about 15 hours per week. And even that much wears her down.

She has seen many doctor's and specialists, all of which have done nothing to come close to touching the migraines. They all hype up their pitch that this is the end-all be-all, but as we have come to learn time and time again, that's never the case. The list of treatments we have been through (but is not limited to) are: Botox, Dysport, Cefaly, Reed Migraine Center implanted neurostimulator, Diamond Clinic headache center 4 rounds at 10 days each for DHE, meds of every variety (antiseizure, beta blockers, gabapentin, Cymbalta, muscle relaxers, Benadryl IM), we have seen many neurologists and hospitals, Barnes Jewish in St. Louis, Cleveland Clinic, Diamond Headache Clinic in Chicago, Reed Migraine Center in Dallas, we've also tried Ketamine, CBD oil, holistic drops, restrictive diets, nerve blocks, ablasions, plus ER visits and shots for migraines at the doctor's office that are too numerous to count. Nothing has worked and as you can imagine these have cost us a lot of money. And at the end of the day, nothing seems to touch it unless it's a temporary relief. The best combinations we've found are Benadryl shots taken with a Tizanidine. It enables her to feel get temporary relief and get some sleep. Usually when she wakes up, though, her migraine is back. The 2nd best temporary relief we use is a Sumatriptan shot, but that doesn't last for very long. And finally, the 3rd best temporary relief are pain killers (Percocet, Hydrocodone). Unfortunately, these create dependency and cause terrible rebound headaches.

Now we see here on the horizon the possibility of a brand-new drug in the CGRP inhibitor medication, it’s unfortunate to think that insurance wouldn’t cover this. We feel like we are at the end of the line. We don’t have that much money (especially with my wife not working full time and only making minimum wage), there’s just no way we could afford this medication without the help of insurance. I beg you to please help us out to help my wife get to experience life again! She’s only 27 years old and has had most of her 20’s robbed from her – it’s time she can never get back. But here is a promising medicine that may be able to put an end to the theft she experiences daily, and we would love nothing more than to be able to take advantage of that! Please feel free to reach out to me with any questions you may have, and I’d be happy to discuss our situation further with you.

Thank you for your consideration,

Travis

Public Comment – Migraine and HOPE for CGRP Coverage

Submitted by Jacqueline Renee Mitchell, age 57- Chronic, daily migraine with aura – 15 years

I began experiencing migraine headaches during my pubescent years. I recall such vicious, blinding headache attacks; I was unable to move, be in any light or sound, and vomited incessantly for hours upon end causing dehydration, immobility, and yes, something similar to delirium. I can remember crawling to the staircase in our family home and falling unconscious? fainting? on the bottom stair after screaming (silently) for my mother to “cut off my head.” I had been calling out to her to "cut off my head” from the guest bedroom to which she carried me when the attack began; she had given me wet, cold cloths to place on my forehead and neck to calm the nausea. When the vomiting began, she apologized to me as she had to use phenergan suppositories to halt the vomiting. I was about age 14 and spent many days and hours in the guest bedroom. Migraine continued through my adolescent years; I had a couple migraine headaches in my 20’s, and in my 30’s, I was diagnosed with silent migraine and would experience temporary loss of vision. I chalked it all up to hypoglycemia and ate wisely every 4-6 hours to avoid the brief “black outs,” numbness, and vertigo. I had other forms of menstrual and other headaches during my 20’s and 30’s but not many migraine-level headache attacks.

And then I turned 41; I suddenly experienced something I had not even recalled, i.e. a migraine attack. While on vacation at a beach, I was immobilized, unable to go outside into the light and after four days, exited the dark, still room and entered the vacation world again. I was traveling with a friend who was also an internist; I tried abortive and other medications, i.e. Maxalt, acetaminophen, etc. Nothing worked at all. By age 43, I had approx 20+ days of migraine/HA monthly and began the “Migraine Journey” and an ongoing, unsuccessful treatment dance with various neurologists – two of whom have been “headache specialists.” For that past ten or more years, I have had chronic, daily migraine. I cycle through the phases of migraine with back-to-back prodome and postdrome phases. I believe I have had 2-3 headache/migraine-free days in the past 8 years. I have several types of migraine, including migraine with aura, basilar type migraine with aura, migraine without aura, etc. I am at least a 3rd generation migraine person. I have family history of migraine on maternal and paternal sides of the family.

Over the last 16 years, I have tried numerous types of Rx, i.e. abortive migraine Rx, (maxed out at 300mg daily Imitrex for approximately 60 days without relief), anti-epileptics of Topamax, Depakote, Keppra, Lamictal, the antidepressant, Elavil, and a few cardiac Rx (ceased after several months as BP was averaging 90/42); the migraines never ceased with these and the side effects prohibited further experimentation with them. I had an inpatient stay to receive DHE infusions, tried Botox only to have the paralytic, spreading effect over my entire body rendering me unable to sit upright. I have had nerve blocks, a nerve ablation to right side of head, tried transcranial magnetic stimulations (TMS-eNeura), outpatient infusions, more nerve blocks, dry needling, acupuncture and acupressure, and I go monthly for a scalp, neck and shoulder massage. I have NEVER been to the emergency room for treatment. I was advised by one of my first neurologists to avoid going to the ER. He said I would be labeled a drug seeker. As I was employed by an inner-city hospital as a licensed social worker, I heeded his warning. As a result, I probably was under-treated on numerous occasions. Even during “complicated” or “complex” migraine attacks (now known as basilar type migraine with aura) when stroke-like symptoms of aphasia, ataxia, numbness in arms, hands, legs, visual changes/loss, etc, were evident and debilitating, I did not go to the emergency room. I did not want this label. I once asked for caffeine drip pre-knee surgery to avoid caffeine-onset migraine. The anesthesiologist immediately barked I could not have anything for pain. I advocated for myself as migraine patient and asked him to check my history of pain Rx use; he ignored it so I had a post-surgical migraine headache, etc, to go along with post-ACL reconstruction.

I have been attended by a neurologist for the last three years. After the initial appointments, he began greeting me at each appointment with, "as I have said in the past, there is nothing I can do. You have failed all treatments." Each time, I remind him I am aware he cannot cure this disease; my expectations are minimal to none and that at this point, I only seek to understand the disease to manage the required coping of it. He has informed me migraine is considered a neurodegenerative disorder and a sensory integration disorder. I have repeatedly explained I must have someone to treat me for migraine as an internal medical/PCP will not as the condition is too complicated. I have repeatedly informed him it is unnecessary for him to repeat this disclaimer; I have not succeeded in combating this (ego?) mantra. He has tried a few other options, including Namenda, Lamictal, Klonopin (I filled one time only as it did not help and is habit forming), Zofran, Reglan, and TMS. TMS was *not* successful; I continued with headaches, aura symptoms, and increased agitation and sensitivity to sound with TMS. The cost to continue it without improving the condition was not beneficial and yes, cost prohibitive. It was not approved by my insurance company although I had shown numerous, other failed (step) therapies. The side effects of medication have prevented therapeutic use; I remain on a small dose of Keppra and attempt to use as an abortive. The numerous treatments have been unsuccessful in treating the chronic disorder of migraine. After a lengthy and daily period of daily migraine aura with/without headache last fall, I was unable to continue functioning. I pleaded to try any treatment option available so I could resume and continue working. I scheduled off one week from work to try anything to return me to and independent, functional status. He agreed to order a high-dose steroid and nerve blocks; I asked to try simultaneous outpatient infusions. Trifecta was my goal. On the last day, last hour of infusions, the migraine headache/aura symptoms spiked again, and I asked the nurse to call the MD to consult. His response was, "I'm not surprised." I am not an overly sensitive or emotional person, but *I abhor feeling that I am failing the treatments verses the accuracy of my journey, i.e., the treatments have failed me and 3 million other chronic migraine patients.* It speaks volumes when even the physicians are pessimistic.

For the record, I have never filed short-term, long-term, or any form of disability. I have been required to file FMLA to avoid conflict for my job. I have never called in sick with a migraine, but I have used plenty of pre-scheduled, vacation time to rest, recuperate, and recover. Of the many years I have had a FMLA claim, I have used 2.5 scheduled days for a nerve ablation and two hours to go for a nerve block; I returned to work after the block. I do not give up or give in to any illness. I plan to go down fighting with all my stubbornness and might. I was blessed by a work at home job almost four years ago; prior to that, the thought of filing for disability was becoming ever-more real. I could no longer function appropriately in a loud, intense, hospital setting. I have willingly ceased most social functions, change my lifestyle routines, and adhered to the "boredom" lifestyle prescribed for persons with migraine. I need to work and want to work. I am able to fly under the work-requirement/productivity radar by using lunch breaks to nap, I keep all blinds drawn continuously, and primarily limit use of physical, neurological, emotional, and all types energy to work, exercise three days weekly and church on Sunday. I am truly accepting of this; my only goal as someone with chronic, daily migraine is to be able to function. I wouldn't mind to have back my old life; I make attempts at it intermittently. It is often an enormous challenge and yes, as others, I pay for it later, but it wards off the emotional and psychological impact of chronic pain and illness. The reality is that after a heavy duty migraine attack, especially of the "Basilar Type with Migraine Aura," I am incapacited for approximately three to four months before I return to my baseline. In truth, it can be very depressing and yes, provokes a lot of anxiety in worrying if/when it will happen again (I had four within a two-week period a few years ago. It was an absolute mess) and how it is impacting my work, and my loved ones. I have prayed many times for the Lord to help me to continue moving forward when I wasn't sure how I would keep pushing. I would never harm myself, but it does not mean the temptation hasn't haunted me a few times when the pain and debilitation persisted for six to 8 months on end and would not relent. I now have recurrent, involuntary jerking of legs and arms, my right eye spasms to a close, and I am unable to walk in crowds or in large stores due to the motion, stimuli, etc. It is very embarrassing to appear intoxicated in a church, a mall, a school event, etc. I have an exceptional support system that drives me places when incapable, who understands and accepts why I do not over-schedule myself, and most importantly, who does not judge me. They also rally with me when I take on the mountain; they do not see me as disabled. I do not see myself as disabled; I am *able.* I am so blessed. I am infinitely blessed. My faith and my loved ones have sustained me. Hope in new treatments does also; however, I learned a very long time ago to keep my expectations low to avoid the inevitable disappointment. I have very strong coping skills, and I am so thankful for this.

CGRP – the newest opportunity of a lifetime for someone with chronic migraine. I have read the cost will be astronomical and yes, very likely cost prohibitive for the majority of patients. I was not a clinical trial candidate as I was chronic/daily with migraine and already age 55 at the time. I have attended the World Migraine Summit two, consecutive years and listened to every lecture that would guide my next steps and life with migraine. I am hopeful for the opportunity to try CGRP to see if it will help in any way. If it doesn't, I accept this also, but I hope and pray for coverage for the Rx, to not have to battle for this assistance, and yes, to avoid having to feel like it is something of a character flaw to have chronic, daily migraine. There are over 40+ million people with migraine and approximately three million with chronic, daily migraine. I advocate for the recognition and treatment of many conditions and illnesses, i.e. cancer, ALS, mental illness, Alzheimer's disease, Parkinson's disease, MS, autism, etc.

I am advocating for myself and "36 Million" plus on this occasion.

Thank you or hearing my story and our plea for formal advocacy and assistance.

Respectfully submitted,

Jacqueline Renee Mitchell

Lynn Morris

May 8, 2018

Via Email: publiccomments@icer-review.org
Institute for Clinical & Economic Review
2 Liberty Square, 9th Floor
Boston, MA 02109

RE: ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Dear Review Board;

I never thought I would have “hope” and the doctors have actually given me “hope”. I’m not sure if everyone can comprehend what that means since most people cannot comprehend the pain and all the surrounding effects of the neurological event that is called Migraine. The decision in front of you is major. I can only tell you my story and hope like there is no tomorrow that you understand the need for patient accessibility to CGRP Inhibitors.

I had a motorcycle accident when I was 16 years old. I went head first over the handlebars, and through the passenger rear window of the vehicle that illegally crossed my right-a-way. I then flew out the back window of the vehicle and landed 30 feet from impact. I don’t remember anything except thinking that I have no choice but to hit this guy.

Roughly 8 months later, I had piercing eye pain to the point I thought I was spontaneously bleeding. I have never felt so much pain, not even in the motorcycle accident. I thought a blood vessel burst and I was dying. It turned out it was my first Cluster Headache. I had a few more, just as severe. Although I was 16, I lived in Florida alone but I called my mom in Connecticut and she thought it was sinuses. I asked if sinus headaches actually hurt that bad. Turns out…they do not. Then it just disappeared for about 2 years.

At the time, I was attending a community college on a volleyball scholarship and working at a restaurant to make ends meet. It was not an easy life, living on my own at 16 but it is what I choose and I wanted to do it without help from my parents. It should be noted that I had suffered a concussion while I was playing volleyball in college, prior to the accident. Prior to that, I had a minor concussion in high school varsity volleyball. About 6 years after the motorcycle accident, I had a car accident, wherein I did not have my seatbelt on and my head cracked the windshield.

When the Clusters came back, it was more often, more severe and stayed for longer before disappearing again. I was not diagnosed for years. I did not have insurance, but when I did make it to the doctor they blew me off. It was like they did not believe the pain level and it turned out that was a theme. Doctors used to think only men had Clusters and certainly not female teenagers. I did get diagnosed with Episodic Clusters Headaches in my early 20s but that did not make anything easier. I was going to school to be a paralegal and working full time as legal secretary. A neurologist prescribed me Propranolol with some narcotics and told me good luck. Each time the Clusters would come back, I would have to convince the attorney I worked for that it would pass and I could make up work in between attacks. Not an easy request for a busy litigation practice that has trials and deadlines. Luckily, I did good work and I could, at that time, keep up.

By my early 30s, I was married and a paralegal at a medical malpractice litigation firm which was my goal. Attending trials with attorneys was my ultimate aspiration and here I was and beginning to get the pay I had worked towards all on my own since I was 16. But here we go again…it's back. The remission periods were about 1 ½ years apart now. The Cluster periods lasted 3-4 months, up to 4 Clusters a day, about 4-5 times a week. I actually knew what hell was like and no one could understand it. I finally got an appointment at a headache clinic during my Cluster period (it took 3 months) I remember the doctor saying, "I should be glad its not Chronic". Oh boy he was not kidding.

Then the bottom fell out in my early 40s. My husband and I had a nice home together and my career was in full swing. I was always preparing for trials so I was working many hours but I loved my job. I also was being approached by other firms to come work for them. I was very proud that I accomplished my dream because I left home at an early age. I proved to everyone that I could do it.

Problem was the Clusters were back and this time it did not go away. The Clusters not only went Chronic but they brought along their friend, Chronic Migraine. I was having what I called "in between" headaches. It was not as quick, or piercing, knife-like eye pain as a Cluster. It started slower, in the back of my head, and felt like pressure building. Then it moved to the back of my eyes and lasted for hours. It was painful and I felt like I couldn't think but it was nothing like a Cluster. The Cluster made me feel like ripping my hair out because that would deter the pain from my eye. But at this point, I did not realize it was Migraine and I was only concerned about the Clusters.

Work started to suffer. Co-workers did not understand why I was not at work. They did not realize I was working at home trying to keep up due repeated attacks. Once an attorney came into my office and I could only see half of his face. I tried to hide it but he knew. I was stressing out about keeping up at work and dealing with co-workers. I decided to quit the job and take a few months off, as my neurologist suggested, to see if the headaches would settle down. It did somewhat but unfortunately, my husband was having problems with his job. My job was the only steady income and bills were getting behind so I looked for a less stressful job. I received offers from several firms but I had to turn them down because I needed less stress so I choose contract law instead of litigation.

Within 2 weeks, the headaches increased again. A real gut punch was when I received a job offer at an interior design firm even though I didn't have experience. I've always had an interest in the field and the job was to review contracts and learn the business. I told them I accepted another job but they fought for me. I had to keep turning them down until I finally told them that my headaches are back and I didn't even know if I could keep the current job. Guess what, I couldn't.

Everything…everything I worked so hard for was slipping away. I went on Temporary Disability and flew to Connecticut to see a world renown headache expert. That should be the ticket back to health. A headache expert and time off to heal. He diagnosed the "in between" headaches as Chronic Migraines so now I officially I had Chronic Clusters and Chronic Migraines. He was impressed with the drug regime I had tried thus far and suggested Lyrica and coaxed me into trying the Imitrex injection again. Lyrica did not work at all.

By now, Percocet is my go to for pain relief but I am up to 3-4 a day for years. I wait too long before using the Imitrex injection because over the years I have developed a particular dislike for shots. Imitrex also makes me feel so weak and tired that I am useless and it didn't well. Frova used to work way back in the beginning but not anymore. As far as prophylactics, I had also tried Topamax, Depakote, and the like but the side effects made me groggy or even made my hair fall out and it did not work. I have tried Amitriptyline and similar drugs but it was ineffective. I have been admitted to the hospital for intravenous DHE 45 treatments 4 times which worked twice for short periods. One scary surprise during an admission, they found I had a significant AV heart block as a side effect from the high dose of Verapmil that was prescribed as a prophylactic. We would not have known that unless I had been admitted.

I was first in line when Botox came out. I agreed to be the practice guinea pig for my neurologist so I received the first treatments for free. It did not budge my headaches but did reinforce my dislike for injections. I have taken so many types of steroids to try to abort an exacerbation. I even went for outpatient intravenous steroids for 5 days. I cannot take steroids anymore because the psychological side effects are frightening…that's all I'll say on that. Of course, I've tried all the usual alternative methods, physicians, acupuncture, chiropractors, breathing exercises, treatments, etc. I've been prescribed all kinds of medications that needed pre-authorizations but it ends up the cost is hundreds of dollars. Occasionally, I've paid it because I need something but I just don't have money to continue using it even if it worked.

Temporary disability embarrassingly turned into disability 11 years ago. I am now 50 years old. I hate it when people ask me what I do for a living. I'd rather lie. Over the 11 years, I have tried to go back to work so many times, against my doctor's advice, that it is just sad. I convinced a few attorneys to let me work around my headaches and make concessions for me but eventually the headaches got worse. I even take jobs doing food shopping for people but currently, I cannot even do that. The more I press on, the worse I make it for myself.

Then the finale…about a year ago I had a temporary neuro-stimulator implanted. I spent 3 months weaning of Percocet, Imitrex and OTC drugs. The associated headaches were torture. The CIA should figure out a way to use it for enhanced interrogation. Believe me, the suspect will talk. Our cost for the procedure was supposed to be $3000 but at the surgery center, they say it's $7,000 because Medicare changed what it would pay. I was desperate so I did it. I had the stimulator in for 2 weeks and I had 2 reasonably good days. Then 3 months later we get another bill from the surgery center for $4,000 because Medicare denied more. I am not eligible for Medicare Supplement Insurance in Florida so I begged them to write off the bill and they did. The doctor said he would write off his bill but that was temporary too. Since I did not have good results and it was not worth $50,000 (my cost) to get the permanent implant. None the less, my doctor kept pushing for it. It was unusual so I got my medical records. Throughout the year he wrote that I had 70% improvement while I had the temporary stimulator implanted. I repeatedly told him I did not have success with this treatment so either he repeatedly made an error in my records or was something else going on?

Currently I wake every single morning with pain and swelling in the back of my head. If I am too busy, particularly for a couple of days in a row, it will start a riot in my head. It makes me a little afraid to leave the house sometimes because of too many triggers out there yet I am depressed to stay at home. My friends were visiting recently from Atlanta and I could not go to the beach with them. I missed Easter dinner. I just can't fake it anymore, not even for them.

I cannot take acute medication every day due to Medication Overuse Headaches. Most times I just suffer with ice packs and some coffee. Sometimes, I will take an anti-inflammatory with aspirin. The bad ones, I will take whatever, Imitrex or Percocet but it usually won't work. Once my Migraines are rioting, it will take weeks for it calm down.

I spoke at Headache on the Hill 2018 in February and I just started to feel better a couple of weeks ago. I am terrified to fly to my niece's graduation because my headaches take months (actual months) to settle down after I travel and I used to love to travel. We just moved into a 2 bedroom apartment because I can not take care of a 4 bedroom house any more. If I have time in between headaches, I don't want to use that precious time to catch up with house chores. If I overexert myself or get too hot (I live in Florida BTW), it can trigger a headache. I don't usually feel hungry, but I know I am hungry because I feel a Migraine coming on. I can't go to concerts or go out dancing anymore because it's too loud for my Migraines. I disappoint family and friends so many times that I will actually make up another reason why I can't make it rather than say it's my Migraines again. I used to run every day for 30 minutes then lift weights since I was a teenager. I haven't been able to run in years. I usually feel sharp pain straight into my head with each step. Although it can be hard, these days I am trying hard regularly eat and exercise.

The impact on my marriage…I don't even have a word to describe it. I am fortunate that I have a supportive, loving husband. He may not have understood in the beginning but he sure sees the difference in the last 27 years that we have been together. I am so grumpy and take it out on him even though I should not. The expense, the time, the changes in our life all revolve around my Migraines. Devasting. I've told him on several occasions to leave me.

I am always skeptical of new treatments. What may work on others, has not worked on me but I would never close a door either. The doctors have a light in their eye when they talk about CGRP Inhibitors. It's not the usual, oh we can maybe try this Rx this time. They are excited that they may finally have something for me, IF I can afford it.

Since I am on Medicare, I am extremely worried this new wonderful medication for Migraines, for sufferers like me, is about to come out and I may not be able afford it. What is the point if patients cannot get it? That is why the medication was developed. I ask you to please consider me and all Migraine people that need access to this medication. It's not a headache, it's a neurological event that disables millions. I don't recall what feeling normal is like, but I'd like to get back to a product life.

Thank you for your time and consideration,

Lynn Morris

To: Institute for Clinical and Economic Review

From: Beth Morton, PhD

Date: May 8, 2018

Re: Open Comment Period on CGRP Inhibitors for Migraine

My Background

My headache disorder story began at the end of high school with frequent headaches and episodic migraine attacks. I was lucky in that I was diagnosed soon after my symptoms started. However, no preventive medications have ever really helped control my symptoms. For about 20 years, I managed to live my life relatively well despite this.

That was until about two and half years ago. I was finishing my dissertation and working nearly full time. Those two things alone were very stressful, but a series of other stressful life events also occurred. My sleep and mental health suffered. These triggered more frequent headaches. More of those headaches ended up as full-blown migraine attacks. My headache specialist and I could not get them under control. Before I knew it, I had a new diagnosis: chronic migraine. In the span of a year, I finished my PhD, but exhausted all my leave options at work and had to resign. I moved back to my hometown in Vermont to be nearer to family who could help me manage my new life with chronic, daily migraine attacks.

I have not had a symptom-free day in almost 2 years now. My primary symptoms are head pain and light sensitivity. I don't always have a full-blown migraine, but several times a week my symptoms do transform into one. On these days, my pain spikes, I become nauseous, and often have gastrointestinal symptoms. I experience sensitivity to scents and sounds. I also become more cognitively impaired: my thinking slows, I have trouble concentrating, and I'll experience brain fog. Any movement can exacerbate the pain.

After a full-blown migraine attack, once my pain recedes to a "functional" level, I often remain fatigued. The brain fog also lingers. I also tend to experience heightened anxiety during the postdrome period because I don't want to re-trigger the attack.

A little over a year after leaving my life and career in Boston, I am still living with daily symptoms. I have established care with all new health care professionals and fully exhausted all medicines, devices, and lifestyle changes, with very little improvement in quality of life. My life has changed so much in the past two years that almost anything I did before chronic migraine, I can no longer do. I won't be able to name them all here, but I will provide a sampling.

- **I am still unemployed.** It is immensely frustrating to have spent eight years completing my PhD only to leave my career soon after. Work isn't everything in life, but when you find the work you are doing meaningful, it is really hard to give up.

- **I cannot eat the same foods I used to eat.** My diet has been restricted to avoid common and not-so-common triggers. This makes eating outside the home incredibly hard. Food holds no joy any more. I simply eat to survive.
- **I don’t travel.** My world is very small. I don’t visit friends because something as seemingly benign as sleeping in another bed can be a trigger. The physical process of travel – flying or long car rides – are triggers themselves and can expose me to additional triggers.
- **I can’t exercising or get outside as much**. Sun, heat, wind, and overexertion are all triggers.
- **I don’t attended concerts, the theater, or sporting events.** I frequented these types of events when I lived in Boston, now they would be impossible without triggering a full-blown attack because of lights and sounds.
- **I can’t read a physical book or e-book.** The eye movements either trigger migraine or worsen symptoms. I now rely solely on audiobooks.
- **I don’t drive myself** further than 30 minutes from home for fear of an attack becoming so bad that I can’t safely drive myself home.

What do these CGRP treatments mean to me? Potentially, being able to reenter the workforce. Being able to make spontaneous plans with a friend. Being able to make plans in advance and keep them. Being able to take that bucket list trip I wanted to take after finishing my dissertation. Being able to celebrate over a meal with family and friends at any restaurant. Being able to use my kayak again. Being a fun aunt instead of a sick aunt. Being able to read the print version of a book. Being able to live on my own and support myself again. Being able to drive myself long distances. Be able to visit friends. Each of these things might be possible again provided I am given the opportunity to try the CGRP treatments. There is no way you can estimate the cost-benefit of that opportunity.

My hope is that the CGRP drugs will give me some (many) relatively symptom free days. I will be happy, though, if they bring my baseline down so that I have fewer days spiking above a symptom level of 4 out of 10. Either of these scenarios would mean getting back to some of the activities I’ve described above. I have adjusted to life in the 2-3 level symptom range reasonably well at this point, but in order to even do that, **<u>I need a reliable preventive medication.</u>**

My Treatments

I want to be clear that when I say I have tried almost everything, I mean it. I spend hours researching and advocating for myself to ensure I have left few, if any, treatment options unturned. Currently, I’m on four daily preventives, plus Botox. I also take countless supplements. None of these seem to work very well.

Let me tell you about my Botox experience, though, because I have a love-hate relationship with it. Botox is an incredibly unreliable and frustrating treatment for me. If it works, I can get a few weeks of low symptoms, low pain. However, the effects wear off very quickly. On the other hand, some recent rounds haven’t affected my symptoms at all. What bothers me most is that it was my very *first* round of Botox that triggered a week-long intractable migraine from which I never recovered. For me, it seems like a "good" round of Botox simply gets me closer to where I was before I even started it, but if I try to stop it altogether, my attacks worsen dramatically.

In addition to various alternative medicine treatments, I've made a host of lifestyle changes: the dietary changes I described earlier, a strict sleep schedule, regular meditation, and exercise on my lower-pain days. I go to physical therapy. I avoid dozens of potential triggers. I do everything in my power to prevent attacks, and yet, **my current preventive treatment plan barely improves my baseline symptoms. I am still disabled by daily migraine attacks**.

I also have no abortive that works quickly or effectively, so I usually switch between a strong NSAID that aggravates my GI system and an antiemetic that gives me muscle twitches. Because these are not first-line abortives, they aren't very effective. My full-blown attacks can linger for a few days. If my pain is extremely severe, I have injectable ketorolac as my last line of rescue. I'm afraid to use it too often for fear it, too, will become ineffective for me.

For the record, I have always been aware of "medication overuse headache" and "rebound headache." I never used my abortive medications more than prescribed. If anything, I likely treated *fewer* attacks than I should have. Research shows that each migraine attack can increase a person's sensitivity to more. Undertreated episodic migraine is a risk factor for becoming chronic in some people.[1] This is a key reason **people with episodic migraine should not be barred access from the CGRP treatments**. Preventing disease progression from episodic to chronic should be a focus of current treatments[2] and CGRPs offer an important option. In fact, effective, "long-duration prophylaxis" is recommended for people with "high attack frequency and other risk factors for migraine progression."[3]

In place of relief, I have side effects. These aren't necessarily symptoms. These all likely popped up as a result of my medications, namely: daytime drowsiness, yet nighttime insomnia, muscle twitching, muscle pain, joint pain, dry mouth, tinnitus, depression, weight loss, hair loss, constipation, and brain fog. I'm sure there have been others. It's telling when tolerating all of these outweighs chronic, daily migraine attacks.

It's worth noting that I've also stopped a host of treatments. At some point, I have to do my own cost-benefit analysis. I've stopped roughly a dozen medications due to side effects or ineffectiveness. Nerve blocks had a tendency to trigger an intense migraine attack with little relief, so I gave up on those after several tries. Because oral preventives have a tendency to give me numerous side effects, I've been eager to trial the approved neurostimulators. I am currently trialing my third one. Unfortunately, it seems exacerbate my pain more than help. I also can't afford $500 out-of-pocket to continue experimenting when I have very limited income. This is the drawback to any of the devices at this point: high cost and no insurance coverage.

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[1] https://www.ninds.nih.gov/Disorders/All-Disorders/Migraine-Information-Page

[2] Carmona, S., & Bruera, O. (2009). Prophylatic treatment of migraine and migraine clinical variants with topiramate: an update. *Therapeutics and clinical risk management*, *5*, 661.

[3] Fanciullacci, M., & De Cesaris, F. (2005). Preventing chronicity of migraine. *The journal of headache and pain*, *6*(4), 331-333.

My Experience with Insurers

Unlike, **every migraine preventive therapy before them,** these CGRP treatments were developed for migraine. They have shown to be effective and tolerable. Every person with migraine deserves the opportunity to try them. However, there are going to be major barriers. Since leaving my job, I spent eight months on an expensive COBRA plan, five months on Medicaid, and now I'm on a "Silver" tier ACA plan. At each step, my access to care has declined. I have much stricter limitations on the amount of abortive medications I can be prescribed. For example, my doctor has had to ask for prior approvals to cover my prescribed amount of ketorolac. One of my more effective abortives – compounded ketamine nasal spray – is altogether not covered. My appeal was barely considered before it was denied.

Historically, I have had to go through the fail-first steps of trying and failing some preventives medications before being approved for Botox. My expectation is that will be the same for the CGRPs. At least now I will be able to show I have tried nearly everything available for chronic migraine without seeing marked improvement. My hope is that opens access to the CGRP treatments more quickly for me. However, this may jeopardize thousands of high-episodic patients who are at risk of becoming chronic if they are delayed access to effective CGRP treatments by first needing to fail ineffective ones. I made this point earlier and your own report makes note of this on page 3: "Without adequate treatment, patients with episodic migraine are more likely to progress to chronic migraine. About 2.5% of patients with episodic migraine progress to chronic migraine per year."[4] I was one and I advocate because I want to prevent this from happening to others. ICER can help.

Takeaways

I'm not sure your analysis fully grasps the severity of disability those of us with migraine face or the breadth of symptoms we deal with. The introduction of your report states some figures and lists some symptoms, but I hope you read and take to heart the real-life stories that each person with migraine has shared with you during this open comment period. I could spend my remaining space recounting the facts on migraine's disabling qualities, but I just told you how much it has taken from me. I could give you the laundry list of symptoms people with migraine have, but I've shared my own. Countless others will do a better, more clinical job of recounting the medical facts and figures.

Likewise, there will be others better equipped to critique your analyses and model specifications. I have a background in statistics, but not in health economics. I won't pretend to understand your cost-benefit analysis, but it does seem to make many assumptions. There are gaps you admit yourself. I am disappointed that – gaps and assumptions notwithstanding – results from this report may give insurance companies to deem these CGRP treatments too expensive and limit access for some patients. I may just squeak by being diagnosed as chronic and having failed multiple other treatments, but that's a high bar to set based on what I see as a premature analysis of their true value.

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[4] Bigal ME, Serrano D, Buse D, Scher A, Stewart WF, Lipton RB. Acute migraine medications and evolution from episodic to chronic migraine: a longitudinal population-based study. Headache. 2008;48(8):1157-1168.

I’m here to ensure that you have one more patient voice. Because, until your model can account for all my lost work productivity, my lost days being an aunt, my lost times being a friend, my lost trips abroad or days outside, my lost meals without worry of triggers, etc.. Until you can account for all of this and more, I don’t think you can estimate what these CGRP treatments are really worth to me and my loved ones.

Lastly, please know that I am speaking not only for me, but for **thousands of others with chronic migraine who didn’t have the energy to write to you, but share the same story.**

Thank you.

My migraine journey started when I was 22 years old, newly married and just out of college. My mom and younger sister had suffered from migraines for years (my mom started having migraines at 29 and my sister at 7 years old), so I knew what they were, but had no idea that this would begin years of suffering, progressively getting worse with each year. In the beginning of my journey, I would get headaches a couple of days a week, which were pretty easily taken care of with Exederin or even Extra Strength Tylenol. I was teaching preschool at the time and would often come home and have to lay on the sofa because it was so painful and tiring. Over the next 24 years, they became more and more frequent, until every day brought another round of pain, eventually being diagnosed as having "chronic daily, intractable migraines." The pain ranges from a stabbing, burning, knife-like feeling in one eye or the other (usually a level 5-7) to a helmet-like, heavy pain over my entire head that makes me nauseous (level 7-10). My goal over these last 24 years has been to find a migraine treatment that reduces the frequency and severity of my migraines. Sadly, it has been to no avail.

Migraine disease has taken so much from me-my career as an early childhood educator (as I have to have so much energy to do that and I never know from day to day how I will feel) and my role as a wife and mom to my three girls (ages 8, 9 and 15) are very much affected, often feeling like "half a wife and half a mom". Add the daily physical pain to the emotional sadness/depression of not being able to do all that I want to do, and life for me is very overwhelming. I try as much as I can to "push through", put on a happy face and keep going, but it is exhausting. My quality of life would be greatly improved with this new treatment-I just cry thinking about it.

Over the years, I have tried every conceivable treatment for migraines, from medical to homeopathic, and everything in between-vitamins, special diets, allergy testing, chiropractic, reflexology, acupuncture, neurostimulator trial (Reed Migaine in Dallas-failed trial), nerve blocks, Botox, neurologists, many, many different preventatives and abortives tried (I currently take 100 mg of Imitrex tablets-try to limit it to 3 a week to prevent rebound, but I feel like I am in rebound-the other days I just "suck up" the pain and muddle though my day as nothing else works-even imitrex only takes it down a few notches). Along with imitrex about three days a week (only taken when I get to a level 7 or above), I also take Magnesium, B2, CoQ10 and Tumeric daily for prevention, with limited help. All of this has cost our family thousands and thousands of dollars.

Twelve years ago, I went to Jefferson Headache Center in Philadelphia where I was given many preventatives and abortives to try, sat through infusions and was finally hospitalized for three days hooked up to IV drugs to try to break the headache cycle. I was discharged after 3 days without a headache, only to wake up the next morning with another headache that pretty much hasn't ended since (I may get one "good" day a week, 2 if it's a really good week). In February of this year, I started going to Jefferson again, as I heard that the CGRP drug was coming out and I felt it was the best place to be to get it first. Even in the couple of months I've been going there, I have already been denied getting a preventative by my insurance company.

I implore ICER to support and take into consideration the disabling effects that migraine disease has on myself and thousands and thousands of others who suffer from this invisible illness. This new CGRP drug is the light at the end of a very dark tunnel of pain and lessened quality of life for me. I have been following the developments of this drug for the past year or so and it has brought so much hope to me. Having affordable access to this drug would be potentially life changing for me and the thousands and thousands of people whose life has been devastated by migraine disease. Thank you for your consideration and help that you can give.

Susan Mulloy

May 8, 2018

Public Comments
ICER Review
New Migraine Drugs: CGRP Inhibitors

Dear People:

I just saw a notice on Twitter asking for comments on the review process for the new migraine drugs. I would like to tell you my story.

I have had chronic migraines since I was a child. I am now 69 years old. My mother and grandmother also suffered from this disease. I get about 5 migraines a week. I received SSDI disability from the years 2008 through 2015 when I transitioned from SSDI to regular Social Security Insurance. Throughout my adult life I have had great difficulty building a career and keeping employment because I have been sick so often. I also suffer from clinical depression. The combination of both disabilities has been devastating. I have worked hard to survive. I have felt ashamed that I should fare so poorly given the opportunities and gifts with which I have been blessed.

I grew up in Chicago during the 1950’s and 1960’s. My parents worked hard to send their four children to college, even though they never had this opportunity themselves. My father had to quit school after the eighth grade to help support his family. He finished high school by attending night school after work. I inherited intelligence and was always a good student. I studied International Relations and Journalism at the University of Wisconsin, Madison, graduating in 1971. I received a Lehman Fellowship from the State of New York and earned an MA in Economics at the Graduate Faculty of the New School for Social Research in New York, NY. I moved to the San Francisco Bay Area in 1976 and worked for Catholic Social Service until I attended the UCLA Anderson MBA program in 1982-84. I received my MBA in Finance and Operations Management in 1984.

Even with all these credentials I had many difficulties with work. I know that depression, as well as migraines, had a great deal to do with my struggles. By 2007 when I left my secretarial job to go on California SDI, I was almost non-functioning. I would have been homeless had not my siblings helped me financially. I am now a low income senior getting MediCal without a share of cost under the Federal Senior and Disabled Poverty Program.

I think I am alive today because of psychotherapy and medication (for migraines and depression). When I was in my 40’s, I started to get migraines almost daily. I learned about the new triptan drugs and asked my family doctor to prescribe them for me. Triptan drugs have helped me survive chronic migraines. Without them, I would have 32 hour migraines with no relief until they finally ended. I tried ergot drugs and pain killers but nothing stopped the migraines except Imitrex and Maxalt. Over the years I have tried drugs to help prevent migraines. The only one that I know has some effect is Propanolol. This drug is effective in that when I run out of it, I am sure to get a migraine. But I still get chronic migraines while taking Propanolol. I have also tried Gabapentin, Topomax, Divalproex, and Lyrica as prophylactics. And I have tried cranial-sacral massage, chiropractic, and acupuncture treatments, Bio-Feedback, herbal supplements, magnetic headbands, and magnesium supplements. I have stopped alcohol, caffeine, citrus, bananas, nuts, dairy, avocados, and sugar (I no longer try to follow such a restrictive diet although I do not consume alcohol and I try to eat a healthy, largely vegetarian diet).

My current medications for migraines are Rizatriptan and Propanolol. I was also taking magnesium supplements but may no longer be able to afford this cost. I just received a rent increase and will be paying 83% of my income in rent. I am tired most of the time. I stopped taking Gabapentin because I believe it made me lethargic. I have gained 25-30 pounds over my normal weight while being on antidepressants and some of the migraine prophylactics.

Luckily I am introverted by nature so being at home is not such a hardship. I can no longer afford a car and I do not get out much. I have limited energy. Shopping is a challenge.

I write all this to ask the ICER to support episodic and chronic migraine sufferers access to the new CGRP inhibitor medicines. I sincerely hope that my Medicare Part D plan will permit me to get them as well. This new class of medicines will empower many many Americans to lead happier and more productive lives.

Thank you and sincerely,
Susan Mulloy

The Institute for Clinical and Economic Review (ICER)   May 4, 2018

- Share your migraine journey (when did you first start experiencing migraine attacks, what does a migraine attack feel like to you, how often do you experience migraine attacks, etc.)

I am 66 now, but I remember starting with migraines in my late teens. Did not medicate other than Tylenol or the like, and they were few back then. My mother had migraines too, but I never remember either of us getting diagnosed. It never seemed to be talked about back in the 60's and 70's.
A migraine feels like a debilitating curse to me. They have morphed from episodic into chronic. <u>I have a migraine of some form and intensity every day</u>.
They have changed over the years; sometimes eye aura or dizziness first, sometimes not. I very seldom get nauseous or vomiting, which I am thankful for. The pain starts within a few minutes after the aura or trigger, on the top of my head. If I can catch it with my abortive/triptan, that's great, but I usually have to take another within two hours. Recovery days after that are 1 or 2, mostly in bed. If I get a migraine during the night that doesn't wake me because there is no pain per se, it is most often vertigo and I am a little nauseous and can't lift my head off the pillow. This lasts about 2 days and I definitely need help taking care of myself.
I get the excruciatingly bad migraine attacks about 3-4 times a month. These are the ones that require abortive meds and I am in bed for 2-3 days. Other days the migraines are lesser and I try to make the best of the day using a Benadryl to break the pressure in my head, and just recently using CBD oil sublingually 2-3x day, every day. More often than not I feel the need to lay down in the afternoon for a few hours.

- Describe the negative/disabling impact that migraine has in your life

I have missed some days of work when I was still working, but I always tried to muddle through with the help of an abortive. Went to bed as soon as I got home.
The migraine attacks have certainly changed over the years, for the worse, to the point that at age 58 I had to take disability out of my job. I could no longer function at peak in my job, and it was embarrassing. Depression set in almost immediately because I felt like I was experiencing a forced retirement.
For many years now I have had to cancel plans short notice when a migraine attack happens. And, I can't attend social events like parties or weddings. Even smaller gatherings in a small room; too much noise and chaos for my brain to process. Alcohol will give me an instant migraine. Weather changes and/or dramatic barometric pressure changes will also trigger a migraine. There are several more triggers, but I try to control the ones I can; stress is a big challenge though! All in all, I miss a lot of fun things & events, a lot of nice weather days spent in bed, and can't travel by plane, unless that trigger is no longer a trigger now.
Some friends and family take the time to understand that migraine is a disease; others don't understand and think it's just another headache and I use it as an excuse.
In short, my house is my 'safe place.'

- Detail how existing migraine medicines fail to fully treat your migraine disease and have many unwanted side effects

I have taken preventives since 2003. I have taken pretty much all of them that I could possibly take, based on my medical condition at the time. In general, I would say that NONE of them really help/helped because I still have a migraine of some intensity every day. I have never tried any of the durable medical equipment to prevent or abort because I have read mixed reviews about all of them. I gave Botox a try (3 rounds) but my headache specialist and I agreed that it wasn't working for me.

I have tried cranial sacral therapy, PT, massage therapy, chiropractic, acupuncture, and many other treatments, to no avail. I have also tried Neurofeedback 2 or 3 times a week for 4 months, and I didn't see much, if any, improvement in how I felt. MAYBE the intensity of my migraines was less; not sure.

I have tried every triptan abortive available and only one helps me, but I usually have to take one at onset and then another after 2 or 3 hours. My 'cocktail' at onset is the triptan + 1 Benadryl + 4 Advil. The next day or two are recovery days and I feel hungover.

NOTE: I can definitely say that I do NOT have MOH -Medication Overuse Headache, because I hardly EVER take OTC pain killers, no narcotics, and no more than 2 triptans in a week period (maybe once or twice a year).

- Call on ICER to appropriately value your pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines

I, along with tens of thousands of other sufferers, have been waiting years for another, more effective preventive for our debilitating disease. CGRP seems to have real promise, with few if any side effects. Our current medications, treatments, or equipment for prevention or abortion can be costly and not even work, or work well. I suspect when the CGRP meds are released, they will NOT be covered by insurance, surely not by Medicare.

I respectfully ask that you consider all of us who are suffering for years on end with very poor qualities of lives, and price these medications so that we can afford to purchase them at a reasonable price. At 66 years of age, I still have hope that I can travel again, go to parties, weddings, movies, theme parks, concerts, etc.

Thank you for reviewing my letter.

Lynne Nelson

May 7, 2018

I experienced my first migraine attack six months after a complete abdominal hysterectomy, at the age of twenty-five. I will be turning forty-nine this year.

To most anyone reading, the obvious “cure” to my migraine and headache pain would have been hormone therapy. Fast forward twenty-four years, nothing about my head pain has been obvious or easy and there is no “cure”. Today, the most important thing for me, is to be able to increase my quality of life by functioning more on a daily basis. For me, that means going on a walk or being in my gardens. It would be nice to be able to meet with friends for lunch and to make plans more than a week out.

In August of 1995 I awoke with the worst pain of my life. The pain was blinding. Deafening. And so, it began… For the next 3 years I went in and out of hospitals, sought the advice of the best doctors, neurologists and headache specialist, including the NE Center for Headache in Stamford CT. We sought council with chiropractors, and holistic healers including the Marino Center in Cambridge MA. I spent a week inpatient at Dartmouth Hitchcock in Lebanon NH.

During this time, my husband and I were raising our son and I was managing a career at AAA. There was a new office and an opportunity for me to establish a property and casualty insurance office within the agency. That is exactly what I did and became one of the top producing agents in Northern New England.

In 1997, it became clear that the migraine pain had became chronic daily headaches (at that time coined another term). The pain had begun to take its toll on every aspect of my life and I became desperate. Spaulding Rehab Hospital in Boston MA accepted me into a program for 30 days and offered a complete program to help with dealing with chronic pain. After completing the program that included occupational therapy, physical therapy, biofeedback, etc., I then had to accept that I would only be able to go back to work on a part-time basis.

The realization that MIGRAINES are a disease and there is NO CURE has now changed my life.

I fought on, using the modalities that I was taught, participating in several clinical trials for the next several years. Early to mid-2000’s, I had several more hospital admissions, dental visits (mouth guards) Tufts Medical, participated in Behavioral Health and biofeedback sessions and finally the FDA approved Botox to treat migraine headaches.

In 2007, I left the career that I worked so hard for at AAA Insurance Agency. I was embarrassed and humiliated and extremely sad. To this day I still am. In 2009, I was awarded social security disability.

In 2012, I fought for, was denied, appealed and won the ability to have the St. Jude Occipital Nerve Stimulator to help with the daily pain. In 2013, the permanent stimulator was implanted by Beth Israel Deaconess in Boston MA.

I am in pain every moment of every day. Over the last several years, the pain has changed, but it is always constant. I have aura, constant nausea, issues with my appetite, anxiety, and depression. I live in fear of when my next migraine attack will be. Light, noise and odor can trigger an attack, so I very rarely drive or go out on my own.

Over the last twenty-four years, there have been so many medications that I have been prescribed for headaches/migraines. Here is just a fraction of the ones that I have been prescribed:

Butalbital
Inderal
Librium
Zyprexa
DHE45
Duragesic patch
Botox
Zomig
Topamax
Nadolol
Buspar
Lidocaine
Nerve Blocks
Trazadone
Serzone
Imipramine
Methocarbamol
Methergine
Ambien
Wellbutrin
Desipramine
Prednisone
Toradol
Oxycodone
Imitrex
Neurontin
Amitriptyline

Currently, I take Topamax as a preventative. I get Botox injections every 10 weeks and nerve blocks in between. If I have a migraine episode that is out of my control (meaning the pain, nausea and vomiting cannot be controlled with any medication/modalities I have at home), I have a medical plan in place with my doctor and can get a "pain shot" at the nurse clinic. That shot consists of Demerol, Phenergan and Toradol. If I catch it quick enough and can go to sleep, sometimes I can break the cycle. My freezer is full of ice packs (different sizes, shapes and varieties based on how bad the pain is). My bedroom is set up to go "dark" at any time. My house is quiet and even my dog doesn't like loud noises, beeps and flashing lights.

I look back at when my headaches first started and how they (and I) was treated. At first it was the pain, I was given Fentanyl and sent home. When they just didn't go away, then the headaches must be "all in my head". More medications were added, and the pain just got worse. Then I had to fire a doctor for mistreatment and learn to be my best advocate. Learning I wouldn't die from the pain was both a blessing and a curse. Finding a Headache Specialist was the key! Being in the know about procedures, medications and methods that are successful to other headache sufferers is helpful.

During the last twenty-four years, I have been extremely fortunate to be on my husband's health plan. Even still, I have had to appeal to get care from our health care provider on two separate occasions. The first was to be granted the inpatient stay at Spaulding Rehab Hospital and the second for the Occipital Nerve Stimulator. I would have had to appeal Botox at the very beginning, however I was in the clinical study and brought sufficient evidence of success to our health insurance carrier and was approved. I am eager to have access to a drug that is specifically targeted to prevent migraines. If this drug could decrease the severity and intensity of the pain and the number of attacks, it could change my life. To be able to spend more quality time with the people I love, would be LIFE CHANGING.

My HOPE is that for the millions of migraine sufferers in the United States, that we can all have access to these new CGRP inhibitor medications. We don’t want much…just our lives back.

Robyn Nelson

05/08/18

To Whom It May Concern at ICER,

My name is Tory Nersasian and I am a migraine patient under the care of The Stanford University Neurology Department for the past 5.5 years. I am writing to encourage ICER to provide CGRP to chronic migraine patients like myself. It is my opinion that this treatment should be fully covered by insurance. I already pay over $10,000 in medical expenses each year since the onset of chronic migraines, despite having a good Blue Cross health insurance plan with a low deductible of $500 annually, as well as using all in network providers. I have been unable to work since my accident that triggered this disease in 2011, other than managing a couple of athletes in my Sports Psychology practice (I earned a whopping total of $1500 last year). Adding additional expenses for a medically necessary treatment would simply be unaffordable for me, and ethically questionable. I've worked for insurance companies as a third party reviewer, as well as being contracted to provide Psychology services when I was practicing full time. While I fully understand that insurance is a business, CGRP has demonstrated some of the most promising research for potentially drastic improvement in migraine patients like myself. It would be truly awful if this drug is not affordable to those who are in true need of this treatment. From a business standpoint, please keep in mind as you read this testimony how much insurance companies could save if CGRP were available to severe and chronic migraine patients.

My chronic intractable migraines started on 10/30/11 at the age of 39 following a motor vehicle accident that caused significant neck trauma, a severe concussion and post-concussion syndrome that lasted for nearly two years, as well as chronic intractable migraines that are absolutely debilitating. These migraines became much worse after a second head and neck injury on 12/17/15 after being hit in the back of the head with a television camera at a live sporting event I was attending for my small Sports Psychology practice. I have a strong family history of both migraine and chronic migraine.

During a migraine my pain is typically between an 8-10 on the 1-10 pain scale. I've had several migraines last for over 30 consecutive days without reprieve. During a migraine I experience extreme light and sound sensitivity to the point where I can not leave my home or open the shades, and I often can't even get out of bed. I experience tinnitus, vertigo, blurry vision, cognitive fogging, nausea, dizziness and occasional blackouts. The medications I have used to try to control this disease have left me with multiple GI problems. These symptoms are so severe that I don't feel safe to drive, and I live in a rural area without public transportation. This illness has effected absolutely every area of my life, from my relationships to losing my full time career as a Clinical and Sports Psychologist, and even the basic ability to care for myself (i.e. if I can not drive or stand up, then how can I obtain my own groceries or keep my home clean, etc… sometimes it's too painful to shower, and I can not brush my teeth without vomiting). I also can not enjoy any of the things I love, like gardening, surfing, swimming, skiing, or traveling to see my family who all live across the country, all of which protect people from depression. It's a lonely, isolating disease. Coping with it is similar to living in a sensory deprivation tank. Most people go a bit insane in those tanks after only a few hours… imagine 30 days.

In the years since my accident I have seen over 10 neurologists, two headache specialists at both Stanford and Mass General, several chiropractors, and multiple massage therapists. Stop triggering these migraines. I'm currently working with a pain doctor to attempt to improve my neck so that it will stop triggering migraines. We've used several trigger point injections as well as an epidural that required anesthesia. I've gone to physical therapy, and I've changed my eating, sleeping and exercise routines in an attempt to improve my health. Anyone in my position would experience depression and anxiety, so I am in therapy and see a Psychiatrist as well. My condition has put a tremendous strain on my husband both financially and emotionally, and we've just started couple's therapy focusing on how to cope with chronic illness. It's well within the range of possibility that my illness could destroy my marriage of 19 years.

Thus far, Stanford has tried me on Botox, originally 31 injections, but now we're at the maximum dosage of 40 injections. We've tried the TMS machine. As for medication trials we've attempted Inderal, Verapamil, Topamax, Maxalt, DHE nasal spray, Immetrex, Cymbalta, Baclifin, Tramadol, and an occasional Vicodin when all else fails. My medical condition has forced me into the Emergency room on several occasions for IVs of Compazine and Benedryl. There are many other medications that we've tried, there are just too many to remember. The saddest part is that I have nothing to show for any of this… I'm still in just as much pain, and I'm still without any quality of life.

If there is even a chance that CGRP could block migraine pain, even if it's a brief reduction in frequency, intensity or duration, my life could completely change for the better. My utilization of other medical services would likely decrease, saving insurance companies money. Heck, this drug might even save my life. I leave you with this point to consider. May people in my position can not find a reason to go on and end up taking their own lives. Don't kid yourself, chronic migraine can be just as lethal as cancer or any other life threatening illness. It won't cause death, but it can make you wish for it. I hope this brings your committee some insight as to what it can be life to suffer with chronic intractable migraine. For more information I highly recommend Migraine.com, as well as a visit to their patient support group for very informative articles and personal stories about what this disease is truly like to experience.

Sincerely,

Tory Nersasian, Psy.D.

LORIE NOVAK

May 8, 2018

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I welcome this opportunity to describe what it is like to live with chronic migraine. I am a University Professor and artist and am 64 years old. My migraines began when I was 8 years old. I grew up at a time when migraines were not considered a medical condition, as they are now, but an emotional one. As a child and adolescent, I was told I worked too hard, did too much, and was too stressed out. In other words, it was my fault. For most of my life, I tried to ignore my migraines as I was encouraged to do and pretend that they had no real consequences.

It is a prolonged battle I always feel like I am losing. Their pattern has changed throughout my life. During peri-menopause they were at their worst, and after menopause they lessened, but not to the extent that my doctors and I had hoped. At the moment, I get Botox injections every three months, magnesium and B12 injections every month, and take sumatriptan injections when needed (approximately 10-15 a month). I have to take rounds of steroids several times a year after having retractable migraines that will not go away after 4 days. I took High CBD medical marijuana for about 6 months. It worked well for the first two months and then stopped having any affect. In the over 55 years that I have been suffering from migraines, I have tried every type of preventative drug there is including Depakote, Neurontin, Topamax, Lamictal, Amitriptyline, Inderal, Celexa, Lexapro, and Savella. I have also tried all types of more natural remedies including CoQ10 200 mg, Acupuncture, Feverfew, Migraliev, and Biofeedback. Different Rx medications I have used to treat migraines include Maxalt, Zomig, Tremximat, Fiornal, Midrin, Cafregot, Darvon, Migrainal, Stadol, Dilaudid, and Imitrex caplets. I have also used over the counter medications Excedrin, Advil, and Aleve. Currently, only the Sumatriptan injections are strong enough to have any affect.

I have been hospitalized for migraines several times. As a child, I had a CAT scan, and starting in my thirties, I began to have regular MRIs. 10 years ago when I was hospitalized for severe second degree burns and given a morphine drip, I had the worst migraine of my life. It made the painful burns not seem so bad. Even though I was in the pain clinic, the residents had no idea how to treat the migraines. It was shocking. I now know that I cannot take any type of morphine drug and that anesthesia often triggers a bad migraine.

It is hard to know what triggers my migraines. I rarely get an aura. I know that if I skip a meal, get dehydrated, or drink red wine I will get a migraine. I watch my diet carefully and seldom drink alcohol. I have never smoked. I know weather is a factor but unpredictable to know how it will affect me. When I was child, sleep would help my migraines. As an adult sleep does not help.

I often wake with a migraine. The majority of my debilitating, throwing up migraines start in the morning or the middle of the night. I have often woken up because I have to throw up. Now, I always sleep with Sumatriptan by my bed. An excerpt from my migraine journal:

> I woke up in the middle of night with a slight headache, refusing to take medication because I feel like I take too much, I went back to sleep. Sleep in these cases almost feels like passing out – it is deep but troubled. I dreamt that I was going a trip and couldn't find where I put my boxes of imitrex injections. I woke up with my head throbbing and as with most mornings felt like there was a huge weight on me so I could not move. Getting a sip of water from the bedside table is overwhelming, let alone taking a shot which last night I put near the bed with a bottle of alcohol just in case. I often feel like this a ritual of keeping medication by my bed will ward off evil migraine spirits – to show them I am prepared. When I was in high school I used to carry 2 excedrin with me at all times either in the little pocket right below the waist in my jeans or when I wasn't wearing jeans, in my purse. I now carry a wider array of meds on me at all times including an injection. Unfortunately, being prepared does not seem to have the preventative power that I have always hoped for.

Like many other sufferers, migraine runs in my family. My father had migraines and outgrew them in his 30s. His brother had them into his 90s. One of my sisters and one of my cousins have them. I am convinced that my paternal grandmother had them because the family gene is so strong. She was a woman who never complained and migraines were so dismissed in women, it is not surprising to any of us that we do not know for sure.

It was not until my thirties when I read Joan Didion's essay "In Bed," in which she gives voice to her migraine suffering through words, that I acknowledged the effect they have on me. It was a life-changing moment, and the start of a continuing struggle to accept that I have a chronic illness. Up until that point, I hid my migraines – not really telling even my closest friends. When I was younger (in the 1960s-mid 1970s), my parents minimized my migraines. "Ignore them and they will go away." I was told they were sinus headaches, as if that would lessen he pain. I learned to suffer in silence, how to go to school and be with people while being in pain. Only when I threw up and the pain was unbearable (which was more often than I like to remember), did I get in bed. I realize now how much this affected my personality – made me more reserved, made me go places and not really experience where I was. I felt like a failure since I had been made to feel that was in my power to stop them.

It was in my thirties when I read Joan Didion's essay "In Bed," in which she gives voice to her migraine suffering through words, that I acknowledged the effect they have on me. It was a life-changing moment, and the start of a continuing struggle to accept that I have a chronic illness. I then read Oliver Sach's *Migraine* book but couldn't even finish it because it so described my medical issues and they were the very ones that were ignored. I then started to get the National Headache Foundation newsletter which transformed my life and helped to finally see Doctors who took my migraine seriously. I am not sure when I was actually diagnosed with chronic migraine but I know that I have been getting 10-15 (and more in a bad month) migraines a month for close to 20 years. Before chronic migraine was an actual diagnosis, I was told by some doctors that it was impossible that I got that many in a month.

Even when I don’t have a migraine, I often feel one lurking in the background. I try to ignore the slight throbbing in my head and not move too much. I often feel nauseous and dizzy. As is the case when I have a migraine and take medication, my productivity is severely compromised. And as you can imagine, living with chronic migraine, I am often exhausted. Although I hold done a full time University position, I know that I would much more productive and better at what I do if I did not have to lose so much time to migraines. I am very open about my migraines in hopes that my students who suffer from migraine (and there are many) or other chronic illnesses will not feel that they have to hid them and be isolated like I was when I was younger.

It has been difficult to keep an accurate record of how many migraines I get, so in 2009, I began to photograph myself with my webcam or phone every time I had a migraine. When I have a migraine, all I want to do is leave my body so I won't feel the pain. My laptop is my escape—it allows me to ignore my body and, by photographing myself, see myself. I can express what I can't articulate and make the pain visible. Since I am a photo-based artist, I have turned this self-portrait project into a long term project and have been photographing myself with a migraine for 9 years. (see www.migraineregister.net and www.instagram.com/migraineregister.) It took me 5 years after starting the project to actually count how many I got. I learned that I average more than 120 migraines a year – that is a third of my time that I am in pain or compromised. I still have had a hard time accepting that.

I am one of the lucky ones – I have good health insurance that covers my regular visits to a headache specialist and my botox and other medications. Botox has keep the completely debilitating migraines away but not the frequency. I would not have a life if I did not have access to medications. I urge the committee do all that is in your power to make the new CGRP Inhibitor migraine drugs affordable and accessible. I end with a selection of the more than 1,000 of my migraines that I have photographed in hopes of better communicating the pain and suffering that accompanies living with migraine.

Sincerely,

Lorie Novak

May, 7, 2018,

To whom it may concern,

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

1) My migraines started when I was 14, my freshman year of high school. They were so bad my parents too me for evaluation. I was given eeg ,brain scan and xrays. They found nothing that would cause them gave me internal, and sent me on my way. Throughout high school and co)eye they continued. I went and saw doctor after college graduation and he prescribed caffergot. They continued through my working and culinary school. In 1990's I was prescribed 800 mg of ibuprofen and 500mg of Tylenol to take when migraines occurred. By the time I was in thirties I had duodenal ulcer and could no longer take ibuprofen. After sinus surgeries and osteomyletis of sinus, the migraines were accompanied with occipital neuralgia and trigeminal nerve referred pain.

2) For years, I worked with chronic head pain and migraines until I could no longer continue because they totally disabled me and were debilitating.i lost my job. I could barely care for household, child and my marriage ended. I was barely surviving. Medications made me dull or unable to function. I had a hard time shopping, suffered weight gain from steroids nerve blocks, and became inactive and unable to move as I did before. I could on travel by car or train as planes altitude changes affected me. I put myself in early menopause to stop menstrual migraines. Then migraines were mostly low barometer or stress involved. So I couldn’t get sick, and winter and spring weather was the worst. I would become totally incapacitated. My son had to shop, do my laundry, and help around house.

3) I was diagnosed by my ENT with neuralgia, and sent to a neurologist. He tried anti seizure medication from neurontin to trileptal, up to to 1200 mg a day. I tried baclophen,citolopran, nortriptyline, the Tripton migraine medicines, lamictal, and lyrica. He finally gave up on me and said severe the nerves. I asked for pain management. I went to pain management Dr. Who prescribed fentanyl. He did nerve blocks and 2 rfas of c5 and c6. He sent me to another pain management clinic for medication. There I tried Norco, hydroprofen, hydromorphone, opana, oxycondtin, exalgo er, voltaren gel, lidocaine patches, physical therapy, psychiatrist, acupuncture, alaprazoloam and Zoloft. Throughout the years I’ve needed my meds down to the only ones that help, Norco, and hydromorphone for breakthru pain, and cymbalalta and alaprazoloam to relax. That with therapy and pain management. It has been survival not living. I receive botox ever four months and trigger points injections in between when botox wears off.

4) I call on ICER to appropriately value my pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines. When my pain management clinic closed I had to find new clinic. I was treated like a drug

seeker at one that only prescribed indomethacin, which caused heard palpitations and treated me so rudely my son refused to have me return there. Luckily I found another clinic that treats me respectfully. My medications were cut down to follow standards by fda. I still suffer pain more than half the month with migraines. My great headache specialist moved and now I see a new Dr. The time between appointments is longer because they are so full. This was on opiates has caused undue stress to me a chronic pain sufferer. I don't understand why the focus isn't on China, Mexico, and South America for smuggling heroin, and fentanyl into my country. Instead it attacks Drs and patients. New treatments like stem cell therapy and Cgrp inhibitors will be called experimental and Medicare will never cover them, until we suffer. Many friends have take lives because of unaddressed pain. I want my life back, I want to live, not just survive. Every month it's a new guideline. Random test or inability to get trigger point shots because over exceed someone's idea of too many. Walk in my shoes for a week. See how much relief I get. I can't afford to live on disability and pay for monthly pain management, headache specialist, gp doctors, tests, meds, and procedures. I have three collection bills all on medical related care. I can't even use coupons because I'm on medicare, which makes no sense. Medical marijuana is out of bounds because of FDA. I have random ua and blood tests and follow rules, but still suffer debiliatating pain and no one cares. Please help me get my life back again and cover and support all research for migraines of all types.

Respectfully,

Jennifer Oliver

May 7, 2018

ICER
publiccomments@icer-review.org

Re: ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

To Whom It May Concern:

I have been suffering from continuous migraine pain since June 2006. I have pain every day which varies in intensity and location. I don't remember what it is like to be pain free. At it's worst, the migraine pain feels like a vice on my head, my eyes hurt, my balance is off, and I am forced to seclude myself in a dark room to minimize incoming stimuli. I feel like I am in a fog and have to work harder to process normal thought tasks on things as simple as what we should eat for dinner. I constantly need sunglasses, even in the winter time, as my eyes are very sensitive to light. The constant pain is physically draining, and even when my pain is lower, I need to rest or take naps in an attempt to allow my body and mind to recover.

I am married, have a son, and enjoy spending time with my dogs and horse. Due to my migraines, I have missed holidays, sports practices, swim lessons, as well as just daily life. Physical intimacy with my husband has greatly decreased as it often causes my pain to spike or I am already in so much pain that I have no interest. My son will ask to play a game or jump on the trampoline and I have to tell him no because I need to rest or the activity will cause increased pain. I've had to forfeit entry fees for obedience classes I've entered for my dog or participate at a reduced level in training classes because I am dizzy. There are many days I've had to forego plans to spend at the farm with my horse as I'm in too much pain, or too dizzy, to be safe around him. The pain and dizziness also affects my ability to drive and I will forego activities if I don't have someone that is able to drive me. In addition to the missed time, I'm unable to do many household tasks on a regular basis and we have decided to hire someone to come clean our home to reduce my anxiety over not being able to complete these tasks.

In addition to the missed family time, I've also had to miss work on multiple occasions due to migraine pain or for doctor's appointments. My productivity is also reduced on an almost daily basis as I may be having a hard time processing my thoughts, or have to move slower due to increased pain. I have requested modifications at work to accommodate my migraines, such as a standing desk and specific work station locations away from areas that are loud or with bright light. I am also unable to work out on a regular basis and have put on a significant amount of weight. Simply climbing a flight of stairs can increase the pain and cause dizziness.

Over the years, I have tried more medications than I can remember to try to reduce the severity of my migraines including amitryptiline, Cymbalta, Topamax, migranal, Imitrex, cyclobenzaprine, muscle relaxers, and Botox. None of the medications helped and they have had serious side effects. The Cymbalta made my brain very fuzzy and I was very forgetful, the

Topamax was contraindicated because I had a history of kidney stones, and the migranal is a Class X drug that can cause serious birth defects. This is a drug that I was needing to take multiple times a week. If it can cause such serious birth defects, how safe is it for me to be taking on a weekly basis? I have also taken medications not prescribed to me, including narcotics, as the pain was unbearable. The last time I took Percocet, it didn't make the pain go away, but just lowered it to more bearable level and made it so that I could function.

In addition, I've tried many things that were not covered by insurance at significant personal expense. I've tried supplements containing fish oil, magnesium, vitamin D, and tang keui. I've tried modifying my diet by eliminating sugars, dairy, legumes, and grains including gluten as well as increasing my water intake. I've seen multiple chiropractors and massage therapists and have had acupuncture done as well. I have seen some improvement utilizing chiropractic and massage therapy, however due to the cost, I have not been able to pursue whether more frequent applications of those treatments would be beneficial.

It is imperative that migraine treatments are available for those who suffer from migraine in any form. The one thing I've learned on this journey is that everyone is different in what triggers their migraines and what helps to minimize their pain. I was initially denied insurance coverage to receive Botox and had to appeal to have the insurance company cover the cost. The migranal drug at the time I took it was $100 for a single use dosage. Without insurance coverage, there is no way that I could afford these treatments. As stated above, alternative treatments may provide relief but are unaccessible to me due to the out of pocket cost being prohibitive.

We need better treatment options, including a variety of covered treatment modalities. We need more doctors specializing in migraine care to minimize the wait time we experience trying to see them. Doctors who are not specialists in this area simply do not have a good understanding of the disease and patients are ultimately left to trial and error to see what may help their pain and improve their quality of life.

I refuse to let this disease control my life. However in order to do so, I need the help of quality specialized doctors and insurance coverage to make treatments affordable and available. This not only will help me have a better life, it gives my son his mom back.

Sincerely,

Amanda Olson

Amanda Olson

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

1) Share your migraine journey

Hello. My name is Valerie and I am a 57 year old migraine sufferer. I've had migraines since 2011 and my neurologist believes they were caused by hormonal changes due to menopause. The migraines came on gradually. I would get a lot of "headaches" at work and I took Advil or Tylenol for them. Typically they would last 3-4 hours and it would be very difficult for me to function at work with the pain. I would either leave work early or go home after my shift and immediately lie down until the "headache" would disappear.

The "headaches" got worse as the months progressed. The frequency and duration increased and so did my use of Advil (which usually worked better than Tylenol). It got to the point after 5-6 months that I got a "headache" that would not go away. At that point, I made an appointment with my Primary Care physician. My PCP requested an MRI and referred me to a neurologist.

The neurologist diagnosed me with Chronic Migraine. I have no other illnesses (I know a lot of migraine sufferers have other issues beyond just migraine, but that is not my case). Honestly, I can't imagine having to deal with more than just this one issue. I was started on a preventive prescription medication and was given a prescription abortive.

Through the first 3 years, we tried many different preventive medications. The only medication that has ever worked in any capacity is Botox, and I was not able to even try that until I had run through a ton of other (less expensive) options, due to the requirements of my health insurance. Each preventive needs to be taken for a number of months 4-6 usually, before it could be ruled out as a viable option. Up until these new CGRP drugs, there has never been a migraine-specific preventive. So I've tried all of the "standard" medications: antidepressants, anticonvulsants, and beta blockers. These did absolutely nothing to help prevent my migraines.

I was finally at the point where I could try Botox. My insurance would not cover the cost until I had tried all the other, less expensive, options even though it is well known that Botox works better than most other options for most people. Because Botox is the medication that seemed to be the most beneficial for other migraine patients and I was hopeful it would be the "cure" I was searching for. As I said earlier, Botox has been the only preventive that has made any difference, but it is no cure. I have been taking it for 3 years now. It is administered every 3 months. For the first two months of every 3-month cycle, there is about a 40-50% improvement in the frequency and the length of a migraine attack. In the last month, it wears off rapidly and I have twice as many migraines and they are most difficult to abort. Most last 3-4 days and I have to lay down in a dark room in complete misery for at least 1-2 of those days.

I also see a naturopathic doctor (MDN). With guidance from her over the years, we have tried many other preventives. None of the naturopathic remedies have helped, but I do like the feeling that I have tried "everything", and also that these remedies are not likely to harm my body long-term, even if they didn't work. With the help of this doctor, I have taken a food allergy test and, based on those results, have eliminated possible foods that could also potentially cause these migraine attacks. Once again, eliminating foods from my diet did not make any meaningful difference. I do see this doctor for weekly acupuncture. It does not help my migraines directly, but it does help me sleep and I would rather do acupuncture to help me sleep than take another prescription medication for it.

Even with everything I do to avoid migraines, including the Botox, I still have anywhere from 6 to 15 migraine days a month. About half of that time involves me lying in a bed in a dark room. I cannot do anything with my time but think and sleep. I cannot read, listen to music, watch television, or participate in any activities at all. When I'm awake, I attempt relaxation techniques or try distracting myself with song lyrics or work problems that might be solved.

2) Describe the negative/disabling impact that migraine has in your life.

My migraine "triggers" include some fairly mundane activities that most people take for granted. My main triggers are light, sound and movement. The list of activities I am able to do without triggering a migraine is much shorter than the list of things I have to avoid. Since listing what I can do is pretty boring, here is what I cannot do for more than 15 minutes or a migraine will definitely occur:

Watch television/movies (video of any kind)
Listen to music (most complex audio although I can listen to white noise)
Sit in a room with more than 5-6 people talking
Go to a store (too much noise and movement)
Exercise (even walking around my short block can trigger)
Carrying a heavy object or any kind of strain like that
Being around bright light, sunlight or fluorescent lighting
Being around flashing-type lights like you might see on an afternoon drive (sunlight flashing through the trees)
Heat (anything above 90 degrees)

You might be able to imagine what my quality of life is like, based on that list. I rarely go anywhere but to a doctor's appointment. To entertain myself at home, I do a ton of reading, work jigsaw puzzles, sew and paint on rocks. My husband and son do all of the necessary running around – grocery shopping, picking up prescriptions, bringing me occasional restaurant food, etc.). I shop for everything personal (clothing and gifts) online. My world is very small.

I work! I consider it my one huge accomplishment against migraine as it is not all that easy. I am lucky enough to have a career where working exclusively from home is possible. I am a computer programmer and I am able to do that from home. Meetings are difficult because of the audio (sometimes visual) components and I sometimes have to skip meetings because of migraine activity. If I have use a very good microphone and there aren't many people in the meetings, I can handle an hour-long meeting 2-3 times a week without them triggering a migraine. I also use blue-light blockers on my monitor to help prevent light sensitivity. I am very lucky to still be working. It passes the time and provides me with pretty good medical insurance at a decent cost. I've worked for the same company for 20 years and have saved up a lot of sick time so I use a lot more than I have in the past but I work when I can and take sick time for the remainder.

3) Detail how existing migraine medicines fail to fully treat your migraine disease and have many unwanted side effects.

I’ve tried many medications over the years. Most just flat out do not work. Side effects have included weight gain and, in one instance, symptoms of heart attack. Here is a list, but I did not keep very good track of what I tried the first couple of years so this list is probably not complete.

Preventives I have tried:

Amitrypteline
Topiramate
Propanolol
Cholesterol Medication (can’t remember which one)
Simvastatin
Botox
Magnesium
Butterbur
Migralief (combination of different herbs)
Migravent (another combination of herbs)
CoQ10
Alergena (natural allergy medication)
CBD oil

Abortives I have tried:

Maxalt/rhizatriptan
Frova
Indocin
Seroquel
Zofran
Medrol
Dexamethasone
IV infusions of Depacon, Toradol, magnesium, Phenergen and Benadryl
Advil
Tylenol
Benadryl

4) Call on ICER to appropriately value your pain and disability

I spent 3 years jumping through insurance procedures to get to a point where I found something that partially works. My life is still very limited. There is so much a want to do but am still prevented from. I feel like I’m in some kind of “house arrest” program with an ankle bracelet, only my “bracelet” is my migraine. It keeps me home. It keeps me from enjoying family, friends, social activities, a simple walk. When I do go out, it’s to my doctor or to my back yard. I wear ear plugs at least half of the day to block out household noises, the noise from neighbors playing basketball in their front yard, the noise from a leaf blower or a lawn mower. This is no way to live. Having to wait for such a promising new drug, developed specifically for migraine, has been my lifeline. I cannot wait to give it a try. I have high hopes that one of these new CGRP medications is going to allow me to live my life again – to be able to sit in a restaurant for dinner occasionally, or go to a park or just shop for myself at the grocery store!

Bottom line is that there has been no preventive drug specifically for migraine available to us until now. I believe the CGRP antibodies are our best chance for a real, significant improvement to our lives and I urge you to do whatever you can to make these life-changing medications available to all migraine sufferers. I know they will be expensive and that I will never be able to afford them without my insurance covering the bulk of the costs. It is vital that these medications become available and affordable to those that need them.

Respectfully submitted by:
Valerie Patten

Catherine Paul

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My Migraine Journey

My first symptoms of chronic migraine with aura began while I was swimming in July 2009. I was a competitive masters swimmer and I began experiencing strange neurological symptoms while training—numbness and tingling in my right arm and leg, and numbness in my scalp and face. This numbness would come and go, and was sometimes accompanied by tremulousness, changes in perception of temperature, and weakness on the right side (my dominant hand). Over a few months, these symptoms began to appear at other times, in addition to during exercise. In the course of a year, I developed headaches, typically presenting as pain in my right eye, head and face, although at times pain appears on the left side, or in both sinuses. These headaches came to appear more often than not and eventually becoming refractory.

During this time, I was Professor of English at Clemson University, and this increasing level of migraine symptoms began to affect my work. Because of my busy schedule doing work I love, I was not able to rest to let symptoms abate. Eventually, these unrelenting migraine attacks affected my teaching: my inability to think clearly (concentrate, remember recent events) and my difficulty with language (finding the words I needed, constructing cogent sentences) meant that I missed many classes and eventually had to take a leave of absence. In October 2013, in the middle of a semester in which I was teaching two of my favorite classes ever, I quit teaching, gave up on my first opportunity to deliver a conference keynote lecture, and was admitted to the hospital for ergotamine injections (which did not work). Despite a period of serious rest, and because I was unable to find effective treatment, I retired on disability from the university and the academic profession in May 2015, when I was 43 years old.

Currently, I have some level of migraine symptoms most days, though often this is very mild pain or sensory/mental disruption. When I raise my level of activity—whether mental or physical—the level of pain and disruption increases as well, and after periods of significant exertion (regular intellectual work or a particularly busy schedule) headaches and other migraine symptoms become unrelenting until I take significant rest for a period of weeks. My migraine symptoms do not present according to the typical arc of prodome-aura-headache-postdrome. Instead, I have what my doctors have identified as aura symptoms (numbness, tingling, visual disturbance, tinnitus, dizziness) most of the time, frequently accompanied by pain (which is usually at a low to moderate level, but at times increases to a higher severity). Sometimes I have long periods of fatigue, and other times I feel more energetic and normal.

During a migraine attack, I am thrown into a psychically isolated world of being unable to express myself and simultaneously pounded with pain that I cannot make stop. My brain stops functioning so that I can hardly speak, and finding a way through steps to lessen the pain feels almost impossible. I want so much for people around me to help me fix this, but we are all powerless, so I go to bed and hope that by not moving, by focusing on my breathing only, but escaping the sensory overload of the attack, I can make it lessen, or that I can go to sleep and wake up a different person.

Migraine disease has negatively affected every aspect of my life—my profession, relationships with family and friends, and my ability to take care of myself through exercise and education. I quit a job that I loved, and where I had the potential to continue to grow for several decades. I have lost friends. I have struggled in my marriage. I have given up on career and other ambitions. I have lost a tremendous amount of money and earning potential. I have quit hobbies and sports. I have dealt with a tremendous amount of physical, emotional, and psychological anguish. I have missed important family celebrations. I am unable to accept invitations to do things I desperately want to do.

Negative/Disabling Impact of Migraine

As I noted above, I retired on disability from my vocation as Professor of English in 2015. This was the profession for which I had trained my whole life, and I loved teaching and writing scholarly work. Migraine made it impossible for me to keep a regular schedule as a teacher, and to do the high level of work required to write and teach well, and to perform as a reliable departmental citizen.

I was also a competitive masters swimmer, and because migraine symptoms have always intensified during exercise I have had to quit that as well.

I love to travel, but I have had to reduce this, too, because traveling requires a lot of energy and being able to follow a schedule.

Since retiring, I have set up an artist's studio at a local art center, where I quilt and make textile art. During periods of fatigue and intense migraine attacks, I am unable to work there at all. When I am in good phases, I can work there up to 10 hours a week, but usually less, before I am exhausted.

I also love to knit and read, and while these activities are less intense than those listed above, all are impossible during periods of fatigue and intense migraine attacks.

During periods of extended fatigue and while in the midst of a migraine attack (anywhere from twice a week to all week), I am unable to cook meals, clean my house, take care of my yard, attend social events, go to arts events, exercise, etc.

Perhaps the hardest part of this disease, though, has been letting go of my ambitions, because I was (and deep down still am) a very ambitious person. I cannot hope to be a senior professor, a person who wrote a groundbreaking book, who brought disparate fields of study together, who will teach abroad, who will build exciting interdisciplinary academic programs. When I read about opportunities, I have to let them go in favor of my quiet, very isolated, very limited life.

How Existing Medications Fail

Since I started dealing with chronic migraine with aura in 2009, I have worked with my family doctor, a doctor of environmental medicine, and three neurologists, including one doctor (Dr. Alan Finkel) at a nationally recognized headache center from whom I continue to seek treatment.

I have had three brain MRIs, two cervical spine MRIs, a lumbar puncture, a nerve conduction study, an EEG, EKGs, as well as tests for various autoimmune disorders, iron and vitamin deficiencies, and such other diseases as Lyme and Rocky Mountain Spotted fever.

I have been admitted into the hospital for ergotamine injections, seen two chiropractors, a massage therapist, an acupuncturist, two psychologists, and a nutritionist.

Medications that have failed include:

- prophylactics (Botox, sphenopalatine ganglion block, Topamax, propranonol, verapamil, indomethacin, acetazolamide, Lamictal, Allegra, Vimpat, Rozerem, Silenor);
- abortives (ergotamine injections, Maxalt, Treximet, Relpax, Zomig, Frova, naratriptan, Cambia, Sprix, and Excedrin Migraine);
- supplements (magnesium, melatonin, vitamins, feverfew, essential oils).

I have also tried such non-drug remedies as acupuncture, chiropractic, therapeutic massage, dietary changes and elimination diets, improved sleep hygiene, modification of exercise, meditation, and so forth.

I am currently taking Vimpat, which I believe helps with my symptoms of vertigo and tremulousness, but which does not control my aura symptoms of numbness and tingling, or my head and face pain, or the mental and language problems that come with attacks.

I regulate my schedule, sleep, exertion, diet, and exposure to environmental stimulants very carefully, in hopes that these things might reduce the frequency and intensity of attacks.

I have structured my whole life around migraine prevention, and even so, I am failing. I continue to see my headache specialist, and he creatively tries new drugs, combinations of drugs. Each time we try a new approach, I hope this one will really make a difference. I no longer expect to cure this disease, so I hope for less frequent attacks, some symptom-free days, and more ability to do the things I want to do.

The Need for Wide Access to CGRP Inhibitor Medications

My current doctor, Alan Finkel of the Carolina Headache Institute, has told me of the success of trials for these new CGRP inhibitor medications, and I am excited to try one of these drugs for myself. I understand that these drugs could be incredibly expensive, and that some insurance companies may be reluctant to pay for them. Having had to pay a lot of money out of pocket, having had my insurance companies deny access to drugs, I have struggled in the past with being able to follow my doctors’ treatments.

I know that I am not alone in having tried so many drugs and other treatments for my migraine disease, and I know that I am not alone in having struggled with insurance companies’ unwillingness to follow doctors’ approaches to treatment.

The Institute for Clinical and Economic Review
ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE
Two Liberty Square, Ninth Floor,
Boston MA 02109

May 6, 2018

To Whom It May Concern,

My name is Katelyn, and I am a chronic migraineur. I am writing to you today as a patient to participate in the "**ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE".**

I was diagnosed with migraines in the Spring of 2005 at the age of 11 years old. My diagnosis was not the result of my first migraine attack, but the result of several attacks over a period of 6 months.

My first migraine happened in 2004. It was associated with my menstrual cycle. I remember, as a child, the level of pain I experienced during my first migraine attack convinced me that I was dying. I had never experienced that type of pain before. My body shook, and I could not stop it. I was covered in goosebumps despite the fact that I was sweating. I was sick to my stomach, and ended up dehydrated. On top of all that, I was also dealing with the standard hormonal changes that every young woman experiences. I dreaded my cycle, because I knew that it would lead to this type of pain and sickness.

Over time, my migraines have evolved. In 2007, my migraines began to gain additional triggers. My triggers expanded to include: low pressure weather systems, bananas and other foods with high potassium content, and florescent lights. In 2009, my diagnosis was transitioned from episodic to chronic migraine. I was experiencing a minimum of 15 headache days per month. My normal month changed to being in pain for 3 of the 4 weeks per month. Finally, in 2015, my diagnosis was transitioned from chronic to chronic intractable migraine headache.

My longest episode was a 742 day migraine attack. I've had several attacks that have been more than 60 days. These attacks are only able to be treated in the hospital or through intensive outpatient therapy with the utilization of intravenous medication.

My migraines impact my daily life. I've lost the ability to work normal hours, and I require extensive accommodations to function like my colleagues. Finally, I miss out on having a "normal" life in being able to support my friends and family.

I've lost the opportunity to witness my friends' weddings due to hospitalization, or having to go to these event on large amounts of medication. These medication can impede my memory of these happy events. It is truly heart breaking.

I frequently struggle with dehydration due to being nauseated or sick to my stomach for long periods of time associated with my migraines. I've spend hundreds of dollars on many types of glasses and sunglasses to try to combat the lights that trigger my migraines in an effective manner. Finally, I have tried almost every medication and surgery currently available with no success or with side effects that I could not tolerate.

I have tried: amitriptyline, nortriptyline, Topamax, Bystolic, Fetzima, Effexor, verapamil, Botox, Depakote, clonazepam, benzodiazepine, VIMPAT, Keppra, Lectirim, Prozac, Magnesium, riboflavin, Feverfew, and butterbur root just to name a few. The side effects of each drug has created dangerous issues in my body. Butterbur root and feverfew messed with my liver until it was dangerous and I had to be hospitalized. VIMPAT, Keppra, Topamax, and Depakote cause suicidal ideations and extreme hostility and have almost lost me my jobs. Prozac, Fetzima, and Effexor cause an increase in heart rate that makes me unable to stabilize my heart rate(due to POTS), and then I will experience fainting episodes which can lead to concussions or other injuries. The Bystolic, Verapamil, Amitriptyline, and others have cause the opposite problem as the Fetzima and Prozac where my blood pressure drops, and I will faint due to POTS, but without the spike in heart rate first. These fainting episodes again can lead to concussions and other injuries due to falls.

Unsuccessful abortive medications include: Imitrex, Treximet, Zomig, Zembrace, Phenagren, Benadryl, Noraflex, DHE 45, Migrinal, Zofran, Keppra, Magnesium, and Excedrine, just to name some of them. Not only do these medications not alleviate my migraine, but their side effects: tiredness, dizziness, fainting, nausea, and headache (yes, this is a side effect of several of these medications) also inhibit my ability to work if I have to take any of these mediations while I am at work or school. It impacts my attendance, which in turn impacts my colleagues because I am a member of a team.

Out of desperation, I have even pursued surgical options to try to alleviate my migraine headaches. In 2015, I had Lasik eye surgery after a neurologist blamed my poor vision and glasses for my migraine headaches. This surgery was successful in correcting my vision, but did not do anything for my headaches. The following year (2016), I had a neurostimulator surgically implanted to try to assist with my migraines. Although the stimulator does reduce my pain level, it does not actually impact the migraine cycles or stop the migraines from happening.

I sincerely hope that all of you on the committee will make the new medications affordable and accessible to patients experiencing migraines. It is important for those of us with migraines to be able to maintain our jobs, and rejoin our lives with our families and friends.

Thanks for your time and consideration.

Sincerely,

Katelyn Pearson
MSW Student
Chronic Migraineur

I have been suffering from Migraine headaches for at least ten years. They occur each day beginning in the afternoon and getting the worst about 3 or 4 am if left untreated. I am presently taking an antacid tablet with lunch to help me tolerate 550mg of Naproxam with dinner. I then take 5mg of Zolpidem, 2.5mg of Naratriptan and 4mg of Tizanidine before bed each night which helps to control them but does not always do so. Even though I have Medicaid and a substantial supplemental policy on Anthem, my insurance is limiting my Naproxam to 18 tablets a month. I have been given a substitute for the Naproxam but must wait a day before taking it so headaches can return in the interim. In addition, I use a Cefaly device on my head for twenty minutes every night. When all else fails I use Zomig mist in the middle of the night to reduce symptoms. I have tried other medications, some of which have had harmful side effects and other which have not been effective. I am hoping this new device will reduce the need for me to take the Naproxam which has caused stomach bleeding in the past. Without all these medications the pain prevents me from sleeping. Jason Peck

Hello, my name is Michelle. I have suffered horribly from Cluster Headaches since I was 22 years old. I am now almost 52 years old, being born in 1966. I wasn't properly diagnosed until 2009. I was so embarrassed by my red eye and showed several doctors over the years. None knew what it was—including doctors in the Emergency room---where after many years I sought help from the agony. But because the pain wasn't acute, I was only diagnosed with a simple migraine. I had had a migraine when I was about 15, and our family doctor said ir was an allergy.

I knew what I had experienced all those years was not the same—by FAR. I even showed my red, sagging, watery left eye to the other doctor in our family practice. He simply said he didn't know what it was—and left it at that—with NO effort to investigate.

Years went by…painful years. I started to notice that certain things brought it on: ovulation; my period; strong scents, like being around cigarette smoke or excessive perfume. I was always in pain. I tried taking OTC medications for the pain. It ended up being 9 extra strength aspirin per day, or the same amount of another type. I had given up hope of relief. I was finding it hard to work being in this condition so much. Plus I tried to volunteer at a type of religious group, helping others. Eventually, I got fired from my main job for being tardy all the time. I had begun seeing a psychiatrist, at the urging of my “boss” at the religious place. So I was on Geodon, which made me so tired. Getting fired really affected my self image.

I just couldn't cope. The CHs were still very active, although I still didn't know what I had. I even showed my red eye to my psychiatrist, an M.D. He didn't know. So I would make light of it and say I was “street fighting, and you should see the other guy.” I mean, I had to do *something,* since I had no clue. It was so frustrating to be in so much pain and to have no answers.

Then, I was able, since I had lost my income, to get a 100% discount from Truman Medical Center, a local teaching hospital. In meeting an internist for the first time, a resident was also there. I didn't have a CH then, but described them. The resident immediately responded, “sounds like a ‘cluster headache.' So a CT Scan was ordered, which came out “normal.” It will, if it is for a CH. The doctor also gave me a referral to their neurology department. Sadly, there was a wait up to a year, possibly more to get in.

In the meantime, my parents had moved from Tennessee back within Missouri, to Branson, and invited me to come stay with them. Mom helped me get into see a Neurologist, and I had free legal aid helping me get Medicaid, so I could receive continued care. It was 2010 by this time. I had been suffering from the pain since I was around 22, in 1988, and things had gotten much worse. It is, certainly, a very long and uphill battle to get a proper diagnosis, then receive treatment---all the while dealing with a medical community that isn't properly educated about

CH. The only doctors I found who did know about them, were a dental school instructor (an MD) and chiropractors—as well as the resident and the one Dr. at Truman Medical Center.

This is beyond reprehensible!!!

There also must be a disability designation for CLUSTER HEADACHES. They aren't just “migraines.” Imagine a brain freeze from a cold drink—that is 100x worse and in one eye---and WON'T GO AWAY. Many times I have wanted to rip my eyeball out if it would make the agony only STOP. CH is a lifelong condition with NO CURE.

It's time that all doctors and and the disability courts are properly trained about this the MOST PAINFUL CONDITION KNOWN TO SCIENCE

Thank you for listening,

Michelle Pingel

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

May 7, 2018

To Whom It May Concern,

I am a 49 year old mom who is desperate for pain relief from the chronic migraines I have suffered from since childhood. Below is a detailed list of everything to date I have tried. I am eagerly awaiting the new CGRP therapies as I am not sure how much longer I can go on in this hell of a health condition. So hoping you can help!!

Timeline
5-13 years old- Once a month episodes triggered by food, flashing lights, sleep , weather, etc. very intense pain lasting only a few hours, ending in vomiting and sleep work up a new person. Easy to survive the intense pain knowing that shortly it will be gone for good. No meds used.

14-18 years old- Increase in frequency seen with puberty. Sometimes daily episodes but lasting only few hours and then gone with sleep. Parents took me to neurologist for brain scan. All clear just classic M. Tried propanol at that time for preventive had bad reaction. No abortive used other than aspirin.

18-28 years old- Once a month episodes always the day before my period and gone the next day. Occasional episode with usual migraine trigger but gone next day. Used Imitrex shot to abort once a year.

29-41 years old- Episodes increased in frequency during pregnancy and beyond to more like 1-2 a week. Stopped using Imitrex during these childbearing years. Relieved with Excedrin and Tylenol combo and sleep. Never lasted more than a day.

41-47 years old- M become Chronic. 20-25 month lasting days at time with no relief. Only once every 3-6 months though do I have ones that I feel like I need to go to the hospital though I resist going to hospital as nothing they can do. I know episodes are hormonally triggered from perimenopause. Worst M of the month come during period and week after period. Searching for cure becomes full time effort. Go to top specialists in country and seek every possible angle tried as detailed below in treatment section. Nothing works. Desperate beyond words.

48 years old- Frequency of most vicious episodes increases as does intensity. Term is Status Migrainosus Not able to sustain much more. Have hope in hormone balancing.

Treatments Tried
Acupuncture - Love acupuncture but not for migraine. Tried so many times and even let them do medieval bloodletting.
Healers- Yes, from places near and far, to no avail.
Massage - Shoulders were getting so painfully tense and contributing to pain but now twice monthly massage from Lauren help that. Have not helped in reducing migraine but my body feels better.

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Meditation- For a month been doing daily meditation. Although I like it now, hasn’t helped head yet.
Bar Class/Yoga - Starting to go twice a week now, hard to keep consistent when feel so bad.
Light Therapy- Green light and red light , tried both. Did not work. Special red glasses did not work either.
Oxygen Therapy- O2 did not abort of prevent migraine. Nor did breathing exercises
Chiropractic Therapy- Many different practitioners no results
Infra Red Sauna Therapy- To remove heavy metals. Tried once was good will try again.
Cryotherapy- At NASA space did a few sessions and left me with painful permanent goose bumps for a year.
Cranial Sacral- Therapy- Not effective

RX Medications - Those that do work start off working for a couple times then stop. And those that work for longer cause rebound headaches.

Preventatives -
Beta Blockers-
Propanol
Amlodipine- Not a beta blocker but supposedly a heart med that can eliminate migraine but I was on 6 months and didn't work and causes legs to swell too badly.

Antidepressants-
Lexapro- Did not work for depression or pain.
Cymbalta- Currently on 60mg/day, works great for depression. Initially worked great for pain. Never let my pain get above a level 8. One year later pain goes regularly to 11.

Abortives -
Triptans-
Sumatriptan- This is the shots I take. nasal and pill do not work only shot . Provide a few hour relief when in most urgent pain then cause rebound with in 12 hours .
Maxalt- Work with mild headaches caught early and then causes rebound 24 hours later.
Zomig- Did not work
Relpax - Did not work and Extreme rebound
Frova- did not work

Analgesic/NSAIDs-
Advil- doesn’t work hurts stomach
Aleve- doesn’t work hurts stomach
Excedrin- Works sometimes so my go to but don’t want MOH. So can only use 2 times a week max.
Toradol Shot- didn't work, tried a few times.
Indomethacin- did not work hurts stomach

Opioids/ Barbiturates-
Codeine- tried made me sick and does not work
Morphine- tried make me sick and does not work.

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Ergots -

Cafergot -didn't work
Other-
High Ball- Sugar Free Energy Drink- Has Lots of Caffeine and Ginseng and I use as first order of defense I drink half of it to abort small on coming.

Hormones -

Pro-gest cream seems to be amazing at helping mood and stopping bleeding. Hoping balancing hormones has good effect on head.
Mirena IUD- Used to reduce severe monthly bleeding. Instead it distributed it over 3 weeks a month. After three years had it removed this past month. This is first cycle w/out it. Bleeding 'normal' for me. Heavy for most but not too heavy.
Estroidol patch- didnt work
Anti-nausea
Zofran- Works great take it when vomiting and need to keep down steroids.
Muscle Relaxers-
Baclofen- Does not work
100mg progesterone pill good for when i need to sleep w/ M knocks me out but not for every day

Diet - Have tried every diet under the sun to no avail. Currently on no sugar, no dairy, no gluten, no chocolate, no caffeine, limited glutamates and limited histamine foods.

Ketogenic- high fat low carbs to prevent seizures 6 months
No Glutamates - Started this one a few weeks ago supposed to reduce estrogens. Glutamates like MSG in everything from brown rice syrup to guar gum, carrageenan and hydrolyzed protein and hundreds more.
No Histamines- Build up of histamine could explain why one day chocolate not a trigger and another day it is. makes sense. I continue to eat reduced histamine food.
Green Juice Daily for 3 years- turns out kale not good for migraine or kidney stones. Helped build immune system but no help with M.
No Gluten, Dairy , Sugar, Chocolate, Caffeine for one year worked for a month felt better then regressed. Still mostly continue this eating as ant-inflammatory.
No M Trigger foods per Johns Hopkins doctor book for 6 months
Anti Inflammatory Diet always
Stanton Protocol - tried this full on 100% for 5 months. little carbs, high fat, extra salt, balancing electrolytes, extra water . Did not work.
Simply Well Protocol- tried bits and pieces but want to try the full version though involves juicing carrots and potatoes and carrot juice too sweet for me. And eating radish , zero histamines and many supplements. Ideally this program is done w/ out Rx meds so have to wean off them.
Low Salicylate Diet- too many foods to eliminate

Machines

Spring TMS Device- Tried this for 9 months. Thought it slightly helped at first but then felt it was removing my memory.

Cefaly- Tried this zapping device didn't work.

Herbal Supplements- I have tried hundreds of supplements over the years. The best being butterbur but its success was short lived. My biggest problem is lack of consistency with supplements so need to be better at sticking with them 3-6 months instead of 3 weeks. Below is a partial list of ones I have tried for M specific and results.
Melatonin - Tried for 6 weeks as was supposed to reduce menstrual migraine and did not work. Stanford doing trial of it now.
Magnesium- Soak in Magnesium baths nightly and am off and on again supplements. Did for months at a time no result.
Butterbur- Was dreamy reduced frequency and severity by 60-80% and I needed much less sleep and woke refreshed. Wore off after 2 months. Tried to retake a few times over the years but never got the same good results.
Feverfew- not effective
CoQ10- not effective
B6, B12, Methyl B not effective
Niacin- Tried as abortive and even though took small dose had bad reaction of itching and vomiting.
Iron- took when extreme bleeding as low iron increases M.
Omega 3
Vit D
DIM- tried off and on , need to be more consistent as supposed to even out hormones.
Pregnenolone- i think it is this that recently is making me feel so great mood and energy
Peppermint- makes worse

Essential Oils-
Frankincense
Peppermint- exacerbates.
Lavender
Every other one you can think of

Thank you so much for reading my story. Please do everything in your power to help those of us that can not help ourselves. Please allow us access to the CGRP inhibitor medicines.

Sincerely, Jennifer Pleasants

May 5, 2018

To: The Institute for Clinical and Economic Review (ICER)

Subject: Affordable Access to New Medications for Migraine Prophylaxis

Dear ICER Review Panel,

I am a 23-year old woman, who has suffered from Migraines for seven years. My migraines are constant. For about half of the days in a month, my migraines can be ranked at a 4 out of 5. I started having abdominal migraines in my senior year in high school. After a car accident, my migraines presented with vomiting, light and sound sensitivity. I had a tutor to graduate high school and tried to attend college on two separate occasions, only to have to withdraw from classes for my inability to leave my dorm room due to constant head pain. I didn't get the chance to experience any social aspects of college and only incurred the cost of attending a college that I couldn't leave my room to participating in.

I have been fired from jobs, since I appear unreliable, not knowing if I will be disabled by a more severe migraine without warning. I have spent months in bed, in a darkened and quiet room, only leaving my house for doctor's visits. From medications, I have lost 40 pounds, gained 60 pounds, and lost 40 pounds from my inability to stomach food. My parents have been very supportive and allowed me the room and space to deal with this chronic illness. I have recently been denied Social Security Benefits, as I don't meet their description of disabled. I need the new medication, so I can have a career and productive life.

Before I developed migraines, I was an active teenager. I was in a dual curriculum high school (College Prep and Cosmetology). At the same time, I was the Football manager, and an active member of the Theater Stage Crew at my high school. One day I did all of this, the next I was in a dark room and didn't emerge for 6 months! I lost contact with all of my friends and have only my family to socialize with. My family has sacrificed a lot to fund treatments for my illness. My parents have both missed a lot of work to shuttle me to these doctors as I cannot drive, for fear of a migraine attack while driving.

We have tried many different and sometimes invasive therapies. I have started and stopped many medications for my migraines. The standard treatments such as triptans, have no effect on my pain level. I have seen a series of acupuncturists, chiropractors, nutritionists, ENT's, 5 neurologists, a cardiologist, therapists, internists, and so-called "headache specialists"

I had my gall bladder removed, since my test showed my gall bladder was slightly under functioning, and we were grasping at straws to find a reason for my illness.

I am still under my parents Health Insurance, and I have tried a laundry list of medications that failed to manage my chronic pain:

Amitriptyline, Gabapentin, Imitrex, Zomig, Ativan, DHE, Sprix, Quetiapin, Treximet, Onzetra, Flexeril, Norflex, Bacofen, Isomethptene, Lyrica, Relpax, Phenergan, Roboxin, Skelaxin, Thorazine, Torodal, Vistaril, Wellbutrin, Lidocane Nasal Spray, Reglan, Aleve, Advil, Advil Migraine

These medications have caused me to have side effects like hand tremors, extreme nausea, extreme head pain, and weight gain. In addition, these medications had no positive effect on my migraine symptoms.

My current regime includes, Botox (12 wks), Keppra, Klonepin, Belsomra, Effexor, Lidocane patch. I am still unable to hold a job of any sort, due to the unexpected pattern of my illness.

To think that there is any question or the possibility that I or others migraine sufferers would not have access to this new medication or any possibility that my insurance wouldn’t cover it is astounding. If you had a disease and were told there is a medication that will target your disease, but you can’t have it, you would be outraged. I’m counting on this medication to increase my quality of life, lessen my daily pain, and allow me to live a life where I can make difference, and not be a burden on my family.

Regards,

Penelope Plum

PS Please note that I am submitting this public comment using a pseudonym because migraine is a highly stigmatized disease and I have legitimate concerns about connecting my name publicly with migraine.

The Institute for Clinical and Economic Review May 7, 2018
Re: CGRP

Dear ICER,

I am writing to ask that you and support both episodic and chronic migraine patients in having access to the new CGRP inhibitors. I am so hopeful to have access to these new monoclonal antibodies. The high level of successful treatment that has been demonstrated in Phase I, II and III trials is a major breakthrough. That the group of people who have benefited includes many with recalcitrant patients, who like myself have only been helped t a small degree by standard chronic migraine treatments is very encouraging. Maybe this is because CGRP inhibitors are the first treatment that was developed to directly treat a know biochemical pathway associated with migraines.

I have had chronic migraine for over twenty five years. Out of the long list of medicines that I have tried, only two treatments have helped, somewhat. Triptans help when I need to manage the worst attacks, and onabotulinium toxin A injections reduce the severity of my symptom. However, I have headeache/migraine all the time, and the partial relief I get from triptans only lasts for a few hours; if I take one every day I develop rebound effects. They also make me fatigued. Botox has the effect of reducing the severity of my symptoms (on average my pain is less severe (down a point or two on a scale of 10), but it weakens the muscles in my eyes, and the beneficial effects wear off far before the twelve week intervals between treatments.

A lot of my life is constrained by the effects of my chronic migraines. I lose sleep, miss many social opportunities, and am not as good a mother and spouse as I would be if I wasn't managing head pain. Without the help of triptans and botox I was even more limited. I am a health administrator for the RI Department of Health, and I work full time, but I know that I would work better and have a better quality of personal life if my headache pain was reduced from an average of moderate, to an average of mild. If I could have some days without head pain, it would feel like a miracle!

I have Unitedhealthcare (UNH) insurance, and I know that ICER's final recommendations will influence how they cover CGRP inhibitors, including what tier the medicines will be in on the plans' formularies, and what types of prior authorization or step therapy will be required. I anticipate that my condition will receive authorization for CGRP inhibitor therapy but, of course, I am concerned about price. I don't think it would be right if coverage was limited to people who have frequent, intensely crippling pain. Insurance companies need to provide coverage to treat persistent, debilitating pain like mine. While price is a big concern for me, I do think there needs to be broad insurance coverage for CGRP inhibitors, even if it means that it is more expensive for me than it would be if people with less chronic or less severe pain were covered.

Treatments for other chronic pain include hip and knee replacements, which are very expensive. Treatment for recalcitrant head pain should be considered at least as important by insurance companies. Given the likely expense of CGRP inhibitors, it would be appropriate to apply similar requirements for step treatment. As for other pain conditions, as long as pain remains moderate to severe after less expensive options are not successful, then more aggressive options should be available. Please recommend that insurance companies cover CGRP inhibitors to provide at least as much pain relief and financial assistance as is offered for other debilitating conditions. Arguably, the societal benefit will be greater.

Thank you for your attention. I hope very much that your recommendations for CGRP inhibitors will benefit a large percentage of migraine sufferers. If this new therapy has a broad base of beneficiaries, much more data will be collected, allowing for faster improvement in the underlying understanding of its therapeutic effects.

Sincerely,

Sherry Poucher

May 6, 2018

Susan and Michael Powell

The Institute for Clinical and Economic Review (ICER)
Two Liberty Square, Ninth Floor
Boston, MA 02109

Re: ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Dear ICER Review Panel:

My name is Michael Powell and my wife Susan has suffered from chronic migraines for over 30 years. I wanted to share with your panel how chronic migraine has affected our lives. I first met Susan in 2001. She was living near Seattle Washington and I had just moved to Atlanta Georgia to do HIV/AIDS research at the Morehouse School of Medicine. We met online and shared an interest in Science and both had family living in Texas. Early in our relationship Susan told me of her decades long struggle with chronic migraine. Like most people, I knew little about the disease and didn't fully realize the impact it would have on our lives. I came to understand that she had lost her job, marriage, and led a life on minimal subsistence on disability benefits. She had seen her father deal with the disease as she was growing up and watched him end his life in suicide. She spent her days traveling to doctor appointments to seek an answer to her condition. She ultimately moved to Georgia, and we were married in 2008.

I started to understand her daily struggles to lead any sort of normal existence. I learned that migraines were not simply "having headaches" that could be treated by "taking aspirin". They were debilitating attacks that make individuals sensitive to light, sounds, and smells that we often don't even notice or think about. I came to realize that the state of Georgia (home to CDC) had NO board-certified headache specialists and that only a few headache centers exist throughout the country, even though migraines affect 1 in 5 people (mostly women). Yet, it garners less than 1% of NIH-funded research dollars. She had already been given a dozen different medications that are primarily used for other disorders but have been used "off-label" for treatment of chronic migraine. Yet, these medications have offered her only temporary and partial relief. In desperation we have traveled to the famous Diamond Headache center in Chicago. On our flight to Chicago, weather delayed our takeoff. We were forced to sit on the airplane for two hours, a situation almost guaranteed to induce a migraine. By the time we returned to the gate her migraine had reached crisis proportions and I had to evacuate her by ambulance to a local Emergency Room. We ultimately made it to Chicago and Susan was placed in the hospital for a week. The treatment helped for a short period, but we could not afford to fly to Chicago to follow up.

It now seems obvious to me that we need more migraine research to find specific drugs to treat migraines. It was with great excitement that I first heard about CGRP inhibitors. The first treatment specifically designed for migraines. The path to FDA approval has been long but is scheduled to be reported out by FDA in May of this year. It represents hope for us that this treatment is effective for many that do not respond to other treatments. It shows promise to be able to reduce the impact of chronic migraine on her life. While the excitement of this new drug gives hope, the realization that many migraine sufferers may not have access to this potentially life altering treatment, is frightening. So many people suffer but have so few alternatives. I think it says something about our humanity if this hope is snatched away from those who often have few advocates, few compassionate care-givers, and have huge impacts on their ability to live a normal existence. I know from my own experience that to fully understand the impact that this disease requires years to appreciate and understand (it took me ten years). You are being asked to make a decision that will affect the lives of these individuals. I implore you carefully consider what your decision will mean to all of those who suffer, and to those of us who love and care for these individuals.

Sincerely,

MD Powell

Michael D. Powell

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I started getting episodic migraines when I was only seventeen. They lasted through my adulthood until 2012 which is when I started getting chronic migraines. (More than fifteen headache days per month over a three month period of which more than eight are migrainous, in the absence of medication over use.) Many years ago I was also diagnosed with cluster headaches from my migraine specialist.

Migraines do not discriminate on age, color, gender, lifestyle, or religion.

My migraines feel like my head is being slammed in a car door over and over again. The pulsating in my head feels like my heart is in my brain and trying to split my scalp open with every beat to make entry into the outside world. The cluster headache feels like someone is physically putting their hand in my eye and trying to pull the eye out of its socket. The pain is worse than my two natural child births. I live in fear of when the next one will strike. Most times the attacks cause me to lie in my dark bedroom and ride it out with medications that very often don't even touch the episode. The pain truly is indescribable, in fact, it's horrifying.

I look forward to new drugs that can help someone like me who can't take triptans due to Atrial Fibrillation, in particular the new calcitonin gene-related peptide. I'd like to see my functional ability be more doable, less migraine days, and less pain severity.

The one thing that I miss the most, is the fact that migraines have stripped me from my ability to work a full time job. This has left me with a feeling of worthlessness of my individuality that I use to have in the work place, and as a person as a whole.

My experience with my last job was terrible. So bad in fact that I got harassed by my immediate team leaders, and supervisor for taking my prescribed oxygen tank to work, wearing migraine sunglasses at my desk, and requesting the very strong fluorescent light above my desk be removed or replaced. This goes to show you that there is little knowledge about migraines in the work place. I had to go to Human Resources about the harassment. That made things even worse with my department Leaders. It's not like a migraine comes with a warning with a time that it will start or a period of how long it will last, or for that matter, even what the severity of it will consist of.

I am currently using rescue medications: Oxygen, Toradol IM, Phenegran IM, Bendryl IM, and the (FDA eNeura TMS which my insurance company denied coverage due to lack of data. It's FDA approved and you have to have a prescription for it. Data had to be compiled for FDA approval, yet my insurance company still denies it's a tool that can sometimes help abort my migraines, especially the barometric pressure ones. It's costing me three thousand dollars a year to rent.) Sometimes this regimen above will in fact work. Other times it does not. Knowing when to medicate is especially hard, in order to prevent MOH. (Medication over-usage Headaches) Due to this, I can only medicate twice weekly with pills or shots. The TMS device (Transcranial magnetic stimulation) allows me usage any time I need it without the worries of MOH.

I get trigger point injections every eight weeks for prevention. I've been on botox for migraines for three years until I had a severe allergic reaction with body hives that invaded my entire body of skin for almost three months. I take prescription magnesium oxide 800 mg's a day, and I am also on zanaflex for the muscle tension in my neck. I have been on other medications i.e. topamax, zonegran, verapamil, prozac, trazadone, and other anti-seizure, and antidepressant medications that had awful side effects and made it just unbearable for me take. My current natural approach is Vitamin D, B, B12, and CoQ10. I also use the cefaly device daily for prevention. Even with all this, my quality of life is still affected due to the inconsistency of my medications not fully being able to provide migraine free relief.

It is my wish that people, especially those in the medical field, work place, and insurance companies understand that my pain and migraine disability is very real. I think it's very important that chronic migraines, cluster headaches, exertion headaches, and episodic migraineurs have access to the newer and improved drugs; in particular the CGRP inhibitor medications. We should not have to climb mountains, swim seas and do back-flips in quick sand in order for our insurance companies to cover the cost to help elevate our pain. Without our insurance companies being on board to absorb the majority of the cost, many people like myself will never have access to this very important drug that can reduce migraine days, and offer myself and others some worthiness and more pain free days back into our lives.

Thank you.
Teresa Powell (54)

Institute for Clinical and Economic Review (ICER):

My name is Kristin and I first started getting headaches when I was 9 years old. I missed a lot of school that year, and I remember many trips to various doctors and several diagnostic tests trying to figure out what was wrong. I wasn't diagnosed with migraine until almost 20 years later, but in hindsight, those "headaches" were probably migraine.

I woke up on my fifteenth birthday with my first classic migraine. One sided pain, light sensitivity, vomiting, the whole bit. My mom took me to the doctor, who decided I looked pale and prescribed iron supplements. As I mentioned, I wasn't formally diagnosed until my twenties. At first, my migraines were episodic and responded to over the counter medications. After having my boys in my mid-twenties, my migraines turned chronic, and my primary care doctor referred me to a neurologist. I have tried countless medications through the last twenty years, both abortive and preventative. Either the medications don't help or the side effects are unbearable. After seeing several neurologists, I'm currently seeing a headache specialist. But even with the powerful brain of my specialist and several preventatives, I still get 6-9 migraines per month. My migraines typically last 2-3 days, so that totals 12-18 days with migraine. April 2018 was a particularly bad month for me with approximately 15 days with migraine, over a third of which were severe enough to either send me to bed, or wake me up during the night. For some reason, 4:00 in the morning tends to be a particularly painful time of the day.

My symptoms include one-sided head pain, light sensitivity, noise sensitivity, nausea/vomiting, difficulty concentrating, vertigo, blurred vision, mixing up my words or difficulty finding the right words. I have to move more slowly because any kind of activity aggravates my pain. It's often very challenging to function, and at times, it just takes too much strength or energy to power through, and I end up in bed.

With the help of my medications, I'm usually able to work through a migraine, although it definitely affects my performance. I'm a veterinary nurse, so lives are at stake. Mistakes can have far reaching consequences. When I have a migraine at work, I make sure my team members know, so that they can help me make sure what I'm doing makes sense. I double and triple check myself, and have my co-workers double check my work too. Fortunately, I currently have particularly supportive co-workers. That hasn't always been the case. Still, there are days I have to miss or leave work early when the pain and nausea are too debilitating, or if I feel my performance is affected too severely to be safe.

In a 30 day period, I might miss one day of work, and typically spend 3-5 days bedridden with severe pain. When I do miss an event, it's more often leisure activities, social activities or my children's extracurricular activities. I have lost count of how many orchestra concerts, soccer games, track meets, cross country meets, etc. I have attended with a migraine, and many I was unable to attend at all. Missing my children's events is one of the most precious things migraine has stolen from me.

Over the years I have tried scores of medications to manage and treat my migraines. In the preventative category, I have tried beta blockers, calcium channel blockers, antidepressants, anti-seizure medications, and muscle relaxants. Beta blockers made my blood pressure drop so low that I was passing out. Amytriptylline made me almost comatose, and nortryptilline made me anxious and angry. I took Paxil for a while, but it didn't help, and I had terrible withdrawal effects going off of it. Effexor gave me severe muscle twitches, and lexipro triggered a migraine the first day I took it. I've tried Botox three different times with no success. I was taking zonegran for almost a year and it was helping, but I had to stop taking it because I kept losing weight. I was down to about 109 pounds when my doctor decided I was approaching malnutrition and needed to stop it. Currently, I take two muscle relaxants, Flexerill and Robaxin, and one anti-seizure medication, Gabapentin, as preventatives. I also take magnesium and vitamin B2 supplements. These have helped me manage my migraines so that I only have 6-9 per month. They used to be almost twice that.

I've tried many abortive medications as well, just about all of the triptans. I started with Axert, but it stopped working, so I switched to Maxalt, which made my arms numb, so then I tried Zomig, which didn't help. I used Relpax for a while, but my migraines are longer lasting, so the Relpax would work for a few hours, then stop working before the migraine was over. I have had better success with Frova, which is what I use now, but to avoid medication overuse headaches, and because of insurance company restrictions, I only get 9 per month. Recall that my migraines typically last 2-3 days. At one pill per day, I run out of Frova pretty quickly. I also have injectable Ketorolac, however my insurance company is restricting the amount they will pay for to two vials per 30 days. This puts me in the unfortunate situation of having to ration my medication. Every time I feel a migraine starting I have to ask myself, how bad is this one going to be? Can I manage it with an extra muscle relaxant or am I going to have to use one of my limited Frova or Ketorolac. The challenge with this decision making process is that migraine medications work best when taken at the beginning of a headache. So it's this constant battle between waiting long enough to decide if I really need a triptan or injection, but not so long that they won't work when I use them. There have been months when I have run out of medications before being eligible for a refill. It's a miserable way to live.

I've been counting down the days until the CGRP medication will be available, hoping that it could be helpful for me in reducing either the severity or frequency of my migraines. Maybe even both! My biggest fear is that CGRP will be too expensive, or that my insurance company will deny it. Or qualify it in such a high tier formulary that even after the necessary haggling of prior authorizations and other ridiculous posturing, I still won't be able to afford it. The CGRP options are the first medications specifically for migraine that patients have seen since triptans were released twenty years ago. Twenty years! Migraine research funding is next to nothing compared to many other diseases. Yet, there are millions of people that suffer from this debilitating condition. Now, there is a promising new treatment with outstanding results in the FDA trials. It would be a travesty for the patients who would benefit most from these drug options to be unable to use them due to expense.

ICER, please make these medications accessible and affordable. I understand the need to make a profit. But there are so many people with migraine, profit will come just as effectively if not more so, by making the CGRP medications affordable to all the patients in need. Work with the insurance companies, and encourage them to cover these new migraine specific treatments, so that migraine patients who could benefit from them are able to do so.

Thank you,
Kristin

To Whom It May Concern:

It has come to my attention that a new class of CGRP inhibitor medications will be reviewed by insurers companies and the Institute for Clinical and Economic Review (ICER) will be assisting this process. However, there isn't a migraine patient or headache specialist on this review panel; as a migrainer, this is very concerning to me. So, let me share my story with you, in hopes to make you revisit this decision.

I first developed migraines five years ago at the age of 25. I was at work when it first came on. As an Educational American Sign Language (ASL) Interpreter, I couldn't just leave to go home. If I am not there, the student misses out on their education. This headache was unlike any headache I've experienced. It felt like my temples were being crushed into my head. Tylenol didn't do the trick and I'm allergic to Ibuprofen. I managed to tough it out for the day.

After several attacks, I went to see my doctor. My doctor was not available, so I saw a nurse practitioner. She diagnosed me with cluster headaches and proscribed me Tramadol for sudden attacks and Cyclobenzaprine nightly to help with muscle tension. Tramadol definitely did the trick. I no longer had pain, but also felt high as a kite. I couldn't believe that I could take this medicine and still work. I then understood why people became addicted to Narcotics.

Later that year there was a mandate that all patients who were taking Narcotics would have to have a medical review every three to four months. It was a pain, but I understood. I came in for my yearly physical. The doctor went over my medications and set up my next appointment for my Narcotic review. When I returned my doctor (the same doctor from earlier) was shocked that I was on Tramadol. She said she would never prescribe it to me. I reminded her that she didn't, but a nurse practitioner had, the doctor had authorized it, and then set up this appointment. She quickly changed my prescription and sent me on my merry way. I questioned her about going to see a neurologist and she said that because '*I wasn't projectile vomiting that I don't need to see one*.' Needless to say, I switched practices that day and my new doctor sent me to a neurologist right away. This new doctor went so far to say they wouldn't even look at changing my medication until I saw a neurologist.

My first visit to the neurologist said that he'd treat my cluster headaches as a migraine. He encouraged me to start logging my migraines and to start a daily preventative migraine medication. I told him I did not want to be on any medication unless it was absolutely necessary. He took me off of Tramadol and wrote me a script for Imitrex. I told him how I'm really sensitive to medications, so he recommended cutting the pills in half. Later that week when a migraine began I took half of a pill. My head felt better, but my jaw was in extreme pain. I couldn't eat or even drink because it caused a surge of pain throughout my jaw. I decided the next migraine I'd quarter the pill to see if would help. Even that small of a dose still gave me jaw pain.

I called my neurologist and he switched me to another Triptan, Maxalt. I had the same reaction. We went back and forth trying different things. At this time I now had five to eight migraines a month. I finally caved and got on a daily preventative medication, Amitriptyline. However, Amitriptyline didn't work and I also started experiencing visual auras. I called to tell my neurologist about this new development and I to my surprise he didn't seem too concerned. In the end, he switched me to Topamax.

At this time I had been doing a lot of research and questioning about these medications and how they impact my body. I had read a study that discovered women who had migraines and went on birth control were at a higher risk of having a stroke than women who didn't take birth control. I brought my concerns to my neurologist and he brushed it off and said I'd be fine. I felt that he didn't listen to my concerns, so I went to OBGYN to see what my alternatives were. She agreed with my concerns and suggested I get off birth control and switch to another type of contraception.

I then was in search of a female neurologist because I felt my current one was not listening to my worries. During this waiting period of time, I got off birth control and continued taking Topamax. Suddenly I began experiencing these crazy mood swings. I could not control my emotions. Everything was so overwhelming that I cried daily. At this time my husband and I were moving. I remember looking at a box and trying put things into said box, but I couldn't determine how to do it. My husband held me as I cried for the thousandth time that month. I kept saying over and over again, *"This isn't me. I'm not crazy. It's the medicine, but I'm afraid to get off it."*

I finally was able to get an appointment with a female neurologist. Before we went over my medical history she told me to remember the three words that she had said to me as a test. It seemed easy enough. After going over everything and a few tests she ended our session asking me what the three words were. I was shocked…I could only remember one. It was terrifying. I'm an Educational ASL Interpreter; recall is what I do for a living. It's vital to a child's education and here I can't remember three words. She reassured me that Topamax is also referred to as *Dopamax*. A side effect is a cloudy mind, mood swings, and confusion. How in the world is a medication like that supposed to help me? She switched me to a daily regimen of Gabapentin and a high dose of Naproxen for my migraine attacks.

I proceed to take these medicines as directed. My amount of migraines decreased from 8 to 4 a month. However, I noticed that if I didn't take the Gabapentin on time I'd get extremely anxious. I told my neurologist this and she said it was stress induced. I work in a school system. I'm off for the summers. It's really hard to be stressed when you are watching TV on a Monday afternoon. I then pulled up Gabapentin's website and clearly listed on their website is that one of the withdrawal side effects is anxiety.

At my next visit to my neurologist, I told her of my findings and she didn't seem fazed by it. I brought up my desire to want to start a family. I knew, of course, I'd have to get off all my medications. In looking over my chart and seeing that I now have two to four migraines a month she said that this is probably the best I'll ever get. Therefore, we can start getting me off Gabapentin and onto some vitamins, such as MigRelief. She prescribed that I go from 500 mg a day to 250 mg to being completely off of Gabapentin. The first two days I was climbing the wall and skin felt like it was going to crawl off of me due to the withdrawal symptoms. I demanded a slower decrease to keep me from feeling this way. So over five weeks, I decreased dosage 100 milligrams per week.

This is when my shoulder started really bothering me. I was already seeing a physical therapist for TMJ so they also started working on my shoulder. Months of physical therapy, x-rays, cervical and shoulder MRI's, and injections at a pain clinic left me with no answers. The only explanation to be found was that I have a torn bicep tendon and arthritis that was covered up by Gabapentin. My goal was still to start a family, but even with the migraine pain, I knew I couldn't care for a baby with an injured shoulder. After completing a year of physical therapy and no relief I was sent to another doctor.

I saw a specialist in Neuromusculoskeletal and Osteopathic. He specializes in Prolotherapy, which is a therapy that is used to treat issues involving muscles and their attachment to the skeleton. At this point in my life, I would do anything to get the migraines and shoulder pain to go away. He had many success stories on how this procedure helped migrainers and people with other injuries. I didn't care about the cost or the fact that I was deeply afraid of needles; I wanted the pain gone.

In prepping for this procedure I could no longer take Naproxen for my migraines because I couldn't have any anti-inflammatory in my system before or after the injections. This terrified me because I was going to have to go through all this pain with just Tylenol. I couldn't even have ice. The first session included 30 injections in my head and neck. I cried. I screamed. I hyperventilated. The next four days I was bedridden with the worst migraine I'd ever experienced. I'd never have gone to the ER for a migraine and that week I almost did. I was too afraid to go because what if the doctors counteracted my injections and I'd have to go through it all again. The only thing that got me through was the constant mantra I repeated to myself, "*After this, no more migraines*."

I'm happy to say that I did survive and I only had one migraine the next month. I still have a few more sessions to go through to help improve my pain in my shoulder and my migraines. For a Trypanophobia, I'll do it all again just to never have to experience a migraine any more.

Now that was just my medical history. Let me tell you the truth about my migraines. **My migraines control my life**. There isn't a morning that I don't wake up searching around my brain to see if there is one in there. It impacts my job, my husband, my social life, things I love to do, and even the paint color inside my house. I always have to have an escape route just to keep my migraines at bay. I've tried countless medicines, diets, pillows, essential oils, piercing, and I've even given up sleeping in. There isn't a day that I don't plan for a migraine. Nevertheless, by the end of the day, not experiencing a migraine is exhilarating, but exhausting.

My migraines feel like someone is pushing with all their might at both temples forcing my brain out of my forehead, through the bone. Sometimes my right eyebrow feels like an ice pick is stabbing through it. Other times I can feel it coming on in the back of my head and the fear surges through my body. My triggers are light and sound. Too much of one or the other can cause a migraine.

As a migrainer, you have a window of time to take your medicine. If you don't take it before it really starts, you are really out of luck. Have fun with your migraine for the rest of your day and onto the next two days. Typically my migraines start in the morning, lasting all day, and can continue for the next two days. Sadly I can't sleep it off. Instead, it just goes on pause and continues the next day. The only relief I have even with medication is lying in a dark room with the TV volume extreme low and dimming it as dark as it can go.

You may ask, *"Why wouldn't you take your prescription as soon as you feel it come on?"* Because most drugs like Triptans are given to you in small increments. I take Frova for my severally bad migraines. It still kills my jaw and causes very sensitive skin, but it's all I have. My insurance will only covers nine pills a month with a co-pay of $50. I've been lucky to only have had a maximum of eight migraines a month. Not only do you have one pill per migraine, Frova's directions say you can take another pill every two hours. However, you shouldn't take more than three pills in one day and you shouldn't take four pills in one month. The math just doesn't add up. While on the other hand, I can take Naproxen twice a week, but if I take too much I can get rebound headaches. It is a lose-lose situation.

This is why migrainers hoard their pills. They aren't sure if this attack is bad enough to use a pill or not. By the time you do realize it is bad enough to use a pill, you are too far down the sinkhole to even get out. So, in the end, you have to survive through the migraine, because then, even the pills can't save you. All of which is very depressing and lonely. It makes it seem like what is the point of surviving through it because you know it'll just come back later next week.

Migraines don't only affect me; they affect the people I love. I have had to decline many social events with my friends and family. I had to leave my brother's graduation because I couldn't take the lights or the loudspeaker. I can't go to concerts or clubs because the lights and music will trigger a migraine. Missing out these events is really hard for me because in high school I was very socially active; I was in the marching band, concert band, and show choir. I no longer participate in the church choir because of fear that one will come on in the middle of service.

I've tried eliminating every migraine trigger from my diet. I no longer eat chocolate and gluten. I went a whole year without garlic and onion, which was really hard on my sweet husband. I no longer stay up late or sleep in late, but instead, I need to stick to a steady schedule of nine hours of sleep; which is really hard for this night owl. I can't enjoy alcohol or even go to a wine tasting. I once debated over purchasing tickets to a wine tasting with friends; however the ticket was $50. I was afraid I'd end up with a migraine before I even get there and waste the money. Sure enough, I did get one the night before. Luckily I hadn't gotten the ticket. From this, I've learned to only buy tickets the day of.

My house is designed around my migraines. Both the living room and bedroom are in dark colors with thick, black-out shades. I keep gluten-free mac and cheese, Dr. Pepper, and ginger ale on hand at all times. I force myself on good days to not be lazy or procrastinate because tomorrow I might be down with a migraine.

My co-workers all know about my migraines and some even experience them themselves. We keep the fluorescent lights off, use fragrant free lotions, don't use perfume, and keep soda and ginger ale in stock. They know I can't look at them when they stand in front of a window and that when I shield my eyes, or if I leave the noisy office it's not me being rude. I've been very fortunate to have a great team who will go cover assignments for me if I have a migraine. Instead, I can then work in the office in peace. My boss even will send me down the hall to catch a 20 minute nap in hopes that it'll help. I am very lucky that I can usually work through the migraine, because if not I'd have to go on medical disability since I'd wipe out all of my sick leave within a few months.

My dear husband has been through it all with me. When we first started dating I didn't even have migraines. It wasn't until we had been together a year did they appear. He has been through all of the numerous drugs, doctors, treatments, crying fits, canceled plans, adjusting his habits for me, takes care of me, and even participating in Miles for Migraines with me. When we go into a restaurant I determine where we sit and have him switch seats so that the sunlight is at my back. When we are out with friends or listening to a band at a local bar he leaves early with me. He's learning ASL not only to communicate with my deaf friends but also to communicate with me when I have earplugs in or can't talk. He lets me control the volume of the TV and radio. He even doesn't get mad when I tell him that he's making too much noise and to stop what he is doing. He's gone with me to every Prolotherapy appointment and held me down as I kick, scream, and cry as I'm being injected. He is my biggest supporter, but also *just as impacted by my disease as I am.*

There needs to be better medications and treatments for this disease. *If we can't stop it then provide us with all avenues to find what works for us.* Don't restrict us. Each person and each migraine is different. To categorize us as all as the same is to say that we all have the same problem so we must find relief in the same solution. We also need to find relief for pregnant and breastfeeding women. Research needs to be done on how migraines are impacting these unborn babies and not just the mother. In addition, how we can prevent from genetically continuing this disease onto the next generation.

More research needs to be done in searching for the cause of this disease. I get so tired of all my medication being created for depression or anxiety. Or the migraine drug of choice being Triptans, which I'm allergic to. To then take the medication and have the common side effect then being more headaches or more pain. Doctors are playing a guessing game of prescribing medication; *let's see if this one will work.* I don't want just a pill to fix it. I need therapy. I need consoling. I need it to stop. Don't take away my resources. Haven't I already been through enough pain?

Sincerely,
Jenifer Pridgeon
Five-years Migrainer

Date: May 8, 2018

Subj: ICER Open Comment Period on CGRP Inhibitors for Migraine

To: ICER

I am currently on disability through the veteran’s administration with a 50% evaluation for migraine headaches, the highest schedular evaluation allowed under the law for migraine. Military veterans can apply for disability upon leaving the military, and although I was having migraines at the time (1984), I was the kind of person who got restless if I didn’t have a project or if I wasn’t being useful, and disability was not something I was ready to consider. However, approximately 25 years later, I had to face the hard truth that comes with chronic migraine, and I finally asked for help.

I was really proud to have a great job, and I had worked very hard to get to the senior management level of an information technology company. I was the Senior Director of Operations for the eastern division with approximately 120 personnel working for me. But around this timeframe, my migraines increased in frequency and intensity, and eventually got so bad that I would have to stay at a hotel next door to the office on days I couldn’t even make the drive to my home. The bathrooms were centrally located in the building with offices completely surrounding them, and when the nausea took hold, I would spend excruciatingly embarrassing migraine days vomiting and even crying in the office bathroom. On days the nausea wouldn’t ease and the pain would become completely unbearable, someone at the office would take my hand and walk me to the car and then drive me to the emergency room (ER) for help. There are days I have absolutely no memory of how I arrived at the ER or even how I was treated once there.

Chronic migraine didn’t affect only my job – when it took control, it took away everything I held on to as being part of a normal existence. For instance, I visited a long-time friend for a hotdog and hamburger cookout with her kids. About 30 minutes after eating a hotdog and drinking a diet Coke, I was in the bathroom throwing up so badly that I would take one step outside the bathroom and have to turn around and go right back in again. The pain in my head was so horrible, breathing was more like gasps for air in between moments of horrific reality. My friend took me to the ER and explained to them what was happening, they treated me, and I was so exhausted from the relentless pain and vomiting that I had to sleep for a couple of hours before I could be expected to leave the ER and walk back to the car. My friend took me back to her house where my husband was waiting to take me home, but I was still so exhausted that I never even noticed him there and unconsciously walked to the couch and laid down to sleep for another eight hours. Again, I learned all this from my friend as I had no memory of going to the ER or my husband coming to pick me up, and I was very shocked to awaken in her house at dawn the next morning. I also learned that while in her car on the way to the ER, I was kicking and jerking my limbs and left behind footprints on her dashboard. I had held my hands so tightly to cover my sensitive eyes that the nurses turned off the lights in the ER so that I would take my hands from my face and allow them to put in IV medications.

As the person in charge on my job, I had an enormous amount of stress on my shoulders, so it was logical to think that if I reduced the stress in my occupation, the sickening migraines would improve. At the age of 46, doing what I thought was sacrificing my career, I quit my senior level, six-figure job and began working as a clerk for the City for $24K a year. I had been a secretary in my younger days and learned that working administration came naturally to me, so I thought that performing in this type of position would be simple and require little effort from me. Unfortunately, this did not make a difference. I attempted to work with severe pain, horrible nausea, and sensitivity to light, smell, and sound. Activities as simple as having a short telephone conversation was too much…talking only intensified the pain. The demands of this clerk job were minimal compared to my management job, and yet I still had to push through each day with extreme discomfort. I used up all my vacation and sick hours and began taking hundreds of hours off as time without pay. After only ten months, but what seemed like an eternity, I resigned from the clerk position and have not been able to return to work since then.

In an attempt to get my life back, I saw several neurologists and tried a list of prescribed prevention medications, but they were all not only ineffective, but also caused a number of side effects such as confusion, nausea, dry mouth, diarrhea, drowsiness, muscle spasms, dizziness, agitation, and weakness. I would have to take them for weeks and weeks before determining that they would not be a solution for me, and then take them for weeks more as I tapered off them. For prevention, I currently do not take any medications, but I have taken these as prescribed: Effexor, Topiramate, Fluoxetine, Sertraline, and Amitriptyline. Because I have been diagnosed with inappropriate sinus tachycardia, I have been prescribed Inderal since the late 1980's, but this has not had any impact on my migraines. I have also taken over the counter supplements such as magnesium, butterbur, vitamin B-2, coenzyme Q10, black cohosh, fish oil, ginger, melatonin, and feverfew. For current treatment, I first take acetaminophen, a caffeine soda, and an iced towel wrapped around my head. As the pain worsens, I take Maxalt and then later I will take Ketorolac and then later Hydrocodone-acetaminophen. For nausea, I currently take Promethazine suppositories and have also tried Metoclopramide. In the past, I've also been prescribed Motrin, Indomethacin, Naproxen, and Diclofenac. In the ER, my treatment has usually been IV access: normal saline, 1000mL BOLUS, IV fluid infusion over 60 minutes; Benadryl 50 mg IVP; Compazine 10 mg IVP; and Toradol 30 mg IVP; Pain: 10.

I tried the occipital nerve block shots which did not help. I am currently taking Onabotulinum Toxin A (Botox) injections. The Botox injections actually do make the migraines less intense and less frequent for about four to six weeks, and I take advantage of this time to catch up on medical appointments, laundry, housecleaning, visits, short vacations, or communications with family, etc. But after that short reprieve, the migraines come back daily, and I have to wait weeks more to get the injections again. This past month, I have had eight migraine-free days, with the shortest migraine lasting 30 minutes and the longest for just under 14 hours. As a result, I have blackout curtains on the windows that are never opened. My husband soaks dish towels with cold water and puts them in the freezer, and once the towel is completely stiff and frozen, he folds (and beats) the towel into thirds so I can wrap it completely around my head while it's still frozen and can form it to the shape of my head. Then I lay down in a dark, quiet room and do what should be completely impossible and try to relax and fall asleep. And when the vomiting continues for hours, and I start crying and moaning while pacing, hitting the walls with my head and fists and praying out loud, my husband will take me to the ER for IV pain and nausea medications. My scalp stays sore from rubbing my head and sleeping with an iced towel. And long after the migraine is gone, I feel very tired, have dizzy spells, feel confused and unfocused, and my knees are weak.

I have become very anxious about my situation because of the fear and anticipation of chronic and severe pain. I'm unable to make plans or promises, and I am so unreliable and undependable that it's impossible for me to maintain friendships or even close relations with my family. Because of this, my personality has changed completely. I'm no longer a confident and proud working professional with goals and hopes for a prosperous future. I can no longer juggle numerous tasks at once and remember the tiniest of details. I can no longer walk with focus and purpose, and I am no longer mission-oriented with schedules that are checked off daily. I can't afford to be picky or passionate about the things that I used to love since I must choose wisely how I spend my energy and pain free days. I don't speak normally sometimes; the words get jumbled up in my mouth. Chatting and having casual conversations with people are things I rarely do anymore. I'm often confused about what day I did something because the days run together when you sleep at night and also during the day. There are so many things I just don't remember anymore.

Lives are changed by migraine; of this, there is concrete and hard-lived proof. If I had to choose between reducing migraine frequency, lessening severity, or increasing functional ability, I would choose reducing migraine frequency. This would allow more pain free days, which in turn would increase my functional ability. I'm simply a person who wants today to be pain free…just today…so I can open the windows and let in a little sunshine and tell my husband how grateful I am that he's still here.

Thank you for your consideration.

May 7, 2018

Re: ICER REVIEW OF MIGRAINE PREVENTION MEDICINES

Dear ICER Review Panel,

In February 2018, I attended my first annual Headache On The Hill event in Washington, D.C. The experience was incredibly moving for me. I would like to share with you the letter that I wrote to my family upon my return from the trip. Reading about my experience will give you a glimpse into my daily struggle as a working mother of two brilliant children, both of whom suffer from migraines as well.

Thank you for taking the time to read my letter.

Dear family and friends,

For anyone interested, I would like to share my experience last week at the Headache on the Hill in Washington, D.C. (Fair warning, this is going to be long.)

As some of you are probably aware, I've had chronic migraines since I was 12 years old. My migraines started in elementary school and then became daily when I hit my teens. Many of you maybe didn't even notice or might think that they must be pretty mild since I seem to function so well. I certainly have better days than others and sometimes I let myself forget how much they run my life. However, last week, it was as if someone placed a mirror in my face and what I saw was disturbing.

Sunday night before the event in D.C., I was all packed up and doing some last minute studying for grad school. Then it hit me. The ringing in my ears started. I couldn't see the computer as I typed because of a huge blind spot and my fingers were constantly making typos. Shit. Shit. Shit. This migraine aura is one of my worst. I gave it 20 minutes to calm down, but the nausea and pain hit me. I quickly went downstairs for my injectable triptan medication. Shot delivered. I tidied up my bedroom and lay in bed trying to sleep. The medication tightened my blood vessels and gave me chest pain. I thought I was having a heart attack. Then the fatigue hit and I couldn't do anything else but sleep. As I fell asleep, I just hoped that my husband didn't wake up to a corpse the next day.

Monday, I woke up and went to my training event in D.C. The pain was bearable and I put on a good face. I entered a ballroom of 140 chronic migraine and cluster headache patients and sat at one of the tables. I didn't know anyone so I just kept to myself and read my paperwork. As the speakers talked, one after another, I scanned the room and noticed something. **Everyone looked like me**. At least one person at every table was massaging their neck or temples. People at each table were hiding the light from their eyes. The lady to my right told me she may need to leave to be sick. One person assigned to my table didn't show up because she was in her room in too much pain. Several people in the ballroom were nodding off to sleep. We looked like war zone victims. Dozens of us were barely able to sit in a quiet room comfortably listening to a speaker. At this point, my pain began to take over my thoughts and I took a second triptan. The rule of thumb is that we're only allowed to take 2 triptans per week; so at this point, I was maxed out.

That evening, we had dinner and then set up to watch the premiere of the movie "Out of My Head." My new migraine friends and I discussed food triggers and the difficulties of explaining our food triggers to friends/family. When it was time to watch the movie, my new friends and i walked into the room and immediately started looking for the best seat to avoid a migraine. One person said, "We can't sit too close because of the bright light and vertigo." Another said, "We can't sit near speakers because of the loud sounds." Another said, "We should sit near an exit in case one of us needs to go to the back of the room (due to pain)." Another said she already felt a little nauseated and wasn't sure if she could make it through the whole thing. The shocking thing, **they saw the world the way I see the world**. They felt the same triggers and feared the same migraine consequences that I did. How did they know that's how I see every room I walk in to as well?? We found our seats. During the movie, certain sounds were triggering my pain while other sounds were triggering the lady next to me. By the end, I was in unbearable pain and had to go back to my room to lay down.

The next day, I followed every migraine prevention rule. I had gotten enough sleep, I woke up early enough not to rush or stress, I ate a high-protein tyramine-free breakfast, packed plenty of hydration, took my preventative meds on time and only carried a lightweight purse. We started the morning in the Senate building. My fellow comrades and I had some time to kill so we had a second breakfast in the cafeteria. As we were finishing our breakfast and about to walk to the first senators office, one of the ladies in my group started having chest pain. She had taken the same drug that I had taken on Sunday night. She felt like she was having a heart attack and began hyperventilating. Unfortunately this is a pretty common (very scary) side effect with this particular medication and people really have had heart attacks and strokes. She was pale, sweaty, and panicking, but had a normal heart rate. After a short period of time, the side effect subsided, the young lady recovered (temporarily), and we were able to make it to our meetings throughout the day. (The young lady later needed to leave the group and go back to hear hotel room to be sick and sleep it off.)

The meetings with the staff members from each senator and representatives offices went well. They listened to my story and enjoyed the pictures of my kids who also have migraines. The cynical part of me thinks that they are probably immune to heart-tugging stories from people who are constantly asking for increased funding. But I then remind myself that inaction is a choice that I refuse to make. And my children’s futures are dismal if nothing is done to stop this disease in them.

As the day came to a close, my head was throbbing, I could barely remember what the representatives were saying, vision was blurry, and stomach felt sick. It was going to take me an hour and a half to drive in traffic, but all I could think about was getting home to the kids and husband. I had a bag of chips to snack on until I could get home to eat a decent meal. I used GPS as my guide to get out of D.C. which had me completely confused and I missed several turns. When I finally reached a highway that I knew, the pain was excruciating. I tried to do meditative breathing through the pain which then started putting me to sleep at the wheel. The drowsiness led to carsickness which then I was ready to pull over to throw up in my poor chip bag. My vision was completely double as I drove home at a snails pace through traffic. When you're in that much pain, all you can think of is getting home to your family. I just wanted my family. :(I reached home 2.5 hours later and collapsed. I slept for 13 hours. (For the record, I do regret driving home. I now realize I should have just pulled over, ditched the car and taken a cab home.)

Wednesday and Thursday, I went to work, I looked like crap, and I took 2 more doses of triptans to make it through the work day. I broke the triptan rules and now I was at risk for rebound headaches. This is bad, like really bad. It means I'm stuck in a migraine cycle with no way to stop it.

On Friday, 3 days after the event, we all received an email from the event coordinator, Katie McDonald. One thing Katie said to us really resonated with me, she said, "I've seen and heard a lot about people, myself included, who are feeling the after effects of the event. Many of us dealt with migraine and or cluster attacks while making our visits on Tuesday. Many more of us are feeling completely wiped out with head pain, puffy eyes, foggy brains and sore bodies now that we are home." How did she know??? **All of these people are suffering just like me.**

What did I learn from my experience? **We are a mess and we need help.** Every age group from every state in the U.S. was represented at that meeting. Our disease burden is astounding. Many of us are functioning in our lives and hiding our agony due to the stigma of looking weak with "just a headache". Migraine is a brain disease that actually causes permanent structural damage to our brain when it's chronic. The amount of research funding that goes into migraines is absolutely disgusting; especially when compared to other disorders with less prevalence or disease burden. https://report.nih.gov/categorical_spending.aspx Migraine is the second leading cause of disability in the world and there is hardly any money going into research funding for migraine.

Why am I sharing all of this? For starters, I know that some of you have migraines or know people with migraines. It turns out that there are millions of people who have been suffering in silence, and I am one of them.

Ten days later after the event, things are finally calming back down for me. I had to have injections of lidocaine placed along the occipital and trigeminal nerves in my scalp and shoulders to achieve relief from last weeks migraine. I had a mostly pain-free day on Thursday so that was a blessing. Pain free days make me feel like I'm floating on a cloud. Today wasn't quite as good as floating on a cloud, but my fingers are crossed that I will have one of those days soon.

Love to you all and thanks for listening. <3

Want to hear some true confessions that I would never tell my family or friends?

1. I tell people that I’m not good with remembering names, when in truth, my memory is compromised from chronic pain.

2. I feel ashamed of the number of medications I take. No, I don’t take opioids, but I take about 24 tablets a day in addition to Botox and nerve blocks. I’m only 37 and I have more pill boxes than a nursing home resident.
3. I battle pain even on the days I feel “good”.
4. I feel ashamed and embarrassed by the way I look after receiving Botox. During one round, I lost my smile for 3 months. My 2 year old was apprehensive around me.
5. I lie about my pain at work and with friends so they don’t feel sorry for me.
6. After work, I collapse on the couch (at least 4 days per week) and my husband takes care of me, the kids, baths, dinner, chores, etc. I often feel like I’m failing as a mother and a wife.
7. The prospect of hope from CGRP medications is sometimes the only thing keeping me going.

Again, thank you for taking the time to read my story. I am fighting for my own health and for the future of both of my children with migraine. The migraine community truly needs help with access to these new CGRP drugs. I am one of the rare lucky ones that is still able to keep a job, but many of my colleagues are starting to talk to me about considering disability.

We appreciate any support you can offer.

Sincerely,

Anonymous Migraine Patient

My daughter's migraine story:

When my daughter, Jill Piggott, began speaking clearly at around age 2,she often pointed to her head and said, "Hurts here, Mommy." When the frequency exacerbated, I took her to our pediatrician who diagnosed migraine.

Even though she was seen by neurologists who were, and many are still, considered leaders in the field of migraine treatment, her attacks increased steadily through adolescence and into maturity and she was diagnosed as having Daily Intractable Migraine, accompanied by seizure activity. She earned advanced degrees, B.S., M.A., Ph.D, and went on to teach at the college level while struggling every single day with intense pain and other varied neurological disturbances. It came to a place where she could struggle no longer in order to continue with the teaching career she had worked so long and so diligently to pursue. She had to retire on disability at age 43.

She is now 56 years old and she has been essentially housebound since 2005. Even to the point that it is difficult for her to go to her doctors' offices. On one recent attempt to see her doctor, a person in the waiting room was wearing a scent. It caused Jill to have a sudden, severe migraine and slip from her wheelchair to the floor where she sustained a concussion and became further disabled for many weeks.

She can no longer endure a trip from her home in Maine to visit her nuclear family here in New Jersey. And it is difficult for her to sustain a visit from us for any length of time when we travel to see her. The medications prescribed by her neurologists do little to treat her migraine disease. Because she has had to take them for so many years, there is now real concern about possible damage they are doing to the rest of her body and the side effects from these medications cause other disturbances that are difficult to treat and make her life even more difficult. She has had to rely on prednisone for migraine "rescue" so frequently over the past decades that she developed steroid-induced osteoporosis in her 40s.

For more than a decade, Jill's neurologists have been urging her to "hang in" until CGRP comes to market. They believe it offers genuine hope for her. However, she fears that her insurer may be unwilling to cover the drugs. If she's denied coverage, the drugs would be priced out of her reach, as she relies only on fixed, disability insurance payments.

I'm attaching a photograph of my daughter taken the year she was diagnosed with recurrent migraine. No mother should have to watch her beloved young child robbed of a normal life. It breaks my heart that she is now wheelchair bound and housebound and that the ordinary things she loves—music, sunshine, the smell of lilacs in her garden—actually cause her harm.

Please give her a chance to try the new CGRP inhibitor drugs which hold out hope that she can over the years ahead be able to return to teaching, to visit with her family, and enjoy a full relationship with her loving husband who has been a tireless caretaker for many years.

Janet Purcell

To: ICER

I have been suffering with chronic migraine for close to 10 ½ years. I have not had one day without some degree of head pain during that time, not one day. When I have a migraine, it feels like my head is in a vice and that it might just explode. The only part of my head that doesn't hurt is my lower jaw. The pain is filled with intense throbbing and sometimes stabbing pain. My upper teeth even hurt. If anyone touches me, especially my head, I recoil. My distance vision gets blurry. I get dizzy and lose my balance. I can't tolerate loud noises and have light sensitivity. I lose the ability to find the correct words to communicate with others. I can't focus. Sometimes, I'm nauseous as well. There are times when my head hurts so much that I can't even put my head on my pillow.

Migraine disease has impaired my ability to do things with and for my children and husband. I am incapable of being the mother and wife that I want to be and that my family needs me to be. I have to limit the hours I work. I can hardly read a book because I can no longer focus. I wanted to pursue further education but there's no way I could succeed in school with migraine disease. The only exercise I can do is swim. I can't even go for a walk with friends and family because, with each step, the impact shoots up to my head causing further pain.

I have tried at least 80 medications. The results are that they don't work, work for a period of time and then stop, or have side effects that are intolerable. I have had to appeal insurance company refusals to cover some prescribed medications. I have been an inpatient in a headache clinic twice. I have tried nerve blocks, acupuncture, Botox, Sphenopalatine Ganglion Blocks, and I have a peripheral nerve stimulator implanted.

Thirty-nine million people in the U.S. suffer from migraine. These thirty-nine million people have a substantial variety of experiences during a migraine. We don't fit one mold. We are different ages. We come from different socioeconomic backgrounds. All of us deserve to have access to these new CGRP inhibitor drugs without worrying about being able to afford them. I ask you to validate the debilitating impact that migraine disease has on our lives by making CGRP inhibitor drugs available to all. We need better treatment options and access to those options.

Thank you for taking the time to read my letter.

Sincerely,
JR

Anna Ramen

5/8/18

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

(Please note that I am submitting this public comment using a pseudonym because migraine is a highly stigmatized disease and I have legitimate concerns about connecting my name publicly with migraine.)

I am a 27-year-old woman and I suffer from chronic migraine which I have had for the past 15 years, since I was 12 years old. Over the past 10 years I have had migraines almost daily for 10-14 hours per day on average. My migraines consist of sharp, often throbbing pain on one side of the head radiating behind my eyes, along my temples and scalp, and through my neck. The pain is exacerbated by light, any kind of activity, or looking at a screen (such as a phone or computer). In addition to the headache pain, I also have other debilitating migraine symptoms including nausea, vomiting, photophobia, phonophobia, chronic fatigue and brain fog, and chronic neck, shoulder, and upper back pain. When I get a migraine, the only thing that consistently helps is lying down in a dark room and sleeping until the pain gets better. For the past 10 years I woke up daily (with few exceptions) with a severe migraine (7 or 8 on a scale of 10) which only gradually got better after many hours, subsiding to moderate or mild by late afternoon or evening.

Because I woke up with a severe migraine daily, immitrex (the most effective acute relief medication currently available for migraine) did not often help, as it is most effective only when taken at the beginning of an attack, not in the midst of a full-blown one. Additionally, if I take immitrex more than two days in a row, I end up with a very severe, intractable migraine lasting >72 hours with nausea and vomiting, which lands me in the ER. For several years, I landed in the ER once or twice a month due to these severe rebound headaches until I learned not to take immitrex or other rescue medications as frequently. Over the years I tried a long list of preventative and acute medications and supplements (often multiple times each) to alleviate my chronic migraines, with no significant or lasting relief, including: propranolol, atenolol, topomax, gabapentin, depakote, amitriptyline, nortriptyline, verapamil, Inderal, timolol, seroquel, Botox, Cefaly device, benadryl, magnesium, vitamin D, vitamin B2, maxalt, immitrex, naproxen, relpax, zomig, promethiazine, rizatriptan, and toradol. Besides not helping my migraines, many of the preventatives such as propranolol, atenolol, gabapentin, topmax, seroquel, etc, also came with side effects such as fatigue, sedation, and cognitive dysfunction that were extremely disabling. I also tried numerous alternative therapies including: acupuncture, acupressure, chiropractor, physical therapy, massage therapy, Chinese herbal medicine, yoga & meditation, homeopathy, and Ayurvedic medicine. None of these provided significant or lasting relief of my migraines either.

Because I had severe daily migraines for over 10 years which lasted most of every day, with no lasting relief from preventatives or acute relief medications, I was severely debilitated and limited in my ability to function most of the time. The few precious functional hours of mild or no migraine in the evenings was spent studying (to try to finish my college degree) or working part-time as a tutor. I could never work full-time – the most I was able to work and/or study was perhaps 10-15 hours per week, often by working late into the night. And I missed out on years' worth of time I could have spent with family and friends. The nausea accompanying my severe migraines often meant I skipped both breakfast and lunch on many days. I was unable to care for myself sufficiently on my own, and I was unable to complete chores such as meal prep, grocery shopping or laundry, so I moved back home with my parents, who both financially support me and are my caregivers.

I refer to some of this history in the past tense because, just over a week ago, on April 27, I got my first treatment of CGRP antibodies in a clinical trial I was lucky enough to get into, and even in such a short time period, the results have been dramatic. I went to the clinic with a severe migraine, and immediately after my shot, it went away completely – the headache pain, the nausea, light sensitivity, fatigue, and back and neck pain all disappeared! I had several headache free days (which hasn't happened in many years) and while I did have a migraine later that weekend, and a couple of times over the past week, the severity and duration of the migraines were greatly diminished compared to how they have been for the past 10 years. Instead of all day, they lasted only a few hours or part of the day, at a pain level of 3-4 out of 10 instead of 7 or 8 out of 10, and I didn't feel the need to take immitrex or any other acute relief medication, as they went away on their own.

The reduction in severity and frequency of my migraines thus far seems to both be at least 50%, and it's only been a week since my first treatment, so I'm sure it can only continue to improve. For someone who had chronic daily migraines as frequently and severe as I had them, the difference has been dramatic! I was able to go out, attend all my classes last week (normally I miss more than half of them due to my migraines), spend all day during the weekend with my family, and do a lot more. I went for walks nearly every day over the past week with my family and my activity levels have been much greater – I logged more than 5,000 steps on my activity tracker on every day except one over the past week, when usually I'm lucky if I get one or two days with that many steps. I used to suffer insomnia along with my migraines, getting little sleep most nights. Since the treatment, I've been sleeping soundly each night, which hasn't happened in years. I also haven't used immitrex or any acute relief medication for my migraines over the past week and a half since the treatment. My constant exhaustion, cognitive dysfunction, and brain fog from my chronic migraines is much better and my mind feels clearer than it has in years. Shortly after I got the shot, I said in laughing disbelief to my family and friends, "Is this what it's like to not be in severe pain all the time?" Everyone deserves this.

Dear Judges,

I am writing to you concerning the ICER Open Comment Period on CGRP Inhibitors for Migraine. I have been a migraine suffer since I was a young child. My migraines started at about the age of 8. Back then, I had never heard of Migraine; all I knew was that my head was pounding, and I was nauseated and throwing up. It was several years before I learned that my problem had a name. My mother tried every pain reliever she could find to no avail. I would be in bed for days with a “sick headache”. By the time I was in my teens, I was having several episodes a month. Now I am having chronic migraines which means I have 28 to 30 headache days a month. The pain gets so bad I want to cry, but I have learned through experience that crying only makes things worse. I feel like someone is using a jackhammer inside my head, and or running a thick metal pole from my eye to the back of my head. The only remedy I have is to lie in a cool, quiet, dark room with a cloth over my eyes. I get sick to my stomach and dizzy; and I often throw up several times. I usually have a bowl nearby, because getting up to go to the bathroom to get sick is simply not possible. I have a relief medicine, but it does not always work. Even if it does work, there is no guarantee that it will last the entire headache. Many times I will get relief, only to have the headache return a few hours later

My migraines are so frequent and so severe that I live a “Sometimes life”. I am unable to work because I miss too many days due to migraines. I miss out on so much of my life. I am frequently unable to attend family functions such as church and family get togethers. I also miss a lot of my children’s lives. I cannot go to many of their school functions or sports events. I cannot even take care of my house and family in the manner that they should be taken care of. There are many nights when I cannot cook for them, and I have a hard time keeping up with the house work. Even if I don’t have a headache right now, I know that one could strike at any time. I suffer from depression due to my lack of ability to function.

There really is no good medication available for me right now. The Fioricet that I take does not always treat the migraine completely. It will sometimes only treat part of my symptoms, or it will not last for the entire headache. There are many times when it simply does not work at all. Even when it does work, it makes me very tired and sleepy because of the sedative that is in it. I often have to lie down to sleep for a while because it makes me too tired to function. I have tried several different medications to both prevent and relieve Migraines. I am allergic to Imitrex and cannot take any triptans. In addition, I have not had much luck with the medications that are supposed to prevent migraines. I have tried several different ones, but they only work for a short period of time. I have taken Amitriptyline and Topamax to prevent migraines. Neither of these worked for more than a few months. I have tried Feverfew, Magnesium and B vitamins. I have tried lavender scents, hydration therapy, and meditation. None of these have helped much if at all. Even going to the ER for a “Migraine Cocktail” of anti-nausea meds and pain killers is often not successful. I really need to find a medicine that will allow me to function even with a migraine. I also need my insurance to be willing to pay for this medication because many migraine medications are very expensive. Since I cannot work, we have a very limited budget.

What I really need is better treatment options and the ability to access them. I have had to change medications because my insurance would not pay for a medication any longer. I have had to try therapies my doctor and I knew would not work just to be allowed to get the medication we wanted in the first place. I have been denied medication that my doctor thought would work because the insurance company refused to pay for it and I could not afford it on my own. I am asking you to understand that there are many migraine sufferers that need your help. We need to be heard and understood. We need people to realize that our pain is real. That we suffer not only from migraines, but from insurance companies that don't seem to believe that we need help. That we really are disabled by our condition, and we need better ways to deal with the issues. There are some promising new drugs available, but they will not help us if we cannot get access to them. The new CGRP Inhibitors sound very promising for both episodic and chronic migraine sufferers. However, they will not help us if we cannot get access to them. We need the insurance companies to believe that we need these medications and that we deserve to be allowed access to them. We need to be heard and believed. We truly are hurting and we truly need help.

1. Briefly describe your disease experience, including your diagnosis, treatments you’ve used, etc. Be as specific as you feel comfortable with.

I have suffered from chronic acute migraine for 30 years. I have tried every one of the prophylactic medicines available, and none has provided relief.

2. How do the disease/condition and the available treatments affect your day-to-day life?

I have frequent and acute enough migraines that I consider the condition a disability. I have to cancel activities with some regularity due to migraines.

3. What impact does the disease have on family or caregivers?

My partner's life is impacted almost as much as mine, as I am often in need of caretaking.

4. What else should ICER know about living with the disease or condition (e.g. impact on your ability to work, exercise, care for family, etc.)?

My life is radically constricted by the migraines. I am able to work because I have a job with a great deal of flexibility, but I would not be able to work a regularly scheduled job. Exercise is out of the question when I have a migraine, which is typically 2-3 times per week. I made the decision not to have children because of my migraines.

5. What outcomes are most important to patients? For example, is the top priority improved quality of life, longer survival, or relief of a specific symptom?

Improved quality of life through reduction of frequency and severity of migraines.

6. Are there new/emerging treatments that the patient community is anticipating? What are the benefits or disadvantages of the new treatments (e.g. more or fewer side effects, convenience, effectiveness, etc.)? Do you think the benefits will outweigh side effects or risks?

I have been convinced that CGRP inhibitor therapy is worth a try.

7. Do patients have trouble getting insurance coverage for treatment? Do costs affect patients’ choice of treatment, or their ability to access treatment?

My insurance typically covers all migraine treatments.

From the Desk Of……

JOANN REDMOND

To: The Institute for Clinical and Economic Review

Date: May 8, 2018

Subject: CGRP inhibitor medicines for migraine prevention

Personal History

My name is Joann Redmond. I live in a small town west of Atlanta, Georgia. I am 57 years old, married for 36 years. I have four grown children and two grandchildren. I am a Migraine sufferer and have been for over thirty years.

My journey began as a teenager with "bad headaches". Never diagnosed with any real malady so my mother just gave me ibuprofen from over the counter. I would take 600-800 milligrams at the onset of each headache. I am sure I was not doing my liver any justice.

The migraine starts in my neck muscles. It goes up the back of my neck and over into my forehead. I can't think straight. I can't see well. Sometimes I have an aura – cobwebs in my vision or tiny flashbulbs/fireflies. I get cold. I don't tolerate strong smells, bright lights, blinking lights/strobing lights, continuous loud noise or short, sharp noises. If left unchecked or meds aren't working well, I get nauseated. I become chilled to the bone. My face goes pale and I get deep circles under my eyes. My hair even hurts. And my skin. I can't touch my skin.

How Migraine Affected My Life

I missed out on things like school dances, dates, and family outings as I was in pain. As a young teen, this meant that the entire family would cancel their plans because I could not attend. And it meant my dates were cancelled at short notice, and I missed out on my social friendships.

As I aged, the "bad headaches" became "severe headaches" and included nausea, blurred vision, inability to form thoughts, sensitivity to light and sound. They impacted my early jobs. I was unable to hold down jobs because I missed too much time. I left college after only 1.5 years because I could not study with any consistency or attend classes when necessary. It took a lifetime to get where I am today. Had I been able to attend college, it is my belief I would have been further along in my career.

My marriage has suffered to some extent. My spouse understands that I am in pain but doesn't understand why it's so frequent. He doesn't like the medication I am taking as it makes me dizzy and unable to drive. This stops me from functioning as a partner in our relationship. I don't grocery shop because I can't drive there most of the time. I don't even pick up my own medications. Should we talk sex? Well, there really wouldn't be a point because it happens so infrequently. I'm either in pain, on medication, or recovering from both. When I have a headache, I really do have a headache. I believe our marriage is strong and safe, but I often wonder what he thinks deep inside. Does he regret marrying me because I'm sick? Does he really understand that I'm sick or is he just saying it so he doesn't make me feel worse? By the way, these questions always make me feel worse when I think about them.

Our children grew up with a mother in pain. We had a single child and then triplets. They required all of my attention. I HAD to stay alert for them. It was so difficult. There were days when I had to have help so I could rest my brain. My children understand I have migraines. And now, two of my children suffer. I've got the added guilt of knowing that I've passed along the gene. I'm so sad that I missed some of their childhood. I missed watching them play outside WITH them because I couldn't handle the sunlight, the heat. I watched from the window inside. I know they wanted me to play with them. I just couldn't.

Now? I have two granddaughters. The first thing they want me to do is play with them. I can't. I sit on the couch and watch them so they know I'm there. I don't let anything happen to them. But in the meantime, I'm in pain because I'm suffering from a Migraine and they are just being kids and squealing and playing. It's like sharp knives being driven into my skull. But I go to sit with them because I love them and I want them to know me.

I work. Yes, I work for a non-profit and have worked nearly my whole life. But I've been written up many times for missing sick days because of my migraine. I lose two days of work per month. I make mistakes. I feel like sometimes I don't make sense when I talk. I'm saying words that are real words and they are in the right order. But sometimes I think they aren't what I should be saying. It's an odd feeling. I have to work, though. I can't go months without a paycheck waiting on Social Security Disability to approve me. I have four more years and I will retire. I am praying that my migraines also retire, although I have no evidence that they will.

<u>Existing Migraine Medications and What I've used in the Past</u>

I take Imitrex (sumatriptan) daily as a preventative. But it really doesn't prevent anything. Maybe the pain isn't as bad as it could be. My insurance doesn't pay for the amount I need. They only allow me 9 tablets per month. What would I do the other three weeks of the month if I'm experiencing daily migraine? Nothing we say to the insurance companies will change their procedures. I get my medication with help from Good Rx.

I also take Butalbitol/Acetominophen blend. No caffeine. No codeine. I have adverse reactions to both of those. It's bad enough with the blend. I get very drowsy. I have a hard time seeing computer screens (like right now). They make me want to sleep all the time. And I can't drive once I've taken them. My reflexes are not as sharp.

I take these two medications on a daily basis and my Migraines are the same. Not worse. Not better. The same.

I've used at least one drug in every class of preventative medications. The blood pressure meds, the anti-seizure meds, the anti-depression meds, etc. My doctor has said there is no reason to try other drugs in the same classes because they all work the same.

I've had Botox. I participated in four months of shots. They did not work. At all.

I've had a nerve block in the top of my neck at the base of my skull. I had all three blocks and they did not work either. I saw no change at all.

My doctor has given me shots (Imitrex, Phenergen, and Valium) for the Migraine as well. Also I've been in the Emergency Room a few times.

I've seen three neurologists, had two MRIs. I've seen 2 chiropractors. I get massages when I can. None of these doctors have made a significant impact on the frequency and pain levels of my migraines.

And, finally, I've completed at least three steroid step packs in the last 5 years. These were used to stop the cycles. They did not. I had a migraine the whole time.

CGRP inhibitor medicines

I believe the CGRP medications could be the answer to my pain. This has delivered in lab testing. The results are in. Yes, I know it is still in final testing. But the prospects are looking extremely favorable.

I implore you to consider allowing access to these medications by all migraine patients. Make them affordable. If you allow insurance companies set prices, we will pay with our pain. If you allow the pharmaceutical companies to set the prices so high, we will pay with our pain. Why would anyone want to sell a medication to patients that is priced so high it can't be purchased or used?

I would like to see CGRP lessen the frequency of my migraines and lessen the pain. I don't expect a cure (although it would be very nice).

Migraine patients are not lazy. We are not incompetent. We are not stupid. We are many. We are strong. We are smart. And we are in PAIN. Please help us ease that pain.

Thank you for your time.

Dear ICER,

I first began to have migraines when I was a child but my family just thought that they were bad headaches and didn't understand what was going on. My senior year of high school I woke up one morning with a severe case of vertigo, unable to walk or go to school for an entire week. Following that incident, I began having recurring episodes of vertigo about 2-4 times a year, in addition to those "bad headaches". My first year of graduate school, I had one incident of vertigo that lasted 1 ½ months and caused me to drop out of a class I was enrolled in. Due to the severity of this attack, I went to get a second opinion regarding the cause of my vertigo. It was the ENT specialist who eventually diagnosed me with migraines, with intermittent migraine associated vertigo. After this diagnosis, I started seeing a neurologist who confirmed the migraine diagnosis.

After my initial diagnosis of episodic migraines, my migraine attacks increased in frequency every year despite the neurologist placing me on multiple preventative medications. I've tried every class of migraine preventative medication and none have worked for me. Many of the medications I've tried have given me serious side effects from insomnia so intense I didn't sleep for 1 ½ months to excessive vomiting and extreme memory loss. I bounced around from neurologist to neurologist hoping to find a doctor who would suggest a treatment plan that would work. However, despite all the doctors I went to and all the preventative medications I tried, my migraine frequency eventually became 25 migraines/month- keeping me essentially bedridden and leading to my diagnosis of chronic migraine. During this time, my graduate studies were essentially on hold and I was visiting the emergency room 4x a year. Not long after I was diagnosed with chronic migraines, my neurologist prescribed Botox injections due to the ineffectiveness of all the other migraine preventative medications. Because of Botox, my migraine attacks are down to 15-17 migraines a month. However, my migraine frequency leads me to be very sick for ½ to 2/3rd a year and still have to visit the emergency room every 12-18 months.

During my migraine attacks I can experience everything from the traditional symptoms of migraines such as light and noise sensitivity, nausea and/or vomiting, and intense pain to the bizarre from hot flashes, chills, olfactory hallucinations, allodynia (extreme pain response from stimuli which do not normally provoke pain), diarrhea, transient memory loss and aphasia, and extreme fatigue to the point where I am unable to walk or be alert. My migraines can last from a few hours to 3-5 days, causing me to miss work and time spent with family and friends. Even with the Botox therapy, my migraine frequency has still been highly disabling. With my migraines, every year I've had to take all of my allotted sick days plus have had to convert my vacation days to sick days. The migraines have held me back from progressing in my career at work. In fact, I have even been threated to be let go at my workplace because of the severity of my disease. In my personal life, I can't count how many family get-togethers and special events I've missed because I was having a migraine attack and have had to put off romantically dating for a few years because of the difficulty in juggling a new relationship with migraines. Because of this my migraines have caused me to battle with bouts of depression. My mother retired early to help take care of me and my family is always “on-call” knowing they may have to rush to be by my side to aid me during an attack.

ICER, I employ you to please see just how disabling migraines are. In the 2015 Global Burden of Disease Study, migraines were found to be the third highest cause of disability in those under 50 year of age worldwide. The new CGRP inhibitors are currently my only source of hope for a better life. I have put many things on hold, including applying for a clinical fellowship and romantically dating, just waiting to see how I respond to the CGRP inhibitors, in hopes that these drugs help me get to some semblance of a normal life. It is important that you recommend insurance coverage for CGRP for both episodic and chronic. Treating migraines is very costly and is often a financial burden on patients like me. My current therapy cost thousands of dollars a year and without adequate insurance coverage, CGRP inhibitors will not be accessible for most patients, including me. These new CGRP inhibitor medications represent the best hope migraine patients have to lead a more productive life.

With sincerity,

Jacquelyn Reuther

Dear ICER, 4-28-2018

I have had a neurological disease called migraines for over 30 years but was not diagnosed and treated until about 12 years ago. I never understood why certain sensations would bother me. For example, sunlight, loud noises, smells, weather changes. Food would also trigger and amplify the symptoms of my migraines. Migraines have changed my life. I have experienced the debilitating pain, disabling me to carryout daily activities. In the past 12 years, the occurrences of the disease of neurological migraines has escalated to every other day. I have altered my lifestyle in hopes to decrease symptoms and frequency of migraines. These lifestyle changes include changing my diet, exercise routine, topical creams to possibly slow down a migraine, etc. I've explored many migraine medications, therapy and treatment options including chiropractor, acupuncture, massage therapy, Botox, nerve block, trigger points, and SPG procedure. However, none have worked or helped. The triggers that cause migraines for me are MSG, strong smells, cooker smoked meat, camp fires, clicking sounds, as well as barometric pressure changes.

Migraines have taken everything from me, negatively affecting the quality of my life, nothing seems to help. I try and hide a migraine when I have one. If It is a bad one, no one will see me. I hide away in my bed. It is becoming very hard to go through a day without migraines or the migraine hangover after effects. I try and tell people what it feels like weekly of having this invisible disease. It’s like having the flu every week, or like a bad sinus cold every week. I have them in the back of the head, my temples, which have a vice like feeling, also, sinus pressure, nausea, and zaps in the head are a few of the symptoms. The total exhaustion tired drained feeling I get the day before and the day after a painful migraine is also taking my quality of life away.

Once the Migraine appears, I have many different symptoms, neck pain, severs head pain, also sinus pressure, nausea, eyes zigzags in my vision, pain in the temples, foggy feeling, migraine hangover and, I am unable to concentrate. There are many days that I must go in a dark room, ice pack pills, and hide away from the world. Those day no one sees me. This disease takes my life away. I am always trying to hide it and push through the day. Thank goodness for some of my rescue medication it helps me to push through the day. For my family the impact of having migraines they really feel sad for me. There is nothing they can do, and they don't like it. I have had to cancel many functions because of the migraines. The Family at times just don't understand that it is a daily job for me to watch my triggers. They also at times really get sick of hearing about my migraines all the time. I just try not to talk about them sometimes. I wish I didn't have migraines, but they are part of my life. Migraines are a neurological disease. Having migraines is the most debilitating disease of day to day life. Until someone has had them they will never understand. It is not just painful, but you can still have migraines with no pain, nausea, fatigue, tiredness, fogginess, can't think right, can't talk straight, trying to power through the day is a struggle.

CGRP is a new treatment coming on the market next year 2018. Calcitonin gene-related peptide (CGRP) is a member of the calcitonin family of peptides. USA has over 37 million people that have the neurological disease called migraines.

I have been in the 3 phase CGRP since July 2016. This study has given me my life back. This study of the CGRP shot has given me over 50% a month back to me. Words cannot express How I have Felt so wonderfully. I have gone from 14-15 migraines a month, also having the pre- migraine and migraine hang overs, to an average of 7 migraines per month or less. The CGRP Calcitonin gene-related peptide, shot has really helped me in this invisible disease. I will always have to watch out for my triggers, but this has been amazing. Please make this **affordable** to the people with this terrible invisible neurological disorder called migraines.

When I get my migraine medication there are usually only 6 pills. The insurance won't cover any more. I have more than 6 migraines a month, I have about 14 migraines a month, so I try to pick the worst ones to take the medication. Sometimes my medication are 3 or 4 tier and I can't afford them. It cost over$ 150.00. Also, my insurance is telling me now that as of 2018 they won't let me have my medication that I have to have generic, but the generic does not work for me.

For all of us who experience migraines, we need to try not to let migraines take our life away. We need to except we have migraines and we can't give up. With the help from the pharmaceuticals and ICER to find a cure or medications like CGRP to lesson our discomfort. To help us have some quality of life. The most important thing is getting relief and my quality of life back. These painful migraines, pre-migraines, and migraine hangover has taken my life away. Please make it affordable and HELP us!

Thank you for your time

Sharon Rhoades

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I am the mother of a 25 year old son with complicated severe episodic migraines. He has struggled since high school but towards the end of college, was unable to abort the migraines at home with any of the prescribed abortives. He dutifully tried all categories of abortives. He also has tried numerous preventive medications. Topomax put him in the hospital with dangerous changes in his creatinine level. Depakote caused a severe tremor and blood pressure medications caused intolerable fatigue and weakness. Amitriptyline, the only preventive that has truly helped has caused extreme blurred vision so he was unable to get up to a therapeutic level. He has had excellent care at the Jefferson Headache Center but unfortunately, the only solution that would work for him was 2 full days of IVs to abort a migraine each time that he had one. And waiting for an IV "spot", which could mean days or weeks with a migraine until he could even have the chance to have an IV. And now, this week, the infusion that he just had didn't work, for the first time. He is petrified that he will now have a daily headache that will be intractable. And he is afraid of that because my other son, who is 28 years old, has had a 10 year daily unremitting headache. He worries that this is his future.

The impact that migraine has had on his life is hard to even describe in words. He is 25, in the prime of his life. While his friends are at the beach or out late on the weekends, he is often on the sofa with the shades drawn, watching the world go by. He somehow managed to finish his masters degree with accommodating professors and is working on his teaching certification, but worries about how he will ever student teach or get a job with this constant disruption in his life. How do you tell the school that you are working for, that you have to miss work for 2 days because the only way your migraines will abort is with 2 days of IV? And that this could happen a few times a month. The worry about getting a migraine and not having a reliable treatment that will break it takes over his life at times, and certainly doesn't help him get out of the spiral of repeated migraines.

He has tried every triptan, anti-inflammatory, DHE nasal spray, DHE injectable, Reglan, Compazine which only is the beginning of the long list. He sees an alternative medicine specialist and takes so many supplements that he says he feels like a 90 year old man. He is currently using the sTMS mini. He has gotten Botox for the last 3 years. Most categories of preventives give him terrible side effects that are a deal breaker. He is gluten free, dairy free, egg free. He hydrates, sleeps regular hours……..as he puts it, "I live my life in a straight jacket."

As the mother of 2 precious sons in their twenties struggling with migraine and new daily persistent headache, I urge you to value our pain and suffering as well as that of the entire migraine community. We desperately need the new CGRP medications to be accessible and affordable and need you to open your hearts to respond to our plea.

May 8, 2018, 10:05pm Eastern Standard Time

To Whom It May Concern at Institute for Clinical and Economic Review (ICER):

RE: Migraine patients need better treatment options and affordable access to these options.

My migraine journey

I am currently 42 years old and started getting migraines when I was approximately 20 years old. I experience anywhere from 4-15 migraines per month, depending on several factors, including the weather, change of seasons, and if it's my "busy" season at work. I am a nonpartisan budget analyst at the state capitol in Hartford, Connecticut. I often work 16 hour days during the last days of session, during "budget season".

Disrupted sleep, along with the season change is a big trigger for me and this often sends me into a downward spiral of what I'd call "cluster migraines". I have to take the rescue triptan (Zomig) almost daily, which I know is wrong. This causes rebound headaches. It's the only way I can function at my high-pressure job. I like my job and don't want to file for disability, even though I know I could. The migraines cause cognitive impairment, confusion, and speech slur which is a problem for my career. I have had to run out of high level budget negotiations with the Governor himself to throw-up. It's embarrassing, but by the time the migraine escalates to that level the pain is so great, embarrassment is the least of my problems.

I have full-sleeve tattoos (including the elbows), run full marathons, and have a spinal fusion in my neck; none of the aforementioned compares to migraine pain. The cluster migraines bring me to my knees after a few weeks. I fight back tears during meetings. It's just too much to bear, even for us Type A's. One can only "push through" so much, for so long. My vision gets blurry, sweating through my suit jacket from intense physical pain. I develop speech problems, and my head pounds with throbbing pain. Concentrating on fiscal impacts of proposed legislation is difficult at best. Most times, I can hardly read the words. Writing this chokes me up with sadness. There are those worse off than myself and I advocate for them. The night before the NYC marathon, I got a blowout migraine. I took the triptan, which drains your energy and gives you these "hangovers" and plodded away for over six hours to finish the NYC marathon under the pitch black darkness of nightfall. I do not quit. This is true of most Migraneurs. We are strong, we know pain and we do not quit. We just need new tools in our arsenal.

Migraine disease has subtracted from my quality of life. During certain times of year, I cannot make commitments with friends, knowing I may be subject to breaking them if "the beast" rears its ugly head. Overall, this nasty chronic disease has had a negative and disabling effect on my otherwise wonderful life. I become irritable, when I think I'm otherwise a really pleasant person! Now, I recognize that as a warning sign that a migraine is coming. I don't go on vacation to certain rainy areas of the country because it seems like a "headache place". This seems ridiculous to a healthy person! I have developed anxiety that I never used to have, caused by the disease. Fear of the next attack is always looming. I stash rescue medications away like a squirrel (desk drawers, my car, my nightstand in case I literally cannot move from my bed, etc.). New and improved treatment may not only treat the primary disease, but secondary ones, as well (the mood disorders and maybe even my neck tension!).

Below please find a list of medications, supplements, surgeries, neurostimulators, and complementary alternative methods that I have tried or are currently using:

> Topamax, nortriptyline, beta-blockers, triptans (Maxalt, Relpax, Imitrex, Zomig, others I cannot remember), botox injections, nerve block injections, dry needling, tens units, ACDF disc replacement & fusion in my neck at C5-C6 on 1/20/2015 St. Francis Hospital- Hartford, CT, acupuncture, massage therapy, physical therapy, cardiovascular exercise (marathon running), yoga, meditation, special "diets" (keto, gluten-free, elimination diets), B-vitamins, CoQ10, 5-HTP, melatonin, magnesium, and caffeine.

While I’m lucky to have the treatment regimen I do, with my amazing private insurance, although there are drawbacks. The existing migraine medicines I take fail to fully remedy the full array of horrible migraine symptoms and these drugs have many side-effects, including rebound headaches. Imagine that – a headache drug where side effects include headache.

In summary, please value the *incredible* pain and disability endured by migraine patients by supporting both episodic and chronic migraine patients in having access to these new promising CGRP inhibitors.

If you don’t personally suffer from this life-altering, mind-bending type of pain you cannot even imagine what they’re like to endure.

We need new affordable treatments, now. Thank you!

Please feel free to contact me for clarification, or with any questions.

Best,

Marcy Ritsick

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My Migraine Journey

I started getting Migraine attacks when I was about five years old. I don't remember life without several attacks every week. I spent most of my formative years learning how to hide my symptoms so other people would not characterize me as undependable. I also put a great deal of thought and planning into my career choices in an effort to find a Migraine-friendly work environment. Ultimately, I had to admit that such an environment did not exist.

I didn't get access to an effective treatment until after my 45th birthday. Even with a "successful" treatment, my days are still spent treating or trying to avoid a Migraine attack. It's always good to have fewer attacks that are less severe and respond well to acute treatments. However, none of that matters if the preventive treatments cause side effects that are as debilitating, or more disabling, than the migraine attacks themselves.

Every single treatment I've tried has either been completely ineffective or caused side effects that were more debilitating that the Migraine attacks themselves. Nearly every failed treatment tried over the years have resulted in irreversible weight gain. When I started on this journey toward finding an effective treatment back in 1988, I weighed just 90 lbs. with a BMI of 19. Thirty years later, I now weigh 225 lbs. with a BMI of 45. I am now struggling with morbid obesity resulting exclusively from the side effects of Migraine preventive treatments.

Because I must still take daily medications that cause weight gain, I've struggled to lose weight. It takes all my willpower just to prevent additional weight gain.

Treatment success doesn't mean a good quality of life.

A large part of my treatment "success" is a result of a restrictive lifestyle that protects me from environmental triggers that will set off attacks even while receiving a "successful" treatment. Here are just a few examples of the limitations I experience because of migraine:

- I don't go to church anymore because of the risk of fragrance triggers
- I wear noise-cancelling headphones and specially-tinted glasses whenever I go to a movie theater. I am unable to watch 3D movies at all without triggering a migraine attack.
- I shop online, even ordering groceries online for pickup or delivery.
- Amusement parks, fairs, open air markets, and concerts are all out of the question because of the risks of flashing lights, loud noises, and strong fumes (particularly cigarette smoke).
- I am unable to work outside the home or do any work that requires fixed deadlines. Even though my treatment is "successful," my attacks are still too frequent and irregular to satisfy any employer.

Current treatments don't help most of us.

Even though I am currently experiencing treatment "success," my life is far from normal. The longest I've ever gone between attacks is 25 days. That's happened only five or six times in the last 43 years. Most often, I experience at least one attack every week.

Migraine experts tell us that we should consider preventive therapy even if we're only experiencing a few attacks per month. At this time, receiving a "successful" treatment, my doctor tells me that I am still getting too many Migraine attacks. If I had received early intervention when I was only five years old, I might not be living with weekly Migraine attacks now in middle age.

Since 1988, I've tried the following:

- Amitriptyline caused suicidal ideation and weight gain.
- Feverfew had to be discontinued before getting to a therapeutic dose due to pregnancy. When I tried it post-partum, it had no impact on Migraine frequency or severity.
- Depakote caused a severe dystonic reaction with just one dose.
- Melatonin had no impact.
- 5-HTP caused vomiting and nausea
- Oregano caused vomiting and nausea
- Various homeopathic headache remedies had no effect.
- Topiramate lowered frequency from 20 to 18 attacks per month. It caused potassium deficiency and severe cognitive impairment that resulted in my termination from a job. When I finally weaned off topiramate, I gained 20 lbs. in two weeks.
- Magnesium caused diarrhea.
- Riboflavin had no effect at all.
- Gabapentin only made me sleepy all the time and caused a 40 lb. weight gain.
- The first trial of Botox was ineffective because it wasn't administered correctly. That "failure" led doctors to refuse try it again for five more years.
- Keppra caused paranoia within the first week.
- Baclofen dropped my blood pressure dangerously low.
- Verapamil reduced attacks from 20 to 15 per month but caused painful swelling of my hands and feet and another 20 lb. weight gain.
- Multiple rounds of prednisone over a 4-year period failed to stop long-lasting attacks and added another 30 lbs.
- Amitriptyline failed a second time because the dose was too low.
- Botox was finally tried again in late 2014, reducing attacks from 20 days per month down to 4-5. It was the first time 40 years that I had just one Migraine attack per week.
- A therapeutic dose of amitriptyline was started in 2017 in the hopes it would eliminate the last few attacks. Instead, it only caused another 15 lb. weight gain.

Cost-effectiveness doesn't consider quality of life.

Over the past 30 years, Migraine has cost me over $1.5 million in lost wages because I have been unable to work in any of the fields for which I am trained. I'm well-educated with in-demand skills. The only thing that's ever held me back is Migraine.

It hasn't just cost me a career. I've missed holidays, birthday, countless concerts and sporting events in which my children participated. I missed my son's high school graduation because the side effects of a Migraine treatment sent me to the ER that day. I had to give up camping with my family because, even with the most successful treatment, outdoor activities still trigger severe Migraine attacks. My granddaughter's 4th birthday party is in just a few days. I still can't predict whether I will be able to attend. I could wake up with a Migraine attack that day. If acute medication doesn't work, I will miss that very important day.

Insurance coverage is already inadequate.

I've never had a treatment fully covered by insurance. The least expensive Tier 1 acute and preventive medications were never the most effective for me. I routinely spend over $200 a month just on prescription medication to treat Migraine and its comorbidities. Half of my prescribed treatments are not covered at all.

I receive SSDI and Medicare. I do not qualify for any special assistance because my husband is employed full time. My SSDI benefits don't even cover all my premiums, co-pays, and out-of-pocket medical expenses.

A few safe, effective treatments are available.

My insurance has denied coverage of three treatments without weight gain side effects that are FDA approved to treat Migraine:

1. Cefaly
2. sTMS Mini
3. GammaCore

I cannot afford any of them without insurance paying for part of the cost. Any one of these treatments, if proven effective, could replace every single acute and preventive treatment currently prescribed to me. The out-of-pocket and insurer's costs would be significantly reduced and my quality of life (plus life expectancy and overall health) would greatly improve.

Better treatments are pointless if we can't get access.

Safer, more effective treatments are desperately needed. However, they do us little good if they're only accessible to a few. We shouldn't be forced to wait until we are desperately ill and disabled to finally get access to one of handful of treatments actually proven to work. It's more affordable to approve early intervention so we never have to lose our jobs, our homes, our families, and our hope.

Yours truly,

Tammy Rome, LPC

The Headache
& Migraine
POLICY FORUM

CHAMP
Coalition For Headache
And Migraine Patients

Migraines have devastated my life for 26 years now. Since I was 2 years old I've dealt with this monster called migraine inside my head and it has only gotten stronger as the years have passed. 26 years of pain, loss, judgments and depression and people still don't take this illness seriously.

They first started off as normal migraines when I was a child. I had to lock myself in a dark room with a bucket at daycare while the other kids played. I miss those simple migraine days. It was when I was 13 that it all changed.

My run of the mill horrible migraines had turned into Hemiplegic Migraines. Never heard of them? That's alright. Most doctor's today still have never heard of Hemiplegic Migraines. They are migraines with stroke symptoms. They are almost exact to real stroke symptoms. I would know since I suffered from a serious stroke back in 2015, but we'll talk about that in a bit.

When I have an attack, the left side of my body loses function. I can either just lose some strength in my let side, or I can't move it at all. Or worse, I can't move anything on my body at all. I can only just lay there and blink to communicate. In my worst attacks, I'll lose the ability to swallow. I've choked on my mucus a few times, and the only way I could breathe is my husband rolling me onto my side. I'll lose consciousness, not know what's going on around me, confuse past memories with current reality. When I keep passing out, I'll confuse reality with whatever dream I keep slipping into. Unbelievable pain.

You lose a lot of dignity when you're unable to do simple things like walk. During bad attacks, I have to be carried everywhere. My husband who has a bad back, bad knee has to carry me. Sometimes my left torso muscles are so weak that he has to hold me on the toilet while I go so I don't fall off. And if my arms aren't working, he has to wipe for me. In a marriage, there's some things you want to keep a mystery. When you have Hemiplegic Migraines, that's not possible. He has to cut up my food for me during an attack, sometimes feed me. And it's heartbreaking because I'm useless even when I'm NOT having a bad attack.

Preventatives and abortive medicines have never worked for me. All my neurologists have nothing else for me. My last attempt was Botox and that didn't help either. I even went to the Mayo Clinic in Minnesota and they had no help. I've lost a lot of weight this year because my attacks are so often and I'm often suffering from nausea. It is currently May 2018. I've been in a constant Hemiplegic Migraine since Fall 2017.

For months on months I've rarely been able to drive, if I do, it's no more than 5 minutes. I can't handle doing chores most of the time. Walking can be to much if I'm weak. Sometimes I'll have some strength, but my head won't be able to handle walking faster than a crawl. All sounds and lights have to be particular. Every single moment is a fight. Every. Single. Moment. With torso weakness, sitting in a chair is very, very difficult. You don't know how much you use your torso muscles until they give out on you. Even letting the dogs outside by opening the door so many times a day really wears me out. My husband has to make sure I have easy to heat up food, protein shakes for when my stomach isn't having a good day. One minute I could be okay, feeling decent and happy so I'll do some singing. Here cues another attack. Singing, laughing, happiness, excitement, anger, crying all of those WILL cause an attack. My head doesn't tolerate anything well. Everything is always a constant battle.

So I mentioned earlier that I had a serious stroke back in 2015. Stroke at 25? What? It was the perfect combination of things to cause my stroke. I had a Hemiplegic Migraine for several days and I couldn't keep anything down, not even water, plus Hemiplegic Migraines give you an increase risk for stroke, and my birth control. Perfect storm. Funny thing was, we had no idea. I was at home for a straight week before we decided to go to the hospital because my symptoms weren't that different from my Hemiplegic Migraines. I was in ICU for a few days. The doctors were marveled at my stroke. I should have died. It's nothing less than a miracle that I'm here. But I now have brain damage and it has made my Hemiplegic Migraines much worse. I'll be on blood thinners for the rest of my life, so I do not have the option to carry a child. So thanks to my stroke, can't have kids. And thanks to HM (Hemiplegic Migraines) I can't care for a kid, can't even take care of myself.

So kids are off the table, so I should focus on my career, right? Good idea but no. Every job I've ever had I had to leave thanks to my illness. I'd miss work thanks to HM. Some jobs they never saw the attacks and only heard about it, so they didn't believe me. They couldn't fire me, so they just made my life miserable until I quit. Some jobs understood though. Some I'd come to work, drove to work, with body weakness. I'd try to power through all my stroke symptoms and they'd only get worse. That was an almost every day occurrence with some jobs. All in all, I have worked until I've passed out on the job, literally. My body cannot handle it.

I am blessed with amazing friends and family, but I have lost a lot of friends because they do not understand my illness. They think me canceling all the plans is me just being a jerk and not wanting to spend time with them. I can't relate to people my age. They are full of life, opportunities and dreams and I am just not blessed with those. They don't get that there's no answer out there for my illness.

They try and try to refer medicine and treatments but they don't understand how nothing can work for me. Then they realize the true devastation that comes with my illness, it scares them, and they slowly stop making contact with me. My body is super sensitive from the CRAZY side effects “migraine medicines” can cause. One medication made me hallucinate at work! Like they didn't think I was weird already with my illness, they also got to see me have horrible adverse reactions to a medication.

When I was a kid and teenager, doctors were throwing pills at me. Since I was a kid, they didn't listen to me when I said I didn't want to up the dose. When I was a teen I was on SO many medications at one time my liver was on the verge of failing. A very different world from now. Now, doctors just shrug and say there is no treatment for HM and cast me off onto another doctor that's never heard of my condition.

I sit at home, every day by myself. I try to make life as enjoyable as possible with my limits but this is not life. I had to drop out of high school my senior year because I missed so much school due to HM. The school nurse hated me because she thought I was faking it. But I graduated. I was home schooled and the next year after I dropped out I was able to walk across the stage. Hemiplegic Migraines have taken SO much from me, but I still fight like hell to stay here. They helped cause my stroke in 2015, but I fought like hell and recovered my right side back from that. My life is full of defeat and loss but I refuse to give up. I want life. I want to live. I want to dance, laugh as hard as I want, sing as loud as I want, work a job without having to worry if I'm going to lose body function. I want so much from life. And I need help for that. I am desperate for a medication to help me function and doesn't have horrible side effects. I've tried everything, every specialist in my area, every medication that my neurologist now says there's nothing else to try. I just want to live. But hey, it's just a headache, right?

Dear ICER:

I have read with interest about your input re: marketing the new **CGRP** medication for migraine (ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE). I have been a migraine sufferer for most of my life: I had auras when a child, and a limp in my twenties; later, this was diagnosed as hemiplegic migraine, with aura. By my thirties until my fifties, I endured pain and nausea so severe I would vomit for days, because I was too sick even to pick up a phone; finally, I would by sheer will power, be able to phone 911, and end up in the ER. There, the pain was sometimes so severe, that I would curl into a fetal position, and feel as though I were dying-- that my cerebral blood vessels were about to explode. Sometimes, ER doctors knew what drugs would work, but often, not (The steroid *Decadron* would work, as would morphine-- but not all doctors were comfortable in using either one of these). The so-called “preventative” drugs don’t work for me, and also, cause severe cognitive side effects and drowsiness. I began to use the **Triptans** when they arrived, but shortly thereafter, was given that label of “hemiplegia”-- so that, no doctor really wanted to use these drugs on me (for fear of stroke). In addition, I am allergic to aspirin, and cannot use Ibuprofen because of multiple stomach and digestive disorders.

Now, I am at the point of having chronic migraines. I have good days and bad. Sometimes, I cannot do anything that day, except curl up on bed. On other days, I can tolerate moderate activity. I am unduly sensitive to light and sound. I currently use a combination of *Fioricet* and/or *Percocet*-- never more than 2 per day for each drug. I usually break my meds in half, and count my acetaminophen mg.-- never taking more than 1800 mg. Per day. But in our current political/medical climate, I may be denied the low dose of opioids I am taking… in addition, I am being told I’ll eventually have to come off *Ativan*, as well. This is a shame, because *Meclizine* does nothing for me, and ½ of an *Ativan* will often help my migraine vertigo (a neurologist in the past told me to use it). And what is the fate of *Fioricet*-- which is a terrific medication for moderate migraine?

So because the CDC/FDA is systematically reducing all the other meds we can take (and some of us cannot tolerate what they want us to take for chronic pain), I hope that your panel allows **CGRP** drugs to be marketed, and to covered by insurance, including Medicare Part D. The more drugs that are available, the better doctors can treat this mysterious malady. Thank you for your time and attention to this letter and attachment.

Sincerely,

LS

My name is Jaime Sanders. I am a migraine patient advocate, migraine community blogger, and member of Global Healthy Living Foundation's 50-State Network.

I am most concerned that ICER has chosen to deny the request to have a migraine patient and a headache specialist included on the voting panel. There will be a severe lack of understanding of migraine disease without the experiences and knowledge of a migraine patient *and* a headache specialist.

As someone who has lived with migraine disease for over thirty years, the severe limitation of migraine specific medications and access to treatments is a common hurdle for migraine patients and the specialists who treat many of us. There is an egregious oversight of how serious migraine is and how the obstacles in receiving appropriate treatment have impacted the migraine and headache community and their quality of life. Excluding the perspectives of an actual migraine patient and headache specialist and solely relying on the antiquated QALY measurement is extremely troublesome to me.

Having chronic migraine puts many limitations on my ability to function normally. I have twenty-four/seven sensitivity to light, sound, and smells. I am in pain most days and any physical activity, such as housework or exercise, triggers a migraine. I have had to make changes to my diet to avoid multiple food triggers. I suffer from memory loss, confusion, the inability to concentrate, and slower processing speeds. My available treatments only lessen how many very severe migraine attacks I get, however I still have 15 or more headache days a month.

My current treatments do not greatly improve my quality of life. Every day I am in some level of pain and am inundated with the symptoms of migraine. I must rely on several daily medications and supplements, receive Botox injections and nerve blocks, monitor dietary restrictions and triggers, and limit how much I do each day. Despite following these protocols, I still wind up in the emergency room way too often and have been hospitalized multiple times to treat an intractable migraine that would not break.

How is it possible to determine if the CGRP drugs are of value to the migraine patient without including and understanding the reality of migraine disease from those who experience and treat it? I have been on more than twenty different medications, including propranolol, topiramate, and amitriptyline, which I either failed on, could not tolerate due to the side effects or had an allergic reaction to. The inability to receive a treatment with long-term results is extremely frustrating.

My experience with the treatments I have been prescribed for both episodic and chronic migraine is like putting a band-aid over a bleeding artery. My pain is not being eradicated. It is simply being dialed down. I still must fight through pain to live my life and that is something that I no longer want to do. The burden this disease has on me and my family is tremendous. Everyone suffers along with me. Access to these CGRP drugs have the potential to elevate my quality of life to a place I have never experienced. They could provide an opportunity for people like me to reenter the world and become active members of society again. I want to be able to work, travel, exercise, and spend time with friends. With my current treatments, I am either completely unable to or must substantially limit how much I can do.

My headache specialist has expressed at every appointment how upsetting it is that I have been suffering for so many years. He acknowledges that what he is prescribing to treat my disease is inadequate but better than everything else I have tried. He wants to see me on a CGRP drug because it will finally give me a chance to have a much better life. He truly does not like to see his patients suffer like this and wants to be able to have the access to prescribe CGRPs. He is afraid that if ICER's emphasis on hand-picked, short-term economic data is used to ignore the long-term patient benefits as well as short- and long-term societal benefits, including productivity, and quality-of-life for patients and families, that the drug class will be deemed too expensive – a decision that will come from a purported group of experts that does not include a headache specialist. I cannot overemphasize this glaring deficiency – the lack of a relevant specialist – in this study, and many of ICER's previous studies.

I can only hope that if someone on the panel or in the ICER organization, gets a life-altering disease, this pattern of ignoring the experts doesn't continue, and a qualified specialist is available to make decisions for *them*.

I will never give up hope that I will have access to groundbreaking treatments, despite the harping presence of groups like ICER which seem to promote their own agenda at the expense of patients, their families and society. I will continue to advocate for the millions of people in this country who suffer silently with migraine disease. Every single one of us deserves to live a life free of pain and to deny us that access is cruel and negligent.

The following is the statement I wrote for my disability application. In the 4th paragraph, I begin to talk about migraine. Because migraine alone is not recognized as sufficient to qualify for disability, I had to emphasize my MS and depression. The truth is that I have always considered migraine to be the more debilitating condition.

4. Describe fully your present disability and its causes, with a complete history of it to date I began working at Telephone Counseling of the Counseling and Mental Health Center at UT in the summer of l996, the summer before my final year of graduate school. It seemed a perfect way to gain more experience as I prepared to become a psychotherapist after graduate school. It was intended to be a short-term, student position, but that all changed with my diagnosis of multiple sclerosis the semester of my graduation from graduate school (spring 1997). The initial symptoms that led to my MS diagnosis were numbness, weakness, incoordination in my right arm and leg, and intermittent difficulties with speech.

During 1997and 1998, I battled debilitating depression while attempting to move ahead with my career plans in some fashion. With the help of therapy and psychopharmacology, the depression finally began to lift. This was a trial and error process of finding the correct antidepressant and dosage for me.

I needed to maintain the health insurance provided with my part-time job at UT. Due to my need for additional income, I obtained 2-3 additional part-time jobs. At first, I was able to manage the fatigue, weakness, depression, heat sensitivity, and other problems associated with multiple sclerosis. Then, in February of 2001, I had an MS exacerbation. The symptoms were similar to the ones that led to my MS diagnosis in 1997, but they were also accompanied by extreme fatigue and difficulty regulating my body temperature.

My doctor recommended that I begin a disease modifying injectable medication. I began the interferon Betaseron on 4/13/01. However, I did not really begin taking the medication consistently until 4/26/01 as I was having difficulty managing the flu-like side effects. Unfortunately, when I started the Betaseron, I began to experience severe daily headaches. I stopped the Betaseron in June 2002 as the headaches began to dramatically interfere with my ability to function on the job and at home. I was incapable, even, of beginning a new disease modifying regimen. I did not have the wherewithal to research and decide which of the available injectables designed to stabilize the disease would be the best option for me given my side effect experience with Betaseron. I knew from my experience on Betaseron , it was not realistic for me to imagine mixing the drug and preparing the syringe, perhaps on a daily basis, as well as adapt to a new side effect profile, when uncontrolled pain was interfering with my basic ability to care for myself. It was all I could do to slap some peanut butter on a piece of bread for dinner.

The development of severe daily migraine in February 2001 until I was finally able to find a bit of relief at the beginning of 2003, marks an extremely dark and difficult 2 year period in my life. The following is a list of doctors and migraine treatments that were tried, unsuccessfully, during this period:

Marci Roy, MD, MS and migraine specialist; Imitrex, Neurontin (24oo mg), Zomig, Fiorinal, Darvocet
Rajat Gupta, MD, migraine and pain specialist; Imitrex nasal spray, 9 myofacial release physical therapy sessions
Ed Fox, MD, MS specialist; Pamelor (150mg), Zanaflex, Vicodin

None of the aforementioned treatments were effective for me. Pamelor caused me to suddenly have dramatic difficulties with speaking (getting the word out) and spelling.

The pain during this period of my life was unbearable. I could not tolerate sound, light, movement, and activity. I remember that if I had client cancellations at my agency job, I would lie in bed until my first appointment because getting up and getting showered and dressed meant even greater pain.

Everything in my life slipped as I fought to keep up my responsiblities at work. I had to rest when I got home and on weekends. Bills went unpaid, housekeeping undone, groceries unpurchased, laundry piled up. I did not feel like socializing or visiting with friends or family over the phone or in person.

In December 2002, I was terminated from the agency where I worked as a psychotherapist. Subtraction and addition errors were beginning to appear on client billing ledger cards, and I wasn't maintaining enough clients on my caseload.

In May 2002, I stopped teaching ESL due to difficulties maintaining focus and concentration necessary for teaching. I had difficulty planning lessons and maintaining my classroom duties.

On December 31, 2002, Eliot Frohman prescribed Topamax and I finally began to experience partial relief at the beginning of 2003. I began to be able, at least, to get out of bed on most days, at least in the winter.

During 2002-2004, I continued to search for better treatment for my debilitating headaches. I finally thought that I had convinced Dr. Frohman to help me see the headache specialist at UT Southwestern (a referral was needed), but I continued to experience roadblocks.

I finally found Dr. Ninan Mathews of the the Houston Headache Clinic. However, Dr. Mathews was not a provider on my insurance plan. I went through a long appeal process with Blue Cross before they approved treatment by him June 2004. In the meantime, I was striken by sudden and dramatic mobility impairment in February 2004. The acute phase of this exacerbation took approximately two months to resolve. One evening as I was walking up stairs to my apartment, I noticed that my left leg would not move properly. It dropped like a lead weight. When I woke up the next morning, I could barely move my left leg, and hardly walk.

I began a course of outpatient IV steroids. I did not use sick time for this treatment because the back up staff for Telephone Counseling was unable to cover for me. Also, according to the nurse, I could self administer the IV by simply following her instructions. Twice I had to be seen at the hospital, on an emergency basis, for things that went wrong in the IV administration.

For more than a month, my walking speed was extremely slow and took great effort. I couldn't walk more than 10 feet without resting and/or taking a break. This was a hardship in terms of my UT job given the distances of the hallways that needed to be travelled to arrive at the office.

On July 26, 2004, I checked into the Houston Headache Clinic for a week due to severe, debilitating, unrelenting migraines. This was a full-day week long program. I received daily IV infusions, learned biofeedback and other behavoir techniques to treat migraines, and my long term pharmalogical treatment plan was revamped. I agreed to try another triptan, though already several triptans had proved unsuccessful for me. Unfortunately, the new triptan did not work either. I added Nadolol to my preventative regimen. I do not believe it has provided much, if any, additional benefit.

I have continued to remain informed of the migraine literature. It was not until Namenda that the next promising migraine drug since Topamax seemed to appear. I began Namenda on March 23, 2010. By the fifth week on the drug, I began to experience serious side effects. On April 27, 2010, while on the telephone trying to find out the number of sessions being authorized for a client, it became difficult to speak. I had a hard time moving my mouth to form the words I wanted to say. My walking was clumsy and weak. I couldn't cool down, even though it was only 70 degrees outside, the humidity was low, and I had the AC turned down to 68 degrees. I had to place the fan in close proximity, blowing directly on me.

In addition to the daily migraines which have plagued me since 2001, I have experienced significant elbow/wrist problems on my right side that interfere with my writing/typing function as well as balance difficulties resulting in several dangerous, or potentially dangerous fall. For the most part, I have learned to manage symptoms of depression, but from time to time, I do experience bouts of depression that paralyze me. Also, over time cognitive impairment in terms of my processing speed, memory, and judgment has become more pronounced. I try to compensate using memory devices from post it notes to writing notes on the inner top of my hand, where it is impossible to miss them. The following are examples of some mistakes I have noted making:

- I get claims I file sent back repeatedly. Often I copy my NPI wrong. Other times, the error is more shocking, such as when I write the wrong year.
- I was unable to balance my checkbook for three months. When I finally got help, I was astounded I had not been able to figure out a simple error on my own.
- Often misdial phone numbers.
- Spelling problems: ficture for fixture, extirese for expertise, offe for off

- Easily get confused/ have trouble thnking clearly. I had to figure out whether 5/11/10 was the 2nd Tuesday of the month. Because May 11 fell during the 3rd week of May, I could not wrap my head around the fact that it was also the 2nd Tuesday.
- At times I have been sure I offered a client one appointment time, but according to the client, it was another. I've even had a client allow me to listen to my voicemail message I had left for him so I could hear for myself I had been wrong.

8. **Describe all the work you are able to do at home and elsewhere.**
When I am feeling well enough, I must seize these opportunities to get the things that are absolute priorities done: buy groceries, pay bills, do laundry, submit claims. Problem is, I seldom feel well.
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The above statement expresses how migraine has adversely affected my life. Perhaps it is too late for me. Migraine has already taken a great toll on my life. I have lost my profession and the ability to live normally for almost 2 decades. I write this letter on behalf of of those who come after me. Perhaps being offered a drug like a CGRP inhibitor will allow them to adequately treat migraine so that they are not robbed of all I have been robbed of due to migraine.

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Chylo Schwab

May 7, 2018

Ladies and Gentlemen of the ICER Panel:

My name is Chylo and I suffer from Chronic Migraine Disease. My first migraine started when I was in my mid 20's and I am 47 now. At first, the migraines were episodic and lasted for 14 to 16 days but only one or two times a year. In the last 6-7 years, they have progressed to Chronic. I will typically have 5-6 days a month with little or no pain but the symptoms will persist. I have tried the following (I know I'm forgetting some, forgive me, my brain isn't what it used to be):

- Triptans
- Amitriptyline
- Topamax
- Fioricet
- Nortriptyline
- Botox
- Trazadone
- Medrol dose packs
- Cefaly device
- Ibuprofen
- Tylenol
- Aleve
- Exedrine and Excedrine Migraine
- Tramadol
- Vicodin
- Toradol Injections
- Gabapentin
- Propanalol
- Depakote
- Oxycodone
- Verapamil
- Sinus surgery
- C-spine surgery
- Chiropractic care

- Lumbar puncture
- Keppra
- Countless antidepressants
- Ice
- Heat

During most of each month, I have dizziness and vertigo, constant loud ringing in my ears, balance issues, extreme fatigue, pain that is sometimes almost unbearable, blurry and double vision, nausea and vomiting, sensitivity to light and noise, memory and cognitive function issues, tingling of my face and scalp. I also suffer from Fibromyalgia so those symptoms tend to worsen during a migraine attack.

Every day, I let people down. My husband, my children, my co-workers and my supervisors. I know that I am not what I used to be and the guilt is also almost unbearable. My husband picks up my slack in regards to housework and chores, grocery shopping and dealing with the family. I lose countless days away from them as I have to sleep the pain and fatigue away. I no longer go on vacations or trips with my family, nor do I make plans to, because I never know if I will be able to stand it or not. I miss days from work because I cannot go when the pain is at a level 7 or 8 and I'm so nauseated I cannot stand to move my head. So far, nothing in my treatment plan has made this a bearable disease. The triptans will sometimes work to take the edge off, but the side effects are pretty hard to deal with, much less live with. I stopped taking almost all of the medication listed above due to either allergies, intolerance to the drug or the drug just failed to do anything for me. I live my life daily getting from one period of pain, etc. to another. I try to do my best at my job that I can. We rely on my insurance so I absolutely have to maintain my job. At work, I do everything I can possibly do and when I come home, I've got nothing left, so I lie down for the rest of the night. My husband makes dinner, we eat and I go back to bed. The weekends are me trying to practice self care and lie down and recoup as much as possible. Then I start all over again.

My husband is amazing and my one and only caregiver. He has become more and more disheartened by not being able to do anything at all to ease my suffering. He holds my hand when I'm trying not to cry because crying makes the migraine worse. Our marriage has suffered because this disease tends to make a person selfish, where all they can do is do the minimum care they can for themselves. There is nothing of me left for him or my kids. I'm lucky if I can even shower twice a week and wash my hair. My family has come to expect that I can't do things with them that I used to. Not even spend a lot of time with them when they are here to visit.

I can no longer exercise because bending over is out of the question. Straining is out of the question. I try to do little things so I can try to lose some of the weight that I've gained from some of the medications. I used to be a dancer but I can no longer do this. I miss it. I used to draw and paint but my eyes blurring out or seeing double has made this very difficult, not to mention the level of concentration that I need. It kills my head. I miss painting and drawing the most. I look at my art supplies and it makes me sad, but I'm hopeful that I can get it back!

If I could get back to my former quality of life, I would be happier than I could even tell you. I need to feel like a human being again. I don't want to be a burden anymore. I've always been self -sufficient and strong and now I'm the total opposite of that.

The new CGRP medication is the first thing I've been hopeful about in a very long time. This is the first medication that is designed just for migraine disease (and not migraine treatment as a side effect) and the science regarding the lack of side effects (comparatively) and the treatment shows great promise in helping us as migraine disease sufferers. We need for this medication to be affordable, available and not a step medication. We have jumped through too many hoops as it is. We, even I, want our lives back. We want to be productive members of society. I don't want to be on disability. I don't want to give up. I don't want to watch my life go by.

Before I was forced to become a "professional patient", I had all trust in doctors and medication to fix whatever they possibly could. In this journey, I've found that, unfortunately, that isn't true. I never thought that there were "bad doctors" or "bad medicine" but there are - both of those things. Doctors that don't believe that this disease is real and catastrophic to our lives. Medications that do nothing but give horrible side effects without doing anything that we are so hopeful for. Insurance companies making us go through all of these other medicines before letting us inject poison into ourselves, all to gain some relief and some quality of life. Insurance companies that deny medication because we haven't yet gone through the 3-6 medications on their list to get to the one that may just do the trick for us.

Please, from a patient that does not want anyone to feel sorry for me (so many have it so much worse), help me. Help me and the other Migraine Warriors have any shot that we can get. Please help us to be able to live again.

I have been suffering from migraines for more than 20 years. Attacks for me have varied through the years. I have not had simple headaches but have literally rolled on the bathroom floor in severe pain, next to the toilet that was handy to vomit in. Shockingly, the only minute the severity would lessen is during the active vomiting.

I have rarely used the emergency room in all these years as the pain has been so overwhelming that I would endure these for days on end rather than wait for hours in a brightly lit ER. Thankfully, I have had out-patient infusions that cut the waiting time out but it's not a simple fix.

The medicines given on top of the migraine and transportation to a facility often makes things worse before improvement.

Often times I wake with a level 10 migraine. It's too late for sumatriptan to get it under control, though that is my go-to home option. My migraines have progressed to chronic intractable status. I have asked every neurologist I've seen how to choose when to take my triptans. Not one has been able to give me a response. Why? Simply put: there is a limit on the amount of triptans that are allowed to be taken in a week and also in a month. The main concept with migraine abortive is to take them immediately upon the start of a migraine. For me, this is impossible as I would need meds every day of the month with the exception of a rare day that I actually feel good. So I have to pick and choose. Could I get by in pain for the day and take no meds or will I have waited too long and there is no chance for getting it under control? Oh the blessing of being able to do anything, work or pleasure without pain.

I have tried the Cefaly device. Within 12 seconds it would irritate my migraine. I have tried numerous over the counter supplements, nsaids, prescriptions of steroids, toredol, DHE 45, beta blockers, among others.

I have Botox every 12 weeks. The six week interval has consisted of nerve blocks and SPG blocks although I seem to be having complications from the SPG lately and it has been temporarily suspended. I understand the new drug CGRP is costly however the costs billed to my insurance company for my migraines alone are extremely high.

12/28/17	$1,558	Nerve blocks and ketorolac injection (uncontrolled pain)
01/15/18.	$241	office visit with ketololac injection (uncontrolled pain)
01/25/18	$346	IV infusion (uncontrolled pain)
01/25/18	$653	SPG Blocks
03/15/18.	$4,210	Botox
03/21/18	$1,920	Nerve blocks
Total	**$8928**	**for 3 months of out patient care**

I am currently downgraded to sumatriptan spray for abortive at home use. Sumatriptan injections have been generic, tier 1; however, all of the Medicare companies have now listed it as a tier 4 drug. Something is wrong with this system.

This is just a three month period of time and is the typical routine of my life and i think if you will do the math it is a costly disease.

In addition, I have endured a total of 21 inpatient days with numerous medicines tried, and other treatments including oxygen and facet blocks. I have had to travel to other states for this advanced care as the closest Migraine facility, advertised to be the largest in the United States, has been unable to provide me with the additional care I needed and has advised me to travel states away, with personal costs involved as well.

As I was ready to be discharged last time they had to switch my medicine as the pharmacy said my co-pay would be $5,000.

Let's talk about the real cost. I have lost myself due to lack of a treatment that will control this. I have tried one brief vacation. The doctor prescribed steroids to be taken daily. I used every medicine I was allowed to take that week and more. I remember laying in bed hour after hour praying, wondering where the closest ER was, afraid of spoiling my companions vacation, ready to call my family to come get me. That's it. One vacation.

I haven't been able to work in years. I can not commit to volunteering, watching my grandchildren. I find it hard to drive. My balance is compromised. I am totally exhausted. Any visual movement might instantly bring my head pain to a 10. Noise is another problem. The cold breeze on my head irritates as well as a soft pillow. That's the result of allodynia. Nausea is often present.

What do I want? To be a contributing member of society. Invite or accept an invitation and know I can commit to it. I want to show my children and grandchildren how much I love them and I could be fun. Most of the time the smile on my face is one I've learned to create but in pain it is hard to feel real joy. I think it would be the exception to the rule that a person could live daily with any level of pain and not have a sense of loss.

Migraine is a disease, not a headache.

Thank you,
Kathy Scott

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Hi, my name is Shelby. I started experiencing migraines at seventeen. They would start around 5-6 in the evening and wouldn't go away until I fell asleep that night. Even now at twenty-four, my migraines are the exact same most of the time. I experience intense pain on usually both sides of my temples. It's a pounding pain; I feel my vessels pulsating underneath my fingertips when I attempt to rub the pain out for a few seconds of relief. Nausea, sensitivity to light and sound, and other gastrointestinal issues frequently accompany my migraines. During an attack, I have to lay completely still on my bed with fans aimed at me, underneath my weighted blanket, in the dark with all the windows covered, and have a heating pad under my neck with an ice pack over my temples. I have to make sure I will be left in complete silence, so no TV, pets, phone, or company. In the past few months, my migraines have changed. It will start at my temples but then move to anywhere else on my head. They will move to behind my eyes, the top of my neck, the back of head, or just envelop all of my head and intensify at different points at different times. Starting off, I would get a migraine 2-3 times a week. Now, I get one every 1-2 weeks. If I get one though, I will probably get one the next couple of days as well. Rebound migraines almost.

For me, migraines have definitely had a negative impact on my life. I've had to call in quite a few days at work because I woke up with a migraine that would interfere with my job. Sometimes, my hands, feet, or mouth will go numb, too. I am a veterinary technician so I am constantly on my feet and around loud animals all day. I don't have the ability to take a break and lay my head down when I feel a migraine coming on. I also have left work early due to migraines. My managers and co-workers are very understanding though, and never make me feel bad for leaving. I have to be sure I have multiple kinds of headache/migraine medications with 24/7. When other people my age are excited to go to concerts or camping, I have to hope that if I go, my night won't be ruined by a migraine. There are multiple nights a month I can't spend time with my family because I'm lying in bed, in pain. While in college, I had to skip studying some nights because my migraine was interfering. Migraines can rule my life, instead of the other way around.

For the first 2-3 years, Ibuprofen was the only medication I would take for my migraines. I had heard from several people that doctors didn't know much about migraines and the medications they prescribed rarely provided relief. A part of me thought my migraines were temporary, too. Eventually, I started taking Excedrin too because Ibuprofen provided no relief. I believe I was twenty when I finally saw my primary care about my chronic migraines. I explained that both my grandmothers suffered from migraines and my migraines were increasing in frequency. She wanted to start me on abortive medications as opposed to daily preventative medications. At first, she tried Sumatriptan. I was to take it when I felt an attack coming on. I didn't have any success. Second was a different kind of triptan, Triximet. This one didn't have success either. Around this time, I also stopped drinking beverages with caffeine. I can say it has been about five years since I've had a caffeinated beverage. That, like most other remedies, helped for a while, but not for long. At a dentist appointment, I mentioned my migraines and the medication I take occasionally for them. The hygienist suggested sleeping with a night guard. She said some people clench or grind their teeth at night and it can be the cause of migraines. This really seemed to help and still provides relief. I'm very thankful for that dental hygienist, for the doctor didn't seem concerned and didn't offer any advice. From here, my primary care physician suggested a lifestyle change. My breakfast now needed to be something that had 5 grams or less of sugar. I also needed to start drinking more water. She recommended taking my weight and dividing it in half and drinking that many ounces in water. For me, it was about 60 ounces of water. This change helped the migraines that started around 4-5 in the evening, which she contributed to the fall from my sugar high. After a while, she started me on my first daily, Propranolol. My abortive medication changed to Fioricet. Propranolol seemed to have some effect but the Fioricet did not. I switched to Onzetra, an inhalant nasal powder. Instead of a vapor, a capsule was crushed inside and the granules were inhaled. Not only was this miserable to take, it didn't provide any relief. Even with my insurance, it was about $40 for one use. With my finances and amount of migraines, that medication wasn't an option for me. Now, I'm on Trokendi, a daily. It's provided relief and has decreased the frequency of my migraines. To treat them once I get them, I take a generic acetaminophen with caffeine pill. It works 50% of the time. Unfortunately, I wasn't blessed with perfect vision, either. I annually have an exam with my optometrist to check my vision and receive another year of contacts. Recently my vision changed but other than that, my eyes have not contributed to my migraines. Allergies can be a year-long battle in Oklahoma so I started taking an allergy medication daily in hopes of maybe preventing migraines. Some vitamins have shown to help prevent or relieve headaches. I researched for weeks on which one I should start taking. In the end, I started taking a women's multi-vitamin which included a majority of the specific vitamins I was looking at (Vitamin B2, Vitamin B6, Vitamin D). On the non-medical side, I've tried several therapies as well; diffusors, essential oils, electronic head massagers, migraine-specific massages, anti-nausea bracelets, acupressure bracelets, and several different kinds of hot/cold packs. All provided some relief, but nothing significant. We need more research and drugs available (also available through insurance) so we don't have to suffer and waste more money hoping to find the magic tool that will make all this go away.

At what point will migraines finally be recognized as a debilitating disease and when will we finally have more than a few proper medications for preventing and treating them? Do we have to wait for a celebrity to tweet about their constant pain while suffering a migraine? Are migraines insignificant because no one on the board suffers from them? Everyone who takes time to write one of these letters is suffering. They are taking time out of their busy day to explain the hell they have to go through on a regular basis. They are hoping that maybe years on down the road, their children don't have to suffer like they do and they will have the appropriate medications. I was writing this between work, keeping up all my household duties, planning a vacation, and going through personal issues. Any college kids who wrote, they worked it in while studying and taking finals and possibly moving back home for the summer. Any parents who took their time to write, really stretched their schedule. Please don't take this issue lightly. We need people fighting for us. Please, please fight for us.

ICER Open Comment Period on CGRP Inhibitors for Migraine

My Migraine Experience

I’m writing to share my story with the progressive neurological disease migraine. It started at 6 yrs old in the form of abdominal migraines. I had excruciating pain in my abdomen for up to 12 hours at a time, eventually projectile vomiting for hours. At the time the only relief available was metoclopramide, which did little to relieve anything and had the serious side effect, tardive dyskinesia. In addition to the pain, an intense fear was instilled in me as a result of these episodes. I never stopped thinking about the possibility of my next episode even at that age. I had a remission btw 9-11. I recall going over each month in my head, celebrating not having had one of these horrible stomach aches. Since it was the 70s & 80s, nobody took it seriously so I had no support for either the actual episodes or any of the accompanying anxiety, not even from my family who did not understand the degree to which I was suffering.

At 11 yrs old one day at school, suddenly my head began to pound and throb so intensely I could hardly move. It was the end of the day, so even though I thought any second I would vomit, I forced myself onto the bus home. Everything around me became distorted and loud, and I was so dizzy I was afraid I would faint. I ran off the bus and was able to get a ride home. The incredibly painful episode did not end for many more hours. Since I had no medication, I simply endured the pain, crying and vomiting at the same time until it went away of its own accord.

This was the beginning of my more typical migraines, which I had from middle school until I was a young working adult. I had no medication as no one even thought to consider this an illness, including myself. Therefore my mental health really suffered from the dissonance between the expected normal life that everyone seemed to enjoy and my painful debilitating migraine life. Due to the isolation the illness imposed, my mental state developed into a full blown comorbid mental illness.

As a young adult, I was living and working in NYC doing a variety of account executive jobs. I regularly had to miss work, leave early, or would not be able to complete deadlines on time. My headaches got worse and worse but it wasn’t until I had given myself an ulcer from taking too much ibuprofen in an attempt to manage the migraines, that I was finally diagnosed at 25 yrs old, almost 20 years after they had started.

In addition to negatively impacting my work, migraines also interfered with my musical career. I was a serious musician who started playing the oboe at 10. I had to leave many rehearsals early, and struggled to get my parts ready for performances because playing my instrument would frequently give me a migraine. My college career was also negatively affected.

The day of my thesis defense, I woke up in such pain I could literally not move. It felt like someone was dropping bricks onto my head. I was so accustomed to ignoring my own severe pain, I didn’t think anyone would believe me if I told them how sick I was. So instead of going to the ER as I needed to, I dragged myself into the classroom for my thesis defense. When asked a question, I could barely speak much less articulate complicated thoughts to defend my ideas.

Despite working on my thesis for 2 solid years, my scores wound up being mediocre due to my poor defense performance.

Upon my first diagnosis by my GP at 25, I was given Tramadol for breakthrough pain and Amitriptylene as a preventative. Thanks to the medication, I immediately felt a difference in severity and length of episodes.

Around this time I became incredibly noise sensitive and I started wearing earplugs almost every day. To improve my career opportunities, I pursued activities outside of my job, but I was incapable of completing anything. I tried to learn Italian, and took art classes at more than one institution. I failed out of everything. I had never failed anything in my life. Despite my headaches I had always been an excellent student, learned fluent German, and was an accomplished musician. I adored art and could draw, paint, do collages, paper sculptures, and even knit.

Due to migraine fatigue and a depression that settled and did not lift, I was just able to get myself to work on time, participate as best I could, and get myself home as quickly as possible where I crashed on the couch immobile with fatigue. I wanted to go to graduate school, but simply did not have the stamina to work a full time job, take care of myself, manage my illness and also go through the hurdles of applying for advanced degrees.

I continued to experience these incredibly painful migraines with unabated frequency, so I was finally referred to my first neurologist in 1996 – I’m 27. The neurologist gave me Sumatriptan which was useful in aborting some headaches. But it would not work at all if I took it after a migraine was well on its way. Or I would get a rebound headache and I had already taken as much as the package insert said was safe. So I would have to suffer through more hours and now sometimes even days-long migraines. Also getting the medicine was difficult as I did not have a full time job since my live-in fiance and I were starting a dot.com. The stress of a looming wedding while also doing a start-up obviously made my illness worse.

After we got married and our business was taking a while to grow, I began working a full-time job outside of our start-up to support both of us, and our company. But I spent days in bed, pillow over my head, unable to eat, all plans cancelled, totally immobile, a jack hammer beating one side of my head. Even with the meds I was on at the time, the pain was unrelenting and excruciating. I began to think about suicide, in part because my husband was not supportive. My neurologist suggested I change to noritriptylene and increase the dose. During our honeymoon in Miami Beach, we went for a bike ride and the heat and humidity combined with the side effects from the increased dose of the ‘triptylene made me feel like I was going to faint. My husband was annoyed that I couldn’t ride the bike and instead of comforting me, helping me find shade and get properly hydrated, he called his family to complain about my inadequacy.

Eventually, my inability to be a healthy person caused my husband to leave me. He told me the headaches were my own fault. I desperately wanted a baby but was terrified to allow myself (and a child) to be so vulnerable. His family took it personally that I did not allow myself to get pregnant. My family had become very remote ever since I became an adult so I could not turn to them for help either. They had never provided any help or solace regarding this awful illness.

Eventually the illness would disturb even my day-job so badly that I had to consider taking medical leave. Instead I quit the stressful job with long hours. I thought I would use my savings to do art full time, and that hopefully this time off doing what I truly enjoyed would somehow make a difference in the migraines. It did not. Eventually I went back to work at one of my old jobs, but as a contract employee instead of full time. Everyone who used to see me as the Golden Girl on the job now whispered behind my back about my problems. No one ever came forward to ask if they could help. I did my best to act like a normal person even with a migraine and ignored the bad press. But whenever a headache would start, I would have to sneak into an empty office, turn out the lights, lay on the floor with my jacket as a pillow, and hope nobody was looking for me.

After several scary years where I spent weeks in bed, shades drawn, ear plugs in, unable to eat, completely alone, hour after hour enduring the most unspeakable pain, that I never even talked to anyone about, I finally moved in with my then boyfriend. He lived in a less crowded part of Manhattan. I hoped that less stress would minimize the frequency, and hopefully the intimacy would take the edge off of the depression. I loved him and he was very supportive as a caregiver, more than anyone I had ever known, and we both wanted a child.

But those years were also disappointingly painful. The apartment was humid and cold, and so I began to have the worst headaches of my life. I had always used cannabis to help control my headaches and depression but my boyfriend did not approve so I stopped cold turkey. The severity and the length of the headaches increased again lasting sometimes 72 hours. I finally started going to the nearby ER. Luckily, it was a satellite hospital so the ER was unusually quiet. They were surprisingly experienced with migraine so for a while I could rely on their ER care when it became too much to bear.

I worked in medical education and one of my clients was an opioid maker. We learned about how pain was undertreated. Thus, I realized I needed to go see a pain management specialist. In addition to all the medication I was already taking, my new doc wanted me to try Topamax. It was a nightmare. I could barely string two sentences together. In fact, my boss thought I was on an illicit drug because I acted so strangely. I was ashamed to tell her I was taking an anti-epileptic drug because of the severity of my migraines. I stopped taking it within a week.

Around this time I had a sledding accident, and I damaged my back, neck and broke my arm in two places. The pain did not compare to a migraine so I ignored it. When I woke up the next morning my arm and shoulder had ballooned. After my arm was set I was given opioids. I had never taken them for anything. I stopped the tramadol at least 7 years before since it didn’t help. But after spending 2 days of excruciating pain in the dark in total silence like so much of my young life had been spent, I tried two of the Tylenol #3s in addition to my ‘triptan and within 30 minutes the migraine was gone. From then on, I always asked my pain management specialist for an opioid prescription. Also we changed my ‘triptan to Maxalt because I used so much Sumatriptan that I was completely tolerant to it. There were many other ‘triptans I could take, like Axert and Relpax that worked really well, but they were not covered by my insurance and were therefore not feasible due to their extremely high cost. As a migraineur, I was always in fear of losing my insurance. Since I now only worked as a free-lancer I signed up for an NY state insurance. It was a godsend otherwise there is no way I could have paid for my migraine medication and I probably would have killed myself.

Eventually, it became obvious that the Upper Manhattan living situation was no longer tenable. My boyfriend was spending too much time care-giving and I was always sick. So I moved to a couple of places in NYC and then to Berlin, again hoping that the more relaxed lifestyle would somehow solve my headaches. But it didn't seem to matter where I lived, or how much creative elbow-grease I applied to the situation, I was able to do fewer and fewer normal activities like go out to dinner, concerts, dancing, malls, & parties. Increasingly my food choices were limited. The fatigue was so great that sometimes I would sit in front of the television like a zombie all day. I no longer had the energy to even go out. I spent most of my time in my apt where I could control the noise/light and relax as best I could. The outside world was increasingly becoming something I could not afford to be part of. I did whatever I had to do to minimize my headaches, which meant saying 'no' to almost everything and everyone. So in addition to losing job security, a husband and a serious boyfriend, I also lost a lot of friends. I was in my mid-30s.

Finally I thought I would take the radical step by moving to Texas where my family lived. Surely, I reasoned with myself, living in a much lower key state that had lots of sunshine, I would finally wrench myself from this cycle of torture and the migraines, anxiety and depression would melt away with the hot sun.

Instead I found myself in more complicated job situations, in an environment that was much noisier due to the construction of the building I lived in, breathing palpable pollution, and melting from the heat and humidity. I had lived in Texas before so I thought that I knew how hot it was. Migraines had sensitized me so that now when the thermometer hit anything above the low 80s, I was immediately struck with a headache.

I soldiered on and found a new headache specialist. He gave me magnesium infusions which worked for a short time, but were very expensive. He also switched the type of opioid I was on. We tried many new preventatives including Zoloft, Cymbalta, Proponal, and Prozac among others. Nothing worked. I also tried acupuncture but my insurance plan did not cover it. This was a shame because it worked.

At this point, I was so ill it was very difficult working at all. However, in 2013 I got the kind of contract I was used to. It had taken me 7 years to get back into the pay grade I was accustomed. I was excited by this job but it was stressful with weekly deadlines. This is when I began to notice major cognitive deficits. One of the senior management was a friend, so he gave me accommodation for my migraines (my own office that I could use to take naps in whenever I needed to). I did good work but I had to rely heavily on a colleague in order to get all the details straight. For the first time in my life, I wasn't able to collate lots of information. It was scary and embarrassing. I never told my colleague that I was ill. Only my friend knew and we agreed it was best to not tell anyone. Irrespective, I wound up being let go.

It was my last shot at saving myself, but since I had saved up a decent sum from my last gig, I thought I would try to go to graduate school. Since I was so ill I knew I couldn't move and manage graduate school so I had to go somewhere nearby. I applied for a Public Health Certificate, since that allowed me to enroll immediately. I got in. I only took two classes to start with since I was so ill. I loved the classes but the environments in both classes were insanely migraine-negative. I went to the school's councilor to inform her of my debilitating illness and could they accommodate me? The rooms were either very hot or cold, and both had such intense florescent light that I was forced to wear sunglasses and wide-brimmed hat to every class. Because of a muscoskeletal issue, I also had to sit on an exercise ball. As a result I looked ridiculous. Even though it was a school for public health, I overheard even administrators saying that I was crazy. I got so depressed that I tried to kill myself again and was hospitalized. I had to take medical leave in order to finish the work for my classes. I was so angry that I decided I would try for a different school, hoping they would be more sensitive to disability. So while finishing my coursework for my first semester of graduate school, I applied for the school of biomedical informatics. I completed my public health classes with excellent grades and I got into the new program. I was elated. I didn't care anymore if i looked weird in sunglasses and hat, and took care of myself as good as humanly possible. I worked as hard as I could, still getting migraines but working through them. Then one night while staying up late to work, my consciousness had a complete breakdown. I didn't know if I was alive or dead. Everything was through a tunnel. I spent the whole night in fear, on my knees touching everything in the dark trying to convince myself it was all real, and not a dream like my brain was telling me. After many terrifying hours I was able to sleep. When I woke up I realized I had pushed myself too far (as if the migraines were not indication enough) and that if I was not careful I would lose myself forever. I immediately let the administrators know that I needed medical leave again and I went to see a psychiatrist. I had already applied for disability in the Fall, and with this new radical symptom I was lucky to be approved.

For years I had been going to the start-up meetings, as I had lots of ideas for new medical products. Around the same time, I met someone who was interested in my ideas and we wound up founding a company together. I am too ill to take a full time role, but I have been an advisor to the company since it is a migraine-related start-up. At first when we took meetings, I was always in bed, and my cofounder would kindly sit at the foot of the bed so we could complete our business. Then my cofounder told me about CBD. I was able to acquire some extremely high quality CBD and it really improved my headaches. However, I still have to orchestrate every minute of every day to make sure I don't get one. And I still get them all the time, just not as severe.

Please take this disability and pain seriously. I am eager to try the new class of meds, CGRP. Please make them affordable so that CMS will cover them. I desperately want to get better, and still nurture hope that I can. Perhaps the CGRP meds will allow me to finally be my old self again. Thank you.

My name is Sarah, I'm 28 years old and I've been living with chronic migraine for 5 years. It started as one migraine attack here, one migraine attack there to I now experience migraines 20-25 days a month. For most people, when they hear the word migraine, they think that it's just a headache and that you can take an Advil, or an Excedrin and it will go away. I'm way past that stage. For me, when a migraine attacks hits, it doesn't just mean a "bad headache". On a low to mid-level migraine day (When I'm between 1-6), I will usually experience the following symptoms: Nausea, Photophobia (Light Sensitivity), Sensitivity to Sound, Sensitivity to Smell, Sinus Pressure. Slurred speech and a stabbing pain throughout my head and neck. I can also have tinnitus and/or ear pain. I have these symptoms 20-25 days out of the month, each episode lasting longer than 8+ hours. Before a migraine attack, I also can experience visual disturbances such as temporary blindness and seeing little black specks. This can last anywhere between one minute to twenty minutes. On my more severe migraine days (When I'm at a 7-9), I'll have the same symptoms that I mentioned above (amplified), but sprinkle in some vomiting, chest pains, slurred speech, numbness/droopiness on the right side of my face and stabbing sharp pains shooting throughout my head every second. On my level 10 days, I'm unable to leave the bed due to the pain being so severe. On these days, I often wish I could sever my head from my body. Unfortunately for me, most of the medications that are out that can be used to treat migraine either have no effect on me or give me severe side effects and minimal relief from the migraine itself, so I'm usually left to deal with all the above symptoms of migraine for hours, days, weeks and months sometimes.

Migraine has negatively affected not only my career but my personal life as well. For my career/work life, I've had to really sit with myself and realize that I am unable (at this point) to do the jobs and work that I've always been used to doing. Migraine doesn't stop for anyone, no matter what dreams you wanted. Before migraine, I was able to work long hours and put in 100% into all the work and projects that I was doing. I was able to travel for work, take the bus or drive my car with no issues and even work on my computer without pain.

Now I:

- Must be extremely careful to not work long hours, as it can trigger a migraine attack.
- Must avoid driving long distances in the car or bus for work. Being in an enclosed space like a car or bus while moving can trigger a migraine attack. This has affected what jobs that I have been able to apply for or move up in my career. I work in the events/entertainment industry, where traveling, working long and late hours just comes with the territory. It's something that I love doing, but I've had to reassess what I'm physically able to do.
- Had to lose days of pay due to not being able to come to work due to an attack
- Had my productivity cut nearly in half, every time I experience a migraine attack at work.
- Must work my migraine doctors' appointments around my work schedule
- Was unemployed for 6+ months due to the strain of the pain and symptoms from migraine

Migraine has also disrupted my personal life from my romantic relationships, friendships and family. I'm an extremely social person, or so I was before. I was very active and involved. Now while most people my age are out hanging out and making memories, I'm usually curled up into a ball begging the pain to go away. During the week, I must push through my migraine attacks to get through work and I'm left with nothing else for my other relationships because I must work 10 times harder and in pain. One of the most frustrating parts of living with this disease is how much it takes from you. Energy, relationships, understanding, money – I could go on and on. I've missed weddings, bridal showers, anniversaries, funerals, vacations, graduations of my friends and family due the pain that I experience from migraine. I often must opt out of most plans or not give a direct answer because I never know how my migraine is going to be on the day when the plan is. Being a chronic migraine patient is also extremely expensive with all the specialist visits, medicines and therapy that you must get to help maintain it. That's an added expense that most people my age do not have to factor into their monthly expenses and often leaves me broke or in the red at the end of the month. I have an extremely supportive and loving partner who thankfully is there to take care of me when I'm unable to take care of myself. I feel terrible that I've now become this caretaking job for her, which I know she doesn't mind, but I worry constantly about how this will affect my own family in the future. Having a medicine that could help reduce or completely take away my pain would mean not only the world to me, but everyone in my life.

I've been on numerous migraine medications, supplements and alternative methods to attempt to get my migraines to a more "stable" status. The list below displays the "treatments" that I've ever tried or am still trying to manage my migraine attacks.

- Triptans (Pill Form) - Relpax, Frova, Maxalt, Sumatriptan, Zomig
- Triptan (Injection Form) – Sumavel Dose Pro
- Pain Medications (Cambia, Tramadol)
- Nerve blocks
- Botox for Migraine
- Physical Therapy
- Supplements for Migraine (Magnesium, Coq10, Riboflavin, Butterbur, Feverfew, B2, Vitamin D)
- Cranial Sacral Therapy
- Herbal Teas
- Essential Oils
- Meditation
- Yoga
- Autoimmune Protocol Elimination Diet
- DHE Infusion Treatment
- Magnesium Infusion
- TENS Unit
- Preventative Pills - (Propanalor, Topamax, Depakote, Amitriptyline, Cymbalta, Pamelor)
- Ice Packs
- Hot/Cold Baths

Now, I am doing a combination of the alternative methods such as essential oils, elimination diet, supplements, meditation, ice packs. These methods never take away the pain or symptoms, it's more like a distraction or slight reduction. I am also getting the Botox for Migraine injections every 3 months. This consist of getting 31 needles injected into your skull, face and neck, which is very unpleasant and painful. Usually after the Botox injections, I either get a migraine immediately after and my face and neck are sore for days after (almost like whiplash). The Botox injections do seem to help with my severity of my migraines but not the frequency. I still average about a level 4/5 on a pain scale daily. For an abortive method (pain relief) I either take a Triptan, Cambia or Tramadol pill. With any of the triptans, I have severe side effects that affect my ability to function (drive, think, walk) and cause severe stomach pain. I'm not sure why I react this why to a medication that's supposedly supposed to take away the pain. On top of this there is usually a 30% chance the triptans will take away the pain. Sometimes, they make my migraine even worse. Right now, Cambia seems to be there most "effective" treatment, but still it only works 50% of the time and the pain relief effects never last long. It normally stays away for 3 to 4 hours and then comes creeping back with a vengeance. I also am only given a monthly supply of 6 packets. For someone that has 20-25 migraine attacks a month, 6 is nowhere near cutting it. The above methods that I've tried is also very expensive.

Migraine suffers are people too, we are loving, caring, supportive and empathetic people. You've probably come across us in your daily life. We are parents, siblings, children, cousins, coworkers. Our pain should not be dismissed, we shouldn't be denied treatment and we shouldn't have to go into bankruptcy to afford treatments for our pain. I'm already doing that with my student loans… The amount of pain that myself and other goes through, even though you may not see it is extremely real. Please understand that we need better treatment options along with an affordable ability to access them

For me, I can sometimes be in pain the time I wake up to the time I go to bed. Imagine what effects that can have on not only someone's physical body, but there emotional/mental state as well. It takes a toll.

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Share your migraine journey…

Hello, my name is Kelli Smith. I am from Omaha, Nebraska and I am 48 years old. I have had chronic migraines since the age of 18, so my journey has been a long one.

A migraine attack for me is consists of a variety of symptoms… the first of which is the classic pain… mine is on the left side of the head. This pain can range in severity for me in levels which I generally notate in a migraine diary as mild (1-3), moderate (4-6), severe (7-10). The way I know head pain is a migraine vs. a tension headache is very easy because of the one-sided nature, and the many other symptoms that exists as well. I have a vestibular aura that makes me very nauseous and produces a motion sickness/vertigo feeling even when I turn my head from side to side. When the migraine is of a moderate or severe level, I also have issues with my gut, where I don't seem to process food properly or just do not have appetite or get very constipated. During severe attacks, the nausea does cause me to vomit and my only relief is to knock myself out with acute migraine medicine and an opiate and go to sleep and hope it's better when I wake up. During moderate and severe attacks, I also experience nightmare dreaming which is very unpleasant. It tends toward panic type of dreams vs horror… but does not provide good restful sleep.

Throughout my 30-year migraine journey, I have experienced different frequency of migraine attacks, from being highly chronic to a more moderate frequency, depending on how well my medication is working at the time. For me, this disease has changed as my body has changed. I am also highly sensitive to changes in climate and temperature and struggle each year during the changing seasons and fluctuating barometric pressure, and this effected frequency as well. I have experienced several periods of my life where I was absolutely chronic, experiencing migraine pain and symptoms every day for an extended period into multiple years. These periods were debilitating both physically and emotionally. But, with prophylactic medication and other holistic treatments including acupuncture and meditation I have also been able to have periods where I have been able to get my moderate and severe attacks down to a much more manageable and functional number. I am thankfully in one of those stages now. However, it is quite likely that the medication I am taking now will lose its efficacy for me over time. This is incredibly worrisome for me. I've gained some of my life back, and it is always a worry in the back of my mind that I will lose the functionality that I have gained. I know that these new medications are showing incredible promise for our disease and I really implore your group to do everything in your power to help make them available to us.

Negative/disabling impact that migraine has in my life…

When I was young, I was a very good athlete… I played tennis and golf at a high level and was outside all the time. Now, I am not able to be outside in any kind of hot weather without getting really sick. It's difficult for me to travel without being worried about whether I'm going to have an attack and not be in control of my environment… or if I have to drive getting stuck and not being able to drive back home because I'm having motion sickness and it's not safe. It's difficult for me to make plans with friends and family ahead of time without having to worry that I might have to cancel on them at the last minute because of a migraine, again. I worry that people don't understand or simply get tired of me canceling with an excuse and think badly of me… so I simply don't make plans anymore unless it's really close friends and immediate family who really understand and know my long-term struggle and have seen first-hand how sick I really get. I've missed my nieces and nephew's school events and other family events from being sick with a migraine. These are moments I cannot get back and that is frustrating to me.

I altered my life in many significant ways due to this disease. The one that makes me the saddest is that I chose not to pursue having a family or children because of this disease. There have been times of my life where I am in pain so much of the time that I just did not want to subject a husband or children to a spouse or mother who was in pain all the time. It's difficult to witness someone you love in pain all the time… and sometimes it hurts you, and other times you can come to resent the person for not being able to be reliable. Maybe this was not giving the right person enough credit, but it was a decision I made fairly young. Looking back at all the really difficult periods and thinking of the days where the pain was so severe, I think I also just prefer to be alone in it… it's so painful that I don't want any noise or anyone needing anything. I have pets and I feel guilty even knowing that they sometimes get less attention when I am sick. I also created a work life specifically to suit my needs as a migraineur. I became an expert in the internet marketing field so that I can work as a consultant primarily from a virtual home office. Migraines do still hinder my ability to focus at times and especially my ability to travel and meet with clients as much as I would like to.

But, I don't want anyone reading this to think having a disease like this is all bad… it also makes you an incredibly sensitive and empathetic person. You can very much understand what others who have invisible diseases are going through. It makes you appreciate your good days SO much and really grateful when you get to do things you aren't otherwise able to do. It makes you appreciate the people who understand your disease and support you very much too. So, if you're willing to see a silver lining in a cloud… you can.

3) Detail how existing migraine medicines fail to fully treat your migraine disease and have many unwanted side effects.

Throughout my journey, I have tried so many different migraine medications, both acute and prophylactic. I am currently on a prophylactic "cocktail" that has decreased the frequency of my migraines and lessened their severity, which is fantastic. But… the migraine disease is still there. There does not seem to be anything available yet that truly treats the disease itself and stops the migraines at their source. The prophylactic medicines can lessen their frequency and severity, but not stop them. The acute medicines are only effective once the migraine is starting. We need a solution that will address this disease and stop the migraine at the root cause.

To treat my migraines currently I take prophylactic Topamax, nortriptyline, and levothyroxine daily, and use acute Imitrex/sumatriptan, naproxen, ondansetron, Excedrin Migraine, hydrocodone (in emergency only) as needed during attacks. Sumatriptan has worked for me since it was first introduced in shots in the 90s but there are still some attacks that don't respond to any medication at all and I'm not sure why this is. These are the attacks that are the most difficult and the most life effecting. They tend to last for multiple days up to two weeks and it is akin to having the flu but with a raging one-sided throbbing headache and a constant pressure that feels like a vice around your head.

There are some downsides to a prophylactic regimen like mine. I also take an anti-depressant SSRI and it's quite possible that the combination of that medication with the Topamax may have caused a gall bladder attack last year and led to emergency gall bladder removal surgery. Now I have a slight worry that if those medications were reacting and the gall bladder was processing the "problem"… what is handling the problem now? I can't seem to get an answer on that question from anyone. I'd rather be taking one single medication that would stop the migraines altogether and then may also help with the co-morbid depression issue.

Appropriately valuing migraine pain and disability…

I personally plead for ICER to value the pain and disability migraineurs suffer every day in our country seriously. It's an invisible disease and there are people you know and see every day who likely have this disease and don't share openly their story. Much of the public still thinks migraines are just headaches, but they are so much more than just the symptom of head pain. For most of us, that is a huge symptom, but the others are the ones that debilitate us. The vertigo, nausea, gut issues, sensitivity to light, temperature, sound, movement. It's more than a headache.

Supporting both access to new CGRP inhibitor medicines...

If there are new medications that can potentially help a segment of the migraineur population combat this disease, I implore ICER to support their release fully. Do whatever you can to support their swift and full approval by the FDA so they can get to market to us as soon as possible. You could change someone's life completely. It could be mine.

May 8, 2018

To whom it may concern:

As a chronic migraine patient who endured several failed treatment attempts like millions of other patients, I urge ICER to report favorably on the value of CGRP inhibitor medications for migraine prophylaxis.

Of the 100+ medications now prescribed on- or off-label for migraine prophylaxis, exactly zero were designed to prevent migraines. Relying on hand-me-down drugs developed for depression, high blood pressure, or seizure and psychiatric disorders means that most of us are being medicated using drugs for conditions we don't have, or for which these medications are a poor match. These medications tend to give patients like me intolerable side effects.

Among the problems I have experienced personally while experimenting with migraine prophylactics:

- weight swings eventually reaching 50 pounds (on a 5'2" tall body)
- severe insomnia
- anxiety and agitation
- depression and lethargy
- cognitive impacts such as aphasia and memory loss
- "discontinuation syndrome"
- lack of effectiveness at migraine prophylaxis

These side effects read rather drily in bullet form. The *cascade of consequences* from those side effects, however, is hardly benign. They can have major impacts on the lives of patients just as the "want of a nail" led to the loss of the kingdom in the old poem. Let me illustrate what this cascade can look like in the life of a migraineur.

CASCADE OF CONSEQUENCE

Weight gain: Someone of my short stature may need new clothes with a weight gain of as little as 10-12 pounds. Swings in my weight of up to 50 pounds required the expensive acquisition of a wardrobe in four different sizes. (Dieting does not help drug-induced weight gain. I've talked to countless migraineurs and others who will tell you it's as though our bodies are no longer under our control.) Suits, professional wear, alterations, undergarments (notably more expensive for those of us who wear bras and dresses) add up to a prohibitive expense for many people, especially those whose finances are bearing the costs of emergency department visits and time out of work.

I'm sure I don't need to tell you about the numerous health risks attributed to weight gain. Now imagine the risk of depending on a doctor who dismisses your experience, relying instead of stigma and myths. I once had a doctor tell me to "stop eating nuts," which I didn't eat at the time, to combat the weight gain I experienced on a migraine prophylactic she prescribed for me. She apparently did not see the warning that it was contraindicated for patients with asthma. We as a society are just beginning to appreciate the stigma and downright harm that overweight patients endure from some medical professionals. Whatever medical risks come with weight gain, and they may be different for different patients, the risk of receiving poor or neglectful medical treatment when one gains weight remains high.

Why not just “go to the gym”? Those of us with the common migraine symptoms of extreme sensitivity to light and sounds would like to know where to find a fitness facility that eschews fluorescent lights and is quieter than the local disco. It’s hard to commit to a regular fitness routine when migraines make activities such as sitting up unassisted or feeding oneself challenging.

Severe insomnia: Severe insomnia not only causes significant cognitive dysfunction but brings risks to a patient’s safety and the safety of those in his/her care. If I am exhausted enough, am I safe to drive? Can a parent drive the kids to school without risking an accident? Can a worker operate machinery? Regulate moods enough to avoid problems on the job? Remember what a supervisor just requested? I recall at least one incident in which I became aware that I was driving in a neighborhood I had not intended to visit; it seems as though I “zoned out” behind the wheel. I am forever grateful that no one was hurt.

Anxiety and agitation: The experience of enduring migraine disease is anxiety-inducing all by itself. Having extra anxiety added to that can be unmanageable for patients already burdened with pain, other physical and sensory symptoms, and the daily requirements of daily living. I remember describing it to a friend as “I’m practically afraid of my own shadow all the time.” The stress of constant anxiety neither helped reduce the frequency of my migraine attacks nor helped me navigate any other area of my daily life.

Depression and fatigue: Migraine patients work hard enough to manage the symptoms of migraine disease. Adding depression and fatigue to the pile left me with even less energy to manage daily living. I recall large stretches of time when I ate mostly cold cereal and canned soup because I simply did not have the energy to hold down a job and manage daily chores. If the migraine pain wasn’t a burden, the overall feeling of being “out of gas” was. The most difficult part of this problem was recognizing it as an issue separate from the disease itself. Only when I switched medications did I realize how onerous this side effect had been. If I could barely feed myself, how was I supposed to “take good care of myself,” never mind attend to other problems like professional development or caring for family?

Cognitive impacts: The antiseizure agents often prescribed for migraine prophylaxis are notorious for cognitive and memory impacts. Aphasia is a famous symptom—and a difficult one for someone like me whose profession is “writer.” Forgetting what coworkers and supervisors told me to do was a risk to my career and ability to keep a roof over my head. Forgetting to pay bills wreaks havoc on your credit report (and for some, could mean having a car repossessed, eviction or foreclosure, even arrest). Forgetting large swaths of my own life is not only distressing, but undercuts my ability to advocate for myself in a variety of situations: What if I had to testify in a legal setting against someone who harmed me? If I can’t remember parts of my own life, can I be considered a credible witness? Can I remember key medical details if I’m in a medical emergency? Can I prove I'm me in situations requiring me to remember complex passwords or personal data? Forgetting what loved ones told me puts those relationships in jeopardy, as many people assume my forgetting meant I hadn't paid attention. Migraine patients tend to be far more isolated than healthier people. Cognitive and memory issues put patients at risk for further isolation, also a dangerous risk for migraineurs.

"Discontinuation syndrome": This is the term to the set of symptoms one experiences as one titrates off of a medication. Antidepressants and anti-seizure agents are notorious for the severity of the symptoms, from "brain zap" sensations to dizziness, insomnia, panic attacks, and more. I am fortunate that I had a doctor work with me on a plan to soften the discontinuation syndrome and quit that medication safely. Dizziness may be considered more of an inconvenience than anything, but if one happens to be standing on a stone or concrete floor, pavement, or stairs, losing one's balance could result in serious injury.

Lack of effectiveness: All of the above side effects have onerous impacts on the daily life of a migraine patient. The punchline to this unfunny joke is that millions of us get inadequate migraine prophylaxis from these medications. Can you imagine experiencing any or all of the above side effects AND crushing, all-consuming pain on a regular basis? Could you keep your job? Would your loved ones help you? Could you keep professional licensure? Manage the bare minimum tasks required for daily life?

Compounding this situation is the fact that patient responses to medication can change. Because of drug tolerance, migraine's tendency to shift and evolve as a disease over time, and other factors, migraine patients who had reasonably effective responses to a prophylactic regimen may find their disease worsening after a period of predictability. Imagine finally having some minimal sense of control over your life after all that pain and all those complications….then having to start at square one again.

Side effects and lack of effectiveness are plain words on paper. In the lives of migraineurs, they bring a cascade of consequences that can make life a downward spiral into catastrophe. Patients with catastrophic outcomes not only impact their households and families, but insurers, medical professionals, and a social service safety net that is already near the breaking point.

IMPACT OF CGRP OUTCOMES

The open label extension report on erenumab suggests that as many as one out of two difficult-to-treat migraineurs experienced a 50% or better reduction in the number of attacks after a year on the medication. Side effects are reported as negligible. If 50% of migraineurs in the U.S. had such a remarkable treatment as a baseline, our lives would be profoundly better.

So would yours.

When we are able to participate in the world more fully, you benefit. We will cost less overall as patients, with fewer emergency room visits, fewer treatments required for the cascade of side effects, and an improved ability to partake in the kinds of activities that enhance health overall.

You also benefit from the gifts, skills, and contributions of up to 38 million migraineurs in this country who cannot participate fully in the marketplace, in the workplace, in academia or in our communities. If the OLE for erenumab proves correct (both for erenumab and the other drugs in its class), we may be talking about approximately 19 million people able to rejoin more of the public sphere as soon as they receive treatment. Our households benefit from improved earnings and stronger economic futures. Your world benefits from having us back as valued employees, talented artists, and innovative entrepreneurs. My world benefits when I can participate in all the things I care about, from the arts to volunteering. Your world benefits when I can do these things regularly, instead of making “it’s a game day decision” my personal motto for most activities.

Migraine costs more than the initial ICER assessment projects, but patients aren’t the only ones who pay. You do, every time a migraineur has to withdraw from the world. You lose our productivity, our taxes, our donations, and our contributions to the world. Most of us can do very little to rectify that situation. You now have it within your power to change that. Please report favorably on the use of CGRP inhibitors to treat migraine disease and reduce or remove the obstacles facing patients who are counting on these medications.

Sincerely,

Lisa Smith

To whom it may concern,

I have been a migraine sufferer for most of my adult life. Beginning in my late twenties I began having weekly migraines. That was almost forty years ago and migraines have been a constant, unwanted companion ever since.

In the beginning I didn’t realize what they were. My father had suffered from classic migraine with aura and I didn’t know you could have migraines without the aura. It was more than ten years before I saw a neurologist and was diagnosed properly. My doctor tried all of the then standard treatments: beta blockers, fiorinol, and an occasional narcotic to ease the most intense pain.

When triptans came on the market I finally found one that worked for me, Rizatriptan, and for a while things were better. At least there was a drug that would take away the pain at least 8o% of the time. Still it was expensive, I didn’t have insurance and it was only considered safe for use four times a month. Another down side is that if I go to sleep before the medicine kicks in, usually 1.5 to 2 hours, I still have the headache when I wake up. Excedrin also worked sometimes if I could catch the migraine early enough. I also tried many supplements and herbal remedies: Coq10, butterbur, feverfew and complementary treatments: therapeutic massage, acupuncture, and physical therapy.

The headaches gradually worsened and became more frequent. I have been a life-long swimmer and had to give up swimming because it was starting to trigger migraines. I gave up watching movies because the flickering light also began triggering migraines. The computer screen can do the same thing. Then, worst of all, reading began triggering migraines. And I am a reading specialist!

My doctor tried me on Depakote, which helped somewhat for a while. I gained weight and still couldn’t swim. Then, I tried Topomax, which wasn’t supposed to cause weight gain. However, I was so nauseated all the time I couldn’t eat, so I had to stop using it. At that point, the headaches only seemed to ease up a little rather than go away completely. Finally, I felt that I had no choice but to take early retirement from my full time teaching job.

I began to find a balance of part time work and rest. Though the migraines didn’t go away they eased a bit and with a combination of Rizatriptan, an occasional Norco or Excedrin, I was at least functioning and finding some satisfaction in being able to continue a version of my career, if only part time. As instructed, I was careful not to take the Rizatriptan more than 8-9 times a month.

Still, after a couple of years I noticed a small but steady increase in the number of headaches I was getting and soon I was caught in a nasty rebound cycle. Apparently any kind of pain medication prescription or even over the counter pain medication needs to be counted as part of the less than 10 a month. So what do you do when you have a nasty migraine and you’ve had more than your monthly quota? It’s a horrible conundrum.

Last summer and fall, at my neurologist’s suggestion, I tried a 15 session series of biofeedback. Fascinating, but it didn’t help with the migraine. I’ve also tried short term anti anxiety medication, since I’m definitely feeling very anxious about the recurring migraines. It does help some of the time.

I think even worse than the pain and nausea is how much of my life migraines have robbed from me. Even when I do not have a headache the worry that it could descend on me and ruin everything, is ever present. I have missed birthdays, graduations, family trips to the beach, vacations, and had to give up a job I loved, all because of migraines.

We desperately need new and more effective medications, especially for those of us with intractable migraines. It is so ironic that I am basically healthy and yet spend so much time not being able to do anything the requires that I focus my eyes. That eliminates 50-75% of my life.

Thank you for considering my concerns,

Kathie Snow

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

May 7, 208

To Whom It May Concern:

I have been suffering from migraines for 40-plus years, since I was a teenager. Over time, as I've aged, the attacks have become far more frequent. When I was young, I would get a migraine every few months. I now have migraines nearly half of my days. Some are intensely painful, others more of a dull but persistent pain. Some have a sinus component, others feel like someone is lancing my eye with a red-hot fire poker. I don't have aura, but I have prodrome—intense hunger, when I should be feeling nausea.

Over-the-counter medications do nothing to touch any of the headaches, which usually last—without medication—for four days. I am, gratefully, able to function—albeit at a highly reduced level—during many of my migraine attacks, thanks in large part to a hodgepodge of prophylactic and rescue prescription medications. But my goal is to return to a life where I don't live in fear of waking each morning with a migraine or that my headache-free morning will turn into a migraine-heavy afternoon; where I don't worry that every bite I eat might possibly trigger a migraine (in an idealized world, a glass of wine every now and then would be so lovely, too—but now, I truly dream); where I can stop living in a heightened state of anxiety about whether I have enough rescue meds to see me through the month (the daily calculus of, is this headache bad enough to take one of the precious triptans health insurance will pay for each month, or do I save it for the next day when it will almost certainly be worse?). I'd like to think that I could work a full-time, 40-hour-a-week job, instead of resorting to freelancing, because that's what allows me to work when I'm feeling well enough. Because when your brain is on fire, it is very, very difficult to perform optimally, if you can perform at all.

Over the decades, I have tried so many drugs and alternative treatments, I'm not sure I can remember them all. I've tried Excedrin, Fiornal, Amitriptyline, Propanalol, Topamax, Maxalt, and Imitrex. I've spent years doing acupuncture. I tried Botox for two years. I've floated in high-magnesium salt tanks. I've seen allergists, functional medical doctors, Chinese medical healers, and eaten clean diets. I've used ice and heat and Neti pots and numerous arthritis/muscle creams on my neck.

Right now, the most effective regimen appears to be using an antiepileptic medication (Zonergan) daily to reduce the frequency of attacks and Eletriptan when I get an attack (but insurance only pays for a small number of pills each month). The neurologist would like me to take the faster-acting Imitrex injection at the first sign of a migraine, but insurance will only pay for two injections a month—when you spend half your days with headaches, that's laughable.

I also take CoQ10, Magnesium, Riboflavin, Vitamin D (D3), Baby aspirin, Alpha lipoic acid, Taurine and L-Theanine every day as they are all supposed to help with migraine. And yet, the headaches persist—at a rate of up to 15-18 headache days/month. I do not drink or do drugs. I am not overweight. I work out at least five times a week. I aim for 7-8 hours of sleep a night, and manage that most of the time. I eat a very healthful diet.

Migraine is much more than my headache. It is who I have become. It impacts nearly every aspect of my life: from my work options, to my food options, to my recreational choices—to my very personality. It has dulled my senses and experiences.

It also is part of a group of what I thought were unrelated health concerns. I recently learned that another complaint, for which I've seen my dentist, GP, OB/GYN, and an oral surgeon—but not my neurologist—is linked to migraine: Burning Mouth Syndrome (where the nerve endings in my mouth fire off every afternoon and evening as if I've just eaten a too-hot slice of pizza).

When I was in my 20s I was under the care of a neurologist and spent a night in a hospital hooked up to an EEG to see if I had epilepsy, because I was having frequent and severe benign positional vertigo. I spent a year of my life sleepwalking on Depakote. I've recently learned that this, too, is associated with migraine. At the time, the doctors were concerned that I was developing the late-onset epilepsy that had plagued my grandmother.

And I've been worked up by yet another neurologist for MS, because an MRI (taken after my 30-year-old brother had a cerebral aneurysm) showed white/dead space characteristic of MS patients. I could have told them it was just the headaches talking.

I implore the esteemed members of ICER to take these complaints seriously, to value migraine as a serious disability, and to approve the CGRP inhibitor medications and to call upon insurers to cover their cost. Migraine is the sixth most disabling illness in the world—and the cause of $13 billion of lost productivity annually for American employers. Those of us who have been suffering for years have been so excited at the prospect that the new CGRP inhibitor medications might, just might, be the solution to our problem. We would like to return to the workforce, to our lives. I dream of a life for my 20-year-old daughter—whose first words strung together at less than two years old, were "Mommy, my eye hurts," before she threw up—where she will not have to live with daily migraine pain.

Sincerely,

Marian Sprague

In need of migraine prevention.

Around 28 years ago I was at work and all of a sudden it was like an old camera had flashed in my eyes. I was seeing lights and it was obstructing my vision, I began to feel numb only on the right side of my body. My hand and fingers were numb, the inside of my mouth was like I had been given a shot from the dentist. My speech was effected, while my mind was trying to say one thing my mouth would say another. And then......the freight train hit my head. A doctor told me this was a migraine, which I now know was a hemiphelic migraine.

Breathing any fragrance will trigger a migraine. Perfumes, Scentsy products, Lysol sprays, Febeeze, heavily scented laundry detergents, candles burning or not, cigarette smoke, mens cologne and aftershave, lotions...and the list goes on, these are poison to me. I am not talking about breathing this over a period of time I am talking about ONE inhale of any of these items and it feels like a tree grinder is demolishing my brain and it happens immediately, just that fast. And then I can suffer for hours or days due to ONE inhale.

The migraines that are on top of my head feels like a bat being slammed on my head at the point of impact and that can last for hours or days.

The migraines in my temple also can make my eyes balls hurt as well, and then lights hurt me even more especially the newer lights and sounds are louder during migraines and the louder the sounds the more it hurts. I wear sunglasses in a dark room with an ice pack on my head to try to get relief.

The migraines in the back of head makes my head feel too heavy for my neck to hold up my head and causes the occipital nerves to hurt as well and there is no relief.

I am constantly dodging all the smells and environment to escape a migraine. The workplace can be a terrible place to be because I have no control of what others cause me to breath even when it is poison to me.

Please assist with any prevention to this terrible thing called migraines.

Thank you,

Falicia Stanford

My name is JP Summers. I've lived with the migraine disease for the past 31 years, and I am a mother of a 14-year-old son that received a migraine diagnosis at the age of 10.

As an active member of the headache disorder community I am upset to learn that ICER has denied the request to have migraine patient and a headache specialist included on the voting panel. It is vital to have the expertise of someone who lives with migraine and a person who actually treats patients with this type of neurological disease.

You can not even begin to fathom the limitations my son, and I experience on a daily basis. Yes! I said on a daily basis because we both suffer from chronic migraine which means there are more than 15+ days a month where we will have one of the following symptoms: vertigo, dizziness, head pain, body pain, loss of motor skills, difficulty speaking, nausea, memory loss, numbness on face, sensitivity to light, sounds, and odor.

I've personally tried over 30+ types of medications. Both over-the-counter and prescription. I've taken a variety of vitamins, made changes to my diet more times than you could imagine. My neurologist was able to get me approved for Botox which helped for a few months then my body became immune to them.

When that wasn't successful, I started getting SPG Blocks. These injections are done a weekly then monthly basis depending on the severity of your symptoms. I live an hour away from my neurologist. It is not convenient at all for me to get SPG Blocks, but I desperately want whatever quality of life I can get.

These are band-aids on a massive, gaping wound. They do not cure my disease. I also continue to struggle with the hormonal and environmental triggers. I went as far as to leave my house for a few weeks and even traveled out-of-state to see if my environment was contributing to the severity of my migraine attacks. Nothing changed. I was still debilitated to the point that I needed someone to care for me 24-7 for two years because walking unassisted was impossible.

I had several MRI's, CT's, blood work and even went as far as to get angioplasty to rule out tumors that are undetected by those tests. All results came back negative. In a matter of a fact, the neurosurgeon that did the angioplasty stated that my migraine disease is what is contributing to all of my troubling symptoms.

The worst part about all of this is that my own child is going through the same ordeal as me. He keeps hitting a wall with his treatments.

We had to go from a 504 Plan (ensures that no student with any sort of disability is discriminated against, and is given the same education as every other student, all the while being provided a safe space to manage their condition as needed during school) to an IEP (It’s a map that lays out the program of special education instruction, supports, and services kids need to make progress and succeed in school. Each program is designed to meet a child’s exact needs. The term IEP is also used to refer to the written plan that spells out the specific types of help the child will get. Both the program and the plan are covered by special education law, or the Individuals with Disabilities Education Act (IDEA).

Do you know how hard it is for me to watch my teen, who never missed a day of school until his very first migraine attack in the 5th grade, get upset because he can't be in class or participate in extracurricular activities like his friends?

Let me tell you. It is not easy to "lie" to your child's face by telling them everything will be okay when you truly don't know that it will because every treatment option he's tried has failed him.

The migraine disease not only effects my teen and I. We have three other family members that are our caretakers at any given moment. They hate to watch us suffer, but they also feel disappointment when plans have to be canceled.

When ICER steps in to satisfy their agenda, I take full offense to that as migraine patient of three decades and a mother to a teen that has an unknown future with this often debilitating neurological disease.

I will continue to fight for myself, my son and the other 38 million Americans that live with migraine. We all deserve a better quality of life. For those who think otherwise, will continue to see more advocates fighting even harder to prove them wrong.

Rosa Sundquist

May 7, 2018
ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

1. I am 56 years old, my migraine journey began when I was 15 years old or younger. As a young child I experienced terrible digestive issues and abdominal pain, in fact I don't remember a time in my life where I didn't experience abdominal pain or digestive distress. On September 28th, 2008 I woke up with a migraine that changed my life forever. I was diagnosed with chronic intractable migraine October 2008.
   I am always in pain, have sensitivity to light, sounds and smells always, not just while having an attack. My attacks are debilitating with severe nausea, vomiting, dizziness, confusion, throbbing pain usually on the right side of my head but often my whole head hurts. I also experience severe neck and shoulder pain which mixed with all the other things it renders me helpless.
   It would be amazing to be able to reduce the frequency of the attacks, lessen the severity and be able to function normally on a daily basis.

   Migraine disease has taken away so much from me and my family that it is difficult to describe without getting emotional. I have lost my independence, spontaneity, self-worth, freedom and so many other things that I just can't describe. The financial burden, stigma, guilt and feeling like a burden to my family is devastating.
   I look forward to the day when new and potentially better treatments are available to those of us with this disease.

2. The negative and disabling parts of this disease are difficult for me to explain. I no longer drive further than a 10 mile radius and most times I don't drive at all. Simple things like grocery shopping, preparing meals, keeping my home clean, attending social events are difficult and I must always plan in advance. I cannot walk outside without dark glasses, my home remains dark most of the time. My extreme sensitivity to scents makes leaving my home one of the biggest challenges as scents always trigger an attack where I become violently sick, disoriented, and unable to communicate and then the horrible blinding pain arrives.
   I've had to alter my life in many ways. I lost my job and career of 25 years because of this disease. I still tell myself every day that tomorrow this pain will go away and I can resume my life as it used to be. I miss working, volunteering, driving, spending time with my family and friends, cooking big meals, walking in the sunshine, dancing, going to the movies… I miss life!

3. I have tried countless medications, therapies, supplements without much success.
   Prozac, Zoloft, Cymbalta, Verapamil, Atacand, Depakote, Dilantin, Kepra, Lyrica, Neurontin, Topomax, Lithium, Zyprexa, Trazadone, Ativan, Klonopin, Vioxx, Indocin, Methergine, Coenzyme Q, Feverfew, Magnesium, Melatonin, Butterbur, Ritalin, Lunesta, Gabapentin, Bacoflen, Vitamin B-2 Riboflavin, DHE, Migranal, Imitrex,, Maxalt, Medrol Dose Pack, Prednisone, Decadron, Tylenol, Advil, Flexeril, Magnesium IV, B-Vitamins

via IV, Chiropractor, Acupuncture, Acupressure, Reiki, Lidocaine Infusions, Physical Therapy, Cefaly, Spring TMS, Greater Occipital Nerve Blocks, Trigger Point Injections
I currently take the following medications and receive the following treatments
Armour Thyroid, Prevacid, Propranolol ER, Dialtiazem,Tizanidine, Restoril, Mexiletine, Vitamin D, B-12 injections, Memantine, Botox, Relpax, Phenergan, Zofran, Keterolac IM Injections, Benadryl, Chlorpromazine, Ketamine Nasal Spray
Inpatient Ketamine Infusions every 3-4 months, Massage Therapy, Trigger Point Injections, Greater Occipital Nerve Blocks

I have tried all of the above treatments and more. The side effects from the medications are difficult to deal with and NOTHING takes this pain away.

4. The treatments I have tried and continue to use are expensive and some are not covered by health insurance. We are in desperate need of medical treatments for migraine patients. Using medications that have serious side effects and no efficacy is devastating to the migraine patient. Please consider the CGRP Inhibitor medicines and help make them affordable for all migraine patients.

Thank you,

Rosa Sundquist

To Whom it May Concern:

We are the parents of a 13-year old boy suffering from migraine disease. His symptoms began when he was three years old. He would suddenly become violently ill, repeatedly vomiting, and becoming sleepy. We did not realize then that those were early warning signs of migraine disease in children. When he was 10, he suffered an attack while playing baseball. Again, he became violently ill and debilitated and had to be carried from the field. Together with a group of other parents, we removed his uniform, attempted to cool and hydrate him, and finally were able to move him to the car after 30 minutes. He could not speak. He could not open his eyes. He was dazed and incoherent. It was the most frightening moment we've experienced as parents.

He was diagnosed with migraine disease the next day. Over three years, he has been in and out of doctor offices, has been treated by two neurologists, has undergone countless tests including MRI, EEG, EKG, and endocrine testing. He has failed three preventative prescription treatments and is currently on his fourth. He has tried five rescue medications – all fail to abort his attacks sufficiently. We have tried lifestyle modifications, elimination diet, herbal supplements, essential oils, salt baths, physical therapy, and cranial sacral therapy. He sees a therapist to help him cope with living with chronic illness. Up until recently, he was taking 84 pills per week – not including rescue medicines.

He has three to four migraine days per week. While medications reduce the time of complete debilitation from 18 hours to 6 hours, daily medicines do not adequately prevent attacks, and rescue medications do not eliminate the postdrome, which lasts 24 hours. He misses two days per week of school. When he does attend school, he is often dizzy, light sensitive, and cognitively impaired. Although he has Section 504 accommodations, attending school 60% of time robs him of 40% of his potential. Our son was identified as gifted and talented in elementary school and functions at a very high and accelerated level. Now he struggles to keep his head above water.

Medications such as Topamax have side effects that can be as bad, or worse, than the disease itself. Our 13-year old boy dropped to 90 pounds on Topamax, and he was barely recognizable from a personality and mood standpoint. He would cry often and not know why. He was depressed, distant, and could not concentrate. He has been off Topamax for three weeks, and we are starting seeing signs of the boy we know and love. And now, we begin on a new regimen that will take months to know if it works. After a particularly bad last week, he is now barred from taking any more rescue medications for the next six days for risk of medication overuse. Desperation is the word that best describes how we feel as parents.

Both of us work outside the home, and we have another child. Our professional and personal lives are affected, including our earnings ability due to frequent time off work to care for our son. Additionally, his treatments are expensive. Our daughter's life, activities, and accomplishments are often sidelined if one parent cannot attend an event due to caring for our son during an attack. School counselors, teachers, coaches, extended family members … everyone pitches in to help. The domino effect of migraine disease affects many lives – not just the migraineur.

This is why CGRP therapy needs to be widely available and accessible to all migraine patients. Drugs used by migraine patients today have been developed for other conditions. None have worked for our son, and all come with significant side effects that we constantly weigh against the actual benefit. This is no life for a 13-year old. This is no life for anyone. Migraine disease robs of son of moments, memories, experiences, and joys. It alienates him to a dark, quiet room for hours at a time while life goes on outside his bedroom door. The things he once enjoyed and participated in regularly are not always an option now – playing sports, reading, playing piano, or enjoying time with friends and family.

We have the potential to change that for him and for all who suffer from migrate disease with CGRP medications. The migraine community is not known to loudly advocate. We do not have anywhere near the level of funding that we should receive given the millions of people who suffer. The time has come to be loud and take action. We urge you – begging and pleading as parents with a front row seat to this disease – please recognize the need for CGRP inhibitors to be widely available, accessible, and supported by insurance companies. We have the ability to change lives, and the time is now.

Thank you for your time and attention.

Respectfully,

Kristin and Andrew

Dear Institute for Clinical and Economic Review:

My name is Nate and I suffer from chronic migraines. I'm 13 years old and I'm in seventh grade. I started getting migraines when I was in fifth grade and just around the start of the schoolyear this year, my migraines really picked up. I get anywhere from 2-4 migraines a week and I have not found a treatment that quite works for me. Migraines are probably the worst pain that I have experienced. I get them in my forehead and in my eyes usually. The ones in my forehead I can tolerate and that feels like a throbbing or a pounding pain. But the ones that I feel right behind my eyes are the worst ones. It feels like something is pressing and wants to get out of my head but it just can't. They disable me completely and it is sometimes hard to even walk.

Migraines have impacted my life greatly because as of right now I am missing 2 or 3 days of school per week. Even when I don't have a migraine I have what is called postdrome afterwards and that makes my brain feel foggy and heavy. It is hard to function at school while I am getting a migraine or afterwards. My medicine, while helpful, can sometimes hinder my ability to excel in the classroom. I also play sports such as baseball and basketball, but migraines sometimes will inhibit my playing ability or make me not be able to go at all. It is harder to hang out with friends, and since I miss school time I also miss out on the chance to socialize with my friends.

The medicines I have taken for my migraines are Topiramate, cyproheptadine, and Elavil. My rescue medicine has been Ibuprofen, Tylenol, Benedryl, Sumatriptan, rizatriptan (which I had an allergic reaction to), midrin, and Amerge. These medicines have not worked and have had many unwanted side effects such as depression, slower moving, postdrome, sleepiness, appetite loss, appetite gain, and many others.

Many people such as peers, teachers, and even doctors don't know what migraine really is and have not appropriately handled my situation. A migraine is not just a headache. It is a neurological disorder, and just one symptom is headache. I hope to one day find a medicine that really works for me and through you guys, I may have that ability. I might not be able to take it because of my age, but it could help the migraine community, and when I am older, the drug might be more widely available. Thank you for reading my letter and I hope that you make the CGRP inhibitors more accessible to all.

Sincerely,

Nate

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

1) I have had diagnosed migraines for at least 15 years, possibly longer, with only very minimal relief; I probably have had them my whole life, but never knew it. . I am 51 years old. There are many problems with this statement. The fact that I have a debilitating disease that went undiagnosed for so many years is unacceptable. The fact that I have had little relief is unacceptable.

I missed family trips and was often the only one left in the hotel while everyone else went exploring. I was told (by doctors), "it's your period, nothing you can do". I was told, "You didn't sleep enough, and next time go to bed earlier". I was told, "You're hungry, you shouldn't drink as much alcohol, and you could have prevented this". In the beginning, I agreed with them. is Share your migraine journey (when did you first start experiencing But then I stopped drinking, I regulated my sleep and my food, I tool birth control pills (even though I didn't need them for) to regulate my hormones; and it didn't work. Sure, it helped a little, but they still came, even when everything was perfect.

I get migraines at 10-15 times a month. Sometimes they last for days, sometimes only an hour; it depends on if I have enough Triptan in my medicine cabinet, and if I take it in time. You see, I have to ration the pills…insurance only pays for 9 a month, and I already know that isn't enough. So, I have this conversation with myself every time: "Is this a real migraine or is it a headache? Can I abort it with other meds so I can save the Triptan? Either way, will I get a rebound migraine tomorrow? Should I suffer through without meds so I don't get a rebound? Can I suffer through?"

I end up taking the Triptan because I know, if I don't, I'm just prolonging the inevitable. Then I worry. I won't have enough to make it through the month.

This is a recurring theme in my life. Not only do I suffer the pain, the stress and anxiety of not having enough meds wears on me as well.

Sometimes I try to get rid of the migraines without Triptans: I take anti-inflammatory meds; I take OTC steroid nasal sprays; I take muscle relaxers; I try Excedrin. I sleep, drink water and caffeine. Sometimes these things will help a little. Sometimes they keep the severe pain away long enough for me to save my Triptans. But they never completely take away the pain in my head.

And don't think I only try abortive methods, I try preventative as well. I take Magnesium and specific Vitamins daily and I continue to regulate my sleep and eating patterns. I also do not drink alcohol. I have found no difference in the frequency or the severity of my migraines.

I am left to wonder if it's worth it to take all of these medications. What are they doing to my body, my liver, my stomach? I always have an upset stomach; are they the cause?

Recently, I was in a rebound cycle that would not stop. I was told to not take ANY medication so I can break the cycle. I tried, but the pain was too much. I could not function. My physician injected my face, neck, and head with saline over 20 times. This was the most painful experience I have ever had in my life. I sat there on the examining table for 30 minutes crying while he did this, just wanting the migraine pain to stop, wanting the injection pain to stop, wanting everything to stop. The physician was desperate to help me, but after a while he said he had to stop; he couldn't continue to hurt me. It took those injections, combined with a Sumatriptan injection, steroids, anti-inflammatories, muscle relaxers, and neck massages for me to feel good enough to get out of bed. This lasted for over 15 days. By the way, neither the injections nor the massages were covered by my insurance. All was out of pocket and it was over $1000.

My physician has recommended Botox. It's not cheap. My insurance will cover part of it, but not all of it. Not sure yet if we can afford it; I hate having to weigh my ability to suffer with whether or not we can pay other bills.

I guess I'm lucky that I'm still able to work and that I have sick days. But it wasn't always like this. I spent the first years of my life going to work in pain because I had no sick days. I had I have had to choose jobs my whole life based on health insurance and sick days. Having my medications covered by my insurance and affordable are the only things keeping me going. Without that, I have no idea how I would be able to pay for the medication.

I still miss family functions; I still don't get as much done at work or at home because I'm not at my full potential or capacity. I can't relax on the days that I feel good because those are the days I have to clean the house or pay bills. I have to take advantage of those days because I don't know how many there will be. No rest. Even when I "feel good", I'm still not 100%. It's still there, the slight throbbing, the slight pain…waiting to flare up. And don't forget the "migraine brain". I didn't know this was a thing until recently. I figured that my inability to recall words or remember some things was just me. I now know that it is related to my migraines. It is affecting my home life and definitely affecting my work.

There has to be something better. The medications I take do not prevent nor do they decrease the number or intensity of my migraines. I wake up EVERY SINGLE DAY with a headache. EVERY DAY. EVERY.SINGLE.DAY. I hate waking up because I know I will be in some sort of pain at some level. I hate knowing that I am not at my full potential. It'd depressing and demoralizing.

We need access to medication that works. We need those medications to be affordable. We need help.

Shannon Taylor
Struggling Migraine Patient

May 6th 2018

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Dear ICER:

I first began experiencing migraines when I was 12 years old. I was in 7th grade Spanish class when the excruciating headache hit me, then I rushed to the bathroom to throw up. Since then I had almost constant pain in my eyes and headaches more days a month than not. My migraine pain started out feeling a lot like a bad sinus infection on one side of my head, and intense pain in the eye on that side like my eye socket was shrinking and squeezing my eye itself until it felt like it would burst. That was 24 years ago, and as I have aged my migraines have gotten worse. I am chronic and in pain every day and I now have several different types of migraines. I cannot remember what it feels like not to be in pain. The pain isn't the only debilitating symptom of this disease for me either. I am severely sensitive to light and smell, chronically tired and fuzzy headed, I'm queasy or down right nauseas, I have a hard time focusing my eyes on anything even though my eyesight is good, I get lightheaded at the oddest times, and most recently my face and sometimes finger start to go numb.

This disease has affected everything aspect of my life, and I have made many changes and lost much in my life due to their frequency and severity. I do not make plans with friends and seldom with family as I never know if I am going to be able to keep them. I consciously try not to move my eyes to look at something, instead I try to turn my head because my eyes hurt so much. I have a very hard time doing simple errands both because of the light, and because of the strong smell of perfume on other people or air fresheners at the grocery store. I have to wear a hat at work when I can't turn the light off above me. I no longer can watch TV or read a book to relax after work, nor can I stand to be on the computer for long. My house is outfitted with blackout shade which are usually drawn down and is fragrance free for just about everything from deodorant, shampoo, and hair products, to household cleaners. I am often so tired or in pain that I do not get to the housework and have to force myself to do it at least once a week. If the new CGRP drugs could even lessen the severity of my migraines and their symptoms, I could gain back even a portion of control of my life. I could do simple things like groceries or household chores without wishing I could disconnect my head.

I am still working full time, however I am not sure I will be able to keep that up much longer. I try not to call out as much as I can but it happens often, and even when I am there I don’t put out the quality or quantity of work that I know I could if not for these migraines. I 'm terrified of the day when I won't be able to work, as I have to spend so much money on medications and doctor appointments just to get out of bed, that there is no way a social security/disability income would support me let alone my family. I will end up in worse pain without treatment, trapped in my darkened room not able to cope any longer.

Over the last 24 years I have tried multiple medications in each drug class and in different combinations and dosing to try and gain a little bit of relief, but nothing has worked to reduce the frequency or severity enough to maintain a normal life. Sometimes I will get a little relief from something and I am grateful for that, but it never last for long, and then you have to deal with the side effects that can be just as bad as the migraines themselves. I have tried many alternative treatments including acupuncture, acupressure, massage, Neurostimulator, chiropractic care, vision therapy, and diets. I have even has septoplasty surgery in an attempt to relieve some of the pain.

I am currently doing Botox every 12 weeks, Immunotherapy for allergies, upper cervical Chiropractic care, using the Cefaly device and vision therapy, on top of my preventative (verapamil, nortriptyline, & Ritalin), and abortive medications(Amerge or Zomig, Tramadol, and Cambia) and vitamins (B2, CoQ10, Magnesium, melatonin, D3, & probiotic). Since starting the Verapamil I can no longer work out, as I get very light headed and dizzy with any increase in heart rate, and I started the Ritalin as I was so tired during the day that I could not function at work. Just started the Nortriptyline because my migraines became intractable and we needed a way to try and break the cycle. This of course has cause more fatigue and brain fog which makes it even harder to work. After I receive Botox injections I am left with worse headaches for the first two weeks then only a marginal decrease in severity until about three weeks before I am due again. On the last round I didn’t have any decrease in severity and had to try additional medication to break the cycle.

I urge you to consider my pain and disability along with all chronic and episodic migraine patients. We desperately need access to the CGRP medications soon to be released. This coming treatment has been the last glimmer of hope for many of us.

Thank you for all your hard work in helping access and afford this much needed new medication. If you have any questions please feel free to reach out to me.

Sincerely,

Shannon Taylor

I'm not sure what salutation to use for this letter. How do you properly address the people who hold much of your fate in their hands? This note is to implore you--virtually beg you-- to fund the CGRP medications that are soon to hit the market. Please do not let this first real hope for sufferers become unattainable.

My first memory of migraine goes back to my 30's when I was a young mom. I dealt with a few bad attacks as well as more mild monthly pre-menstrual migraines. They came on with a vengeance when I reached my late 40's. A couple times a week, a migraine would hit. The pain was staggering, forcing me to go to the Emergency Room for relief. I was unable to work the next day as well, because I needed time to regain some strength.

These episodic migraines progressed into a chronic condition that affects me about 15-20 days out of the month. There was life before migraine--and life with migraine. I have been unable to work as much as I need to, unable to live life with the same vigor I used to. Anxiety has become a familiar companion--not knowing when an attack will strike keeps me a bit closer to home.

I have had to try various preventive medications, all of which carry side effects that are more than problematic. Dizziness, anxiety, lack of appetite, weight gain, weight loss. You name it, a drug causes it. I used to take a triptan that worked well during a migraine attack, but then my insurance company "decided" not to cover it. I had to switch to one that doesn't offer the same relief. That triptan also has troublesome side effects, including drowsiness and nausea.

Migraine is an illness that runs in families, as you know. Sadly, my children also have them. Right now they're not experiencing them regularly. I pray that they never experience what I have.

Pain has had the power to bring me to my knees. Yet, there are those who suffer more. The stories I've read of other migraine sufferers have brought tears to my eyes. The desperation and isolation so many feel are palpable.

Again, I ask you to do the right thing and make CGRP medications accessible for the millions of people who need them NOW...and those who will need them in the future.

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

1. **Share your migraine journey (when did you first start experiencing migraine attacks, what does a migraine attack feel like to you, how often do you experience migraine attacks, etc.).**

   I began experiencing migraines 48 years ago while in high school. It wasn't until almost three decades later that sumatriptan was introduced and finally offered some relief that didn't involve pain killers. I have been diagnosed with chronic migraine -- 14 or more migraines in a month. Before triptans, my migraines would last 72 hours. Most of my life was spent in one phase or another of a migraine attack. In addition to the headache phase, I experience moderate to severe neck pain, photophobia, nausea, transcient aphasia, cognitive impairment, and fatigue.

   Migraine has robbed me of so many every day things… playing with my young children, going out with my husband, enjoying Thanksgiving Day with my extended family. You make plans and schedule events, hoping you won't have a migraine, but there's no way to know. Perhaps one of the most devasting effects migraine has had on me was when I had to give up my job as an educational sign language interpreter for deaf/hard-of-hearing students. Because language processing can be impacted during a migraine attack, I found I was no longer able to perform my job to the high standards I had set for myself.

2. **Describe the negative/disabling impact that migraine has in your life.**

   One of the most devasting effects migraine has had on me is the cognitive impairment. I remember so clearly talking to my neurologist about it, announcing that "I used to be smart." I graduated suma cum laude from college. Prior to my interpreting career, I worked for one of the top consumer packaged goods company in the world. I was creative and, yes, I was smart. Now I can't always follow a television program if they're speaking rapidly. I can no longer do anything but the most simple mental math problems. Sometimes I don't understand what my husband has just said to me.

   Along with having a problem processing language, I often get my own words jumbled up, or can't think of a word. I'm currently working as a business consultant with my husband; it allows me the flexibility I need due to my migraine disease. And while jumbled up words may sound innocuous, when I'm on the phone with a client and I mispronounce several words, or can't speak articulately, or at all, it is very humiliating. I used to be smart.

3. **Detail how existing migraine medicines fail to fully treat your migraine disease and have many unwanted side effects.**

   I have tried several medications and procedures and alternate therapies to treat my migraine. The medications include: beta blockers, calcium channel blockers, Topamax, Neurontin, angiotensin II receptor antagonists, baclofen, zanaflex, compazine, indomethacin, duloxetine, and several of the triptans, including Axert, Imitrex, Amerge, Relpax, Amerge and Treximet. Therapies I have used include: cranialsacral therapy, physical therapy, sphenopalatine ganglion block, occipital nerve block, trigger point blocks, botulinum toxin type-A, radio frequency nerve ablation and temporal mandibular joint surgery.

Many of the medications I had to abort using due to side effects such as suicidal thoughts. Others had no impact on the disease. Some I am still taking. I still have occipital nerve blocks and trigger point blocks every six weeks. I still get an average of seven or eight migraines a month. I cannot drive if I have taken a triptan, or for that matter if I have a severe migraine. Insurance companies will only allow 9 triptans/month. Since my migraines often last more than a day, this doesn't cover all my migraine days. And if you take much more than that, you run the risk of medication overuse headache, or rebound headache. Taking pain killers too often has the same effect, and only dull the pain a little. There is no medication out there now that will reduce my migraine frequency without side effects. It's balancing act of layering what you have in your arsenal of drugs to get you through the attack.

4. **Call on ICER to appropriately value your pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines.**

   Since triptans were approved in 1991, there are no other medications out there that are specifically deisgned to treat migraine. We are, in effect, borrowing medications from other diseases because they might have some benefit. Most come with a laundry list of side effects. Migraine disease is so prevalent and so debilitating. Imagine losing days each month out of your life, losing your pride, your job, even your friends and family. I know you will hear stories of people with migraine disease that have lost everything, are on disability and desperate for relief. We are in desperate need of having access to the CGRP inhibitors to increase the quality of our lives. I ask that you give us that chance.

   In 1-2 paragraphs, state the need for better treatment options and access to them.

May 7, 2018

Dear Sir or Madam,

I'm 62 years old, male, and employed as a flight attendant. I have been affected for most of my life by disabling migraines.I would characterize myself as healthy with a positive attitude and a laid-back persona. Over the years I learned what some of my triggers are and I avoid them but still get migraines on average of 3 times a week.

My typical migraine starts slowly, the throbbing pain in my forehead increases to a point where I just want to curl up into a ball and lay down. I become sensitive to light and noise. Sometimes I have nausea and begin vomiting. The pain will usually last for several hours and I get some relief from the pain for a short while after vomiting but remain totally impaired, unable to engage in any physical or mental activity.

Early in life Imitrex and combinations of various triptans, and OTC analgesics were able to bring on positive relief. However, during the past 10 years or so, the intensity and frequency of the headaches have increased. The previously effective meds have become less and less effective.

Eventually, I had migraines lasting two to three days, this was emotionally devastating and triggered near panic type anxiety. I did not know when and if a migraine would end. This was causing increasing inability to work. My fear increased, should I be working and in flight and a migraine hit me, I'd be unable to perform my duties. This was happening despite my best efforts to prevent it. My income is affected by missing on average 2 days of a month.

I'm always afraid this will happen while I'm on a trip. if it does it adds tremendously to my sense of despair and helplessness. My family and social life are affected. Doubts about being able to make appointments etc. The worries of not being able-bodied at any given moment never go away.

I stay healthy by eating right, exercising and staying active. Sometimes I can't help feeling depressed and I wish for the time to come where this one headache this one migraine will be over with, just to be able to get out of the house, run some errands etc and be able to enjoy it.

I have tried over the years several types of therapies including natural remedies like Acupuncture, diet, and proper rest. I've also tried everything I could or that my doctors recommended. The list incudes beta-blockers, Tylenol, acetaminophen, various combinations w/ caffeine, Imitrex, Zomig, Fiorinal, butalbital, etc. but none of them had the desired effect on me. Some were effective and partially effective earlier in life. However, over the past 10 years, they were becoming less effective in and the frequency and severity of my attacks were worrisome.

I usually will try to stop the progression of an attack with Excedrin first and if that alone doesn't work I'll take the 100mg triptan.

I'm able to stop some of my migraines with these, but the negative unwanted side effects are many. Side effects included, a stomach ache, I keep having to urinate and they stop me from being able to sleep. They leave a general feeling of being hungry and I overeat. I'm also acutely aware of the rebound headache these have.

My biggest worry is the toll these meds that I take on a regular basis have on my physical health, when I think I've been relying on them for decades. In the spring of 2016 I began having migraines that brought me to tears, so debilitating and agonizing w/ no relief from the multiple combinations of meds I'd relied on before.

My Primary Care Doctor referred me to a headache specialist who directed me to participate in an anti-CGRP monoclonal study. I was hopeful but skeptical anything would work.

The trial was an open-label one (TEVA) and I experienced firsthand the benefits of this new therapy. After an evaluation period of one month, I received a monthly injection for a period of one year ending in May 2017.

TEV-48125 was so successful for me that I did not have a single full migraine attack while in the study, just some mild headaches from time to time just like the average person would experience. Words cannot describe the effects it had on me and how my life was positively affected during that time period.

I firmly believe that these new medications have the potential of changing the lives of many migraine sufferers. This whole experience made me realize how life without migraines can be, and it gave me a sense of hope. There is a therapy out there that I personally call nothing short of a miracle. My hope is that the health care professionals with the power to do so will make these new drugs available and accessible. The result of these decisions has the potential of making an immeasurable impact on patients like me who are chronically affected by migraines.

Regards,
Denis Tessier

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

In 2004, I was diagnosed with chronic migraine disease after a migraine attack landed me in the local Emergency Room. My daily migraine attacks consist of excruciating head, neck, and shoulder pain, as well as nausea, vomiting, dizziness, visual disturbances, sensitivity to light, sound, and smell, extreme fatigue, insomnia, increased urination, diarrhea, and increased anxiety and depression. For me being diagnosed with chronic migraine means that I have a migraine attack every single day. It is not a matter of "IF" I have an attack on any given day but more so "HOW SEVERE" that attack will be. I am frequently bed-ridden in a dark, cool room, missing out on family events and what's left of my social life. I lost my partner and many of my friends due to this disease. I was let go from my job as a preschool teacher long ago, cast out from a career that meant everything to me because of something beyond my control. My heart shattered the day I had to leave my students. I tried to pick up some part-time work but my chronic migraine disease was still too frequent and too severe to work outside the home.

These days, I'm a 33-year-old woman who lives with my parents and spends much of my time as a "Professional Patient": I go to doctor's appointments both weekly and monthly, I have tests done, keep my own records and a daily diary of my symptoms, I'm admitted as an inpatient, sometimes I have to go to the Emergency Room just to get the vomiting under control. My doctors and I spend a great deal of time on the phone with my insurance company, trying to explain to them why I need the medications that my doctors prescribe and I am often forced to switch medications and/or try other medications before I can have the medicine that my doctors and I have decided would work best for me. I have lost so much of my quality of life not only to this disease but to the lack of effective treatment available.

For 13 years, I have tried so many different things, including triptans, Botox, nerve blocks, DHE infusions, countless prescription medications, over-the-counter supplements, massage therapy, chiropractic intervention, physical therapy, diet and lifestyle changes, meditation, mindfulness, yoga, the list goes on. I see a therapist and a psychiatrist regularly. I'm doing everything that I can to help myself. Please help me.

ICER, please appropriately value my pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines. I and so many others desperately need better treatment options and access to them.

Thank you,

Michelle L. Tracy

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

I believe I had my first migraine when I was still in elementary school. I remember missing school a lot due to “headaches”, and that my eyes hurt all the time. My parents brought me to an eye doctor, who prescribed reading glasses, but they didn’t help. I seemed to have less frequent migraines as I aged, and by the time I was in my teens, I mostly experienced them during my period. In my early twenties, the attacks grew severe enough that I mentioned them to a neurologist I was seeing due to a separate condition (Meniere’s disease). I was prescribed Imitrex to take during an attack. Unfortunately for me, I experienced cardiac side effects, and could not take that class of medications.

When I was 28, I had a complete hysterectomy, and bilateral oophorectomy due to a different health condition. Within a few months of having this surgery, my migraines transformed from episodic, to almost daily. I do firmly believe that this is due to my change in hormone levels. While I am on HRT, I have never attained pre-hysterectomy levels of estrogen. I am now 35. Since that time, I have experienced 20-25 migraine days, or more, a month. My attacks range from moderate to severe. A severe attack carries with it the following symptoms: stabbing pain behind my eye that is exasperated by movement, nausea, vomiting, slurred speech, blurry vision, right sided muscle weakness, specifically in my facial muscles, confusion, vertigo, exhaustion, difficulty concentrating, dysgraphia, photophobia, eye pain, and I am sure other things I am forgetting now. These attacks are frequently about 36 hours, with associated down time right before, and for about 12 hours after an attack. I estimate that I experience at least 12 severe attacks a month. A moderate attack is mostly the same, however, I can get out of bed and move, perhaps to the couch, perhaps all the way to work, if I am able to have someone drive me. Over the course of the last 8 years, I have had to leave 3 jobs due to migraine, I have missed countless work days, as well as important family events. I have thrown up as soon as I get out of bed more times than I can count, and I have strained my relationship with my husband at times, due to my inability to participate fully in life. I don’t blame him for being frustrated, I am too.

I first sought treatment locally, however, after trying 1 preventative, the local doctor proclaimed that he was not able to help me if Topamax didn’t work for me, and I was not able to take triptans. I then looked to an online support group for suggestions of a migraine specialist recommendation, and was told about a specialist in Boston, MA. I have been seeing this doctor since that time, with a brief break about 2 years ago, due to a lack of money to travel down to Boston from Maine. My migraine specialist is phenomenal. He is often rushed, and can be less than personable at times, but he is always willing to try something new. I have been on several different preventative medications, including all first line treatments, many second and third line, and some that are from Canada or Europe and are not even approved in the US, none of which have worked, either because of intolerable side effects, or just because they had no effect at all on migraine frequency or severity. I have him to thank for the medications I am able to take during an attack, Toradol IM injections (which cost $200, and are not covered by my current insurance), and Phenergan and Zofran for nausea. Of course, I can only take Toradol a maximum of two times a week, so the rest of my 12-17 migraine attacks are going untreated. At our last appointment we decided that since I have had so little response to currently available preventative medication, we were going to discontinue any until the new CGRP medications became available sometime 2018, hopefully soon after the May 2017 FDA approval date of

Aimovig. I have my next appointment with my specialist at the end of May, and he hopes to be able to prescribe Aimovig to me at that point. Of course, if the cost is as high as I have read it will be, and insurance doesn’t cover the medication, I won’t be able to access it. I really hope that Insurance companies can see that this revolutionary new treatment, which was designed specifically to treat migraine, is a long overdue miracle, and should not be denied to the hundreds of thousands of migraine patients in the U.S. If I could decrease the frequency of my migraines even by 25 %, my quality of life would improve drastically, as would my ability to be a productive member of society. I am calling on ICER to appropriately value my, and the many other migraine patients, pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines.

Sincerely,

Meredith Treat

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

May 8th, 2018

The first time I had a migraine was when I was 9 years old. I can remember standing by the window crying, waiting for my mother to come home. When I was in college, I had the occasional 'classic' migraine: It started with a zig zag neon pattern in one eye. I knew I had 25 minutes to get to a place where I could lie down before the wall of pain hit. In my 20's I started having headaches more often. I was diagnosed when I was 34 with chronic migraine: a low to high head pain that never ended. I am 48 now and have been treated by The Jefferson Headache Clinic in Philadelphia for the past 14 years. My headache is now constant, every day, ongoing pain. I never know if I'll be well enough to do planned activities for the day. My quality of life has been greatly impacted by headache. 7 out of 10 times, I do not go out with my husband and our two children because I am physically exhausted by having a headache all day and what little energy I do have has been spent holding myself together. I never plan activities that start after 2pm because I know I will be in more pain in the PM hours.

I used to be able to consistently go out with friends and family in the evening. I used to be happy to greet the day. I used to be someone to be relied on. Headache has taken these things away from me. On days when we do get together with someone or when I know I have to be 'on', I take a combination of Tylenol with Codeine, Naproxen, and Compazine. That usually (not always) gives me three hours of relief. I am given a set amount of Tylenol with Codeine each month and I use it sparingly. I am always asking myself, "What would I do without this rescue medication?" It is the only one that consistently works.

Once every two months, I invariably have a more painful headache that will not end. I am in bed all day when this happens and I get down as I feel I am doomed to a life of pain. The usual treatment is a 10 day dose of steroids. That usually breaks the extra painful headache and brings the pain level down to my normal daily roar of a headache. Sometimes the steroids don't work and I need to take something stronger, like Zyprexa, for a few days in a row. This type of headache is called a 'Status Migrainosus" and can rapidly become more serious if not treated. It increases my risk of stroke.

I have taken 30+ medications in looking for something to manage the pain. The side effects can be crippling. One medication I took, Nortriptyline, really made a difference in the severity of daily pain. The heart breaking thing for me is that Nortriptyline made my blood pressure go sky high. It was a situation where I had to risk my life to have less pain, or discontinue the one medication that had truly helped. It felt so unfair to not be able to use this one medication. It still (3 years later) upsets me when I think about it.

I have taken Topomax, which helped quite a bit but after a month made me so depressed I did not want to get out of bed. I can't take triptans as the make my heart race and induces a panic attack. I have two medications (DHE 45 and toradol) that I have to self inject. I am an expert at giving myself shots. These injectable medications dull the pain slightly, but in no way make my headaches go away. I had acupuncture twice a week a few years ago. I saw absolutely no benefit from this treatment. I have stories for every medication that has failed me in the past 14 years.

I currently have Botox injections once every 8 weeks. The Headache Center and my psychiatrist worked together to appeal my insurance coverage to cover Botox every 8 weeks. What was happening to me that I need Botox more often than the usual 3 month dosage is that after the Botox wore off at 6 or 7 weeks post injections, I would become so depressed that I would go to my psychiatrist asking for a change in my medications to help.

Botox does help dim the pain. Without it I would never be able to function to the level I do now daily. Botox, however, does not take away all of the pain. I am left with the steady hum of pain that is constant and unending.

I need a better treatment for my headaches. I am excited about the forthcoming CGRP inhibitor medications as my headache specialist has told me that I am the perfect candidate for them. It would be a blessing if I could access these drugs without having to remortgage my house. Please seriously consider them as medications to be covered by insurance. If they are not covered by insurance, I will not be able to afford them. I deserve a better quality of life.

---Elizabeth Tsukada

I started getting episodic migraines at the age of 7. As I got older, my migraines increased in frequency. When I had originally had them once every two months at age 7, I was having them every week at 17, and 15 days a month by the the age of 21. Around this point, my symptoms shifted as well, what was originally severe pain, nausea, vomiting, light sensitivity, and sound sensitivity, now also included the complete inability to speak, the complete inability to see, muscle weakness in half my body, and severe vertigo.

In the years since I was 21, my migraines have only continued to get easier to trigger, more frequent, and have longer lists of symptoms that come alongside them. In the last two months I have had not had a day without a migraine and this is with barely leaving my home, due to how severe of migraines I get from environmental triggers that are everywhere. I have literally pages of symptoms I get with every migraine, for the entirety of the migraine. Things from random falls, to hallucinations, to falling asleep wherever I am no matter how safe or not safe it is, to severe enough dehydration that I can literally not pee after having been given fluids in the ER because I just cannot force liquid into my body no matter what I'm doing.

Because of my migraines, but more so, because no preventative has worked, and I am triggered so easily, I am living in my bedroom, and unable to leave it and do things in public. I am triggered by the smoke left on people after they smoke, perfumes, and everything else scented. I'm triggered by cleaning products. I'm triggered by lights and sounds. I'm triggered by not being in complete control of my environment at all times, because people will always be doing things that are some of my triggers - and nothing I have ever tried for preventative works - so the only choice I have is to avoid people and the public whenever possible, and live instead with only the less severe migraines that come from things like weather, and stress. This isn't really a choice. This is a life that comes with depression and anxiety, and never being happy, because of never being able to so much as do something that is enjoyable.

I cannot work, I cannot help with chores at home, I cannot feel like I am pulling my weight in any way, and am always only a burden on others, because I simply cannot do things because I simply always have a migraine, and everything will trigger me. I cannot spend time with friends. I cannot do my hobbies. I cannot even spend time studying things I used to study, because the medications I'm on in order to keep myself as well regulated as I am now, to keep me from expecting myself from going to the ER weekly, instead of it being an irregular occurrence, are keeping me from being able to understand what I used to do. My life has been taken over by migraine. Any option for trying to take back my life needs to be tried.

And I've made attempts. I've spent years working with a neurologist to try to find any way to reduce the severity of my migraines, pharmaceutically and not, focusing on prevention of migraines and abortion of migraines.

I've tried doxepin, which had no benefit and had me sleeping 20+ hours a day (and miserable the rest of the time). I've tried verapamil, which again did nothing, and caused simple partial seizures. I've tried propranonol, which mildly helped the pain, didn't help anything except the pain, and caused amnesia. I've tried olanzapine, which actually helped, but caused me to have severe panic attacks daily, and severe cognitive side effects to the point where I could not manage anything, as well as weight gain. I've tried botox, which did nothing.

I’ve tried sumatriptan, naratriptan and rizatriptan - all of which stopped helping me within few pills, even upon increasing the dosage of the sumatriptan (where it worked for 3 whole pills), and all of which shut down my digestive track to the point where it was deemed unacceptable to have me on any oral triptan.

I’ve tried using flonase to see if it reduces the severity of my noses reactivity to everything, from the suggestion of an allergist - it didn’t. I’ve tried massage, acupuncture, use of peppermint essential oil, use of specific foods such as ginger. Nothing reduces the frequency of my migraines, or the severity of my auras.

Currently I’m taking trokendi, gabapentin, coenzyme q10, magnesium, riboflavin, feverfew, and vitamin b12 daily. I’m using the cefaly daily. I use the cefaly when I have a migraine in order to try to break the migraine. I use procholperazine for nausea when needed. But while this combination has been deemed worth taking, it itself has significantly impacted my life. Upon starting gabapentin I started getting 6-12 cavities every 6 months. Trokendi causes a variety of cognitive effects such as word finding difficulty, an inability to do math (having done a math major in college), an inability to learn new things, and a general feeling foggy and like my thinking is slowed down. There are also physical effects like tingling in my extremities and twitching in my eyelids. Between these meds I need about two hours more sleep than I had before my current medication regimen. I’m also sure that there are side effects that also are mixed in with migraine symptoms that I just cannot sort out, because of having been able to match vertigo as a side effect in the past, and now not being able to sort things out that much.

My past neurologist told me he didn’t want to increase my dose of gabapentin any higher than my current dose. We have tried increasing my trokendi, and what happens if we do that is I get so hard to understand my partner cannot understand my attempts at communicating, while I’m being convinced that everyone I care about is not only suicide idiating, but making active attempts if I cannot see them.

Even with these meds that I’m taking, and all of these side effects, I’m still having migraines between 2/3s of the time and all of the time based on things like the weather and my stress levels.

As it is, I need to be able to try new options for migraine treatment. Unfortunately, there’s the challenge where migraine treatments, like many medical treatments, are expensive, and like many disabled people am unable to work because of my disability. I cannot afford high cost treatments, because I simply do not have the money for it. People need to be able to access medications, life-changing medications, no matter how much money they make.

They also need to be able to access these medications no matter the medications they’ve previously taken. I was denied botox because of not taking depakote, despite being told by my neurologist that he’d never put me on that medication because my risks were too high for it. My insurance company had decided that everyone needed to have taken depakote, so the fact that I had been told I should never do so didn’t matter. I managed to appeal, but this slowed down my attempted treatment significantly.

I need better options than what are available, but I need to be able to access these options, and so do other migrainers - chronic migrainers, and episodic migrainers. So do people with common migraines, and people with auras. People with rare migraine subtypes like basilar migraines, hemiplegic migraines, and vestibular migraines, all chronic or episodic, all need to be able to access better options than are available now.

CGRP antagonists will be the answer for some of us. We need the chance to try it.

ICER Open Comment Period on CGRP Inhibitors for Migraine

05/08/2018
Jamie Valendy

Briefly describe your disease experience, including your diagnosis, treatments you've used, etc. Be as specific as you feel comfortable with.
I do not recall when my first migraine attack was, but I know now that they began during childhood. I was diagnosed with migraine with aura at age 16. The treatments I used included Imitrex, Excedrin, caffeine, and/or a dark, quiet room. I was able to function and manage the moderately severe migraine attacks with the tools I had.

The migraine attacks became chronic and debilitating, following an auto accident in my early 20s; and they have remained that way for the past nine years. I have been unable to work since my accident. I was unable to complete my graduate degree. My life came to a complete halt, and I have had to slowly learn a new way of living within the limitations of a disease I cannot adequately manage.

I have tried over 35 acute medications, over 40 preventive medications (including supplements), and various rescue medications in emergency settings. Some of these medications have simply been ineffective, while some have also had unacceptable or dangerous side effects (some of the most severe including tooth decay to the point I needed two crowns, syncope, medication induced amnesia).

I had a neurostimulator implanted. It was a long and painful recovery and did not provide the relief I experienced during the trial period, so I had it explanted after four years.

Migraine is not just a headache. It is a full-body attack. Other symptoms that I experience include:

- Allodynia (sensitivity to touch)
- Aphasia (trouble finding words)
- Dizziness and/or trouble balancing
- Fatigue
- Impaired cognitive dysfunction
- Irritability
- Nausea and/or poor appetite
- Phonophobia (sensitivity to sound)
- Photophobia (sensitivity to light)
- Visual disturbance

How do the disease / condition and the available treatments affect your day-to-day life?
Chronic migraine does not let you ever forget that it is there. Even if the pain and other symptoms are under control in this moment, it could quickly change the next moment. It is a difficult balance to be alert to the signs the body gives that a migraine attack is coming without being overly attuned to the point of not living life.

I experience varying degrees of functioning each day. The pain is always there, but the intensity and associated symptoms vary. Even on a low pain day, the other symptoms may be just as debilitating as a high pain day.

I spend most of my time in my house. Whenever I do leave the house, I have to plan the outing out carefully and make sure that I have the tools that I may need (food, water, medication, sunglasses). When I enter any setting, I immediately take note of noise, lighting, restroom, exits.

I rarely feel comfortable going out alone. I never know when or exactly how a migraine attack will hit. Several of my symptoms (and acute medications) make it unsafe to drive. When a migraine attack starts, I can become disoriented and overwhelmed by my surroundings, so I need someone to help get me out of that environment.

The acute medications that I have available to treat a migraine attack make me drowsy. There are times that I cannot keep my eyes open, and I am bed-bound for the majority of the day. I need assistance with even basic needs, such as getting food.

What impact does the disease have on family or caregivers?

Migraine impacts the entire family, and chronic migraine is even more intrusive. My husband is my caretaker, and has been for the past 9 years. I hate that he has to be in that position, especially when we are only in our early-30s. He takes off work to take me to doctor appointments. He has taken on more household responsibilities that I cannot always complete. He helps me in so many ways that I cannot even express. He makes living with this disease more bearable.

My family and friends are as understanding as they can be of this disease. They do their best to accommodate me, whether they offer or I ask. They invite me to participate in activities, knowing that I may not be able to attend or participate much depending on my pain levels that day. Some of my relationships have drastically changed and/or ended because of the chronic and debilitating nature of the disease.

What else should ICER know about living with the disease or condition (e.g., impact on your ability to work, exercise, care for family, etc)?

I have been unable to work, since my migraines became chronic. I was approved for private long-term disability and Social Security Disability Income, which has helped relieve some of the financial burden of having a chronic, debilitating disease. The disability income allows us to pay for the medical treatment I need to try to manage my health conditions.

I am not able to exercise consistently. I have been very intentional to try to get out and walk more, when able. But, that sometimes is just a 5 minute walk. My head pain increases, when my heart rate increases. Even yoga can be difficult because there are a lot of positions that increase my head pain.

We do not have children. One reason is that with the level that my migraines are currently at, I believe I would be unable to fully care for a child or at least be unable to be the kind of mother I would want to be. I know that my husband would fill in the gaps as much as possible, but that is an additional weight to add (he is already the sole breadwinner and my caretaker). I also worry that I would pass migraine disease on to my child.

What outcomes are most important to patients? For example, is the top priority improved quality of life, longer survival, or relief of a specific symptom?
Quality of life is top priority. There is currently no cure for migraine. Having treatment options that reduce the severity and/or frequency of migraine attacks would be life-changing.

I had to completely re-examine my life, when my migraines became chronic. I was suddenly forced to stop working at age 23. No one anticipates that. I pushed hard and even tried to go back to school (graduate school), but it was to the detriment of my health. I was left unable to work in any capacity, participate in hobbies that I loved, and even go to church. Many of the attributes I valued in myself (including dependability) were suddenly flipped upside down.

I have fought to make the most of the life I have now, to learn to live well with the limitations I have. Quality of life is key.

Are there new / emerging treatments that the patient community is anticipating? What are the benefits or disadvantages of the new treatments (e.g., more or fewer side effects, convenience, effectiveness, etc)? Do you think the benefits will outweigh side effects or risks?
The lack of medications specifically developed for migraine disease is unacceptable. The patient community has had to trial and error with medications that were developed for other diseases. This often involves horrible side effects and inadequate relief.

Both the personal and societal burden of the disease indicate that there is a dire need for better treatments to prevent and manage this disease.

CGRP medications will be the first class of drugs ever developed specifically for the prevention of migraine disease. As such, the entire headache community has been watching trials closely with great anticipation.

This new class of medications has shown far fewer side effects than most patients have endured with the non-migraine-specific medications. Even if there are side effects, there is a higher chance of improvement since CGRP medications are being developed to specifically treat migraine disease.

The main disadvantage of new treatments is the uncertainty of access. Some doctors may not feel comfortable prescribing them right away. Most insurance companies will likely resist any level of coverage by excluding the class of medication altogether, requiring patients and doctors to jump through hoops, and/or providing inadequate coverage levels making it too expensive for patients to access. All of this, even after the medications have been approved by the FDA.

Do patients have trouble getting insurance coverage for treatment? Do costs affect patients' choice of treatment, or their ability to access treatment?

I know a lot of patients that have had difficulty getting coverage or access to treatments. There are several reasons for this.

- Insurance coverage: medications are often limited or excluded.
- Financial burden: treatments are often very expensive. This is exacerbated by the reality that many patients are unable to work and may or may not be receiving disability income.

I have submitted several appeals to my insurance company: to increase the amount of acute migraine medication (specifically, triptans) covered per month, to cover a migraine medication that was unknowingly excluded by my plan, and to cover FDA-approved treatments like Botox. These treatments are both expensive and limited (or even excluded altogether) by insurance. Triptans are the only medications that have been developed specifically to treat migraine, but insurance companies are making access to these treatments difficult, inadequate, or impossible.

Insurance coverage for devices, including the SpringTMS device, is limited or non-existent. This device has helped my migraines, but insurance will not cover it. It is very expensive to have to pay for fully out of pocket.

I work closely with my healthcare professional team. The treatments that we discuss and decide to use are considered to be best for me. It should not be up to an insurance company to limit the number of pills covered (at least not to the strict amount they do). As a patient, I shouldn't have to prove that I have exhausted all other treatment options.

Insurance coverage should take into consideration that a more expensive treatment option may very well reduce the need for expensive emergency room and hospital visits, doctor appointments, and additional medications. An adequate prevention regimen means that the disease is better managed, and maintaining is more cost-effective than paying for continued trial and error of treatments and for emergency care. Long-term, a more expensive but effective treatment option saves insurance money.

Please share any other information that you think is important for us to know from a patient perspective.

CGRP medications present an opportunity for adequate treatment to a lot of people living with migraine disease. The headache community has suffered a long time without medications developed specifically for migraine. It would be a shame if such an effective treatment was inaccessible to patients because of cost.

ICER OPEN COMMENT PERIOD ON CGRP INHIITOR FOR MIGRAINE

When I was 43, I had a complete hysterectomy. The operation relieved me of the symptoms of stage 4 endometriosis and a soccer ball sized tumor that encased my ovaries and caused me daily abdominal pain, but I woke up with a 'headache' that I just could not shake. The only pain relievers I was given for the surgical pain was alternating Tylenol and Advil. I was not bothered by the pain from surgery, but more by the nagging headache that just did not go away. My doctor told me this should subside when they would start me on hormones six weeks after surgery. Eight weeks after my surgery, I experienced a blinding headache – like nothing I had ever experienced in my life. This was accompanied by uncontrollable vomiting that occurred if I moved even an inch. My body ached from being frozen in place for hours. I had not thrown up since I was a child…something had to be terribly wrong.

The severe attacks grew more frequent and longer, the persistent headache between the violent attacks became more disabling. The first year after my surgery, my husband and I tried to continue as usual. I put on a brave face at work and we continued to take international trips I had booked prior to the surgery. I was also on a hormone rollercoaster while my gynecologist tried to determine if that was the issue. Finally, I met with my first neurologist who, after all the test I was sure would reveal a brain tumor, diagnosed me with 'garden variety migraine'. For the record, I'm no wilting flower. When out of the blue I was told I had several uterine tumors and tests looked as though it might be cancer and I would need a complete hysterectomy, I calmly asked how much the tumors weighed (I had put on a few pounds I could not account for), scheduled surgery and left on a business trip. I'm not an emotional wreck and obstacles are just hurdles to be dealt with…so I started Topamax and learned that I would need to do my own research and was on to neurologist #2. This neurologist had to be mistaken – I was intermittently losing my hearing, smelling acrid and oily smells that didn't exist and vomiting until I was so dehydrated I couldn't move. This was not 'garden variety' anything.

The first year was terrible because of not knowing what was going on and thinking that maybe each ensuing attack was the one that was going to kill me, but I had hope that I just needed to find out what was 'wrong'. I was obsessed with tracking the dates of the terrible attacks – what I had eaten, what hormone adjustments had been made, what my bowel movement looked like. I tried everything not to have it happen again or at least predict what my day would look like. I was able to give myself Imitrex injections and became proficient at vomiting while driving. Once the vomiting started, it wouldn't stop, so I just had to get home and it would take days to feel like myself again. Every time I flew, I would steal the sick bags to carry with me in my daily life.

Neurologist #2 was fascinated and started me on riboflavin, CoQ10 and magnesium. The best thing he did for me was give me permission to go to the ER. He said if I was taking everything in my prescription arsenal and not getting an ounce of relief and getting dehydrated to the point of fainting, I should go to the ER. I now was a regular at the ER every 6-8 weeks. I took a blanket, ear plugs, sunglasses. They knew me and I knew my morphine 'cocktail'. He also told me to stop making jokes and trying to put people at ease about my pain levels. They were clearly worse than I let on.

A year and a half after my surgery, I couldn't keep up the façade any longer. I present my ideas to groups of developers, brokers, architects and engineers for a living. I was having trouble finding the words I needed in simple conversations and told my office that I needed to take a break. The cost of the ER co-pays and battling with insurance about 'enhanced coverage' for these frequent visits was taking up my free time. I frequently left the office and ran to an acupuncture clinic ($100 every 10 days which was not covered by insurance) in the hopes that I could get some momentary relief to get me through an important morning or afternoon. I was buying every device I could find on Amazon that promised any kind of relief and I would lay under my desk for just a few moments of calm before attempting to continue with my day. I would unknowingly press the sides of my head with my palms to dull the pain enough to allow a coherent sentence out. I told my director I needed 3 months off and I knew it would be without pay and my health insurance would have to paid out of pocket. I just had to see if my lifestyle was part of the problem. She told me an absence like this would not go unnoticed in the industry and would affect my reputation. I did not have a choice.

I was a shadow of my former self. I cried…a lot. I'm not a crier, but this was just so desperate. I told my husband that I just didn't think I was going to get through this. I'm not this person – I can get through anything. I've always been everyone else's rock. My husband promised me that we could move anywhere and be anything that would make me happy. It all sounded like too much. So I slept and ate clean and walked outside and did yoga 2-3 times a day and ordered a stack of books on migraine. I read and highlighted while my head pounded. I had already given up alcohol and coffee and rock music and travelling and going to see live music. I was someone I hated…I was a creepy self-help person. I got massages and acupuncture and drank apple/pear/celery juice. I found online communities of people suffering the way I was suffering and worse. I would tell my story and by now it sounded like one of their stories and their stories sounded terrible. People felt bad for me and that annoyed me. I'm not one for pity so I kept pushing for an answer.

I took my husband to my next neurologist appointment and we both realized neurologist #2 didn't have anything else to offer me. It was 30 minutes of me asking questions and him asking, "Have you tried medication X", "How about medication Y?" and listing side effects. I needed something more. One of my books mentioned that I should be seeing a 'headache specialist' not just a neurologist. That seemed like a great idea. I was now armed with much more information and my binder had many more questions after my research. Of course, it would take 3 months to get an appointment which would be 8 weeks after I was back at work, but what could I do?

One embarrassing side note to highlight my desperation during this time. I read an article in a magazine about women in New York and San Francisco going to see shaman to drive out evil spirits and heal them of all kinds of ailments. I was still wondering how a perfectly healthy person could have had a surgery and turned into a walking pharmacy in constant debilitating pain. I now know that I probably had experienced a few migraines in my youth and written them off as a hangover and that I was over-using Excedrin before I had my surgery. Anyway, I had moved from NYC to Phoenix years ago so I looked up my local shaman. It's not an admission I'm proud of and thankfully shamans are quite expensive and use drums in their process which I could not imagine lying still through.

I went back to work at 30 hours a week with a very flexible schedule. My bosses just want any 30 hours from any location. I live 10 minutes from the office, so I'm able to come home and decompress a bit at lunch. All the hard work of juicing and yoga were soon dismantled and the first week my pain levels were almost unbearable. The difference was that I now had 3.5 days to recover before the next week and they didn't even suggest late nights or weekend work.

Neurologist #3 the headache specialist was different from the beginning. The information packet was probably 100 pages of questions, the waiting room was dimly lit and very soothing. I took my husband with the hopes that I would be given a nerve block or one of the other magic bullets I read about. I explained about two years and various doses of Topomax that I kept with even though it made me dopey (my husband says I went from Type A to like living with a college student) and the Trokendi I had tried that I thought gave me a terrible migraine (I now know to give meds a longer trial). I told him about the massive doses of riboflavin that I thought did nothing, but I didn't want to stop in case they did something and the magnesium that I took every night that I thought had reduced the morning migraines. I showed him that I had documented that that CoQ10 had made me so sick to my stomach and gave me vertigo (even though everyone said that was not a thing). I listed my Sumatriptans, Rizatriptans and how neurologist #1 told me to do a shot of Cambia before I gave myself a shot in the leg with Sumatriptan. I asked what I was supposed to do with the other 21 days a month when I only got 7 doses of a Triptan and I worried about rebound. The only other thing they gave me was Indomethacin and that worked as well as Tylenol. I told him that for the most part none of these seemed to put a dent in these except for the trips to the ER for morphine and steroids – and I really didn't want to put opioids in my body and the co-pays were killing me. Not to mention the expense of this disease – holistic approaches (massage, acupuncture, supplements), prescriptions (even my high deductible is typically met by September), ER visits, unpaid leave.

Neurologist #3 explained that I needed better preventative medications and while I could certainly continue with my juices, I needed more medications in my arsenal. After having so many side effects for the last few years, I pushed back. He insisted I try it his way at first. I left with Amitriptyline, increased Topomax, Cambia, Dihydroergotamine, Rizatriptan, Fiorcet and an explanation for how many each could be taken a week and what could not be taken within what timeframe of which. Neurologist #3 was also going to try to get me approved for Botox. He said it was a long shot since during my 2-1/2 years of hell I had not tried enough 'steps', but we optimistically booked the procedure.

The Amitriptyline soon took the dark thoughts away and loosened some of the crawly tense feelings that had built up in my shoulders, neck and skull. Of course, I recently read that I have a 30% increased risk of dementia from being on Amitriptyline. The Dihydroergotamine has kept me out of the ER for the last 18 months and counting. That medication is also not something that is sustainable since I have a family history of heart disease and stroke. I try not to take the Fiorcet since I would not be able to take the Ergot if the migraine got worse – same for the

Triptans. I have never found them to be terribly helpful anyway. Cambia is my go to for 2-3 times a week. My insurance company threatens to cut me off of it on a regular basis and suggests Advil or some other asinine 'step' medication. Neurologist #3 is not perfect, but he is responsive and has been able to keep me approved for Cambia.

I was approved for Botox and it has made an improvement to the quality of my life. As long as I am very careful and watch my sleep, my diet, take my preventative medications my daily pain levels are reduced. Botox is not without its side effects. The first 8 weeks after the injections my eyelids droop to the point that my nephews tease about not needing a Snapchat filter…but I past the point of vanity in the name of relief a while ago.

I also started working with a TMJ specialist (insert cash register noise here). My dentist had a thought that perhaps my jaw had been damaged during my surgery which was triggering my migraines. I've had injections to my jaw joint, day and night splints and this doctor added Meloxicam and Tizanidine to my daily repertoire.

I still cannot work more than 30 hours a week which prevents me from advancing or changing firms. I tried taking on more challenging projects and immediately my health deteriorated again. Luckily, I'm very good at my job and valued at my firm so they are understanding of my situation…but I do wonder what is said in the industry behind my back. I try not to let my clients know and make myself available on email when I am not in the office. I'm very tired at the end of the week and only occasionally socialize. I was always the one who planned our recreational travel and I don't think we've gone farther than a road trip to San Diego. A weekend away requires a gallon-sized bag of pill bottles, powders, planning for water and ice and whatever 'migraine voodoo' I'm trying. It just doesn't even sound like fun. My husband recently turned down a career change for twice the salary since it would involve moving every few years with some of the destinations being overseas. A few years ago, this would have been our dream, but I just couldn't imagine starting over with a new team of healthcare providers every few years.

I am well enough to focus on helping and educating others. We did the Miles for Migraine fundraising walks the last two years. Last year my husband and I raised the most money in Phoenix and this year we were right behind the Mayo Clinic (they beat us at the last few hours!). I listen and take notes through the Migraine World Summit every year and encourage those around me with episodic migraine to seek help so that we are all counted. I'm sure I drive my doctors crazy with questions and 'theories'. The last two weeks I've been experimenting with making a turmeric and coconut oil gummy squares in an effort relieve inflammation. My personal goal now is to lower the amount of medication. I actually wake up at night in a panic and tell my husband that I've forgotten to take something and will have a migraine – and it's just a dream. I set my pill bottles where I'll remember to take them. Four bottles on the nightstand, two by where I charge my phone, one plus magnesium by where I eat dinner and the rest are in the giant days of the week separator for the morning. Any doctor I see receives a print out of my prescription list since it is far too long to list off or fill in on a form. The pharmacists know me by name since I'm always in picking up prescriptions. I also frequently call the pharmacy because I will have taken Ergotamine and forgotten that I had something still in my system and am afraid that I will end up like Elvis. I read somewhere that he accidently overdosed on migraine medication which ended up testing like hardcore drugs. Wouldn’t that be a fitting end to this adventure?

CGRP has been a beacon of hope for our suffering community as we have watched the clinical trials and now FDA approval. Even our typically dry doctors are a bit giddy with the possibilities of actually helping their patients that, until now they have only been able to medicate. As a part of the patient community, we are hopeful for this new classification of medication. If it does nothing more than reduce the amount of medication we are ingesting with fewer side effects, I would be thrilled to be the first in line.

I am a chronic migraine sufferer---by chronic I mean I have been plagued with migraines for the past 46 years!! That's 46 years of intense pain and suffering. There is no normal life for migraine sufferers, its just a living hell on earth. When I started getting migraines as a child, there was nothing they could do for me. Luckily sumatriptan rescue medication came to be and it gave me relief when I could afford the medication. Before it was generic it was very expensive so I had to pick and choose when I wanted to feel better. What kind of choice it that?? The older I got the worse my migraines became. The more frequent they came, the more life altering it became. My quality of life suffered tremendously. I couldn't make advanced plans because I never knew how I would feel. I couldn't plan vacations cause who wants to be sick when you have spent so much money. All my plans are last minute so I can see how I feel. It got to the point (and still does) that I have a 5 day long migraine that I have from the moment I awake to the moment I fall asleep and no longer aware of pain. The only thing that helps is sumatriptan. But I can't take too much sumatriptan because it can cause rebound headaches. So what is a person to do?? SUFFER.

My migraine disease isn't outwardly visible like other disabilities ---and yes it is a disability! Ask any one who suffers from them! I have suffered so long and got so good as masking the appearance my pain, that not many people even know when I have a massive migraine. That is from 46 years of practice! I really don't like to tell people that I have migraines because there is still a stigma that it is just a bad headache …….really!! I have had many people in the past tell me headaches are caused by stress and take away stress and the headaches will magically go away!! Sorry I don't have that magic pixie dust! That is why I choose not to tell many people about my disease. Only people with migraines can understand the real pain involved here.

Just imagine 5 days straight where a knife is thrust inside one eye and constantly turning, and that same side of your head is tight inside a heavy vice that pulsates. Than you may get a small picture of how I suffer. I will get these migraines for 5 days, then I may get a break for several days, than the cycle starts all over again! I have had many, many years of migraine almost every day! When I do get a break from the severe pain and wake up without a migraine, I feel so good and it feels so unusual to me to be pain free that I think maybe I will never have another migraine!! Wishful thinking…….. than the cycle starts again. I have even lost some faith in God because I can't imagine a God that would let someone suffer for so many years!

Imagine having to work under these conditions (which I do). Imagine running a household under these conditions. Imagine trying to have a social life under these conditions. The impact is unbelievable.

I have tried every single treatment available for the past 45 years.

Chiropracator, Acupunture biofeedback exercise botox

Nicardipine Serzone Topomax Keppra Depokote

Frova Axert Nortripyline Gabitril Benicar

Timolol Propranolol Metoprolol Atacord Nadolol

Verapamil Valproate sodium topiramate Zonegram DHEA

Advil Excedrin migraine natural medications

I have also taken narcotic medication (for post surgeries) and they didn’t touch my migraine pain.

I have tried some of these meds multiple times and still didn’t work.

These are just the medication that I have record of. I am sure there are others that I haven’t listed.

The ONLY medication that works for me are my rescue medication sumatriptans. They are wonderful at taking away the migraine but I have not found anything to **prevent** the migraines. So they just keep on coming back like a bad penny. I can’t take too much triptan because it can cause rebound headaches! So I am caught between a rock and an hard place. I must choose when I want to feel good. Even after menopause, I continue to get regular cycled migraines.

I used to go regularly to neurologist for my disease, but one after the other said “there is nothing more I can do for you”. We have run out of medication to try and help you. They all told me when I hit menopause the migraines will go away. NOT….

Life is very tough and when I saw this new preventative medication CGRP I thought maybe this will be the one medication that can help me because it targets migraines. Than I saw the cost! There is no way anyone can afford to take this medication. It is so unfair that the people the meds are meant for will not be able to pay for them. Its like holding out an ice cream sundae and telling you not to eat it!

I ask you to please recommend that insurance companies pay for the new drug for migraine prevention. This is hope for migraine sufferers. I am sorry I now have to go lay down because I have a migraine!!

Lisa Villa

Dear ICER Review Panel,

My name is Sarah Vogts. I am 23 years old and a music performance major at the University of Kansas. I have New Daily Persistent Headache, and have had a headache in literally every waking moment since November 7, 2014, at 10:30am. I know that this review of the new CGRP inhibitors is mainly intended for migraine patients, but I would ask that you please keep in mind the potential that these medications have to help control New Daily Persistent Headache, a primary headache disorder which currently has no effective form of treatment available. New Daily Persistent Headache is a continuous, non-stop headache that is often refractory for years or even decades. The headache specialist who diagnosed me at the Mayo Clinic told me that I "should expect to have a headache for the next several decades of [my] life until research catches up with [me]". Many in the NDPH community are extremely hopeful that the CGRP inhibitors may prove to be an effective treatment for us, and I ask that you work to ensure that this medication is an available and affordable for NDPH patients.

November 7, 2014, started out as a fairly unremarkable day. I was in my second year of college at the University of Texas-Austin, where I spent my first 3 years of college before having to transfer and give up my full-ride scholarship due to the effects that NDPH had on my schoolwork. My morning classes had been cancelled, so I slept in a bit and then went over to the music school to practice. At 10:30am, I walked into my practice room and I felt fine. Unremarkable, really. But by the time I had assembled my bassoon and sat down to practice, I was anything but fine. Just like that, I had been hit with a headache unlike anything else I had ever experienced before. There was an intense pressure surrounding my head and pulling behind my eyes. Everything suddenly seemed so much brighter, to the point that I could hardly keep my eyes open. I quickly gave up practicing and instead curled up on the floor and cried until I had to leave for my next class. The pain was so unbearable, I could hardly take it. Little did I know, that was only the beginning of a headache that has lasted for 1,278 days and counting.

Every morning, I wake up with a headache. Every night, I go to sleep with a headache. And, I have a headache in every waking moment in between. I am not exaggerating when I say that I have not had a single headache free moment for the past three and a half years. You may notice that I am always referring to headache in the singular and never in the plural. This is because having New Daily Persistent Headache means living with one continuous headache indefinitely, one headache that never stops. Most people I have talked to with NDPH will also refer to their headache in the singular. We are not living with frequent headaches or occasional headaches - we are living our lives with one never-ending, unrelenting headache.

Having New Daily Persistent Headache has had a devastating impact on my life. As I referenced previously, my NDPH began when I was in my sophomore year at UT-Austin. I was doing very well there, both musically and academically. I also had been chosen as a Forty Acres Scholar, which is the premiere merit-based scholarship offered to UT-Austin. I was the first music major to ever win this scholarship, and it was a lifesaver financially. UT-Austin should have been a place that I could succeed, but developing NDPH robbed me of that experience. I was no longer able to function well enough to succeed academically. I could hardly get things done, and I was unable to practice bassoon hardly at all. I am pursuing a career as a professional musician, so this was a very big problem that put me very far behind where I needed to be. I ended up taking a semester off during my junior year, and later chose to transfer to the University of Kansas due to my bassoon teacher being very unsupportive of my choice to continue pursuing my dream career despite living with New Daily Persistent Headache. This meant having to leave all of my friends, a school that I loved, and the amazing scholarship I had.

I am just completing my fifth year of college, and thanks to several medical course load reductions and transferring, I will still need to be part-time for another year before I can graduate. I still struggle with being able to accomplish everything that I need to do because of the pain I feel from NDPH literally all the time. I worry that I may not be able to have the career that I have always wanted and worked so hard for due to my continual struggles with NDPH.

Having New Daily Persistent Headache has also led me to develop continuing mental health issues. Living every moment of my life in pain is exhausting. There are some days that I even consider killing myself just so that I can escape from the pain. (I have zero intention of actually doing this, but the thought is there.) It has been very isolating, since none of my peers have any understanding of what I am going through. I also have a difficult time being able to socialize and stay attentive, which further increases the isolation of living with NDPH.

I have seen 4 neurologists, 1 neurosurgeon, and numerous other primary care doctors, physical therapists, massage therapists, chiropractors, osteopaths, nutritionists, etc. On two occasions, I have had to travel across the country to see a specialist. I have had 2 MRIs, 2 MRAs, 1 MRV, 1 MR Myelogram, an EMG, an EEG, and several X-rays. I have tried a variety of treatments, both medicines or otherwise. I have tried amitriptyline, lexapro, verapamil, Botox, sumatriptan, gabapentin, as well as every over the counter imaginable. I did not have any positive benefit from any of the medications. Sumatriptan, in both the pill and injection forms, gave me unbearable nausea without even touching the headache pain. Botox injections have been an incredibly painful endeavor, and I normally do not have any problem with needles. I just had my second round of injections last week, and the nurse who administered them told me that she has never seen another patient experience as much pain with the Botox as I did. She suspects that my scalp is incredibly sensitive due to years of this constant headache.

As far as non-medicinal treatments go, I have done osteopathic manipulation, chiropractic treatments, massage therapy, physical therapy, dietary changes, acupuncture, and special glasses that are designed to help headache patients. I also had an epidural blood patch to rule out the possibility of a CSF leak. I did have a minor amount of relief in certain parts of my head with massage, but the treatment became unaffordable over time for how little benefit I was getting from it. I am having a similar struggle with physical therapy, as it has not been giving me much relief and is also expensive to continue without any notable results.

My headache has been gradually getting worse over the three and half years that I have had it. I started developing significant visual issues about a year into my NDPH. I now have what could best be described as a visual snow in my vision at all times. Imagine having thousands of pinpoints of neon lights in your vision every waking moment of the day. It can make it difficult to read textbooks or computer screens, which detrimentally affects my ability to study. I also have a constant, highly sensitive level of palinopsia, where I see after images of anything that contrasts with the surrounding colors. I am also very sensitive to bright lights, and these can cause my headache to get drastically worse. I also struggle with tinnitus and brain fog.

I would say the the most difficult part of living with New Daily Persistent Headache is the hopelessness of the situation. I often wonder if I will ever experience another headache-free moment in my lifetime. I know this may sound melodramatic, but even my headache specialist at Mayo Clinic told me to “expect to have a headache for the next several decades of [my] life”. The only hope for those of us living with New Daily Persistent Headache is new research providing us with a long-awaited effective treatment. It is possible that the CGRP inhibitors may provide relief for many people suffering from New Daily Persistent Headache, but we will not be able to try this medication unless it is affordable. Please keep us in mind as you decide which conditions should or should not be covered and how much the medicine will cost.

Sincerely,

Sarah Vogts

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

To whom it may concern:

My earliest memories of my chronic migraines were when I was 8 years old. I was at a restaurant with my family, unable to eat or pick my head up off the table, my vision blurred, nauseous and sensitive to the bright lights and noises. My family did not understand the severity of my migraines. “How could I really be in this amount of pain?” they wondered. My brain was hyperreactive to the world around me, and the effects were both cognitive and physical. These episodes were frequent and severe, occurring more than 15 times per month. When the pain began to be too much to bear, I began seeing a local neurologist at age 13. I was diagnosed with chronic migraine, a neurological disease for which there is currently no cure. A disease which is widely misunderstood.

For the next several years, I began trials of countless preventative medications, acute treatments, physical therapy, chiropractic care, massage therapy, acupuncture, etc. Each medication came with side effects, and I didn’t respond to any of them. At age 20, I began using Imitrex as an acute treatment, along with Botox injections. Triptans, like Imitrex, were the last breakthrough migraine treatment developed over 20 years ago. This was a turning point in my life, and I finally had my condition “under control”, having about 10 attacks each month and I was able to treat them with Imitrex. I was able to live my life, attain my goals, travel, paint, be an involved aunt, excel in my education and career, and enjoy my passion for photography.

A year ago, that all changed. I had just turned 27. While eating dinner with my girlfriends, I experienced sudden blindness. I later found out that I had experienced a very rare form of migraine, called a Retinal Migraine. This experience, along with my family history and a rare heart condition, meant I was at an increased risk for stroke. Along with these risks, I was no longer able to take any Triptans, including Imitrex. The very medication that allowed me to function properly, was suddenly not an option anymore.

My life drastically changed at a time when I least expected it to. I was in my fifth year of teaching elementary school and my last semester of graduate school, excited to devote my career to teaching children to read. I was a young wife, planning to begin a family of my own. I spent the next several months in pain so severe that I could not get out of bed most days, vomiting for 16 hours at a time, and unable to be the person I once was. I had to hide my Imitrex, so desperate for relief that I would risk a stroke just to ease my pain. I lost weight, my hair, and my ability to function properly. After countless appointments with neurologists, and many visits to one of the best migraine specialists in the United States, which was 8 hours away, I was told that there was nothing else I could do that I wasn’t already part of my treatment plan. My only hope of living a normal life would be the new CGRP advancements being made specifically for migraines. My hopes and dreams of living a fulfilling life, changed to attempting to survive. My relationships were strained, and the burden of chronic migraines was now not only my problem, but my family’s as well.

I often wonder, on my few pain free days, what kind of person I could be if I wasn’t burdened with this disease. What kind of wife would I be? How would I change the lives of my students? Should I even have children, knowing this disease is hereditary? What did I ever do to deserve this? How can I live this way for the rest of my life?

Currently, I take my preventative medications, which all have side effects. I take my acute medications such as Toradol injections, Excedrin Migraine, and opioids, when all else has failed. I take my daily supplements, Botox injections every 12 weeks, trigger point injections, nerve blocks, massage therapy, regular sleep patterns, exercise, hydration, meditation and relaxation strategies, and much more. Despite my best efforts, chronic migraine persists because I have no acute or preventative medications that work for me, I am currently having 15-20 migraine attacks each month. What if I could get those 240 days back each year? Migraine steals away days, weeks, months, and years of my life. For now, I hide my symptoms behind a smile and pretend I am fine until the school bell rings at the end of the day. I have had to become an advocate for my health, educating myself on the best practices and approaches to use to treat this debilitating disease.

Although I often feel alone in this battle, I know that there are millions of others who aren't able to take Triptans due to health conditions, and are praying for breakthrough treatments, like CGRP inhibitors, to treat their chronic or episodic migraine attacks. For many, this breakthough migraine treatment could mean that we would have the chance get our lives back under control. Preventative treatments are considered successful if they can reduce the frequency of migraines by 50%. That means, I could potentially get 120 days a year of my life back. However, treatments like CGRP inhibitors must be attainable and affordable. Without insurance coverage, most patients will not be able to afford this medication. The financial burden of chronic migraines weighs heavily on my family, as many treatments, such as nerve blocks, are not covered by my insurance. Patients, like me, need access to better treatment options that are accessible and affordable.

Without any major advancements in the fight against chronic migraine in over 20 years, patients and providers deserve access to effective health care treatments. Your influence can make a difference in the lives of so many, like myself. The barriers of chronic migraine are often too much to bare, but your influence on the course of treatments for patients could allow chronic migraine sufferers who have failed all other available treatment options, a chance to get their life back. Thank you for taking the time to read about my story. There are millions of stories just like mine, and suffering patients who are awaiting more treatment options.

Sincerely,

Jacqueline Wagner

May 08, 2018
Re: ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

To Whom it May Concern,

At 25 years old, I had worked my tail off through six years of college to receive my B.S. and M.A.; I'd worked one year on the job as a clinical fellow, completing the final requirements so I could do my dream job as a fully certified Speech Language Pathologist and I had practiced for a year and a few months with children with disabilities as "Kelly L. Smith, SLP-CCC." I'd never heard of migraine, much less known that it could be so debilitating. I'd never felt anything remotely close to the intensity and utter nightmare that is migraine. The first migraine I ever had, I'd left work early, the earth was spinning and vomit that was threatening with severe nausea. The bright light of the overcast day was searing into my eyes; how could light be so painful? The loud noise of the traffic intruded without permission – again painful and new and making my whole body shudder. I felt attacked by my environment. Later I would discover touch to be so painful that I couldn't tolerate even a gentle hug. Have you ever seen a Migraineur wince when light hits their eyes? The reaction is not like when the sun is too bright and you need your sunglasses. Oh no, it is physically painful, like knives. And that is similar for sound, movement and touch. When my husband speaks too loud, it feels like he is hurting my physically. We have a hand signal I use to tell him, "Please be quieter."

That first migraine, I arrived home and crawled up the flight of stairs to my apartment as I could barely lift my head up; the pressure inside my head was unbelievable. Someone was trying to crush my brain and at the same time a screw driver was digging into the right side of my skull. I inched across the threshold and to my guest bathroom and as my head lay on the green bath mat, I started to feel pain in my head that I had never before experienced. I knew I was dying. No one could experience this amount of pain and have these intense symptoms and survive. What I discovered later was that Migraine, was pinning me to the floor.

I didn't die, but my life changed completely that day, October 26, 2005. It was the first day I had what I later would learn was a Migraine and Migraine has been a part of almost every day since. Chronic intractable (resistant-to-treatment) Migraine). I had gotten engaged on October 15, 2005, eleven days before this happened. I wasn't depressed. I wasn't stressed. I was on cloud nine making dreams and plans with my then fiancé, now husband, for a life that didn't turn out to be even remotely close to what we'd planned. The only job I ever wanted was to parent, but Migraine has kept us from it. I'm 38 and my husband is 46 and the reality of not having children is devastating. And all that work to become Speech Language Pathologist? I've not been able to return to work since February 8, 2006.

Migraine is a thief of time. It keeps me in bed, on the couch, away from my family, hidden in my bedroom because I cannot tolerate the noise, light, or symptoms of Migraine. Migraine is exacerbated by stimulation and it is isolating. I cannot participate in life because life itself is so assaultive to my brain. Migraine causes me many cognitive and neurological symptoms that happen during and between Migraine attacks. I can’t find the correct words. Sometimes I can understand what’s being said to me but not respond. My head jerks. My brain is too reactive with Migraine to be a part of life.

On rare occasion, if I go on an outing, to a musical for example, and stay the whole time, my brain will have become overwhelmed by the end of the couple hours, that my head is jerking; I can’t speak and if I can, the wrong words come out; my head is throbbing and I’m completely dependent on my husband to get me home and to bed. Afterward my body is traumatized by the slightest stimulation and takes hours if not days to recover.

My passion is supporting other chronic warriors in finding an incredible life with their diseases while waiting for research and treatments that can get us functioning again. As Migraine made it very hard for me to concentrate, think clearly, find words, remember things, I had to stop writing on my blog a couple years ago. I’m a determined woman and when this English minor couldn’t write anymore, I switched mediums and started talking to a camera. I create videos to encourage other people in their lives with chronic illness. I love it, but even in this area, I cannot create videos like my chronically ill peers do because my brain works slower and when I have a migraine, I cannot create (video, edit, produce, publish) at all. I’m side-lined by Migraine even in my disability-friendly passion.

New and better treatments give so many of us who are disabled by Migraine disease, hope that we might be able to participate in life again. To show up as a daughter, wife, friend, lover that I want to be. I want to function like a typical human. I want to go just ONE day without a migraine if not several days. I want my severity to be lessened. I want to contribute to my family by earning money and lift the financial strain. I want to feel good enough to be intimate with my husband. I want to be able take care of my parents when they get older and I’m scared I won’t be able to do that. And although I might not be able to parent, I’d love to have the ability to be around kids and feel like I need to run away from their noises. As you may see, this doesn’t just affect me, it affects everyone who I love and loves me. No grandchildren for either set of parents.

I used to fully engage in life in every way. In addition to working with preschool age children with disabilities, I volunteered as a leader at a local food pantry serving 100 plus clients a night, listening to their needs and giving them support. I would attend activities at church and go to outings and parties with my friends on birthdays and holidays. I left my house multiple times a day. I’d visit family and see them the majority of the visit. And now, I can do NONE of these things. I rarely leave the house. If I make plans with friends, I cancel almost 100% of the time. It’s isolating and discouraging. And even doing household chores is hard. In addition to working to support us financially, my husband goes shopping, cooks, does the laundry ect. No, this is NOT the life we dreamed of when we got engaged. Migraine is a thief.

This is a comprehensive list of treatments I have tried for Migraine since October 2005. As you can see by this list the current medications and treatments available for use for

Migraine disease have failed to help me be a functioning individual:
Preventative Medications: (These medications were tried at different doses for 12 week trials at each dose. They were stopped because they did not work/help prevent Migraine, my brain would stop responding to them after finding some help with severity of Migraine or I'd max out the dose & stop taking them, or they were not tolerated. Some of the many side effects I got from these medications were: nausea, weight gain, weight loss, diarrhea, constipation, vomiting, hallucinations, suicidal ideations, night terrors, hair loss, neurological side effects, fatigue, concentration and memory problems, vertigo and I could go on:
Topamax (twice), Lyrica, Zonegran, Keppra (twice), Gabatril (four times), Lamictal, Nortriptyline, Zoloft, Lexapro, Cymbalta, Abilify, Clonazepam, Xanax, Verapamil, Metoprolol Tartrate, Clonidine, Bystolic, Botox, Petadolex, Magnesium, Vitamin D3, Foltx (Vitamin B complex + Folic Acid), CoQ10, Omega 3 Fatty Acids, Vitamin B-100 complex
Abortive Medications: (I couldn't tolerate the side effects or they did not work to stop Migraine acutely.)
Midrin, Relpax, Zomig, Treximet, Amerge, DHE (IM injection)
Rescue medications: (Again, many medications were tried in hopes I would find relief.)
Muscle Relaxers: Parafon Forte, Norflex, Soma, Zanaflex, Baclofen, Diazepam, Robaxin
NSAID's: Toradol (p.o. and IM injection), Sprix (nasal spray) Mobic, Indomethacin
Steroids: Methyprednisolone; Prednisone; Decadron
Opiates: Percocet; Hydrocodone in forms of Vicodin, Loracet, Lortab & Norco; Darvocet; Morphine; Demerol; Suboxone, Dolophine (IM); Nalbuphine (SubQ); Butrans transdermal patch
Other. Esgic Plus, Bellergal, Methergine, Haldol & Cogentin & Ativan "triple shot-taken together", Zyprexa, Benadryl (IM), Compazine, Vistaril, Tramadol, Diamox, Continuous low-dose birth control pill to avoid hormonal-related Migraines,
Anti-Nausea: Phenergan, Zofran, Reglan, Emend, Compazine

IV Medications I went to the ER several times early on, but realized that is no place for a Migraine patient as it is overstimulating. I was hospitalized for Migraine several times:
*Northern Illinois Medical Center (McHenry, IL) November 2005 – 3 days;
*Diamond Headache Clinic Inpatient Unit (Chicago, IL): February 2006 –seven days; October 2008- seven days; February 2009- nine days; August 2009- fourteen days; October 2009- twelve days. Anodyne Headache Clinic (Dallas, TX)- six day Outpatient Intensive IV therapy. I tried a variety of different IV medications. I never left the hospital or clinic with Migraine being broken or having stopped. If I found improvement it was minimal. For these reasons, I changed to a new Migraine specialist to try other types of treatments. Here are the IV medications I tried multiple times:
(All IV): DHE-45, Droperidol, Benadryl, Depacon, Magnesium Sulfate, Norflex, Thorazine, Ativan, Toradol, Keppra, Dilaudid, Morphine,Tramadol, Lidocaine, Ketamine, Compazine,

For a time, they thought that treating my neck pain would help treat my Migraine. Both inpatient and outpatient procedures consisted of a physiatrist giving me several injections while I was under anesthesia all in 2008-2009: Bilateral Cervical Facet Blocks at OA joint/between C1-C2/between C2-C3, Occipital Nerve Block, bilateral C2 root ganglion block, bilateral suboccipital peripheral nerve blocks, Botox,

I have tried many alternative treatments to help with Migraine. None of these were successful in eliminating or significantly decreasing Migraine. Some of them help me cope emotionally, but do not provide Migraine relief: Ice, Biofeedback, Meditation & Mindfulness, Diaphragmatic breathing, Trigger Point Acupuncture, Cold Laser Therapy, MRT Food Sensitivity Testing and Following the LEAP ImmunoCalm Dietary Management Program with a licensed Nutritionist, Physical Therapy, Massage, Psychotherapy, Gentle exercise (Walking, Household Chores, Tai Chi, Easy Pilates), SootheAway device and SPG block using SphenoCath.

My current regimen works together to help me endure the day the best I can. I couldn't say that any one treatment really is helping. They all work together to get me where I am today in getting out of the bedroom, which is a low bar. I know that if I weren't taking them, I'd be much worse –unable to get out of bed and not being able to even leave the bedroom. The following is my current regimen:

-Daily Preventative Medications: I take Gabitril (an anti seizure drug) daily for Migraine which has many cognitive side effects and diazepam daily for neurological symptoms Migraine creates in my body such as head jerking and word finding. Being on Diazepam daily negatively impacts my balance as I have Meniere's disease. However, when I tried to get off diazepam, we discovered that it was helping to suppress countless neurological symptoms caused by my brain and likely Migraine disease. In a challenging spot, I have to treat the neurological symptoms but make my balance worse. I'm getting a service dog in Fall 2018 in part because I fall often due to vertigo and balance difficulties. The dog will help stabilize me.
-I get Botox injections every 9-12 weeks. I notice when it is wearing off as my Migraines become more severe.
-I use eNeura sTMS (single pulse Transcranial Magnetic Stimulation) device throughout the day. It has never broken a Migraine. When I first started it, I felt using it throughout the day helped with severity of Migraine more than if I'm not using it. I'm not so sure now.
-I take daily supplements of Vitamin D3 and CoQ10 for Migraine. I did not notice a difference after I started taking them. But, I'm taking them in hopes it is somehow helping my brain.
-Frova is a long acting triptan and my only option for an abortive. When I take it, it might decrease the severity some and I'm so thankful for that. It has never stopped a Migraine, which is the whole point of the medication.
-Toradol IM is an injection I give to myself when Migraine gets so intolerable, I can't move. It helps take the edge off what feels unbearable. I cannot take it often because of the risks to my body.

I share this extensive treatment history to show that current treatments are not only insufficient, but they are not giving me a functional life. . I hope beyond hope that CGRP or a treatment developed for migraine will enable me to reclaim my brain and my life. It is maddening that nothing really works and that I can’t tolerate medications to see if they could work and that I have to deal with side effects of medications that do work. And isn’t it absurd that after all these treatments that I’ve tried and gone through, that none of them are created specifically for Migraine prevention? I cannot wait to try something that was created, researched and tested for Migraine disease. Myself and other Migraine patients deserve to have access to something that is created for us and likely will help us. As opposed to borrowing other drugs created for something else hoping they might help. We are of value. We deserve to have preventative treatments created for our disease because it is much more likely it will help so many of us to become functioning and productive individuals again.

Please, I ask you to see give value to how migraine has affected my life and to the disability it has created in myself and in my community. If I only had one Migraine day a month and had to call off work, that would still be more sick days than most people have working a full-time job. Regardless if a Migraine patient has one Migraine a month or fifteen plus Migraine days a month, we all need to get back to work, get back to contributing to society fully and get back to our families. We need to be functioning again. I feel like I’ve died in my family’s eyes. The hope of better treatment options and the ability to access them gives me the hope that I will be able to show back up in my life. I cannot wait to see my mom and dad and brother’s faces.

If there is a treatment available, it should be accessible so that not one more 25 year old young woman with everything ahead of her will EVER experience the pain and loss that I have. I still have dreams that can be accomplished. Let’s make them happen!

Thank you so much for your time.

Sincerely,

Kelly L. Wahle

May 2, 2018

ICER OPEN COMMENT PERIOD ONCGRP INHIBITORS FOR MIGRAINE

To whom it concerns:

I am a 56 year old woman suffers from daily chronic migraine, migraine with aura & occasional retinal migraine. I had my first migraine at age of 14. My migraines are always on a scale of 1-10, start out about a 2 –3 then shoot to a 8, 9 then 10 pretty quickly, within a 15 minute period. They are on the top of my head with throbbing pain & feels like my head is going to explode wide open. When I was 17 years old I had one so severe that I had to miss couple days of school then finally I was taken to the emergency room where they gave me demeral, which made me sleep & knock the migraine out. I suffered from then on with migraine, 1 or 2 times a month. Migraines cause me severe nausea & vomiting, dizziness, visual disturbances, ringing in ears, clogging of ears, upper neck & upper back pain. I become depressed, have anxiety & irritability. I use heating pads on my upper neck & ice on top of top & back of my head. At age of 18 I was diagnosed with endometriosis, which is a co-morbidity condition of migraine. The pain from that was so severe that the gynecologists suggested I get pregnant, as this usually gets rid of endometriosis. I had several laparoscopy surgeries that didn't take the endometriosis pain away. I continued suffering with migraines & endometriosis every month through age of 27 at which time I had my first child & it did help the endometriosis pain go away. I would use & tried every over the counter pain reliever I could find but still would miss out days of school, social & family events. I took many hot showers with the water pounding on my head trying to make the pain stop. In 1992 I started my first preventive drug, Amitriptyline. We had to continue upping the dosage to strength of 175 mg, 1x @ bedtime. This drug enabled me, along with imitrex being released around that time, & vicodin to work a full time job, 40 hours a week and manage a family, having & raising 2 children. I still suffered 5-6 migraines per month but was able to keep my job & function when not in the severest pain. I had always worked when I was able too. I worked from 1979 until 2009, 26 years +! My first job was restaurant job starting in 1979 which I worked for 1 year & several months. I was proud of my work & accomplishments. My office skills included Account payable/Receivable, invoicing, purchase orders, etc. Administrative assistant was my title and I worked hard at being a professional. My first administrative job I worked at for 13 years, 1980 to 1993. My second administrative job I worked at for 9 years during which our Office was moved across the country and I had to take on a new job close to home. Management above me would vouch for my good work ethics but also acknowledge I suffered severe migraine from time to time. The next six years were absolutely terrible to endure while trying to keep a job. My headaches became more frequent & more intense. I held 3 great jobs but ended up taking a time off in-between each due to migraine worsening. The following was a pattern that happened to me:
2005-2006 worked one year at Stewart Filmscreen in Amelia, Ohio
2007-2008 worked one year at Hamilton County board of mental retardation & development disabilities.
2008-2009 worked one year at University of Cincinnati
For some reason, Amitriptyline no longer was helping me. I became so sick with migraines that I would have to stop on the way to work, pull over & vomit then continue to work. Some days I would make it to the university parking garage then vomit on my walk into work. I fought so hard to keep the last 3 jobs that were fantastic opportunities, but just couldn't keep up with all the pain in my head.

I was seeing a neurologist, family doctor, headache specialist, chiropractors & more while I was working, not to mention continuing to try every drug in many categories that might help my migraines & deal with all the side effects. Several times while working I lost my vision while being on the computer. These would last up to ½ hour. It is frightening to experience some of the symptoms of migraine. Other symptoms I have of migraine is hallucinations & anxiety. For example, I was in ER with one migraine that I believed that Jesus on the cross on the wall was coming down off the cross toward me. This worried my husband considerably. With anxiety, comes panic attacks. I was in a department store & separated from my husband when I felt head pain, dizzy, claustrophobic and had to drop the items I was holding & go lean on a wall & call my husband for help. I have anxiety over driving my own car now. Migraines affect every aspect of my life. I've lost great jobs with great co-workers, lost friends & family members whom i seldom see. I'm also not the person I was. I was very outgoing & sociable. Migraine disease changes you unfortunately. For my family I hide the fact I'm in pain most of the time. When I can't get out of bed they know of course. My children learned at a very young age when mommy is having a migraine they must be quiet and leave me alone.

In 2010 I was awarded full disability. I spent many years feeling very depressed about leaving my jobs. Disability is very hard thing to accept when you are driven person. Today I spend time reading & listening to migraine books & other written material on depression, & other conditions. Because I suffer with photophobia as well, I have trouble driving at night & watching television. Television is a trigger for my migraines. I can only read short periods of time before I feel the nagging prodome symptoms of migraine. I currently suffer with migraines, depression, anxiety, sleep apnea & fibromyalgia. I also have always had migraine with aura through the years. It's not every migraine but it happens. My migraines can be 3 – 4 hours to up to 9 days long. I don't let them go more than 3 days long anymore. My doctor says they just increase intensity & harder to get rid of the more days you postpone them. I go to the ER after 3 days now.

Some of my worst triggers are the weather; barometric pressure changes, heat & cold, smells; especially perfumes & deodorizers, loud noise, hot flashes, stress, food & drink. Some of the food & drink are chocolate, artificial sweetners, wine, msg, strawberries, & sugar. I have tried so many migraine diets & keeping headache diaries without much success. I do know what to avoid & I do that. Some things are out of my control.

I have seen some of the best headache specialist around me and have been told I am one of the worst cases they have seen. I know many, many people have their own migraine story & suffer as bad as I do. I will provide a page of all the drugs I have been on. Some of the treatments are as follows:

Alternative medicines; Riboflavin, Magnesium, Co-Enzyme Q10, supplements, massage, accupunture & Homopathic treatment.

2009 Sinus Surgery- Deviated septum. Did not help headaches.

Three weeks in IMATCH program at Cleveland Clinic (Head pain unit) DHE was given via IV & had to spend entire weekend in ER due to severe stomach nausea caused by the DHE.

Migraine surgery (decompression of occipital & trigeminal nerves) & reduction of turbinates in nose was done by Dr. Bahman Guyuron. I suffered with angry (firing of nerves) in head afterwards for 2 years and it did not help my migraines. My migraine pain only moved from the back of my head to the top of my head. I was put on neurontin for the nerve problems after the surgery.

I tried botox over 3 month period which eventually lead me to getting very sick, flu like symptoms and did not help my migraines.

2010 I worked with my Gynocologist over a year trying synthetic hormone treatment which did not help my migraines.
I began getting 28-30 steroid trigger point injections in my head, neck & upper shoulders by a pain doctor without long lasting success.
2011 I went to a eye specialist, 3 hour appointment. He checked & did every test possible to determine if my eyes were causing migraines and determined they weren't the problem.
2012 I started seeing Dr. Joel Saper at Michigan Headache & Neurological center. Was admitted into the hospital for 10 day head pain unit with a pick line. We tried all sorts of medicines without success.
I also paid out of pocket & tried natural hormone treatment in 2012 for one full year without success.
2013 Was admitted into Chelsea hospital, head pain unit again for 10 days to try more medications with a pick line.
2014 Was admitted into Chelsea hospital, head pain unit again for 5 days of infusion. Spinal taps were performed and blood patches done multiple times. It was discovered I was having positional headache. I was sent to Dr. Gray, Duke University in NC where she found multiple tears in my spinal tube (neck area) & pin holes in my back. She performed 2 blood & glue patches over a years time.
While in pain unit in hospital I had deep nerve blocks performed. R C2-3 L C2-3
R C3-4 L C3-4, Facet block injections right & left occipital nerves.
2015 I began to see a pain specialist again who gave me repeated injections of steroids over a period of a year. They help somewhat but I also got a very bad fungal infection in my esophagus that had to be treated with IV anti-biotics while in hospital.
I went to Chicago (Diamond Headache Center) was admitted into hospital for 7 days Aug 18-25, 2015. Was given many different medicines to break migraine. Was feeling well for period of 1 month then back to daily migraines.
2016 I began having IV infusions at UC Hospital West Chester of (Decadron, benedryl, toradol & reglan) I did these monthly for several months. Would take a break then repeat the infusions again.
This is now the cocktail I receive when I go to the ER in serious pain of migraine.
I have had my share of MRI's & cat scans & nothing serious or fatal there.
2017 We traveled to Lexington, Ky for help. I received more IV infusion which helped temporarily. More steroid injections in the head & neck along with physical therapy. I have many variations of medicines in these IV infusions without success. Some even caused terrible consequences. For example, I was given too much reglan & began to have twitches all over that lasted hours until benedryl calmed them down. I was given compazine which caused me to have out of body experience.

October 2017 I went into ER severely dehydrated, very low blood pressure, with head pain & stomach pain. I ended up being admitted for 7 days with migraine and diagnosed with ulcerative colitis. My Gastroenterologist believed that the anti-imflammatory medication was to blame.
October 2017 to current we have been constantly trying different drugs every 4-6 weeks, sometimes the same drugs I've been on in past but in different combination without much success.
I have tried many forms of treatments, recent & in past. Chiropractors, massage, exercise, Physical therapy, bio-feedback, meditation, braces on teeth & mouth guard for TMJ, purchase out of pocket of a head helmet unit that tightened on your scalp $100.00, no more migraine pills on TV at cost of $99.00, inversion table & mechanical traction unit for neck $350 & more.

Migraines completely impact my life in a negative way. I can no longer work, cannot be reliable for anything. Daily migraines completely disable me. I am afraid to leave my house alone most days & become anxious when I have to drive my car on my own as a migraine may come on. They have impacted my family. Most days I retreat to my bedroom where I have wood blinds covered up with room darkening shades because of light sensitivity. Over the years I have had to rely on the ER far too much. The ER is not a solution. It often is a negative experience and I avoid it if at all possible. The following are some of the doctors & specialists I have seen over the years & currently seeing.

Dr. Arthur Hughes, neurology	Cincinnati, OH
Dr. Michael Holliday,Family Dr.	Cincinnati, OH
Dr. Rajbir Minhas, Pain Dr.	Cincinnati, OH
Dr. J Nicholas, neurology	Cincinnati, OH
Dr. Lisa K Mannix, neurology	Cincinnati, OH
Dr. Vincent Martin,Headache specialist	Cincinnati, OH
Dr. Deborah Tepper, neurology	Cleveland Clinic Cleveland, OH
Dr. Joel Saper,	MHNI, Ann Arbor, MI
Dr. Diamond	Diamond Headache center, Chicago
Dr. Linda Gray	Duke University, NC
Dr. Bahman Guyron	Lyndhurst, OH
Dr. Young, neurology	Lexington, KY

My current medications are below. They provide only short term relief that is why I am excited to try the new CGRP because I do respond well to Sumatriptan, but I need a better medication that will provide longer relief.

Abilify, Amitriptyline, Diazapam, Tizanidine, Percocet, Lunesta, Toradol Injections, Sumatriptan Injections, Benedryl Injections, Phenergan, Zofran, Lidoderm spray & patches, Nexium, Carafate & Bentel.

I am excited about the new migraine treatment to be released but am worried about the costs. Can I afford it when it does become available? I am on disability & a fixed income. Many, many people suffer from this terrible disease and need access to the new CGRP drug and at a affordable price. ER costs are astronomical. My last ER visit on 3-16-18 cost the insurance $7,295.00. We need to be able to afford this new drug.

I cannot use some of the better known migraine preventives because of side effects or they just don't work, such as; Migranal, DHE, Depakote, Topamax, Inderal, Methergine, steriods & more. I spent weeks gathering my info & days writing this letter. Please keep the cost affordable. Too many people are suffering!

Thank You

Carol L. Ward

Medicines tried

ANALGESICS
Cafergot
DHE
Frova
Imitrex/Sumatriptan
Lidocaine
Maxalt
Methergine
Midrin
Migranal
Relpax
Treximet
Zomig
Acetaminophen
Aspirin
BC or Goody’s
Darvocet N100
Demerol
Dilaudid
Excedrin
Fioricet
Vicodin
Fiorinal
Advil
Hydrocodone
Oxycodone
Oxycontin
Percocet
Stadol injection
Stadol nasal spray
Tylenol
Tylenol #3 or #4
Ultram/Ultracet
Vicodin

STIMULANTS
Adderall
Concerta

BLOOD PRESSURE
Candesartan
Clonidine
Corgard
Inderal
Lisinopril
Propranolol
Verapamil

ANTICONVULSANTS
Depakote
Gabitril
Keppra
Lamictal
Lyrica
Trileptal
Neurontin
Topamax
Zonagran

ANTI-IMFLAMMATORIES
Daypro
Aleve
Celebrex
Ibuprofen
Motrin
Toradol
Voltaren
Lodine
Indocin
Orudis
Relafen
Feldene

HERBAL
Coenyme Q10
Feverfew
Magnesium
Fish Oil
5-HTP
Butterbur
Peppermint oil

MUSCLE RELAXANTS
Baclofen
Botox
Flexeril
Norflex
Robaxin
Skelaxin
Tizanidine
Zanaflex

ANTI-NAUSEA
Compazine
Phenergan
Reglan
Vistaril
Zofran

SEDATIVES
Abilify
Ambien
Ativan
Halcion
Xanax
Klonopin
Lorazepam
Lunesta
Melatonin
Seroquel
Thorazine
Tylenol PM
Valium
Xanax

STEROIDS
Decadron
Hydrocortisone
Medro
Prednisone

ANTI-DEPRESSANTS
Amitriptyline
Celexa
Cymbalta
Brintilex
Effexor
Elavil
Lexapro
Lithium
Nardil
Nortriptyline
Prozac
Pristiq
Remeron
Trazodone
Wellbutrin
Zoloft

OTHER
Clinoril
Tolectin
Bystolic
Zonisamide
Benedryl
Marplan
Compro
Meclizine
Chlorpromazine
Clarithromycin
Sumavel
Cafergot

Public comment CGRP for migraine

My headaches began in my teens (I am now 75 years old). They were annoying but didn't really affect how I lived my life. As the years went by, they became progressively worse. When I was pregnant with my first child and was seeing my ob on a regular basis, I started discussing the impact that they were having on my life with my doctor. Following delivery, I began to search in earnest for an answer.

I started my work life as an elementary education teacher. As my headaches became worse, I found I was spending most of my breaks resting in the nurse's office. Eventually, I gave up teaching. I just didn't have the energy any more. As my kids were growing up, I tried to attend their activities. I pushed myself to be there physically but I just didn't feel like I was "really there". For several years, I worked part time at home which gave me the flexibility to rest when I needed to. After my children were grown, I worked part time in an office. Many days, I pushed through the pain but it was very difficult to concentrate when my head hurt so much.

Over the years, the headaches have become worse and more frequent. I have seen at least 30 different doctors and tried 3 pages of medications including tricyclic antidepressants, anti seizure drugs (topomax, depakote etc), blood pressure meds, narcotics, over-the-counter pain relievers, tramadol, roxycodone, and neurontin as well as supplements like B2, magnesium and Coq10. Some have helped short term and then stopped working. Others had such debilitating side effects that I was unable to continue their use. I have traveled to headache clinics in Florida, Michigan and Minnesota as well as working with the headache clinic in my hometown of Rochester NY. I have tried botox, acupuncture, hypnosis, nerve blocks and ablations, psychiatrists, biofeedback, massage therapy, allergy testing, chiropractic care, stress management, sleep studies, physical therapy and several special diets - all to no avail.

Over the years, my headaches have become progressively more severe and have occurred daily for several years. They were diagnosed as migraine without aura and eventually, as chronic migraine. In 1990, I was prescribed Imitrex in injection form which was a wonderful acute medication but I was restricted on how often I could use it and how much my insurance coverage would allow. Now, 28 years later, I still rely on my triptan for acute relief. It is no longer as effective as it once was but I get a few hours of partial relief. I am still limited in how much I can take because of side effects. There have been no new preventatives developed specifically for migraines and no new acute drugs since the triptans so I have to depend on whatever relief they give me.

I tried a Cefaly device and used it every day for 3 months but it provided no benefit. I rented a Spring TMS device and used it every day for 3 months. Again, there was no change in my headaches.

Fatigue, lack of stamina, poor sleep quality, difficulty concentrating and digestive issues connected with the migraine pain greatly affect my quality of life. I push myself to exercise daily and to participate in life around me. I think I am "normal" until I watch what others are able to accomplish compared to what I am able to do. Others seem to do twice as much in half the time. Then I realize that these headaches and all that goes with them have stolen so much of my life and I have had them for so long that I don’t know what life would be like without them (but I sure would like to find out!). My social life has shrunk to almost nothing. I feel as though I live in a closed room and that room seems to be shrinking. I don’t know what it is like to wake up without pain or go to sleep without pain. It is always there at some level. It affects my family as well as me when I am unable to participate in family activities. There are so many things I would like to do, things other people take for granted but I just don’t feel well enough to enjoy them. I am now 75 years old and would like to look forward to a few more years without this constant pain.

I have been following the success of the trials for the new CGRP therapies and I am very hopeful that they will provide relief for me. The cost however, will be a big factor in whether I will be able to use these drugs. It is my sincere hope that insurance will help me and other migraine sufferers to be able to afford this medication.

Lynn Ward

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My first migraine headache was in 1988 when I was 32 years old and we lived in the Washington, DC area. I treated my headaches then with over the counter medications about 2-3 times a month until they became more frequent. My husband was in the Navy, and two years later, it was time to move to Arlington, Texas. My headaches started becoming weekly and after treating me with butalbital and other meds, my PCP referred me to a neurologist who diagnosed me with migraines and rebound headaches. That began a VERY long road of going through the extensive list of every episodic medication and preventive medication to find one that controlled my headaches. After trying all the available episodic meds like the triptans that were available at that time, and preventive meds from Amitriptyline through all the epileptic medications, there were none of the preventive meds that were effective, and I ended up on Lyrica when it first came out, and that decreased the frequency of my headaches for around five years. I was able to continue my career as a Pediatric Nurse Practitioner without too much interruption.

In 2001, my husband was retired from the military, and we moved back to the San Antonio area to be closer to family. While we were building a home, we were staying at a temporary place where I fell down some stairs and hit my head. My exam and CT were neg.. After that time, my headaches increased to daily migraines. I was diagnosed with chronic daily migraines. It was very difficult to concentrate, think clearly, problem solve, and I had some memory issues. It was at that time that I started the long road of the addition of pain medications to what I was already taking. I used meds including Duragesic, Fentanyl, Hydrocodone/APAP, Ketamine Infusions, Naltrexone, and morphine. I was also diagnosed with rheumatoid arthritis because I was having fatigue and pain in my joints after a viral illness, confirmed by lab. I saw a Pain Management doctor who managed some of these pain medications and the Ketamine infusions. He also did numerous nerve blocks and implanted a nerve stimulator, which was later removed. Then I was referred for posterior, then later, anterior nerve decompression. My neurologist performed 3 rounds of Botox with no relief. I've also had many rounds of physical therapy, massage therapy, counseling, acupuncture, chiropractors, and homeopathic medicine.

My headaches were bad enough that I quit my job because I was on so many medications, including the narcotics, that I was afraid that I might make a mistake that would affect a patient, and I wanted to leave BEFORE that happened. I was out of practice long enough that I would have had to go back to school to be re-licensed. The headaches also affected my ability to plan vacations, etc. We had to cancel one trip because I had a Ketamine infusion, so I would feel well for the trip, but instead had a bad reaction that lasted longer than usual. Headaches certainly affect every day and my social life.

After exhausting the above treatments, I was referred to a neurologist at the Mayo Clinic in Rochester, MN. I was seen there and told that indeed I had Chronic Daily Migraines, as part of a Chronic Pain Syndrome, and would benefit from their three-week Chronic Pain Clinic. I attended that program and had some relief from my headaches if I followed the program all day long every day, which doesn't leave much time to have a normal life. The one benefit of the program was getting off the opioids, which is a good thing, but I don't have anything to replace them with.

My headaches are not as severe, as I did learn to reframe my pain, BUT they ARE still almost every day, which still affects my concentration and patience. I am still on Lyrica and now also on Topamax. But that is about the end of the road as far as options. I have tried increasing my dosages, but that didn't decrease my headaches AND did increase my brain fog.

So many suffer from pain such as mine. Please give us better treatment management options, and access to them. Don't waste time and money by making us try old useless drugs again before our insurance will pay for these new drugs when they become available. New medications for migraines that work are LONG overdue. Everyone agrees opioids are not the answer, and many of us have quit taking them, SO hurry up and give us better options, PLEASE!

1. **Briefly describe your disease experience, including you diagnosis, treatments you've used, etc. Be as specific as you feel comfortable.**

I am a 24 year old female with a Bachelors in Biomedical Engineering. I work as an engineer in the biotech industry. I've gotten migraines my entire life, but they did not become a problem until January 2010. Since then, I have tried 9 preventative medications and 3 abortive medications. I've been followed by 2 neurologists that specialize in migraine treatment. My story is best told through a timeline.

1. Pre-January 2010: I noticed that I would get headaches on occasion. These were the types of things that would give me a headache (later, I would learn it was a migraine):
    a. Certain artificial candy my family would get on road trips.
    b. Certain artificial flavors of gum. I've become so sensitive to the smell of gum that I cannot be near someone else who is chewing it. If I get a whiff, I start to get a migraine.
    c. Thinking about a math problem in a moving vehicle.
    d. Reading in a moving vehicle.
    e. Not having eaten in a while.

   However, I could treat these migraines easily. All I had to do was take a short nap or take an Advil. As I got older, migraines began to take over my life.

2. January 2010: I was a sophomore in high school at the time and got a headache I couldn't get rid of. Advil did nothing. Sleeping did nothing. After the headache had been going for a week, my family took me to the Emergency Room. There, I was admitted and given many tests to rule out diseases like brain tumor, brain bleed, and intracranial hypertension. After everything was ruled out, they concluded that I suffered from migraines. I scheduled to see a neurologist, but couldn't get in until June of that year. The next few months were very hard because I wasn't given any preventative or abortive medication. I just had to document all the days I got migraines. During that time, I would get them ~25 days/month.

3. June 2010: I was diagnosed with migraine by a neurologist that specialized in migraine treatment. I was given Treximet (Sumatriptan and Alleve) as an abortive medication. I was able to get 18 Treximet/month from the pharmacy, which was covered by my insurance. This medication helped a lot. We, then, tried the following preventative medications with the following side effects/results:
    a. Topamax: This made my migraines worse, and I was told that may because my serotonin levels are too low, and the Topamax (a serotonin stabilizer) was just keeping my serotonin low. This led us to try antidepressants to get my serotonin levels higher.
    b. Tricyclic Antidepressants: I ended up trying 3 different tricyclic antidepressants (only 1 at a time): amitriptyline, protriptyline, and nortriptyline. All of these helped; I no longer felt like I was always on the verge of another migraine. I had some "freedom days". On page 4, I will describe what I mean by this term. However, each of these tricyclic antidepressants made my resting heart rate be ~100 bpm. Before (and once I discontinued), my resting heart rate is usually ~60 bpm. This was a side effect I could not justify; I couldn't make my heart consistently beat much faster than it would normally. So, we moved on to different antidepressants and other classes of drugs.

   c. Birth Control: Right around when my migraines jumped to being a near-daily occurrence, my period also changed a lot. I wouldn't get a normal cycle, sometimes only getting spotting every 2 weeks. My period was very irregular (if it came at all). I was officially diagnosed with Polycystic Ovarian Syndrome (PCOS) soon after. This wasn't surprising as I'd been diagnosed with advanced bone growth as child and many people in my family have PCOS. In order to help with my migraine frequency, I was put on birth control to regulate my hormones and period. This helped a lot. Again, it made me feel less like I was always getting or having a migraine.
   d. Verapamil: This is a calcium channel blocker. I was on this for a while, but saw no improvement.

4. Fall 2011: This is about when I started Effexor. Once on Effexor, I was much more under control. My migraine frequency was about 6-10/month, and when I got one, the Treximet made it much more bearable.
   a. Effexor: This selective serotonin and norepinephrine reuptake inhibitor (SSNRI) antidepressant had a similar therapeutic effect as the other antidepressants, but without the elevated resting heart rate. However, the Effexor made my eyes bulge like a lemur. The technical term for this is Exophthalmos. Just having my eyes open normally, you could see the white at the top of my iris. My top eyelid would be contracted back all the time. I would raise my eyebrows, but my eyelids wouldn't change (they couldn't open anymore). I was tested for the thyroid diseases that could cause this symptom and was found to not have them. This made it so that my eyes would not close all the way when I slept, and therefore became very dry. My eyes were chronically red and dry. I saw an ophthalmologist, and she said that if I didn't make changes, the damage from the chronic dryness could eventually lead to blindness. So, I no longer wore contacts (switched to glasses), was put on Restasis, and used an eye ointment at night. After stopping Effexor, the bulging eyes went away. That's when I knew I could no longer take that medication because of the side effects.

5. Spring 2012: My migraines started to be more frequent during this time. I took the Treximet as prescribed.

6. Summer-Fall 2012: This was the first time I felt a pain in my upper right abdomen. This eventually became something that happened every night, and the pain would wake me every night. I would double-over in bed waiting for the pain to die down. By the end of November that year, the pain was so bad one night that I went to the Emergency Room. They said that I had irritable bowel syndrome and to take Bentyl when my stomach hurt. This medication held off the pain for a year.
7. Fall 2013: By this time, the Bentyl was no longer helping with the stomach pain. I went to a gastroenterologist and had an upper endoscopy and colonoscopy performed. The upper endoscopy found a Giant Duodenal Ulcer (>2.0cm). The Bentyl had been masking the pain as the ulcer grew over the year. It was determined that the cause of the ulcer was the Alleve in the Treximet I took for my migraines. Immediately after this, I stopped taking Treximet all-together. I have never taken an NSAID medication since the Fall of 2013. After being on prescription strength Omeprazole for 2 years and weaning off of it for 1 year, I still,

occasionally, get ulcer pain. Instead of Treximet, I took just Sumatriptan as a migraine abortive.

   a. Prozac: Around this time, I also started a different antidepressant to control my migraines. Prozac turned out to be a good antidepressant that helped prevent my migraines, but didn't have many side effects. My migraines died down, and were very controllable until March 2016.
   b. Physical Therapy for Migraine Prevention: Around this time, I had a few physical therapy sessions to teach me about how I can stretch my neck and change my posture to help prevent my migraines. What I learned in these sessions has helped a lot with my migraine prevention.

8. March 2016: Around this time, my migraines suddenly got much worse. I had a migraine last a week, and Sumatriptan wouldn't get rid of it. I needed to try a round of Prednisone (which I had occasionally done before Fall of 2012) to break the cycle. This is when I started seeing a new neurologist. After seeing the new neurologist we tried:
   a. Propranolol: My other neurologist had been hesitant to try this medication because it lowers one's heart rate. My resting heart rate is already pretty low (~60bpm), and having it be lower may be dangerous. We tried it, and the medication helped a little bit. However, I would become extremely lightheaded from the lack of blood pressure. We discontinued the medication for that reason.
   b. We have increased the Prozac, and that still seems to help.
   c. Naratriptan: Instead of Sumatriptan, I now take Naratriptan, which has a slower release rate. This medication helps get rid of my migraines better than Sumatriptan did.
   d. Theraspec glasses: indoor and outdoor. I always where sunglasses outside during the day (even if it's raining). I now wear red-tinted (FL-41) Theraspecs indoors and outdoor Theraspec sunglasses. These have helped during and in the prevention of my migraines.

9. Current state: After multiple months of the migraine intensity and frequency increasing, my neurologist referred me on to a headache specialist. I average over 25 migraines per month, and have for more than 6 months straight now. Sometimes I will get the really bad migraines that are a 8-9 on a 1-10 pain scale. During these, I will be entirely incapacitated and the only thing I can think about is the pain until the Naratriptain is able to give me relief. If I have taken Naratriptan too much that week already, then sleep may be the only respite. Not every migraine is like this for me. Some of mine are a lingering level 5 pain that just won't quit. Getting a level 5 migraine at 8pm and sleeping it off would count as a "migraine day". As these past 6 months have passed, the time in which the migraine starts in the day has crept closer and closer to the morning. Often, I can't make it passed noon without a migraine starting. Then, I must suffer through the rest of the work day, cancel any evening plans and go to bed as soon as I get home. Since seeing the headache specialist, we have tried the following preventatives and acute treatments:
   a. Botox shots
      i. Too early to know effectiveness.
   b. Zonisomide
      i. Too early to know effectiveness.

        c. 3 days of IV-infusions for breaking a cycle
            i. This was for a 1.5-2 week migraine that was not responding to Naratriptan. This was effective.

As you can see, I've tried a lot of medications over the past 8 years. The need for new preventative medications is immense. CGRP inhibitor medicines could be the preventative necessary to let patients like me get down to 6-10 migraines/month. Just the thought of cutting my migraine days in half, doubling my freedom days, gives me hope that this disease can stop determining so many aspects of my life. However, without the insurance coverage of new medications, people like me will be limited by medications that don't work for every patient.

2. **How does the disease/condition and the available treatments affect your day-to-day life?**

As said previously, I currently get migraines 25+ times/month. My day-to-day life is completely changed because of the fact that I have migraines. I do the following to prevent migraines:

1. Avoid the following foods: anything artificial (candies, sugar replacements, etc.), any caffeine, any citrus fruits, anything aged (cheese, alcohol, foods cooked days ago, etc.), anything processed (nitrates and nitrites), anything with a high tyramine level (dried fruits, most fruits in general, etc.).
2. Get enough sleep: I make sure that I get 7-9 hours of sleep each night.
3. Avoid bright or flashing lights: I always where sunglasses outside during the day (even if it's raining). I now wear red-tinted Theraspecs indoors and outdoor Theraspec sunglasses. These have helped during and in the prevention of my migraines.
4. Exercise and lower stress: If I don't exercise and/or get too stressed, I will get more migraines.
5. Avoid scented anything: All soap, laundry detergent, and hair products I use are unscented. I avoid being near people who wear a lot of perfume, have strongly scented hair products, or chew gum. Any strong smell (though artificial smells are the most potent), can trigger a migraine for me.

Migraines are much more than a headache. They affect my whole body. In addition to the pulsating pain of the migraine, I have severe photophobia. I often will cover my eyes with a black tee-shirt to ward off the light (even when all the lights are off and it's dark outside). Opening my eyes makes it feel like icicles are being pounded into my eye sockets. If it's not pulsating pain, then I feel like my head is inside a vice that keeps getting closed a little tighter. The pressure builds up, and I feel like my brain is trying to break through the front of my skull.

In addition, I get extremely dizzy. Walking up and down stairs is a real challenge. I will often feel like I'm falling even though I'm lying in a bed. Walking or turning my head will make me uneasy and nauseous.

The pain often takes over all of my muscles. If my muscles had been sore from prior exercise, they become extremely rigid and painful to the touch (I feel like my body is covered in bruises). My neck muscles will tighten up and need deep massage to get back to normal.

After a migraine, I am exhausted. I feel drowsy and like I just came out of a hard-fought battle. I feel the need to sleep for a while to get my energy back. Often I will not have recovered fully from a previous migraine before the next one strikes.

Every day, I try to have a “freedom day”. This is a term I use to describe days where my head is completely free of pain. There is no weight pushing down on my eyebrows that builds up stronger and stronger as the day goes on. On these days, I can turn my head without pain to look in the blindspot of my car while driving. After January 2010, I’ve made it my goal to do everything in my power to increase the number of “freedom days” I get. Freedom days are the goal. I do the things listed above every day to try and get through without getting a migraine. If there were more preventative medications covered by insurance, maybe I could have more freedom days to do the things I can’t now. Maybe I’ll be able to spend my evening with my family instead of having to go to bed at 7pm because my head hurts. Maybe I’ll be able to say with confidence that I can go to the movies with my friend and not have to tell them “I’d love to go, but only if I don’t have a migraine that day”. Maybe I could go to the beach or on a boat and not get a migraine from the brightness of the water. Maybe I could enjoy the things I do all the time, not just on those occasional days when I don’t have a migraine that day.

3. **What impact does the disease have on family and caregivers?**

When I have a migraine, I cannot do simple things like cook, go food shopping, or drive. I have to rely on my friends and family to do these types of things. It takes up a lot of their time.

4. **What else should ICER know about living with the disease or condition (e.g. impact on your ability to work, exercise, care for family, etc.)?**

On days that I have a migraine, it is very hard for me to work as effectively (and with as much passion) as I do on days that I don’t have a migraine. As an engineer, my work takes critical thinking, which is difficult when I have a migraine. If I’ve had a bad week full of migraines, I will occasionally need to work from home and break up the workday with naps because the pain is too much. I am an active person, and like to workout 3-5 times a week. However, it is very hard (if not impossible) to workout while having a migraine. My workout plans are often foiled by the fact that I have a migraine that day and need to rest. In addition, I get some relief from food when I have a migraine. This has ruined my weight loss goals because if I have a migraine, I cannot stick the calorie restriction I have set for myself.

5. **What outcomes are most important to patients? For example, is the top priority improved quality of life, longer survival, or relief of a specific symptom?**

For me, the most important thing a medication could do for me is to lessen the frequency of my migraines. If I had fewer migraines, I would be able to complete the goals I set for myself (i.e. workout so often, restrict calorie intake to a certain level, spend x-amount of time with friends this month). Right now, the unpredictability of my migraines and high frequency of the attacks makes it very hard to stick to my commitments. I could produce higher-quality work at my job. I could enjoy my job and everything I do in life more because half the time I won’t be doing it with a migraine.

7.Do patients have trouble getting insurance coverage for treatment? Do costs affect patients’ choice of treatment, or their ability to access treatment?

> Without insurance covering the treatments I've gotten, I would not be able to pay for all of the treatment I get/have gotten. I'm close to running out of prevention options, so if new drugs like this aren't covered, I may not be able to lessen the frequency and severity of my migraines more.

ICER Opening Comment on CGRP Inhibitors for Migraine
ICER 2018 Opening Comment on CGRP Inhibitors for Migraine My Journey: My migraine attacks started in 2000 when I was 36 years old. The Migraines occurred infrequently at first. Overtime they have progressed to a daily Migraine. Each migraine begins with crippling fatigue, confusion, and difficulty doing simple daily tasks. The migraine is a sharp, searing spear of pain from my right eye-searing through the right side of my brain past my ear to my spine. Normal levels of light or sound intensify the pain. I tried one medication after the other. Hydrocodone worked for a while then stopped being effective. I tried Triptans that worked for a while then stopped being effective and so on. I also have Migraine aura and increased light and sound senility. For example, during a migraine, the dim green light on the smoke detector is so bright it hurts the right side of my head. I can see everything in the room with this dim green smoke detector light (this does not happen between migraines). My olfactory system senses odors that no one else smells. Nausea kicks in, then vomiting starts. The vomiting intensifies the head pain. Sharp, pounding, throbbing pain beats inside of my head every second of every minute, hour after hour. Normal touch or a breeze hurts my face (allodynia). This lasts 1-2 days. My life comes to a halt. I am not able to care for myself, my family, my child, or my patients. Then the recovery phase lasts 1-2 days. The recovery phase is all the symptoms of a Migraine but without the sharp pounding headache. I have to power through crippling fatigue, confusion, and difficulty doing simple daily tasks.

These migraines were initially infrequent and then steadily increased to more than 20 per month. Trips to the noisy and brightly lit ER were agonizing. I was then diagnosed with a Chronic Migraine and began Botox treatments (32 injections to my head, neck, and shoulders every three months). The Botox reduced the relentless pounding painful migraines a month. The Botox does NOT reduce the pain caused by light or sound sensitivity. Botox does not decrease the facial pain, nausea or motion sickness. In 2009 intermittent Tinnitus started that became constant in 2015. The Botox does not help with this. Flashing lights auras also began. Imagine trying to sleep when it looks like someone is flipping on and off the room lights. Even in a pitch-black room, this aura is present. I also experience "visual snow." This exhibits as white and black dots and flashes of light, visible even when my eyes are closed and interferes with my sleep. I wake up just as tired as when I went to bed each day. I have had only one morning in the past year that I woke up refreshed only to have a migraine later that day. Between migraines, my hands, feet, ears, and face feel so cold it's painful. Wearing eye glasses hurt my face and head. I experience muscle spasms of the cervical spine and trapezius, dry eyes, rosacea, rosacea Blepharitis, Raynaud's, and reflux commonly related to a migraine. I feel guilty that I can't be with my family and contribute to the household like I want to. I feel angry that I am getting worse. I feel hopeless that I have tried every combination of treatments and continued to get worse. The migraine disease has robbed me of my life. My only hope is that CGRP will be effective and give me a break from this relentless daily pain.

There is no effective treatment. We need a Migraine targeted medication to reduce the frequency and severity and increase peoples' ability to function. Which brings me today. This submission is embarrassing; it illustrates to me how difficult it is to write simple sentences. I once was able to write College papers with ease, and now it is so hard to get these thoughts onto paper. It is torture to try and get my thoughts out on paper. I hope that you can understand how difficult it is to live like this.

2) Impact: I have no life now. I was energetic working Mother. I worked as a Registered Nurse. I traveled and had many hobbies. Simple things that I once took for granted I can no longer do without pain. Even between migraines, the fluorescent lighting can be blindingly painful, going outside, grocery shopping, going to the movies, talking to friends or family on the phone or attending or family events is painful. Even between Migraine attacks flushing a toilet, running water for a shower or to wash my hands is painful . These simple things are even more painful with a migraine. I have to wear earplugs to use the bathroom. Work Impact: I can no longer work a 40-hour work week. I was lucky to find a part-time job that I can mostly do from home. My migraines have reduced my world to force myself to work, eat, sleep and repeat. Riding in a car causes motion sickness.

My husband is getting depressed because it is so painful and exhausting to do the simplest things. We have all the shades closed and dimmer switches on a light in each room. My computer and smartphone lowest light level is still painful. My hopes of moving up in my career are gone. The Migraine disease has robbed me of the possibility of pursuing a Master Degree. I can only hope that I can keep my part-time job. It is a shame the I have dedicated my life, as a Registered Nurse, to helping others. The healthcare community that I have worked within and supported cannot help me with this never-ending pain…. if the CGRP works I would have a life again it would save my life. My only hope is CGRP. Please understand the Migraine disease pain is so bad that me and others with Migraine disease consider suicide, and some have taken their life. I have gotten to that point. Life is not tolerable like this day after day. The only treatment that will stop the pain cycle is lose of life. I don't like my brain going in this direction but when I am in my room alone, and in severe pain, the treatment of euthanasia is a real option that enters my mind. I have not other chronic diseases. If I could get effective treatment of my migraines, I would be in excellent health.

I hope that ICER will value my pain and disability, and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines.

I hope CGRP is approved and is affordable so that I can have a pain free life.

3) Migraine medications and side effects: Over the past 18 years I have worked with my Neurologists, therapists, Headache specialists and tried and failed acute abortive medications and preventive medications. Including Anti-seizure medication, beta-blockers, antidepressants, birth control (pills, patches, and ring). Lifestyle changes. Non-Pharmacologic treatments, and devices. Relief from existing preventive treatments is often temporary, and my Neurologist and Headache Specialist try the next medication on the list.

More specifically Acetaminophen, Amitriptyline, atenolol, Axert, Candesartan, Flexeril, Cymbalta, Depakote, DHE, Gabapentin, opioids, Hydrocodone, Indomethacin, Ibuprofen, Lexapro, Lisinopril, Lyrica, Magnesium Citrate, Metoclopramide, Maxalt, Estrogen, progesterone, Prednisone, Topamax, Verapamil, Zonegran. An IV infusion of Benadryl, antiemetic and pain medication. Butterbur supplements, feverfew supplements, CoQ10, B12, Riboflavin I tried elimination diets, dark sunglasses – TheraSpecs, inversion therapy, physical therapy, Chiropractor, acupuncture, Tens units, psychotherapy. I

currently do behavioral therapy, yoga, meditation, mindfulness, Cefaly, eNeura. Cold packs, hot packs and Gatorade
There is only minimal relief; there is no identifiable trigger. I have worked hard with my family to eat healthy, exercise and get plenty of rest. I have extra dark sunglasses. I have a filter on the computer screen The Computer and phone lowest light level is still painful.

Side effects that I have experienced from the Medication include : anxiety, ataxia, allodynia, anorexia, arthralgia, asthenia confusion, back pain, brain fog, chest tightness, chest pain, , depression diarrhea, difficulty having a conversation, diplopia, dizziness, drowsiness, dysphasia, dry eyes, fatigue, hypertension, lack of concentration, memory impairment, nausea, nervousness, paresthesia, psychomotor disturbance, speech disturbance, visual disturbance, weight loss or weight gain, dysgeusia, mood changes, and anorexia. Arthralgia, and asthenia, facial and oral pain.

ER Doctors get 1 day of training on all headache types. I carry a letter from my Neurologist with the IV abortive medication protocol. I am a Registered Nurse, and I am so frustrated that each time I have a medical procedure such as a colonoscopy, I get a raging migraine. The Colonoscopy anesthesiologist does not have access to my ER records AT THE SAME HOSPITAL. Luckily I had the letter from Neuro with the IV medications that in combination reduce the pain from a 9 to a 2. Initially, the anesthesiologist did not think that this IV combination would reduce migraine pain. After it worked said, "I have to keep this in mind for the other patients we have that get a migraine before a procedure". Unfortunately, the side effects of the IV medications are heavily sedating so don’t even think that this would be a treatment. NOTE: The Neurologist said the IV medication protocol has to be used a little as possible because if it used too often the medical research indicates that this too will stop working.

4) I call on ICER to value my pain and disability and support both episodic and chronic migraine patients in having access to these new CGRP inhibitor medicines. I have been denied treatments that have proven to help reduce migraine frequency, duration or pain level. These include Chiropractic care, biofeedback, the FDA approved Cefaly and FDA approved eNeura devices. I paid out of pocket for the Cefaly Duo, and it has been effective in aborting a migraine. But we need a preventive such as CGRP to be affordable.

May 8, 2018

Submitted electronically to: publiccomments@icer-review.org

Steven D. Pearson, MD, President
Institute for Clinical and Economic Review
Two Liberty Square, Ninth Floor
Boston, MA 02109

RE: ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

Dear Dr. Pearson:

As the Institute for Clinical and Economic Review (ICER) prepares to vote on the Final Scoping Document regarding the value and effectiveness of the new class of medicines for the preventive treatment of episodic or chronic migraine, I would like to share my personal story as a migraine sufferer and also highlight some additional data brought to my attention as a member of the National Migraine Coalition, in hopes that it may be informative as you prepare your final report.

I am the President & CEO of the Women's Business Development Center in Connecticut. I launched the Center in 1997 to assist women entrepreneurs, and after over two decades, I have 15 employees and championed countless women business owners. I have been honored to receive many awards and recognition for my work but there is an underlying concern that floats beneath my confident exterior — I am a migraine sufferer.

My migraine journey began over 20 years ago when I started getting migraines and went misdiagnosed for 15 years. As an employer and leader in my community, migraine interferes with my active work schedule and can be debilitating. Unfortunately, my story is not unique.

To help move the needle on this widespread health issue – often misunderstood and misdiagnosed – I have become a migraine advocate working with the National Migraine Coalition. This Coalition brings together diverse stakeholders in the healthcare, patient advocacy, disability, and employer communities to create a united voice working towards increasing awareness on the economic impact of migraine.

Migraine headaches are among the most common headache disorders. Yet, while millions of Americans suffer from migraine headaches, roughly only 3%-13% of identified migraine patients are on preventive therapy. An estimated 38% are in need a preventive agent to address this debilitating health issue.[1]

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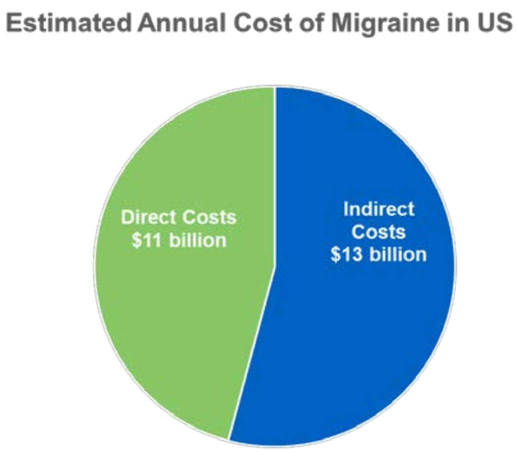
[1] Estemalik E, Tepper S. Preventive treatment in migraine and the new US guidelines. Journal of Neuropsychiatric Disease and Treatment: Published May 17, 2013, Volume 9: Pages 709 – 720.

Over 38 million Americans are affected by migraines and the toll that migraine is taking on the workplace is astonishing. I, as an employer and migraine patient, am concerned that the framework of ICER's Draft Evidence Report (DER) does not adequately address the significant direct and indirect costs to employers and the workplace impact of migraine.

Migraine is most common between the prime productive working ages of 18 and 59 and affects women three times as often as men. [2] This puts migraine patients at risk of a significant loss of wages when they are unable to work during their chief income earning years and hurts employers with gaps in productivity.



Migraine costs American employers about $13 billion a year due to lack of productivity and impaired work function; close to $8 billion was directly due to missed workdays which equal 113 million due to migraine and headache.[3]

Migraines cost employers up to $4100 per patient per year for those with episodic migraine and up to $14,400 for chronic migraine.[4] In addition, migraine patients are 2.5 times and 2.4 times as likely to have a short- and long-term disability claims, respectively, than non-migraine patients.[5]

Women are at greater risk for increased direct and indirect costs of migraine. As mentioned, women are disproportionately affected by migraine during their prime income earning years. Unfortunately, women also experience a significant wage gap. In 2017, the ratio of women's to men's median weekly full-time earnings was 81.8 percent, a wage gap of 18.2 percentage points. Women's median weekly earnings for full-time work were $770 compared with $941 for men. Women of all major racial and ethnic groups earn less than men of the same group, and also earn less than Caucasian men.[6]

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[2] World Health Organizaton Fact Sheet, "Headache Disorders" Updated April 2016. Available at: http://www.who.int/mediacentre/factsheets/fs277/en/

[3] Munakata J et al. Economic burden of transformed migraine: results from the American Migraine Prevalence and Prevention (AMPP) study. Headache 2009;49: Pages 498-508.

[4] Serrano, D.; Manack, A; Reed, M; Buse, D; Varon, S; Lipton, R; Cost and Predictors of Lost Productive Time in Chronic Migraine and Episodic Migraine: Results from the American Migraine Prevalence and Prevention (AMPP) Study. Value in Health Journal, Vol. 16, Issue 1, Jan. – Feb. 2013: Pages 31-38.

[5] Bonafede, MM; Cappell, KA; Juneau, P; Tepper, SJ; Sapra, S; Shah, N; Desai, PR. Rates And Predictors Of Short Term Disability Claims Among Migraine Patients In The US. Value in Health Journal, Vol. 19, Issue 7, November 2016: Page A434.

[6] Institute for Women's Policy Research. "Women's Median Earnings as a Percent of Men's, 1985-2016 (Full-time, Year-Round Workers) with Projection for Pay Equity, by Race/Ethnicity." IWPR Quick Figures #Q066. November 2017. Available at: https://iwpr.org/publications/womens-median-earnings-1985-2016

The predominance of migraine in women, a historical wage gap, combined with the fact that healthcare costs for families with a migraine sufferer are 70% higher than for families without, creates a recipe for financial disaster for women in the workforce faced with migraine.[7]

On a personal note, as an employer and migraine sufferer, I often must take time off of work unexpectedly or adjust my schedule at the last minute when hit with a migraine. I've had to educate my staff on my condition to ensure they are prepared for any unexpected migraine attacks or absences. Though I have risen up to the challenge of continuing my work with such a significant health condition, make no mistake that the difficulties have been substantial. I believe that being able to be my own boss has provided me with the critical flexibility I need to deal with my health issue. It has also spurred me to ensure that I have in my workplace the necessary accommodations for any of my staff dealing with similar health issues.

Unfortunately, other migraine sufferers are not so lucky. Debra S. had to quit work after 13 years as a police officer due to the severity of her migraine attacks. She sees a neurologist about every 2-3 months and is on a strict regimen. She says, "I'm 54 years old and have had these Migraine attacks since I was in 8th grade. I don't know what it's like to not have head pain all the time. I have a 12-year-old daughter who has Migraine, too." Due to her inability to work and the pain she deals with daily, her husband must provide both the financial and emotional support for their family.

The data paints a shocking picture on the economic impact of migraine on the U.S. economy. Yet my story, Debra's and others also highlight the personal toll on employers and employees with this widespread health issue.

There exists an urgent need for improved understanding about migraine and the availability of migraine therapeutics to help address the workplace impact this health issue has on our economy. I appreciate your willingness to hear from the migraine and employer community on this matter.

Thank you in advance for your consideration.

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[7] Stang PE1, Crown WH, Bizier R, Chatterton ML, White R. The family impact and costs of migraine. American Journal of Managed Care. May 2004;10(5): Pages 313-20.

My cousin has been migraine patient since early childhood, & she has been fully disabled by the disease since before she was 40. She has severe pain daily, and she’s so hypersensitive to light, smell, and sound that she’s unable to spend time away from home or travel to visit with family. She has migraine with aura, which affects her ability to speak and to move her right arm, hand, and leg. She doesn’t recover “between” attacks because she doesn’t have any time “between” attacks. As a result, she’s been unable to drive for more than a decade, and she needs to use a wheelchair.

She’s always been treated at headache centers, and for years, her neurologists have been telling her that she’s likely to be helped by the new CGRP treatments. News about the high cost of the drug makes the whole family worry that her insurance company is going to put her through hell with multiple appeals and might end up denying her a chance to have something like a normal life.

I’m a nurse, and I am disabled myself. So I know the importance of something-something-something-something. I hope your organization is able to convince drug companies and insurers to make sure this breakthrough treatment is accessible to patients who are disabled by chronic migraine, like my adorable and clever little cousin, who is funny and charming, despite the fact that she refuses to cook for her handsome husband.

ICER Public Comment

February 2nd, 2014, a date that is etched in both my daughter and my mind. It is the day that her headache began. Except for a 1 day reprieve, this headache has continued to this day. At the age of 15 years old, my teen began an odyssey that has not yet ended. She has seen 3 PCPs, 3 Neurologist, and countless ER physicians who can only dull the pain from a 10/10 to a 4/10. Neither, MRIs, CT scans, countless lab tests to rule out diseases, genetic conditions or irregular blood work have led to a cure or effective treatment for my now young adult. She has tried a plethora of medications, though not one was specifically developed for headaches or migraines – anti-depressants, seizure medications, pain reducers, and anti-inflammatories. Each time she starts with a ray of hope, only to experience side effects or no effect at all.

40 days, the number of absences from school her junior year due to pain so excruciating that she could not attend. 4 classes, the maximum course load she could possible take her Senior year using Home and Hospital to graduate, as the glaring classroom lights would trigger a migraine, loud sounds and everyday commotion of the Brick and Mortar school would worsen her pain until she would have to excuse herself to take an abortive medicine while resting in a dark room.

My daughter and I know every medication that is available to a young adult to try to end the pain or at times just dull it. Her quality of life has been as low as a 2/10 during her worse periods. She did not get to go to typical school events, no Homecoming, no Proms, not even a Pep Rally. In essence, her life became limited by her ability to tolerate the pain or to protect herself from situations that worsen it.

There are currently medications on the market which Insurance companies refuse to allow my daughter to try – Cambia, DHE Spray. We were told there are others we MUST TRY FIRST. Now a new medication, specifically developed to treat migraines is becoming available. My teen has been following its development for the past year, reading about the success of the trials. She once again has hope to find an end to her journey. We both fear that the price may make it be prohibitive; that insurance companies will not cover it. My teen just wants a chance – a chance at a life with minimal pain, a chance at a life where she can once again participate in everyday activities and events like her peers, a chance to see if the CGRP inhibitor drugs are the cure we have been searching for these past 4 years.

Please take into consideration the needs of those patients who have intractable headaches or migraines, who have been waiting for the day that a medication is available to successfully treat them.

Sincerely,
Kathy Willard

I am writing on behalf of myself and hundreds of thousands of people living with migraine. My journey began in high school. I was very active in sports and clubs and an A student. As a younger child I had experienced cyclic vomiting. After much research, I found there is a link between childhood cyclic vomiting and migraine. My migraines begin as severe fatigue and jaw pain, going into my ear area and over my eye. Sometimes on the left, sometimes on the right side of my head. Often times I awake in the middle of the night and have to vomit and then the pain begins. A pain that is hard to describe. A pain that makes me nauseous and sometimes I have trouble seeing. I have even gone into the ER for fluids because of too much vomiting.

My doctors initially tried ruling out other causes for my head pain and nausea. I had blood tests checking for everything from deficiencies in my chemistry to celiac disease. After several gastrointestinal endoscopies and CT scans and head and sinus, it was apparent there was no abnormality there. I was first educated on the general rules for healthy living. A nutritious diet free of old protein, too much dairy or chocolate. I never drank alcohol or did illicit drugs. I tried supplements like magnesium and B complex. My goals were always to drink plenty of fluids and get lots of rest. Any deviation from my normal sleep pattern or onset of excitable moments like prom, a big game or vacation with my family always resulted in a migraine. I was able to complete high school only because my parents appealed my tardiness every semester with the appropriate doctor excuses. Amazingly my grades never suffered, but I was worried about enduring the rigors of college. Many days I commuted to and from the city in an effort to complete my Associates Degree in Science and licensing in Surgical Technology. With God's help I graduated college at the top of my class and began my career at my home town hospital.

I began seeing a neurologist who prescribed the usual migraine medications, many of which were created for other diseases but found to help some migraineurs. There were a couple beta blockers which were created for high blood pressure. These never helped but instead made me feel fatigued. I have tried every triptan available although they never really aborted a migraine, and I also found I could not tolerate them without feeling chest pressure and nearly passing out each time I took them. I was then moved to a different MD with more migraine experience and she prescribed Topamax, which was actually created for seizure control for epileptics. This cut my migraine days down from 15 to 20 days per month to about 10 per month. While this became my new "preventative" medicine, I was not able to continue taking it after I developed kidneys stones, a side effect of the topomax. I still am without an acute medicine to stop a migraine I feel coming on. My only rescue medicine is a trip to my doctor for an intramuscular injection of demoral, phenergan and steroid. This is a last resort after enduring 24 to 36 hours of pain. I try to avoid over use of narcotics for fear of rebounding.

I am now 25 years old but feel like I am way older than my years. I have been approved for FMLA so that I can take off when I simply can't work in the operating room. I endure days of pain and nausea so my co-workers aren't over burdended when I must call in sick or leave early. All of this has been a substantial financial burden as well and although I have decent health insurance, I still have deductibles and always have medical bills arriving. Now I am engaged and worry what kind of financial and emotional strain this will be on building a future with a family. I am linked into many migraine forums on-line because misery enjoys company and I want to know what works for others. I have plans to speak to a new neurologist about Botox for migraine, but am already afraid of those possible side effects. I learned of CGRP therapy from a news article and was very excited to hear that soon, Aimovig will be FDA approved for the prevention of migraine. The trials have been very promising with little or no side effects. Now I am worried it will be too expensive to purchase and my insurance will not cover it. I am appealing to you on behalf of myself and several others I know who suffer with this debilitating and costly neurological disease. Please do all you can to allow this drug to be affordable to so many who suffer. In the long run, I know that it will be more cost efficient for insurance carriers to allow access to this drug, as opposed to paying for other non-migraine therapies that do not work. ICER: Let’s take the lead here please. Keep an open mind and be fair in your assessment of this new therapy and push for coverage in health insurance markets. Thank you for your consideration and the advocacy so many need.

Meghan Wills

ICER
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ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

My migraine journey started 39 years ago. I was 20 years old. The pain is always one-sided, usually around my eye area and extending any direction from my eye. It is unbearable pressure and a stabbing feeling from within, feels like my eyes are going to be gouged out of their sockets. It is accompanied by throwing up and dizziness. I cannot stand any noise or any type of light or glare. Any type of movement intensifies the pain. Any smell also intensifies the pain. I have migraine pain 95% of the time. The level of intensity does vary. I will start feeling better only to find out the pain is moving to the other side of my face. They are debilitating and I miss a lot of work. Thank God for FMLA or I would have lost my job.

I don't volunteer for anything anymore because I ultimately end up canceling because of migraine pain and then they are shorthanded. I have missed a lot of family activities or just don't plan family activities anymore. I have lost a lot of my friends because they just don't ask me to do anything anymore because I either reject the offer for fear of not being well, have to cancel or I am a stick in the mud because of the migraine pain. Or even worse yet, someone has to take me home early and I ruin it for everyone. My coworkers resent me for missing so much work. I really do believe that most of them do not believe me, including my immediate supervisor. My husband is not understanding with this either, so that has put a strain between us. So now I am also dealing with depression because of migraines. Life is not easy. Every week I contemplate cutting life short. I would be out of pain and my family would ultimately have an easier life. (I will not do this, but it sure sounds good sometimes.)

The heat and sun are a big trigger for me. That limits any outside activities for me. I can't do the upkeep of our property anymore. Everything is overgrown and falling apart. It is embarrassing. I don't like when people come to my house and see the condition it is in. It has been a real struggle for my husband to pick up on that because of the hours he works on his job.

I have been on many medications through the years. I did not keep a list of them. Most of them did not work. Some worked but I couldn't continue on them because of the debilitating side effects. In the early years of this disease they thought it was sinus issues so they did surgery for my deviated septum. Of course, it did not work. Now, I do take magnesium, nortryptiline, B2, and Propranolol as preventives. Not sure they help, but am afraid to stop taking them. Early on I took Tylenol, Advil, Excedrin and when they didn't work anymore codeine was added to the mix and other narcotics. They just made the migraines worse. I have also tried acupuncture, massage, chiropractor and some other things I cannot remember the name of. I went through several triptans until Zomig nasal spray was found to work for me. The only problem is the Zomig makes my body hurt, I move like I have severe arthritis and it makes me lethargic so I end up losing 19 to 24 hours of my life anyway. Every time I use the Zomig the side effects get worse. I don't know how much longer I can continue to use it without having permanent damage to my body. The other problem is I cannot use Zomig more than twice within a 7 day period or I get rebound migraines. The worst! The rebounds will last 2-3 days during which I cannot function. So I have to try to pick when I use the Zomig. There are days at work that I cannot miss. So if I already used Zomig once and I know I have to absolutely be at work in the next 7 days I will have to pass on using it again until that day comes around in case I need it then. It makes it even more complicated. It tires me out thinking and worrying about it and how I am going to get through life. I cannot quit work and I cannot lose my job. *I am very hopeful that CGRP will work for me and improve my quality of life!*

I ask and beg you to value my pain and disability and support both episodic and chronic migraine patients in having access to the new CGRP inhibitor medicines. I am so looking forward to this new treatment option and access to them. I will be forever grateful! Thank you for taking the time to read about my migraine life and considering access of CGRP to both episodic and chronic migraine patients!

Jody L. Wolfe

May 7, 2018

Institute for Clinical and Economic Review ("ICER")
Publiccomments@icer-review.org
Cc: info@headachemigraine.org

Re: Open Comment Period on CGRP Inhibitor Medications for Migraine

To Whom it May Concern,

I strongly encourage you to add a neurologist specializing in migraines to your panel!! It would be an oversight not to have this perspective in moving toward your final analysis. I am happy to suggest some of my daughter's caring neurologists. Too often doctor's medical judgment is unduly influenced or clouded by the cost mandated steps that insurance companies' impose. You need to have someone who understands this disease from both the medical and patient side on your panel in order to really perform the task at hand!!

We understand that CGRP is a game changer for migraine patients. **This panel has the great responsibility to ensure that every migraine patient has immediate access to CGRP inhibitors through their insurance provider.** We are literally counting the days for this medicine to be approved by the FDA.

My family's story is extreme. I am sure we are not alone. Migraines are stealth and life changing. They force patients literally into dark, quiet places away from other people - withdrawing from life either on a temporary or permanent basis - where medical practitioners, employers, teachers and the insurance community cannot truly fathom the cost and toll that this disease extracts on the patient and their families. In the case of our daughter, the migraines got much worse over a 10+year period. Her neurologists' limited arsenal of migraine preventative medications, abortive drugs and physical interventions took months to take effect (if at all), exposed her to some great risks and caused many, many unwanted side effects.

We almost lost our daughter last year when she tried to take her own life because no medicines any doctor could provide would relieve the non-stop extreme head pain. Because of her migraines, she has missed large chunks of high school and ultimately had to withdraw from college. She developed hemiplegic migraines with blindness, paralysis, deafness, inability to speak, month long vertigo, non-stop vomiting, passing out, falling down and seizures. We had been to major migraine in-patient clinics in Chicago and Michigan for month long and unsuccessful visits and consulted with many top neurologists who prescribed many drugs over the years including Elavil, doxepin, Topamax, botox (strains A and B), flunarizine, triptans, diamox, methergine, DHE, and countless others. Our daughter has unsuccessfully tried acupuncture, nerve blocks, radio frequency and cryo ablations. She has been through hell. **Your actions could literally save lives by helping patients and their doctors to successfully manage migraines without having to go through years of ineffective and harmful treatments and medication not specifically designed for migraines. Make the hard - but**

correct - decision to give greater access to this amazing new medicine!! Let the doctors make the call!!

Very truly yours,

Concerned Mother of Migraine Patient

ICER OPEN COMMENT PERIOD ON CGRP INHIBITORS FOR MIGRAINE

In light of the upcoming FDA review and ICER's report on the new CGRP inhibitors for the treatment of migraine, I would like to share my migraine story and illustrate why it is crucial to have these medications available and accessible to all patients suffering from this debilitating disease.

I have suffered from migraine my entire life. As a small child, I remember having debilitating headaches a few times a year when all I could do was be in a dark room, in complete quiet, hoping I can vomit or fall asleep so the pain will go away. I remember my worried parents taking me to multiple specialists, only to find out that there is nothing that can be done for me. As a teenager, I remember my migraine episodes becoming more frequent, especially as I reached puberty. In those days, any time I got over-tired or over-exerted myself I would get a horrible migraine. Afraid to do anything to cause a migraine, I stayed away from playing sports or do any extracurricular activities. My headaches caused me to miss school at least once a month. As a college student and later in pharmacy school, I prayed to God that I would not have a migraine the night before an exam when I had to study or on the day of the exam. I was lucky to discover that triptans alleviated my migraine pain and was always sure not to run out of my prescription.

My migraines got progressively worse throughout my 20's and my early 30's. I saw the best headache specialists and tried multiple preventative medications, without relief. I experienced about 1 migraine per week, which usually responded to a triptan. I also experienced almost daily headaches… so a headache-free day was a real treat for me. I thought things were not good then, little did I know, they would get much-much worse after I had my first child at 35. It is unclear what caused my migraine to worsen – middle age or having a child, but my migraines changed from episodic to chronic at 35 years old and have been unbearable since then. My weekly migraines turned into daily migraines, triptans failed to provide adequate relief and I found myself depressed and anxious. When my migraine first changed to chronic, I had 18-23 migraine days per month. I felt that I could not function at work (I worked as a manager of clinical pharmacy services at a prestigious academic medical center), could not take care of my 12-months old son, and did not know how I would go on. I was extremely anxious every morning when I woke up because I knew that a new day would bring on a new headache. I switched neurologists, and started seeing Dr. Gottschalk at the Yale Headache Center who prescribed multiple preventative and abortive medications, but unfortunately the frequency and intensity of my migraine did not decrease. I became so depressed and anxious that I was forced to take a 6-week leave of absence from work in order to rest, seek psychotherapy, and try to figure out what to do about my migraines. At the end of the 6 weeks, I knew that I needed to change my career and leave the job that I loved, in order to work in a less stressful environment.

I am lucky that in my new position, I am able to work from home, but every time there is a posting for a new career opportunity at work, I become extremely sad, because I know I have to give up on my career and I cannot advance or work harder, because I can barely manage my current not-very-stressful job from home. This makes me extremely sad, as I watch my peers grow and advance, earn advanced degrees, and I am forever locked in a job I do not love simply because it provides me the opportunity to lie down or stop working when I get a migraine. I feel like I cannot be best at my career and cannot be the best mother and wife at home, because I am so frequently in excruciating pain, in my dark bedroom, trying to feel better. I frequently miss family outings, my children's school events, important work functions, and other activities I used to enjoy in the past. Not a day goes by when I do not worry about getting a headache, because I usually do… so I would say migraine runs and ruins my life. On the infrequent days when I do not have a migraine, I think about what I could accomplish and how much happier I would be if I didn't have daily migraines.

As a pharmacist, I am pretty well-versed in the various treatments that are available to migraine sufferers and I am sorry to say that I have tried most of them, without any success. These include topiramate (which caused a lot of unwanted weight loss and brain fogginess), amitriptyline and nortriptyline (which caused drowsiness), amlodipine, memantine, and propranolol. I have endured painful peripheral nerve block with lidocaine and bupivacaine and bupivacaine alone. I am receiving Botox injections, but they do not seem to work either. I have tried the Cefaly device, massage therapy, spent over $1,000 on acupuncture, have tried butterbur and coenzyme Q10, am taking magnesium supplements, routinely do relaxation exercises and deep breathing, and NOTHING WORKS. I am lucky, because I do have abortive medications that provide relief (somewhat). Triptans are no longer as effective as they used to be, but they still provide some relief, even if for a few hours. I also take naproxen and metoclopramide (which makes me feel extremely tired and lousy overall), and they sometimes take the edge off so I can function. My migraine usually lasts a few days and when I get into a really bad cycle, I receive methylprednisolone infusions followed by a dexamethasone taper, in order to break the cycle and resort from taking triptans more than 4 times a week, which leads to medication overuse headache.

Since I suffer from menstrual migraine, I have tried taking continuous oral contraceptives to prevent migraine without success. Since my migraine significantly improved during both of my pregnancies, I know there is a hormonal component to my disease so I have asked my neurologist about surgical menopause (bilateral oophorectomy) – YES, I would go that far to get relief from migraine suffering. After having learned that surgical menopause would likely not provide relief but rather make things worse, I am left actually LOOKING FORWARD to menopause. A 40 year old woman… looking forward to aging, just to have some relief from daily pain.

I have read the CGRP inhibitor studies and even though they are not perfect and may not provide the cure, they sure provide a glimpse of hope to patients like me. In addition to their effectiveness, their side effect profile is extremely attractive, considering the detrimental side effects of most available preventative and abortive migraine treatments. My worry though, is not having access to these medications. As a pharmacist, I know that these medications will be extremely expensive and most patients, including myself, will not be able to afford them without insurance. It is already extremely difficult to obtain access to much cheaper oral medications. Since my insurance plan has a limit on how many triptans I can have per month, I am not able to receive all the triptans prescribed to me by my neurologist because I have prescriptions for both frovatriptan for my menstrual migraine and sumatriptan, so I often have to pay out of pocket. Peripheral nerve block is also not covered by my insurance, and since it provides some relief, I have had to pay hundreds of dollars out of pocket to receive the treatment. I am no longer able to afford it so I have stopped receiving the nerve block. Unfortunately, CGRP inhibitors will be cost prohibitive, and I doubt I will be able to afford them if my insurance does not cover them.

I hope that my detailed story paints a picture of why new therapies, like CGRP inhibitors are needed for patients suffering from migraine. The prospect of having a potentially efficacious medication with a relatively safe side effect profile provides a lot of hope but it is also so important for patients like myself to be able to access this medication. I ask that in your review of these medications, you consider stories, such as mine. Having a medication that would decrease the number of headache days each month would mean I could spend more time with my family and enjoy life in general – it would mean the world to me.

Sincerely,

Marina Yazdi

Input for CGRP – How Chronic Migraine Affects Me

Almost 3 ½ years ago I slipped on the ice and hit the back of my head on the stone facing of a garage, suffering a mild concussion. Since that day, I have lived with chronic to daily migraine. Having never suffered a migraine prior to my concussion, the last 3 ½ years have been a challenging time, learning how to function and live day-to-day life despite constant migraine symptoms and pain.

I'm still unable to discern what phase of migraine I'm in most of the time. It's rare that I can tell when a migraine is over before the next one begins. I have a daily baseline headache of 5, whether I have other migraine symptoms or not, and that pain fluctuates higher throughout the day. I've been told that baseline headache will be the last thing to go with years and years of treatment ahead of me. When I reach a 9, all I can do is curl up into a ball and cry. My other symptoms include overwhelming nausea (almost daily), neck, shoulder and jaw pain(daily), intense pressure in my head (to the point it feels like I need to rip my eyeballs out of my face to alleviate the pressure), dizziness, disorientation, lack of cognitive abilities, anxiety, depression, panic attacks, extreme fatigue and painsomnia, just to name my most regular symptoms.

I've tried multiple triptans, all with very adverse side effects and ineffectiveness. I've had 5 weeks of reduced symptoms as a result of Botox treatments in the last 24 weeks. I've had minimal relief with nerve block injections in the past. I've tried multiple other preventative medications, all with adverse side effects and ineffectiveness.

Migraine not only affects me on a daily basis, but it affects all of my relationships and my quality of life at any given point. Yes, I've learned how to function, but I grieve who I was before my concussion on an almost daily basis. I pray for a day that something will come on the market that will help me, and I really hope this CGRP drug will do that.