Integrating Behavioral Health into Primary Care

A Technology Assessment

Final Report

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About ICER

The Institute for Clinical and Economic Review (ICER) is an independent non-profit research organization that evaluates medical evidence and convenes public deliberative bodies to help stakeholders interpret and apply evidence to improve patient outcomes and control costs. ICER receives funding from government grants, non-profit foundations, health plans, provider groups, and health industry manufacturers. Through all its work, ICER seeks to help create a future in which collaborative efforts to move evidence into action provide the foundation for a more effective, efficient, and just health care system. More information about ICER is available at www.icer-review.org.

About CTAF

The California Technology Assessment Forum (CTAF) – a core program of ICER – reviews evidence reports and provides a public venue in which the evidence on the effectiveness and value of health care services can be discussed with the input of all stakeholders. CTAF seeks to help patients, clinicians, insurers, and policymakers interpret and use evidence to improve the quality and value of health care. CTAF is supported by grants from the Blue Shield of California Foundation and the California HealthCare Foundation. The CTAF Panel is an independent committee of medical evidence experts from across California, with a mix of practicing clinicians, methodologists, and leaders in patient engagement and advocacy, all of whom meet strict conflict of interest guidelines, who are convened to evaluate evidence and vote on the comparative clinical effectiveness and value of medical interventions. More information about CTAF is available at www.ctaf.org.

About CEPAC

The New England Comparative Effectiveness Public Advisory Council (CEPAC) is an independent, regional body of practicing physicians, methodological experts, and leaders in patient advocacy and engagement that provides objective, independent guidance on the application of medical evidence to clinical practice and payer policy decisions across New England. Council members are elected for three-year terms and represent a diversity of expertise and perspective; they are purposely not selected for expertise in the clinical topic under discussion in order to maintain the objectivity of the Council and to ground the conversation in the interpretation of the published evidence rather than anecdotal experience or expert opinion. Led by ICER, CEPAC is supported by a broad coalition of state Medicaid leaders, integrated provider groups, public and private payers, and patient representatives. For more information on CEPAC, please visit www.cepac.icer-review.org.

Table of Contents

List of Abbreviations Used in this Report v
Executive Summary ES1
Introduction 1
1. Background 3
2. BHI in Context: Barriers, Opportunities, and other Considerations for Integrated Care 9
3. Existing Approaches to Integrated Care Delivery 23
4. Clinical Guidelines and Policy Statements 27
5. Coverage and Reimbursement Policies 29
6. Ongoing US Studies 35
7. Evidence Review (Methods & Results) 38
8. Comparative Value of BHI 57
9. CEPAC and CTAF: Voting Process and Results 78
10. Recommendations to Guide Practice and Policy 85
References 98
Appendix A: Prevalence of Mental Health Disorders 118
Appendix B. Patient Confidentiality Legislation: New England and California 120
Appendix C. Summary of BHI in New England SIM Efforts 122
Appendix D. Key National Models for BHI 124
Appendix E. Sample Worksheets for Practice-Level Expenses Associated with BHI 127
Appendix F: CTAF and CEPAC Conflict of Interest Policy 134
Appendix G: Key Informant Interviews 135
Appendix H: CTAF and CEPAC Voting Results 137
Appendix I. Billing and Reimbursement for BHI 140
Appendix J: Policy Roundtable Panelists: CTAF and CEPAC 141

List of Abbreviations Used in this Report

AACP:	American Association of Community Psychiatrists
AAFP:	American Academy of Family Practice
ACA:	Affordable Care Act
ACO:	Accountable care organization
ACT:	Advancing Care Together
ADP:	Department of Alcohol and Drug Programs
AHRQ:	Agency for Healthcare Research and Quality
AIMS:	Advancing Integrated Mental Health Solutions
ANP:	Advanced nurse practitioner
BHC:	Behavioral health consultant
BHI:	Behavioral health integration
BCBSMA:	Blue Cross Blue Shield of Massachusetts
BMI:	Body mass index
BSCA:	Blue Shield of California
CALM:	Coordinated Anxiety Learning and Management
CBOC:	Community-based outpatient clinic
CBT:	Cognitive behavioral therapy
CCM:	Collaborative Care Model
CEPAC:	Comparative Effectiveness Public Advisory Council
CHEC:	Consensus on Health Economic Criteria
CHW:	Community Health Worker
CIHS:	Center for Integrated Health Solutions
CMS:	Centers for Medicare & Medicaid Services
CMMI:	Center for Medicare & Medicaid Innovation
CNS:	Clinical Nurse Specialist
COPD:	Chronic obstructive pulmonary disease
CPI:	Consumer Price Index
CPT:	Current Procedural Terminology
CT:	Connecticut
CTAF:	California Technology Assessment Forum
DHCS:	Department of Health Care Services
DMH:	Department of Mental Health
E&M:	Evaluation and Management
ED:	Emergency department
EHR:	Electronic health record
EPHC:	Enhanced Personal Health Care
FFS:	Fee-for-service
FQHC:	Federally qualified health center

FTE:	Full-time equivalent
HBAI:	Health and behavior assessment and intervention
HIPAA:	Health Insurance Portability and Accountability Act
HMO:	Health maintenance organization
HPHC:	Harvard Pilgrim Health Care
HRSA	Health Resources and Services Administration
IBHP:	Integrated Behavioral Health Project
ICSI:	Institute for Clinical and Systems Improvement
ICER:	Institute for Clinical and Economic Review
IMBH:	Integrate Medical and Behavioral Health
IMPACT:	Improving Mood – Promoting Access to Collaborative Treatment
IT:	Information technology
LCSW:	Licensed clinical social worker
LTSS:	Long-term support and services
MA:	Massachusetts
MBHO:	Managed behavioral health organization
MCP:	Managed care plan
ME:	Maine
MFT:	Marriage and family therapist
MHP:	Mental health plan
MHSA:	Mental Health Services Act
NCQA:	National Committee for Quality Assurance
NH:	New Hampshire
NP:	Nurse practitioner
PA:	Physician assistant
PBM:	Pharmacy benefits manager
PCP:	Primary care physician
PCMH:	Patient-centered medical home
PIC:	Partners in Care
PMPM:	Per-member per-month
PROSPECT:	Prevention of Suicide in Primary Care Elderly: Collaborative Trial
PTSD:	Post-traumatic stress disorder
P4P:	Pay for performance
QALY:	Quality-adjusted life year
QI:	Quality improvement
QuEST:	Quality Enhancement by Strategic Teaming
RESPECT-D:	Reengineering Systems for the Primary Care Treatment of Depression
RI:	Rhode Island
RCT:	Randomized controlled trial
RN:	Registered nurse

RR:	Rate ratio
SAMHSA:	Substance Abuse and Mental Health Services Administration
SBIRT:	Screening, brief intervention, and referral to treatment
SF12/SF36:	Short Form 12/Short Form 36
SIM:	State Innovation Models
SMD:	Standardized mean difference
SMI	Serious mental illness
TOP:	Telemedicine Outreach for PTSD
UHC:	United Healthcare
US:	United States
USPSTF:	United States Preventive Services Task Force
VA:	Department of Veterans Affairs
VT:	Vermont

Executive Summary

This assessment evaluates the evidence on the clinical effectiveness and value of the integration of behavioral health services into primary care settings and reviews barriers and potential policy options for the implementation of such integrated care in the US generally and in selected states. It informed two recent meetings of the California Technology Assessment Forum (CTAF) and New England Comparative Effectiveness Public Advisory Council (CEPAC), which are core programs of the Institute for Clinical and Economic Review (ICER).

Background

Providers in the US health care system often assess and treat patients with physical health conditions and behavioral health conditions (e.g., mental health and substance use disorders) in siloes, yet physical and behavioral health are inextricably linked. Up to 70% of physician visits are for issues with a behavioral health component.[2] A similar proportion of adults with behavioral health conditions have one or more physical health issues.[3] Having a chronic condition is a risk factor for having a behavioral health condition and vice versa.[4] Depression and anxiety in particular are common in primary care settings but are often inadequately identified and treated, leading to a worsening of behavioral conditions and/or increased difficulty managing physical health conditions.

Behavioral health integration (BHI) into primary care addresses both physical and behavioral health needs in primary care settings through systematic coordination and collaboration among health care providers. While behavioral health can be defined quite broadly, for the clinical effectiveness analysis in this report, we limited our scope to two mental health conditions that are frequently diagnosed and managed in primary care settings (i.e., anxiety and depression).

During the past two decades, many initiatives have sought to integrate behavioral health and primary care. The overall goals of BHI are those of the Triple Aim – better outcomes, better care experience, and reduced costs.[20] How these goals are achieved and the terms used to describe various aspects of integrated care vary extensively. Decision-makers across the health care spectrum recognize the need to better serve patients with behavioral health conditions, but questions remain regarding the latest evidence on the effectiveness and value of BHI, as well as how best to approach implementation and which aspects of integration are most important for improved patient outcomes.

This report supported CTAF and CEPAC's deliberations and attempts to answer some of the key issues related to BHI confronting patients, provider organizations, payers, and other policymakers. The goals of this report are to: 1) evaluate the evidence on the comparative clinical effectiveness

and value of efforts to integrate behavioral health into primary care, 2) identify the models and components potentially associated with successful integration and outcomes, 3) assess the potential budget impact of integrating behavioral health into primary care, and 4) provide an overview of barriers to integration and lessons learned from national and state-based experts to help identify potential innovations and solutions for BHI.

Conceptual Framework

For this report, we reviewed the Agency for Healthcare Research and Quality (AHRQ) lexicon and a framework published in 2013 by the Substance Abuse and Mental Health Services Administration and the Health Resources and Services Administration (SAMHSA-HRSA) Center for Integrated Health Solutions (CIHS). These two resources define terms, structures, and competencies used in BHI efforts.

Existing Models for Integrated Care Delivery

A variety of approaches have been used to integrate behavioral health and primary care services in a range of settings, and several programs have emerged as models for implementing integrated services nationally. Common elements highlighted across models have been summarized extensively in the policy literature and include:

- Screening for depression, anxiety, and other behavioral disorders using validated screening tools
- Team-based care with non-physician staff to support primary care physicians (PCPs) and co-manage treatment
- Shared information systems that facilitate coordination and communication across providers
- Standardized use of evidence-based guidelines
- Systematic review and measurement of patient outcomes using registries and patient tracking tools
- Engagement with broader community services
- Individualized, person-centered care that incorporates family members and caregivers into the treatment plan

The most studied model is called the Collaborative Care Model (CCM), and it is the basis for the studies in this report's evidence and economic reviews except as noted. Under the CCM, patients are screened for depression and anxiety using validated screening tools. Care managers are core members of the care team and work with PCPs to support medication management, provide brief

counseling and other services, and coordinate across providers. Psychiatric consultants are available to support the care team in diagnosing patients and making treatment adjustments. Patient progress is systematically tracked and monitored using a central data registry. This model, derived from the Wagner Chronic Care model,[218] was originally focused on older adults but has been expanded to include adolescents and the general adult population.

A second promising approach to integration is the Behavioral Health Consultant (BHC) model that shares many elements of the CCM. Distinctive features of the BHC model are that generalist behavioral health clinicians a) are fully embedded members of the primary care team who provide patients with rapid access to behavioral health treatment through warm "handoffs" between behavioral health clinicians and primary care physicians, and b) address a broader range of health, mental health, and substance use disorder conditions.

Effectiveness of Programs that Integrate Behavioral Health into Primary Care

For our review of the evidence on effectiveness, we focused on systematic reviews of studies of the CCM in a primary care setting with the requirement that a majority of patients have a depression and/or anxiety diagnosis. Findings from these reviews indicate that integrating mental health into primary care improves mental health outcomes such as depression and anxiety, patient satisfaction with care, and some measures of diabetes control and quality of life, although the demonstrated effects of the CCM were small to moderate. Key findings from the reviews and a summary of the evidence strength for each are shown below:

1. Depression

There are a large number of randomized trials of integrated care for depression, the vast majority of which demonstrated improvements in depression outcomes with the CCM compared with usual care (typically coordinated care with separate locations for primary care and mental health and limited communication between the two). Using the ICER evidence rating,[125] our judgment is that there is high certainty of a small net benefit for the CCM in improving symptoms of depression compared with usual care.

2. Anxiety

Only seven studies focused on anxiety, but they generally showed improvements in anxiety scores or remission. Overall, we judge there to be moderate certainty of a small net benefit for the CCM in improving anxiety symptoms compared with usual care.

3. Chronic Medical Conditions

There have been a large number of studies of the impact of integration of mental health services into primary care on diabetes outcomes. Most of the studies for other medical conditions, such as

cardiovascular disease, evaluated and managed patients in the hospital or specialty clinics rather than in primary care. Diabetes is very common in primary care, and many patients with diabetes also suffer from depression. In trials, patients receiving the CCM had statistically significant decreases in hemoglobin A1c levels, depression scores, and LDL-cholesterol compared with patients receiving usual care. We judge there to be low certainty of a small net benefit for the CCM in improving both diabetes control and depression compared with usual care in patients with both diagnoses. The level of certainty is low because of the small number of studies and the statistical heterogeneity of the results. These differences may translate into improvements in the microvascular and macrovascular complications that decrease the quantity and quality of life for patients with diabetes, but there have been no studies of sufficient size or length to answer those questions.

4. Quality of Life

Many of the randomized trials of depression reported measures of quality of life as determined by the Short Form (SF) 36. The CCM improved the scores on the mental health quality of life subscale more than usual care in the first 6 months, and those gains were preserved through 24 months. The trend still favored the care provided through CCM beyond 24 months, but it was no longer statistically significant. There were no early improvements in the scores for the physical health quality of life subscale, but the differences became significant between 13 and 24 months. We judge there to be high certainty of a small to moderate net benefit for the CCM in improving quality of life in the mental health domain compared with usual care. There is low certainty of a small net benefit for the CCM in improving quality of life in the physical health domain compared with usual care.

5. Patient Satisfaction

Patients in randomized trials were significantly more satisfied with the CCM. The size of the benefit was modest but highly statistically significant. We judge there to be high certainty of a small to moderate net benefit for the CCM in improving patient satisfaction compared with usual care.

6. Levels of Integration (per the SAMHSA-HRSA CIHS framework: coordinated, co-located, integrated)

A systematic review found substantial evidence that the CCM improved mental health outcomes, but that there was no correlation between levels of integration and outcomes. Thus, our judgment is that there is insufficient evidence to assess whether higher levels or intensity of integration as defined by the SAMHSA-HRSA CIHS framework offer incremental benefit.

In sum, there is a very large body of literature evaluating the CCM. Studies across widely varying delivery systems demonstrate with great consistency that the CCM improves outcomes, although the absolute benefits are small to moderate. There is inadequate evidence to assess whether greater integration (per the SAMHSA-HRSA CIHS framework) would lead to larger improvements in

outcomes. There is also inadequate evidence to assess the clinical effectiveness of any BHI model other than the CCM.

Components of BHI Associated with Treatment Success

Research on the impact of individual components of BHI on depression-related or other health outcomes is extremely limited. To complement previous research analyzing factors of collaborative care associated with improvement in depressive symptoms and use of antidepressants, we conducted an analysis of the factors of integrated care most frequently reported in studies with successful outcomes.

We identified 36 studies of BHI that reported statistically significant improvements in one or more primary outcomes of interest, such as sustained improvement in depression or anxiety symptoms, likelihood of receipt of antidepressant therapy, and medication adherence. The most common program component across successful models was inclusion of a standardized care coordination plan that involved regular interaction with both patient and physician (86%), followed by formal patient education at 69%. Both supervision of care coordinators and systematic screening in primary care were included in two-thirds of successful studies, while inclusion of a standardized schedule of psychotherapy appeared in approximately half.

Comparative Value of BHI

ICER has adopted the following framework for assessing the comparative value of health care interventions, with value assessed according to two distinct constructs:

Care Value:

1. Comparative clinical effectiveness of each intervention vs. alternatives (considering both clinical benefits and harm)
2. Any additional "non-clinical" benefits (e.g., reduced caregiver burden)
3. Contextual considerations (no other acceptable treatment, vulnerable populations)
4. Cost-effectiveness (incremental cost to achieve important patient outcomes vs. alternatives)

Health System Value:

1. Care value of the intervention of interest (as above); **and**
2. Potential effects of short-term budgetary impact from the intervention on other patients in the health care system

Our economic analysis had three components:

1. To assess comparative care value, we conducted a detailed analysis of the available literature on the economic impact of BHI in primary care for the treatment of depression and/or anxiety with a focus on the differential impact of BHI in certain subgroups of patients, key drivers of economic impact, and any trends in comparative value over time. As with the review of the evidence, published economic evaluations have focused almost exclusively on the CCM model; non-CCM approaches are clearly delineated when encountered.
2. We describe publicly-available resources for planning and implementing BHI, based on published information from the CCM as well as other approaches for start-up, implementation, and incremental "steady state" costs associated with integration.
3. We estimated the per-member, per-month (PMPM) budgetary impact of implementing BHI using staffing ratios from both the CCM and Behavioral Health Consultant models, from the perspective of a 200,000 member Medicaid plan; analyses included both implementation and "steady state" costs over one year.

Our consideration of care value is based on a relatively robust evidence base for both clinical effectiveness and cost-effectiveness of CCM interventions for depression and anxiety in primary care. Available studies have been consistent in showing a small-to-moderate clinical benefit over usual care, at least in terms of mental health outcomes. In addition, while not explicitly measured in these studies, there does not appear to be any potential harm to the patient from integration efforts. Finally, while the quality of available economic evaluations could be greatly improved, findings from multiple evaluations across a variety of settings and populations suggest that implementation of the CCM falls within generally-acceptable thresholds for cost-effectiveness ($15,000 - $80,000 per quality-adjusted life year [QALY] gained vs. usual care).

Assessment of health system value is much more complex, however, as the investment in BHI and the potential for return on investment vary greatly depending on the baseline state and realities faced in any individual setting. Economic studies have shown with consistency that BHI increases organizational costs, at least in the short term. Our own budgetary impact analysis suggests that the investment in BHI is considerable, ranging from approximately $3 - $22 on a PMPM basis depending on the underlying prevalence of depression. The impact on Medicaid budgets would accordingly range from 0.3% - 4.0% of annual expenditures.

We did not consider the potential for cost offsets in our budget impact analysis, as evidence on cost savings is extremely limited. However, fairly conservative estimates of reductions in health care costs could offset these initial investments considerably. Others might argue that the increase in PMPM costs such as those depicted in our budget impact analysis are not only manageable, they are in fact *warranted* due to chronic underfunding and undervaluing of primary care.[213]

Summary of CTAF and CEPAC Votes

The CTAF Panel and CEPAC Council both voted unanimously that the *CCM* improves mental health outcomes related to depression and anxiety, as well as patient satisfaction when compared to usual care. The majority of both groups judged that the CCM provides reasonable to high care value and reasonable health system value.

Majorities of both groups also voted that, compared to usual care, there is insufficient evidence to determine whether *other models of BHI* improve outcomes for anxiety, depression, diabetes, and patient satisfaction. Due to insufficient evidence, neither program judged the care value or health system value of other models of BHI.

Members of both groups emphasized that a vote for insufficient evidence should not be misinterpreted to mean that alternative approaches to BHI are ineffective; rather, it means that there are not enough high quality, publicly available studies to determine their impact on the outcomes assessed in ICER's review. See Section 9 for a description of the voting process and a summary of the votes.

Recommendations to Guide Practice and Policy

Prior to the CTAF and CEPAC public meetings, ICER staff conducted semi-structured interviews with national and regional experts in New England and California to gain their perspectives on practice and delivery system innovations, barriers to change, and opportunities for improving how behavioral health services are integrated into primary care. Combining the insights gained from these interviews with the votes on the evidence by CEPAC and CTAF and the ensuing policy roundtable discussion at each meeting, the following recommendations are presented to guide the application of evidence to BHI implementation.

Care Delivery Models

1. *Effective BHI can be accomplished through different care delivery models, and in practice, implementation will be tailored to distinct patient populations and other local considerations. Since the approach to integration with the strongest evidence base is the Collaborative Care Model (CCM), practices implementing BHI should use available resources and seek guidance from organizations that have experience with the CCM while accounting for differences in patient population, resources, treatment priorities, and options for funding. A second promising approach to integration is the Behavioral Health Consultant model.*

2. *Researchers, research funders, and clinicians should work together to generate more evidence on the effectiveness of BHI approaches in addition to the CCM and on the effectiveness of BHI in treating health conditions other than depression and anxiety.*

Reimbursement and Payment Policies

3. *To align incentives among providers and encourage integration, payment for behavioral health services should be shifted away from fee-for-service (FFS) to value-based reimbursement contracts, including risk-adjusted capitation and opportunities for shared savings and/or shared risk. When developing reimbursement arrangements, decision-makers should consider the following:*
   a) *Where possible, supplemental capitated payments or performance bonuses should be based on implementing and sustaining BHI.*
   b) *To support the transition towards value-based reimbursement, payers and state agencies should activate currently available billing code sets for care and case management so the incremental services being provided in integrated settings can be documented.*
   c) *Behavioral health carve-outs, though not ideal for achieving the goals of BHI, are likely to remain an important aspect of health care financing. To the extent possible, carve-out arrangements should be improved through enhanced communication, information sharing, and care planning across entities to encourage collaborative care planning and follow-up.*

4. *Even with a shift toward capitation, FFS will continue to be a reality of the reimbursement landscape, at least in the short-term. Therefore, several changes to billing requirements are needed to facilitate BHI. Although they will differ by state, these include allowing more types of clinicians to bill for behavioral health services; expanding billing codes for care management and case management; and paying for behavioral health services provided when a patient is not present, rather than requiring a physical face-to-face interaction.*

5. *Health plans should design benefits and provider networks to support a role for behavioral health providers as members of primary care teams and not require that patients pay specialist-level copayments for these providers.*

6. *Providers should be reimbursed for behavioral health services delivered via telehealth.*

Licensing and Certification

7. *States should take steps to alter licensing and certification requirements that serve as a direct barrier to BHI and pursue policies that streamline licensing processes for integrated or multi-site care settings.*

Innovation and Collaboration

8. *Public and private payers, clinicians, patients, and others should collaborate to reduce fragmentation of care and develop innovative system-wide solutions that include BHI, building on efforts already underway and utilizing state and federal programs.*

Technology/Information sharing

9. *BHI depends on the ability of clinicians to collaborate and share patient information. Systems that better support communication between primary care providers and specialty behavioral health providers are therefore needed, particularly where electronic health record (EHR) systems are not used or lack interoperability. Clearer guidance is also needed from federal and state officials to help clinicians understand laws that affect the sharing of patient information related to mental health and substance use disorders. Enhanced information sharing would allow for more coordinated treatment, particularly around vulnerable times of transition, and would help to avoid duplication of services.*

Clinic Operations, Workflow, and Space

10. *Flexible workflows facilitate BHI. To the extent possible, clinic operations should allow for "warm hand-offs" and real-time (in-person or virtual) collaboration and consultation across providers. The specific staffing model that a practice adopts should reflect the disease burden and broader psychosocial characteristics of the population served and should include designated leadership positions to facilitate team collaboration and oversee the transition to integrated care.*

11. *If a population-based approach to BHI is not feasible, practices should consider rolling out BHI interventions to a subset of the patient population with the greatest clinical need and potential benefit.*

Provider Training and Capacity

12. *The capacity for practices to implement BHI is strained by an overall shortage of primary care and behavioral health providers and by a lack of providers with expertise in integrated care. Additional specialized training or re-training of staff is necessary to build the integrated care workforce and help each team member understand their scope of work and the goals of integrated care.*

13. *To address network capacity concerns, provider organizations should develop systems that link providers electronically and help triage patients to the level of care most appropriate for their individual needs.*

Measurement, Outcomes, and Standards

14. *Payers, practices, patients, and policymakers should work collaboratively to build consensus around a set of validated structure and outcome measures for BHI. Standardized measures would help payers and practices understand the degree of integration being achieved, the benefit, and the true cost of implementing and maintaining BHI.*

Patients, providers, and payers all wish to counter the fragmentation of current health care and "reconnect the head with the body." Integration though models such as the CCM have the promise to improve the delivery of care, increase the engagement of patients in maintaining their health, and produce better outcomes. Further research into the best models for BHI as well as the impact of such integration on long-term cost trends, policy innovation to provide incentives for BHI, and care transformation to accelerate its implementation will all be required to disseminate BHI more widely.

Introduction

This assessment evaluates the evidence on the clinical effectiveness and value of the integration of behavioral health services into primary care settings and reviews barriers and potential policy options for the implementation of such integrated care. This assessment formed the basis of two recent meetings of the California Technology Assessment Forum (CTAF) and New England Comparative Effectiveness Public Advisory Council (CEPAC), regional independent bodies that convene publicly to vote on recently completed evidence reviews and engage in discussions with subject matter experts to help decision makers in each region interpret comparative effectiveness information and provide recommendations for its application to practice and policy. CTAF and CEPAC are core programs of the Institute for Clinical and Economic Review (ICER), which oversees the day-to-day management and operations of each program and produces the evidence reviews for each effort.

This report attempts to answer some of the key issues confronting patients, provider organizations, payers, and other policymakers and includes the following:

1	An overview of the contextual factors impacting the integration of behavioral health and primary care services in both California and New England, including a summary of clinical guidelines and payer reimbursement policies relevant to integration
2	An evaluation of the evidence on the comparative clinical effectiveness of efforts to integrate mental health into primary care, including an identification of components potentially associated with successful integration
3	An assessment of the comparative cost effectiveness and potential budget impact of integrating behavioral health into primary care
4	A summary of the votes taken by CEPAC and CTAF on the comparative clinical effectiveness and value of different models for BHI
5	Key policy recommendations to inform the implementation of BHI

Scope of Review

Behavioral health integration (BHI) into primary care addresses both physical and behavioral health needs in primary care settings through systematic coordination and collaboration among health care providers. For this report, we considered behavioral health to include both mental health and substance use disorders, and we limited our scope to conditions that are frequently diagnosed and managed in primary care settings.

Consistent with state-of-the-art national efforts to integrate care for both mental health and substance use disorders, most of this report provides information about both but focuses the

evidence review (Section 7) on mental health outcomes related to the treatment of anxiety and depression in primary care, as they are the most common mental health disorders treated in primary care settings.[1] Studies that include patients with serious mental illness (SMI) or substance use disorders are included as long as >50% of the population studied was diagnosed with depression and/or anxiety; otherwise they are excluded. This is designed to focus the assessment on studies that involve management and triage of patients presenting in the primary care setting and to exclude studies focusing on the delivery of primary care services in settings where patients are receiving specialized treatment for SMI and/or substance use disorders.

Context

Providers in the US health care system often assess and treat patients with physical health conditions and behavioral health conditions in siloes, yet physical and behavioral health are inextricably linked. Up to 70% of physician visits are for issues with a behavioral health component.[2] A similar proportion of adults with behavioral health conditions have one or more physical health issues.[3] Having a chronic condition is a risk factor for having a behavioral health condition and vice versa.[4] Depression and anxiety in particular are common in primary care settings but are often inadequately identified and treated, leading to a worsening of behavioral health conditions and/or increased difficulty managing physical health conditions.

The economic impact of behavioral health conditions is also significant. Care for patients with comorbid behavioral health conditions can cost 2-3 times more than care for patients without these comorbidities,[5] and these individuals can have substantially shorter life expectancies than the average person.[3] Additional national health care expenditures related to behavioral health comorbidities were estimated to be $293 billion in 2012, with approximately 217 million days of work lost annually at a cost of $17 billion/year.[5] Behavioral health spending is also concentrated among public insurers. Medicaid beneficiaries are twice as likely to have mental health disorders, and Medicaid finances more than 25 percent of behavioral health spending in the US.[6,7]

During the past two decades, many initiatives have sought to integrate behavioral health and primary care. Decision-makers across the health care spectrum recognize the need to better serve patients with behavioral health conditions, but questions remain regarding the latest evidence on the effectiveness and value of BHI as well as how best to approach implementation and which aspects of integration are most important for improved patient outcomes. This report focuses on the integration of behavioral health into primary care. Such integration is designed to improve screening and/or treatment in primary care settings through systematic coordination and collaboration among health care providers to address both physical health and behavioral health needs. Simply stated, it involves whole-person care and "reconnecting the head to the body."

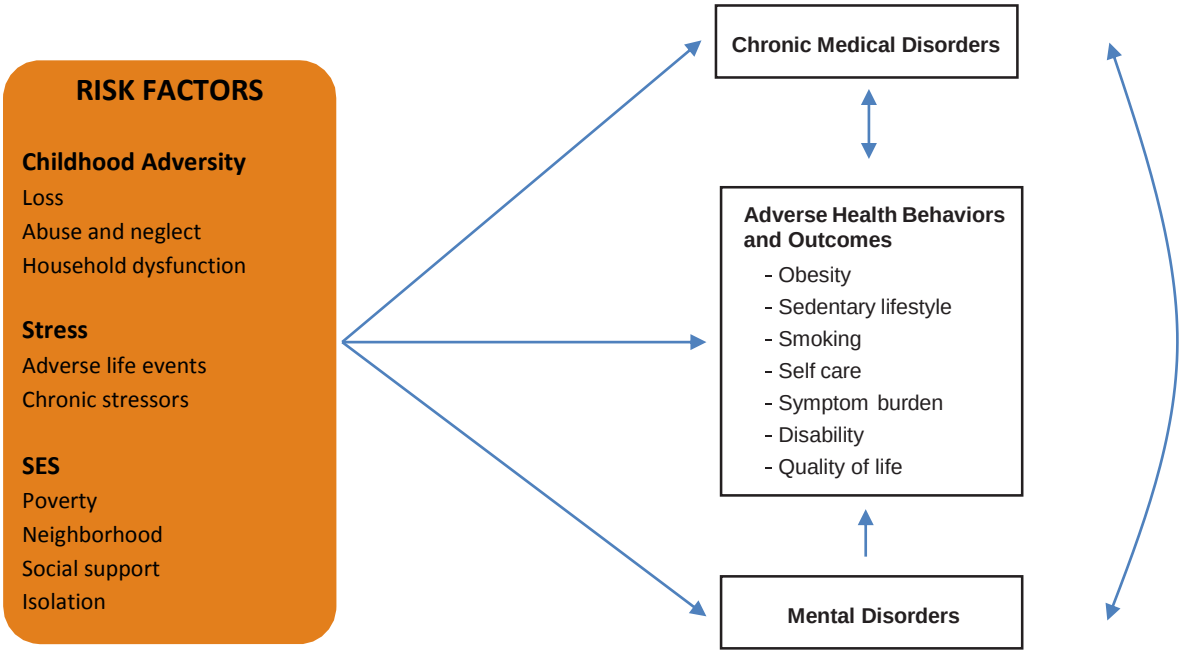
1. Background

1.1 Behavioral Health Conditions

Behavioral health conditions are common; more than one quarter of the US population is reported to have a mental health and/or substance use disorder in any given year.[8] In the US, about 44 million adults, or 18%, have a mental disorder,[9] and about 10 million of those have a SMI that substantially interferes with or limits major life activities.[10] Rates of mental health disorders are similar in both California and New England states, ranging from 16 to 20 %.[11,12] Further information on prevalence in each region is available in Appendix A.

While lifetime occurrence is higher, about 7% of adults reported having a major depressive episode (lasting at least two weeks) in the past 12 months,[13] and more than 18% had an anxiety disorder.[13,14] Many patients have both mental health conditions and medical conditions: 29% of the adult population with medical conditions also have mental disorders, and 68% of the adult population with mental disorders also have medical conditions.[15] As shown in Figure 1 below, a variety of risk factors affect both medical and mental disorders, and there are inter-relationships between chronic medical disorders, adverse health behaviors and outcomes, and mental disorders.

Figure 1. Model of Interaction between Mental and Medical Disorders



Source: Druss BG, Walker ER. Mental disorders and medical comorbidity, RWJF Research Synthesis Report 21, Feb. 2011.[15]

In sum, the population to be served by integrated care is complex, with many having co-occurring mental health and substance use disorders along with chronic physical health conditions, being homeless or in transitional housing, and experiencing other socioeconomic determinants of poor health (e.g., limited job opportunities and transportation, poverty, exposure to crime/violence).

Although behavioral health services represent a relatively small portion of total health spending in the US (6.3% in 2009),[16] they have a large impact on public budgets. Government agencies purchase nearly 60% of mental health services in the US, with Medicaid representing 28% of total expenditures, other state and local government 18%, Medicare 8%, and other federal sources 5%.[17] Approximately 90% of Medicaid spending is for physical health and 10% for behavioral health; by contrast, the percentages for private insurers are 97% and 3%, respectively.

Regional Spending on Behavioral Health Services

California

In 2005, the most recent year for which data are available, California **spent 7% of its total health spending on behavioral health services** and **$477 per resident (2014 dollars),** close to the national average of $511.

New England

Compared to other regions of the country, states in New England spend more per resident on behavioral health and allocate a larger share of total health spending to behavioral health services. In 2005, the most recent year for which data are available, New England states **spent 9 – 11% of total health spending on behavioral health services** and **$781 per resident (2014 dollars),** compared to the national average of $511.

Source: Substance Abuse and Mental Health Services Administration. Medicaid Handbook: Interface with Behavioral Health Services. HHS Publication No. SMA-13-4773. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2013.

Most diagnoses of behavioral health conditions, especially depression and anxiety, are made in the primary care setting. Despite the high prevalence, more than half of those who have a behavioral health condition are not treated for it.[18,19] Multiple factors contribute to this, including most primary care providers not having extensive training in behavioral health, relatively short appointment times to address a patient's multiple needs, limited behavioral health referral resources, and restrictions on billing for services.

1.2 Conceptual Framework

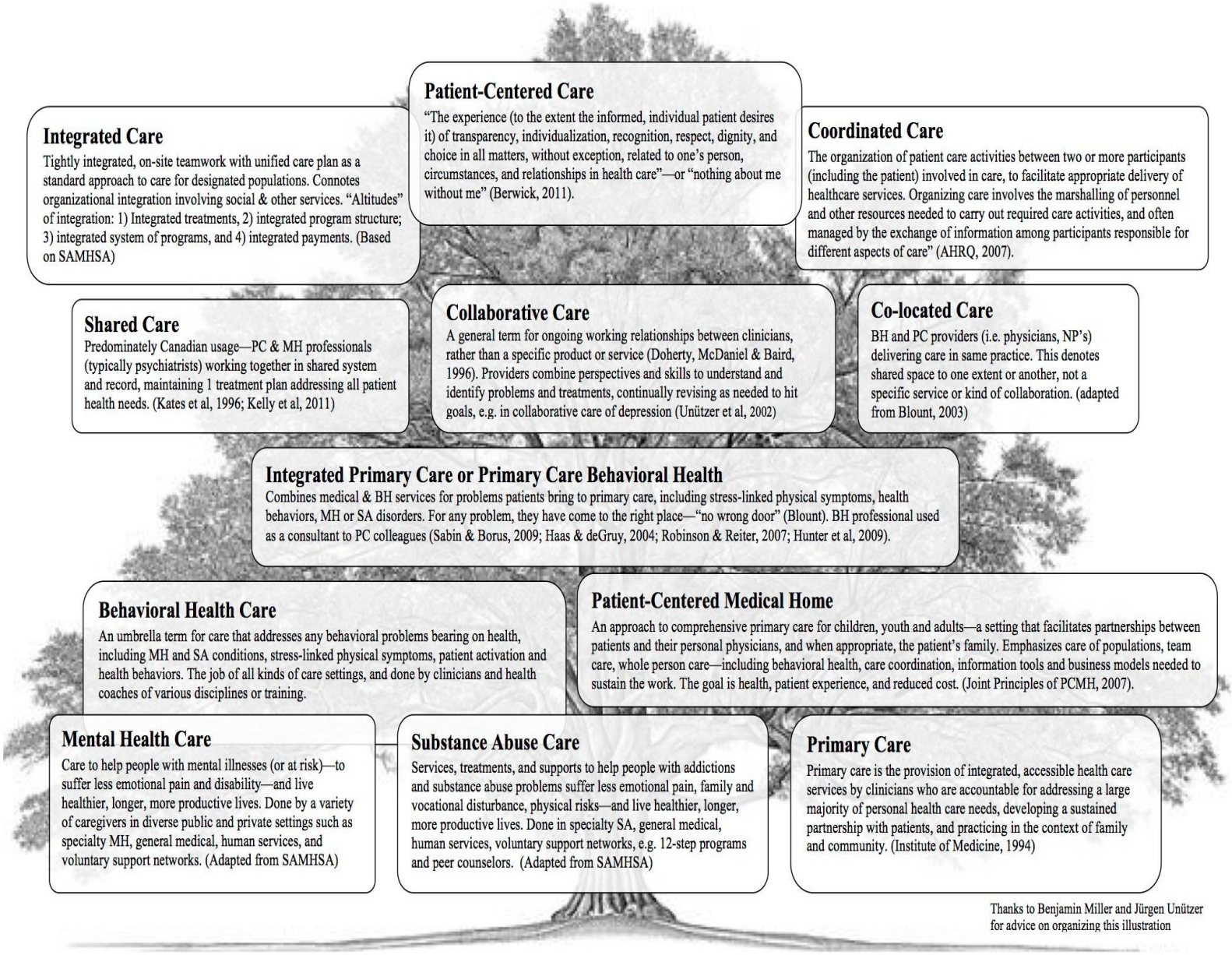
The overall goals of behavioral health integration (BHI) are those of the Triple Aim – better outcomes, better care experience, and reduced costs.[20] How these goals are achieved, and the terms used to describe various aspects of integrated care, vary extensively and include "co-located care," "collaborative care," "integrated primary care," "care management," and "patient-centered care," among others (see Figure 2 on the next page).[21] Federal agencies including the Agency for Healthcare Research and Quality (AHRQ), the Substance Abuse and Mental Health Services Administration (SAMHSA), and the Health Resources and Services Administration (HRSA) have provided thought leadership on the topic of integrating behavioral health into primary care. Contributions from these federal agencies are described below.

AHRQ Lexicon and Integration Framework

AHRQ created an *Academy for Integrating Behavioral Health and Primary Care* that is designed to be both a "coordinating center and a national resource for people committed to delivering comprehensive, integrated health care."[22] Recognizing the need for a standardized vocabulary in this emerging field, the Academy supported development of a consensus *Lexicon*, which is a set of concepts and definitions designed to enable effective communication among various stakeholders discussing and implementing integration.[23] The Lexicon is intended to be a functional definition and describe actual practice; this is in contrast to previous definitions in the field that "emphasized values, principles, and goals."[23]

Building on the Lexicon, while noting the need for a more specific set of observable and measurable functions within integrated care, the Academy also developed an *Integration Framework* that specifies functional domains and/or actions and measurement constructs for integrated behavioral health care.[24] Functional domains refer to high-level functions or actions such as care team expertise, clinical workflow, and data collection and use. Measurement constructs describe specific characteristics (i.e., structures), actions (i.e., processes), and outcomes for each of the functional domains. The framework appears to be useful for organizations interested in the elements of each function that are important for design, implementation, and measurement of success within a given organization, but is less well-suited to a critical assessment of the level of integration across organizations. In the following section, we describe another integration framework that is more easily applied to the programs described in the accumulated body of evidence for this topic.

Figure 2. Family Tree of Terms in Use in the Field of Collaborative Care



Source: Peek CJ and the National Integration Academy Council. Lexicon for Behavioral Health and Primary Care Integration. AHRQ Publication No. 13-IP001-EF. 2013[23]

SAMHSA-HRSA Levels of Collaboration/Integration

Building on the five-level collaboration continuum initially specified by Doherty (1995)[25] and other subsequent work, the SAMHSA-HRSA Center for Integrated Health Solutions (CIHS) published a framework in 2013 that has six levels of collaboration/integration.[26] Because it is the current framework produced and disseminated by the federal agency focused on substance abuse and mental health services, commonly used by practitioners, and has been used to assess clinical evidence such as that summarized in this report, we adopted this framework (described briefly below) as an organizing tool in the evidence review (section 7).

There are two levels in each of three categories (coordinated care, co-located care, and integrated care), as described below:

Coordinated care

1. Minimal collaboration: referral network to providers at another site
2. Basic collaboration: periodic communication about shared patients

Co-located care

3. Basic collaboration: primary care and behavioral health providers share facility but maintain separate cultures and develop separate treatment plans for patients
4. Close collaboration: providers share records and some systems integration

Integrated care

5. Close collaboration approaching an integrated practice: providers develop and implement collaborative treatment planning for shared patients but not for other patients
6. Full collaboration in a merged integrated practice for all patients: providers develop and implement collaborative treatment planning for all patients

In this framework, collaboration refers to how resources (i.e., health care professionals) are brought together, whereas integration describes how services are delivered and practices organized and managed. Said another way, collaborative care relates to how behavioral health works with primary care, and full integrated care is when behavioral health functions within and as part of primary care.[26] The higher numbers for integrated care reflect the belief that they represent a greater potential for positive impact on health outcomes and patient experience.

Integration Considerations

The SAMHSA-HRSA CIHS framework emphasizes that co-location of primary care and behavioral providers does not necessarily guarantee greater collaboration or integration but that it can be beneficial (e.g., may reduce travel time for patients, may increase likelihood that patient makes and keeps an appointment with a behavioral health provider, may increase communication between

physical and behavioral health providers). The authors of this framework note that it is not reasonable for all health care settings to move toward increasing levels of integration and that practical considerations should drive choice of level.

In a review of integrated care models, Collins et al (2010) suggest that integration should be designed for a particular set of local or statewide circumstances, taking into account such factors as the population being targeted, provider availability/training, service capacity in the community, consumer preferences, funding/reimbursement, and regulatory restrictions.[2] They note that there is no single approach that will work for all communities, and that differences in needs, resources, and practice patterns will influence which model is the best fit for a specific community. The practice model adopted may range from loose collaboration across separate providers where case managers are used to coordinate services with complex needs to a fully collaborative system of care where behavioral health and primary care services are woven seamlessly together.

2. BHI in Context: Barriers, Opportunities, and other Considerations for Integrated Care

Integration of behavioral health care requires substantial effort given the long history of separate financing, different types of service providers with different expectations about treatment, and real or perceived barriers to sharing data across providers. This section provides an overview of the regulatory, financial, and administrative context affecting how behavioral health and primary care services are integrated in California and New England states. Section 10 builds off the challenges to and opportunities for BHI outlined below and provides a series of recommendations to help inform implementation efforts in both regions. It is important to recognize that the landscape for BHI is constantly evolving; therefore, this section should be considered a "snapshot" of the status at the time of the report's publication.

2.1 Regulatory Oversight

Regulatory Oversight and Financing

Physical and behavioral health services have historically been regulated and financed through multiple tiers of government and separate agencies, leading to the fragmented delivery of care. The federal and state systems that regulate integrated health systems are rarely integrated themselves, meaning that there is often poor alignment of processes, rules, and missions across agencies. It is not uncommon for practices attempting to co-locate physical and behavioral health services to need separate licenses from multiple government agencies or departments, which can be costly and administratively challenging, particularly for smaller practices. For instance, in many states, all practices must seek licensing and credentialing through multiple governmental departments, such as Medicaid, mental health, and alcohol/drug agencies, in order to co-locate and be reimbursed for services; this is complicated by the different budgets, processes, and regulations of each individual agency.[27] Moreover, the separate entities charged with regulating health services may have unique responsibilities that can be at odds with one another, making it difficult in some states to form a cohesive strategy for BHI. The division of responsibilities for physical and behavioral health may also exacerbate the cultural divide between services at the practice level by creating distinct sources of support and guidance that fail to bridge the two areas of care.[27]

Regional Snapshot: Administrative and Financial Oversight in California and New England

California: State government agencies focused on physical health, mental health, and substance use were historically separate in California until 2012-2013. In 2012, most of the functions of the Department of Mental Health (DMH) were transferred to the Department of Health Care Services (DHCS). In 2013, the former Department of Alcohol and Drug Programs (ADP) was eliminated and its functions absorbed into DHCS.

New England*:* In most New England states, the administrative and financial responsibilities for physical and behavioral health services are split across multiple government agencies or departments. It is not uncommon in the region for behavioral health purchasing, rate setting, and contracting on behalf of public beneficiaries to come under the purview of Medicaid, but for behavioral health licensing, the provision of specialty behavioral health services, and some portion of behavioral health purchasing to be delegated to a separate entity. Even though nearly all states in New England consolidate administrative oversight for behavioral and physical health services within one umbrella agency, decision-making and regulatory authority is typically still split across multiple departments and programs.

2.2 Workforce Capacity and Training

Intrinsic to BHI is team-based care and collaboration across different types of providers. Depending on the practice setting and unique population needs, AHRQ identified the following categories of potential members of integrated care teams: [29]

- Primary care providers, including physicians, physician assistants (PAs), nurse practitioners (NPs)
- Behavioral health providers, such as psychiatrists, psychologists, social workers, counselors, marriage and family therapists (MFTs)
- Allied health professionals, such as health educators, community health workers (CHWs), pharmacists, care coordinators, peer specialists, patient navigators

The practice transformation required to integrate behavioral and physical health services typically involves scope-of-practice changes and retraining of staff to meet program objectives. Academic training rarely includes formal education on effective collaboration and how to work with other members of a care team.[29] For example, psychologists are rarely oriented to the unique culture and needs of primary care as part of standard training,[30] and primary care physicians often lack exposure to management of behavioral health conditions in their training programs. Moreover,

most integration strategies involve the addition of a care manager role, or someone whose job it is to coordinate services and support for the patient and among providers. Care managers can come from a range of disciplines, including nursing, social work, or psychology, and they typically require training explicit to the role**.**

Two federally-sponsored initiatives support training efforts and the development of a standard set of core competencies needed for integrated care settings. AHRQ is conducting an observational study of successfully integrated primary care sites to develop a set of workforce competencies to help guide training for behavioral health and primary care providers. In 2014, the SAMHSA-HRSA CIHS also developed a set of core competencies to help inform workforce training and orientation, recruitment, and performance assessment.[31] Split across 10 major domains, SAMHSA-HRSA CIHS' competencies apply to both physical and behavioral health practitioners and prioritize effective communication and teamwork, knowledge of evidence-based behavioral health interventions and screening strategies, and cultural competence. The full set of competencies is summarized in Table 1 below.

Table 1. Summary of SAMHSA-HRSA CIHS Core Competencies

Category	Competencies
Interpersonal Communication	The ability to establish rapport quickly and to communicate effectively with consumers of health care, their family members, and other providers. Examples include: active listening; conveying information in a jargon-free, non-judgmental manner; using terminology common to the setting in which care is delivered; and adapting to the preferred mode of communication of the consumers and families served.
Collaboration and Teamwork	The ability to function effectively as a member of an interprofessional team that includes behavioral health and primary care providers, consumers, and family members. Examples include: understanding and valuing the roles and responsibilities of other team members, expressing professional opinions and resolving differences of opinion quickly, providing and seeking consultation, and fostering shared decision-making.
Screening and Assessment	The ability to conduct brief, evidence-based, and developmentally appropriate screening and to conduct or arrange for more detailed assessments when indicated. Examples include screening and assessment for: risky, harmful or dependent use of substances; cognitive impairment; mental health problems; behaviors that compromise health; harm to self or others; and abuse, neglect, and domestic violence.

Category	Competencies
Care Planning and Coordination	The ability to create and implement integrated care plans, ensuring access to an array of linked services, and the exchange of information among consumers, family members, and providers. Examples include: assisting in the development of care plans, whole health, and wellness recovery plans; matching the type and intensity of services to consumers' needs; providing patient navigation services; and implementing disease management programs.
Intervention	The ability to provide a range of brief, focused prevention, treatment, and recovery services, as well as longer-term treatment and support for consumers with persistent illnesses. Examples include: motivational interventions, health promotion and wellness services, health education, crisis intervention, brief treatments for mental health and substance use problems, and medication assisted treatments.
Cultural Competence and Adaptation	The ability to provide services that are relevant to the culture of the consumer and their family. Examples include: identifying and addressing disparities in health care access and quality, adapting services to language preferences and cultural norms, and promoting diversity among the providers working in interprofessional teams.
Systems Oriented Practice	The ability to function effectively within the organizational and financial structures of the local system of health care. Examples include: understanding and educating consumers about health care benefits, navigating utilization management processes, and adjusting the delivery of care to emerging health care reforms.
Practice-Based Learning and Quality Improvement	The ability to assess and continually improve the services delivered as an individual provider and as an interprofessional team. Examples include: identifying and implementing evidence-based practices, assessing treatment fidelity, measuring consumer satisfaction and health care outcomes, recognizing and rapidly addressing errors in care, and collaborating with other team members on service improvement.
Informatics	The ability to use information technology to support and improve integrated health care. Examples include: using electronic health records (HER)s efficiently and effectively; employing computer and web-based screening, assessment, and intervention tools; utilizing telehealth applications; and safeguarding privacy and confidentiality.

Reproduced from SAMHSA-HRSA CIHS, 2014[31]

Training programs to develop a workforce for integrated care have proliferated in recent years, with nearly 100 such programs now available across the US.[32] Efforts to develop the workforce for integrated care are especially salient given the projected shortage of primary care physicians (PCPs) and behavioral health professionals.[33,34]

2.3 Information Sharing: Confidentiality and Electronic Health Records (EHRs)

Federal and state privacy laws intended to protect patient confidentiality have important implications for the integration of care. The Health Insurance Portability and Accountability Act (HIPAA) regulates the disclosure and use of patient health information. It contains broad exceptions that allow for data disclosure without prior consent from the patient when related to treatment, payment, and operational activities.[a,35] More stringent criteria exist for facilities providing treatment for substance use disorders, thereby affecting the ability of practitioners in these centers to share data with primary care practices. States may also employ stricter requirements in addition to HIPAA that can further limit practitioners from sharing information and facilitating coordinated services. A summary of key legislation in New England states and California impacting the disclosure of patient medical information across care teams is described below and discussed in more detail in Appendix B.

The enactment of HIPAA and other patient protection laws has coincided with the spread of EHRs in the US.[36] EHR adoption has become a national policy priority to better facilitate coordination across providers and allow individual practitioners to access patient health information expediently to inform treatment decisions.[37] However, in part due to more stringent privacy laws affecting the care of patients with substance use and mental health disorders, behavioral health organizations have adopted EHR systems at a much slower pace than have other health care settings.[37] Moreover, recent incentive programs that reward practices with higher payments from Medicare and Medicaid for adopting EHR systems exclude many behavioral health providers (e.g., psychologists, social workers).[38] Federal efforts have been made to support infrastructure that allows for the exchange of health information between physical health and behavioral health providers, but these initiatives are primarily in the form of individual pilot projects. The lack of widespread use of EHRs among behavioral health professionals and practices remains an issue.[4]

[a] Psychotherapy notes have special rules under HIPAA legislation. Patients must provide written prior authorization consent for their disclosure or use by a practitioner, but this only applies when the notes are separate from the patient's individual medical record.

Regional Snapshot: State Confidentiality Laws Pertaining to Mental Illness

California: Clinicians, health plans, and contractors are required to obtain written authorization from a patient before psychotherapy notes and drug and alcohol treatment records can be shared, except in very limited circumstances.

New England*:* Some states in the region have separate protections that apply only to the disclosure of mental health information. Rhode Island requires patient consent for mental health information to be shared with practitioners outside of the facility where the patient receives treatment. In Connecticut and Massachusetts, state legislation requires all records from psychologists to be confidential, and these records cannot be shared except in very limited circumstances unless written consent is provided by the patient. Vermont has broader protections and requires all information pertaining to a patient's mental health disorder or developmental disability to be kept confidential.

2.4 Billing and Reimbursement

Complex billing rules also pose a significant challenge to BHI. Even though a standard set of Current Procedural Terminology (CPT) and diagnostic codes is maintained nationally, Medicare and each state Medicaid program have unique billing rules that affect how behavioral health services are reimbursed. Many Medicaid programs place restrictions on same-day services, meaning that providers within the same organization are unable to bill for behavioral and physical health visits on the same day, and/or a single practitioner cannot receive reimbursement for providing both types of service on the same day unless specifically licensed to do so.[39]

Public payers additionally limit the specific procedures and diagnoses for which primary care providers can receive reimbursement, and in-person consultation is also a common requirement for billing even though coordination that is core to integrated care is often performed outside of the patient visit.[39] Existing billing codes may not comprehensively address the full scope of integrated care, meaning that some activities central to integration, like communication and consultation across providers, are not reimbursable. To address some of these concerns, the Centers for Medicare & Medicaid Services (CMS) added six Health and Behavior Assessment and Intervention (HBAI) codes in 2010 to better support integrated services and allow for the billing for services related to behavioral, social, psychological, and cognitive issues that affect the management of physical health conditions. However, not all states have activated the HBAI codes, including three states in New England (Massachusetts, Rhode Island, and New Hampshire).

Public payers may also place limitations on the type of practitioner that can bill and receive payments for behavioral health services, often excluding "nontraditional" health care professionals such as peer support specialists and CHWs that are increasingly relied on in integrated settings.[27] In California, Medi-Cal only allows licensed physicians, PAs, NPs, clinical psychologists, and licensed clinical social workers (LCSWs) to bill and be reimbursed for HBAI codes. In New England, states vary in the requirements for the credentials providers must have when billing for certain services. In the states with HBAI codes activated (Vermont, Connecticut, and Maine), licensed physicians, PAs, NPs, and clinical psychologists are also generally allowed to bill for these services, and Maine also allows advanced practice registered nurses (APRNs), LCSWs, and licensed clinical professional counselors (LCPCs) to use the codes.

A summary of Medicare and Medicaid billing regulations in California and New England states is provided in Table 2 on the following page, and a more detailed explanation of Medicaid billing rules and other health insurer reimbursement policies specific to each of these two regions is available in Section 5.

Public payers, as well as commercial health plans, are pursuing alternative payment methodologies that allow for greater flexibility in how behavioral health services are reimbursed in primary care settings, but fee-for-service (FFS) payments, which do not provide incentives for integrated care, remain pervasive. Further details of some of the major regional and national payment reform efforts are presented in section 2.6.

Table 2. Medicare and Medicaid Billing Rules: California and New England States

Medicare	Medicaid: California	Medicaid: New England
➢ **Credential requirements:** In most cases, a MD/DO, NP, PA, or clinical nurse specialist (CNS) may bill for psychiatric evaluation performed in a primary care setting. These same providers, as well as psychologists and LCSWs, may also bill for therapy, group therapy, crisis intervention, and mental health assessment services in primary care settings as permitted by state federally qualified health center (FQHC) regulations. Medicare covers SBIRT* services, but beneficiaries are only eligible for one screening per year and four 15-minute counseling sessions; the services may *not* be provided by a clinical psychologist or LCSW but they may be provided by a CNS or certified nurse midwife. ➢ **HBAI codes**: Medicare reimburses for all HBAI codes with the exception of the code for family therapy when the patient is not present. These services can only be billed by doctorate-level psychologists. ➢ **Same-day billing**: Medicare FFS plans allow for same-day billing of mental health and physical health services.	➢ **Credential requirements**: MD/DOs, PAs, and advanced nurse practitioners (ANPs) may bill Medi-Cal for evaluation and management (E&M) services related to behavioral health care. Psychiatrists may bill for psychiatric evaluation in a primary care setting, and therapy services may be provided by a MD, PA, NP, clinical psychologist, or LCSW. ➢ **HBAI codes**: California has activated HBAI codes, which may be used by a MD, PA, NP, clinical psychologist, or a LCSW; HBAI codes for family therapy are not "turned on" in California so are not reimbursable. Providers who may use HBAI codes may also provide SBIRT services for alcohol, provided they have completed four or more hours of SBIRT training. ➢ **Non-billable services**: Mental health assessments, group therapy, and crisis interventions are not reimbursable by Medi-Cal in primary care. ➢ **Same-day billing**: Same-day billing for both mental health and physical services is not permitted for FQHCs, except in the case of illness or injury subsequent to the first visit.	➢ **Credential requirements**: Maine allows only psychiatrists to bill for psychiatric evaluation with or without medication management, while Vermont also allows physicians, PAs, or psychiatric NPs to bill for these services. A number of providers are able to bill for therapy services in each state, including LCSWs and PhD or PsyD psychologists. In some states, a physician, PA, NP, master's-level psychologist, or other medical professional may bill for these services. While Massachusetts and Rhode Island allow community health centers to bill for SBIRT services, the remaining New England states do not provide coverage. Connecticut is currently implementing a grant program to implement SBIRT in community health centers. ➢ **HBAI codes:** Of the six state Medicaid programs, Vermont, Maine, and Connecticut have activated the HBAI codes. Connecticut has activated all six of the codes, while Vermont and Maine have activated five of the six codes, excluding the code that allows for family therapy in the absence of the patient.[40-42] The remaining New England states have not activated the codes. ➢ **Non-billable services**: In all states except Connecticut, group therapy services are not billable. Case management is not billable in any of the six states. ➢ **Same-day billing**: Coverage for same-day services varies by payer and health care setting. However, all New England state Medicaid programs allow for same-day billing for physical and behavioral health visits in FQHC settings.[8]

*Screening, Brief Intervention, and Referral to Treatment (SBIRT): a practice used to identify, reduce, and prevent use, abuse, and dependence on alcohol and illicit substances.

Sources:

- SAMHSA-HRSA CIHS Billing and Financial Worksheets: http://www.integration.samhsa.gov/resource/billing-financial-worksheets#Billing
- DHCS provider manuals: http://files.medi-cal.ca.gov/pubsdoco/Manuals_menu.asp (choose psychological services)
- CMS Medicare Benefit Policy Manual: http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c13.pdf
- SAMHSA-HRSA CIHS same day billing analysis: http://www.integration.samhsa.gov/financing/Same-Day-Billing-Fact-Sheet-ICN908978.pdf

2.5 Behavioral Health Carve-Outs

Public and private health plans often "carve out" some or all behavioral health services from their benefit package to be managed by a separate organization. Delegating the financial and administrative responsibility for behavioral health to organizations with specific expertise in this area was historically intended to ensure appropriate use of behavioral health services but can also hinder the integration of care. In a carve-out model, the provision and financing of a patient's physical and behavioral health care are coordinated across multiple organizations, each with potentially distinct provider networks, budgets, and policies. For clinicians, carve-outs may mean that physical and behavioral health services are reimbursed through different payment models, thereby misaligning incentives. In some cases, carve-out networks are limited to mental health specialists, meaning that primary care provider groups are unable to directly participate on carve-out panels.[39] Carve-outs can also make it difficult to access comprehensive patient information across entities, additionally hindering integration at the provider level. For these reasons, as the importance of integrating behavioral and physical care has become more recognized, state Medicaid programs as well as commercial payers are increasingly pursuing strategies that align financial accountability and coordination across organizations, or they are shifting towards integrated arrangements that manage the administration and purchasing of both behavioral and physical health services.

2.6 Payment and Care Delivery Initiatives

Accountable Care Organizations (ACOs)

National health reform through the Affordable Care Act (ACA) has created opportunities for clinical integration by supporting the development of alternative payment models that provide incentives for clinicians to coordinate services and provide quality care more efficiently. Accountable Care Organizations (ACOs), or networks of health care providers that share clinical and financial responsibility for a defined patient population,[43] may be particularly well-suited to integrate behavioral and physical health services due to unique incentives that emphasize primary care and foster greater coordination across providers. Unlike with traditional FFS payment structures, ACOs receive bonus payments (e.g., shared savings) for controlling costs and meeting certain quality benchmarks; they also have more flexibility to provide services such as care management that are not typically reimbursed.[44] However, a recent survey of ACOs from across the US revealed that BHI is still limited in these settings, in part because of contract arrangements that continue to carve out behavioral health services and costs from the rest of primary care.[45]

California and New England states have experienced significant ACO activity relative to the rest of the country. Maine, Massachusetts, Rhode Island, New Hampshire, and Vermont are among eight states in the US estimated to have more than 10 percent of their populations covered by ACOs.[43] California has 67 ACOs, more than any other state, with over 1.3 million Californians projected to receive their care from an ACO by February 2016.[46] ACOs are still emerging within the health care safety net and Medi-Cal, which has the flexibility to test various care delivery models designed to improve quality and control costs as part of a Medicaid waiver.[46]

Medical Homes and Health Homes

The patient-centered medical home (PCMH) is another model that has evolved to improve the quality and efficiency of primary care delivery. Also referred to as a primary care medical home, many of the core principles of PCMHs overlap with the goals of integration, including physician-led team-based care, coordinated services across disciplines, and person-centered services that comprehensively address the physical, psychosocial, and behavioral aspects of treatment. PCMHs differ in how they are reimbursed, but many have adopted a payment structure that combines FFS with supplemental per-member per-month (PMPM) payments to cover the cost of coordinated care, as well as opportunities for bonuses based on performance on key outcomes.[47] The National Committee for Quality Assurance (NCQA) launched its PCMH Recognition program in 2008 to develop standards and guidelines for practices working to transform how primary care is organized. The most recent set of standards issued in 2014 placed an expanded focus on BHI, including new requirements for team-based care, depression screening, and care management for patients with behavioral health disorders. Standards with aspects specific to BHI are provided in Table 3 on the next page.

The ACA recently expanded on the medical home model to explicitly address the coordination of physical and behavioral health services. Health Homes, established in section 2703 of the ACA, are designated practice organizations (typically safety net providers) that use health care teams to provide comprehensive case management, coordination, individual and family support, community referrals, and transitional care services to populations with multiple chronic conditions, including behavioral health disorders.[48] Whereas PCMHs have involved multiple payer participation, Health Homes are currently exclusive to Medicaid. Health Homes are also reimbursed using alternative payment methodologies, typically PMPM capitated rates. Only a small number of states have established Health Homes so far, with more currently receiving planning grants to implement the model. Maine, Rhode Island, and Vermont are the only states in New England with approved Health Home amendments,[49] though Rhode Island's and Vermont's efforts focus only on patients with SMI and substance use disorders, respectively.[50, 51] Connecticut is also pursuing a Behavioral Health Home but will also focus on patients with SMI.[52] California received a planning grant from CMS to develop a state plan amendment for a Section 2703 waiver, and staff work related to the waiver is currently underway.

Table 3. Summary of 2014 NCQA PCMH Standards Specific to BHI

Standard	Description
Team-Based Care	• Practices document and communicate to patients how behavioral health needs will be addressed • Members of the care team are trained and assigned to support patients/families/caregivers in self-management, self-efficacy, and behavior change
Population Health Management	• Tobacco use status is captured in an electronic record of all patients aged 13 and older • Clinicians perform comprehensive health assessments that include 1) attention to an individual's health behaviors, 2) history and family history of behavioral health conditions, and 3) an understanding of social and cultural factors that affect health • Clinicians screen for depression using a standardized tool in practices with access to relevant services when results are positive • Clinical decision support is implemented using evidence-based guidelines for behavioral health disorders and conditions related to unhealthy behaviors
Care Management Support	• Clinicians use a systematic process to identify patients for clinical care management using criteria that prioritizes populations with a high prevalence of behavioral health disorders
Care Coordination and Transitions	• Practices maintain agreements with behavioral health providers to enhance access, communication, and coordination • Leadership describes the integration approach to behavioral health providers within the practice site

Source: SAMHSA-HRSA Center for Integrated Solutions, 2014.[53]

State Innovation Models (SIM) Initiatives

The State Innovation Models (SIM) Initiative is a program of the Center for Medicare & Medicaid Innovation (CMMI) that provides federal grants to states to test multi-payer health care delivery and payment reform models for improving care quality while reducing costs. Many award recipients are using SIM funding to develop an enhanced primary care delivery system that is responsive to the comprehensive needs of patients and integrates care across sectors.[57] Each state in New England has received either a Model Design award (funding to support planning and development of an innovation plan) or a Model Testing grant (funding to test their innovation plan), and California has received two Model Design awards.[70,71,80] Efforts in both regions have overlapped with the goals of integration and have typically focused on expanding existing ACO and PCMH programs, investing in EHR infrastructure, supporting workforce development and training for team-based care, and using alternative payment models to support BHI and other integrated care efforts. A summary of the different approaches New England states are adopting as part of the SIM initiative to develop primary care and foster BHI are described in Appendix C.

Medicaid and Health Center Expansion

The expansion of Medicaid programs authorized by the ACA may bring greater significance to integration efforts, as individuals gaining coverage through Medicaid are disproportionately affected by behavioral health conditions. The ACA also established new requirements that health insurance sold through Health Insurance Exchanges or provided by Medicaid to newly eligible adults must cover mental health and substance use services to the same extent as all other covered medical benefits.[54] The ACA expands on existing legislation through the Mental Health Parity and Addiction Act of 2008 that requires group health plans and insurers with existing coverage for behavioral health conditions to provide coverage that is comparable to that of medical and surgical care.[55]

The ACA also established an $11 billion trust fund to finance the expansion of FQHCs to address the behavioral and primary care needs of the patients they serve. FQHCs have a long history of providing comprehensive health care to underserved populations, and in many states, have been at the center of innovative efforts to integrate behavioral health services. A 2010 national survey of FQHCs indicated that 65 percent provided some level of integrated services.[56] Federal investment in FQHCs is intended to increase the capacity for community health centers to provide comprehensive, integrated primary health care services, particularly in environments with expanded access to health care coverage.[57]

Telehealth

Telehealth, or the use of electronic information and telecommunication technology to provide health at a distance, has emerged in recent years as a tool to support integrated care. In areas where populations are dispersed and/or there are insufficient human and capital resources to provide behavioral health services in primary care settings, practices have turned to telehealth to link patients with physical and behavioral health providers under one system of care. Telehealth has been used to provide general health assessment, psychotherapy, medication management, and psychiatric diagnostic assessment, though the type of services reimbursed using telehealth varies significantly across payers.[58] There is a national trend for states to require telehealth services to be reimbursed at the same rate as in-person visits by private insurers.[59] Medicare reimburses for some telehealth services for patients who live in rural areas and receive care in certain settings (e.g., FQHCs, rural health clinics, hospitals). Medicare allows for a number of practitioners to provide and receive reimbursement for telehealth; however, clinical psychologists and social workers cannot bill for psychiatric diagnostic examinations, psychotherapy, medical management, or management services under Medicare. Medicaid programs also typically provide some degree of coverage for telehealth, though each state has unique requirements that affect the setting in which services can be provided, as well the type of providers who can deliver services.[60] Access to

telehealth is also affected by state licensing rules that require practitioners to be licensed in the state where the patient is receiving care.[61]

Regional Snapshot: Regulations and Standards for Telehealth

California:

- Medi-Cal reimburses providers for telehealth services if they are licensed in California, enrolled as a Medi-Cal provider, and the telemedicine service provides a near real-time or better audiovisual connection (communication in seconds to minutes) between the patient and doctor.
- California does not mandate that private insurers reimburse for telehealth services. However, no insurer, public or private, may require that a patient visit a health care provider in-person before payment is rendered for a covered service.[63]

New England*:*

- Out-of-state physicians providing telehealth services are required to become fully licensed in the state where the patient resides, though many states offer a more streamlined path to licensure for physicians coming from states with equivalent licensing standards.[62]
- Physicians may consult with out-of-state clinicians regarding a patient's care through telehealth, though typically only on an ad hoc or temporary basis before additional licensing is required.
- Most states in the region require private health insurers to reimburse some level of telehealth

2.7 Summary

The sections above provide an overview of the administrative, regulatory, and financial context affecting the capacity of California and New England states to pursue BHI. The policy environment for BHI is influenced by a number of factors including: 1) the organizational structure of how health care services are regulated and financed, 2) Medicaid billing rules, 3) patient confidentiality protections that may inhibit information-sharing across providers, 4) the utilization of carve-out arrangements to manage behavioral health care, 5) growth in the Medicaid population, 6) number of FQHCs and alternative payment and delivery system models that provide greater flexibility to support BHI, 7) the availability of SIM funding to advance primary care, 8) whether the state is developing Medicaid Health Homes to coordinate care for chronically ill patients, and 9) the availability of telehealth. Each of these factors contribute to the barriers and potential solutions for integrating behavioral health into primary care and form the basis for the policy recommendations in Section 10. Table 4 on the following page provides an overview of the unique context for BHI in California and New England. The factors mentioned are constantly evolving and are not intended to provide a comprehensive list of all potential influences on BHI.

Table 4. Contextual Considerations for BHI: New England and California

	California	New England					
		Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont
State is expanding Medicaid	Yes	Yes	No	Yes	Yes	Yes	Yes
Estimated number of new Medicaid enrollees	~3M[68]	~130,000[72]	N/A	~362,000[77]	~46,000,[79]	~ 79,000[83]	~20,000[86]
Medicaid utilizes behavioral health services carve-out	Yes	Yes	No	Yes	Yes	Yes	Yes
State received 2703 Health Home Waiver[64]	Application in progress	No	Yes	No	No	Yes	Yes
Number of PCMHs	~130[69]	>70[73]	>70[75]	~150[78]	>80[224]	>70[84]	~120[87]
Estimated percent of population covered through ACOs[65]	1 – 3%	5-10%	>15%	10-15%	10-15%	10-15%	10-15%
Number of FQHCs[66]	129[59]	13	19	36	10	8	8
SIM award received	$2.6M Model Design Award (Round 1); $3M Model Design Award (Round II)[70,71]	$45M Model Test Award[74]	$33M Model Test Award[76]	$44M Model Test Award[76]	$1.6M Model Design Award (Round I);[80] $2M Model Design Award (Round II)[81]	$20M Model Test Award[85]	$45M Model Test Award[76]
HBAI codes activated	Yes	Yes	Yes	No	No	No	Yes
Medicaid same-day billing allowed for FQHCs?[67]	No	Yes	Yes	Yes	Yes	Yes	Yes
Telehealth coverage requirements[63]	Medicaid only	Medicaid only	Medicaid and private insurance	Private insurance only	Private insurance only. Legislation pending for coverage in Medicaid Managed Care plans (MCPs).[82]	No requirement for coverage of telehealth	Medicaid and private insurance

3. Existing Approaches to Integrated Care Delivery

A variety of approaches have been used to integrate behavioral health and primary care services in a range of settings. The evidence review in Section 7 explores the comparative effectiveness of different models of integration and seeks to identify the key program components that correspond to improved patient outcomes. Several advanced programs have emerged that have served as models for implementing integrated services nationally, each with distinctive features and core similarities to how care is organized and coordinated. Common elements highlighted across models have been summarized extensively in the policy literature and include:

- Screening for depression, anxiety, and other behavioral disorders using validated screening tools
- Team-based care with non-physician staff to support PCPs and co-manage treatment
- Shared information systems that facilitate coordination and communication cross providers
- Standardized use of evidence-based guidelines
- Systematic monitoring of patient response to therapy
- Engagement with broader community services
- Individualized, person-centered care that incorporates family members and caregivers into the treatment plan

Selected BHI models are briefly described below to provide context to how integration is being approached in primary care. A table with a more comprehensive description of each program is provided in Appendix D. We chose to highlight these approaches to BHI as they are among the most developed models for integrating behavioral health services in primary care and have been adapted locally in a variety of settings.

3.1 Summary of Select Models for BHI

Collaborative Care Model (CCM): [88]

Developed by the University of Washington and based on the Wagner Chronic Care model, the CCM integrates treatment for a range of mood and anxiety disorders into primary care settings. The Advancing Integrated Mental Health Solutions (AIMS) Center based at the University of Washington focuses on the implementation of Collaborative Care and has worked with hundreds of practices nationally and internationally to apply and adapt the model. Under this system, patients are screened for depression and anxiety using validated screening tools. Care managers are core

members of the care team and work with PCPs to support medication management and to provide brief counseling and other services as well as coordinate across providers. Psychiatric consultants are available to support PCPs in diagnosing patients and making treatment adjustments. Patient progress is systematically tracked and monitored using a central data registry. This model was originally focused on older adults but has been expanded to include adolescents and the general adult population.

Behavioral Health Consultant Model:

The Behavioral Health Consultant Model takes a population-based approach and aims to serve a primary care practice's entire patient population, not just a segment of the population with specific risks or care needs. In this model, behavioral health consultants are fully embedded on the primary care team and behavioral health is a routine part of primary care. Behavioral health providers assist PCPs in the management of behavioral health conditions and provide brief, focused interventions to educate patients about their condition and provide self-management techniques. This approach utilizes a flexible workflow of which warm hand-offs and "curbside" consultations are a core component.

Medical-Provided Behavioral Health Care Model: [89]

Under this approach, only physical health providers are directly involved in the delivery of behavioral health services. PCPs receive consultative support from psychiatrists or other behavioral health providers with the goal of expanding the capacity of PCPs to address more complex behavioral health needs in the primary care setting. PCPs screen and diagnose patients for behavioral health conditions using validated tools, and they may also utilize Screening, Brief Intervention, Referral, and Treatment (SBIRT) programs to identify, reduce, or prevent substance use conditions in primary care. This model has been adapted and implemented in several states, particularly those with significant network capacity issues and a lack of providers for specialty behavioral health.

3.2 Examples of BHI Programs

A summary of how the different models described above have been adopted and adapted locally is described below. The real-world implementation of BHI often combines several features of different models or approaches and is adapted with the specific resources, population needs, and goals of the practice in mind.

Cherokee Health Systems[90]

Cherokee Health Systems is a FQHC and community mental health center in Tennessee with over 50 clinic sites throughout the state. This system takes a population-based approach to care management whereby every patient is screened for behavioral health conditions and triaged to the appropriate level of support. Cherokee Health Systems is an example of the Behavioral Health Consultant model that shares elements of the CCM. Generalist behavioral health consultants (BHCs) are fully embedded on the care team and work collaboratively with PCPs to develop treatment plans and co-manage patient care. BHCs are available to provide rapid access to behavioral services – often during the same patient visit – and are a standard feature of well-child visits and prenatal appointments. Psychiatric consults are available to provide guidance and support for more complex cases. Care teams are also composed of care coordinators, health coaches, and community health coordinators who all work together to provide continuity of care across behavioral health services. Team members are connected through an EHR system and use standard measures to track patient outcomes.

Department of Veterans Affairs (VA)[91]

The VA integration program built on a strong existing infrastructure to implement a national strategy for BHI that focuses exclusively on SMI and depression. The program involves several individual projects that are coordinated but individualized to each site's unique needs. Under this system, PCPs provide universal screening of depression and post-traumatic stress disorder (PTSD). Patients with positive screens are assessed for behavioral health needs using structured protocols performed by care managers. Depression care managers are included on the primary care team and make recommendations to the PCP about treatment, provide proactive patient follow-up, and communicate with consultant psychiatric specialists when problems arise. EHRs are used to facilitate provider communication, report data, and provide point-of-care decision support.

Intermountain Healthcare Mental Health Integration Program[92]

Intermountain Healthcare is an integrated health system of over 20 hospitals and 200 outpatient clinics serving the metropolitan area of Salt Lake City, Utah. The health system built on existing institutional structures for coordinated care to integrate primary care and behavioral health services. Features of this model are being applied to health systems nationally, including in Maine, Mississippi, New Hampshire, and Oregon. At Intermountain, all patients receive a comprehensive mental health assessment and are screened for depression, anxiety, and other behavioral health concerns using validated screening tools. PCPs and other behavioral health team members collaborate to develop shared treatment plans and provide for seamless patient transition across providers. A secure, central health information exchange is available to all team members to track and upload patient data, using a standard set of measures.

Massachusetts Child Psychiatry Access Project[93]

The Massachusetts Child Psychiatry Access Project is a program designed to increase PCP access to child psychiatry consultation by establishing consultation "hubs" across the state that allow pediatricians serving patients with behavioral health conditions to call centers staffed by behavioral health specialists in order to receive guidance and clinical advice from psychiatrists in real time. Psychiatric consultants help answer diagnostic and therapeutic questions from PCPs and may help coordinate referrals and/or transitional services for more complex patients who need more specialized ongoing behavioral management.

4. Clinical Guidelines and Policy Statements

Guidance for Integrating Behavioral Health in Primary Care Settings

Joint Principles for Integrating Behavioral Health into the Patient-Centered Medical Home (PCMH), 2014

http://www.aafp.org/dam/AAFP/documents/practice_management/pcmh/initiatives/PCMHJoint2014Update.pdf

A joint statement from multiple clinical societies promotes the use of PCMHs for integrating care. Each patient in a PCMH should have a personal physician who is primarily responsible for the patient's care but will also have access to a team of health care professionals including a behavioral health specialist, who should ideally be co-located to improve access and coordination. Information technology should include information from all providers on the care team, including the behavioral health provider's patient notes, mental health screening and case finding tools, and outcome tracking.

Funding should be pooled between physical and behavioral health providers using a model such as PMPM capitation payments. Payment should be available for behavioral health services provided in a face-to-face setting, as well as telehealth services (e.g., telephone, electronic communications). Services associated with the coordination of care should be available to all patients including services provided by separate team members on the same day.

American Association of Community Psychiatrists (AACP), 2002

http://www.communitypsychiatry.org/pages.aspx?PageName=AACP_Position_Paper_on_Interface_and_Integration_with_Primary_Care_Providers

The AACP suggests that mental health professionals working in community-based settings should become more familiar with the culture of primary care. AACP outlines several key characteristics of an integrated model including behavioral health triage, capacity for ongoing behavioral health consultation support and training for PCPs and staff, and care monitoring with chronic disease management protocols.

AACP recommends integrated settings be staffed with master's degree or higher-level mental health professionals, as well as mental health professionals with prescribing privileges, and nurse staff or other non-mental health trained staff to provide some or all of care monitoring and support services. AACP supports implementation of ongoing measures to evaluate program success, including accuracy of diagnosis of psychiatric disorders for patients seen in primary care, the

effectiveness and cost-effectiveness of services provided, clinical outcome indicators, and satisfaction of both patients and providers.

Department of Veterans Affairs (VA), 2008

http://www.mirecc.va.gov/VISN16/docs/UMHS_Handbook_1160.pdf

The VA Uniform Mental Health Services Handbook establishes minimum requirements for VA Mental Health Services. Included in the numerous regulations outlined in the Handbook is an overarching requirement that systems provide integration or coordination between care for mental health conditions and other aspects of health care for all veterans. Patients must have a principal mental health provider while receiving mental health care. All veterans receiving mental health care must be enrolled in a VA primary care clinic for their primary care needs. If veterans are not already enrolled in VA primary care, their mental health providers must assist them in receiving all appropriate screenings and preventive interventions in the mental health clinic. Mental health programs are not intended to function as isolated entities but rather within the larger context of the VA system.

United States Preventive Services Task Force (USPSTF), 2009

http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/depression-in-adults-screening

The USPSTF supports screening for depression in primary care to assure accurate diagnosis, effective treatment, and follow-up. The guidelines mention several tools for primary care providers to use to diagnose depression, and note that shorter, informal screening tests that include questions about loss of interest in activities or depressed mood may be just as effective as a more formal assessment.

Institute for Clinical and Systems Improvement (ICSI), 2013

https://www.icsi.org/guidelines__more/catalog_guidelines_and_more/catalog_guidelines/catalog_behavioral_health_guidelines/depression/

In screening for and monitoring depression, ICSI recommends using a standardized instrument to document symptoms and baseline severity to assist in monitoring response and remission rates. Screening should be completed if depression is suspected based on certain risk factors including substance use disorder, diabetes, cardiovascular disease, and chronic pain. The cultural background of the patients should be taken into account when assessing and treating depression. The physician or office staff must document the patient's symptoms based on DSM-5 criteria and track progress and remission throughout the course of treatment. The PCP should supplement medication with psychotherapy and work with the patient to adjust medication dosage, if necessary.

5. Coverage and Reimbursement Policies

While most efforts to integrate behavioral health into primary care are at the practice or health system level, two private national payers (Aetna, Anthem) offer programs in support of collaborative or integrated care. These and some other regional (Health Net in California; Tufts Health Plan, Blue Cross Blue Shield of Massachusetts in New England) and national payers (Humana, UnitedHealthcare) have divisions within the overall organization that provide behavioral health services to some portion of the plan's members, so both physical health and behavioral health care are provided under the same umbrella organization, potentially reducing restrictions on data sharing and care coordination that are more common under carve-out arrangements. Nonetheless, for behavioral health providers who are paid on a FFS basis, payers have been limited in the extent to which they can provide incentives for integrated care.

Since payer policies are continually evolving and information is not always publicly available, this section is not intended to be a complete picture of private and public payer efforts related to BHI. Rather, it includes information on publicly available billing requirements/restrictions from payers and information on their support of BHI as of the date of this report.

Public payers have more billing restrictions (e.g., on the types of providers who can bill for behavioral health services in primary care, types of visits that can be billed by an FQHC on the same day, billing codes that can be used) than do private payers. Some private payers are currently or have been involved in integrated care pilot projects that involve different payment structures and incentives.

5.1 Public Payers

State Medicaid Programs

New England Medicaid Programs

Coverage and licensing requirements for using billable mental health services varies widely across the New England states. Of the six state Medicaid programs, Vermont, Maine, and Connecticut have activated the HBAI codes. This six-code series was created to allow providers to bill for services that support assessment and intervention of the psychological and social factors that affect treatment in patients with a primary physical health diagnosis. Patients do not need to have a behavioral health diagnosis.[94] Codes are available for individual assessments and reassessments that can be billed in 15 minute increments to allow for brief consultations, interventions at an individual level, and group therapy sessions. Separate codes are also available for family therapy interventions either with or without the patient. Connecticut has activated all six of the codes, while Vermont and

Maine have each activated five of the six codes, excluding the code that allows for family therapy in the absence of the patient.[40-42] The remaining New England states have not activated the HBAI codes.

The New England states vary in requirements for the credentials providers must have in order to be able to bill for certain services. Maine allows only psychiatrists to bill for psychiatric evaluation with or without medication management, while Vermont also allows physicians, PAs, or psychiatric NPs to bill for these services. A number of providers are able to bill for therapy services in each state, including LCSWs and PhD or PsyD psychologists. In some states, a physician, PA, NP, master's level psychologist, or other medical professional may bill for these services. In all states except Connecticut, group therapy services are not billable, and case management is not billable in any of the six states. Appendix Table I1 provides more detail on the Medicaid licensure requirements for using behavioral health and mental health billing codes in each New England state.

California (Medi-Cal)

Licensed physicians, PAs, and advanced nurse practitioners (ANPs) may bill Medi-Cal for evaluation and management (E&M) services related to behavioral health care. HBAI codes may be used by a MD, PA, NP, clinical psychologist, or a LCSW; HBAI codes for family therapy are not "turned on" in California so are not reimbursable. Providers who may use HBAI codes may also provide SBIRT services for alcohol, provided they have completed four or more hours of SBIRT training. Psychiatrists may bill for psychiatric evaluation in a primary care setting, and therapy services may be provided by a MD, PA, NP, clinical psychologist, or LCSW. Mental health assessments, group therapy, and crisis interventions are not reimbursable by Medi-Cal in primary care. A more detailed analysis of which providers may use individual CPT codes related to behavioral health is available at the SAMHSA-HRSA CIHS website. Same-day billing for both mental health and physical services is not permitted at FQHCs, except in the case of illness or injury subsequent to the first visit.

Medicare

In general, Medicare covers more services related to behavioral health than do Medi-Cal and New England state Medicaid programs. Medicare provides coverage for five of the six HBAI codes, with the exception of family therapy in the absence of the patient, but services can only be billed by doctorate-level psychologists. Medicare places limitations on SBIRT services, limiting beneficiaries to one screening per year and four 15-minute counseling sessions; these services may *not* be provided by a clinical psychologist or LCSW, but they may be provided by a certified nurse specialist (CNS) or certified nurse midwife. If permitted by state FQHC billing rules, a physician, NP, PA, or CNS may bill for psychiatric evaluation performed in a primary care setting. These same providers, as well as psychologists and LCSWs, may also bill for therapy, group therapy, crisis intervention, and mental health assessment services in primary care settings as permitted by state FQHC regulations.

- CMS Medicare Benefit Policy Manual: http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c13.pdf
- SAMHSA same day billing analysis: http://www.integration.samhsa.gov/financing/Same-Day-Billing-Fact-Sheet-ICN908978.pdf

5.2 Private Payers

National Private Payers

Aetna

Aetna offers PCPs a depression program that screens and triages members to appropriate care settings. Participating physicians screen patients for depression with validated screening tools and refer those who test positive to Aetna care planning and case management staff. The plan also identifies patients for screening based on data from its in-house pharmacy benefits manager (PBM) program, as well as by a patient's comorbid conditions. Aetna staff contact patients via telephone at multiple points after treatment and re-administer a depression screening tool (the PHQ-9, a nine item questionnaire). Physicians may consult with an Aetna psychiatrist at any time and may refer their patients to behavioral health specialists with optional assistance from a care manager.

- Aetna Depression in Primary Care Program: http://www.aetna.com/healthcare-professionals/documents-forms/depression-program.pdf

Anthem

Anthem offers its Enhanced Personal Health Care (EPHC) program to PCPs, who are encouraged to screen for depression, alcohol, and drug use, and to promote the use of self-management techniques. Anthem staff support implementation efforts by providing consultation for workflow and process improvement, data analysis, and care management and coordination skill development. All participating providers must use a suite of web-based tools that include a record of all health care services received by their Anthem patients both within and outside of the provider's organization.

Practices that participate in the EPCH program may receive care coordination payments on a PMPM basis, though Anthem notes that local regulation and existing contracts may preclude these payments. Providers who meet both cost and quality targets are eligible for shared savings. Anthem offers EPHC programs in several states including California, Connecticut, Maine, and New Hampshire.

- Patient-Centered Primary Care Collaborative summary of Anthem EPHC program: https://www.pcpcc.org/initiative/anthem-enhanced-personal-health-care
- EPHC Program Description: http://www.anthem.com/ca/provider/f2/s2/t1/pw_e191769.pdf?refer=provider

Cigna

Cigna offers a Collaborative Care Program in several states, including California, Connecticut, Maine, Massachusetts, New Hampshire, and Vermont, in which physician-led care teams with care coordinators employed by the provider receive support from Cigna case managers to link patients to the clinical support programs for chronic condition management or lifestyle management offered by the payer. Medical groups participate in a pay-for-value structure linked to improved outcomes and lower costs.

- Patient-Centered Primary Care Collaborative summary of Cigna's Collaborative Care Program: https://www.pcpcc.org/initiative/cigna-collaborative-care-program

Humana

Humana manages its Integrated Medical and Behavioral Health (IMBH) program through a subsidiary, LifeSynch. The program focuses primarily on case management services provided by medical case managers from Humana and behavioral case managers from LifeSynch.

- LifeSynch IMBH program homepage http://www.lifesynch.com/about/products/behavioral_healthcare/integrated_medical_behavioral_healthcare.asp

UnitedHealthcare (UHC)

UnitedHealthcare (UHC) has a subsidiary, OptumHealth that manages its behavioral health benefit.

- UHC report on primary care delivery advancement http://www.unitedhealthgroup.com/~/media/UHG/PDF/2014/UNH-Primary-Care-Report-Advancing-Primary-Care-Delivery.ashx

Regional Private Payers

California

About 80% of Blue Shield of California (BSCA) members receive behavioral health care under a carve-out agreement with Magellan Behavioral Health. Though it is paid a PMPM fee by BSCA,

Magellan pays its providers on a FFS basis. BSCA currently does not have any payment incentive arrangements with Magellan to encourage BHI into primary care. No detailed information on payment rates or structural approaches to BHI was publicly available from Magellan.[95]

New England

Although nearly all private payers in New England have made efforts to integrate behavioral health services, there is considerable variability among them with regard to how these benefits are paid for and administered. Several plans use behavioral health carve-out organizations to manage mental health and substance use services for their members, while others have developed in-house initiatives based on an alternative payment methodology.

Of those plans with designated carve-outs, both Neighborhood Health Plan of Rhode Island (NHPRI) and Neighborhood Health Plan (based in Massachusetts) contract with Beacon Health Options, while Connecticare and Harvard Pilgrim Health Care (HPHC) use Optum to manage their behavioral health programs. Beacon Health Options offers behavioral health case management services in which members are assigned a case manager to assist the patient and their family in accessing behavioral health care. Beacon does not require pre-authorization for a patient's first 12 outpatient behavioral health visits, and members may self-refer for behavioral health services.[96] Under Optum, patients do not need a referral for routine outpatient behavioral health services such as medication management, psychiatric consultation and evaluation, substance use disorder treatment, and therapy sessions; non-routine services do require prior authorization, however.

Very little information is publicly available with regard to payment models for these carve-outs, though several plans offer additional incentives directly to primary care providers for meeting quality measures associated with behavioral health integration. HPHC, for example, has allocated several Quality Grants to primary care practices (many of which are PCMHs) that add a behaviorist to an existing care team or implement screening for depression and substance use.[97] NHPRI will also reimburse some behavioral health services when they are administered through an in-network PCP[96] while Connecticare covers screening for depression and alcohol abuse as a preventive service when administered in a primary care setting.[98]

Blue Cross Blue Shield of Massachusetts (BCBSMA) and Tufts Health Plan are unique among the New England private payers in offering in-house behavioral health services. In 2009, BCBS MA implemented the Alternative Quality Contract (AQC),[99] which utilizes a global payment methodology designed to include inpatient, outpatient, pharmacy, behavioral health, and other costs and services associated with each of their members while attaining quality targets. These payments are supplemented with a per-patient payment through performance-based incentives based on a provider's ability to meet a number of clinical performance measures related to process, outcomes, and patient experience. Similarly, Tufts Health Plan has integrated and fully managed

mental health and substance use disorder benefits and services, and this allows members to self-refer or they can contact their PCP or the Tufts Health Plan Mental Health Department for help in choosing a network provider.[100] However, some pre-authorization is required for mental health services under some commercial plans depending on the insurance product, and the type and location of treatment. Tufts Health Plan's Coordinated Care Model, which aligns with ACO principles, is built on a tiered approach to cost-sharing and pays providers on a value basis, rather than through FFS.[101]

6. Ongoing US Studies

The table on the next three pages summarizes the ongoing and recently completed studies of BHI in three categories: model of care, screening tools, and technological intervention.

Title	Study Design	Comparators	Patient Population	Primary Outcomes	Estimated Completion Date
Model of Care					
Consultation Liaison and Integrated Care for COPD Patients with Psychiatric Co-Morbidity (COPD_HSRG) NCT01644916	RCT N = 900	Standard care for chronic obstructive pulmonary disorder (COPD) with psychiatric comorbidity Integrated care with team of nurse educators, doctors, case manager, psychologist	• Ages 55-90 • COPD diagnosis • No psychiatric disorder • No terminal illness	• Hospital Anxiety and Depression Scale (HADS) score	December 2015
Stepped Enhancement of PTSD Services Using Primary Care (STEPS UP): A Randomized Effectiveness Trial NCT01492348	RCT N = 666	STEPS UP RESPECT-Mil collaborative care	• Age 18-65 • Active duty military • Has PTSD • No psychosis, bipolar disorder within 2 years • No substance dependence within 1 year • No suicidal ideation within 2 months	• Post-traumatic Diagnostic Scale 3,6, 12 months • Hopkins Symptom Checklist Depression Scale – 20 Item Version (HSCL-20) 3, 6, 12 months	September 2015

Title	Study Design	Comparators	Patient Population	Primary Outcomes	Estimated Completion Date
Research Aimed at Improving Both Mood and Weight (RAINBOW) NCT02246413	RCT N = 404	Lifestyle intervention, and as-needed antidepressant pharmacotherapy to treat comorbid obesity/depression in primary care Usual care	• Age > 18 • Body mass index (BMI) ≥ 30 (≥27 for Asians) • PHQ-9 > 10 • No alcohol/SU disorder • No SMI, bulimia nervosa, terminal illness, diabetes, cardiovascular disease • No ongoing psychiatric care outside of PAMF network	• BMI at 12 months • Depression Symptom Checklist 20 (SCL-20) score at 12 months	March 2019
Treatment of Insomnia and Depression in Elders (TIDE) NCT01648049	RCT N = 46	Integrated cognitive behavioral therapy (CBT) Usual care	• Age > 50 • Not current psychological treatment • No serious suicidality • No significant cognitive impairment • No intrusive/unstable concurrent psychiatric/medical disorders	• Insomnia severity index at 10 weeks, 3 months • Hamilton Depression Scale at 10 weeks, 3 months	March 2015
Brief Cognitive Behavioral Treatment of Deployment-Related Post-Traumatic Stress Disorder (PTSD) Symptoms in Primary Care Settings NCT02291639	RCT N = 60	Brief CBT Minimal contact followed by treatment	• Age > 18 • PTSD Checklist, Stressor-specific (PCL-S) score > 32 • No moderate to severe suicide risk • No severe brain injury	• Change in PTSD symptom and/or diagnosis from baseline at 2 weeks, 8 weeks, 6 months using PTSD Symptom	August 2015

Title	Study Design	Comparators	Patient Population	Primary Outcomes	Estimated Completion Date
			• No alcohol dependence, psychotic disorder, significant dissociative disorder	Scale, Interview Version and PCL–S	
Screening Tools					
An Evaluation of Innerview, a Web-Based Tool to Support the Integration of Mental Health in the Primary Care Setting NCT02025647	Observational N = 150	Innerview mental health clinical decision support tool	• Age > 18 • Men and Women • Can read English at 8th grade level • Internet Access • No current psychosis	• Accuracy of data collected • Reliability for identifying DSM-IV-TR criteria	January 2015
Technological Intervention					
Enhancing Delivery of Problem Solving Therapy (PST) Using SmartPhone Technology NCT01891734	RCT N = 40	PST PST + Moving Forward (mobile app)	• Age > 18 • Depression and/or Anxiety • No SMI or substance use	• Depression • Anxiety • Stress	March 2015
Online Treatments for Mood and Anxiety Disorders in Primary Care NCT01482806	RCT N = 700	Computerized CBT + internet support group (N = 300) Computerized CBT (N = 300) Usual Care (N = 100)	• Age 18-75 • Current major depression, panic, or anxiety disorder • PHQ-9 > 10 • No SMI • No alcohol/substance use disorder	• Mental health-related quality of life at 6 months • Secondary: Hamilton Rating Scale for Depression (and Anxiety) at 6 months	December 2015

7. Evidence Review (Methods & Results)

7.1 Effectiveness of Programs that Integrate Behavioral Health into Primary Care

Our review of the evidence on the effectiveness of programs that integrate behavioral health into primary care can be found in the sections that follow. Note that, because of our focus on studies of BHI in a primary care setting and the requirement that a majority of patients have a depression and/or anxiety diagnosis, the vast majority of available studies focused on mental health services provided to these patients – in other words, treatment for substance use disorders as well as interventions for other behavioral issues (e.g., smoking cessation, lifestyle changes) were not a focus of the literature we selected for review.

Methods

More than 25 systematic reviews of randomized trials have assessed the effectiveness of BHI in the primary care setting among patients with depression and/or anxiety disorders. Findings from these reviews indicate that integrating mental health into primary care using the Collaborative Care Model (CCM) improves mental health outcomes such as depression and anxiety, although the effects are modest.[102-123] Because of the wealth of prior systematic reviews, we elected to focus our assessment of key systematic reviews as well as an updated search of more recently-published literature (see below).

We focused on two large, higher-quality systematic reviews from AHRQ (2008)[102] and the Cochrane Collaboration (2006, 2012 update)[103,106] that matched our project scope: a) use of an intervention that integrated primary care and mental health, b) delivery of the intervention predominantly in the primary care setting, c) ≥50% of the population diagnosed with depression and/or anxiety disorders, and d) minimum of 6 months of follow-up in available studies.

We conducted a systematic literature search using the search criteria from the 2012 Cochrane review[1] to extend the review to include the period from December 2013 to February 2015. The search identified additional publications from studies already identified in the AHRQ and Cochrane reviews but no new randomized trials or comparative trials evaluating integration in the primary care setting.

We specifically searched for comparative observational studies evaluating frequently cited models of integration such as the Behavioral Health Consultant model but found none. Experts referred us to small case series, but no comparative studies were identified. High-quality observational studies such as those using repeated measures time series methods, cohort designs with careful adjustment for confounders, or instrumental variable analysis have the potential to extend the

literature from the randomized trial to the real world. However, no high quality observational studies were identified.

The quality of individual studies was assessed by considering the domains listed below, which are adapted from AHRQ's methods guide:[124]

- Similarity of baseline characteristics and prognostic factors between comparison groups
- Well-described methods for randomization and concealment of treatment assignment
- Use of valid, well-described primary outcomes
- Blinding of subjects, providers, and outcome assessors
- Intent-to-treat analysis (all randomized subjects included)
- Limited and non-differential loss to follow-up
- Disclosure of any conflicts of interest

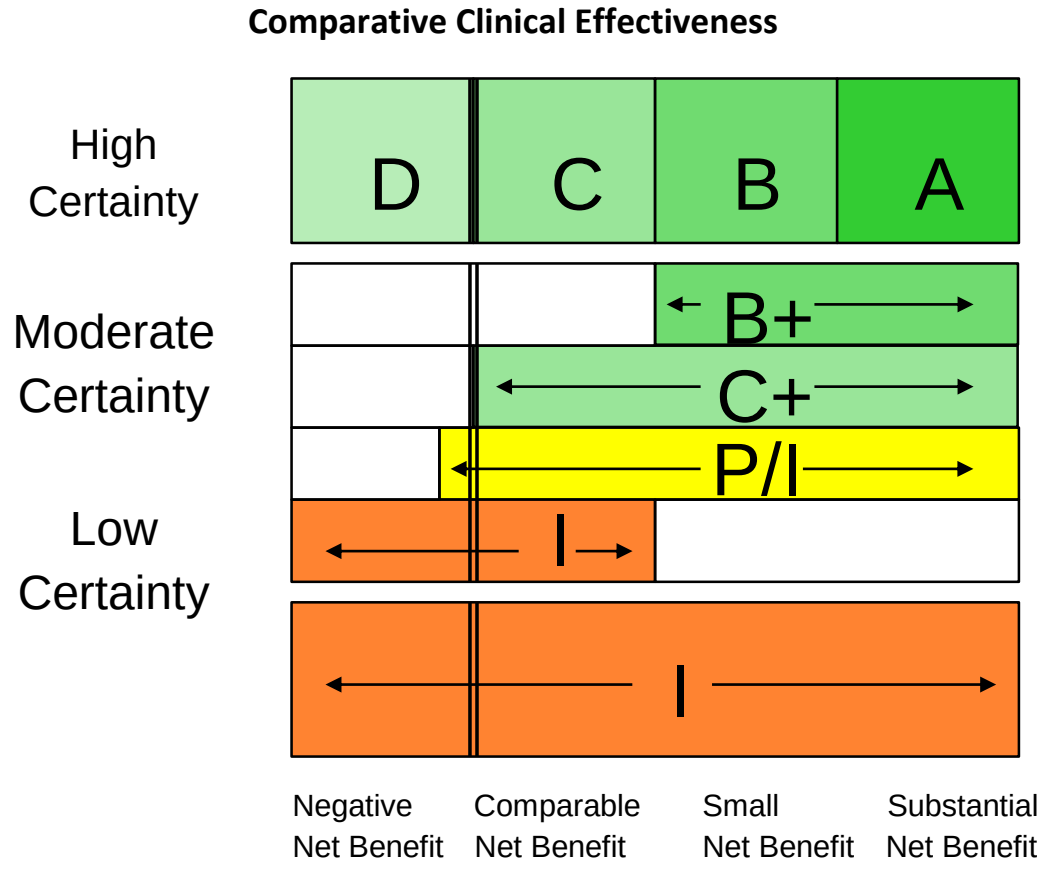
There was no way to blind participants to their group assignment in studies of integrated care. This is particularly important in studies of depression and anxiety because outcome assessment is subjective and in part based on patient report of symptoms. Thus, all of the studies have some risk for bias.

We used the ICER Evidence Rating Matrix to evaluate the evidence for the impact of integrated care on depression, anxiety, quality of life and other outcomes.[125] The evidence rating reflects a joint judgment of two critical components:

a) The **magnitude** of the difference between a therapeutic agent and its comparator in "net health benefit" – the balance between clinical benefits and risks and/or adverse effects AND
b) The level of **certainty** in the best point estimate of net health benefit.

The matrix is depicted in graphic form in Figure 3 on the next page.

Figure 3: ICER Evidence Rating Matrix



A = "Superior" **-** High certainty of a substantial (moderate-large) net health benefit
B = "Incremental" **-** High certainty of a small net health benefit
C = "Comparable"- High certainty of a comparable net health benefit
D="Negative"- High certainty of an inferior net health benefit
B+="Incremental or Better" – Moderate certainty of a small net health benefit, with high certainty of at least incremental net health benefit
C+="Comparable or Better" - Moderate certainty of a comparable net health benefit, with high certainty of at least comparable net health benefit
P/I = "Promising but Inconclusive" - Moderate certainty of a small or substantial net health benefit, small (but nonzero) likelihood of a negative net health benefit
I = "Insufficient" – Either moderate certainty that the best point estimate of comparative net health benefit is comparable or inferior; or any situation in which the level of certainty in the evidence is low

Results

We identified 94 trials that randomized more than 25,000 patient to integrated care for mental health outcomes or usual care. All of the trials studied some form of the CCM. None of the trials co-located a psychiatrist in primary care nor were there any trials evaluating a unified, collaborative treatment plan. The large majority evaluated collaborative care in primary care clinics (83%, 78/94). Five studies were initiated in the hospital and managed outside of primary care (three for cardiac

disease, two for trauma focusing on PTSD prevention). Eight studies evaluated collaborative care in specialty clinics (four oncology, two neurology, one HIV, and one occupational health).

Cluster randomization was used in 24% of the studies (23/94). The remainder used simple randomization at the patient level. Most of the studies were done in the US (73%), but there were 10 studies from the United Kingdom (UK), five from the Netherlands, and three from Chile.

A wide variety of treatment settings were represented. These included integrated health maintenance organization (HMO) systems like Kaiser Permanente or Group Health Cooperative of Puget Sound (30%), the VA (18%), multi-payer practices (47%), and studies in multiple systems (5%).

The collaborative care intervention focused solely on medication management in 38% of the studies, psychological therapy in 12% of the studies, and both were available but not used for all patients in 50% of the studies. The case manager had professional training in psychological care in 57% of the studies. The comparison group was usual care or enhanced usual care. Usual care was almost always coordinated care with separate locations for primary care and mental health and limited communication between the two. In some studies, there was systematic screening for depression or anxiety with notification of patients and/or their PCPs about the diagnosis. This is referred to as enhanced usual care.

The 2008 AHRQ review focused on randomized and high quality quasi-experimental design studies performed in the US.[102] For their review, AHRQ considered family physicians and general internists to be PCPs. Mental health specialists included psychiatrists, psychologists, social workers, and psychiatric nurses. AHRQ defined four levels of integrated care based on 1) the degree of shared decision-making between specialists and primary care, and 2) co-location of primary care and specialists. Their four categories, from least integrated to most, are: 1) PCP-directed care with specialist care offsite ("low" integration), 2) coordinated decision-making and off-site specialty services OR PCP-directed decision-making and on-site specialty services ("intermediate II" integration, 3) coordinated decision-making and on-site specialty services ("intermediate I" integration), and 4) consensus decision-making and on-site specialty services ("high" integration). While no formal crosswalk to the SAMHSA-HRSA CIHS framework that is used in this assessment has been published, AHRQ's low integration roughly corresponds to SAMHSA-HRSA CIHS level 1 (minimal collaboration), intermediate II integration corresponds to SAMHSA-HRSA CIHS levels 2 and 3 (basic collaboration), intermediate I integration approximates SAMHSA-HRSA CIHS level 4 (close collaboration/co-located care), and high integration represents SAMHSA-HRSA CIHS levels 5 and 6 (integrated care).

The AHRQ review found substantial evidence that integrated care improved mental health outcomes. The bulk of the evidence was for depression, but integration also improved outcomes for

patients with anxiety disorders. The studies reported that integrated care improved symptom severity, treatment response, and remission compared with usual care.

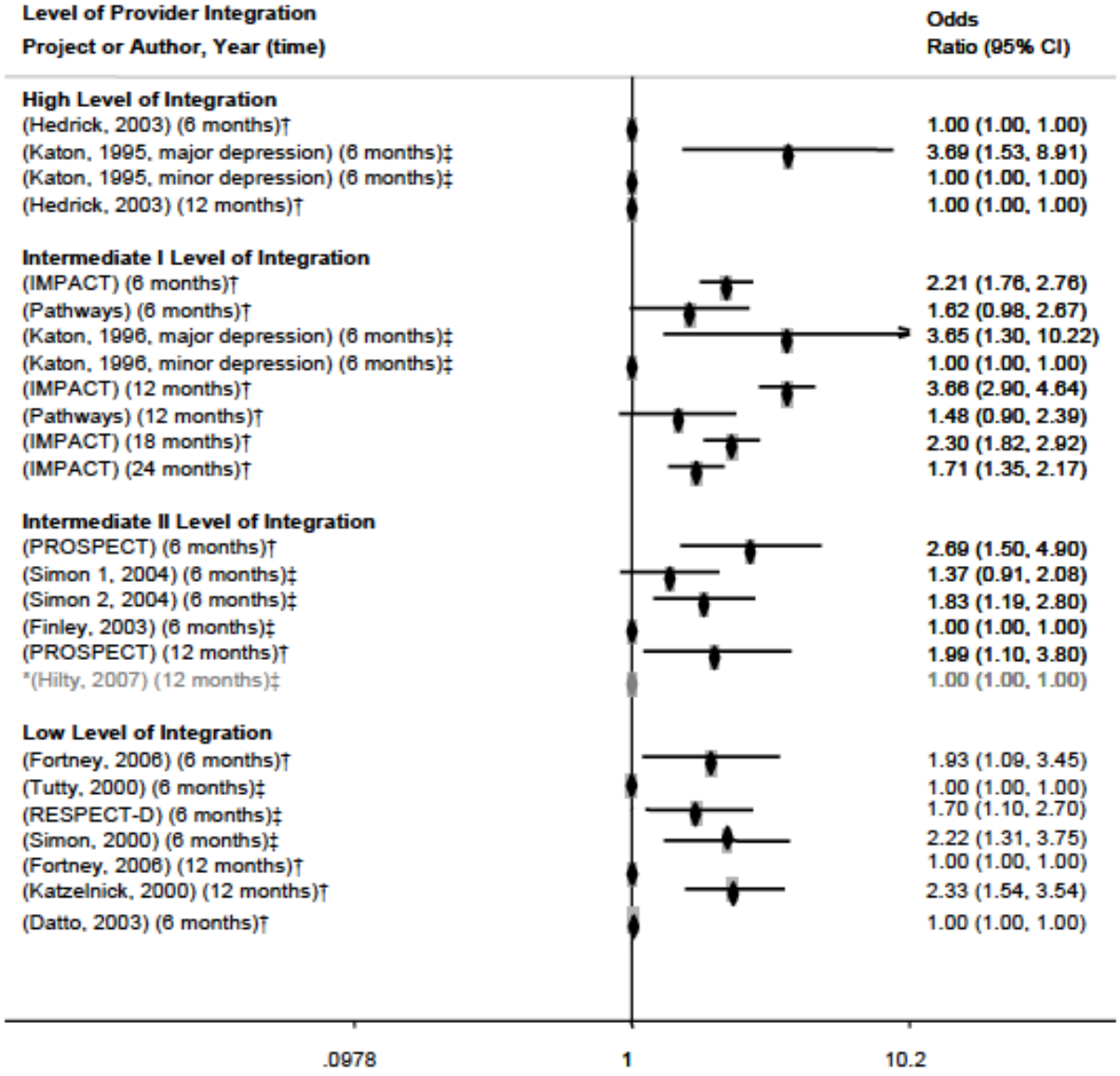
An earlier systematic review and meta-analysis of collaborative care published in 2006 focused solely on depression.[106] The authors found strong evidence of benefit from 6 months to two years, and fewer studies, and weaker, though still significant, benefit through 5 years of follow-up (see detailed findings in the sections that follow). They did not find evidence of publication bias. The Cochrane Collaboration published an updated systematic review of mental health integration into primary care in 2012.[103] Their search results demonstrate the depth and breadth of the literature on this topic. They identified 435 articles describing 79 randomized trials. The same group performed a more detailed meta-analysis focused on depression in order to identify factors associated with better outcomes.[110] The results of these new meta-analyses are described according to key outcomes of interest beginning on page 44.

Correlation Between Levels of Integration and Outcome

As noted above, all of the randomized trials used interventions based on the CCM. AHRQ's own approach to categorization of the intensity of integration based on the decision-making process and co-location of services (described above) found no correlation between the intensity of integration and the rates of depression response or remission.[102] Figure 5 from the AHRQ review, replicated as Figure 4 on the next page, demonstrates graphically the lack of correlation between level of integration and treatment response.

In addition, there are no head-to-head trials directly comparing higher levels of integration to intermediate levels of integration. Thus, there is insufficient evidence to assess whether higher levels or intensity of integration offer incremental benefit.

Figure 4: Treatment Response by Level of Provider Integration



*Studies in grey indicate low quality
†Diagnosed patients—usual care
‡Patients initiating treatment—usual care
§Diagnosed—enhanced referral

Source: Butler, M et al. Integration of mental health/substance abuse and primary care. AHRQ Publication No. 009-E003. 2008

Overall Impact of Collaborative Care: Key Outcomes

1. Depression

As noted above, there are a large number of randomized trials of collaborative care for depression. The 2006 cumulative meta-analysis estimated that the randomized trial evidence on the mental health benefits of collaborative care over usual care was statistically significant by the year 2000.[111] Since then, at least 56 additional randomized trials have been published, the vast majority of which demonstrated improvements in depression outcomes with collaborative care compared with usual care. Three of the larger trials are described briefly below, followed by the summary statistics from the meta-analysis.

The Partners in Care (PIC) trial was a large randomized trial that influenced subsequent trials of collaborative care.[126] Forty-six primary care clinics in six US managed care organizations were randomized to either one of two quality improvement (QI) programs or usual care. The QI programs included training local experts and nurse specialists to provide clinician and patient education, identification of a pool of potentially depressed patients, and either nurses for medication follow-up or access to trained psychotherapists. Usual care included mailing practice guidelines for depression to providers. The QI-meds intervention focused on enhancing tools for supporting medical management of depression. The QI-therapy intervention focused on enhancing tools for providing cognitive behavioral therapy (CBT) for depression. Both aimed to increase the initiation of and adherence to antidepressant medications or psychotherapy. The two interventions were combined to test their primary hypothesis: that a QI program would improve depression quality of care and patient outcomes. Patients in QI (n = 913) and control (n = 443) clinics did not differ significantly at baseline in service use, quality of life, or employment. At 6 months, 50.9% of QI patients and 39.7% of controls had counseling or used antidepressant medication at an appropriate dosage (P<.001), with a similar pattern at 12 months (59.2% vs 50.1%; P = .006). There were no differences in probability of having any medical visit at any point (each P > or = .21). At 6 months, 47.5% of QI patients and 36.6% of controls had a medical visit for mental health conditions (P = .001), and QI patients were more likely to see a mental health specialist at 6 months (39.8% vs 27.2%; P<.001) and at 12 months (29.1% vs 22.7%; P = .03). At 6 months, 39.9% of QI patients and 49.9% of controls still met criteria for probable depressive disorder (P = .001), with a similar pattern at 12 months (41.6% vs 51.2%; P = .005). Initially employed QI patients were more likely to be working at 12 months relative to controls (P = .05).

A second example is the Improving Mood – Promoting Access to Collaborative Treatment (IMPACT) trial, which incorporated what was learned from the PIC trial and is the largest of the randomized trials.[127] It has become a resource for subsequent clinical trials and for organizations attempting to implement meaningful collaborative mental health care (see website: http://impact-uw.org/about/). The study randomized patients at 18 clinics and followed 1,801 depressed older

adults for two years in the primary analysis. Depressed patients were identified either by their PCP or through systematic screening using the PRIME-MD 2 question screening instrument.[128] The 18 participating clinics were associated with eight health care organizations in Washington, California, Texas, Indiana, and North Carolina and included health maintenance organizations (HMOs), traditional FFS clinics, an independent provider association, an inner-city public health clinic, and two VA clinics. Intervention patients had access for up to 12 months to a depression care manager who was supervised by a psychiatrist and a primary care expert. The care manager offered education, care management, and support of antidepressant management by the patient's PCP or brief psychotherapy for depression – Problem Solving Treatment in Primary Care (PST). The control group received enhanced usual care because patients were informed of their diagnosis and encouraged to seek treatment from their PCP. Depression scores using the symptom checklist 20[129] (SCL-20) in the intervention group declined from 1.68 at baseline to 0.99 at one year, and the score for those in the control group declined from 1.67 to 1.39 (p for between group differences < 0.001) (see Table 5 below). The percentage of patients responding to treatment (at least a 50% reduction in depression score) was 45% in the intervention group and 19% in the control group (p<0.001).

Table 5. One Year Outcomes in the IMPACT Trial

	Collaborative Care	Usual Care	P
Score (SCL-20)	1.7 to 1.0	1.7 to 1.4	<0.001
Response (≥50%)	45%	19%	<0.001
Remission	25%	8%	<0.001
Antidepressant use	73%	57%	<0.001
Satisfaction with depression care	76%	47%	<0.001

Finally, the Quality Enhancement by Strategic Teaming (QuEST) trial randomized 12 clinics across the US that did not have mental health clinicians on site.[130] Clinics randomized to the intervention received a brief training program for two PCPs, one nurse, and one administrative staff member focused on the identification and management of major depression. Administrative staff at both the intervention and usual care sites screened patients for depression. Patients already on treatment were included in the study. In patients beginning a new treatment episode, their average depression score on the Center for Epidemiologic Studies – Depression (CES-D) scale[131] decreased from 55.1 to 33.4 in the intervention arm and from 52.7 to 39.2 in the usual care arm. Thus, the intervention improved depression symptoms by 8.2 points more than usual care (95% confidence interval [CI], 0.2 to 16.1; P =.04). Within this group, the intervention improved depression symptoms by 16.2 points (95% CI, 4.5 to 27.9; P =.007), physical role functioning by 14.1 points (95% CI, 1.1 to 29.2; P =.07), and satisfaction with care (P =.02) for patients who reported antidepressant medication was an acceptable treatment at baseline. In the QuEST study, patients already in treatment at enrollment did not benefit from the intervention.

We did not place any age restrictions in our search of the literature. The majority of the studies focused on adult populations. For example, the IMPACT trial exclusively studied patients 60 years of age and older. Three randomized trials evaluated the CCM in pediatric populations and found similar benefits in this younger population.[132-134] Thus, there is evidence for effectiveness of the collaborative care model for depression across all age groups and the effect size appears similar.

Collaborative care may decrease disparities in the treatment of depression among some race/ethnicity subgroups. In one VA study, African American and Latino patients had significantly greater improvements in depression scores than did white patients.[135] However, this appeared to be driven by the lack of response by Caucasian patients to the intervention. Most other studies failed to find a significant interaction between race/ethnicity and response to collaborative care.[136-140]

The 79 studies identified for this assessment used many different validated tools to assess depression (e.g., HAM-D, SCL-20, CES-D, PHQ-9).[141] In order to compare and combine the results across studies, the meta-analysis used an outcome called the standardized mean difference (SMD). This is a standard technique used in meta-analysis, including the Cochrane reviews used for this assessment, to provide a uniform statistic across all studies.[103,104] The SMD is defined as the difference in the mean outcome between groups divided by the standard deviation in the outcome. In essence, it represents the number of standard deviation units that separate the means in the experimental and control groups in an individual study. The SMD in depression symptoms between collaborative and usual care was 0.28 (95% CI 0.23 to 0.33) in the most recent meta-analysis.[110] There is no standard for interpreting the magnitude of the SMD, though some authors have proposed that an SMD of 0.2 is small, 0.5 is moderate, and 0.8 is large.[142]

Using the ICER rating, our judgment is that there is high certainty of a small net benefit for collaborative care in improving symptoms of depression compared with usual care. There is high certainty of benefit because in all of the larger, well-done randomized trials, the p values for greater improvements in depression scores or depression remission are low (<0.001) and the findings are consistent in the smaller studies. However, the degree of improvement in depression for patients in the intervention group was only modestly greater than that of the usual care group (SMD < 0.3, less than half achieved remission).

2. Anxiety

Only seven studies (7.4%) focused on anxiety. These included studies of single types of anxiety such as panic attacks or PTSD, as well as studies allowing all forms of anxiety disorders. The SMD for anxiety symptoms was 0.33 (95% CI 0.19-0.47). The confidence interval is relatively wide reflecting the lower number of studies and fewer patients with anxiety symptoms randomized in these trials.

A high quality example of collaborative care for anxiety is the Coordinated Anxiety Learning and Management (CALM) study.[143] This study randomized patients at 17 primary care clinics in four US cities to collaborative care or usual care. The anxiety disorders included panic disorder, generalized anxiety disorder, social anxiety disorder, and PTSD. The study followed 1,004 patients with anxiety disorders (with or without major depression) for 3 to 18 months. PCPs identified and referred patients to the study with the assistance of an optional 5-question screening tool for anxiety.[144] The CALM intervention, which was modeled on the IMPACT intervention, allowed patients the choice of CBT, medication, or both by non-expert care managers who also assisted primary care clinicians in promoting adherence and optimizing medications. By six months, a larger proportion of patients in the collaborative care arm achieved a response (57% compared with 37%, p<0.001) or complete remission (43% compared with 27%, p<0.001). Both differences remained significant at 12 and 18 months (p<0.001 for all comparisons) (see Table 6 below).

Table 6. One Year Outcomes in the CALM Trial

	Collaborative Care	Usual Care	P
Score (BSI-12)	16.2 to 8.1	16.3 to 10.8	<0.001
Response (≥50%)	64%	45%	<0.001
Remission	51%	33%	<0.001
Appropriate counseling	49%	27%	<0.001
Satisfaction with anxiety care	3.9/5	3.4/5	<0.001

Overall, we judge there to be moderate certainty of a small net benefit for collaborative care in improving symptoms of anxiety compared with usual care. There is moderate certainty of benefit because in the large, well-done randomized trial, the p values for greater improvements in anxiety scores as well as anxiety response and remission are low (<0.001), but there are far fewer studies than for depression. The degree of improvement in anxiety for patients in the intervention group was only modestly greater than that of the usual care group, and only about half achieved remission.

3. Chronic Medical Conditions

Most of the studies for medical conditions other than diabetes, such as cardiovascular disease, evaluated and managed patients in the hospital or specialty clinics rather than in primary care; however, chronic pain has been studied in the primary care setting.

Chronic pain and depression are common co-morbidities. The RESPECT trial found that the collaborative care intervention for depression did not change pain outcomes and that patients with chronic pain had worse depression outcomes.[145] The IMPACT trial, alternatively, found a significant 0.6/10 point greater improvement in pain for patients in the collaborative care arm of the study among patients with depression and chronic pain from arthritis.[146] Only one randomized trial evaluated the effect of a collaborative care intervention focused on both depression and pain.[147]

This trial found that the collaborative care intervention significantly improved both depression and pain outcomes.

There have been a large number of studies of the impact of integration of mental health services into primary care on diabetes outcomes. Diabetes is very common in primary care, and many patients with diabetes also suffer from depression. There were sufficient published trials in 2014 to perform a meta-analysis of the trials of collaborative care in patients with both depression and diabetes.[104] All of the studies identified patients with diabetes from registries or medical records. Two of the studies then selected patients currently on antidepressant medication or diagnosed with depression in the past year. The remaining five screened the patients with diabetes for depression. Six of the seven studies were done in the US. As an example, in a high-quality trial published in the New England Journal of Medicine (NEJM) by Katon and colleagues, hemoglobin A1c levels decreased from 8.1% to 7.3% in the collaborative care group and from 8.0% to 7.8% in the usual care group ($p<0.001$ for between group difference).[148] Patients in the collaborative care group also had greater decreases in depression scores ($p<0.001$), LDL-cholesterol ($P<0.05$), and there was a trend towards a greater reduction in systolic blood pressure (between group difference of -3.4 mm Hg, 95% CI -6.9 to +0.1). Our updated search did not identify additional trials to add to this meta-analysis.

In the meta-analysis of the seven randomized trials, patients in the collaborative care arms had significantly lower depression scores (SMD -0.32, 95% CI -0.11to -0.53) and lower hemoglobin A1c levels than patients in the usual care arms (-0.33%, 95% CI -0.66% to -0.0%).[104] However, there was significant heterogeneity across the trials for both outcomes ($p=0.001$).

We judge there to be low certainty of a small net benefit for collaborative care in improving both diabetes control and depression compared with usual care in patients with both diagnoses. The level of certainty is low because of the small number of studies and the statistical heterogeneity of the results. In addition, the change in hemoglobin A1c was of borderline statistical significance. The magnitude of the benefit (change in hemoglobin A1c) was relatively small: this is less than half that expected with the addition of a single oral agent for type 2 diabetes. These differences may translate into improvements in the microvascular and macrovascular complications that decrease the quantity and quality of life for patients with diabetes, but there have been no studies of sufficient size or length to address those questions. There is insufficient evidence to judge the net benefit of collaborative care for other health outcomes, such as chronic pain.

4. Quality of Life

Many of the randomized trials of depression reported measures of quality of life. The most commonly used generic instrument was the Short Form 12 (SF12) or the longer Short Form 36 (SF36), which measure several quality of life domains including mental health and physical health.[149]

Collaborative care improved scores on the mental health quality of life subscale more than usual care in the first 6 months, and those gains were preserved through 24 months (SMD 0.20-0.26).[103] The trend still favored collaborative care beyond 24 months (SMD 0.10), but it was no longer statistically significant. There were no early improvements in the physical health quality of life subscale, but the differences became significant between 13 and 24 months (SMD 0.10, 95% CI 0.02 to 0.17).

We judge there to be high certainty of a small to moderate net benefit for collaborative care in improving quality of life in the mental health domain compared with usual care. There is low certainty of a small net benefit for collaborative care in improving quality of life in the physical health domain compared with usual care.

5. Patient Satisfaction

Patients in the randomized trials included in the systematic review were generally more satisfied with collaborative care.[103] In the 34 studies that assessed patient satisfaction, 22 reported statistically significant differences in favor of collaborative care, 8 reported non-significant trends toward greater satisfaction, and 4 reported non-significant trends towards decreased satisfaction. Patients were typically asked about their satisfaction using a single question (24 studies). The remaining 10 studies used validated questionnaires on patient satisfaction, such as the Client Satisfaction Questionnaire or the Patient Evaluation of General Practice Care instrument. The size of the benefit was modest but highly statistically significant (SMD 0.31, 95% CI 0.13 to 0.49). One example from a large, well-done trial is patient satisfaction with depression care as described for the IMPACT trial above in the section on depression outcomes.[127] Patients in the intervention arm of the IMPACT trial had greater overall satisfaction (76% reporting care as very good or excellent) compared with the control group (47%, $p<0.001$).

We judge there to be high certainty of a small to moderate net benefit for collaborative care in improving patient satisfaction compared with usual care. The majority of studies reported significantly greater satisfaction with care (22/34, 65%), and the summary estimate from the meta-analysis was highly significant ($p<0.001$). However the differences between the collaborative care groups and the usual care groups were not large (SMD 0.31).

Summary

There is a very large body of randomized trials evaluating collaborative care. In some interventions, existing staff were trained to systematically screen for behavioral health issues, while others relied on PCPs to identify the patients. Most included some form of a care manager to ensure regular monitoring of patients for side effects and treatment response, but the level of training of the care managers varied across studies. Some interventions focused solely on antidepressant medications,

some on psychological interventions, and some used both forms of therapy. These studies across widely varying delivery systems and patient subgroups demonstrate with great consistency that collaborative care improves depression and anxiety outcomes, although the absolute benefits are only small to modest. Furthermore, collaborative care improves patient quality of life and satisfaction with care. There is inadequate evidence to assess whether greater integration would lead to larger improvements in outcomes.

7.2 Components of BHI Associated with Treatment Success

Methods

Research on the impact of individual components of BHI on depression-related or other health outcomes is extremely limited. Moreover, efforts to quantitatively measure the relative contribution of each program component may be confounded by lack of detail or poor reporting (e.g., missing baseline clinical characteristics, lack of data on contact or session frequency), as well as overarching concerns of publication bias—the tendency to publish only studies with positive findings. Nevertheless, Coventry and colleagues conducted a recent meta-regression of factors of collaborative care associated with improvement in depressive symptoms and use of antidepressant medication in 74 randomized controlled trials (RCTs).[110] In univariable analyses, factors statistically-significantly ($p<0.05$) associated with improvement in depressive symptoms included recruitment method (systematic screening vs. clinician referral), presence of a chronic physical condition, inclusion of a structured psychological intervention alone or in combination with medication management (e.g., behavioral activation, problem solving), and scheduled (vs. ad-hoc) supervision of care coordination. However, only the presence of a structured psychological component (which occurred over 2-21 scheduled sessions, depending on the study and module used) remained significant in a multivariable model ($p=.03$).

To complement Coventry et al.'s approach, we conducted an analysis of the factors of integrated care most frequently reported in studies with successful outcomes. We began our search with the 33 randomized clinical trials evaluated in the 2008 AHRQ review.[102] In their review, the authors distilled the various characteristics of integration programs into summary tables. Trials that incorporated more than one intervention arm were analyzed separately according to each arm's model of integrated care. From the original 33 trials, we eliminated studies that had less than six months of follow-up, included a majority of patients with mental health disorders other than anxiety or depression, included adolescent study populations, or did not a show a statistically-significant impact of integration on health outcomes relative to limited interventions or usual care. Treatment success was primarily related to improvements in mental functioning scores according to validated instruments (e.g., World Health Organization Disability Scale, Hamilton Depression Rating Scale), and/or improved medication adherence. After application of all entry criteria, a total of 29

studies remained from the original AHRQ sample, encompassing 31 models of integrated care (two of which had two intervention arms with different program components).

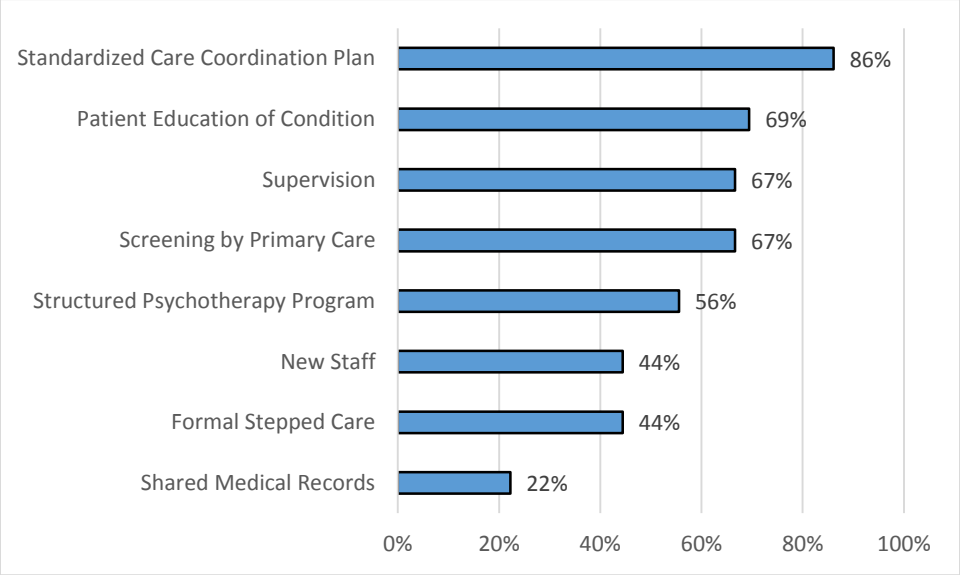
We reviewed these studies, as well as studies recommended in a list of relevant literature in a 2010 AHRQ paper discussing additional research needs on this topic.[108] Finally, a manual search of recent papers co-authored by the primary investigators of the original studies examined in the 2008 AHRQ review was also performed. Using these channels, we identified an additional five studies meeting all entry criteria and with positive findings, for an overall total of 34 studies of 36 models of integrated care.

Study Findings

We identified 36 models of integrated care that reported statistically-significant improvements in one or more primary outcomes of interest, such as sustained improvement in depression or anxiety symptoms, likelihood of receipt of antidepressant therapy, and medication adherence. The most common program component across successful models was inclusion of a standardized care coordination plan that involved regular interaction with both patient and physician (86%), followed by formal patient education at 69%. Both supervision of care coordinators and systematic screening in primary care were included in two-thirds of successful models, while inclusion of a standardized schedule of psychotherapy appeared in approximately half. The addition of new dedicated staff, presence of formalized stepped care plans, and use of shared medical records were the least common program components. Only two models included all eight components.[150,151]

We identified 36 models of integrated care that reported statistically-significant improvements in one or more primary outcomes of interest, such as sustained improvement in depression or anxiety symptoms, likelihood of receipt of antidepressant therapy, and medication adherence. Figure 5 on the next page presents the discrete program components that we identified in available studies and the frequency with which they were reported in studies with successful outcomes. In descending order of frequency, these components included a standardized care coordination plan (i.e., scheduled interaction between a care coordinator and the patient, scheduled feedback to the clinical care team), provision of patient education of a diagnosed behavioral health condition, supervision of care coordinators, systematic screening to identify patients with behavioral health conditions in the primary care setting, availability of a structured psychotherapy program featuring a standardized schedule within the primary care setting, hiring new staff dedicated to the integration effort, formal stepped care (i.e., a protocol for care in which treatment is adjusted according to a patient's response), and shared medical records (i.e., a common information system for participating providers to track a patient's progress). A detailed examination of each of these eight components can be found in the sections that follow.

Figure 5. Number and Frequency of Studies Identifying Selected Key Components of Integration



Standardized Care Coordination Plan

The most common program component found in 31 (86%) models of integrated care was a standardized protocol for interacting with patients following their initial visit. These 31 models reported having a treatment schedule in which care managers or other health care professionals, including pharmacists, nurses, or licensed therapists, had regular contact with patients about their progress. These encounters were frequently conducted via telephone, though in-person appointments were also provided depending on the patient's response to treatment.[152] In addition to reassessing a patient's condition, patients were sometimes given homework assignments to encourage them to remain active in their treatment.[130] Other programs advocated self-monitoring and allowed patients to determine their level of interaction and duration of participation according to their individualized need.[153,154] The details of these meetings were shared either formally or informally with other members of the patient's care team and often were entered into EHR databases. Direct contact with the PCP was somewhat less common, with the exception of situations where patients were not responding to therapy.[155,156] Across all models, the duration of these scheduled sessions ranged from eight weeks to one year and varied in contact frequency, though the rate of encounters generally decreased over time as the patient's condition improved and they entered a maintenance phase of care.[157,158]

Patient Education of Condition

Twenty-five (69%) of the models of integrated care we reviewed included a patient education component. While detailed descriptions of the particular elements of each patient education program were limited, the timing, delivery, and content of such programs have some commonalities. Education was most often delivered through educational materials distributed to

patients or through interaction with a care manager or therapist. Educational materials consisted of pamphlets, videotapes, and workbooks. These materials described the biology of a particular behavioral health condition, physical and emotional symptoms of the condition, time course and effectiveness of medication, potential adverse effects of medication, and how both psychotherapy and medication could improve health outcomes. Education typically occurred before or during the initial phases of care, although one study specified that education was emphasized during each contact point with a patient.[159]

Supervision

The reporting of supervision of staff assigned to coordinate the physical and mental health needs of patients, which was most often a care manager, was included in 24 (67%) models. In almost all models, this role was filled by a psychiatrist, even when the individual was not onsite. One program[154] had an offsite clinical psychologist acting as a supervisor to nurses, with weekly check-ins by telephone and one on-site visit per month. In the QuEST intervention, which sought to make only minor changes in primary care clinics to improve care for patients with major depression, the PCP supervised the clinic nurses.[130] Neither of these programs employed a care manager or mental health professional on site. Another program,[161] which was based on the Wagner Chronic Care model,[160] utilized a team of medical professionals that included a psychiatrist, psychologist, internist, and family practitioner all acting in a supervisory capacity to the care manager.

Screening by Primary Care

Despite an emphasis on systematic screening for depression in primary care as a central component of integration, such screening was only described in 24 (67%) of 36 successful integrated models. Other methods of identification included searches of medical databases, pharmacy records, or patient registries.[162] Interventions in which systematic screening was performed typically cited a validated screening tool (e.g., PRIME-MD) as the method of case identification. Those conducted at VA sites had an initial assessment by a PCP,[163,164,150] likely due to both the influence of the IMPACT intervention,[90,101] in which PCPs screened participants for core depression symptoms in a baseline interview prior to providing treatment, and a high prevalence of mental health issues in VA patients. Screening appears to have been put in place in these programs primarily to identify patients with mental health conditions who are also high utilizers of health care generally.[165,166] However, as noted in the AHRQ review, systematic screening is only one of many elements to improve patient care, and screening alone has been shown to be ineffective in improving outcomes.[102]

Structured Psychotherapy Program

There were 20 (56%) models of BHI that incorporated some form of standardized and scheduled psychotherapy into care delivery for all identified patients. These programs varied in methodology

and number of sessions. Organizations that implemented variations of the IMPACT model, for example, followed a six-to-eight session model of psychotherapy developed in the United Kingdom, known as Problem Solving Therapy for Primary Care (PST-PC).[153,167-169] Other interventions used structured CBT[162,170-175] or cognitive processing therapy.[176] In the TEAMcare model, patients received a less formal method of psychotherapy through "motivational and encouraging coaching" in which nurses helped patients solve problems and improve both medication adherence and self-care.[98] Two models of integration that were reviewed did not directly offer psychotherapy as an integral part of primary care but instead provided a "warm hand-off"[177] or "assisted referral"[161] for identified patients.

In some models where structured psychotherapy was made available, patients could decide whether or not to receive the therapy after consulting with the care team. For example, in the Prevention of Suicide in Primary Care Elderly: Collaborative Trial (PROSPECT) model, Partners in Care (PIC) model (medication arm), and the model implemented by Price and colleagues, treatment options were discussed and decided upon in collaboration with patients.[171,173,178] Likewise, the IMPACT model recommended psychotherapy to patients according to their preferences and response to antidepressant medications.[167]

Therapy was completely or partially administered by telephone[169,154,179,174,162,170] or interactive video conference[176] in several of the integrated models reviewed. One of these programs[174] provided six half-hour cognitive-behavioral sessions delivered over the telephone by a master's-level therapist trained in counseling psychology. Another model, from the Collaborative Care for Anxiety and Panic (CCAP) study, allowed patients who completed at least three CBT sessions in person to receive subsequent sessions over the telephone. In addition, patients received "booster sessions" over the telephone "to monitor clinical status, reinforce proper medication use and cognitive-behavioral skills, and make further medication recommendations if necessary."[170]

Psychotherapy sessions were delivered by a range of mental health professionals with various levels of experience and education. These were most often administered by individuals acting as care managers or behavioral health specialists, including psychologists, social workers, and nurses who had a master's- or doctoral-level academic degree.[153,162,168,179-181]

New Staff

We identified 16 (44%) programs in which new personnel were incorporated into and dedicated to the integrated care model;[102] the remainder focused on retraining existing staff or did not provide details on this component. The interventions that reported hiring new staff often did not specify the number or type of new staff members that were recruited, but many described the addition of a care manager position to the program. Care managers' roles included helping PCPs recognize behavioral health conditions, offering recommendations for treatment, monitoring symptoms and

medication side effects, delivering psychotherapy, and following up with patients.[180] As noted by Butler et al., prior experience, education level, and training requirements of care managers varied extensively across care models, with some programs employing nurses or other medical professionals with limited mental health experience, and others appointing care managers with master's- or doctoral-level degrees in a mental health field.[102]

Formal Stepped Care

The concept of formal stepped care introduces evidence-based protocols for treating patients that come from a variety of different clinical backgrounds. These formalized practices were identified in less than half (44%) of the integrated models. Programs based on the Wagner Chronic Care model were more likely to incorporate a stepped-care treatment algorithm based on treatment guidelines for depression in primary care settings; these were used to allow physicians and mental health providers to establish a treatment plan based on individualized patient needs.[167] Stepped care approaches were included in several models, including IMPACT, PROSPECT, Pathways, and QuEST, and were primarily concerned with treating critical patient subpopulations with co-occurring depression, such as the elderly[151,178] and those with diabetes.[166] The use of evidence-based stepped care approaches was also employed to measure patients' response to treatment in settings where there was no mental health provider on the integrated care team.[130]

Shared Medical Records

We found only eight (22%) models of successful integrated care that reported using shared medical records. Programs that did share medical records primarily reported using EHRs to facilitate collaboration between members of the care team. For example, an off-site care team supported PTSD treatment delivered by community-based outpatient clinics (CBOCs) using EHRs in the Telemedicine Outreach for PTSD (TOP) model.[176] In this model, EHRs were used to recruit PTSD patients, provide feedback and treatment recommendations to CBOC providers, assess adherence to the medication regimen, determine receipt of cognitive processing therapy and psychiatric care, and evaluate therapist fidelity to the cognitive processing therapy protocol.

Shared medical records were also used to foster communication between providers. For example, the Internet-based system used in the IMPACT model reminded clinical specialists in depression if enrolled patients had not yet received an initial assessment, if more than three weeks passed without a recorded contact with a patient, and if a patient had spent more than 12 weeks on "apparently ineffective treatment."[167] The Internet-based system also ensured that intervention records were available to clinicians and study investigators in "real time."[167] Another program used computerized charts to inform the PCP of medication changes by the pharmacist and to record PCP interventions.[156] PCPs who participated in the Primary Care Research in Substance Abuse and Mental Health for the Elderly (PRISM-E) study documented their role in each patient's care in the

medical record and used this medium to communicate with mental health and substance use staff.[182]

Integrated clinics administered by the VA have also reported EHRs to be important mechanisms for improving communication between team members. For example, in a study by Hedrick and colleagues,[150] providers were notified of patient diagnoses and progress via their electronic records. Similarly, in the Telemedicine-Enhanced Antidepressant Management (TEAM) program, small rural primary care practices used telehealth technologies (e.g., telephone, interactive video, the VA's Computerized Patient Record System, and the Internet) to facilitate communication between a centrally located depression care team and primary care providers.[163]

8. Comparative Value of BHI

Nearly all RCT-based economic evaluations published in the last 15 years have focused on the CCM model of BHI and have shown CCM to be more effective than usual care but also more costly over 6 months – 2 years. Offsetting reductions in health care costs, when shown, have primarily occurred with specialty mental health services and in inpatient/emergency department care for specific subpopulations (e.g., patients with diabetes). Longer-term studies have demonstrated the potential for cost-neutrality or even overall cost savings, but these are relatively few in number and subject to quality concerns in some instances.

Nevertheless, evaluations of the cost-effectiveness of CCM have uniformly produced estimates that meet generally-accepted thresholds for cost-effective interventions in the US ($15,000 - $80,000 per quality-adjusted life year [QALY] gained vs. usual care). Comparative data on non-CCM approaches to BHI (e.g., clinician education alone, pharmacist-led interventions) are extremely limited; in addition, these interventions have not been found to be more effective than usual care, so reliable estimates of cost-effectiveness cannot be calculated.

Finally, while there may be substantial incremental start-up and ongoing costs for BHI, these will vary substantially by setting, prevalence of depression and anxiety in any given population, and model of BHI used. However, many would argue that the increased reimbursement to cover the implementation of BHI represents an investment in primary care that is necessary and long overdue.

As noted in this review, the integration of behavioral health into primary care practice can take many forms, which differ according to the approach to integration, the types of staff involved, introduction of new infrastructure and services vs. extension of existing resources, and many other components. Because of this variability, we felt that development of a detailed economic model exploring the budgetary impact and/or cost-effectiveness of any one approach would have little validity for providers and policymakers who are interested in integration but not yet certain of the best approach for their organization. We did, however, estimate the budgetary impact of implementing BHI in a 200,000-life Medicaid plan based on assumed levels of implementation costs and ongoing "steady-state" costs over one year, using multiple models of BHI and exploring budgetary impact across a range of depression/anxiety prevalence.

Our assessment of the *care value* of BHI was made primarily through a detailed analysis of the available literature on the economic impact of BHI in primary care for the treatment of depression and/or anxiety in Section 8.1; we focus attention not only on the primary findings of these studies but also on the differential impact of BHI in certain subgroups of patients, key drivers of economic impact, and any trends in comparative value over time. We also call attention to major design considerations and/or quality issues in these economic evaluations.

We also recognize, however, that organizations considering integrating behavioral health into primary care require comprehensive guidance on staffing levels, planning and other start-up costs, and ongoing costs to manage an integrated approach. While this type of detailed information is generally absent from the current published literature, there are also publicly-available resources that do provide such guidance, and these resources are summarized in Section 8.2.

Finally, while the formula for estimating start-up and ongoing practice costs is highly individual to each organization, we nevertheless conducted a budgetary impact analysis from the perspective of a Medicaid plan to illustrate the potential expenditures involved over a one-year start-up and roll-out period. The results of these analyses are presented on a regional basis, with separate findings for California and New England, in Section 8.3.

8.1 Prior Published Evidence on Comparative Value

Our literature search identified four good-quality systematic reviews that focused specifically on the costs, budgetary impact, and/or cost-effectiveness of various approaches to integrating behavioral health into primary care specifically for patients with depressive and/or anxiety disorders.[164, 111, 118, 121] While there is overlap between these reviews in the studies included, each review takes a somewhat unique approach to evaluating the evidence, so we have summarized each review and noted the distinctions between them in the sections that follow. In addition, findings from individual studies both within and outside the scope of these reviews are also summarized for their notable distinctive features (e.g., long-term follow-up, data on specific subgroups). Importantly, as with the evidence on comparative clinical effectiveness, the comparative literature on the economic impact of BHI in primary care is almost exclusively focused on variants of the CCM approach. For example, 15 of the 18 RCTs described below use a CCM approach for integration.

Neumeyer-Gromen et al., 2004

This review involved an assessment of 10 RCTs published between 1995 and 2002, all of which compared broadly-defined CCM programs for depression to usual care and were included in the systematic reviews summarized in Section 7. Eight of the RCTs were conducted at managed care organizations in the US.[118] Specifically, interventions of interest a) used evidence-based treatment guidelines, b) had both provider and patient educational components, c) used population-based screening for case identification, and d) included routine reporting and feedback loops for members of the care team. Usual care involved clinical identification of cases and traditional referral to specialty mental health; provider education and treatment guidelines were included in the usual-care condition in some studies. A meta-analysis of clinical data from these studies indicated statistically-significant reductions in the likelihood of treatment failure (i.e., failure to achieve ≥50% improvement in depressive symptoms; rate ratio [RR] 0.75; 95% CI 0.70, 0.81) and in

discontinuation of antidepressant therapy at 90 days (RR 0.59; 95% CI 0.46, 0.75) over periods of follow-up ranging from 5-24 months.

Six of the 10 RCTs involved an economic evaluation. All studies showed higher overall costs for integrated care vs. usual care. Five of the six presented results in terms of the incremental cost per QALY gained; the remaining study calculated a cost per successfully treated patient (≥50% improvement in depressive symptoms).[183] Study details and cost-effectiveness findings are presented in Table 7 on the following page; we updated costs to 2014 levels for each study using the medical care component of the US Consumer Price Index (CPI).[184]

A range of results is presented for each study; this is because each study assessed either a range of estimates for depression's impact on health-related quality-of-life, different variants of the intervention (e.g., integrated care + medication vs. integrated care + psychotherapy), different subgroups of patients (major vs. minor depression), or all three. Incremental costs varied from $20 - $3,900 per patient; this wide range can be explained in part by differences in the types of costs included in each evaluation. For example, four of six studies did not include inpatient costs in their estimates of the total costs of care, and despite the measurement of lost work time due to depression in most studies, only three of the six included any measurement of indirect costs in their calculations.

Estimates of cost-effectiveness also ranged widely (between $15,000 and $80,000 per QALY gained in 2014 dollars) but were nevertheless within widely-published thresholds for cost-effectiveness in US settings (i.e., $50,000-$100,000 per QALY gained). Not surprisingly, QALY gains from these interventions were entirely from improved quality of life alone rather than in combination with increased survival. In addition to differences in cost calculations as described above, cost-effectiveness estimates were influenced by variability in intervention effect across studies as well as a broad range of assumed reductions in quality of life for a year with depression (between 0.2 and 0.4, or losses of 73 to 146 days due to depression).

In the study by Von Korff (1998) (not included in the table), estimates of the incremental cost of BHI per successfully treated patient with major depression ranged from $1,688 - $2,850 in 2014 dollars (BHI appeared to be clinically inferior in patients with minor or "subthreshold" depression).[183] This study also showed a small (~$160) average reduction in the costs of specialty mental health visits for integrated vs. usual care, but this was outweighed by increases in the costs of medications and behavioral interventions in primary care. In fact, of the five studies in the table, only two showed offsets in any other category of cost. In an evaluation of 228 patients with persistent depressive symptoms,[185] an approximate $100 reduction in the costs of non-mental health services was observed with integrated care; however, total outpatient costs were increased by ~$250 due to higher mental health costs. A study of BHI for relapse prevention in 386 previously-treated patients showed reductions in the cost of non-mental health services (~$60 on average) and all inpatient

care (~$150), but these were subject to wide confidence intervals and the authors focused primarily on the increased costs of depression-related treatment in the intervention group.[186]

Table 7. Studies Reporting Cost-effectiveness of Integrated vs. Usual Care for Depression in Neumeyer-Gromen, 2004

Author, Year	Sample Size	Incremental $ of Integrated Care (2014 $/Patient)	Cost per QALY Gained (2014 $)	Comments
Lave, 1998[220]	276			No inpatient $
+Medication +Psychotherapy		$1,328 – $1,494 $1,521 - $1,960	$16,292 - $30,802 $27,644 - $61,144	
Simon, 2001 (a)[221]	407	$1,603 - $3,935	$35,200 - $79,200	
Simon, 2001 (b)[185]	228	$568 - $929	$31,302 - $62,605	No inpatient $; no work-loss $
Schoenbaum, 2001[222]	1,356			No inpatient $
+Medication +Psychotherapy		$666 $771	$24,530 - $58,347 $15,165 - $34,365	
Simon, 2002[186]	386	$20 - $412	$32,475 - $65,700	No work-loss $

Source: Neumeyer-Gromen A, et al. Disease management programs for depression: A systematic review and meta-analysis of randomized controlled trials. *Medical Care*, 2004: 42(12)1211-1221.[118]

Finally, of note in these studies (and among most of the studies summarized in this section), it is likely that estimates of incremental costs are conservative because the full costs of implementing the intervention are not accounted for or not reported in sufficient detail. For example, while most of the studies presented the costs of delivering integrated care in detail, inclusion of the costs of practice-wide screening are mentioned in only two of the six studies in this review. In addition, despite the fact that these RCTs were tests of novel interventions for integrated care, the costs of planning, infrastructure changes, and implementation were not mentioned in any study.

Gilbody et al., 2006

This evaluation involved an assessment of a broad array of economic evaluations (including cost-benefit, cost-effectiveness, and cost-minimization analyses) of collaborative care or care management models.[111] Studies had to include a discrete educational intervention, a structural change or reconfiguration of roles with primary care, or a case management/active follow-up component, and they had to be based on data obtained from a randomized study. Quality criteria specific to economic evaluations were also applied. For example, studies that did not use a well-accepted method for generating confidence intervals around estimates of economic impact (e.g., bootstrapping) were excluded. A total of 11 reports of economic evaluations were identified, including five of the six studies included in the Neumeyer-Gromen review (the Lave 1998 study was excluded for multiple reasons, including quality concerns and lack of active case management). As

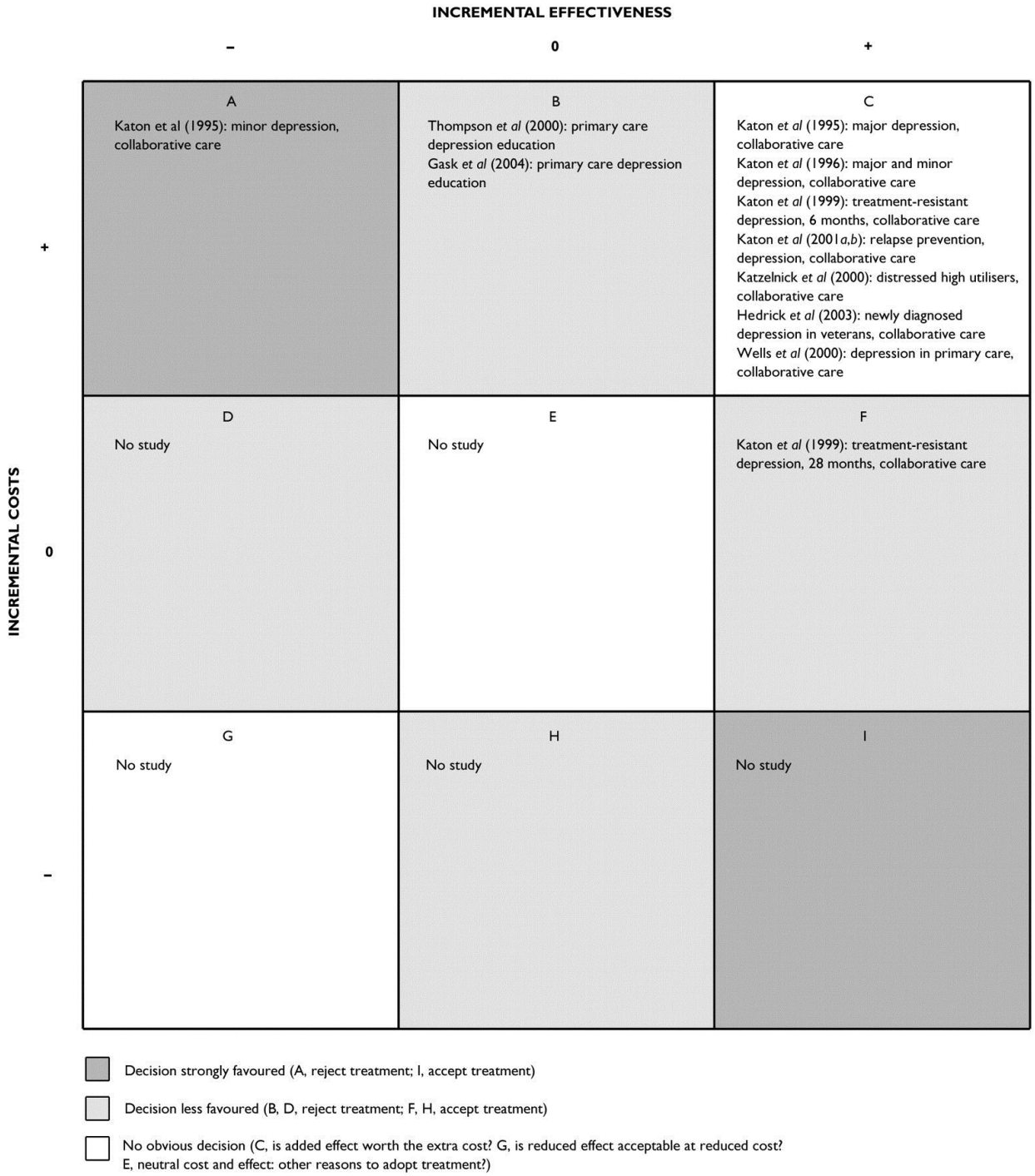
with the Neumeyer-Gromen review, no study produced cost estimates indicating that BHI was both more effective and less costly than usual care. Figure 6 on the next page presents a "permutation matrix" illustrating the results of the 11 economic evaluations according to both incremental clinical benefit and incremental costs relative to usual care.

Nine of the 11 reports in this review focused on a CCM approach to integration. The two studies that did not consisted solely of educational efforts targeted at primary care clinicians, including written materials, video training, skills-based training and role-play, and general educational outreach sessions.[187,188] Intervention costs were reported in only one study, and were lower than those for CCM approaches because of the limited nature of the intervention (an incremental $313 per primary care practice).[187] Cost-effectiveness was not calculated in either of these studies because the intervention was found to be no more effective than usual care.

In terms of CCM-based approaches, the previously-described Von Korff evaluation (which was based on RCT data from Katon, 1995) illustrated that BHI for minor or subthreshold depression is both more costly and less effective. A longer-term follow-up of Simon et al.'s intervention for persistent depression[185] showed durable clinical benefits at 28 months and cost-neutrality – no statistically-significant differences in depression-related costs, all outpatient costs, or total health care costs between the BHI intervention and usual care.[152,189] All remaining CCM evaluations produced evidence of incremental benefit and increased costs for BHI vs. usual care.

Estimates of the incremental cost per depression-free day ranged relatively narrowly from $17 to $32 (2014 dollars) across available studies. Beyond those summarized in the Neumeyer-Gromen review, the only additional study to estimate the incremental cost per QALY gained was an evaluation of a nurse-delivered case management approach in 211 patients with newly-diagnosed depression.[190] Cost-effectiveness was estimated to be $22,529 per QALY gained (2014 dollars); acceptability-curve analyses conducted at the time indicated a 91% probability that cost-effectiveness would be less than $50,000 per QALY gained.

Figure 6. "Permutation Matrix" of Incremental Effectiveness and Incremental Cost



Source: Gilbody S, Bower P, Whitty P. Costs and consequences of enhanced primary care for depression. *Br J Psych* 2006; 189:297-308.[191]

van Steenbergen-Weijenburg, 2010

This review focused attention on eight economic evaluations of data from RCTs of CCM-based approaches, all of which also explicitly documented plans for "stepped care" for depression in primary care (i.e., increased intensity of services for patients who screen positive and/or do not respond to initial treatment).[121] The review is also notable for its use of a detailed published checklist for the quality of economic evaluations known as the Consensus on Health Economic Criteria (CHEC) list, which consists of 19 yes/no questions within the following domains:[192]

- Study design (e.g., target population, time horizon, perspective adopted, treatment alternatives of interest)
- Capture and appropriate measurement of relevant costs
- Capture and appropriate valuation of health outcomes
- Analytic approach (e.g., discounting, incremental comparisons)
- Assessment of uncertainty
- Reporting issues (e.g., generalizability, conflicts of interest)

Five of the eight studies were also included in one or both of the reviews from Gilbody and Neumeyer-Gromen. The three additional studies included a 6-month assessment of group-based BHI among 240 adult women with depression in Chile,[193] and two evaluations of RCT data from two separate trials (N=1,801 and 329 respectively) of CCM approaches in depressed patients with diabetes.[194,195] Both of the latter studies were conducted in US settings, were based on the University of Washington's IMPACT model, and followed patients for 24 months. Findings from the Chilean evaluation are difficult to generalize because the costs of health care services are valued very differently, and so are not discussed in further detail here. In the larger IMPACT evaluation focused on patients age >60, total outpatient and overall health care costs were increased by $395 and $926 respectively (2014 dollars) for the intervention relative to usual care; the cost per QALY gained (in 2014 dollars) ranged from $3,376 - $6,750 based on a range of assumed quality-of-life impacts from depression.[194] A time trend analysis suggested that the intervention was associated with reductions in total outpatient costs after 12 months of follow-up, but the impact on overall health care costs was not assessed.[194]

A more detailed assessment of this trend was included in the other IMPACT evaluation.[195] Total depression-related and unrelated outpatient costs were similar between the intervention and usual care in the first year (approximately $9,200 [2014 dollars] per patient in each group) but were reduced by over $1,700 in the intervention group in the second year; on average, 2-year costs were reduced by approximately $1,100 and $370 in the intervention group before and after adjustment for baseline differences between groups respectively. Reductions were driven primarily by lower costs for drugs other than antidepressants, specialty medical visits, and diagnostic services. However, as with the Katon evaluation, the impact on overall health care costs was not measured. Also, as with many of the other evaluations in these reviews, intervention costs were focused

primarily on the costs of delivering services and did not appear to include practice-wide or other fixed costs associated with planning, implementation, or screening.

Across all studies, the quality of available economic evaluations was found to be lacking; the highest score observed on the CHEC list was 10 (out of 19 possible items). Most studies did not include any systematic approach to conducting sensitivity analyses for variables subject to high levels of uncertainty. Only four of the eight studies presented results using generally-accepted incremental methods and measures (e.g., cost per QALY). Studies were inconsistent in the perspective adopted, and while many studies measured lost productivity and time in treatment as outcomes, their associated costs were often not reported. Finally, the durability of intervention effects was largely unknown due to the within-RCT nature of these evaluations (i.e., maximum follow-up of 24 months).

de Bruin, 2011

This review focused on 31 studies of disease management programs for diabetes, depression, heart failure, and chronic obstructive pulmonary disease; the Wagner Chronic Care model was used to search for appropriate programs.[196] Four RCT-based economic evaluations in depression were identified, three of which were CCM-based. One was a subset analysis of the IMPACT trial for late-life depression at sites with 4-year trial data available.[197] The other two were reported only in this review and included a telephone-based collaborative care program[198] and an economic evaluation of Partners in Care (PIC), an educational and nurse-support intervention studied at six managed care organizations in the US.[199]

The sole non-CCM study involved a pharmacist-led intervention aimed at optimizing medication management for depression, a 6-month RCT involving 151 patients.[200] However, 6-month follow-up data were only available for 88 patients (58%); incremental costs of the intervention averaged $604 per patient. The study found no statistically-significant improvements in either depression symptoms or medication adherence, so cost-effectiveness ratios could not be calculated and the incremental costs were deemed not worthy of investment by the authors.

Among the CCM studies, the PIC intervention was found to increase total health care costs by an average of $1,122 (2014 dollars) in patients with major depressive disorder[199]; no detail was provided on individual cost components, however. The corresponding cost-effectiveness ratio (in 2014 dollars) was $66,070 per QALY gained based on utility data derived from the SF12 instrument. Incremental costs were much lower in patients with subthreshold depression ($46 on average in 2014 dollars), as was the resulting cost-effectiveness ratio ($2,494 per QALY gained). Of note, however, the study organizers covered 50% of the costs of intervention development and delivery, so estimates of incremental cost may have been understated.

The Simon study randomized 600 patients at Group Health Cooperative to usual care, telephone care management, or telephone care management plus short-course CBT over 24 months of follow-up.[198] Adjusted outpatient costs controlling for age, sex, and baseline costs were $784 and $461 higher for telephone management and telephone management plus psychotherapy respectively vs. usual care (2014 dollars). Cost-effectiveness ratios were not calculated, but the telephone management plus psychotherapy intervention generated 60% more incremental depression-free days than telephone management alone (46 vs. 29 days more than usual care respectively), or approximately $10 per depression-free day for the combined intervention vs. usual care. Unadjusted inpatient costs were tallied but were not included in multivariate analyses because of their substantial variability.

The final evaluation in this set was a 4-year study of the effects of the IMPACT intervention[194] at sites with cost data available over this timeframe.[197] The intervention was found to reduce total health care costs by $4,035 (2014 dollars) on average; reductions were seen in every cost category but were driven primarily by lower inpatient costs ($3,093). In addition, while bootstrapping analyses indicated an 87% likelihood that the intervention was cost-saving overall, the 95% confidence interval around the cost-savings estimate included 0 (i.e., a non-significant difference).

Temporal analyses also suggested that the cost savings occurred entirely in years 3 and 4 of the evaluation. However, the intervention itself was only one year in duration, and no long-term assessment of clinical outcomes was conducted; it is therefore impossible to ascribe cost differences definitively to a persistent treatment effect. In addition, the analysis was conducted at only two of the original 12 study sites, and no data were provided on whether patient attrition over the four years differed by study group.

Other Studies

We also identified additional economic evaluations not included in the four systematic reviews described above. An RCT of CCM-based "enhanced care management" involving care coordinators working with primary care physicians and mental health providers at different sites was not included in the above reviews for unknown reasons.[201] This study randomized 12 primary care practices to the intervention or usual care; 73% of the initial patient sample (n=211) was available for 24-month follow-up. Total costs (including intervention, outpatient, and patient time and transportation) were $657 higher in the first year of the evaluation but $27 lower in the second year (2014 dollars). Cost-effectiveness estimates ranged from $12,853 per QALY gained when generic costs for antidepressants were assumed to $19,170 per QALY gained when brand costs were assumed (2014 dollars). This study was also notable for its detailed accounting estimates of screening and intervention workflow, as illustrated in Table 8 on the following page. Interestingly, the screening tool is described in the study as a "2-stage instrument", but the accounting estimates suggest that the office assistant spent no more than three minutes per screen.

Table 8. Example of Accounting Approach to Estimating Costs of Delivering BHI

Table 1. Derivation of per Capita Program Costs (Nonadjusted)

Activity	Time	Cost per Hour $	Mean per Capita Cost $
Office assistant screening	.050 hr per screening test × 5,838 screening tests / 115*	13.91	35.28
Care manager preparation	.115 hr per contact × 11.8 contacts	24.40	33.11
Care manager contacts	.210 hr per contact × 11.8 contacts	24.40	60.46
Care manager record keeping	.165 hr per contact × 11.8 contacts	24.40	47.51
Physician review of care manager's records	.550 hr	85.51	47.03
Care manager communication with physician	.216 hr	24.40	5.27
Physician communication with care manager	.216 hr	85.51	18.47
Overhead	30% of above costs		74.14
2-year total costs			321.27
Annual costs			160.64

Note: Screening by office assistant, care manager, and physician cost per hour derived from Bureau of Labor Statistics estimate for median office assistant, registered nurse, and general/family practitioner earnings plus 25% fringe benefits inflated to year 2000 dollars. Office assistant, care manager, and physician time estimates derived from care management report.

*Identifying 115 patients beginning a new treatment episode required screening 5,838 patients.

Source: Rost et al. Cost effectiveness of enhancing primary care depression management on an ongoing bases. *Ann Fam Med.* 2005; 3:7-14.[201]

We did not focus our evaluation on observational studies given the wealth of RCT-based economic evidence. These studies have shown promising results, but design and analysis challenges limit their applicability. For example, a quasi-experimental comparison of 1,225 patients treated for depression at Intermountain Healthcare's integrated and non-integrated clinics[202] indicated a smaller increase in costs between the 12 months before and after diagnosis for integrated care ($812 vs. $1,559 for usual care, 2014 dollars), although these differences do not appear to have been statistically tested. In addition, the pre-diagnosis costs in the usual-care cohort were nearly 20% higher than those in the intervention group, suggesting a potential for selection bias (i.e., more severely ill patients receiving usual care) that was not controlled for in the analysis.

8.2 Resources for Estimating Start-Up Costs

As noted previously in this section, nearly all economic evaluations did not include a full valuation of implementation costs in their estimation of expenditures for BHI and were also lacking detail on practice-wide expenses involved in delivering the intervention (e.g., screening) in many instances. In addition, our budgetary impact analysis was based on a single scenario, and the realities of integration will vary widely by setting.

Nevertheless, publicly-available tools are available for organizations interested in BHI to develop estimates of staffing needs and expenditures for planning, start-up, and "steady state" once integration has been implemented. These tools are summarized on the next page, and more detailed resources are available in Appendix E.

Staffing

The AIMS Center at the University of Washington, the developers of the IMPACT integration model, have made available an online implementation guide for primary care organizations considering BHI, which can be found at: http://aims.uw.edu/collaborative-care/implementation-guide. As part of this effort, the AIMS team has developed a staffing formula for diverse primary-care settings based on the mental health needs of the populations being served (low, medium, or high). The formula is depicted in Table 9 below.

Table 9. Collaborative Care for Depression: Staffing Ratios in Diverse Clinic Settings

Clinic Population	Prevalence of Depression	Typical Active Caseload for 1 FTE Care Manager	Primary Care Panel Size for 1 FTE Care Manager	Typical Personnel Requirements for 1,000 Primary Care Patients (FTEs)	
				Care Manager	Psychiatric Consultant
Low need (e.g., insured, employed)	2%	100-125	5,000	0.2	0.05 (2 hours/week)
Medium need (e.g., FQHC, chronic pain, substance use)	5%	65-85	1,500	0.7	0.07 (3 hours/week)
High need (e.g., homeless, addiction issues)	15%	50	333	3.0	0.3 (12 hours/week)

FTE: Full-time equivalent; FQHC: Federally-qualified health center

The costs and staffing implications of AIMS/IMPACT models of care have been studied in two separate applications within the VA system.[203, 204] A time-and-motion study of telephone care

management activities indicated that successful interactions were time-intensive, ranging from 75-95 minutes for initial assessments and 51-60 minutes for follow-up calls.[204] Unsuccessful attempts were also time-intensive, ranging from 9-11 minutes per attempt. Caseload estimates were slightly higher than those estimated above for "low need" settings, ranging from 143-165 patients per case manager.

Costs to implement a care-management system at seven VA primary practices were also estimated, including practice engagement, planning, design, training, infrastructure redesign, and coordination activities.[203] Across all 7 practices, 128 individuals contributed over 3,000 hours of time to these activities at a total cost of $411,189 (2014 dollars), or $58,741 per practice.

SAMHSA has also developed an implementation and financing guide specifically for FQHCs. The guide cites a general rule that behavioral health staff "should be available 2-4 hours weekly for every 1,000 primary care patients,"[205] although the source of this information is cited only as personal communication. The full guide can be found at: http://www.integration.samhsa.gov/financing/Financing_BH_Services_at_FQHCs_Final_7_23-12.pdf.

Estimating Planning, Implementation, and Steady-State Costs

Prescription for Health is a grant-making organization based at the University of Colorado-Denver that is focused on incorporating evidence-based methods to encourage patient behavior change in clinical practice (http://www.prescriptionforhealth.org/about/index.html). One of the results from the initial two rounds of funding was an Excel-based toolkit for organizations interested in integrating behavioral health into primary care; the resulting estimates of start-up costs have been published and are described in further detail in Section 8.3.[206] The toolkit consists of multiple worksheets that allow for estimation of planning, start-up, and ongoing costs of a BHI program based on the needs and infrastructure of individual organizations. The toolkit was recently modified for use with Colorado's Advancing Care Together (ACT) initiative, which involves BHI integration at 11 diverse practice sites across the state.[207] Examples of detailed templates can be found in Appendix E. Briefly, the templates are designed to capture the following cost elements:

Planning Costs

- Current patient flow
- Current staff salaries, FTEs, fringe benefit percentages, etc.
- Amount of time spent on BHI planning for each staff type
- Current direct expenditures, indirect expenses, and overhead

Start-Up Costs

- Staff training (e.g., screening tool, program activities)
- Administration (e.g., website redesign, community outreach)
- Fixed costs (e.g., workspace, computer equipment, other capital assets)
- Overhead (e.g., rent/lease, insurance, phone and other utilities)

"Steady State" Costs

- Percent of staff time devoted to intervention and incremental costs associated with treatment
- Overhead expenses attributable to BHI
- New capital purchases and depreciation of existing assets

SAMHSA has also developed a resource for making the business case for BHI. However, the focus of this tool is on modeling improvements in workflow and revenue through use of additional billing codes, reducing PCP time for case triaged to a behaviorist, etc. While there are entries for development, implementation, and screening costs, they lack the level of detail described above. Nevertheless, the Excel-based pro forma tool can be found in Appendix E of this report, and the full monograph on the business case can be found at: http://www.integration.samhsa.gov/integrated-care-models/The_Business_Case_for_Behavioral_Health_Care_Monograph.pdf.

8.3 Budgetary Impact Analysis

Methods

To gain an understanding of the potential expenditures that might be involved in a new effort to integrate behavioral health into primary care practice, we conducted an exploratory analysis from the perspective of a 200,000-life Medicaid plan; two separate sets of analyses were conducted for California and New England. For the latter analysis, Massachusetts was chosen as the source of state-based data. Primary model inputs are presented in Table 10 on page 71. We made a number of key assumptions for this analysis, as listed below:

- Variable prevalence based on type of population (see below)
- Assumed start-up and implementation time of 4 months
- Steady-state costs extrapolated to 12 months to give accurate picture of annual costs
- CCM-based intervention considered for primary analysis; staffing ratios for care managers and psychiatrist consultants based on 150 patients per care manager (from AIMS Center ratios)
- Behavioral Health Consultant model considered in secondary analysis; staffing based on cited behavioral health workload of 2-4 hours weekly per 1,000 primary care patients

- Change in job role for medical assistants to conduct depression screening; no additional hires
- Only small modifications of existing EHR system required, no other major IT expenses
- Additional capital expenditures assumed for workspace for new hires
- All patients in panel assumed to have one screening encounter during the year

Expenses were divided into those required for program implementation and start-up, and those that would be incurred after BHI is implemented (i.e., "ongoing" costs). We found a single source of published data on these costs, an analysis of the initial Prescription for Health integration of behavior-change interventions in 29 primary care practices across the US.[206] However, the interventions of focus in this study were limited in scope, focusing on coaching patients with regard to smoking cessation, dietary change, exercise, and alcohol use. Costs were estimated based on the experience of three of these practices (practice group 2 in the publication), which were the only ones to report capital expenditures for additional staff space.

We therefore assumed additional costs related to the integration of staff and instruments targeted at identification and treatment of depression. Requirements for new care managers and psychiatric consultants were estimated based on the staffing ratios published by the AIMS Center (see Section 8.2); we assumed that these individuals would each require four and two hours of training, respectively. As noted above, we did not assume any new hires of office/medical assistants but rather retraining of existing staff. We assumed that there would be one assistant per 2,000 patients in the panel (100 total) and that these individuals would require 4 hours of retraining each. The maximum caseload for each RN care manager was assumed to be 150 patients based on the AIMS ratios. Training costs were calculated based on published average state-specific wage rates for nurses, physicians, and medical assistants from the US Bureau of Labor Statistics (see Table 10 on the next page). Care managers were assumed to be nurses as this was the most commonly reported staff type filling the role in available RCTs.

We estimated ongoing costs based on three components: screening, direct staff expenses for intervention delivery, and practice overhead. Screening costs were estimated based on the use of a validated patient instrument that required 3 minutes of office assistant and 0.5 minutes of PCP time for each screen; relevant wage rates were applied to calculate these costs. Overhead costs (e.g., clerical support, billing) were estimated based on the study by Dodoo and colleagues, again focusing on the experience of practice group 2.[206]

Intervention delivery costs varied based on the assumed prevalence of depression. For a primarily employed population (such as those newly enrolled in Medicaid through ACA expansion), an estimate of 3% was used based on data on major depression from self-insured employers.[208] For a broader Medicaid population, we used an estimate of 22.3% based on PHQ-9 screening results for adult Medicaid beneficiaries from the National Health and Nutrition Examination Survey

(NHANES).[209] At the lower bound of prevalence, 40 care managers and 10 psychiatrist consultants were assumed to be required to meet patient demand; these figures increased to 200 and 50, respectively, at the higher prevalence level.

Table 10. Key Model Inputs for Budgetary Impact Model in a 200,000-member Medicaid Plan

Parameter	Estimate		Source(s)
Staffing Requirements			
RN Care Managers	40 -200		AIMS Center, 2014; Ivanova, 2010; Chang, 2013
Psychiatrist Consultants	10 - 50		AIMS Center, 2014; Ivanova, 2010; Chang, 2013
Medical Assistants	100 (existing)		Assumption
Average Hourly Wages	*Calif.*	*Mass.*	
Medical Assistants	$16.37	$18.01	US Bureau of Labor Statistics, State Data, 2014
RN Care Managers	$49.85	$45.37	"
Psychiatrists	$92.05	$89.87	"
Primary Care Physicians	$93.64	$98.47	"
General Start-Up Expenses (per month)	$5,817		Dodoo, 2008; US BLS, 2014
Major Depression Prevalence	3%; 22.3%		Ivanova, 2010; Chang, 2013
General Overhead Expenses (per diagnosed and treated patient per month)	$57		Dodoo, 2008; US BLS, 2014

NOTES: Staff time for training included 4 hours for each care manager, 4 hours for each medical assistants and 2 hours for each psychiatric consultant. Screening time included 3 minutes per test for medical assistants and 0.5 minutes per test for PCPs. Active caseload of 150 patients assumed for each care manager.

It also may be the case, however, that a percentage of patients with depression in a primary care setting are already well-managed and do not require additional intervention. This has previously been estimated at 29% in managed-care settings.[210] We therefore used this estimate to reduce the number of patients who would receive the intervention. Resulting estimates in our population of 200,000 ranged from approximately 4,200 at the lower bound of prevalence to ~32,000 at the upper bound. BHI expenditures were compared to the most recently-reported Medicaid PMPM. These were obtained from Kaiser State Health Facts, and totaled $552 and $1,002 for Medi-Cal and MassHealth (the Massachusetts Medicaid Plan), respectively (in 2014 dollars).[214, 215, 216]

In addition to primary analyses as described above, we also conducted alternative analyses in which less-intensive staffing ratios would be used. We based this analysis on the previously-cited estimate of up to 4 hours of behavioral health staffing weekly for every 1,000 primary care patients,[205] which equates to 20 full-time equivalent behavioral health consultants in a 200,000-life Medicaid plan.

All costs are presented in 2014 dollars and were updated as necessary using the medical care component of the US CPI.[211] Analyses were conducted using Microsoft Excel® 2013.

Results: California

Findings from our budgetary impact analysis for California are presented on a total and PMPM basis for a low-prevalence population (3% with depression) (see Table 11 below). As illustrated in the table, costs during the start-up period are relatively modest (approximately $40,000 in total, or $0.02 PMPM), even with an assumed training of 50 new staff and retraining of 100 others. Similarly, screening costs are not a significant contributor (approximately $310,000, $0.13 PMPM) given the relatively small amount of assistant and PCP time that each screen takes. By contrast, direct staff and overhead costs would be expected to generate nearly $600,000 in monthly expenditures for this ACO, or nearly $7 million annually.

Table 11. BHI Expenditures in a 200,000-member California Medicaid Plan (Low Prevalence)

Type of Expense	Total Cost ($)	Total Cost ($PMPM)
Start-Up Expenses		
General startup	$23,268	$0.01
Additional training	$16,365	$0.01
Total Start-Up Expenses	$39,633	$0.02
Ongoing Expenses (Annual)		
Screening	$313,524	$0.13
Direct Staff	$3,961,855	$1.65
Overhead	$2,905,632	$1.21
Total Ongoing Expenses	$7,181,011	$2.99
TOTAL EXPENSES	$7,220,644	$3.01

NOTE: Subtotals and grand total may not precisely sum due to rounding.

When expressed on a PMPM basis, all ongoing costs (i.e., screening, direct staff, and overhead) in a population with 3% prevalence would total $2.99, and the overall PMPM (including start-up costs) would be $3.01. When compared to the average Medi-Cal PMPM of $552, these expenditures represent a 0.6% increase.

Findings from the high-prevalence analysis are presented in Table 12 on the next page. Screening expenses are unchanged. Start-up costs are essentially doubled because of the need to train greater numbers of care managers and psychiatrist consultants. Most importantly, as the number of patients requiring treatment is nearly eight-fold higher, ongoing expenses would be over $4 million monthly, or over $51 million on an annual basis. The resulting PMPM increase of $21.43 represents a 3.9% increase in overall annual Medi-Cal expenditures.

Table 12. BHI Expenditures in a 200,000-member California Medicaid Plan (High Prevalence)

Type of Expense	Total Cost ($)	Total Cost ($PMPM)
Start-Up Expenses		
General startup	$23,268	$0.01
Additional training	$55,633	$0.02
Total Start-Up Expenses	$78,901	$0.03
Ongoing Expenses (Annual)		
Screening	313,524	$0.13
Direct Staff	$29,449,787	$12.27
Overhead	$21,598,531	$9.00
Total Ongoing Expenses	$51,361,842	$21.40
TOTAL EXPENSES	$51,440,743	$21.43

NOTE: Subtotals and grand total may not precisely sum due to rounding.

Findings are quite different when staffing ratios based on the behavior health consultant approach are employed. Based on an estimate of 4 hours weekly per 1,000 primary care patients, approximately 20 behavioral health consultants and 5 psychiatrists would be required to manage the ~32,000 patients with depression in the "high-prevalence" scenario; this is about one-tenth of the staffing levels used in the CCM-based primary analysis. As a result, start-up costs would decline (from $78,901 to $34,725), and ongoing staff and overhead expenses would total slightly more than $400,000 per month. Total start-up, screening, and ongoing expenses would be $5.3 million in this scenario, or approximately $2.21 PMPM, representing a 0.4% increase in Medi-Cal expenditures.

Results: New England

Findings from our budgetary impact analysis for New England are presented in Table 13 on the next page; results are presented on a total and PMPM basis for a low-prevalence population (3% with depression), using Massachusetts as the state of focus. As illustrated in the table, costs during the start-up period are relatively modest (approximately $40,000 in total, or $0.02 PMPM), even with an assumed training of 50 new staff and retraining of 100 others. Similarly, screening costs are not a significant contributor (approximately $340,000, $0.14 PMPM) given the relatively small amount of assistant and PCP time that each screen takes. By contrast, direct staff and overhead costs would be expected to generate nearly $550,000 in monthly expenditures for this ACO, or nearly $7 million annually.

Table 13. BHI Expenditures in a 200,000-member Massachusetts Medicaid Plan (Low Prevalence)

Type of Expense	Total Cost ($)	Total Cost ($PMPM)
Start-Up Expenses		
General startup	$23,268	$0.01
Additional training	$16,261	$0.01
Total Start-Up Expenses	$39,529	$0.02
Ongoing Expenses (Annual)		
Screening	$337,652	$0.14
Direct Staff	$3,688,623	$1.54
Overhead	$2,905,632	$1.21
Total Ongoing Expenses	$6,931,907	$2.89
TOTAL EXPENSES	$6,971,436	$2.90

NOTE: Subtotals and grand total may not precisely sum due to rounding.

When expressed on a PMPM basis, all ongoing costs (i.e., screening, direct staff, and overhead) in a population with 3% prevalence would total $2.89, and the overall PMPM (including start-up costs) would be $2.90. When compared to the average MassHealth PMPM of $1,002, these expenditures represent a 0.3% increase in the overall PMPM.

Findings from the high-prevalence analysis are presented in Table 14 on the following page. Screening expenses are unchanged. Start-up costs are essentially doubled because of the need to train greater numbers of care managers and psychiatrist consultants. Most importantly, as the number of patients requiring treatment is nearly eight-fold higher, ongoing expenses would be over $4 million monthly, or nearly $50 million on an annual basis. The resulting PMPM increase of $20.60 represents a 2.1% increase in overall annual MassHealth expenditures.

Table 14. BHI Expenditures in a 200,000-member Massachusetts Medicaid Plan (High Prevalence)

Type of Expense	Total Cost ($)	Total Cost ($PMPM)
Start-Up Expenses		
General startup	$23,268	$0.01
Additional training	$52,487	$0.02
Total Start-Up Expenses	$75,755	$0.03
Ongoing Expenses (Annual)		
Screening	$337,652	$0.14
Direct Staff	$27,418,767	$11.42
Overhead	$21,598,531	$9.00
Total Ongoing Expenses	$49,354,950	$20.56
TOTAL EXPENSES	$49,430,705	$20.60

NOTE: Subtotals and grand total may not precisely sum due to rounding.

Findings are quite different when staffing ratios based on the behavior health consultant approach are employed. Based on an estimate of 4 hours weekly per 1,000 primary care patients, approximately 20 behavioral health consultants and 5 psychiatrists would be required to manage the ~32,000 patients with depression in the "high-prevalence" scenario; this is about one-tenth of the staffing levels used in the CCM-based primary analysis. As a result, start-up costs would decline (from $75,755 to $35,000), and ongoing staff and overhead expenses would total slightly approximately $400,000 per month. Total start-up, screening, and ongoing expenses would be $5.1 million in this scenario, or approximately $2.14 PMPM, representing a 0.2% increase in MassHealth expenditures of $1,002 PMPM.

8.4 Summary

Our findings suggest that the costs of planning, implementing, and carrying out BHI are driven primarily by the personnel costs associated with delivering the intervention. These costs will vary substantially. In our analyses, variability was illustrated via different assumed levels of depression prevalence in a Medicaid population as well as the staffing levels required to deliver a collaborative care vs. behavioral health consultant model of BHI. As illustrated in our two state-based scenarios, the relative impact of BHI on state budgets may also differ based on Medicaid expenditures in any given state.

As mentioned previously, the budgetary impact displayed in this analysis is illustrative for the assumed scenarios only. For example, in settings that already have sufficient physical space and co-located behavioral health personnel, a greater focus would be placed on reconfiguring workflow and less emphasis on new hires and changes to the physical plant. By contrast, rural settings might need greater information technology investment as well as additional hiring and physical space modifications to best address behavioral health needs. In addition, our analysis assumed that BHI interventions were "one size fits all – in other words, all screen-positive patients (other than those already deemed to be adequately treated) received the full complement of staff time and overhead, when in reality, it is likely that some patients will be more resource-intensive than others. Indeed, the concept of "value-added" BHI has gained in popularity, denoting targeted application of these interventions to specific populations with great need as well as the potential for cost savings (e.g., patients with depression and diabetes, clinically complex and/or high-risk patients).[211] Our analysis did not consider the potential for cost savings given inconsistent results across the entire evidence base, but it is possible that targeted uses of BHI such as these have the potential to provide substantial cost offsets.

Despite these limitations, we believe that this analysis can be instructive for both organizations considering an approach to BHI as well as to payers considering appropriate reimbursement models

that would allow ACOs and other provider organizations to recover the implementation costs of BHI and sustain such interventions moving forward.

As in the recent review of newer treatments for hepatitis C for CTAF,[212] ICER has adopted a novel framework for assessment of the comparative value of health care interventions, in which value is assessed according to two distinct constructs:

- *Care Value:*
    1. Comparative clinical effectiveness of each intervention vs. alternatives (considering both clinical benefits and harm)
    2. Any additional "non-clinical" benefits (e.g., reduced caregiver burden)
    3. Contextual considerations (no other acceptable treatment, vulnerable populations)
    4. Cost-effectiveness (incremental cost to achieve important patient outcomes vs. alternatives)

- *Health System Value:*
    1. Care value of the intervention of interest (as above); **and**
    2. Potential effects of short-term budgetary impact from the intervention on other patients in the health care system

Our consideration of care value is based on a relatively robust evidence base for both clinical effectiveness and cost-effectiveness of BHI interventions for depression and anxiety in primary care. As described in Section 7, available studies have been consistent in showing a small-to-moderate clinical benefit over usual care, at least in terms of mental health outcomes. In addition, while not explicitly measured in these studies, there does not appear to be any potential harm to the patient from integration efforts. Finally, while the quality of available economic evaluations could be greatly improved, findings from multiple evaluations across a variety of integration models and populations suggest that BHI falls within generally-acceptable thresholds for cost-effectiveness ($15,000 - $80,000 per QALY gained vs. usual care).

Assessment of health system value is much more complex, however, as the investment in BHI and the potential for return on investment varies greatly depending on the realities faced in any individual setting. Economic studies have shown with consistency that BHI increases organizational costs, at least in the short term. Evidence on longer-term cost savings is more limited, focused on specific subpopulations (e.g., patients also diagnosed with diabetes) in many instances, and subject to methodological concerns in others (e.g., incomplete accounting of start-up or practice-wide costs, tracking of health care costs at periods distal to the end of the intervention). However, others would argue that the increase in PMPM costs such as those depicted in our budget impact analysis are not only manageable, they are in fact *warranted* due to chronic underfunding and undervaluing of primary care.[213] In addition, while there are not currently consistent data with which to estimate

potential cost offsets from BHI, fairly conservative estimates of reductions in health care costs could offset these initial investments considerably. Given the broader context of increased movement toward accountable care and other at-risk arrangements, BHI is one of multiple steps that is likely to be taken.

9. CEPAC and CTAF: Voting Process and Results

9.1 CTAF and CEPAC Processes

About the CTAF and CEPAC Processes

The California Technology Assessment Forum (CTAF) Panel and the New England Comparative Effectiveness Public Advisory Council (CEPAC) are independent bodies composed of clinical, economic, and policy experts that convene publicly in each region to deliberate and vote on evidence reviews of the clinical effectiveness and value of health care services and interventions. Through their deliberations, CTAF and CEPAC provide guidance on how the existing evidence can best be applied to improve the quality and value of health care services both regionally and nationally. Both CTAF and CEPAC members are recruited through an open nomination process and are selected on the basis of their experience and training in the interpretation and application of medical evidence in health care delivery. All members meet strict conflict of interest criteria (described in Appendix F).

During CTAF and CEPAC public meetings, the Panel/Council members vote on key questions related to the systematic review of the clinical evidence, a cost analysis of the applications of the medical technologies or treatments under examination, and the supplementary information presented. CTAF and CEPAC members are intentionally selected to represent a range of expertise and diversity in perspective. To maintain the objectivity of both groups and to ground the conversation in the interpretation of the published evidence, they are not pre-selected based on the topic being addressed. Acknowledging that any judgment of evidence is strengthened by real-life clinical and patient perspectives, subject matter experts are recruited for each meeting topic and provide input to Panel and Council members before the meeting to help clarify their understanding of the different interventions being analyzed in the evidence review. Clinical experts also serve as a resource to CTAF and CEPAC during their deliberations, and they help form recommendations with CTAF and CEPAC on ways the evidence can be applied to policy and practice.

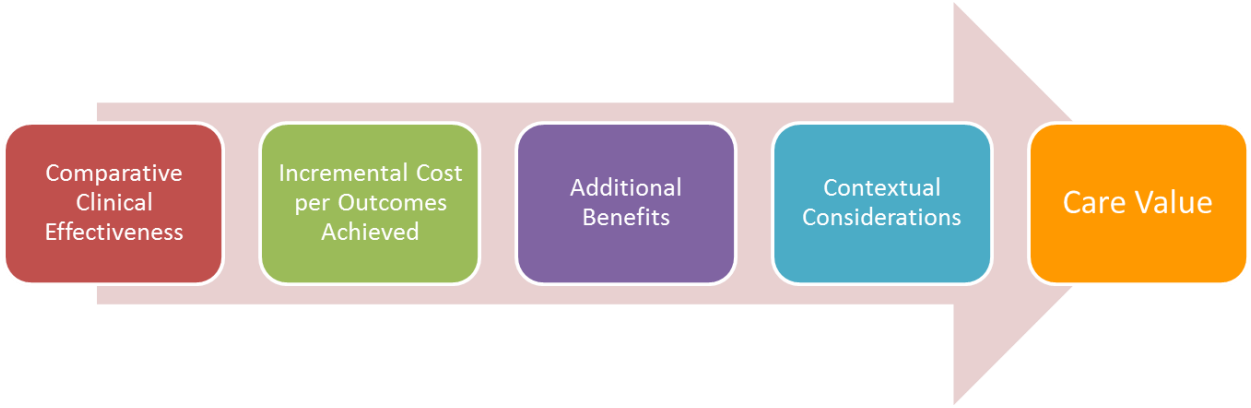
At each meeting, after CTAF or CEPAC votes, a policy roundtable discussion is held with the Panel or Council, and individuals representing the patient, clinician, payer, and policymaker perspective. This is intended to bring stakeholders into the discussion on how best to apply the evidence to guide patient education, clinical practice, and coverage policies. Participants on the policy roundtable are selected for their expertise on the specific meeting topic, are different for each meeting, and do not vote on any questions.

At April 2 and May 1, 2015 meetings, the CTAF Panel and CEPAC Council, respectively, discussed issues regarding the application of the available evidence to help patients, providers, and payers

address the important questions related to the integration of behavioral health into primary care. Following the evidence presentation and public comments, the CTAF Panel and CEPAC Council voted on key questions concerning the comparative clinical effectiveness and comparative value of BHI. These questions are developed by the ICER research team for each assessment, with input from the CTAF and CEPAC Advisory Boards to ensure that the questions are framed to address the issues that are most important in applying the evidence to support clinical practice and medical policy decisions. A summary of the voting results is presented below, along with comments reflecting considerations mentioned by CTAF Panel and CEPAC Council members during the voting process.

In their deliberations and voting related to value, both groups made use of a value assessment framework with four different components of *care value*, which they considered in assigning an overall rating of low, reasonable, or high care value. The four components of care value are comparative clinical effectiveness, incremental cost per outcomes achieved, additional benefits, and contextual considerations regarding the illness or therapy. Once they made overall assessments of care value considering these four components, the CTAF Panel and CEPAC Council then explicitly considered the affordability of BHI in assessing health system value as low, reasonable, or high (see Figure 7 below and Figure 8 on the next page, as well as the detailed explanation that follows).

Figure 7. Care Value Framework



***Care value* is a judgment comparing the clinical outcomes, average per-patient costs, and broader health effects of two alternative interventions or approaches to care.**

There are four elements to consider when deliberating on care value:

1. ***Comparative clinical effectiveness*** is a judgment of the overall difference in clinical outcomes between two interventions (or between an intervention and placebo), tempered by the level of certainty possible given the strengths and weaknesses of the body of evidence. CTAF and CEPAC use the ICER Evidence Rating Matrix as the conceptual framework for considering comparative clinical effectiveness.

2. ***Incremental cost per outcomes achieved*** is the average per-patient incremental cost of one intervention compared to another to achieve a desired "health gain," such as an additional stroke prevented, case of cancer diagnosed, or gain of a year of life. Alternative interventions are compared in terms of cost per unit of effectiveness, and the resulting comparison is presented as a ratio: a "cost per outcome achieved." Relative certainty in the cost and outcome estimates continues to be a consideration.
3. ***Additional benefits*** refers to any significant benefits offered by the intervention to caregivers, the delivery system, or other patients in the health care system that would not have been captured in the available "clinical" evidence. Examples of additional benefits include mechanisms of treatment delivery that require many fewer visits to the clinician's office, treatments that reduce disparities across various patient groups, and new potential mechanisms of action for treating clinical conditions (e.g., mental illness) that have demonstrated low rates of response to currently available therapies. For each intervention evaluated, it will be open to discussion whether additional benefits such as these are important enough to factor into the overall judgment of care value. There is no quantitative measure for additional benefits.
4. ***Contextual considerations*** can include ethical, legal, or other issues (but not cost) that influence the relative priority of illnesses and interventions. Examples of contextual considerations include whether there are currently any existing treatments for the condition, whether the condition severely affects quality of life or not, and whether the condition affects priority populations. There is no quantitative measure for the role of contextual considerations in an overall judgment of care value.

Both CTAF and CEPAC use this conceptual description of the elements of care value when deliberating on the evidence and voting. The Panel and Council were asked to vote whether interventions represent a "high," "reasonable," or "low" care value vs. a comparator from the generalized perspective of a state Medicaid program.

Figure 8. Health System Value Framework

Health system value **is a judgment of the affordability of the short-term budget impact that would occur with a change to a new care option for all eligible patients, assuming the current price and payment structure.**

Usually, the care value and the health care system value of an intervention or approach to care will align, whether it is "high," "reasonable," or "low." For example, a treatment that is judged to represent high care value from the perspective of per-patient costs and benefits will almost always represent a high health system value as well. But health system value also takes into consideration the short-term effects of the potential budget impact of a change in care across the entire population of patients. Rarely, when the additional per-patient costs for a new care option are multiplied by the number of potential patients treated, the short-term budget impact of a new intervention of reasonable or even high care value could be so substantial that the intervention would be "unaffordable" unless the health system severely restricts its use, delays or cancels other valuable care programs, or undermines access to affordable health insurance for all patients by sharply increasing health care premiums. Under these circumstances, unmanaged change to a new care option could cause significant harm across the entire health system, in the short-term possibly even outweighing the good provided by use of the new care option itself.

To consider this possibility, CTAF and CEPAC review estimates of the potential budget impact for a change in care as measured by the estimated increase in PMPM health care premiums that would be needed to fund a new care option in its first year of use were all eligible patients to be treated. Both CTAF and CEPAC were asked to consider affordability from the generalized perspective of a state Medicaid program. It should be noted that if, after considering potential budget impact, a health intervention judged to have high care value receives a judgment of "low" health system value from the Panel or Council, this does not imply that the health system should not adopt the intervention; rather, the vote indicates that policymakers should consider implementing mechanisms related to patient selection, step therapy, pricing, and/or financing to ensure that the short-term budget impact of a high care value intervention does not lead to more harm than good. CTAF and CEPAC votes on health system value therefore serve an important function by highlighting situations when policymakers need to take action and work together to align care value with health system value.

The following definitions were used for the CTAF and CEPAC reports and meetings:

- *Behavioral health integration (BHI)* into primary care refers to screening and treatment to address both physical health and behavioral health needs in primary care settings through systematic coordination and collaboration among health care providers.

- *Behavioral health* is defined broadly by AHRQ to include mental health and substance abuse conditions, health behaviors (including their contribution to chronic medical illnesses), life

stressors and crises, stress-related physical symptoms, and ineffective patterns of health care utilization. This report focuses on programs to address mental health and/or substance use disorders that are frequently diagnosed and managed in primary care settings and not on programs that address the other issues identified above OR serious mental illness (SMI), addiction, or serious alcohol abuse.

- *Collaborative Care Model* (CCM) is an approach that integrates treatment for mood and anxiety disorders into primary care settings and has these components: 1) care coordination and care management, 2) regular/proactive monitoring and treatment to target using validated clinical rating scales, and 3) regular supervision of case manager by a mental health professional. The IMPACT model is the most studied example of a CCM.

- Other models of integration may involve co-location of providers including social workers, psychologists, or psychiatrists in primary care settings; or completely integrated practices that include shared treatment plans, shared electronic health records (EHRs), and other components.

9.2 Summary of the Votes

Key Voting Results: CEPAC and CTAF

- The evidence is adequate to demonstrate that interventions to integrate behavioral health into primary care using the Collaborative Care Model (CCM) **have better depression and anxiety outcomes, and higher patient satisfaction,** than usual care.
- The CCM represents **reasonable to high care value** and **reasonable health system value**.
- The evidence is inadequate to determine the clinical effectiveness and value of alternative approaches to BHI due to the lack of high quality scientific studies available for other models. This vote indicates a need for additional research on alternative methods and is not intended to suggest that other strategies lack benefit.

The CTAF Panel and CEPAC Council both voted unanimously that the CCM improves mental health outcomes related to depression and anxiety, as well as patient satisfaction when compared to usual care. CEPAC also unanimously judged that CCM improves quality of life for patients compared to

usual care.[2] The two bodies were closely divided on the CCM's effects on intermediate health outcome for patients with diabetes (e.g., reductions in hemoglobin A1c levels, blood pressure) with the CTAF Panel voting 7 to 6 that the CCM improves outcomes and the CEPAC Council voting 5 to 7 that it does not. The close split of the votes signifies the level of uncertainty surrounding the evidence of the benefit of the CCM for diabetes outcomes.

The majority of both programs judged that the CCM provides **reasonable to high care value**. CTAF and CEPAC members offered the following insights into their assessments of each of the four components of care value:

Comparative clinical effectiveness	CCM provides a superior or incremental clinical benefit relative to usual care. A minority of members noted that the evidence was promising but inconclusive.
Incremental cost per outcomes achieved	Incremental costs per QALY of the CCM fall within ranges that are generally accepted as reasonable.
Additional benefits	CCM reduces emergency department utilization and missed days of work, while allowing primary care providers to make better use of their limited time.
Contextual considerations	CCM increases access to care for underserved and disadvantaged populations and improves historically inadequate behavioral and physical health care.

Members who deemed CCM to reflect high care value despite relatively small improvements in comparative clinical effectiveness and reasonable incremental costs per outcomes achieved emphasized the significance of the additional benefits and contextual considerations observed.

Majorities of both groups judged the CCM to be of reasonable health system value. As justification for their rationale, several Panel and Council members noted that primary care has been chronically underfunded. One CEPAC Council member's "low" health system value vote was driven by the large budget impact in Medicaid populations with a high prevalence of major depression, but the member noted that future studies may show substantial long-term savings and benefits.

Across both programs, the majority of panel members voted that, compared to usual care, there is insufficient evidence to determine whether other models of BHI improve outcomes for anxiety, depression, diabetes, and patient satisfaction; CEPAC also found insufficient evidence to determine the effect of other models of BHI on quality of life versus usual care. Due to insufficient evidence,

[2] CEPAC was presented an additional question related to patient quality of life based on feedback from the April 2, 2015 CTAF meeting. Both question sets are presented with vote tallies in Appendix H of this report.

neither program judged the care value or health system value of other models of BHI. CEPAC and CTAF members emphasized that a vote for insufficient evidence should not be misinterpreted to mean that alternative approaches to BHI are ineffective; rather, it means that there are not enough high quality, publicly available studies to determine their impact on the outcomes assessed in ICER's review.

10. Recommendations to Guide Practice and Policy

Prior to the CTAF and CEPAC public meetings, ICER staff conducted semi-structured interviews with national and regional experts in New England and California to gain their perspectives on practice and delivery system innovations, barriers to change, and opportunities for improving how behavioral health services are integrated into primary care. These key informants included experts from academic institutions, FQHCs, hospitals, patient advocacy organizations, health plans, and managed behavioral health organizations (MBHOs). A full methodology and list of individuals who served as key informants throughout our research process is available in Appendix G.

The results of these interviews and research were used to generate a draft set of policy and practice recommendations for the CEPAC and CTAF moderated discussions between Council/Panel members and regional policy roundtable participants. Clinical experts, health insurers, state agency representatives, and a patient advocate discussed with Council/Panel members various policy options for implementing BHI in the New England states and California (see Appendix J for a list of policy roundtable participants):

Combining the insights gained from the earlier policy expert interviews with the votes on the evidence by CEPAC and CTAF (see Section 9 for a description of the voting process and a summary of the votes) and the ensuing policy roundtable discussion at each meeting, the following recommendations are presented to guide the application of evidence to BHI implementation. This set of recommendations combines the major findings that emerged from both meetings and policy discussions. Best practices and other resources specific to each region are described in complementary Action Guides for CTAF and CEPAC. Because the discussion at each meeting reflected multiple perspectives and opinions, the recommendations should not be taken as representing the views of individual members of CTAF or CEPAC, policy roundtable participants, or as a consensus view held by all participants.

Care Delivery Models

1. *Effective BHI can be accomplished through different care delivery models, and in practice, implementation will be tailored to distinct patient populations and other local considerations. Since the approach to integration with the strongest evidence base is the Collaborative Care Model (CCM), practices implementing BHI should use available resources and seek guidance from organizations that have experience with the CCM while accounting for differences in patient population, resources, treatment priorities, and options for funding. A second promising approach to integration is the Behavioral Health Consultant model.*

While the precise details of a program to integrate care should be tailored to the population being served, the CCM has demonstrated improved mental health outcomes through a team-based approach in which team members share responsibility for patient care. **Initial screening** of patients for mental health conditions, followed by **treatment and systematic monitoring** to ensure progress and ongoing care management are key components of this model. **In the CCM, a designated care manager serves as an intermediary between the PCP and other behavioral health providers and helps co-manage mental health conditions. Psychiatrists or psychologists are available to provide consultation and oversight.** For practices seeking to implement BHI, publicly available resources on the CCM are available at the AIMS Center website and in the Action Guides for CTAF and CEPAC.

Stakeholder experts emphasized that while the CCM is the BHI approach with the strongest evidence base, it is clear that one size does not fit all in terms of implementation. Experts also noted that regardless of how BHI is implemented, clinic leadership and staff should be aligned in their commitment to BHI as a systemic practice change intended to improve patient care – and not as a quick fix to reduce health care costs. Many other approaches to BHI converge or overlap with the CCM but are adapted to account for local differences in patient needs and practice resources. For example, policy roundtable panelists noted that the staffing ratios used in the CCM trials (up to 3.0 FTE care managers per 1,000 patients) do not always reflect the reality of local resources. One of the key lessons from the CCM is that PCPs can screen for and manage common mental health conditions using care managers to co-manage and support patients who are not improving.

2. *Researchers, research funders, and clinicians should work together to generate more evidence on the effectiveness of BHI approaches in addition to the CCM and on the effectiveness of BHI in treating health conditions other than depression and anxiety.*

While the evidence base does not yet demonstrate the effectiveness of BHI approaches other than the CCM, experts emphasized that inadequate evidence does not mean proof of ineffectiveness. Organizations should partner with researchers to evaluate their programs and generate evidence on the clinical effectiveness of alternative approaches to integrated care for various conditions; additional evidence on the effectiveness of the CCM for behavioral health conditions other than depression and anxiety is also needed. Finally, while the evidence base for CCM does include information on the costs of implementing and managing such programs, evidence of long-term cost savings is lacking for both CCM-based and other BHI approaches.

While randomized controlled trials are an extremely important tool to assessing the comparative effectiveness of different interventions, they may not be possible for most organizations that cannot randomize patients or clinics. RCTs may not adequately capture factors crucial to the successful implementation of integrated programs. Other evaluation approaches, such as high-quality, well-controlled pragmatic trials; approaches using aggregated quality improvement information; or observational studies using both quantitative and qualitative data, can generate

compelling clinical and economic evidence and should be pursued by the research and practice communities.

Reimbursement and Payment Policies

3. *To align incentives among providers and encourage integration, payment for behavioral health services should be shifted away from fee-for-service (FFS) to value-based reimbursement contracts, including risk-adjusted capitation and opportunities for shared savings and/or shared risk. When developing reimbursement arrangements, decision-makers should consider the following:*
    a. *Where possible, supplemental capitated payments or performance bonuses should be based on implementing and sustaining BHI.*
    b. *To support the transition towards value-based reimbursement, payers and state agencies should activate currently available billing code sets for care and case management so the incremental services being provided in integrated settings can be documented.*
    c. *Behavioral health carve-outs, though not ideal for achieving the goals of BHI, are likely to remain an important aspect of health care financing. To the extent possible, carve-out arrangements should be improved through enhanced communication, information sharing, and care planning across entities to encourage collaborative care planning and follow-up.*

Experts were nearly unanimous in stating that FFS incentives and complex billing rules are among the most pressing challenges to sustaining BHI, and that working through billing issues and adopting value-based payment structures that better support the work of BHI and shift incentives towards care management and coordination are crucial to sustaining integrated efforts.

FFS reimbursement makes it difficult for providers to receive payment for activities core to BHI, including care management and collaboration across providers. Much of the daily interaction among care team members (e.g., formal or informal "huddles", reading medical records in complex cases, informal consults in the hallways) is not allowable for FFS billing, and yet is critical to collaborative care planning. Capitation and bundled payments are alternatives to FFS that better support BHI. Capitation payments should be risk-adjusted with an increase in PMPM to help fund care coordination, case management, and other practice enhancements. Where possible, supplemental payments should be tied directly to BHI and the manner in which behavioral health services and expertise are tied into primary care. Policy experts cautioned that supplemental global payments should be specifically targeted towards BHI and not admixed with the overall clinic budget.

Health plans emphasized the importance of incorporating both “upside” and “downside” risk, meaning that in addition to sharing savings, providers accept some accountability for costs that exceed targets or if they fail to meet certain quality standards; otherwise, there will be little

incentive to continually improve. Other experts noted that performance measures for bonus payments should also include explicit standards for integration, such as having a system to monitor treatment to target and adjusting care quickly when it is not working, to further incentivize BHI. Savings and risk should also be shared in cases when behavioral health care is carved out and there is shared patient responsibility between a health plan focused on physical health and a separate entity focused on behavioral health.

Even where there is widespread support for value-based reimbursement, both payers and providers have noted challenges to transitioning away from FFS. First, some payers mentioned that introducing global payment structures to support integration can be a non-starter in organizations where the payer represents a small proportion (20% or less) of the market share of the patient population. Similarly, provider groups may find it difficult to fully invest in integrated care for a minority of patients in a global payment structure while not getting paid at all for the same services rendered to FFS patients. Another often cited challenge to shifting to global payment structures is establishing a monthly payment that is cost saving to payers and provides an appropriate level of revenue for practices. Realistic estimates of the time it will take for a practice to observe a positive return on investment (ROI) are essential; as a related example, some architects of state payment reform initiatives mentioned that an underestimation of the time required for PCMH efforts to lead to a positive ROI led some practices to revert to FFS before change could be realized. Anecdotal experience shows that it may take practices 2-5 years to achieve cost neutrality with BHI, given the significant initial investment involved with primary care transformation and the time it takes to standardize integrated care. These timeframes are inconsistent with state budget timelines (typically 1-2 years).

Key informants called for additional research and application of more sophisticated, objective risk-adjustment algorithms to more appropriately establish rates and allocate resources. Experts also cautioned that capitation introduces a level of opaqueness to reimbursement and makes it more difficult to monitor which services are being delivered and have value. Though global payments may provide additional flexibility for practices to better provide coordinated, comprehensive services, some experts were concerned that it is difficult to monitor whether the services paid for by the global payment rate are being delivered. When rolling out supplemental capitated payments, some experts recommended activating billing code sets for care management and case management to help practices and payers make accurate valuations of the supplemental care being provided under capitation. Though the ultimate goal should be to shift towards value-based contracts, in the short-term, activating existing FFS billing codes for care management and case management services, along with HBAI codes, will help decision makers understand what services individuals are accessing in primary care; this will help determine the true costs of implementing and managing BHI.

4. *Even with a shift toward capitation, FFS will continue to be a reality of the reimbursement landscape, at least in the short-term. Therefore, several changes to billing requirements are*

needed to facilitate BHI. Although they will differ by state, these include allowing more types of clinicians to bill for behavioral health services; expanding billing codes for care management and case management; and paying for behavioral health services provided when a patient is not present, rather than requiring a physical face-to-face interaction.

Billing rules differ across payer and setting, creating complexity for providers and an environment that is not supportive of BHI. In states with the billing restrictions listed below, the following changes would enhance BHI:

- Activate Health and Behavior Assessment and Intervention (HBAI) codes to allow billing for services related to behavioral, social, psychological, and cognitive issues that affect the management of physical health conditions;
- Ease restrictions on licensing requirements for the use of different billing codes to be more inclusive of behavioral health clinicians (e.g., physicians typically bill using evaluation and management (E&M) or psychiatric codes, whereas licensed, non-physician behavioral health clinicians typically use HBAI codes);
- Establish billing codes for care management and case management, including for services provided when a patient is not present such as provider-to-provider consultation and referral coordination;
- Allow behavioral health and physical health visits to be billed on the same day; and
- Ease the requirement that patients must receive a full intake evaluation and assessment before providers can bill and be reimbursed for behavioral health services.

Coverage and licensing requirements for using billable behavioral health services vary widely across New England states. Among the six Medicaid programs, Massachusetts, Rhode Island, and New Hampshire have not activated the HBAI codes, limiting the ability for behavioral health providers in these states to be reimbursed for services related to integrated care. Another challenge relates to whether LCSWs, MFTs, and other providers can bill using HBAI codes. Payers in New England that have activated HBAI codes typically interpret these services to be billable only for licensed psychologists, NPs, or MDs. Each state Medicaid program in New England does allow for same-day billing in FQHCs, though some regional commercial plans do not pay for physical and behavioral health visits on the same day.

In California, FQHCs serving Medi-Cal patients cannot bill for behavioral health services provided by MFTs, or for physical and behavioral health visits on the same day. Separate bills have been introduced in the California legislature to address these issues – one (SB 147, introduced April 2015) to implement a pilot project that would provide capitation payments to FQHCs and allow them greater flexibility in the delivery of services (e.g., they could provide both types of services on the same day, use different types of providers, and provide care through phone or email consultations) and another (AB 690, introduced February 2015) to add MFTs to the list of health care professionals whose services are reimbursed through Medi-Cal on a per-visit basis.

5. *Health plans should design benefits and provider networks to support a role for behavioral health providers as members of primary care teams and not require that patients pay specialist-level copayments for these providers.*

Because they have historically been considered as specialty providers by health plans, behavioral health clinicians often have different structures for copayments and for provider networks that pose barriers to effective integration with primary care. Medicare and some commercial insurers require higher copayments for some behavioral health providers (e.g., psychologists, psychiatrists, social workers), and for many patients, an additional copayment of $40-50 (Medicare rates) to see a psychologist or social worker makes it unlikely that patients would opt to see behavioral health and primary care providers during the same visit. An alternative approach is to have a single copayment for a visit that covers any care provided by the primary care team. As practices shift towards integrated care and behavioral health clinicians are embedded in primary care teams, some experts think that behavioral health clinicians should not be categorized by payers as specialists, effectively eliminating higher copayments for behavioral health clinicians than for other members of the primary care team. As Mental Health Parity regulations are implemented, the issue of copayments and the designation of some behavioral health providers as specialists is likely to evolve.

Some health plans have separate provider networks for primary care and behavioral health clinicians. As a result, it may not be possible for a behavioral health clinician working in a primary care practice to serve all the patients in the practice. Experts suggested that payers establish primary care panels that are inclusive of both physical and behavioral health providers to avoid limiting access to integrated services.

6. *Providers should be reimbursed for behavioral health services delivered via telehealth.*

Telehealth represents an opportunity to expand access to care for patients, particularly in underserved areas. Since the availability of psychiatrists and other behavioral health clinicians is often limited, expanding telehealth reimbursement would allow for a broader geographic distribution of behavioral health consultations. As more states turn to telehealth as a solution to workforce shortages, key informants mentioned the need for greater consistency in how telehealth is reimbursed across payers. Some payers will only reimburse for a psychiatrist's time when providing remote consultative services to a primary care provider but not for providing treatment to patients remotely, which may discourage the use of this technology. The CCM model, for example, uses telehealth extensively for psychiatric consultations and oversight.

Licensing and Certification

7. *States should take steps to alter licensing and certification requirements that serve as a direct barrier to BHI and pursue policies that streamline licensing processes for integrated or multi-site care settings.*

State and federal licensing and certification requirements are oft-cited barriers that hinder integration of services at the practice level. Key informants agreed that licensing and certification standards need to keep pace with desired transformations in primary care practice. For example, in Massachusetts, provider organizations have recommended revising legislation that requires new or renovated facilities to have separate waiting rooms for behavioral health and primary care patients. Recently, the state has granted waivers to this requirement, but receiving a waiver can be subject to an "administrative lottery" and may take over a year to obtain.

The current requirement for separate licensing and associated fees for each clinic housing an integrated team and each clinician practicing as part of the team serves as a barrier to BHI. Experts have recommended allowing discounted fees for professionals who certify as a care team and creating an option for integrated practice groups to apply for a single license rather than acquiring separate licenses for each facility, as is often required.

Some states have recently changed or are actively pursuing changes to licensure requirements to better support integration, such as Massachusetts' recently proposed legislation (Bill H.905, introduced January 2015) that would require hospitals and FQHCs to provide access to behavioral health services, either directly or through contracts, in order to be licensed. The Connecticut Department of Public Health recently approved legislation that reversed a longstanding rule that prevented behavioral health facilities from providing any service "off-site" in satellite physician offices or other health care settings. A multi-care facility license now allows behavioral health facilities to provide care in a variety of settings, removing a significant barrier to integration.

Innovation and Collaboration

8. *Public and private payers, clinicians, patients, and others should collaborate to reduce fragmentation of care and develop innovative system-wide solutions that include BHI, building on efforts already underway and utilizing state and federal programs.*

Significant efforts are underway in both New England and California to integrate behavioral health and primary care, and these efforts could be further advanced and sustained with the involvement and support of additional collaborators. In the New England region, the State Innovation Models (SIM) Initiative – a program of the Center for Medicare & Medicaid Innovation (CMMI) that provides federal grants to states to test multi-payer health care delivery and payment reform models for

improving care quality while reducing costs – has spurred a number of efforts related to BHI. Many award recipients are using SIM funding to develop an enhanced primary care delivery system that is responsive to the comprehensive needs of patients and integrates care across sectors.[223] Each state in New England has received either a Model Design award (funding to support planning and development of an innovation plan) or a Model Testing grant (funding to test the innovation plan).[223] Efforts in the region have overlapped with the goals of integration and have typically focused on expanding existing ACO and PCMH programs, investing in EHR infrastructure, supporting workforce development and training for team-based care, and using alternative payment models to support BHI and other integrated care efforts. A summary of the different approaches New England states are adopting as part of the SIM initiative to develop primary care and foster BHI is in Appendix C.

Stakeholders should also take advantage of opportunities to expand BHI through Medicaid waivers. California, for example, submitted an 1115 waiver to CMS in March 2015 with a goal of facilitating system transformation. Specific to BHI, the waiver seeks to 1) better coordinate and promote BHI so patients experience more seamless care, and 2) reduce overall costs of care through aligned financial incentives and value-based payments. Waiver components include cross-training of providers in primary care, mental health, and substance use disorder services; improved care coordination by expanding the use of peer providers as part of a care team; value-based purchasing strategies and shared savings; and support of EHR adoption with a focus on interoperability across providers and plans.

Technology/Information Sharing

9. *BHI depends on the ability of clinicians to collaborate and share patient information. Systems that better support communication between primary care providers and specialty behavioral health providers are therefore needed, particularly where EHR systems are not used or lack interoperability. Clearer guidance is also needed from federal and state officials to help clinicians understand laws that affect the sharing of patient information related to mental health and substance use disorders. Enhanced information sharing would allow for more coordinated treatment, particularly around vulnerable times of transition, and would help to avoid duplication of services.*

EHRs can be very useful in facilitating communication, scheduling, and tracking of patient outcomes. The ability of EHRs to facilitate the kind of communication at the core of BHI is limited to some extent, however, by federal patient confidentiality standards and interoperability challenges. HIPAA, though not designed to prevent appropriate communication across providers, has been interpreted by some practices as placing constraints on information sharing needed for BHI. Some policy experts believe confidentiality rules are poorly understood and that more education and support is needed from federal and state policymakers to help practices understand that legal

requirements to protect health information do not necessarily preclude the sharing of information central to BHI.

Separate federal legislation (42 CFR Part 2) that requires additional authorization for substance use facilities to share patient information with primary care practices poses distinct challenges. In response to this legislation, many practices have maintained behavioral health and physical health records separately. In some cases, specialty behavioral health providers have even opted not to communicate back to primary care providers when a patient has been seen within their practice. This lack of communication between primary care and specialty behavioral health organizations makes it difficult to know if duplicate or contradictory services are being performed, and if adjustments need to be made to a patient's treatment plan.

In circumstances where legal or infrastructure constraints make it impossible to use an EHR to share information fully, other approaches may be used to support coordination and communication between providers. Provider groups may wish to consider using Community Health Workers (CHWs) or patient navigators to help track patients receiving specialty behavioral health services and to support the coordination of services between primary care and behavioral health providers. Patient navigators and CHWs are also being used to help link higher-risk patients with community resources and provide follow-up and engagement outside of the primary care visit.

Clinic Operations, Workflow, and Space

10. *Flexible workflows facilitate BHI. To the extent possible, clinic operations should allow for "warm hand-offs" and real-time (in-person or virtual) collaboration and consultation across providers. The specific staffing model that a practice adopts should reflect the disease burden and broader psychosocial characteristics of the population served and should include designated leadership positions to facilitate team collaboration and oversee the transition to integrated care.*

Care team staffing and flexibility in clinic workflows are key considerations for BHI. Clinic scheduling should allow time for team members to discuss cases and coordinate treatment plans, as well as to provide real-time consultation when problems are identified. In settings where both primary care and behavioral health providers are physically present, practices should consider having time built in to the schedule to allow for "warm hand-offs" in which behavioral health clinicians enter primary care appointments to introduce themselves to patients, explain services, and immediately take care of any urgent concerns. Office space can play a pivotal role in a practice's ability to integrate care, since many facilities are not arranged such that all physical and behavioral health practitioners are located on one floor or even in the same building, hindering the ability for "warm hand-offs" or real-time consulting across team members.

In terms of adapting clinical workflows and scheduling to accommodate for greater collaboration, some experts recommended reserving designated clinic time each day for provider-to-provider consultation. Other practices have instituted "no closed-door" policies to help foster a culture of collaboration and encourage team members to interrupt appointments when issues are identified. Cherokee Health Systems, a large health system in Tennessee, has adopted an innovative approach in which behavioral health consultants carry a laptop that allows them to move throughout exam and consultation rooms to address patient issues as they arise. RNs are used to carefully manage workflow and allocate space to ensure that appointments run on schedule. If PCPs fall behind in their schedule, behavioral health clinicians may initiate appointments with patients and provide some primary care services to keep them from waiting.

The optimal number of behavioral health team members will depend on each practice's unique patient characteristics, the prevalence of behavioral health conditions among its patients, and how broadly the practice defines the scope of behavioral health care. Some experts mentioned that behavioral health staff should be available 2-4 hours weekly for every 1,000 patients in typical primary care practices, while others mentioned hiring one behavioral health clinician (e.g., licensed psychologist, LCSW, RN) for every 3-4 PCPs, depending on the size of the practice. The AIMS Center at the University of Washington has developed a staffing formula for diverse primary-care settings based on the needs of the population being treated, as discussed in section 8.2 of this report. However, strong empirical evidence on the effects of different staffing ratios is lacking.

Practices have taken many different approaches to staffing depending on the practice setting and unique patient case mix. Care teams have often included LCSWs or licensed psychologists who serve as care managers working alongside PCPs, RNs, NPs, and CHWs or care navigators. As in the CCM, psychiatrists were often available on a consultant basis to provide guidance for more complex cases or to serve as a referral for patients requiring long-term care. At least initially, it may be helpful to have "team huddles" in which all behavioral health team members participate. All care team members should also be included in decisions about workflow. The structure and timing of team meetings will vary according to the unique patient needs of a practice, but can range from daily to monthly. Key informants also underscored the importance of not only hiring new line staff to integrate care, but also of establishing new leadership positions to oversee the transition to integration. Practices tend to underestimate the level of expertise and time required to establish new workflows and clinical processes to facilitate BHI, so hiring new directors of integration can be particularly helpful.

11. *If a population-based approach to BHI is not feasible, practices should consider rolling out BHI interventions to a subset of the patient population with the greatest clinical need and potential benefit.*

Although a population-based approach is a desired goal, practices may decide to limit screening and treatment efforts to depression and anxiety before taking on all behavioral health conditions, for example, or they may limit interventions to patients who have multiple conditions and more complex management needs (e.g., patients with diabetes and depression). Experts cautioned that practices should avoid screening for conditions if they cannot reasonably provide services to patients needing treatment or cannot refer them elsewhere for timely and high-quality treatment.

If implementing BHI incrementally, some experts cautioned that at a minimum, behavioral health clinicians should be present in the practice for enough days a week or have enough contact with team members to become part of the team culture and build a trusting relationship with other team members. Experts additionally noted that the implementation of BHI involves a degree of primary care transformation that is made far easier by strong leadership, vision, and commitment at the senior level. Implementing BHI incrementally through narrow pilot projects can reduce the willingness to participate in future reform efforts if these projects fail by virtue of limited resources or ineffective or incomplete implementation.

Provider Training and Capacity

12. *The capacity for practices to implement BHI is strained by an overall shortage of primary care and behavioral health providers and by a lack of providers with expertise in integrated care. Additional specialized training or re-training of staff is necessary to build the integrated care workforce and help each team member understand their scope of work and the goals of integrated care.*

Key informants emphasized network capacity issues and noted that there is a shortage of primary care and behavioral health providers to meet the needs of the communities they serve. Even in states with adequate numbers of health care staff, primary care and behavioral health providers tend to be concentrated in certain areas and are not distributed to reflect geographic needs. This is particularly true in rural areas, where it is difficult to recruit and retain clinicians. Moreover, available primary care and behavioral health providers are rarely trained in integrated care. Psychologists, social workers, and psychiatrists are typically not trained in the primary care setting. PCPs and other primary care team members may lack exposure to behavioral health issues and may be uncomfortable managing behavioral health medications and treatment plans. Administrative staff in primary care settings may also lack familiarity with behavioral health billing and integrated care scheduling. Therefore, major retraining of staff is often necessary to support BHI efforts and help each team member understand their new scope of work and the goals and mission of integrated care. Some experts also noted pushback from primary care team members who perceived that BHI would expand the scope of their role in an area where resources and time are already limited. Research suggests that if PCPs performed all recommended screening and preventive services for all individuals in a patient panel, it would take over 7 hours a day.[208] Primary

care staff in particular feel pressure to adapt their practice to other ongoing reform efforts, including medical homes, ACOs, and new quality and performance measures, all without significant increases to reimbursement.

Specialized integrated care training can help prepare primary care staff and practice leadership for an integrated environment. Though not yet a mainstream component of medical or psychology training, some such programs do exist. The Center for Integrated Care at University of Massachusetts Medical School, for example, provides specialized integration training for a range of perspectives, including for behavioral health providers transitioning from specialty practice to the primary care setting, for care managers working in medical homes and other integrated settings, and for administrators and physicians planning to establish integrated practices. Experts also called for more residency and training programs for behavioral health providers in primary care settings, and for more education on how to adapt traditional behavioral health tools that are crafted for longer appointment structures to primary care practice. Some health systems such as Intermountain Healthcare and Cherokee Health systems have established their own internal training systems from which they recruit behavioral health care managers and other team members.

13. *To address network capacity concerns, provider organizations should develop systems that link providers electronically and help triage patients to the level of care most appropriate for their individual needs.*

The shortage of specialty behavioral health providers places strains on the ability of patients to access behavioral health services in primary care settings. Insufficient referral sources for specialty behavioral health and avoidance of specialty behavioral health services by individuals stigmatized by treatment in these settings suggest that some patients with SMI or severe substance use disorders are likely to access behavioral health services in primary care settings, which may lack the resources to respond to the needs of these patients. Some primary care practices also noted that it can take over a month to obtain an appointment with a specialist for more complex patients, placing additional strains on integrated care settings.

As a response to issues of access to behavioral health providers, some states have developed innovative solutions, particularly in the area of child psychiatry. For example, the Massachusetts Child Psychiatry Access Project has established consultation “hubs” across the state that allow pediatricians serving children and adolescents with behavioral health conditions to call centers staffed by behavioral health specialists in order to receive guidance and clinical advice from psychiatrists in real time. The initiative is funded through the state and available to assist all children in Massachusetts. The program has been adapted elsewhere in New England, including the Access Mental Health program in Connecticut. Connecticut is also developing a central database and clearinghouse of providers accepting new patients to help them access services, given issues

with network capacity. In Vermont, some health systems have moved towards establishing "medical neighborhoods" to help address network capacity issues. In this model, medical home primary care practices refer patients with more complex behavioral health needs to specialty organizations, where patients are stabilized, after which they are transferred back to primary care practices for ongoing management to help improve efficiency and ensure that patients are being treated in the care setting most appropriate to their needs. In California, eConsult, an online system that allows primary care and behavioral health providers to share information and collaborate on patient care, is currently being tested.

Measurement, Outcomes, and Standards

14. *Payers, practices, patients, and policymakers should work collaboratively to build consensus around a set of validated structure and outcome measures for BHI. Standardized measures would help payers and practices understand the degree of integration being achieved, the benefit, and the true cost of implementing and maintaining BHI.*

As reimbursement is increasingly linked to performance, experts called for greater consensus among payers and providers on key outcome measures for BHI and how performance should be evaluated. Some national standards for BHI have emerged; for example, the National Committee for Quality Assurance (NCQA) issued new standards for PCMHs in 2014 that explicitly relate to the integration of behavioral health and primary care (see Section 2). The AHRQ Integrated Behavioral Health Care Atlas supports integration by providing a framework for measuring BHI and compiles a list of existing measures that organizations can adopt in their own work.

Despite these national efforts, health plans often enter PMCH and other contracts with their own set of performance standards and expectations that can make aligning efforts around integration challenging. Measurement options are also limited for evaluating clinician behavior and adherence to different models for BHI. Some tools do exist, such as the VA's Primary Care Behavioral Health Provider Adherence Questionnaire,[217] though they may not be relevant to all care settings or models of BHI. Some payers also stated that more standardized measurement for behavioral health services like cognitive behavioral therapy (CBT) would help health plans more effectively support these services and pay more for providers meeting certain quality standards.

Though recognizing the need to monitor outcomes on BHI, patient advocates had concerns that some performance measures could create perverse incentives. If practices are rewarded for scheduling physical and behavioral health visits on the same day, for example, some advocates were concerned that this could lead to longer wait times for appointments or patients being rushed through appointments for the sole purpose of meeting the same-day standard.

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This is the first review of this topic by the California Technology Assessment Forum and the New England Comparative Effectiveness Public Advisory Council.

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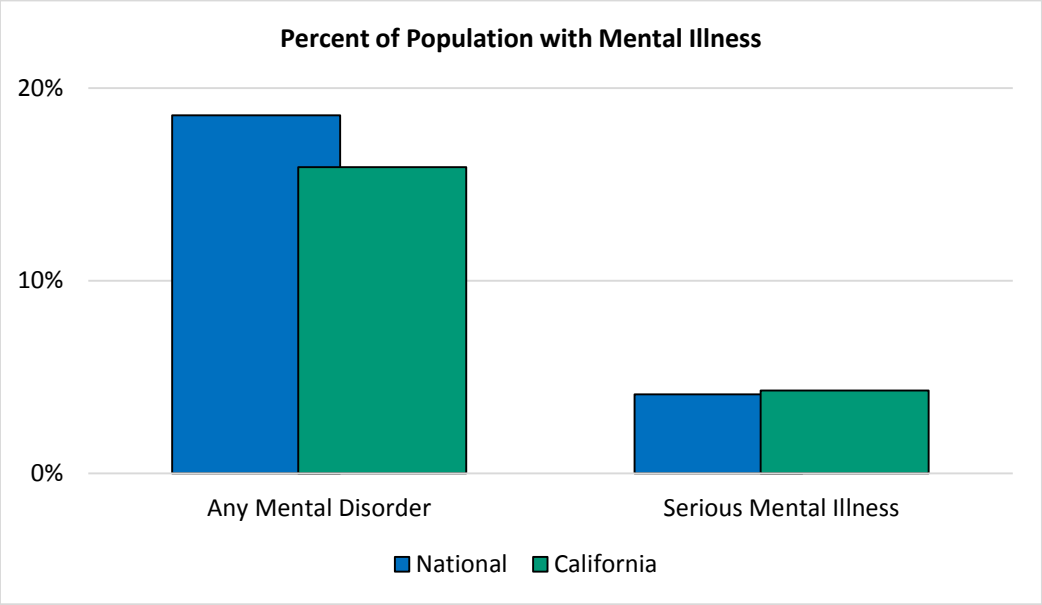
APPENDICES

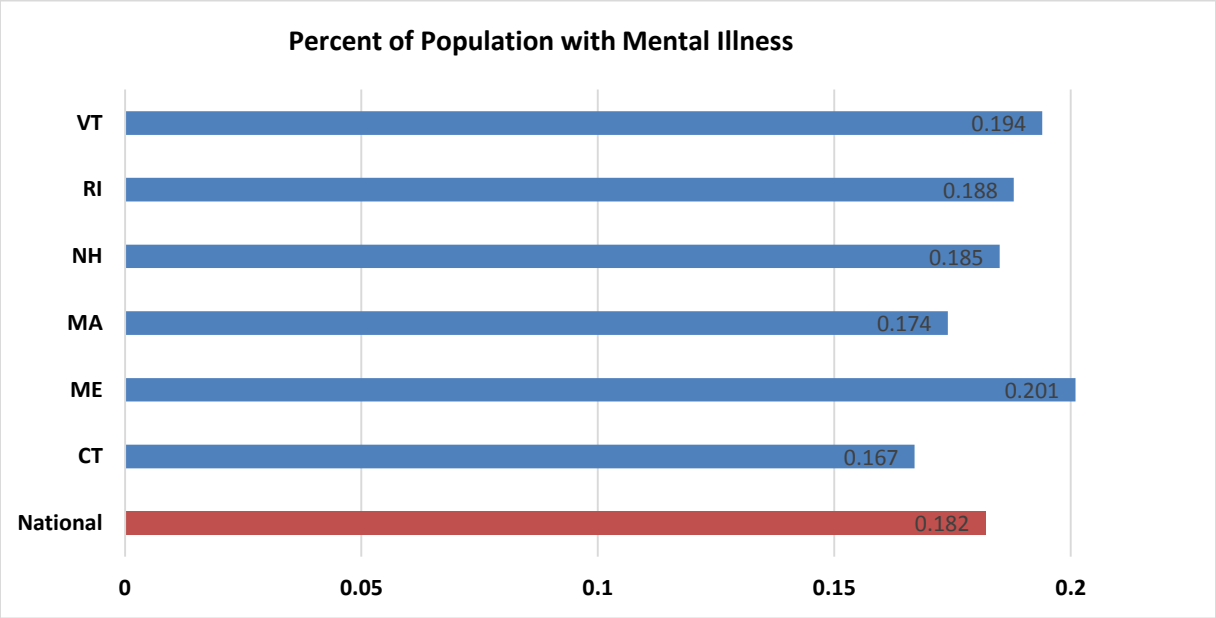
Appendix A: Prevalence of Mental Health Disorders

Figure A1: Prevalence of Any Mental Disorder and SMI, National and California



Source: California HealthCare Foundation. Mental health care in California: Painting a picture. California Health Care Almanac, July 2013.[11]

Figure A2: Prevalence of Mental, Behavioral, and Emotional Disorders among Adults, National and New England



Source: Substance Abuse and Mental Health Services Administration. The 2011 and 2012 National Survey on Drug Use and Health, February 2014.[12]

Appendix B. Patient Confidentiality Legislation: New England and California

California	CA Civil Code 56.10-56.16: A provider cannot share information about a patient without patient's consent except as described in the law. CA Evidence Code Section 992: Communication between physician and patient is confidential. Information cannot be disclosed to third party, except as necessary for diagnosis and treatment. The patient may refuse disclosure of information. CA Evidence Code 1010-1027: Communication between patient and psychotherapist is confidential. Information cannot be disclosed to third party, except as necessary for diagnosis and treatment. The patient may refuse disclosure of information.
Connecticut	CT ST § 52-146c: A patient or patient's authorized representative must provide consent for disclosure of information provide din any communication between psychologist and patient. 52-146f: Communications may be disclosed without authorization under several conditions, including sharing of information to other persons engaged in the diagnosis or treatment of the patient or transferred to another mental health facility if the psychiatrist sees it as necessary for diagnosis or treatment. The patient must be informed that the information will be disclosed.
Maine	ME R REV 503: The patient may refuse to allow disclosure of confidential communications among the patient, physician, psychotherapist, and other people involved in the diagnosis or treatment. LD534 An Act To Improve Care Coordination for Persons with Mental Illness: Authorization for disclosure is not required for information shared within the office, practice, or organizational affiliate of the provider or health care facility.
Massachusetts	MA Title XVI Chapter 112 Section 129A: All communications between licensed psychologist and individuals with whom psychologist engages in practice of psychology are confidential
New Hampshire	189:2 Use and Disclosure of Protected Health Information; Health Information Exchange: Health care providers may transmit patient health information through the state's health information organization. Information can be accessed only by a health care provider for treatment, care coordination, and quality assurance, or by a legal representative. Patients must be given the opportunity to opt out of having personal information such as a name or address shared with protected health information. NH ST § 332-I:2: Providers cannot share confidential communications or information without the patient's consent, unless as required by law or to protect the patient or public interest. Rule 503. Patient's Privilege: Interactions between patients and state certified psychologists or pastoral counselors are confidential, and no psychologist or pastoral counselor should be required to disclose information without consent of the patient. Chapter 330-A Mental Health Practice Section 330-A:32: Interactions between patients and licensed state mental health providers are confidential, and no psychologist or pastoral counselor should be required to disclose information without consent of the patient.
Rhode Island	RI Gen L § 23-17-19.1 (2012): State-licensed health care facilities must ensure patient privacy and confidentiality. All records related to a patient's treatment should be kept private. Confidentiality does not prevent sharing of information between providers for the purposes of patient care. § 40.1-5-26 Disclosure of confidential information and records: All information and records created during provision of mental health services cannot be shared without consent of the patient. Information sharing between qualified medical and mental health professionals that pertains to the patient's care is

	allowed without patient consent. Consent must be obtained before sharing information with professionals outside of the facility where the patient is being treated.
Vermont	12 V.S.A. § 1612: Providers, including mental health professionals, are not able to disclose any information obtained while caring for a patient in a professional capacity unless the patient provides consent.

Appendix C. Summary of BHI in New England SIM Efforts

State	Award Type	Primary Care Delivery System Features	Select Efforts related to BHI in primary care[3]
CT[74]	**$45M Model Test Award**	**PCMHs**	• **Expand certified PCMHs and develop CT-specific PCMH criteria related to BHI** • **Offer awards and technical assistance to health systems and FQHCs to develop clinical care teams and integrate behavioral health** • Develop inter-professional training curricula to prepare future primary care professionals for team-based care • Introduce shared savings contracts to Medicaid to promote greater accountability for quality and costs in this population and flexibility to provide integrated services • Expand EHR infrastructure to support communication across care providers
ME[76]	**$33M Model Test Award**	**PCMHs** ACOs	• **Expand number of PCMHs utilizing team-based care approaches to support chronically ill patients** • **Development of workforce models that provide care management to high-risk high-utilizing patients with chronic illness and peer support for high risk populations** • **Support training efforts for primary care clinicians serving patients with behavioral health needs** • **Expand alternative payment models like shared savings and global capitation that provide greater flexibility for BHI** • Implement EHRs in behavioral health settings to support care coordination and integration with primary care
MA[76]	**$44M Model Test Award**	**PCMHs** **ACOs**	• **Provide support for primary care practices transitioning to PCMH models** • Develop alternative primary care payment methodologies that incorporate shared savings/shared risk models with added quality incentives based on statewide metrics • Support public and private payers in transitioning to the model • Enhance data infrastructure to provide better accountability and care coordination

[3] Some states in New England have developed programs as part of SIM initiatives to integrate primary care services into specialty mental health settings or Behavioral Health Homes serving patients with SMI, as in Rhode Island and Maine. These programs are not discussed here as the focus of the report is integrating behavioral health into primary care settings.

NH	**$1.6M Model Design Award (Round One)[80]**		• **Improve access for individuals at risk of requiring long-term supports and services (LTSS) through Medicaid** • Implement practices that empower the patient in coordination of care • Better coordinate services provided through medical, behavioral, and LTSS systems • Develop an incentive program that shares savings with providers if system-wide improvements are achieved[219]
	$2M Model Design Award (Round Two)[81]		• **Develop plan for implementing Regional Healthcare Cooperative Extensions (RHCEs) where providers can access health systems engineers for consultation, implementation support, and technical assistance** • **Improve exchange of information and communication through technical assistance from RHCEs, an open data initiative to make de-identified state data openly available, improvements to quality reporting, and wider adoption of EHRs, particularly in long-term care settings** • Develop strategies to improve population health • Explore payment methodologies for episodes of care as well as global budgets, both with opportunity for shared savings
RI[85]	**$20M Model Test Award**	**PCMHs** Health homes ACOs	• **Develop a Population Health Plan based on a baseline assessment of community health, including the integration of behavioral health and primary care** • **Expand and strengthen existing network of PCMHs, Health Homes, and ACOs through a Transformation Network that will provide technical assistance and analytical support to providers and payers adopting value-based approaches** • **Support the development of community health teams to strengthen linkages between primary care and community resources** • **Expand state's health information technology infrastructure to support uptake of EHRs** • **Facilitate the statewide implementation of tools to support substance abuse prevention and early treatment** • Explore alternative payment models, including pay-for-performance (P4P) and shared savings

VT[76]	**$45M Model Test Award**	**PCMHs ACOs**	• **Create a model that increases coordination between primary care and specialists**
			• **Develop three alternative payment models:**
			  • **An ACO model that integrates payment and delivery across the entire system through a shared-savings payment model**
			  • A bundled payment model that integrates payment and services across independent providers
			  • A P4P model that improves the quality, performance, and efficiency of providers
			• Improve telehealth and home-monitoring services
			  • Defined strategies and mechanisms for moving to a more value-based, patient-centered system

Appendix D. Key National Models for BHI

Summary of Select National BHI Programs

Program	Overview of Key Features
Cherokee Health Systems (Behavioral Health Consultants)	Cherokee Health Systems is a FQHC and community mental health center in Tennessee that operates over 50 clinic sites throughout the state. Core features of the program include: • ***Screening and services provided****:* Primary care team members screen every patient for behavioral health conditions to triage care accordingly and identify treatment and care support needs of each patient. Cherokee Health Systems provides continuity of care across behavioral health services - from psychological and psychiatric consultation and care management in primary care, specialty therapy, psychiatric services, intensive outpatient programming for alcohol and drug abuse, crisis outreach teams, and a crisis stabilization unit. This model of behaviorally enhanced comprehensive primary care aims to optimize prevention, at risk intervention, and intervention of the spectrum of physical, mental, and social needs of the communities we serve. • ***Team-based care****:* Generalist Behavioral Health Consultants (BHCs) are typically licensed psychologists and are fully embedded on the care team and co-manage patients found to have behavioral health conditions. BHCs are also a standard part of all well-child visits and prenatal care appointments to address psychosocial challenges, provide screening, and provide patient education and prevention. Care teams are also composed of care coordinators, health coaches, community health coordinators, and specialist psychiatric consultants who all work together to complete the functions of a behaviorally enhanced primary care system. • ***Integrated workflow****:* BHCs provide rapid access to behavioral health treatment on the same day – often during the same patient visit. Consultant psychiatrists are also available to provide specialized consultative services to PCPs and BHCs for complex cases. A robust orientation is provided to all members of the care team, including analytical and administrative staff, to provide an overview of the mission of integration and scope of each person's position within the care team. BHCs receive additional specialized training on integrated care. • ***Shared information system****:* Members of the care team share access to the same EHR that facilitates information exchange across practitioners. • ***Systematic measurement****:* EHRs are used to track patient outcomes, share notes, and obtain data on core health outcomes to track improvements and adjust patient care as needed. Cherokee Health Systems has additionally trained numerous other health systems on its model through its Primary Behavioral Health Integration Academy.

Program	Overview of Key Features
IMPACT Model/Collaborative Care	Developed by the University of Washington, Collaborative Care, or the IMPACT model, integrates treatment for a range of mood and anxiety disorders, as well as broader mental health conditions into primary care settings. The AIMS Center based at the University of Washington focuses on the implementation of Collaborative Care and has worked with hundreds of practices nationally and internationally to apply and adapt the model. Core features of the IMPACT model include: • ***Screening***: Care team members screen patients for depression using validated screening tools, such as the PHQ-9, a nine item questionnaire. • ***Team-based care***: Primary care and behavioral health providers collaborate using shared treatment plans that are individualized to meet each patient's unique circumstances and goals. Core members of the team include a primary care physician (PCP), care manager, and psychiatric consultant. The care managers may be nurses, social workers, psychologists, or other trained health professionals. • ***Integrated Workflows***: Care managers support PCPs in coordinating treatment, providing brief counseling, providing proactive follow-up, notifying PCPs when outcomes are not improving, supporting medication management, and communicating any treatment changes to psychiatric consultant team members. Psychiatric consultants support PCPs and care managers in diagnosing patients, and in designing treatment plans and adjustments when patients are not experiencing improvements (i.e., stepped care). Psychiatric consultants may work directly with patients in complex situations. • ***Systematic Measurement*:** Patient progress is tracked and regularly monitored in a central registry, and workflow adjusted so more resources can be allocated to patients who are not improving as expected.
Intermountain Healthcare Mental Health Integration Program	Intermountain Healthcare is an integrated health system of over 20 hospitals and 200 outpatient clinics serving the metropolitan area of Salt Lake City, Utah. The health system built on existing institutional structures for coordinated care to integrate primary care and behavioral health services. Features of this model are being applied to health systems nationally, including in Maine, Mississippi, New Hampshire, and Oregon. Core features of the model include: • ***Screening***: All patients receive a comprehensive mental health assessment and are screened for depression, anxiety, and other behavioral health concerns using validated screening tools. • ***Team-based care***: Mental health practitioners are embedded with the primary care team to co-manage care and may include psychiatrists, nurse practitioners, social workers, psychologists, peer specialists, or other professionals. Families are also considered part of the care team and included in treatment plans. • ***Integrated workflows***: All members of the care team are housed within the same facility to facilitate seamless care transitions. Mental health practitioners

Program	Overview of Key Features
	rotate through clinics and are assigned in blocks of hours based on the unique patient mix at each clinic. For example, practices with more complex caseloads may have a rotating psychiatrist to handle appointments for a day a week, whereas practices with more mild-to-moderate cases may use psychiatric specialists for less time each week. Extensive training is provided to all team members on the goals and features of integration and each individual's role within the model and care team. • ***Shared information-systems***: A secure, central health information exchange is available to all team members to track and upload patient data, communicate, coordinate treatment plans, and measure patient outcomes. • ***Systematic measurement*****:** A core set of measurement tools are used to document patient outcomes, assess the allocation of resources, and build consensus around integration needs. • ***Engagement with broader community***: Intermountain Healthcare also establishes formal relationships with community resources to refer patients to broader social supports to reinforce treatment plans.
Department of Veterans Affairs (VA)	The VA integration program built on a strong existing infrastructure to implement a national strategy for BHI that focuses exclusively on SMI and depression. The program involves several individual projects that are coordinated but are individualized to each site's unique needs. Core features of the program include: • ***Screening***: PCPs provide universal screening of depression and PTSD. Patients with positive screens are assessed for behavioral health needs using structured protocols performed by care managers. • ***Team-based care***: Depression care managers are included on the primary care team and make recommendations to the PCP about treatment, provide proactive patient follow-up, and communicate with consultant psychiatric specialists when problems arise. Case managers are typically nurses or social workers. • ***Integrated Workflows***: Care managers are supported by formal review and consultation with mental health specialists, who also see more complex patient cases as needed. Mental health and primary care team members are co-located and share responsibility for treatment development, monitoring, and ongoing management. • ***Shared information system****:* EHRs are used to facilitate provider communication, report data, and provide point-of-care decision support. • ***Systematic Measurement***: A standard set of performance measures is used to track patient outcomes and improvements.

Appendix E. Sample Worksheets for Practice-Level Expenses Associated with BHI

A. Start-Up Expenses

Table 1 - Start-up expenditure data (prior to baseline)

Practice Number:
Start-up period from Calendar Month and Year (MM/DD/YYYY): to

	Total # of staff FTEs	Total hours devoted per staff category (over entire start-up period)	Average monthly Salary per 1 FTE	Average monthy Benefits per 1 FTE	Did you hire any new staff specifically for the intervention during the start-up study period? (if yes, specify FTE and start-up month)	New staff FTE	New staff start date	Notes?
Section A1. Direct Staff Start-up Time								
Training								
Clinicians								
PA								
Health Coach								
Behavioral Health Counselor								
Medical Assistant								
Front Desk								
Care Coordinator-RN								
Biller								
Referrals Coordinator								
Section A2. Indirect Staff Start-up (Adminstrative)								
Practice Administrator								
Other (please list staff category; use lines below)								
Medical Director/PI								
CFO								
COO or program personnel								
CEO								
MA Supervisor								
Front Desk Supervisor								
Billing Supervisor								

	Estimated cost ($)
Section B. Non-recurrent Start-up Expenditures (non-staff)	
Space purchases (construction of health coaching rooms)	
Computer hardware and any equipment purchases	
Computer software purchases	
Purchase of rights for an tool, instrument or measure	
Travel and transportation	
Other Asset purchases	

	Expenditure on all overhead items for the period ($)	Average % of item devoted to ACT project
Section C. Overhead Start-up Expenditures (non-staff)		
Building and occupancy lease/rental during startup		
Equipment lease/rental during startup		
Insurance (NOT malpractice) & finance fees		
Electronic software subscription fees		
Phone and utilities		
Administrative supplies and services		
Other expenses:		

Notes:

Source: Adapted for Advancing Care Together (ACT) program from: Dodoo MS, Krist AH, Cifuentes M, Green LA. "Start Up and Incremental Practice Expenses for Behavior Change Interventions in Primary Care." *American Journal of Preventive Medicine*, Nov 2008; 35(5 Suppl):S423-430. [206]

Table 1D - Development expenditure data (prior to baseline)

Practice Number:	0		
Start-up period from Calendar Month and Year (MM/DD/YYYY):		to	

	Total # of staff FTEs	Total hours devoted per staff category (over entire start-up period)	Average monthly Salary per 1 FTE	Average monthy Benefits per 1 FTE
Section A. Staff Development Time				
Staff Meetings with Community Reach				
Practice Administrator			$0.00	$0.00
Medical Director/PI			$0.00	$0.00
Health Coach			$0.00	$0.00
Behavioral Health Counselor			$0.00	$0.00
Development of Program Activities				
Practice Administrator			$0.00	$0.00
Health Coach			$0.00	$0.00
Medical Director/PI			$0.00	$0.00
Develop Workflow and Process Diagrams				
Medical Director/PI			$0.00	$0.00
Practice Administrator			$0.00	$0.00
Tool Development				
Health Coach			$0.00	$0.00
Practice Administrator			$0.00	$0.00
Website Redesign				
Practice Administrator			$0.00	$0.00
Medical Director/PI			$0.00	$0.00
Administrative and Legal Activities				
Practice Administrator			$0.00	$0.00
Westminster Medical Director/PI			$0.00	$0.00
Clinicians			$0.00	$0.00
Health Coach			$0.00	$0.00

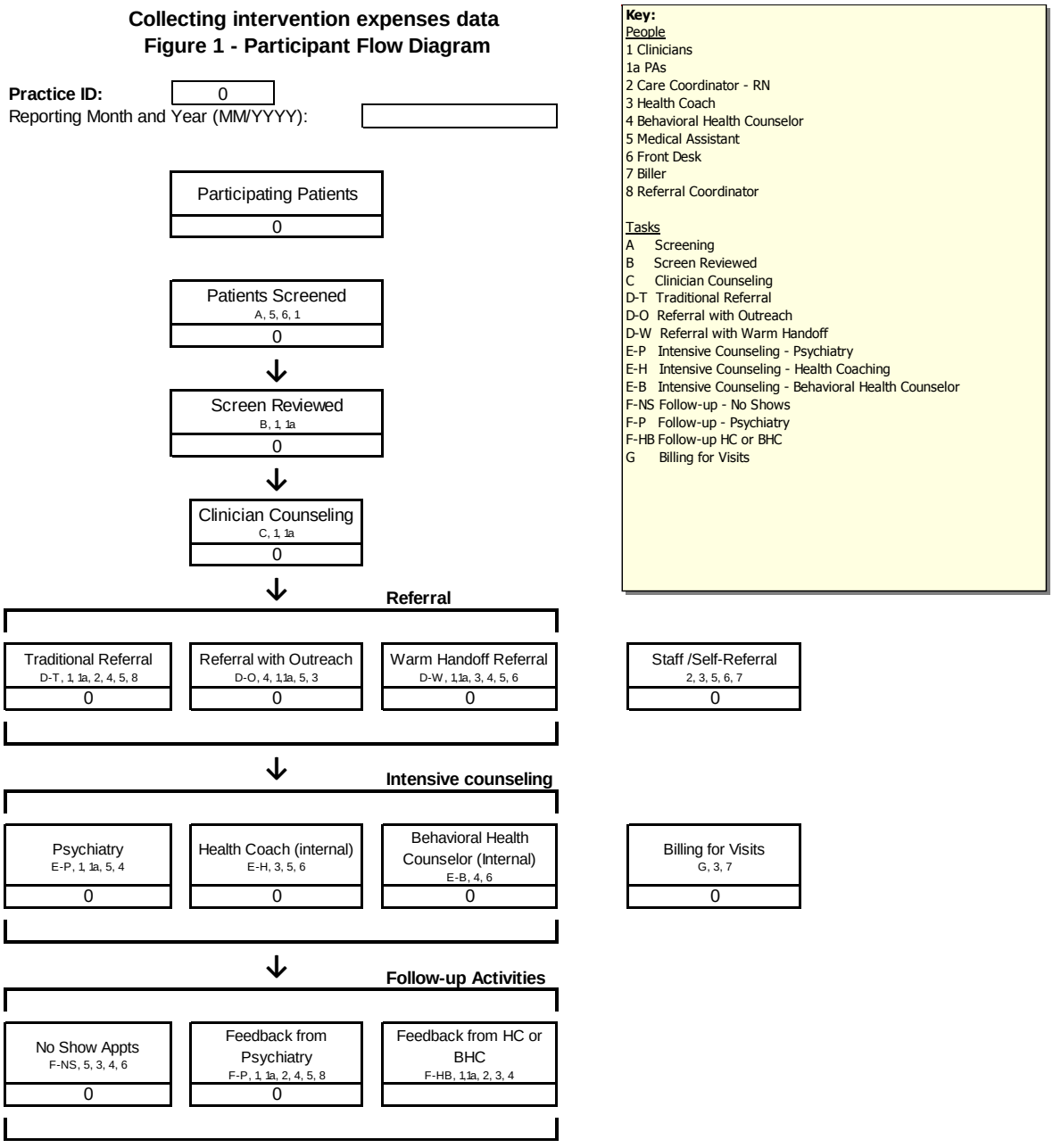
	Estimated cost ($)
Section B. Non-recurrent Development Expenditures (non-staff)	
Travel and transportation	$0.00
Other purchases	$0.00

	Expenditure on all overhead items for the period ($)	Average % of item devoted to ACT project
Section C. Overhead Development Expenditures (non-staff)		
Building and occupancy lease/rental during startup	$0.00	0.0%
Equipment lease/rental during startup	$0.00	0.0%
Insurance (NOT malpractice) & finance fees	$0.00	0.0%
Electronic software subscription fees	$0.00	0.0%
Phone and utilities	$0.00	0.0%
Administrative supplies and services	$0.00	0.0%
Other expenses:	$0.00	0.0%

Notes (please describe the items are you including in Section B and C above. Please note if any expenditures are both start-up and developmental items):

Source: Adapted for Advancing Care Together (ACT) program from: Dodoo MS, Krist AH, Cifuentes M, Green LA. "Start Up and Incremental Practice Expenses for Behavior Change Interventions in Primary Care." *American Journal of Preventive Medicine*, Nov 2008; 35(5 Suppl):S423-430. [206]

B. Baseline and Ongoing Expenses



Source: Adapted for Advancing Care Together (ACT) program from: Dodoo MS, Krist AH, Cifuentes M, Green LA. "Start Up and Incremental Practice Expenses for Behavior Change Interventions in Primary Care." *American Journal of Preventive Medicine*, Nov 2008; 35(5 Suppl):S423-430. [206]

Collecting intervention expenses data
Table 2 - Average Salary information for each type of direct staff per FTE

Practice ID:	0
Indicate the Reporting Period:	0
Reporting Month and Year (MM/YYYY):	
Date Completed:	

	Current Monthly base salary per FTE ($)	Current Monthly Fringe Benefits per FTE ($)	Average Current other salary or benefit expenditures ($)	Total Average Compensation per FTE	Total # of FTEs in Practice	Current monthly time spent on formal training for ACT
Direct Staff Category						
Physicians				$0.00		
PAs				$0.00		
Health Coach				$0.00		
Behavioral Health Counselor				$0.00		
Medical Assistant				$0.00		
Front Desk				$0.00		
Care Coordinator - RN				$0.00		
Biller				$0.00		
Referrals Coordinator				$0.00		
Administrative Staff						
Administrative and clerical support staff	$0.00	$0.00	$0.00	$0.00	0.0	0
			$0.00	$0.00	0.0	
			$0.00	$0.00	0.0	
			$0.00	$0.00	0.0	
Supervision/Management staff used in month	$0.00	$0.00	$0.00	$0.00	0.0	0.0
MA Supervisor				$0.00		
Front Desk Supervisor				$0.00		
Billing Supervisor				$0.00		
				$0.00		
				$0.00		
Other overhead staff expenses	$0.00	$0.00	$0.00	$0.00	0.0	0.0
				$0.00		
				$0.00		
				$0.00		
				$0.00		

Notes:

Source: Adapted for Advancing Care Together (ACT) program from: Dodoo MS, Krist AH, Cifuentes M, Green LA. "Start Up and Incremental Practice Expenses for Behavior Change Interventions in Primary Care." *American Journal of Preventive Medicine*, Nov 2008; 35(5 Suppl):S423-430. [206]

Table 3 - Basic Operating Expenditures

Practice ID:	
Indicate the Reporting Period:	1. Baseline month 2. Midpoint month 3. Month before end of steady state
Reporting Month and Year (MM/YYYY):	
Date Completed:	
Number of hours facility open in reporting month:	

	Total number of times the activity is completed in the month (Column 1)	% of activity by specific staff type for the month for Column 1	Average time in **minutes** per activity	Total Minutes spent per month on each activity
Section A1. Recurrent Expenditures (Direct staff)				
Physicians				
Screening	0			0.0
Screen reviewed	0			0.0
Clinician Counseling	0			0.0
Referral Traditional	0			0.0
Referral with Outreach	0			0.0
Referral with Warm Handoff	0			0.0
Intensive Counseling - Psychiatry	0			0.0
Follow-up - Feedback from Psychiatry	0			0.0
Follow-up - Feedback from HC and BHC				0.0
PAs				
Screening	0			0.0
Screen reviewed	0			0.0
Clinician Counseling	0			0.0
Referral Traditional	0			0.0
Referral with Outreach	0			0.0
Referral with Warm Handoff	0			0.0
Intensive Counseling - Psychiatry	0			0.0
Follow-up - Feedback from Psychiatry	0			0.0
Follow-up - Feedback from HC and BHC				0.0
Medical Assistants				
Screening	0			0.0
Screen reviewed	0			0.0
Referral Traditional	0			0.0
Referral with Outreach	0			0.0
Referral with Warm Handoff	0			0.0
Staff/Self-Referral	0			0.0
Intensive Counseling - Health Coaching	0			0.0
Follow-up No shows	0			0.0
Follow-up - Feedback from Psychiatry	0			0.0
Health Coach				
Referral with Outreach	0			0.0
Referral with Warm Handoff	0			0.0
Staff/Self-Referral	0			0.0
Intensive Counseling - Health Coaching	0			0.0
Follow-up No shows	0			0.0
Follow-up - Feedback from HC and BHC				0.0
Billing	0			0.0
Behavioral Health Counselor				
Referral with Warm Handoff	0			0.0
Referral Traditional	0			0.0
Referral with Outreach	0			0.0
Intensive Counseling - Psychiatry	0			0.0
Intensive Counseling - BHC	0			0.0
Follow-up No shows	0			0.0
Follow-up - Feedback from Psychiatry	0			0.0
Follow-up - Feedback from HC and BHC				0.0
Front Desk				
Screen reviewed	0			0.0
Referral with Warm Handoff	0			0.0
Staff/Self-Referral	0			0.0
Intensive Counseling - Health Coaching	0			0.0
Intensive Counseling - BHC	0			0.0
Follow-up No shows	0			0.0
Care Coordinator-RN				
Referral Traditional	0			0.0
Staff/Self-Referral	0			0.0
Follow-up - Feedback from Psychiatry	0			0.0
Follow-up - Feedback from HC or BHC				0.0
Biller				
Staff/Self-Referral	0			0.0
Billing	0			0.0
Referral Coordinator				
Referral Traditional	0			0.0
Follow-up - Feedback from Psychiatry	0			0.0

Source: Adapted for Advancing Care Together (ACT) program from: Dodoo MS, Krist AH, Cifuentes M, Green LA. "Start Up and Incremental Practice Expenses for Behavior Change Interventions in Primary Care." *American Journal of Preventive Medicine*, Nov 2008; 35(5 Suppl):S423-430. [206]

Table 3, Continued.

	Average % devoted to intervention
Section A2. Recurrent Expenditure (Indirect Staff)	
Administrative and clerical support staff	
Supervision/Management staff used in month	
Other overhead staff expenses	

	Estimated cost ($)
Section B. Non-recurrent expenditures (non-staff)	
Space purchases	
Computer hardware and any equipment purchases	
Computer software purchases	
Purchase of rights for an tool, instrument or measure	
Travel and transportation	
Other asset purchases:	

	Sum of all expenditure for month ($)	Average % devoted to intervention
Section C. Overhead (NOT direct) expenditures		
Building and occupancy lease/rental in month		
Equipment lease/rental in month		
Phone and utilities in reporting month		
Insurance(NOT malpractice) & finance fees		
Travel and transportation in month		
Administrative supplies and services in month		
Other expenses:		

Section D. Additional expenditure items

Were there additional practice expenditure items that even though not directly related to your ACT intervention, were triggered by the intervention?

List the items and indicate the expenditure	Expend. Amount
1	
2	
3	
4	

Notes:

Source: Adapted for Advancing Care Together (ACT) program from: Dodoo MS, Krist AH, Cifuentes M, Green LA. "Start Up and Incremental Practice Expenses for Behavior Change Interventions in Primary Care." *American Journal of Preventive Medicine*, Nov 2008; 35(5 Suppl):S423-430. [206]

SAMHSA Proforma Tool for Business Case

BUSINESS CASE FOR BEHAVIORAL HEALTH PRO FORMA MODEL

Core Assumptions:

Panel size	1500	1500		Average Visit Scheduled Time	15	minutes
Encounters	4200	4200		Estimated time saved by diverting	11	minutes
Payer Mix				to a behaviorist		
Medicaid		40%		Average visits per hour	3	
Medicare		12%		Transition training time	16	hours
Commercial		8%				
Sliding fee scale		40%		SBIRT screenings that triage for intevention	16%	
Average Reimbursement per visit		$135		Projected proportion that could be diverted to	50%	
Medicare SBIRT Reimbursement				Behaviorist		
G0396		$ 29.62		Slots created as a result of integration model	246.4	
G0397		$ 57.69				
Medicaid SBIRT Reiml	H0049			Estimated Medicare SBIRT Screens	504	
H0049		$24.00		Estimated Medicaid SBIRT Screens	1680	
H0050		$48.00		Estimated Medicare Screen & Intervention	80.64	
				Estimated Medicaid Screen & Intervention	268.8	
Provider Hourly Rate		$ 72.00		Medicare encounters	504	
RN Hourly Rate		$ 27.60		Medicaid encounters	1680	
Medical Assistant Hourly Rate		$ 15.60				
Behaviorist Hourly Rate		$39.06	$81,250	$65,000 Base salary	25% Benefits	
				2080 Hours worked a year		

Costs		**Salary Resource**	**Time**	**Lost Revenue**	**Totals**	
S	Screening					
I	Intervention	$ 40,625.00			$	40,625.00
T	Transition Costs	$ 1,843.20	16	$6,480	$	8,323.20
	Subtotal				**$**	**48,948.20**
Revenue						
X	Screening Reimbursement	$ 55,248.48			$	55,248.48
P	Gains in Productivity	$33,264.00				$33,264
R	Reimbursement for Screen and Treatment	$ 8,714.76			$	8,714.76
					$	**97,227.24**
Net Business Case					**$**	**48,279.04**

Source: SAMHSA-HRSA. The business case for the integration of behavioral health and primary care. Accessed at: http://www.integration.samhsa.gov/resource/the-business-case-for-the-integration-of-behavioral-health-and-primary-care, March 4, 2015.

Appendix F: CTAF and CEPAC Conflict of Interest Policy

CEPAC members (excluding ex-officio members) and CTAF members cannot work for any state agency or regional private payers. CEPAC members (excluding ex-officio members) and CTAF members are expected to be free from financial conflicts of interest, and all members will be required to disclose financial ties to any private health care organization. While issues of financial influence will be handled on a case-by-case basis, as a guideline, CEPAC members (excluding ex-officio members) and CTAF members may not have substantial financial interests in the health care industry, defined as the following:

- A specific financial association, such as individual health care stock ownership (including those held by spouse or minor child) in excess of $25,000 during the previous year from any one health care manufacturer or insurer (e.g., $25,000 holdings in XYZ healthcare manufacturer or $25,000 consultancy income from ABC health insurer).
- Financial association, such as individual health care stock ownership (including those held by spouse or minor child) in excess of $50,000 in aggregate during the previous year from health care manufacturers or insurers (e.g., $15,000 holdings in XYZ healthcare manufacturer, $15,000 in speaking fees from ABC health insurer, and $20,000 in consultancy income from 123 health insurer).

Recusal

Any CTAF Panel or CEPAC member with a potential influence on judgment, including but not limited to, a personal experience with a particular technology or condition; or a political consideration, shall recuse themselves from voting at a public meeting. Any CTAF Panel or CEPAC member with a direct financial association with the particular product or service being evaluated at a public meeting shall also recuse themselves from voting at that meeting. “Direct financial association” is defined as individual health care stock ownership (including those held by spouse or minor child) in or health care consultancy income from the manufacturer of the product being evaluated in excess of $5,000 during the previous year. Their presence will count towards establishing a quorum, but they will not be able to vote.

Appendix G: Key Informant Interviews

To perform this assessment, we conducted key informant interviews with 37 national and regional subject matter experts representing the following institutions:

Academic and research	University of Colorado, Denver
	AHRQ Integration Academy
	California Institute for Behavioral Health Solutions
	Institute for Healthcare Improvement
	Integrated Behavioral Health Project (IBHP), California
	Milliman
	University of Massachusetts Medical School, Center for Integrated Primary Care
	University of Minnesota Medical School, Department of Family Medicine and Community Health
Hospital/community health/FQHCs	Cheshire Medical Center/Dartmouth-Hitchcock Keene, New Hampshire
	Fair Haven Community Health Center, Connecticut
	Goodwin Community Health Center, New Hampshire
	Memorial Hospital of Rhode Island
	Penobscot Community Health Center, Maine
	Providence Community Health Center, Rhode Island
Practice networks	Cherokee Health Systems
	Intermountain Healthcare
	MaineHealth
	Sutter Health/Palo Alto Medical Foundation, California
	University of Vermont Health Network
Patient/consumer advocate	Office of Healthcare Advocate, State of Connecticut
	National Alliance of Mental Illness, Maine
Payers and managed care organizations	Beacon Health Strategies
	Connecticut Medicaid
	Kaiser Permanente
	Massachusetts Behavioral Health Partnership
	Rhode Island Medicaid
	Tufts Health Plan
State and federal agencies	Care Transformation Collaborative, State of Rhode Island
	Department of Behavioral Healthcare, Developmental Disabilities, and Hospitals, State of Rhode Island
	Department of Health Care Services, California
	Department of Human Services, State of Rhode Island
	Department of Mental Health, State of Massachusetts
	Department of Social Services, State of Connecticut
	Health Policy Commission, State of Massachusetts
	Health Resources and Services Administration
	National Institute of Mental Health
	Substance Abuse and Mental Health Services Administration

To develop a list of potential interviewees, we reviewed the policy literature and identified the key groups of stakeholders relevant to the subject of BHI. Within each group, we relied on input from the CEPAC Advisory Board and CTAF Advisory Board to identify key individuals and organizations to interview as part of our research process. When conducting interviews with initial contacts, we sought recommendations for additional regional and national experts to include as part of our assessment.

We conducted 37 – 60 minute telephone interviews with each individual using a semi-structured guide. We attempted contact with a range of stakeholders within each New England state and in California, though due to time limitations and scheduling challenges, were unable to interview all relevant stakeholders. To help ensure that key barriers and solutions were not left out of our assessment, we performed a scan of the existing policy literature.

Appendix H: CTAF and CEPAC Voting Results

CTAF Results

1. Is the evidence adequate to demonstrate that interventions to integrate behavioral health into primary care using the ***Collaborative Care Model (CCM)*** have better outcomes than usual care in terms of:
    a. *Improvement in anxiety and/or depression?*
    13 Yes (100%)
    0 No (0%)
    b. *Physical health outcomes in patients with diabetes?*
    7 Yes (54%)
    6 No (46%)
    c. *Physical health outcomes in patients with other medical conditions?*
    Vote not taken

2. Is the evidence adequate to demonstrate that interventions to integrate behavioral health into primary care ***other than the CCM*** have better outcomes than usual care in terms of:
    a. *Improvement in anxiety and/or depression?*
    1 Yes (8%)
    12 No (92%)
    b. *Physical health outcomes in patients with diabetes?*
    0 Yes (0%)
    13 No (100%)
    c. *Physical health outcomes in patients with other medical conditions?*
    Vote not taken

3. Is the evidence adequate to demonstrate that interventions to integrate behavioral health into primary care using the ***CCM*** improve *patient satisfaction* vs. usual care?
    13 Yes (100%)
    0 No (0%)

4. Is the evidence adequate to demonstrate that interventions to integrate behavioral health into primary care ***other than the CCM*** improve *patient satisfaction* vs. usual care?
    3 Yes (23%)
    10 No (77%)

5. Given the available evidence, what is the *care value* of ***CCM*** vs. usual care?
    2 Low (15%)
    9 Reasonable (70%)
    2 High (15%)

6. Given the available evidence, what is the overall *health system value* of ***CCM***?
   0 Low (0%)
   11 Reasonable (85%)
   2 High (15%)

7. Given the available evidence, what is the *care value* of integration interventions ***other than the CCM*** vs. usual care?
   Vote not taken

8. Given the available evidence, what is the overall *health system value* of integration interventions ***other than the CCM***?
   Vote not taken

CEPAC Results

1. Is the evidence adequate to demonstrate that interventions to integrate behavioral health into primary care using the ***Collaborative Care Model (CCM)*** have better outcomes than usual care in terms of:
   a. *Improvement in anxiety and/or depression?*
      12 Yes (100%)
      0 No (0%)
   b. *Physical health outcomes in patients with diabetes?*
      5 Yes (42%)
      7 No (58%)
   c. *Physical health outcomes in patients with other medical conditions?*
      12 Yes (100%)
      0 No (0%)

2. Is the evidence adequate to demonstrate that interventions to integrate behavioral health into primary care ***other than the CCM*** have better outcomes than usual care in terms of:
   a. *Improvement in anxiety and/or depression?*
      2 Yes (17%)
      7 No (58%)
      3 Abstain (25%)
   b. *Physical health outcomes in patients with diabetes?*
      0 Yes (0%)
      9 No (75%)
      3 Abstain (25%)
   c. *Physical health outcomes in patients with other medical conditions?*
      0 Yes (0%)
      9 No (75%)
      3 Abstain (25%)

3. Is the evidence adequate to demonstrate that interventions to integrate behavioral health into primary care using the ***CCM*** improve *patient satisfaction* vs. usual care?
   12 Yes (100%)
   0 No (0%)

4. Is the evidence adequate to demonstrate that interventions to integrate behavioral health into primary care ***other than the CCM*** improve *patient satisfaction* vs. usual care?
   0 Yes
   9 No (75%)
   3 Abstain (25%)

5. Given the available evidence, what is the *care value** of ***CCM*** vs. usual care?
   0 Low
   8 Reasonable (67%)
   4 High (33%)

6. Given the available evidence, what is the overall *health system value*** of ***CCM***?
   3 Low (25%)
   8 Reasonable (67%)
   1 High (8%)

7. Given the available evidence, what is the *care value* of integration interventions ***other than the CCM*** vs. usual care?
   Vote not taken

8. Given the available evidence, what is the overall *health system value* of integration interventions ***other than the CCM***?
   Vote not taken

Appendix I. Billing and Reimbursement for BHI

Table I1. Billing for Behavioral Health Services in FQHC Settings: New England State Medicaid Regulations

	Service	VT	NH	ME	MA	CT	RI
HBAI Codes	Assessment	MD, PA, NP, clinical psychologist	Not activated	MD, PA, APRN, Clinical Psychologist, LCSW, LCPC	Not activated	Credentialing information not available	Not activated
	Reassessment						
	Individual Treatment						
	Group Treatment						
	Family Treatment w/ patient						
	Family Treatment w/out patient	Not activated		Not activated			
Mental Health	Psychiatric evaluation w/out medical services	Psychiatrist, physician, PA, Psychiatric NP	Credentialing Information not available	Psychiatrist	Physician, ANP, CNSMH	Psychiatrist, MD, APRN	Credentialing information not available
	Psychiatric evaluation w/ medical services				PA employed by CMHC		
	Therapy	LCSW, LMHC, LMFT, Psychiatric NP, Psychiatric physician, doctorate and master's level psychologists	MD, PA, NP, clinical psychologist, LCSW	Licensed clinical psychologist, LCSW, LCPC, CNS	Credentialing information not available	LCSW; PhD, PsyD Psychologist	MD, PA, NP, Clinical Psychologist, Clinical Social Worker
	Mental Health Assessment		Not covered	Not covered	Not covered	Not covered	Not covered
	Group therapy					LCSW; PhD, PsyD Psychologist	
	Crisis intervention	Information not available					
	Case management					Not covered	

Source: SAMHSA-HRSA CIHS State Billing and Financial Worksheets. July 2014.

Appendix J: Policy Roundtable Panelists: CTAF and CEPAC

Program	Name	Title and Organization
CTAF	Marty Adelman, MA, CPRP	Behavioral Health Program Manager, Council of Community Clinics
	Maribel Cifuentes, RN	Deputy Director, Advancing Care Together, University of Colorado, Denver
	Efrat Eilat, MBA, PhD	Special Advisor for Integrated Systems, CA Department of Health Care Services
	John Fortney, PhD	Associate Director for Research, University of Washington AIMS Center
	Neha Patel, LPC	Manager Community Transformation – West Region, Enhanced Personal Health Care Program, Anthem, Inc.
	Susan Plass	Retired, Patient
	Kathan Vollrath, MD, MPH	Clinical Associate Professor, Medicine – General Medical Disciplines, Stanford Health Care
	Kenneth Wells, MD, MPH	Center Director, Professor-in-Residence of Psychiatry and Biobehavioral Sciences, UCLA Neuropsychiatric Institute & Hospital; Senior Scientist, RAND
CEPAC	Stephanie Jordan Brown, MA	Vice President, Transformation & Integration, Massachusetts Behavioral Health Partnership
	Nelly Burdette, PsyD	Director, Integrated Behavioral Health, Providence Community Health Centers Integrated Behavioral Health Practice Facilitator, Care Transformation Collaborative-Rhode Island (CTC-RI) MHI Faculty Advisor, HMS Center for Primary Care Faculty, Alpert Brown Medical School, University of Massachusettes Medical School Center for Integrated Primary Care
	Ken Duckworth, MD	Medical Director, Behavioral Health, Blue Cross Blue Shield of Massachusetts; Medical Director, National Alliance on Mental Illness (NAMI)
	Parinda Khatri, PhD	Chief Clinical Officer, Cherokee Health Systems
	Neil Korsen, MD, MSc	Medical Director, MaineHealth Behavioral Health Integration; Physician, MaineHealth
	Tom Simpatico, MD	Chief Medical Officer, Vermont Department of Health Access