

Artwork by Lillian Bond

The Integration of Mental Health and Primary Care CPCI
Learning Collaborative

A Breakthrough Series Collaborative

FINAL REPORT

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California Department of Health Care Services
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- B. Experts and Clinical Faculty Biographies
- C. Revised Change Package
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- E. CPCI Connect Screen Shots
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- I. Pre-Work Manual
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 - a. PDSA Cycle Worksheet
 - b. Organizational Team Meeting Report
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EXECUTIVE SUMMARY

The Integration of Mental Health and Primary Care (CPCI) learning collaborative is a quality improvement initiative of CalMEND (the California Mental Health Care Management Program.) CalMEND was established in 2005 as a quality improvement project to promote wellness and recovery for individuals with mental illness. Supported by funds from the Mental Health Services Act (MHSA), CalMEND operates under the sponsorship of the California Department of Health Care Services (DHCS) in collaboration with the Department of Mental Health (DMH) to improve quality and outcomes for publicly funded mental health services. The California Institute for Mental Health has functioned as a sub-contractor and key provider of CalMEND initiatives including CPCI.

The CPCI learning collaborative addresses concerns identified in a 2007 study sponsored by the National Association of State Mental Health Program Directors: that individuals with serious mental illness die on average, twenty-five years earlier than the general population. Co-occurring serious mental illness and substance use/abuse (MH/SU) results in an even higher level of morbidity and mortality. “The increased morbidity and mortality are largely due to treatable medical conditions that are caused by modifiable risk factors such as smoking, obesity, substance abuse, and inadequate access to medical care” (NASMHPD, 2007).¹ There is also mounting evidence that psychiatric medications contribute to, or even cause metabolic disturbances, predisposing people to metabolic syndrome and an increased risk of heart disease and diabetes.

The goal of CPCI was to improve the health outcomes of persons with serious mental illness and co-occurring chronic medical disorders through effective partnerships between mental health and primary care providers. CPCI recruited partnerships of mental health and primary care organizations to improve the “whole health” of this population through integration and coordination of care including: regular screening and treatment of health risks/conditions, care management, care coordination and self-management support.

CPCI followed a systematic improvement approach based on the Institute for Healthcare Improvement’s (IHI) Breakthrough Series (BTS) Collaborative model and Associates in Process Improvement’s Model for Improvement. CPCI was considered a BTS “pilot” collaborative because change strategies to improve patient outcomes through care integration and MH/PC partnerships were and are still in the early phases of testing and design. During this 18-month BTS pilot collaborative, the county teams of paired mental health/behavioral health departments and primary care organizations tested and measured the impact of practice innovations to improve care for their mutually served population, and shared their experiences across teams to accelerate learning and implementation of best practices. The “Chronic Care Model” developed by Ed Wagner, M.D. and associates at Group Health Research Institute’s MacColl Center for Health Care Innovation provided a framework for systems change and practice innovation.²

¹ Morbidity and Mortality in People with Serious Mental Illness, National Association of State Mental Health Program Directors, October 2006, (www.nasmhpd.org)

² Chronic Care Model, Group Health Research Institute, MacColl Center for Health Care Innovation, <http://www.grouphealthresearch.org/maccoll/maccoll.html>

Six county mental health and primary care (MH/PC) partnerships joined the pilot collaborative: Shasta, Placer, Sacramento, Contra Costa, San Mateo and Orange counties. In structure some partnerships had integrated/co-located care and some collaborated between geographically separately sites. Three partnerships also included representatives from public Medi-Cal health plans, County Organized Health Systems (Orange and San Mateo) and a Two-Plan Model (Contra Costa). Orange County also included staff from their indigent care program, Medical Services Initiative, on their team.

CPCI brought together an expert faculty that met with participating teams in five face to face learning sessions, four action periods that included twice monthly web meetings as well as team consultation and site visits to five of the six teams. Detail regarding learning topics and expert faculty is provided in this report, Section 2.

Through the CPCI pilot collaborative, county integrated partnerships took initial critical steps to coordinate and improve the screening, monitoring and provision of care for persons with co-occurring serious mental illness and health risks/conditions. The pilot teams also learned that implementing advances in care requires organizational commitment to continuous improvement--testing, ramping up and sequencing to adopt and spread high leverage changes. Teams tested key aspects of improved care capacity—and have continued to implement and spread key changes including:

- Sharing and using clinical information (underscoring the importance of registries and health information exchange) across specialties/providers to improve individual and population outcomes
- Team-driven care with including partnering providers functioning as “virtual” teams/health homes
- Treat-to-target approaches that concurrently treat/monitor improvement in mental health and medical conditions-including the development of algorithms for several specific co-occurring conditions
- Client/patient and family as care team members and participants in their own care and recovery
- Health literacy and self-management to improve health outcomes and the potential contribution of persons with lived experience/peers as health coaches and leaders of self-management support activities

RECOMMENDATIONS

CPCI identified and tested change concepts and improvement strategies using BTS learning collaborative methods. These concepts and strategies can serve to guide development of future learning collaboratives with similar focus: integration and coordination of mental health and primary care (MH/PC) to improve the health of persons with serious mental illness at risk of or with co-occurring medical conditions such as heart disease and diabetes. The summary recommendations that follow are discussed in more detail in Section 5 and focus on both the content and the method/processes of the learning collaborative.

Learning and Technical Content

1. The design of future learning collaboratives should address the diversity in participants' models of integration, e.g., coordination at a distance, co-location, full on-site integration.
2. The Chronic Care Model provides a useful framework for addressing multiple, system improvements particularly within single organizations. However, meaningful change in complex cross-organizational partnerships requires focus on fewer, carefully sequenced change concepts.
3. The rapid evolution of care integration models and practices requires learning collaboratives faculty to stay current with research and flexibly adopt/adapt content to reflect new learning.
4. Providers must be aware of and adopt evidence-based and best practices including key standards of care for screening and monitoring conditions within and across MH/PC disciplines.
5. High leverage changes such as team-based care, care coordination and/or self-management support should be introduced early and built incrementally over the course of the collaborative.
6. The outcome measures used to assess the impact of changes were appropriate given the improvement aim of the learning collaborative.

Collaborative Activities and Processes

7. Engaged and supportive executive leaders are essential to accomplish complex systems transformation and create a culture of quality improvement.
8. Recruitment and participant team selection must clarify and consider applicants' capacity to meet the time and resource requirements for learning collaborative participation of all mental health and health partners as well as communicate the potential benefits for improved client/patient outcomes.
9. Focused "Pre-Work" must address cross-organization coordination, information sharing and reporting requirements for partnering organizations to support teams to maximize and accelerate improvement during and after the collaborative.
10. Partner organizations must have the ability to share client information to effectively guide care. During the early phase of the collaborative process, participants need to identify tools and initiate processes to collect and store client/patient data required for measuring clinical and system outcomes.
11. Regular and timely feedback to teams regarding their progress and results is critical for learning, especially during the early phases of the learning collaborative. Staffing must be adequate to support this feedback process.
12. The BTS learning collaborative is a highly participatory and coaching oriented approach to organizational learning. The Learning Collaborative Director and the Improvement Advisor must therefore provide coaching/guidance to faculty and content-expert presenters regarding the model for improvement (MFI) and how to use their expertise to foster team and peer learning.

THE PATH FORWARD: CHALLENGES AND STRATEGIES FOR INTEGRATING CARE

Integration and coordination of primary care and mental health (and substance use disorder) services is essential to improving the health, quality of life, and life expectancy of individuals with serious mental illness. Research and practice knowledge is evolving rapidly regarding effective care integration for co-occurring conditions such as depression and cardio-vascular disease. The University of Washington AIMS Center's Impact Model and the Group Health/University of Washington's TeamCARE/"treat to target" models are examples of this progress. However, there have not been adequate or parallel developments in research and models of care for persons with serious mental illnesses such as schizophrenia and bi-polar disorders. The CPCI Pilot Learning Collaborative begins to address this gap.

Fundamental improvements in care will require both new approaches to integration and a commitment to continuous improvement. The CPCI collaborative is one of the first (and still few) formal cross-organizational integration learning collaboratives focused on improving health outcomes for persons with serious mental illness.

Health reform has supported a growing emphasis on person-centered health care homes and accountable care organizations (ACOs) to improve the quality and coordination of care and lower cost. California, through its "Bridge to Health Care Reform" 1115-B waiver, is working to improve, better integrate and coordinate care-especially for persons with multiple complex conditions-including individuals with co-occurring serious mental illness and medical conditions. There is also clear recognition that while the State can provide a policy and financing environment to promote these improvements, fundamental change in the organization and quality of health care requires local/regional action.

Findings from the CPCI pilot collaborative, with its focus on county-level partnerships, contribute important knowledge about challenges and potentially successful approaches to integrating care at the local level. Participating teams are continuing to test and spread improvements including sharing and using shared clinical information to guide care, leading self-management support groups – some of which are peer led, using peers as health coaches and navigators, using mental health nurses as care managers, and developing and using treatment protocols for mental health conditions in primary care. It will be important to build and sustain these efforts through sharing best practices and convening future collaboratives that spread learning about both the content of integrated care and the process of testing and bringing change for improvement to scale.

SECTION 1: BACKGROUND AND OVERVIEW

SPONSORSHIP AND CHARGE

The California Mental Health Care Management Program (CalMEND) was established in 2005 as a quality improvement project to promote wellness and recovery for individuals with mental illness. Supported by funds from the Mental Health Services Act (MHSA), CalMEND operates under the sponsorship of the California Department of Health Care Services (DHCS) in collaboration with the Department of Mental Health (DMH) to improve quality and outcomes for publicly funded mental health services. CalMEND's mission is to develop and support publicly funded mental health services in California that are person-centered, safe, effective, efficient, timely, and equitable, that are supported by friends and community, that promote wellness/recovery, and that fully incorporate shared-decision making between consumers, family members and providers. CalMEND envisions that all individuals will receive support that optimizes their development and increases their resiliency and recovery from mental illness.

The California Institute for Mental Health has functioned as a sub-contractor and key provider of CalMEND initiatives including: supporting the inclusion of mental health client and family perspectives in CalMEND programs and the development of two learning collaboratives to: (1) improve client flow and capacity of local/County Mental Health Services-Improving Client Service Capacity and quality of Care (ICSC) and, (2) improve the health outcomes of persons with serious mental illness with co-occurring chronic health risk/disease conditions through integration of Mental Health and Primary Care-CalMEND Pilot Collaborative to Integrate Primary Care and Mental Health Services (CPCI).

For the duration of the CalMEND initiative, program guidance and overall leadership was provided through a DHCS and DMH partnership. CalMEND has been co-chaired by the Director of the DHCS Pharmacy Benefit Division through a designated CalMEND “Director”/Medical Consultant II and Medical Director of the State Department of Mental Health. A CalMEND Leadership Group including the CalMEND Co-Chairs as well as the CiMH President and CEO and CiMH CalMEND Project Director was established to coordinate a range of contract objectives and projects, including the CPCI Learning Collaborative.

FRAMING THE ISSUES

A 2007 study sponsored by the National Association of State Mental Health Program Directors found that individuals with serious mental illness die on average, twenty-five years earlier than the general population. Co-occurring serious mental illness and substance use/abuse (MH/SU) results in an even higher level of morbidity and mortality. “The increased morbidity and mortality are largely due to treatable medical conditions that are caused by modifiable risk factors such as smoking, obesity, substance abuse, and inadequate access to medical care” (NASMHPD, 2006).³ There is also mounting evidence that the co-occurring health problems faced by individuals with serious mental illness face are compounded or even triggered by psychiatric medications that cause metabolic disturbances, predisposing people to Metabolic Syndrome and an increased risk of heart disease and diabetes.

Health care payers and providers are increasingly concerned about the impact of mental illness on chronic disease outcomes and the related cost of care. For example, a recent national Medicaid study

³ Morbidity and Mortality in People with Serious Mental Illness, Medical Directors Council, National Association of State Mental Health Program Directors, October 2006, (www.nasmhpd.org)

found that psychiatric conditions were present in three of the top five most prevalent dyads of the highest-cost 5% of beneficiaries with disabilities.⁴ Research suggests that without addressing the healthcare needs of persons with serious Mental Health/Substance Use (MH/SU) disorders as well as the treatment needs of the MH/SU population, it may be very difficult to achieve the three critical healthcare reform objectives articulated by the Institute for Healthcare Improvement's Triple Aim:⁵

- Improve the health of the population
- Enhance the patient experience of care (including quality, access, and reliability)
- Reduce, or at least control, the per capita cost of care

California's Medicaid 1115-B waiver that is serving as a "Bridge to Health Care Reform" for the implementation of the Accountable Care Act in 2014, addresses the importance of integrated care for the MH/SUD population as well as for other high risk/high need populations that have significant prevalence of MH/SUD including Dual Eligibles, Seniors and Persons with Disabilities.

CalMEND's CPCI learning collaborative, while not initiated in direct response to the 1115 B Medicaid waiver and health reform, provided an important opportunity to test and learn about strategies that may begin to address the crisis in health care for persons with mental health concerns-as well as point out implications for chronic disease prevention and treatment.

⁴ The Faces of Medicaid III: Refining the Portrait of People with Multiple Chronic Conditions, Center for Health Care Strategies (October 2009) finds that 49% of Medicaid enrollees and 52% of dual eligibles have the prevalence of SU which were under-reported in Medicaid data. A conservatively projected 25% of this population has a co-occurring SU condition.

⁵ <http://www.ihl.org/IHI/Programs/StrategicInitiatives/TripleAim.html>

CPCI CHARTER

To address an emerging crisis in care and poor health outcomes for persons with serious mental illness and co-occurring conditions, and to provide focus for the CPCI Learning Collaborative’s work, project leadership and staff developed an over-arching Aim and Mission statement that has been updated recently to reflect learning over the past 18 months.

CPCI CHARTER	
<p>AIM</p> <p>The integration of mental and physical health care is critical to improving dramatic disparities in the health outcomes of persons with serious mental illness and co-occurring medical conditions. CalMEND will support partnerships of mental health and primary care organizations to improve the “whole health” of this population through integration and coordination of care including: regular screening and treatment of health risks/conditions; care management/coordination and self-management support. The Care Model will be used as a framework for these improvements in integrated care.</p>	<p>GUIDANCE</p> <ul style="list-style-type: none"> • Approaches to improving and integrating care will differ depending on the partnership structure of participating organizations—a primary care setting with behavioral health services and linkages to County Mental Health, a County Mental Health System partnering with an FQHC, county-operated health clinic or network of primary care physicians. • Sharing clinical information between mental health and primary care providers is essential to coordinating care and improving health outcomes. • Exchange of client/patient data among mental health and primary care providers is guided by local interpretation of confidentiality regulations. The use of informed consent is an avenue for facilitating necessary data exchange. • Clinical health information exchange (that integrates mental and physical health data) is critical to improvement. Registries are a widely used solution but at a minimum a shared data base that includes critical client health indicators is necessary. • Leadership involvement is essential to support the cultural and systems changes necessary to integrate/coordinate care across partnering entities. Integration of care must also include leadership support for training and cross training of all staff-including professional/medical staff in standards of care and effective practices. • The active engagement of clients/patient in self-management is critical to better health and client/patient and family involvement is key to improvement at the system level.
<p>MISSION</p> <p>To improve the health of individuals with severe mental illness and co-occurring chronic medical disorders through more effective partnerships between mental health and primary care providers</p>	
<p>OBJECTIVES</p> <ol style="list-style-type: none"> 1. Improve by at least 50%, the identification/screening and evidence-based treatment of cardiovascular disease (CVD) and its risk factors, including physical inactivity, smoking, obesity, diabetes, hypertension, and dyslipidemia. 2. Clients/patients will demonstrate increased health literacy and active involvement in their care. 3. Partnering organizations will demonstrate increased coordination and integration of care. 	

Problem Statement

The Problem Statement, which follows, provides an abbreviated overview of the serious health crisis faced by persons with mental illness and their families as well as the consequences that this creates for the US health care system.

- People with serious mental illness served by public mental health systems die, on average, at least 25 years earlier than the general population
- 60% of premature deaths in persons with schizophrenia are due to co-occurring medical conditions such as cardiovascular, pulmonary and infectious diseases
- 50-60% of individuals with serious mental illnesses have history of co-occurring substance use which increases morbidity and mortality
- Serious mental illness is associated with a 31.2% increase in the odds of being hospitalized in a given year
- According to an analysis of Medi-Cal data by Jen Associates in 2007, the prevalence of diabetes, ischemic heart disease, cerebrovascular disease, arthritis and heart failure was three times higher among the SMI Medi-Cal population compared to the general Medi-Cal population
- About 75% of individuals with serious mental illness are tobacco dependent compared with 22% of the general population
- Recent results from the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) study found that among persons with schizophrenia, appropriate Medi-Cal treatment was not received by:
 - ✓ 30.2% of persons with diabetes
 - ✓ 62.4% of persons with hypertension
 - ✓ 88.0% of persons with dyslipidemia
- Second generation antipsychotic medications have become highly associated with weight gain, diabetes, dyslipidemia, insulin resistance, and metabolic syndrome
- Established monitoring and treatment guidelines to lower risk are underutilized in SMI populations
- Forty-nine percent of Medicaid beneficiaries have a psychiatric condition and 3 of the 5 most costly dyads include co-occurring psychiatric condition (Faces of Medicaid III)
- 11% of Californians in the fee for service Medi-Cal system have a serious mental illness. Healthcare spending for these individuals is 3.7 times greater than it is for all Medi-Cal fee-for-service enrollees—\$14,365 per person per year compared with \$3,914

THE PARTICIPATING TEAMS AND THEIR COUNTY DELIVERY SYSTEMS

The CalMEND Pilot-Collaborative to Integrate Primary Care and Mental Health Services-CPCI followed a systematic improvement approach based on the Institute for Healthcare Improvement's (IHI) Breakthrough Series (BTS) Collaborative model. CPCI was considered a BTS "pilot" collaborative because change strategies to improve patient outcomes through care integration and MH/PC partnerships were in the early phase of testing and design. During the 18-month Pilot Collaborative, county teams consisting of paired behavioral health authorities and their partner primary care organizations tested and measured practice innovations to improve care for shared populations, and shared their experiences in an effort to accelerate learning and widespread implementation of best practices.

CPCI recruited counties that had existing relationships between mental health and primary care providers though the nature and structure of those relationships varied from site to site. Three of the six sites extended the partnership to include their County Health Plans and one included its indigent care program in the partnership. All of the county partners were aware that they were joining a "pilot" collaborative whose aim was to improve care but, equally importantly, to test and learn about system level and clinical interventions that would lead to improve care for future partnerships.

Contra Costa County – Department of Health Services' Mental Health Division and Hospital & Clinics Division-Ambulatory (Primary) Care in partnership with the Contra Costa Health Plan

The provision of a Psychiatric Nurse Practitioner and a Psychiatric Technician in mental health was proposed to increase access and availability of physical health care at a free-standing mental health clinic in the western region of the County as well as increase follow-up to care with a county operated primary care clinic and private medical providers.

Orange County – Health Care Agency's Behavioral Health Services and Medically Indigent Services in partnership with CalOPTIMA and Asian Health Center, a private FQHC look-alike clinic

Increase identification and tracking of shared client/patients, referral effectiveness and bi-directional care coordination with a community health clinic as prototype design model for improving care integration across diverse network of private group and individual care providers.

Placer County – Partnership within Placer County Health and Human Services Department between Mental Health's Adult System of Care (ASOC) and the Placer County Community Clinic located in Auburn

ASOC had partnered with the Community Clinic, designated as a rural health clinic, to add behavioral health staff (including a full time psychiatrist) to the primary care setting and transition over 400 seriously mentally ill clients to the clinic for their care.

Sacramento County – Department of Health and Human Services' Primary Health Services in partnership with the Mental Health Division

An existing primary care team that included UC Davis physicians dually boarded in internal/family practice medicine and psychiatry worked with the MH Division to strengthen and expand care coordination and capacity to serve seriously mentally ill clients at a large primary care clinic.

San Mateo County – Health Services Department’s Behavioral Health and Recovery Services and the San Mateo Medical Center-Family Health Clinics in partnership with the Health Plan of San Mateo Increase the identification of health risks, availability and coordination of health and wellness services including smoking cessation for person’s with serious mental illness at the North County Health Center which is co-located in the same building as North County Regional Mental Health Services.

Shasta County – Shasta County Mental Health Department in partnership with Hill Country Community Clinic, an FQHC serving persons in Central and Eastern Shasta County Hill Country Clinic had a pre-existing contract with Shasta DMH to serve persons with serious mental illness through an MHS “Full Service Partnership”. Shasta Mental Health retained responsibility for crisis and inpatient psychiatric care.

SECTION 2: COLLABORATIVE PROCESSES

LEARNING COLLABORATIVE OVERVIEW, MODEL FOR IMPROVEMENT AND THE CARE MODEL

The California Primary Care and Mental Health Project for Integration pilot learning collaborative (CPCI) involved six county partnerships, each comprised of a county mental health/behavioral health department and a community primary care provider organization. The pilot team partnerships varied in structure and partnering organizations. Three partnerships also included representatives from public Medi-Cal health plans, County Organized Health Systems (Orange and San Mateo) and a Two-Plan Model (Contra Costa). Orange County also included staff from their indigent care program, Medical Services Initiative. The actual membership of the teams differed and is described in the individual team summaries (See Attachment A.) The teams were asked to include persons with lived experience/peers and family members and by the end of the collaborative, four of the six teams did include peers though none successfully integrated family members. During the fifteen-month period, April, 2010, through July, 2011, the county teams participated in a series of in-person collaborative meetings, regular webinar conferences and also maintained regular contact with each other and with CPCI staff via email and an extranet. Two learning strategies were central to supporting improvement efforts:

Expert Support

Teams had in-person and webinar interaction with experts in MH/PC integration, techniques for coordinating care for persons with mental health and co-occurring health conditions, self-management support and mental health recovery, team-based care, primary care based behavioral screening and treatment, and other evidence-based and best practices across the disciplines. Expert trainers and consultants included individuals who participated in the development and use of the Chronic Care Model as well as those with expertise in aspects of care integration. (See Attachment B for biographies and descriptions of faculty and experts.) The CPCI Improvement Advisor (IA), a co-author of *The Improvement Guide*,⁶ has been the IA for numerous national health care learning collaboratives, e.g., those sponsored by HRSA and the Indian Health Services. The IA trained and coached project faculty and participating teams in testing and adapting changes, as well as using data for quality improvement.

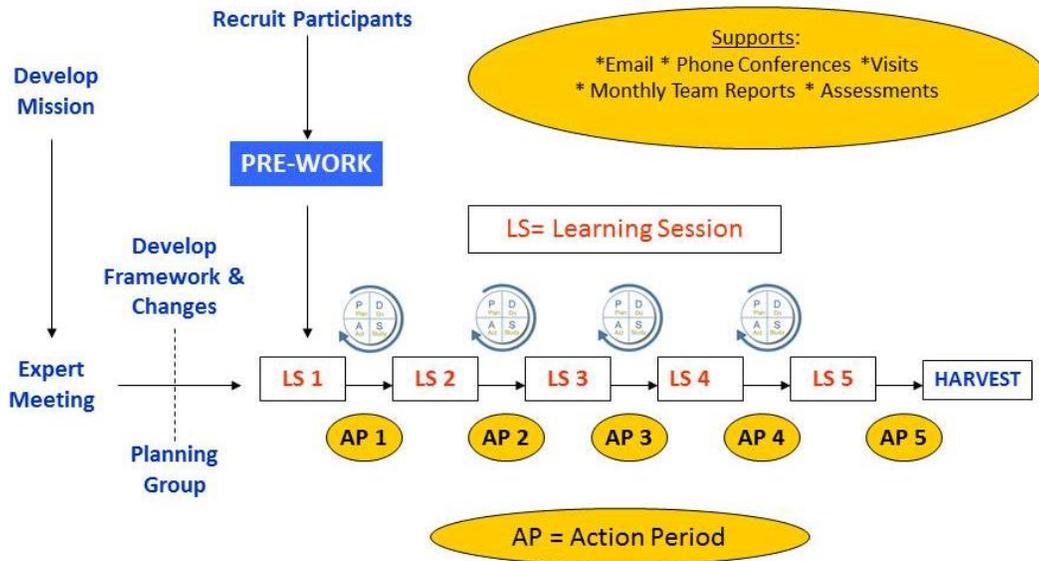
Team Collaboration

Throughout the pilot collaborative, participating county teams tested change ideas designed to improve wellness and health outcomes of clients/patients with SMI and co-occurring medical illness and to integrate MH/PC care. During Learning Sessions (face-to-face meetings) and Action Period Calls (webinars), participating teams shared their progress and learned from each other. They shared the results of their “tests of change,” analyzed progress, developed strategies for overcoming barriers, and planned for spread of successful changes.

⁶ Langley et al. (2009). *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance* San Francisco, CA: Jossey-Bass (2nd printing)

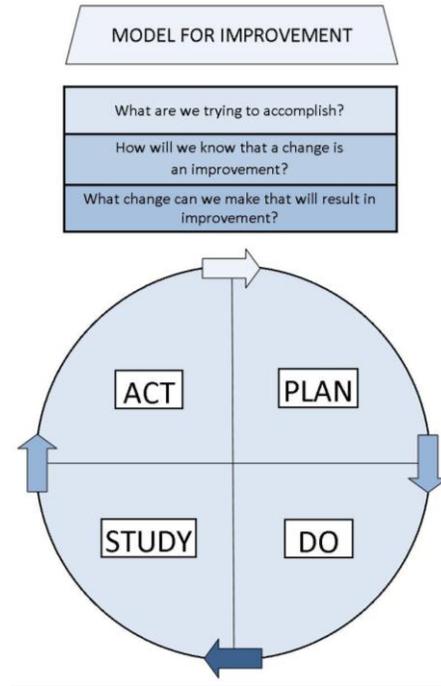
The pilot collaborative methodology was based on the Institute for Healthcare Improvement's (IHI) Breakthrough Series (BTS) model. This is an effective and proven quality improvement framework that is nationally recognized for groundbreaking improvements in the health field in areas such as reducing medical errors, diabetes and asthma care and reducing health disparities. CalMEND adopted the use of the BTS methodology to test and facilitate breakthrough improvements in integrating mental health and primary care—and to test a methodology with the potential for more widespread and cost effective adoption of successful solutions and associated results following the pilot phase of the CPCI project.

Breakthrough Series Model



Model For Improvement

CPCI used the improvement methodology developed by Associates in Process Improvement, an approach used routinely in BTS improvement efforts and adopted globally by a wide range of industries and organizations. This approach, called the Model for Improvement, provides a methodology to guide the improvement of quality at an accelerated pace. The Model for Improvement consists of addressing three fundamental questions, and the Plan-Do-Study-Act cycle (based on the teachings of W. Edwards Deming) to test and implement changes in real work settings.

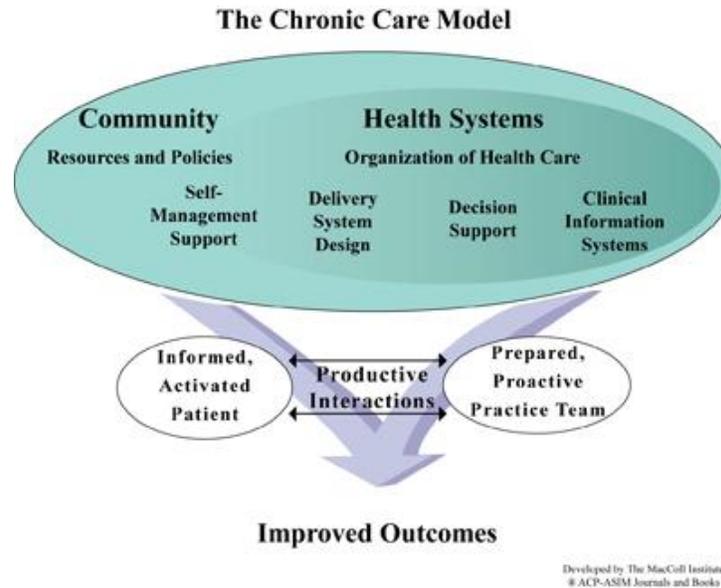


The Care Model

Teams tested the use of practice improvements that were based on promising/proven, evidence-based care practices. These practices were organized using the framework of the Chronic Care Model developed by Ed Wagner, MD and associates at the MacColl Center for Health Care Innovation. The Chronic Care Model (CCM) has been widely adopted as an organizational approach for planning, organizing and providing care for individuals with chronic disease in primary care settings. The CCM and its applications are described and continually updated on the Group Health Research Institute's (MacColl Center's) very useful web site.

*"The Chronic Care Model (CCM) identifies the essential elements of a health care system that encourage high-quality chronic disease care. These elements are the community, the health system, self-management support, delivery system design, decision support and clinical information systems. Evidence-based change concepts under each element, in combination, foster productive interactions between informed patients who take an active part in their care and providers with resources and expertise. The Model can be applied to a variety of chronic illnesses, health care settings and target populations. The bottom line is healthier patients, more satisfied providers, and cost savings."*⁷

Since the CPCI Pilot focused on persons with or at risk for chronic conditions, the Care Model was selected as the best available organizational approach for the improving and integrating mental health and primary care. The six essential components of a health care system, as shown below, encourage high-quality care and emphasize evidence-based, planned and integrated collaborative care. See Pre-work Manual (Electronic Attachment I) for further description of the care model components.



The Care Model was used to organize CPCI change concepts/ideas and improvements and provides a system approach to promote understanding that improvement in each of the components is necessary to create practical, supportive, evidence-based interactions between informed, activated client/patients and their families and a prepared, proactive care system. These change concepts, arranged according to the Care Model, resulted in a CPCI Change Package as described below.

⁷ Improving Chronic Illness Care, Group Health Research Institute, www.improvingchroniccare.org

PLANNING & PREPARATION

In order to reach agreement about the collaborative's overarching aim and objectives, a CPCI charter was developed in the spring of 2010 by the sponsoring parties including DHCS, DMH and CiMH. The aim statement plus the rest of the Charter are shown in Section 1.

Expert Panel and Change Package Development

During the CPCI planning phase, project staff convened a panel of national experts in aspects of integrated care to inform the development of a set of change ideas to support integration and improve care for SMI with co-occurring risk/symptoms of cardiovascular and metabolic diseases (referred to as the "Change Package"); see Attachment B for experts' biographies and Attachment C for the final Change Package. In general a *Change Package* is a collection of change concepts and change ideas that have proven to be effective changes for similar improvement efforts. *Change Ideas* are actionable, specific, and can be tested to determine whether they result in the expected improvements.

In a BTS pilot collaborative such as CPCI a packaged set of proven changes does not exist for the desired improvement aim. Thus, for a pilot collaborative, a 'draft' change package is developed, to serve as a resource for improvement activities undertaken by the teams and to establish and test a set of changes that demonstrate the desired improvement. The CPCI initial Change Package, organized according to the structure of the Care Model, contained change concepts and testable ideas drawn from evidence-based and emerging promising practices drawn from the fields of mental health and substance use disorder services and from health care. It also contained emerging care integration strategies. At the conclusion of the pilot, the staff developed a revised change package that reflects the experience of the participating pilot teams, their improvement results, knowledge gained from expert faculty and consultants presented in the course of the Pilot Collaborative and advances in the field. (See Attachment C)

Recruitment of Pilot Partnerships

During the planning and preparation phase of the project (November, 2009 through April, 2010), interested county mental health (and in some instances health) departments were contacted and asked to identify local mental health/primary care partners. Recruitment discussions were held with approximately 20 county organizations that were identified as "early adopters" of integrated behavioral health and primary care integration. Six partnerships were selected and ultimately agreed to participate. Each organization in the partnership agreed to fully participate through a county contract with the CA Department of Health Care Services. These contracts provided each county \$40,000 to partially offset the cost of their participation including travel to the face-to-face meetings, partial staffing costs, etc...

Before the start of the collaborative, the clinical faculty and the Improvement Adviser developed a set of core measures to be used by each team to measure progress throughout the pilot. CPCI measures and their use/impact are discussed in Section 4 of this report. (See Attachment D for detailed descriptions of the CPCI measures.)

PRE-WORK PHASE

Once recruited and oriented to the project, each of the participating partnerships was provided a Pre-Work Manual (Electronic Attachment I.) to guide their preparation. This pre-work, which was completed during April through early June 2010, and led up to the first Learning Session included the following activities:

- Identify a leader, team members from each of the participating organizations, define team member roles and complete the team roster
- Introduce CPCI core faculty and staff to the pilot teams
- Develop and submit an aim statement to specify local partnership's aim and objects within the broader framework of the CPCI Charter
- Distribute the Pre-Work Manual to all team members
- Participate in pre-work webinars, led by CPCI staff to introduce core BTS concepts and pilot collaborative expectations
- Define a target population of shared client/patients according to their aim statement and charter
- Review and prepare for data requirements related to identifying shared clients and measuring health outcomes and system improvements
- Create a storyboard for Learning Session #1 introducing the team and its improvement charter
- Complete the modified Assessing Chronic Illness Care (ACIC), a team self-assessments of their capacity for providing integrated care

LEARNING SESSIONS & ACTION PERIODS

Focused learning and improvement activities were formally initiated in June 2010 with Learning Session 1 and were supported through two types of activities: learning sessions and action periods.

Learning Sessions

Teams representing the six counties attended five highly interactive Learning Sessions, where they explored the elements of improving care for seriously mentally ill individuals with co-occurring medical conditions, as well as methods for testing and implementing changes and sustaining improvements. Through these professional development sessions conducted by expert faculty, small group discussions and team meetings, attendees had the opportunity to:

- o Learn from faculty and colleagues across mental health and primary care disciplines from throughout the state and country
- o Receive coaching from faculty and colleagues
- o Gather new knowledge on subject matter and process improvement
- o Share experience and collaborate within and across county teams on ways to introduce improvements and to develop action plans

Action Periods

The time between Learning Sessions is called an Action Period. During Action Periods, teams' worked to test and implement changes to integrate services and improve patient care. Teams tested multiple changes in their clinic site(s) and collected data to measure the impact of the changes. Although participants focused on their own partnering organizations, they remained in regular contact with other teams enrolled in the Pilot-Collaborative, CPCI staff, and faculty via twice-monthly conference calls and email. Pilot Collaborative teams shared the results of their improvement efforts, describing tests of changes and the learning and results from said tests. Sharing experience among peers is proven to be one of the most powerful approaches for adult learning. To further facilitate communication across teams, results of their testing of change ideas, their learning and data were posted on an extranet site, CPCI Connect.⁸ CPCI Connect was a private website that was hosted by the National Council for Community Behavioral Health (NCCBH) as an in-kind contribution to the DHCS CalMEND CPCI project. To reinforce change concepts and ideas presented at the Learning Sessions, expert consultants participated in select conference calls. Participation in Action Period activities gave the teams the opportunity to include local team members that did not attend the face-to-face Learning Sessions, including medical staff. This virtual participation provided more service staff with direct access to the shared learning of the collaborative. (Electronic Attachment IV provides agendas and presentation material from the Action Periods)

A summary of the Learning Session and Action Period schedule follows. The agendas and overall session presentations are included in Electronic Attachment II.

⁸ See Attachment E for screen shots of CPCI Connect, the extranet for communication and sharing learnings among collaborative participants.

BTS Activity	Model for Improvement and Collaboration Support	Technical Content
Pre-work	<ul style="list-style-type: none"> Partners form teams CPCI staff introduce BTS concepts and confirm expectations for collaborative participants 	<ul style="list-style-type: none"> Develop local charter and define target population of shared clients Review measures and prepare for data collection Complete the modified ACIC
Each LS, Learning Sess. 1-4:	<ul style="list-style-type: none"> Presentation of storyboard (prepared in advance)⁹ Action Period planning by team 	
Learning Session 1	<ul style="list-style-type: none"> Introduce the Care Model and review the Change Package framework Demonstrate registries Introduce MFI and Plan-Do-Study-Act (PDSA) rapid cycle change testing Introduce Core Measures and stress the importance of measurement 	<ul style="list-style-type: none"> Review the business case for integration to improve health outcomes Review the modified ACIC self-assessments of each team
Action Period 1	<ul style="list-style-type: none"> Practice small scale tests of team’s selected changes Introduce data reporting tool and narrative 	
Learning Session 2	<ul style="list-style-type: none"> Teamwork for Improvement Review of MFI and small scale testing Introduce sequencing of tests of change and running multiple sequences 	<ul style="list-style-type: none"> Reinforce objectives with voices from client/family “customers” Learn from experts about: <ul style="list-style-type: none"> Effective cross-organizational care Recovery and self-management support Approaches to financing care Shared care plans Decision support for integrated care Clinical info. needed to support integrated care
AP 2	<ul style="list-style-type: none"> Site visits 	<ul style="list-style-type: none"> Smoking Cessation webinar in collaboration DHCS, DPH
Learning Session 3	<ul style="list-style-type: none"> Peer to peer (mixed not in teams) discussion about key changes for 	<ul style="list-style-type: none"> Update of psychiatry for primary care (concurrent with leadership) Discuss leadership for QI and integration (concurrent to above)

⁹ See Electronic Attachment III for teams’ storyboards presented at Learning Sessions 1 through 5

BTS Activity	Model for Improvement and Collaboration Support	Technical Content
	<ul style="list-style-type: none"> improvement • Review of sequencing of tests, sequences for multiple changes • Introduce planning for implementation 	<ul style="list-style-type: none"> • Learn about <ul style="list-style-type: none"> ○ Organizational and staff characteristics needed for integration with Bob Franko, Cherokee Health Systems ○ Client support through education around healthy lifestyles • Discuss results of 2nd ACIC assessment and compare to initial assessment
AP3	<ul style="list-style-type: none"> • Learn about annotating runcharts 	<ul style="list-style-type: none"> • Learn and test Brief Action Planning (BAP) with Connie Davis, RN, GNP
Learning Session 4	<ul style="list-style-type: none"> • Discuss impact of changes on measures (annotating runcharts) • Create 4th storyboard 	<ul style="list-style-type: none"> • Learn about and discuss application of : <ul style="list-style-type: none"> ○ TEAMcare and treat-to-target for CPCI target population with Wayne Katon, MD, Group Health and University of WA Department of Psychiatry ○ Tools for support of wellness, recovery and self-management with Keris Myrick, Executive Director, Project Return
AP 4	<ul style="list-style-type: none"> • Prepare and run tests for implementation • Prepare team’s learning session presentation 	<ul style="list-style-type: none"> • Review treat-to-target • Use BAP and other techniques to help clients practice healthy behaviors • Put elements of team-based care into practice
Learning Session 5	<ul style="list-style-type: none"> • Planning for Spread • Teams serve as faculty & share their improvements 	<ul style="list-style-type: none"> • Learn from peers about: <ul style="list-style-type: none"> ○ Health care reform and integrated care in CA ○ Healthy Living Support: nutrition, walking, smoking cessation groups ○ Engaging primary care and instituting care management ○ Embedding behavioral health specialists in primary care ○ Using a registry to improve patient care ○ Laying the groundwork for multiple organizations to exchange data and coordinate care for shared client/patient population ○ Promoting wellness and self-management across mental health and primary care throughout the county

MEASUREMENT & REPORTING

The purpose of CPCI was to improve the health of clients/patients through integrated approaches, i.e., Improvement, not research or compliance. Therefore, the measurement approach creates a feedback system to inform partnering teams that are testing and implementing changes, whether changes are resulting in improvement (or not). Teams provided monthly Narratives and data reports to support and document their improvement efforts.

- Monthly Narrative Reports were developed and submitted to each project’s executive sponsor(s) as well as the CPCI core faculty. The Narrative Report was structured to facilitate recording and tracking of changes according to the six system change areas of the Care Model.
- Monthly data reports/measurement helped teams and project staff evaluate the impact of changes made to improve detection of risk, diagnosis and treatment of the pilot population. The measurement system was designed to accelerate improvement. The goal was to support teams to pursue just enough measurement to be convinced that the changes being made were leading to improvement or to recognize and make adjustments.

A set of measures was developed for use in the CPCI pilot collaborative (see Attachment D) to support the original Aim:

The initial focus will be on improving, by at least 50%, the identification and treatment of cardiovascular disease and its risk factors including physical inactivity, smoking, obesity, diabetes, hypertension, and dyslipidemia...

The measures were intended to reflect selected clinical standards of care, be manageable and yet act as indicators of change during the pilot.

CORE MEASURES	OPTIONAL MEASURES
Identification of Clients at Risk 1. Count of clients 2. Risk Behavior Screening 3. CVD/DM Risk Screening (with and without waist circumference)	Indicated Medications 11. Statin use 12. ACE inhibitor use 13. Aspirin use
Core CVD Measures, health risk, control 4. Screening for DM (& hyper-lipidemia) 5. Blood Pressure in Control	Referrals 14. Referred clients to primary care 15. % referred to MH services 16. Referred to MH and kept appointment
Other Measures 6. Smoking cessation counseling 7. Substance Abuse treatment 8. Self-management goal setting 9. Shared Care Plan	
Referrals 10. Receive ongoing care	

A tool for tracking the data on a monthly basis was given to each team. During Action Periods, the IA coached teams on how to use the runcharts generated from data housed in the tools and how to annotate the charts to identify activities that impacted the runcharts' values and patterns.

HARVEST & CLOSING

The final collaborative activity was a "Harvest Session", which was a day-long session attended by the teams; executive sponsors/leaders from about half of the participating partnerships also joined. This session was designed to solicit feedback from the participants about the pilot: what changes and processes worked well, needed improvement, to be added or eliminated. During this session, participants provided feedback in the following areas:

- **Change Package:** Identifying high leverage change ideas that are essential for this work and grouping them into key change concepts.
- **Must Haves:** Identifying the key changes that must be in place in order to achieve the desired improvement
- **Overcoming Challenges Incurred:** Brainstorming about challenges incurred in the process of testing, implementing and spreading changes relating to the aim of the pilot – and identifying strategies to overcome critical challenges
- **Measures:** Identifying missing elements from the current measurement set, clarifying the value of specific current measures to their organization and goals, and creating a proposal for a set of measures for moving forward into future collaboratives.
- **Steps to Success:** Describing details or steps to accomplish each change, identifying tips, examples, and/or items to consider for particular steps. In addition, participants were asked to provide examples of tests or series of tests that would be helpful to future collaboratives
- **Capacity Building:** Developing ideas for infrastructure support that will be helpful moving forward, and identify ways that experienced teams might be helpful to the new participants
- **Team Binders:** Each team also submitted a binder describing changes, results and tools developed during the collaborative as well as their learning session story boards, impact stories and their power point presentation from the final learning session.

SECTION 3: CHALLENGES, PROGRESS AND LESSONS LEARNED IN INTEGRATING CARE

This section summarizes key areas of change, challenges, and lessons learned from participating pilot teams as they worked with CPCI faculty and each other to better integrate care. A summary of the key changes and lessons learned for each of the participating county teams can be found in Appendix A.

LEADERSHIP: FUNDAMENTAL TO INTEGRATING AND IMPROVING QUALITY ACROSS ORGANIZATIONS AND ORGANIZATIONAL CULTURES

Committed, engaged and sustained leadership is essential at the executive/sponsoring level and at the operational level to support integration of mental health and primary care whether the integration is focused within one physical/organizational entity or bridges the complex structures and cultures of multiple organizations. While strong leadership is a widely recognized component of any high performing system, the unique role of leadership in supporting change for improvement is often underestimated. Although county leaders in mental health and/or primary care participated during recruitment and identification of their teams, only some leaders were able to continue active participation beyond the first learning session. To encourage continuing leadership engagement, CPCI staff arranged for a one-time Special Leadership Track titled *“A Facilitated Dialogue with CPCI Executive Sponsors, Team Leaders and National Leaders: The Essential Role of Leadership in Promoting a Culture of Innovation and Improvement for Healthcare Integration and Reform”* held at Learning Session 3. This session was very well attended by the six county mental health agencies’ leadership and by some of the partnering primary care organizations. (Agenda and dialogue questions are provided in Appendix F.)

What Was the Role of Leadership Within CPCI Teams?

CPCI teams were asked to identify executive sponsors, senior leaders and team leaders for each pilot project. For those executive sponsors and senior leaders that were not active team members, the monthly Narrative and Data/Measurement Reports provided a record of project progress. While these reporting tools were built into the learning collaborative process, teams used a range of techniques to keep their leaders informed and supportive of the pilot.

- Orange County Behavioral Health Services was responsible to submit a monthly CPCI report to the agency director
- San Mateo provided periodic county-wide leadership briefings
- Shasta County mental health and Hill Country leaders convinced of the need for regular meetings/dialogue, tested alternatives to their early AM weekly schedule throughout the pilot. Ultimately they acknowledged that their pre-pilot schedule of regular early AM meetings was best to ensure that key leaders could and would consistently participate.

Team champions and leaders helped sustain pilot activities in some of the counties.

- Amid major staffing changes, Shasta’s Hill Country team leader changed to a clinical manager who in addition to leading the effort became the advocate for daily use of registry reports to target care for scheduled patients/clients
- Contra Costa’s newly hired supervising psychiatric nurse practitioner in addition to actively testing changes in client care at West County Adult Mental Health Clinic continued to take charge of maintaining/building the relationships with the primary care physicians who identified themselves as primary care champions.

What Were the Challenges Regarding Leadership?

Although pilot collaboratives' leaders made significant efforts to participate and to support the work of their integration initiatives, some of the teams reported that progress was less than optimal because their senior leaders' focus was of necessity inconsistent. This was in large part attributable to local stresses and responses to California's unprecedented fiscal crisis and related State and local budget reductions and restructuring of services. This system-wide instability also contributed to turnover in team level leadership and the loss of key team members in several of the pilots.

- One pilot implemented a successful smoking cessation group, which then lost one of its co-facilitators, the Wellness Coordinator (with co-facilitator Peer specialist), due to budget-related staff transfers. It is a tribute to the commitment of this team and system that these smoking cessation groups continued in a more limited capacity-and now will be replicated and spread as part of a system-wide total wellness initiative.
- Several pilots used or hired staff on a temporary basis with grant funds to try new roles and test changes in workflows, which thwarted the agencies' ability to maintain the new ways of working at the end of the pilot.

Quality improvement initiatives require strong leadership commitment in 'normal' times, e.g., let alone in times of unprecedented financial crises. That said, there were internal challenges that more active leadership intervention might have ameliorated/improved.

- Lack of equally committed leadership on the part of the partnering organizations significantly slowed the progress of several teams. For example, one team had little primary care participation. Another team struggled to convince their partnering psychiatrist that workflow and team member role changes could ease the doctor's case load challenges.
- Delayed hiring for already authorized positions was a problem for several teams. These teams were either slow to begin testing and implementing changes or less practiced in the running tests of change because key members did not learn the model for improvement during the early phase of the collaborative. Hiring challenges should be considered during the pre-work phase of the learning collaborative.
- Staff turnover cannot always be avoided; however, teams that support broad participation in collaborative activities are more resilient. For example, Hill Country (Shasta) experienced major staff changes during the middle phase of the pilot, yet new leaders and champions emerged and the team continued to make improvements.

Impact and Lessons Learned

During the final "Harvest" session for the pilot, teams identified **committed and engaged/sustained leadership as the single most important "Must Have" requirement for an initiative as complex as the integration of MH/SUD and primary health care.** Leadership was described as essential across participating organizational partners/teams to create "Buy-in" from both organizations; leaders, stakeholders, community partners and line staff were highlighted...

- Need a champion
Each clinical entity needs at least one person who understands and can advocate for key components/changes related to care integration
- Build will and awareness at multiple levels of each organization in the partnership, the team, the clinical departments, the agencies, and the larger system(s), e.g., entities engaged in governance, County Board of Supervisors.
- Communicate successes to engage/re-engage staff at all levels, facilitate feedback [on progress] and share results."

Senior leadership was cited by Ovretveit, et. al.,¹⁰ as one of the critical management and cultural factors that lead to the relative success or failure of Learning Collaboratives:

“One conclusion from the research is that a quality collaborative can be a temporary and powerful learning organization, which motivates; provides knowledge, skills and support; and develops its own culture. This can equip and empower teams to address quality problems. However, if the home organization has the wrong culture and there is little senior leadership support, the achievements of a team are limited.”

There was agreement among CPCI pilot teams and faculty that a future learning collaborative should structure additional and more frequent opportunities for leaders to explore their role, challenges, and strategies to lead effective systems transformation and quality improvement. These senior leadership activities can and should utilize virtual communication technology to reduce travel and time demands on senior leaders.

IDENTIFYING CLIENTS, SHARING AND USING CLINICAL INFORMATION

The identification of partnering mental health and primary care organizations shared clients/patients is a prerequisite for coordination and integration of care. However, the identification of shared clients proved to be an extraordinarily challenging and labor/time intensive process for half of the pilot teams. In addition, all of the teams experienced significant barriers to sharing patients/clients clinical information including lab results, medication lists, health status, etc... The CPCI collaborative experience underscores the critical importance of health information exchange (HIE) across disciplines and organizational boundaries, but it also demonstrated the challenges and some of the steps necessary to build effective information exchange. As a result of the Affordable Care Act and the movement to establish health homes, HIE and electronic health records can be expected to improve future clinical information sharing among physical health care providers. However, even when mental health and primary care services are located within the same organization and when both systems have electronic health records; clinical information sharing is difficult because health care organizations do not use data definitions and structures that can be easily cross-walked.

Identifying Shared Clients

The team partnerships that were most easily and rapidly able to identify clients with co-occurring medical and psychiatric conditions had a prior history of integrated or co-located mental and primary care services and were able to “match” clients through cohorts related to a single provider/location of care or through existing data bases.

- Shasta’s Hill Country Clinic, an FQHC with a behavioral health department, was able to add key data elements to a patient registry (i2i) already in use for several years;
- San Mateo County had a 15-year history of co-located primary and mental care services where the shared client cohort was identified as the caseload of the Primary Care Nurse Practitioner out-stationed in the mental health clinic.

¹⁰ Ovretveit, J. and Gustafson, D., “Quality Collaboratives Lessons from Research” The International Journal of Quality Improvement(2002) www.qualityhealthcare.com

- Sacramento County focused its pilot population within a primary care clinic staffed by physicians that were dual boarded in medicine and psychiatry.
- Placer County Community Clinic had over the previous several years, integrated a full time psychiatrist (re-assigned from the County Mental Health Clinic) and accepted the transfer of approximately 400 clients from which the CPCI team defined their target population
- Contra Cost and Orange worked with their County Organized Health Plans and Medically Indigent Care Service (Orange) to identify shared clients.
- In San Mateo, health plan representatives participating in CPCI worked with the partnering providers to identify shared clients.

The issues and barriers that were uncovered in this process appear to have laid the groundwork for ongoing work among these behavioral health, primary care and health plan partnerships to identify efficient systems of client identification for integrated care.

Difficulty with identifying shared clients/patients resulted in such small target populations for several of the partnerships that this limited the extent of improvement that could be observed over the duration of the pilot.

Confidentiality and Release of Information

Regulations governing confidentiality posed barriers to identification of shared clients and/or sharing of clinical information depending on the nature of the specific mental health/primary care partnership and whether mental health and primary care were structured as business associates under HIPPA. Three counties used their Business Associates agreements as the basis for exchanging their shared clients' information. The other three counties sought consent from each of their clients.

Contra Costa and Orange decided in consultation with their Privacy Officer/County Counsel to secure a Release of Information (ROI) from each client as a means to insure educated and informed consent and to permit sharing of client/patient information. Securing ROI was also seen as setting in place a process to share client information in the future with broader groups of private providers/private provider networks. The CalMEND Client/Family Sub-Committee worked with DHCS (including DHCS legal counsel) to develop a template for ROI, which was provided to CPCI teams, however, ROI forms-and requirements remain the provenance of each local provider.

- Orange County developed a policy that is being implemented throughout their Behavioral Health Services Department to routinely secure a ROI to permit sharing of information such as medications and lab test results with clients' medical providers.
- Contra Costa County developed a protocol to routinely seek informed consent/release with CPCI client participants to promote greater health literacy regarding the importance of coordinating health and mental health care.
- Placer's approach to 'enroll' clients in CalMEND included a signed agreement to participate in CalMEND program.

Note: this change idea, e.g., integrating the client consent/release of information into routine intake/clinical processes, is being widely adopted by small counties as a foundation for coordinating care in the Small County (SCERP) learning collaborative that is also facilitated by CiMH.

Sharing Clinical Information

Coordination and integration of care requires shared clinical information. Although both mental health and medical services at four of the six sites had electronic health records (EHRs) with the remaining two

scheduled to bring EHRs on-line in the immediate future, EHRs are not sufficient to facilitate sharing and full use of critical information across partner organizations. DHCS as the CPCI sponsor as well as core faculty recognized the importance of a patient registry as a key building block to integration.

Participating teams were offered free access to a registry for the duration of the pilot, but due to both State level and local level obstacles, only one of the sites actually used a registry during the course of the CPCI pilot. Hill Country Clinic (Shasta) had used the i2i registry for several years. The team was able to modify it, adding basic mental health and substance use disorder data and using diagnosis information to identify their mental health patients. Towards the end of the CPCI pilot, Hill Country was able to use this integrated clinical information to guide care and help clients recognize the impact of their lifestyle on their health.

Impact Story
A client (middle aged, white male) with [add psychiatric diagnosis] had been treated for high blood pressure. His BP history plotted in the registry showed that the medication dosage and other lifestyle changes had been under control. However, a jump in BP had alerted his provider to more closely monitor his condition. This BP increase was shared with the patient at one of his return visits. Together the client and provider determined that the BP jump coincided with a resumption of drinking alcohol whereas in the period of normal BP, he had been sober. The client returned after a period of time, he had stopped drinking and his BP returned to the former baseline.

Contra Costa County Mental Health Division pursued a different clinical information sharing strategy. Learning that the primary care clinic system maintained a diabetes registry, mental health team members obtained access to enter primary care data about shared clients/patients with a history of diabetes as well as to generate reports on their shared clients' current health condition. Team efforts to modify the registry to include mental health information stalled due to county-level system's conversion so the team developed a work around. By gaining additional access to full patient histories contained in the registry, the west county Mental Health Clinic developed an Access database to merge their client information with the registry information. Use and modification of an existing registry is a reasonable strategy when local systems have the authorization and capacity to design and execute these modifications. While these system-wide strategies are pursued alternative small-scale approaches, as in a local merged database, can also help clinicians to better support and guide the care for their clients/patients.

San Mateo County is pursuing yet another strategy. Mental Health and Primary Care had no legal barriers to sharing client/patient information; both organizations already had electronic health records (EHR)—and yet, it was not possible to electronically share basic health data such as medication lists and lab values. The team also found that the data fields had different definitions and values differed for the same field between the two EHRs. They ultimately developed a method for data reconciliation and a data dictionary/cross-walk in order to track key information in an Excel workbook. These data were used to report CPCI measures and to develop a more population-based view of client care. To that end, one of the physician champions asked that women's health screening information be included in the data collection.

As a further assist to clinicians to know their clients/patients condition 'at a glance', San Mateo is currently developing a shared clinical data summary that will accept data downloads of key demographic and clinical information. These cover sheets will serve as a registry alternative for individual client care until a shared registry or other HIE solution is adopted.

Orange County adopted the lowest tech solution to sharing certain critical client information in a system where the majority of primary care providers are independent groups and practices. Behavioral Health has established a policy and procedure to fax the completed Release of Information to Asian Health Center providers. Then, Asian Health Center faxes referral and other relevant clinical information to BHS for shared clients. Low tech solutions are an important interim step.

Impact Story

An AHC (primary care) patient diagnosed with diabetes – the patient’s condition improved tremendously because the behavioral health provider was aware of the physical condition and therefore stopped the mental health medications. This was possible due to the provider-to-provider communication between the PCP and the BHS provider!

Decision Support and Shared Clinical Information

All teams made good use of shared demographic and clinical information particularly in conjunction with decision supports. Decision support for this integration pilot fell into two broad categories: 1) training, and 2) the use of evidence-based practice and standards of care. For example, recording blood pressure on the cover of the chart prompted clinicians to make sure clients’ hypertension was addressed. Once lab tests were current, psychiatrists responded with medication adjustments or other requisite treatment. Pilot teams cited cross training of primary care physicians and psychiatrists as a high priority/high leverage change. That specific training is needed so clinicians in both disciplines know how to address common psychiatric conditions and basic medical symptoms.

- CPCI Clinical Co-Chair, Robert McCarron, D.O. and UC Davis colleagues provided a half-day seminar, “Everything you need to know about psychiatry in primary care” [See Electronic Attachment VIII “Psychiatry for Primary Care” on CD recording from Learning Session 3] Concurrently or subsequent to this:
 - Sacramento County developed a full protocol for using behavioral health questions which would prompt use of screening with PHQ-9, GAD-7, MDQ or CAGE-AID depending upon the patient’s responses.
 - Orange County’s Asian Health Center primary care providers tested the use of PHQ-9 in their intake process. Placer County’s clinic also began testing it.
 - Toward the end of the pilot, teams began to test screening for other mental health and substance use disorders (Orange County is pursuing the use of K6 for primary care clinics).¹¹
- Most of the teams developed new protocols to order routine labs, which also prompted psychiatrists to pay attention to the results and take action based upon their training (and current standards of care).
- Tracking of vitals and Body Mass Index (BMI) encouraged all providers to begin dialogues with clients/patients about exercise and eating habits.

¹¹ For more information on K6 and K10 see the National Council’s website and the National Comorbidity Study site, http://www.thenationalcouncil.org/cs/best_practices_programs http://www.hcp.med.harvard.edu/ncs/k6_scales.php

Impact Story
A male patient was diagnosed with stage 3 colon cancer at the age of 49. He came to visit several times for specialist referrals only. Then, he came to the clinic feeling hopeless and in despair, saying he does not want to go on having any treatment. On the visit where the patient completed the PHQ-9, the primary care doctor sat down and went over the PGH-9 assessment with him. Because of that conversation and staff coaching on how to assess depression, the patient was able to open up to the doctor. We find the PHQ-9 is a very helpful tool to use to break the ice so that patient feels that you really care for them. We have used the form on several occasions to help the patient to understand their condition.
Impact Story
A female patient with diagnosed of severe depression and anxiety. She saw both psychologist and psychiatrist but she still felt very sad. One day, we sat down with patient and used the PHQ-9 to review her progress. We were able to exchange some thoughts and ideas on what the patient has gone through and during the interview we were able to understand more about our patient. She is doing better now with our listening.

Subsequent sections about team-based care and care coordination expand on this discussion of standards of care.

Impact and Lessons Learned

The identification of clients/patients receiving care in multiple health settings or systems is a necessary first step to coordinating care and improving health outcomes. However, this process of shared client identification was far more challenging than expected at the outset of the CPCI pilot. The length of time required to establish processes to identify shared clients was a major barrier for several of the CPCI partnerships and actually prevented several teams from identifying a large enough target population cohort to fully test and implement changes related to integrated care practice. It is strongly recommended that any future integration learning collaborative require partners to develop and implement processes to identify shared clients as a part of the Pre-Work Phase.

Identifying Shared Clients/Patients - Systems/partners must identify options and opportunities to identify shared clients. Two approaches were found to be successful:

- Partner with local/regional health plans (private and public) to run client data matches
- Build routine processes of care that include Release of Information (ROI) as standard during intake/assessments and add routine question regarding involvement with other health providers at each contact.

Sharing Client Information - Coordinated/integrated care requires sharing of critical individual client and population level information. Patient registries are the most efficient and currently available “real time” solution; however, most medical registries must be modified to include mental health and substance use disorder information. Although the Affordable Care Act supports development of Regional HIEs and this may well be the technology of the future, registries provide a more immediate and accessible technology solution.

- A registry function is necessary to accomplish large-scale integration of care. This was the second highest frequency “must have” recommendation from pilot partnership teams.
- Implementing registries or “registry-lite” solutions such as downloading data from several EHRs into a single database will require the development of data dictionaries/cross-walks.

- It is essential to identify and share basic clinical information such as prescribed medications and lab values. Low-tech solutions such as faxing of clinical information should not be overlooked in initial stages of coordinating care.

Using Shared Client Information - Effective use of shared clinical information requires cross-training regarding standards of care and care guidelines. While teams tested changes in some or all of these areas, it is recommended that cross disciplinary education and adopting of existing medical standards of care be an early focus in future collaboratives.

DELIVERY SYSTEM DESIGN: TEAM-BASED CARE AND CARE COORDINATION: NEW ROLES AND NEW PROCESSES

Delivery systems' partnership structures shape approaches to team-based care and care coordination. The May 2010 Millbank Memorial Fund Report on "Evolving Models of Behavioral Health Integration in Primary Care" provides a commonly referenced integrated care typology that provide a framework for understanding the nature and complexity of the partnership models pursued by the CPCI pilot counties:¹²

"This complexity is further compounded because most models are implemented as hybrids and often blend together one or more elements of different models. And depending on the specific implementation, a model may represent partial or full integration. ...

Behavioral health care may be coordinated with primary care, but the actual delivery of services may occur in different settings. As such, treatment (or the delivery of services) can be co-located (where behavioral health and primary care are provided in the same location) or integrated, which means that behavioral health and medical services are provided in one treatment plan. Integrated treatment plans can occur in co-location and/or in separate treatment locations aided by Web-based health information technology. Generally speaking, co-located care includes the elements of coordinated care, and integrated care includes the elements of both coordinated care and co-located care."

The six CPCI pilot partnerships represented three of the integration typologies:

- Improving collaboration between separate providers: Orange, Contra Costa
- Unified Primary Care and Behavioral Health: Shasta-Hill Country FQHC, Sacramento
- Co-located Primary and Behavioral Health: Placer, San Mateo

Though partnership strategies ranged from basic coordination to fully integrated/collaborative mental health and physical health care, all of the pilots identified the development of team-based/driven care and care coordination as essential to improving the health outcomes of persons with serious mental illness.

The CPCI Revised Change Package focuses change concepts/testable change ideas on:

- Team-driven care-Design, develop and run effective care teams

¹²Millbank Memorial Fund, Evolving Models of Behavioral Health Integration in Primary Care Chris Collins, Denise Levis Hewson, Richard Munger, and Torlen Wade, May 2010

- Design, document and implement clinical workflows that support integrated care
- Provide care management to support integrated care for persons with complex and co-occurring mental and physical health conditions

At the CPCI Harvest, the pilot participants recommended that team-based care and team design, i.e., composition, roles and accountabilities, and workflows, be strongly emphasized and addressed earlier in the learning collaborative process. In addition, care coordination was emphasized as a process that must involve active monitoring and follow-up for persons with serious mental illness and chronic health conditions whether care is coordinated across primary care and behavioral health services within a single agency or across partnering provider organizations.

Team-Based Care

A key aspect of team-based care is collaboration between the client, mental health clinician and primary care provider. One approach to this three-way collaboration is to use a ‘shared care plan’, a documented agreement signed by all parties. Learning Sessions 2 and 3 included breakout groups that addressed shared care planning for ‘team’ coordination. Several of the partnerships tested and attempted to implement shared care plans. Placer developed and tested a shared care plan signed by the primary care physician, psychiatrist and the client/patient. The team incorporated its use into their routine care processes.

However, it was not until Learning Session 4 that team-based care was effectively brought to the forefront through a full-day presentation and consultation by Wayne Katon, MD on TeamCARE and Treat-to-Target. Dr. Katon presented seminal research published in December 2010¹³ that demonstrated statistically significant improvements in health outcomes for individuals with CVD or DM and severe depression when the conditions were treated in an integrated “treat-to-target” approach where active nurse care managers served as the client’s primary link to the care team. Dr. Katon provided additional consultation to the pilot teams during an Action Period Call following LS 4.¹⁴

Key features of the TeamCARE treat-to-target model include:

- clearly defined roles within the team, including a nurse care manager and primary care physician management of patients with access to psychiatry consultation
- collaborative treatment approach with patient to set treatment and self-management goals
- integrated clinical care processes including regular monitoring of client/patient using both mental health and medical health status measures
- treatment adjustments guided by desired outcomes on the health measures (patient self-report (PHQ-9 Depression scale) and lab values for CVD and dyslipidemia
- accountability for patient progress toward goals by the team and specific accountabilities for each member of the team

¹³ Collaborative Care for Patients with Depression and Chronic Illnesses, Wayne J. Katon, M.D., Elizabeth H.B. Lin, M.D., M.P.H., Michael Von Korff, Sc.D., Paul Ciechanowski, M.D., M.P.H., Evette J. Ludman, Ph.D., Bessie Young, M.D., M.P.H., Do Peterson, M.S., Carolyn M. Rutter, Ph.D., Mary McGregor, M.S.N., and David McCulloch, M.D., New England Journal of Medicine, December 30, 2010

¹⁴ In addition to this presentation, participants were directed to the TeamCareHealth.org website that includes detailed resources and manuals regarding team processes and clinical work flow design.

The TeamCARE model has not been tested with individuals with serious mental illnesses other than severe depression. However, CPCI faculty and pilot teams hypothesized that the basic framework of TeamCARE could be adapted for other serious mental illnesses and co-occurring medical conditions. It will be important to test adaptations of TeamCARE for a broader range serious mental illnesses and co-occurring CVD and diabetes.

Although none of the teams reorganized their delivery system along the TeamCARE model, a number of design changes were tested to facilitate team-based approaches to care:

“Warm Hand-Offs”

Warm Hand-Offs will facilitate transition of client and client information from one provider to another were tested and used in Placer, Contra Costa, Sacramento, and San Mateo. Warm handoffs were found to increase patient comfort and engagement in care.

- San Mateo’s primary care nurse practitioner provided face to face introductions of clients to the new Wellness Coordinator resulted in increased show rates to wellness follow-up visits compared to the previous process of ‘referral’ and scheduling call by the Wellness Coordinator
- Contra Costa mental health treatment staff accompanied clients to their initial visit(s) to the PCP and/or mental health peer support worker. This extra continuity of staff seemed to increase patient comfort and their follow-through with outpatient primary care. Whenever possible, mental health treatment staff at the Clinic would provide warm-hands offs of consumers who were eligible to join the pilot to the CalMEND CPCI staff. This increased trust between the consumers and the pilot staff and improved the chances a consumer would enroll in the pilot.
- Sacramento developed a protocol where PCPs personally introduced patients that needed to be seen right away to the Behavioral Health Specialists

Develop Clearly Defined and Complementary Roles for the Client’s Providers

- San Mateo County established the function of Wellness Coordinator whose role included ensuring a warm handoff among various providers as well as engaging the client/patient in self-management/healthy behavior supports
- Sacramento developed a Behavioral Health Specialist role within their primary care clinic as well as detailed policies and procedures describing work flow/processes of care
- Several teams established care coordinator roles, which will be discussed further in the next section

Team-Driven Collaborative Care Processes and Policies/Procedures that Provide for Coordination of Care Between Client’s Different Providers

In keeping with Dr. Katon’s presentation, several of the teams tested aspects of team care including: huddles and clinical decision/treat-to-target algorithms.

- Placer developed an intake routine that included consultation by the CalMEND care manager, a warm handoff to the RN assigned to CalMEND and accountability of the RN regarding medical testing and treatment including referrals or consults with the primary care physician
- Asian Health Center (Orange County) followed a new protocol of faxing intake and medical information to Behavioral Health Services (BHS) when a referral was made to BHS
- Shasta’s Hill Country Clinic implemented daily, morning and noon team huddles to review specific needs of clients’ scheduled for later that day in terms of labs, other testing and referrals. A key tool for the huddles was a review of lab values and client information using reports from

their registry. Close to the end of the pilot, Contra Costa began testing periodic huddles with their care 'team'.

- Sacramento designed clinical decision algorithms for depression to guide processes of care for patients with co-occurring depression and physical health conditions. Screening tools were also adopted for anxiety and psychotic disorders, which led to an explicit referral process for PCPs. These algorithms, i.e., decision support tools, and well-defined processes of care were presented in the final learning session and several other teams plan to test, adapt and widen the use of these tools and processes.

Care Coordination to Improve Outcomes for Clients/Patients Within MH/PC Partnerships

Care coordination was identified as a change concept in the initial CPCI Change Package. And, over the past year there has been increased emphasis and new published research/learning regarding the importance of care coordination for individuals with complex co-occurring chronic health conditions. The role of the Nurse Care Manager as a cornerstone of the TeamCARE treat-to-target model and several teams' testing of similar roles has been previously discussed. Practice standards and guidelines for care coordination are emerging in NCQA's Patient-Centered Medical Home Standards (2011); the Institute for Healthcare Improvement's "Care Coordination Model: Better Care at Lower Cost for People with Multiple Health and Social Needs"¹⁵, and the MacColl Center for Health Care Innovation's "Reducing Care Fragmentation: A Tool Kit for Coordinating Care"¹⁶

Three teams, Contra Costa County's West County Mental Health Clinic, Placer County Community Clinic and Shasta's Hill Country Clinic, tested care coordination and the role of a Care Coordinator. Orange and San Mateo counties, plan to develop and test care coordination strategies that use trained peers as navigators. (Mental Health Services Act Prevention and Early Intervention is one funding source that is being used to support this care coordination function.)

- Placer County tested the use of a clinical social work position, assigned from Adult Mental Health Services to coordinate care between the clinic's psychiatrist and the medical service, including involving clients in developing their Shared Care Plan; coordinating with other health providers regarding the plan and needed care; and, following up with the patients between appointments to assess/address progress and needs. In addition, the team tested the use of existing clinic nurse as a primary care adjunct to the care manager to follow-up on physical health screening, e.g., vitals and basic blood work.

Impact Story

"John" was referred to CalMEND on 8-19 (the first day our program was introduced to the physicians) and began receiving case management and brief therapy in September. Without a formal treatment regimen established in CalMEND, John was able to lose over 15 lbs. in 6 weeks and lower his A1c and blood pressure to within normal range within 3 months. John's referring physician observed the improvements and praised the patient and CalMEND team for this success story. John is now participating in the formal CalMEND treatment program and continues to be enthusiastic about managing his illnesses.

¹⁵ Catherine Craig, Doug Eby,MD, John Whittington,MD "Care Coordination Model: Better Care at Lower Cost for People with Multiple Health and Social Needs", Institute for Healthcare Improvement, Innovation Series, 2011

¹⁶ MacColl Center for Health Care Innovation, Reducing Care Fragmentation: A Toolkit for Coordinating Care, 2011, http://www.improvingchroniccare.org/downloads/reducing_care_fragmentation_april_2011.pdf

- Contra Costa County Mental Health assigned a Psychiatric Technician and hired a Psychiatric Nurse Practitioner to develop care plans and coordinate care with the primary care clinic that is located at another site in West Contra Costa County. The staff provided active outreach to difficult to engage seriously mentally ill clients with significant co-occurring health risks/conditions. This outreach included meeting with them and their family members in the community and accompanying them to the Primary Care Clinic to insure access to needed care. This active care coordination included arranging for lab tests as well as monitoring results. Contra Costa intends to test this method of care management with more clients in West County and then spread this change to other regions within the county.

Impact Story
<p>“J” is a man with schizophrenia and developmental delays who had been living with his mother who died suddenly in February. As a result, he had to move to El Cerrito to live with his sister. When he enrolled in CalMEND, he weighed 30 pounds more than his current weight, his blood pressure was borderline high and he had been sedentary. CalMEND staff took J to the local junior college to show him the pool and basketball courts in the gym. One of the other CalMEND clients bought him a basketball. This made him interested in the program. He now attends all of the clinic wellness groups and has positive interactions with the staff and other clients, greeting everyone with a smile. His blood pressure has fallen into the normal range and he has lost two inches from his waste.</p>

Care coordination as it is discussed in chronic care best practice, focuses on the role of an informed and “activated” client/patient at the center of their own health care. Most of the teams tested the use of Brief Action Planning (BAP) to understand, identify and make short term and progressive behavioral changes¹⁷ as an evidence-based tool for working with clients and their families/significant others

Teams generally achieved positive results when they tested BAP. For example, several patients in Placer County with cardio vascular disease and obesity followed through on their care plan goals related to initiating physical activity when they had never done so before. However, teams that tested BAP with clients from diverse cultural and language backgrounds found that cultural accommodations were necessary. For example, Vietnamese clients served by Orange County’s Asian Health Center were not responsive to the core BAP question: “*Is there anything you would like to do for your health in the next week or two?*” (what, when, where, how often, etc?). Their primary care physician suggested that these patients expected the doctor to take a more authoritative role, tell them what to do and more actively provide treatment direction.

Impact and Lessons Learned

CPCI pilot partnership teams demonstrated significant variation in the extent to which they were able to test and implement cross-discipline collaboration, new clinical workflows, and emerging best practice clinical functions such as care management. The pilot teams and the CPCI faculty core team concurred that for future learning collaboratives, change concepts related to improving delivery system design needed to be simplified. Specific structuring of the changes related to redefining team roles and work processes should be introduced early in the collaborative process.

¹⁷ BAP developed by Steven Cole, MD is a deceptively simple evidence-based motivational tool that has been found to generate greater improvements in health and wellness outcomes--the client/patient is an active partner. Steven Cole, MD, CMI Research and Training Institute, Brief Action Planning, <http://stevencolemd.com/UBPAP.aspx>

A recent study published in *Psychiatric Services*, reporting on three cycles of behavioral health/primary care integration learning collaboratives, stressed the same learning:

*A successful learning collaborative must assist teams in breaking the change process down into clear operational strategies and focusing attention on detailed shared clinical workflows. Role clarification is a key to successful practice change.*¹⁸

The CPCI pilot appears to have promoted change concepts that are increasingly accepted as best practices in integrated care. The same principles, team-based care, “patient care pathways”, redesign and explicit team role/task definition (including virtual team members), were repeatedly emphasized as critical improvement strategies by multiple speakers at a National Medical Home Summit held in San Francisco in September 2011.

Additional lessons learned and recommendations include:

- CPCI teams represented diverse partnership structures, which made it very difficult to learn, test and share comparable approaches to delivery system design delivery system design. Partners need to understand each other’s workflow, roles and care culture and then develop and test a new delivery system design that best meets the needs of the partnership’s shared patients. Future learning collaboratives should consider: (a) For diverse partnerships, create a Change Package where delivery system design introduces a set of core change ideas and then provides distinct tracks for team design, work flow and care management organized according to participants integrated care structure; or, (b) recruit participants based on consistent integration models.
- Care Coordination for patients with multiple chronic medical conditions is an evidence-based best practice and related standards of care are emerging around patient centered medical home models and certification requirements. Care coordination for individuals with complex co-occurring health and serious mental illnesses is a likely extension of these best practices. .
- The design of delivery systems to improve patient outcomes must address health disparities and challenges of language/culture, poverty, homelessness, and other social influences. Change concepts would need to address the impact of culture on patient’s response to self-management programs, the provision of multi-lingual staff/services and information, and transportation barriers.
- There is emerging and powerful evidence that team-driven care improves health outcomes for individuals with complex co-occurring conditions. Integrated partnerships may need to evolve beyond coordination of care and adapt/build cross-organizational care teams that care exclusively for clients/patients with serious mental illness and co-occurring medical conditions.

EVIDENCE-BASED AND EMERGING BEST PRACTICES AND STANDARDS OF CARE

As has been previously described, a strong evidence base is emerging that integration of care and team care approaches--and not just the coordination of care at a distance, are essential to improving the health outcomes of individuals with multiple serious/chronic health and mental health conditions.

¹⁸ Steven Vannoy, Mauer et.al., “A Learning Collaborative of CMHCs and CHC to Support Integration of Behavioral Health and General Medical Care,” *Psychiatric Services*, July 2011, Vol 62, No. 7

- The IMPACT model developed by the University of Washington’s Aims Center has been demonstrated in a variety of settings and with adult and older adult populations to be an effective approach for treating depression and co-occurring health conditions in primary care settings.
- Katon, Lin et al. developed a TeamCARE “treat to target” approach that found in a randomized trial that “an intervention involving nurses who provided guideline-based, patient-centered management of depression and chronic disease significantly improved medical disease control and depression.”¹⁹

However, these evidence-based interventions or guidelines were developed and tested with individuals with depression. **Integrated team-care/treat-to-target approaches have not been tested for clients with other serious mental health conditions such as schizophrenia and bi-polar disorder who comprised the learning collaborative’s target population and reflect the populations generally served by county mental health departments in California.**

Impact and Lessons Learned

In general today, the best available care for individuals with co-occurring serious mental illness and chronic medical conditions such as CVD and/or metabolic disorders is coordination of care between primary care and specialty mental health providers, including robust consultation or co-located services. Only a small number of exceptional integrated systems, such as Cherokee Health Systems (Tennessee), Intermountain Healthcare (Utah), and the Veterans Administration have demonstrated and documented how fully integrated care produces better outcomes for persons with serious mental illness.

CPCI brought in experts in evidence-based and emerging practices in integrated care (Wayne Katon, MD-TeamCARE, Kathy Reynolds of the National Council, and Bob Franko-Cherokee Health Systems) to consult with the learning collaborative pilot teams to support their testing and adapting of change ideas. However, more testing and learning is needed to determine how to adapt and adopt effective practices that were developed for single organizations to improve outcomes in stepped care environments where multiple provider organizations are partnering in the care of clients/patients with serious co-occurring mental health and medical conditions.

SUPPORT FOR CLIENTS’ SELF-MANAGEMENT

Self-management support was another key improvement focus. A considerable literature confirms that self-management is essential for improving and optimizing the health of individuals with chronic health conditions such as CVD and diabetes. Similarly, client recovery relies less on clinical intervention and more on helping the client learn how to address his/her own needs.²⁰ However, neither primary care

¹⁹ Katon WJ, Lin EH, Von Korff M, Ciechanowski P, Ludman EJ, Young B, Peterson D, Rutter CM, McGregor M, McCulloch D. Collaborative care for patients with depression and chronic illnesses. *N Engl J Med.* 2010; 363(27):2611-20.

²⁰ The Agency for Healthcare Research and Quality (AHRQ) issued a recent Decisionmaker Brief that identifies support of patient/client self-management as one of the four key ways for physicians to involve patients. “Support patients in care. This support includes helping all patients reduce risk factors, as well as helping patients with chronic illnesses develop and update self-care goals and care plans.”²⁰ This has also been an area of keen interest and focus of the CalMEND Client and Family Sub-Committee which has recently completed an “Assessment of Peer-Run/Peer-Supported Self-Management Programs. AHRQ, The Patient Centered Medical Home, Strategies to Put Patients at the Center of Care, Publication No. AHRQ 11-0029 February 2011

nor mental health providers have a strong track record of providing effective support to self-management for persons with multiple health challenges including serious mental illness. CPCI pilot teams tested changes to improve self-management in areas such as smoking, nutrition, exercise—and also began to learn about the critical link between health literacy, motivation to pursue health goals and clients’/patients’ initiative and ability to sustain self-management activities. The CPCI pilot also emphasized the importance of welcoming and engaging family members/significant others as partners in supporting self-management.

Self-Management/Self-Management Supports by Pilot Teams

Teams pursued a range of wellness and self-management support strategies to address smoking cessation, physical activity and nutrition through individual coaching as well as groups.

Contra Costa’s West County Mental Health Center developed wellness groups and community activities to promote healthy eating and healthy lifestyle activities-including walking groups and field trips to community resources. Brief Action Planning/”teach-back” have also been used as tools to facilitate client engagement in their own health and wellness. Contra Costa’s consumer-operated Wellness Center has also implemented Peer Support Whole Health self-management support groups developed as an outgrowth of the work of Kate Lorig, R.N., Dr.P.H. and colleagues at the Stanford Patient Education Research Center.

Impact Story
<p>“A” was a shy, awkward and beautiful 20-year-old young woman who came to the program three months ago from a neighboring community-based organization, Fred Finch Center. She complained of poor self-esteem, social anxiety, self-image disturbance and obesity. She was about to celebrate her 21st birthday and had no friends to celebrate with. She was diagnosed with depression and was at risk for metabolic syndrome. She lived with her elderly grandmother and feels lonely and isolated. After participating in CalMEND for three months, attending weekly healthy eating and walking groups as well as enrolling in yoga classes, A has lost 19 pounds. Her BMI is now in the high normal range. Due to the weight loss, she is feeling empowered and is making friends. She is speaking up more and feels positive about her life. As a result, she has enrolled in junior college.</p>
Impact Story
<p>“T” is an obese woman with mental illness and diabetes who joined CalMEND to learn how to cook and eat healthier foods. She has cancer and is a crack addict who smokes crack at least three times a week. During enrollment, she indicated she was highly motivated to stop using crack but did not know how. She was referred to a substance abuse counselor and she now attends a daily outpatient drug free program. She now attends all the CalMEND wellness groups and has expressed interest in joining a peer-support training course. Because of the CalMEND care model developed by the CalMEND staff, she has achieved several of her wellness goals by being clean and sober for six months and changing her diet. In addition, she now regularly keeps her appointments with her primary care provider.</p>

Placer County developed a Shared Care Plan that included client self-management goals. They also developed activities such as smoking cessation and a very successful walking group that participated in the Annual NAMI walk. They attempted to link patients to local Peer Run Wellness Center but found that health clinic patients would not use this resource without greater preparation and bridging of services.

The following client/patient responses were provided to the Placer CPCI team’s anonymous survey:

“CaIMEND helped me tremendously. Without the program, I would not have been able to quit smoking.”

“I am so grateful to CaIMEND for the services & support received. Thank you!”

“Very helpful. Hope to see this program continue!”

“I wish the group didn’t fall apart in June and May. I miss the core group we had. It was my social support.”

“Enjoy walking with some people in the support group. Like Healthy Lifestyles with Mary and seem to get a lot out of it.”

“My counselor...gave me a chance to improve my life.”

San Mateo County designed and ran smoking cessation groups that were co-led by a trained Peer Counselor/Community Worker. This peer-led smoking cessation program is now being spread to multiple sites throughout the county. San Mateo is also exploring the implementation of peer led self-management support groups based on one of several evolving national program curriculums as an element of their “total wellness initiative” partially funded through a SAMHSA grant.

Shasta County attempted to include CPCI-linked patients in self-management support groups that were already offered on a periodic basis.

Orange County did not specifically develop self-management programs within the CaIMEND collaborative but is integrating self-management principles into a wide-scale implementation of a trained mental health peer navigator program.

Sacramento’s Behavioral Health Specialists follow their clients/patients regularly through phone calls between visits. If patients are not adhering to their treatment and self-help goals, or have additional challenges, this staff person provides encouragement, helps the client/patient make plans to change their behavior and shortly thereafter follows up with a phone check in. .

Impact and Lessons Learned

Self-management, including individualized support and self-management support groups/curricula was confirmed by CPCI participants and faculty as one of the most critical areas of change that can improve the health outcomes of individuals with serious mental illness and co-occurring chronic health conditions. In addition, several of the teams tested and found that it was essential to address health literacy and engaging family members to understand wellness/self-management personal goals so that they were supportive of their member(s) to pursue positive health behaviors. Future integration initiatives should prioritize self-management support as an essential strategy for improving health outcomes.

- The initial testing of self-management tools by CPCI teams showed positive trends. There are a small but growing number of self-management approaches that are geared to address the combined challenges of living and recovering with a serious mental illness that is co-occurring with a chronic medical condition. One of these self-management programs (based on the evidence-based programs of Stanford Patient Education Research Center,) Peer Support Whole

Health²¹ has been tested and documented in a peer-reviewed journal. Additional structured self-management programs are being implemented and tested across the country.²²

- Support groups continue to be a method of choice for helping patients with lifestyle habits.
 - Smoking cessation groups were tested in Placer and San Mateo and client participants reacted quite positively with some modest successes in reduced smoking and quit rates.
 - Contra Costa and Placer led walking groups with enthusiastic participation as long as staff leaders were consistent and provided participation prompts.
- Building the health literacy of patients' with chronic disease has been demonstrated to be essential for maximizing their wellbeing. Teams discovered that their clients were not particularly knowledgeable about their mental health or their medical conditions. Effective and sustained self-management as well as "adherence" to treatment is grounded in clients' (and usually their families') understanding/being literate about their multiple conditions and the impact of treatment and healthy lifestyle choices. The development of changes and testable ideas related to health literacy should be a priority for future integration learning collaborative.
 - CPCI provided some basic training on "teach-back" and Brief Action Planning, which are tools to support client/patient understanding of their condition and their options.
 - Professionals and/or peers that are promoting health literacy must also attend to the impact of culture, ethnicity and language—and the necessity of cultural humility in interactions with clients/patients. The Health Literacy Universal Precautions Toolkit developed by AHRQ is a useful compendium of strategies and approaches.²³
- The Mental Health (and Substance Use) recovery movements have much to teach and offer to programs that are integrating mental health and primary care. Wellness and recovery are not concepts that are generally understood in the world of physical health care.
- Health care programs have some successful, but limited experience with patient navigators, including navigators with ties to diverse communities. CPCI participants strongly and consistently recommended that trained peers be used as navigators and wellness coaches/advocates by programs and partnerships that are integrating primary and mental health care.

²¹ www.nasmhpd.org/general_files/Technical%20Assistance/TTIY1Y2Summary.pdf

²² Assessment of Peer-Run/Peer-Supported Self-Management Programs, CalMEND Client and Family Sub-Committee, August 2011. This assessment was pending distribution when this report was written and on CalMEND – DHCS website or www.CiMH.org.

²³ Health Literacy Universal Precautions Toolkit, AHRQ Pub. No. 10-0046-EF

SECTION 4: PILOT RESULTS, LEARNING, & RECOMMENDATIONS

Along with the learning by county teams-mental health and primary care leaders, the clinicians and clients/patients, the CPCI staff gathered knowledge about how to most effectively support integration and improve the overall health of clients/patients with SMI. This learning came in three primary areas: technical content (e.g. Change Package), measurement (e.g. Core Measures) and collaborative processes and activities (e.g. Timeline and Project Support).

The summary of learning provided here very specifically addresses the knowledge and tools needed by county mental health and health care organizations to work collaboratively across organizations to improve care. To do so, care systems need actionable answers to the following fundamental questions:

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What changes can we make that will result in an improvement?

TECHNICAL CONTENT

Technical Content Experience & Learning

As described in the Planning and Pre-work activities, project staff convened an expert panel to gather the best knowledge about how to change practices in primary care, mental health care and the interaction of practices to improve the health of the clients/patients with serious mental illness and co-occurring medical conditions. This knowledge organized according to the Care Model in the original Change Package (Attachment C) guided the improvement efforts of the pilot teams throughout the project. An important outcome of the CPCI pilot was to identify key knowledge and change ideas contained in this package so that it would become more useful and effective for any PCP and MH organizations choosing to integrate and thus improve the care of SMI individuals. See Attachment G for a summary of changes tested by the county teams.

Reflecting on both the experience and feedback from the teams, the clinical faculty and other experts, this pilot project demonstrated that the original change package had the following strengths and weaknesses:

- The Care Model is a useful model for the systems change required of organizations engaged in providing integrated mental health and primary care
- The change package was flexible enough to enable the introduction of new and important evidence-based changes during the course of the collaborative.
- The initial Change Package was too complex. The large number of change concepts and ideas made it difficult for teams to select the most high leverage change ideas for their partnership. Eliminating redundancy and overlap, modifying and reducing the number of change ideas based upon current evidence and best practice produced a more streamlined and user friendly Revised Change Package (Appendix C)
- Teams require guidance to effectively sequence changes. The development of sequencing for change is a key task of the pilot phase of BTS collaboratives. (Attachment I)
- Some key care improvements can be made by mental health and primary care practices independent of establishing partnerships. These were not differentiated in the Change Package.

For example, APA standards of care regarding physical health screening for persons with SMI could have been independently adopted by the mental health providers.

Technical Content Recommendations:

On the basis of the testing use of the initial Change Package, input from teams during the collaborative and the final harvest process, as well as the CPCI faculty's expert knowledge and synthesis of the collaborative experience, the following improvements are recommended:

- Continue to use the Care Model as an organizing framework for change ideas but, sequence selected care model areas so that the array/scope of changes is more focused. For example, Delivery System Design (team based care or care management) or Self-Management Support) might be emphasized, rather than giving equal weight to testing and implementing changes from all areas of the Care Model.
- To the extent that Learning Sessions provide the forum to introduce change ideas, the faculty and clinical experts need to sequence the introduction and expansion of activities/information related to change concepts .
- Consideration should be given to how primary care and mental health systems can collaborate and independently adopt best practices and accepted standards of care within each discipline as building blocks/essential elements of integrated care partnerships.
- The differences in culture of primary care and mental health must be acknowledged and taken into account in designing effective integrated care processes for collaborative care within a single organization or within stepped care partnerships among primary care and specialty mental health providers.
- Change ideas need to be differentiated and identified as they apply to various partnership arrangements.
- Knowledge is rapidly evolving about effective structures and processes of care for complex and co-occurring mental health and medical conditions. Integrated care initiatives require a flexible staff and faculty that are able to adopt and introduce state of the art practice to collaborative participants.

MEASUREMENT

Measurement Experience and Learning

All of the partnerships were able to identify shared clients and report on at least some of the measures by the middle phase of the collaborative. This level of outcomes measurement reporting improves upon the experience of previous mental health integration collaboratives conducted through the National Council²⁴ but underscores the challenges of measurement in collaborating organizations. Input from the teams during the CPCI Harvest and the views of the faculty and staff provide support that the measures developed for the pilot were the appropriate set, however obtaining the data was very difficult for the pilot teams. As a result, cumulative monthly data reports provide only minimal evidence of improvement with respect to the collaborative's outcome objectives.

²⁴ Steven Vannoy, Mauer et.al., "A Learning Collaborative of CMHCs and CHC to Support Integration of Behavioral Health and General Medical Care," *Psychiatric Services*, July 2011, Vol 62, No. 7

The Target Population Defined

Although the CPCI charter was rather specific with regard to the target population, material differences existed in the teams' target populations. These differences impacted the usefulness of the measures as indicators of whether changes resulted in improvement. More importantly, a number of the teams had an insufficient number of data point (months of tracking a particular measure) to be in a position to determine whether a trend actually represented a significant directionality of change.

At least half the teams defined their target populations as those 'enrolled' and participating in CalMEND. Thus, once the client was participating, they were screened for risk factors and the screening measures consistently show near 100% for the duration of the pilot. For these teams, screening measures have limited use for understanding changes that drive improvement. Not only are the changes tested outside of the normal work processes affecting a narrow subset of clients/patients, teams were limited in the range of circumstances in which tests of change could be run. For the teams where patients were allowed to decline participation or pull out of CalMEND, nothing could be learned about caring for the patient population while de facto limiting the withdrawn patients' health and wellness.

Were the Measures the Right Ones?

Based on team and faculty input at the Harvest, the required measures were appropriate and useful. Although few of the teams were able to report on all of the required measures at the onset of the collaborative, all teams were reporting many (minus one or two measures in several cases) by the end of the collaborative.

Additional, specific experience with the required measures includes the following:

- While waist circumference (WC) was recognized as an emerging standard of care-especially for certain ethnic populations where BMI is not a reliable predictor, half of the teams did not measure WC in addition to BMI. WC was challenging to integrate into work processes; IT systems' data fields were not set up to capture the information; and, most importantly, it was found that individuals with weight/obesity problems and SMI were very uncomfortable with staff measuring WC. Orange was the only pilot team that routinely measured WC. Shasta's testing suggests that patients are more willing to learn to measure their own waists and do so in the presence of clinic staff.
- Although co-occurring substance use/abuse is recognized as a significant problem, only half of the teams screened and reported on this measure.
- There are no routine processes for ordering and/or sharing lab test results across partnering providers leading to duplication and/or lack of routine coordination or sharing of lab results. This meant that in some instances partnering organizations had conflicting lab results for an individual. A key finding is that partnering organizations must determine which organization is responsible for scheduling and tracking results-and the process for sharing the results. (See related delivery system design discussion.)
- The two integration measures: presence of a shared care plan and inclusion of self-management goals in treatment plans, were not routinely collected. Given the purpose of the collaborative, this result may be surprising. However, it appears to reflect the difficulty of embedding new care processes and, again, the barriers to modifying and recording new data in current information systems.

The required measures focused on identification of target population, screening, identification of risk and diagnosis. The original set of measures included more specific tracking of guideline- based standards

of care as well as numbers and tracking of referrals across partners. A subset of this original set of 17 measures were designated as optional in recognition of the challenges that teams experienced in tracking a set of measures on a monthly basis.

Teams were also asked to specify county-specific aims, guidance and measures; however the teams did not routinely track or report on their site-specific measures. This is attributable to the overall challenges with measurement already discussed-including the lack of patient registries.

The Assessment of Chronic Illness Care (ACIC) is a self-assessment tool that is routinely used in BTS Learning Collaboratives. For CPCI, the ACIC was modified with the approval of the MacColl Center to include a section on integration of care across partnering organizations and to increase the wellness/recovery focus of all of the self-assessment measures. This Modified ACIC was self-administered twice: prior to LS 1 and at the mid-point, LS 3. Partnership teams were not asked to complete a final ACIC because of time constraints on the completion of the pilot collaborative. (Note: the CPCI collaborative was shortened by two months to respond to CalMEND budget reductions.) The ACIC's usefulness for CPCI teams was minimal since the CPCI pilot teams did not effectively use it as a self-measurement yardstick for integration and there was no consistency in how the teams completed the assessment. In a future LC, more team preparation and orientation to the value and process for completing the ACIC might result greater utility of this self-measurement of care effectiveness.

Did the Measures Provide Evidence of Improvement?

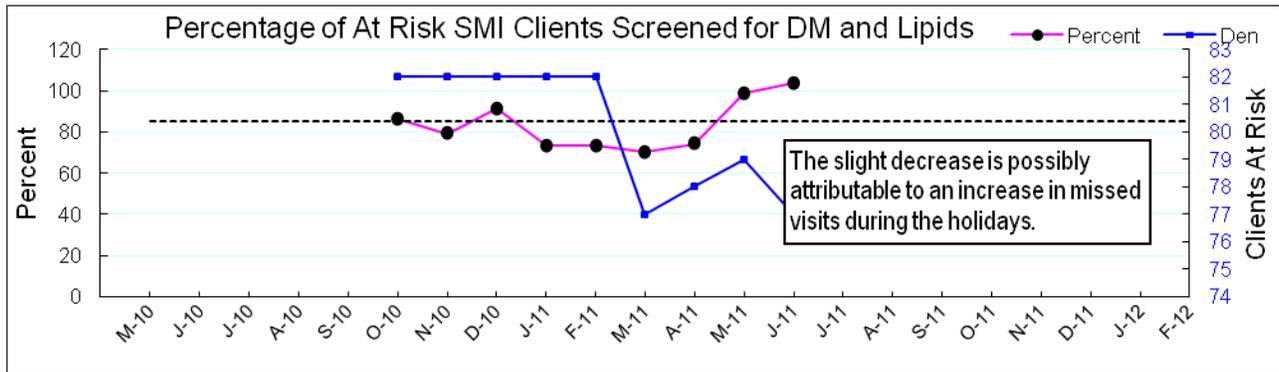
While the usual practice in a large LC combines the results for the core measures from participating teams, individual team measures are not usually aggregated in pilot collaboratives:

- pilots involve fewer teams with smaller target populations resulting in less significant results in the aggregate
- more variability exists in the changes that are tested across participating teams
- individual team impact and trends in measures could be lost if the data were combined and pilots are geared to assessing variability where measures help and where measures need to be improved to track the impact of changes: little change-and why, as well as substantial change-and why

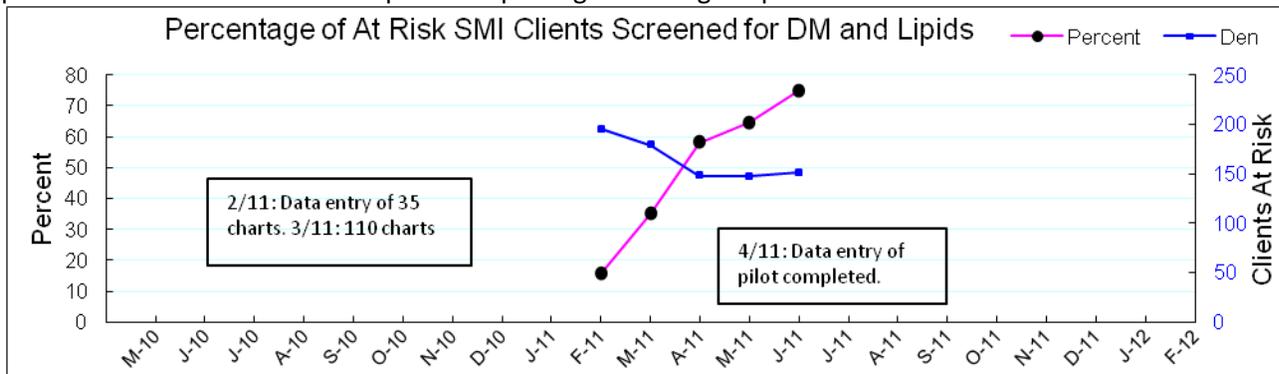
As has been noted, CPCI pilot teams did make progress in reporting on core measures. However, the period of time that most of the teams were able to track CPCI measures was insufficient, the data collection and storage methods were not sustainable, and thus teams' ability to link tested changes to observable impacts on client outcomes was compromised.

Given these caveats related to CPCI as an initial LC pilot, the runcharts from each team provide suggestions of improvement. (See runcharts in Attachment A) The plots show emerging rather than clear demonstration of change and improvements in patient care and outcomes. The two graphs below illustrate the promise and limitations of measurement results in the CPCI pilot. The first graph below reflects the San Mateo team's effort to report on their clients/patients current lab work. Additional months of data would be necessary to have confidence that improvement would be sustained in their routine care processes/workflow for these targeted clients.

San Mateo



Below, the Shasta runchart shows clear upward trend in DM and lipid screening, yet as the annotation points out the trend is due to improved reporting not change in patient care.



The measures reported by all of the teams show at least some positive direction over time. The most promising of these are similar to the San Mateo chart above.

Additional factors impacting the amount that could be learned and demonstrated through data over time measures included:

- The measurement time period was too short and the shortening of the pilot timetable by 2 months meant that few teams can say with confidence that increasing values necessarily reflected improvement. The longest team data runs are ten months whereas 12 months is considered minimum for meaningful results.
- Teams did not have sufficient resources to collect and enter data.
 - Orange County’s data/measurement was delayed by four months due to numerous data challenges and in addition, team resources were required to manually collect data from medical records.
 - Shasta was the only team to have access to a fully functioning registry (i2i) and demonstrated the greatest success in tracking measures.
- Most of the teams learned that information about the patients was maintained in different and often in multiple places. While some teams took time to pull data from multiple sources, most did not reconcile discrepancies and opted instead to make one source primary over the other.
 - Some Teams, like San Mateo, spent considerable time and energy reconciling their multiple records.

- Others like Placer and Shasta developed approaches to record and share data specific to the CalMEND population outside of the normal chart system. These teams developed a quick summary sheet for the top of both MH and PC charts so that all providers used the information from the coversheet.

Since teams gained limited perspective from their runcharts, the teams and faculty as can be the case in pilots relied on anecdotal evidence and stories to demonstrate improvement.

What Additional Information Can Provide Evidence of Improvement?

Most of the teams will claim that the changes they made resulted in improvements. And, one or two will assert that the improvements can be demonstrated through their measures. Others recognize the limitation of their data. All teams will point to the impact stories which are shared in the Appendix H and the examples in the earlier sections of this paper.

Measurement Recommendations

The measurement of the impact of changes is critical to successful improvement efforts. The following recommendations would help MH/PC teams to collect and utilize data in more effective ways:

- Keep the same measures as defined for this initial pilot with the expectation that teams will begin reporting required measures at the beginning of the pilot with the potential of adding the optional measures during the course of the collaborative.
- Teams should define and identify their target populations during pre-work and the target populations should be defined as naturally occurring groups to include clients/patients who may not agree to participate and/or drop out during the course of the collaborative. This definition of target population would provide a better base from which to assess the overall impact of the changes being tested.
- Ensure that teams have tools and resources for collecting and storing patient data needed for the measures. Ideally each team would have access to a registry.
- The pilot duration and data collection should be a minimum of 12 months for meaningful assessment of results and improvements.
- Provide additional help to teams to use data to guide individual and population-based care.

COLLABORATIVE ACTIVITIES & PROCESSES

Collaborative Activities and Processes Experience

While the MFI and BTS methodologies are well established as effective quality improvement approaches within a broad range of physical health care settings, these improvement methodologies have rarely been used in mental health systems. In addition, CPCI faculty is aware of only one other series of BTS-like quality improvement collaboration that has been implemented to support cross-organizational MH/PC integration.²⁵ Thus, a critical objective of this pilot was to identify and learn about the change

²⁵ Steven Vannoy, Mauer et.al., "A Learning Collaborative of CMHCs and CHC to Support Integration of Behavioral Health and General Medical Care," *Psychiatric Services*, July 2011, Vol 62, No. 7

processes and improvement supports that are the most critical to developing effective integration cross-organization partnerships.

Learning Associated with Improvement Supports

The Model for Improvement (MFI) represents a new method for continuous quality improvement for mental health programs—as well as for many primary care/health and health plans. If MFI methods for testing, ramping up, implementing and spreading change are sustained by CPCI pilot teams, they may well provide a continuing source of organizational improvements to care. However, it is also clear that organizational discipline—and continuous leadership commitment is necessary to sustain MFI approaches and the change to a culture of quality improvement. Specific learning in the use of this model by CPCI teams included:

- All teams practiced and some teams became skilled in conducting and sequencing small tests of important/fundamental change. Those that were successful on a small scale were not always able to successfully ramp up testing to larger scale testing and implementation because these MFI tools were not fully understood or supported outside of the immediate context of the pilot team. For example, several teams tested and achieved success with the use of the techniques of Brief Action Planning (BAP) and “teach-back” that are viewed as emerging best practices in health care. However, it was difficult to sustain and build on BAP goals if the client’s/patient’s goals were not also actively supported by their PCP.
- Some teams found it very difficult to plan and test the multiple changes (sometime simultaneous) required for improvement in complex organizational/cross-organizational environments. The complexity of the CPCI Change Package also made it difficult for teams to determine which changes to pursue—and in what order of priority. During the early phase of the LC, faculty encouraged teams to test changes in most domains of the Care Model. At the CPCI Harvest, pilot team participants recommended that a future LC focus on a smaller number of core change concepts during the first several learning sessions—and then build on those concepts/areas of the Care Model through Action Periods and additional Learning Sessions. See Attachment I for a new sequencing of Changes and Improvement Methods.
- Teams recognized the value of testing changes as a team, yet they struggled to meet, coordinate and function—especially when teams represented cross-organizational partnerships. In some counties, such as Orange, there were actually four organizational partners. Even finding time to regularly meet as a cross-organizational team was a consistent challenge and therefore limited the scope of changes pursued.
- The MFI approach of initial testing on a small scale, learning from mistakes as well as successes and then moving to large scale testing and wide adoption of new practices, creates a dramatic contrast to the audit accountability and defensive practice environment that drives so much of mental health and physical health care. Even though the BTS/MFI process has nationally led to wide scale improvements in areas such as reduction of avoidable medical errors, diabetes and asthma care, quality improvement methods have been slow to take hold on any broad scale in public safety net care organizations.
- CPCI partner teams generally knew very little about each other’s delivery system design and care processes. This culture and knowledge gap also hindered improvement. Cross organizational systems mapping, analysis and design was not integrated into CPCI and should be considered as an important early element of any future integrated care collaborative.

Learning and Recommendations for Collaborative Activities

Leadership – Pilot staff learned that it was difficult to engage leaders, particularly primary care leaders, on a consistent basis. This can be attributed in part to the demands of change and the pace of the business of primary care-especially in light of health care reform. It was however impressive that fully half of the teams included representatives/managers from their local public health plans.

Recruitment of teams – CPCI project staff were being trained in BTS and MFI and thus were not be able to give teams a full view of participation requirements and workload expectations. That being said, all of the six teams completed the CPCI pilot. Setting clear expectations about both the demands and the benefits of LC participation is important as teams are recruited.

Selection of teams and requirements for participation – MH/PC integration partnerships are more successful when the participating organizations have a pre-existing relationship. If a future collaborative chooses to involve teams without strong/positive organizational history, success will be limited unless there is a process during the pre-work phase to build cross-organizational bridges and a culture of collaboration. In addition, the scope of changes to be tested and implemented as well as the sequencing of changes would need to address the building of organizational partnerships.

Preparatory work – The timing, duration, and scope of preparatory/“Pre-Work” was insufficient given the complexity of coordination, information sharing and reporting requirements for multiple partnering organizations. More focused pre-work would support complex partnering organizations to achieve greater improvement at a faster rate.

Identification and use of experts – There were several challenges in selecting and coaching/training the clinical faculty and experts for CPCI. This included a change in contracted staff/faculty during the pre-work period and the need to replace one of the clinical co-chairs after the first learning session. A focus of the initial planning and pre-work phase for any future learning collaborative should include more intensive coaching of faculty and consultants in how to share and use their experience to guide teams’ learning and encourage peer learning. Peer to peer team learning was most successful when there was preparation and coaching of teams as presenters and of teams to jump start discussions and sharing of key change ideas.

SECTION 5: RECOMMENDATIONS AND IMPLICATIONS FOR FUTURE ACTION

RECOMMENDATIONS

The following recommendations are provided as summary guidance for the development of future learning collaboratives focused on integration and coordination of mental health and primary care to improve the health of persons with serious mental illness and risk or co-occurrence of medical conditions such as heart disease and diabetes.

Learning and Technical Content

1. **Integrated/stepped care models** – The design of future LC's should address the diversity in participants' models of integration: e.g., coordination at a distance, co-location and full on-site integration. There are several options for addressing this integration model heterogeneity:
 - a. Accommodate diverse partnership models within a single LC, provide all teams with experience with core change ideas (sharing client information, care coordination, self-management support) and then offer affinity tracks, e.g., team-based care design, work flow and roles, organized by participants' integration structure; or
 - b. Organize future LC's for to involve participants with similar basic integration models.
2. **Care Model (Chronic Care Model)** – provides a useful framework for addressing multiple, system improvements particularly within single organizations. However, meaningful change in complex cross-organizational partnerships requires a focus on fewer, carefully sequenced change concepts. Like the CPCI collaborative, health home and other health care reform models require coordination of care among multiple partners. However, when dealing with multiple organizations, it becomes important to focus on fewer, carefully sequenced change concepts. Future LCs should address a selected number of high leverage changes such as: Delivery System Design (team based care and/or care management) or health literacy and Self-Management Support, rather than attempting change in all areas of the Care Model.
3. **Remain current with evolving best/evidence-based practices in care integration** – The rapid evolution of care integration models and practices requires LC faculty to stay current with research and flexibly adopt/adapt LC content to reflect new learning.
4. **Standards of care and evidence based/promising practices** – Providers must be aware of and adopt evidence-based/promising practices including key standards of care for screening and monitoring conditions within and across MH/PC disciplines.
5. **Sequencing of Change Package** – High leverage changes such as team-based care, care coordination and/or self-management support should be introduced early and built incrementally over the course of the collaborative.
6. **CPCI Core measures** – used to assess the impact of changes were appropriate given the improvement aim of the LC. Optional measures may require greater electronic communication/registry capacity than cross- organizational systems typically have at this time.

Collaborative Activities and Processes

7. **Engaged and supportive executive leaders** – Provide regular opportunities for leaders of partnering organizations to engage in peer learning to explore challenges, and strategies/skills for complex systems transformation including building a culture of quality improvement. Use virtual communication to reduce time demands given leaders' competing priorities.
8. **Recruitment and participant team selection** – must clarify and consider applicants' capacity to meet the time and resource requirements for LC participation of all mental health and health partners as well as communicate the potential benefits for improved client/patient outcomes

9. **Preparatory work** – Duration, and scope of preparatory/“Pre-Work” was insufficient given the complexity of coordination, information sharing and reporting requirements for multiple partnering organizations. More focused pre-work would support complex partnering organizations to achieve greater improvement at a faster rate. Partnering organizations must establish procedures to identify shared clients & complete selection of target population during “pre-work.”
 - a. Partnering organizations need to arrange for adequate data sharing capability that will suffice for at least the duration of the collaborative
 - b. Faculty should provide active coaching re: charters, team roles and composition.
10. **Sharing & using client information to guide care**-Testing and implementation of changes requires the capacity to identify and share clinical information. During the early phase of the collaborative process, tools and processes must be in place to collect and store client/patient data needed for measuring outcomes.
 - a. Ideally each team would use a registry. However, most registries still must be modified to include mental health and substance use disorder information.
 - b. If it is not possible to use a registry, then participants must adopt a more simplified data base approach, e.g., spread sheets, to collect, track and share critical clinical information
 - c. Low-tech communication solutions such as faxing of clinical information should not be overlooked as an initial method for sharing basic clinical information, e.g. medications and lab values.
11. **Provide regular feedback to teams regarding measures/progress** – Regular and timely feedback to teams regarding their progress and results is critical for learning-especially during the early phases of the LC. Staffing must be adequate to support this feedback process.
12. **Use of faculty/expert consultants** – The BTS LC is a highly participatory and coaching- oriented approach to organizational learning. The LC Director and the Improvement Advisor must therefore provide coaching/guidance to faculty and content-expert presenters regarding the model for improvement (MFI) and how to use their expertise to foster team and peer learning.

THE PATH FORWARD: CHALLENGES AND STRATEGIES FOR INTEGRATING CARE

The integration and coordination of primary care and mental health (and substance use disorder) services is essential to improving the health, quality of life, and life expectancy of individuals with serious mental illness. Research and practice knowledge is evolving rapidly regarding effective care integration for co-occurring conditions such as depression and cardio-vascular disease. The University of Washington AIMS Center’s Impact Model and the Group Health/University of Washington’s TeamCARE/“treat to target” models are examples of this progress. However, there have not been adequate or parallel developments in research and models of care for persons with serious mental illnesses such as schizophrenia and bi-polar disorders. The CPCI Pilot Learning Collaborative begins to address this gap.

Through the CPCI pilot collaborative, county integrated partnerships took initial critical steps to coordinate and improve the screening, monitoring and provision of care for persons with co-occurring serious mental illness and health risks/conditions. The CPCI learning collaborative identified and underscored critical aspects of improved care capacity such as:

- Sharing and using clinical information (underscoring the importance of registries and health information exchange) across specialties/providers to improve individual and population outcomes
- Team-driven care with partnering providers functioning as “virtual” teams/health homes

- Client/patient and family members as key care team members in recovery oriented shared-care
- Health literacy and self-management as essential to improved health outcomes and the potential contribution of persons with lived experience/peers as health coaches and leaders of self-management support activities

The pilot teams also learned that implementing advances in care requires organizational commitment to continuous improvement--testing, ramping up and sequencing to adopt and spread high leverage changes. It will be important to continue to develop and refine the content and the sequencing of change through future integration learning collaboratives.

Fundamental improvements in care will require both new approaches to integration--and a commitment to continuous improvement. The CPCI collaborative is one of the first (and still few) formal cross-organizational integration learning collaboratives focused on improving health outcomes for persons with serious mental illness.

Health reform has supported a growing emphasis on person-centered health care homes and Accountable Care Organizations (ACOs) to improve the quality and coordination of care and lower costs. California through its "Bridge to Health Care Reform" 1115-B waiver is working to improve, and better integrate and coordinate care--especially for persons with multiple complex conditions--including individuals with co-occurring serious mental illness and medical conditions. California's efforts are aided by rapidly emerging clinical and practice research that is being translated into tool kits and change packages for care management, care coordination, team driven care, client/patient and family member engagement, health literacy and self-management of chronic conditions.

There is also clear recognition in California that while the State has an essential role in creating a policy and financing environment to promote these improvements, fundamental change in the organization and quality of health care requires local/regional action.

Findings from the CPCI pilot collaborative, with its focus on county-level partnerships, contribute important knowledge about challenges and potentially successful approaches to integrating care at the local level. Participating teams are continuing to test and spread improvements including sharing and using shared clinical information to guide care, leading self-management support groups -- some of which are peer led, using peers as health coaches and navigators, using mental health nurses as care managers, and developing and using treatment protocols for mental health conditions in primary care. It will be important to build and sustain these efforts through sharing best practices and convening future collaboratives that spread learning about both the content of integrated care and the process of testing and bringing change for improvement to scale.

CiMH will continue to focus on quality improvement and integration of care through programs and initiatives supported by a range of funders. This work includes the development of four new Breakthrough Series Learning Collaboratives, three of which will focus on processes and emerging best practices in the integration of mental health, substance use disorder and primary health care. While the DHCS CalMEND project does not currently have the resources or capacity to directly support these next steps, it has built a foundation for future initiatives.

CiMH looks forward to a continued collaborative relationship with the Department of Health Care Services, other state departments and private and public sector organizations as we work at the state and local level to reform California's health care system.