Integration of Primary Care and Behavioral Health

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General Overview and Rationale for Integrated Care

One of the great challenges facing health care over the last 50 years has been how to manage chronic medical problems. Medicine, as a system, has traditionally focused on swiftly addressing life-threatening illnesses, and, as a result, chronic, fluctuating, and slowly progressive disorders are often missed or inconsistently managed (Institute of Medicine, 2001). As medical technology has increased longevity, so too has it increased the number of people living with chronic medical conditions. This has led to a tipping point in the USA wherein many patients are receiving care for chronic medical conditions, but fewer than half of the patients seen for depression, hypertension, or diabetes are receiving appropriate treatment (Clark et al., 2000; Joint National Committee on Prevention, 1997; Young, Klap, Sherbourne, & Wells, 2001).

More concerning still is that this has now begun to negatively affect longevity, resulting, in the USA, in decreased life expectancy for the next generation (Olshansky et al., 2005). Specific to mental health, large population studies have found that major depressive disorder alone can decrease life expectancy by more than 10 years (Chang et al., 2011).

Since the 1980s, researchers have studied the impact of depression in primary care settings, with discouraging findings. It has been found that 5–12% of primary

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care patients at any point in time will meet criteria for major depressive disorder (Katon & Schulberg, 1992). Furthermore, early studies found depressed patients utilize health care twice as much as non-depressed patients, have greater functional impairment than that expected from their other medical conditions alone, and are more likely to have medically unexplained symptoms (Katon & Sullivan, 1990; Simon, Ormel, VonKorff, & Barlow, 1995; Simon & VonKorff, 1991; Wells et al., 1989). Since its initial investigation, depression remains the most common cause of disability worldwide and one of the most encountered diagnoses (Unützer & Park, 2012). Only half of patients with major depressive disorder are identified accurately in primary care, (Akincigil & Matthews, 2017; National Academies of Sciences, Engineering, & Medicine, 2015), and of those only half who are referred to specialty mental health care will make it to an appointment (Pace et al., 2018). In follow-up studies, this remains true and worsens in populations of ethnic minorities, older adults, medically complex patients, and men (Ettner et al., 2010; Gonzalez et al., 2010). When treated in primary care, patients may face client, provider, and health system barriers, including infrequent appointments, delays in medication adjustments, and discontinuation of antidepressants (Grembowski et al., 2002; Katon, Berg, Robins, & Risse, 1986; Ross et al., 2015; Simon, VonKorff, Wagner, & Barlow, 1993).

In addition to decreased life expectancy, mental disorders also lead to more frequent and severe chronic health conditions. Patients with psychiatric disorders have a threefold increase in the rate of diabetes, ten times the rate of heart disease, and 40 times the rate of cancer (Murray et al., 2012). The relationship between psychiatric and other medical conditions is likely complex. However, half of patients with a psychiatric concern struggle with adherence to medical recommendations (Murray et al., 2012).

Access to specialized mental health care is limited for primary care patients, and, inversely, access to primary care is limited for persons with severe mental illness. This can result in treatable medical problems affecting health, wellness, and life expectancy in mental health settings.

To improve outcomes in this population with frequent comorbid psychiatric and other medical needs, improvements are needed in care delivery methods. Systems pressures, including health care workforce shortages and the enactment of value-based care plans, greatly influence how any novel approach can function sustainably (Renders et al., 2001; Wagner et al., 2001). With a formidable workforce shortage in mental health care, 18% of US counties have an unmet need for non-prescribing mental health professionals (e.g., social workers, psychotherapists), while 96% of counties have a shortage of prescribers (e.g., psychiatrists, psychiatric nurse practitioners) (Thomas, Ellis, Konrad, Holzer, & Morrissey, 2009).

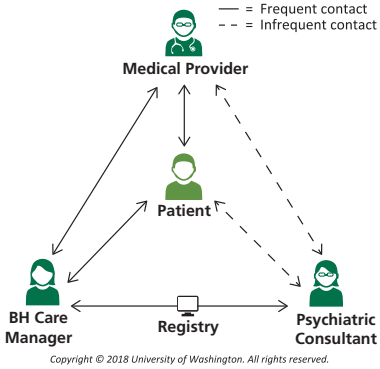
The concept of value-based care has developed to address the US high per capita health care costs that are coupled with lagging health metrics (Porter, 2009). Value-based care emphasizes the creation of tracking measurements to assess and improve outcomes in health care.

In response to these and other pressures, several models of integrated team-based care have developed, all of which aim to achieve improved clinical outcomes in a cost-effective manner. These models and common adaptations are discussed in the next section.

The Collaborative Care Model

Structure

The Collaborative Care Model (CoCM) is an evidence-based model of mental health service delivery in medical settings (Archer et al., 2012). The core CoCM team includes the patient, a primary care provider (PCP) or other treating medical providers, a behavioral health care manager (BHCM), and a psychiatric consultant. Depending on the resources of each clinic, teams may sometimes include other members, such as a psychologist or health navigator (see Fig. 1). Each team member has a clearly defined role (Centers for Medicare & Medicaid Services, 2018). The PCP is responsible for identifying patients in need of treatment, introducing the CoCM to the patient, and prescribing medications if needed. The BHCM provides care management by tracking behavioral health measures and response to treatment



The solid arrows indicate regular direct communication between team members.

The dashed arrows indicate only as needed or indirect communication as part of care delivery.

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Fig. 1 Typical team configuration of the CoCM team. The solid arrows indicate regular direct communication between team members. The dashed arrows indicate only as needed or indirect communication as part of care delivery. Collaborative Care Team Structure. Reprinted from "AIMS Center- Advancing Integrated Mental Health Solutions. (2018). Available at: https://aims.uw.edu/collaborative-care/team-structure." Used with permission from the University of Washington AIMS Center

in a registry and by delivering brief evidence-based behavioral interventions. The psychiatric consultant supports the other team members by providing expertise through weekly systematic case reviews with the BHCM to ensure appropriate diagnosis and development of care plans for common mental disorders.

A typical treatment course in the CoCM starts with identification of the patient needing treatment. This may be done through systematic screening, for example, for depression, or through the PCP's clinical assessment. Once the patient is identified, the BHCM is responsible for engaging the patient, completing an initial mental health assessment and adding the patient to a CoCM registry. The BHCM then meets with the patient at regular intervals, typically every 2 weeks in person or by phone to assess symptoms and provide evidence-based counseling/psychotherapy interventions like problem-solving therapy (PST), cognitive behavioral therapy (CBT), and behavioral activation (BA). The BHCM is also responsible for continuously engaging the patient in his care, repeating behavioral health assessment measures, such as the Patient Health Questionnaire-9 (PHQ-9), tracking response to treatment, and coordinating overall care for the patient.

The role of the BHCM is essential, with timely follow-up within the first 4 weeks strongly predicting clinically significant improvement in depression within 6 months and a shorter time to improvement (Bao, Druss, Jung, Chan, & Unützer, 2016). The psychiatric consultant may or may not be collocated with the primary care team and focuses the systematic weekly case review with the BHCM on intensifying the care plans for those patients who are not responding to initial treatment interventions.

Psychiatric case review in any given month is associated with twice the probability of receiving a new medication in the following month, indicating that systematic case review reduces clinical inertia in the treatment of depression (Sowa et al., 2018). A full-time BHCM within a typical CoCM team would have an active caseload of 50–80 patients and receive 1–2 h of support each week from the psychiatric consultant through case reviews of 5–8 patients.

Background and Evidence

There are over 80 randomized controlled trials demonstrating that the CoCM is more effective than care as usual for depression and anxiety disorders and a growing evidence base that CoCM is effective for other mental disorders, such as substance use disorders and bipolar disorder (Archer et al., 2012). The largest trial of CoCM, the IMPACT study, demonstrated that CoCM was twice as effective as usual care for treating depression in older adults in primary care settings (Unützer et al., 2002). Additional studies have demonstrated that CoCM can achieve the Quadruple Aim of health care system optimization: improved patient satisfaction, provider experience, patient outcomes, and cost-effectiveness of care (Archer et al., 2012).

The evidence base for CoCM continues to expand, and there is growing interest in understanding how the effectiveness of CoCM compares to that of other models

of integration. For example, a recent small study demonstrated that more patients experienced a significant reduction in depression symptoms when treated in sites that used the CoCM compared with sites using the colocation model (Blackmore et al., 2018).

Target

CoCM has the strongest evidence base for its application in the treatment of depression and anxiety (Archer et al., 2012). However, a recent summary showed that other disorders can be effectively treated by CoCM including chronic pain, dementia, and depression with a variety of medical comorbidities including diabetes and cardiac risk factors (Huffman, Niazi, Rundell, Sharpe, & Katon, 2014).

More recently, studies have demonstrated that CoCM can effectively address substance use disorders in primary care settings (Watkins et al., 2017), ADHD in pediatric populations (Myers, Stoep, Thompson, Zhou, & Unützer, 2010), and adolescent depression (Richardson et al., 2014). CoCM has been shown to effectively treat mental health conditions in racially and ethnically diverse clinical populations (Angstman et al., 2015; Shao, Richie, & Bailey, 2016), including Blacks/African-Americans (Areán et al., 2005; Unützer et al., 2002), Hispanics/Latinos (Hay, Katon, Ell, Lee, & Guterman, 2012; Miranda et al., 2003; Unützer et al., 2002), and Asians/Asian-Americans (Ratzliff, Ni, Chan, Park, & Unützer, 2013).

Implementation and Resources Needed

The Collaborative Care Model is a complex intervention requiring significant resources for implementation. Successful collaborative care programs have all core team members in place and focus on five core principles: patient-centered team care, population-based care, measurement-based treatment to target, evidence-based treatment, and accountable care (AIMS Center, 2018b).

Patient-Centered Collaboration

Collaborative care starts with the patient, partnering with the PCP, BHCM, and psychiatric consultant to develop and follow a shared treatment plan. Clearly defined roles for each team member are essential to the provision of effective and efficient shared care.

Population-Based Care

The team must define the caseload of patients who are in active treatment for an identified mental health need. Using a registry to track this patient population allows the CoCM team to manage care proactively for these patients in a fundamental shift from treatment as usual, which often is provided reactively only to patients who consistently engage in treatment. A CoCM registry includes demographic information about the patient, behavioral health screening results (e.g., Patient Health Questionnaire (PHQ-9) for depression), and dates of clinical contacts.

Measurement-Based Treatment to Target

The CoCM team is structured to support the consistent use of measurement tools to guide active treatment until clinical target goals are achieved. The landmark STAR-D trial for depression showed that it can take up to four changes in treatment before 70% of the population will have a response to treatment (Rush, 2007). The routine implementation of measurement-based treatment to target, especially when measurements are appropriately timed to support clinical decision-making and prompt treatment changes, can improve clinical outcomes (Fortney et al., 2017).

Evidence-Based Care

Patients are offered evidence-based treatments in a biopsychosocial approach to mental health. The PCP initiates medication, the BHCM delivers behavioral or psychotherapeutic interventions, and the psychiatric consultant supports the PCP and BHCM to guide the evidence-based treatment most appropriate for the working diagnosis.

Accountable Care

CoCM is not only accountable to the individual patient but to the entire identified population. To achieve excellence in care, the whole team must commit to continuously improving the quality of care provided. This process starts with the team identifying goals and targets for collaborative care and then regularly reviewing program data to assess the effectiveness of treatments delivered. Quality measures might address processes (e.g., caseload size or number of actively engaged patients), outcomes (e.g., the percentage of patients achieving treatment response or remission of depression symptoms), and other important targets identified by the clinic (e.g., provider and patient satisfaction). The team monitors its progress and can use standard quality improvement strategies to address areas in need of improvement. High-quality CoCM delivery includes this continuous quality improvement process as standard practice.

There is now a growing literature on the factors that facilitate strong implementation of CoCM. One study examined the relationship between implementation factors, the likelihood that patients were engaged in CoCM care, and positive depression outcomes (Whitebird et al., 2014). It found that patient engagement was significantly correlated to the clinic having good leadership support, a strong PCP champion, a care manager whose role is both well-defined and implemented, and a care manager who is on-site and accessible. Depression remission was correlated with having an engaged psychiatrist, warm handoffs, and operating costs not being seen as a barrier.

Additionally, pay for performance metrics may improve outcomes in real-world implementation of CoCM (Unützer et al., 2012). In this analysis of safety-net clinics who implemented CoCM, it took 64 weeks to achieve clinically significant improvement in depression in 50% of patients. After the payer mandated that 25% of the payment to clinics for collaborative care be dependent on performance in five key quality metrics, time to depression improvement was reduced to 24 weeks. These types of strategies can help guide improvement efforts in clinical practices implementing the CoCM.

There are a number of national and federal resources that support implementation of CoCM. American Psychiatric Association (2018) offers resources on team training, implementation, and financing for CoCM. The UW AIMS Center (2018a) provides resources to support training and implementation. The American Medical Association provides a stepped approach to behavioral health integration (Drake & Valenstein, 2018) as do the Agency for Healthcare Research and Quality (Korsen et al., 2018) and the SAMHSA-HRSA Center for Integrated Health Solutions (2018). Interested readers should see additional books on CoCM team care delivery and its implementation (Raney, Bergman, Torous, & Hasselberg, 2017; Raney, Lasky, & Scott, 2017; Ratzliff, Unützer, Katon, & Stephens, 2016).

Challenges/Limitations

In addition to the steps required to successful implementation noted in the previous section, a common challenge for CoCM is obtaining adequate financial reimbursement of the costs of team-based approaches. Several of the team processes in CoCM, such as telephone outreach calls to patients, time spent on team communication, and the systematic case reviews, are not billable through traditional fee-for-service billing approaches. CoCM costs have been covered through a variety of strategies to date: grants, services delivered in fully capitated systems, partial capitated payment (i.e., the PCP continues fee-for-service billing, and the BHCM and psychiatric consultant are paid through adjusted case rate), bundled monthly payment rate, and billing fee-for-service for all billable services (Carlo, Unützer, Ratzliff, & Cerimele, 2018).

Encouragingly, a new payment opportunity was introduced in 2017 when CPT codes were introduced by Medicare to pay for the CoCM (Press et al., 2017). These

codes are billed by and paid to the PCP for the work of the whole collaborative care team including the work of the BHCM and psychiatric consultant. The team must track minutes spent over the course of a calendar month and must deliver the core components of CoCM to be eligible to bill these codes (Centers for Medicare & Medicaid Services, 2018).

Real-World Program Example

The Depression Improvement Across Minnesota—Offering a New Direction (DIAMOND) is an example of a large real-world implementation of CoCM throughout Minnesota and western Wisconsin (Whitebird et al., 2014). The structure of the initiative was based largely on CoCM as it was tested in the IMPACT study. It focused on six components: (1) use of the PHQ-9 for assessment and ongoing monitoring; (2) use of a registry for systematic tracking of patients; (3) use of evidence-based guidelines to provide stepped care treatment modification/intensification; (4) relapse prevention education; (5) a care manager located in the clinic to provide education, care coordination, behavioral activation approaches, and support of medication management; and (6) a consulting psychiatrist to meet with the care manager for weekly case review and treatment change recommendations.

Training was provided by the Institute for Clinical Systems Improvement (ICSI), who systematically provided standardized training in implementing collaborative depression care and consultative support for primary care clinics over the course of 2 years. Payment for care delivery was provided through a partnership with nearly all commercial health plans in the state. Each clinic provided standardized monthly data reports through a common Internet portal about the number of patients seen by the care manager, the number enrolled in DIAMOND, and the PHQ-9 scores to monitor depression response and remission rates. On average, 23% of patients engaged in the program had remission from depression symptoms at 6 months.

Primary Care Behavioral Health Model

History/Background

The development of the Primary Care Behavioral Health (PCBH) model was a clinically based movement, with the goal of reducing the behavioral health services gap. Robinson and Strosahl (2009), two pioneers of the PCBH model, led integration efforts in the 1980s at Group Health Cooperative (GHC) of Puget Sound and then a consumer-owned and consumer-led Health Maintenance Organization (HMO) in Seattle, in response to an organizational leadership mandate to explore behavioral health integration.

This call for integration was itself a response to widespread GHC primary care provider dissatisfaction with the organization's existing mental health services. By shifting treatment away from diagnosis-based treatment toward a focus on the patient's functional outcomes and life satisfaction, creation of psychologist-led interventions for depression treatment that could be delivered in less than 3 h total, and the development of team-based behavioral health services in the primary care setting, the PCBH movement evolved.

Since its conception, the PCBH model of care has grown considerably over more than 30 years in a multitude of organizations. The US Air Force, US Navy, Kaiser Permanente, Veterans Health Administration, Cherokee Health System, and Southcentral Foundation are among the organizations that currently employ Behavioral Health Consultants (BHCs) in their primary care clinics. Perhaps largely due to the grassroots beginnings of the PCBH model, there are many variations in the models used in these and other facilities (Hunter et al., 2018).

As the model has grown, so have efforts to formally describe and measure the model. The first comprehensive text on the subject, *Behavioral Consultation and Primary Care*, written in 2007, is now in its second edition (Robinson & Reiter, 2016). Acknowledging the inconsistent use of terminology and varying model components, PCBH leaders have recently created a concise definition of the model, with the first part of this definition reproduced here (Reiter, Dobmeyer, & Hunter, 2018, p. 112):

> The PCBH model is a team-based primary care approach to managing behavioral health problems and biopsychosocially influenced health conditions. The model's main goal is to enhance the primary care team's ability to manage and treat such problems/conditions, with resulting improvements in primary care services for the entire clinic population. The model incorporates into the primary care team a behavioral health consultant (BHC), sometimes referred to as a behavioral health clinician, to extend and support the primary care provider (PCP) and team…

Evidence Base

Given the clinical grassroots inception of the PCBH model, its evidence base is still developing, but there is encouraging evidence of its impact on patient outcomes and implementation efficacy. Recently Hunter et al. (2018) summarized the available literature in a descriptive review of 20 articles that examined PCBH model outcomes, with most of the reviewed studies using a pre/post design.

The PCBH model has demonstrated improvements in clinical outcomes. Regarding specific disorders, PCBH patients have experienced improvements in depression, anxiety, and PTSD symptoms (Angantyr, Rimner, Norden, & Norlander, 2015; Cigrang et al., 2015; Hunter et al., 2018). There is also some initial evidence that the PCBH model addresses insomnia, tobacco use, and weight loss, with one study each indicating improvement in symptoms in small trials (n = <30) (Goodie, Isler, Hunter, & Peterson, 2009; Sadock, Auerbach, Rybarczyk, & Aggarwal, 2014).

However, within small samples, one of these same studies also failed to show improvement in sleep (n= 4) or pain (n = 9) (Sadock, et al., 2014). Suicidal ideation has also decreased in those receiving PCBH care (Bryan, Morrow, & Appolonio, 2009). These results demonstrate promising, albeit early, evidence of the PCBH model's efficacy.

Patients' overall functioning and care satisfaction has also improved with engagement in the PCBH model. One pediatric study indicated less global distress with PCBH care (Gomez et al., 2014). PCBH patients' satisfaction has been high in multiple studies, although one limitation of this conclusion is that most studies have used locally made self-questionnaires without psychometric data (Hunter et al., 2018).

Beyond patient-specific outcomes, the PCBH model also has been tested for its implementation properties. Fourteen studies have demonstrated a variety of implementation-related outcomes, including high provider satisfaction, positive shifts in PCP practice habits, and increased patient engagement in outside mental health referrals after involvement in the PCBH program (Hunter et al., 2018).

Lanoye et al. (2017) demonstrated decreases in preventable inpatient hospitalizations among those receiving PCBH care, which could be taken as encouraging evidence of cost-saving ability within the model. Gouge, Polaha, Rogers, and Harden (2016) also found the model demonstrated improved financial viability: a pediatrics practice was able to earn $1142 more on days with an on-site BHC, thought to be due to providers' increased efficiency in seeing more patients when BHCs were present and acting as "physician extenders."

Structure and Targets

Robinson and Reiter (2016) elucidate the PCBH components in the GATHER acronym (Table 1). BHCs aim to impact the health of a clinic's population through a *generalist* approach: they will effectively assist all patients with all problems, with a focus on concerns that are behaviorally or biopsychosocially influenced. Intervention examples include sleep hygiene habits for insomnia, behavioral

Table 1 GATHER acronym describing PCBH characteristics

Concept	Definition
*G*eneralist	Assists all patients and health conditions
*A*ccessible	Timely, ideally same-day, delivery of care to patient
*T*eam-based	Shared clinic space, resources, and collaboration with team
*H*igh volume	Contributes to care for a large percentage of the clinic population
*E*ducator	Improves the care team's biopsychosocial assessment and intervention skills and processes
*R*outine	Routine part of biopsychosocial care

Created by authors. Source: Robinson and Reiter (2016)

activation techniques for depression, mindfulness activities for anxiety disorders, and working on drinking diaries or action plans for alcohol misuse. Skills are delivered with a "here and now" approach, as the PCBH model prioritizes BHC *accessibility* to ensure the patient can have assistance in addressing his problem in real time, ideally the same day that he is referred.

Team-based refers to the integrated nature of the care delivery. While the BHC has a lead role in doing the behavioral intervention, they are still part of a care team that may include the primary care provider, nurse, and others. The team prioritizes regular communication about patients' care needs, has a consistent, integrated care plan for shared patients, and uses workflows that facilitate consistent and effective transitions between team members. With an integrated team approach and a population focus, *high volume* of care can be achieved. BHCs may see patients one or two times only for 15–30 min per interaction, averaging 10–14 patients per day with one visit being the modal number per patient served by a BHC (Reiter et al., 2018). In part due to this population-based approach, BHCs aim to provide active interventions and skills in each visit, including the first visit. Delivering effective interventions in only one visit enables the BHC to serve the entire clinical population more efficiently.

With the other GATHER pieces in place, the BHC role can also be that of an *educator*. By addressing a broad array of biopsychosocially influenced concerns with shared patients, the BHC can help the whole care team improve their behavioral health aptitude over time. When providers consistently and reliably involve BHCs in patients' care (*routine*) through standardized care pathways, this facilitates the educational component of the BHC's role, as providers will begin to see common interventional components for different behaviorally influenced concerns.

The BHC is often a psychologist or master's level therapist by training, growing from its beginnings as a psychologist-created model. Involvement from psychiatrists in this model is not classically discussed or consistent in practice, although many best practice sites do indeed involve psychiatric consultation in a collocated or integrated manner (Cohen, Davis, Hall, Gilchrist, & Miller, 2015).

Implementation and Resources Needed

Considerations for a successful PCBH program include organizational, interpersonal, and individual staff-level needs. Shifting the focus from providing resources to patients with only obvious or severe mental health concerns to care for all patients with behaviorally influenced conditions requires commitment from all stakeholders. On the organizational level, a truly integrated PCBH program must ensure the program's alignment with the organization's mission and values. This alignment enables quality improvement processes, financial backing, and appropriate staffing of the program to occur. An Agency for Healthcare Research and Quality report of exemplary programs noted that successful PCBH organizations supported their programs with structured clinical workflows, shared physical workspaces, and

shared information infrastructures (e.g., electronic health records) (Cohen et al., 2015).

Examining interpersonal practices among programs, this same report found that effective PCBH models developed clinical workflows that included interdisciplinary communication and clear care pathways, as well as timely access to BHCs for both planned appointments and unplanned patient concerns. This last point requires a delicate balance of maintaining some scheduled visits, as well as allotting time for the BHC to contribute to unexpected care situations.

For the BHC specifically, initial and continued training needs is of utmost importance. Robinson and Reiter (2016) define the core competencies for BHCs as brief intervention skills, pathway service skills, documentation skills, consultation skills, team performance skills, practice management skills, and administrative knowledge and skills. These BHC core competencies have not traditionally been a focus of curricula for social work, psychology, or marriage or family therapy programs. This led to the development of a variety of training initiatives for both individuals still in training and those already licensed to practice who want to shift into a BHC role. Adding training to graduate programs, new certificate programs, curricula from the American Psychological Association, community-based trainings, and self-study options are some examples of these training approaches, with many of these resources outlined in a recent review (Serrano, Cordes, Cubic, & Daub, 2018). Once in practice as a BHC, ongoing supervision to ensure continued model fidelity and general support is also critical to the BHC's continued evolution of skills.

Real-World Program Example

The Southcentral Foundation (SCF), an Alaska Native-owned nonprofit health care organization based in Anchorage, Alaska, offers primary care and specialty services to nearly 65,000 Alaska Native and American Indian individuals (Southcentral Foundation, 2018). As a cornerstone of their integrated behavioral health services, the Southcentral Foundation trialed incorporation of BHCs into several primary care clinics over 10 years ago (Southcentral Foundation, 2017). With positive feedback from primary care providers and patients, the number and role of BHCs expanded, and they are now a presence throughout the organization's primary care clinics.

Starting in 2012, warm handoffs and same-day services were emphasized, which the organization has found reduced the wait time and need for traditional behavioral health service referrals. Southcentral Foundation customer owners (e.g., individuals referred to as patients in other health care organizations) may see a BHC one or more times, depending on the customer owner's specific needs. BHCs at SCF encounter patients with a variety of behaviorally influenced concerns, offering treatments ranging from biofeedback for enhancing mindfulness in an anxious individual

to building a relationship with a customer owner with first-break psychosis to facilitate further behavioral health service engagement (author (SH) personal experience).

Time is balanced between scheduled appointments with customer owners and availability for immediate referrals from PCPs by employing a call schedule where the BHCs rotate who will be the "on call" providers for the day. BHC availability, along with other integrated strategies that include the presence of collocated psychiatrists within the primary care clinics, has led to improved wait times for customer owners who do need referrals to behavioral health services beyond what the BHCs can offer. Wait times have decreased from a 42 day average to a 7–28 day maximum post-BHC integration. BHCs also likely contribute to the high satisfaction rate of 96% among customer owners with the care they receive at (Southcentral Foundation, 2017).

Primary Care for Patients with Serious Mental Illnesses in Mental Health Care Settings

History and Background

Having a serious mental illness (SMI) elevates the risk for multiple medical issues and premature death (Alakeson, Frank, & Katz, 2010). SMI typically is defined as the subset of any mental illness that causes substantial functional impairment in one or more of life's domains. Psychotic disorders, such as schizophrenia, and mood disorders, such as major depressive or bipolar disorders, often fall within the SMI distinction. SMI's broad impact on health and risk for premature death may be partly due to limited access to preventative and primary care services (Cook et al., 2015). Patients with SMI are more often hospitalized for preventable medical illness and have chronic conditions that are poorly controlled (Druss & von Esenwein, 2006).

Multiple barriers can exist in obtaining primary care services for patients with SMI, including the impact of SMI on health behaviors and a patient's understanding of their health care needs, as well as perceived stigma in PCP settings toward patients with SMI (Alakeson et al., 2010; Cook et al., 2015; Druss & von Esenwein, 2006). Integrating primary care services into mental health clinics enables patients who may be engaged in care in their mental health center, but not in a primary care clinic, to receive integrated services simultaneously to address their mental health and other chronic health conditions in a more patient-centric manner.

To integrate services in this manner, a primary care provider (i.e., physician, nurse practitioner, or physician's assistant) typically is embedded in a mental health care clinic. Patients are often seen by a physically onsite PCP at the mental health care clinic, but they are also seen via telehealth in some programs. The

PCPs' provided services typically include annual physical exams and diagnosis and treatment of diabetes, hyperlipidemia, hypertension, and other chronic medical conditions.

There is a spectrum of integration within this care model. Some programs deliver primarily collocated care, with the primary care and behavioral health teams working independently or occasionally attending care team meetings together. When care is more integrated, patient panels may be formally co-managed, multidisciplinary team meetings regularly occur, and workflows are shared. To encourage shared management of patient needs, a registry may be used to track laboratory results and record return visit dates for patients.

Data and Evidence

The goals of integrating primary care services for patients with SMI are consistent with the Quadruple Aim's focus on improved clinical outcomes, cost-efficacy, patient satisfaction, and provider experience.

A study of 752 patients with SMI in 2 integrated behavioral health clinics, 1 established and 1 new, evaluated hospital utilization and costs (Breslau et al., 2018). In the established integrated care clinic, patients receiving integrated care services had reduced inpatient hospital admissions after enrollment in the integrated program, as compared to non-enrolled patients in the clinic. However, in the second clinic with a new integrated care program, this reduction in hospitalization did not materialize. A trend in decreased inpatient hospitalization costs for patients receiving integrated care services also occurred in the established clinic only. Neither clinic saw a reduction in emergency room visits or costs. These results indicate the benefit of an established integrated care program toward reducing hospital days and its costs.

Outcomes for several chronic medical conditions have also been evaluated within this model. A quasi-experimental difference of design study compared three primary care integrated behavioral health care sites to control clinics (Scharf et al., 2016). The patients in integrated care clinics possessed healthier cholesterol levels after 1 year, but no other significant impacts were demonstrated for other medical disorders. Another randomized controlled trial found that while the integrated model improved quality of care, it did not improve medical markers of health (Druss et al., 2017). Finally, a quasi-experimental study found that integrated primary care services resulted in a slight reduction in emergency department visits and psychiatric hospitalization, as well as an increase in diabetes monitoring (Rodgers et al., 2016). While this is a promising model, more data is needed to further assess its overall efficacy.

Implementation and Resources

Hiring, training, and logistical considerations all need be considered to develop a successful integration program. Related to hiring, this model requires hiring and/or training primary and preventative care staff to provide on-site assessments while also ensuring that the primary care and behavioral health providers have a basic understanding of each other's roles. When present, medical support staff, such as medical assistants or peer counselors, may also require training to provide services within the mental health care clinic.

Beyond hiring and training needs, infrastructure should also be thoughtfully developed. When a registry or panel is used for tracking patients' progress, this can require effort to create and implement. As part of seeing patients, the primary care provider will also need to have dedicated space with medical equipment that is usually not found in psychiatric clinics (e.g., an ophthalmoscope, a medical exam table, phlebotomy equipment).

For a more thorough discussion of the necessary pieces to launch integrated primary care in behavioral health settings, the reader is directed to the SAMHSA-HRSA Center for Integrated Health Solutions (2018).

Limitations

While integrating primary care into mental health settings demonstrates promise for lessening the health outcomes gaps between people with and without SMI, this model does have several challenges to address. Its evidence base is still developing, as it has limited controlled studies and outcomes data. One challenge to broadening the evidence base is that there is variability among the components and workflows of programs in practice. In terms of necessary resources, additional or repurposed space in a mental health care clinic is required, which can be challenging in some clinics. Finally, regular communication between the primary care and behavioral health team members can be difficult in busy clinics, which can lead to siloed care or unintegrated care plans (Rodgers et al., 2016).

Emerging Approaches to Integration

As was described in the chapter's introduction, integration can be understood as a spectrum of strategies for overcoming systemic care fragmentation. While CoCM and PCBH represent two of the more widespread and recognized models of integrated behavioral health care, the wider universe of potential approaches is always expanding. This section seeks to highlight several constellations of approaches and practices that hint at the range of possible forms of integration.

Elaborating on Existing Models

Some integration approaches share significant overlap with the models described above. For example, it is possible to create programs that effectively "blend" key elements of CoCM and PCBH models, providing access to both (1) rapid assessment and management of acute, time-limited stressors, or crises and (2) the capacity for assessment and treatment of identified psychiatric conditions within a more comprehensive, population-based behavioral health program. While such "blended" approaches have not yet been rigorously studied, pragmatic experimentation in this area is ongoing and encouraged by leaders in the field (Unützer, 2016).

Other approaches have already received more rigorous study, such as TEAMcare, which like CoCM, was built upon Wagner's chronic care model. In Katon et al.'s (2010) seminal single-blind randomized controlled trial, a TEAMcare intervention versus usual care was studied in 14 primary care clinics and included 214 adult patients with comorbid depression and coronary heart disease and/or poorly controlled diabetes. The intervention sought to provide patients and their primary care teams with a combination of enhanced behavioral health and general medical treatment support using an on-site nurse who was supported by primary care physicians and psychiatrists through population-based consultation. As with CoCM, the TEAMcare approach was shown to facilitate active treatment changes and lead to improved metabolic (A1c, cholesterol), cardiovascular (systolic blood pressure), and depression (SCL-20) measures while also increasing patients' satisfaction with care and improving their overall quality of life (Katon et al., 2010; Ratzliff et al., 2016).

There is also the potential to develop fully integrated health homes and even larger-scale community-level integrated health programs, wherein a nearly complete range of integrated general medical and behavioral health services are provided directly in the same clinical and community settings. Particularly in environments, such as US health care systems, where behavioral health and general medical care have historically occupied rather distinct institutional and cultural spaces, developing such fully integrated programs requires extensive coordination, planning, institutional support, financial realignment, and cultural shifts. Successful ongoing efforts to create and develop such systems in the US context include Cherokee Health Systems (2018) and the state of Vermont (2018).

Alternatively, there may be other situations in which an upskilled primary care workforce is called upon to provide integrated general medical and behavioral health care without ready access to other professionals. Such circumstances include situations in which (1) symptom severity and complexity are sufficiently low, (2) access to local specialists or other integrated care resources are limited, and/or (3) a patient's care preferences limit access to other forms of integration. In such instances, additional support in terms of training and clinical resources can be invaluable (American Academy of Family Physicians, 2018).

Innovating for Specific Populations and Conditions

It is possible, as well, to develop integrated approaches that respond to the unique needs and circumstances of specific populations, with the population defined by some combination of behavioral health conditions and sociocultural factors. This was noted, above, in discussing the implementation of primary care services within mental health settings for individuals with SMI wherein specialty mental health clinics were identified by patients as their primary health home.

The integrated treatment of substance use disorders (SUDs) represents another such example. Due to factors such as elevated social stigma and institutional-structural features of health care systems, the treatment of SUDs is often separated from other general outpatient medical care (Office of the Surgeon General, 2016). However, experience in primary care and with partial integration efforts, such as Screening Brief Intervention and Referral to Treatment (SBIRT) programs, have demonstrated that referral to treatment in separate specialty addictions treatment centers constitutes a significant barrier to initiating and maintaining patients in treatment for SUDs (Kim et al., 2017; Saitz et al., 2014).

In response, there have been efforts to incorporate treatment directly into primary care that have demonstrated improved health outcomes. For example, in one study of US military veterans diagnosed with alcohol use disorder (AUD) in US Veterans Administration Medical Centers (VAMC), primary care clinics were randomized to two groups. One group was comprised of intervention clinics who offered patients with AUD primary care-based treatment (i.e., counseling and access to oral naltrexone to alcohol curb cravings); the second group was usual care clinics who offered referrals to a VAMC outpatient specialty addictions clinic's intensive outpatient treatment program. Patients treated in primary care demonstrated improved treatment engagement and reduction in heavy drinking days relative to those referred to traditional specialty care (Oslin et al., 2014). This finding appears to be driven largely by the low rate of successful initial engagement after referral to non-primary care-based treatment, as opposed to a deficiency in the treatment provided for those who were able to engage in specialty care.

Others have sought to adapt CoCM principles and techniques to SUD treatment. The SUMMIT trial showed increased receipt of evidence-based treatments and self-reported 30-day abstinence among patients with AUD and/or opioid use disorder (OUD) who were randomized to CoCM versus usual care. These benefits were observed despite surprisingly low use of medication-assisted treatment in both groups (Watkins et al., 2017).

The successful and more widely disseminated Massachusetts Model of Collaborative Care for OUD relies heavily on primary care-based nurse care managers, working in coordination with their clinic's primary care providers and a program-level coordinator, to support, monitor, and manage of patients with OUD who are being treated with buprenorphine-naloxone in primary care. This scalable and efficient approach shows evidence of greater than 50% retention in treatment at

1 year with 95% reduction in illicit opioid use for those remaining in treatment (Alford et al., 2011; LaBelle, Han, Bergeron, & Samet, 2016).

Finally, the Vermont Hub-and-Spoke model for OUD treatment relies on larger health care system redesign that enables integration of specialty addictions treatment and primary care and facilitates a more seamless flow of patients and resources across a continuum of treatment contexts, according to an individual patient's clinical needs. In this model, regional specialty addictions centers serve as hubs that provide assessment, assistance with treatment initiation, ongoing education, and coordination-of-care transfers to support networks, or "spokes," of primary care clinics (Vermont Agency of Human Services & Vermont Blueprint for Health, 2012).

Spokes are eligible for in-clinic nurse and case manager staff assistance, as well as access to hub-based addiction treatment expertise and the opportunity to participate in a statewide virtual "learning collaborative." This program has facilitated primary care workforce expansion, allowed for same-day access to treatment in many regions, increased access to and appropriate use of OUD medication-assisted treatment, facilitated retention in treatment, and enabled timely care transitions between specialty and primary care settings (Cimaglio, 2015; State of Vermont, 2018; Vermont Agency of Human Services & Vermont Blueprint for Health, 2012).

Leveraging Technology

Finally, the increasing role of information and communication technologies (ICTs) in facilitating multiple different approaches to care integration should be acknowledged. Even beyond the use of electronic health records and clinical registries that support CoCM and other established integrated care approaches, ICTs, in the form of a rapidly expanding array of "telehealth" modalities, are being leveraged to bring behavioral health into non-behavioral clinical and community settings.

The oldest of these is synchronous two-way interactive video-based virtual encounters between patients and behavioral health specialists, often referred to as telepsychiatry (Shore, 2015). Early experimentation in the late 1950s and 1960s with closed circuit analog videoconferencing was followed by decades of limited use, before telepsychiatry and telemental health, more generally, saw a resurgence in the 1990s and 2000s. In recent years, this has been accelerated though access to digital web-based platforms (Chan, Parish, & Yellowlees, 2015).

Today, direct patient-to-clinician synchronous videoconferencing is incorporated into multiple integrated care approaches, including CoCM (Fortney et al., 2015; Turvey & Fortney, 2017). In addition, there is a growing use of digital electronic consultation platforms used for both (1) synchronous and asynchronous consultation between a remote behavioral health specialist and a primary care clinician regarding the clinical care of individual patients in primary care and (2) population-based consultation through "remote telehubs" (Raney, Lasky, et al., 2017). While

the former has not yet been rigorously studied, there are high-quality studies indicating the effectiveness of the latter in CoCM (Fortney et al., 2013). There is also increasing experience with and emerging evidence for the use of learning collaboratives, such as Project ECHO, to facilitate telementoring and shared learning among behavioral health experts and primary care clinicians with the goal of supporting local practice change and improved patient outcomes (Fisher et al., 2017; Hager et al., 2018).

Finally, there are emerging opportunities to leverage access to patients outside of traditional clinical settings. In recent years, this has been an area of significant research and commercial interest, expanding in large part through the proliferation of sophisticated mobile devices and other web-based technologies. These devices and technologies enable new patterns of communication and can generate complex mixed datasets using patient-generated and passively collected data. These, in combination with powerful new data management and analysis techniques, are beginning to generate new opportunities for diagnostic clarification, decision support, treatment delivery, and monitoring treatment progress (Hallgren, Bauer, & Atkins, 2017; Raney, Bergman, et al., 2017).

Implications for Behavioral Health

The established models and emerging approaches described in this chapter attest to the range of possibilities for integrating of primary care and behavioral health services (Table 2). Many of the challenges that led to the need for integration initially remain true to this day. These include behavioral health workforce shortages, stigma related to mental health conditions, lack of coordination among treatment teams, high rates of undetected and untreated psychiatric conditions, and rising health care costs, among other ongoing issues. Different integrated care models offer a variety of innovative responses to these challenges, with strengths and limitations specific to each model. Although CoCM has achieved a strong evidence base, it still requires significant resources to appropriately implement and maintain a high-fidelity program.

While there is a less-established evidence base for the PCBH model, there is nonetheless some compelling evidence, as well as an implicit endorsement of the PCBH model's utility, as evidenced by its use in many large US health care systems. For individuals with SMI, integrating primary care services into the behavioral health settings that patients are comfortable in can enable the delivery of fundamental primary and preventative services for this vulnerable population. Blended approaches to integration also exist beyond these models, with variations on the strategies and practices used to deliver comprehensive care to patients.

Innovations in integrated care will continue. Ideally, this movement will be guided by a balance in employing evidence-based approaches while also acknowledging that each organization's culture, resources, and other unique features will

Table 2 Overview of integrated care models

Model	Target population	Primary goal	Involved personnel	Unique integration components	Strengths	Limitations
Collaborative care	– Primary care patients with diagnosable mental health conditions – Strongest evidence for depression, anxiety	To treat to target common mental health disorders such as depression and anxiety; additional target conditions include substance use disorders, dementia, chronic pain, ADHD, and bipolar disorder	– Primary care provider (primary relationship; prescribing function) – Behavioral health care manager (care management; delivery of evidence-based brief behavioral interventions) – Psychiatric consultant (provides indirect care through systematic case review)	– Regular use of behavioral health measures – Use of registry to identify patient in need of intervention and drive treatment to target	– Strong evidence base – Leverages scarce psychiatric resources	– Complex intervention which makes implementation more challenging – Financial sustainability for team-based care is limited

Primary behavioral health consultant	Primary care patients with any biopsychosocially influenced health condition	"To enhance the primary care team's ability to managed and treat behavioral health problems and influenced conditions, with resulting improvements in primary care services for the entire clinic population" (Serrano et al., 2018)	– Behavioral health consultant (provides brief behavioral interventions) – Primary care provider (referring physician, collaborates on care with the BHC)	– Model focuses on extending beyond diagnoses – Identifies and treats patients with any type of biopsychosocially-influenced concern – Uses warm handoffs	– Available to all patients – Not focusing on a diagnosis can be helpful to patients who do not identify as having a psychiatric issue – Focused on immediate care delivery	– Workforce shortage of trained BHCs – Traditionally, there are no psychiatrists involved in the model to provide expertise on medication management
Primary care in behavioral health settings	Patients with psychiatric conditions who have other untreated medical needs	To decrease the amount of untreated medical comorbidity in psychiatric clinics	– Primary care provider (provides medical care for chronic and acute medical conditions) – Behavioral health provider/s (collaborates on patient's health care needs with primary care personnel)	– The clinic location is within a mental health center – Integration of primary care services into a non-primary care setting	– Provides primary care services to patients who often do not regularly engage in primary care services	– Requires additional clinic space – Requires team members with experience in medical presentations in patients with psychiatric conditions

inevitably lead to continued development of integrated care models. This evolution will be carried out with the ambitious, but achievable, goal of providing cost- and clinically- effective patient care in a system that gets the approval of patient and clinical stakeholders alike.

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