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PSYCHIATRY IN PRIMARY CARE (BN GAYNES, SECTION EDITOR)

Mental Health Collaborative Care and its Role in Primary Care Settings

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Abstract Collaborative care models (CCMs) provide a pragmatic strategy to deliver integrated mental health and medical care for persons with mental health conditions served in primary care settings. CCMs are team-based intervention to enact system-level redesign by improving patient care through organizational leadership support, provider decision support, and clinical information systems, as well as engaging patients in their care through self-management support and linkages to community resources. The model is also a cost-efficient strategy for primary care practices to improve outcomes for a range of mental health conditions across populations and settings. CCMs can help achieve integrated care aims underhealth care reform yet organizational and financial issues may affect adoption into routine primary care. Notably, successful implementation of CCMs in routine care will require alignment of financial incentives to support systems redesign investments, reimbursements for mental health providers, and adaptation across different practice settings and infrastructure to offer all CCM components.

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Introduction

Mental health conditions are common and are the leading cause of disability worldwide [1]. In the USA, more than 25 % of the population is affected by one or more of these conditions at any one time [2]. Primary care settings are the locale where up to 70 % of patients are diagnosed and treated for the most prevalent mental health conditions, including anxiety, mood, and substance use disorders [3, 4]. Furthermore, medical comorbidity is the rule for this population in which the majority suffer from at least one co-occurring chronic medical illness [5]. Because many acute and chronic medical conditions (e.g., chronic pain, chronic obstructive pulmonary disease, obesity) involve health behaviors or psychosocial issues with the potential to exacerbate symptoms or undermine treatment outcomes, primary care is well-suited as the medical home for provision of essential behavioral health care [6].

Despite the availability of effective mental health treatments, these interventions are rarely employed in a coordinated approach in routine care to yield long-term improvement in mental health outcomes [5, 7]. Among patients with access to primary care who are accurately diagnosed with depression, fewer than 15 % receive adequate treatment to achieve remission [8]. Primary care providers (PCPs) continue to encounter barriers to referring patients to specialty mental health settings, while patient uptake to these offsite referrals remains low [9–11]. Furthermore, physicians,

physician assistants, and nurses often lack the time or training to effectively address mental health needs [12].

Collaborative care models (CCM) provide a pragmatic strategy to deliver integrated mental health and general medical care in primary care settings [7]. CCMs are a team-based, multicomponent intervention to enact care delivery redesign by systematically improving coordination of patient care through organizational leadership support, evidence-based provider decision-making, and clinical information systems, as well as engaging patients in their care through self-management support and linkages to community resources. Recent systematic reviews found that CCMs are a cost-efficient strategy for primary care practices to improve mental and physical outcomes for a range of mental health conditions across diverse populations and primary care settings [13, 14••]. However, current payment models discourage integrated primary care through financing carve-ins and carve-outs that make it difficult for PCPs to receive reimbursement for behavioral health services [15••, 16].

The enactment of the U.S. Mental Health Parity and Addiction Equity Act (MHPAEA) of 2008 and the U.S. Patient Protection and Affordable Care Act of 2010 (ACA) combine to present an opportunity to implement organizational and financial strategies to better integrate mental health care into primary care settings through CCMs [17–20]. Collaborative care is an underlying tenant inhealth care reform, including two ACA mechanisms to control costs in complex patient populations: the patient-centered medical home and accountable care organizations (ACOs) [8, 21, 22•, 23–30]. As many aspects of ACA policy have yet to be finalized, mental health providers and PCPs have a vested stake in understanding current issues pertaining to mental health CCMs to better advocate for policies that can promote the uptake of this model to help achieve the triple aim of improving health and quality of care in a cost-efficient manner [17, 31].

In light of emerging health care reform initiatives, this article presents a critical review of the recent literature published about the topic of CCM for mental health in primary care settings, with particular emphasis on highlighting literature relevant to the implementation of this treatment model in routine practice. To achieve this, we conducted a rigorous search of Pubmed to identify relevant English-language articles published between January 2012 and March 2013 that included empirically-based research studies, topical reviews, influential commentaries, and guideline/consensus statements focused on collaborative care for mental health in adult patient populations. Key words utilized in the search included "primary care", "general medicine", "collaborative care", "integrative care", "chronic care model", "patient-centered medical home", "medical home", "treatment model", "mental health", "mental health disorders", "mood disorders", "anxiety disorders", "depression", "bipolar disorder", "substance abuse disorder", "addiction disorder", "serious mental illness", and "behavioral medicine". A total of 74 articles was identified for inclusion in this review of the literature [5–10, 13, 14••, 15••, 16–21, 22•, 23, 24, 26, 27, 29, 30, 32–36, 37••, 38–40, 41•, 42•, 43–47, 48••, 49–53, 54••, 55–68, 69•, 70–83].

Based on this literature review, we identified the following issues pertinent to clinicians, researchers, and policy makers: (1) defining essential components of collaborative care for mental health in primary care; (2) summarizing recent systematic reviews that document CCMs as cost-effective, evidenced-based treatments to achieve integrated care outcomes; and (3) highlighting issues affecting the implementation and sustainability of CCMs in routine care settings.

Key Components of Collaborative Care Models for Mental Health

Because there are a number of models for providing integrated care in primary care settings [84], it is helpful to begin with an operational definition of what constitutes mental health collaborative care. Simply co-locating a mental health professional into a primary care setting has been proven insufficient to improve mental health outcomes [5, 7, 38]. Comparatively, the U.S. Community Preventive Services Task Force defines CCM as a multicomponent, health care system-level intervention that reorganizes the delivery of care so that care managers link PCPs more efficiently with patients and mental health providers to improve evidence-based treatment of mental disorders [32].

CCMs are based on Wagner's Chronic Care Model [85], which recognizes that medical care tends to prioritize the treatment of acute symptoms over the need to properly manage individuals with chronic conditions. Current CCMs are an iteration of the Chronic Care Model that acknowledges mental disorders also require a long-term and systematic approach to foster access and continuity of care to achieve optimal management. Moreover, mental health CCMs emphasize *collaboration* among a team of mental health providers and PCPs within a practice to effect these changes, including coordination of care with specialists and community resources outside of primary care.

Current CCMs for mental health are commonly identified by six components [7, 14••, 34, 37••, 84], detailed in Fig. 1: (1) organizational support from health care system leaders for resource allocation and work flow restructuring; (2) delivery system redesign that emphasizes care management; (3) utilization of clinical information systems; (4) provider decision support; (5) patient support for improved self-management of health risks; and (6) linking patients to community resources. These components not only empower providers with improved access to information that supports evidence-based decision making, but also serve to help patients take a more active role in treatment decision-making and managing their health concerns.

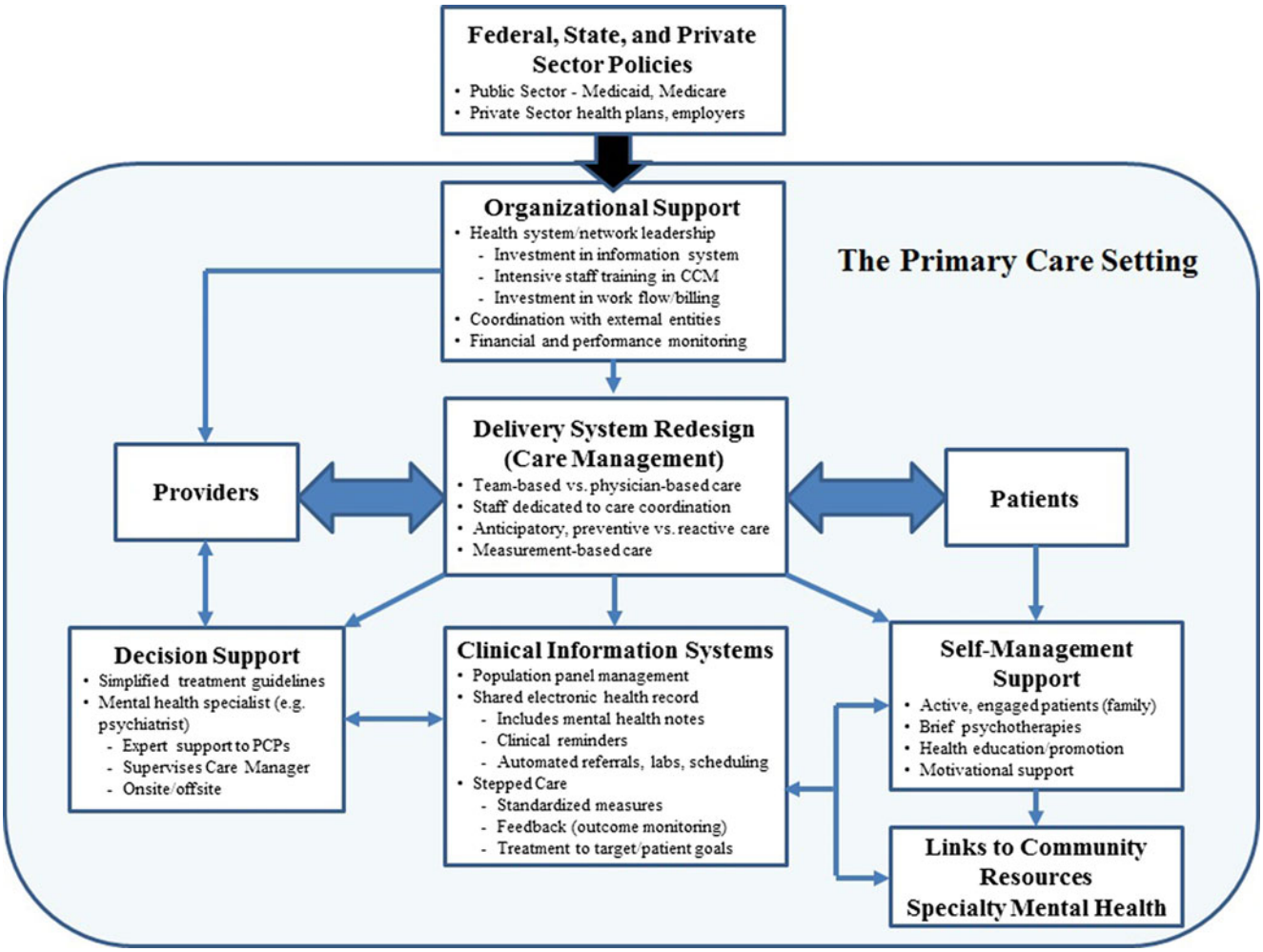

Fig. 1 Evidence-based components of collaborative care for mental health in primary care. Based on the original model articulated in Wagner et al. [85]

The basic components of mental health CCMs are predicated by the interrelated principles of population-based care, measurement-based care, and stepped care [7, 35, 46, 85]. Population-based management aims to identify panels of high-risk patients to track through electronic registries created with electronic medical records (EMR). These information systems permit care teams to track the status of patients to anticipate the need for services and target preventive services. Measurement-based practices facilitate this aim by incorporating the use of brief, patient mental health measures, such as the Patient Health Questionnaire-9 for depression, that enable providers to diagnose and monitor patients' treatment progress over time [8, 46]. CCMs are believed to improve care through the flow of more timely information to PCPs [12, 46]. Care managers facilitate this flow of information between patient and provider by systematically using registries and follow-up contacts with patients to measure mental health symptoms and to track responses and side effects to specific medication dosages, treatment adherence, and service dates that are essential to stepped care models [7, 8, 12]. This information improves decision-making by improving PCPs' ability to follow treatment guidelines to achieve more desirable treatment responses ("treat to target" or patient preference) by adjusting/switching medications and treatment with psychosocial treatments while empowering patients with better options to avoid the exacerbation of medical conditions [7, 42•].

Care management is a key operational component of CCM health care system redesign and represents a significant change from traditional physician-centered, primary care practice [12, 24, 86]. In the CCM practice environment, PCPs are part of a team and are responsible for the screening and diagnosis of mental health conditions, prescribing appropriate medications, and referring complex cases to specialty mental health care as needed. PCPs delegate and supervise many treatment tasks, which are coordinated by the care manager, to other members of the care team. Physicians are indirectly supported by mental health specialists, such as psychiatrists, who provide decision support for complex cases, as well as treatment recommendations [7, 32, 38]. Collaborative communication between these providers

and their patients is facilitated by the care manager—usually a nurse, social worker, or other allied health professional who helps patients manage one or more mental health conditions. Care managers also work with PCPs by providing self-management support to patients through the delivery of brief evidence-based psychotherapies, information provision, skills training, or health counseling or by linking patients to community-based wellness resources [6, 21]. Mental health specialists may be embedded in the practice or based offsite and linked to the practice through phone and the EMR. However, it is the unique role played by care managers that ensures essential information is proactively and systematically collected, monitored, and provided to physicians and patients to facilitate evidence-based decisions that result in better outcomes and lower cost [12].

CCMs for Mental Health are Evidence-Based Care

Several systematic, meta-analytic reviews were published over the last year that provided robust support for CCMs as an evidenced-based strategy for the management of mental health conditions in primary care settings [14••, 37••]. Separate and independent analyses were conducted by the Cochrane Collaboration [34], the U.S. Community Preventive Services Task Force [13, 37••], and leading mental health researchers [5, 14••, 87, 88]. Findings from these reviews, when combined with expert qualitative reviews of the literature [7, 12, 38], show that CCMs are more effective than usual care for improving mental health outcomes for periods up to 2 years.

Of the dozens of studies reviewed in these systematic reviews, the majority of trials examined employed the CCM for integrated care implementation and outcome analyses focused on the treatment of depression. The U.S. Community Preventive Task Force examined outcomes for 69 depression clinical trials and found CCMs were more effective than usual care for improving depression symptoms, treatment adherence, remission and recovery from symptoms, quality of life, and satisfaction with care [37••]. Similarly, the Cochrane Collaboration review of 79 trials concluded that CCMs were superior to usual care/consultant-liaison models of care for managing depression and anxiety for up to 2 years with respect to symptom improvement, medication adherence, mental and physical quality of life, and satisfaction with care [34]. A third review of 57 trials also found CCMs to be effective for improving psychiatric symptoms, quality of life, and social role function with results generalized mental health diagnoses of depression, bipolar disorder, anxiety disorders, and other diagnoses across both primary and specialty care settings [14••]. Notably, two of the reviews found CCMs to be a good economic value [13, 14••], with results from 30 trials showing CCMs are cost-effective, resulting in little to no net increase in health care costs to health care systems. The limited number of trials testing CCMs for the treatment of substance abuse disorders and schizophrenia prohibited conclusions, but many have suggested this adaptation is achievable in routine care by emphasizing protocols to coordinate care between practices and specialty mental health and addiction services [14••, 51, 76–89].

Increasing evidence also demonstrates the effectiveness of multi-condition/cross-diagnosis CCMs that aim to address depression and one or more medical comorbidities [5, 14••, 88]. Results from 12 trials showed that CCMs improved depression outcomes, but findings for medical outcomes were indeterminate owing to limited reporting of medical outcomes. Studies not included in these reviews subsequently reported that CCMs can concurrently improve management of depression, cardiovascular disease, and diabetes control through medication treatment intensification and self-management support, as evidenced by reduced hemoglobin A_{1c} [90], decreased Framingham 10-year cardiovascular disease risk scores [69•], and low-density lipoprotein cholesterol and systolic blood pressure levels [91, 92]. Moreover, Katon and colleagues [30] reported that the TEAMcare collaborative care intervention was cost-effective for patients diagnosed with depression and either poorly controlled diabetes or heart disease, providing an additional 114 depression-free days, 0.335 quality-adjusted life-years, and lower mean outpatient costs of $594 per patient at 24 months compared with usual care controls. Collectively, these findings offer compelling reasons to disseminate this evidence-based intervention at a population-level to achieve improvements in health care quality and cost.

Issues for Large-scale Translation and Dissemination of CCMs to Routine Care

Systematic, meta-analytic reviews are the foundation of evidence-based care, but translation of these practices from research into routine care is challenging. There have been few rigorous trials of implementation interventions to promote the uptake of evidence-based mental health practices into routine care settings. However, reforms in the US health care system, described below, have been a catalyst for literature that examines opportunities, challenges, and new ways of disseminating CCMs as a sustainable model for primary care.

The translation of CCMs for mental health into routine practice holds great promise with the passage of multiple pieces of national health care legislation in the USA. First, the MHPAEA provided Americans with equal insurance coverage for behavioral health and physical health treatment. Second, the ACA created the potential to increase access and quality of care for millions of un- or underinsured Americans [93]. The ACA places a greater priority on the integrated treatment of mental health in primary care, and new emphasis on prevention and well-being [21]. Consequently, the

ACA provides for a National Prevention, Health Promotion, and Public Health Council to support these health promotion goals, and a $15 billion-funded Prevention and Public Health Fund to be allocated for states to spend over the next decade.

Patient-centered medical homes (PCMHs) represent one of two ACA mechanisms to improve the coordination and quality of integrated health care. The PCMH model is based on the principles of primary care, patient-centered care, new models of practice (i.e., the CCM), and health care payment reform [94]. The six basic CCM components were developed in parallel to the PCMH and are the framework with which medical homes implement delivery system redesign to offer patients a more comprehensive, team-based experience that coordinates care across multiple settings and providers [95]. Section 2703 of the ACA provides for a demonstration program for states to enact "health homes" under Medicaid [15••] for individuals with chronic mental disorders. Health homes promise to coordinate physical and mental health care through the provision of a variety of services, including care management, transitional care from an institution to the community, family education, community linkages, peer-support, and using health information technology to share data between physical and mental health providers [15••]. Under the ACA, implementing health homes for persons with chronic mental health conditions would be reimbursed up to 90 % [96].

ACOs are the second mechanism called for by ACA that emphasizes integrated care in both Medicare and Medicaid programs, as well as the private sector [97]. ACOs are a new payment and care delivery model designed to facilitate care coordination across providers for high-risk patient populations, including individuals with mental health conditions. ACOs link financial incentives to the attainment of specific quality improvement targets and reductions in health care costs for these specified populations [22•, 97]. ACOs are a response to the current fee-for-service payment model, and funding carve-ins and carve-outs that fragmented delivery of mental and physical health services and increased costs. The medical home is one method ACOs can employ to improved integrated care by linking payment to standards of quality care. However, the CCM also represents an evidence-based approach to achieve these aims. Regardless of the approach, improving the quality of care for high-risk populations under the present fee-for-service payment model will be challenging until new pay-for-performance and alternative payment models are implemented [94].

The opportunities afforded by provisions in the ACA must be tempered by the reality that specific aspects pertaining to the implementation of integrated care for primary care settings have yet to be defined for medical homes and ACOs [15••, 16, 24]. Presently, psychiatrists are the only mental health professionals defined by the Centers for Medicare and Medicaid Services (CMS) as participating ACO clinicians, to the exclusion of social workers, psychologists, counselors, and health educators who may serve as care managers in an integrated settings [16, 22•]. Furthermore, only one of the 65 quality measures proposed for ACOs pertain to mental health care (depression screening), while no performance incentives or standard billing codes are tied to the provision of prevention or treatment services for mental health needs, nor the delivery of fundamental CCM components, such as provider decision support, measurement-based care, self-management support, or registry maintenance [15••, 16, 22•].

These trends are inconsistent with mental health parity legislation that calls for essential patient benefits that provide equal treatment for mental and physical needs while ending the fragmentation of care that was created by funding carve-ins and carve-outs [16]. Evidence from Oregon's early implementation of behavioral health parity legislation indicates that patients increasingly chose non-physician behavioral health specialists (e.g., social workers) [18] for mental health care, resulting in little increase in total behavioral treatment costs [27]. Inconsistent fee-for-service billing practices across public and private payers pose a practical barrier to mental health professionals serving as care managers and seeking adequate payment for behavioral health services rendered in primary care [15••, 16]. Blended payment models represent a strategy to transition from the fee-for-service model to one that helps practices become incentivized to deliver CCM-consistent care practices that improve outcomes and bundles payments for the start-up and maintenance of implementing these new practices [25]. However, it will be important to build risk adjustment and risk sharing into payment models to avoid incentivizing plans to avoid selecting high-cost patients, including those with mental conditions [20, 25, 26, 29, 93, 97]. CMS, state, national, and professional organizations can play a significant role in developing standards for payers regarding reimbursement rates for specific behavioral services and capability for primary care practices to utilize a broader array of mental health professionals to deliver these services [15••, 16, 25, 26].

Until recently, there have been few examples of organizational strategies that demonstrate how to disseminate CCMs on a large scale [15••, 48••, 56, 98]. Qualitative studies [47, 61, 99, 100], case studies [48••, 51], and qualitative reviews [7, 16, 45] outline the significant challenges to implementing CCMs in primary care. Implementation of integrated care is expensive, presenting a high cost to reorganize existing services, standardize systems of care, adopt an EMR, develop registries, hire new staff, train staff in new treatment protocols, adopt measurement care process, and come to terms with significant role resistance from being a hierarchical, physician-centered practice focused on workflow, to a patient-centered practice [86]. Not only is leadership support important for successful implementation of CCMs, it is also essential to have the commitment of frontline providers and staff. Furthermore, practices need to adapt their

business model for care by evaluating utilization and cost data to understand how to achieve performance measures and to identify process costs that should be shared with health payers [26].

Evidence-based implementation interventions are needed to promote uptake of CCMs and improve mental health outcomes, especially in smaller and rural practices [45, 56]. For example, up to 98 % of patients with mood disorders receive care from smaller practices, which may not have the tools to fully implement medical homes [33]. For evidence-based practices to reach these patients, evidence-based implementation interventions that leverage outside expertise and local leadership are needed to support community-based providers in delivering these treatments. One such strategy is to employ external facilitators who provide expert consultation to practices in implementing the CCM [55]. Another strategy is for small practices to pool their resources to create regional provider networks, or a "medical neighborhood" that may be anchored by a community hospital or Federally Qualified Health Center (FQHC) [16, 28, 55, 86]. Finally, a randomized trial of an innovative CCM for improving evidence-based depression care for patients served by rural FQHCs [54••] found support for telemedicine-mediated CCM support from a centralized off-site team that was three times as likely to achieve remission in depression than care delivered by an on-site PCP and nurse care manager trained in the CCM protocol. This study highlights the need for diverse CCM implementation strategies to address the heterogeneous needs of practices and patient populations. While the centrally-coordinated CCM contracted to offsite providers may seem to go against some clinical researchers' assertions that on-site integrated care is optimal [53], the off-site providers demonstrated that standardized evidenced treatment delivered by telephone can compensate for real world implementation barriers like shortages of mental health providers and the logistical challenge of serving vast rural regions [23, 50].

New large-scale initiatives offer preliminary solutions to the central issue of creating and sustaining a payment model to supported integrated CCM models of care across treatment settings and payers [15••]. DIAMOND (Depression Improvement Across Minnesota, Offering a New Direction) [48••] is a state-level initiative started with the goal of developing a bundled payment model to support the CCM for depression treatment in Minnesota. This initiative utilized a unique approach in which an independent quality improvement organization (the Institute for Clinical Systems Improvement) brokered an arrangement between six private health care plans, 22 medical groups, 84 primary care clinics, and the Minnesota Department of Human Services to implement a CCM for depression based on specific goals and clinical outcomes. A bundled payment model enabled practices to be reimbursed for the costs of implementing and maintaining CCM processes. Implementation was successful and DIAMOND is ongoing because stakeholders were initially engaged to set feasible and shared benchmarks of success, PCPs remained engaged because outcomes were publicized to highlight the success of specific practices, and a business case was made that justified the investment in resources on outcomes shared by multiple stakeholders. Table 1 summarizes similar lessons of implementing each of the CCM components from prior studies. Knowledge gained from state-led initiatives like DIAMOND underscores the need for PCPs and mental health providers to engage health care reform initiatives to help negotiate payment policies and performance standards that ensure system redesign interventions like CCMs are sustainable in over time.

Conclusions and Future Directions

Health care reform efforts in the USA and around the world have drawn attention to CCM for mental health as a strategy to deliver integrated care in primary care settings. The CCM applies concepts of population-based care, measurement-based care, and stepped care to systematically track patient status to support improved patient and provider treatment decisions. The six CCM components represent evidenced-based practices that have proven more effective than usual care for improving mental health outcomes across settings and diagnoses, with little-to-no net increase in health care costs [13, 14••, 34, 37••]. Further research is needed to more effectively implement CCMs in routine practice, notably by identifying and reducing organizational and financial barriers within emerging health care reform initiatives, and by developing payment models to enhance CCM uptake.

The CCM has the potential to be an effective strategy to support US health care reforms, but practical issues in disseminating the model into routine care have yet to be resolved [48••]. Financial and organizational incentives must be aligned so that public and private health plans have the capacity to adopt and sustain the model [22•, 26]. Evidence in support of CCM effectiveness was based on large, closed health care systems or staff-model health plans, whereas most Americans with mental disorders are managed in solo or small practices comprising fewer than 10 providers [33, 54••]. Small primary care practices and FQHCs need new models of payment to support the costs to implement measurement-based tools like EMRs and electronic registries, as well as delivery processes of care like decision and self-management support [56]. Further research is needed to evaluate centralized e-health technologies to create shared efficiencies through networked practices or "health neighborhoods" [36, 86]. It will also be necessary to negotiate changes to the current fee-for-service and service carve-outs to enable mental health care providers to support PCPs in carrying out CCM care management and mental health specialist roles [15••]. Collaborative demonstration projects like the DIAMOND initiative show promise that multiple

Table 1 Problem-solving challenges to implementing mental health collaborative care in routine Primary care settings

CCM component	Implementation step	Challenges	Solutions
	Adopt EMR/electronic registries	• High costs to adopt, build, and maintain	• Seek CMS/HITECH EMR funding
		• Mental health notes separate from medical EMR	• Negotiate EMR costs into bundled payments
		• Barriers to population registries	• Establish payment for measurement-based care
			• Develop networked "neighborhood" registries
Clinical information system	Adopt standardized outcome measures	• Diverse measures and measurement protocols for screening/follow-up	• Achieving consensus on key mental health and physical tracking measures (embed in EMR)
			• Standardize frequency of follow-up contacts
	Negotiate performance measures	• Unknown costs for new workflows • Business model not established	• Work with practice networks, health agencies, health plans, insurance exchanges to identify common measures to evaluate patient progress, align incentives
	Adopt care management/team care	• Lack of staff/provider buy-in	• Physician champion aligns realignment with values
		• Physician-centric culture	• External facilitation to support transition
Delivery system redesign	Develop standardized protocols for diagnosis, follow-up measures, stepped-care, referrals	• Cost of training and changing workflow	• Establish blended payments to general and specific care coordination procedures
		• Poor coordination between team • Role ambiguity, provider competing demands	• Specify work roles and methods to communicate patient information, referrals, urgent consultations
	Specify care management protocols	• Provider competing demands	• Physical colocation of medical and mental health staff
	Identify MH diagnoses for treatment and who delivers specific treatments	• Supply of interdisciplinary behavioral health staff	• Negotiate reimbursement and competencies for specified professionals (licensure, credentials, training, skills)
		• Multiple patient comorbidities	• States incentivize interdisciplinary training programs
			• Negotiate patient goals and treat to "target"
	Engage patients in care	• Practice is patient flow vs patient-centered	• Measure satisfaction, emphasis feedback, and indicators of shared decision-making in EMR/registries
Self-management support	Identify brief evidence-based treatments	• Reimbursement for training/supervision	• Negotiations for bundled payments for self-management
		• Practice treatment capacity	• Establish protocol length, visits, and stepped-care protocol
	Implement health promotion counseling and who to deliver	• Focus on single MH or disease condition	• Have cross-disease focus
		• Lack of reimbursement for wellness	• Available to all patients
			• Negotiate reimbursement, performance measures
	Referrals to community/specialty care	• Patient and provider stigma	• Train staff to de-stigmatize MH conditions
		• Poor referral uptake by patients	• Offer on-site or e-health-mediated treated when possible
		• Lack of follow-up	• Establish follow-up procedures for community referrals
	Establish space/delivery mode	• Inadequate space/staff	• Contract self-management to phone/e-health provider
	Train staff/physicians in guidelines and measurement-based care	• Stigma/negative attitude towards MH	• Allocate funds for staff/provider training
		• Lack of training in MH diagnosis/care	• Train in diagnosis and screening

Table 1 (continued)

CCM component	Implementation step	Challenges	Solutions
			• Create simplified guideline supports for stepped-care medication, psychosocial, and referral strategies
Provider decision support	Establish mental health specialist services	• Undefined role and reimbursement	• Specify contractual obligations for MH panel and care manager supervision, consultations, facilitating referrals
			• Decide if colocated or off-site
	Define care manager functions	• Capitated payments do not cover care management	• Reimbursement based on care management functions of diagnosis, tracking, medication support, brief psycho-education counseling, prompting physicians for treatment changes, relapse prevention, registry updates
Community linkages	Creating network of community resources (specialty mental health transportation, housing, wellness, employment)	• ACO serving wide geographic regions or dense urban settings lack sufficient community connections	• Local practices create network or health "neighborhood" directories of local resources and providers
		• Poor patient uptake of specialty mental health referrals	• Develop links with local specialty mental health resources/providers for warm hand-offs
	Ensure leadership buy-in and support	• Integration from health plan vs practice	• Align CCM restructuring with practice values
		• Poor relationship between leaders and frontline providers and staff	• Consult with practice facilitator
Build leadership and organizational support	Establish priority for system redesign with CCM components	• Lack of priority for measurement-based care • Inertia to redesign workflows, procedures, and billing processes	• Identify physician and mental health champions
	Create a sustainable business model	• Lack of financial business model	• Achieve consensus on the value of CCM with regional and state healthcare stakeholders, key tracking outcomes
		• Financial costs for investing in CCM components and maintenance	• Assess the types of providers, location/size of practices, and the intervention components to deliver
		• Unbillable activities for new provider types, services, and processes of care	• Measure new costs to understand new financial model
		• Lack of stakeholder input	• Establish working group of stakeholders (e.g., providers, plans, employers, patients) to define performance outcomes
			• Propose and negotiate a reimbursement model involving neutral third party to move from fee-for-service to bundled payments model that covers costs of CCM redesign

Data from Unutzer and Park [7], Thielke et al. [12], O'Donnell et al. [15••], O'Donnell et al. [22•], Whitebird et al. [47], Lauren Crain et al. [48••], Taylor et al. [55], and Kathol et al. [99]

CCM collaborative care models, *EMR* electronic medical record, *MH* mental health, *ACO* accountable care organization, *CMS* Centers for Medicare and Medicaid Services, *HITECH* Health Information Technology for Economic and Clinical Health Act

stakeholders can work out bundled payment arrangements that help practices cover some of the costs of implementing and carrying out CCMs [15••, 25, 48••]. Finally, additional research is needed to understand the finances of these arrangements and performance standards that guide reimbursement for achieving quality and cost savings.

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- •• Of major importance

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