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Integrating Mental Health and Primary Care

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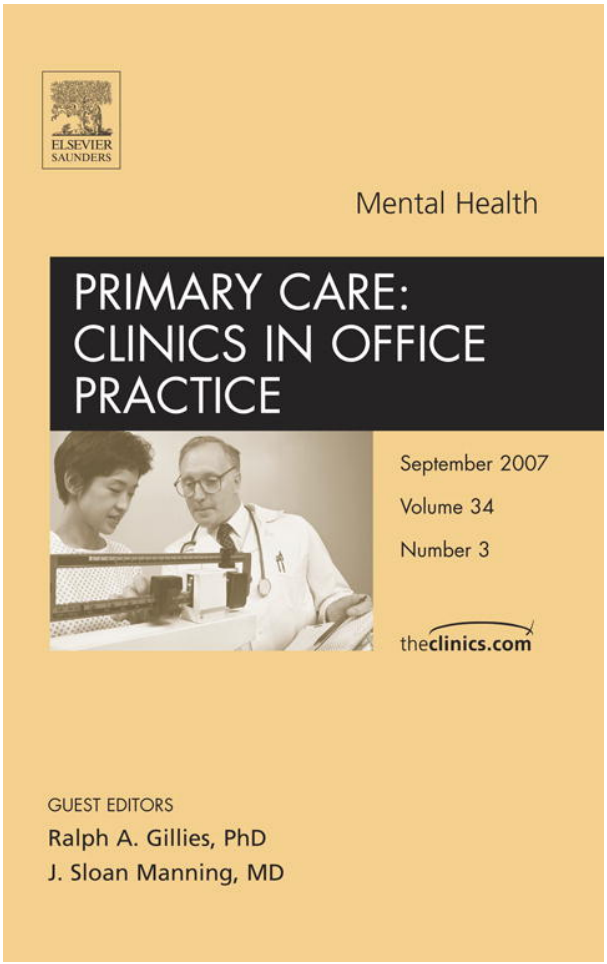

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Integrating Mental Health and Primary Care

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Mental health and primary care delivery systems have, by virtue of their histories and the patients they treat, evolved to operate quite differently. For example, attention to multiple medical issues, health maintenance, and structured diagnostic procedures are standard elements of primary care that are seldom incorporated into mental health care systems. A multidisciplinary approach to treatment, group care, and case management are common features of mental health treatment settings that are only rarely used in primary care practices. Advances in the treatments for mental health disorders and increased knowledge of the integral link between mental health and physical health encourage the treatment of mental health disorders in primary care settings, which reach the most patients. Effective integration of mental health care into primary care requires systematic and pragmatic change that builds on the strengths of both mental health and primary care.

At first glance, the following conditions might seem to be necessary for better treatment of common mental disorders in primary care [1]:

- Patients who have mental health disorders must be systematically identified.
- Primary care providers must apply the right treatments for mental health disorders, which requires

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Sufficient education about mental health diagnosis and treatment
Sufficient experience in dealing with patients who have mental health disorders
Accessible, clear, evidence-based guidelines for treatment
Availability of consultation with experts in mental health

- There must be enough mental health specialists available to accept referrals for management of complicated cases.

Despite the intuitive appeal of such requirements, this article concludes that none of the strategies to satisfy them has been found in research trials to be of significant benefit for improving patient-level mental health outcomes in primary care. Specifically, there is little evidence of positive patient level outcomes from efforts focused on screening, provider training, dissemination of guidelines, referral to mental health specialists, or colocating mental health practitioners in primary care settings. Instead, there is strong evidence that the best outcomes for treating common mental health disorders in primary care result from the application of "collaborative care," an approach in which primary care and mental health providers collaborate in an organized way to manage common mental disorders. Such programs are pragmatic and apply principles of chronic disease management, such as establishing and sustaining effective communication and collaboration between primary care and mental health providers and care managers who can facilitate such collaboration, support systematic diagnosis and outcomes tracking, and facilitate adjustment of treatments based on clinical outcomes (stepped care).

This article focuses on key research evidence from efforts to improve mental health provision through systemic changes to primary care, with less attention to the patient-level barriers for accessing mental health care, the efficacy of specific treatments for mental health disorders, or the logistical issues involved in implementing interventions in the real world. Because of the limited space available, this attention to process rather than content will omit much of the important research about how to improve mental health services to populations, but will deal specifically with how primary care settings can adapt to provide services that have been shown to improve outcomes.

Primary care and mental health disorders

Box 1 reviews some of the common barriers to effective treatment of common mental disorders in primary care. These elements, synthesized from work on improving mental health provision [2–17], are meant to illustrate the multiple factors that complicate attempts at identifying and treating mental health conditions in primary care settings.

Disease process level

Mental health disorders are a challenge to understand, identify, and treat. The term "mental health disorders" covers a broad range of disorders and

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Box 1. Barriers to treating mental disorders in primary care

Disease process
"Mental health disorders" include a broad range of conditions and symptoms
Limited understanding of etiology and pathophysiology
Nonspecific presentation, often overlapping with somatic symptoms
Undifferentiated symptoms crossing multiple categories of illness
Diagnosis based almost entirely on lengthy history and mental status examination
Symptoms often chronic and complex at the time of presentation
Treatment for complex disorders often unsuccessful, even in controlled settings
Other disorders self-limited, requiring no formal treatment

Patient
Multiple comorbidities and priorities competing for attention
Stigma associated with mental illness; negative beliefs about treatment
Symptoms discourage care seeking and self-management (eg, depression)

Provider
Trained in medical model, not psychotherapy
Competing demands and knowledge overload

System
Little monetary incentive for addressing and treating mental disorders in primary care
Time constraints and limited follow-up available
Little attention to systematically measuring mental health outcomes
Limited access to mental health specialists
Limited capacity to provide evidence-based psychosocial treatments in primary care

conditions, related to behavior, mood states, interpersonal relations, cognitive ability, attention, identity, and development. Unlike most medical conditions, providers often have little idea of what causes mental health conditions, or what pathophysiological changes occur during them. The most common disorders, related to mood, anxiety, and personality pathology, frequently manifest with somatic or nonspecific complaints [18]. In the setting of other medical comorbidities, it can take several visits before

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a mental health problem is even identified, often after other disease processes are excluded. Mental health symptoms may become chronic or entrenched before care is sought. Making an accurate diagnosis requires taking a detailed and complex history and understanding patient concerns [19], all within limited time [20]. Alternately, there are some common mental health disorders, such as mild depression, which may remit without formal treatment, and for which a "watchful waiting" approach may be appropriate, but it can be hard to differentiate these from those requiring acute attention [21]. Even when chronic or stable over time, psychiatric symptoms rarely fit a neat diagnostic category, and there is significant overlap of mood, anxiety, substance abuse, and personality disorders [22,23], which can complicate efforts to diagnose and treat with accepted treatment algorithms for a single disorder. There are multiple criteria and diagnostic tests for mental health conditions (as in the *Diagnostic and Statistical Manual of Mental Disorders*, *Fourth Edition* [DSM-IV]), but most of them are quite detailed and lengthy to administer, and all require subjective interpretation by the practitioner. This is considerably different from conditions such as hypertension or diabetes, which can be ascertained through at most a few straightforward quantitative measurements and a focused clinical evaluation. Once identified, some mental health conditions are resistant to initial treatment, even under ideal circumstances, such as in clinical trials with "clean" populations that have no significant comorbidities, and many patients end up "better but not well."

Patient level

Patients who have mental disorders have, on balance, more somatic complaints and more medical comorbidities than those without mental health problems [24]. They thus often have a full list of medical problems to address in primary care, and the mental health condition must compete for attention with other health problems that often seem more. During a time-limited primary care visit there is often very little time left for mental health issues [25]. Stigma about mental health problems persists in society, and can discourage patients from talking openly about their psychological problems, and discourage providers from asking patients about such problems. Because of such stigma, individuals are often unaware that the way they feel emotionally, mentally, and physically is because of a mental disorder for which treatment exists, or that their primary care provider can help them treat it. Patients often have negative views of treatments such as psychotropic medications [26,27], and they often do not take such medications as prescribed [28–30]. In addition to stigma, the very nature of some mental health disorders, such as depression, cognitive impairment, or personality disorders, may limit patients' motivation or capacity to seek care or to be an active participant in their health care. Indeed, by definition, almost all mental disorders involve impairment in functioning or self-care. Patients who have severe depression or thoughts of suicide may have a sense of

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hopelessness and futility with regard to potential treatments. Patients who have substance abuse disorders often have ambiguous motivation for initiating or sustaining care. These factors require the practitioner to work harder (ie, apply more skill and time) to progress from initial presentation to diagnosis and successful treatment.

Provider level

Primary care providers have been trained in a medical model, and most of the treatments they apply involve medications, procedures, or advice. Medications are also a mainstay of treating mental health conditions in primary care, but there is strong evidence that an effective therapeutic alliance and formal psychotherapy are also important components of effective treatment for common conditions such as mood or anxiety disorders [31–33]. Evidence-based psychotherapies such as cognitive-behavioral therapy, interpersonal therapy, or problem-solving treatment require both trained providers and a substantial time commitment (eg, 30 minutes to an hour a week for 6–12 sessions), and are often provided by non-medically trained providers such as psychologists and social workers. Although primary care providers often become, through experience, experts in understanding and working with interpersonal dynamics in clinical settings, they are not able to offer time-intensive psychotherapy to their patients because of short appointments and limited reimbursement for longer visits. Primary care providers are expected to keep current on a broad range of medical topics, but current recommendations and guidelines about evidence-based care for mental disorders can be hard even for specialists to follow [34]. An ''overload'' of shifting information about evidence-based treatments can make it difficult to apply up-to-date specialty recommendations for mental health treatments in primary care.

System level

Primary care reimbursement systems generally apply few financial incentives for treating mental health problems with increased time or effort. For instance, a lengthy visit for a Medicare patient with a primary care diagnosis of depression may lead to a smaller reimbursement than several brief visits focused on somatic complaints. Primary care visits are almost always time-limited, and tight schedules make it difficult to increase visit length to address complex mental health issues [25]. For the same reason, regular follow-up can be hard to accommodate in busy schedules. Mental health outcomes are often difficult to track, and there are few procedures in place for systematically measuring and monitoring symptoms (unlike other medical outcomes such as weight or blood pressure, which are usually measured at each visit) [35]. Time constraints, lack of strong incentives, and absence of clear outcomes can make it difficult to address mental health issues in primary care, and attention may shift preferentially to those issues that can be more readily addressed.

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Approaches to integration

Despite these barriers, most patients seek initial care for mental health complaints in primary care settings [36,37]. Box 2 outlines some of the major strategies attempted to improve mental health delivery in primary care [38–40]. Each of these is described, and the evidence base for its outcomes briefly reviewed.

Systematized screening for mental health conditions

As described above, many aspects of primary care make it difficult to identify mental health disorders, and multiple studies have demonstrated that mental health conditions are underdiagnosed in primary care [41–44]. Ideally, systematic screening could enable primary care physicians to discover mental health disorders sooner and treat them better. To this end, mandates have been developed for primary care to better "screen, detect, treat, and improve" common mental health conditions such as depression [45].

Controlled studies have shown that screening and systematic feedback to providers about mental health problems can increase diagnosis rates [46]; however, screening alone has been found to have limited effects on clinical outcomes in several large controlled trials, and for large populations, screening has not demonstrated clinical benefits [47] or cost-effectiveness [48,49]. For depression, the U.S. Preventive Services Task Force now recommends that adults be screened only if systems exist to ensure accurate diagnosis, effective treatment, and follow-up [50]. A recent review suggests that screening approaches do not perform as expected, because they involve considerable performance burden (using imperfect instruments to measure and communicate variables), interpretation burden (the need for further tests, given the low predictive value of screening instruments), and treatment burden (the need to initiate and sustain effective treatment) [51]. These findings reinforce that even though systematic screening for common mental disorders in primary care may improve recognition, screening alone may simply

Box 2. Interventions geared at improving mental health in primary care

Systematic screening for mental health conditions
Education and training of primary care practitioners
Production and dissemination of treatment guidelines
Referral to mental health specialists (on-site or off-site)
Tracking mental health outcomes with "mental health laboratories"
Collaborative care models, involving care managers and stepped care

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produce a presumptive diagnosis that can complicate care [52] without improving health outcomes, unless a practice has the capacity to effectively diagnose and manage these disorders.

Education and training of primary care practitioners

Intuitively, one would expect that primary care providers who had better training in the recognition and management of mental health disorders would produce better patient outcomes than those with less training. Most of the efforts at improving mental health treatment in primary care are thus directed at educating providers about diagnostic criteria, treatment algorithms, and prescription of psychiatric medications. Programs of this type account for a majority of the effort and money spent on improving mental health delivery in primary care [53]. For example, there exist an abundance of training programs on mental health topics for primary care resident physicians, continuing medical education courses for established primary care providers, pharmaceutical company-supported educational programs about psychotropics, and continuous quality improvement (CQI) initiatives for entire health care systems. One highly targeted approach, academic detailing, seems to have particular promise because it involves face-to-face contact between a primary care provider and an expert to discuss evidence-based guidelines, usually focused on realistic cases [54].

Under scrutiny, these education and training approaches have not been shown to have consistent beneficial effects on either provider behaviors or patient-level outcomes, especially long-term. A comprehensive review of attempts to improve the psychiatric knowledge, skills, and attitudes of primary care physicians found a dearth of quality evidence for provider-level change or improved patient-level outcomes [55]. The evidence for specific effects is mixed, depending on the type of intervention and the outcomes measured. A short educational program was shown to improve primary care physician knowledge and adherence to guidelines, but the effects did not seem to improve diagnosis, and there were no patient-level outcomes measures assessed [56]. A program to improve management of depression involving 20 hours of physician training improved adherence to recommendations and had modest effects in patient outcomes at 3 months, but there were no benefits observed at 1 year [57]. Similar negative findings with regard to outcomes have been reported from brief training followed by case consultation [58], and didactic training followed by videotapes and follow-up sessions [59]. Academic detailing and CQI for depression care have been assessed through two randomized trials that showed moderate changes in prescribing behavior, but no difference in patient outcomes [60,61]. Such programs are quite costly to administer, at roughly $15,000 per patient-level quality-adjusted life year (QALY) [62]. This research suggests that physician knowledge is either not the primary barrier to improving mental health outcomes for primary patients, or that it is not readily

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amenable to change through educational interventions. Using the most conservative interpretation of the available evidence on provider training, it seems reasonable to conclude that skills and knowledge related to mental health may be necessary but not sufficient factors to improve outcomes of patients who have common mental disorders.

Production and dissemination of treatment guidelines

Instead of increasing primary care providers' understanding of and experience with mental health conditions, an alternative approach codifies treatments into specific guidelines for "what to do" with mental health diagnoses. These guidelines are often developed by specialist experts, and generally are grounded in research evidence. As such, they work to encourage treatments that have been shown to work in controlled clinical trials, and would be expected, if followed, to improve outcomes. Guidelines of this type have been developed for most of the common mental health conditions seen in primary care [63–66], and considerable effort has been applied to making them as useful as possible—for instance in the maxim recommending that, "Good guidelines are simple, specific, and user friendly, focus on key clinical decisions, are based on research evidence, and present evidence and recommendations in a concise and accessible format" [67]. Within psychiatry, there is some evidence that adherence to algorithms can improve outcomes compared with usual care, at least within controlled settings [68].

In examining how guidelines change provision of care, there is little evidence of significant change in practice behaviors or patient outcomes. Few studies have looked carefully at the effect of treatment guidelines in primary care, and those that have done so failed to show substantial improvements in patient outcomes that can be related to the application of such guidelines. For instance, a controlled study of patients who had anxiety disorder in primary care, comparing referral to a psychiatrist, guided self-help recommended by the primary care provider, and a highly-structured Anxiety Disorder Guideline, found similar moderate improvement from all approaches, with the guidelines more difficult to carry out [69]. An investigation of pediatric attention deficit hyperactivity disorder (ADHD) guidelines found that the complexity of the clinical presentations and the lack of systems for providing additional support and follow-up often rendered the guidelines inapplicable or unproductive [70]. For depression, there is some evidence that "nonalgorithmic" factors such as greater patient involvement in decisions are associated with better outcomes [71,72]. There are some large-scale studies ongoing to assess the utility of treatment recommendations for treating depression in primary care [73] that may ultimately bolster specific guideline approaches. At present, however, there is little evidence that more or different types of guidelines for primary care providers are sufficient to improve mental health outcomes.

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Increased referral to mental health specialists

Given the barriers to providing mental health care within primary care, there has been interest in interventions that increase the role of mental health specialists in managing mental health disorders. This can be effected either by increasing the availability of external mental health specialists who can evaluate patients and either assume treatment or make recommendations for care (''enhanced specialty care''), or by having mental health specialists located within primary care clinic settings (''colocated care,'' not to be confused with ''collaborative care,'' with which it has been used synonymously at times). Such approaches reduce the role of the primary care provider to identifying possible mental health conditions, and then either referring the patient to a mental health specialist or consulting with that specialist about the best course of action, especially for complicated or nonresponsive cases. These strategies seem to capitalize on the strengths of both systems: the primary care provider's connection with, history with, and comprehensive knowledge of the patient, combined with the mental health expert's skill at diagnosis and treatment and capacity for longer or more frequent visits. The more complex the patients are, or the less responsive to treatment, the more the specialist would take responsibility for their care.

Such colocation strategies were adopted in the mid-1990s in several large health care systems in the United States (Kaiser Permanente Northern California and the Veteran's Administration Healthcare System), and continue to be used to varying degrees, but there are no published outcomes from these real-world experiments, and there is little evidence from controlled trials about the effectiveness of such colocated services. Some research has suggested that integrated care is better accepted by patients than traditional care [74], but the samples in such studies have been quite restricted, and no changes in outcome were documented. The PRISM-E (Primary Care Research in Substance Abuse and Mental Health for Elderly) study compared integrated care with enhanced specialty referral for depression outcomes, and found better patient engagement in integrated care, but no significant differences in patient outcomes between these two strategies at 6 months [75,76]. Treatment response rates were close to those found in usual care in other studies, suggesting that neither approach may be substantially more effective than care as usual. Similarly, a study of enhanced specialty care involving three visits with a specialist around patient-specific treatment recommendations did not show any substantial difference from standard primary care in the treatment of depression [77].

Increasing specialty mental health referrals also has significant operational problems. Rates of engagement with specialty mental health care providers are low overall, and especially so for ethnic minorities [78] or older patients [77]. Thus many patients referred for specialty care never receive such care, or have only few visits in the specialty mental health care sector before finding their way back to primary care. Moreover, most specialty providers are already busy with caseloads of patients who have severe and

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often chronic mental illnesses, and it is unrealistic to expect that they would be able to take on a large number of new patients from primary care, particularly in rural and underserved areas where specialty mental health resources are extremely limited. There are some novel approaches for increasing the connections of primary care patients and providers with specialty providers, such as telepsychiatry [79–81], but these have not been tested in large trials. In general, attempts to improve referral access to mental health specialists have had disappointing results with regards to improving outcomes of primary care patients who have common mental disorders.

Tracking mental health outcomes with ''mental health laboratories''

Many of the key barriers to managing mental health disorders in primary care relate to the mismatch between primary care delivery systems and those of mental health. For instance, primary care relies on diagnostic procedures such as laboratory tests for health maintenance, work-up of diseases, and tracking of treatment effectiveness. These objective findings can direct straightforward treatment protocols managed by the provider. This is in contrast to mental health systems, which assess patients primarily through subjective interactions, and use diagnostic laboratory procedures only in special circumstances, such as to check serum levels of medications or to assess general health before starting a treatment. One innovative approach to improving mental health treatments in primary care settings is to treat and monitor psychiatric symptoms in the same way that other ''lab values'' are used to manage patients who have chronic medical disorders such as diabetes or hyperlipidemia. An innovative program called the ''Behavioral Health Laboratory'' involves a telephone call from a health technician, asking questions from established psychiatric rating scales such as the Patient Health Questionnaire-9 (PHQ-9) for depression. The results are scored by a computer algorithm, and are conveyed to the primary care physician, who can treat or refer to on-site mental health services available in most Veterans Administration (VA) medical centers. This intervention has been tested in a large VA primary care clinic population, with increased identification of patients who have elevated psychiatric symptoms and comorbidities [82]. In this setting, such a ''laboratory'' was relatively low-cost and easily implemented, a major advantage with regards to the ability to disseminate and sustain an innovation. Improved patient-level outcomes have yet to be demonstrated in a randomized trial, and further research will show if this is a feasible and effective means of being able to manage mental health conditions in other primary care systems. Theoretically and operationally, this approach has many similarities to evidence-based collaborative care programs discussed below.

Collaborative care models, involving care managers and stepped care

Collaborative care as defined in this article refers to a treatment model quite different from that of either primary care or specialty mental health

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care. The emphasis is on managing mental disorders as chronic disease rather than treating acute symptoms or complaints. The Chronic Care Model as outlined by Wagner and colleagues [83] provides the underpinnings for such interventions, and involves improvements in six areas: (1) self-management support, (2) clinical information systems, (3) delivery system redesign, (4) decision support, (5) health care organization, and (6) community resources [84,85]. Interventions directed by these principles have focused on involving the patient in care decisions (eg, offering a choice between antidepressant medications and psychotherapy in the treatment of depression), developing collaborative approaches to optimize complementary roles of different providers (eg, primary care providers and consulting mental health specialists), and organizing care around commonly defined and recorded treatment goals and systematic measurement of relevant health outcomes to determine if such goals are being met or if changes in treatment are needed [86].

Effective collaboration of primary care providers and consulting mental health specialists is often facilitated by a new type of professional, the care manager. This approach is similar to evidence-based care management programs for chronic medical disorders such as diabetes or congestive heart failure (CFH), in which diabetes nurse educators or CHF care managers function in this role [87]. In the area of mental health, the chief roles of care managers include [88,89] (1) educating patients about their illness; (2) involving and supporting patients in making treatment decisions; (3) monitoring treatment outcomes using structured rating scales; (4) ensuring adequate follow-up; (5) discussing and encouraging medication treatment as initiated by the primary care provider; (6) providing brief counseling using evidence-based structured techniques such as behavioral activation, motivational interviewing, or problem solving treatment in primary care; (7) facilitating consultation from mental health specialists; and (8) facilitating referral to appropriate mental health specialty care or other community resources for patients who are not improving in primary care.

Similar to other successful chronic disease management programs, the care manager's job is devoted to managing patients' chronic conditions, in this case a mental disorder such as depression or an anxiety disorder. Most treatment occurs in primary care, and much of the patient contact is with the care manager, often over the telephone. Treatment goals emphasize measurable reductions in the symptoms that are captured by structured mental health rating scales; scheduled measurements and feedback about these are an essential element of collaborative care. Such systematic outcomes tracking is similar to the ''mental health laboratory'' described above, but is scheduled rather than prescribed as indicated. Stepped-care algorithms are often applied to guide the initiation and modification of treatment based on systematic clinical outcomes, with changes in treatment such as augmentation of medications or a combination of medications and psychotherapy if patients are not improving with initial treatment in primary care.

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Care managers are responsible for tracking a caseload of patients who have common mental disorders such as depression in a primary care practice. They also increase patient contact and may enhance the therapeutic alliance, which works both toward improved outcomes and decreased dropout from treatment [88], and which reduces the risk of patients staying on ineffective treatments for too long. A designated mental health expert, usually a psychiatrist, provides regular systematic caseload supervision for care managers, as well as consultation and backup to care managers and primary care providers, focusing on patients who are not improving as expected. Table 1 describes the core processes and provider roles that define such evidence-based collaborative care [38,90,91].

Collaborative care thus differs from traditional primary care in two essential ways. First, a care manager whose job focuses on managing one or more common mental disorders supports treatment that is initiated by the primary care provider and supervised indirectly by a mental health specialist. Second, proactive follow-up and systematic tracking of outcomes is essential, and outcomes are the subject of communication between the different providers and between the providers and the patient, and also are the main information with which treatment decisions are made (ie, whether to continue the same treatment or to make a change). Within this framework, care managers support effective collaboration between patients, primary care providers, and consulting mental health specialists, facilitating treatment changes indicated by systematic tracking of clinical outcomes according to evidence-based treatment guidelines.

Over 35 randomized clinical trials of such collaborative care models for depression in the United States and Europe have demonstrated their superiority over usual care, with advantages in retention in treatment, clinical outcomes, employment rates, functioning, and quality of life (see Bower and colleagues [92], Gilbody and colleagues [93], and Williams and colleagues [94] for recent meta-analyses of these multifaceted interventions). For instance, in the IMPACT (Improving Mood and Promoting Access to Collaborative Treatment) trial, the largest trial of collaborative care for depression to date, 45% of the depressed older adults in the collaborative care arm had a substantial treatment response (50% or greater reduction in depression symptoms from baseline), compared with only 19% in usual care [88]. Similar positive results have been obtained in randomized trials of collaborative care for depression in nongeriatric adults [93], as well as for panic and generalized anxiety disorder [95], bipolar disorder [96–99], and Alzheimer's disease [100]. Collaborative care seems to benefit ethnic minority groups, who otherwise have low rates of care and poor outcomes [101–103], as well as adolescents and older adults who have comorbid medical illness [104,105]. These programs are not only more effective, but also more cost-effective than usual care [106–108], and they have been successfully implemented in a variety of diverse health care settings [109–114].

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Table 1
Core processes and provider roles in collaborative care

	Providers			
Process	Care manager	Mental health expert	Primary care provider	Information tracking and exchange
Systematic diagnosis and tracking of outcomes	Measure, document, and track mental health outcomes.	Supervise caseloads with care managers, based on measured outcomes. Consult on diagnosis for difficult cases.	Receive feedback from care managers about outcomes.	Database of symptom severity over time for all patients
Stepped care:				
a) Changes to treatment using evidence-based algorithm if patient is not improving	Educate about medications and their use; encourage adherence. Counsel patients. Facilitate treatment change or referral to mental health as clinically indicated.	Consult on patients who are not improving as expected. Recommend additional treatments or referral to specialty mental health care according to evidence-based guidelines.	Prescribe medications. Reinforce and support treatment plan. Collaborate with mental health expert and care manager to make necessary treatment changes.	Treatments received Changes to treatment
b) Relapse prevention once patient is improved	Track symptoms after initial improvement; follow algorithms.	No formal role during maintenance phase	Reinforce relapse prevention plan.	Reminders to ensure ongoing contact and symptom monitoring

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Why do some approaches work whereas others do not?

Taken as an aggregate, the available evidence indicates that many of the strategies that have been attempted to improve mental health treatment in primary care have not been successful. Multifaceted approaches used in trials of collaborative care are currently the most promising efforts, although even such multifaceted programs are not successful for all patients. The evidence for the effectiveness of collaborative care comes not only from controlled clinical trials, but also from the implementation of such evidence-based models in ''real world'' health care settings [109]. In the light of the barriers to integration discussed earlier, the differences between collaborative care and the other approaches merit attention: why should collaborative care succeed where other approaches have failed?

Efforts to enhance mental health in primary care, through a variety of means such as additional screening, more education of providers, or more specific treatment guidelines, have been found not to make much consistent measurable difference in patient outcomes. One of the main reasons for this lack of effect is probably because primary care systems are, in essence, not organized to treat mental health disorders. Instead, they are organized to manage acute diseases and the health maintenance of broad populations who have various medical conditions, but not to detect, diagnose, retain, and treat individuals who have mental health disorders, which are often qualitatively different. This key systematic barrier would be expected to persist no matter how many new cases are identified by systematic screening, no matter how expert primary care providers are about psychiatric disorders and their treatment, no matter how specific the guidelines and algorithms for treatment are, and no matter how many specialists are available for consultation and referral.

Evidence-based collaborative care programs do not require primary care providers to take on all of the responsibility for identifying and treating what can be complex and often nebulous conditions, or to undergo major changes in the way they practice medicine. These programs also do not simply colocate primary care providers and mental health specialists to practice in parallel under the same roof. Instead, these approaches build on and integrate strengths and approaches from both primary care (eg, the systematic measurement of key health outcomes such as a PHQ-9 used in the ''behavioral health laboratory,'' or stepped care approaches used to treat other chronic medical disorders such as hypertension or diabetes), mental health specialty care (eg, a multidisciplinary approach to treatment with caseload supervision by psychiatrists or other experienced mental health professionals, and the use of evidence-based psychosocial treatments in addition to medication treatment), and evidence-based approaches to the management of chronic medical illnesses (such as the use of care managers to facilitate patient education, proactive follow-up, systematic tracking of outcomes, and adjustment of treatments based on clinical outcomes). These

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elements of care are provided in primary care, a setting that is easily accessible and familiar to the patient, carries less stigma than specialty mental health settings, and allows for closer coordination of treatment for the patient's medical and mental disorders.

The main change that is expected of primary care providers and specialty mental health care providers in collaborative care is that they will pay attention to the symptom-related outcomes that are systematically documented for each patient, and will collaborate to initiate changes in the treatment plan for patients who are not improving, with support from a care manager who can help facilitate these changes and who is supervised by a consulting mental health specialist. In collaborative care, primary care providers recognize a new agent in the treatment team (the care manager), and respond to a new type of information (regular, quantitative mental health status and focused recommendations for treatment change by a consulting mental health expert). The mental health provider offers oversight and supervision for a caseload of patients managed in a primary care setting, following systematic measures of relevant patient outcomes and focusing on treatment recommendations for patients who are not improving as expected, or who represent particular diagnostic or therapeutic challenges. A recent meta-analysis of collaborative care interventions for depression in primary care concludes that the three "essential elements" of effective collaborative care interventions are (1) support of medication management by primary care providers, (2) care management, and (3) supervision of care managers by consulting psychiatrists [94].

Another potentially important element in collaborative care that has only started to receive attention is patient self-management, which is one of the tenets of the Chronic Care Model, and which is accomplished by educating patients about their conditions and encouraging them to be responsible for managing them. Many collaborative care interventions actively involve patients in deciding treatment goals and treatments. For instance, in the IMPACT trial, patients worked with the care manager to decide whether to use antidepressant medications, problem solving treatment, or both [88]. There is some preliminary evidence from collaborative care treatment trials that patient self-management is associated with positive outcomes [97,115], and patient education and self-management have been parts of almost all successful collaborative care interventions [94]. This differs from approaches directed solely by the provider or by treatment algorithms, in which the patient is passive and has a very small role.

Structured and well-organized information tracking systems have been another central element in effective collaborative care interventions [116]. Electronic health records (EHRs) have been used to manage the volumes of information that support screening, follow-up, patient contact, and treatments for large caseloads [117], and may allow successful accomplishment of the complex information-based tasks in chronic disease management [118]. Such information systems can prevent patients from "falling through the

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cracks,'' and they can enhance transparency, because the occurrence of patient contacts, the treatments applied, and the outcomes are visible to all those involved in the care of the patient, including care managers, primary care providers, mental health providers and consultants, supervisors and administrators (as appropriate), and often other care managers within a care network. Effective caseload supervision by a consulting mental health specialist involves a systematic review of the outcomes of all of a care manager's patients in a practice, using the information summarized in such an information system. As a result of such transparency, providers in a collaborative care program agree to ''have their feet to the fire,'' committing to an agreed common proximal goal in treating patients, the achievement of which will be known to the patient, the primary care provider, the care manager, the consulting mental health specialist, and (at an aggregate level) the administrators who have responsibility for quality of care at a clinic level. From a social psychology perspective, such a process that has identified, measured, and published treatment targets may have more effect than one where the goal is simply to ''do a better job,'' with no one paying careful attention to how well this is accomplished. Providers in such a collaborative care program would all share responsibility for patient outcomes, and would have incentive to collaborate effectively to achieve such outcomes.

At a deeper level, there are key theoretical and operational differences between collaborative care and the other more traditional approaches to improving care. The traditional interventions are mainly ''intention-driven,'' seeking to improve care and improve outcomes through increased attention to elements assumed to be ''essentials'' for quality care: ready identification of cases through screening, improved provider knowledge and experience, evidence-based treatment algorithms, efficacious treatments, and readily available specialty referrals. The tacit premise of such approaches is that better components of care produce better care, which in turn produces better outcomes. Much of the energy is spent on action, and not on measurement. Collaborative care as defined in this article, on the other hand, is fundamentally pragmatic, concentrating on enacting specific procedures that have been found to improve outcomes in a measurable way. It does not ask that providers ''know more'' or ''act differently,'' but that they perform specific tasks: talking with patients and other providers in a structured manner, receiving feedback on outcomes, and following through with treatment changes when patients do not improve. The ends of collaborative care are also ultimately pragmatic—demonstrated improvement in measured patient outcomes—and the information tracking and exchange systems are designed to keep these ends paramount.

Despite the substantial evidence for the effectiveness of collaborative care programs for common mental disorders such as depression, it is still unclear what the exact ''magic'' is in collaborative care, or which elements of such programs can be modified or adapted without changing outcomes. Further research aimed at identifying key components of such multifaceted

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programs and the most effective methods for adapting and implementing such programs in diverse health care settings is needed. Even well-implemented collaborative care programs leave substantial numbers of patients without a complete remission of their symptoms, and future work should identify evidence-based means of improving outcomes for all patients.

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