Collaborative Depression Care Models

From Development to Dissemination

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In 1978 the first multi-site mental health epidemiologic study in the U.S. reported that more than 50% of community respondents with depressive disorders were treated exclusively within the primary care system.[1] As a result, primary care was labeled the "de facto mental health system" for Americans with the more prevalent but less severe mental health disorders.[1] Subsequent research over the next decade found that only 25% to 50% of patients with depressive disorders were accurately diagnosed by primary care physicians.[2] Moreover, among those accurately diagnosed only ~50% received minimally adequate pharmacologic treatment, and less than 10% received a minimally adequate number of psychotherapy visits.[2]

The concept of the collaborative care model was developed to attempt to bridge these gaps in the quality of depression care. A multidisciplinary team of researchers at Group Health and the University of Washington helped stimulate development of this model[3,4] and were influenced by the pioneering work on the chronic illness model of care by Wagner and colleagues.[5] The chronic illness model was developed because of data showing that a majority of patients with chronic medical illnesses were not receiving guideline-level care. Much like the gaps in quality of depression care, only about one third of Americans with hypertension received effective treatment to lower blood pressure below guideline-recommended levels,[6] and more than 50% of patients with diabetes had HbA1c levels above guideline-recommended levels.[7] Wagner and colleagues[5] recognized that improving self-management and guideline-level care for patients with chronic illnesses would be difficult with the usual brief, infrequent visits with primary care physicians and would require a team approach.

Both the collaborative care model and chronic illness model emphasize three core concepts: population-based care, measurement-based care, and stepped care.[5,8] Most clinicians view their job as taking care of patients who show up in clinic each day, whereas population-based care involves an emphasis on improving the quality of care and outcomes of defined populations with chronic illness. In order to accomplish this goal, it is essential to have tracking systems such as disease registries and timely measurements of disease control so that physicians can monitor visits, adherence to treatment, disease control, and dosages of medications.

For depression, the establishment of the Patient Questionnaire-9 (PHQ-9)[9] as the recommended tool for primary care systems to help accurately diagnose depression and to monitor progress of treatment has been key to improving the quality of care. Stepped care involves intensification of care (such as stepwise increases in doses and number of antihypertensive medications) for those with adequate adherence but persistent poor disease control.[8] Recent data in more than 160,000 patients with Type 2 diabetes found that among patients with poor glucose, blood pressure, or low-density lipoprotein (LDL) control, approximately 20% of the poor control was due to poor patient adherence to medical regimens, but 30% to 47% was explained by lack of physician intensification of treatment.[10]

The lack of intensification of treatment in patients with depression has been shown to be very prevalent in primary care, with many patients remaining on the initial dosage of antidepressant medication for many months despite having persistent high levels of depressive symptoms.[2,11] Efforts to improve disease control of chronic illness need to focus on improving patient self-care and adherence to medical regimens but even more on provision of stepped care.

The findings from the two systematic reviews[12,13] in this issue of the *American Journal of Preventive Medicine* that reviewed randomized trials of collaborative care from 2004 to 2009 are quite consistent with findings from two prior systematic reviews of collaborative care up to 2004.[14,15] The combined findings from 69 studies found that collaborative care increased adherence to evidence-based depression treatment by approximately twofold and improved depressive symptoms with an effect size in the moderate range. Moreover, both sets of reviews found

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that collaborative care provided "good economic value" (based on cost effectiveness and cost-benefit analysis) and improved satisfaction with care. Health reform efforts have emphasized the importance of the Triple Aim initiative, which calls for redesigning healthcare systems to enhance the quality of care, improve the health of the population, and reduce or at least control the per capita cost of care.[16] The results of the systematic reviews of collaborative depression care provide robust support that this model of care meets all three of these goals.

Another important finding from the systematic review was that collaborative care improved adherence and depressive outcomes in minority populations and populations living below poverty levels.[13] This is important because research has shown that both minority and impoverished populations have lower rates of recognition of depression by primary care physicians and even less exposure to evidence-based depression treatments.[17] Although the above finding was based on a limited number of studies, it is supported by the results from a large collaborative care trial that randomized 1801 elderly patients with depression to collaborative versus usual care from eight health care systems.[11,17] In this trial, two sites had a majority of patients who were either African American or Hispanic, respectively, with most living below U.S. poverty levels. The effect size in this trial of collaborative versus usual care on depressive outcomes was as large at these two sites as the other sites with majority middle-class and/or white populations.[11,17]

Although a number of barriers to implementation of collaborative care were described,[18] the most common barrier that has limited dissemination was not mentioned—the financial barrier. Primary care systems attempting to implement this model of care will experience a financial cost of reorganized existing services, developing registries, care manager time for in-person and telephone visits, and physician caseload supervision time. Moreover, potential savings in total medical costs will benefit health insurers and employers more than fee-for-service primary care systems.

In several large-scale dissemination efforts of collaborative care such as the DIAMOND (Depression Improvement Across Minnesota: A New Direction) project,[19] health insurers have developed ways to bill for care manager visits and psychiatric supervision time. The development of Center for Medicare and Medicaid Services (CMS) codes for depression care manager visits and physician supervision time could help defray costs for primary care systems that want to implement this model of care. The increased payments for primary care systems documenting that they meet the Level-2 medical home requirement for improving the quality of care for populations with two chronic medical illnesses and one behavioral illness could also help defray costs of implementing collaborative depression care.[20]

Several recent studies have expanded the concept of collaborative depression care by training care managers to enhance quality of care for depression and common comorbid conditions such as hypertension, diabetes, and coronary heart disease.[21,22] These new multicondition collaborative care models may provide "economies of scope" to treat multiple common primary care conditions. Rather than primary care systems needing a separate care manager for each illness, which may be prohibitively expensive, multicondition care managers can provide enhanced quality of care for the most common medical conditions in a cost-effective manner. A recent multicondition collaborative care program was found to improve the quality of mental health and medical care and disease control (including HbA1c, systolic blood pressure, LDL, and depression) for patients with comorbid depression and poorly controlled diabetes and/or heart disease.[22]

The IOM *Crossing the Quality Chasm* report emphasized that to improve quality of care for chronic illnesses, "trying harder will not work, changing systems of care will."[23] There is now extensive evidence across 69 studies that collaborative depression care is a cost-effective change in the primary care system that improves quality of care and outcomes for patients with depression.

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