

The Societal Promise of Improving Care for Depression

Nine Years Out

Depression is now the second-leading cause of disability worldwide, accounting for as much loss in functioning as most chronic diseases. Depression costs employers more than \$51 billion per year in absenteeism and lost productivity, not including high medical and pharmaceutical bills. Treatment (medication and psychotherapy) is effective for 70 to 80 percent of depressed patients. But studies over the past decade have consistently found low rates of detection and appropriate treatment in primary care settings, where most depressed patients go if they seek care. Overall, only about one-fourth of people with depression receive treatment consistent with accepted clinical guidelines. Rates are particularly low among underserved minority groups.

A team of RAND experts, led by Kenneth Wells, designed and evaluated *Partners in Care* (PIC), a real-world trial to determine whether diverse primary care clinics could implement practical programs for improving depression care and to assess whether such programs could reduce disparities in care for minorities.

Partners in Care: A Collaborative Approach to Improving Depression Care

Partners in Care evaluated how two guidelines-based quality improvement (QI) programs for depression—as implemented by managed, primary care clinics—affected quality of care, health-related outcomes, employment, and disparities in clinical outcomes. The study involved 181 physicians in 46 primary care clinics in 6 managed care organizations, located in geographically and socioeconomically diverse communities across the country. Within each study location, the clinics were randomly assigned either to conduct care as they usually would (“usual care”) or to participate in one of two QI interventions—one that facilitated medication management and one that facilitated psychotherapy.

Key findings:

- Over two years, the quality improvement (QI) programs improved the quality of care that patients received.
- The programs also improved patients’ health and quality of life and increased the amount of time that patients worked.
- The programs modestly increased health care costs but, compared with other accepted interventions, were cost-effective.
- The programs, particularly QI therapy, reduced ethnic disparities in health outcomes.
- While the main effects on quality of care and psychological health were gone nearly a decade out, there were still indirect effects on reduced long-term depression and lingering secondary effects on barriers to care, problems in coping with stress, and perceived discrimination from one period of improving care for depression.

More than 27,000 patients were screened for depressive disorders, out of which 1,356 patients (70 percent of those eligible for the study) agreed to participate. The research team followed the participants for five years in earlier work and for almost a decade in later work, making this the first study to examine the very-long-term effects of practice-based QI programs. The participating patients were ethnically diverse. Specifically, one-third was Latino, a group thought to have rates of depression comparable to Whites but in whom depression treatment has rarely been studied.

The study’s approach resembled resource management and education more than a typical clinical trial. After each practice nominated

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Headquarters Campus
 1776 Main Street
 P.O. Box 2138
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 90407-2138
 TEL 310.393.0411
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leaders—a doctor, a nurse supervisor, and a mental health specialist—the study team trained them to educate other staff in implementing the QI programs and provided them with written and videotaped materials to do that. (All the *Partners in Care* materials can be downloaded from <http://www.rand.org/health/projects/pic/>)

Both QI programs followed a collaborative care model, involving empowerment of patients, education of patients and clinicians, case management by nurses, and teamwork in program oversight among primary care clinicians, mental health specialists, and nurses. In the medication-oriented program, the depression nurse helped patients get started on treatment and managed medications for 6 or 12 months. In the psychotherapy-oriented program, 14 to 16 sessions of cognitive-behavioral therapy were provided at a reduced fee.

No one told the clinics, clinicians, or patients what to do; they were encouraged to follow their own goals. Physicians and patients were informed about both medication and therapy, but patients and providers were free to choose the type and amount of treatment, or none. In effect, the clinics and their patients were given resources and training to improve care themselves.

How *Partners in Care* Affected Patients' Lives

The earlier work showed that the QI programs significantly increased appropriate care for all patients. Patients who had access to the QI programs were about twice as likely to start antidepressant medication and/or psychotherapy over the first 6 months than were patients in the usual-care clinics; over the first 12 months, they were more likely to receive appropriate care—quality care—for depression overall (see Figure 1). Patients in the QI programs reported significantly improved quality of life and were significantly less likely to be depressed over time: For instance, 12 months after study

enrollment, patients in the programs were 10 percentage points less likely to be clinically depressed than were patients in usual care. A full 57 months after enrolling in the study, patients in the QI programs were 7 percentage points less likely to be depressed.

Assessing Cost and Cost-Effectiveness

The research team assessed the cost-effectiveness of the QI programs from a societal perspective by considering how the programs affected total health care costs and patients' depression burden and quality of life relative to usual care. They found that the programs reduced the amount of time patients were burdened with depression by 1 to 2 months while increasing health care costs over usual care by \$350 to \$450 per patient over two years. Overall, the programs' costs per *quality-adjusted life year*—a year of life adjusted for its quality or its value, the standard measure of cost-effectiveness—were in the range of other accepted medical interventions.

In addition, the research team examined the effects of the QI programs on patients' employment—an outcome rarely studied in prior depression trials, despite its importance for patients and payers. They found that the programs increased the amount of time patients were working by about 1 month. For most patients, the income they would earn from an additional month of employment would more than cover the additional health care costs of the programs.

Examining Program Effects on Disparities in Clinical Outcomes

Historically, underserved minority groups, such as Latinos and African Americans, have been less likely than other groups to receive appropriate care for depression. The *Partners in Care* team was particularly interested in whether the QI programs the clinics had implemented would increase or reduce disparities in clinical outcomes between minority and White patients. Often, innovations can increase disparities if more-advantaged groups have greater access to them.

To ensure that minority patients were included in opportunities for care, experts in mental health interventions for minority patients participated in designing the educational materials for the QI programs. All program materials were available in English and Spanish. Latino and African-American providers appeared in videotapes that were included in the program material for all patients. Information about cultural beliefs and ways of overcoming barriers to appropriate treatment for Latino and African-American patients was included in the training materials given to providers. And minority researchers directly supervised the local experts throughout the programs.

The researchers found that, relative to usual care, the programs reduced disparities in clinical outcomes during the

Figure 1
Programs Increased Appropriate Care for All Patients

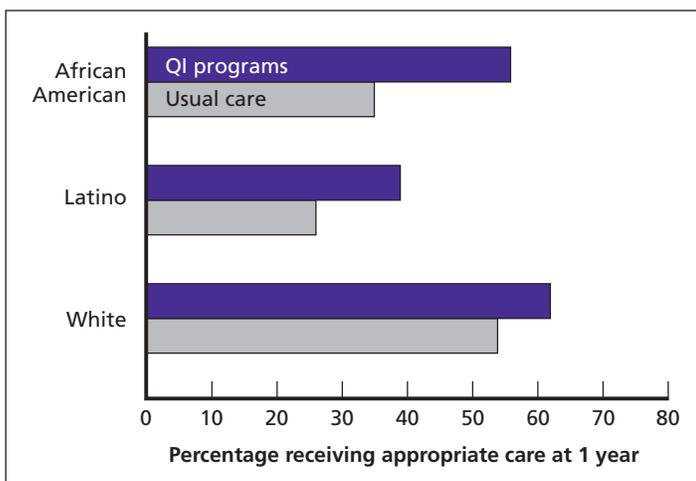
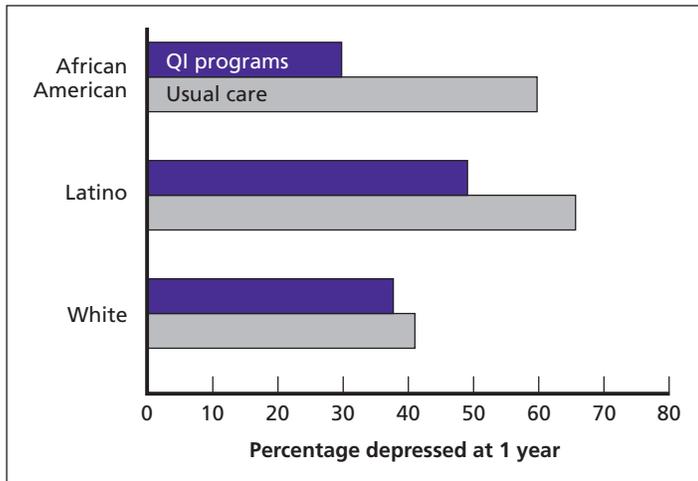


Figure 2
Programs Reduced Disparities in Clinical Outcomes



programs. For example, after one year (the end of the active programs), Latinos and African Americans in the programs were significantly less likely to be depressed than their counterparts in usual care, who, in turn, had poorer outcomes than Whites in usual care (see Figure 2).

The reduction in disparities was still observable five years after the programs. Under usual care, 56 percent of minorities and 36 percent of Whites were depressed after five years—a large disparity in outcomes. But the QI programs largely eliminated the disparity, reducing the prevalence of depressive disorder by 10 to 20 percentage points among minority patients. Among Whites, the programs caused a drop of only 2 to 4 percentage points, a significant difference from the program response of the minority patients. There are few other examples of specific programs that primary care clinics can implement to reduce disparities.

The medication and psychotherapy programs produced different (favorable) outcomes for minority patients (see Figure 3). Of minority patients who were in the medication program, 45 percent were depressed after five years; the comparable number for those in the therapy program was 36 percent. The more favorable outcomes in the psychotherapy program could be because minorities view that type of program as more culturally appropriate. Both Latino and African-American patients tended to prefer psychotherapy to medication as a treatment for depression at the beginning of the study.

In later work, researchers tracked the effect out to nearly a decade and found that, compared with usual care, the QI-therapy program led to a cumulative benefit for minorities similar to the effect of removing the psychological burden of experiencing the death of 4–12 loved ones over that period. Also, the QI-therapy program had this same benefit in reduc-

ing the disparity in psychological health for underserved minorities compared with Whites over this period.

Even so, after nearly a decade, researchers found relatively few main effects on such outcomes as quality of care or psychological health. Nonetheless, there were some other specific secondary program effects—both negative and positive—that may be of interest for planning future programs. On the negative side, Whites reported more barriers to care, and there was some suggestion that they had problems in coping with stress or psychological distress for program conditions, particularly for the QI-meds program. On the positive side, the QI-therapy program reduced perceived discrimination in care for underserved minorities.

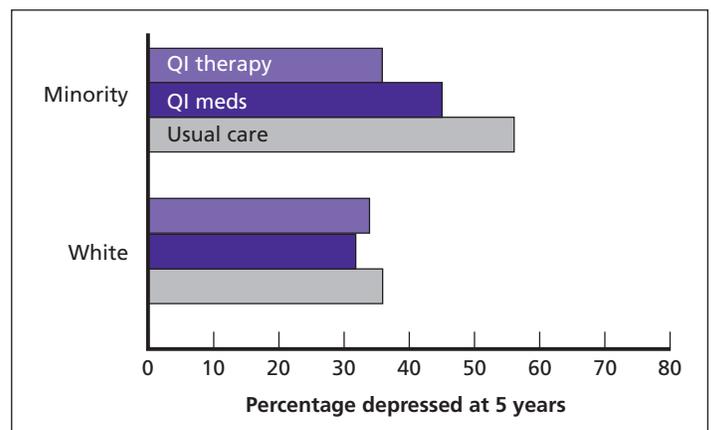
Researchers believe that these secondary effects reflect the fact that participants had favorable experiences and benefited from the interventions during the intervention period, but then had problems getting the same level of care after the intervention period. In other words, as people changed locations, providers, or health care systems over time, they may have encountered more difficulty finding the higher standard of care that they had found helpful originally. As a result, they reported more barriers, even more than the group receiving usual care all along. However, these explanations need to be examined in new research studies.

The bottom line is that, although the main effects were gone a decade out, there were still lingering secondary effects from one period of improving care for depression, which seems quite remarkable.

Policy Implications

Partners in Care shows that modest, practical QI programs, as implemented by diverse managed care organizations under usual-practice conditions, can decrease the personal and societal burdens of depression. Improvements span clinical outcomes, quality of life, and employment status, and the

Figure 3
Programs Continued to Reduce Disparities Over the Long Term



effects are large for a QI program. Moreover, the programs are relatively cost-effective from a societal perspective.

The programs improve care for all patients, but minority patients profit the most. Five years after enrolling in the programs, minority patients are about as likely as White patients to be depressed, and that effect persists over nine years. Thus, over the long term, the programs improve equity, a major public health goal.

But achieving benefits for all patients may require policy changes. Although the programs are cost-effective from a societal perspective, they do increase direct health care costs. Thus, providers will not offer them widely unless they are compensated for doing so. Yet few public or private insur-

ance plans cover the key components of collaborative care for depression, particularly care management (for example, phone follow-up), physician supervision of care managers, or a psychiatrist's consultation with primary care physicians and care managers. Vulnerable populations face additional barriers, such as limited or no insurance and language barriers.

Fee-for-service plans (such as Medicare) can make collaborative care services reimbursable. Managed care plans can require that health plans cover, and clinics provide, these services.

Improved medical care has much to offer depressed patients and their families and communities if we can create the conditions necessary to put such programs in place. ■

This Highlight summarizes RAND Health research reported in the following publications:

Miranda J, Duan N, Sherbourne C, Schoenbaum M, Lagomasino I, Jackson-Triche M, and Wells KB, "Improving Care for Minorities: Can Quality Improvement Interventions Improve Care and Outcomes for Depressed Minorities? Results of a Randomized, Controlled Trial," *Health Services Research*, Vol. 38, No. 2, April 2003, pp. 613–630.

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Schoenbaum M, Unützer J, Sherbourne C, Duan N, Rubenstein LV, Miranda J, Meredith LS, Carney MF, and Wells K, "Cost-Effectiveness of Practice-Initiated Quality Improvement for Depression: Results of a Randomized Controlled Trial," *Journal of the American Medical Association*, Vol. 286, No. 11, September 2001, pp. 1325–1330.

Schoenbaum M, Unützer J, McCaffrey D, Duan N, Sherbourne C, and Wells KB, "The Effects of Primary Care Depression Treatment on Patients' Clinical Status and Employment," *Health Services Research*, Vol. 37, No. 5, October 2002, pp. 1145–1158.

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Wells KB, Sherbourne C, Schoenbaum M, Duan N, Meredith L, Unützer J, Miranda J, Carney MF, and Rubenstein LV, "Impact of Disseminating Quality Improvement Programs for Depression in Managed Primary Care: A Randomized Controlled Trial," *Journal of the American Medical Association*, Vol. 283, No. 2, January 2000, pp. 212–220.

Wells K, Sherbourne C, Schoenbaum M, Ettner S, Duan N, Miranda J, Unützer J, and Rubenstein L, "Five-Year Impact of Quality Improvement for Depression: Results of a Group-Level Randomized Controlled Trial," *Archives of General Psychiatry*, Vol. 61, No. 4, April 2004, pp. 378–386.

Wells KB, Sherbourne CD, Miranda J, Tang L, Benjamin B, and Duan N, "The Cumulative Effects of Quality Improvement for Depression on Outcome Disparities over 9 Years: Results from a Randomized, Controlled Group-Level Trial," *Medical Care*, Vol. 45, No. 11, November 2007, pp. 1052–1059.

Wells KB, Tang L, Miranda J, Benjamin B, Duan N, and Sherbourne CD, "The Effect of Quality Improvement for Depression in Primary Care at Nine Years: Results from a Randomized, Controlled Group-Level Trial," *Health Services Research*, published online June 2008.

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