

PREVENTION IN ACTION

Integrated Care for Depression in Diabetes

PERSPECTIVE

Psychiatrists have long been aware of the strong association between depression and diabetes, as a large number of the patients we treat for depression also seem to have diabetes. Although it is difficult for us to know whether their morbidity from diabetes is secondary to their depression and lack of motivation to engage in quality self-care or if somehow their diabetes is contributing to their depression (or a combination of both), it behooves physicians to take care of the entire patient.

Unfortunately, the disconnect between



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mental and physical health is a deep-seated problem dating back to the 17th century, when René Descartes wrote about mind-body dualism. Further, the lack of respect given to psychiatry in medical schools does not help physicians who practice physical medicine develop respect for the relationship between the mind and the body or the field of psychiatry in general. Without that fundamental respect, it is nearly impossible to provide holistic medical care to the entire patient, because doing so requires interdisciplinary teamwork.

As the evidence base linking depression and diabetes continues to expand, and as research continues to show that treating depression in patients with diabetes greatly improves their mental and physical health outcomes, the failure of general medical practitioners to consider their diabetic patients' depressive disorders will be a liability risk, and it will become ever more clear that not addressing the comorbid depression is unethical.

Ultimately, it might be that science and the fear of malpractice will force a more interdisciplinary approach, as it has in other areas. For example, since it has become clear that new generation antipsychotic drugs put patients at risk for obesity and other medical complications, psychiatrists are now weighing patients and determining their body mass index before prescribing these drugs. Science tells us that not doing so would be unethical, and malpractice law suggests it would be a liability risk. Perhaps the strength of the science linking depression and diabetes will produce the same level of concern.

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The irrationality of the age-old, artificial dichotomy between physical and mental health is painfully obvious in the longstanding failure to address the association between diabetes and major depression.

"We have known for years that these conditions overlap, yet their combination continues to lead to worse physical and psychiatric outcomes," according to David Osborn, Ph.D., senior lecturer of epidemiology and community psychiatry at University College London.

The Centers for Disease Control and Prevention estimates that nearly 24 million people in the United States alone have diabetes. Considering this increasing prevalence of diabetes and recent evidence indicating a significantly poorer prognosis for diabetic adults with comorbid depression, "the need to develop and evaluate coherent services that address both the mental and physical needs of these patients cannot be overstated," he said.

Patients with type 2 diabetes mellitus are at least twice as likely as their non-diabetic peers to experience depressive symptoms, and the aggregated lifetime prevalence of major depression in this population might be as high as 27%, according to a 2001 meta-analysis (Diabetes Care 2001;24:1069-78). In particular, individuals with poorly controlled diabetes are more likely to have depression, possibly because of the association between depression and problems with medication and diet adherence (J. Diabetes Complications 2005;19:113-22).

Several studies have linked depression with an increased risk of developing diabetes-related complications, as well as increased mortality. In a recent prospective investigation into the association between depression and all-cause and cause-specific mortality in patients with diabetes, Dr. Elizabeth H.B. Lin of the Group Health Research Institute in Seattle, and colleagues used the Patient Health Questionnaire (PHQ-9) to assess depression at baseline in a cohort of 4,184 patients with type 2 diabetes who received care at one of nine Group Health primary care clinics between 2000 and 2002.

Annually through 2007, the researchers reviewed the patients' medical records and the death registry files of Washington state to ascertain the causes of death. After adjusting for demographic characteristics for the 428 patients who died, they found that major depression was significantly associated with all-cause mortality, cardiovascular mortality, and noncardiovascular, noncancer mortality. "Patients with diabetes and coexisting depression face substantially elevated mortality risks beyond cardiovascular deaths," they reported (Ann. Fam. Med. 2009;5:414-21).

In a second study, Dr. Lin and her colleagues also tracked the rates of microvascular and macrovascular complications by conducting follow-up interviews between 2005 and 2007 with the surviving study participants. For

this analysis, microvascular complications included blindness, end-state kidney disease, amputations, and kidney failure; and macrovascular complications included myocardial infarction, stroke, and cardiovascular procedures. The authors determined that, over the 5-year follow-up period, participants with major depression had a 36% increased risk of developing microvascular complications and a 25% increased risk of developing macrovascular complications, compared with patients without major depression. Reducing the risk of diabetes complications requires "better interventions that not only treat the diabetes but address any accompanying depression as well," the authors concluded (Diabetes Care 2010;33:264-9).

Such interventions exist, and they are effective. In 2007, Dr. Hillary Bogner and colleagues in the University of Pennsylvania, Philadelphia, conducted a randomized, controlled trial of a depression treatment program for older adults with diabetes who were based in primary care. The researchers used data from the multisite, practice-randomized, controlled Prevention of Suicide in Primary Care Elderly: Collaborative Trial (PROSPECT), which they supplemented with a search of the National Death Index.

Patients with diabetes in the study who screened positive for depression were randomized to usual care or to a depression management intervention, which involved assignment to a depression care manager who worked with the patient's primary care provider to recommend treatment, monitor, and assist with adherence. Patients in the intervention group were half as likely as patients in the usual care group to die during the 5-year follow-up period (Diabetes Care 2007;30:3005-10).

In a more recent study, Dr. Bogner and her colleagues determined that integrating treatment for type 2 diabetes and depression improved medication adherence, glycemic control, and depression outcomes in older African American men—a group that is at high risk for poor outcomes. Of the 58 African American male patients aged 50-80 years who participated in the pilot trial, those who were randomized to integrated depression treatment had significantly greater adherence to their oral hypoglycemic and antidepressant medications at 6 weeks than did the usual care group. (Diabetes Educ. 2010;36:284-92).

Dr. Bogner said in an interview that without question, "these findings support the integration of depression screening and treatment with diabetes management in primary care, especially in high-risk populations."

Dr. Diana Echeverry and colleagues at Charles Drew University in Los Angeles reached a similar conclusion. They recently conducted a randomized, placebo-controlled trial to determine the impact that screening and pharmacologic treatment of depres-

sion would have on diabetes-related outcomes in low-income minorities.

Prospective study participants included low-income Hispanic and African American adults with elevated HbA_{1c} levels. They underwent a low-intensity (two-question) primary care screen for depression, which, if positive, was followed by a computerized diagnostic interview survey for the diagnosis of depression. Patients with depression were then randomized to receive the antidepressant sertraline or placebo. At 6 months, the sertraline group demonstrated greater improvements in HbA_{1c} levels and systolic blood pressure, compared with the control group, and both groups had improved depression scores—possibly because of the increased contact with a "sympathetic questioner," according to the authors. They noted that the screening questions had positive prediction for depression ranging from 67% to 84%, indicating the value of a low-intensity screen and computerized assessment in the primary care setting (Diabetes Care 2009;32:2156-60).

Combined behavioral interventions also can play an important role in the management of depression in adult patients with diabetes. Mary de Groot, Ph.D., of Indiana University, Indianapolis, and her colleagues recently reported the results of a study designed to test the effectiveness of a combination behavioral approach to the treatment of depression in adult patients with type 2 diabetes living in the rural Appalachian region. The 12-week interdisciplinary intervention, called Program ACTIVE, combined concurrent cognitive behavioral therapy and community-based exercise. The study enrolled 50 adults with diabetes who had screened positive for depression at baseline. Immediately after the intervention and at 3 months after the intervention, the mean Beck Depression Inventory scores of the participants improved significantly relative to baseline, and more than half of the patients no longer met the criteria for major depressive disorder, the authors reported.

With respect to diabetes outcomes, significant improvements were observed in blood glucose levels and low-density lipoprotein cholesterol levels relative to baseline, both immediately after and 3 months after the intervention, the authors wrote (Diabetes Spectrum 2010;23:18-25).

Interventions such as Program ACTIVE can be successful in improving depression and diabetes outcomes despite geographic and financial obstacles "if they are flexible in their approach and make use of community resources to facilitate participant self-care," according to Dr. de Groot. "In doing so, there is great opportunity to address the significant costs associated with comorbid depression and diabetes." ■

By Diana Mahoney. Share your thoughts and suggestions at cpnews@elsevier.com.