aged 6 to 17 years who were taking an atypical antipsychotic and 15 000 children taking albuterol but no antipsychotic drugs. Patients with diabetes were excluded from both groups. The study found that glucose screening was low in both groups, with 31.6% of the patients taking antipsychotics receiving such screening compared with 12.6% of controls. Only 13.4% of the patients treated with antipsychotic drugs received lipid testing compared with 3.1% of controls. Further analysis revealed that children with multiple psychiatric diagnoses and those who used more medical services were most likely to be screened.

The results suggest that many physicians are falling short of the level of monitoring recommended in a 2004 consensus statement from several professional groups, including the American Psychiatric Association and the American Diabetes Association. Morrato said that clinicians treating pediatric patients, often primary care physicians, may be less aware of these guidelines, which apply to all age groups, and that there may also be systemic barriers to screening.

Correll called for even more aggressive monitoring for metabolic changes in pediatric patients taking atypical antipsychotics than that recommended in 2004. He said that physicians should monitor these patients' weight and height at each visit, and should do a fasting glucose test when initiating therapy, 3 months later, and every 6 months thereafter.

"We are between a rock and a hard place because these children and adolescents are brought to us because they are severely ill," he said. "They can't function, so we need to give them effective medications, but we also need to make sure they have the least possible side effects. For that, monitoring and management of these abnormalities is crucial." □

Depression Care Effort Brings Dramatic Drop in Large HMO Population's Suicide Rate

Tracy Hampton, PhD

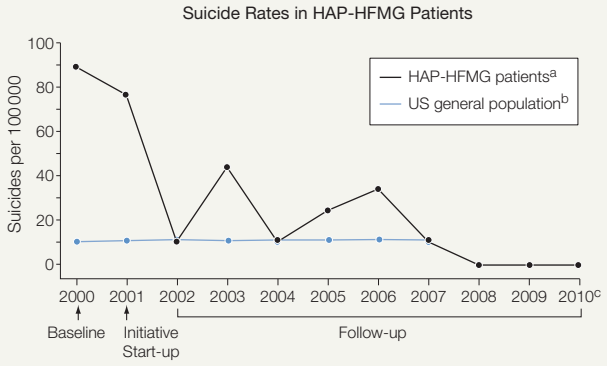
WHILE PHYSICIANS AND OTHER health care workers may not be able to predict which of their patients will attempt suicide, they can implement preventive strategies that markedly lower the risk of such tragedies. Now, one pioneering program has demonstrated the importance of pursuing 2 key approaches at once: carefully assessing patients for risk of suicide and adopting measures to reduce the likelihood that a patient will attempt suicide.

The example comes from a quality-improvement initiative that succeeded in substantially bringing down the rate of suicide in a population of about 200 000 members of a large health maintenance organization (HMO). Through the second quarter of last year, the Perfect Depression Care program of the Behavioral Health Services (BHS) division of the Henry Ford Health System resulted in 9 consecutive quarters without any suicides, a dramatic contrast to the annual rate of 89 suicides per 100 000 members at baseline and approximately 230 suicides per 100 000 individuals expected in a patient population. The work has won several awards, including the Joint Commission's Earnest Amory Codman Award and the Gold Achievement Award from the American Psychiatric Association.

"I believe we have a model that is applicable to most health care settings and that could dramatically improve the care of patients with depression and other major mental disorders that raise the risk of suicide," said neuropsychiatrist C. Edward Coffey, MD, Henry Ford Health System vice president and CEO of BHS, a large integrated mental health and substance abuse system that includes 2 inpatient hospitals and 10 clinics serving southeastern Michigan and adjacent states.

ZERO SUICIDES

The Perfect Depression Care Initiative was one of 12 national demonstration projects (and the only mental health



[a]Health Alliance Plan (HAP) health maintenance organization members receiving care from the Henry Ford Medical Group (HFMG). Data source: C. Edward Coffey, MD/Henry Ford Health System.
[b]Data sources: Heron MP et al. Deaths: final data for 2006. *Natl Vital Stat Rep*. 2009;57(14):30. Xu J et al. Preliminary data for 2007. *Natl Vital Stat Rep*. 2009;58(1):20.
[c]Includes first quarter of 2010.

A quality-improvement initiative succeeded in curbing the rate of suicide in a population of about 200 000 members of a large health maintenance organization.

proposal) selected in 2001 by the Robert Wood Johnson Foundation to demonstrate that a report by the Institute of Medicine (IOM) could serve as a roadmap for health care redesign. The IOM report, *Crossing the Quality Chasm: A New Health System for the 21st Century* (http://www.iom.edu/Reports/2001/Crossing-the-Quality-Chasm-A-New-Health-System-for-the-21st-Century.aspx), praised advances in medical science in the United States, but it called for fundamental change in the US health care delivery system and offered a strategy for building a stronger health system.

The IOM report identified depression and anxiety disorders on a list of priority conditions for immediate national attention and improvement. The goal of Henry Ford's Perfect Depression Care initiative was to completely redesign depression care delivery using the 6 aims for health care improvement from the report: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity. Safety improvements strive to avoid injuries patients receive as a result of their care; effectiveness involves providing services based on scientific knowledge while avoiding underuse and overuse; patient-centered care considers individual patient preferences, needs, and values and ensures that patient values guide all clinical decisions; timely care reduces delays; efficient care avoids waste; and equitable care does not vary in quality because of personal characteristics.

As the Perfect Depression Care initiative focused on these aims, it became apparent that one goal trumped all others for driving breakthrough improvements in care: to reduce the number of suicides to zero in patients seen in both inpatient and outpatient facilities. "If we were to provide perfect depression care, nobody would kill themselves," said Coffey. "Such a 'perfection' goal was very controversial at the start, but if zero isn't the right number [of suicides], what is?"

The BHS implemented a number of tactics to achieve its audacious goal. "Once we committed to zero suicides, it forced us to commit to things we'd never think of doing," said Coffey. One example was to address the availability of weapons. "We got very serious about it and insisted that patients provide us with an inventory of weapons in their home, and we encouraged them to get rid of them," he said.

Each patient seen through the BHS is first assessed and stratified on the basis of suicide risk: acute, moderate, or low. "Everyone is at risk. It's just a matter of whether it's acute or whether it requires attention but isn't emergent," said Coffey. A patient considered to be at high risk undergoes a psychiatric evaluation the same day. A patient at low risk is evaluated within 7 days. Group sessions for patients also allow individuals to connect and offer support to one another, not unlike the supportive relationships between sponsors and "sponsees" in 12-step programs.

HOW IT WORKS

For each patient, staff members develop a clear vision of how that patient's care will change, partnering with patients to ensure that the care they receive meets their needs. Those involved in a patient's care also design and test strategies for improvements in areas such as the patient's access to care, and they implement relevant and up-to-date measures of care quality. Finally, they communicate with each other and constantly work to improve patient care by sharing results, analyses, and lessons learned with staff and other stakeholders, such as leaders throughout the health system and members of the initiative's Community Advisory Group (which includes patients, their family members, and other community leaders and advocates with an interest in mental health).

All patients have access to a depression Web site maintained by the program and are able to communicate with behavioral clinicians via e-mail. Each outpatient site also offers one or more drop-in group appointments each week that are led by a psychiatrist and a social worker.

All health clinicians within the BHS have access to patients' electronic medical records. Each year, all behavioral health care staff at the BHS complete a course on suicide risk and prevention and must score 100% on the follow-up test or receive additional education. The BHS also instituted team members called physician extenders, who support patients and call them periodically to see how they are doing. In addition, an Intranet site gives clinicians access to depression guidelines, the patient registry, and electronic tools to improve the quality and efficiency of care.

Within the first 4-year follow-up interval, the average annual rate of suicide in the BHS patient population dropped 75%, from approximately 89 per 100 000 in 2000 to approximately 22 per 100 000 (Coffey CE. *Jt Comm J Qual Patient Saf*. 2007;33[4]:193-199). More recently, there has not been a suicide in the HMO population in more than 2 years.

"They've really carried this initiative forward even in the highest-risk patients, who are very vulnerable to suicide," said Donald Berwick, MD, MPP, the president and CEO of the not-for-profit Institute for Healthcare Improvement and professor of health policy and management at the Harvard Medical School in Boston. "It's quite remarkable that they've had no suicides, particularly in this group," added Berwick, who was nominated in late March by President Barack Obama to head the Centers for Medicare & Medicaid Services.

The success of the initiative demonstrates, said Coffey, "that dramatic—indeed, unimaginable—improvements in mental health care quality are possible, and that the IOM's *Chasm* report can indeed serve as a very useful model for mental health care redesign." He added that because the BHS team (which calls itself the "Blues Busters") designed, tested, and implemented multiple practice improvements over several years, it is difficult to determine which strategies contributed most to the group's achievements. However, the determination to strive for perfection, rather than incremental goals, had a particularly powerful effect, he said. Principles behind the Perfect Depres-

sion Care initiative are now being applied to the care of BHS patients with other psychiatric conditions, such as anxiety and psychotic disorders.

Although some patients are reluctant to talk about suicide attempts, Coffey noted that his team does hear consistent themes from patients and their families. "Patients have come to us and said, 'It's a good idea that you had me take the gun out of my house; some nights I'd sleep with it on the pillow beside me.'" These sorts of comments indicate that suicide is often impulsive and that imposing even a short delay can allow the impulse to pass, said Coffey.

A MODEL PROGRAM

The initiative's success may spur others to consider implementing similar measures. "People are searching for ways to adapt modern improvement methods to behavioral health, not just classical medical care," said Berwick. "Behavioral health is sometimes thought to be more elusive, but Dr Coffey and his team successfully adapted a systematic model, based on the IOM report, to behavioral health."

J. John Mann, MD, vice chair for research in the department of psychiatry at Columbia University, in New York City, noted that the initiative's results support several previous studies in Sweden, Hungary, and Germany that found that enhanced diagnosis and treatment of major depression can substantially reduce rates of suicide and suicide attempts. "This study now shows a similar strategy can also work in a community in the United States and helps make the case that such approaches should be more widespread as part of a national suicide prevention effort," he said.

Efforts like the Perfect Depression Care initiative are important because depression is the leading mental disorder associated with suicide risk, said Morton Silverman, MD, a clinical associate professor of psychiatry at the University of Chicago. He noted that the initiative's results are "quite impressive."

Coffey said that a program like this can be difficult to emulate because it takes considerable commitment and a unique culture. Still, despite the challenges in implementing what he calls a "zero defect" program, Coffey believes the BHS approach could be applied to a wide range of medical issues, such as medication safety, violence prevention, and infection control. "You have to be able to measure the issue and strive to pursue perfection," he said. Berwick agreed, noting that similar success will require leadership's commitment as well as an atmosphere that encourages innovation and aggressive improvement. □

Integrated Care Key for Patients With Both Addiction and Mental Illness

Bridget M. Kuehn

DESPITE A GROWING BODY OF EVIDENCE that integrated care is important in treating individuals with addiction and comorbid psychiatric disorders, such care remains in short supply. But efforts by scientists and policy makers aim to improve access to such treatment.

Substance abuse disorders often occur in patients with other psychiatric illnesses, yet few such individuals receive treatment for their conditions despite the serious health and other consequences that often result. An estimated 17.5 million adults had a serious mental illness in 2002 based on the National Survey on Drug Use and Health (previously called the National Household Survey on Drug Abuse), a nationally representative survey of more than 68 000 US individuals. About 4 million (23%) were also dependent on or abusing alcohol or illicit drugs (http://www.oas.samhsa.gov/2k4/coOccurring/coOccurring.htm). But more than half of these individuals received no treatment for either condition, about one-third received treatment only for their mental illness, 2% received only specialty substance abuse treatment, and just 12% received care for both conditions.

COMMON VULNERABILITIES

There are a number of potential explanations why substance abuse and other types of psychiatric illness frequently occur together, explained Nora D. Volkow, MD, director of the National Institute on Drug Abuse (NIDA) in an interview. She explained that there may be common genetic or environmental factors that lead to both conditions. Additionally, because substance abuse and other mental illnesses affect overlapping brain circuits, brain changes related to one disorder may lead to another. There may also be complex interactions between such factors.

One environmental factor that has been strongly associated with the development of both addiction and other mental illnesses is exposure to stress during childhood or adolescence. For example, a child raised in a household in which there is parental neglect, physical abuse, or sexual abuse has an elevated risk of developing a substance use disorder, depression, or an anxiety disorder.

"Which of these trajectories you take when you get exposed to these environmental stimuli is a function of genetic vulnerability factors and also