INTRODUCTION: CARDIOVASCULAR DISEASE AND METABOLIC RISK FACTORS IN PATIENTS WITH MENTAL ILLNESS

By John W. Newcomer, MD

According to the National Comorbidity Study Replication, >25% of people in the United States have some type of mental illness.1 The prevalence of serious mental illness has been estimated at 6.2%.2 Patients with severe and persistent mental illness have significantly reduced life expectancy relative to the general population. On average, pooled populations of public sector inpatients and outpatients die 25–30 years earlier than unaffected individuals in the general population, according to recent data from multiple states in the US.3 Schizophrenia and bipolar disorder together account for ~23,000 deaths and >20 million life-years of disability worldwide each year.4 The most common cause of mortality in these individuals is cardiovascular disease (CVD), not, as might be assumed, suicide (Figure 1).3 Heart disease and stroke are the most common causes of death in patients with serious mental illness, accounting for ~40% of deaths,5 underlying the dramatically decreased life expectancy in these patients.5

Numerous epidemiologic studies in the general population have established risk factors for CVD, including overweight and obesity, smoking, impaired glucose tolerance and diabetes, dyslipidemia, and hypertension.6 These well-established cardiovascular risk factors are underdiagnosed and undertreated in the general population, and are even less well-managed or monitored in patients with mental illness.7–10 Many patients receive no interventions for metabolic abnormalities associated with cardiovascular risk, despite the knowledge that even small improvements in these abnormalities may have a clinically significant effect on their long-term cardiovascular health. In addition, some of the agents commonly used to treat conditions such as schizophrenia and bipolar disorder can cause or contribute to metabolic abnormalities (obesity, glucose intolerance, and dyslipidemia) and increase cardiovascular risk.11

Concern about the impact of some antipsychotic medications on risk for diabetes and CVD prompted the American Diabetes Association (ADA), the American Psychiatric Association (APA), and other groups to convene a consensus development conference to enhance our understanding of how these agents may cause or exacerbate the risks for diabetes and dyslipidemia and to develop guidelines for the management of patients who are receiving them.12 The ADA and APA provided specific recommendations for patient, family, and caregiver education as well as metabolic monitoring guidelines in patients being treated with atypical antipsychotics: baseline screening for family history of diabetes and CVD, weight and body mass index, waist circumference, blood pressure, fasting plasma glucose, and fasting lipids with follow-up for all of these factors during the course of therapy (Table).12 These guidelines recommend consideration of metabolic risks of individual medications when initiating atypical antipsychotic

![Graph showing causes and rates of death in the general population and in state mental health care populations](image-url)

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therapy. Further recommendations for managing patients who develop metabolic abnormalities during treatment with atypical antipsychotics are also given, including guidance to consider a change in treatment to an agent that has not been associated with weight gain or diabetes if a patient gains ≥5% of his or her initial weight or experiences worsening plasma glucose or lipids.  

The implementation, however, of these highly publicized guidelines remains limited; the recommendations for metabolic monitoring and selection of antipsychotics that have a low risk for detrimental metabolic effects have not broadly impacted practice patterns. Routine monitoring of metabolic risk factors has not increased appreciably since the publication of these guidelines: compared to rates of screening before the guidelines, lipid testing rates increased from 78% to 8.5%, and glucose testing rates from 20.6% to 22.5% after the guidelines were published (Figure 2).  

Although much remains to be done to improve the cardiovascular health of people with serious mental illness, encouraging efforts are underway. State departments of mental health are beginning to take notice of the problem: the National Association for State Mental Health Program Directors has released a report on this topic. The APA also aims to publish a report of a working group evaluating the relationship between antipsychotics and metabolic risk.

In this Clinical Information Supplement, Henry A. Nasrallah, MD, Roger S. McIntyre, MD, Charles H. Hennekens, MD, DrPH, and Suzanne Vogel-Scibilia, MD, review recent information about CVD and cardiovascular risk factors in patients with schizophrenia and bipolar disorder, how CVD may be exacerbated by some medications used in the treatment of mental illness, and approaches that may be taken to decrease the overall risk in these patients. The evidence points to the urgent need to increase metabolic monitoring and selection of antipsychotics that have a low risk for detrimental metabolic effects; the recommendations for metabolic monitoring and selection of antipsychotics that have a low risk for detrimental metabolic effects have not broadly impacted practice patterns. The APA also aims to publish a report of a working group evaluating the relationship between antipsychotics and metabolic risk.

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