Primary Care Providers' Views on Metabolic Monitoring of Outpatients Taking Antipsychotic Medication

Dr. Christina Mangurian, M.D.,
San Francisco General Hospital (SFGH) and the Department of Psychiatry, University of California, San Francisco (UCSF)

Ms. Funmi Giwa, B.A.,
San Francisco General Hospital (SFGH) and the Department of Psychiatry, University of California, San Francisco (UCSF)

Dr. Martha Shumway, Ph.D.,
San Francisco General Hospital (SFGH) and the Department of Psychiatry, University of California, San Francisco (UCSF)

Dr. Elena Fuentes-Afflick, M.D., M.P.H.,
Department of Pediatrics and the Department of Epidemiology and Biostatistics, UCSF

Dr. Eliseo J. Pérez-Stable, M.D.,
Division of General Internal Medicine, Department of Medicine, UCSF

Dr. James W. Dilley, M.D., and
San Francisco General Hospital (SFGH) and the Department of Psychiatry, University of California, San Francisco (UCSF)

Dr. Dean Schillinger, M.D.
UCSF Division of General Internal Medicine at SFGH

Abstract

Objective—The purpose of this study was to evaluate attitudes of primary care providers toward barriers to metabolic monitoring and to characterize their beliefs about providers' responsibility for monitoring and reducing cardiovascular risk for people with severe mental illness.

Methods—An anonymous survey was administered to 214 primary care providers working in 23 public community health clinics in San Francisco.

Results—The response rate was 77% (164 of 214). Nearly 40% of primary care providers were unaware of consensus guidelines for metabolic monitoring of people who take second-generation antipsychotic medications. Responses showed variation in providers' beliefs about who should monitor patients' metabolic risk. The major barriers to metabolic monitoring were severity of psychiatric illness, difficulty collaborating with psychiatrists, and difficulty arranging psychiatric follow-up.

Conclusions—Primary care providers believed that better communication between primary care providers and psychiatrists would facilitate metabolic monitoring and promote better treatment for patients with severe mental illness who are taking antipsychotic medications.

Send correspondence to Dr. Mangurian, Department of Psychiatry, University of California, San Francisco, 1001 Potrero Ave., Suite 7M, San Francisco, CA 94110 (christina.mangurian@ucsf.edu).

People with severe mental illness die, on average, 25 years earlier than the general population, often from cardiovascular disease (1,2). Multiple risk factors contribute to this early mortality, including smoking, substance abuse, and poor access to care (3). In addition, some second-generation antipsychotic medications, commonly prescribed for people with severe mental illness, can lead to metabolic complications (including obesity, insulin resistance, and dyslipidemia) that increase the risk of cardiovascular disease (4,5).

Cardiovascular risk factors are more likely to be underdiagnosed and undertreated among individuals with severe mental illness compared with the general population (6). To reduce this premature mortality, the American Psychiatric Association (APA), the American Diabetes Association (ADA), and other medical professionals published metabolic monitoring guidelines in 2004 for people taking second-generation antipsychotic medications (7). These guidelines recommend baseline metabolic screening before initiation of medications, specifically, body mass index (BMI), waist circumference, blood pressure, fasting blood glucose, and fasting lipids (7). Continued metabolic monitoring is also recommended, specifically BMI (every three months), waist circumference (annually), blood pressure (annually), fasting blood glucose (annually), and fasting lipids (every five years, or more frequently if clinically indicated) (7). Despite these guidelines and psychiatrists' acknowledgment that monitoring is important, studies continue to show low monitoring rates (8–11). For example, among Medicaid beneficiaries prescribed second-generation antipsychotic medications with a moderate to high risk of causing metabolic abnormalities, only 40% had received metabolic monitoring in the past year (9).

Primary care providers' perspectives on the gap between metabolic monitoring guidelines and practice for this vulnerable population remain unexplored in the literature. This study examined primary care providers' beliefs about the roles that primary care providers and psychiatrists should play in metabolic monitoring and treatment of metabolic abnormalities among people with severe mental illness.

Methods

A complete sample of primary care providers (physicians, nurse practitioners, and physician assistants) was recruited from all safety-net clinics in one large urban public health system. These safety-net clinics provide health care services to low-income people, including those without insurance. All of these clinics are part of the UCSF Collaborative Research Network.

Between December 2010 and February 2011, after an initial announcement was made to clinic coordinators and directors, primary care providers were approached in person by a research coordinator and invited to participate in this anonymous survey. A $5 gift card was offered regardless of survey completion. Follow-up e-mails were sent two weeks after initial distribution, regardless of survey completion. To meet inclusion criteria for this study, a provider was required to primarily treat adults and spend 5% or more of provider time in direct patient care. We excluded data provided by four primary care providers who did not meet one or both of the inclusion criteria, for a final sample of 160 providers. Study procedures were approved by the Committee on Human Research at the University of California, San Francisco. Because the survey was designed for anonymous response, the committee waived the need for informed consent.

The survey included 19 questions that characterize primary care providers and their practices, as adapted from prior national physician surveys (12,13). Questions about the responsibility of providers to conduct metabolic monitoring and to treat metabolic abnormalities were included, as were questions about barriers to metabolic monitoring of

people who take antipsychotic medication. These questions were based on the literature and consultation with experts (8,9). [The survey is available online as a data supplement to this report.]

Attitudes about providers' roles in metabolic monitoring and treatment of metabolic abnormalities were rated on a 5-point Likert scale (from 1, strongly disagree, to 5, strongly agree). Because the responses were skewed on the Likert scale, they were reduced to two categories, one encompassing "strongly disagree," "disagree," and "neutral" responses and the other encompassing "agree" and "strongly agree" responses. Among the 25 possible barriers to metabolic monitoring listed, respondents were asked to identify the one barrier that had the largest impact.

We used t tests and chi square tests to determine whether any demographic characteristics of providers were related to attitudes toward metabolic monitoring or treatment. Multivariate logistic regression analysis was used to examine whether provider characteristics might predict attitudes toward metabolic monitoring and treatment. Logistic regressions were used to determine whether provider characteristics predicted selection of barriers to metabolic monitoring.

Results

All 214 primary care providers in this urban safety net public health system were invited to participate; 77% (164 of 214) of primary care providers responded, and 98% of them (160 of 164) met inclusion criteria.

The mean±SD age of respondents was 46.2±10.0 (range 27–69), and most respondents were women (69%, 111 of 160) and all respondents saw clients with either public insurance or no insurance. Most providers identified themselves as white (62%, 96 of 154), with 31% identifying as Asian (47 of 154), 4% as African American (six of 154), 1% as Native Hawaiian or other Pacific Islander (one of 154), and 3% as "other" (four of 154). A majority identified themselves as non-Latino (93%, 129 of 139), and ten (7%) identified themselves as Latino. Most providers were physicians (62%, 99 of 160); 36% were nurse practitioners (57 of 160), and 2% were physician assistants (four of 160). On average, providers saw 150.0±124.9 (range 0–500) unique patients monthly and reported that 47% of their patients had one or more psychiatric diagnoses (see online appendix for specific survey question). Nearly 40% of primary care providers (63 of 160) were unaware of the consensus guidelines from the American Diabetes Association and the American Psychiatric Association (7).

Primary care providers responded variably to three separate, nonmutually exclusive questions about different roles psychiatrists might play in metabolic monitoring. For example, two-thirds (102 of 154) of primary care providers agreed that it is their role, and not the role of the psychiatrist, to monitor patients who take antipsychotic medication. That said, about two-thirds (100 of 154) of primary care providers also agreed that it is the role of the psychiatrist to monitor for metabolic risk factors if patients have no established primary care provider. In addition, 60% (93 of 156) believed that it was the psychiatrist's role to conduct metabolic monitoring even if the client had a primary care provider.

In considering treatment for metabolic dysfunction, almost half of primary care providers (42%, 66 of 158) agreed that it is the role of the outpatient psychiatrist to treat metabolic dysfunction with prescription medications (such as statins). Provider demographic characteristics were not independently related to attitudes toward metabolic monitoring and treatment.

When asked to identify the barrier with the largest impact on metabolic screening, respondents most frequently chose the severity of patients' psychiatric illness (35%) (Table 1). Other critical barriers were "difficulty collaborating with psychiatrists" (14%) and "difficulty arranging referral for psychiatric follow-up" (8%). Provider characteristics (such as provider type, age, and gender) were not related to selection of specific barriers.

Discussion and conclusions

With this study, we gained important insights about primary care providers' perspectives on metabolic monitoring and treatment of metabolic abnormalities among people with severe mental illness.

Although most of the primary care providers in this urban sample believed that monitoring for metabolic dysfunction was one of their roles, many believed that the psychiatrist also had this role. This suggests that these providers were open to sharing this responsibility with psychiatrists. Further, almost half believed that psychiatrists should prescribe medications to treat metabolic abnormalities identified through monitoring.

To have psychiatrists treat metabolic complications would be a significant cultural shift from current practice norms, but there is a growing movement toward conceptualizing community mental health clinics as the primary "medical home" for these clients (14). Policy makers should consider providing primary care consultation, clinical decision support, or both for community psychiatrists so they can take this more active role, because many psychiatrists are reluctant to do so now (15). In addition, policy makers must address legitimate concerns about reimbursement for these practices at community mental health clinics (14).

Coordination of care is critically important for people with severe mental illness who have difficulty navigating the public health system. Four of the six most important barriers to monitoring identified by our respondents involved care coordination. Colocating primary care providers in community mental health settings may be one obvious solution. Shared electronic medical records and facilitation of on-site laboratory access in community mental health clinics are additional steps that could improve coordination of care for people with severe mental illness.

This study was limited in that it relied on a single urban community safety-net health system. Nonetheless, to our knowledge this was the first study to evaluate the views of primary care providers, a critical stakeholder group, about general medical treatment for people with severe mental illness. Future studies should try to elucidate the perspectives of other stakeholder groups to help improve metabolic monitoring and guide policy decisions to improve care for this vulnerable population.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

References

1. Colton CW, Manderscheid RW. Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. Preventing Chronic Disease. 2006; 3:A42. [PubMed: 16539783]

2. Brown S, Kim M, Mitchell C, et al. Twenty-five year mortality of a community cohort with schizophrenia. British Journal of Psychiatry. 2010; 196:116–121. [PubMed: 20118455]

3. Druss BG. Improving medical care for persons with serious mental illness: challenges and solutions. Journal of Clinical Psychiatry. 2007; 68(suppl 4):40–44. [PubMed: 17539699]

4. McEvoy JP, Meyer JM, Goff DC, et al. Prevalence of the metabolic syndrome in patients with schizophrenia: baseline results from the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) schizophrenia trial and comparison with national estimates from NHANES III. Schizophrenia Research. 2005; 80:19–32. [PubMed: 16137860]

5. Newcomer JW, Hennekens CH. Severe mental illness and risk of cardiovascular disease. JAMA. 2007; 298:1794–1796. [PubMed: 17940236]

6. Nasrallah HA, Meyer JM, Goff DC, et al. Low rates of treatment for hypertension, dyslipidemia and diabetes in schizophrenia: data from the CATIE schizophrenia trial sample at baseline. Schizophrenia Research. 2006; 86:15–22. [PubMed: 16884895]

7. American Diabetes Association, American Psychiatric Association, American Association of Clinical Endocrinologists, et al. Consensus development conference on antipsychotic drugs and obesity and diabetes. Diabetes Care. 2004; 27:596–601. [PubMed: 14747245]

8. Buckley PF, Miller DD, Singer B, et al. Clinicians' recognition of the metabolic adverse effects of antipsychotic medications. Schizophrenia Research. 2005; 79:281–288. [PubMed: 15964743]

9. Essock SM, Covell NH, Leckman-Westin E, et al. Identifying clinically questionable psychotropic prescribing practices for Medicaid recipients in New York State. Psychiatric Services. 2009; 60:1595–1602. [PubMed: 19952148]

10. Morrato EH, Druss B, Hartung DM, et al. Metabolic testing rates in 3 state Medicaid programs after FDA warnings and ADA/APA recommendations for second-generation antipsychotic drugs. Archives of General Psychiatry. 2010; 67:17–24. [PubMed: 20048219]

11. Morrato EH, Cuffel B, Newcomer JW, et al. Metabolic risk status and second-generation antipsychotic drug selection: a retrospective study of commercially insured patients. Journal of Clinical Psychopharmacology. 2009; 29:26–32. [PubMed: 19142103]

12. Arbuckle MR, Gameroff MJ, Marcus SC, et al. Psychiatric opinion and antipsychotic selection in the management of schizophrenia. Psychiatric Services. 2008; 59:561–565. [PubMed: 18451017]

13. Olfson M, Marcus SC, Wilk J, et al. Awareness of illness and nonadherence to antipsychotic medications among persons with schizophrenia. Psychiatric Services. 2006; 57:205–211. [PubMed: 16452697]

14. Amiel JM, Pincus HA. The medical home model: new opportunities for psychiatric services in the United States. Current Opinion in Psychiatry. 2011; 24:562–568. [PubMed: 21918447]

15. Parameswaran SG, Chang C, Swenson AK, et al. Roles in and barriers to metabolic screening for people taking antipsychotic medications: a survey of psychiatrists. Schizophrenia Research. 2013; 143:395–396. [PubMed: 23231879]

Table 1

Barriers to metabolic screening of people with severe mental illness[a]

Barrier	N	%
Severity of psychiatric illness	52	35
Difficulty collaborating with psychiatrists	21	14
Difficulty arranging referral for psychiatric follow-up	12	8
Lack of access to qualified psychiatric follow-up	11	7
Insufficient physician time	9	6
Lack of insurance	8	5

[a]According to 5% or more of 148 primary care providers surveyed