

# A Program to Improve the Quality of Antipsychotic Prescribing in a Community Mental Health System

Mary F. Brunette, M.D.

Alexander de Nesnera, M.D.

Karin Swain, M.S.

Erik G. Riera, Ed.M., M.B.A.

Doris Lotz, M.D.

Stephen J. Bartels, M.S., M.D.

**State mental health authorities can use public-academic partnerships to create professional roles in which leaders can track trends, identify problems, and carry out quality improvement projects to address key issues. Leaders with positions in both academic institutions and state mental health authorities ensure access to resources, technical expertise, and key relationships to improve quality. The authors describe a public-academic partnership in New Hampshire and a quality improvement program it carried out. The program encourages providers at community mental health centers to adopt prescribing practices that limit the cardiometabolic side effects of antipsychotic medicines. (*Psychiatric Services* 62:1004–1006, 2011)**

*Dr. Brunette is affiliated with the New Hampshire Department of Health and Human Services (NHDHHS) and the Department of Psychiatry, Dartmouth Psychiatric Research Center, State Office Park South, 105 Pleasant St., Concord, NH 03301 (e-mail: mary.f.brunette@dartmouth.edu). Dr. de Nesnera and Dr. Bartels are with Dartmouth Medical School, Lebanon, New Hampshire, where Ms. Swain was affiliated until her retirement. Mr. Riera and Dr. Lotz are with the Bureau of Behavioral Health, NHDHHS, Concord, New Hampshire. Lisa B. Dixon, M.D., M.P.H., and Brian Hepburn, M.D. are editors of this column.*

State mental health authorities can use public-academic partnerships to enhance many capabilities, including staffing, training, data analysis, program evaluation, and quality improvement. We describe the New Hampshire partnership and a quality improvement program created by the partnership that advances the health of people with severe mental illnesses by improving antipsychotic prescribing practices in community mental health settings.

The New Hampshire Bureau of Behavioral Health and Dartmouth Medical School initiated a public-academic partnership in 1988. Since that time, the Dartmouth academic partners have conducted public mental health services research, but the partnership involves a variety of other important functions as well. Contracts developed by the partnership enable the state's Department of Health and Human Services (DHHS) to recruit and retain high quality psychiatrists to staff the state hospital, clinician leaders to work within DHHS, and a data analyst to support quality improvement.

One of the clinician leaders (MFB) is the medical director of the Bureau of Behavioral Health, who works 40% of the time within DHHS and 60% within the academic center. The medical director meets regularly with leaders of all of the community mental health centers, the state psychiatric hospital, the state's Medicaid program, the Bureau of Behavioral Health, the medical school's Department of Psy-

chiatry, and community stakeholders to oversee and coordinate community mental health care in the state. By having long-standing roles within both DHHS and the medical school, this leader has established ongoing relationships in both settings that facilitate high-quality initiatives.

Another advantage of such dual positioning is the ability to track and participate in public mental health research. For example, the academic partners tracked the research indicating that even at low doses, many second-generation antipsychotic medications can cause serious side effects, such as obesity and diabetes, for up to 50% of patients. These side effects contribute to the development of heart disease and early mortality among people with severe mental illnesses.

In 2004, the American Psychiatric Association and the American Diabetes Association recommended regular monitoring to identify and rapidly address medication-induced cardiometabolic side effects, but reports from across the country indicate that adoption of these recommendations has been slow (1). Additionally, antipsychotic polypharmacy—use of two or more antipsychotics at once—has become increasingly common, although a growing body of evidence suggests that polypharmacy is no more effective than monotherapy (2), and it is not recommended by treatment guidelines (3). In 2008, after interviewing leaders of the community mental health centers and analyzing

state Medicaid claims, the medical director of the Bureau of Behavioral Health established that local practices mirrored these national trends and that improvements were needed.

### **Overview of the quality initiative**

In 2009, the medical director and the lead administrator of the Bureau of Behavioral Health (ER) initiated an antipsychotic quality improvement program. The program aimed to reduce use of antipsychotics with high likelihood of cardiometabolic side effects, reduce antipsychotic polypharmacy and use of antipsychotics for indications other than psychosis, and increase adherence to side effect-monitoring guidelines. The long-term goal of the program was to improve the physical health of patients with severe mental illnesses who are served in the state public mental health system.

Partnerships were established between the Bureau of Behavioral Health and leaders of the state psychiatric hospital (AD), the Medicaid program (DL), and the academic services research group (SJB) by meeting to discuss the public health problem and a strategy to address it. These leaders recognized the seriousness of the problem and readily partnered with the bureau. The previously established relationships between these leaders facilitated rapid buy-in.

The first strategy to address the problem involved educating community mental health leaders, other community stakeholders, and, later, all community mental health prescribers over several years. Second, a quality improvement team delivered in-person education to prescribers at each mental health center. The rationale for and details of the antipsychotic prescribing quality improvement program are described below.

### **Strategies to improve quality of prescribing**

To improve the quality of prescribing practices, the leaders considered using preferred-drug programs, prior authorization, academic detailing, and audit and feedback.

Medicaid and private insurance companies in most states use preferred-drug programs. These programs require clinicians to use medications con-

sidered preferred before using other medications within the same class, thereby shaping prescribing practices toward use of less expensive, but therapeutically similar or equivalent, agents. These programs are designed to contain costs while maintaining access to many or all medications (4).

Preferred-drug programs are used in conjunction with prior authorization, which requires formal approval to access a nonpreferred medication. When used to manage some classes of medications, such as nonsteroidal anti-inflammatory medications, this strategy can significantly reduce costs (5), but the impact of such programs on antipsychotic prescribing is unclear. In fact, very few studies that assessed outcomes of such programs have been published. One study of such a program demonstrated that use of nonpreferred antipsychotics was reduced by up to 13.9% (6) but was associated with an unintended increase in antipsychotic treatment discontinuities among Medicaid recipients and did not change total pharmacy reimbursements (7,8). Prior authorization with step therapy—the required use of one medication before trying another—achieved the intended goal of reducing use of second-generation agents but was associated with increased outpatient treatment (9). The cost of increased outpatient treatment equaled the savings achieved by reducing use of second-generation medications.

Academic detailing, or educational outreach, entails visits by physicians or respected peers to counsel prescribers about the evidence for risks, benefits, and efficacy of medication alternatives (10). Studies have shown that this strategy can change prescribing practices to conform to evidence-based standards while maintaining the capacity for individualized treatment (11). Changes in prescribing have been found for about 5% of patients of general medical practices that have received academic detailing, although some studies demonstrated changes in prescribing practices that affected as many as 50% of patients (11). When delivered with additional intensive training, academic detailing reduced use of antipsychotics among elderly nursing home residents (12). In contrast, a recent study found that four in-

person educational visits did not reduce antipsychotic polypharmacy in a Danish municipality, but the meetings were poorly attended (13).

Audit and feedback involves showing clinicians data on their prescribing patterns and comparing them with recommended practices. Multiple studies have demonstrated that this method reduced psychotropic medication polypharmacy (14,15). Education may also be effective, especially if the outcomes are perceived to be serious (16).

After reviewing these strategies, the team chose to implement a combination of approaches. Preferred-drug and prior authorization programs were already in place and were designed to leverage lower prices for medications while maintaining access. The team chose to avoid increasing the stringency of prior authorization or adding step therapy because these strategies could lead to interruptions in treatment or increases in service use and were universally unpopular with stakeholders. Instead, they developed a program that combined academic detailing with audit and feedback because these strategies were supported by the most promising evidence of efficacy in improving antipsychotic prescribing and also provided clinicians and patients with more flexibility and choice. The team planned to monitor the project's efficacy by analyzing Medicaid claims data and collecting data on the rates of office and laboratory monitoring of cardiometabolic side effects during annual reviews of community mental health center records.

### **Implementation of the quality improvement program**

The project was implemented on two levels. The first level of the initiative was an effort to achieve broad stakeholder engagement and education. As part of this process, the quality improvement team engages and educates state leaders, mental health center leaders, and consumer and family groups. They provide community mental health center leaders with access to lectures by experts and current data summaries of antipsychotic prescribing practices that allow them to compare practices at their own center with those of others. All community mental health prescribers are sent a

quarterly letter describing the quality initiative and its goals and recommendations as well as articles relevant to the initiative. Additionally, the quality improvement group has partnered with the Medicaid program to send educational letters to medical professionals who have prescribed an antipsychotic without obtaining the recommended laboratory tests of cardiometabolic side effects.

The second level of the program consists of 45-minute, in-person educational visits to all of the prescribers within each community mental health center. A series of three visits in ten months incorporates academic detailing and audit and feedback strategies. The visits include a presentation describing current research evidence for antipsychotic treatment and providing information through summary tables from state Medicaid claims data about the prescribers' recent prescribing patterns as well as feedback about and reinforcement for changes made over time in their antipsychotic prescribing. Data tables about prescribing practices at the center allow prescribers to compare patterns in antipsychotic prescribing and monitoring among centers. Tables summarizing prescribing practices by individuals allow them to compare their practices with those of peers within their center. A part-time data analyst provides key technical support for this component of the educational intervention. The presenters give prescribers easy-to-use reference materials and encourage discussion about the site-specific prescribing data.

### Challenges in implementing public-academic partnerships

State mental health authorities and academic researchers may have differing goals. Mental health authorities often focus on limiting cost and adhering to regulations. Although they seek quality, improving quality in response to new information may be deferred or even defunded, particularly in challenging fiscal and political environments. Academic partners, on the other hand, often focus on developing and testing treatments.

Improving the quality of care is an area where mental health authorities and researchers may have mutual interests. Academic partners can bring

energy, resources, and expertise to address new public health problems. By employing academic partners within DHHS, a public mental health authority may preserve its capacity for quality improvement and also maintain long-standing relationships that enable departments to collaborate to improve care.

In this case, the state Medicaid program had already implemented a prescription management strategy, through a preferred-drug list, that focused primarily on cost and control. In the absence of a public-academic partnership, it could have sought further restrictions to address the quality goals. Instead, the team chose to enhance quality by using a research-based strategy to increase prescriber knowledge and motivation while maintaining flexibility and choice for prescribers and patients and meeting the needs of the public mental health system to improve care.

### Summary and conclusions

State mental health authorities can use public-academic partnerships to create leadership roles in which leaders can track trends, identify new problems, and carry out quality improvement projects to address key issues. In this case, members of the partnership responded to growing concerns about early general medical morbidity and mortality among people with severe mental illnesses by initiating a program to improve antipsychotic prescribing.

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### References

1. Moratto EH, Druss BG, Hartung DM, et al: Metabolic testing rates in three state Medicaid programs after FDA warnings and ADA/APA recommendations for second-generation antipsychotic drugs *Archives of General Psychiatry* 67:17–24, 2010
2. Correll CU: Monitoring and management of antipsychotic-related metabolic and endocrine adverse events in pediatric patients. *International Reviews in Psychiatry* 20:195–201, 2008
3. Buchanan RW, Kreyenbuhl J, Kelly DL, et al: The 2009 Schizophrenia PORT psy-

chopharmacological treatment recommendations and summary statements. *Schizophrenia Bulletin* 36:71–93, 2010

4. Simeone JC, Marcoux RM, Quilliam BJ: Cost and utilization of behavioral health medications associated with rescission of an exemption for prior authorization for severe and persistent mental illness in the Vermont Medicaid program. *Journal of Managed Care Pharmacy* 16:317–328, 2010
5. Motheral BR: Pharmaceutical step-therapy interventions: a critical review of the literature. *Journal of Managed Care Pharmacy* 17:143–155, 2011
6. Law MR, Ross-Degnan D, Soumerai SB: Effect of prior authorization of second-generation antipsychotic agents on pharmacy utilization and reimbursements. *Psychiatric Services* 59:540–546, 2008
7. Soumerai SB, Zhang F, Ross-Degnan D, et al: Use of atypical antipsychotic drugs for schizophrenia in Maine Medicaid following a policy change. *Health Affairs* 27:w185–195, 2008
8. West JC, Wilk JE, Rae DS, et al: Medicaid prescription drug policies and medication access and continuity: findings from ten states. *Psychiatric Services* 60:601–610, 2009
9. Farley JF, Cline RR, Schommer JC, et al: Retrospective assessment of Medicaid step-therapy prior authorization policy for atypical antipsychotic medications. *Clinical Therapeutics* 30:1524–1539, 2008
10. Soumerai S, Avorn J: Principles of educational outreach (“academic detailing”) to improve clinical decision making. *JAMA* 263:549–556, 1990
11. O'Brien MA, Rogers S, Jamtvedt G, et al: Educational outreach visits: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews* issue 4, art no CD000409, 2007. DOI 10.1002/14651858
12. Meador KG, Taylor JA, Thapa PB, et al: Predictors of antipsychotic withdrawal or dose reduction in a randomized controlled trial of provider education. *Journal of the American Geriatrics Society* 45:207–210, 1997
13. Baandrup L, Allerup P, Lublin H, et al: Evaluation of a multifaceted intervention to limit excessive antipsychotic coprescribing in schizophrenia out-patients. *Acta Psychiatrica Scandinavica* 122:367–374, 2010
14. Uttaro T, Finnerty M, White T, et al: Reduction of concurrent antipsychotic prescribing practices through the use of PSYCKES. *Administration and Policy in Mental Health and Mental Health Services Research* 34:57–61, 2007
15. Goren JL, Beck SE, Mills BJ, et al: Development and delivery of a quality improvement program to reduce antipsychotic polytherapy. *Journal of Managed Care Pharmacy* 16:393–401, 2010
16. Forsetlund L, Bjørndal A, Rashidian A, et al: Continuing education meetings and workshops: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews* 2:CD003030, 2009. DOI 10.1002/14651858