Implementing Best-Practice Guidelines for Schizophrenia in a Public-Sector Institution

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During the 1990s significant changes took place in the practice of psychiatry, particularly in the treatment of schizophrenia and related disorders (1). These changes were the result of a combination of factors, including deinstitutionalization, the availability of new medications, and managed care. Managed care has prompted the need to demonstrate the efficacy and effectiveness of new medications and other evidence-based interventions to support their incorporation in clinical practice.

Published guidelines for the treatment of schizophrenia (2,3) provide a framework of reference that includes expert consensus and research evidence supporting a rational approach to disease management. Most guidelines are general, and their implementation has been left up to practitioners and organizations. The extent to which clinical sites conform to guidelines varies, partly because of differences in financial support and the availability of other resources (4).

This column describes the experience of clinicians working in a public-sector institution in implementing best-practice guidelines for schizophrenia.

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Setting

The psychiatry service at the University Health System of the University of Texas at San Antonio serves more than 300 patients with schizophrenia or schizoaffective disorder. Most of these patients receive psychiatric treatment through the thought disorders outpatient clinic, which meets once a week. In this clinic the team consists of three attending psychiatrists, two nurses, and three case managers who are master's-level social workers. Two or three third-year residents in psychiatry rotate at 12-month intervals, and a variable number of third-year medical students rotate every six weeks. Inpatient services are provided through the 27-bed unit at the University Hospital.

The thought disorders outpatient clinic is under pressure to provide services to an increasing number of patients with a limited amount of resources while continuing to teach medical students and residents in psychiatry. Furthermore, because of the characteristics of funding in the county, the University Health System does not receive any state funds for providing psychosocial services, which creates another barrier to the provision of integrated services.

In 1998 the psychiatry service at the University Health System began a continuous improvement process. This process is an approach to quality management that builds on traditional quality assurance methods and promotes the need for objective data that are used to analyze and improve the process (5).

Establishing the guidelines

The goal for the continuous improvement process task group was to develop and implement a best-practice model for patients with schizophrenia. The initiative was the result of a joint venture between the department of psychiatry at the University of Texas Health Science Center at San Antonio and the University Health System through its outcomes and case management department. The ten-member task group was composed of representatives of each of the clinical sites—the thought disorders outpatient clinic, the inpatient service, and the emergency center—and included psychiatrists, nurses, social workers, pharmacists, and information systems representatives. The group was initially chaired by the second author and is now chaired by the first author.

The model of evidence-based medicine, described by Ellrodt and associates (6), was used as a starting point. This model uses an approach to practice and teaching that integrates pathophysiological rationale, caregivers' experiences, and patients' experiences with valid and current clinical research evidence. The task group reviewed published research studies and descriptions of clinical experiences and developed a treatment grid describing the best practice for patients with schizophrenia through the continuum of care—presentation, acute care, postacute care, and maintenance. In each of these areas, group members examined the psychiatry service's current practice by identify-

ing needs, obstacles, and resources with the goal of improving service delivery.

The problem-solving process

Problems were identified in the areas of documentation, medication management, medical treatments of comorbid disease states, patient and family education, continuity of care, and community support programs. Work groups were established and began the problem-solving process in each of the specific areas. The work groups emphasized the identification of goals that could be achieved within six months to a year.

Documentation work group. One of the problems identified by the documentation work group was a lack of consistency in the clinical data gathered. The initial goal was to standardize the information collected during outpatient visits. This goal was partly accomplished by developing a thought disorders clinic progress note and incorporating the Schizophrenia Rating Scale. The progress note has both narrative and structured components. The narrative component, which describes the patient's status since the last visit, allows for flexibility in describing the particularities of the patient's condition. The structured sections ensure that key information is systematically recorded. These sections include mental status examination, alcohol and drug use, axis I through axis III diagnoses, Global Assessment of Functioning score, Abnormal Involuntary Movements Scale score, medication side effects, and Clinical Global Impression.

The Schizophrenia Rating Scale is the result of work done through the Texas Medication Algorithm Project (TMAP) schizophrenia module (7,8). The project is a public-academic collaboration to improve the quality of care of persons with serious mental disorders in the public health system of Texas (7). The Schizophrenia Rating Scale was developed by the project to standardize the evaluation of symptoms and the assessment of treatment response for subjects enrolled in the project. The Schizophrenia Rating Scale consists of four items from the psychosis factor of the Brief Psychiatric Rating Scale and four items selected from the Negative Symptom Assessment Scale and the Schedule for the Assessment of Negative Symptoms.

The Schizophrenia Rating Scale is easy to administer, brief, and sensitive to change in both positive and negative symptoms. It is completed on every visit to the clinic for all patients with a diagnosis of schizophrenia or schizoaffective disorder. Faculty and residents are trained in its administration through a videotape developed for TMAP.

The Global Assessment of Functioning (GAF) is used as the standard measure of overall adaptive functioning. Patients' ratings are recorded in the thought disorders clinic progress note at least every three months. To become reliable raters, residents and faculty must use a training tape on the GAF. Currently, other important aspects of a patient's clinical presentation, such as social skills, cognitive abilities, work skills, and basic social service needs, are not assessed in a standardized manner during routine visits, partly because of time limitations of routine visits and the lack of instruments that can be used for this purpose.

The psychosocial evaluation conducted at the clinic is currently under revision, with the goal of incorporating brief instruments that could be administered at the initial visit and could aid in the development of a multidisciplinary treatment plan.

The treatment guideline grid, the algorithm, and the rating scales can be accessed on the Web at http://www2. uthscsa.dcci.com/legler/uhsformulary/ uhsdruginfo.htm through the schizophrenia clinical pathway. More information on TMAP is available at www. mhmr.state. tx.us/meds/tmap.htm.

Medication management work group. The identified problem was the lack of consistency in the approach to the pharmacological treatment of patients with schizophrenia. The goal was to implement a schizophrenia algorithm based on the recommendations adopted by TMAP for selection of medications, treatment response, and dosage adjustment. The TMAP schizophrenia algorithm was designed to ensure that pharmacological treatment progresses systematically through specific stages until good results are achieved. Each stage represents a therapeutic trial for the patient and has within it critical decision points at which the physician decides whether to move to the next stage of the medication algorithm.

An important reason for adopting the algorithm was to be able to make atypical antipsychotic medications available to all patients regardless of their source of funding. When the algorithm was implemented, only risperidone was available on the formulary. About six months later, after reviewing the evidence-based and rational approach to the use of atypical antipsychotics outlined in the TMAP guidelines, the pharmacy and therapeutics committee authorized the inclusion on the formulary of olanzapine and later quetiapine.

The University Health System administration was concerned about cost and wanted atypical agents to be prescribed in order of least to most expensive. However, this directive was not supported by pharmacoeconomic data. Furthermore, the continuous improvement process work group did not want to establish a precedent in which cost considerations overrode clinical information. After negotiations between the work group and the administration, a compromise was reached, and this sentence was inserted into the algorithm: "The physician will use as the initial medication the less expensive of the three atypicals unless such choice is clinically contraindicated."

The compromise supports the value of the clinical decision because the prescribing psychiatrist makes the final selection, and no preapproval is required. The administration agreed with the premise that acquisition cost is only a portion of the total cost of using a medication. However, the administration asked for data to support this assumption. To address this request, patient information in the database will be linked with cost information—the cost of inpatient and outpatient treatment, emergency visits for both psychiatric and general medical care, and medications. Cost information is routinely gathered through the hospital system with the long-term goal of assessing the cost-effectiveness of clinical interventions, including the use of specific medications.

Since 1998 more than 103 patients with schizophrenia or schizoaffective disorder have undergone treatment by the algorithm guidelines, and to date 67 patients have completed three or more critical visits. (A critical visit is one that occurs at a decision point in the algorithm.) All these patients were taking typical antipsychotics and were started on treatment under the algorithm because of poor symptom control or side effects. More than 63 percent of the patients beginning treatment at stage 1 achieved good symptom control. As expected, a smaller percentage of patients achieved good response as they progressed through the stages. However, the fact that some patients responded to one atypical and not to another supported the pharmacy and therapeutics committee's recommendation that all atypical agents be made available.

After the algorithm was implemented, the original TMAP recommendations about the length of time between visits had to be revised to accommodate practical issues such as patients' preferences and financial concerns. Most patients did not want to return for weekly follow-up visits during the initial month after a medication change. As a result the interval between visits had to be extended. The average length of time between critical visits 1 and 2 was 5.4 weeks, compared with the three weeks recommended by TMAP.

Work group on medical treatments of comorbid disease states. One problem in this area was that the patients with schizophrenia who had diabetes were not attending diabetes education classes. The first goal of the work group was to identify potential causes of the problem. According to patients, the most common causes were difficulty understanding the material provided, lack of transportation, and difficulty finding the rooms where services were offered. The next goal was to develop a strategy to address these problems within our resources. The solution included networking within the diabetes education program and finding an instructor who was willing to offer sessions at the thought disorders clinic and at a pace adapted to patients' cognitive capacity.

All ten patients referred attended at least one session. Although no formal evaluation was conducted, patients' willingness to attend at least one session suggests that such an approach can be helpful for this population. The next goal is to assess the intervention more systematically.

Another problem identified by the work group was weight gain among patients on atypical antipsychotics. The goal was to develop an intervention to educate patients about the importance of maintaining a healthy diet and exercising. A weight management group was established on clinic days to facilitate attendance. The group is led by a social worker, with a nutritionist consultant. The sessions include food diaries, food preparation, and a 30-minute walk. Weight is checked every six weeks. No formal evaluation has been conducted, but six patients have consistently attended since February 1999. All are taking clozapine, and each has lost between four and seven pounds.

Work group on continuity of care. The work group on continuity of care focused on inconsistency in the availability of records at the time of patients' visits. This problem was partly solved by the development of a database of clinically relevant information gathered systematically. The thought disorders clinic database includes data on more than 300 patients with schizophrenia or schizoaffective disorder. At the beginning of each clinic day, the team receives a computer-generated list of the names of all patients who will be attending that day and their scores on the Schizophrenia Rating Scale, medication dosages, algorithm stages, and visit dates.

Using these scores, the team is able to monitor patients' progress. In addition, the team can assess the impact of the implementation of the antipsychotic medication algorithm. The ability to track key symptoms in an objective and time-efficient manner has enhanced the education process and the supervision of psychiatric residents.

Work group on patient and family education. The identified problem was the lack of consistency in the education provided to newly diagnosed patients and their families. The initial goals were to review all the available educational materials, including brochures, videos, and pamphlets, and

to select those that might be more appropriate for the clinic population. Once the selection process was completed, the next goal was to develop a protocol describing the basic information and materials to be provided at both the inpatient and the outpatient levels.

Through these discussions, it became clear that patients also needed more information about services provided by the University Health System. One problem was patients' difficulties in mastering interactions with the pharmacy. Members of the work group established a liaison with the pharmacy and developed a video for patients that provided simple explanations about how to refill prescriptions, what to do when a supply of medications is running low, and what to do when a prescription cannot be filled. The video is played in the clinic's waiting room. No formal evaluation of its impact has been conducted.

Conclusions

Implementing best-practice guidelines for schizophrenia is an arduous but rewarding process. It requires the joint effort and commitment of two organizations, the University Health System and the department of psychiatry at the University of Texas Health Science Center at San Antonio. It also requires the drive, creativity, and perseverance of participants in the continuous improvement process and their willingness to cooperate across the clinical sites—the thought disorders outpatient clinic and inpatient and emergency services—and across the fields of psychiatry, social work, nursing, pharmacy, and information systems. Access to the experience of participants in the Texas Medication Algorithm Project has facilitated the endeavor. The development of concrete products that are readily integrated into daily practice and that simplify work has helped gain providers' acceptance of the guidelines.

Implementation of the best-practice guidelines is an ongoing process that requires an ability to adapt to the ever-changing realities of health care and the frequent revision of priorities by administrators. ♦

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References

1. Buckley P, Miller A, Chiles JA, et al: Implementing effectiveness research and improving care for schizophrenia in real world settings. American Journal of Managed Care, special issue 5:SP47–SP56, June 1999

2. American Psychiatric Association Practice Guideline for the Treatment of Patients with Schizophrenia. American Journal of Psychiatry 154(Apr suppl):1–63, 1997

3. Lehman AF, Steinwachs DM: Translating research into practice: the Schizophrenia Patient Outcomes Research Team (PORT) treatment recommendations. Schizophrenia Bulletin 24:1–10, 1998

4. Young AS, Sullivan G, Burnam MA, et al: Measuring the quality of outpatient treatment for schizophrenia. Archives of General Psychiatry 55:611–617, 1998

5. Duncan C, Lindemann L, Burandt J, et al: Targeting Quality: UHS Manual. San Antonio, University of Texas Health Science Center at San Antonio, University Health System, 1997

6. Ellrodt G, Cook DJ, Lee J, et al: Evidence-based disease management. JAMA 278:1687–1692, 1997

7. Chiles JA, Miller AL, Crismon ML, et al: The Texas Medication Algorithm Project: development and implementation of the schizophrenia algorithm. Psychiatric Services 50:69–74, 1999

8. Miller AL, Chiles JA, Chiles JK, et al: The Texas Medication Algorithm Project schizophrenia algorithms. Journal of Clinical Psychiatry 60:649–657, 1999