Pharmacoeconomics of Schizophrenia in the 21st Century

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During the next century—if not before—a variety of issues associated with mental health care in the United States need to be addressed and resolved nationwide, including securing full parity for patients with psychiatric disorders, improving the overall medical health of psychiatric patients, establishing the effectiveness as well as the efficacy of new drugs and educating health care providers about new drugs and new uses for older drugs, and using all costs to evaluate new therapeutic strategies or medications. The following discussion covers some of the major findings from studies conducted in the Commonwealth of Massachusetts, touches on some of the areas mentioned above, and is intended to serve as a springboard for exchanges among professionals in the health care community who care for psychiatric patients. *(J Clin Psychiatry 1999;60[suppl 1]:26–27)*

THE COMMONWEALTH OF MASSACHUSETTS EXPERIENCE

Nearly all schizophrenic patients in the Commonwealth of Massachusetts eventually receive public assistance. Over the years, we have examined the overall cost and the various individual components of different mental disease states to find management strategies that produce better outcomes for patients while containing costs. Since 1992, the Commonwealth has imposed no restrictions (e.g., prior approval) on the use of any of the newer antipsychotics for schizophrenia or serotonin selective reuptake inhibitors for depression.

About 55% of the insured population of the Commonwealth of Massachusetts receives health care under managed capitated programs. This is substantially higher than the percentage in most states and may reflect trends to come for other parts of the country. The agency responsible for Medicaid in the Commonwealth manages a $3.8 billion budget, with approximately $250 million allocated for mental health. The state's prescription drug costs are keeping pace with the Consumer Price Index (Table 1).

For the fiscal period 1993 to 1997, inpatient costs for psychiatric patients decreased overall, which translates into decreased need for long-term care hospitals. After increasing 20% in 1993, acute outpatient costs have stabilized (Table 2). The percentage of the budget devoted to pharmacy costs increased in 1993, when clozapine and some other more expensive antipsychotics were introduced, and has continued to increase at a rate of about 15.6% each year. However, it is important not to focus on just one area, but to look at all costs over longer periods than are usually studied. For example, although the expenditures for prescription drugs increased after the introduction of the newer antipsychotics, other costs over the years were positively influenced by the effectiveness of these drugs.

PARITY FOR MENTAL HEALTH

The disparity in overall general health and allocations for care between patients with psychiatric illnesses and those with medical illness is unacceptable and cannot be justified. Administrators and legislators—who ask few questions about the cost of antihemophilic factor, new oncology drugs, or the cost of full-time nursing associated with diseases—often argue against the cost of the newer, more expensive psychiatric drugs, although these drugs often help patients return to a level of functioning that permits hospital discharge. Less expensive drugs are substituted even though they may produce a lower level of functioning and their side effects lead to a poorer quality of life. Administrators need to be educated to examine a drug's effectiveness, not just its efficacy (Table 3).

IMPROVING OVERALL HEALTH OF PSYCHIATRIC PATIENTS

Patients with mental illness in the Commonwealth of Massachusetts die an average of 15 years earlier than indi-

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Table 1. Budget Issues in the Commonwealth of Massachusetts Department of Medical Assistance*

Total budget $3.8 billion
$250 million allocated for mental health
1.5% growth in enrollment projected
3.4% growth in PMPM projected
15.6% growth in pharmacy PMPM projected, to $60 PMPM

*Data on file. PMPM = capitation rate per member per month.

Table 2. Forecast Summary for the Commonwealth of Massachusetts Department of Mental Health*

Account	FY93	FY94	FY95	FY96	FY97 (est)
Inpatient acute hospital	29.3%	–2.20%	–7.0%	–3.5%	1.2%
Outpatient acute hospital	20.0%	12.9%	3.3%	2.4%	2.5%
Pharmacy	25.1%	13.9%	6.3%	20.4%	15.6%
Mental health/ substance abuse	8.3%	10.2%	1.9%	–1.0%	4.0%
Inpatient nonacute hospital	–1.6%	–13.0%	–12.2%	–7.7%	2.6%
Outpatient nonacute hospital	27.9%	6.5%	32.6%	9.6%	7.0%
Community long-term care	16.7%	11.4%	4.6%	4.5%	5.4%

*Data on file. FY = fiscal year.

viduals in the general population (M.A.H., manuscript submitted, 1998). The leading cause of death is cancer, particularly lung cancer, followed by a wide variety of uncontrolled cardiovascular problems including hypertension and pulmonary disease. There are few internists and family physicians in mental health institutions or in the community who provide basic preventive health care such as mammograms or Papanicolaou (Pap) smears to schizophrenic patients or well-child checkups to children of schizophrenic mothers.

Hospitals and community health providers are often reluctant to treat mental health patients because of poor hygiene or aggressive or provocative behavior that disturbs clinic or office patients. In addition, health care workers often do not try to increase compliance among patients who refuse to accept treatment by, for example, educating families about the importance of taking diabetes or hypertension medications or by developing innovative methods to follow patients and manage their care.

Basic preventive medical care can extend the lives of many psychiatric patients. Health maintenance organizations and managed care providers with contracts to provide care to the Medicaid population of the Commonwealth of Massachusetts are rated by how much general medical care they give to all patients, including those with psychiatric illnesses. The Commonwealth uses standard

Table 3. Drug Efficacy vs. Drug Effectiveness*

Is treatment effective for the patient under ordinary life conditions?
Is the patient's functional status improved?
Is the patient able to adhere to the treatment regimen?
Does the patient remain in treatment?
Are side effects tolerable?
What is the total cost of treatment?

*While *efficacy* is a research term that reports whether or not a drug works, a drug's *effectiveness* reflects the real world, or what the disease result is after a treatment is used under typical practice conditions. In cost evaluations of new drugs and technologies, the above questions need to be addressed.

measures, such as the number of patients receiving periodic mammograms and Pap smears, and other indicators in the Healthplan Employer Data and Information Set (HEDIS), a national effort directed by the National Committee for Quality Assurance (NCQA). This data set monitors and compares medical care in different populations.

OVERALL COST OF CARE

During the 21st century, all states need to implement a system that brings together the skills of many disciplines to evaluate new technologies and drugs in a thoughtful and organized way. The lifetime cost of schizophrenia and other mental diseases, rather than the cost of single episodes of care, needs to be studied to identify areas for improvement. In any disease category, calculations of inpatient care and outpatient care costs and pharmacy costs constitute just a few of the items in overall cost of health care. All items should be viewed along a continuum, with linking of inpatient and outpatient budgets. For example, if schizophrenic patients discharged from psychiatric facilities after successful treatment with a new antipsychotic have their medication switched to a less expensive drug because the outpatient community budget is limited, the overall cost of care escalates due to costs associated with relapse, rehospitalization, and retreatment.

CONCLUSION

In the next century, continuing pressures on state and federal agencies and on insurers and private providers will lead to evaluation of all direct and indirect costs within all disease categories. The experience of the Commonwealth of Massachusetts indicates the need for a team approach that includes researchers, health care administrators, clinicians, economists, legislators, and others. By working together, these professionals can formulate appropriate policies for patients with mental illness and implement the use of new drugs and management strategies that are not only clinically effective but also cost effective.