Medical outcomes is still an emerging, and imperfect, science. But as more purchasers and health systems strive to improve quality of care and control costs, pharmacy is sure to play a more significant role in this burgeoning field.
necessary to perform true outcomes analysis has led many to question the discipline's usefulness and validity. This skepticism is further fueled by the perception held by some critics that many outcomes-oriented or disease management programs amount to little more than marketing opportunities for the pharmaceutical industry. These skeptics also cite the fact that to date, no clear leader has emerged in the field of outcomes management.

In this article, the author examines the state of outcomes management—paying particular attention to the role pharmacy plays—through the views and experiences of several individuals and organizations that have been involved in the movement.

**EMPLOYERS: THE DRIVING FORCE BEHIND THE OUTCOMES MOVEMENT**

The outcomes movement has been fueled largely by purchasers' efforts to reduce escalating health care costs while holding health plans and providers more accountable for the quality of the medical services they provide. Although most employers mainly are concerned with designing and managing their own health benefit programs to control costs, several large companies are starting to delve into the area of outcomes and disease management, says Larry Boress, vice president of the Chicago-based Midwest Business Group on Health, a nonprofit business coalition of more than 100 corporations in 11 states.

"There is a belief among employers that this is the right direction to take," Boress says. "These employers "are not waiting for the perfect tool or protocol. There are decisions that need to be made today, so they are using the tools they currently have." The goal of most of these purchasers is to eventually obtain "an integrated data system" that will allow them to see exactly how their health care dollars are being spent.

First Chicago NBD, a banking/credit card company with more than 35,000 employees nationwide, has been a leader in using integrated data systems to pinpoint where their health dollars go and in using that information to better tailor their benefits to promote employee wellness and reduce health care costs. First Chicago's Vice President and Corporate Medical Director, Wayne N. Burton, M.D., has published papers showing how the company was able to use this data during the 1980s and early 1990s to develop programs to better address the needs of patients with costly medical conditions. For example, after the company determined that roughly 50% of its mental health costs were attributable to depression, it initiated an employee assistance program (EAP), introduced psychiatric case management and utilization review, and revamped its benefits design by increasing coverage for outpatient and partial day hospitalization services. As a result, the company saw a decline in its overall costs for mental health and substance abuse treatment during a period when overall medical costs increased.

Dr. Burton says he now is working on an unpublished study that looks at depression data from 1993 through 1995. Initial results show that in dollars spent per covered life during those years, "inpatient costs are down, outpatient costs are up, and pharmaceutical costs are up" related to depressive illness. But overall costs for treating depression are down compared with 1984, when the company's costs for treating this disorder reached its peak. "This is what we want to see," Burton says. "We want more employees to access outpatient facilities and use drugs for the treatment of depression."

**PROVIDERS RESPOND TO MANAGED CARE**

Managed care also is driving the demand for good outcomes data. In California, where managed care reigns supreme, many physicians have begun responding to this call. One organization heavily involved in this area is the National IPA Coalition (NIPAC) in Oakland, which consists of 125 physician organizations that care for more than 3.5 million patients enrolled in managed care. The organization's goal is to help IPs and other physician groups become more effective and efficient in order to be successful with managed care.

Most of the outcomes and disease management programs operating today are "more talk than action," says Richard E. Dixon, M.D., NIPAC's vice president for medical affairs. Nevertheless, "progressive physician groups see enormous promise in the efforts to bring standardization of practice. We just have to figure out how to do it."

NIPAC recently began several pilot projects to help develop disease management tools to provide to its members. "We're not coming out with a NIPAC protocol, but with the tools to help [doctors] develop [their own] protocols," Dixon says. NIPAC also is part of a California-based coalition of providers, purchasers, and plans that...
recently agreed to share pharmaceutical data as part of an initiative to promote greater outcomes management. Such data will allow the users to (1) define patient populations at risk based on the drugs they take; (2) determine the severity of a disease based on drug usage; and (3) determine an outcome in and of itself (one example would be identifying the use of narcotic reversal agents, which would indicate previous inappropriate use of narcotics).

HIGHLIGHTING THE ROLE OF THE PHARMACIST

Tracking and preventing the inappropriate use of medications, which often leads to higher costs and poorer patient outcomes, also is at the heart of an effort being undertaken by the Massachusetts Medicaid agency. The project involves reducing the use of benzodiazepines, which have addictive properties, and increasing the use of non-benzodiazepines and non-drug therapies for Medicaid patients with certain mental disorders, explains Randy Vogenberg, R.Ph., Ph.D., president of the Institute for Contemporary Pharmacy Research, Waltham, Massachusetts, which helps organizations develop tools for determining outcomes. "One problem we identified was the fact that many physicians weren't transitioning their patients quickly enough to alternative therapies—such as buspirone—because they didn't know how to taper the dosage properly to avoid withdrawal symptoms," Vogenberg says.

Another project the state Medicaid agency conducted in 1993 sought to reduce inappropriate use of, and costs associated with, H2 antagonist for treating peptic ulcer disorders. Vogenberg's team identified a number of problems in this area: many initial doses for patients with acute conditions were too high to begin with; in other cases, patients remained on these initially high dosage levels long after they should have been placed on lower maintenance levels of the drug. In response, Vogenberg's team developed dosing criteria and provided educational programs, monographs, and reference materials for pharmacists, medical directors, and prescribers involved in treating the Medicaid population. In addition, the state implemented a prior approval program for the drug. Follow-up studies have found that about 1/3 of the prescriptions for H2 antagonists meet the new prescribing guidelines, resulting in annual savings to the Medicaid program of roughly $500,000 to $600,000. The program's success has prompted one other state, West Virginia, to adopt the same techniques within its Medicaid system.

Both the benzodiazepine and H2 antagonist programs undertaken in Massachusetts were designed to "play up the role of the pharmacist" in promoting good patient outcomes, by giving the pharmacist more opportunities to consult with physicians on therapeutic issues, Vogenberg says. He attributes much of the program's success to the fact that physicians were kept "in the loop," which in turn prompted their support and cooperation. Pharmacy has a tremendous opportunity to have a positive impact on patient outcomes, Vogenberg says, but this can happen only if pharmacists form strong working partnerships with other health providers, prescribers, and health care administrators.

FOSTERING A BETTER PATIENT-PHARMACIST RELATIONSHIP

"In pharmacy, the goal is to provide a service that makes a difference [in patient outcomes]," says Wendy Monroe, Pharm. D., president of MedOutcomes Inc., Richmond, Virginia, an affiliate of McKesson Corp. "Patients need knowledge and skills and they need feedback on how they are doing," she says. "They need a positive relationship with their caregivers. Pharmacists can provide those kinds of services."

One of the services MedOutcomes offers is to help pharmacists, especially those in retail settings, learn to provide added-value services to patients, and document the value of those services, Monroe explains. Pharmacists learn to apply clinical monitoring and disease management principles to improve patient care: these include systematic, ongoing monitoring of patients for drug-related problems, early intervention in and management of medical or drug-related problems, and patient behavior modification through counseling and other educational efforts. MedOutcomes currently offers disease management guidelines for asthma, diabetes, hypercholesterolemia, and hypertension; additional guidelines for depression, hormone replacement therapy, and gastrointestinal disorders are under development.

A study published in the January/February 1997 issue of Clinical Therapeutics showed how such an intervention program adopted by a retail pharmacy chain resulted in lower overall
health care costs. The study looked at 188 patients seen by Richmond-area CVS pharmacists who participated in the program. All 188 patients had one or more of the following: asthma, diabetes, high cholesterol, or hypertension. They were compared to a control group of patients who also visited the pharmacies, but did not participate in the program. The result: the overall average monthly health cost for each patient enrolled in the program was $200 to $300 lower than for the average patient in the control group, with the lower cost group averaging fewer hospital days and physician visits.

Monroe disagrees with those critics who charge that good patient outcomes simply cannot be achieved, or demonstrated, without proper integration of data and data systems. "There is so much mismanagement [of pharmaceutical care] today that you can make a significant impact working with what's already available," contends Monroe, who adds, "It's scary how little information we provide to people on how to use their drugs." She cites an anecdote from one recent project: when pharmacists monitored a non-insulin-dependent diabetic patient on glyburide, they found that her blood sugar levels still were not under proper control. The patient's pharmacy records indicated that she was getting her prescriptions refilled regularly, so compliance wasn't the issue. Through the intervention program, pharmacists discovered what happened: the patient had been instructed to take her medicine twice a day; so she did, once in the morning, and again two hours later. "She had no clue" as to the importance of taking her medicine at the proper time intervals.

The challenge for pharmacists is getting payors to recognize the value of what they do, she says. "Payors need to look at pharmacy in a different light. They need to realize that pharmacists and their services are cost-effective."

**Skepticism Still Prevails**

Trying to convince payors, including employers, of the value of pharmacy services, or the value of other outcomes-oriented, disease management programs, is no easy task. "There are lots of companies out there touting outcomes products, but nobody is buying," says Craig Stern, president of ProPharma Pharmaceutical Consulting, Inc., Northridge, California. "There is an enormous amount of skepticism in the marketplace."

Stern attributes this skepticism to several factors. Outcomes and disease management are still "poorly defined," he says. "As a result, everyone is going in different directions, and too many companies are offering vague products," he charges. Also, many people in health care are realizing "that you have to deal with broader issues than just with specific diseases" in order to achieve meaningful improvements in patient care and in cost reduction.

Compounding this skepticism is the fact that to date, there have been only a few outcomes/disease management companies that have reported significant results from their programs, says one outcomes industry observer/analyst who spoke with the author on condition of anonymity. But this landscape is changing, the observer says. He cites recent data published by Diabetes Treatment Centers of America, Nashville, and Controlled Diabetes Services, a subsidiary of Eli Lilly, that showed significant reductions in hospitalizations, emergency room visits, and total treatment costs, as examples of the kinds of results that are just starting to emerge.

But many outcomes/disease management companies still lack good, reliable data to prove their point, the observer says. For one, most studies do not have good control groups of patients, in part because patients in managed care plans tend to enroll and dis-enroll all the time, and studies often fail to take into account these population shifts. Also, most data generated to date have been from one- to two-year studies, but many costly diseases, including cancer and cardiovascular illness, really require data from five years and beyond to be meaningful.

For any outcomes/disease management program to be truly successful, "it must focus on more than just pharmaceutical care," the observer says. "It has to be an all-encompassing program" featuring patient and physician education, monitoring, and intervention. "You really have to run the whole gamut."

Pharmacy data, however, will continue to be a key component of most disease management/outcomes programs. "Pharmacy is a yardstick for measuring overall disease management," says Karen Roberts, senior consultant with AON Consulting Group, San Francisco, which helps employers assess the value of data integration. "You can tell which diseases are out there by the medications people are taking. It's an accurate mirror of outcomes."

There is no question that medical outcomes and disease management are still emerging sciences, and it will be several years before the true impact of such programs on overall patient well-being and health care costs can be accurately assessed. Nevertheless, it's clear that such programs will become more critical as our health care delivery system evolves into the next century.

For pharmacists in particular, the movement appears to hold much promise. Now is the time for pharmacists to embrace the outcomes movement as a golden opportunity to become more directly involved in the patient care process. As Vogenberg says, the very future of the pharmacy profession could hinge on pharmacists' ability to position themselves as leading figures in the efforts already underway: "If you can't demonstrate value, you're not going to make it."