Trends in Managed Care Pharmacy: Responding to Changing Environments

By Joseph Eichenholz

The United States is not the same country it was a year ago, or even six months ago. Global events have impacted domestic, economic, and social policy options and decisions in a more precipitous manner than any other set of changes in recent memory. Last year, we were discussing how to allocate federal budget surpluses to education and health care, with enhanced drug coverage for seniors (both public and private sector) prominent on the agenda. Now, we are facing extended federal budget deficits, a new national economic reality, and global issues with far-reaching domestic impact.

But the health care sector cannot stand still in the face of issues we face internally, and we cannot be paralyzed by challenges from the external environment. Rather, we must look long and hard at ourselves and what we do, and we must reaffirm our commitments to patients, professionals, health care organizations, and the employers who ultimately pay the health care bills in this country.

A few major trends should guide our thinking and our actions in this regard as we also seek to preserve the financial viability of our own organizations and the integrity of the pharmacy benefit.

First, increasingly empowered consumers are challenging what we do for them and to them. In particular, those suffering from chronic conditions such as diabetes, heart disease, and chronic pain need greater attention. At the same time, an

aging "Baby Boomer generation" as a population needs to move up on our national health care radar screen.

All Americans have become the "worried well," wondering if those traditional runny noses and sore throats are a common viral infection, the flu, or—in the post-September 11 environment—possibly even deadly. Consumers are harnessing new information technology, particularly the Internet. Searching for disease and drug information is high on the web-surfing agenda.

Second, the relationships among all the stakeholders in health care continue to evolve: the patient-physician relationship, physician formation of medical groups that are attempting to manage defined patient populations, and contract/ownership relationships among medical groups, health plans, and integrated health systems. In the pharmacy area, there is growth in, and the consolidation of, the pharmacy benefit management organizations. We need to understand that dynamic and respond to it from the perspective of how that trend can work to the benefit of patients and payers.

Finally, the growing emphasis on quality and outcomes begs the question of how to define those terms, benchmark performance, and overcome the "silo effect" that has challenged managed care pharmacy efforts to document the true value of pharmaceutical-based and disease-focused interventions on the overall health status of patients and the overall cost of care.

This paper places these trends and challenges in the context of recently released managed care data. The specific managed care data cited below were taken from the Aventis Managed Care Digest Series¹, which is a centralized source of information about all aspects of managed care. It includes print, CD-ROM, and Internet editions (www.managedcaredigest.com)—all available either directly to the pharmacy community or through Aventis Pharmaceuticals. In addition, examples are included that demonstrate how pharmacists can use information available to them within their own organizations to highlight specific conditions or population groups for improvements in patient intervention—while also helping to contain costs for the health plan and employers.

Evolution of Managed Care Organization Membership

Despite an overall increase in managed care penetration in recent years, there was a slight decline in 2000, with 99.3 million people, or 36.4% of the U.S. population, in health maintenance organizations (HMOs) (see Figure 1). Of that total, 19.5 million—or 19.6%—were enrolled in point-of-service (POS) plans. This represents a 1-million-member increase in POS membership, despite a 5-million-member decline in overall HMO membership in 2000. The number of HMOs has continued to decline, from 820 plans in 1999 to 625 plans in 2000.

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FIGURE 1 Health Plan Evolution

Source: *Managed Care Digest Series 2001*, Bridgewater, New Jersey: Aventis Pharmaceuticals, 2001.

TABLE 1 Medicare and Medicaid HMO Enrollment, 1986–2000

	Number of Enrollees (Thousands)		# of HMOs Accepting Government Beneficiaries	
	Medicare	Medicaid	Medicare	Medicaid
1986	1,421	602	332	159
1990	1,896	842	211	88
1994	3,080	2,665	223	146
1998	6,513	9,795	335	267
1999	6,698	11,300	310	248
2000	6,730	11,469	239	220

As a result of consumer demand for choice, consumer interest in preferred provider organizations (PPOs) has grown. Despite an overall decline in the number of operating PPOs—from 1,127 in 1998 to 988 in 2000—the number of eligible employees has increased from 98 million to 111 million. Employers appreciate that in PPO and POS programs, consumers themselves bear at least some of the economic costs of the choices they make.

Membership demographics in managed care organizations have also been affected by a change in Medicare and Medicaid patients (see Table 1). In 1998 HMO enrollees included 6.5 million Medicare beneficiaries and 9.8 million Medicaid beneficiaries. Those numbers rose to 6.7 million for Medicare and 11.3 million for Medicaid in 1999, and 6.7 million for Medicare and 11.5 million for Medicaid in 2000—a lower rate of change than in previous years.

Concerns linger regarding the viability of Medicare risk plans. The size of these population segments within HMOs continues to have important implications. It reflects continuing interest by federal and state governments in capping their own financial risk while assuring availability of care. For health plans, these members still represent a potential source of new members that does not always require attracting members from other health plans. Yet the

difficulties in providing care for these members, assuring adequate communication, and managing financial risk are becoming more apparent each year.

A further change in HMO membership demographics has resulted from the overall increase in older Americans. Changing member demographics have also affected service and resource utilization. As pointed out in a previous article in this journal, as the general population ages, there is increasing need for treatment of chronic age-related diseases, such as cardiovascular disease, type 2 diabetes, arthritis, and osteoporosis.² The addition of more HMO members who are older and sicker challenges both the clinical protocols and the fiscal viability of today's managed care organization.

HMO Utilization and Pharmacy

Changing HMO demographics and enrollment have also brought increased utilization. In recent years, ambulatory visits and physician encounters rose for all enrollees (non-Medicare, Medicare, and Medicaid). Physician encounters for Medicare HMO members almost doubled during the 1990s. Prescription use also increased significantly from 1998 to 2000. The average number of prescriptions for non-Medicare members per year increased from 4.9 in 1988 to 7.1 in 1999 and 7.5 in 2000.

Pharmacy expenditures increased as

well. Average ingredient cost rose from \$11.50 in 1988 to \$31.25 in 1999. Pharmacy premiums for both individuals and families continue to grow, with increases per member per month from 1999 to 2000, \$17.43 to \$19.00 for individuals, and \$43.32 to \$44.00 for families. Pharmacy expenses as a percentage of total operating expenses have been stable in the 13% to 14% range over the past three years. (See Table 2 and Figure 2.)

Coinciding with increases in pharmacy costs are significant decreases over the long term in the use of hospital care. Specifically, while hospital admissions per 1,000 non-Medicare patients increased from 57.7 in 1999 to 60.0 in 2000, there was a decrease of more than 20% between 1990 and 2000. Length of stay also decreased 26%. Table 3 illustrates utilization rates by payer type for 1999 and 2000.

Despite these opposite trends in the use of pharmaceuticals and acute care, pharmacy continues to come under intense scrutiny because pharmacy budgets have increased. In an effort to manage costs while striving for good care, pharmacies have used formularies, drug utilization reviews, and pharmacy benefit managers. About 99% of HMO plans used formularies in 2000, with 49.4% of them being closed (see Figure 2). Interestingly, 71% used practice guide-

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TABLE 2 HMO Pharmacy Trends

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Prescriptions Per Member			Average Ingredient Cost	Pharmacy Premium (Per Member Per Month)						Pharmacy as a Percent of Total Operating Expenses
NonMedicare		Medicare		Individual			Family			
				Rx	Total	%	Rx	Total	%	
1988	4.9	—	\$11.50	\$ 7.40	\$ 90.90	8.1	\$18.47	\$242.49	7.6	10.0%
1990	5.7	—	\$15.10	\$ 9.40	\$ 112.69	8.3	\$23.80	\$301.11	7.9	9.0%
1994	6.0	16.5	\$21.54	\$12.26	\$ 141.51	8.7	\$31.28	\$392.89	8.0	10.4%
1998	7.0	17.1	\$28.20	\$16.98	\$ 151.43	11.2	\$42.49	\$443.05	9.6	13.6%
1999	7.1	18.1	\$29.35	\$17.43	\$155.93	11.2	\$43.32	\$451.42	9.6	14.0%
2000	7.5	19.3	\$31.25	\$19.00	\$ 159.59	11.9	\$44.00	\$462.21	9.5	13.4%

Source: Managed Care Digest Series 2001. Bridgewater, New Jersey: Aventis Pharmaceuticals, 2001.

FIGURE 2 HMO Pharmacy Utilization

Source: Managed Care Digest Series 2001. Bridgewater, New Jersey: Aventis Pharmaceuticals, 2001.

lines and 82% used prior drug authorization. Efforts to provide choice to physicians have resulted in many HMOs allowing more physicians to override formularies (75.4 vs. 70.5% in 1999), but 92% of prescriptions were still filled within formulary in 2000, compared to 81% in 1999.

As PPOs have assumed a more prominent position within managed care, PPO pharmacy policies have changed as well. Virtually all PPOs had a managed pharmacy program in 2000, up from 74% in 1996

and 34% in 1990. These programs covered 103 million out of 111 million PPO eligibles in 2000, compared to only 48 million eligible in 1996. Most PPOs (79%) also had managed pharmacy carve-out programs in 2000.

Integration of Managed Care

Increased utilization and costs have also led to changes in the way managed care organizations have organized themselves. Significantly, there has also been a steady

increase in the degree of integration in health care systems over the last 6 years (see Figure 3). Integrated systems are designed to improve the delivery of care by coordinating different health care components, such as outpatient and inpatient hospital services. Over the long term, they provide real opportunities for coordination of pharmacy services. Highly integrated systems, with three or more health care components, are also likely to assume more financial risk. Integrated systems also

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TABLE 3 HMO Utilization, 1999-2000

Payer Type	Hospital Days per 1000 Members		Average Length of Stay		Physician Encounters per Member		Ambulatory Visits per Member	
	1999	2000	1999	2000	1999	2000	1999	2000
Non-Medicare	200.0	206.0	3.6	3.7	3.0	3.0	1.6	1.8
Medicare	1328.8	1272.0	5.5	5.3	7.2	7.2	2.6	2.2
Medicaid	394.8	386.0	3.5	3.5	3.4	3.3	1.6	1.3
Overall Average	222.8	224.3	3.9	3.8	3.4	3.2	1.8	1.3

Source: *Managed Care Digest Series 2001*, Bridgewater, New Jersey: Aventis Pharmaceuticals, 2001.

have the potential to offer better data integration between health care sectors, although the benefit in using organizational data to improve care and reduce costs is underutilized. Yet they have been challenged to achieve their full potential, in part by the need for greater clinical and operational integration of their components and the need to benchmark clinical service and pharmacy performance across high-cost conditions and high-utilization populations.

Medical Group Practice Dynamics

Physicians remain challenged to regain and exercise their traditional clinical leadership role when it is now inevitably linked to an

economic role as well. Thus, physician practices continue to merge and form ever-larger groups. The number of group practices of five or more physicians increased 11% between 1999 and 2000, from 9,100 to 10,100. The number of physicians in these groups increased from 132,000 to 142,000.

These groups contract extensively with managed care. Seventy-two percent of these groups reported having more than eleven managed care contracts. Forty percent have capitation contracts (77% to 85% of physician groups of more than 75), and 5% of groups receive a majority of their revenues from capitation. More than a third of groups assume pharmacy risk,

73% have a formulary (45% open, 26% closed), and 41% have in-house pharmacies. Most groups (85%) have disease management programs.

Changing Roles of Providers

As previously discussed, a shift in traditional roles for health care providers has also occurred in the last decade. The role of the physician as primary decision-maker has changed: more responsibility, less time, and a more challenging economic environment. Patients are becoming more aggressive in their search for and use of information as they are made more responsible for their own health care choices and outcomes. These factors have contributed to a fundamental change in the physician/patient relationship and the potential for tension among health plan, provider, and patient. These characteristics and challenges continue, and in fact are accelerated in today's economic environment.

Pharmacists face similar changes in their roles. In the past, pharmacists functioned solely as health care providers, interacting directly with patients and physicians. While originally the creation of pharmacy departments added complexity to the pharmacist's role, their evolution through multi-tier copays, certain disease management programs, and use of information technology provide the opportunity to make explicit and rationalize choices through linking the clinical and economic implications of patient and

FIGURE 3 Integrated System Trends

Number of Systems by Delivery Components Per System, 1993-1999

Source: *Managed Care Digest Series 2001*, Bridgewater, New Jersey: Aventis Pharmaceuticals, 2001.

physician choices.

The constant and ever-increasing scrutiny of pharmacy budgets, which has resulted in new administrative responsibilities and challenges for pharmacists, now allows pharmacists to respond. They can now better focus on cost management as well as patient care and continually examine and confirm the value of pharmaceutical interventions in the broader continuum of care. Essentially, an entirely new discipline of business management has resulted. New skills and approaches are required, changing the nature of the pharmacist's job, but the tools are becoming increasingly available.

Health Care Challenges

The trends enumerated have resulted in some important challenges focusing on pharmacy that must be addressed if managed care is going to successfully meet patient needs while keeping costs manageable. Changing technology and products require new criteria to determine appropriateness, not just efficacy and safety. And cost concerns are increasing. Specifically, continuing increases in pharmacy expenditures have led to ever-greater budget scrutiny and demands for proof of value than in the past, due to changing overall economic conditions. Although increased pharmacy expenditures for drug therapy have coincided with decreased hospital admissions and fewer days in the hospital, impact on total cost of care is not always clear, nor is it always possible to determine. Databases within each system are often incompatible, with integration of pharmacy data a particular challenge. This can make accurate analysis of total organizational and population costs extremely difficult, and limit the ability of the organization to demonstrate potential cost reductions and productivity increases to employers.

Implications for Pharmacists

The key to progress is to focus the use of available data on the populations, conditions, services, and products where outcomes can be improved and costs managed more effectively. The first step in achieving this goal is to refocus efforts on patient

needs, and improved physician/patient relationships. One way pharmacists can approach this is to identify particular member populations and specific information about pharmacotherapy as a means of impacting care and costs. Previous discussions have focused on using data as an early warning system regarding patients whose conditions can result in emergency room visits, hospital admissions, and high costs.⁷

Pharmacy can further aid in the management of health care and health costs by highlighting conditions or diseases that may affect a patient population (and employers) in multiple ways that go beyond the specific problem. For example, the impact on patients of arthritis, chronic or acute pain, can affect quality of life, productivity, absenteeism, and an entire family. Older patients may suffer from both glaucoma and diabetes, and efforts to address one condition may help retain the patient in the health care system and aid in the effort to manage the other condition. Finally, in the post-September 11 era, we are all worried about respiratory illness; evidence may accumulate in the coming months that patients are flooding the health care system with conditions which may require treatment, but are unlikely to be lethal.

Patient Safety

Within the past two years, enormous concern has been expressed regarding the high cost of unintended consequences of medical care. But even earlier, the cost of drug-related morbidity and mortality in the United States was estimated at \$77 billion in 1992.⁸

Beginning with two highly visible reports from the Institute of Medicine, *To Err Is Human* and *Crossing the Quality Chasm*, a number of strategies and approaches have been advanced to address these concerns.⁹ By building a tactical plan and cross-team cooperative environment, managed care pharmacy can play an important role within their organizations, both to improve the health care process and reduce avoidable costs.

Impacting Direct and Indirect Costs

The events of September 11 raised America's awareness of inhalational anthrax. But the very real clinical, economic, and social burdens of viral respiratory infections (VRI) are still under-appreciated and inadequately addressed by managed care.⁶ In addition to the direct costs of treatment, the National Center for Health Statistics (NCHS) estimates that annually, VRI accounts for approximately 20 million lost workdays for adults and 21 million lost school days for children, when considering only patients who seek medical care or are bed-ridden. The "common cold" falls within this category, adding significant avoidable expense to pharmacy budgets.

The impact of VRI is even more severe in patients with asthma or chronic obstructive pulmonary disease (COPD). Complicating the picture is the use of antibiotics in the treatment of VRI. Only 10% of upper respiratory tract infections are caused by bacteria, but 60% of patients are prescribed an antibiotic.¹⁰ With the emergence of new therapies to manage VRIs, and with collaborative efforts between the CDC and a number of health plans, the opportunity exists for managed care pharmacy to examine these issues more rigorously and document both direct and indirect cost savings through more appropriate use of antibiotics and other emerging therapies and through better management of VRIs of all types.

A growing area of similar concerns to employers is arthritis (osteoarthritis and rheumatoid arthritis), which will affect an increasing number of American workers as the Baby Boomer population and overall working population ages. Arthritis currently affects 14% of the U.S. population, and it is expected to increase to 20% by 2020.¹¹ A number of studies have documented individual components of the cost of arthritis, but a complete assessment of the overall impact of the disease on employers is not currently available. Recently introduced pharmaceutical interventions can improve clinical outcomes and employee productivity, but they can add significantly to cost. Thus the opportunity exists here as well for managed care pharmacy to lead the

analytical and program effort to more fully document the direct and indirect costs of the disease in their population, and establish more firmly the clinical and workplace value of medical and pharmaceutical interventions.

■ Conclusion

Managed care continues to evolve. Recent data illustrate changing member choices and responses. The trend toward accountability to stakeholders, particularly employers, has accelerated. Employers are acutely concerned with the need to reduce costs and increase worker productivity. Health care, and particularly pharmacy, costs are highly visible, and must be justified as aiding in the achievement of these objectives. Managed care pharmacy has new opportunities to help health plans address these employer concerns and others, such as patient and drug safety. And it has the

responsibility to more fully demonstrate the value of pharmaceutical interventions on clinical, economic, and social outcomes. ■

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