

## Selected Presentations

### Impact of Managed Care on Pharmacy Practice and Education

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#### INTRODUCTION

The American health care system is in a period of historic change that is certain to impact all health care professions and provider organizations. These changes are the result of the rapid transition from a delivery system based on indemnity insurance that pays submitted charges to individual physicians, pharmacists, and hospitals to one that is founded on capitated contracts with Managed Care Organizations (MCOs). The MCOs often pass the risk on to local hospital and physician run delivery systems.

The provision of pharmaceutical products and services is also changing. For example, most pharmacies are owned and operated by large companies with multiple outlets (chain pharmacies), managed care companies with large market share are lowering the profit margins for dispensing drugs, and over 50 percent of drugs are purchased by group buyers (*e.g.*, hospitals, HMOs). But this is just the beginning of the restructuring that is taking place in the pharmacy area, and the challenge facing pharmacy educators is to prepare students for careers in a delivery system that is in a period of transition and importantly, may not reach a more stable state for many years. Clearly this is a daunting task in the best of times, and as I shall point out, this is far from the best of times, as health professional education enters a period of provider oversupply and reduced funding.

<sup>1</sup>Presented at Opening General Session of the house of delegates at the 96th Annual Meeting of the American Association of Colleges of Pharmacy, Philadelphia, PA July 7-12, 1995.

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**Table I. Growth and maturation of managed care**

Enrollment percentage	1995	2000 <sup>a</sup>
Privately Insured Medicare	70	85
Medicare	10	50
Medicaid	25	80

<sup>a</sup>Estimated.

I was invited to give this presentation because of my unusual career as both a health professional educator and researcher and a managed care executive. Thus, I am sympathetic with the need to have strong academic medical institutions and programs. I also have an appreciation for the impact of managed care on the delivery of care. In this regard, I was responsible for Aetna Health Plan's pharmacy programs for several years and understand the strategic and operational issues associated with the delivery of indemnity and managed care pharmacy services. In addition, I serve on several national committees that are examining the influence of managed care on health professional education.

However, these experiences alone do not make me an expert in pharmacy education. To prepare for this presentation, I interviewed several leaders of pharmacy education and managed care and read many articles on these issues. The people that I called were very willing to discuss the future of the pharmacy profession with me, and I am very appreciative of their time and insights.

The paper is organized into several sections. First, I outline the more important structural changes taking place in the delivery system and discuss their implications for the delivery of pharmacy products and services. Then, I examine several key controversies around the future role of pharmacists in a managed care dominated delivery system. With this as background, I consider the core competencies needed by pharmacists to perform in the restructured delivery system and look at the serious challenges pharmacy educators face in preparing students for these new roles. I end with a few cautious predictions on the future of pharmacy practice and education.

#### GROWTH AND MATURATION OF HEALTH CARE

As seen in Table I, enrollment in some form of managed care plan, defined as a Health Maintenance Organization (HMO), Preferred Provider Organization (PPO), or Point-of-Service (POS) plan now covers about 70 percent of the privately insured population(1). Publicly funded health programs lag behind the private sector but are rapidly catching up. Thirty-six states are now in the process of trying to enroll their Medicaid eligibles into managed care, and both Republicans and Democrats support greater participation of Medicare members, in HMOs and other managed care products.

It is reasonable to suggest that within five years most Americans will receive their medical care, including pharmaceutical products and services, in a managed care plan. Indemnity insurance will continue for the relatively small percentage of the population that live in rural areas, are very wealthy, or have other special situations (e.g., reside in long-term care facilities).

With the growth of managed care comes a massive restructuring of the delivery system. For most cities with 20 percent or more of the population enrolled in HMOs, mergers and acquisitions are resulting in fewer but larger managed care organizations. In cities such as Minneapolis,

Portland, Phoenix, and Boston, three to five MCOs enroll 80 percent or more of managed care members. These large, powerful organizations make it close to impossible for small HMOs to survive or for new HMOs to enter the market. Further, because of their considerable market power, these MCOs are able to make significant demands on providers to deliver care more effectively in terms of both costs and quality.

In response to the consolidation of MCOs, provider organizations are also coming together to better position themselves to contract with MCOs. Tertiary care hospitals are buying or forming alliances with community hospitals to serve as feeder facilities. In addition, many hospitals have formed contractual relationships with community physicians (e.g., PHOs, physician-hospital organizations) and purchased primary care practices in an effort to keep their beds filled and to accept risk contracts from MCOs.

Physician practice is also changing. Many practitioners are forming or joining group practices, and both group and solo physicians are coming together to form network-based delivery organizations to contract directly with HMOs and other payers.

To make this picture even more confusing, some MCOs are buying or building primary care group practices, and several large provider organizations have established HMOs and contract directly with group purchasers. Hence, the roles of MCOs and provider organizations are beginning to blur.

Still another stage in the maturation of managed care markets is the formation of integrated delivery systems. This term is both overused and misused, and most PHOs and other provider-sponsored delivery entities have a long way to go before they even approach having the attributes of a mature, integrated delivery system.

The major integrated delivery systems now in operation, such as Henry Ford Hospital System, Sentara, Health Partners, UniHealth, and some Kaiser plans have certain features(3). These include:

1. The capacity to provide a comprehensive set of health care services to a large population, through some combination of owning or contracting with delivery settings and practitioners.
2. A strong governance structure that ties the different delivery units together into one functioning organization that sets business and clinical goals and aligns incentives.
3. The ability to accept the full financial risk to deliver all needed services for a fixed sum of money (capitation).
4. Advanced information systems to link all the delivery settings together so that the necessary clinical and administrative data are available to manage the system.
5. The ability to deliver efficient, high quality of care to members, integrated among delivery settings.

Many organizations aspire to be an integrated delivery system, but most are at an early stage of development, and it is going to take many years, billions of dollars in infrastructure investment, and much turmoil before the health care system is made up of mature integrated delivery systems.

Of course, this assumes that integrated systems provide care more cost-effectively. In fact, there is little empirical data proving that they operate more efficiently than more loosely organized delivery formations. Nevertheless, the current trend in delivery system reorganization is to integrated delivery systems(4).

**Table II. Major pharmacy service issues**

1. Dispensing vs. Pharmaceutical Care
2. Dispensing Pharmacist Role in Pharmaceutical Care
3. Cost-Effectiveness of Pharmaceutical Care
  - \* Inpatient Care
  - \* Outpatient Care
4. Population vs. Individual Patient Focus

#### MANAGED CARE PHARMACY PROGRAMS

With this description of managed care and system restructuring as background, this section examines how MCOs and provider organizations manage pharmacy benefits. The more mature integrated delivery systems such as Health Partners in Minneapolis and Henry Ford Health System in Detroit operate their own hospital and ambulatory pharmacies in sites where their employed medical staff delivers care. These organizations also have networks of contracted physicians and hospitals in suburban and rural areas. For patients receiving care in these sites, the plans have developed a network of contracted community pharmacies. Usually, the network-based pharmacy program is run internally and is fully integrated with other medical operations.

Large MCOs such as CIGNA and Aetna that are based primarily on networks of contracted practitioners run their pharmacy programs in essentially the same way as the integrated delivery systems but with a different balance between owned and contracted pharmacies. That is, they own a few pharmacies in their staff and group model HMOs, but mainly rely on contracts with community pharmacies. These large MCOs have their own internal pharmacy management group.

Finally, there are large numbers of smaller MCOs that contract with Pharmacy Benefit Management (PBMs) companies such as Caremark, ValueRx and PCS to build community pharmacy networks and manage pharmacy benefit plans. The PBMs are used for the HMO and POS products but also to carve out the pharmacy benefit from PPO and indemnity plans.

As managed care markets mature and are dominated by a few large MCOs and integrated delivery systems, the role of external PBMs becomes less certain. Most likely, in the major metropolitan areas the provision of pharmaceutical products and services will be fully integrated with other internally managed medical services programs and not contracted to outside PBMs.

Not only will most of the larger, capitated delivery organizations manage their own pharmacy benefits, they will also make every effort to reduce the unit cost of providing pharmaceutical services and to promote the correct and efficient use of Pharmaceuticals by providers and patients. In this environment, the traditional role of pharmacists is certain to change as delivery organizations seek more effective ways to deliver pharmacy services to large populations.

#### CRITICAL ISSUES IN PHARMACY PRACTICE

Table II presents four of the more important issues that the pharmacy profession faces as the health care delivery system moves to managed care. The first issue is the traditional role of pharmacists as dispensers of Pharmaceuticals. From my readings and conversations with many knowledgeable people, there is a clear consensus that the dispensing role is certain to decline dramatically in the next 10 years(5). The

primary factors causing this change are the increased use of pharmacy technicians, robotics, bar coding, and other advanced information technologies. These innovations will substantially increase dispensing efficiency and as a result, reduce the demand for dispensing pharmacists. I will not belabor this point further.

The second major issue is the role of the dispensing pharmacists in the provision of pharmaceutical care. Certainly, there is a pervasive belief within the pharmacy profession that dispensing pharmacists have a major role to play in pharmaceutical care. I disagree for several reasons. First, as just noted, much of the dispensing will actually be done by technicians and will not involve pharmacists except for selected patients or drugs. Second, the site of dispensing is changing with the growth of mail order drugs, and the likely increase in direct physician (practice) dispensing of drugs within organized delivery systems. The latter makes a great deal of sense, since physicians are at financial risk for both medical services and drugs, it is more convenient for patients, and it is an excellent time and place to educate patients. In this situation non-pharmacists (e.g., physicians, nurses, educators) will provide most of the necessary patient education and compliance monitoring.

Related to this is the use of technology (e.g., expert systems and interactive media) located in the delivery setting to provide most of the routine checks for drug appropriateness and educational material. Although pharmacists will have a major role in setting up and managing these drug and patient focused activities and may be directly involved with selected patients, it is unlikely that the dispensing pharmacist will have a key role.

Further, I would not be surprised to see HMOs develop systems for delivering prescriptions to the homes of patients. It is likely that prescription information will be entered into computerized medical record systems by physicians and then sent automatically to a local central facility that uses messenger services to deliver the prescription to the patient's door. This may sound like star wars, but if Domino Pizza can deliver a \$10 pizza to your home hot and within 20 minutes of a call and still make money, it should be possible to provide that same level of service to patients.

Finally, based on the experience of the past 10 years, the evidence is very clear that managed care plans and PBMs are not willing to pay dispensing pharmacists for pharmaceutical care. This is a marketplace test of the value payers believe dispensing pharmacists offer. So, as much as the pharmacy profession advocates a role for dispensing pharmacists in patient education and related areas of pharmaceutical care, it has not happened yet and is unlikely to happen in the future. Consequently, I see a separation of dispensing from pharmaceutical care.

Another very important issue is the cost-effectiveness of pharmaceutical care delivered in hospitals and outpatient facilities by pharmacists who are, for the most part, not involved in dispensing. Clearly, if pharmaceutical care does not reduce expenses or lead to better clinical outcomes, it has little chance of becoming a basic part of patient care. For both inpatient and outpatient care some research indicates that pharmaceutical care does reduce inappropriate use of drugs, leading to fewer admissions, shorter lengths-of-stay, and, in turn, substantial savings(6-9). However, most of this work consists of case studies with small numbers of patients and pharmacists and weak controls over the many other factors that influence utilization and outcomes. Because the

**Table III. Pharmaceutical care in managed care organizations**

Pharmacist role	
1.	Establish and Maintain Formulary
2.	Develop and Monitor Pharmacy Policies
3.	Develop and Manage Pharmacy Network
4.	Prepare and Analyze Reports on Drug Utilization/Costs
5.	Operate Drug Utilization Review Program
6.	Contribute to MCO Quality Management Program
7.	Educate Members on Drug Benefits and Use
8.	Educate Providers on Drug Policies and Procedures
9.	Identify Patients/Providers Use Drugs Inappropriately
10.	Work with MCO Staff to Change Behavior of Individual Patients and Providers

cost-effectiveness of pharmaceutical care is such a critical issue to pharmacy educators and practitioners, a major expansion of this research is necessary. Detailed information is needed on the impact of pharmaceutical care by condition, case severity, drug type, patient characteristics, delivery organization, management system, and other factors that influence costs and clinical outcomes. With this information, delivery systems and managed care organizations will be better able to maximize the effectiveness of pharmacists providing pharmaceutical care.

A market test of the cost-effectiveness of pharmaceutical care is the employment decisions of hospitals and MCOs with respect to pharmacists providing pharmaceutical care. For both settings more pharmacist are being employed, and in hospitals and in staff and group model HMOs that deliver care directly to patients, pharmacists are providing pharmaceutical care(9,10). Independent Practice Association model HMOs are also using more pharmacists, but as I will discuss later, these pharmacists are being used for a different type of pharmacy service. Nevertheless, the market is providing signals that pharmaceutical care is cost-effective, and in the real world of business, this is equally or even more important than evidence coming from academic research.

However, the number of pharmacists needed to provide pharmaceutical care is an issue. At least for the studies reported in the literature, relatively few pharmacists were employed by hospitals and group practices to provide pharmaceutical care. Perhaps, with more evidence on the cost-effectiveness of pharmaceutical care this will change.

In contrast, the demand for pharmacists by independent practice association model HMOs and PBMs appears to be substantial and growing. In these settings the focus is on the use of outpatient drugs at the population level. Pharmacists spend relatively little time interacting with individual patients. Based on many conversations with pharmacists employed by independent practice association HMOs and my own experience running a managed care pharmacy program, the pharmacists' major responsibilities (see Table III) are almost entirely at the population level. I do not have the time to describe each of these activities in detail, but please be assured that they are difficult, complex, and demanding responsibilities that use the full knowledge and skills of doctoral-trained pharmacists.

When drug problems are identified for individual patients or physicians, pharmacists work with the plan medical directors, network management staff, patient educators and others to intervene. As a result, most pharmacists employed by MCOs that are built on networks of physicians

spend little time in direct patient or physician contact.

### CORE PHARMACISTS' COMPETENCIES

If my view of the future of managed care is correct, and the role of most pharmacists centers on patient or population level issues rather than dispensing, what are some of the core competencies that pharmacists need to have on graduation from pharmacy schools? First, is a fundamental understanding of pharmacy therapeutics. This is already an area of strength in most pharmacy education programs, so at most these programs may need to be strengthened.

Second, pharmacists should be familiar with the basics of medical diagnosis and treatment. In the future most pharmacists will spend their careers in close working relationships with physicians and other care deliverers, and they must understand core clinical processes in order to be fully integrated members of the medical team. I suspect that most colleges of pharmacy do not provide students formal courses in physical diagnosis or internal medicine.

A third area of competency is drug epidemiology, the use and distribution of drugs at the population level. This is essential knowledge if pharmacists are going to work in a managed care environment. Few schools appear to offer courses on the principles of epidemiology and their application to pharmacy practice. Clearly, this is a major gap in the curriculum that needs immediate attention.

Fourth, all students need to have didactic courses and clinical experiences in managed care pharmacy. Since the majority of students will spend their careers in a managed care setting, it is imperative that they are fully prepared to function in this environment. Here, is another area where most pharmacy schools will need to develop courses and clinical experiences for students.

Last of all, is the need for competency in general business and management. Because of the substantial size, complexity, and importance of managed care pharmacy programs, pharmacists have to know how to manage these operations. In my experience pharmacists come to HMOs with a better understanding of business principles than other health professionals. So, it appears that pharmacy colleges are putting some effort into management education, but more effort is probably necessary.

### BARRIERS TO CHANGING EDUCATIONAL PROGRAMS

Knowing where pharmacy practice and education are going is one thing, preparing students for their new roles is another. The leaders of pharmacy education face major challenges in restructuring their educational programs. The first barrier to overcome is the decline in support for health professional education and research. Most colleges of pharmacy are part of academic health centers that are under great financial pressure. Increasingly, MCOs are unwilling to pay the 20 to 40 percent higher fees that university medical centers commonly charge and are not contracting with these centers or are paying competitive rates. In either case profit margins from patient care services are declining.

Teaching hospitals are also about to see a 20 to 50 percent reduction in graduate medical education support, as the Congress tries to slow the rate of growth in Medicare program expenditures. Not only with this lead to a substantial reduction in graduate medical education subsidies, but Medicare and Medicaid reimbursement levels will be cut. Since these two programs account for 40 to 60 percent of

University hospital revenues, the impact of these cuts will be substantial. Make no mistake about it, as the revenues of academic health centers decline, pharmacy schools will have their budgets reduced.

Other threats to financial well-being of pharmacy colleges include reductions in community hospital revenues where many pharmacy students train. These hospitals are going to be much less willing to subsidize pharmacy training programs than in the past.

The growth in state support for medical education has been steady or in decline for the past several years, and this is likely to continue as the federal government gives states more responsibility to finance and run social programs. Thus, state supported pharmacy colleges will find it very difficult to obtain additional state funding for their programs.

Finally, some medical schools are likely to close or merge because of the growing oversupply of physicians and because of fiscal problems. Indeed, two medical schools merged this past year in Philadelphia. The question is, what will happen to schools of pharmacy in these situations? Can they survive as independent schools or will they be forced to close as well?

Another barrier to change is finding clinical opportunities to train students in managed care settings. This will probably be a significant problem for several years. Longer-term, many managed care companies and provider organizations are likely to see important advantages in having pharmacy students rotate through their delivery and management sites. Students are often a positive factor in recruiting and keeping good professional staff.

Also, contact with students is an excellent way to identify and recruit talented new staff. Eventually, most hospitals and ambulatory facilities will become part of a large delivery organization and operate under managed care principles. When this happens, the problem of finding managed care training sites will go away.

Another barrier to changing educational programs is strong opposition from Alumni Associations. These Associations are dominated by pharmacists who have spent their careers in retail pharmacy dispensing drugs and who view managed care as the enemy. They will not be supportive of curricula changes that move away from dispensing and prepare students for a career in managed care.

Alumni may also be unhappy if they perceive a national oversupply of pharmacists and the schools as a source of this problem. As retail drug stores and hospitals reduce the number of dispensing pharmacists, the issue of oversupply is going to become a major concern. Schools need to start now educating their influential Alumni on the changes taking place in the delivery system and gaining their support for new educational program.

#### CAUTIOUS PREDICTIONS

To conclude, I want to make a few cautious predictions about the future of pharmacy practice and education in the year 2005 and beyond. First, the major employer of pharmacists will be large integrated delivery systems, PBMs, and MCOs. Retail pharmacies will still have a significant number of pharmacists, but their primary role will be managing the drug dispensing system rather than the actual dispensing.

The future role of pharmacists is likely to involve three major areas of responsibilities. Perhaps 20 percent of effort

will be in the management of dispensing systems and drug dispensing. Another 30 percent of effort will focus on pharmaceutical care at the patient level. This will occur mainly in hospital settings for severely ill patients and to a lesser extent, in ambulatory care facilities. Lastly, perhaps 50 percent of effort will go to pharmacy management at the population level.

It is obvious that changes of this magnitude will cause considerable financial and psychological pain to many hardworking pharmacy practitioners, managers, and educators who have a major investment in the old system and are unable to adapt to the new realities. Yet, this is also a time of unprecedented opportunities for those who can adapt rapidly and become change leaders rather than followers.

From my many discussions, I am confident that the leaders of pharmacy education have an excellent grasp of the changes taking place and are moving rapidly to position their institutions to excel in this new environment. Having worked with several other health professional education groups, I can say that pharmacy educators that I talked to had a clearer vision of the future and innovative plans to achieve the vision.

I am also convinced that the day is dawning on a new and much stronger pharmacy profession. In the past pharmacists may have been over-trained for what they did, and under-trained for what they should have been doing. Clearly, this will no longer be true in the future. The effective management of the pharmaceutical system at the patient and population level will require all the knowledge and skills of professionals that have earned the title Doctor of Pharmacy. **Acknowledgments.** I sincerely appreciate the input from the many people that discussed the future of pharmacy practice and education with me. Many of the ideas in this paper came from them. These people include Leslie Benet, Barry Carter, Jordan Cohen, Jody Hessen, David Knapp, Mary Anne Koda-Kimble, Richard Penna, Mark Petruzzi, and Charles Rutledge."

*Am. J. Pharm. Educ.*, **59**, 396-400(1995); received 11/1/95.

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