Professional Opportunities in Managed Care Pharmacy

Bringing together the skills of community, institutional, and clinical pharmacy, managed care offers pharmacists a practice site for the future.

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Condensed from the chapter of the same name in *Principles and Practices of Managed Care Pharmacy* by Kenneth A. Speranza Sr., Ph.D., associate professor of pharmacy administration, School of Pharmacy, University of Connecticut in Storrs. The book is available from AMCP.

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Because of the U.S. healthcare system's need to control costs without sacrificing quality and because pharmaceuticals represent about 10% of our nation's annual healthcare bill, professional opportunities for pharmacists in managed care pharmacy are extensive and expanding rapidly. In a recent report, the American Pharmaceutical Association recognized the impact of managed care on pharmacy by stating that "managed care has become...a permanent fixture of the U.S. healthcare delivery system."¹ With the prospect of 87% of the population becoming managed care enrollees by 1997 and the growing focus of all current healthcare reform proposals on managed care, it promises to dominate future pharmacy practice.¹

With such trends prevailing, many pharmacy students see managed care pharmacy as a promising career area. Many schools of pharmacy are beginning to offer educational opportunities

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in this field of practice, through both coursework and clerkships based in HMOs and other health organizations. Joining the Academy of Managed Care Pharmacy is an excellent way to stay abreast of developments in the field, through national and regional meetings, management development programs, career placement services, continuing education programs, publications, and opportunities for professional networking.

Most pharmacists enter managed care pharmacy by practicing as staff pharmacists in some form of managed care organization (MCO). Strong clinical skills, extensive drug knowledge, and honed dispensing and compounding abilities are needed for evaluating the universe of therapies and counseling diverse patients. Good oral and written communication abilities are also essential for successful managed care pharmacy practice. Handling large amounts of drug and patient data are part of the challenge, as well as developing strong management skills for strategic planning, evaluation, cost control, budgeting, personnel management, negotiation, team building, sales, and marketing. Managed care pharmacists share a common belief: that pharmaceutical care will be effective only if it is patient centered and provided from a multidisciplinary and coordinated perspective.

In brief, comprehensive entries, this article will define the professional responsibilities of a managed care pharmacist and explain where such pharmacists practice.

WHAT PHARMACISTS DO WHEN THEY PRACTICE MANAGED CARE PHARMACY

Many of the activities of pharmacists in managed care settings are no different from those performed in other areas of pharmacy practice. In fact, managed care pharmacy has been characterized as a hybrid of community, institutional, and clinical pharmacy practice. This field of pharmacy provides the unique ability to ensure that, if high-quality, cost-effective pharmaceuti-

cal care is to be provided to pharmacy plan enrollees, everything will be coordinated and managed in a systematic way. Managed care pharmacists must not only be knowledgeable and skillful in performing the required activities, they must also understand how these functions relate to each other and how they serve to reduce costs and ensure the quality of pharmacy care.

The essential functions of a managed care pharmacy practice comprise the following areas:

▼ **Information Acquisition/Documentation:** All managed care pharmacists are concerned with information management—collecting, documenting, accessing, and analyzing information. The large volume of information, made feasible by the extensive patient populations served by managed care plans, is a significant advantage to pharmacists, enabling them to relate pharmacy care information to other medical care and cost center databases. This allows pharmacists to maximize their professional and managerial roles to ensure the quality of care and to control costs.

▼ **Formulary Development and Maintenance:** As managed care health plans depend on formularies to provide clients with the most clinically effective drugs at the most reasonable costs, managed care pharmacists participate in formulary development, implementation, and revision by evaluating drugs for inclusion in the formulary. Today, nearly 80% of all formulary teams rely on the pharmacist for critical drug information to assist their formulary and management activities.²

▼ **Drug-Use Review (DUR)/Drug-Use Evaluation (DUE):** DUR is an extremely important skill of the managed care pharmacist. It monitors physician prescribing, patient drug use, and pharmacy dispensing to ensure appropriate use, control prescription costs, and ultimately maximize patient and pharmaceutical care. As on-line electronic point-of-service systems become more sophisticated, DUEs will begin to play a significant role in proactive improvement in the quality of pharmaceutical care.

▼ **Counseling:** HMOs and other forms of MCOs are stressing the importance of patient counseling. Counseling may include direct patient contact or development of in-service education programs, programs for use at the dispensing pharmacy, or printed or electronic material. State and federal regulations that mandate counseling will make this aspect of managed care pharmacy even more significant. Regardless of regulations, however, pharmacists enjoy the personal interaction that counseling involves and their contribution to greater therapeutic efficacy and the reduction of additional healthcare services.

▼ **Consulting:** The pharmacist is the acknowledged drug expert in managed care pharmacy organizations and is an information source respected by physicians, other health professionals, and administrators when questions of drugs and drug therapy arise.

▼ **Patient Profiles and Drug-Use Monitoring:** Patient profile development and maintenance and the monitoring of drug therapy are indispensable for effective counseling and consulting. These functions also contribute to the database necessary for quality and cost decision analysis.

▼ **Dispensing and Drug Distribution:** In settings that provide drugs to pharmacy benefit plan enrollees, pharmacists must minimize patients' waiting time and provide excellent customer service. Other opportunities available in this sector of managed care pharmacy are the management of pharmacy provider networks, contract development and negotiation, and the development and provision of educational programs for pharmacy providers.

▼ **Drug Information and Education:** In addition to educating patients, physicians, and other health professionals about drugs, managed care pharmacists are frequently called upon to give continuing educational programs or lectures to students in schools of pharmacy, members of community agencies or service groups, employer benefit groups, or other pharmacists participat-

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treated with MONOPRIL in controlled or uncontrolled clinical trials (N = 1479) and less frequent, clinically significant events include (listed by body system): **General:** Chest pain, edema, weakness, excessive sweating. **Cardiovascular:** Angina/myocardial infarction, cerebrovascular accident, hypertensive crisis, rhythm disturbances, palpitations, hypotensions, syncope, flushing, claudication. Orthostatic hypotension occurred in 1.4% of patients treated with fosinopril monotherapy. Hypotension or orthostatic hypotension was a cause for discontinuation of therapy in 0.1% of patients. **Dermatologic:** Urticaria, rash, photosensitivity, pruritus. **Endocrine/Metabolic:** Gout, decreased libido. **Gastrointestinal:** Pancreatitis, hepatitis, dysphagia, abdominal distention, abdominal pain, flatulence, constipation, heartburn, appetite/weight change, dry mouth. **Hematologic:** Lymphadenopathy. **Immunologic:** Angioedema. (See WARNINGS: Angioedema). **Musculoskeletal:** Arthralgia, musculoskeletal pain, myalgia/muscle cramp. **Nervous/Psychiatric:** Memory disturbance, tremor, confusion, mood change, paresthesia, sleep disturbance, drowsiness, vertigo. **Respiratory:** Bronchospasm, pharyngitis, sinusitis/rhinitis, laryngitis/hoarseness, epistaxis. A symptom-complex of cough, bronchospasm, and eosinophilia has been observed in two patients treated with fosinopril. **Special Senses:** Tinnitus, vision disturbance, taste disturbance, eye irritation. **Urogenital:** Renal insufficiency, urinary frequency. **Heart Failure:** In placebo-controlled clinical trials (361 MONOPRIL-treated patients), the usual duration of therapy was 3-6 months. Discontinuation due to any clinical or laboratory adverse event, except for heart failure, were 8.0% and 7.5% in MONOPRIL-treated and placebo-treated patients, respectively. The most frequent reason for discontinuation of MONOPRIL was angina pectoris (1.1%). Significant hypotension after the first dose of MONOPRIL occurred in 14/590 (2.4%) of patients; 5/590 (0.8%) patients discontinued due to first dose hypotension. Clinical adverse events probably or possibly related or of uncertain relationship to therapy, occurring in at least 1% of patients treated with MONOPRIL and at least as common as the placebo group, in placebo-controlled trials are shown in the following table on page xx.

Clinical Adverse Events in Placebo-Controlled Trials (Heart Failure)

	MONOPRIL (N = 361) Incidence (Discontinuation)	Placebo (N = 373) Incidence (Discontinuation)
Dizziness	11.9 (0.6)	5.4 (0.3)
Cough	9.7 (0.8)	5.1 (0.0)
Hypotension	4.4 (0.8)	0.8 (0.0)
Musculoskeletal Pain	3.3 (0.0)	2.7 (0.0)
Nausea/Vomiting	2.2 (0.6)	1.6 (0.3)
Diarrhea	2.2 (0.0)	1.3 (0.0)
Chest Pain (non-cardiac)	2.2 (0.0)	1.6 (0.0)
Upper Respiratory Infection	2.2 (0.0)	1.3 (0.0)
Orthostatic Hypotension	1.9 (0.0)	0.8 (0.0)
Subjective Cardiac Rhythm Disturbance	1.4 (0.6)	0.8 (0.3)
Weakness	1.4 (0.3)	0.5 (0.0)

The following events also occurred at a rate of 1% or more on MONOPRIL (Fosinopril Sodium) but occurred on placebo more often: fatigue, dyspnea, headache, rash, abdominal pain, muscle cramp, angina pectoris, edema, and insomnia. The incidence of adverse events in the elderly (≥ 65 years old) was similar to that seen in younger patients. Other clinical events probably or possibly related, or of uncertain relationship to therapy occurring in 0.4 to 1.0% of patients (except as noted) treated with MONOPRIL in controlled clinical trials (N = 516) and less frequent, clinically significant events include (listed by body system): **General:** Fever, influenza, weight gain, hyperhidrosis, sensation of cold, fall, pain. **Cardiovascular:** Sudden death, cardiorespiratory arrest, shock (0.2%), atrial rhythm disturbance, cardiac rhythm disturbances, non anginal chest pain, edema lower extremity, hypertension, syncope, conduction disorder, bradycardia, tachycardia. **Dermatologic:** Pruritus. **Endocrine/Metabolic:** Gout, sexual dysfunction. **Gastrointestinal:** Hepatomegaly, abdominal distention, decreased appetite, dry mouth, constipation, flatulence. **Immunologic:** Angioedema. (0.2%). **Musculoskeletal:** Muscle ache, swelling of an extremity, weakness of an extremity. **Nervous/Psychiatric:** Cerebral infarction, TIA, depression, numbness, paresthesia, vertigo, behavior change, tremor. **Respiratory:** Abnormal vocalization, rhinitis, sinus abnormality, tracheobronchitis, abnormal breathing, pleuritic chest pain. **Special Senses:** Visual disturbance, taste disturbance. **Urogenital:** Abnormal urination, kidney pain.

Fetal/Neonatal Morbidity and Mortality See WARNINGS: Fetal/Neonatal Morbidity and Mortality.
Potential Adverse Effects Reported with ACE Inhibitors Body as a whole: Anaphylactoid reactions (see WARNINGS: Anaphylactoid and possible related reactions and PRECAUTIONS: Hemodialysis). Other medically important adverse effects reported with ACE inhibitors include: Cardiac arrest; eosinophilic pneumonitis; neutropenia/agranulocytosis, pancytopenia, anemia (including hemolytic and aplastic), thrombocytopenia; acute renal failure; hepatic failure, jaundice (hepatocellular or cholestatic); symptomatic hyponatremia; bullous pemphigus, exfoliative dermatitis; a syndrome which may include: arthralgia/arthritis, vasculitis, serositis, myalgia, fever, rash or other dermatologic manifestations, a positive ANA, leukocytosis, eosinophilia, or an elevated ESR. **Laboratory Test Abnormalities Serum Electrolytes:** Hyperkalemia, (see PRECAUTIONS); hyponatremia, (see PRECAUTIONS: Drug Interactions, With diuretics). **BUN/Serum Creatinine:** Elevations, usually transient and minor, of BUN or serum creatinine have been observed. In placebo-controlled clinical trials, there were no significant differences in the number of patients experiencing increases in serum creatinine (outside the normal range or 1.33 times the pretreatment value) between the fosinopril and placebo treatment groups. Rapid reduction of longstanding or markedly elevated blood pressure by any antihypertensive therapy can result in decreases in the glomerular filtration rate and, in turn, lead to increases in BUN or serum creatinine. (See PRECAUTIONS: General.) **Hematology:** In controlled trials, a mean hemoglobin decrease of 0.1 g/dL was observed in fosinopril-treated patients. In individual patients decreases in hemoglobin or hematocrit were usually transient, small, and not associated with symptoms. No patient was discontinued from therapy due to the development of anemia. **Other:** Neutropenia (see WARNINGS), leukopenia and eosinophilia. **Liver Function Tests:** Elevations of transaminases, LDH, alkaline phosphatase and serum bilirubin have been reported. Fosinopril therapy was discontinued because of serum transaminase elevations in 0.7% of patients. In the majority of cases, the abnormalities were either present at baseline or were associated with other etiologic factors. In those cases which were possibly related to fosinopril therapy, the elevations were generally mild and transient and resolved after discontinuation of therapy.

OVERDOSAGE

Oral doses of fosinopril at 2600 mg/kg in rats were associated with significant lethality. Human overdoses of fosinopril have not been reported, but the most common manifestations of human fosinopril overdose is likely to be hypotension. Laboratory determinations of serum levels of fosinopril and its metabolites are not widely available, and such determinations have, in any event, no established role in the management of fosinopril overdose. No data are available to suggest physiological maneuvers (e.g., maneuvers to change the pH of the urine) that might accelerate elimination of fosinopril and its metabolites. Fosinopril is poorly removed from the body by both hemodialysis and peritoneal dialysis. Angiotensin II could presumably serve as a specific antagonist-antidote in the setting of fosinopril overdose, but angiotensin II is essentially unavailable outside of scattered research facilities. Because the hypotensive effect of fosinopril is achieved through vasodilation and effective hypovolemia, it is reasonable to treat fosinopril overdose by infusion of normal saline solution.

Consult package insert before prescribing Monopril (fosinopril sodium).

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References: 1. Average wholesale price, Red Book® Update, May 1995. 2. Data on file, Bristol-Myers Squibb Pharmaceutical Research Institute.

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ing in the plan's network.

▼ **Research:** Research in managed care pharmacy practice often involves formulary development and evaluation, drug-use reviews, physician prescribing behaviors, drug protocols, and validation of the cost-effectiveness of drugs compared with others in the same class of medications or to other medical treatments. Pharmacoeconomic studies and outcomes measurement are quickly becoming specialized areas of managed care pharmacy.

▼ **Management/Administration:** Pharmacists who assume administrative positions in managed care pharmacy may be involved in some or all of the following types of management activities: pharmacy benefits design and implementation, pharmacy plan administration and evaluation, inventory control, personnel management, contract negotiation, and the marketing of pharmacy benefits. Their primary responsibility is to ensure that pharmacy benefit programs meet the needs of the primary customer and provide high-quality, cost-effective care in a profitable manner.

WHERE PHARMACISTS PRACTICE MANAGED CARE PHARMACY

Managed care pharmacy is practiced in a variety of settings. Since managed care is an evolving area, some practice settings are more established than others. Hence, the extent to which managed pharmaceutical care concepts and techniques can be implemented and practiced varies with the setting. Some environments are rudimentary in their current development and therefore are only controlling costs. Others have reached the point of acknowledging that effective managed pharmaceutical care must concern itself not only with cost considerations, but with clinical and quality considerations as well. Pharmacists who practice in these types of managed care pharmacy operations will have more extensive involvement with all of the professional activities discussed above.

The following are some of the many settings in which managed care pharmacy is practiced:

▼ **Health Maintenance Organization (HMO):** HMOs are entities that offer, provide, or arrange for coverage of designated health services needed by plan members for a fixed, prepaid premium. Of the various types of HMOs in existence—staff, group, network, or IPA—the staff model and group model HMOs provide the pharmacist the greatest opportunity to practice managed care pharmacy, as clinicians, managers, or both. Almost 90% of staff model HMOs operate in-house pharmacies, while other HMO types contract for pharmaceutical services through groups [e.g., chain pharmacies, individual provider-pharmacists, or pharmacy service administrative organizations (PSAOs)], which are voluntary networks of independent pharmacies that provide volume buying power and other services.

▼ **Preferred Provider Organization (PPO)/Point-of-Service (POS) Programs:** PPOs are precursors of POS programs, which is the most dynamic element in the managed healthcare market. These organizations generate contractual agreements between

providers and purchasers of healthcare, and may contract with a drugstore chain, an independent pharmacy, or a PSAO.

▼ **Pharmacy Benefit Management (PBM) Company:** Managed care plans and employers contract with PBMs to handle the administrative functions of the pharmacy benefit plans, and pharmacists in PBMs help create drug formularies, negotiate national contracts, and process claims (e.g., through card systems), among other activities.

▼ **Managed Indemnity Plan:** Many traditional insurance companies are replacing fee-for-service drug insurance programs with managed care pharmacy programs, thus yielding new practice opportunities for pharmacists, including benefit design, implementation of cost saving programs, formulary development, pharmacy and therapeutics committees, DUR, education programs, and clinical protocols.

▼ **Third-Party Administration (TPA):** Third-party administrators offer a growing number of paths for pharma-

cists who want satisfaction from providing managed prescription benefit packages on behalf of a PPO or employer.²

▼ **Employer Benefit Consulting:** Consultant pharmacists typically examine a MCO's existing pharmacy benefit plan and develop strategies for improvement.

▼ **Pharmaceutical Industry:** Many drug companies have established managed care divisions that participate in the pharmacy benefit programs and other activities of MCOs. Because many of these activities are related to sales, pharmacist sales representatives need extensive knowledge of drugs as well as managed care pharmacy and clinical pharmacy.

▼ **Government:** Several institutions run by the federal government and state-run Medicaid programs need pharmacists with managed care backgrounds to develop and operate new programs, particularly as the population continues to age.

▼ **Academia:** Many schools are in-

corporating managed care pharmacy clerkship rotations, and pharmacists who can teach in this developing area are valuable.

▼ **Hospital Pharmacy:** Hospitals, in an effort to increase efficiency and cut costs, are implementing managed care pharmacy ideas.

▼ **Specialty Pharmacy Services:** Home healthcare, long-term care, respiratory pharmacy, home infusion therapy, hospice, mail-order pharmacy, and international pharmacy services all have a place for managed care pharmacists who can integrate specialized care with the needs of the particular patient.▲

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