The Impact of a Therapeutic Interchange Program in a Managed Care Organization

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OBJECTIVE: To show how therapeutic interchange, one of the tools used to manage pharmaceutical utilization, can save money while ensuring high-quality care and patient and physician satisfaction.

DESIGN: Patients using nifedipine gastrointestinal system were switched to nifedipine core-coat product.

SETTING: A multispecialty group practice that employs more than 250 physicians in some 23 specialties, with responsibility for more than 200,000 patients as of November 1997.

MAIN OUTCOME MEASURES: The number of patients able to switch successfully and the savings in costs.

CONCLUSIONS: Managed care organizations can use utilization management tools successfully to assure quality care at lower costs. In the long term, this switch benefited both patients and plan.

KEYWORDS: Therapeutic interchange, Nifedipine (GITS), Nifedipine core-coat

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Over the past several years, prescription drugs have come to account for an ever-increasing part of the health care budget.[1] Prescriptions are among the few categories of consumer goods rising faster than inflation[2] rate.

Managed care spends around $30 billion dollars annually on prescription drugs. In 1997, pharmaceutical drug costs increased by 2.3% in the first and second quarters; by 2.9% in the third quarter; and by 3.1% in the fourth quarter. A decrease of 5%–12% in generic drug prices prevented the 1997 increase in prescription drug prices from rising even higher.[3]

The increase in drug prices, particularly for new and branded drugs, is expected to continue. The impact on costs will be heightened in the near future as the FDA is expected to approve a record number of new drugs.[4]

In addition to the escalating costs of medications, the number of drugs used per patient has increased for some disease states.[3] More aggressive management of diseases such as hyperlipidemia, hypertension, diabetes, and asthma is the growing trend. More proactive patient management often results in earlier identification and increased numbers of patients receiving prescription drugs.

A third factor contributing to the continuing rise in prescription drug utilization may be the benefit structure developed by managed care. Managed care systems generally offer office visits at either no cost or for only a small copayment. Estimates indicate that 60% of all office visits end with a prescription.[5] In addition, most managed care programs offer prescription medications for only a low copayment. This removes financial barriers and makes obtaining prescriptions easier. The combination of greater access to physician office visits and small drug copayments results in increased medication use.

In turn, the increase in medication utilization leads to higher health care costs for insurers, employers, and eventually

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Table 1. Monthly Top 100 Placement for Nifedipine-GITS

Medication	Jan 92	June 92	Dec 92	Jan 93	June 93	Dec 93	Jan 94	June 94	Dec 94
Nifedipine-GITS 30 mg	11	10	8	8	8	7	9	9	8
Nifedipine-GITS 60 mg	12	12	12	11	10	10	10	10	9
Nifedipine-GITS 90 mg	55	63	44	38	33	26	29	27	29

consumers. To remain competitive, managed care must develop ways to ease the financial increases in medical products and services. At the same time, given the increased regulatory and legislative scrutiny faced by the industry, managed care must be completely sure that cost containment strategies do not negatively affect clinical outcomes or patient satisfaction.

FALLON CLINIC

Managed care pharmacy departments use a variety of tools to ensure appropriate prescription drug utilization. Some strategies, including formularies, drug utilization reviews, physician utilization reviews, drug class reviews, patient profiling, prior authorization, restrictions, guidelines, and disease management are aimed at affecting physician and patient behavior. At an organizational purchasing level, other important tools include contract and rebate systems. The purpose of this paper is to describe how one managed care organization used several of these tools to develop and implement a successful medication interchange program.

The Fallon Healthcare System in central Massachusetts consists of the Fallon Clinic and Fallon Community Health Plan. Fallon Clinic is a multispecialty group practice that employs more than 250 physicians in 23 specialties. Approximately 90% of patients are health maintenance organization (HMO) members. The patient mix at Fallon Clinic is consistent with area sociodemographics; most patients are of European background working at blue-collar jobs.

Fallon Community Health Plan is a state-licensed federally qualified group model HMO in operation since 1977. Membership in 1997 totaled more than 200,000, including 39,000 Medicare-eligible enrollees in a senior plan.

The Fallon Pharmacy and Therapeutics (P&T) Committee, which consists of 21 physicians and three nonphysicians, each with one vote, manages the prescription drug benefit. The physicians represent a range of primary care and specialty practices as well as sites in different geographic locations of the Fallon service area. The P&T committee makes decisions on new medications approved by the FDA, old medications with new uses, biotechnology products, copayment changes, pharmaceutical sales representative policies, and restrictive status of medications. The Drug Evaluation Committee (DEC), a working subgroup of the P&T committee, includes the chairperson of the P&T committee (a physician who helps manage the pharmacy benefit), a clinical coordinator, a drug purchaser, and a medication contractor. The DEC examines new drug reviews, meets with pharmaceutical drug representatives, and calculates expected utilization and cost impact of new drugs to the system.[6] The DEC brings the information to the P&T committee for a vote.

Fallon Clinic has a closed formulary. Before physicians can use nonformulary medications they must send a Compassionate Use Request stating reasons that the formulary medication cannot be used. On average, requests are answered within two hours.

THERAPEUTIC SUBSTITUTION PROGRAMS

Most managed care plans regularly replace medications currently used with other medications in the same drug class. Substitution can occur when new medications become available, when drug formulations change, or when a more favorable financial contract is offered for the new medication. Patients new to therapy can easily be given the replacement medication. Managed care organizations, however, must consider patients currently on a therapy who will be switched to the new medication. Most such patients can be switched safely to the new drug without a decrease in patient satisfaction. Switches must be well organized to ensure that providers and pharmacists can smoothly implement proposed changes.

In 1995 Fallon was offered a contract for a new calcium channel blocker with potentially significant cost savings for the organization. Before considering any changes in the formulary, however, the new product had to be compared to the existing product to ensure equal or superior clinical efficacy and safety.

Until 1994 only one long-acting nifedipine product, nifedipine gastrointestinal system (GITS), was on the Fallon formulary. During 1993 and 1994 the use of this product increased. As seen in Table 1, two of the three available strengths had climbed into the Top 100 list for monthly drug utilization as measured by volume of prescriptions and cost.

At the same time, the National Heart, Lung, and Blood Institute published the fifth report of the Joint National Commission (JNC) on Detection, Evaluation, and Treatment of High Blood Pressure. The JNC-V report included suggestions on drugs used in hypertension treatment, noting that diuretics and beta blockers should be the first choices for patients with hypertension, because those two classes of antihypertensives were associated with a decrease in cardiovascular mortality

and morbidity. In response to the report, Fallon implemented a program to educate physicians on the new recommendations on the treatment of hypertension. The new nifedipine contract afforded an opportunity to combine the medication switch with a physician education program.

METHODS

In March 1994, a drug manufacturer presented information on its long-acting nifedipine core-coat product, which was clinically equivalent but considerably less expensive than the product on formulary. At the time, because the product in use enjoyed reasonable physician and patient satisfaction, the Fallon DEC chose to take no action. Later in 1994, as usage and costs continued to grow, the DEC completed a drug review of the long-acting nifedipine core-coat product.

Drug reviews focus on many parameters including, but not limited to, formulations available, efficacy, comparable efficacy, side effects, monitoring parameters, drug interactions, cost, and current and expected utilization.[1] Fallon's review comparing the nifedipine GITS product to the core-coat product estimated that the nifedipine core-coat product was 35% less expensive than nifedipine GITS. At the time, no studies existed that made a direct clinical comparison between the two products. Special attention was placed on parameters such as dissolution rates, absorption rates, plasma levels, and blood pressure evaluations.

The two once-daily nifedipine products are FDA-rated BC and could not be considered generic equivalents. However, after concluding that the two products, although not identical, had comparable outcomes, the DEC recommended that nifedipine core-coat be added to the formulary. In December 1994 the P&T committee voted to add the drug as the preferred calcium channel blocker, without mandating a change.

Table 2. Demographics for Patients on Nifedipine Products

	1993	1994	1995
Nifedipine Core-coat			
Under 18		0.3%	0%
18–44		4.9%	4.1%
45–64		32.6%	29.3%
65+		61.8%	66.6%
Nifedipine GITS			
Under 18	0.2%	0.2%	0.1%
18–44	6.2%	5.9%	6.3%
45–64	34.3%	31.9%	32.6%
65+	59.3%	61.9%	61.0%
Nifedipine Core-coat			
Female		51.6%	49.0%
Male		48.4%	51.0%
Nifedipine GITS			
Female	45.8%	47.1%	48.0%
Male	54.2%	52.9%	52.0%

Providers received multiple notices from the DEC on the efficacy, cost, and positioning of the new product within hypertension step therapy. The DEC sent written material to physicians, pharmacists, and nurses on how the products differed, correct dosing, and how to answer patient questions. Well-established organizational communication channels were used to disseminate this information.

During 1995 a number of patients new to therapy were placed on the new product. Overall, however, there was very little switching to the newer product. Two more notices about the new product were sent to providers. As of 1995, 40% of prescriptions were written for nifedipine core-coat, compared to 60% for nifedipine GITS.

As seen in Table 2, the demographics for patients prescribed each nifedipine product were similar.

INTERVENTION

In February 1996, the P&T committee and the Department of Cardiology voted to begin mandatory substitution. A notice went to all providers explaining the new rule, emphasizing the great cost savings, and noting that the number of prescriptions written for nifedipine GITS had decreased by 25%. The notice further added that an additional 25% would result in even greater savings.

In addition to the notice, physicians received a list of their patients on the long-acting nifedipine GITS product. Included on the list was the patient's telephone number, the date of all prescriptions filled, and the amount of medication dispensed. Physicians could choose to switch patients to the nifedipine core-coat product in any of the following ways:

▲ Call patients to explain that the next time their prescription was refilled it would be for a different medication. At the same time, send a new prescription to the pharmacy.

▲ Have the head nurse call to educate each patient about the new medication. Send a new prescription to the pharmacy.

▲ Wait for patients to get a refill and have the new prescription waiting at the pharmacy for them.

▲ Wait for patients to have their annual physical exams and then explain the switch to them.

With the list, physicians could examine patients individually and decide whether a switch would be beneficial or if another class of medication would be better. Patients were instructed by their pharmacists and physicians to have a blood pressure check four weeks after the switch.

During the change, an article appeared in the *Journal of the American Medical Association* describing an increased mortality rate from certain short-acting calcium channel blockers in patients with hypertension.[7] Psaty's study did not include data for the long-acting calcium channel blockers. However, because it was published as Fallon was implementing the change, many providers decided to switch patients from calcium channel blockers to alternative medications in different drug classes.

Table 3. Percentage of Volume of Prescriptions for the Two Nifedipine Products

	1993	1994	1995	1996
Nifedipine GITS	100%	97%	60%	6%
Nifedipine core-coat		3%	40%	94%

Relatively few patients were allowed to remain on the original nifedipine GITS. These patients did not want to switch, or felt the new product caused side effects.

RESULTS

By the end of 1996, the trend in nifedipine prescribing had almost reversed from the trend in 1994; 94% of prescriptions filled for nifedipine were for the core-coat product (see Table 3). No severe adverse effects were reported. Providers confirmed that patients accepted the switch with very few problems. The single report of an increase in blood pressure could have been attributed to other causes. In addition, providers indicated the switch did not take as much time as expected. No differences in ambulatory or hospital utilization among this patient group were observed. In addition, the overall utilization of all nifedipine products declined by 37%. Based on current utilization, Fallon is now saving 35% per year by using the nifedipine core-coat product.

DISCUSSION

This product interchange helped the health plan economically and potentially benefited patients medically. Patients received high-quality medication that was clinically equivalent to the more expensive product. They also received extra educational attention about their hypertension and had their blood pressure checked and rechecked. Some patients benefited by being switched from a calcium channel blocker to another, more appropriate, medication. The total number of nifedipine prescriptions decreased due to several factors, including the Psaty article[7], the interchange process, and increased patient scrutiny of their hypertension management.

As measured by cost savings and by patient care quality issues, this therapeutic interchange was very successful. The switch was well planned, physicians were an integral part of the decision-making process, and the Department of Cardiology championed the change. In addition, all providers were educated about the switch through well-established communication channels that allowed interaction among all members of the health care system who would be a part of the implementation. A further important factor was the system-wide effort put into patient education.

This study did not measure the costs associated with the process, including production and distribution of educational material, and pharmacy, physician, and nursing hours needed to effect the change. Fallon previously had determined that therapeutic interchange programs would not be undertaken unless they offered the potential for a 30%–35% reduction in drug costs. Some of the cost savings for the first year, however, are consumed by implementation of the switch.

Therapeutic interchange will become more important given the continued rise in drug prices, the expected number of new drug products being introduced this year, and the continued use of more aggressive therapies. Managed care plans must continue to make judicious use of the money they receive through payors and patient premiums. In this case, both the health plan and patients benefited economically by reducing the cost of drugs.

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