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# PHARMACY MANAGEMENT TRENDS: A GUIDE FOR NEW PHYSICIANS

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A 38-year-old production-line auto worker presents to his new primary care physician with a complaint of severe heartburn. The heartburn occurs at least once daily and sometimes is associated with regurgitation that has an acid taste. The patient's symptoms are worse at work because his job entails crawling into tight spaces.

The patient has never seen a doctor for his condition. After several years of part-time employment, he now has a full-time job with health insurance benefits. He has been self-treating his heartburn with antacids and has been using a large bottle of liquid antacid every 2 or 3 days for at least 2 years. On noticing his dependency on antacids, a coworker recommended he try one of the new over-the-counter histamine<sub>2</sub> (H<sub>2</sub>)-receptor blockers. Although these drugs diminished the severity of his heartburn symptoms, he states that their benefit did not justify their relative high price compared with his generic antacid, which he purchases by the case at a discount center.

When the patient visited his parents a few months ago, his father suggested he try his prescription acid-reducing medication. The patient found that the medication worked much better than the others he had tried. He cannot recall the name but remembers that the pill was purple in color. He asks his physician for a prescription for that medication.

**A**lthough the rate of growth in per capita health care spending has been slowing somewhat in recent years [1], the rate of increase in pharmaceutical costs has been rising and is expected to continue climbing. In 1997, pharmacy benefit expenditures accounted for 7.2% of total health care spending. In 2000, pharmacy benefits are expected to account for 8.5% of total health care expenditures.

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Early efforts at controlling pharmacy costs led to the creation of pharmacy benefits management (PBM) organizations. PBMs reduced unit drug costs initially by forming preferred provider networks, much the same as managed care organizations (MCOs) did for other medical providers. PBMs negotiated discounts from pharmaceutical manufacturers based on their ability to purchase large volumes of prescription drugs and established a variety of clinical interventions designed to mitigate costs, promote appropriate usage, or both. For example, a patient might be prevented from filling prescriptions for both fluoxetine (Prozac) and paroxetine (Paxil) to avoid unnecessary utilization of similar agents.

Despite PBM efforts to moderate increases in prescription drug costs, total spending has continued to rise at an alarming rate. Over the next several years, drug costs are expected to increase 13% to 17% per year [2]. Unless health plans and other payers use aggressive interventions, this trend will not abate. In 1997, health maintenance organizations (HMOs) spent an average of 11.7% of their total operating expenses on pharmaceutical expenditures. Plans with less than 15,000 members were affected to a greater degree than larger plans and spent an average of 13.2% of operating expenses on prescription drug benefits during the same year [3]. Some health plans may actually spend more on pharmacy benefits than they do on hospital expenses [4].

Physicians entering the workforce often are unaware of the actual costs associated with pharmaceutical therapies. This article reviews factors that have contributed to rising pharmacy costs and explores the impact that direct-to-consumer (DTC) advertising has had on patient demand for pharmaceutical products. Current strategies being used to better manage pharmacy benefits also are reviewed. Portions of this article are adapted from a previous publication [2].

## Factors Contributing to Increased Pharmacy Costs

Several factors have contributed to the increases in drug expenditures, including per prescription drug costs, utilization, and the impact of costly new drugs entering the market.

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**Table 1.** Percentage Contribution of Components of PMPY AWP Cost Trend, 1994–1998

Factor	1994–1995, %	1995–1996, %	1996–1997, %	1997–1998, %	1994–1998, %
Common drugs*					
Inflation	1.0	3.3	2.4	5.1	11.0
Units per prescription	1.4	1.8	1.0	0.6	4.7
Strength mix	0.2	0.5	0.6	0.6	4.0
Therapeutic mix	2.2	4.2	4.7	4.4	7.6
Utilization	2.8	1.4	4.5	3.8	4.0
Total	7.8	11.5	13.7	15.2	34.0
New drugs	1.1	1.3	2.4	1.6	32.6
Total	8.9	12.9	16.1	16.8	66.6

NOTE. The percentage contribution of each factor does not equal the common drug percentage increase for a given time period due to rounding. The percentage increase was calculated by multiplying the base cost for a given year by the percentage contributed by the first factor (inflation). The result was then multiplied by the percentage contributed by the second factor (units per prescription), and so on. The percentage contribution of new drugs was then added to the total common drug percentage increase to yield an all-drug percentage increase. AWP = average wholesale price; PMPY = per member per year. (Adapted with permission from Teitelbaum F, Parker A, Martinez R, Roe C. 1998 Drug trend report. St. Louis [MO]: Express Scripts, Inc.; 1999.)

\*Common drugs refer to medications that were introduced prior to 1994 and were available for use between 1994 and 1998.

### Per Prescription Drug Costs

To ensure comparability over time and among payers with different plan designs, per prescription drug costs are expressed in terms of average wholesale price (AWP), which excludes discounts negotiated with drug manufacturers and member financial contributions. Fluctuations in AWP are due to variations in 4 components: inflation, therapeutic mix, strength mix, and number of units of a drug dispensed per prescription. The degree to which each component contributes to changes in per prescription cost may vary according to market trends.

Inflation refers to variation in the AWP charged by a manufacturer for each unit of its product; inflation increases may be moderated by the availability of less expensive generic equivalents of brand name products. Therapeutic mix refers to changes in the combination of pharmaceutical entities within and across therapeutic classes (ie, relative use of more or less expensive drugs); strength mix refers to the cost impacts of more or less expensive strengths of given drugs. For example, between 1997 and 1998 drugs in the cough/cold class experienced a combined 6.5% mix increase [2]. This change resulted primarily from the increasing popularity of brand name non-sedating decongestants, whereas less costly generic agents decreased in popularity among prescribing physicians.

### Utilization

Utilization refers to the number of prescriptions written for a particular drug as well as the duration of time a

drug is employed for therapy. Drugs prescribed for long-term use or maintenance therapy (eg, selective serotonin reuptake inhibitors for depression and proton pump inhibitors [PPIs] for gastric reflux) have a larger impact on overall drug costs than do comparably priced drugs used for acute, self-limiting conditions (eg, antibiotics for urinary tract infections).

### Recent Drug Cost Trends

Between 1994 and 1998, the per member per year (PMPY) AWP for drugs increased 66.6% (from \$198 to \$330) [2]. **Table 1** shows the relative contribution of inflation, therapeutic mix, strength mix, and units to drug costs during this 4-year period. Looking more closely at this cost trend, changes in per prescription drug costs and utilization accounted for increases associated with common drugs that were available for use during this period. The remaining portion of the trend is attributable to the impact of new, brand name drugs entering the market.

The rate at which drug costs are rising also increased during this 4-year period, from 8.9% between 1994 and 1995 to 16.8% between 1997 and 1998; the rate of increase in PMPY AWP for managed care and non-managed care plans between 1997 and 1998 was 15.9% and 17.4%, respectively [2]. Two thirds of the 1997–1998 increase was due to higher per prescription costs, although the degree and causes of the increase varied among drug classes. For example, utilization of

antihistamines and antihyperlipidemic drugs increased (17.5% and 16.3%, respectively), whereas utilization of cephalosporins, analgesics, and calcium channel blockers decreased (-8.1%, -3.4%, and -3.3%, respectively). Likewise, inflation had only a modest impact on the cost of gastrointestinal agents and macrolides (increases of 0.7% and 1.8%, respectively) but a significant impact on the price of antianxiety drugs (a 28.3% increase).

Although 1999 data currently are not available, AWP costs were expected to increase at least 16% [2]. **Table 2** shows anticipated trends for the top 25 therapeutic classes, along with rationales for predicted changes.

### Increasing Consumer Demand

Consumer demand for pharmaceutical products increased steadily during the 1990s and is partially responsible for the rapid increases in drug costs. To a large extent, the demand is the result of DTC advertising. For example, following the premiere of the first DTC television advertisement during the 1992 Super Bowl, demand for a prescription product—a nicotine patch—quickly increased beyond available supplies [5]. This phenomenon has grown dramatically since the U.S. Food and Drug Administration (FDA) relaxed its regulations governing DTC advertising in 1997.

Due to the success of DTC advertising campaigns, pharmaceutical manufacturers have steadily increased their marketing efforts aimed at consumers. During 1998, total DTC spending was \$1.32 billion, an increase of 23% over 1997 spending [6]. That year, more money (\$185 million) was spent on advertising loratadine (Claritin), a nonsedating antihistamine, than was spent for any other single agent [6]. During the first 6 months of 1999, pharmaceutical manufacturers spent \$905 million on DTC advertising, 59% of which was spent on television advertisements [7].

Reaction to DTC marketing has been mixed. In the medical community, it has been lauded by some as a step toward meeting consumers' increasing demand for information about conditions that affect their health [5]. Proponents of this view maintain that as patients learn more about diseases they may have, they are empowered to take responsibility for managing their own health (eg, through greater adherence to recommended treatment regimens or lifestyle modifications). Information about disease states is especially important for patients with chronic, undermanaged conditions such as depression and diabetes. For these patients, DTC advertising may represent a new source of information and an inspiration to seek better care.

Alternatively, critics question the quality of information in DTC advertisements and argue that lay persons

do not have the medical knowledge and clinical experience needed to evaluate whether the information applies to their own conditions. Several studies have questioned the reliability and completeness of information contained in DTC advertisements [8-12]. Authors of these studies are concerned that DTC advertisements fail to reference appropriate controlled trials, lack necessary warnings or precautions, and are composed primarily of promotional rather than educational material.

Nevertheless, DTC advertising has proven to be an effective means of creating patient interest in pharmaceutical products. A 1998 study conducted by *Prevention Magazine* with technical assistance from the FDA found that 90% of respondents had seen an advertisement for a specific drug; 33% of those individuals (an estimated 53 million people) subsequently visited a physician and in 80% of cases received a prescription for the requested drug [13].

Another trend of the past decade is for consumers to accept drug therapy over other treatment approaches, such as diet and exercise to lower blood pressure or cholesterol levels. Consumers are also demanding access to drugs that are not necessary to sustain life or health but are used instead to enhance quality of life (eg, sildenafil [Viagra]) or for cosmetic purposes (eg, finasteride [Propecia], tretinoin [Retin A]). Although some of the current interest in life-enhancing drugs may be due to DTC advertising, most DTC spending is concentrated on drugs that lie on the continuum between life sustaining and life enhancing.

### Impact of the Internet

The Internet also has affected drug cost trends in recent years. Consumers use the Internet to gain information about drugs and disease states as well as to purchase drugs. In 1998, almost 25% of Internet sites were found to be health related [14], and advertisements for online health care information sources are increasingly common. Even medical societies are taking advantage of the growing health care presence on the Internet. In early 2000, the American Medical Association (AMA) and 6 other medical societies plan to unveil a for-profit Internet "super-site" called Medem.com, which seeks to increase the "medical empowerment" of consumers [15].

Similar to DTC advertisements, many health-related Internet sites currently are not regulated. The sites, especially online sources of prescription medications, pose obvious dangers, and the FDA, the AMA, and several other groups have advocated the imposition of regulations [16]. In Spring 1999, the National Association of Boards of Pharmacy introduced the Verified Internet Pharmacy Practice Sites (VIPPS)

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**Table 2.** Trends in PMPY Cost and Utilization of Top 25 Therapeutic Classes

Therapeutic Class	1997, \$	1998, \$	1999, \$*	Comments
Gastrointestinals	24.77	28.53	32.81	Increased use of PPIs will continue to increase costs
Antidepressants	23.55	28.31	33.12	Increased competition and marketing efforts will cause continued cost increases
Antihyperlipidemics	18.01	21.64	25.54	Use of new guidelines for primary prevention and DTC advertising will maintain growth
Antihypertensives <sup>†</sup>	15.83	18.13	20.40	Price competition will slow rate of cost increases
Calcium channel blockers	13.43	13.41	13.01	Cost decreases will continue due to increased availability of therapeutic alternatives
NSAIDs	12.42	12.88	16.10	Increased use of COX-2 inhibitors will substantially increase costs
Antiasthmatics	10.57	12.25	13.90	Use of practice guidelines will increase utilization and maintain high costs
Antidiabetics	9.10	12.12	15.15	Addition of new therapies to current regimens will substantially increase costs
Antihistamines	8.86	11.10	14.26	DTC advertisements will increase consumer demand and costs, but utilization may plateau
Dermatologicals <sup>‡</sup>	8.81	10.29	11.73	New drugs to treat previously untreatable conditions and "old" conditions will result in continued cost increases
Antineoplastics	5.94	9.86	15.78	New drugs and indications and increased ambulatory use will cause significant cost increases
Estrogens	7.24	8.29	9.78	Increased availability of new drugs will increase utilization
Oral contraceptives	7.33	8.07	9.20	Political pressure for coverage, availability of new products, and new indications will increase costs

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program. Online pharmacy merchants that meet VIPPS criteria display a seal of approval on their Website; consumers interested in verifying a particular site's compliance status can click on the seal hyperlink to view pertinent information [17]. However, to date few online pharmacies have received the VIPPS seal of approval. Furthermore, despite the imposition of regulations in the United States, there continues to be a proliferation of unregulated foreign sources of online prescriptions.

A recent study of the availability and costs of obtaining physician and prescription services via the Internet found that online providers may actually cost consumers more than traditional providers [18]. However, many consumers are drawn to such sites by the expectation of cost savings.

### Cost Containment Strategies

Health plans and pharmacy providers are under immense pressure to contain pharmacy costs. Cost management strategies can be divided into 2 categories: those that attempt to control per prescription costs and those that attempt to control utilization. **Table 3** pro-

vides practical suggestions that physicians can use to keep drug costs under control.

After listening to his patient's request for the "purple pills," the physician consults the prescribing guidelines for the patient's managed care plan. The guidelines encourage physicians to reserve PPIs for patients who fail a course of therapy with a generic H<sub>2</sub> blocker. The patient agrees with this plan after the physician informs him that ranitidine was for many years the most widely prescribed antisecretory agent.

On a return visit, the patient reports that he took the generic H<sub>2</sub> blocker as directed but that the effect was "no better" than with the pills he purchased at the drug store. After another review of the health plan's prescribing guidelines, the physician informs the patient that his health plan recommends upper gastrointestinal endoscopy following failure of antisecretory therapy. The patient flatly refuses and again strongly requests a prescription for the PPI. The physician complies and prescribes the requested PPI.

Table 2. *continued*

Therapy Class	1997, \$	1998, \$	1999, \$*	Comments
Cephalosporins	7.80	7.38	6.86	Use of alternative therapies will result in continued cost decreases
Cough/cold agents	6.75	7.46	8.28	Cost increases expected to continue at current levels
Antivirals	5.98	7.36	9.27	Newly approved drugs and additive treatment regimens for AIDS/HIV will continue to increase costs
Macrolides	6.38	6.88	7.50	Ease of dosing and effectiveness of class will result in increased utilization
β-Blockers	6.06	6.92	7.82	Positive study results re-emphasizing efficacy in treating cardiac conditions will increase utilization
Narcotic analgesics	5.85	7.05	8.32	Recommended use of these products for nonterminal conditions will continue to increase costs
Penicillins	5.45	5.69	5.97	Unit costs will result in continued moderate cost increases
Migraine products	4.68	5.50	6.77	More available products and DTC advertisements will result in increased utilization
Decongestants <sup>§</sup>	4.72	5.43	6.14	Effect of DTC advertisements will be offset to some extent by loss of patent protection for some drugs
Anticonvulsants	4.45	5.52	6.62	Off-label use and price increases will maintain rate of overall cost increases
Antianxiety agents	4.64	6.22	6.84	Continued excessive cost increases are not expected
Quinolones	3.19	3.97	4.76	Increased use of newer broad-spectrum drugs will continue to increase costs
Other	50.66	59.59	69.12	Newer niche products and general demand for drugs will result in cost increases
<b>Total</b>	<b>\$282.48</b>	<b>\$329.83</b>	<b>\$385.06</b>	

COX = cyclooxygenase; DTC = direct-to-consumer; NSAIDs = nonsteroidal anti-inflammatory drugs; PMPY = per member per year; PPIs = proton pump inhibitors. (Adapted with permission from Teitelbaum F, Parker A, Martinez R, Roe C. 1998 Drug trend report. St. Louis [MO]: Express Scripts, Inc.; 1999.)

\*Estimate.

†Antihypertensives include angiotensin-converting enzyme inhibitors, angiotensin receptor blockers, and other antihypertensives.

‡Dermatologicals include topical antifungal agents.

§Decongestants include nasal corticosteroids.

The patient leaves his physician's office satisfied until he arrives at a retail pharmacy to discover that his copay for the PPI (\$25) is significantly higher than the copay for the generic H<sub>2</sub> blocker (\$5). The pharmacist informs him that she can substitute an equally efficacious but less costly PPI that is preferred by the plan and will have a lower copay (\$15). However, the patient remembers his positive response to the "purple pill" and chooses the more expensive drug.

At a follow-up visit 3 months later, the patient tells his physician that he feels fine when he takes his medication; however, when he forgets to follow the treatment regimen, his symptoms invariably return.

Shortly after the patient's visit, the physician's medical group negotiates a new contract with the patient's health plan. Under the new contract, primary care physicians are capitated for pharmacy benefits and thus assume some financial risk for pharmaceutical expenditures. Because this patient will require long-term maintenance therapy for his condition, at his next visit the physician recommends a new, less costly maintenance regimen that includes either a high-dose generic H<sub>2</sub> blocker (at least twice daily) or the preferred PPI, preferably at a lower dose (ie, every other day).

The patient takes the preferred agent every other day, and his symptoms remain under good

**Table 3.** Practical Strategies for Controlling Drug Costs

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### Create an expert

Appoint office personnel (eg, nurse, medical assistant) to be responsible for drug preauthorizations and approvals and to become familiar with the formularies and appeals processes of pharmacy benefits providers.

### Organize formulary information

Organize formulary data so that it can be easily referenced. Create a quick reference chart and ascertain whether formularies are available electronically.

### Compare costs

Learn about the costs and outcomes of similar drugs. Read the medical literature and newsletters such as The Medical Letter ([www.medletter.com](http://www.medletter.com)) for new drug and cost-comparison data.

### Understand pharmaceutical marketing goals

Request peer-reviewed journal articles when discussing products with drug representatives. Drug detailing may lead physicians to prescribe costly new drugs over less expensive, equally effective products.

### Talk to a pharmacist

Work with a pharmacist who can analyze physicians' prescribing habits and offer advice for prescribing more cost-effectively.

### Communicate with patients

Talk to patients about drug options. Patients may want name brand drugs, even if they result in higher copays or out-of-pocket expenses. Be aware of direct-to-consumer marketing in the media and on the Internet.

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Adapted with permission from Wilson JF. Prescribing under pressure. *ACP Observer* Oct 1997.

control. The physician realizes that his patient could save the practice money by using the generic H<sub>2</sub> blocker, but he is satisfied with his patient's progress.

## Strategies to Control Per Prescription Costs

### Member Cost Sharing

Individuals who view a prescription drug as an entitlement that should be virtually free may have little incentive to be concerned about the drug's actual cost, whether they truly need the medication, or whether they can obtain equivalent health outcomes with a less costly alternative. Consequently, health plans and PBMs are challenged to sensitize members to drug costs, often by making them financially responsible for sharing the cost of the medications prescribed. Each dollar spent by a member is a dollar saved by the plan. The member

share of prescription costs may take the form of a front-end deductible, a yearly limit on the total amount of drug costs for which the plan sponsor will pay, a per prescription copay, or a combination of these strategies.

### Drug Formularies

A formulary is a list of drugs approved for payment by a health plan or pharmacy benefits provider. Formulary lists often are accompanied by comparative clinical and cost information to help physicians appropriately choose which drug to prescribe.

Formularies are developed by an organization's pharmacy and therapeutics (P&T) committee, which most often is composed of a medical director, primary care physicians, specialty physicians (as needed), and pharmacists. In larger organizations, nurses, legal experts, ethicists, and other administrators also may sit on the P&T committee. The committee makes decisions on which drugs should be included on a formulary based on comparative data regarding efficacy, safety (eg, side effects), utilization, and cost (including acquisition costs and manufacturer's rebates) [19].

Formularies may be classified as *open* or *closed*, or they may fall somewhere between these extremes.

**Open formularies.** Plans using an open formulary provide coverage for nearly all drugs typically prescribed in an ambulatory setting. Providers are restricted from prescribing very few, if any, drugs, and provider prescribing behavior usually is not monitored aggressively. This type of formulary allows physicians and patients the greatest therapeutic freedom, but it may not be effective at controlling pharmacy costs.

Most open formulary lists designate specific products as *preferred*. Preferred products have the potential to provide the greatest level of net savings for the plan. Therefore, plans often encourage both physicians and members to use drugs that are less costly and therapeutically equivalent whenever appropriate.

**Closed formularies.** A closed formulary is a limited list of drugs for which the plan will provide coverage. Drugs not on the formulary are not reimbursed by the payer; patients who wish to receive nonformulary drugs usually must pay for the prescription themselves. Often, costly or brand name drugs are not listed if lower cost alternatives have proven to be equally effective. When brand name drugs are listed on a closed formulary, their generic equivalents are also listed [20]. Coverage may be denied (ie, the health plan will not pay the cost of the drug) for entire classes of life-enhancing drugs, such as antiobesity, fertility, and baldness agents. Nonformulary drugs may be covered on a case-by-case basis in circumstances of medical necessity or when formulary

drugs fail to be therapeutic. Cost savings resulting from this strategy are directly related to the degree of restrictiveness of the formulary.

A closed formulary can also take the shape of a mandatory generic program. With this system, a member who chooses to fill a prescription for a brand name drug when a generic form of the drug is available is required to pay the difference between the price of the drugs. A mandatory generic program can be implemented such that the member is required to pay the difference only if the physician has indicated that a generic can be substituted. Mandatory generic programs are more commonly used by MCO insurers than by non-MCO insurers.

**Tiered formularies.** Although use of closed formularies increased in popularity during the 1990s, data indicate that there is a trend toward fewer restrictions, and many plans that used closed formularies are moving toward open, "tiered" formularies [2].

Tiered formularies involve differential member payments for brand name or nonpreferred drugs. Currently, 3-tier copay plans are very popular. Under such a system, a member's copay is lowest for generic drugs (tier 1), somewhat higher for formulary or preferred brands (tier 2), and highest for expensive, nonpreferred drugs (tier 3). A 3-tier copay structure is considered to be open, because members are not denied access to expensive or nonpreferred drugs. This type of structure also saves the plan money because members are encouraged to use less expensive drugs (tier 1 and tier 2) and to assume responsibility for a greater proportion of the cost of expensive drugs.

For example, gastrointestinal agents might be placed on a 3-tier copay plan in the following way. Generic agents such as ranitidine and cimetidine would be placed on the first tier, and members would pay \$5 for each prescription. Brand name drugs such as nizatidine (Axid) and famotidine (Pepcid) would reside on the second tier, requiring a \$10 copay. More expensive PPIs such as omeprazole (Prilosec) and lansoprazole (Prevacid) would require a \$25 copay per prescription.

Because sponsors of 3-tier copay systems still pay for a percentage of drug costs, these systems may be more marketable than closed formularies and are attractive to payers. Data from the Scott-Levin 1999 Managed Care Formulary Drug Audit indicate that the percentage of MCOs offering 3-tier pharmacy benefits increased from 52% to 67% during 1999 [21]. Average copay amounts for those plans were \$6.63 for drugs on tier 1, \$13.94 for those listed on tier 2, and \$28.32 for those on tier 3. Although 3-tier copay structures can save drug costs, care must be taken not to set the third-

tier copay level so high as to dissuade members from filling or refilling essential prescriptions.

Some plans have also begun using a 4-tier system. In this structure, a fourth tier consists of drugs with even higher copays than those on the third tier. Examples of drugs that may be placed on a fourth tier include antiobesity agents and drugs used to treat erectile dysfunction.

### Step Therapy

Similar to the MCO described in the scenario, many health plans and pharmacy providers attempt to manage drug choices within a therapeutic class. This strategy, known as *step therapy*, requires members to undergo limited trials with low cost or generic medications before the plan will approve payment for more costly or brand name drugs. Step therapy may reduce the cost of treatment, especially with short-term drug therapies.

### Quantity Limits

If the quantity of medication dispensed per prescription is excessively large, the medication may be unused or wasted. Thus, limiting the quantity of medication dispensed per prescription can help to reduce overall drug costs. This strategy is especially helpful for medications that are commonly prescribed in quantities in excess of suggested normal use. For example, physicians often prescribe abortive migraine drugs (which typically are used only as required) in quantities of 30 to 50 pills; however, patients may only need to have 10 or 15 pills on hand.

### Mail Order and Limited Retail Networks

One of the simplest ways for health plans to save pharmaceutical costs, particularly for drugs used to treat chronic conditions, is to encourage members to use approved mail order services. The supply of medication dispensed through mail order is typically greater than that received through a network pharmacy, thus requiring less administrative cost. Cost savings from this strategy may be passed on to patients through discounted prices. Likewise, with a limited retail network, more members obtain a large number of prescriptions from a few retail pharmacies. This high-volume system allows the PBM or health plan to obtain better price discounts with pharmacies in the network than would be obtainable with a broader group of retail pharmacies.

### Strategies to Control Utilization

#### Financial Incentives

The clinical scenario in this article illustrates a situation in which a physician group assumes financial risk for

providing pharmacy benefits to its patients. That is, the group and its physicians have become responsible for managing both pharmacy and other medical costs. In this situation, the group is paid a fixed amount for each member's yearly pharmacy benefit (capitation), and the group bears financial responsibility for costs in excess of that payment. Therefore, the physician presumably is concerned that continuing his patient on the relatively expensive PPI will result in increased pharmaceutical expenditures, even though that drug is the most effective treatment strategy. By suggesting an alternative therapy that may result in comparable outcomes, the physician hopes to constrain his pharmacy budget.

Pharmacy benefits also may be tied to utilization through use of withholds, which are payments held back from providers in case of cost overruns. In this situation, a contracted physician group may benefit financially if costs are managed efficiently, or it may suffer financial losses if the group's use of pharmaceutical products for its patients results in cost overruns. The practice of using pharmacy withholds is similar to MCO management strategies for other medical services. The degree to which physicians share the financial burden of providing pharmacy benefits varies among plans and usually is determined during contract negotiations.

### **Prior Authorization**

Health plans and pharmacy providers may require physicians to obtain prior authorization before they can prescribe certain medications [20]. For example, drugs such as human growth hormone and certain antibiotics may be very costly, require the expertise of a specialist for appropriate dosing and monitoring, or both. Other drugs such as finasteride may require prior authorization because they are life enhancing rather than life sustaining.

### **Provider Education and Profiling**

Provider education and buy-in are essential to the success of any program to reduce pharmacy costs. Health plans and PBMs must ensure that physicians understand the rationale behind the formulary decisions (eg, through educational seminars or regular newsletters) and follow the formulary when writing prescriptions. For example, plans that do not use a mandatory substitution program may encourage providers to use generic drugs whenever possible because of the cost savings associated with them. Alternatively, feedback may be provided directly to physicians through profiles or other performance measurement tools. Physicians' practice and utilization patterns can be analyzed with

respect to those of their peers or compared with agreed upon treatment protocols or best practice guidelines.

Profiling strategies can range from a simple prescription profile (in which the number and type of prescriptions written by a physician are compared with those of peers) to more sophisticated analyses. More complex analyses require complete, integrated medical and drug data that are organized around disease states and accurately reflect each patient's disease-specific severity-of-illness. Physicians whose resource consumption significantly exceeds normal limits can be identified and counseled. Financial incentives also may be used in conjunction with provider profiling to identify physicians who overprescribe costly or marginally effective drugs. Negative profiles may result in financial penalties, whereas positive profiles may be associated with bonuses.

### **Disease Management Programs**

Disease management is an approach to patient care that seeks to provide comprehensive, high-quality, cost-efficient care for patients with specific, often chronic diseases such as diabetes and asthma. Disease management programs encourage appropriate utilization of pharmaceutical products through use of defined pathways and care plans designed to increase patient self-care and decrease overall utilization of health care resources. Key objectives of these programs are to educate patients about their diseases and the importance of self-management and to prevent disease complications through anticipatory care (ie, regular patient monitoring and evaluation). Appropriate management of key disease states is purported to promote better outcomes, and disease management programs often result in increased drug costs because they promote appropriate utilization of medication to improve disease symptoms and outcomes. Although disease management programs may increase pharmacy costs in the short-term, costs may be recouped in the long run through decreased use of acute and inpatient services.

### **Conclusion**

Prescription drug costs continue to increase at an alarming rate. To cope with this rising financial burden, payers have designed strategies to mitigate pharmacy costs. Many of the methods used to manage pharmaceutical costs have a direct impact on physicians, either by restricting the drugs they can prescribe or by holding them accountable for keeping drug costs down among their patients. It is important that new physicians understand how pharmacy benefit management strategies will affect them, as well as how these strategies will affect their patients, both clinically and financially.

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