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Prescription Drug Use and Expenditures in California

Key Trends and Drivers



AdvancePCS
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Prescription Drug Use and Expenditures in California:

Key Trends and Drivers

Prepared for:

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Acknowledgments

AdvancePCS is the nation's largest independent provider of health improvement services, touching the lives of more than 75 million Americans and managing more than \$18 billion annually in health care spending. The company offers health plans a comprehensive array of highly effective pharmacy benefit and health benefit management services designed to build better health. For more information on AdvancePCS, visit the Web site at www.advancepcsr.com.

The **California HealthCare Foundation** (CHCF), a private philanthropy based in Oakland, California, was created in 1996 as a result of the conversion of Blue Cross of California, a nonprofit organization, to Wellpoint Health Networks, a for-profit company. The Foundation focuses on critical issues confronting a changing health care marketplace by supporting innovative research, developing model programs, and initiating meaningful policy recommendations. For more information on CHCF, visit our Web site at www.chcf.org.

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Executive Summary

*“We are in ‘survival mode.’
Everybody’s losing money
[on drugs]. We know the
market will win in the end.
It is just a question of who
will survive long enough to
get there.”*

– Medical director,
southern California health plan

IN RECENT YEARS, PHARMACY COSTS HAVE BEEN one of the fastest growing segments of the total cost of health care nationally and in California—taking their toll on health plans, medical groups, employers, hospitals, and consumers alike. The major causes of drug spending increases are generally recognized to be (1) the increased availability of new drugs; and (2) the increased use of drugs (more prescriptions being filled each year). To explain these forces and explore meaningful solutions, the California HealthCare Foundation commissioned this analysis of the key trends and drivers affecting California’s changing pharmaceutical utilization and costs.

Trends: California vs. the United States

Californians are moving at a faster pace than the rest of the nation in both spending and utilization of retail prescription drugs. Retail prescription drug spending in California was \$9.3 billion in 1999, or 8.1 percent of the country’s \$114.6 billion retail pharmacy spending. This represents an increase of 19.4 percent over California’s 1998 pharmacy spending of \$7.8 billion. By comparison, U.S. retail pharmacy expenditures increased 19.3 percent over the same period. Similarly, California’s per capita prescription utilization increased by 9.9 percent from 1998 to 1999, while national utilization increased by only 7.9 percent during the same period.

At the same time, Californians are filling fewer prescriptions and spending significantly less money on drugs, on average, than other Americans. Californians filled 6.8 prescriptions per person in 1999, an increase of 9.9 percent from the 1998 figure of 6.2 prescriptions per person. This is 36 percent lower than the 1999 national average of 10.8 prescriptions per person. And retail drug spending per person in California was \$281 in 1999, as compared to \$420 for the country. (Given the limitations of the data set used in this analysis [see note below], some of these differences may be accounted for by use of in-house health plan pharmacies.)

Table 1. California Retail Drug Utilization

California Retail Drug Utilization	1997	1998	1999	Trend 97-98	Trend 98-99	Trend 97-99
Total Retail Dollars (billions)	\$6.8	\$7.8	\$9.3	14.6%	19.4%	36.8%
Total Retail Rxs (millions)	185	203	226	9.7%	11.4%	22.2%
Average Retail Dollars per Capita	\$211	\$239	\$281	13.0%	17.7%	33.0%
Average Retail Dollars per Rx	\$36.72	\$38.37	\$41.10	4.5%	7.1%	11.9%
Average Retail Rxs per Capita	5.7	6.2	6.8	8.1%	9.9%	18.8%

Table 2. National Retail Drug Utilization

National Retail Drug Utilization	1997	1998	1999	Trend 97-98	Trend 98-99	Trend 97-99
Total Retail Dollars (billions)	\$83.8	\$96.1	\$114.6	14.7%	19.3%	36.8%
Total Retail Rxs (millions)	2,523	2,693	2,933	6.7%	8.9%	16.3%
Average Retail Dollars per Capita	\$313	\$356	\$420	13.6%	18.2%	34.3%
Average Retail Dollars per Rx	\$33.21	\$35.68	\$39.08	7.4%	9.5%	17.7%
Average Retail Rxs per Capita	9.4	10.0	10.8	5.8%	7.9%	14.2%

Source: IMS Health

Note: This analysis of drug utilization and expenditures has certain limitations. Because only retail sales are captured by the data set used, institutional, hospital, and in-house HMO pharmacies (such as Kaiser Permanente-owned pharmacies) are not included in the analysis. The analysis also does not account for the rebates that health plans and employers receive from pharmaceutical manufacturers. Finally, this data set does not include patient demographics, so it is not possible to explore issues such as drug utilization by age and sex, however important and timely these may be.

Several factors may contribute to California's lower retail prescription utilization rate, yet higher utilization growth trend. First, the average age of the population in California is lower than the national average: In 1999, the average age of California residents was only 33.3 years, compared to the national average age of 36.4 years. Because prescription drug utilization increases with age, and California residents tend

to be younger, they would be expected, on average, to use fewer prescription drugs.

In addition, California has a high rate of managed care penetration—the second highest in the country. Consequently, utilization may be lower in California because doctors tend to manage their prescription writing more tightly when they are involved in risk-sharing arrangements or other managed care control programs.

Finally, as noted above, the data set used in this analysis does not capture sales of prescription drugs in institutional and closed-access pharmacies. To the extent that Californians obtain a higher proportion of their prescriptions in these settings than the national norm, California retail utilization will appear lower. Given the high penetration of Kaiser in the California market, this is probably true. However, it is unlikely that staff-model pharmacies can account for the 37 percent variance in average per capita utilization.

“The hospital and physician are at risk for costs on HMO products. One seven-year-old hemophiliac cost us \$5 million last year—and 90 percent of that was for blood and blood products. We reached our max on reinsurance, but the hospital kept paying out of its own pocket.”

– CFO, Orange County health system

California’s high utilization growth trend may be explained in part by its relatively low baseline. At the start of the study period (1997), California residents filled, on average, only 5.7 retail prescriptions per person—3.7 less than the national average of 9.4 per person. While Californians fill fewer prescriptions than the U.S. average, in general they use the same types of drugs as the rest of the country.

The state’s high utilization growth trend also may reflect changing physician prescribing habits due to a shift in risk sharing. Since the early to mid-1990s, medical groups in California assumed risk for the prescription drug component of their patients’ care. As risk bearers, physicians may have become more conservative in adopting new therapies and may have instituted effective utilization management. However, interviews with physicians indicate that the time period of this study coincides with the beginning of the trend away from physician risk-sharing. As a result, the higher utilization trend in California may reflect the movement of physicians away from tight pharmacy utilization control.

What Drives Drug Spending?

The primary drivers of rapidly increasing drug costs in California echo those in the rest of the country:

Dramatic increases in utilization. Californians’ per capita consumption of drugs has increased by 18.8 percent over the past three years. This compares to a national increase of 14.2 percent over the same time period. In general, the same factors drive utilization both in California and nationally: an aging population, increased emphasis on preventive care, new drugs to treat previously untreatable conditions, increased third-party coverage, and direct-to-consumer (DTC) advertising. Additional factors contributing to California’s high utilization growth (as discussed above) may include (1) a relatively low baseline rate of utilization; and (2) more frequent prescribing by physicians recently released from risk-sharing arrangements.

Changes in the therapeutic mix. Patients are switching from older, less expensive drugs to newer, more expensive drugs. In addition, patients are more often using multiple drugs to treat conditions that were previously treated with a single drug.

Increases in drug prices. In general, price increases on older drugs have mirrored increases in the consumer price index (2 percent to 4 percent annually), but prices of newly launched drugs are dramatically higher than the drugs they are replacing. For example, the average price per day for treatment with Celebrex (celecoxib), an arthritis medicine launched in 1999, is \$3.30; the average price per day for treatment with a generic form of ibuprofen is just \$0.68.¹ In addition, the deflation in generic drug prices that was evident in the early 1990s has reversed, and increases in generic drug prices are now contributing to the overall increases in drug spending.

Stakeholders' Voices

In looking for solutions to drug cost problems, this study assessed the “state of the market”—that is, the willingness of key stakeholders to participate in solutions. Working with AdvancePCS, Abt Associates interviewed representatives from 13 large medical groups, six managed care organizations, six large employers/purchasing cooperatives, and five hospitals and health systems. The following themes emerged:

Strained relationships. There is significant acrimony among managed care organizations, medical groups, hospitals, employers, and pharmaceutical companies regarding the causes and solutions to the rapid increases in pharmaceutical spending.

Shifts in risk bearing. Unexpected increases in drug costs have resulted in significant losses to medical groups with previously negotiated risk-sharing contracts. This has led to a shift of pharmaceutical risk back to payers and health plans. Mechanisms to account and adjust for new drug introductions must be developed if groups are to be comfortable accepting risk in the future. In addition, now that risk has shifted back to the health plans, the information infrastructure developed by physician groups to manage drug costs is being dismantled at a breathtaking pace. It is unclear whether physicians have internalized their new, more conservative prescription-writing habits or will revert to old prescribing patterns.

Effects of low unemployment. Because of low unemployment in the healthy California economy, employers see prescription drug benefits as an extremely important component of an employee attraction and retention strategy, and therefore are cautious about instituting draconian solutions.

Direct-to-consumer advertising. All stakeholders concur that direct-to-consumer advertising is eroding relationships between consumers and other stakeholders, including physicians, employers, and health plans.

The power of senior consumers. Health plans are retreating from drug risk in the Medicare risk market, either by adding benefit caps, raising cost share rates, or exiting the Medicare risk market altogether. Many senior consumers are responding assertively by looking at alternative purchasing models (such as sources outside the country) and engaging in aggressive lobbying for government-supported drug coverage.

The “new” health care consumer. The health care patient has evolved into an aggressive health care consumer who makes informed decisions based on his or her individual needs, finances, and the best available information. Also, legislative and regulatory authorities are becoming increasingly responsive to consumer concerns. However, the lack of truly objective information regarding the trade-offs between drug cost and quality is seen as a major obstacle to appropriate prescribing. Stakeholders believe that until manufacturers are required to communicate objectively, and consumers have access to complete clinical information, there is little chance for a slowdown in expenditures.

Concern about legislative intervention. California health plans have a fairly dark view of the immediate future for pharmacy benefits. Part of their pessimism stems from concern about legislative intervention. They fear that government tinkering with drug benefits will complicate the cost picture and add to the tensions between physicians and health plans. Unfunded mandated drug benefits are a concern—particularly given the low level of collaboration among stakeholders today. Hospital executives are equally pessimistic. They reluctantly predict that government intervention is both unavoidable and unlikely to result in any significant relief to their institutions.

The future. As traditional interventions fail or achieve less than satisfactory results, stakeholders anticipate major changes in the way prescription drugs will be covered and financed in the future. Prescription drug benefits, they predict, will be designed to take advantage of the rise in consumerism as well as the growth of technology. Quality will emerge as a greater focus as tools become available to evaluate and integrate quality into the prescription drug cost-benefit mix. Technology, including information systems, decision support, new devices, and the Internet will expedite and facilitate benefit changes and quality improvement.

Stakeholders also predict the need to start from scratch and build an entirely new system for providing and managing prescription drugs. It may grow out of existing models or be developed *de novo*, driven by the threat of government intervention or truly “outside the box” thinking in response to market conditions.

Information Sources

AdvancePCS prepared this report using the following information sources:

- ♦ AdvancePCS Information Warehouse—a blinded, proprietary pharmaceutical utilization data set derived from AdvancePCS’ membership base of more than 50 million people. No patient-specific information was used in developing this report.
- ♦ IMS Health Retail Method-of-Payment—a national sales database of United States and California retail prescription drug sales. This aggregate audit of pharmaceutical sales data is based on prescriptions reported monthly by a panel of retail pharmacies, with aggregate totals projected at the state and national levels.
- ♦ Stakeholder Interviews—the results of personal interviews with 30 key California health care system stakeholders conducted by the consulting firm Abt Associates.
- ♦ An extensive literature review.

“We have created a false sense of knowledge with the information that is floating around out there. People confuse ads with clinical data, and come in here ready for a fight. We are fighting with patients all the time.”

– Medical group PCP, Los Angeles

I. Introduction

“In our market, everyone is in conflict—physicians, payers, hospitals, ancillary providers and retail pharmacies. Each plays a role in pharmacy and each wants ultimate control. The only good thing is that everyone is aware of the problem and talking about it. Still, there is no trust relationship.”

– Medical director, southern California health plan

IN A COMPLEX AND INTERACTIVE HEALTH CARE market no single group involved in health care has the ability to manage the consumption and distribution of prescription drugs.

Employers who use managed health plans have little direct control over pharmacy expenditures unless they manage their own carve-out for prescription benefits.

Health plans can either manage directly or outsource to prescription benefit management (PBM) firms, but managed care interventions are being challenged. Managing demand for prescriptions is made more difficult by the fact that consumers, fueled by the vast amount of health information (and sometimes misinformation) available to them, are pushing back against managed care and are irritated by limits imposed on their access to prescription drugs. And because most consumers have health insurance with prescription drug coverage, many are not aware of the true cost of the drugs they are taking or want to take.

While physicians hold the ultimate responsibility for prescribing medications, they are faced with an often conflicting scenario: an increasing number of patients who demand specific drugs, a lack of adequate information about how their patients use medications, and an inconsistent awareness of the costs and effectiveness of pharmaceuticals.

Hospitals and health systems are faced with trying to satisfy patients; convince physicians to comply with the hospital formulary; coordinate hospital formulary drugs with multiple formularies from managed care companies, Medi-Cal, and other payers—and at the same time contend with pressures from pharmaceutical company sales staff (“drug reps”) who focus exclusively on institutional providers.

Pharmaceutical manufacturers compound the problem by creating consumer demand for drugs using direct-to-consumer (DTC) advertising. Manufacturers are accused of charging exorbitant amounts for drugs, but point to the large expenditures they make for research and development, including new drugs that never make it to the market.

In California, as in the rest of the nation, these factors result in complex and interrelated market dynamics that affect drug expenditures.

II. California Drug Utilization and Costs

On average, Californians use drugs at a rate 36 percent less than the United States as a whole.

TO UNDERSTAND THESE DYNAMICS, WE BEGAN our analysis by scrutinizing California's top 15 therapeutic drug classes and products along with their growth trends in terms of both utilization and dollars spent. This examination revealed, among other things, that:

- ♦ A small number of therapeutic drug classes and products accounts for a high percentage of utilization and spending.
- ♦ Many of these growth classes represent drugs that treat chronic illnesses.
- ♦ While the top drug classes in California are almost identical to those for the nation (with some notable variations), all of California's top utilized therapeutic classes are used at considerably lower rates than the rest of the country.

Drug Utilization

In 1999, the 15 most utilized therapeutic drug classes represented 40.2 percent of total prescriptions in California. As shown in Table 3, the largest of these classes are the narcotic analgesics for pain, ACE inhibitors for high blood pressure, and NSAIDs (nonsteroidal anti-inflammatory drugs) for arthritis. The remaining 59.8 percent are distributed among hundreds of therapeutic classes, with no individual class representing more than 1.7 percent of total prescriptions.

Table 3. Top 15 California USC (Universal System of Classification) Therapeutic Classes by Total Prescriptions, 1999

1999 Rank	USC Class	Indication	Total Prescriptions	Percent
1	Narcotic Analgesics	Pain	11,932,000	5.3%
2	ACE Inhibitors	High Blood Pressure	6,790,000	3.0%
3	NSAIDs	Arthritis/Pain	6,674,000	2.9%
4	Oral Contraceptives	Oral Contraceptives	6,495,000	2.9%
5	Amoxicillin Antibiotics	Infection	6,345,000	2.8%
6	Calcium Channel Blockers	High Blood Pressure	6,063,000	2.7%
7	PPIs and H2 Antagonists	Gastrointestinal/Ulcer	5,961,000	2.6%
8	HMG-CoA Reductase Inhibitors	High Cholesterol	5,902,000	2.6%
9	SSRIs	Depression	5,759,000	2.5%
10	Estrogens	Hormone Replacement Therapy	5,592,000	2.5%
11	Beta Blockers	High Blood Pressure	5,267,000	2.3%
12	Thyroid	Thyroid Dysfunction	5,051,000	2.2%
13	Benzodiazepines	Anxiety	4,818,000	2.1%
14	Antihistamines	Allergies	4,475,000	2.0%
15	Cephalosporin Antibiotics	Infection	3,818,000	1.7%
	All Other		135,474,000	59.8%
	Total Market		226,416,000	100%

Source: IMS Health RMOP

Similarly, a relatively small number of drug products account for a significant proportion of total prescriptions, with the top 15 drug products representing 19.9 percent of total prescriptions in

California. As shown in Table 4, the most frequently utilized drugs are hydrocodone for pain, Premarin for hormone replacement therapy, and Trimox for infections.

Table 4. Top 15 California Products by Total Prescriptions, 1999

1999 Rank	Product	Indication	Total Prescriptions	Percent
1	Hydrocodone w/APAP	Pain	7,024,000	3.1%
2	Premarin	Hormone Replacement Therapy	4,082,000	1.8%
3	Trimox	Infection	4,043,000	1.8%
4	Acetaminophen w/COD	Pain	3,387,000	1.5%
5	Ibuprofen	Arthritis/Pain	3,037,000	1.3%
6	Atenolol	High Blood Pressure	2,897,000	1.3%
7	Albuterol	Asthma	2,802,000	1.2%
8	Cephalexin	Infection	2,592,000	1.1%
9	Levoxyl	Thyroid Dysfunction	2,568,000	1.1%
10	Lipitor	High Cholesterol	2,505,000	1.1%
11	Claritin	Allergies	2,436,000	1.1%
12	Triamterene/HCTZ	High Blood Pressure	1,973,000	0.9%
13	Furosemide	High Blood Pressure	1,965,000	0.9%
14	Prilosec	Gastrointestinal/Ulcer	1,930,000	0.9%
15	Lotensin	High Blood Pressure	1,913,000	0.8%
	All Other		181,262,000	80.1%
	Total Market		226,416,000	100%

Source: IMS Health RMOP

In terms of growth, the largest increases in prescriptions between 1998 and 1999 are represented in the following therapeutic classes: leukotrienes (for the treatment of asthma), urinary antispasmodics (for urinary incontinence), and angiotensin II receptor blockers (ARBs) (for high blood pressure). Much of the growth in urinary antispasmodics and ARBs is due to the introduction of new products in these classes, such as Detrol (tolterodine tartrate) and Ditropan XL (oxybutynin chloride) for urinary incontinence, and Avapro (irbesartan) and Avalide (hydrochlorothiazide, irbesartan) for high blood pressure.

Two classes—leukotrienes and urinary antispasmodics—have experienced growth six or more times California’s average prescription growth rate of 11.4 percent (Table 5). Many of these growth classes represent drugs that treat chronic illnesses, a possible sign of increased awareness of the value of early diagnosis and ongoing management of populations with chronic conditions such as asthma, high blood pressure, and diabetes.

Table 5. Top 15 California USC Classes by Total Prescription Growth, 1999

1999 Rank	USC Class	Indication	Total Prescriptions	Percent Growth
1	Leukotrienes	Asthma	548,000	76.8%
2	Urinary Antispasmodics	Urinary Incontinence	527,000	66.8%
3	ARBs	High Blood Pressure	1,053,000	56.9%
4	Anti Platelet Drugs	Stroke Prevention	446,000	38.9%
5	Glaucoma Drugs	Glaucoma	868,000	38.0%
6	Biguanides	Diabetes	1,895,000	37.1%
7	Biphosphonates	Osteoporosis	681,000	34.9%
8	Estrogen/Progestin Drugs	Hormone Replacement Therapy	1,873,000	27.5%
9	Diuretics	High Blood Pressure	1,451,000	27.4%
10	Hematinics	Anemia	445,000	27.1%
11	HMG-CoA Reductase Inhibitors	High Cholesterol	5,902,000	26.0%
12	Antihistamines	Allergies	4,475,000	25.9%
13	Ophthalmic Allergy Drugs	Allergies	402,000	24.1%
14	Non-SSRI Antidepressants	Depression	2,152,000	22.6%
15	Erectile Dysfunction	Erectile Dysfunction	770,000	11.6%
	All Other		202,927,000	9.7%
	Total Market		226,416,000	11.4%

Source: IMS Health RMOP

On average, Californians use drugs at a rate 36 percent less than the United States as a whole. The top drug classes in California are almost identical to those for the nation, with some notable variations. Calcium channel blockers, proton pump inhibitors (PPIs)/H2 antagonists, and selective serotonin reuptake inhibitors (SSRIs)—therapeutic classes used in the treatment of high blood pressure, gastrointestinal

complications, and depression—are utilized almost 40 percent less often by a Californian than by the average American. In fact, as shown in Table 6, all of California’s top utilized therapeutic classes are used at considerably lower rates than the rest of the country. More research is needed to explore these differences: Are they due to more prudent drug management or differences in population demographics?

Table 6. Top 15 California USC Classes by Total Prescriptions: California vs. National, 1999

1999 Rank	USC Class	Indication	California PMPY	National PMPY	Percent Difference*
1	Narcotic Analgesics	Pain	0.36	0.41	- 11%
2	ACE Inhibitors	High Blood Pressure	0.20	0.29	- 29%
3	NSAIDs	Arthritis/Pain	0.20	0.24	- 17%
4	Oral Contraceptives	Oral Contraceptives	0.20	0.26	- 25%
5	Amoxicillin Antibiotics	Infection	0.19	0.23	- 17%
6	Calcium Channel Blockers	High Blood Pressure	0.18	0.30	- 39%
7	PPIs and H2 Antagonists	Gastrointestinal/Ulcer	0.18	0.29	- 38%
8	HMG-CoA Reductase Inhibitors	High Cholesterol	0.18	0.26	- 32%
9	SSRIs	Depression	0.17	0.28	- 37%
10	Estrogens	Hormone Replacement Therapy	0.17	0.20	- 16%
11	Beta Blockers	High Blood Pressure	0.16	0.26	- 39%
12	Thyroid	Thyroid Dysfunction	0.15	0.21	- 27%
13	Benzodiazepines	Anxiety	0.15	0.22	- 34%
14	Antihistamines	Allergies	0.14	0.17	- 22%
15	Cephalosporin Antibiotics	Infection	0.12	0.18	- 35%
	All Other		4.09	6.96	- 41%
	Total Market		6.83	10.76	- 36%

Source: IMS Health NPA Plus

*California vs. National

Drug Spending

The top 15 therapeutic classes in California account for \$4.1 billion (44.0 percent) of the state's \$9.3 billion total retail prescription expenditures (Table 7). The therapeutic classes that account for the highest spending are the PPIs/H2 antagonists, SSRIs, and HMG-CoA reductase inhibitors. Used in the treatment of gastrointestinal complications, depression, and high cholesterol, respectively; these three classes represent \$1.6 billion in annual drug spending and account for 17 percent of the state's total 1999 drug spending.

A relatively small number of drug products account for a significant proportion of total prescriptions.

Table 7. Top 15 California USC Classes by Total Dollars

1999	USC Class	Indication	Total Dollars	Percent
CA	Total Market		\$9,304,692,000	100%
Rank	All Other		\$5,207,634,000	56.0%
1	PPIs and H2 Antagonists	Gastrointestinal/Ulcer	\$564,670,000	6.1%
2	SSRIs	Depression	\$541,234,000	5.8%
3	HMG-CoA Reductase Inhibitors	High Cholesterol	\$501,528,000	5.4%
4	Calcium Channel Blockers	High Blood Pressure	\$326,658,000	3.5%
5	ACE Inhibitors	High Blood Pressure	\$271,670,000	2.9%
6	Antihistamines	Allergies	\$248,786,000	2.7%
7	Narcotic Analgesics	Pain	\$233,618,000	2.5%
8	Antipsychotics	Psychosis	\$229,971,000	2.5%
9	Oral Contraceptives	Oral Contraceptives	\$227,513,000	2.4%
10	Anticonvulsants	Epilepsy	\$223,738,000	2.4%
11	NSAIDs	Arthritis/Pain	\$177,117,000	1.9%
12	HIV Antivirals	HIV	\$143,572,000	1.5%
13	Macrolide Antibiotics	Infection	\$137,438,000	1.5%
14	Quinolone Antibiotics	Infection	\$135,922,000	1.5%
15	Migraine Drugs	Migraine	\$133,623,000	1.4%

Source: IMS Health NPA Plus

Managed care has conflicting impacts on utilization of prescription drugs.

The top 15 products in California represent 22.5 percent of the total market spending (Table 8), with Prilosec, Prozac, and Lipitor accounting for the highest spending.

Table 8. Top 15 California Products by Total Dollars, 1999

1999	Product	Indication	Total Dollars	Percent
CA	Total Market		\$9,304,692,000	100%
Rank	All Other		\$7,212,250,000	77.5%
1	Prilosec	Gastrointestinal/Ulcer	\$267,940,000	2.9%
2	Prozac	Depression	\$212,531,000	2.3%
3	Lipitor	High Cholesterol	\$202,263,000	2.2%
4	Claritin	Allergies	\$161,023,000	1.7%
5	Prevacid	Gastrointestinal/Ulcer	\$148,504,000	1.6%
6	Paxil	Depression	\$138,072,000	1.5%
7	Pravachol	High Cholesterol	\$125,081,000	1.3%
8	Zyprexa	Schizophrenia	\$123,775,000	1.3%
9	Glucophage	Diabetes	\$108,638,000	1.2%
10	Zocor	High Cholesterol	\$106,280,000	1.1%
11	Zoloft	Depression	\$103,844,000	1.1%
12	Hydrocodone w/APAP	Pain	\$103,220,000	1.1%
13	Imitrex	Migraine	\$102,679,000	1.1%
14	Premarin	Hormone Replacement Therapy	\$99,559,000	1.1%
15	Cipro	Infection	\$89,031,000	1.0%

Source: IMS Health RMOP

Table 9 summarizes aggregate growth rates for the top 15 California therapeutic classes. The osteoporosis, urinary incontinence, and growth deficiency therapeutic classes have experienced dollar growth almost six times greater than California's average of 19.4 percent. While their

growth is impressive, these three classes account for a small proportion of total drug spending in 1999—less than 1 percent—because utilization in these classes persists at a comparatively low rate.

Table 9. Top 15 California USC Classes by Total Dollar Growth, 1999

1999 Rank	USC Class	Indication	Total Dollars	Percent Growth
1	Osteoporosis Drugs	Osteoporosis	\$15,844,000	158.1%
2	Urinary Antispasmodics	Urinary Incontinence	\$23,096,000	147.5%
3	Anabolic Hormones	Growth Deficiency	\$25,991,000	115.5%
4	NSAID/Prostaglandin	Pain	\$17,590,000	101.7%
5	Leukotrienes	Asthma	\$38,169,000	91.4%
6	ARB Combination Drugs	High Blood Pressure	\$17,029,000	91.2%
7	Interferons	Cancer	\$70,620,000	64.7%
8	Hair Growth Drugs	Hair Loss	\$17,826,000	60.6%
9	ARBs	High Blood Pressure	\$58,734,000	57.6%
10	Alpha/Beta Blockers	High Blood Pressure	\$17,163,000	57.1%
11	Biguanides	Diabetes	\$108,638,000	52.6%
12	Anti Platelet Drugs	Stroke Prevention	\$40,716,000	52.0%
13	Glaucoma	Glaucoma	\$44,722,000	47.5%
14	Prostate Drugs	Prostate	\$22,158,000	47.1%
15	Alzheimer's Drugs	Alzheimer's	\$24,580,000	37.5%
	All Other		\$8,761,814,000	17.3%
	Total Market		\$9,304,692,000	19.4%

Source: IMS Health RMOP

Table 10 ranks the top 15 California products by total dollar growth. Celexa, Sustiva, and Baycol have seen dollar growth 22 times greater than the California average. Despite this growth, these drugs—used in the treatment of depression, HIV, and high cholesterol—account for less than

0.5 percent of the total drug spending in 1999. Although dollar growth is increasing rapidly for these drugs, they continue to account for a small proportion of drug spending because utilization of these drugs remains relatively low.

Table 10. Top 15 California Products by Total Dollar Growth, 1999

1999 Rank	Product	Indication	Total Dollars	Percent Growth
1	Celexa	Depression	\$25,837,000	2005.7%
2	Sustiva	HIV	\$13,653,000	1211.5%
3	Baycol	High Cholesterol	\$6,871,000	444.0%
4	Seroquel	Schizophrenia	\$15,375,000	190.1%
5	Amerge	Migraine	\$5,501,000	147.3%
6	Prevpac	Acid Reflux	\$3,448,000	129.7%
7	Topamax	Epilepsy	\$8,786,000	111.7%
8	Alesse	Oral Contraception	\$12,424,000	107.8%
9	Zomig	Migraine	\$10,633,000	106.5%
10	Neurontin	Epilepsy	\$64,714,000	93.3%
11	Orth-Tri-Cy	Oral Contraception	\$49,080,000	90.3%
12	Clozapine	Schizophrenia	\$3,156,000	86.2%
13	Necon	Oral Contraception	\$11,275,000	85.9%
14	Levaquin	Infection	\$34,413,000	84.1%
15	Oxycontin	Pain	\$41,759,000	73.7%
	All Other		\$8,997,767	20.1%
	Total Market		\$9,304,692,000	19.4%

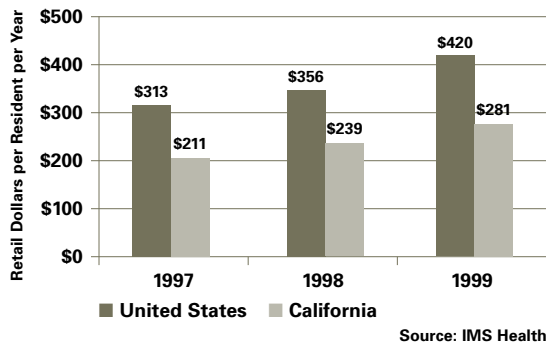
Source: IMS Health NPA Plus

Volume vs. Dollars

The top 15 classes and products in California differ significantly when volume of prescriptions dispensed is compared to dollars spent. Narcotic analgesics, ACE inhibitors, and NSAIDs comprise 11 percent of the prescribed drugs in the state of California, yet are responsible for only 7 percent of the drug spending. Conversely, Prilosec, Prozac and Lipitor represent 7 percent of California's total drug spending, but account for less than 3 percent of prescriptions dispensed.

These differences are due to the average relative cost per prescription for these drugs. For example, the average cost per prescription in the narcotic analgesic, NSAID, and ACE inhibitors is relatively low, with many generics available in the first two of these classes, and low-cost drug options in the latter one.

**Figure 1. Drug Spending per Resident:
California vs. United States**



California vs. United States

Figure 1 shows that \$281 are spent per person per year on retail prescriptions in California, compared to \$420 in the United States. Because California residents consume, on average, fewer prescription drugs than their national counterparts, it is not surprising that the average annual drug spending per person is lower in the state.

There are several likely causes for these differences. The average age of the population in California is lower than the national average: In 1999, the average age of California residents was only 33.3 years, compared to the national average age of 36.4 years. Prescription drug use increases directly with age.

Also, California's managed care penetration is second highest in the nation. In general, managed care plans have been more successful in holding down pharmacy costs than traditional fee-for-service insurance plans.

However, managed care has conflicting impacts on utilization of prescription drugs. Managed care may help increase utilization by decreasing patients' out-of-pocket costs for drugs, by emphasizing early treatment of chronic diseases, and by increasing patients' access to prescribers (through the use of low member co-pays for physician office visits). At the same time, managed care may help decrease utilization through drug utilization management programs (such as prior authorization, managed drug limitations, and formulary compliance enforcement). More research is needed to determine how these various factors impact utilization, and whether the overall effect of managed care is one of increasing or decreasing prescription drug use.

In addition, physician sharing of pharmacy risk, encouraging tighter management of prescription writing habits and other utilization controls, likely had a marked impact on total drug spending.

Finally, the IMS data used in this analysis captures retail pharmacy sales only—to the extent that Californians use closed-access pharmacies, such as those operated by hospitals or staff model HMOs, more than the nation in general, the California retail numbers will be lower. It is unlikely, however, that staff-model pharmacies can account for the 36 percent variance in average per capita utilization.

In California, annual expenditures for PPIs/H2 antagonists and macrolide antibiotics are 39 and 43 percent less than nationwide. This may be attributed to California's pervasive managed care system, which could be managing overutilization of these popularly prescribed drugs.

III. What Drives Drug Spending?

“We see the increase in all new drugs. The technology is amazing and it will get even more expensive with genetics coming down the pike.”

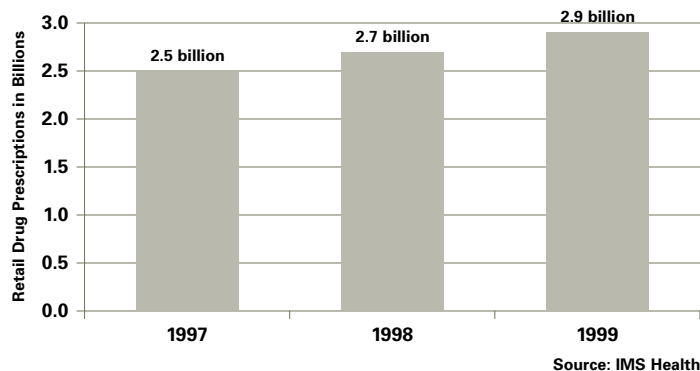
– CFO, Orange County health system

Three major factors contribute to rising drug spending, both within California and across the nation: (1) the increase in sheer volume of prescriptions filled per person per year; (2) changes in therapeutic mix—drug products available to treat a condition—such as the use of new, costlier drugs to replace older therapies, or multiple drugs to treat one condition; and (3) increases in prescription drug prices, though this is a less significant contributor than the first two.

Increase in Prescription Utilization

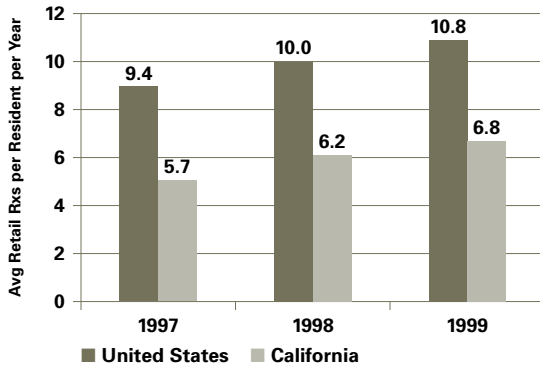
Americans’ use of prescription drugs has increased dramatically over the past several years. As shown in Figure 2, the total number of retail prescriptions in the United States increased 16.3 percent—from 2.5 billion in 1997 to 2.9 billion in 1999.

Figure 2. U.S. Retail Prescriptions, 1997 to 1999



On average, California residents use fewer prescriptions than the rest of Americans, but the rate of increase in utilization is higher in California than for the nation. As shown in Figure 3, from 1997 to 1999, the average number of retail prescriptions per person in California increased 18.8 percent—from 5.7 to 6.8—compared to 14.2 percent for the United States.

Figure 3. Retail Prescriptions per Resident California vs. United States



California’s high utilization growth trend may be explained in part by its relatively low baseline. At the start of the study period (1997), California residents consumed, on average, only 5.7 retail prescriptions per person—3.7 less than the national average of 9.4 per person. The higher utilization trend in California may also reflect changing prescribing patterns as physicians have moved away from risk-sharing arrangements and tight pharmacy utilization control.

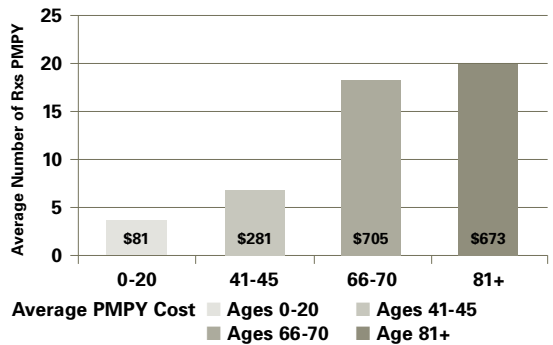
The primary drivers of growth in prescription volume include:

- ◆ The aging of the population
- ◆ Increased use of long-term drug therapies
- ◆ Changing guidelines for disease diagnosis and treatment
- ◆ The introduction of new drugs
- ◆ “Indication creep” (the approval of drugs for more than one indication)
- ◆ Increased third-party coverage of prescription drugs
- ◆ Direct-to-consumer advertising for pharmaceutical products.

Aging of the population. Americans are getting older: People more than 65 years old now account for 12.6 percent of the American population; by 2010, they will account for 13.2 percent; and, by 2020, for 16.5 percent. As we age, we tend to require treatment for chronic conditions, and our use of drugs to treat these conditions is one of the most significant drivers of increased prescription drug use in the United States.

As shown in Figure 4, a large-scale analysis by AdvancePCS found that the average American patient who is more than 65 years of age fills approximately 20 prescriptions per year, compared to approximately three for a person in his or her twenties. Not surprisingly, older people also have higher annual costs for prescription drugs. For instance, the average total prescription cost per member per year is \$704.52 for a person between the ages of 66 and 70. This is nearly nine times higher than the average annual cost for a person less than 20 years old (\$81.06).

Figure 4. U.S. Prescription Use by Age



Source: AdvancePCS

In California, utilization of prescription drugs may be lower than the national average due, at least in part, to demographics. In 1999, the average age of California residents was only 33.3 years, compared to the national average age of 36.4 years. Because California residents tend to be younger, they would be expected, on average, to use fewer prescription drugs.

In general, the aging of the population is expected to continue to drive pharmaceutical use higher for several years. Nationwide, the proportion of the population more than 65 years of age is expected to increase by 5.3 percentage points from 1999 to 2005. However, during this same period, the proportion of the population of this same age group in California is expected to decline by 6.2 percentage points. Consequently, aging may not contribute to future drug spending in California to the same degree that it might in the U.S. as a whole.

Use of long-term drug therapies. Because many of the newly available medications can prevent the onset of serious illness, a growing number of people are taking drugs for a longer time. This is particularly noticeable in the case of treatments for chronic illnesses associated with aging, such as high blood pressure or high cholesterol, for which people must continue drug therapy indefinitely to prevent reoccurrence of symptoms. Other maintenance therapies, such as antihistamines, are used by younger age groups as well.

Another example of long-term prescription drug use is preventive drug therapy. For example, Evista (raloxifene) recently was approved for the prevention of osteoporosis. The market for drugs to prevent this disease is expected to quadruple by 2007.²

In California, maintenance therapies account for seven of the top ten therapeutic classes by total number of prescriptions. These classes include treatments for chronic conditions (such as high blood pressure, high cholesterol, and arthritis) as well as preventive therapies (such as oral contraceptives).

Changing guidelines for disease diagnosis and treatment. Changes in medical guidelines often promote increased use of prescription medications. This expands the pool of patients eligible for prescription drug therapy. For instance, the American Diabetes Association recently lowered the blood glucose level thresholds for diabetes, in effect increasing by 2 million the number of individuals who meet the guidelines for treatment. From 1998 to 1999, California utilization of biguanides, a commonly prescribed oral diabetes treatment, increased 37 percent.

In the future, a similar situation may arise in the area of high cholesterol treatment. Under current treatment standards, individuals are started on cholesterol-lowering drugs if their total cholesterol level is greater than 240 mg/dL. Researchers now believe there may be clinical benefit from starting individuals on cholesterol-lowering drugs if their total cholesterol level is greater than 200 mg/dL. If this newer recommendation is adopted, the number of Americans eligible for cholesterol-lowering treatment will more than double, from 38 million to 97 million.

Changing treatment guidelines also boosts utilization when patients are switched to dual therapy (taking more than one drug for one condition) to replace mono-therapy (one drug). For example, a recent AdvancePCS analysis found that 25 percent of all diabetes patients now take two or more drugs as part of their diabetes therapy.³

Introduction of new drugs. This is a key driver of increased utilization. In some cases, new drugs represent breakthrough therapies for previously untreatable conditions, thus representing entirely new utilization. One example of this is the therapeutic class known as neuraminidase inhibitors, which includes Relenza and Tamiflu, the first available treatments for influenza types A and B. In their first flu season on the market (November 1999 through April 2000), these two drugs accounted for 846,000 new prescriptions in the United States.⁴

In other cases, new drugs offer greater potency, more convenient dosing, or fewer side effects than their predecessor therapies. As a result, people may begin taking these drugs for conditions that previously were left untreated. For example, utilization of antidepressants increased significantly following the introduction of SSRIs, which generally are more effective and have fewer side effects than older antidepressants.

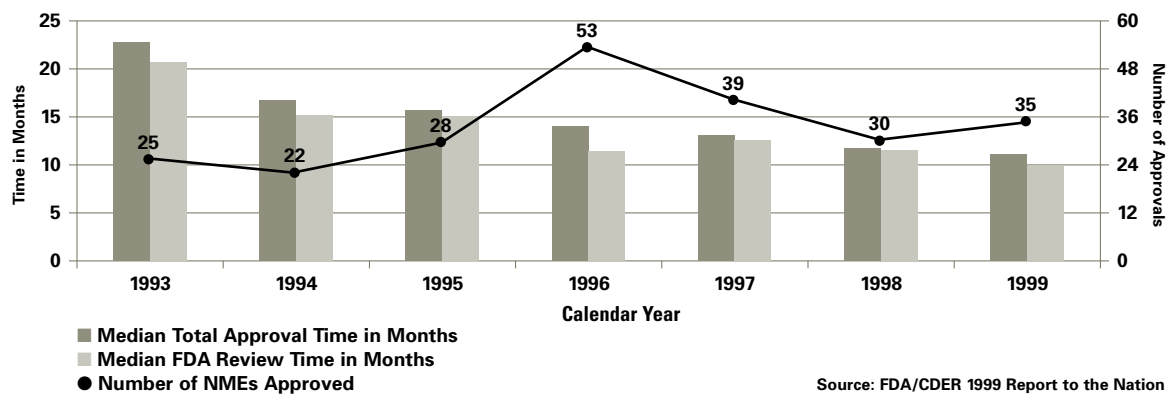
In 1999, the FDA approved 35 new molecular entities (NMEs) for marketing in the United States, as shown in Figure 5. (NMEs contain an active substance that has never previously been approved for marketing, in any form, in the United States.) This represents an increase of about 17 percent over the number of NMEs approved for marketing in 1998.

Drugs currently in the R&D pipeline will account for 40 percent of the increase in prescription drug spending between 1999 and 2004.

Figure 5 also shows that the FDA review and approval time for new drug products is decreasing. About ten years ago, it took the FDA more than two years (31.3 months) to approve a NME.⁵ In 1999, the median total approval time was 11.6 months, 3 percent faster than in 1998.⁶ Slightly more than half of the NMEs approved in 1998 received a priority review—that is, they were approved within six months of filing for a new drug approval.⁷

An important factor in the growing number of new drugs being introduced to the U.S. market is increasing research and development expenditures. In the past decade, pharmaceutical R&D expenditures have nearly tripled. In 1999, research-based pharmaceutical companies estimated to have spent more than \$24 billion on R&D, up 14.1 percent over the previous year. In 2000, R&D expenditures were expected to increase another 10 percent, to \$26.4 billion.⁸

Figure 5. New Molecular Entity Approvals



Source: FDA/CDER 1999 Report to the Nation

“Indication Creep.” As manufacturers receive FDA approval to market a drug for multiple indications, the pool of potential users may expand greatly, contributing sharply to rising drug spending. One example of this is Prozac (fluoxetine). Although most commonly associated with the treatment of depression, Prozac also has been approved for the treatment of obsessive-compulsive disorder, bipolar disorder, bulimia nervosa and other eating disorders, panic attacks and panic disorder, and, most recently, severe premenstrual dysphoric disorder. In some cases, one drug is marketed under different trade names for different indications; the drug bupropion is marketed as Wellbutrin for the treatment of depression, and as Zyban for smoking cessation.

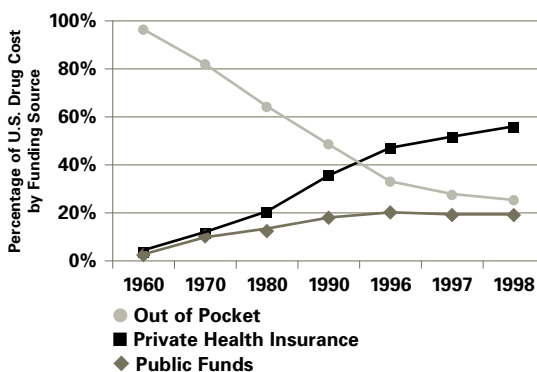
Increasing third-party coverage. Prescription drug coverage has made medicines more accessible for many Americans: As third-party payments for drugs increase, the amount the consumer must pay out-of-pocket decreases.⁹ Over the past four decades, public funds and private health insurance plans have paid for an increasing percentage of prescription drug costs.¹⁰ Nationally, third-party payers provide coverage for 67.4 percent of total market prescriptions. Third-party reimbursement rates are even higher in California, where third-party payers constitute 71.9 percent of the market.

“We don’t have the luxury of time when it comes to demanding patients. It is easier to write the prescription for a drug that is off-formulary, or requires pre-authorization than to take precious time to explain why my preferred drug is as good and less expensive.”

– Physician, Los Angeles

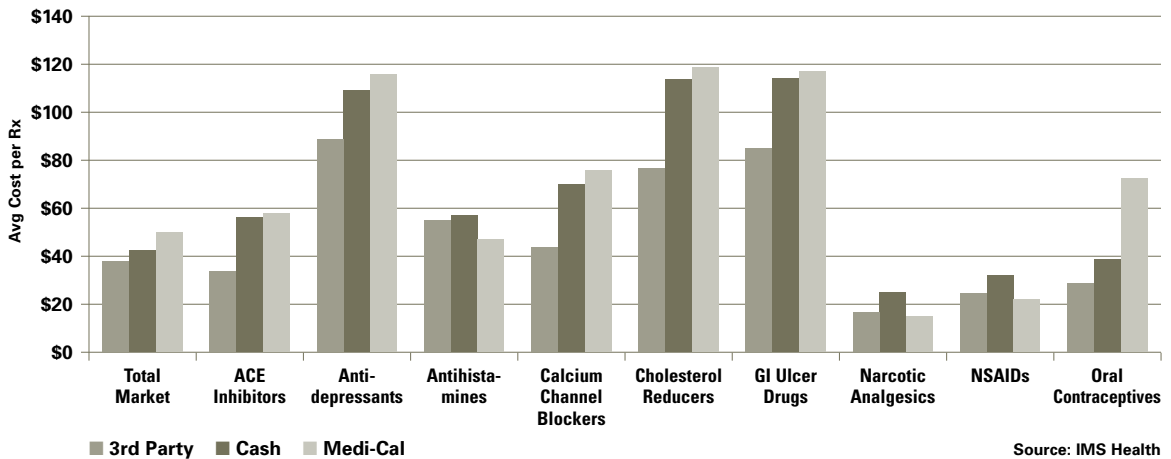
Figure 6 shows that private health insurance plans in particular have covered an increasing percentage of prescription drug costs in the United States. In 1998, private health insurance covered 53 percent of prescription drug costs in this country, about twice as much as the amount (27 percent) covered by out-of-pocket payments.

Figure 6. Drug Cost Payments by Funding Source



Depending on the payment source, the price paid for a prescription may vary widely. For example, as shown in Figure 7, in most therapeutic drug classes the average price of a prescription paid for by a third party is less than the cash or Medi-Cal price. Notable exceptions are antihistamines, narcotics, and NSAIDs, where the Medi-Cal prices are lower than the cash or third-party prices.

Figure 7. Comparisons Among Buyer Groups



Note: The average costs per prescription reflect the total pharmacy reimbursement for each prescription dispensed, which includes patient co-pays, payer reimbursements, and any mark-ups or dispensing fees charged by the pharmacies. Significant variances in dispensing fees can affect total price paid. Also, rebates are not reflected in these prices.

One study of managed care, conducted by ExperTeam, showed that over the past four years, sales of retail pharmaceuticals increased 156 percent when an insurer paid for the drug, versus 20 percent when the patient paid out-of-pocket.¹¹

Direct-to-consumer advertising. The ability of DTC advertising to heighten consumer demand for drugs has been well documented in the past several years.¹²⁻¹⁶ No longer do industry insiders debate whether DTC advertising works; the question now is how to make it work better.¹⁷ For a growing number of drug makers, the answer

lies in the creation of consumer-friendly ad campaigns that build brand awareness for their products. Today's DTC ads frequently use celebrity endorsements; a light-hearted, even comedic, approach; and Hollywood-caliber special effects—a stark contrast to DTC ads of the past, which focused primarily on explaining how the drugs worked.

In their efforts to connect with consumers, pharmaceutical manufacturers are making huge investments in advertising. In 1999, drug makers spent a record \$1.58 billion on DTC advertising, an increase of 35.1 percent over 1998.¹⁸ Manufacturers promoted 92 brand-name drugs to consumers during the year, including 33 products not advertised directly to consumers in 1998.¹⁹ Table 11 lists the top ten DTC-advertised brands for 1999. Several of the heavily advertised drugs are also among the top drugs in utilization, cost, and growth.

Table 11. Direct-to-Consumer Advertising Spending by Brand, 1999

1999 Rank	Brand Name	Indication	Marketer	Promotional Spend	Percent Change
1	Claritin	Allergic Rhinitis	Schering-Plough	\$123,744,700	-17.6%
2	Prilosec	Ulcers	AstraZeneca	\$79,435,800	59.7%
3	Xenical	Obesity	Roche Laboratories	\$76,152,900	105815%
4	Propecia	Male Pattern Baldness	Merck & Co.	\$71,116,400	-21.8%
5	Zyrtec	Allergic Rhinitis	Pfizer	\$57,068,400	-24.1%
6	Lipitor	High Cholesterol	Warner-Lambert/Pfizer	\$55,456,700	605.8%
7	Zyban	Smoking Cessation	Glaxo Wellcome	\$53,904,900	-1.2%
8	Flonase	Allergic Rhinitis	Glaxo Wellcome	\$53,457,400	49.6%
9	Viagra	Erectile Dysfunction	Pfizer	\$53,034,500	147.7%
10	Nasonex	Allergic Rhinitis	Schering-Plough	\$52,333,600	N/C*

*Nasonex was not promoted to consumers in 1998.

Source: *Competitive Media Reporting, Med Ad News 2000.*

Drug makers are using a variety of media to reach consumers, as shown in Table 12. For the past three years, television has received the largest share of DTC promotional spending,

reaching \$906.6 million in 1999.²⁰ In the same year DTC spending increased in all media categories except newspapers, national spot radio, and network radio.

Table 12. Direct-to-Consumer Advertising Spending by Media Category, 1999

1999 Rank	Media	Promotional Spend	Percent Change
1	Magazines	\$547,272,400	22.3%
2	Network TV	\$521,910,100	42.2%
3	Cable TV	\$220,284,300	65.9%
4	Spot TV	\$89,793,800	84.5%
5	Sunday Magazines	\$86,190,900	25.2%
6	Syndicated TV	\$74,650,500	141.4%
7	Newspapers	\$29,578,700	-43.0%
8	National Newspapers	\$8,710,000	22.8%
9	National Spot Radio	\$6,527,800	-21.0%
10	Network Radio	\$2,664,800	-71.4%
11	Outdoor Media	\$2,571,300	99.0%
	Total	\$1,583,623,200	35.1%

Source: *Competitive Media Reporting, Med Ad News 2000.*

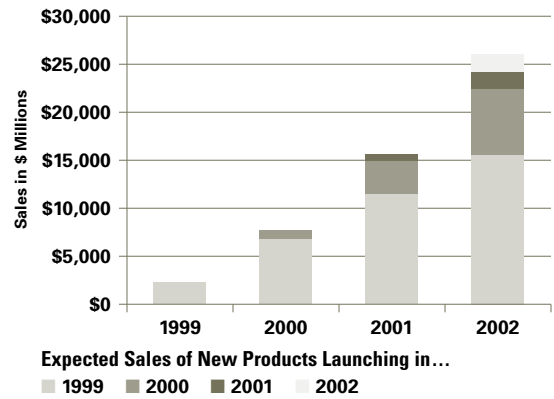
Changes in Therapeutic Mix

As discussed above, the introduction of new drugs is a key driver of utilization. Because new drugs tend to be costlier than older ones, their use may have a significant impact on drug spending. For example, in 1998, a single prescription for a new drug (one introduced in 1992 or later) cost an average of \$71.49, more than twice the average price for older drugs (\$30.47).²¹ Table 13 shows the prices of some newer therapies compared to those of the older therapies they replace.

Nationwide, prescription drugs introduced since 1992 accounted for 35.6 percent, or \$117.55, of the 1998 pharmacy benefit cost.²² It is estimated that products introduced between 1997 and 2002 will account for 41 percent of total prescription drug sales.²³ In addition, new drugs often must be taken indefinitely to prevent symptoms from returning to pretreatment levels. Thus, the expense of new drugs may be compounded greatly over time, as shown in Figure 8.

In California, six of the top ten products (in terms of total dollars spent) in 1999 were introduced in 1992 or later. Together, these six drugs (Lipitor, Claritin, Prevacid, Paxil, Zyprexa,

Figure 8. Growth of New Product Sales



Source: Goldman Sachs Investment Research

and Glucophage) had combined sales of \$882.3 million in California, representing 9.5 percent of total drug spending in the state for 1999. Thus, just six new drugs accounted for nearly 10 percent of total drug spending in California for 1999.

Yet these same six drugs account for a minimal portion of overall utilization in the state. Only two of these drugs are among the top 15 most utilized drugs in California in 1999 (Lipitor

Table 13. The Cost of Innovation: Average Cost per Prescription

Therapeutic Class	Predecessor*	Avg. Cost**	New Therapy	Avg. Cost**
Gastrointestinal	Cimetidine 400-mg	\$12.40	Prilosec 20-mg	\$202.48
Depression	Amitriptyline 25-mg	\$3.76	Prozac 20-mg	\$97.56
Diabetes	Glucophage 500-mg	\$51.43	Avandia 4-mg	\$107.71
High Cholesterol	Gemfibrozil 600-mg	\$16.42	Mevacor 20-mg	\$184.00
Chronic Pain	Ibuprofen 800-mg	\$6.57	Celebrex 200-mg	\$91.91
Allergy	Chlorpheniramine 4-mg	\$1.75	Claritin-D (24 hr.) EXR	\$72.57

*Manufacturer with most new Rx volume chosen for reference price. **Average retail cost.

Source: AdvancePCS.

and Claritin, ranking tenth and eleventh, respectively). Thus, even relatively low utilization of these drugs in California has contributed significantly to the growth of overall drug spending in the state.

Because new drugs tend to be costlier than older ones and account for a growing proportion of overall drug spending, it is important to assess the true value of new drugs. Some new drugs extend lives or dramatically improve patients' quality of life; others have been shown to be cost-effective, in some cases substantially offsetting other medical costs. However, the actual value of many new drugs has not yet been fully assessed, and experts have called for publicly funded research on the added value of new drugs.²⁴ While such research would be difficult to conduct in a timely and cost-effective manner, any assistance to employers and consumers in assessing the cost-benefit trade-offs of new drugs would be invaluable.

Pipeline issues. In the future, the high cost of new drugs is likely to account for an even greater portion of total drug spending. Recent research indicates that drugs that are currently in the R&D pipeline will account for 40 percent of the increase in prescription drug spending between 1999 and 2004.²⁵ This includes drugs in development as well as those currently awaiting FDA approval.

In the past decade, pharmaceutical R&D expenditures have nearly tripled.

As of June 2000, 156 prescription drugs were awaiting FDA approval (see Table 14).²⁶ (These include existing drugs for which manufacturers are seeking approval for additional indications, as well as new molecular entities.) Just six therapeutic classes account for more than half of the drugs awaiting approval: (1) cancer, (2) central nervous system disorders, (3) infections, (4) cardiovascular disease, (5) asthma, and (6) diabetes. All of these represent conditions that can affect a significant proportion of the American population.

Table 14. Therapeutic Classes of Drugs Awaiting FDA Approval (June 2000)

Therapeutic Class	Number of Drugs Awaiting Approval
Cancer	20
Central Nervous System Disorders	14
Infections	13
Cardiovascular Disease	12
Asthma	11
Diabetes	10
Gastrointestinal Disorders	6
Pain	6
Dermatological Disorders	5
Migraine	4
Imaging Agents	4
Ophthalmic Medicines	4
Rheumatoid Arthritis	3
Erectile Dysfunction	2
Other	42
Total	156

Source: "Close to the Finish Line," *Med Ad News* 2000.

As drugs approach their patent expiration dates and become vulnerable to generic competition, some manufacturers are introducing new formulations of those drugs (such as extended-release versions), or are repackaging them in combination with other drugs. For example, the FDA recently granted approval to Bristol-Myers Squibb to market Glucovance, a new diabetes treatment that is a combination of two existing drugs—Bristol-Myers Squibb’s Glucophage (metformin) and the generic diabetes drug glyburide. Glucophage, a top-selling diabetes drug, was scheduled to lose patent protection approximately one month after Glucovance received approval.

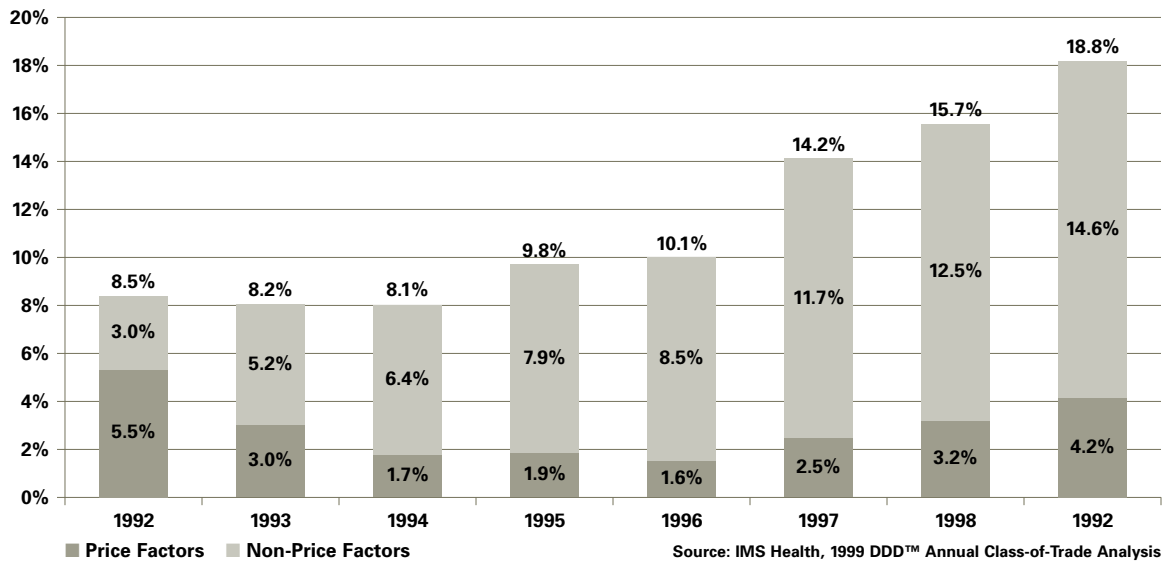
Researchers are also developing new drug delivery systems. In 1999, 11 new products approved for marketing in the United States incorporated some form of drug delivery technology, from delayed- and extended-release tablets, and fast-dissolve tablets, to transdermal patches and topical applications.²⁷ New, more convenient forms of drug delivery may be more costly than previously available therapies and further increase utilization in those therapeutic classes, which is likely to contribute further to rising drug spending.

Price Inflation

Price factors also contribute to rising drug spending in the United States, though less significantly than other factors, such as increased volume and the introduction of new, costlier drugs. As shown in Figure 9, total sales in the U.S. pharmaceutical market grew 18.8 percent in 1999.²⁸ Prescription drug price inflation grew 4.2 percent, primarily because of an increase in the price of brand-name drugs and a shift in generic deflation, while non-price factors, (e.g., new product introductions and increased unit volume) accounted for the remaining 14.6 percent of the growth rate.²⁹

Between 1993 and 1998, prices for older drugs rose 4.2 percent, roughly keeping pace with the rate of overall medical inflation.

Figure 9. U.S. Pharmaceutical Market Growth Rate



As shown in Figure 10, generic penetration in the U.S. pharmaceutical market is gradually decreasing. Generics, which accounted for 42.5 percent of U.S. prescriptions in 1996, increased slightly to 43.2 percent by 1999. However, the percentage of prescription drug sales represented by generics decreased—from 9.3 percent in 1996 to 8.5 percent in 1999.

Health plans continue to encourage the use of generic drugs when possible in order to control plan costs. Prices for generic drugs also have been gradually rising over the past several years. As shown in Figure 11, prices for generic drugs actually increased for the first time in the first quarter of 1999, up 3.4 percent.³⁰ Although most generic drugs did have price decreases, several had price increases at double-digit rates, driving up the volume-weighted average of generics overall.

“Right now the trend is towards more and more costly drugs. It is so hard to measure the benefit versus the cost. A new one comes and we say ‘that’s a wow,’ and they keep coming up with those.”

– Executive vice president/CFO,
Los Angeles-area hospital

Figure 10. Penetration Rates for Generic Drugs

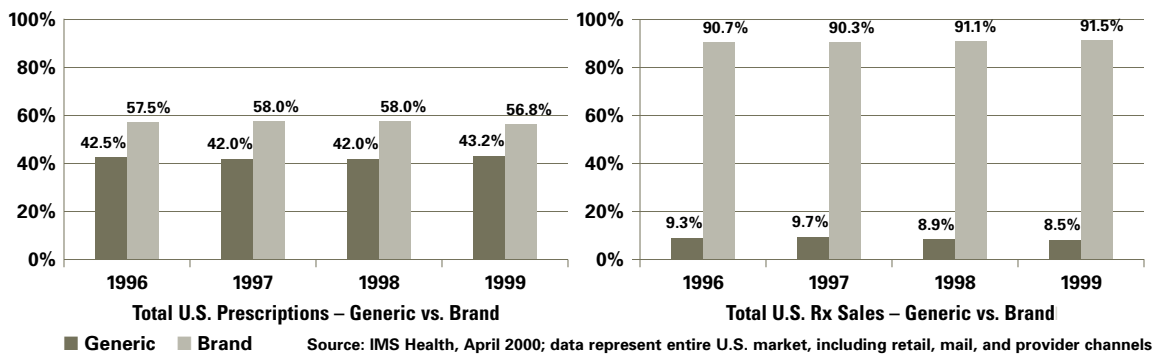
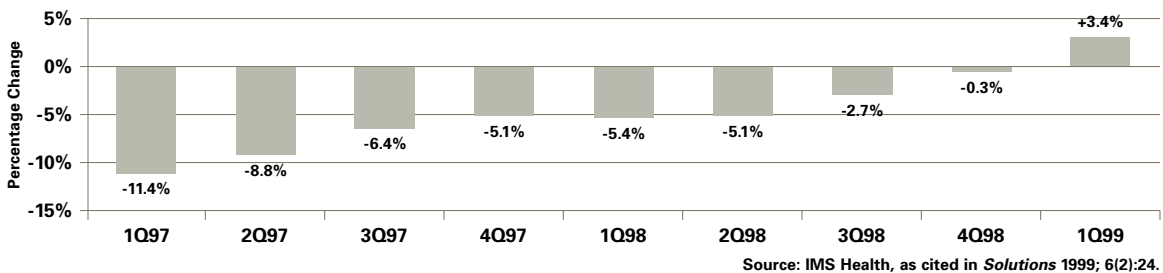


Figure 11. Generic Price Percentage Change



IV. Drug Cost Management Strategies

“The three-tier benefit... does control cost, and it makes constituencies better consumers! Using this model, if members want more, they will need to pay more, to bear more of the cost for their personal preference. It is sort of ‘the Lexus vs. the Toyota’ idea.”

– CMO, northern California health plan

DESPITE THE HIGH COST OF MANY PRESCRIPTION drugs, people are determined to have them—though preferably not at their own expense. Over the past four years, the rate at which retail prescription drug sales increased was nearly eight times higher when an insurer paid for the prescription: Sales increased 156 percent when prescriptions were paid for by an insurer, compared to only 20 percent when patients paid out-of-pocket.³¹

Health plans today face the challenge of balancing the high member demand for pharmaceutical benefits with the affordability of the drugs. In designing prescription drug benefit plans, payer organizations must weigh their desired level of savings against their willingness to shift costs to members and their overall tolerance for potential member dissatisfaction.

Managed care organizations (MCOs) and employer-provided health plans do not always have the same objectives in providing pharmaceutical benefits. Employers may place a higher value on an employee’s productivity or ability to work, and also may have less tolerance for employee/member dissatisfaction. MCOs may be more aggressive in their pursuit of cost savings.

Plans and payers have employed the tactics listed in Table 15 to help control costs. California has led the nation in developing and implementing cost control mechanisms, but to date no single cost management system has been completely satisfactory.

Formulary Incentives

Today most pharmacy benefit plans, including managed care organizations as well as employer health plans, use a formulary—a list of drugs identified as the preferred treatment for specific diseases. Formularies not only allow pharmacy benefit plans to encourage the use of the most cost-effective drugs, but also can be used to qualify plans for rebates from drug manufacturers.

Table 15. Pharmacy Cost Management Tools

Tool	Description	Economic Impact
Formulary	Encouraging use of more cost-effective medication	2%-4.5%
Closed formulary	Excluding reimbursement of certain non-covered drugs	3%-15%
Increasing co-insurance or co-pays	Increasing member financial responsibility (and sensitivity to drug costs)	2%-20%
Generic substitution	Substituting generic drugs for brand-name drugs when clinically appropriate	6%-10%
Therapeutic/ pharmacy interventions	Encouraging use of preferred drugs when clinically appropriate; may include pharmacy interventions or prescriber education	1%-5%
Utilization management ✓ Prior authorization ✓ Step therapy ✓ Managed drug limitation	Requiring prior authorization for specific medications before a prescription is filled	2%-6%
Narrowing pharmacy networks	Selection of pharmacy networks for discounted dispensing rates	2%-10%
Mail service	Use of mail service for dispensing prescriptions (especially maintenance medications)	2%-4%

Source: *AdvancePCS Estimates*

There are three types of formularies: open, incented, and closed. An open formulary does not exclude specific drugs, but uses physician education, voluntary therapeutic substitution programs, and member communications to increase formulary drug use. An incented formulary uses all of these tools to encourage formulary drug use, and also requires the patient to pay a higher share of the cost to receive a nonformulary drug. A closed formulary excludes certain drugs from coverage; if a patient receives a nonformulary drug, he or she usually must pay the entire cost of the prescription. Drugs may be excluded from a formulary for several reasons, such as cost of the drug to the benefit provider, availability of similar treatment with an over-the-counter product, and, in the case of employer health plans, employer attitudes regarding health care benefits and employee satisfaction requirements.

Pharmacy benefit plans may select any combination of these various formularies. The ones used most often are a combination of open and incented formularies—and even closed formularies generally allow members access to nonformulary drugs when medically necessary.

Use of a formulary can provide pharmacy benefit plans with savings from 2 percent to 4.5 percent, and up to 15 percent if the formulary is closed.

Formularies are typically the foundation of a cost management strategy, but their savings are primarily rebate-driven. Short of excluding drugs from coverage, which is problematic given the consumer trend toward choice, rebates do little to control increasing utilization or the impact of newer, more expensive drugs.

Coverage Decisions

Another balancing act concerns decisions regarding when to begin coverage of a new drug. If a health plan waits for six to 12 months after a new drug is launched to cover it, the plan may benefit if the product is recalled during that time. On the other hand, health plan members may become dissatisfied if they must wait up to six to 12 months for a product to be covered, and may in some cases switch health plans when the opportunity arises. Some health plans provide coverage for new drugs immediately upon FDA approval; others review a new product for coverage shortly after launch, an approach that may be attractive to many plan members.

Member cost sharing, through either co-insurance or co-pay plan designs, represents one of the most powerful tools health plans can use to control costs. Both approaches may encourage members to decrease or limit their use of prescription drugs, and hence, decrease overall drug spending. Having members share the financial responsibility helps make them more aware of drug costs. Co-insurance plans, though, because they adjust member contributions to the drug cost, perhaps make members more conscious of the prices of different drugs.

Co-pay plans specify a specific dollar amount that plan members are required to pay for a prescription. The amount of member co-pays may substantially influence prescription drug utilization rates. A recent employer survey found that utilization rates decline as co-pays increase, ranging from per-patient-per-month rates of 0.92 for \$1 co-pays to rates of 0.56 for \$9 co-pays.³²

Sales increased 156 percent when prescriptions were paid for by an insurer, compared to only 20 percent when patients paid out-of-pocket.

Most co-pay plans utilize a traditional two-tier design, employing a higher co-pay for brand-name drugs than for generics. Co-pays for brand-name drugs are typically \$5 higher than for generics, but may be up to \$20 higher. Setting a higher co-pay for brand-name drugs (or nonformulary drugs) encourages plan members to select lower-cost drugs, and also encourages the use of formulary drugs rather than nonformulary drugs.

Today an increasing number of health plans are choosing three-tier co-pay designs. These plans set the lowest co-pays for generic drugs, the next-highest co-pay for formulary-listed brand-name drugs, and the highest co-pay for brand-name drugs that are not on the plan's formulary.

Data from Health Strategies Group, Inc., indicate that the use of three-tier co-pays is increasing among MCOs, while the use of two-tiered co-pays is decreasing. Nearly half (47 percent) of MCOs report that they currently use a three-tier co-pay in some products, and 72 percent report that they plan greater use of this strategy.³³ Although more than three-quarters (78 percent) of MCOs report that they currently use a two-tiered co-pay, only 53 percent say they plan additional use of this type of structure.³⁴ The use of three-tier co-pay plans is currently less common among employer plans.

At the same time, co-pays are increasing for both brand-name and generic drugs. A recent survey revealed that retail-level brand-name co-payments averaged \$11.10, up from \$10.33 the previous year.³⁵ Retail-level generic co-pays averaged \$6.13, up from \$5.70 the previous year.³⁶

As the use of three-tier structures increases, some health plans are adding a fourth tier as well. These utilize an even higher member co-pay (or percentage of cost) for “lifestyle” drugs, such as those designed to treat baldness or sexual dysfunction. These plans may base coverage decisions on a “value-added” continuum framework (from life-saving to cosmetic). Members thereby assume more financial responsibility for drugs that are not considered health-related.

An approach that assigns drugs to tiers depending on the nature of their use requires careful consideration of the clinical and economic impacts of each decision. Because of its increased complexity, this design can present a more challenging education process with patients, physicians, and pharmacists.

One disadvantage of a co-pay system is that as drug costs continue to climb, the percentage of the drug benefit cost covered by the member co-pay decreases, thus increasing plan costs. On the other hand, co-payments priced so high that they result in under-utilization of prescription drugs may lead to members’ increased health difficulties and an increase in the plan’s other health care costs.

Depending on the payer’s benefit management objectives and the related co-pay plan design, co-pay systems can save anywhere from 2 percent to 20 percent on drug costs.

Co-insurance plans require members to pay a certain percentage of the total cost of a prescription (typically 20 percent), while the health plan covers the remaining portion. The percentage to be paid by the plan member may be higher for brand drugs than for generic drugs, thus encouraging use of generic or formulary drugs. One advantage of the co-insurance system is that it is self-adjusting: As drug costs climb, so does the amount of member cost-sharing.

Not surprisingly, this system tends to be less popular with plan members than the fixed co-pay system. Also, members like to know in advance what their out-of-pocket costs will be; under this system, they usually won’t know until they pick up their prescriptions.

Depending on plan design, co-insurance plans can save pharmacy benefit providers anywhere from 2 percent to 20 percent on drug costs.

Drug Utilization Management

Pharmacy benefit plans can choose from among several drug utilization management tools to contain costs. Examples include generic drug substitution, therapeutic substitution, retrospective drug utilization review, prior authorization, and managed drug limitation.

Generic substitution for multi-source brand-name drugs can offer substantial cost savings to pharmacy benefit plans and their members. A recent survey conducted by Bruskin-Goldring Research revealed that Americans have surprisingly favorable views toward generic drugs: 83 percent agreed that generics are good because they generally are as safe and effective as brand-name drugs and cost less.³⁷ Moreover, 80 percent cited “cutting down on overall health care costs to society” as a reason they would choose a generic.³⁸

Generic substitution typically is enforced in one of two ways: Either a member’s co-payment for a generic is significantly less than for a brand-name drug, or the member must pay the price difference between the two.

Generic substitution programs can save pharmacy benefit plans 6 percent to 10 percent, depending on the plan’s level of aggressiveness in substituting generics for brand-name drugs.

Therapeutic substitution (drug-switching) programs encourage the use of preferred drugs, often as a part of a formulary program. When a patient submits a prescription for a targeted drug, the pharmacist contacts the prescriber in an attempt to switch the prescription to a preferred drug. Most therapeutic substitution programs are implemented through mail service programs, but they are becoming increasingly common for retail prescriptions as well.

Therapeutic substitution programs can offer plans cost savings of 1 percent to 5 percent, depending on program design and implementation features.

Retrospective drug utilization review (DUR) encourages appropriate prescription drug therapy, while also minimizing costs, by identifying individual patients and prescribers who meet specific criteria.

Some DURs identify patients using a target drug, patients receiving improper doses of a drug, those who are potential abusers of narcotics or controlled substances, or those who are high utilizers of prescription drugs. This last category is important because, for many health plans, a relatively small population incurs the majority of prescription drug benefit costs.

Other DUR programs identify physicians whose patients meet these or other criteria, or physicians with unusually high or otherwise inappropriate prescribing patterns. In a typical health plan, a small percentage of the plan physicians may represent the majority of the potential savings from more appropriate prescribing.

Typically DUR is performed on a quarterly basis. If problems are identified, letters are sent to the physicians involved for appropriate follow-up. When necessary, various forms of physician education can help doctors become better informed about plan requirements.

Prior authorization (PA) is being used by an increasing number of pharmacy benefit plans to limit members' access to specific, nonformulary drugs. In general, coverage is denied for PA-managed drugs unless the patient meets certain criteria. Some examples of drugs typically included in PA management plans include fertility drugs, cosmetic drugs, growth hormones, and anti-obesity drugs.

Depending on the number and expense of drugs requiring PA, as well as the strictness of criteria for authorization, PA may save pharmacy benefit plans 2 percent to 6 percent in drug costs.

Managed drug limitation (MDL) can be an effective cost control measure for certain prescription drugs—typically those that are normally prescribed only a limited number of times per year (such as drugs for influenza), or drugs that plans want to limit (such as those for erectile dysfunction, infertility, or smoking cessation). Instituting an MDL for appropriate drugs helps prevent stockpiling, non-indicated (prophylactic) use, and fraud (distribution to persons other than those for whom the drugs have been prescribed). At the same time, members are allowed rapid access to the drug if needed.

Co-payments priced so high that they result in under-utilization of prescription drugs may lead to members' increased health difficulties and an increase in the plan's other health care costs.

Retail Pharmacy Networks

Many pharmacy benefit plans organize retail pharmacy networks, including chain and independent retail pharmacies, to fill and dispense their members' prescriptions. The economic incentive for plans to use networks can be significant: In general, it is more cost effective for plans to use such networks, rather than permitting members to use any pharmacy they wish. Some pharmacies provide other value-added services for a plan's members, such as patient education and counseling or online checks for drug-drug interactions.

Limiting the size and scope of pharmacy networks typically provides plans with cost savings of 2 percent to 10 percent.

Mail Service

Because of their higher volumes of prescriptions processed, mail-service pharmacies generally are in a better position than retail pharmacies to negotiate deeper discounts from wholesalers and manufacturers. In addition, mail-service pharmacies have higher generic substitution rates and more effective interventions with physicians (in situations like therapeutic substitution programs).

To keep costs in check, many payer organizations have increased mail-service co-payments substantially over the past few years. Co-payments for brand-name mail-service prescriptions have increased 25 percent over the past four years (with the largest increase occurring in the past year), up to \$15.12.³⁹ Co-payments for generic mail-service prescriptions average \$8.62, up from \$7.11 in the previous year.⁴⁰

To be effective, mail-order co-pays should be adjusted to reflect the higher quantities of drugs typically dispensed by mail-order programs. For example, if patients pay a \$10 co-pay for a one-month supply of drugs through mail order, it makes sense to charge at least twice that for a three-month supply of the same drug.

Depending on the plan design, mail-service plans offer 0.5 percent to 1 percent savings for pharmacy benefit providers.

Disease Management

Disease management programs are designed to promote appropriate health care overall. Disease management programs offer a number of potential benefits to plans and their members, such as detecting disease early on, encouraging patients to obtain appropriate care, promoting patient compliance with treatment regimens, and helping to prevent hospitalization.

Typically, disease management programs focus on illnesses, such as asthma and diabetes, for which early intervention and effective management are known to reduce overall medical costs. However, disease management programs also may focus on arthritis, depression, gastrointestinal disorders, and heart- and blood pressure-related illnesses.

Most disease management programs provide educational materials for patients with specific diseases. Other interventions may include monitoring drug utilization to promote compliance, follow-up phone calls to patients from nurses, or, in some cases, assigning a case manager to work with a patient's health care providers.

Potential savings resulting from disease management programs vary widely, depending on member educational level, program design and implementation factors, program penetration rates, and the disease targeted. Disease management tools can be individualized to meet a specific health plan's needs, thereby helping plans to move more smoothly through the transitions required by the changing face of pharmaceutical benefits.

Risk Sharing

As long ago as the early to mid-1980s, health plans began experimenting with risk sharing as a way to manage escalating prescription drug costs, either sharing or passing the risk for pharmacy costs on to others such as pharmacies, prescription benefit managers, and, most recently, health care providers.⁴¹ Since the early to mid-1990s, many large medical groups in California assumed risk for the prescription drug component of their patients' medical care, and the state ultimately emerged as a leader in physician risk sharing/risk assumption. As physicians became increasingly reluctant to adopt new interventions without proof of cost-effectiveness, they also became much more conservative in their prescribing habits.

Over time, as drug costs increased, risk-bearing medical groups experienced tremendous financial losses, and effectively renegotiated virtually all of their risk-bearing contracts. Under the new non-risk conditions, it is unclear whether physicians will revert to past prescribing patterns or if current patterns will continue.

Hospitals and health systems are another group that has absorbed risk for pharmacy (their fixed-price contracts for all hospital supplies amount to risk-bearing contracts for drugs). Like physicians, hospitals have experienced severe losses due to soaring prescription drug prices. So far hospitals have reacted by tightening traditional cost containment strategies. Potential future solutions include renegotiating contracts to separate pharmacy or decrease their risk. Whether they will attempt this remains to be seen.

“Until last year, we were seeking full risk for prescription drugs in our managed care contracts. Now, we are scrambling to give it back!”

– Director of pharmacy,
southern California medical group

V. California Stakeholder Perspectives

*“Restrictions are coming.
The pressure is building.
In three plus years it’s going
to blow! I see it heating up.”*

– Medical benefits manager,
employer, northern California

GIVEN THE PENETRATION OF MANAGED CARE in California and the willingness of health plans to employ a wide and deep array of cost management strategies over the years to contain escalating drug costs, it is time to rethink drug management approaches. What has failed and what has succeeded? What kind of side effects are all those involved willing to tolerate?

To answer these and other questions, the final section of this report probes the opinions and experience of the major stakeholders in prescription drug programs in California: medical groups, hospitals, health plans, and employers. Their responses pose a spectrum of insiders’ perceptions on the causes and cures of California’s prescription drug woes, offer glimpses into likely future developments, and suggest avenues that may lead to workable solutions.

Working with AdvancePCS, the health care consulting firm of Abt Associates interviewed 30 stakeholders across California. Between May 30 and June 16, 2000, Abt interviewed medical directors and pharmacy managers at 13 large medical groups and six managed care organizations, and medical directors or human resource managers at five large purchasers, including employers and purchasing cooperatives. In December 2000 and January 2001, Abt interviewed chief financial officers, directors of finance, and directors of pharmacy at five hospitals and health systems. Abt also interviewed a resource person at the state legislature to capture the perspective of the government on prescription drug trends.

Each of the interviews lasted approximately 90 minutes and followed a structured guide created specifically for each of the stakeholder groups.

Key Findings

There is intense acrimony among stakeholder groups. Each of the stakeholder groups places the blame for the alarming trends in prescription drug cost and utilization across the state on one or another stakeholder group. Managed care organizations blame medical groups, employers, and pharmaceutical companies for increased utilization and cost. Medical groups point to the manufacturers, managed care organizations, and consumers. Hospitals and health systems denounce pharmaceutical manufacturers for driving up drug costs to increase profits and reproach health plans for making it difficult to effectively manage drug utilization. Employers reproach physicians and managed care companies for having failed to contain costs. Yet all of the groups predict that without a new paradigm, in which the stakeholder groups work together to develop approaches to controlling prescription drug costs, the situation would indeed be dire.

The impact of a shifting risk-sharing picture is still in doubt. Since the early to mid-1990s, medical groups in California assumed risk for the prescription drug component of their patients' medical care. The results are stark: Physician groups lost enormous amounts of money and have effectively renegotiated virtually all of their risk-bearing contracts. However, as risk bearers, physicians did change their prescribing habits, becoming much more conservative in adopting expensive new interventions without proof of cost-effectiveness. It is unclear if, under the new non-risk conditions, physicians will continue in these conservative new habits or revert to old prescribing patterns.

Each of the stakeholder groups places the blame for current conditions on another stakeholder group.

Hospitals and health systems customarily negotiate fixed-price contracts with payers covering all hospital supplies, which amounts to risk-bearing contracts for drugs. In the past, pharmacy costs were easily absorbed, but with soaring prescription drug prices hospitals have experienced severe losses—especially on the new blood products and injectibles, some of which can run to more than \$500,000 per month, and exceed even hospital reinsurance or stop-loss levels.

So far hospitals have reacted by tightening formularies, creating clinical pathways for new drug products, and using group purchasing power. Potential future solutions include renegotiating contracts to separate pharmacy or decrease their risk. Whether they will attempt this remains to be seen.

Utilization management infrastructure is being rapidly dismantled. One positive side effect of risk-bearing for prescription drugs on medical groups was the development of pharmacy management programs that managed the cost and utilization of drugs for the group. As these programs were developed, managed care plans dismantled existing programs that were no longer necessary. Now that risk has shifted back to the plans, what has taken medical groups a decade to construct—the information infrastructure, the disease management protocols, and the peer-review processes—is being dismantled at a breathtaking pace. Faced with the need to reconstruct basic processes for pharmacy management with far smaller budgets to take on this task the second time around, many health plans will use third parties (PBMs) to maintain pharmacy benefits.

Without mechanisms to compensate for unexpected increases in drug spending, stakeholders will not be comfortable accepting risk in the future. Current high levels of drug spending were not anticipated when contracts were forged between health plans and employers and between health plans and medical groups. While risk-bearing medical groups were developing tools to change behavior, delivering data to physicians, and lobbying health plans for better information, pharmacy costs rose an average of 13 percent a year from 1994 through 1998. Today's newly negotiated contracts obviate some of the most egregious imbalances of the old contracts but fail to include mechanisms to compensate for such unanticipated increases in the future.

Hospitals too have been caught off guard, and not just by unanticipated hikes in drug prices that they must absorb in fixed-rate contracts. As plans decrease reimbursement to physicians for drugs that require clinical monitoring, physicians are admitting patients to the hospital for administration of these often extremely expensive drugs, effectively shifting the cost to hospitals. The trend that was originally sought by managed care—a shift to lower levels of care where appropriate—is being reversed to avoid high drug charges in outpatient settings.

As new drugs are introduced, or new uses for existing drugs are approved, causing spikes in drug utilization and spending, the impact on risk bearers must be offset in a way that satisfies the needs of all stakeholders—including consumers.

In a low unemployment economy, employers remain cautious about tampering with benefits. In a healthy economy such as that of California over the past several years, competition among employers for qualified employees is fierce. Employers regard prescription drug benefits as an extremely important component of a strategy to attract and retain employees.

Direct-to-consumer advertising erodes relationships between stakeholders and consumers.

All stakeholder groups point to DTC advertising as a large contributing factor in increasing cost and use of prescription drugs. However, their overriding concern is the negative impact of DTC advertising on relationships between each of the stakeholder groups and consumers. Physicians complain about not meeting patient expectations engendered by such advertising. Employers note employee dissatisfaction over benefit provisions restricting access to advertised products. Managed care plans fret about having to counter-educate consumers and physicians on the benefits of products that are heavily promoted.

The demand for “lifestyle drugs” creates ongoing challenges. Drugs to treat non-life-threatening conditions such as acne or baldness did contribute to increases in cost and prescription drug use. Managed care organizations and employers rushed to dampen the impact with interventions such as tiered co-pays or pre-approval requirements. The significant ongoing worry is how to set a standard that distinguishes lifestyle versus medically necessary medications, and then addressing any resulting consumer dissatisfaction.

The “wild card” of the future for the growth of prescription drug costs is the senior population.

Seniors who are enrolled in Medicare risk plans and facing new caps on drug coverage are seriously concerned about the upward trend in prescription drug prices. In the most recent contracting cycles with health plans, many medical groups have refused to retain a high portion of the risk for drugs for seniors—a signal that they view this area of cost containment as beyond their control. This is because the pharmacy budget for seniors represents a substantially higher proportion of the overall premium allocation compared to commercial populations.

In California, many health plans are abandoning the senior market, so more seniors will be bearing the direct expense for their medications. In contrast to the lack of price sensitivity prevalent in employed populations, senior consumers are extremely aware of the price of their drugs. Many are responding assertively by looking at alternative purchasing models (the European community) and aggressively lobbying for drug coverage. Patients more than 65 years old represent the largest users of prescription drugs now, and stakeholders believe utilization will increase astronomically if legislation mandating prescription drug coverage for seniors is passed.

Patients have evolved into consumers—with mixed results so far. Over the past several years, individuals have been assuming more responsibility for their health, adopting disease management and health management tools, for example, and changing the way they gather and respond to health information. While the rise of consumerism is not unique to health care, its development has had significant implications for the rise in prescription drug costs in California. Patients have evolved into consumers—making informed decisions based on their needs, finances, and the best available information. Unfortunately, all of the elements required for consumerism to be effective are not yet present. For prescription drug users to behave like consumers, they will need to develop price sensitivity and have access to good, if not “perfect,” information. Right now, much of their information is coming from drug makers. While interventions are developing to fill the void, the net effect so far has been increased attention and consumer demand without adequate controls.

Stakeholders are counting on information as a key tool to contain drug costs. Medical groups use health plan data on comparative patterns in prescription use and cost to manage their programs, but the information is often difficult to use (for example, difficult to merge across all health plans or available at varying times throughout the year). Physicians, hospitals, and health plans all bemoan the lack of information available to them and their patients about the value of drugs. Is a new drug better than what is currently available? Is it worth the money? Over the next several years, suggest interviewees, information about quality and value will become more available and will enable better decision making.

Hospitals are investing in information systems to help them understand the utilization trends that contribute to cost increases. Lack of information is a major problem for many institutions, which have no integrated medical record and little ability to gather information on outcomes to give back to doctors.

Patients need information and access to data on new drugs. Until manufacturers are required to communicate objectively, and consumers have access to complete clinical information, stakeholders believe there is little chance for a slowdown in expenditures.

Employers are using information as a cost containment tool, providing information to employees about the cost of the prescription drug benefit to the corporation. As information on the relative value of different therapies in a class becomes quantified, we could start seeing continuously variable co-payments, rather than an artificially contrived three-tier limit. Alternatively, a “consumer value plan” could emerge where whichever drug is most cost-effective gets covered for a given condition.

What Does the Future Hold?

Legislation intervention—a dark view. In California, health plans have a fairly dark view of the immediate future for pharmacy benefits. Part of the pessimism stems from concern about legislative intervention. They fear that government tinkering with drug benefits will complicate the cost picture and add to the tensions between physicians and health plans. Unfunded mandated drug benefits are a concern, particularly given the low level of collaboration among stakeholders today. Hospital executives are equally pessimistic. They reluctantly predict that government intervention is unavoidable and, at the same time, unlikely to result in any significant relief to their institutions.

New risk-sharing arrangements. Health plans have moved, in some cases reluctantly, to negotiate arrangements of shared risk for pharmacy benefits. The most commonly described risk arrangement for pharmacy—negotiated separately from all other medical care risk—is 50 percent shared risk with very limited downside risk (for example, a maximum of 10 percent exposure when the medical group exceeds expected costs). These contracts also have a variety of incentives for upside risk (such as equal sharing in the pharmacy budget surplus at the end of the contract year). Some health plan respondents view the taking back of risk as a precursor to a return to the traditional full-insurance model in which the pharmacy coverage would be offered as a separate rider and would be fully insured.

Innovation. As traditional interventions fail or achieve less than satisfactory results, stakeholders anticipate major changes in the way prescription drugs will be covered and financed in the future. Prescription drug benefits, they predict, will be designed to take advantage of the rise in consumerism as well as the growth of technology. Quality will emerge as a greater focus as tools become available to evaluate and integrate quality into the prescription drug cost-benefit mix.

“Health plan partnering? No, not really. It’s more of a ‘good guy/bad guy’ thing. A patient will complain to the plan about a medication we feel forced to administer (by their formulary)—we will try to work with the plan, but I am struck by how they will persistently let us take the hit for the patient’s unhappiness.”

– Medical director,
southern California medical group

Technology, including information systems, decision support, electronic medical records, and the Internet, will expedite and facilitate benefit changes, quality improvement, and better drug utilization control. Hospitals are making significant investments to reduce medication errors through better prescribing tools and delivery systems.

Stakeholders predict the need for an entirely new system of covering prescription drugs. It may grow out of existing models or be developed *de novo*, driven by the threat of government intervention or truly “outside the box” thinking in response to market conditions. One employer urges stakeholders to *“Take out a new piece of cloth whole and design a new system so each component takes a new accountability: purchasers, health plans, consumers, and society.”*

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