

**CVS**  
**CAREMARK**

# INSIGHTS

2010

EVOLVING PHARMACY CARE

**Per Lofberg**  
*New President of  
Caremark Pharmacy Services*



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**Per Lofberg**

*New President of  
Caremark Pharmacy Services*

## Dear Clients,

This has always been a dynamic industry, but the pace of the change today is unprecedented. Whereas 10 years ago all of us were focused on managing branded blockbuster drugs, they have become less dominant as plans and consumers embraced generics. With generic dispensing rates (GDRs) today over 70 percent and a robust generic pipeline, we expect to push GDRs close to 80 percent over the next several years.

At the opposite end of the spectrum, spending on specialty pharmaceuticals outpaces virtually every other aspect of health care and is projected to rise even faster with new product introductions and innovations. We need to make sure these critically important drugs are available and used appropriately while at the same time keeping costs under control.

We are also seeing rapid acceleration in the use of genetic testing for more and more drugs. Testing will help us make sure that people who receive drugs will benefit from them and will avoid serious complications. Moreover, it will help us avoid the waste associated with using drugs that are not going to work for a particular patient in the first place. As with any new technology, we need to make sure these tests are employed judiciously and used effectively.

In the midst of all this change, we need to anticipate and plan for the impact of the health care reform legislation passed earlier this year. As your PBM, we share your goals of controlling health care costs and achieving maximum value from the prescription benefit, and I want to assure you that we are very clear on **our priorities:**

First, we must help you **control the cost of your drug benefit**. This requires that we be in the forefront of plan design and clinical strategies, and that we use our scale to negotiate as effectively as possible with pharmaceutical manufacturers and participating retail pharmacies.

*continued on page 2*

*continued from page 1*

Second, **we must execute flawlessly** and do everything we can to serve your needs and those of your members and customers.

Third, as health care providers, **we must improve health outcomes**. This is the core of our mission, and we believe, the core of our relationship with you and your members.

As an industry veteran, I have a deep appreciation for the opportunity we have in working with you to manage your pharmacy benefit. Simply put, we touch more of your members more frequently than any provider. By optimizing those interactions, we can have a profound impact on your members and on the effectiveness of your benefit plan. And I believe CVS Caremark, with its combination of mail service pharmacies, retail stores, specialty pharmacies and call centers, has a unique capability to optimize those interactions, to “move the needle” in terms of how we interact with members and improve outcomes.

I’m proud to share our **INSIGHTS** with you. In these pages we provide more detail on the market changes described above, and we share some of the research that will help us guide the evolution of pharmacy care. Importantly we are also introducing a new approach to reporting performance metrics, one that we believe will help you evaluate your benefit performance more accurately and fine-tune your plan to meet your goals and market challenges.

I invite your feedback on this report and on our service. On behalf of the entire CVS Caremark executive team, I want to express our gratitude for the opportunity to work with you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Per Lofberg', with a stylized, cursive script.

Per Lofberg  
President, Caremark Pharmacy Services





# 2009 Year in Review

# Controlling Cost, Improving Outcomes

**Those are the basic goals of any prescription benefit management plan.**

The variables that drive prescription spending, the factors that affect utilization, the pressures on price, the impact of regulatory change or new clinical findings or market introductions—all of these must be balanced and managed to reach those endpoints: control of costs and improved outcomes.

**A quarter of our clients maintained gross trend below three percent in 2009.**

Over the last 24 months prescription spending has been affected by two external factors in particular: the economy and the prospect of health care reform. Specialty spending continues to grow at double-digit rates, and there have been few significant new generic launches. Yet, by taking proactive strategic action, leveraging available opportunities and maximizing member engagement, a quarter of our clients maintained gross trend below three percent in 2009. At the same time, many were able to achieve Best-in-Class adherence rates, above 80 percent in some market segments for key disease states.

Over the next several pages, we examine the factors that have impacted and will continue to impact prescription spending in the months ahead. We report on 2009 performance by market segments. In the second half of INSIGHTS, we look ahead with trend forecasts and an overview of the health care reform legislation passed early in 2010. Finally we share with you what we have learned about prescription behavior and how we are working to improve pharmacy care and help you achieve your pharmacy benefit management goals.



# 2009: A Slow Return

The 2007 downturn left no sector of the economy unaffected, including health care.

Spending for all health care goods and services slowed to the lowest rate in 48 years. The Centers for Medicare and Medicaid services (CMS) reported an actual drop in per capita drug use in 2008.<sup>1</sup> While there are now, in 2010, encouraging signs of recovery in many sectors, the effects of the downturn are expected to linger, continuing to dampen health care spending over the next several years.

Many among those millions became eligible for continuation of benefits under COBRA. Government subsidies for anyone laid off between September 1, 2008 and December 31, 2009 helped make COBRA affordable. Enrollment reportedly doubled compared with pre-subsidy levels.<sup>3</sup> Expiration of those subsidies is expected to have a range of impact—from families “stocking up” on health care to increased enrollment in Medicaid.

## CHANGES IN BENEFITS COVERAGE

Since 2007, millions of Americans have lost their jobs, and millions of families have seen their health benefits curtailed, if not lost altogether. From December 2007 to December 2009, the number of unemployed essentially doubled to 15.3 million Americans from 7.7 two years earlier.

FIGURE 1

### Lingering Effects of the Recession on National Health Care Spending<sup>2</sup>

Year	2007	2008	2009 (P)	2010 (P)	2011-2014 (P)
<b>Economy</b>	Recession begins.	Finance, housing, manufacturing industries troubled. Unemployment rises.	Recovery is slow. GDP expected to decline.	Economy continues to recover; some resumption of consumer spending.	Economy expected to strengthen.
<b>Health Care Spending</b>	Downturn sets off the slowest rate of health care spending growth in 48 years.	Private insurance coverage declines, people skimp on or delay care.	Private spending declines, as public portion of health care spend grows.	Reduced private coverage expected to continue to slow health care spending.	Spending growth projected to increase slowly. Public spending projected to account for slightly more than half of NHE by 2012.
<b>Effect on Prescription Spending</b>	Generics help to slow spending growth.	Per capita drug use declines.	Utilization rebounds somewhat, particularly in Q4.	Utilization moderate, use of generics increases.	Significant generic launches should help to slow spending growth in 2012, 2013.
<b>NHE as a % of GDP</b>	15.9% GDP	16.2% GDP	17.3% GDP (P)	17.3% GDP (P)	NHE projected to rise slowly, to 17.4% GDP by 2014.

NHE: National Health Expenditures

GDP: Gross Domestic Product

Source: Table based on data from “Health Spending Growth At a Historic Low in 2008,” Health Affairs, January 2010. “Health Spending Projections Through 2019: The Recession’s Impact Continues,” Health Affairs, March 2010.

## Year in Review

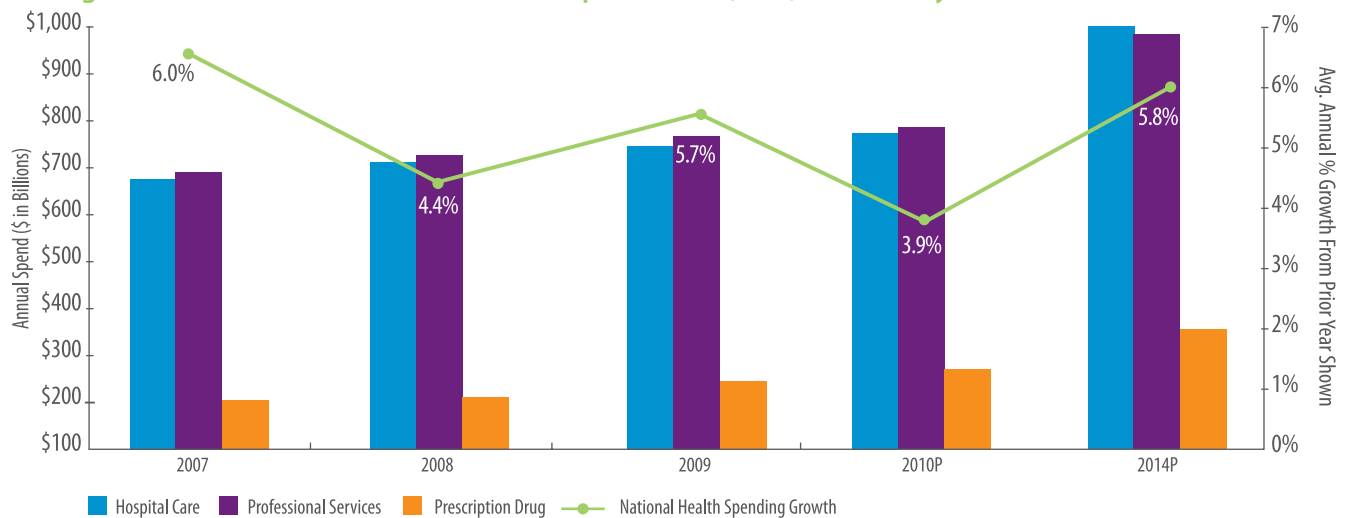
Based on data available early in 2010, CMS projects that in 2009 **federal and state Medicaid spending** grew at the fastest rate since 2002 — 9.9 percent.<sup>4</sup> Overall, public spending on health care is projected to have grown much faster in 2009 than private spending: 8.7 percent growth rate for public spending versus 3.0 percent for private spending.<sup>5</sup>

In the midst of all these profound changes, public debate raged about how to reform health care. The comprehensive health care reform legislation eventually passed addresses various aspects of benefit coverage. The full impact of these changes is difficult to project before regulations and guidance have been issued by applicable government agencies. For an overview of the legislation, please see page 18.

Public spending on health care is growing faster than private spending, and that rapid growth is expected to continue for several years.

FIGURE 2

### Average Annual Growth in National Health Expenditures (NHE) Affected by Economic Downturn





## Year in Review

### PRESCRIPTION DRUG TREND

As noted previously, there was a marked slowdown in prescription utilization in 2008, nationally and in the CVS Caremark Book of Business (BOB). Many people responded to economic uncertainty, job loss and declining insurance coverage by curtailing their use of health care, including prescription drugs. Consumers cut back, rationed or dropped off prescription therapies.

### UTILIZATION

In 2009, **prescription utilization** slowly increased as consumers became more confident and restocked the medicine cabinet. The flu clearly played a role in the uptick at year's end, but families may also have responded to anticipated copay increases in 2010 and the ending of COBRA subsidies. Perhaps in response to the difficult circumstances many families faced, plan sponsors in our Book of Business made few changes in member contribution levels. In fact, BOB member contribution declined from 19.0 percent in 2008 to 15.7 percent in 2009.

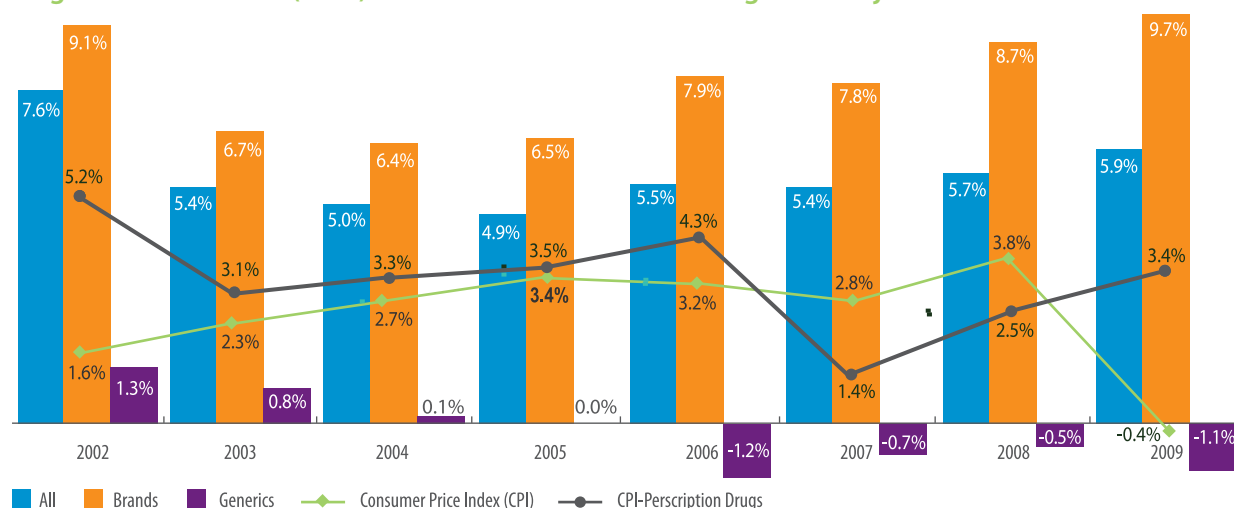
In 2009, prescription utilization slowly increased as consumers became more confident and restocked the medicine cabinet.

### PRICE

Although utilization trend significantly increased from 2008 to 2009, the major driver of trend was **price**. Prices for branded pharmaceuticals increased at more than twice the rate of general inflation. Manufacturers likely responded to a number of pressures including uncertainty over health care reform, pending patent loss for top-selling drugs, and sales dampened by the recession. However, the ongoing price increases cited by various organizations, including AARP, the Government Accounting Office (GAO) and IMS Health, have prompted calls for a congressional investigation.<sup>6</sup> Generic prices continued to decline.

FIGURE 3

### Average Wholesale Price (AWP) Increases: Price for Brand Drugs Was Major Driver of 2009 Trend



Note: CPI changes are based on the "All Urban Consumers" (CPI-U) tables and reflect the year-over-year percentage change in the annual averages 2002-2009.

Source: Bureau of Labor Statistics (BLS), "Consumer Price Index: December 2009," News, U.S. Dept. of Labor, January 2010; CVS Caremark Industry Analytics, April 2010.

## Year in Review

### DRUG MIX

**70.4%**  
**GDR**  
**1Q 2010**  
**Book of**  
**Business**

As has been true for several years, **drug mix** helped to moderate trend. Generic dispensing rates have benefited from growing public acceptance of generics. Harris Poll results show that between October 2006 and December

2008, the proportion of adults who would choose generic drugs over brand name drugs increased from 68 percent to 81 percent.<sup>7</sup> What's more, consumers have more opportunity to choose generics. Over the 5-year period 2004-2008, brand name products with combined annual sales of approximately \$71 billion lost market exclusivity.<sup>8</sup>

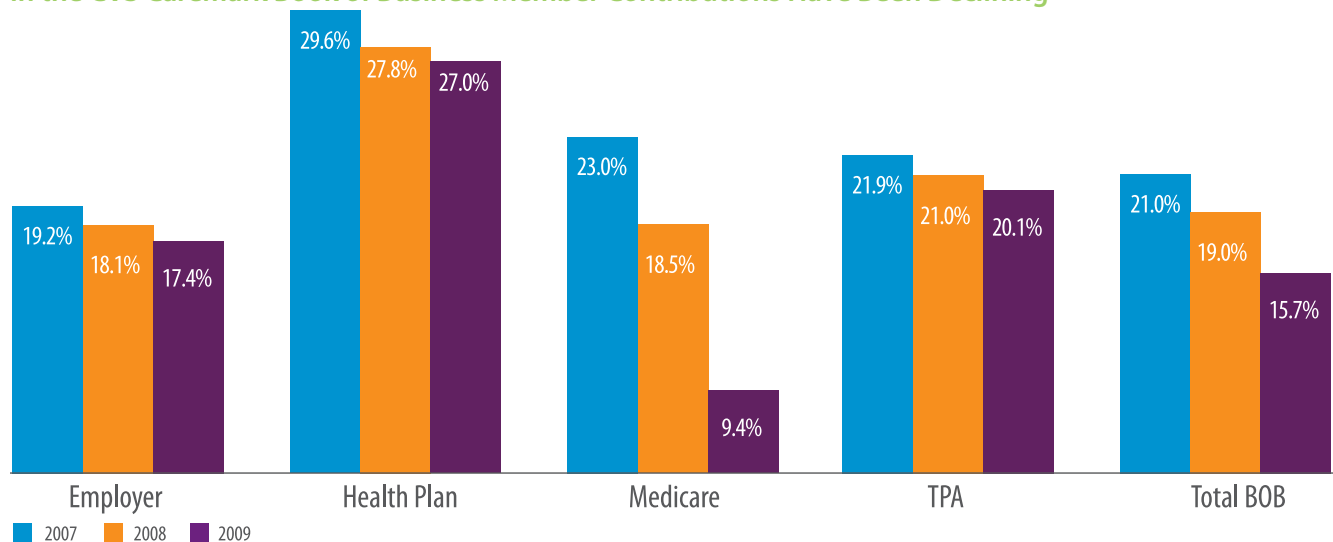
In the CVS Caremark Book of Business, the annual generic dispensing rate increased rapidly in 2009, from 65.1 percent in 2008 to 68.2 percent in 2009, despite a relative lack of

significant new generic launches. Looking ahead, from 2010 to 2015, brand drugs with combined sales of more than \$100 billion are expected to go off-patent.<sup>9</sup> For more information on pending generic launches, see page 22.

For most plans and plan sponsors, **specialty trend** continues to grow at double-digit rates. The progressive management strategies many of our clients implemented kept our 2009 specialty average trend to **11 percent**. Best-in-Class specialty trend in the CVS Caremark Book of Business dipped as low as 7.3 percent. See pages 13-15. Continued vigilance in regard to specialty spend will only become more critical in the future. Government spending for biologics is increasing at a faster rate than any other health care-related expense except diagnostic imaging tests; total spending on biologics is expected to exceed \$100 billion by 2011.<sup>10</sup>

FIGURE 4

In the CVS Caremark Book of Business Member Contributions Have Been Declining



Source: 2008-2009 Caremark book of business trend cohort. All trend calculations are based on a trend cohort group. Trend cohort group criteria includes funded clients with retail claims for calendar year; average eligibility must be within  $\pm 15\%$  period over period and excludes Puerto Rico/Virgin Islands and Guam clients. The specialty trend is based on the universal specialty drug list. Caremark book of business data, industry analytics January 2010.

## Year in Review

With few biogenerics or biosimilars on the market, the specialty sector lacks the key factor moderating prescription trend. However, the health care reform legislation passed in 2010 provides a pathway for the FDA to approve generic versions of biologics, and patents for a number of biotech drugs have expired or will expire in the next several years. How rapidly and deeply these factors will affect trend depend on further regulations and guidance to be determined in the weeks and months ahead.

FIGURE 5

### New Generics in 2009

**DEPAKOTE ER**

Extended release anticonvulsant, also used for bipolar disorder

**TOPAMAX**

Multiple generics launched for this anticonvulsant, class trend dropped in 2009 by more than 20%

**ADDERALL XR**

Extended release combination stimulant used for attention deficit disorders

**CELLCEPT**

Immunosuppressant for transplant patients

**PREVACID**

Ulcer drug, launched as generic and OTC 4Q 2009

**VALTREX**

Antiviral used for herpes and other infections



# 2009 Top Therapeutic Categories

FIGURE 6

## Top Therapeutic Categories and Drugs Ranked by 2009 Gross BOB Cost

	Category and Top Drugs	Use	Gross PMPM Trend	Utilization Trend	GDR
1	<b>Proton Pump Inhibitors (PPIs)</b> • Nexium • <b>pantoprazole sodium</b> (generic Protonix) • <b>omeprazole</b> (generic Prilosec)	ulcers	0.5%	2.1%	59.4%
2	<b>HMG CoA Reductase Inhibitors (statins)</b> • Lipitor • Crestor • <b>simvastatin</b> (generic Zocor)	cholesterol reduction	4.5%	8.9%	56.4%
3	<b>Sympathomimetics</b> • Advair Diskus • ProAir HFA • Symbicort	asthma	13.4%	7.6%	16.2%
4	<b>Miscellaneous Anticonvulsants</b> • Lyrica • <b>gabapentin</b> (generic Neurontin) • <b>topiramate</b> (generic Topamax)	seizure disorders, pain	-20.4%	6.1%	77.6%
5	<b>Antihypertensive Combinations</b> • Diovan HCT • <b>amlodipine besylate/benazepril</b> (generic Lotrel) • Benicar HCT	hypertension	5.2%	0.4%	49.6%
6	<b>SNRIs</b> • Cymbalta • Effexor XR • Pristiq	depression	7.9%	3.8%	7.2%
7	<b>Insulins</b> • Lantus • Humalog • Novolog	diabetes	19.9%	6.9%	N/A
8	<b>Multiple Sclerosis Agents</b> • Copaxone • Avonex • Rebif	multiple sclerosis	25.0%	4.0%	N/A
9	<b>SSRIs</b> • Lexapro • <b>sertraline HCL</b> (generic Zoloft) • <b>paroxetine HCL</b> (generic Paxil)	depression	-5.7%	1.0%	75.4%
10	<b>Opioid Agonists</b> • Oxycontin • <b>fentanyl</b> (generic Duragesic) • <b>oxycodone HCL</b> (generic Oxycontin)	pain	7.8%	5.7%	82.8%

■ Generic

Source: CVS Caremark Book of Business data, Industry Analytics, 2010, arranged by gross spend, per member per month (PMPM)



# Pharmacy Benefit

## Performance Metrics



# A New Approach to Metrics Reporting

**Each market segment has a unique set of challenges and its own approach to managing the pharmacy benefit.**

CVS Caremark provides prescription benefit management services for employers ranging in size from a few thousand to hundreds of thousands of members. Health plans also serve a wide range of populations, while third-party administrators (TPAs) may serve groups as small as a few hundred. Our Medicare Part D and managed Medicaid accounts serve distinct populations and are highly regulated in terms of their operation.

While plans and plan sponsors across our Book of Business cite helping to control health care cost as one of the top priorities for their pharmacy benefit, how each market segment chooses to manage their prescription benefit varies. In addition to segment-specific approaches to plan design and health care management priorities, each of these sectors also varies in terms of member demographics, population health status and drug mix. Some of these factors—population demographics or government regulation—are relatively unalterable, but all of them affect pharmacy benefit performance and trend.

It is with these considerations in mind that CVS Caremark has moved away from a focus on BOB trend. Traditionally BOB trend has been an average of performance determined by evaluating plan metrics across this range of clients, regardless of the very different goals they set and circumstances they faced.

Beginning this year, we instead chose to look at each of the segments we serve and provide an overview of their performance with special focus on Best-in-Class measures. This approach allows our clients to learn from their high-performing peers, who are more likely to share goals and have similar challenges. For the Best-in-Class analysis we looked at top-performing clients within our trend cohort who had achieved reproducible results, excluding from the analysis anomalies such as drastic changes in eligibility or benefit strategy. Our overall trend and Best-in-Class methodology is described on page 32.

**Our Book of Business trend** includes the top clients representing 65 percent of gross spend: it does not include Medicare Part D but represents all other segments in our client mix. **Average gross trend was 3.4 percent.** If we exclude specialty, average gross trend was 2.4 percent. As cited earlier, specialty trend was 11 percent. Average BOB GDR was 68.2 percent.

In contrast, Best-in-Class trend for health plans dipped to 1.7 percent, and Best-in-Class specialty trend for our three commercial segments hovered in the single digits. Best-in-Class GDRs ranged from 71.9 to 86.8 percent. Best-in-Class analysis makes clear that, regardless of the challenges each plan or plan sponsor faces, it's always possible to improve performance by taking a proactive strategic approach.



## Employers

Compared to other market segments, employers have a broader range of population sizes.

FIGURE 7

Employer Best-in-Class Performance	
Gross Trend (PMPM)	2.4%
Specialty Trend (PMPM)	7.6%
GDR	73.4%
Preferred Pharmacy Choice Days Supply*	78.6%
% Optimally Adherent (Hypertension)	77.7%

\*Mail or Mail and Maintenance Choice®

In fact, more than half (55.9%) of the employers in our trend cohort have fewer than 50,000 members. These smaller populations have fewer members to cushion the impact of those who may be high utilizers or using specialty drugs. Moreover, some industries were particularly hard hit by the economic downturn, which led to mergers and downsizing in many sectors. In our Book of Business we saw declining populations in manufacturing, unions, hospitality and transportation services. Workforce reductions were often concentrated on less senior workers, shifting the mix of older and younger employees.<sup>11</sup> Older employees are more likely to be diagnosed with a higher number and broader range of chronic diseases and consequently are higher medication users than their younger counterparts.

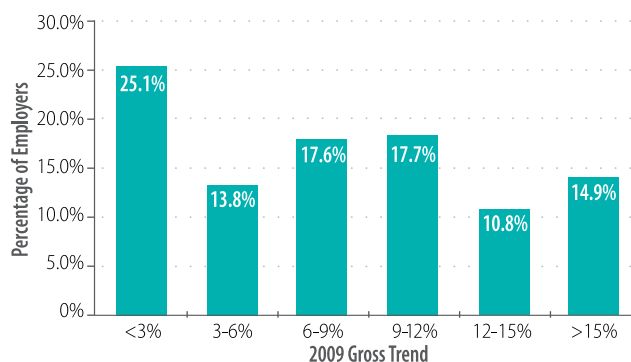
In the midst of economic change, employers have maintained the lowest member contribution levels among our commercial segments — 17.4 percent. Among employers, **generic dispensing rates** (BOB average, 64.5 percent; Best-in-Class, 73.4 percent) are lower than those of health plans, but use of preferred pharmacy channels is higher by far. Best-in-Class plans using mail alone or mail and Maintenance Choice® dispensed **78.6 percent of their days supply at preferred channel pricing**.

Regardless of size or circumstance, employers can take proactive steps to improve their performance. For example, they have found that **targeting classes with generic opportunities** through plan design and coordinating member and physician outreach can push GDR significantly — as high as 90 percent for proton pump inhibitors.<sup>12</sup> Employers who prioritized managing their specialty spend took advantage of advanced management techniques, including **preferred drug strategies** where applicable and our comprehensive Specialty Guideline Management program. Similarly, many clients who have achieved Best-in-Class adherence targeted the problem by implementing solutions such as **evidence-based plan design** or medication therapy counseling for specific conditions.

*To be included in Best-in-Class analysis, employers must have a minimum of 5,000 lives and either a minimum 2 percent increase in GDR or a 3.2 percent increase in their Preferred Pharmacy Choice dispensing rate.*

FIGURE 8

Employers: 25% Had Trend < 3% in 2009



Source: CVS Caremark 2009 Book of Business Underlying Secular Trend Cohort. Industry Analytics, March, 2010.

## Health Plans

Health plans tend to have larger and younger populations, and they typically implement sophisticated benefit strategies.

FIGURE 9

Health Plans Best-in-Class Performance	
Gross Trend (PMPM)	1.7%
Specialty Trend (PMPM)	7.4%
GDR	75.5%
Preferred Pharmacy Choice Days Supply*	58.1%
% Optimally Adherent (Hypertension)	80.9%

\*Mail or Mail and Maintenance Choice\*

In a challenging year marked by a difficult economy and vigorous national debate over health care reform, 30 percent of the health plans in the CVS Caremark Book of Business kept their pharmacy gross trend at or below 3.0 percent. Health plans tend to have larger and slightly younger populations than employers—both factors that help to moderate trend. Health plans typically emphasize cost control and implement sophisticated benefit strategies. Moreover, while health plan member contribution levels have dropped, as they have across our Book of Business, at 27 percent the average member contribution remains higher than that of any other segment. These factors helped the health plan segment achieve the highest GDR among our commercial segments.

Top performing plans in the segment achieved a **Best-in-Class gross trend** of 1.7 percent and a **Best-in-Class specialty trend** of 7.4 percent. Best-in-Class GDR among health plans, at 75.5 percent, was more than 7 percentage points higher than the BOB average. Traditionally, health plans have not promoted mail pharmacy services. Yet, among top performers, 58.1 percent of days supply was dispensed at preferred channel pricing.

To achieve these results, top performers worked closely with the PBM to configure programs tailored to their goals and priorities. They placed strong emphasis on helping members and prescribers make cost-effective choices.

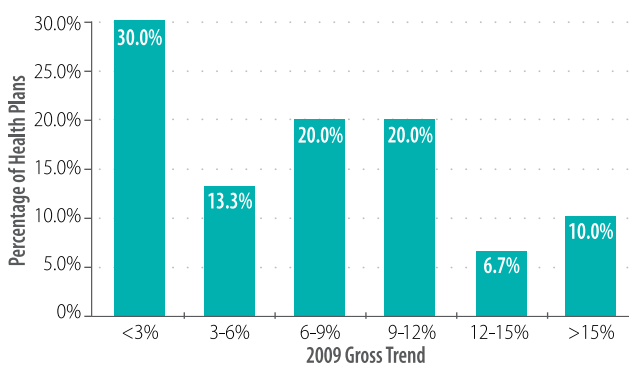
**Generic-first step therapy plan design** and proactive communication to both groups helped improve generic dispensing rates in key categories. Utilization management programs are broadly used across the segment, including those for specialty pharmaceuticals.

With overall goals of reducing health care cost and improving member outcomes, health plan respondents in our 2010 benefit planning survey placed high value on proactive member outreach (93 percent), multi-channel access for members (87 percent) and opportunities for face-to-face consultation (73 percent)—all factors that can help keep members on prescribed therapies and satisfied.

*To be included in the Best-in-Class analysis, qualifying health plans had between 5,000-1,000,000 lives, integrated delivery systems (mail and retail), and specific generic or utilization management performance metrics.*

FIGURE 10

### Health Plans: 30% had Trend < 3% in 2009



Source: CVS Caremark 2009 Book of Business Underlying Secular Trend Cohort. Industry Analytics, March, 2010.

# Third Party Administrators

In 2009, like other benefit providers, TPAs had to face the challenges of a difficult economy and increasing health care costs.

FIGURE 11

TPA Best-in-Class Performance	
Gross Trend (PMPM)	<b>1.9%</b>
Specialty Trend (PMPM)	<b>8.6%</b>
GDR	<b>71.9%</b>
Preferred Pharmacy Choice Days Supply*	<b>55.3%</b>
% Optimally Adherent (Hypertension)	<b>75.1%</b>

\*Mail or Mail and Maintenance Choice®

As always, factors such as population demographics, geographic variations, member health and individual plan goals also impacted trend performance. Nonetheless, 29.6 percent of TPAs in the CVS Caremark Book of Business maintained a pharmacy gross trend below 3.0 percent.

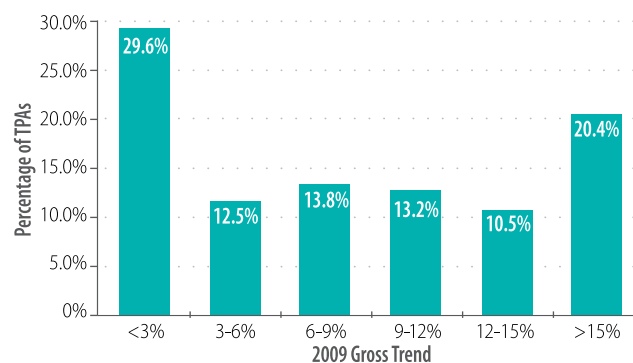
TPAs have traditionally taken a somewhat conservative approach to pharmacy benefit management. Yet, more progressive plan strategies can help to meet market challenges. Best-in-Class performers in the CVS Caremark Book of Business maximize their opportunities and offer their clients more progressive plan strategies to maximize savings. In addition, while making the most of market events, they engage members to help clients reach their benefit plan goals. TPAs in **Best-in-Class analysis achieved a gross trend of 1.9** percent and a GDR of 71.9 percent. Top performers saw 55.3 percent of days supply dispensed at preferred channel pricing. The segment's Best-in-Class specialty trend dropped to single-digits — 8.6 percent — well below the BOB specialty trend of 11 percent.

Top-performing TPAs work closely with the PBM to offer their clients programs that can help them more aggressively manage trend. They use plan design and incentives to drive generic use. They are more likely to consider preferred channel pricing. More TPAs are working with their clients to improve adherence, knowing that better adherence rates may raise prescription costs in the short term but offer long-term gains. Top performers also offer specialty programs that help to ensure specialty medication use is appropriate, safe and effective — helping to manage trend in this increasingly utilized category.

To be included in our Best-in-Class analysis, TPAs must have a minimum of 2,500 lives and specific defined generic or utilization management performance metrics.

FIGURE 12

TPA: 29.6% Had Trend < 3% in 2009



Source: CVS Caremark 2009 Book of Business Underlying Secular Trend Cohort. Industry Analytics, March, 2010.

## Medicare Part D

## Medicaid

Cost-conscious plans and members achieve highest GDRs.

**78.2%**  
GDR

**Medicare Part D  
Best-in-Class**

The Medicare Part D marketplace is complex and dynamic. Plans must both meet the needs of members and comply with shifting **CMS regulations**. The changes within the health care reform legislation will

likely increase CMS' scrutiny of Medicare Part D plans, and it will become harder for plans to find the right balance between an attractive benefit design and cost control.

**Member retention** is critical and involves a balance of copay levels, premiums and drug coverage as well as less tangible factors. Member satisfaction plays a significant role in loyalty and re-enrollment. High-performing plans focus on effective member communication and outreach as well as added-value services such as the CVS ExtraCare® Health card.

Medicare Part D plans continue to outperform our commercial segments in generic dispensing, achieving a Best-in-Class GDR of 78.2 percent. **Split generic tier designs** have helped plans manage the emergence of more expensive generics with a higher cost share, while maintaining a competitive advantage with lower copays on cheaper generics. Medicare Advantage Prescription Drug (MAPD) plans are also investigating the use of preferred networks and tighter controls to manage appropriate drug use through prior authorization, quantity limits and step therapy. Despite member price sensitivity, 72 percent of prescription drug plans (PDPs) increased member premiums in 2010.

**86.8%**  
GDR

**Medicaid  
Best-in-Class**

As people lost their health benefits along with their jobs in the national recession, Medicaid plans reached **record high membership** levels in 2009. Increased enrollment and the H1N1 flu epidemic generated

higher medical, pharmacy and emergency room costs. State tax revenues were down across the nation, thus challenging managed Medicaid plans to balance those record membership levels with the familiar need to reduce costs. Improving PMPM performance and reducing operational costs will remain imperative goals for managed Medicaid plans as the economy and health reform legislation increase membership, spending and regulatory requirements.

In the CVS Caremark Book of Business, the average age in our managed Medicaid membership is 17.6 and PMPY costs are \$288. Our managed Medicaid plans have the **highest GDR** (Best-in-Class: 86.8 percent), and not surprisingly, the lowest gross trend—a negative 0.6 percent.

Plans in our Book of Business focus on **evidence-based clinical interventions, formulary design and utilization management programs** to improve their PMPM performance. CVS Caremark works with our managed Medicaid clients to uncover plan-specific solutions that go beyond mandatory generic formularies to control costs. We help plans develop formularies to control pharmacy trend given their state requirements and membership mix. We then help manage their formulary and P&T process as well as communicate formulary changes to physicians to obtain the maximum impact.

Fraud, waste and abuse monitoring as well as **safety programs** addressing issues such as polypharmacy are additional ways to help control costs and improve member health.





# Looking Ahead

# Health Care Reform

**After months of vigorous debate on Capitol Hill and across America, President Obama signed comprehensive health reform into law on March 23, 2010.**

The legislation, the Patient Protection and Affordable Care Act, addresses expanding coverage for Americans, establishing health insurance exchanges, containing costs and improving the delivery and quality of care.

Overall, the act requires most U.S. citizens and legal residents to have health insurance. Those without will pay a tax penalty which will be phased in beginning in 2014. The states will be awarded grants to support establishment of an American Health Benefit Exchange, through which individuals can purchase coverage. There will be a separate exchange for small businesses.

Some aspects of the reform legislation, such as the extension of dependent coverage, had near-immediate market impact, but many provisions are scheduled to be implemented over time, some as late as 2017. Moreover, implementation regulations and guidance are still to be issued by applicable government agencies, making it difficult to project the law's full eventual impact.

Particularly important in terms of rising pharmacy costs is the provision, effective immediately, of a pathway for the FDA approval of **"biosimilars."** Biosimilars are generic versions of biologic pharmaceuticals for which patents have expired. The bill includes a 12-year minimum exclusivity period for brand innovators with the possibility of additional exclusivity in 12-year increments for the development of new uses. Much work remains to be done before new biosimilars hit the market, however. The FDA needs to provide guidance on clinical trial requirements and define key terms such as *interchangeable* and *substitutable* in regard to these products. However, broad concern about rising health care costs may help provide a stimulus to FDA action, particularly as increasing numbers of specialty pharmaceuticals lose their patents. In the next three years alone, blockbuster biologics Enbrel, Rituxan and Remicade are expected to go off patent.



## Looking Ahead

### OTHER KEY PROVISIONS INCLUDE:

**Employer-Provided Health Coverage.** The law requires employers to notify employees of their coverage options and to report to the government regarding the coverage they provide. Employers with more than 50 employees will pay a penalty for employees who receive a tax credit for health insurance through an exchange. Employers with more than 200 employees are required to automatically enroll employees into their health coverage and in some circumstances to provide free choice vouchers to enable qualified employees to purchase coverage. Effective in 2018, the law imposes an excise tax if the aggregate value of employer-sponsored health coverage for an employee exceeds a threshold amount — the so-called Cadillac Tax.

**Medicare Retiree Drug Subsidy.** The law would eliminate the tax deductibility of the current retiree drug subsidy for employers for taxable years beginning after December 31, 2012.

**Health Flexible Spending Arrangements (HFSAs).** The law limits salary contributions to HFSAs and makes changes relating to items eligible for nontaxable reimbursements.

**Medicare Part D Coverage Gap.** Beginning January 1, 2011, drug manufacturers are required to provide a 50-percent discount to Medicare Part D beneficiaries for brand-name drugs and biologics purchased during the coverage gap. In 2010, there will be a one-time rebate of \$250 to beneficiaries who fall within the gap, also known as the Donut Hole. The coverage gap will be gradually closed over several years.

**Medicare Advantage.** The law prohibits Medicare Advantage (MA) plans from charging beneficiaries cost sharing for chemotherapy, dialysis services, skilled nursing care and other designated services greater than what is charged under fee-for-service Medicare. Medicare Advantage plans will be eligible for quality bonuses beginning January 1, 2012.

**Medicaid Expansion.** Medicaid eligibility is expanded to certain individuals with incomes at or below 133 percent of the federal poverty level and who are under age 65, not pregnant and not entitled to Medicare. The federal government is required to pay certain costs of covering these newly eligible individuals.

**Medicaid Pharmacy Reimbursement.** Pharmacy reimbursement, which is based on the average manufacturer price (AMP), is increased for multi-source drugs under Medicaid. Discounts provided by the manufacturers in the coverage gap are not included in the calculation of AMP.

**Medication Therapy Management Demonstration.** The law requires establishment of a program to provide grants or contracts to eligible entities to implement medication management services. Services will be provided by licensed pharmacists as a collaborative, multidisciplinary, interprofessional approach to the treatment of chronic diseases for targeted individuals. Programs will target those who are likely to have a high risk of medication-related problems. The goal of the program is to improve the quality of care and to reduce the overall cost of treatment for these individuals.

**PBM Disclosures.** The law requires PBMs providing services to Medicare Part D plans or plans provided through state exchanges to provide specific prescription data to Health and Human Services (HHS). The reports will include data on generic dispensing, retail and mail pharmacy spread, and rebates, discounts and price concessions from manufacturers.

**Wellness and Prevention.** The law imposes new requirements on group health plans for prevention services, including items such as immunizations. The bill also establishes a new category of “wellness” programs and establishes conditions for such programs.

# Pharmacy Trend Forecasts

**Pharmacy trend can be affected by many factors, some of them unpredictable.**

The H1N1 flu epidemic spiked utilization in 4Q 2009, for example, while winter storms in early 2010 caused a slight drop as people in affected areas couldn't get to their pharmacies. New clinical findings and safety warnings can have immediate and long-term impact. Other factors that play a role? Legislative action, FDA approvals or non-approvals, settlement of patent lawsuits.

Nonetheless, market trends and historical data can help predict where prescription utilization will go in terms of performance metrics. CVS Caremark updates forecasts for underlying secular trend and key metrics on a regular basis. Underlying secular trend is the per member per year (PMPY) gross cost increase that would prevail if no plan design or demographic changes occur.

## UNDERLYING THE FORECASTS

- **Brand drugs** with total spend of over \$100B are expected to lose patents between 2010 and 2015.<sup>13</sup>
- With additional **generics** in top therapeutic categories, it's expected that generics will account for about 80 percent of prescriptions dispensed by 2012.
- **Specialty pipelines** are robust; specialty drugs may account for 50 percent of spend by 2013.<sup>14</sup>
- **Specialty utilization** growth will continue to outpace other sectors due to new product launches and expanded indications.
- Rising rates of **chronic disease** and a slowly improving economy will help increase utilization.
- Although health care reform legislation included a pathway for **biosimilars**, the impact may not be felt for years.
- When biosimilars are made available, **projected savings** are expected to be in the range of 10 to 30 percent.
- Pressures on pharmaceutical manufacturers are not expected to abate, especially in view of significant patent losses; therefore **price** is expected to continue to be a major trend driver.

## PROACTIVE RECOMMENDATIONS

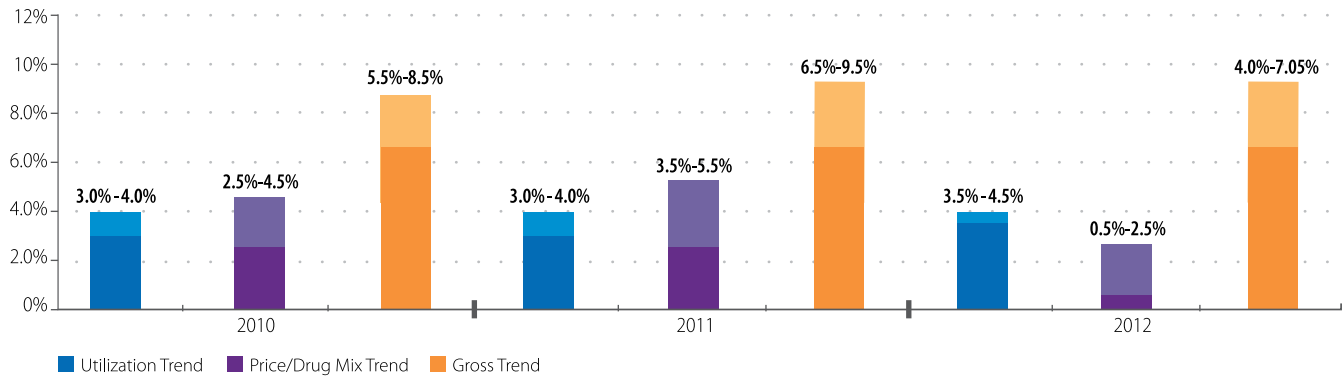
- **Prepare to take advantage of pending new generics;** evaluate plan design and communication strategies for quick mobilization when new launches are pending.
- Many specialty pipeline products are for orphan diseases and will have narrow indications; have plans in place to **ensure appropriate utilization.**
- If you haven't already done so, **investigate the use of genetic testing** to help guide treatment decisions.
- Newer, more expensive pharmaceuticals may offer little advantage over existing products in the class; **consider step therapy or preferred product strategies.**
- Use wellness and preventive programs to identify people at high risk for chronic disease and help them **lower their risk profile.**
- Members with chronic disease who are non-adherent tend to have higher health care costs; evaluate your population's adherence levels and the support you provide to **help people stay adherent.**



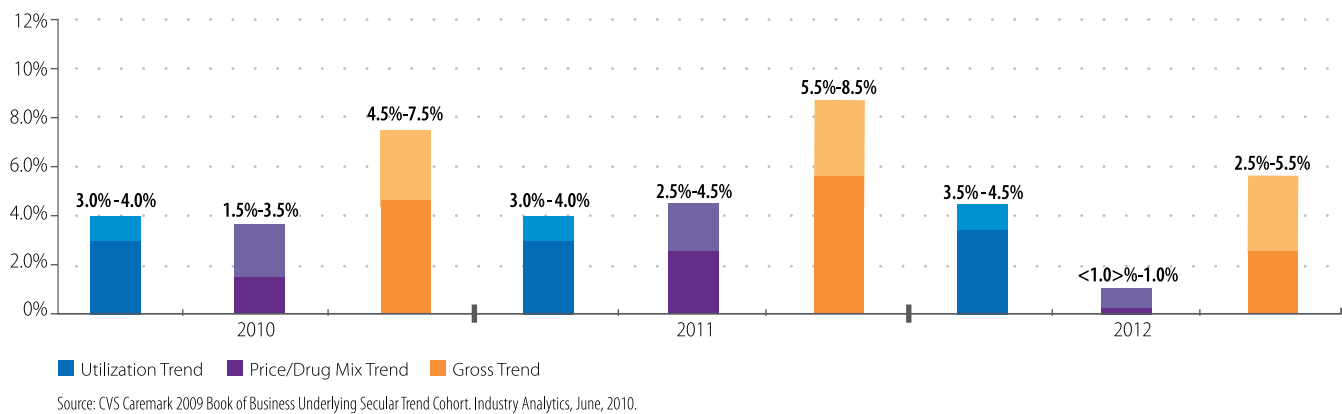
## Forecasts

FIGURE 13

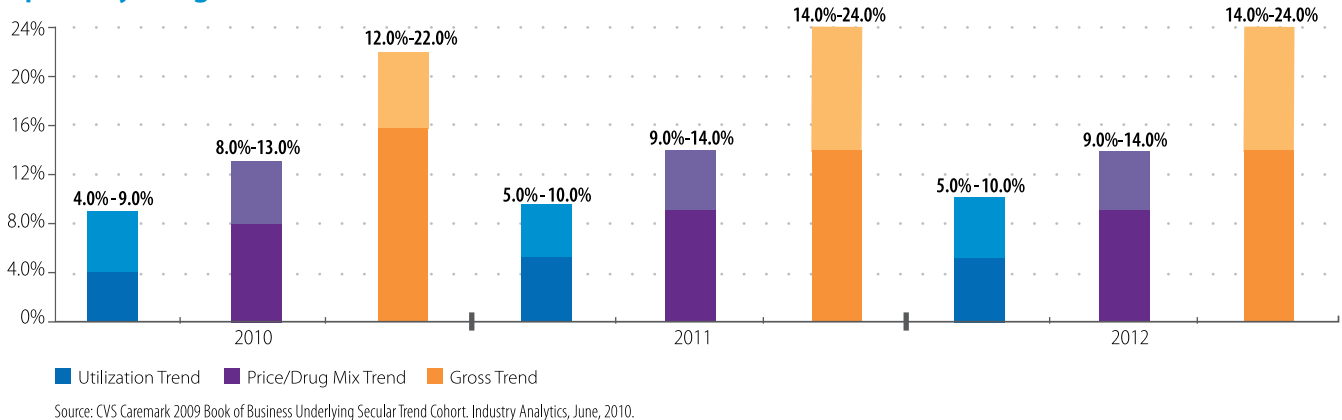
### Overall Drug Trend



### Non-Specialty Drug Trend



### Specialty Drug Trend



This analysis is an estimate for informational purposes only. These estimates do not represent an existing or future contractual guarantee provided by CVS Caremark.



# Generics

With a blockbuster pipeline, there is every reason to expect that GDRs will further accelerate in the months ahead.

**70.4%**  
1Q 2010

**Our BOB GDR  
climbed almost  
2 percent in 1Q 2010**

The **2010 pipeline** promises several generic launches in therapeutic categories which previously had few or no generic options. Cozaar and Hyzaar, launched as generics in 2010, are the first ARBs with generic equivalents; they're likely to be joined in 2012 by generics for Diovan. Generic versions of Effexor XR are also expected in 2010, bolstering GDR for SNRI antidepressants, currently in the single-digits.

In **2011**, Lipitor, long the world's best selling drug, is expected to lose its patent and face generic competition for the first time. Generics for Zyprexa, an antipsychotic, and Aricept, used for Alzheimer's disease, are also expected to launch. All three brands have annual sales well over \$1 billion; Lipitor sales are in excess of \$6 billion.

**2012** brings additional blockbusters, including Plavix, an anticoagulant with sales over \$4.5 billion, and Seroquel, an antipsychotic with sales over \$3 billion. Two other pending patent losses—Singulair, an antiasthmatic, and Cymbalta, another SNRI antidepressant—represent top therapeutic categories that currently have relatively few generic options.

FIGURE 14

## Generics Outlook, 2010-2012

Projected GDR	69%-73%	70%-74%	74%-78%
Significant Pending New Generic Launches	<b>Cozaar/Hyzaar*</b> (hypertension) <b>Flomax*</b> (benign prostatic hyperplasia) <b>EffexorER</b> (SNRI antidepressant)	<b>Aricept</b> (Alzheimer's) <b>Levaquin</b> (anti-infective) <b>Lipitor</b> (cholesterol reduction) <b>Zyprexa</b> (antipsychotic)	<b>Avandia</b> (antidiabetic) <b>Lexapro</b> (SSRI antidepressant) <b>Seroquel</b> (antipsychotic) <b>Plavix</b> (anticoagulant) <b>Detrol</b> (urinary antispasmodic) <b>Actos</b> (antidiabetic) <b>Diovan HCT</b> (antihypertensive) <b>Lovenox</b> (anticoagulant) <b>Singulair</b> (antiasthmatic) <b>Niaspan</b> (cholesterol reduction) <b>Aciphex</b> (anti-ulcer) <b>Cymbalta</b> (SNRI antidepressant) <b>Oxycontin ER</b> (opioid analgesic)
Total Estimated Brand Sales	\$8.5B	\$27.0B	\$29.3B
	2010	2011	2012

\* Launched by time of publication  
 Information related to prospective drug launches is subject to change without notice due to market events and other factors.

# Specialty Pharmaceuticals

Industry projections are that nearly 50 percent of pharmaceutical spend could be in specialty drugs by 2013.

The specialty sector shows no signs of slowing down. The pipeline is strong with potential products aimed both at rare and “less-rare” diseases — multiple sclerosis, cystic fibrosis, and hepatitis C. In terms of the number of potential approvals in 2010, products aimed at orphan diseases outnumber those targeting cancer. **Orphan diseases** affect fewer than 200,000 Americans and often have few or no current treatments. Thus, while the market is small, there is minimal competition and little pressure to control prices. Industry projections are that nearly 50 percent of pharmaceutical spend could be in the specialty realm as soon as 2013,<sup>15</sup> and that by 2014, seven of the top 10 drugs in the U.S. could be specialty.<sup>16</sup>

IMS Health estimates that patents for biologic drugs with \$15 billion in sales will expire between 2009 and 2013. These include blockbusters Enbrel and Remicade, both approved to treat rheumatoid arthritis (RA), and Rituxan, which is approved for RA and some cancers.<sup>17</sup> However, there is still no regulatory pathway for the approval of generic versions of biologics.

**To manage specialty spend**, plans in our Book of Business are ensuring appropriate use through programs like Specialty Guideline Management (which includes genetic testing), Specialty Select and Preferred Drug Plan Design for therapeutic categories with multiple prescription options. Exacting assay, dose and waste management standards also help to lower spend, as does use of exclusive networks for specialty products.

FIGURE 15

Significant Pending New Specialty Drugs Anticipated Approval: 2010	
<b>Ampyra*</b>	multiple sclerosis
<b>Gilenia</b>	multiple sclerosis
<b>Movectro</b>	multiple sclerosis
<b>Zalbin</b>	hepatitis C
<b>Benlysta</b>	systemic lupus erythematosus
<b>Cayston*</b>	cystic fibrosis
<b>Cystoran</b>	ocular cystosis
<b>Replagal</b>	Fabry Disease
<b>Tafamidis</b>	familial amyloid polyneuropathy
<b>Uplyso</b>	Gaucher Disease
<b>Egrifta</b>	HIV-associated lipodystrophy
<b>Gestiva</b>	prevention of preterm birth
<b>Krystexxa</b>	treatment failure gout
<b>Reziid</b>	RSV Prevention

\*Approved and launched

Information related to prospective drug launches is subject to change without notice due to market events and other factors.

## THE SPECIALTY MARKET: VITAL SIGNS

- As of January 2010, 57 percent of all late-stage pipeline drugs fell into the specialty area.
- 71 percent of applications for supplemental indications are for specialty products.
- The number of new specialty drugs approved in 2009 was more than double the number of 2008.
- Provenge, the *first therapeutic vaccine* — which utilizes the patient's own DNA and stimulates the immune system to fight prostate cancer — was approved early in 2010.
- Potential approvals 2010-2012 include four new products for multiple sclerosis (all oral), three for hepatitis C, and three for cystic fibrosis.
- 18 of the products pending approval in 2010 target orphan diseases, which currently have few or no treatments.
- While health care reform legislation provides for a pathway for approval of biosimilars, it also mandates a 12-year *minimum exclusivity* period for brand innovators with the possibility of additional exclusivity in 12-year increments for the development of new uses.

# Pharmacogenomic Testing

**DNA can provide clues to gauge a drug's effectiveness for a specific patient.**

Genetic testing involves examining an individual's DNA for health information. In contrast to diagnostic genetic testing, which is used to evaluate risk or confirm diagnosis, **pharmacogenomics** (PGx) refers specifically to the testing of individuals, tumors and infections to help select the best therapy for a particular patient. PGx testing can be used to help determine whether a drug will be effective, to decide appropriate dosages, and to minimize adverse events.

For a 1M member population, ~\$12M is spent each year on 18 drugs that are administered to patients who do not respond and/or who are more likely to experience drug-induced medical complications.<sup>18</sup>

Cancer-related pharmacogenomic testing is already familiar to many people. Many women being treated for breast cancer, for example, have been tested for HER2 gene over-expression to evaluate whether Herceptin will be effective for them. But pharmacogenomic testing has evolved well beyond oncology and is now available for a variety of therapies, both specialty and non-specialty. The field is expanding rapidly. The FDA has identified more than 30 valid biomarkers, where a genetic test may help inform a prescription decision.<sup>19</sup> Many pipeline therapies

awaiting approval are likely to have companion diagnostics, and the market for targeted therapies where efficacy can be informed by a test is expected to reach \$21 billion by 2015.<sup>20</sup>

**The potential benefits are exciting:** more precise prescribing, greater efficacy and safety, improved outcomes, and not least, avoiding the cost of a drug that will not be effective for an individual. The pathway to those benefits may not be simple. Prescribers may not be aware of testing opportunities, accuracy of lab results can be variable, and results may be open to interpretation.

CVS Caremark has aligned with Generation Health to assist plans and plan sponsors in managing the use of pharmacogenomic testing. Generation Health has been a leader in genetic medicine and will provide

- Expert consultative services
- Predictive clinical outcome models and savings algorithms
- Coverage recommendations
- Outreach and education for prescribers and patients
- Coordination of lab services
- Lab and test credentialing and monitoring.

FIGURE 16

## How Pharmacogenomic Testing Can Help Improve Outcomes and Avoid Cost

Target therapy	Use	Health concern	Prevalence of high risk	Potential consequence	Cost per episode
<b>Plavix</b>	Anticoagulant	Efficacy	1 in 4	Major cardiac event (heart attack, stroke)	\$20,000
<b>Imuran</b>	Immunosuppressant for transplant patients, RA	Safety	1 in 9	Leukopenia (low white blood cell count)	\$5,000
<b>Ziagen</b>	HIV	Safety	1 in 18	Hypersensitivity to drug	\$2,000
<b>Tegretol</b>	Seizure disorders	Safety	1 in 490	Steven Johnson Syndrome, Toxic Epidermal Necrolysis (life-threatening skin rash)	\$20,000-\$60,000



# Evolving **Pharmacy Care**

# Evolving Pharmacy Care for Improved Outcomes and Lower Costs

**The health care reform legislation passed early in 2010 is likely to shift the way many people obtain health insurance.**

The degree to which it will help stem rising costs is less clear, but the inclusion of a medication therapy management demonstration is an important step toward that goal. In medication therapy management programs, pharmacists work with targeted individuals at high risk of non-compliance. Program participants typically have multiple chronic conditions and several prescriptions. Program pharmacists work with these individuals to help optimize their therapies, increase adherence and compliance and ultimately reduce their costs of care.

**Non-adherence is estimated to cost the U.S. health system \$300 billion annually.**

**Proper use of pharmaceuticals** is broadly recognized as one of the most cost-effective ways to lower the cost of chronic conditions. Numerous studies of patients with chronic diseases have shown that those who are adherent have a lower risk of complications, hospitalizations, and emergency department visits, and they incur lower condition-related costs than non-adherent patients. One analysis of published literature found that adherence to recommended treatment reduces the risk for a poor treatment outcome by 26 percent. Furthermore, the odds of a good outcome if the patient is adherent are almost three times higher than the odds of a good outcome if the patient is non-adherent.<sup>21</sup>

Proper use of pharmaceuticals involves basically two principles: People need to be on the right drugs (evidence-based standards), and they need to take them consistently (adherence), as prescribed. Multiple studies indicate this “ideal of medication therapy” happens less frequently than commonly thought. Past studies show that 1 out of 4 people never fill their first prescription. Patients with chronic diseases (diabetes, coronary artery disease) adhere to their ongoing medication regimen only about half the time. Non-adherence to essential medications is a frequent cause of preventable hospitalizations and patient illness, with costs to the U.S. health system estimated at about \$300 billion annually.<sup>22</sup>

Appropriate pharmacy care can help close the gap between current prescription behavior and the ideal. With multiple, connected communication channels and greater frequency of member contact than any health care provider, we believe CVS Caremark has a unique opportunity to improve pharmacy practice and care, support desired behaviors and help lower the national cost of care. To support this goal, CVS Caremark has developed several research partnerships (see box) and has undertaken a series of studies to learn more about prescription behavior and how to improve it.



## Evolving Pharmacy Care

### CVS CAREMARK RESEARCH PARTNERSHIPS

- **Harvard/Brigham and Women's Hospital Adherence Partnership:** 3-year collaboration to better understand patient behavior around medication adherence
- **Behavior Change Research Partnership:** Partnership with academic leaders from Carnegie Mellon University, Dartmouth College's Tuck School of Business and the University of Pennsylvania's Medical School and Wharton School of Business to develop insights into consumer actions around health challenges through the lens of behavioral economics and social marketing
- With **Minds at Work**, a company founded by Harvard University psychologists, a consumer research study on "hidden motivations" around prescription behaviors

### THE PRESCRIPTION CYCLE

Maintaining adherence over time requires multiple actions, from the initial doctor visit to ordering and picking up refills. Each action presents a decision point, at which the member chooses whether to go forward with the therapy or not. Our research looks at adherence over the entire prescription cycle—including data on prescriptions written but never filled and ordered but never picked up, as well as therapy drop offs, wherein the member fills the prescription initially but drops off therapy earlier than the prescriber intended. We also evaluate effectiveness of strategies to improve adherence—from interventions through various channels to incentives such as lower copays.

### NEW FINDINGS ON

#### PRIMARY NON-ADHERENCE

"Primary non-adherence" is used to describe when a medication is prescribed by a health care provider but the prescription is never filled by the patient. Most previous studies on primary non-adherence have depended upon patient self-reporting or were focused on easily-monitored hospital populations. With e-prescribing, we have a record of the prescription as written which can then be compared with pharmacy records to see whether it was filled. Thus, e-prescribing can provide a more accurate picture of how many members fail to fill that first prescription and insights into factors associated with that failure.

In an analysis of 979,000 e-prescriptions written in 2008 and the first six months of 2009, we evaluated the rate of primary adherence across multiple characteristics of patients, prescribers, e-prescribing processes, and prescribed medications. We allowed 180 days for the patient to fill the prescription. The analysis established:

**22.1 percent primary non-adherence.** Rates varied by therapeutic class. 81 percent of nutritional product prescriptions were filled as opposed to only 73 percent of anti-infectives.

**Formulary status—and copay—matters.** 78.7 percent of preferred product prescriptions were filled; 77.6 percent of formulary drugs; and 75.1 percent of non-formulary.

**Age and income make a difference.** Young adults are less likely to fill than other age groups. Members living in zip codes with lower incomes were also less likely to fill their prescriptions.

**Method of transmission increases the odds.** Prescriptions transmitted electronically to the pharmacy were more likely to be picked up than those that were written in the e-prescribing system but then printed and handed to the patient.<sup>23</sup>

## Evolving Pharmacy Care

Due to our integration of the PBM and the retail pharmacy, we have been able to undertake the first large-scale evaluation of prescriptions **abandoned at the pharmacy**—ordered but never picked up. Our study looked at five million patients and 10 million prescriptions and evaluated predictors of abandonment—the factors that increase the likelihood that the prescription will not be picked up. We are using this analysis to prioritize interventions and support patient education to improve primary adherence. Findings included:

**The higher the copayment, the greater the risk of abandonment.** Prescriptions for drugs with a copayment above \$50 were nearly five times as likely to be abandoned.

**Higher incomes lower the risk of abandonment,** a finding that parallels our e-prescribing research.

**New users are nearly three times more likely to abandon prescriptions,** a finding that reinforces the importance of the first-fill adherence counseling we provide to all members with new prescriptions.<sup>24</sup>

### What Other Factors Impede Adherent Behavior?

The medication therapy management programs cited above focus on patients using multiple prescribed therapies. It's widely understood that such patients with **complex therapy regimens** face additional challenges in complying with their doctors' orders. CVS Caremark evaluated prescription data for a deeper understanding of the challenges as a way to evaluate and prioritize pharmacy care initiatives to help these patients stay on therapy. Our evaluation revealed that complexity of therapy regimens involves more than the number of prescribers, medications and daily doses.

In our study, the average statin user was taking 11 different medications, nine of which were maintenance drugs; made five pharmacy visits over 90 days; and had only half of their refills synchronized, i.e., scheduled so that refills for multiple medications were due at the same time.

The **10 percent of statin users with the most complex regimens** took 23 or more medications, 12 of them maintenance drugs; made 11 or more pharmacy visits; had only 10 percent of their prescriptions synchronized; had four or more prescribers and used at least two pharmacies.<sup>25</sup>

With this analysis, we have been able to score measures of complexity as impediments to adherence. This data will provide a simple prediction rule that will help us design interventions to reduce complexity and improve adherence.



## Evolving Pharmacy Care

### NON-ADHERENCE: HIDDEN REASONS

We are able to evaluate factors such as income, plan design, patient demographics and therapeutic complexity by evaluating objective data, but understanding the individual's subjective experience is also valuable. To better understand subjective factors, CVS Caremark identified a sampling of patients who had stopped taking their prescribed medications even though they said they wanted to follow their doctors' orders. Psychologists from Minds at Work conducted "hidden motivations" interviews with these individuals to understand the underlying cause of their actions. Among the findings:

**24 percent** came to see that taking prescribed medications interfered with personal priorities like taking care of family members, compromising social aspects of their lives or finding it to be just another in a long line of chores.

**21 percent** came to see taking their medicine made them feel like they were losing control of their lives; by stopping their medicine they felt they were resisting authority.

**17 percent** came to see they felt taking medicine gave them an unfavorable identity, made them feel old or they wanted others to view them in a more favorable light.

**16 percent** came to see they felt they knew better than their doctors what was good for them; some believed they should take care of their health through exercise and diet.

**16 percent** came to see they were wary of the health care and pharmaceutical industries and did not want to become dependent on medications or suffer unknown side effects.

**6 percent** came to see they did not want to change their personal routines, so they simply put off taking their medications.<sup>26</sup>

### Evaluating Strategies to Improve Adherence, Close Gaps

Identifying the factors that impede adherence and understanding the reasons people drop off therapy can help guide pharmacy care interventions that will support positive behavior change. CVS Caremark is also evaluating the effectiveness of various intervention strategies such as refill reminders and physician-directed alerts on gaps in therapy. How, where and when the message is delivered and who delivers it can all impact effectiveness. Other strategies being studied include incentives — lower copays for maintenance medications in select classes for example. And for high risk patients with complex therapies, we've offered more intensive pharmacy care such as our new Pharmacy Advisor™ offering. Among our findings:

**Telephonic interactive voice response (IVR)** messaging improved the odds of prescription refills by up to 70.6 percent when members answered the phone.

**Early IVR refill reminders** were more than twice as effective at improving first-fill persistency rates at mail compared to reminders received after refill due dates.

**Physician-directed faxed alerts** about gaps in care nearly double gap closure rates.<sup>27</sup>

**Pharmacist interventions** consistently rank as highly effective compared with those from other providers. Pharmacists intervening at the pharmacy were most effective at improving adherence, followed by those in the hospital setting, those who call the patient, and those at a clinic. This evaluation was based on a literature review of 82 articles on randomized control trials.<sup>28</sup>

**Members with diabetes in value-based insurance designs**, in which copayments are selectively lowered or eliminated for preventive or maintenance medications, were more likely to initiate therapy and less likely to discontinue it, and had better adherence.<sup>29</sup>

# Intensive Intervention Programs

For members with complex conditions, we have also provided a variety of **more intensive intervention programs** which may combine financial incentives, pharmacist counseling, patient education, physician outreach and other tactics to help members control their conditions, improve their outcomes, and reduce the risk of complications. For example, a yearlong program in Polk County, Florida, focused on members with diabetes and offered one-on-one pharmacist counseling and copayment waivers for drugs and supplies. Participating members signed a “contract for care” that made specific requests of the patient, including scheduling and attending appointments, self-monitoring blood glucose and blood pressure levels, taking medication as directed by the prescribing physician, and achieving specified disease management goals and lifestyle modifications. If a member failed to comply with the contract, the individual’s participation in the program was suspended and the copayment was reactivated. Initially, 564 members enrolled in the program; 477 were still enrolled at the end of a year. Results included:

**Steady and overall reduction of blood glucose levels;** at baseline 55 percent of participants had levels  $\leq 7$  percent; after one year, 72 percent had levels  $\leq 7$  percent.

**30 percent decrease in hospitalizations** from all causes.

**24 percent reduction in emergency room visits** from all causes.

**Only 3.4 percent of enrolled members had poorly controlled diabetes** (based on blood glucose levels) after one year, compared to a national average of 29.4 percent.

It’s important to note that the Polk County program also improved patient care by increasing the identification of potential adverse events, streamlining medication regimens and supporting the maintenance of a preferred medication formulary.<sup>30</sup>

Our **Pharmacy Advisor™** program, available in January 2011, is our pharmacy-based approach to condition management and provides one-on-one pharmacist counseling for those with chronic conditions. The program pilot, completed in early 2010, focused on members with diabetes. The one-on-one counseling occurs either in the CVS/pharmacy or over the phone with one of our mail service pharmacists. New data systems provide the counseling pharmacists with prescription data on participating members to allow for targeted, personalized counseling. The aim of counseling is to improve adherence and close gaps in care as well as help members make cost-effective channel and drug choices. Results from our six-month pilot included:

**High engagement.** 47 percent of targeted members engaged by phone; 74 percent in the retail setting.

**Improved closure of gaps.** 59 percent improvement over control groups with phone counseling; 98 percent improvement in the retail setting.

**Improved adherence.** More days on therapy in every targeted drug class: oral antidiabetics, ACE/ARBs, and statins.<sup>31</sup>

As the country’s largest provider of pharmacy care, we engage in ongoing research and innovation to effect better results and outcomes for our clients and members. We are able to implement our findings on a broad scale, across our multiple channels and engage clinicians throughout the system through our investment in technology. We are looking at new ways to support adherence, assessing the cost-effectiveness of prevention when low-cost generics are used, evaluating the impact of choice on member behavior, studying how to support caregivers and reviewing the effects of social media on health care. We’re excited about the role we play and the contribution we can make in today’s health care environment. If you would like to know more about our pharmacy care research, please contact your CVS Caremark account representative.

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# Trend Methodology

**CVS Caremark Book of Business (BOB) gross trend is the percentage change in gross drug spend year over year.**

**Gross trend** reflects total prescription cost, including both member and payer portions; rebates and subsidies are not included. 2009 trend reflects prescription claims from January 1, 2009 to December 31, 2009. The population represented consists of members from all commercial market segments in our Book of Business; it does not include Medicare Part D. For inclusion, populations must be stable with no more than +/- 15 percent eligibility change year over year.

**Best-in-Class** trend analysis varies by segment. To be included in the analysis top-performing clients in the trend cohort must have a minimum number of lives and achieve defined performance goals. Best-in-Class Preferred Pharmacy Choice Days Supply and Generic Dispensing Rate performance reflects the top 10 percent of clients meeting population and performance requirements. For inclusion in Best-in-Class Adherence (Percent Members Optimally Adherent), clients must have a minimum of 50,000 claims per year. Members must be eligible for the entire trend period or they must have been eligible six months prior to their first fill in the study period. Best-in-Class Adherence clients performed in the top 10 percent of clients who qualify.

**Trend forecasts** represent future overall underlying secular gross drug trend, that is, the PMPM gross cost that would occur if no plan design or demographic changes occur. BOB overall trend forecasts include specialty pharmaceuticals. Specialty forecasts include the Universal Specialty Drug List. CVS Caremark forecast analysis is for informational purposes only. The estimates do not represent an existing or future contractual guarantee provided by CVS Caremark. This information is subject to change and will not represent any specific offer or return on investment in the future.





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