

2011  
**INSIGHTS**

ADVANCING THE SCIENCE OF PHARMACY CARE

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**CHANGING**  
**RULES**  
**CHANGING**  
**ROLES**

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**CVS**  
**CAREMARK**

Health Care Reform may be the most visible change agent, but advances in technology, clinical breakthroughs and ongoing cost pressures are also affecting every aspect of care delivery. In this issue of INSIGHTS we examine the impact of all these forces on key stakeholders. We'll look at the challenges and issues they face, and the shifts in roles and relationships those changes require.

**NO MATTER**  
**WHO YOU ARE**  
**YOUR**  
**HEALTH CARE**  
**EXPERIENCE**  
**is going to**  
**CHANGE**

Physicians are already **feeling stretched thin**, and that feeling will grow. It's predicted the U.S. will have 159,000 fewer doctors than needed by 2025.

Millions of individuals will be buying their own coverage; health plans will need to **rethink their marketing strategies**.

**Rising prices** for gasoline, food and health care worry consumers. Plus, they're not quite sure what health care reform will mean to them.



30 percent of employers **reduced their health benefit** offering in 2010. How will the insurance exchanges affect their benefit strategies?

Pharmacists are making a real difference for patients with complex, ongoing health problems. They can be a valuable part of a **health management team.**



Dear Clients,



We all know change is a constant, in this industry and in life, but the change we face over the next several years is monumental and unprecedented. The sweeping nature of the health care reform legislation makes it difficult, as even the government admits, to predict how the system and its stakeholders will respond. Regardless of how much is unknown and “still to be determined” about reform, all of us continue to face the urgent, ongoing need to reduce health care spending and simultaneously improve health outcomes.

I’m tremendously excited by the role I believe we at CVS Caremark can play in achieving these goals. I know that we have consistently helped our clients manage their prescription drug trend, in the last year driving generic dispensing rates to the highest levels in the industry. What’s more, our integrated model, as shown by the results of Maintenance Choice® and Pharmacy Advisor™, supports improvement in adherence. As you may already know, we’ve established definitively that adherent patients use less health care and have reduced health care costs. In an article published this year in *Health Affairs*, we’ve shown that, for patient after adherent patient, health care cost reduction offsets the increased pharmacy cost; in some cases by as much as 13 to 1.

And while MinuteClinic® is clearly separate from our operations as a pharmacy benefit manager, I’m proud to be associated with the nation’s most successful and innovative retail health clinic. Many parts of the country are already facing a primary care shortage; broader coverage will only exacerbate this shortage. I’m confident retail health clinics can alleviate the shortage, improve care, and reduce costs—helping to solve some of the most persistent and complex problems in today’s health system.

As you’ll see in the pages that follow, we are deeply engaged in assessing the opportunities and challenges that lie ahead for all our clients and member populations. Throughout the CVS Caremark organization, from our information technology systems and product development to clinical programs and consumer research, we’re committing our resources to bringing you solutions that are effective, innovative and easy to integrate into your organization. Find out more about how we’re advancing the science of pharmacy care in the final section of this report.

I invite your feedback on this report and on our service. On behalf of CVS Caremark, 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". The signature is fluid and cursive.

Per Lofberg  
President, Caremark Pharmacy Services

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*The editors would also like to extend their thanks to many colleagues throughout CVS Caremark who contributed to the completion of this report.*

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# FORCES *of* CHANGE

The Patient Protection and Affordable Care Act (ACA) was signed into law just a year ago, and while health care and health benefits are always evolving, this act represents momentous change. While there are still many issues to be decided, the act is likely to profoundly affect how Americans obtain and pay for health coverage and care.

The ACA was passed only after months of debate, and its passage has not curtailed the controversy. There was a vote on repealing the act early in 2011, soon after newly-elected congressional representatives arrived in Washington. In several states, the courts have issued rulings that challenge the act's constitutionality. Polls continue to show that the public is split on supporting or repealing the act; more than half of consumers say they are confused about how health care reform would affect them.<sup>1</sup>

The President is halfway through his term; probable 2012 candidates are positioning themselves for campaigning.

This highly charged issue will not recede. The ACA will continue to generate debate even as various provisions are implemented. The main provisions of the act are scheduled to go into effect in 2014, and there are many unknowns and details to be worked out.

*ACA targets three interrelated issues: coverage, cost and quality*

Health care reform, in and of itself, is not the only instrument of change. Quality improvement and ongoing cost pressures demand new solutions regardless of reform. An aging population and increasing levels of obesity and chronic conditions continue to challenge the health system. In the pharmaceutical marketplace, the flow of new generics continues, leading to projections of 80 percent generic dispensing rates within a few years. And specialty pharmaceuticals are expected to dominate drug spending as the biological pipeline matures. In the pages that follow, we will look at how all these forces weave together and impact key stakeholders—employers, health plans, physicians, consumers and pharmacists.

# Health care reform will expand coverage, but will change how many people obtain it.

Expansion of coverage is the most fundamental aspect of the reform legislation. Currently, half of people under age 65 are insured through their employer. Most of those over 65 have coverage under Medicare. Over the last several years, the effects of the recession and resultant job loss have caused a sharp spike in the uninsured; there are now 50 million nonelderly Americans without health coverage.<sup>2</sup>

The uninsured have a substantial impact on our national health care costs. People without insurance typically delay or limit needed care, allowing health conditions to worsen, making treatment more expensive when they seek it and leading to preventable hospitalizations. About one-third of the care for the uninsured is paid out of pocket. Seventy-five percent of the remainder is paid by state and federal governments.<sup>3</sup>

Reducing the number of uninsured—providing broader access to care—is one of the main goals of health care reform. It's expected that up to 32 million Americans will gain coverage through health care reform by 2019, thus expanding the risk pool so costs are spread over a wider population. Broader coverage should also mean previously uninsured or underinsured people will access more preventive care—improving health outcomes and helping to slow cost growth. However, providing coverage for an additional 32 million people will also worsen the existing primary care shortage.

## More in Medicaid

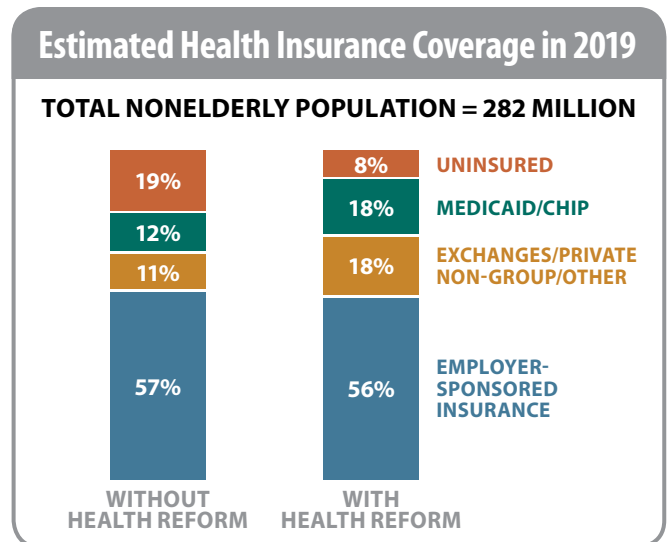
More than half of those gaining coverage are expected to get it through Medicaid. The Centers for Medicare & Medicaid Services (CMS) project a 34-percent enrollment increase in Medicaid and the Children's Health Insurance Program (CHIP) in 2014. The reform act expanded Medicaid eligibility to all individuals with incomes under 133 percent of the Federal

Poverty Level (FPL). There will also be federal subsidies to help people with incomes up to 400 percent of the FPL buy insurance, and there's a temporary high-risk pool for people who can't get insurance due to a health condition.

Most people who are eligible for employer-sponsored insurance choose to carry it, but some don't. The ACA specifies that employers with more than 200 employees automatically enroll their employees in health benefits, although employees may opt out. It also specifies that employers with more than 50 employees pay a penalty fee of up to \$2,000 for each if they do not offer affordable coverage. If employees refuse the company benefit and seek insurance through the exchanges, the employer can be assessed up to \$3,000. Small employers are also eligible for tax credits to help fund coverage.

With these changes and the existence of a viable marketplace to purchase individual coverage, many employers will be weighing the benefits of continuing to offer coverage and the mechanism through which they provide coverage; some movement away from a defined benefit structure and toward a defined contribution model is being discussed in many quarters. In addition, improvements to Medicare offerings will accelerate the decline in employer-sponsored retiree coverage.

INSIGHTS



SOURCE: Congressional Budget Office, March 20, 2010.

Figure 1

## Health Care Reform

Mandates that most individuals have insurance

Establishes state-based exchanges for individuals and small businesses to purchase health insurance

Imposes an excise tax on "Cadillac" plans

Expands Medicaid to 133% of poverty level

Provides dependent coverage up to age 26

Employer

# BENEFIT COSTS ARE HURTING OUR PROFITABILITY. SOMETHING'S GOT TO CHANGE.

Very few large employers but as many as **1 in 5 small employers** may drop medical plans after 2014<sup>4</sup>

55% of all employers want to see performance-based provider payments<sup>5</sup>

Only 6% of employers believe their company will be better off as a result of health care reform<sup>6</sup>

4% projected reduction in employer-sponsored health benefits by 2014<sup>7</sup>

**30%** of employers reduced the scope of health benefits or increased cost-sharing in 2010<sup>8</sup>



The individual consumer seeking coverage will broaden the market for health plans. Both health plans and third-party administrators will need to consider how to differentiate their offerings in the market once the exchanges are in operation.

For managed Medicaid plans, the influx of members may also present new management challenges. Previously, Medicaid was reserved for children, people with children, and those with disabilities. The newly eligible, low-income population is much more diverse and will likely include many people who are more transient and less likely to have an ongoing care provider, factors which can make it difficult to consistently manage health problems.

## The act increases accountability for results and incentivizes system efficiency.

The ACA also defines how plans structure coverage offered on the exchanges. Plans will need to comply with minimum benefit requirements—once they're defined—as established by the act for benefits sold through the exchanges. Moreover, the act prohibits coverage limits and denial of coverage due to preexisting medical conditions—all provisions geared to broader access and patient protection.

The ACA establishes a minimum Medical Loss Ratio (MLR), also known as Health Benefit Ratio (HBR). It requires health plans to report the proportion of premium dollars spent on clinical (strictly defined as spend from incurred claims); quality-improving (for programs/initiatives that improve health outcomes); and administrative (infrastructure, operations, marketing, etc., as well as profit). Activities that reduce

medical errors, prevent hospital readmissions, and promote health and wellness would be classified as clinical or quality improving, as would investments in information technology that would improve quality of care.

Beginning in 2011, plans must provide rebates to consumers if the share of the premium spent on clinical services and quality is less than 85 percent for plans in the large-group market and 80 percent for plans in the individual and small-group markets. Complying with the minimum MLR will require a tight review of costs and the coordination of data with other providers in order to report fully on those classified as clinical or quality as opposed to those that are administrative.

### Learning how to reduce cost

To evaluate different ways to reduce cost growth and improve quality, the ACA creates pilot programs, demonstration projects and payment reform models that will work through Medicare and Medicaid. As has been true in the past, if these programs prove effective, it's expected that they will also be adopted in the private sector. Such provisions aim for greater coordination and higher quality of care, lowering costs and improving overall efficiency of the health system

Among those models, Accountable Care Organizations, or ACOs, have picked up the most momentum. The configuration of an ACO has not been strictly defined.

It could include a network of providers, medical groups, independent practice organizations, and/or hospital systems.

The providers agree to jointly share responsibility for providing care and achieving measured quality improvements and reduction in spending growth. An ACO must have adequate participation of primary care physicians, define processes to promote evidence-based medicine, report on quality and costs, and coordinate care. ACOs that voluntarily meet quality thresholds will be eligible to share in any savings they generate.

*Mandated coverage broadens the health plan's market*

### Health Care Reform

Creates minimum benefits requirements for health plans in exchanges

Prohibits denial of coverage and annual and lifetime limits

Establishes minimum Medical Loss Ratio

Provides bonuses to Medicare Advantage plans for quality (Star ratings)

# HOW DO I COMPETE, COMPLY AND CONTROL COSTS IN THIS NEW WORLD?

CHURN: 120M members will be seeking or changing coverage 2012–2016

Expect greater use of **social media** as plans market directly to consumers

Minimum HBR/MLRs: Plans may not allocate more than 15–20% of premium revenue on non-care-related activities

32M Americans are expected to gain coverage due to reform; more than half will find it in Medicaid. Many will be going to exchanges where they'll be buying their own insurance for the first time

Medicare Advantage plans earning 4 or more CMS stars are eligible for a 1.5% bonus, rising to a 5% bonus in 2014



In 2010, CMS launched a Center for Innovation, an organization created by the ACA. The center's purpose is to "examine new ways of delivering health care and paying health care providers that can save money for Medicare and Medicaid." For example, the center will be testing the idea of medical homes in eight states. Other programs include the creation of bundled payments for episodes of care and bonus payments for plans meeting specific quality ratings.

Such programs require that various health care stakeholders work together efficiently and share information to get the most benefit. These changes necessitate greater standardization of data and investments in data technology and connectivity across the health system. This, in turn, will make it easier to compare data, which should support greater efficiency and efficacy in the system.

## Health care reform aims to get better value for what we spend.

Chronic illnesses affect one out of every two Americans and drive 75 percent of U.S. health care spend. New models like a designated medical home and ACOs are expected to better coordinate care and lower costs for chronic conditions, but the act also takes steps toward helping Americans prevent the development of such conditions.

With this goal of keeping people healthy, the act supports preventive and primary care in many ways. For instance, people on Medicare or Medicaid will pay less for proven preventive services, and physicians will be paid more.

Such services, including immunizations and drug therapy, are known to be good value; people who use them appropriately spend less on overall health care.

### Primary care shortage

However, broader coverage and lower cost may not be enough if primary care is simply not available. In some parts of the country, there is already a shortage of primary care physicians. Patients may have to wait weeks for an appointment. The shortage reflects both declining enrollment in primary care education and increasing numbers of physicians who choose to leave active practice.

To remedy the situation, the reform bill incentivizes primary care practitioners. For example, it provides a 10 percent bonus to primary care physicians and general surgeons caring for Medicare beneficiaries in underserved areas. It also provides additional funding for training in primary, preventive and nursing care.

New payment models, greater accountability for outcomes and the primary care shortage all point to an expanded role for clinical professionals such as nurses, nurse practitioners and pharmacists, in monitoring, educating, and caring for the chronically ill.

Some of the growth in health care costs has been attributed to the adoption of newer treatments and technologies that may not offer a significant clinical advantage over existing, less-expensive modalities. The ACA creates programs that evaluate comparative effectiveness of medical treatments, including pharmaceuticals. These studies will look beyond safety and efficacy and will impact how new health care products are funded and developed.

A new treatment will have to deliver better outcomes, or the same outcomes at less cost, to gain a foothold as payors determine which treatments to cover. Results of these studies will affect all health care stakeholders.

*New treatments will have to deliver better outcomes*

### Health Care Reform

Establishes a national quality strategy and comparative effectiveness studies

Makes primary care and preventive services more accessible

Penalizes hospitals that have too many readmissions or hospital-acquired infections

Allows high-risk Medicaid enrollees to designate a provider as a medical home

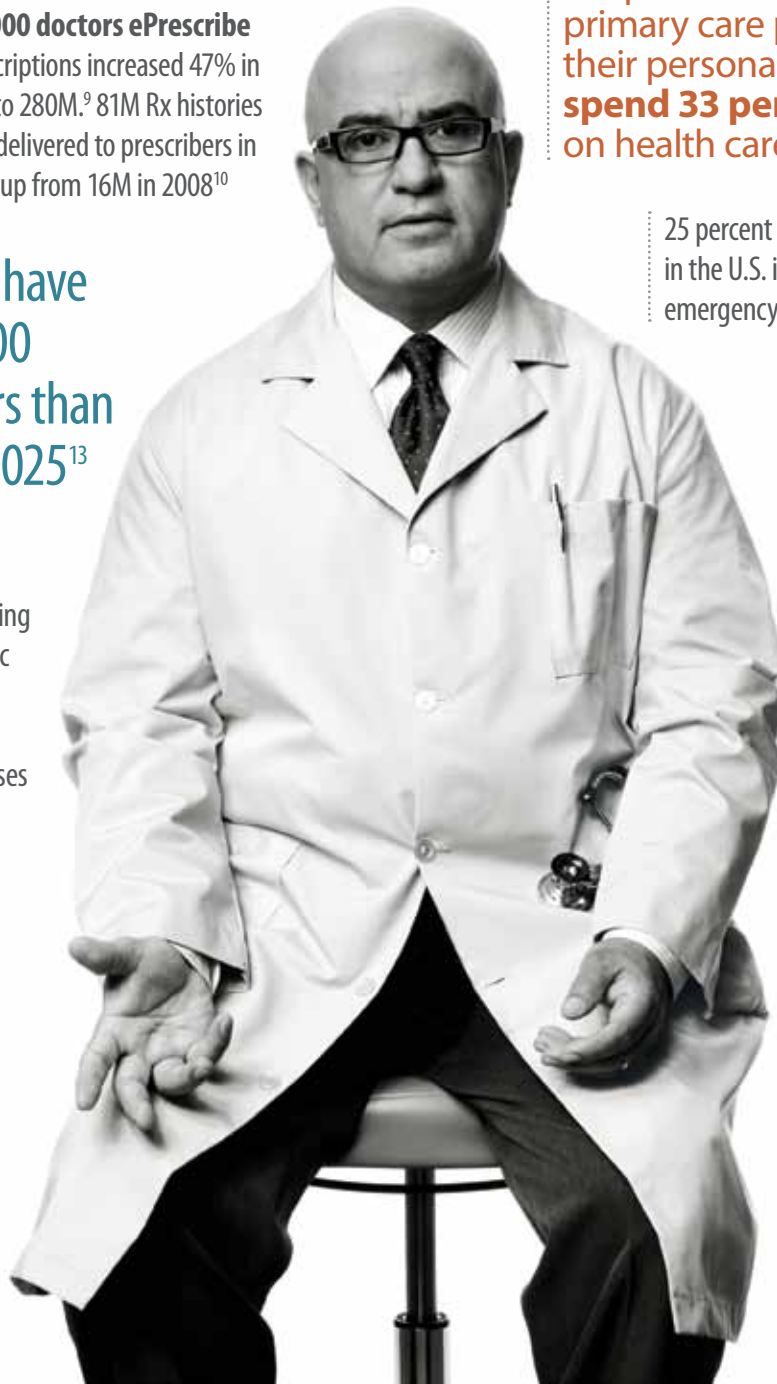
Provides for research and funding of national public health, prevention, and wellness activities

# MY PRACTICE IS ALREADY STRETCHED TO THE LIMIT.

**250,000 doctors ePrescribe**  
ePrescriptions increased 47% in  
2010 to 280M.<sup>9</sup> 81M Rx histories  
were delivered to prescribers in  
2009, up from 16M in 2008<sup>10</sup>

The U.S. will have  
about 159,000  
fewer doctors than  
it needs by 2025<sup>13</sup>

Physicians making  
use of electronic  
health records  
are eligible for  
Medicare bonuses



People who have a  
primary care physician as  
their personal physician  
**spend 33 percent less**  
on health care<sup>11</sup>

25 percent of acute care  
in the U.S. is provided by  
emergency physicians<sup>12</sup>



Other reimbursement  
changes: ACOs,  
Buy and Bill Drugs,  
Medical Home

# Reform retires the RDS tax benefit and closes the doughnut hole.

The Medicare Modernization Act (MMA) created Medicare Part D prescription drug programs, which were first offered in 2006. To help employers continue to offer drug benefits to retirees, MMA enacted the Retiree Drug Subsidy (RDS) program. As intended, many employers took advantage of the 28 percent RDS tax subsidy and continued sponsoring coverage. ACA ends the tax subsidy in 2013, considerably altering the economics for employers.

The Employer Group Waiver Plan (EGWP, commonly referred to as “egg whip”) has emerged as an attractive alternative. EGWP allows a company to contract with the federal government or with a third-party Part D provider to provide drug benefits to retirees—the latter known as an 800 series EGWP. With an 800 series EGWP, the third-party sponsor relieves the employer of much administrative responsibility while the government subsidies reduce benefit costs. It’s expected that many companies will shift to EGWP in the near term rather than waiting for 2013.

MMA also created the Part D coverage gap known as the doughnut hole. Beneficiaries whose drug spend reached a specific threshold had to assume responsibility for almost all their drug costs until reaching a second designated amount. At that point, they would be eligible for catastrophic coverage.

The coverage gap has proven problematic since Part D’s inception, and reform legislation phases it out over several years. Starting this year, beneficiaries reaching the coverage gap receive a 50 percent discount on their brand drugs in the gap through an agreement reached with pharmaceutical manufacturers. Additional subsidies will be phased in until beneficiaries are responsible for only 25 percent of drug costs in the gap in 2020.

Recently, CMS also increased their focus on Star ratings for Medicare Part D plans. The Star ratings have been in existence since 2006 and are intended to inform beneficiaries about plan quality and customer service. CMS has proposed expanding Star rating criteria. Plans are eligible for bonuses based on their ratings. For health plans, Star ratings can be worth 5 percent of revenue in 2014, when the plan is fully implemented.

## Vital Signs: Medicare Drug Coverage

- 90 percent of Medicare-eligible Americans had drug coverage in 2010
- In 2007, an estimated 14 percent of enrollees reached the coverage gap
- The number of Medicare beneficiaries is predicted to increase about 20 percent by 2016
- The Medicare population is expected to be responsible for more than 50 percent of total drug spend by 2020

Figure 2

The health care legislation also increases the rebates pharmaceutical manufacturers are required to provide for drugs dispensed to Medicaid beneficiaries. This provision was put in place to assure that Medicaid pays an amount less than or equal to the “best price” in the market. The increase, from 15.1 percent to 23.1 percent, is expected to lower net drug costs for Medicaid and may allow manufacturers greater flexibility in negotiating rebates and discounts with private purchasers. Overall, the Congressional Budget Office (CBO) anticipates that the ACA-related rebates and discounts will lead pharmaceutical manufacturers to raise drug prices somewhat but that negotiated rebates and discount programs will offset those increases.

## Health Care Reform

Ends Part D Retiree Drug Subsidy tax benefit

Phases down coinsurance rate in Part D coverage gap

Requires manufacturer discounts on brand drugs in the gap

Provides federal subsidies on generics in the gap

Allows Medicaid managed care plans to access the Medicaid drug rebate

# Projecting National Health Expenditures

While the health reform act remains controversial, individual provisions have been enacted, and the private sector is moving to accommodate many of the potential changes. To support planning for these changes, industry analysts and stakeholders have produced a wide range of projections on the act's impact with full knowledge that provisions could go through many modifications between now and key implementation dates. Adding to the forecasting complexity is uncertainty around how quickly the economy is recovering from the recession.

Legislative changes, of course, have substantial impact on spending in the public and private sectors. Each year, CMS evaluates National Health Expenditures (NHE), looking at what various payors spend on hospital care, physician and professional services, prescription drugs and other services.

The agency projects changes in spending for these services over several years taking into account relevant legislative and regulatory changes. It also analyzes potential changes in the source of funding in private and public sectors.

Impact due to legislative changes can be substantial. Consider that, late in 2010, CMS revised its projections on that year's spending growth rate upward by 1.2 percent to 5.1 percent, largely due to the extension of COBRA and the postponement of reductions in Medicare payments to physicians. ACA-related changes that are likely to increase

this year's spending include the high-risk insurance pool, extension of dependent coverage, and modifications to Medicare Part D drug coverage.

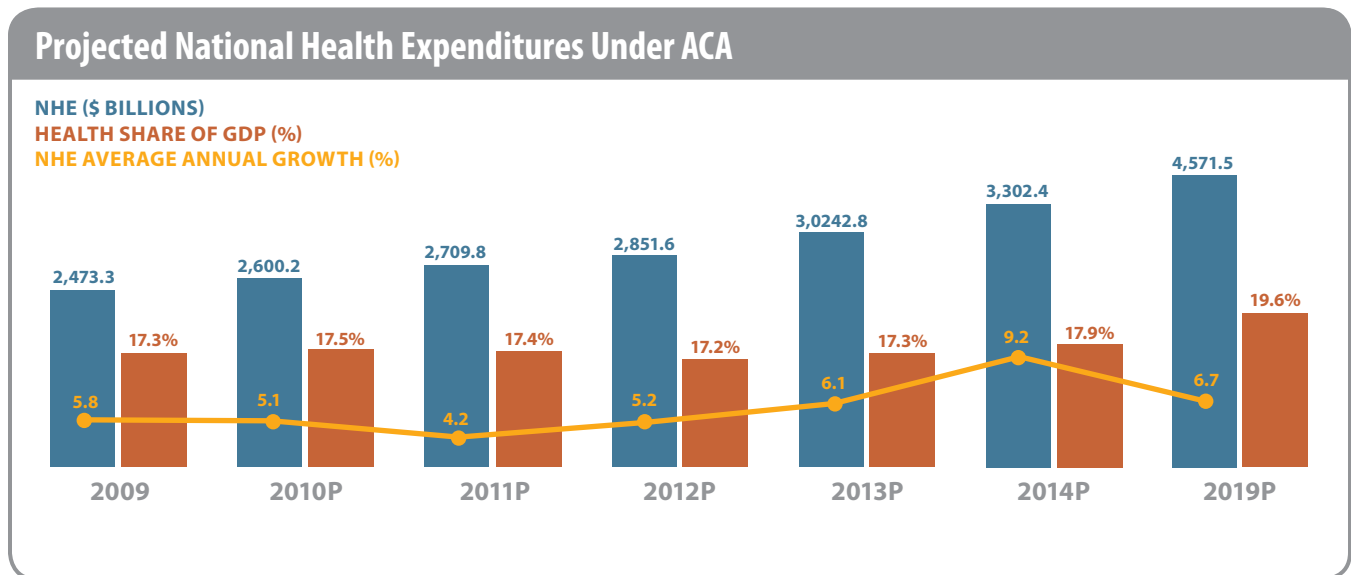
After the passage of ACA, CMS revised its prior forecasts to incorporate the act's probable budgetary impact through 2019.<sup>14</sup> Their analysts projected that average NHE growth will be 0.2 percentage points higher than previously forecast. Projections on NHE as a share of Gross Domestic Product (GDP) also grew—to 19.6 percent, 0.3 percentage points higher than was projected before the reform legislation.

*National spend will be higher, but many more people will have coverage*

As discussed earlier, many of the ACA's major provisions go into effect in 2014, with a substantial increase in Medicaid enrollment and the implementation of health insurance exchanges. CMS projects that health spending for the newly insured will nearly double, even as their out-of-pocket expenditures drop. As a result, spending growth in 2014 is expected to rise by 9.2 percent—a 2.6 percent higher projection than before the reform legislation was passed.

By 2018, OOP spending is expected to accelerate again as employers are expected to scale back coverage to minimize their exposure to the excise tax on high-cost plans.

By 2019, it's estimated by more than 92 percent of Americans will have health insurance, a 10 percent increase. Medicaid and CHIP are projected to provide coverage for 82 million Americans by then. Medicaid and CHIP expenditures for that year are projected to grow by 17.4 percent, more than 11 percent higher than pre-reform estimates.



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group. National Health Spending Projections: The Estimated Impact of Reform Through 2019. *Health Affairs*, October 2010.

Figure 3

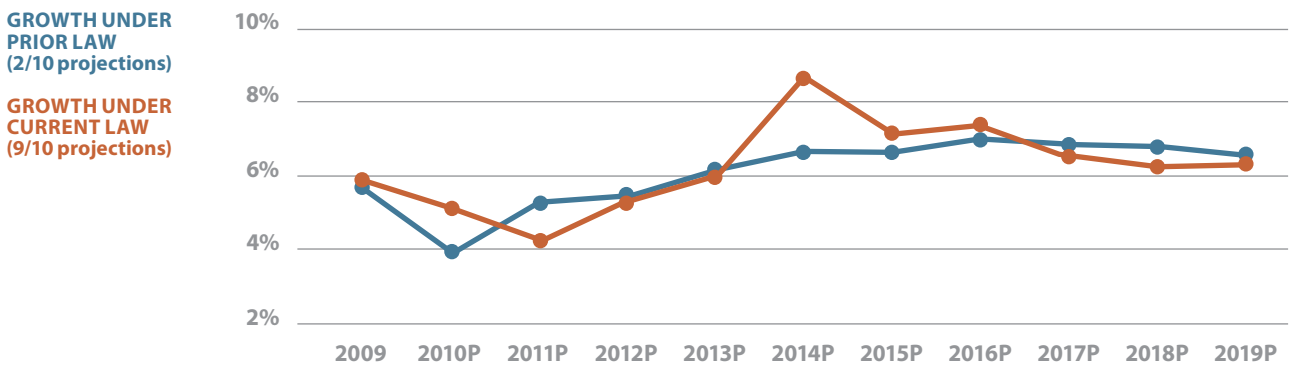
“ Little historical precedent exists for how the health system reforms will operate in practice; how individuals, families and businesses will respond ... or how the effects of coverage changes will affect personal health spending.<sup>15</sup> ”

Where does the CBO expect a lower average annual growth rate? Projected spending growth in Medicare, 2012 through 2019, dropped by 1.3 percent, down to

6.2 percent. The relatively lower rate is expected to result from reduced payments for most Medicare services and substantial reductions to managed care plan payments. Moreover, the ACA created the Independent Payment Advisory Board, which has the authority to propose ways to limit Medicare spending growth if it exceeds targeted levels.

In addition to the intended overall cost-savings, funding for the ACA will come through a variety of taxes and offsets: a much broader Medicare tax on incomes over \$200,000 (individual filers) and \$250,000 (joint filers); an annual fee on insurance providers; the excise tax on “Cadillac” plans as well as taxes on pharmaceuticals and certain medical devices.

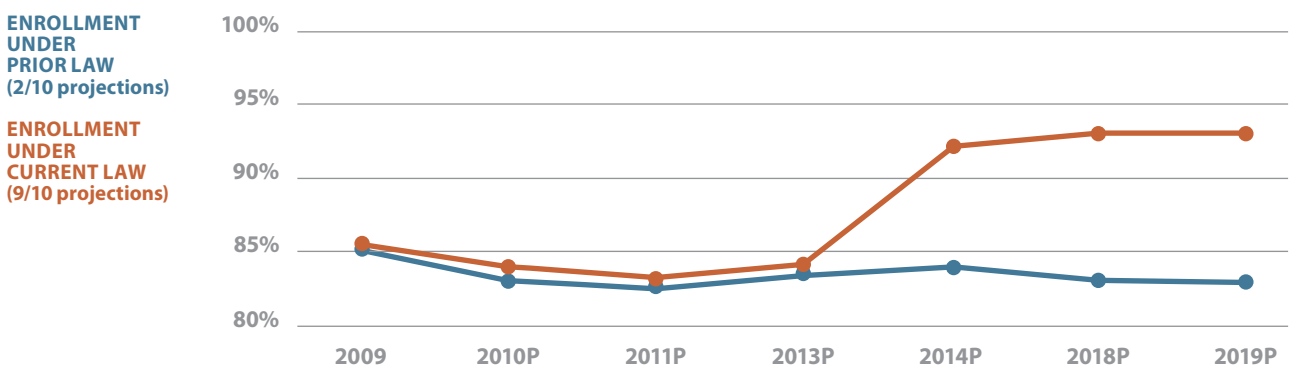
### Projected Annual Growth Rates in National Health Expenditures (NHE)



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group. National Health Spending Projections: The Estimated Impact of Reform Through 2019. *Health Affairs*, October 2010.

Figure 4

### Projected Percentage of Insured



SOURCE: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group. National Health Spending Projections: The Estimated Impact of Reform Through 2019. *Health Affairs*, October 2010.

Figure 5

# WHERE DO WE GO FROM HERE?

Americans make 350 million acute care visits a year; more than a quarter of them to hospital emergency departments<sup>16</sup>

~1 in 2 Americans has a chronic condition

The Congressional Budget Office estimates that **24 million Americans** could seek coverage through the exchanges when fully implemented

2010: 1 in 4 households reported having trouble paying medical bills<sup>17</sup>

Since 2000, average premiums for family coverage have more than doubled<sup>18</sup>

**53%** are confused about health care reform<sup>19</sup>



# 2010 PRESCRIPTION DRUG TREND

*In a health care environment of ever-rising costs, 2010 held some good news. Prescription drug gross trend went down. In the CVS Caremark Book of Business (BOB), non-specialty trend was less than one percent—0.8 percent. A third of clients had trend under 2.5 percent. Nearly a quarter had negative trend.*

**MAJOR MODERATOR.** Many forces came together to help push trend down, but the major factor could be summed up in one word—generics. More generics were available, more doctors prescribed them, and more members were ready and willing to use them. Importantly, payors and plans adopted plan designs that focused on generics: step therapy designs that capitalized on the breadth of generic offerings in major therapeutic categories, co-pay savings that made a meaningful difference to members and communication programs that clearly demonstrated potential savings.

In the CVS Caremark Book of Business, the overall generic dispensing rate (combined mail and retail GDR) reached 73.1 percent in December. For the year, GDR was 71.5 percent, compared to 68.2 percent in 2009. The late-year uptick in GDR reflected end-of-the year generic launches: Prevacid, Aricept, and Ambien CR. Through 2012, even more high-profile brands are expected to launch as generics, pushing generic GDRs even higher. Among the most anticipated: blockbusters Lipitor and Plavix. For more on pending launches, please see page 22.

**CONTINUED GROWTH IN SPECIALTY.** With a gross trend of 13.7 percent, specialty pharmaceuticals continued to be a major trend driver. As a percentage of BOB spend, specialty increased by 1.4 percent, to 14.2 percent. Utilization increased among both existing and newly approved biologics. Two new specialty drugs for multiple sclerosis were approved in 2010—helping to push gross trend for the category to 20.9 percent—with more potential new category entrants in the pipeline. There were also significant new biologics in the rheumatoid arthritis and osteoporosis categories, where specialty medications are already well established.

## 2010 Trend Influencers

- Rising generic utilization—drug mix—lowered trend significantly
- Utilization edged upward—due to signs of growth in the economy, affordability of generics, and possibly increased focus on adherence
- Brand prices increased—some top brand drugs had double-digit price increases
- Continued specialty growth—due to ongoing increases in utilization and new drug launches

Figure 6

**COST PER DAY ROSE FOR MANY BRANDS.** As has been true in the past, prices for brand drugs facing generic competition rose. Cost per day for Lipitor rose 9.46 percent. Despite such price increases, several top therapeutic categories showed significant decline in gross cost per day in 2010. For example, as a class, lipid-lowering drugs dropped

## 2010 Top 5 Specialty Categories

	Condition	% Gross Specialty Cost	Gross Trend	Utilization Trend
1	Rheumatoid arthritis	23.3%	14.9%	8.7%
2	Multiple sclerosis	18.0%	20.9%	8.7%
3	Oncology	14.3%	19.2%	9.6%
4	HIV	10.9%	11.2%	3.6%
5	Human growth hormone	4.3%	12.0%	6.4%

SOURCE: CVS Caremark Book of Business data. Industry Analytics, February 2011.

Figure 7

in gross cost per day despite category leader Lipitor's increase. Why? Generics in the category, simvastatin and pravastatin, had significant price decreases—28 and 34 percent respectively—and market share increases even as market share for Lipitor dropped. Other classes with this dynamic included the proton pump inhibitors (PPIs, ulcer drugs), antihypertensives, antidepressants, nonbarbiturate hypnotics, and miscellaneous anticonvulsants.

The generic for Lipitor will be released with six months exclusivity for manufacturer Ranbaxy; another manufacturer, Watson, will sell an authorized generic version of Lipitor for five years. Exclusivity periods delay the price reduction that comes with generic competition. The longer generics are available, the greater the price decrease. 2010 price drops among generics included almost 22 percent for omeprazole in the PPIs and 27 percent for gabapentin in the anticonvulsants.

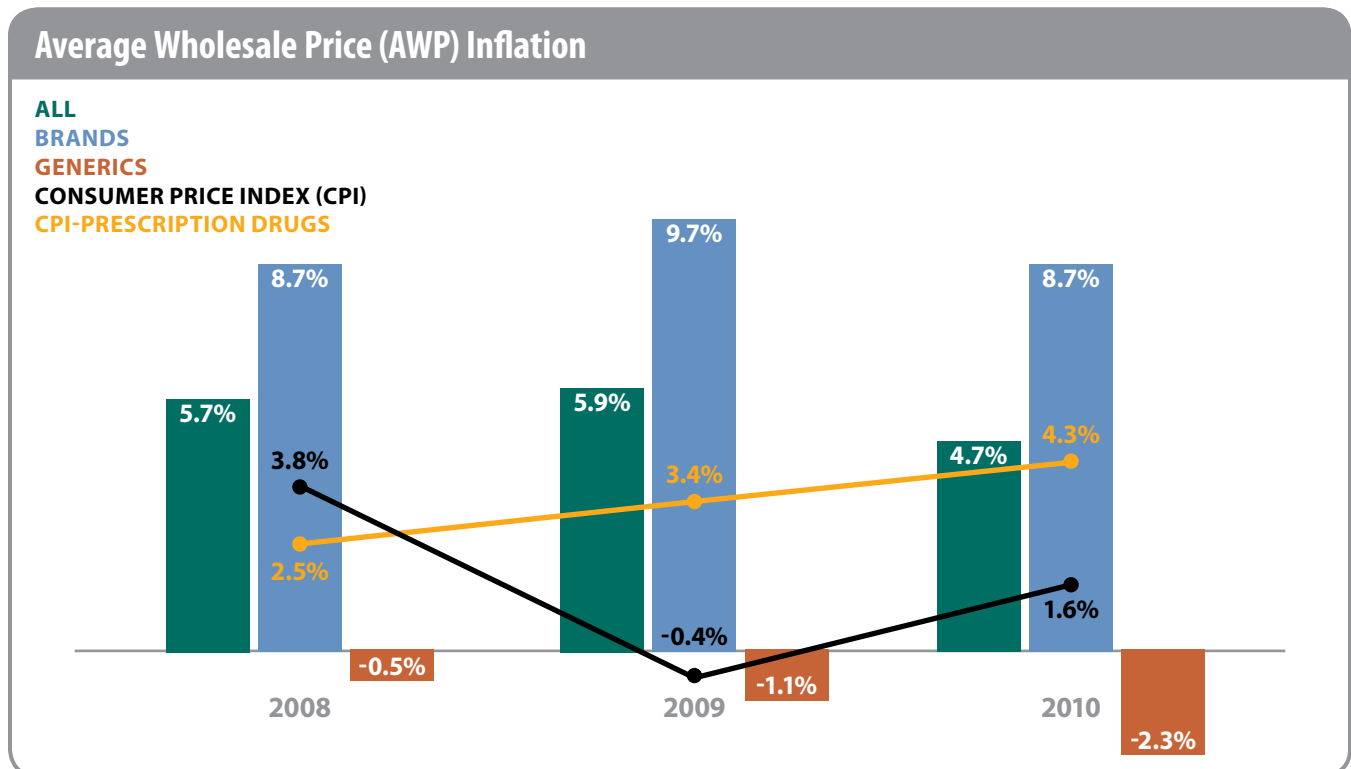
**UTILIZATION ALSO INCREASED.** We calculate utilization as the change in days supply per member per month (PMPM). Utilization is affected by many factors—approval of new drugs or new indications, reformulations, changes in treatment guidelines, off-label drug use, benefit designs, changing demographics (such as our aging population), and pharmaceutical promotional spending.

Utilization was dampened by the recession in 2008; it rebounded somewhat in 2009 and rebounded further

2010 New Generics		
Ambien CR	Effexor XR	Hyzaar
Aricept	Flomax ER	Lovenox
Cozaar	Gemzar	Yaz

in 2010, contributing 2.5 percent to trend. Despite unemployment figures near 10 percent, consumer confidence has improved as shown by spending increases in several sectors, including prescription drugs. It probably helped that there were more generics on the market, making prescriptions more affordable in cash-strapped times. Also, with more emphasis on health outcomes and total cost reduction in many plans, members may be taking and refilling their prescriptions more consistently.

Of the non-specialty drugs approved in 2010, two could have significant impact on future utilization, cost and trend. Victoza, a once-daily injectable for type 2 diabetes, exceeded sales expectations and has the potential to reach a billion dollars in sales as early as 2012. Pradaxa, the first new anticoagulant in more than 50 years could take sales away from generic warfarin and increase costs for plans and payors. For more on pipeline, please see pages 22 through 25.



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 2010, News, U.S. Dept. of Labor, January 2011; CVS Caremark Internal Analysis.

Figure 8

# Prescription Benefit Performance Metrics

While plans and plan sponsors across our Book of Business cite helping to control health care costs as one of their top priorities for their prescription benefit, each market segment's management priorities and strategy are distinct. Each sector also varies in terms of member demographics, population health status and drug mix—all of which affect prescription benefit performance and trend.

Therefore, CVS Caremark provides metrics on each of our market segments with a focus on Best-in-Class measures. For Best-in-Class analysis, we look at top-performing clients within our trend cohort who have achieved reproducible results, excluding from our analysis anomalies such as drastic changes in benefit eligibility or benefit strategy.

In our annual benefit planning survey, clients overwhelmingly cite promoting the use of generics and low-cost, effective therapies as their most important member engagement strategy. As is consistent with the goal of reducing total health care spend, three out of four use pharmacy and medical data to identify and refer eligible members to disease management programs.

## 2010 Average BOB Performance

Gross Trend (PMPM)	Specialty Trend (PMPM)	GDR
2.4%	13.7%	71.5%

- More than 50% of clients had trend below 5% PMPM
- 28% of our trend cohort are Baby Boomers, who account for 45% of gross spend
- 2010 saw greater fluctuation ( $\leq 20\%$ ) in clients' member populations than in previous years, possibly due to effects of the recession such as layoffs and industry consolidation

BOB trend cohort does not include Medicare Part D plans. The specialty trend is based on the universal specialty drug list.

Figure 9

## 2010 Top Therapeutic Categories

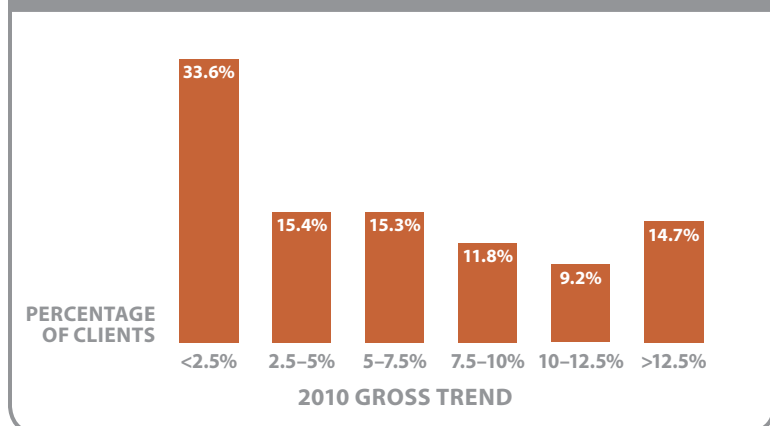
	Category	Top Drugs	Gross Trend	Utilization Trend	12/10 GDR	12/09 GDR
1	HMG CoA Reductase Inhibitors (cholesterol)	Lipitor, Crestor, simvastatin (Zocor)	3.5%	6.0%	59.7%	56.4%
2	Proton Pump Inhibitors (ulcer)	Nexium, pantoprazole (Protonix), omeprazole (Prilosec)	-15.0%	-0.6%	67.6%	59.4%
3	Sympathomimetics (asthma)	Advair Diskus, ProAir HFA, Symbicort	4.3%	0.8%	16.3%	16.2%
4	Insulin	Lantus, Novolog, Humalog	16.8%	5.0%	N/A	N/A
5	Antihypertensive Combinations	Diovan HCT, amlodipine besylate/benazepril (Lotrel), Benicar HCT	1.7%	1.2%	57.9%	49.6%
6	Multiple Sclerosis	Copaxone, Avonex, Rebif	20.9%	8.7%	N/A	N/A
7	SNRI Antidepressants	Cymbalta, venlafaxine HCL ER (Effexor XR), Pristiq	3.2%	1.8%	38.5%	7.2%
8	Platelet Aggregation Inhibitors (anticoagulants)	Plavix, Aggrenox, Effient	12.7%	1.6%	7.0%	6.6%
9	Anticonvulsants—Misc.	Lyrica, gabapentin (Neurontin), topiramate (Topamax)	-13.6%	4.6%	80.1%	77.6%
10	SSRI Antidepressants	Lexapro, sertraline (Zoloft), paroxetine (Paxil)	-3.8%	2.9%	77.3%	75.4%

SOURCE: CVS Caremark Book of Business data. Industry Analytics, February 2011.

Figure 10

## Employers

### 49% of Employers Have Trend $\leq 5\%$



SOURCE: CVS Caremark Book of Business data. Industry Analytics, February, 2011.

Figure 11

### Employer Best-in-Class Performance

Gross Trend (PMPM)	0.2%
Specialty Trend (PMPM)	9.6%
GDR	76.8%
Preferred Pharmacy Choice Days Supply*	77.9%
Mail Days Supply	66.0%
% Optimally Adherent (Hypertension)	81.3%

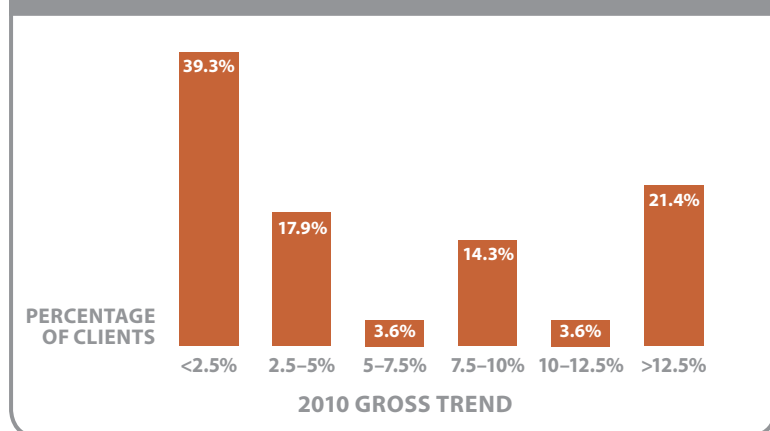
\*Mail and Maintenance Choice

SOURCE: CVS Caremark Analytic Consulting Services, March 2011.

Figure 12

## Health Plans

### More than 57% of Health Plans Have Trend $\leq 5\%$



SOURCE: CVS Caremark Book of Business data. Industry Analytics, February, 2011.

Figure 13

### Health Plan Best-in Class Performance

Gross Trend (PMPM)	-0.4%
Specialty Trend (PMPM)	12.9%
GDR	78.7%
Preferred Pharmacy Choice Days Supply*	57.6%
Mail Days Supply	56.8%
% Optimally Adherent (Hypertension)	75.1%

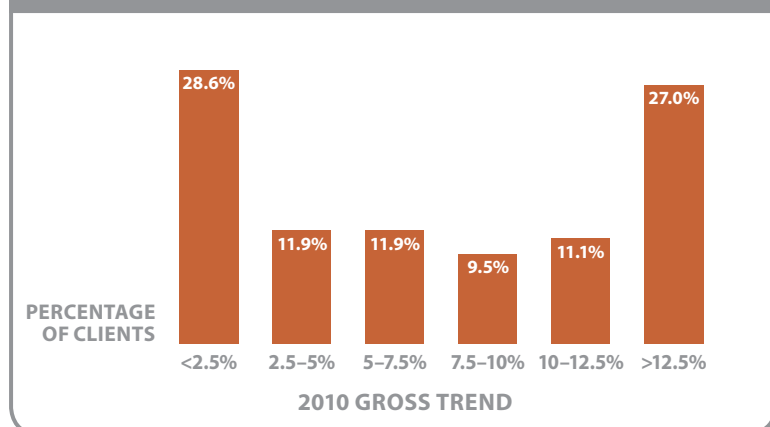
\*Mail and Maintenance Choice

SOURCE: CVS Caremark Analytic Consulting Services, March 2011.

Figure 14

## TPAs

### More than 40% of TPAs Have Trend $\leq 5\%$



SOURCE: CVS Caremark Book of Business data. Industry Analytics, February, 2011.

Figure 15

### TPA Best-in Class Performance

Gross Trend (PMPM)	3.5%
Specialty Trend (PMPM)	7.6%
GDR	77.4%
Preferred Pharmacy Choice Days Supply*	56.7%
Mail Days Supply	43.45%
% Optimally Adherent (Hypertension)	79.4%

\*Mail and Maintenance Choice

SOURCE: CVS Caremark Analytic Consulting Services, March 2011.

Figure 16

# Future Trend Influences

**THE ECONOMY.** While the economy is slowly recovering, unemployment remains high and prices for staples such as food and gasoline are increasing rapidly. While member utilization has rebounded somewhat since the recession began in 2008, these conditions may undercut that growth as people attempt to limit spending to “essentials.”

**AGING POPULATION.** 2011 marks the beginning of the Baby Boomers’ transition into retirement. Baby Boomers historically have been comfortable relying on prescriptions to maintain their health. This year, they made up 28 percent of our trend cohort and accounted for 45 percent of gross spend. We can expect them to continue this utilization. As they watch their parents’ generation age, Boomers have witnessed the effects of Alzheimer’s disease and many will be interested in access to antimentia agents in the years to come.

**CHRONIC CONDITIONS.** The incidence of cancer, diabetes and cardiovascular disease has been rising among Americans as they age. Rising levels of obesity contribute to poor health and increase the risk of chronic illness. One bright spot: the percentage of Americans with high cholesterol fell from 17.7 percent in 2000 to 14.6 percent in 2008.<sup>20</sup> Antihyperlipidemics, the most commonly used class of drugs in America, played a strong role in this decrease.

**CHANGING TREATMENT GUIDELINES.** Updated guidelines on the treatment of hypertension and high blood cholesterol are expected in 2011. New recommendations could affect both utilization and cost trends.

**HEALTH CARE REFORM.** Under the ACA, the government will invest in research through comparative effectiveness reviews of pharmaceuticals, leading to better understanding of the comparative outcomes of products. This will no doubt impact formularies and pricing. The Patient Protection and Affordable Care Act supports preventive care and screenings, includes prescriptions as a basic benefit and has provisions that make pharmaceuticals more accessible to Medicare beneficiaries and Medicaid enrollees. All could translate into increased drug utilization.

**ADHERENCE FOCUS.** The cost-reduction benefits of adherence are becoming more broadly understood and accepted. More plans are building adherence programs into their benefits package, and new models such as ACOs are expected to have a focus on evidence-based guidelines in regard to adherence and gaps in care. Such measures will increase prescription utilization, although they should reduce overall health care spend. See page 26 for CVS Caremark research on adherence.

**GENERIC LAUNCHES.** New generics have helped moderate trend for the last several years; the next few years will see a wave of new generics that should push GDRs to 80 percent and above. For more details on coming generic launches, see page 22.

**ONGOING SPECIALTY GROWTH.** Specialty pharmaceuticals have been a major driver of growth in prescription spending for several years. All the key elements for that growth are ongoing—a robust pipeline for both

new products and new indications; growing utilization; an increasing number of disease targets; price inflation; and a lack of generics to moderate growth. See page 24 for more.

**BRAND PRICE INCREASES.** Historically, manufacturers have commonly increased pricing on brands facing patent loss. Given the volume of pending patent expirations, it’s reasonable to expect that prices for many products will increase in the near future if they haven’t already.

**LESS PREDICTABLE EVENTS.** In 2010, severe winter storms briefly made it difficult for people to get to pharmacies for their refills, causing a slight drop in utilization. With similar weather early in 2011, we can expect a similar impact. The severity, or lack thereof, of the flu season will also impact prescription utilization.

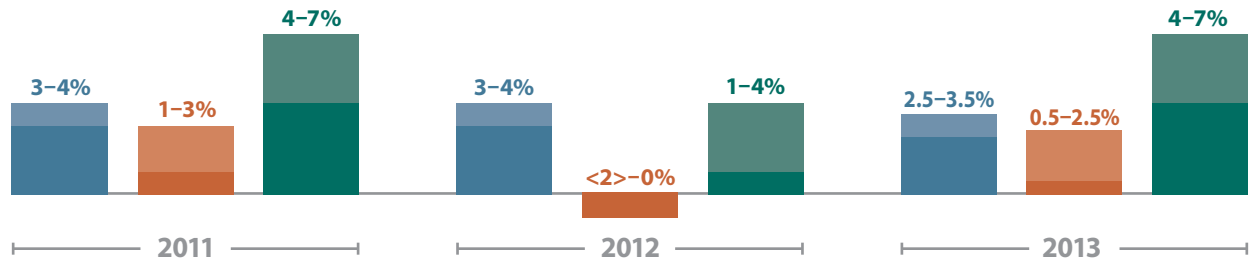
*IMS predicts  
3%–6% growth in  
U.S. prescription  
market through  
2014*

## Forecasts

*Prescription drug trend is affected by factors that are foreseeable—like our aging population—and those that are less foreseeable—a severe flu season, for example. CVS Caremark trend analysts update forecasts for underlying secular trend on a regular basis, evaluating factors such as pending launches, trends in utilization, market forecasts and historical data. Underlying secular trend is the per member per year (PMPY) gross cost increase that would prevail if no plan design or demographic changes occur.*

## Overall Drug Trend

UTILIZATION RATE PRICE/DRUG MIX RATE TOTAL

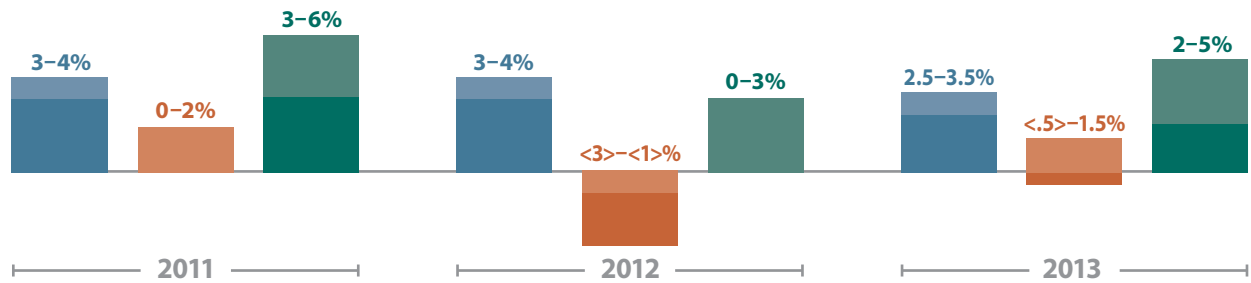


SOURCE: CVS Caremark Industry Analytics, March 2011.

Figure 17

## Non-Specialty Drug Trend

UTILIZATION RATE PRICE/DRUG MIX RATE TOTAL

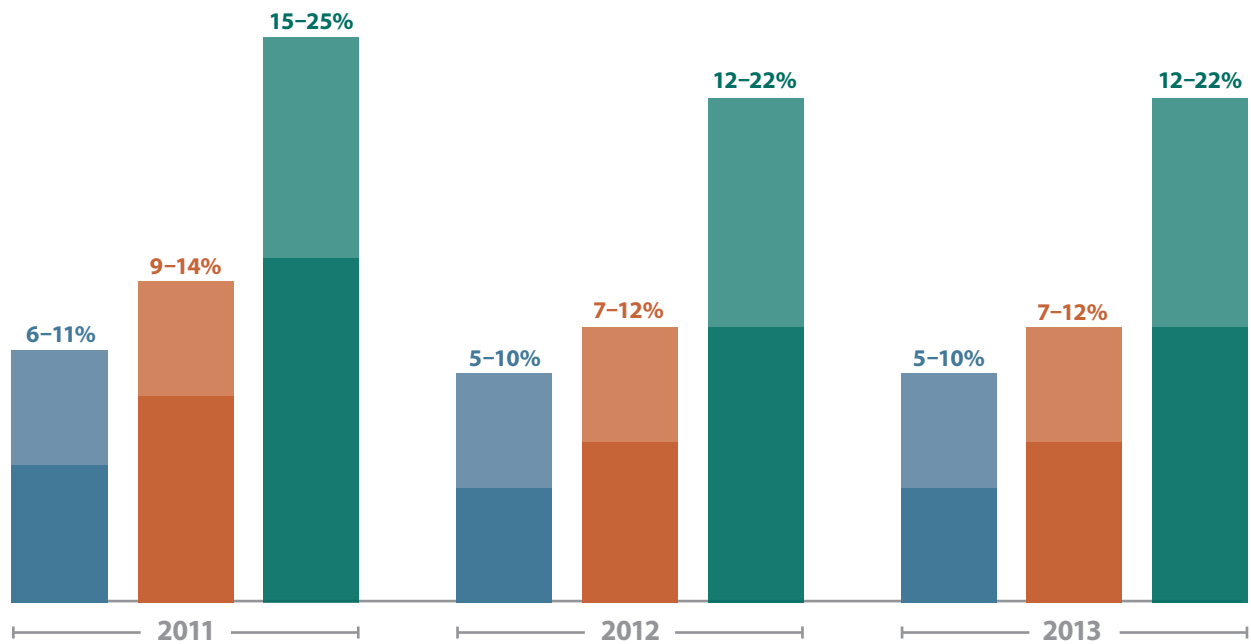


SOURCE: CVS Caremark Industry Analytics, March 2011.

Figure 18

## Specialty Drug Trend

UTILIZATION RATE PRICE/DRUG MIX RATE TOTAL



SOURCE: CVS Caremark Industry Analytics, March 2011.

Figure 19

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

# GDRs of 80% possible as soon as 2012

A decade ago, a wave of blockbuster brands drove double-digit drug trend. Several have dominated drug spend ever since, notably Lipitor, the world's top-selling drug for many years. Those brands have begun to reach what the industry has been calling the "patent cliff." The stakes are high; early in 2011, the FDA granted an extra six months exclusivity to Plavix based on studies on pediatric use. The extra time could be worth \$3 billion to the brand manufacturer.

Despite such delays, generic dispensing rates are rising rapidly. That rise is expected to accelerate over the next few years as dozens of blockbusters lose their patents, pushing generic dispensing rates to 80 percent and above.

That's good news for consumers, payors and the American health system overall, which is expected to save more than \$70 billion through 2014 solely on the basis of new generics. Over the past decade, pharmacy benefit management strategies, consumer and prescriber education, and economic pressures have shifted the pharmaceutical environment so that generics are prescribed by clinicians and accepted by the public as never before.

## Impact of new brands, new formulations

The upswing in GDR may meet a few setbacks however. In certain classes, regulatory practices and new brands and formulations may compress utilization of generics.<sup>21</sup>

**PRADAXA**, a new anticoagulant, received FDA approval in 2010. The category has been dominated by warfarin, which has been available since 1997 and costs a fraction of what is charged for Pradaxa. However, warfarin, generic for Coumadin, requires regular blood monitoring and has variable effectiveness and a significant bleeding risk. Pradaxa was shown to have better efficacy and requires no blood monitoring, dose adjustments or dietary restrictions, although the new drug is prescribed as a twice-daily regimen, which could complicate compliance for patients. Analysts predict Pradaxa could reach \$2–\$6 billion in sales, clearly depressing utilization of the older generic.

**OXYCONTIN**, an opioid scheduled to lose its patent in 2013, was released in a new, tamper-resistant formulation in 2010. The older, controlled-release formulation was subject to misuse; the tablet could be crushed and ingested for immediate effect. The newer formulation could reduce utilization of the older product as well as current generics in the category and decrease the potential impact of OxyContin's direct generic alternatives when available.

### Blockbuster Brands Going Generic

## 2011

Lipitor (\$7.2B)  
Zyprexa (\$2.9B)

Projected GDR  
**73%–77%**

## 2012

Plavix (\$6B)  
Seroquel (\$4.3B)  
Actos (\$3.5)  
Diovan, Diovan HCT (\$3.4B)  
Singulair (\$2.9B)  
Lexapro (\$2.7B)

Projected GDR  
**77%–81%**

## 2013

OxyContin (\$3.1B)  
Cymbalta (\$3B)

Projected GDR  
**79%–83%**

SOURCE: IMS Health, company estimates. GDR projections: CVS Caremark Enterprise Analytics.

Figure 20

### Generics: Vital Signs

- 9 out of 10 consumers are willing to take generics, with cost being the overwhelming reason, cited by 67 percent of respondents in one survey<sup>22</sup>
- In certain therapeutic areas such as hypertension, depression and migraine, more than 70 percent of patients are prescribed a generic first<sup>24</sup>
- When a generic alternative is available, doctors prescribe it 93 percent of the time, up from 83 percent in 2003<sup>23</sup>
- The U.S. health system is expected to save \$70B over the next 4 years due to new generics

Figure 21

**CYMBALTA**, an SNRI antidepressant scheduled to lose its patent in 2013, received an indication in 2010 for the management of chronic low-back pain and chronic pain due to osteoarthritis. This approval may expand Cymbalta's use and have a negative impact on SNRI generic utilization in general, potentially taking claims from less-expensive generic and over-the-counter (OTC) nonsteroidal anti-inflammatory drug (NSAID) options.

**CRESTOR**, a cholesterol-reducing drug, has been approved by the FDA for use in certain patients with normal cholesterol levels to reduce the risk

of heart attack and stroke. The new indication will likely increase use of Crestor and possibly decrease use of other cholesterol-reducing drugs, including generics.

Two new drugs have been approved in the gout category, which has been long dominated by allopurinol, a generic. One of the new drugs, Krystexxa, is the first biologic for gout and costs thousands of dollars per year. The category has also been affected by the FDA's safety initiative to remove unapproved drugs from the market. Colchicine costs pennies a day and has been used for gout pain for centuries but no manufacturer had

received approval until 2009. Once the new form, Colcrys, received approval, its manufacturer sued competitors with unapproved versions. The FDA eventually ordered a halt to the marketing of unapproved forms, leaving Colcrys, with a price tag of more than \$5 a tablet, the sole player in the category.

A similar situation exists with oral morphine sulfate. One version received approval in 2010; other manufacturers must submit a New Drug Application or withdraw their products from the market.

Projected Generic Launches 2011–2015					
Significant Pending Generics	<b>Lipitor</b> (cholesterol reduction)	<b>Plavix</b> (anticoagulant)	<b>OxyContin ER</b> (opioid)	<b>Nexium</b> (anti-ulcer)	<b>Abilify</b> (antipsychotic)
	<b>Zyprexa</b> (antipsychotic)	<b>Seroquel</b> (antipsychotic)	<b>Cymbalta</b> (SNRI antidepressant)	<b>Copaxone</b> (MS)	<b>Namenda</b> (Alzheimer's)
	<b>Levaquin</b> (anti-infective)	<b>Singulair</b> (antiasthmatic)	<b>Aciphex</b> (anti-ulcer)	<b>Celebrex</b> (anti-inflammatory)	
		<b>Actos</b> (antidiabetic)	<b>Niaspan</b> (cholesterol reduction)	<b>Taxotere</b> (chemotherapy)	
		<b>Lexapro</b> (SSRI antidepressant)			
		<b>Diovan, Diovan HCT</b> (antihypertensive)			
		<b>Tricor 145MG</b> (cholesterol reduction)			
		<b>Geodon</b> (antipsychotic)			
		<b>Provigil</b> (narcolepsy)			
	Estimated Brand Sales	\$15B	\$33B	\$11B	\$18B
	2011	2012	2013	2014	2015

SOURCE: Launches: IMS Health, company estimates.

Figure 22

# Specialty: fastest growing health care cost line item

As previously noted, generics now dominate dispensing by prescription volume. One consequence is that spend for traditional drugs will shrink proportionately; generics can cost as much as 80 percent less than reference brands. At the same time, the specialty pipeline is maturing and utilization is growing rapidly. In fact, specialty drugs are the single fastest growing health care cost line item.

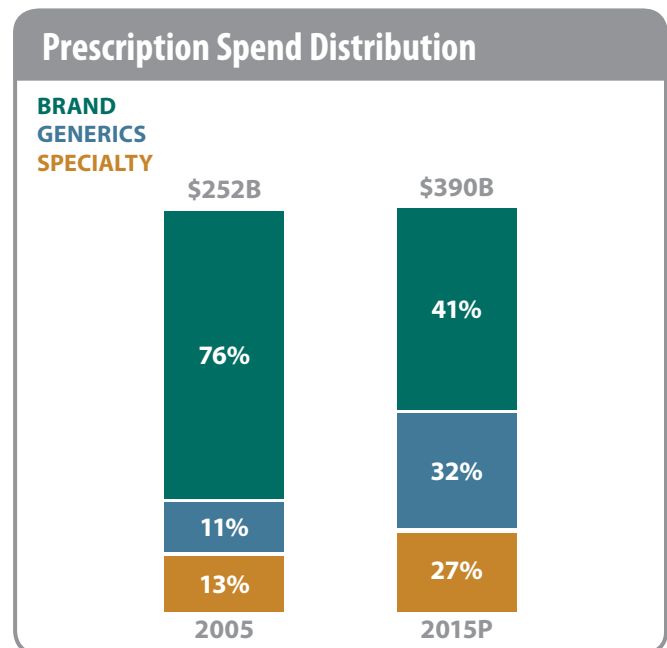
The pipeline is dominated by products targeting cancers and orphan diseases; both categories present particular management challenges. By definition, orphan diseases have few or no current treatments. While the market is small— orphan diseases affect fewer than 200,000 Americans—there is minimal competition and little pressure to control prices.

The first therapeutic vaccine, Provenge, was approved in 2010. More vaccines, which stimulate the body's immune system to fight a disease, are in development. Provenge is a personalized vaccine used to treat prostate cancer. Personalized vaccines are patient-specific vaccines made from an individual's DNA and are likely to be dispensed under the medical benefit. Non-personalized vaccines, which are not patient-specific, are also in development.

## Managing specialty costs

**BIOSIMILARS.** Despite the inclusion of an approval pathway for biosimilars in the 2010 health care reform

legislation, little progress has been made. Issues are complex, and potential biosimilar manufacturers may be forced to use the conventional biologics approval process in order to get their product to market in the near-term. Furthermore, the biosimilar designation could be of little competitive benefit since these biologic products may not be exactly the same as their reference products and clinical trials may be required to prove safety and efficacy. The investment required to conduct trials alone will limit the number of companies able to participate and compete in the biosimilar market space. Minute molecular differences could preclude automatic substitution in any case.



SOURCE: CVS Caremark Enterprise Analytics. Analysis based on published sources and BOB data, 2010.

Figure 23

INSIGHTS

## Specialty: Vital Signs

- 21 new specialty products were approved in 2010
- >40% of new specialty drugs have risk evaluation and mitigation strategies—REMS
- >50% of late-stage pipeline drugs and >70% of applications for new indications are for specialty drugs
- As many as 50 new specialty drugs could be approved in 2011, almost half for oncology
- Up for approval this year: Benlysta, the first new drug for systemic lupus erythematosus in 50 years; more than 1.5 million Americans have lupus
- 35% of new oncology drugs are oral
- Specialty drug spend in the medical benefit is expected to grow 60%, reaching \$105B by 2015<sup>25</sup>
- Specialty drugs now account for 14.2% of our BOB spend

Figure 24

**PREFERRED DRUG STRATEGIES.** As the specialty pipeline matures, some therapeutic classes already have, or will soon have, multiple options; examples include rheumatoid arthritis, human growth hormone, Crohn’s disease, psoriasis, and the erythropoietins. Looking ahead, the near-term pipeline holds additional products for Hepatitis C and half a dozen orals for multiple sclerosis. These classes may present the opportunity to designate preferred products—offering members a co-pay differential—and/or implement step therapy to help manage costs.

**SPECIALTY PHARMACEUTICALS IN THE MEDICAL BENEFIT.** It’s estimated that as much as 50 percent of specialty pharmaceuticals are administered in the physician’s office or other clinical environment, then billed under the medical benefit. In a CVS Caremark analysis, more than half of pharmacy spend in the

medical benefit was for cancer and cancer-related care such as the hematopoietics. We are piloting a management strategy for this spend that does not require restructuring the benefit, applies evidence-based standards to care, and minimizes disruptive changes for the provider and patient.

*Analysts project that 8 of the top 10 drugs in 2014 will be specialty<sup>26</sup>*

**ENSURING APPROPRIATE USE.** Ensuring appropriate use according to evidence-based standards continues to be the most widely applicable and effective specialty management strategy, reducing specialty costs by as much as 5 percent for CVS Caremark clients.

With broader use of personalized medicine, pharmacogenomics and REMS drugs, such management becomes both more complicated and more critical. Pharmacy, prescriber and patient will need to work together to ensure optimal outcomes for the specialty investment.

**Specialty Pharmaceuticals Make Up ~80% of Drug Spend in the Medical Benefit**

Disease/Condition	% Total Spend	Key Specialty Drugs
Cancer	46%	Avastin, Erbitux, Herceptin, Rituxan
Anemia and neutropenia	7%	Aranesp, Neulasta, Neupogen, Procrit
Osteoarthritis and rheumatoid arthritis	7%	Euflexxa, Hyalgan, Orenzia, Remicade
Immune disorders	6%	Baygam, Carimune
Autoimmune disorders (Crohn’s and MS)	2%	Remicade, Tysabri
Hemophilia	2%	Alphanate, Humate-P, Recombinate
Pulmonary arterial hypertension	1%	Remodulin, Ventavis
Macular degeneration	1%	Lucentis, Macugen
Respiratory syncytial virus	1%	Synagis
Lysosomal storage disorders	1%	Aldurazyme, Cerezyme, Myozyme
Growth deficiencies	1%	Humatrope, Omnitrope
All others	6%	
<b>Specialty % of total drug spend in medical benefit</b>	<b>80%</b>	

SOURCE: CVS Caremark Analysis, March 2011.

Figure 25

# CHANGING RULES, CHANGING ROLES: PHARMACY CARE

*How will pharmacy care change to meet the evolving needs of health care stakeholders? In an environment that must reduce costs and improve quality, pharmacy's potential role and contribution goes far beyond simply dispensing prescriptions.*

Some industry experts foresee a two-tier system for pharmacy services. One, a simple distribution model that serves the needs of fast-paced households who'd prefer to check their prescription orders on a smartphone and pick them up like dinner at a drive-through.

The second tier serves a different audience with more complex needs. That audience includes not just the patient with chronic conditions and multiple prescriptions, but the payor and the plan that need to manage that patient's care and costs. Regardless

of whether the patient uses a retail or mail service pharmacy, such individuals are likely to have more frequent interactions with the pharmacy than with any other clinical provider. What's more, the pharmacy has the most real-time data on how the patient is complying with prescribed therapies and whether that therapy meets evidence-based standards.

In a pay-for-performance environment, those factors represent a real opportunity to impact patient behaviors. New models and changing rules—ACOs, medical homes, bonuses based on Star ratings—put a spotlight on measurable pharmacy results such as adherence improvements and closure of gaps in care. When physician practices are already stretched to the limit, pharmacies and retail-based clinics can supplement patient care and monitoring and provide crucial information to help achieve clinical goals.

## Advancing the science

CVS Caremark was focused on pharmacy care well before reform legislation was enacted. Our mail and retail pharmacies serve millions of Americans daily. Over the years, we have been rigorous in grounding those services through research and investment in order to ensure that we are able to deliver maximum value to members, clients and consumers.

## Validating adherence savings

One of the most foundational pharmacy care questions has been the value of adherence. It is generally agreed that people who are adherent use less health care and have lower overall costs. How much adherence lowers total costs, whether those lower costs might reflect an individual's overall healthy behaviors instead of adherence, and whether what's saved in health care offsets higher drug costs—such questions have been less clearly understood.

To answer such questions, CVS Caremark evaluated integrated medical and pharmacy claims data on 135,000 members over a three-year period. This study, published early in 2011 in the journal *Health Affairs*,

### Forces of Change

- Increasing importance of preventive and primary care
- Rising incidence of chronic disease
- Shortage of primary care physicians
- Emphasis on evidence-based standards
- Greater accountability for pharmacy results
- More complex medications to manage

Figure 26

## Health Care Reform

Designates prescription coverage an essential benefit in plans sold through exchanges

Revised Star ratings likely to include adherence metrics

Increases and extends Medicaid drug rebate

Pharmacist

# I KNOW I CAN MAKE A REAL DIFFERENCE FOR PEOPLE.

12.6: average number of retail prescriptions per capita, 2009<sup>27</sup>

Face-to-face counseling by a pharmacist is 2 to 3 times more effective at increasing patient adherence<sup>31</sup>

**10% of cardiovascular patients:**

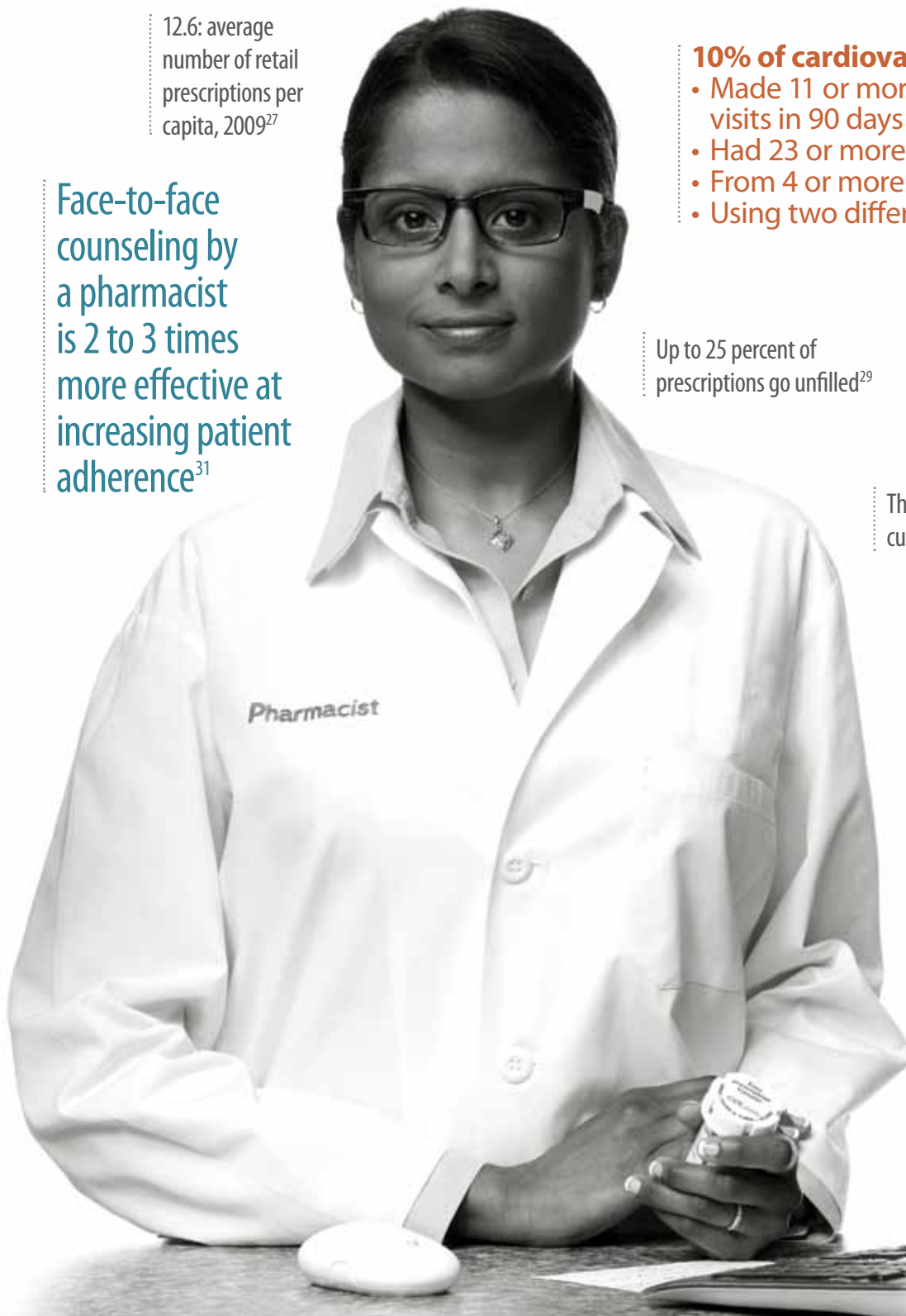
- Made 11 or more pharmacy visits in 90 days
- Had 23 or more prescriptions
- From 4 or more prescribers
- Using two different pharmacies<sup>28</sup>

Up to 25 percent of prescriptions go unfilled<sup>29</sup>

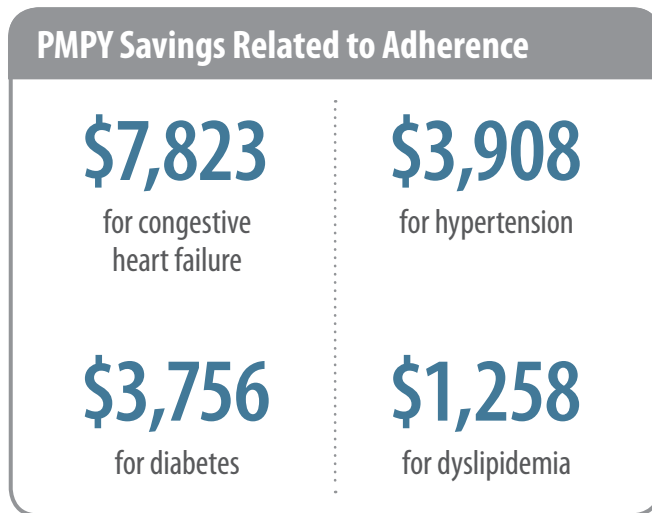
**\$290B**

Estimated annual cost of non-adherence to the U.S. health system<sup>30</sup>

The pharmacy's biggest customer? *The Payor*



established definitively that adherent patients spend significantly less on total care than non-adherent patients.<sup>32</sup> Adherent patients had lower costs mainly due to reduced inpatient hospital days and emergency department visits. Importantly, increases in pharmacy spend were offset by reductions in the use of health care. Benefit cost ratios ranged from 2:1 for adults under age 65 with dyslipidemia to greater than 13:1 for older patients with hypertension.



SOURCE: Medication Adherence Leads to Lower Health Care Use and Costs Despite Increased Drug Spending. *Health Affairs*, January 2011.

Figure 27

### Modeling the opportunity

The CVS Caremark Enterprise Analytics team developed the Pharmacy Care Economic Model (PCEM) to project the financial value of improved pharmacy care. The model makes it possible to predict the disease-specific PMPY health care and productivity cost reduction that can be achieved through improvements in medication adherence and closure of gaps in care utilizing lower-cost brands.

The model was developed using the best of existing literature, including the study described above. It is intended to be a flexible tool for PBM clients that can help prioritize pharmacy interventions. It can be applied

to particular populations, their health profiles, adherence histories and wage levels and can be used to project health care, disability and productivity cost-savings achievable through improved pharmacy care.

To help determine how to improve adherence for a specific plan, the CVS Caremark analytics experts are also developing the Adherence Calculator. The Adherence Calculator will utilize plan-specific data on disease prevalence and adherence levels, and apply performance metrics from management programs to predict adherence improvements based on various strategies. The calculator will be available late 2011.

### Identifying adherence obstacles

Maintaining adherence over time requires multiple member actions and decisions, from scheduling the initial physician visit to ordering and picking up refills, not to mention complying with a daily regimen. Add to these cost concerns, misunderstandings related to physician instructions, forgetfulness and lack of time, and it's easier to understand the low adherence figures widely reported. Our studies have shown that up to a quarter of new prescriptions never get filled, and that patients with chronic diseases generally adhere to their ongoing medication regimen about half of the time.

In order to help our clients achieve the cost reduction potential of adherence, CVS Caremark has undertaken a number of studies aimed at better understanding consumer prescription behavior in regard to adherence. We evaluated the relationship between therapeutic complexity and adherence in one study, which was published in the *Archives of Internal Medicine*.<sup>33</sup> The study was done with researchers from Harvard Medical School and Brigham and Women's Hospital.

- We reviewed prescription claims for 1.8 million members taking statins and 1.5 million members taking ACE inhibitors or ARBs.

### We Know

- Adherence leads to lower health care use and costs
- Complex regimens with multiple prescriptions negatively impact patient adherence
- New prescriptions are 3 times more likely to be abandoned at the pharmacy
- Drugs with a copay over \$40 are 3 to 5 times more likely to go unclaimed
- Face-to-face interactions with pharmacists have more impact on patient adherence

Figure 28

- Over a 3-month period, these patients filled prescriptions for an average of 11 medications. Ten percent of patients filled prescriptions for 23 or more drugs through two pharmacies and made 11 or more pharmacy visits.
- Greater prescribing and filling complexity was associated with lower levels of adherence. In adjusted models, patients with the least refill consolidation had adherence rates that were 8 percent lower over the subsequent year than patients with the greatest refill consolidation.

### Facilitating adherence

Our research suggests that a centralized pharmacy home—similar to a medical home—could help to coordinate a patient’s pharmacy care as well as facilitate collaboration with prescribers, data sharing and the reporting of pharmacy results. Patients could be incentivized to fill prescriptions at a single pharmacy. The pharmacy could help streamline the patient’s therapy by obtaining 90-day prescriptions, synchronizing refills to minimize pharmacy trips, and transferring prescriptions to mail service when appropriate.

Most importantly, we know that pharmacists are very effective at counseling patients on adherence. A retrospective analysis of data published over 40 years found that in-store face-to-face counseling was the most effective, followed by nurses talking directly with patients as they were leaving the hospital.<sup>34</sup>

### PCEM: Savings from Adherence and Gap Closure

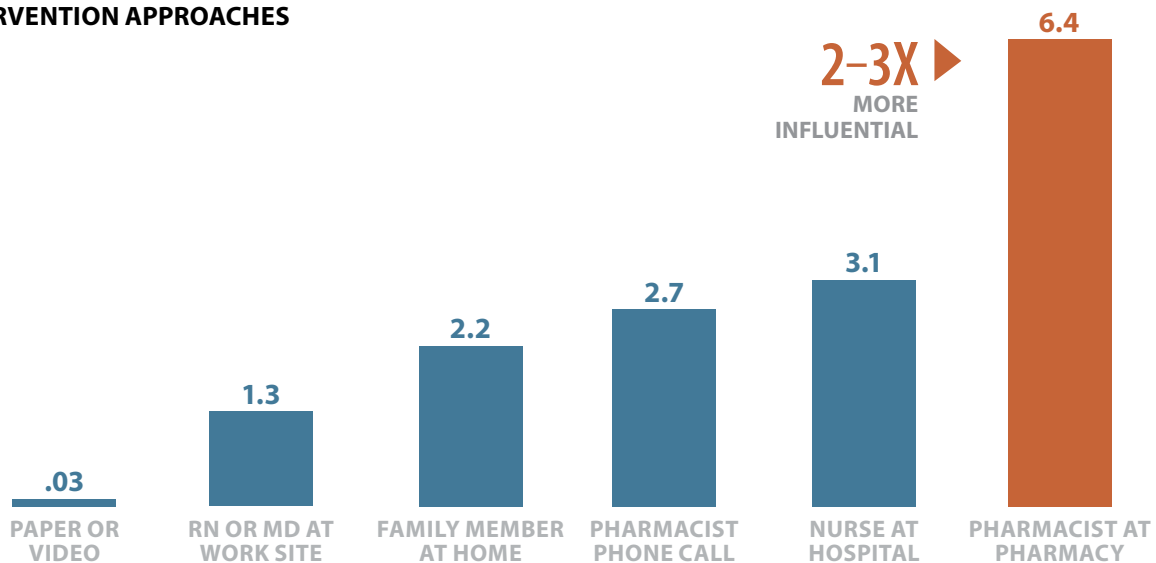
Coronary artery disease	\$2,505,600
Heart Failure	\$2,029,500
Hypertension	\$8,262,450
Hyperlipidemia	\$11,356,800
Diabetes	\$8,812,500
Chronic kidney disease	\$2,256,000
Osteoarthritis	\$4,080,000
Osteoporosis	\$3,600,000
Asthma/COPD	\$2,262,400
Depression	\$6,768,000
Bipolar disorder	\$542,850
Schizophrenia	\$80,700
Seizure disorder	\$1,443,200
<b>Total Savings Opportunity</b>	<b>\$54,000,000</b>

SOURCE: CVS Caremark Analysis, Enterprise Analytics, 2010.

Figure 29

### Pharmacist Counseling More Than Twice As Effective

#### RELATIVE EFFECTS OF INTERVENTION APPROACHES



SOURCE: CVS Caremark Analysis. Reconsidering the Costs of Preventing Cardiovascular Disease in a Time of Low-cost Generic Therapy. Submitted 2010.

Figure 30

## Outfitting the pharmacy home

Today, the typical pharmacy is set up to provide for acute care needs. To meet the more complex needs of payors and patients with chronic conditions, most pharmacies will need to adapt and invest.

Enhanced data connectivity will be crucial—between prescriber and pharmacy and between the pharmacy and payor or other stakeholder such as an ACO. Over the last few years, ePrescribing has proliferated. 250,000 physicians transmitted 280 million prescriptions electronically in 2010—nearly 50 percent more than the year before.<sup>35</sup> Current ePrescribing technology can put information on a member's prescription history and drug coverage in front of the prescriber during an appointment. The ongoing incorporation of evolving evidence-based guidelines and pharmacogenomic recommendations will help prescribers and pharmacists manage the more complex medications in the pipeline with greater consistency.

Workflow in the pharmacy will have to be evaluated to ensure that pharmacists are available to interact with and counsel patients. New solutions should be considered; can a high-frequency patient make an appointment to consult with a pharmacist? Will the pharmacist have access to all pertinent patient information to make each interaction as impactful as possible? Most importantly, are the pharmacists committed to their role in a “pharmacy home”?

## Changing roles: CVS Caremark

We believe the pharmacy home concept has the potential to reduce the fragmentation and complexity that have driven up costs in U.S. health care. We also believe that the CVS Caremark integrated model and our comprehensive approach to pharmacy care provide a strong foundation for this potential expanded role in the health system.

## The Retail Health Clinic

The same forces that are changing the pharmacy paradigm make the concept of the retail clinic more relevant to today's payors and patients than ever before. Key among these forces? The worsening shortage of primary care providers, the rising incidence of chronic disease, and the ongoing pressure to reduce costs.

MinuteClinic is the largest and fastest growing retail-based health clinic in America, having treated more than eight million patients with an overall satisfaction rating of 94 percent. As reported in the September 2009 *Annals of Internal Medicine*, its quality of care is similar to or better than that at a physician's office, urgent care center

or emergency department and the cost is 40–80 percent less.<sup>36</sup> A CVS Caremark analysis revealed that employees who used MinuteClinic had 6–8 percent lower health care costs over a year. MinuteClinic is expanding over the next several years to more than 1,000 locations by 2015. We are currently evaluating opportunities to align with health systems, health plans and payors to meet their evolving needs in the changing U.S. health system.



- Protocols based on evidence-based guidelines
- Joint Commission accredited
- Walk-in service 7 days a week, including evenings and holidays
- Services: basic acute medical problems, physical exams, vaccinations, monitoring of chronic conditions



We are able to offer members both mail and retail access. Our recent analysis shows that with choice of access, adherence improves. Follow-up studies on Maintenance Choice, which gives members the options to get their prescriptions either through our mail service pharmacy or CVS/pharmacy locations for the same co-pay, showed that 30 percent more members were adherent. What's more, the integrated model could help achieve the consistency of care demanded by new rules and opportunities.

*Every member interaction is an opportunity to improve outcomes for the plan and the member*

Due to our integration and investment, we have the capability to share pertinent patient data in the mail and retail pharmacies; with plan authorization, we share PBM data for clinical programs in compliance with HIPAA. This supports consistent, informed, personalized counseling on both clinical and savings opportunities. Participants in our Pharmacy Advisor™ program received such counseling and had significantly better closure of gaps compared to a control group—90 percent better with face-to-face counseling, and 60 percent better with phone counseling. In 2011, more than 10 million members will have access to Pharmacy Advisor.

### We Know

- The pharmacy infrastructure must support effective pharmacy care
- Pharmacy care should cause as little disruption as possible to physician practice
- Evidence-based standards need to be applied everywhere
- Providing all relevant information at time of prescribing can make a critical difference

Our metrics-based integrated member communications strategy drives ongoing improvement by constantly analyzing what works and what doesn't, continually setting the bar for response and effective change higher and higher. In our member communications, we evaluate and refine messaging, imagery, timing, frequency and other factors to improve response rates, and we have the data resources to learn from members' behavior and adapt strategies to drive better outcomes.

With this infrastructure and investment, CVS Caremark looks forward to working with clients to develop and implement new strategies to reduce total costs and improve outcomes as our system evolves and adapts.

Figure 31

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The CVS Caremark 2010 trend cohort group includes funded clients with retail claims for the calendar year. Average eligibility must be within  $\pm 20\%$  period over period. The trend cohort excludes Puerto Rico / Virgin Islands / Guam clients. The trend cohort does not include Medicare Part D plans. The specialty trend is based on the universal specialty drug list.

