INSIGHTS 2012

ADVANCING THE SCIENCE OF PHARMACY CARE

connected

CVS CAREMARK

2012

Tremendous shifts are underway in health care. We're midway between passage of the Affordable Care Act (ACA) and the implementation of its major provisions, but the market is moving now, and not only to accommodate reform. Regardless of what happens on the national front, all of us in health care recognize the need for new solutions.

Health care stakeholders are evaluating options, next steps, and new models. In many cases, those next steps involve forming new alliances. Plans and providers are joining together to explore new ways to expand capabilities and improve quality while reducing cost.

Collaboration is at the base of many of these new solutions, whether they involve a new care delivery model like an ACO or determining how to build a formulary that will meet member needs and manage health conditions cost-effectively. Importantly, these new alliances will ease the transfer and sharing of data needed for better coordination of care and compliance with quality measures—all of which are also tied to the reduction of costs.

connected

It is these connections that led us to the theme for INSIGHTS 2012. In this year's report, we examine some of the ways health care stakeholders are connecting and what they hope to achieve through those connections.

We also want to share with you what we've learned about being connected here at CVS Caremark. As a health care company providing services across the country, CVS Caremark is deeply involved in developing new solutions. We believe pharmacy care is an integral component of overall health management for the member, and that our pharmacists and nurse practitioners have a central role to play in delivering affordable, quality care. Because of our unique integrated pharmacy model, we've been able to provide PBM clients and members new opportunities and support. We've also found that sharing perspectives and vision has changed how each enterprise entity operates, interacts and functions—sometimes in unexpected ways. These changes are fundamental to how we are reinventing pharmacy.

I welcome your feedback on these changes and on this report. I also invite you to visit cvscaremarkfyi.com to learn more about all the ways we are helping people on their path to better health. On behalf of CVS Caremark, I want to express our thanks for the opportunity to work with you.

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INSIGHTS

One Overwhelming Concern

cost

U.S. health care spending[1]

$2.6T
per year

18%
of GDP

$8,402
per person

There's one overwhelming concern everywhere in health care: the unsustainable growth in costs. It's the single biggest category of government spending—18 percent in 2011. It's tied to the federal deficit, unemployment rates, and stagnant wages. And it's had a profound effect on American families. A 2009 study attributed 60 percent of U.S. bankruptcies to medical bills.[2] In a recent Census Bureau report, the single biggest factor increasing the poverty rate for seniors was out-of-pocket health care costs.[3]

Yet health spending growth has actually slowed over the last few years. In 2010, health spending in the U.S. grew more slowly than it had in over 50 years.[4] In 2011, physician office visits dropped to their lowest level in a decade,[5] and utilization of pharmacy services, after several years of slow growth, was actually flat.[6]

Analysts attribute this slow growth to the recession—people continue to tighten their belts and focus on "necessities" even as the economy slowly recovers. While the number of people with insurance has declined over the last few years, even the insured are going to the doctor less frequently. For many people, concerns about job and financial security, debt levels, and higher deductibles, copays and coinsurance are likely impacting the decision to forego care.

Resurgence of utilization is inevitable and necessary. Sooner or later, health needs must be addressed. In addition to this pent-up demand, experts cite the aging of the population and high levels of obesity and chronic disease as eventual drivers of increased health care utilization. If 32 million Americans gain coverage, as originally projected with passage of the Affordable Care Act, analysts expect that utilization will spike as the newly insured enter the market and access services they have been delaying.

Reform's 3 Goals

The 2010 Affordable Care Act (ACA) attempted to accomplish three interrelated goals—increasing insurance coverage (or access), improving care quality and reducing cost. Central to the legislation is the individual mandate: most Americans would be required to have health insurance by 2014 or pay a fine. The ACA put in place a number of initiatives to accomplish this coverage expansion, including establishing Health Insurance

Figure 1

PHYSICIAN AND CLINICAL SERVICES SPENDING

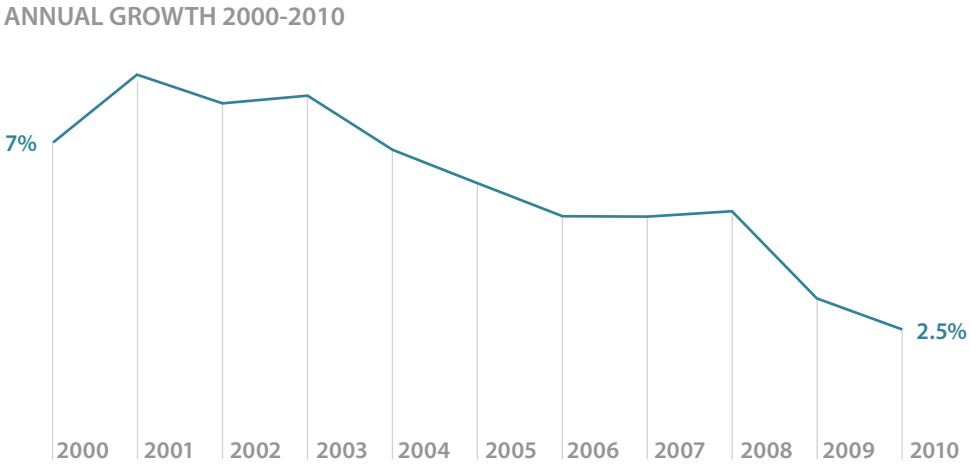
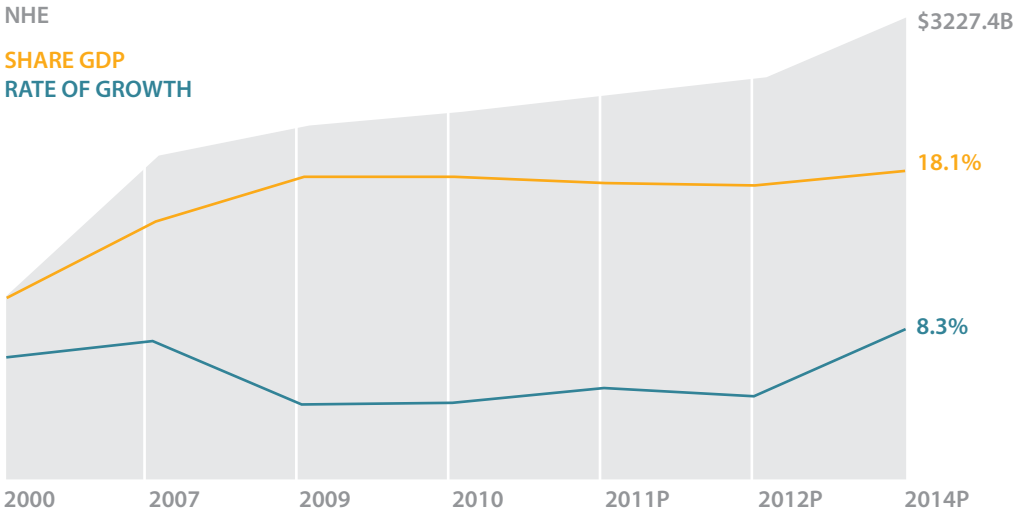


Figure 2

NATIONAL HEALTH EXPENDITURES



Spending for physician and clinical services has been declining; overall growth in health spending has been flat, but is projected to surge in 2014.

2.5 M
More young adults now have coverage

2.65 M
Seniors Saved Money in the Donut Hole

24 M
Seniors Got Free Preventive Care[7]

ACA So Far

- **Extended** dependent coverage up to the age of 26
- **$250 rebates** to help seniors with drug costs in the donut hole (2010)
- **50% prescription** drug discounts for seniors in the donut hole (2011)
- **Increased coverage** of preventive services
- **High risk** pools for people with pre-existing conditions
- **Prohibition** on rescinding coverage
- **Elimination** of lifetime limits on insurance coverage
- **Health insurance** tax credits for small business
- **Review** of "unreasonable" insurance rate hikes
- **Imposition** of rebates based on Medical Loss Ratios for health plans
- **Funding** for innovations to reduce costs

INSIGHTS

2014

Exchanges, expanding eligibility for Medicaid, extending coverage to young adults on their parents' plans, and making it easier for small businesses to provide coverage.

There are currently 50 million uninsured Americans. Providing coverage to much of this population is expected to sharply increase health services utilization in the short term, but also to help manage cost ultimately. When insured, this population is expected to access more preventive care and timely treatment of health problems, thereby improving health outcomes and reducing costs. Now, the costs of care for the uninsured are shifted—spread throughout the system and reflected in higher prices for all.

The individual mandate is the central tenet of the 2010 health care reform bill. It has been challenged as unconstitutional, as has the expansion of Medicaid. Both issues will be reviewed by the Supreme Court this year, with rulings expected by mid-summer. The individual mandate has also been identified as a concern by presidential hopefuls, several of whom have promised to repeal the Act should they get elected. The individual mandate has also been shown to be unpopular in public opinion polls; 67 percent held an unfavorable view of it in January 2012 even though 50 percent of respondents favored expanding the law or keeping it as is.[8]

While the future of the ACA's individual mandate is uncertain, many provisions of the ACA have already been enacted and embraced. These parts of the Act would probably be difficult to reverse. Moreover the 2014 deadline for madated individual coverage looms.

The New Insurance Marketplace

Many changes are underway to effect the expanded coverage intended by the Affordable Care Act. Most people who are not now covered by their employer's plan are expected to access coverage through the state-based Health Insurance Exchanges, which are in various stages of development across the country. Starting in 2014, members of Congress will also get their insurance coverage through the Exchanges.

Essentially, the Exchanges will enable individuals and small businesses to compare insurance offerings on price, coverage and quality. People will also be able to determine whether they're eligible for premium subsidies and tax credits to

continued on page 8

improving access

The Affordable Care Act mandates that most Americans have health insurance and that every state have a Health Insurance Exchange by 2014. Each state will determine how to build and operate their Exchange, including which insurers qualify to offer coverage and what kind of benefits must be included.

Every state must have a **health insurance exchange** by 2014

Currently **50 million** people in the U.S. are uninsured.

24 million people are expected to access coverage through the Exchanges by 2019.[10]

Low and moderate-income people will be able to apply for subsidies to make insurance more affordable.

69% 2001

60% 2009

Since 2000, the number of smaller companies providing coverage has decreased.[9]

Small businesses —with fewer than 100 employees— could use the Exchanges to buy coverage for their employees, or provide vouchers to help employees buy insurance.

People and small businesses will use the Exchanges to compare and purchase insurance.

Both health insurance premiums and workers' contributions have more than doubled in the last 10 years.[11]

health insurance premiums

2001 $5,269

2011 $10,944

worker contributions

2001 $1,787

2011 $4,129

If the ACA is not struck down or repealed, there will be a flurry of activity for states to build their Exhanges—more than half have made little progress. In 2013, the federal government will step in to establish Exchanges where the states have not made sufficient progress.

Infographic by Column Five

help them buy insurance. Many of those seeking insurance on the Exchanges will find it in Medicaid. Under the ACA, Medicaid eligibility expands to 138 percent of the federal poverty level in 2014—$38,843 for a family of four in 2011.[12]

The Future of Employer-Sponsored Coverage

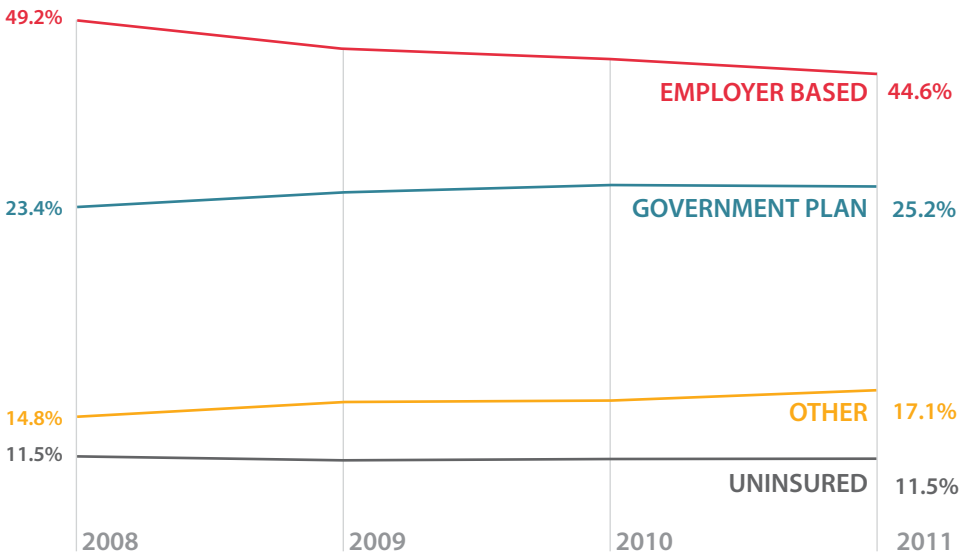
Today 45 percent of all Americans — 158 million—are covered by employer-sponsored insurance. That is 62 percent of all Americans with insurance.[13] The ACA supports continuation of this mainstay of American coverage. It provides small business tax credits to help fund coverage, imposes penalties and fees for employers that don't provide affordable coverage, and opens the Exchanges as an option for small businesses to seek coverage. After 2017 larger businesses will also be able to use the Exchanges to access insurance coverage for their workers.

Analysts vary in their estimation of how ACA will affect employer-sponsored coverage. The Congressional Budget Office predicts a small loss—1.9 percent—while Rand predicts a gain of more than 8 percent by 2016.[14] Continuation of coverage will vary based on business sectors, salary scales, and how competitive the labor market is for specific skills. It will also depend to some degree on how the Exchanges perform. Will they actually be able to provide more affordable coverage and lessen the employer's administrative burden? Will employees warm to the idea of using the Exchanges to choose their own plan? There is wide agreement that whatever early erosion happens will occur among small employers, especially those with lower-wage workers who may be eligible for subsidies on the Exchanges. With the improvements in Medicare, it's also expected that the erosion in employer-sponsored retiree coverage will accelerate.

But the question isn't just *whether* employers will continue to sponsor coverage—it's also about the level of coverage they will provide. Some

Figure 3

AVERAGE HEALTH INSURANCE COVERAGE IN THE US 2008-2011
AMONG ADULTS AGED 18 AND OLDER



employers are likely to move from a defined benefit plan, which is most widely used today, to a defined contribution plan, where the employer sets aside money for the employee to seek coverage on his own through the Exchanges. Other trends focus on increasing employee cost share through higher copays and deductibles and consumer directed plans. It's expected that when employees have to pay more out-of-pocket, they'll make more careful use of health care services.

All these factors add up to a much expanded individual market for health insurance and the rise of the retail health consumer—a seismic market shift for health plans.

Major Market Shift for Health Plans

Health care reform is expected to enlarge the health insurance market by over 30 million people. For health insurance providers who have relied on the small group market, the shift from business-to-business to business-to-consumer will require many strategic adjustments.

Consumers shopping for health benefits are likely to be very cost-conscious and have specific concerns based on their personal and family health needs. They are expected to be more open to limited networks, formularies, and benefit plans if they can lower their premiums. Plans will need to define their targeted market segments, develop offerings that will help attract a diversified risk population and learn how to connect with those new retail health consumers.

At the same time, to maintain their foundational small and midsize group market, health plans will need to demonstrate their ability to control costs. Larger groups demand that plans have the flexibility to provide custom products, in-depth analytics and comprehensive administrative support.

Medicare and Medicaid

Medicare and Medicaid currently cover more than 100 million low-income, disabled and/or elderly Americans. As stated above, most of the individual market is expected to get insurance through Medicaid, while the Medicare population will swell due to aging of the population. These expansions are projected to push the government portion of national health spending to just under 50 percent.[15]

Plans providing coverage for these groups face multiple challenges: reduce costs and improve quality while managing high-risk populations and complying with government regulations. Deficit-strapped states are already making cuts to Medicaid services and payments to providers. Reducing Medicare payments to physicians has been a long-term contentious political issue, and early in 2012 the scheduled 27.4 percent reduction was once again delayed, this time until the end of the year. In terms of improving quality, CMS is placing increased emphasis on star ratings for Medicare Advantage plans, offering a bonus for those earning four or more stars.

In addition to facing such significant market changes, health plans are already dealing with Medical Loss Ratio limits set by the ACA. Plans may not allocate more than 15-20 percent of premium revenue on non-care-related expenses. Utilization of health care services in 2011 was lower than some plans projected, with the end result that they will be paying rebates to members in 2012, emphasizing the need for tight management and lean administrative structure.

Health plans are moving now to prepare for these changes. One prevalent trend is mergers and acquisitions. Plans are looking to broaden market share and expertise, to benefit from economies of scale, to invest in the systems that will be needed to achieve the efficiencies demanded in the market. Plans are also acquiring provider networks to facilitate

the tighter coordination of care requisite to achieve quality goals and succeed with new delivery models.

Moving to Pay for Performance

Improving quality of care is a fundamental goal of health reform, and the Affordable Care Act addresses that goal in a variety of ways—by making preventive and primary care more accessible and investing in health information technology, for example. The approach to quality improvement that is generating the most market activity however is the movement away from fee-for-service. Increasingly government and private sector programs are linking provider payment to performance.

Under the ACA, all health plans participating in the Exchanges must be NCQA-accredited and report HEDIS data, which measures the clinical quality of care provided to members. Required data include measures of vaccination and immunization, management of cholesterol and hypertension, and appropriate use of medication for specific populations.

CMS originally instituted the Five Star Quality Rating System to help consumers choose a Medicare Advantage (MA) plan by providing transparent information on how a plan performed. Areas evaluated include preventive services, condition management and patient experience. Despite web availability of such ratings, few seniors enrolled in top-rated plans according to a 2010 report.[16] In 2012, however, higher rated plans will be eligible for quality bonuses and larger rebates based on their star ratings. Moreover, it is expected that higher-rated plans will attract more enrollments while lower-rated plans will not be able to participate.

The law established the Center for Medicare and Medicaid Innovation to test new methods of delivering care that would improve quality and slow the rate of cost growth. Several of these trials focus on promoting better coordination of care. Bundling payments is seen as one way to incentivize physicians, hospitals and other care providers to work together to manage care cost-effectively. In this Medicare/Medicaid trial, prospective care providers would bid on a target price for a given service—care for a patient with a heart attack, for example. After the episode, total payments would be compared with the target and care providers could share in any savings.

Accountable Care Organizations

Starting this year, the ACA provides incentives for physicians and other providers to join together to form Accountable Care Organizations (ACOs) for Medicare beneficiaries. The providers in an ACO agree to be jointly accountable for the health of their patients. If they are able to keep costs down and meet quality targets, the providers would keep a portion of the savings. The government has defined 33 quality measures for ACOs, such as reducing hospital readmissions, emergency room use and hospital-acquired infections. The providers will have to work together seamlessly to coordinate care for their patients, avoiding unnecessary or duplicative tests and procedures. Each of these ACOs must assume care for at least 5,000 Medicare beneficiaries for three years.

Some large insurers are also looking into forming ACOs for the private market, and they are also being formed by large multispecialty physician groups. In some parts of the country, hospital systems are buying physician practices with the goal of becoming an ACO that employs their providers.

The Patient-Centered Medical Home

The Patient-Centered Medical Home (PCMH) is another approach to achieving better coordination of care. A PCMH could be part, or even the foundation, of an ACO.

(continued on page 12)

increasing quality and reducing cost

Health Care Reform provides incentives for new care delivery models as ways to improve quality and reduce cost. Two models generating great interest are Accountable Care Organizations (ACOs) and Patient-Centered Medical Homes (PCMHs).

1 accountable care organization

In an ACO, providers agree to work together and be accountable for care of patients.

If they manage to save money on care and meet quality standards, they will share savings with the payor—Medicare, Medicaid or a private insurer.

Examples of quality measures include reducing hospital readmissions, emergency room visits, and hospital-acquired infections.

CMS estimates that ACOs will save Medicare over

$940 million in 4 years[17]

2 patient-centered medical home

In a PCMH, each patient has a primary clinical partner who coordinates care with other providers.

If the group manages to reduce costs, they may share the savings.

Emphasis is on primary care, which may reduce an individual's health care costs by as much as 33 percent.[18]

$3,116
Annual cost per patient receiving coordinated care

$15,100
Annual cost per patient not receiving coordinated care

That's a cost reduction of nearly

80%[19]

Both ACOs and PCMHs depend on care providers working together to better coordinate care for patients. By reducing fragmentation of care, it's hoped that these models can increase quality and reduce costs.

Infographic by Column Five

(continued from page 10)

The PCMH model and concept has existed for years, but with little standardization and tracking, it's been difficult to gauge results. The ACA authorized testing of the concept under the Center for Medicare and Medicaid Innovation. Insurers, the health care ratings organizations (AHRQ, NCQA) and TRICARE (which provides health benefits for military personnel) have trials or demonstration projects.

Like ACOs, the PCMH is typically made up of a multidisciplinary group of providers and coordination of a patient's care is a prime goal. The medical home concept is distinguished by its emphasis on the patient's relationship with a primary clinical partner, who could be a primary care physician, a nurse practitioner, or other health care professional. This partner works with the patient to address care issues and takes the lead with referrals to other PCMH providers as needed.

Some hallmarks of the PCMH concept include broader access to providers, including outside office hours, through email, Web, and phone; access to additional care providers beyond the primary care physician, such as nurse practitioners; proactive preventive care; and compensation for a range of activities related to patient care, including care management. The medical home concept recognizes the value of services such as care coordination and patient education, not just face-to-face physician office visits.

One big reason for the current interest in the Patient-Centered Medical Home? The body of evidence indicating that people with a primary care provider have lower overall health care costs. In fact, physicians in a PCMH may share in the savings from reduction of hospitalizations and adverse events or may be eligible for bonuses if certain quality metrics are met.

The Primacy of Data

Central to all of these efforts is the ability to share and utilize data. From comparing coverage options and calculating eligibility

evolving connectivity

Health care cost and quality solutions require functional, interoperable data systems. Systems and providers are at many different stages of evolution—from the purely administrative to sharing patient information to providing decision support at the point-of-care.

Infographic by Column Five

(continued from page 10)

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Infographic by Column Five

on the Exchanges to tracking performance data for a stars bonus to sharing the results of a patient's test within a medical home—all depend on having functional, interoperable data systems. It's one of the reasons for the consolidation going on in the health care environment. And it's one of biggest challenges the individual stakeholders and the government face. Lack of uniform systems, disparities between outmoded and upgraded technologies, and varying levels of technical expertise have made connecting people, providers and institutions a slow and difficult endeavor. Bringing a single medical practice up to speed can be expensive, and for maximum benefit the systems needs to be interoperable, which requires broad regional collaboration.

Thus, the federal government has a number of initiatives to provide funding support that will speed adoption of Health Information Technology (HIT). The ACA provides for administrative simplification, which will reduce unnecessary paperwork and develop uniform electronic standards. This alone is expected to save the federal government $20 billion over 10 years.[21] Far greater savings are projected for the private sector.

The Health Insurance Exchanges are intended to provide a streamlined application process. Consumers will be able to submit a single application through a web portal. Through CMS, the federal government is offering matching funds for the development of Medicaid eligibility and enrollment systems for the Exchanges and has already issued guidance on Medicaid Information Technology that would enable increased sharing of electronic health records (EHR) across states. The intention is that innovator states will share best practices.

The 2009 economic stimulus package also included funding and incentives for HIT initiatives. Importantly, the act created a committee that would set standards so that systems could communicate with one another. And in 2006, the Department of Health and Human Services made it easier for hospitals to help practice groups invest in information technology.[21]

The focus, support, and stimulus have had an effect; use of HIT is growing. Between 2010 and 2012, the percentage of hospitals that had adopted electronic health records more than doubled—from 16 to 35 percent.[22] And a Centers for Disease Control (CDC) survey in 2010 showed that, for the first time, more than half the surveyed physician offices—50.7 percent—had EMR systems, up from 35 percent in 2007.[23]

The CDC survey counted as EMR any electronic system that was not used exclusively for billing. Billing and claims processing is the most basic functionality, and such facilitation of administrative tasks is helping to reduce costs, but electronic systems promise much broader benefits, especially in terms of improving quality of care. Consistency of patient records and accurate transmission of orders for tests and prescriptions help to reduce errors. Sharing those records is fundamental to the care coordination and management that characterizes the new delivery models, and analyzing those records will help to identify care-improvement opportunities. Interoperability will allow those opportunities to be communicated to other providers. On the broadest scale, digitizing medical information will help identify cost-effective approaches to treatment, build accurate projections and better manage population health for the long-term reduction in spending growth.

connected

Public debate about health care reform continues, but the changes it has set in motion will be difficult to rescind. While health care stakeholders may not have entirely adapted to them, the connections already fostered will be difficult to sever. Making these connections work as intended will require some fundamental changes in approach and operations, and the full impact of the changes may not be evident for several years.

$30B

estimated savings/yr if all health transactions were electronic[24]

3 in 4

physicians believe information technology is a reason to collaborate with hospitals

1 in 2

use Internet tools to inform and engage patients

6 percent

use social media to communicate with patients[25]

2011 Prescription Drug trend

74.1%

2011 CVS Caremark BOB Overall Generic Dispensing Rate

Low utilization. High GDR. Two forces combined to drive prescription drug trend down in 2011. Utilization trend PMPM was entirely flat in the employer segment. In the health plan segment, a negative 0.6 percent. As reported earlier, economic uncertainty and persistent unemployment have dampened health care utilization overall. Quite simply, fewer doctor visits translate into fewer prescriptions.

In our commercial segments, price, was the primary driver of trend. In the commercial segment, specialty-only gross trend PMPM was 17.2 percent; without specialty, gross cost drug trend PMPM was a negative 0.3 percent.

Utilization was higher in Medicare and Medicaid, which was primarily due to increases in enrollment. More baby boomers are entering retirement, and employers are cutting back on retiree benefits. The economy and un/under-employment increased enrollment in the Medicaid segment, further burdening cash-strapped states. In response, some states cut back on benefits or increased enrollees' cost share.

Drug mix, as it has for several years, pushed trend down—drug mix trend

Managing Pharmacy Trend: New Challenges

Price was the largest trend driver in 2011 in our commercial (employer and health plan) segments, AWP per day trend showed price increases across specialty and non specialty brands. Since 2007, brand inflation has increased 27 percent.

Formulary and plan design strategies and a stream of patent expirations have successfully driven generic dispensing rates to the mid 70s and above. Brand manufacturers, facing these challenges along with less-than-robust prospects for new products, have acted to protect their margins by increasing prices and going direct to the consumer with incentives to reinforce brand loyalty. Copay coupons, which reduce or eliminate member copays for branded drugs, have flooded the market and are undermining benefit designs meant to promote the use of the lowest-cost, clinically appropriate products. With these coupons, members' costs are lower, but payors have to pick up the bulk of the brand's cost, much more than what they would pay had the member taken the generic instead.

Use of the coupons is growing, including in the specialty sector despite the lack of true generic competition. Due to both new product approvals and expanded indications, preferred product strategies are increasingly being used in specialty categories with multiple treatment options. Moreover, this spring the FDA provided draft guidance for biosimilar development, providing guidelines for an approval pathway for generic alternatives to brand-name specialty pharmaceuticals. With the prospect of increased competition we expect further extension of couponing in the specialty marketplace.

CVS Caremark takes such market developments into account when developing our formulary and plan design strategies, which promote the use of generics whenever possible but provide for the appropriate use of single-source brands as necessary. We have worked with clients to implement narrower formularies, DAW penalties and step therapy policies that help to promote the use of clinically appropriate and cost-effective medications. Other strategies include promoting the use of 90-day supplies through mail service pharmacy and excluding use of the coupons in the plan design.

Fast-rising costs are also prompting plan sponsors to re-evaluate network strategies. For an increasing number of plans, the more favorable pricing of a narrowed network outweighs the value of providing the broadest member access. The ever-growing footprint of the large retail chains makes network implementation without a select major player or two a realistic opportunity. We have found that a nation-wide network of 45,000 pharmacies puts most members—generally 90% or more—within five miles of a participating pharmacy.

Marketplace developments that raise client costs reinforce the need for proactive management. In-depth reporting, forecasting and analytics can help plan sponsors head off issues like couponing before they take hold and can help determine how to best serve members and achieve favorable pricing through network strategies. In the evolving health care landscape, all stakeholders—including payors, members and providers—will be challenged to take on a more aggressive role in controlling costs.

The Real Cost of Copay Coupons

Cost of a Brand Drug with Coupon

Oleptro, 30-day supply	$108.00
Member copay	$ 40.00
Less coupon value	$ 30.00
Member pays	$ 10.00
Plan net cost	**$ 68.00**

Cost for the Generic Equivalent

trazadone, 30-day supply	$ 10.20
Member copay	$ 10.00
Member pays	$ 10.00
Plan net cost	**$ .20**

Illustrative example

According to PCMA, copay coupons are projected to increase plan sponsor drug costs over the next 10 years by

$32B[1]

$5.8B

in unnecessary costs attributed to the prescribing of brand name cholesterol drugs[2]

(continued from page 14)
measured a negative 1.2 percent for the commercial segments.

The specialty sector has trended in the double digits for more than a dozen years, driven by both high utilization and price. In 2011, specialty utilization trend ranged from a "low" of 4.8 percent to a high of more than 10 percent across the BOB. In the commercial segments, gross cost per day trended at 11 percent and above for specialty drugs. These figures reflect specialty's robust pipeline and the launch of new drugs, the increase in indications for some products, and the lack of generics to moderate trend. Specialty pharmaceuticals accounted for 16.9 percent of BOB drug spend, a jump of more than 2.5 percent over 2010.

Utilization

We calculate utilization as the change in days supply per member per month (PMPM). Utilization is affected by many external factors.

- **Approval of new drugs**—The U.S. Food and Drug Administration (FDA) approved more new drugs in 2011 than they had since 2004, including eight new cancer drugs
- **Approval of new indications**—For example, in 2011, an advisory panel recommended that Vytorin be approved for prevention of cardiovascular disease in some chronic kidney disease patients
- **Changes in clinical guidelines**—Last year, the American Academy of Pediatrics updated its guidelines for the diagnosis of attention deficit hyperactivity disorder (ADHD), broadening the targeted age range to 4 to 18 years, potentially increasing the use of ADHD stimulant drugs
- **Reformulations**—Such as the introduction of combination products or once-a-day dosing
- **Changes in treatment guidelines or medical research**—For example, the FDA recently raised questions about side effects of statins, including increased risk of diabetes and memory loss
- **Changing demographics**—As our population ages, drug utilization goes up
- **Coverage**—About 2.5 million young adults gained coverage under their parents' benefits in 2010 as a result of a provision in the Affordable Care Act (ACA). Compared to other age sectors, people between the ages of 18 and

2011 CVS CAREMARK BOB DRUG TREND

OVERALL TREND				SPECIALTY-ONLY GROSS TREND		
Gross Trend PMPM	**Utilization Trend PMPM**	**Gross Cost per Day Trend**	**Business Segment**	**Gross Trend PMPM**	**Utilization Trend PMPM**	**Gross Cost per Day Trend**
2.1%	0.0%	2.0%	Employers	16.5%	4.8%	11.1%
2.2%	-0.6%	2.7%	Health Plans	19.1%	6.6%	11.7%
4.3%	3.4%	0.9%	Medicare Part D	18.1%	9.9%	7.5%
4.9%	3.2%	1.6%	Medicaid	18.7%	10.29%	7.7%
5.4%	1.9%	3.5%	TPAs	25.2%	10.6%	13.2%

Figure 1

26 are not heavy users of prescription therapy

- **Pharmaceutical promotional spending**—Which includes physician detailing, copay assistance, journal and direct-to-consumer advertising and other tactics

For the last several years, utilization has been strongly affected by the economy. Utilization dipped in 2008, and rebounded somewhat in 2009 and 2010. In 2011, consumer confidence was at a low point for much of the year, dampened by persistent unemployment, which hovered around 9 percent until the last quarter. Moreover, when we account for inflation, real wages fell in 2011.[3] People took jobs that paid less or were only part-time. Some employers stopped offering health coverage. While unemployment has improved somewhat, it's expected that consumer confidence and spending will not show a marked turnaround in the near future.

Drug Mix

Lipitor, Zyprexa, Levaquin, Concerta and Taxotere faced generic competition for the first time in 2011. Prior to launch of their generic equivalents, annual sales for these brands totaled more than $20 billion. The total (mail and retail) generic dispensing rate grew steadily throughout the year, reaching just under 75 percent in December.

The new generics helped push GDR higher, but we can't discount economic pressures. Price-sensitive consumers and cost-conscious payors both looked to generics for relief. Copay differentials between tiers have increased. The average differential

2011 Blockbuster Generic Launches

Lipitor
(cholesterol reduction)

Zyprexa
(antipsychotic)

Levaquin
(anti-infective)

Concerta
(stimulant, used for attention deficit disorder)

Taxotere
(cancer)

Figure 2

2011 BOB TOP THERAPEUTIC CATEGORIES

	CATEGORY	TOP DRUGS	GROSS TREND	UTILIZATION TREND	YTD DECEMBER 2011 GDR
1	HMG CoA Reductase Inhibitors (cholesterol reduction)	Lipitor, Crestor, simvastatin (Zocor)	4.1%	2.0%	59.4%
2	Proton Pump Inhibitors	Nexium, pantoprazole (Protonix), omeprazole, Aciphex	-11.8%	0.3%	67.1%
3	Multiple Sclerosis	Copaxone, Avonex, Rebif	19.8%	4.5%	N/A
4	Insulin	Lantus/Lantus Solostar, Novolog, Humalog	13.5%	5.2%	N/A
5	Sympathomimetics	Advair Diskus, ProAir HFA, Symbicort	1.3%	-1.8%	13.7%
6	Antihypertensive Combinations	Diovan HCT, amlodipine besylate/ benazepril (Lotrel), Benicar HCT	-5.6%	-2.7%	63.7%
7	SNRI Antidepressants	Cymbalta, venlafaxine HCL ER (Effexor XR), Pristiq ER	-1.8%	1.9%	41.1%
8	Platelet Aggregation Inhibitors	Plavix	9.4%	-3.4%	5.8%
9	Anticonvulsants, Misc.	Lyrica, gabapentin (Neurontin)	-4.8%	5.3%	80.5%
10	Opioid Agonists	Oxycontin, Fentanyl	-3.8%	9.3%	84.8%

34%
of clients had a trend less than
1.0%

between generics and preferred brands was $16 in 2011, compared to $7 in 2000. The difference between preferred and non-preferred brands was $20 in 2011, compared to $13 in 2000. Average specialty copays increased 37 percent from 2010 to 2011, from $61 to $84.[14]

2011 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 and population health status—all of which affect prescription benefit performance and trend.

In the commercial segments of our trend cohort, there were notable demographic changes in 2011. Both the health plan and TPA segments lost members compared to 2010. Employers had a slight increase in member numbers, but member composition likely shifted as retirees moved into Medicare and Medicare Advantage Prescription Drug Plans while young adults gained coverage under their parents' benefit plans. These shifts probably contributed to the flat utilization in this segment.

A PBMI survey revealed movement toward tighter benefit management strategies. Cost sharing is becoming more complex.

Figure 3

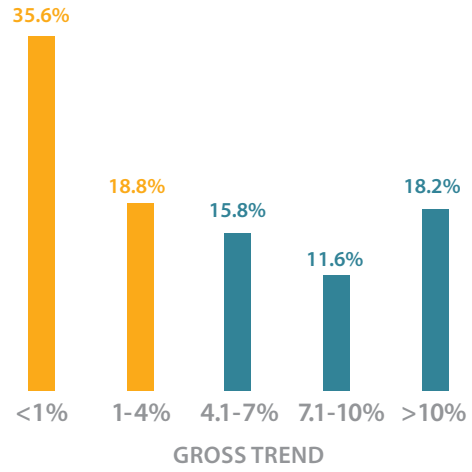
PROJECTED GENERIC LAUNCHES 2012–2015

	2012	2013	2014	2015
Significant Pending Generics	Plavix (anticoagulant) Seroquel (antipsychotic) Singulair (antiasthmatic) Actos (antidiabetic) Lexapro* (SSRI antidepressant) Diovan, Diovan HCT (antihypertensive) Tricor 145MG (cholesterol reduction) Geodon* (antipsychotic) Provigil (narcolepsy) Eloxatin (cancer)	OxyContin ER (opioid) Cymbalta (SNRI antidepressant) Aciphex (anti-ulcer) Niaspan (cholesterol reduction)	Nexium (anti-ulcer) Copaxone (MS) Celebrex (anti-inflammatory) Novolog (antidiabetic)	Abilify (antipsychotic) Namenda (Alzheimer's)
Estimated Brand Sales	$36B	$11B	$17B	$11B

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

Figure 4

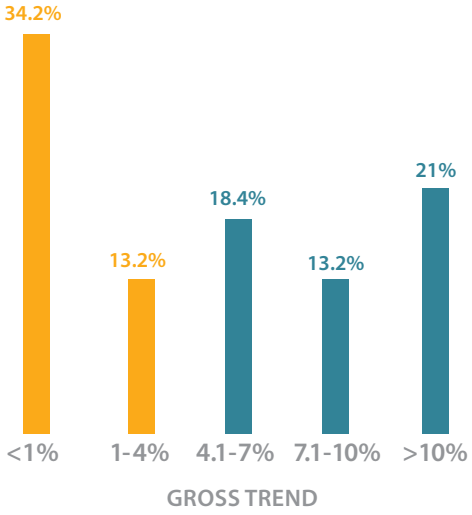
54.4% OF EMPLOYER CLIENTS HAVE A GROSS TREND ≤ 4%



Employer Best-in-Class Performance	
Gross Trend (PMPM)	1.1%
Specialty Trend (PMPM)	11.5%
GDR	80.0%
Preferred Pharmacy Choice Days Supply*	79.1%
Mail Days Supply	61.7%
% Optimally Adherent (Hypertension)	79.0%

Figure 5

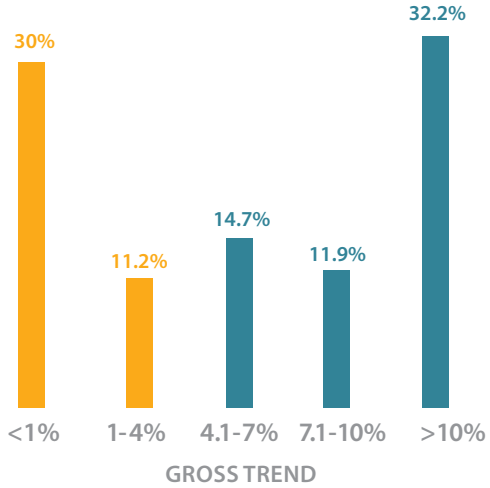
47.4% OF HEALTH PLAN CLIENTS HAVE A GROSS TREND ≤ 4%



Health Plan Best-in-Class Performance	
Gross Trend (PMPM)	1.2%
Specialty Trend (PMPM)	10.0%
GDR	84.8%
Preferred Pharmacy Choice Days Supply*	38.5%
Mail Days Supply	36.5%
% Optimally Adherent (Hypertension)	73.6%

Figure 6

41.2% OF TPA CLIENTS HAVE A GROSS TREND ≤ 4%



TPA Best-in-Class Performance	
Gross Trend (PMPM)	4.0%
Specialty Trend (PMPM)	10.9%
GDR	82.0%
Preferred Pharmacy Choice Days Supply*	67.7%
Mail Days Supply	36.6%
% Optimally Adherent (Hypertension)	79.5%

*Mail and Maintenance Choice

GDR Forecast 2012:

77-81%

2013:

79-83%

Twenty-five percent of plans now use a four-tier formulary, reflecting the growing use of specialty tiers. Forty-eight percent require use of a specialty pharmacy, an increase of 8 percent in just one year. More than half—54 percent—exclude non-sedating antihistamines (NSAs) from coverage, reflecting widespread acceptance of the over-the-counter allergy products.[5]

Forecasts

Generics. Brands with annual sales of more than $35 billion are expected to go generic in 2012, including four of the top 12 brands in the country. With that much brand drug spend at stake, it's not surprising that our 2012 forecasted drug mix trend is negative. However, in addition to the gross cost associated with these drugs, the forecast reflects the circumstances of the anticipated launches.

Atorvastatin launched with a six-month period of exclusivity and a generic authorized by Lipitor's manufacturer. There was essentially no competition among generics, and prices for the generics reflected that. In late spring of 2012, when the period of exclusivity ends, more manufacturers will launch their versions of atorvastatin and prices will go down.

When a generic launches with three or more suppliers, on the other hand, competition drives prices down quickly. Brands worth $25 billion—including Plavix and Seroquel—will lose their patents and be launched as generics from multiple suppliers in 2012. These generics will face market competition from the very start, and payors are likely to benefit. With fewer potential launches in subsequent years, GDR is expected to grow more slowly.

Utilization. Economic recovery continues to be fragile, and in a hard-fought election year it may be difficult to come to agreement on solutions that will significantly improve the outlook and consumer confidence. Given the economic uncertainty, we expect utilization to continue to lag through 2012.

If health care reform proceeds as laid out in the ACA, analysts expect that the surge of newly insured will be accessing physician and other clinical and preventive services, with a resultant jump in prescription utilization in 2014. Many of the newly insured will have the essential health benefits packages available through the Health Insurance Exchanges. These will include coverage for prescription drugs, although plans are likely to vary in terms of richness of the benefit.

As noted earlier, both Medicaid and Medicare populations are increasing and will continue to increase due to aging of the population and expansion of Medicaid eligibility. These two groups had the highest rates of utilization in 2011, and we can expect that trend to continue. Moreover, both these groups will be affected by the quality metrics put in place by ACA. Many of those measures relate to adherence and appropriate utilization of prescription therapies so plans and providers are likely to have programs in place that help them meet the criteria.

Specialty. Specialty pharmaceuticals will continue to be the primary driver of prescription trend for the next 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 trend. For information on the specialty pipeline and projections, please see pages 22-34.

CVS Caremark Drug Trend Forecasts

UTILIZATION RATE
PRICE/DRUG MIX RATE
TOTAL

Figure 7

OVERALL DRUG TREND PMPY

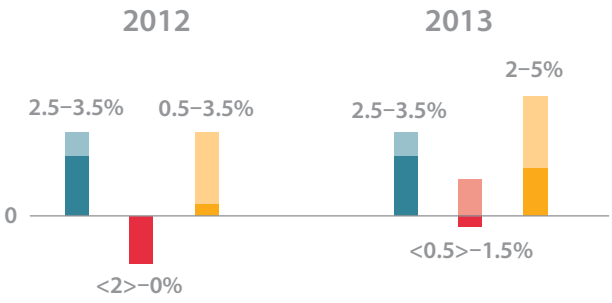


Figure 8

NON-SPECIALTY DRUG TREND PMPY

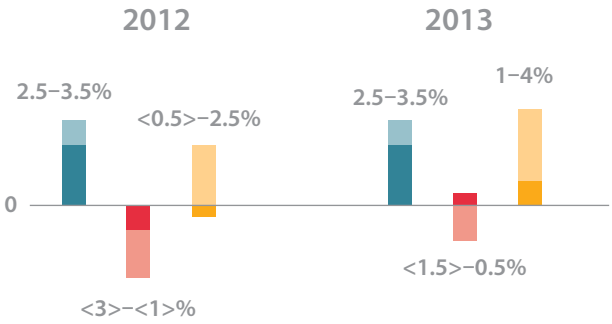
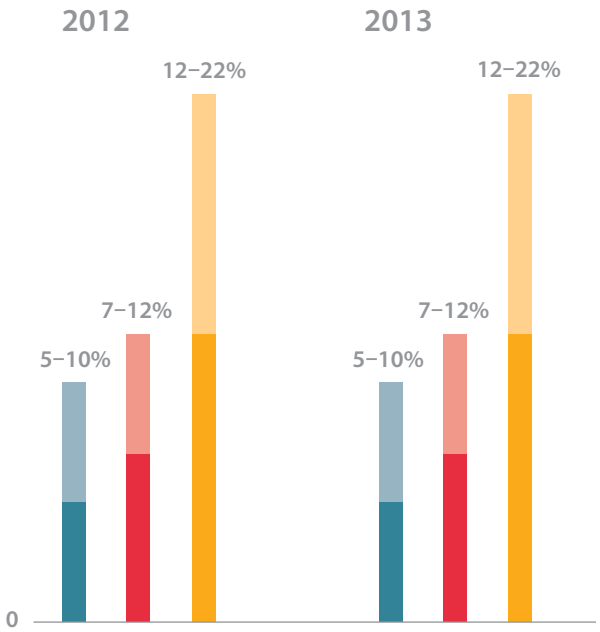


Figure 9

SPECIALTY DRUG TREND PMPY

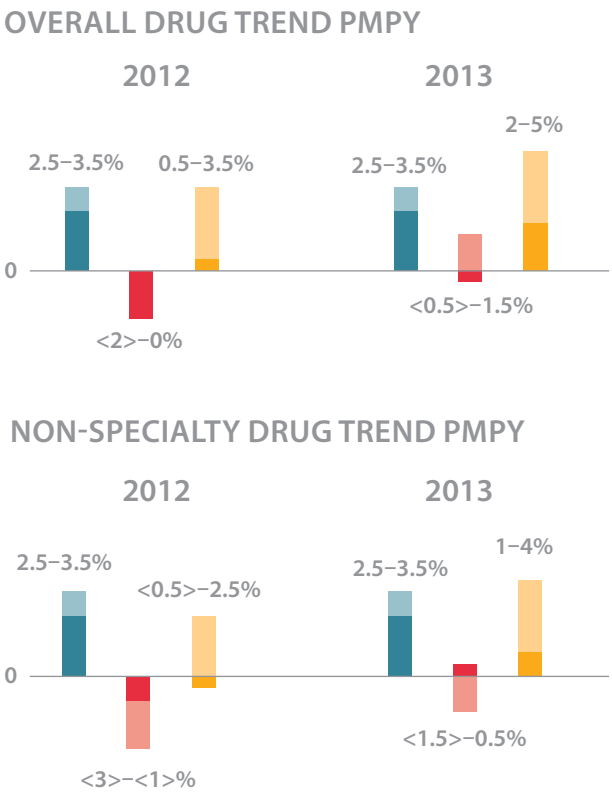


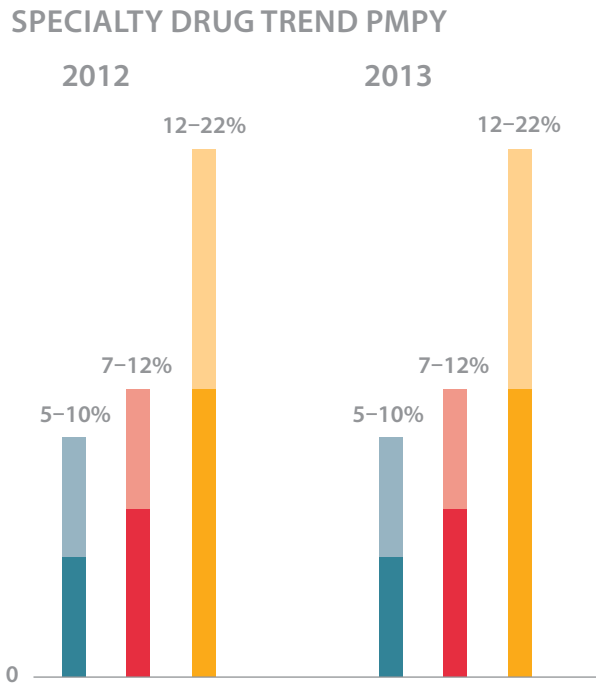
Prescription drug trend is affected by factors that are foreseeable—like our aging population—and those that are less foreseeable—a severe flu season for example. CVS Caremark trend analysts update forecasts for underlying secular trend on a regular basis, evaluating factors such as pending launches,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

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

CVS Caremark Drug Trend Forecasts

UTILIZATION RATE
PRICE/DRUG MIX RATE
TOTAL





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Specialty Drugs Will Soon Dominate Pharmacy Spend

specialty

7 out of the top **10** drugs are projected to be specialty by 2016[1]

Development of specialty drugs is increasing, positioning them as the majority of new drugs entering the market. Ever-increasing FDA approvals of biologic and personalized medications and higher utilization are propelling the sector's growth. In 2010, specialty medications represented 21.7 percent of the $275 billion U.S. pharmacy market. By 2015, those figures could rise to 27 percent of a $390 billion market—a compound annual growth rate of 12.1 percent.[2]

CVS Caremark book of business analysis shows that specialty drugs may make up as little as 2.5 percent of payors' total prescriptions but that can add up to 31 percent of overall pharmacy spend.[3] By 2020, industry research suggests that specialty drugs will comprise upwards of 40 percent of a health plan's pharmacy drug spend.[4] A number of factors are behind this explosive increase:

- Higher cost per unit prices
- Mounting use of biologic drugs to treat chronic and complex conditions
- Growing FDA approvals of new specialty drugs and creation of new specialty drug classes
- Widespread off-label utilization
- Limited competition and manufacturer resistance to price negotiation

Three specialty drugs were among the 2010 top 10 highest revenue-producing drugs in the United States (26% of revenue). By 2016, seven out of the top 10 are projected to be specialty agents (69% of revenue).

Figure 1

2010 TOP TEN

Drug	Revenue	Indication
Plavix	$6.1B	Cardiac/stroke
Lipitor	$5.1B	High cholesterol
Advair	$4.1B	Asthma, chronic obstructive pulmonary disease
Remicade	**$3.57B**	**Rheumatoid arthritis**
Seroquel	$3.56B	Schizophrenia, bi-polar
Abilify	$3.4B	Bi-polar, depression
Actos	$3.3B	Diabetes
Enbrel	**$3.2B**	**Autoimmune disorders**
Avastin	**$3.25B**	**Oncology**
Singulair	$3.21B	Asthma

Figure 2

2016 TOP TEN

Drug	Revenue	Indication
Rituxan	**$3.57B**	**Oncology**
Humira	**$3.54B**	**Rheumatoid arthritis**
Avastin	**$3.45B**	**Oncology**
Januvia/ Janumet	$3.42B	Diabetes
Advair	$3.27B	Asthma, chronic obstructive pulmonary disease
Revlimid	**$2.95B**	**Oncology**
Lantus	$2.80B	Diabetes
Enbrel	**$2.78B**	**Autoimmune disorders**
Remicade	**$2.62B**	**Rheumatoid arthritis**
Atripla	**$2.56B**	**HIV**

definition: specialty drug

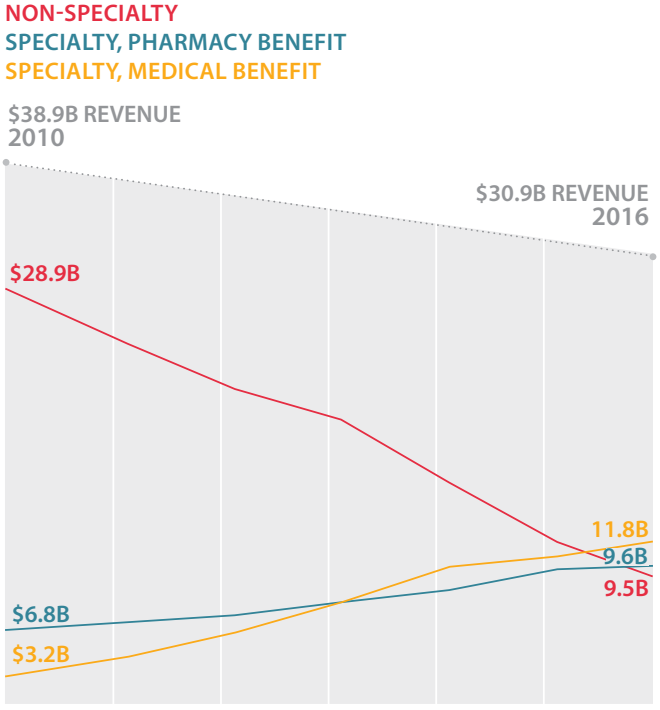
There is no standard industry definition for specialty drugs. The Centers for Medicare and Medicaid Services (CMS) define a drug as specialty if it costs more than $600 per month. Industry data from a large survey of health plans indicates 80% of plans define a drug as specialty if the average monthly cost is more than $1,200 per month. Facilitation of appropriate benefit design and distribution often determines whether a drug is defined as specialty. However, by and large, most health care organizations apply a set of criteria that includes:

- Very expensive drugs that can range from $6,000 up to $750,000 per year
- Injectable or infusion drugs—although oral agents that meet additional criteria are often included
- Drugs that treat complex chronic and/or rare diseases
- Drugs that have significant side effect and/or risk profiles
- Drugs with special handling requirements
- Drugs with unique distribution management requirements
- Drugs that require a high degree of ongoing patient assessment, monitoring and management

The 2016 top 10 are projected to have total revenues of approximately $8 billion less than the top 10 in 2010; this suggests that future blockbusters will primarily be orphan drugs aimed at smaller populations.

Figure 3

SPEND IN TOP TEN U.S. DRUG CATEGORIES



63%
of payors surveyed still plan to contract a preferred brand drug[5]

HEALTH PLAN SURVEY

WHAT DISCOUNT DO YOU THINK BIOSIMILARS WILL OFFER COMPARED TO BRANDED SPECIALTY PRODUCTS?

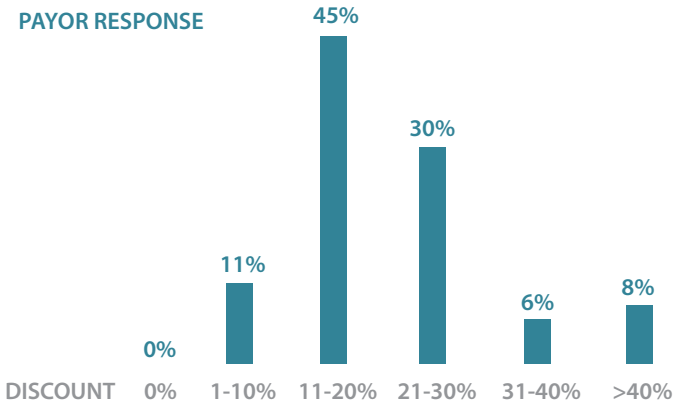


Figure 4

Pricing Implications of Biosimilars Entry

Payors anticipate more biosimilars will enter the specialty landscape within two to three years. More than 60 percent of payors expect a tangible impact on utilization within two years of entry. A plurality of payors anticipate biosimilars entry at an 11 percent–20 percent discount, but only a 1 percent–10 percent discount off of competing brand agents.[6]

As the market awaits the approval of biosimilars, plans are implementing preferred drug strategies when there are interchangeable products available; 63 percent of payors surveyed still plan to contract a preferred brand drug.[7]

A Vigorous Specialty Drug Pipeline

During 2011, 29 new specialty products and 22 supplemental drug indications were approved by the Food and Drug Administration (FDA).[8]
Highlights include:[9]

- **Incivek and Victrelis**—The first oral protease inhibitors for treatment of chronic hepatitis C (HCV) genotype 1 infection when used with pegylated interferon and ribavirin, the "triple therapies" have the potential to significantly improve sustained virological response in previous non-responders and treatment-naive patients

- **Benlysta** —The first new drug to treat lupus in 50 years

- **Firazyr, Berinert**—Two self-administered treatments for acute attacks of hereditary angioedema

- **Zytiga**—An oral oncology drug that prolongs survival in patients with late-stage prostate cancer

- **Caprelsa**—An oral oncology drug for treatment of thyroid cancer

- **Corifact**—The first drug approved for hemophilia factor XIII deficiency

- **Xalkori and Zelboraf**—New oral drugs for lung cancer and melanoma. Each was approved with a personalized medicine diagnostic test to identify patients for whom the drug is likely to be beneficial

2011 APPROVALS AND 2012 POTENTIAL NEW PRODUCT APPROVALS

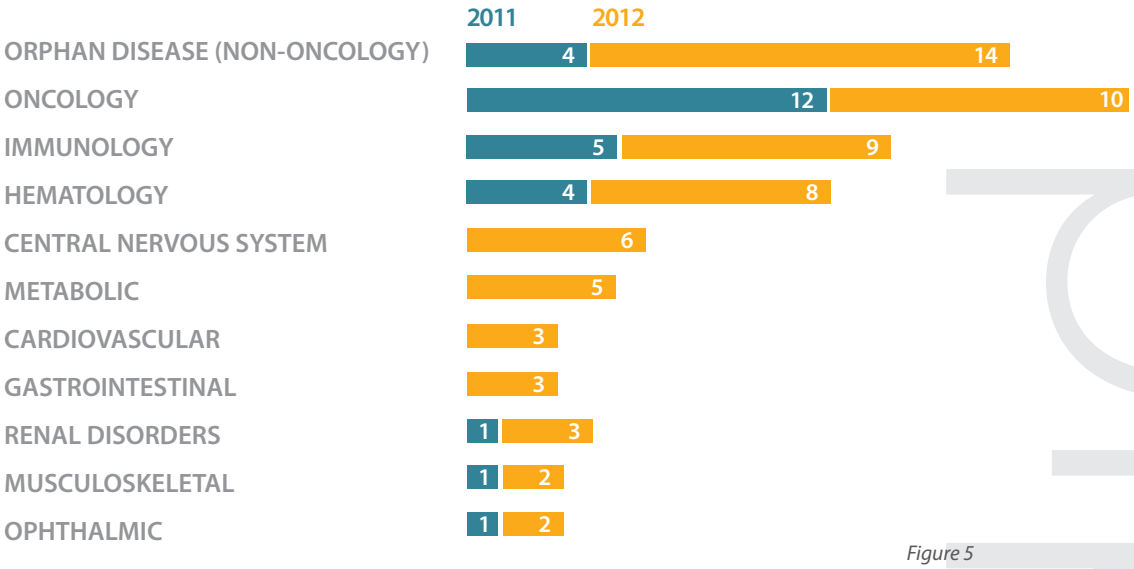


Figure 5

2012 is shaping up to be an even more active approval year for the specialty pipeline. As was the case in 2011, orphan disease, oncology and immunology are anticipated to have the most activity during 2012. However, the orphan disease category now outpaces the oncology category. Specialty makes up 52 percent of the phase III pipeline for new molecular entities and biologics (183 drugs) and 74 percent of supplemental indications (90 indications).[10] Of drugs in phase III, 64 percent are anticipated to progress to approval.[11] FDA is currently reviewing 30 specialty products for approval.[12]

Four categories without approvals during 2011 are anticipated to have approvals in 2012:[13]

- **Central Nervous System**—Northera, tafamidis, Aubagio, Panaclar, Lemtrada, Copaxone (new formulation), Rebif (new formulation)
- **Metabolic**—Uplyso, Replagal, tafamidis, DR cysteamine, pasireotide, Xenbilox
- **Cardiovascular**—Northera, Kynamro, treprostinil ER, lomitapide
- **Gastrointestinal**—Zaltrap, Gattex, perifosine

The current pipeline includes development of oral agents for rheumatoid arthritis (Tofacitinib), multiple sclerosis (Aubagio, Panaclar), and hepatitis C virus infection. Drug developers are getting closer to an all-oral HCV regimen that eliminates the need for injected interferon; GS7977, used in combination with ribavirin, has a projected launch year of 2014.

Development of "biobetters" is a trend. Biobetters modify biotechnology products to provide easier dosing and administration options, such as intravenous infusion to subcutaneous injection, less frequent administration or more targeted therapies.

Oral oncology agents are a significant departure from traditional treatment regimens, presenting new challenges and opportunities for patient management. Before the introduction of oral drugs, patients received monitoring during medication infusion. With their advent, studies have suggested that patients taking oral oncology drugs do not receive the same level of monitoring for adverse effects and adherence.[14]

Rapid advances in technology and better understanding of cancer biology are set to make oncology one of the most fertile fields for personalized medicine. Personalized medicine helps predict a person's response to therapy or the chance of cancer recurrence. Molecular diagnostic testing can guide selection of the treatment most likely to lead to a response in the patient. Nine oral oncology drugs in the current specialty pipeline include personalized medicine or molecular diagnostic testing.[15]

Oral oncology drug monitoring and patient education are crucial for safe and effective utilization. Criteria calling for results of genetic tests for medications that require them should be implemented as appropriate, in order to determine effectiveness and/or potential toxicity.

Health Care Reform and Specialty

Continued Uncertainty about Biosimilar Approval Pathway

Biosimilars could be a multibillion dollar market in the United States, but questions about pricing, reception by payors and providers and FDA approval policy remain. The biosimilars market is relatively new and presents high barriers to entry. Developing and producing biosimilars requires different expertise and resources from those necessary for small molecule generics or new brand-name drugs. Most experts agree that the major challenge for biosimilar sponsors is the complexity and cost of development and approval.

As part of the Affordable Care Act (ACA), the Biologics Price Competition and Innovation Act of 2009 (BPCIA) was signed into law on March 23, 2010, creating a pathway for sponsors seeking approval of products deemed "biosimilar" or "interchangeable" with an FDA-approved product.[16] It also provided extended patent protection of 12 years exclusivity for FDA-approved biological drugs.

The BPCIA did not define the necessary criteria for demonstrating biosimilarity or interchangeability or identify the clinical trials, analytical data and animal studies required. Rather, the BPCIA allowed the FDA to provide this guidance for individual products and product classes, including statements that certain products or entire product classes will not be approved under the pathway.

On February 9, 2012, the FDA issued its long-awaited draft guidance on biosimilar product development in three guidance documents that speak to scientific and quality considerations, and answer commonly asked questions about BPCIA.[17] The documents are intended to help the industry in developing generic equivalents to brand-name biological drugs, and have been anticipated since BPCIA was enacted as part of health care reform. The guidance documents are general in nature, and many questions about their interpretation and implementation remain.

Despite the draft guidance, there is currently no clear timeline for more biosimilars to enter the United States market. This situation is unlikely to be resolved any time soon. However, due to the robust specialty pipeline, increased competition among brand medications within therapy classes already provides opportunities for payors to manage costs without sacrificing clinical quality. Such competition is anticipated to continue and plan sponsors should expect their specialty pharmacy providers to keep them apprised of these opportunities.

Elimination of Lifetime and Annual Limits

Under the ACA, health plans are prohibited from imposing lifetime dollar limits on "essential health benefits."

Restricted annual limits will continue to be imposed until 2014 on both new and grandfathered (existing) group plans. Starting January 1, 2014, annual dollar limits on essential health benefits will be prohibited in all plans.[18] Elimination of lifetime and annual dollar limits is a significant change for complex, chronic conditions treated with expensive specialty medications. For example, treatment costs for a person living with hemophilia can range upwards of $1 million annually.

Aging Baby Boomers Drive Utilization

With the aging of the U.S. population and chronic conditions whose treatment is characterized by comorbidity, difficult therapeutic regimens and high rates of non-adherence, effective specialty management is more crucial than ever.

Comorbidities result in disproportionately high health care costs. It is estimated that more than 75 percent of health care expenditures in the U.S. are spent on care for people with multiple comorbidities[20]; the average spend for a person with comorbidities is roughly five times greater than for a person without a chronic condition.[21]

For example, advances in care have increased life expectancy for people with hemophilia. Increased longevity results in older patients experiencing health conditions not previously seen in this population. An independent study evaluating patients 40 years of age and older found that all patients had at least one comorbid condition other than hemophilia, and the majority had between three and six comorbidities.[22] Intensive coordination of care is essential for hemophilia patients who require age-related

75%

of health care spend is for people with multiple comorbidities[19]

definitions: biological drug, biosimilar, interchangeable and biobetter

Biological product (aka biologics): Unlike most prescription drugs made using chemical processes, biological products are generally made from the materials of living organisms. They are used in the prevention, diagnosis or treatment of diseases and can include vaccines, blood and blood components, gene therapies, tissue and proteins.

Biosimilar: A product can be designated "biosimilar" if data show that the product is highly similar to the biological reference product and there are no clinically meaningful differences between the biosimilar product and the reference product in terms of safety, purity and potency.

Interchangeable: To meet the higher standard of "interchangeable," a biosimilar product must be expected to generate the same clinical result as the reference product in any given patient. The risk of alternating between the interchangeable biosimilar product and the reference product cannot be greater than the risk of keeping the patient on the reference product. A pharmacist may substitute an interchangeable product for the reference product without the intervention of the prescriber.

Biobetter (aka biosuperior): Whereas biosimilars are structural imitations of an originator product, biobetters are improvements to the originator product. A biobetter will possess some molecular or chemical modification that provides an improvement over the originator drug and its biosimilar competitors, for example, an easier route of administration or less frequent dosing.

50%

of people infected with the hepatitis C virus may be undiagnosed[28]

orthopedic surgeries, such as hip or knee replacement.

The most prevalent specialty categories are also affected. Established rheumatoid arthritis patients typically have two or more comorbid conditions, from cardiovascular problems and infections to depression and gastrointestinal ulcers.[23] Depression and incontinence are associated with multiple sclerosis. All such comorbidities can have a significant impact on health-related quality of life.[24]

Hepatitis C: "The Silent Epidemic"

The magnitude of the hepatitis C silent epidemic is now coming into focus. Two-thirds of Americans infected with the hepatitis C virus, about 3.2 million people, were born between 1945 and 1965.[25] At least half of them may be undiagnosed—the blood-borne virus can take decades to manifest symptoms. As the infected population continues to age, the disease may progress from asymptomatic infection to advanced liver disease, such as cirrhosis or liver cancer, and it is a leading cause of liver transplants.

Mortality rates are higher than previously estimated. In 2007, there were 15,000 deaths related to hepatitis C— surpassing the nearly 13,000 deaths caused by the AIDS virus.[26] More than 70 percent of these deaths occurred in people 45 to 64 years old.[27]

The result of widespread infection among baby boomers will be substantial cost increases throughout the health care system. Infection prevalence rates are highest among those born in the early 1950s and while the majority of the infected population has not yet aged into Medicare eligibility, baby boomers with disabilities covered by Medicare show high prevalence of diagnosed HCV infection. Government payors will be responsible for an increasing proportion of costs over the next 20 years, with Medicare being especially hard hit.

INSIGHTS

Figure 6

While the overall proportion of specialty drug spend under the medical and pharmacy benefits is roughly equivalent, wide variations in spend exist within particular drug classes and conditions.

Top categories under the pharmacy benefit	Top categories under the medical benefit	Top categories under both the pharmacy and medical benefit
Multiple sclerosis, orals and injectables	Rheumatoid arthritis/ Crohn's disease, IV	Various cancers
Rheumatoid arthritis/ Crohn's disease, injectables	Immune globulin, IV and injectables	Hereditary angioedema
Oncology, orals	Multiple sclerosis, IV	Lysosomal storage diseases
Pulmonary arterial hypertension, orals and inhaled	Lysosomal storage diseases, IV	Multiple sclerosis
Hepatitis C, injectables	Respiratory syncytial virus, injectables	Psoriasis
Growth hormone disorders, injectables	Pulmonary arterial hypertension, IV	Pulmonary arterial hypertension
Lysosomal storage diseases, orals	Hemophilia factor, IV	Rheumatoid arthritis/Crohn's disease

New, more effective regimens are reviving interest in hepatitis C treatment. Research suggests that adding to standard therapy one of two new drugs—Incivek™ from Vertex Pharmaceuticals or Victrelis™ from Merck—can boost cure rates in chronic HCV genotype 1 from 40 percent to as high as 75 percent.[29] The duration of treatment with these regimens can vary, but some patients may be able to reduce time on treatment by half, from 48 to 24 weeks.[30] The success of the new regimens has re-energized calls from the Centers for Disease Control and Prevention to test for the HVC virus in all baby boomers.

Despite more effective regimens, the side effects of treatment remain difficult to tolerate. Patients require education and monitoring to ensure they stay adherent; poor adherence during a course of treatment can lead to resistance to future therapy.

definitions: compliance, persistence and adherence

The terms "adherence" and "compliance" are often used interchangeably as synonyms. However, CVS Caremark considers them to have somewhat different meanings, along with the term "persistence:"

- **Compliance:** Following medication timing, dosing and frequency as prescribed
- **Persistence:** Remaining on therapy for the prescribed duration of time
- **Adherence:** An overarching term that combines the notions of compliance and persistence and represents the extent to which a patient follows medical instructions.

Drug Spend under the Medical Benefit

Specialty drug spend is almost evenly split between the pharmacy and the medical benefit, a ratio that has remained more or less constant during the past several years. Route of administration has typically determined which benefit covers a specialty drug—with the pharmacy benefit covering self-administered oral, injectable or inhaled drugs and the medical benefit covering drugs that are injected or infused by a health care professional. These silos have prevented payors from obtaining a true picture of the size and scope of their overall drug spend, and, by extension, left them with few opportunities for comprehensive drug management. Payor concerns include:

- **Lack of real-time medical claims data** that enables consistent management across the benefits
- **Higher payor spend** for specialty drugs under the medical benefit due to provider markup
- **Higher patient cost share** under the medical benefit, risking reduced adherence; 28.8 percent of patients with an out-of-pocket expense greater than $500 abandoned their medication[32]

Soaring administrative burden and clinical complexity are other widespread concerns among providers. Prescription prior authorization is increasingly used to mitigate over-utilization and apply management controls such as step therapy; currently they are required 72 percent of the time. Each PA requires an average of 32 minutes of provider office time.[33]

Half of Medical Drug Spend Is Oncology-Related

A 2011 CVS Caremark analysis revealed that more than half of drug spend in the medical benefit was related to oncology medications and supportive therapies. The increase in costs associated with oncology care is spurring plan sponsors to seek innovative solutions to manage specialty drugs that span the two benefits.

Each PA requires an average of

32 minutes

of provider office time[31]

- Among privately-insured individuals under age 65, oncology patients make up a 16 percent slice of the most costly 1 percent of patients.[34]

- Drugs under the medical benefit represented 19 percent of all outpatient spending (compared to 5 percent for all members).[35]

- Among health plans surveyed, 80 percent believe cancer has the greatest unmet therapeutic need of all specialty categories.[36]

The practice commonly referred to as "physician buy-and-bill"—in which a health care provider purchases a drug from a distributor, administers it to a patient and then submits a medical claim for professional services along with the drug at a markup—has come under increased scrutiny by third-party payors.

Health plans recognize that it is preferable to have injectable or infused medications administered in community-based oncology practices rather than more expensive hospitals or academic centers that command premium fees. However, the economics of community oncology practices are changing.

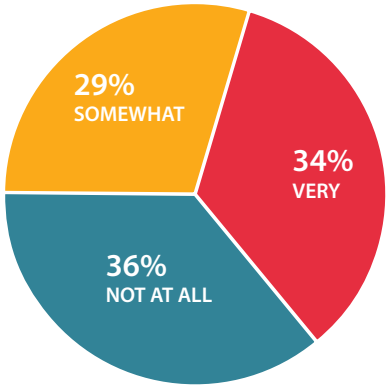
The rapid growth in oncologist income that occurred during the past two decades as buy-and-bill became customary has been stemmed by the passage of the Medicare Modernization Act (MMA) of 2003. MMA 2003 introduced Average Sale Price (ASP) drug reimbursement, which has eroded physician drug income and caused payment challenges related to practice overhead costs. This has led to much talk in the oncology community about integrating with hospital-based cancer centers—accelerated by the Accountable Care Organization (ACO) momentum. Yet for cost of care, such integration may be detrimental.

While drug margins for community-based oncologists have diminished due to ASP reimbursement, drugs continue to be a key source of revenue for practices

Figure 7

HEALTH PLAN SURVEY

HOW CONCERNED IS YOUR ORGANIZATION ABOUT YOUR ABILITY TO MANAGE COMPETING PRODUCTS THAT ARE COVERED UNDER DIFFERENT BENEFITS?



participating in the buy-and-bill model. Payors and physicians increasingly recognize the need to move from a traditionally adversarial relationship to a more collaborative approach.

In response, pharmacy benefit managers are starting to offer programs to optimize drug regimen management as well as site of care. Ideally, such programs would provide:

- an array of methods to manage the drug, the benefit and the site of care across benefits;

- the least disruption for the physicians and patients;

- the best clinical outcomes for patients and payors at the lowest possible cost.

Patient-Centered Care Valued Yet Underutilized

In a major industry survey, health plans were asked what specialty pharmacy outcomes are most important to them. As in previous surveys, goals that involve quality and patient-centered care were at the head of the list.[37]

Health plans value the extensive patient management offered by full-service specialty pharmacies. Convenient access to a pharmacist and/or registered nurse was cited as one of the most valued services, along with comprehensive drug adherence programs. Patient education was another key feature mentioned.

However, fewer than 30 percent of the health plans surveyed reported utilizing such programs. The patient-centered services that health plans reportedly value suggest that programs designed to improve adherence and manage utilization offer unexploited benefits in the form of improved clinical outcomes and cost savings.

Many health plans do require certain specialty drugs to be channeled through specialty pharmacy providers. Policies vary by payor, drug and specialty class, however the majority require use of specialty pharmacies for distribution of at least one major therapy class.

Use of specialty pharmacy for at least one therapy category is required by 71 percent of Medicaid plans, 64 percent of Medicare Advantage plans and 59 percent of commercial plans.[38] The top 10 therapy categories that fall under this requirement are:

- Growth hormone disorders
- Hepatitis C
- Multiple sclerosis (injectable)
- Psoriasis
- Rheumatoid arthritis/Crohn's disease
- Hemophilia factor
- Multiple sclerosis (oral)
- Oncology (oral)
- Multiple sclerosis (intravenous)

A Specialty Pharmacy Better Equipped for Future Challenges

The specialty market is growing and is likely to become a larger share of every payor's budget during each coming year. The U.S. health care environment is becoming more complex and dynamic. Management techniques of yesterday and today will need to be improved to manage the future challenges posed by the uniqueness of the specialty market.

Payors need a specialty service provider who can help them understand, navigate and manage change. They need guidance on how to manage spend under the medical benefit and how to best align their benefit design and networks to control pharmacy costs. Their members need convenience and access to get them started on their path to better health.

59%

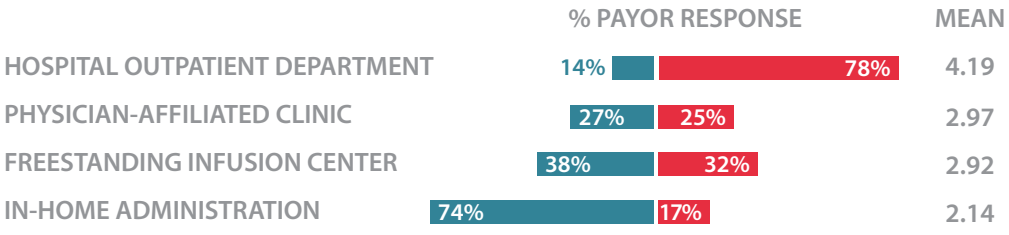
of commercial plans require use of a specialty pharmacy for at least one therapy category[39]

Figure 8

HEALTH PLAN SURVEY

WHAT IS THE COST OF CARE AT THE FOLLOWING SITES RELATIVE TO AN IN-OFFICE INFUSION?

SIGNIFICANTLY OR SOMEWHAT LESS EXPENSIVE (1, 2)
SOMEWHAT OR SIGNIFICANTLY MORE EXPENSIVE (4, 5)



Managing New Cost Dynamics

Future specialty providers must be able to capture and analyze medical claims and help payors understand ways to manage what is driving spend. Many payors are now focused on drug spend under the medical benefit. The specialty provider best equipped for the future will guide and support solutions to other important cost drivers, like site of care, medical devices, administration costs and more.

Payors need aligned pharmacy and medical benefit designs so members can conveniently access the most appropriate, cost-effective care through the most appropriate channels. Such decisions are better made in collaboration with a specialty service provider who can provide an informed recommendation—in specialty pharmacy, one size does not fit all.

According to industry experts, the number of drugs in the specialty pipeline did not top the list of concerns for health plans or employers.[40] However, the pipeline for specialty drugs will soon outpace non-specialty drugs. Many drugs in the specialty pipeline are for orphan diseases and will likely carry high price tags. Payors need a specialty provider who understands the effect new drugs are likely to have on a payor's spend and the most effective management techniques once new drugs are approved.

(continued on page 34)

Figure 9

causes of poor specialty drug adherence

When patients do not take their medications as prescribed, the consequences are an annual tab of $290 billion to the U.S. health care system, and patients who do not get the clinical benefit of the medications they need. And when it comes to high-cost specialty drugs and complex, chronic conditions, the stakes are even higher. So, what causes non-adherence? Research suggests that the top five reasons for non-adherence to specialty drugs are:

1. **Poor results.** Patients are more likely to discontinue a drug if it does not meet their expectations. This is particularly true for drugs that take more time to achieve efficacy.

2. **Difficult administration and/or side effects.** Certain specialty drugs have side effects that are very difficult to tolerate. Others are hard to administer, such as infusion or injection drugs.

3. **High out-of-pocket costs.** By definition, specialty drugs are expensive. When patients face high premiums or copays, the result may be discontinuation of use.

4. **Symptom control.** Certain conditions are asymptomatic. Others, like multiple sclerosis, go through periods of remission. Lack of symptoms may lead a patient to discontinue use of a drug.

5. **Comorbid conditions.** When a patient has more than one condition, successful adherence dwindles. Depression, for example—a common comorbidity— is frequently a cause of poor adherence to a treatment plan.

coordinated specialty pharmacy care: hemophilia

Our therapy-specific programs help people with complex conditions on their path to better health. Hemophilia is a condition where the blood does not clot normally because of a deficiency or abnormality of clotting factors. We provide the right education and management for each stage of life. Hemophilia is hereditary; with nearly 35 years of expertise in hemophilia care, we have helped generations of people within the same families.

Derek's mom, Allison says:

"I've never dealt with a better group of people. It's easy to talk with them by phone and they seem to really care about good service. They are reliable—we have been with them my son's entire life."

Clinical review of member history to optimize therapy outcomes

Pre-plan for upcoming surgical events

Member education to minimize avoidable ER visits

18K–20K hemophiliacs in the U.S. today; most are male[41]

$250K Average medication spend per member, per year (PMPY)—up to $1 million annually[42]

3–6 Average number of adult patient comorbidities[43]

Appropriate prophylaxis with blood clotting factor is important to help avoid uncontrolled bleeds—especially in the major joints and head.

our results:

Improved clinical outcomes while avoiding unnecessary costs

Accurate dosing with our extensive factor assay inventory for potential cost avoidance of up to 8.1% (~$17K) PMPY;[44]

industry target is 2%

we are at .04%[45]

Derek and Allison's CareTeam:

Regular outbound calls for refills including age-appropriate education. Guidance on billing/collections, reimbursement and other patient concerns.

Ongoing clinical support, side effects and medical events monitoring. Subpopulation expertise, such as comorbidity, pediatric and geriatric, and high factor utilizers.

Dedicated nursing support provides in-depth clinical assessments and age-appropriate in-person member education, as needed.

Hemophilia Field Sales and Coordination:

Hands-on assistance with member issues and coordination with the CareTeam and CVS Caremark Operations.

Deep involvement in the local hemophilia community, providing personalized family support.

Infographic by Column Five

coordinated specialty pharmacy care: hemophilia

Derek's mom, Allison says:
"I've never dealt with a better group of people. It's easy to talk with them by phone and they seem to really care about good service. They are reliable—we have been with them my son's entire life."

18K–20K

$250K

3–6

our results:

2%

1.08%

Infographic by Column Five

(continued on page 32)
Rigorous clinical, safety and utilization checkpoints that monitor each patient are also needed. If a particular drug is not appropriate for a particular patient, lower cost and better adherence are moot—the objective is to help patients adhere to the most cost-effective drugs that are right for them.

Managing New Clinical Dynamics

When dealing with high-cost medications and life-threatening conditions, adherence is more important than ever. Most often, patients are non-adherent because of cost, access or side effect issues. Regimens can be difficult to understand and administer. Specialty medications can be difficult to obtain, because they are not usually available at standard retail settings. Patients need expert help to overcome these barriers to proper care.

Specialty providers of the future will need to help patients conveniently start and refill their medications, and support them with consistent clinical outreach and education. Payors need a partner who can help manage the health of their population in a holistic way; the ideal future partner will combine the abilities of a specialty pharmacy, a pharmacy benefit manager, a retail pharmacy, a wellness clinic and an infusion center.

Our Specialty Pharmacy Innovation

With clinical expertise, significant investments and innovation, CVS Caremark is prepared for the dynamic future of specialty. Our capabilities span nearly all classes of medications and offer a variety of ways of managing spend while supporting clinical best practices. We match the right approach with the right client through a comprehensive, in-depth review of medical claims, benefit design, provider networks and operational efficiencies—then provide benefit design, site of care, point of service and integrated technology strategies that drive improved outcomes.

CVS Caremark helps members to use lower-cost drugs through preferred drug strategies, encouraging use of clinically effective, lowest net-cost therapies within a specific specialty category. This helps payors reduce costs without compromising quality of care. Today, we offer preferred drug strategies in several specialty categories including: growth hormone, rheumatoid arthritis, psoriasis, Crohn's disease and multiple sclerosis.

We make member access easy and convenient through a combination of community specialty pharmacies, mail specialty pharmacies and convenient pick-up options at CVS/pharmacy. Members can receive injection training and other health services at a local MinuteClinic®. We provide face-to-face nursing support to those confronting the most complicated clinical situations. The right education and site of care for infused drugs can lead to lower costs, decreases in length of stay and the potential bonus of reduced risk of hospital-based infection.

Pharmacy Advisor® helps improve adherence, safety and effectiveness, and helps reduce gaps in care for people living with complex conditions. Therapy-specific CareTeams educate members on taking medications correctly, review proper storage and handling and troubleshoot side effects. If members indicate a financial barrier to getting needed medication, we connect them to resources that can help—we also advise clients on benefit designs that make copays affordable so adherence is not compromised.

CareTeams communicate treatment issues to prescribers and coordinate care with third parties as needed. With regular CareTeam interventions, members have a better opportunity to get optimal clinical benefit from specialty therapy regimens.

Reinventing Pharmacy

The health care landscape is changing radically. Stakeholders recognize that the way health care is delivered now will not be the only way it's delivered in the future. The system must adapt to accommodate millions more insured people while reining in costs and meeting quality standards.

CVS Caremark provides pharmacy care for

5M people

every day

Pharmacy care will play a critical role. Appropriate use of prescription therapy—which includes using generics whenever possible—is one of the most direct routes to the cost reduction and improved quality so urgently needed in today's health care environment. But we know that the full value of pharmacy care has not yet been realized. Generally, about a third of the patients who start on a long-term therapy drop off in the first month. Half drop off in the first year.[1] Evidence-based guidelines for prescription therapy are followed about half the time.[2] And half of specialty spend is unmanaged.[3]

As a pharmacy innovation company, we're focused on developing new ways to maximize the clinical and the economic value of pharmacy care. We know that to make a difference, you have to do things differently. We believe that the difference we can make is substantial.

With our unique integrated pharmacy model, CVS Caremark has the opportunity to impact care for a large portion of the American population. Between retail store and clinic visits and PBM services, CVS Caremark provides pharmacy health

helping people on their path to better health

care to more than five million people every day, seven days a week. The level of interaction and contact we have with our customers, patients and clients affords us an unparalleled vantage point into their health care needs—and an unmatched point of entry for health care interventions, partnerships and original research.

The Integrated Model

We believe that being connected as an enterprise has made us an even stronger service provider for our customers, clients, members, and patients. It's brought new perspective to each of the three entities that make up our company. Our capabilities have expanded. In many ways, we've changed what we do and how we do it.

PBM: Ten million members can now fill their maintenance prescriptions at mail service pricing at either the CVS/pharmacy or our mail service pharmacy. Twelve million members are eligible for Pharmacy Advisor, which provides pharmacy care and counseling for members with chronic conditions at our retail locations or though our mail service pharmacies. By bringing member-specific prescription history information to the pharmacist at the counter, we're able to leverage high-value face-to-face interventions to improve the effectiveness of prescription therapy. Both programs address chronic conditions, which account for 75 percent of U.S. health care spend.[4]

Retail pharmacy: At CVS/pharmacies, integration with the PBM increased the operational focus on payor priorities for pharmacy performance, leading to best-in-class adherence, generic dispensing and gap prevalence measures *(continued on page 38)*

CVS Caremark: reinventing pharmacy

Being connected helps us provide better service and achieve better outcomes not only for our PBM clients and members, but also for CVS/pharmacy customers and MinuteClinic® patients. Our information technology systems help inform member care at all our touchpoints, and we're expanding our HIT capabilities to better coordinate with other care providers, including ACOs, medical homes and insurers.

CVS Pharmacy

Knows what's important to payors

Best-in-class performance on generic dispensing, adherence and closure of gaps in care

the PBM

Has proven that better pharmacy care can reduce overall costs

Leveraged all touchpoints for significantly better pharmacy results

MinuteClinic®

Prepared for new care delivery models

Strategic affiliations with major health systems including Cleveland Clinic, Emory, Advocate, Henry Ford

Understands why it's hard for people to keep taking their medications

Refill and prescription pick-up reminders, adherence counseling at key points in therapy

Innovated to improve access, service and results.

Making health care simpler, more affordable and more convenient

Coordinated services for PBM clients and members

Chronic care, biometric screening , flu vaccines, wellness; reduced copays

60 million
patient conversations in 2011

1.1+ million
Pharmacy Advisor communications in 2011

11 million
patient visits total

With our combined capabilities and expertise, we're facilitating connection and communication with members, payors and care providers to solve key issues in health care and help people on their path to better health.

Infographic by Column Five

advancing the science of pharmacy care

It's never been more important to clearly establish the value of health care interventions. With our integrated model and significant market presence, CVS Caremark has a unique opportunity to evaluate the economic and clinical value of pharmacy care. Over the last several years we have collaborated in such studies with leading researchers from Harvard and Brigham and Women's Hospital. The studies summarized below were published in the last twelve months, and they reinforce the central role of pharmacy in addressing issues of cost and quality.

In January of this year, the results of our initial Pharmacy Advisor program were published in *Health Affairs*.[5] The study compared adherence and therapy initiation rates for matched groups of patients with diabetes. Pharmacists at retail and mail service locations had member-specific information on adherence and gaps in care, and they addressed therapy issues directly with the member either face- to-face in the pharmacy or by phone. Prescribers were alerted when a member's profile did not include an ACE or ARB, as recommended by evidence-based standards. Over the six-month course of study, the Pharmacy Advisor group improved adherence rates by 2.1 percent. Therapy initiation rates—prescribers closing gaps in care— increased by 38 percent compared to the control group.

Another CVS Caremark-sponsored study-published in the *American Journal of Medicine*[6]—revealed that 35 percent of newly diagnosed diabetes patients were not prescribed medication according to American Diabetes Association consensus guidelines, which specify a generic as first-line therapy. In our current environment, the economics around this study are of particular importance. Patients who were being treated with generics spent an average of $116 over six months, compared with $677 for the more expensive therapies. That is a difference of $560 per patient for six months, or $1,120 per patient per year in additional pharmacy costs. If these findings were applied to the current U.S. population, the study's authors project a $420 million annual excess in direct medication costs.

Another study—published in *Health Affairs* in July[7]—also addressed the economics of preventive pharmaceutical care for chronic conditions.

Our researchers evaluated earlier studies which had been based on the use of branded medications and recalculated costs for the same treatment using generics. For example, an influential 2008 study estimated the cost for lowering LDL cholesterol at $83,327 per quality adjusted life year (QALY), a financial measure that evaluates the impact of improving the quality of life for patients with chronic diseases. Today, cost per QALY for the same treatment using generic alternatives would be $17,084, or 20 percent of the original estimate. More dramatic is a cost comparison for glucose control in cardiovascular patients, with the 2008 study estimating a $48,759 per QALY cost, versus the study's recalculation with generics at $1,022 per QALY, just two percent of the original estimate.

The article included recommendations for policy makers to help reduce chronic care costs in the U.S.

- Promote the use of generics in the new ACO treatment standards.
- Limit the use of prescription-writing practices such as Dispense as Written—where doctors and patients can require a prescription be filled as a specific brand —and amending state Medicaid statutes that require patient consent before generics can be substituted.
- Make sure e-prescribing guidelines encourage the use of more cost-effective medications.
- Develop education programs for physicians and patients around the effectiveness of generics to offset some long-held biases that generics are not as effective as brand medications.
- Develop new incentive programs through pharmacy benefit and health care plans that promote the use of generics.

(continued from page 36)
for all CVS pharmacy patients. CVS Caremark research using claims data and other analytic resources brought new understanding about the many obstacles to adherence. Out of this understanding, we developed multi-faceted ways to support member adherence, ranging from first-fill counseling at the pharmacy to refill reminders on mobile devices to targeted counseling through Pharmacy Advisor.

MinuteClinic: Expanding its services to address the needs of the highest-cost patients, MinuteClinic now provides services that complement physician care for members with chronic conditions, including injection training for patients taking specialty pharmaceuticals. For PBM clients and members, MinuteClinic also offers reduced copay, flu vaccine, biometric screening and wellness programs.

A Pharmacy Innovation Company

At CVS Caremark, we are reinventing pharmacy to help people on their path to better health. We believe our pharmacists and nurse practitioners have a central role to play in delivering affordable, quality care through their work with members, plans and other providers in this evolving environment.

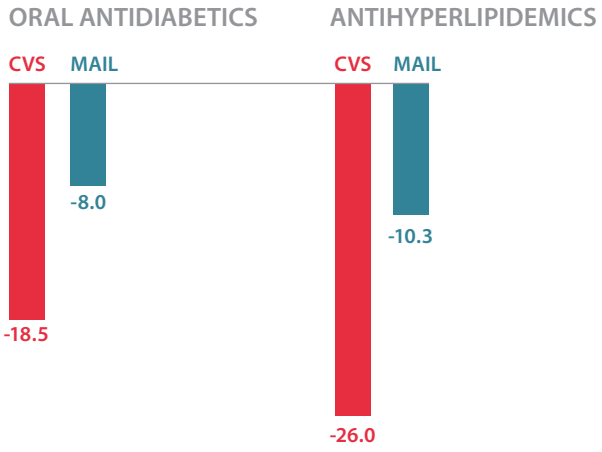
Reducing Cost. Concerns about cost will not diminish. Although recent trends are improving, economic recovery has been slow, and payors are cash-strapped, including every level of government. The insured are likely to face higher out-of-pocket costs; the new health care consumer will be looking at available plans carefully. Less generous benefits will be the norm.

(continued from page 41)

Figure 1

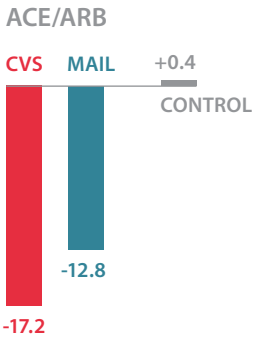
PHARMACY ADVISOR SUPPORTS EVIDENCE-BASED CONDITION MANAGEMENT FOR DIABETES

FIRST FILL DROPOFF



Initiating therapy: compared to control members using the same channel, fewer Pharmacy Advisor members drop off therapy

GAPS IN CARE



Compared to control members, fewer Pharmacy Advisor members have an ACE/ARB gap

Projected shortage of primary care physicians by 2020

45,000[8]

MinuteClinic®

Health care reform is expected to intensify the current primary care shortage. The number of primary care physicians in this country has been declining for some time as older physicians retire and more students choose to go into medical specialties. The national average wait for a family practice appointment is 20 days; in some parts of the country the wait is over 60 days.[9] The increase in the number of insured, the aging of the population, and the epidemic of chronic conditions including obesity and diabetes, are projected to increase demand significantly. By 2020, analysts project a shortage of 45,000 primary care physicians.

MinuteClinic can help. The clinics provide walk-in care, without appointments, seven days a week. The nurse practitioners adhere closely to evidence-based standards of care, providing the same consistent, quality treatment in clinics from Connecticut to California. The goal is to expand the MinuteClinic network to 1000 clinics by 2016 with an emphasis on those states where the care shortage is expected to be most acute.

With a strong belief in the medical home, MinuteClinics share treatment records with the patient's primary provider. When patients are medically "homeless," MinuteClinic provides a list of local physicians who are taking new patients.

MinuteClinic care is cost-effective—40 to 80 percent lower than other sites of care for similar treatment.[10] What's more, studies have shown that overall care costs are lower for MinuteClinic users—8 percent lower on overall costs and 12 percent lower on emergency room costs.[11] The difference is attributed in part to the inherently lower costs of care at MinuteClinic, but these patients are also probably less likely to delay care so they can deal with health problems before they advance.

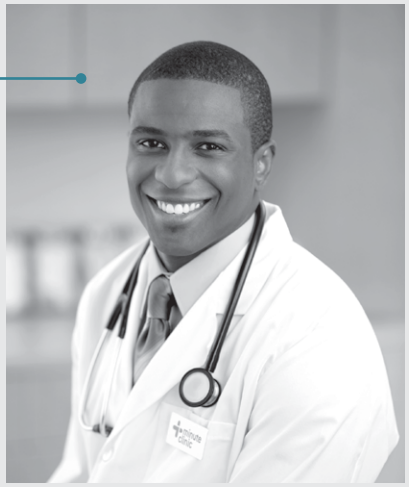
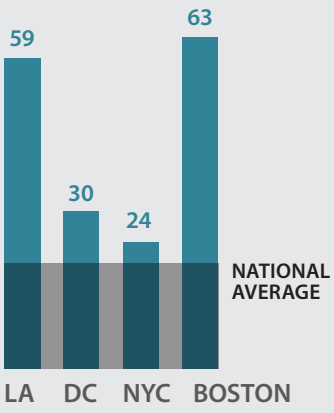
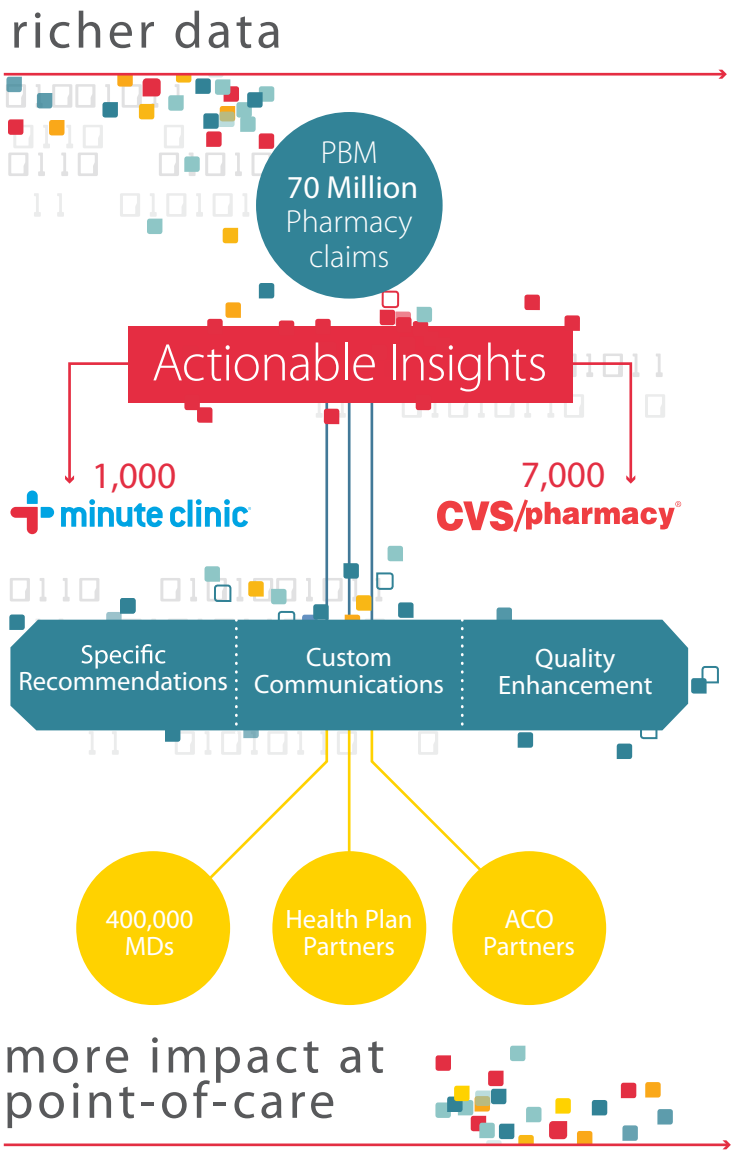


Figure 2

AVERAGE DAYS TO APPOINTMENT FOR FAMILY PRACTICE



MinuteClinic is expanding the scope of services provided beyond acute care, offering monitoring and management of chronic conditions as well as associated point-of-care testing. In addition, for CVS Caremark PBM clients, MinuteClinic offers biometric screening, immunization, disease management and a host of other preventive services. To help keep member costs low and improve their access to primary care, MinuteClinic is now offering a program through which copays can be greatly reduced and in some cases, eliminated, subject to plan approval.



Infographic by Column Five

Doctors and nurses cited the top benefits of HIT as[12]

Availability of better information

85%

Greater accuracy in patient care

72%

Ability to track follow-up care

68%

(continued from page 39)

This cost consciousness has led to growing interest and acceptance of both narrower networks and more restrictive formularies as ways to reduce pharmacy cost. By leveraging the increased selection of generics and the careful development of pharmacy networks, we've been able to improve savings for plans and members. Targeted, behavioral-based consumer communications help ease member transitions. Maintenance Choice is tangible proof of the viability of a consumer-friendly narrower network.

The most significant impact of pharmacy care is in the reduction of overall health care spending. By managing chronic conditions effectively and reducing the incidence of adverse events, appropriate use of prescription therapy substantially lowers overall health care spending, as shown in a CVS Caremark study published in *Health Affairs* in 2011. Working with leading academic researchers, our clinical and analytic teams established that people with chronic conditions who are adherent spend less on total care—about $3700 less for someone with diabetes, $7800 less for someone with congestive heart failure.[13]

20%

of Medicare patients are readmitted to the hospital within 30 days of discharge.[14]

3 in 4

readmissions are related to non-adherence

PHARMACY ADVISOR MESSAGING

Safety	Potential interactions, other safety alerts
	Managing potential non-critical side effects
Adherence	Reason for taking the prescription, importance of taking it as prescribed
	Refill, pick-up reminders
	Condition-specific counseling, with educational brochure
	Follow-up phone call from local pharmacist two weeks after first fill
Optimal care	Counseling on gaps in care, pharmacist also contacts physician
	Opportunity to enroll in plan's disease management program
Cost	Opportunity to switch prescription to mail service

results

Improving Quality. Helping members and patients get and stay on the right medications is a goal across CVS Caremark. The Pharmacy Advisor teams—at our retail pharmacies and our PBM call centers—delivered over one million interventions aimed at improving adherence and closing gaps in care last year. Those interventions had significant impact on both measures. When clients elected to implement both Maintenance Choice and Pharmacy Advisor, results improved even more. The percentage of people optimally adherent to their diabetes drugs improved by from 8.5 to 11.6 percent.[15]

Expanding Pharmacy Advisor

Over the next two years Pharmacy Advisor will broaden in scope— adding more chronic conditions—and our interventions will deepen, including condition monitoring, preventive care and counseling through MinuteClinic. For patients with the most complex conditions, more intensive counseling will be available for a charge. For example, we can provide in-home pharmacist visits to members recently discharged from the hospital. The pharmacist will review the patient's medications, including over-the-counter drugs, and discuss how to comply with the prescribed regimen, helping to prevent costly and all-too-common readmissions.

These Pharmacy Advisor and MinuteClinic services align with the star ratings, HEDIS measures and other quality metrics central to the new care delivery models. For Part D plans, five of the star safety measures relate to adherence and medication safety, accounting for nearly half of the Part D score. CMS program measures also include appropriate use of medication and monitoring, preventive services such as vaccines, and the frequency of hospitalizations and readmissions and use of emergency services—all of which can be impacted by pharmacy care.

Coordination with Other Providers

CVS Caremark is preparing for a collaborative role with the nation's health systems and new delivery models including Accountable Care Organizations and medical homes. We

Figure 2

PHARMACY-RELATED QUALITY MEASURES

Measure	Star Part D	Star Part C	Medicaid	HEDIS
Medication Review for Older Adults		x		x
Comprehensive Diabetes Care/Adherence	x	x	x	x
Cholesterol Management/Adherence	x	x	x	x
Control of High Blood Pressure/Adherence	x	x	x	x
Use of High Risk Medications in the Elderly	x			x
Annual Flu Vaccine		x	x	x
Plan All-Cause Readmissions		x	x	x
Antidepressant Medication Management			x	x
Appropriate Use of Asthma Medication				x

have been enhancing our connectivity systems to enable coordinated messaging to members through various modalities. The deeper counseling available through Pharmacy Advisor stems from analysis of a member's prescription history through our clinical engine. The analysis identifies opportunities to improve care, and the system communicates those opportunities to clinicians at points of contact—at the CVS/pharmacy counter and in the PBM call centers. The system helps coordinate messages through multiple channels including letters, interactive voice response (IVR) and web.

When appropriate, we also connect with prescribers. Messaging about appropriate therapies can be delivered at the point of care through e-prescribing systems, and we reach out to prescribers about gaps in care. We are expanding outreach to physicians with electronic prior authorizations (ePA) in 2012. When prior authorizations can be completed at the point of prescribing, the administrative burden in the physician's office is reduced and patients will get their prescriptions more quickly. ePA is one of several initiatives under way at CVS Caremark to facilitate pharmacy management with better data at the point of care.

MinuteClinic already has strategic affiliations with some of the nation's largest and most prominent medical systems, including Cleveland Clinic, Emory Healthcare and the Henry Ford Health System. These affiliations include both clinical and information system collaboration. In many cases, health system physicians become MinuteClinic physician directors. The physicians collaborate with our clinicians and provide quality oversight, teaching and back up. Collaborative clinical and pharmacy care programs are under development.

We are also working to facilitate the two-way flow of information and electronic medical records between CVS Caremark and other healthcare providers. We will be able to provide recommendations about preferred therapies, comparative effectiveness results and other information that can help guide prescribing decisions. Access to medical claims data deepens our analytic capabilities and can improve member care. On a broader scale, the ability to analyze large data sets can help identify patterns of care at the physician and patient level—analysis that can help health care providers, and the system, do a better job.

For us, making a difference is what being

connected

is all about.

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Figure 5: 47.4% of Health Plan Clients Have a Trend ≤ 4%

Figure 6: 41.2 of TPA Clients Have a Trend ≤ 4%

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Figure 9: Specialty Drug Trend
Source, Figures 7, 8, 9: CVS Caremark Industry Analytics, March 2012

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Best-in-class analysis includes top-performing 10% of clients within the trend cohort who achieved reproducible results as the result of improved utilization of cost effective drugs and channels, excluding from the analysis anomalies such as drastic changes in eligibility.

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Source: Gallup Well-Being, Feb 14, 2012—Health Insurance Coverage in the U.S

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Figure 2: 2011 BOB Top Therapeutic Categories
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Figure 3: Projected Generic Launches 2012-2015
Source: IMS Health, company estimates

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