MARCH 2016

Express Scripts **2015 Drug Trend Report**

THE **EXPRESS SCRIPTS** LAB™

Content

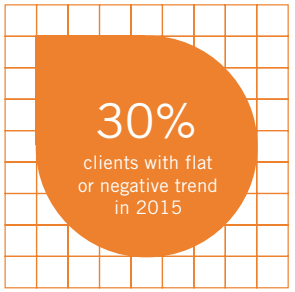
Introduction

Drug trend year in review

2015 drug trend reduction reflects bold actions

Payers faced a seismic shift in the pharmacy landscape in 2014, which led to the highest annual increase in drug spending in more than a decade. As they have for the past 30 years, our clients worked with us in 2015 to implement effective new solutions to address the biggest drivers of that increased spend. Our collective actions helped slow the country's year-over-year increase in drug spending to only 5.2%, roughly half of what it was in 2014. Meanwhile, our members' average out-of-pocket spending on prescription drugs fell 3.2% in 2015, while their overall health outcomes improved.

One thing is clear: taking action works. **Clients who adopted more solutions had an even lower trend.** Our clients who tightly managed their pharmacy benefit held their 2015 increase in drug spending to 3.3% – nearly two percentage points lower than the national average.



Our legacy of client-driven innovation, action and alignment is seen throughout our company's 30 years. Our continued success relies on our commitment to always do what's right for our clients and patients and to always keep patients at the center of everything we do. To all of us at Express Scripts, and to our clients, patients matter most.

In this, the 20th edition of our Drug Trend Report, the impacts of that commitment, and our latest innovations and actions, are clear:

- **Together, we're curing patients with hepatitis C.** In 2015, nearly 50,000 Express Scripts and Accredo patients with hepatitis C received curative treatment. Payers saved more than $1 billion on costly therapies through our Hepatitis Cure Value Program® (HCV). Marketplace competition – ignited by Express Scripts – made these medications more affordable across the U.S., and for many of our plans, accessible to all patients, not just the sickest. Our Accredo specialty pharmacy delivered industry-leading persistency rates for Viekira Pak® (ombitasvir/paritaprevir/ritonavir with dasabuvir) and Harvoni®

To all of us at Express Scripts, and to our clients, **patients matter most**.

(ledipasvir/sofosbuvir) of 93 to 94%, compared to 83 to 92% at retail and specialty pharmacies. New hepatitis C medications coming to market in 2016 will continue to bring down prices.

- **Together, we're eliminating cost and waste.** Payers effectively mitigated the dramatic increases in spending on compounded medications in 2014. They achieved a 97% drop in total plan costs for the class in 2015 through the Express Scripts compound management solution.
- **Together, we're addressing persistent brand price inflation.** Clients who implemented the National Preferred Formulary (NPF) in 2014 will achieve cumulative savings of $3 billion. Fostering competition among existing therapies significantly drives down the cost of care and creates room for payers to cover new, breakthrough therapies.
- **Together, we're innovating.** The Express Scripts Lab is a workshop where we collaborate with clients to create programs that improve patient care and outcomes and tackle unique pharmacy benefit challenges. More than 300 clients participate in pilot programs with Express Scripts, such as our award-winning remote diabetes monitoring program.
- **Together, we're taking on egregious price hikes.** When Turing Pharmacueticals' massive price increase put Daraprim® (pyrimethamine) out of reach for many of those suffering from toxoplasmosis, including many patients with HIV and other conditions that compromise the immune system, Express Scripts partnered with Imprimis Pharmaceuticals to give patients access to a low-cost alternative. Imprimis is offering a compounded oral formulation of pyrimethamine (the active ingredient in Daraprim) and leucovorin (a form of folic acid) for $1 per capsule patients whose pharmacy benefit is managed by Express Scripts.

Still, we have more work to do. A record number of U.S. Food and Drug Administration (FDA) approvals in 2015 and the current pipeline of research and pending approvals will bring promising new therapies to patients, particularly for cancer. This will require new clinical programs and creative approaches to managing spend.

In addition, U.S. drug prices are still on the rise, and the increases are occurring with greater magnitude and frequency than in recent years. In 2015, nearly one-third of branded drugs experienced annual price increases of 20%. Drug maker consolidation and price gouging from a select few pharmaceutical companies are diluting the value of generic medications and lower-cost therapies.

As we've proven over the past three decades, and will continue to prove in the years ahead, our history of alignment and action demonstrates that no test is too great for Express Scripts. We believe there's always a better way to make pharmacy smarter, more accessible and more affordable. We'll continue innovating and taking bold actions, in partnership with our clients, to always keep medicine within reach.

Sincerely,

Glen Stettin, MD
Senior Vice President, Clinical Research & New Solutions and Chief Innovation Officer

Rochelle Henderson, PhD
Senior Director, Research & Clinical Services

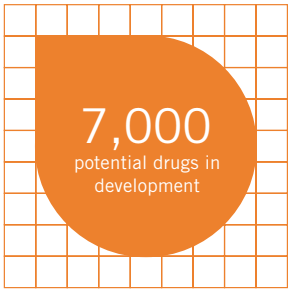
Pharmacy landscape overview

The dynamics underlying anticipated drug cost increases reflect advances in biotechnology, vast improvements in drug development and the superior marketing power of the pharmaceutical industry. Coupled with greater understanding of human genetics, biotechnology promises unique therapies not even imagined when Express Scripts was founded three decades ago. Breakthroughs in the treatment of certain cancers are among the many contributions research brings to the medical marketplace. As a result of pharmaceutical innovation, a record 50 new drugs were approved by the FDA in 2015. Yet, not all increases in spend can be attributed to breakthrough science.

Here's a look at the main factors driving spend in 2015.

High prices for new products

The allocation of pharmacy spend has changed significantly over the last 30 years as more and more dollars are spent on specialty, rather than traditional, medications. In the late '80s and early '90s, most drug development and spend was on traditional, mostly oral, small-molecule solid drugs used to treat conditions such as heartburn/ulcer, depression and diabetes. Today, 37.7% of drug spend is for specialty medications, with the number expected to increase to 50% by 2018 and continue to grow from there. There are 7,000 potential drugs in development, with most aimed at treating the high-use categories of oncology, neurologic disorders and infectious diseases.



High-cost therapies for nonorphan conditions, particularly for cancer, high cholesterol and Alzheimer's disease, will continue to increase the population of patients with high annual drug expenditures.

Oncology therapies

The last decade ushered in an unprecedented number of FDA approvals for oncology medications, with 19 in 2015 alone. These new medications offer oncologists and patients more treatment options and can add months or years of life. Some of these newer medications leverage the body's own immune system to fight cancer. In addition to newer products, medications like Xtandi® (enzalutamide) are used to help patients delay the need to start chemotherapy. These therapies have positive impacts on patient care but come with a hefty price tag – averaging more than $8,000 per prescription.

Increasingly, cancer is becoming a chronic disease that could require more complex, costly and long-term treatment. The average cost for a full-treatment regimen is roughly $150,000 per patient.[1] The cost trend for oncology medications in 2015 was 23.7%, due to growth in both utilization (9.3%) and cost (14.4%). The costs of these medications continue to represent a significant challenge to patients and the overall healthcare system. Some drugs, like Gleevec® (imatinib), are approved to treat multiple types of cancer. However, efficacy may vary for these different indications. The annual cost of Gleevec was $92,000 in 2012, and the economic burden is substantial, due to its multiple indications, wide use and effectiveness.[2]

The future does offer some financial solace for patients who are taking Gleevec, as it lost patent protection in February 2016. Although only one generic manufacturer has 180-day exclusivity, generics from multiple manufacturers are expected to be released in late summer 2016, a competition that should bring lower prices.

High cholesterol therapies

Repatha™ (evolocumab) and Praluent® (alirocumab), new cholesterol-lowering drugs known as PCSK9 inhibitors, entered the market in the second half of 2015. The self-injectable medications block a protein that interferes with the liver's ability to clear "bad" cholesterol from the bloodstream. These new medications are appropriate for only a small number of patients dealing with very specific and

rare forms of high cholesterol that are unresponsive to available statin therapies. The challenge, of course, is that these drugs are priced at more than $14,000 per year, before discounts – far greater than the cost for statin therapies. Although the clinical trials for Praluent and Repatha have been successful in getting these drugs approved for lowering LDL cholesterol, little has been proven about the long-term effects on heart attack and stroke prevention, the main reason people are treated for high cholesterol. For both patient safety and payer affordability, it's important to ensure this class of drugs is appropriately managed.

While we effectively mitigated the expected impact of cholesterol-lowering drugs Repatha and Praluent, we need to prepare for 2017-2018, when the results of outcome trials regarding the effects of these drugs on myocardial infarction and cerebrovascular incidents are anticipated, as those may drive more use.

Price inflation is persistent and costly

Our exclusive Prescription Price Index (page 59) reveals brand price inflation nearly doubled between 2011 and 2015, with the greatest impact seen in more recent years. Compared to 2014, brand prices in 2015 were 16% higher. Brand medications have increased in price by 164% between 2008 and 2015.

Consider the case of Gleevec: In 2015, Novartis, the exclusive manufacturer, engaged in the prevalent practice of increasing the price of a medication in the year prior to patent expiration, and raised the price of Gleevec by 32% to $112.37 per 100mg tablet. Between 2005 and 2015, the price of Gleevec increased three-fold, from $25.50 to $112.37.

On the whole, generic prices continue to decline and deliver significant cost savings to payers and patients. Of greater concern, however, are the increases seen among prices for specific generic drugs, including drugs for diabetes and skin conditions.

Several industry factors are influencing the increase in generic drug pricing. The first is consolidation among pharmaceutical manufacturers that's driving down marketplace competition. For example, Horizon Pharma purchased the product Vimovo® (naproxen/esomeprazole magnesium), then increased the price by 175% in 2015, far exceeding the healthcare value.[3] Other high-profile examples include the greater than 5,000% increase in the price of Daraprim by Turing pharmaceuticals, and the 800% price increase by Valeant Pharmaceuticals on Glumetza®, a branded form of the drug metformin for the treatment of diabetes.

Captive pharmacies circumvent effective cost management

In 2015, we observed the emergence of "captive pharmacies," or pharmacies that enter arrangements to be owned or operated by pharmaceutical manufacturers. Captive pharmacies typically promote the manufacturer's products instead of other lower-cost, equally effective medications. The intent is to circumvent formulary management programs designed to protect the patient and the plan sponsor from unnecessarily filling high-cost medications. The most high-profile captive pharmacy arrangements were between Valeant Pharmaceuticals International and Philidor Rx Services, and Horizon Pharma PLC and Linden Care Pharmacy.

Solutions

How we can deliver better health at a lower cost

Only patient-centric solutions deliver better outcomes and true overall value. Building upon our previous bold actions, we created Express Scripts SafeGuardRx℠, a collection of novel solutions designed to mediate the high cost of new medications through a combination of clinical programs and strategic reimbursement solutions.

SafeGuardRx leverages the clinical specialization at our Therapeutic Resource Centers℠ to target and manage the medication classes that will pose the largest budgetary threats to payers.

In addition to our groundbreaking Hepatitis Cure Value Program (HCV), SafeGuardRx includes our Cholesterol Care Value Program℠ (CCV), Oncology Care Value Program℠ (OCV) and our industry-first Inflation Protection Program.

SafeGuardRx is a **collection of novel solutions** designed to mediate the high cost of new medications through a combination of clinical programs and strategic reimbursement solutions.

Cholesterol Care Value Program

We're already seeing the impact of the Cholesterol Care Value Program, which combines discounts and rigorous utilization management for both Praluent and Repatha, and which offers additional protection by capping plan cost in 2016 for PCSK9 inhibitors. Created to ensure coverage of these medications for patients with rare familial hypercholesterolemia, the program is holding down current spending on this new class of therapy for high cholesterol.

Oncology Care Value Program

Introduced in 2016, this program is designed to ensure cancer patients obtain the treatment they need while helping to protect payers from the high cost of their medications. The approach addresses inefficiencies in the market, whereby some cancer treatments produce a wide range of outcomes across different indications and treatment scenarios, yet prices charged remain the same.

As the country's first program to factor these differences into value-based prescription drug payments, the Express Scripts Oncology Care Value Program takes a multifaceted approach to align cost of treatment with outcomes. The program will focus in 2016 on prostate cancer, lung cancer and renal cell carcinoma.

Inflation Protection program

New for 2016, the Express Scripts Inflation Protection program shields participating plans from the full impact of year-over-year price increases on brand drugs by offering inflation guarantees. All payers fear the unknown costs associated with future brand-drug price inflation. By being creative in our contracting with drug manufacturers, and by taking on our own financial risk, Express Scripts is delivering more value and budget predictability to the payers and patients we serve.

SafeGuardRx programs leverage the specialization of our Therapeutic Resource Centers (TRCs). Our TRC teams are extensively trained in specific medical conditions and provide patients with specialized support from patient-care advocates, specialist pharmacists and nurses.

Championing access and affordability

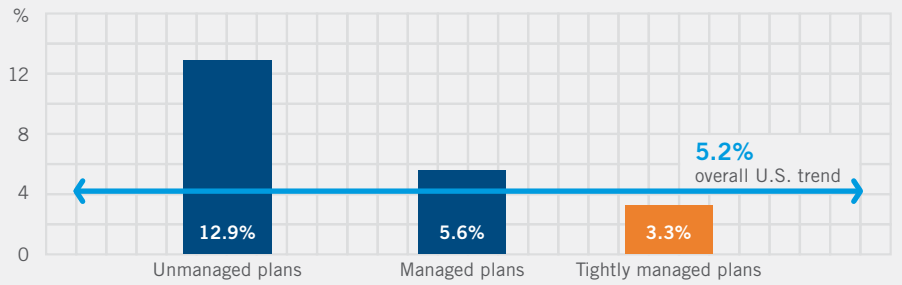
Some drug price increases dominated the industry – and the news – in 2015. Yet those cases are not the only factors driving spend. Guided by an independent panel of clinical experts, our 2016 NPF continues to help payers mitigate rising drug costs. By opening up access to all clinically necessary medications and excluding a handful of "me-too" and other products that have no clinical benefit beyond what's provided by more affordable alternatives, we have leverage to more effectively negotiate with manufacturers and ultimately achieve lower drug prices for the clients and patients we serve.

The 2016 NPF excludes just 80 medications – out of more than 4,000 drugs available on the market – that have clinically equivalent, lower-cost options available. With the NPF, our plan sponsors will save approximately $1.3 billion in 2016, creating more than $3 billion in total savings for those plans that have implemented the NPF since 2014.

Equally important is ensuring that patients receive the most clinically appropriate and cost-effective medications, every time. By using a combination of drug cost management and clinical programs, clients can eliminate waste and maximize the value of every dollar spent.

In our examination of multiple utilization-management and cost-management strategies on traditional drug spend in 2015, we found that "unmanaged" plans experienced an annual average increase in per-member-per-year (PMPY) spend of 12.9% in 2015, compared to 3.3% trend for "tightly managed" plans.

UNMANAGED VS TIGHTLY MANAGED TREND



Therapy class review

A look at drug trend for 2015

Total plan sponsor drug trend for the commercially insured population, including health plans and self-insured plans, increased by 6.4% in 2015. This is roughly half the increase reported in the 2014 Drug Trend Report, noting the change to include rebates in the calculation of trend numbers. Including the impact of member cost share of -1.2%, overall trend was 5.2% in 2015. The largest contributors to rising trend were increased unit cost and utilization for specialty medications. The largest contributors to mitigating trend were the reduction in compounded therapies and cost-saving initiatives for hepatitis C drugs.

Overall drug trend reflects two factors: utilization and unit cost. In 2015, overall trend for traditional medications was almost flat, at 0.6%. Utilization of traditional medications increased by just less than 2%, while unit cost declined 2.1%, the result of programs that drive better discounts and shift share to more cost-effective generics and plan-preferred medications. Overall specialty spend increased 17.8% in 2015. Utilization of specialty medications rose almost 7% for 2015, while unit cost increased by 11.0%. At 37.7%, specialty medications contributed to overall spend more than ever – 5.7% more than in 2014.

COMPONENTS OF TREND

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$708.09	1.9%	-2.1%	**-0.1%**
Specialty	$352.66	6.8%	11.0%	**17.8%**
TOTAL TREND	**$1,060.75**	**2.0%**	**3.2%**	**5.2%**

January-December 2015 compared to same period in 2014, commercially insured.
Reflects total cost for both payers and patients.

Traditional therapy classes and insights: commercially insured

The top 10 traditional therapy classes have shifted compared to last year, yet diabetes remains the most expensive traditional therapy class when ranked by PMPY spend for the fifth consecutive year. Total trend was negative for four of these top classes (high blood cholesterol, high blood pressure/heart disease, asthma and compounded drugs). These decreases in total spend were due to unit cost decreases, with the exception of compounded drugs, which declined in spend due to the sharp decrease in utilization of 55.7%. This decrease reflects commercially insured clients adopting multiple strategies. Utilization increased for all but three of the top 10 therapy classes (high blood cholesterol, heartburn/ulcer disease and compounded drugs).

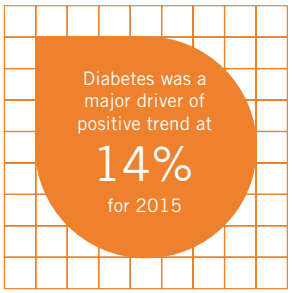
The top three classes by spend (diabetes, pain/inflammation and high blood cholesterol) contributed more than 25% of total traditional drug spend in 2015. High blood cholesterol medications dropped to number three, while pain/inflammation rose to second in spend. Attention disorder medications is number four for 2015, and mental/neurological disorders is number seven. The depression therapy class fell from this top list, replaced by skin conditions at number 10.

COMPONENTS OF TREND FOR THE TOP 10 TRADITIONAL THERAPY CLASSES

RANKED BY 2015 PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$77.50	6.7%	7.4%	**14.0%**
2	Pain/inflammation	$40.65	0.8%	2.1%	**2.9%**
3	High blood cholesterol	$32.66	-0.3%	-8.8%	**-9.2%**
4	Attention disorders	$29.44	5.9%	2.5%	**8.5%**
5	High blood pressure/heart disease	$25.70	2.4%	-14.9%	**-12.5%**
6	Heartburn/ulcer disease	$23.95	-0.7%	36.3%	**35.6%**
7	Mental/neurological disorders	$23.28	2.4%	-2.2%	**0.2%**
8	Asthma	$22.72	5.8%	-7.5%	**-1.6%**
9	Compounded drugs	$20.62	-55.7%	1.8%	**-53.9%**
10	Skin conditions	$20.18	1.4%	26.4%	**27.8%**
	TOTAL TRADITIONAL	**$565.00**	**1.9%**	**-1.4%**	**0.6%**

Highlights



- Diabetes remains a major driver of positive trend within the traditional therapy classes. Trend for this category was 14.0%, reflecting increases in both utilization and unit cost. New cases of diabetes continue to occur, and approximately 27.8% of adults with diabetes are currently undiagnosed.[4] Since diabetes is a chronic condition, utilization will undoubtedly continue to increase, especially as patients increasingly use multidrug regimens. Brand inflation continues to drive the rising unit cost of diabetes medications, which is affected by the lack of generics available in this class. Additionally, new therapies, such as Invokana® (canagliflozin) and Janumet® (sitagliptin/metformin), drove trend through increases in both utilization and unit cost.

- Drugs to treat heartburn and ulcer disease had the largest total trend this year, 35.6%, heavily influenced by a 36.3% increase in unit cost. Although generic medications account for most of the medications filled in this class, the price-per-unit trend was heavily influenced by the increase in branded products such as Nexium® (esomeprazole), Dexilant® (dexlansoprazole) and Prevacid® (lansoprazole). The availability of generic Nexium in February 2015 should result in lower overall unit cost increases for the class in the future.

- At 27.8%, medications used to treat skin conditions, such as psoriasis, had the second largest overall trend of the top 10 therapy classes. This trend was largely due to a 26.4% increase in unit cost of medications in the class, which occurred among both brand and generic therapies. Mergers and acquisitions of manufacturers of drugs in this class have led to a less-competitive market. Of the top 10 drugs in spend for this class, six are generics. Eight of the top 10 drugs in this class by spend increased in unit cost, five of them by more than 40%.

- Medications used to treat high blood cholesterol declined in spend by 9.2% in 2015, moving it down to the third therapy class in spend after over a decade in the top two. Most of the top drugs in this class are generic therapies that continue to decrease in unit cost. Utilization for this class remained almost stable, with a decline of only 0.3%. Despite a decline of conventional generic therapies, such as statins, a 78.2% increase in utilization was noted for omega-3 acid ethyl esters, which are prescription-strength formulations of fish oil. This increase put fish oils as the number four drug in spend for this therapy class. The increase in utilization could reflect patients processing these therapies through the pharmacy benefit.

- Compounded medications had a -53.9% trend in 2015, reflecting the bold actions taken by Express Scripts to ease the staggering increase in spend during 2014. The negative trend reflects the 55.7% decline in utilization of compounded drugs for 2015.

TRADITIONAL SPEND RANK 1

Diabetes

Diabetes medications were the most expensive among traditional therapies, with an overall trend of 14.0%, influenced equally by utilization and unit cost increases. Three of the top five drugs in spend across all traditional therapy classes were diabetes medications: Lantus® (insulin glargine), Januvia® (sitagliptin) and Humalog® (insulin lispro).

Four of the top 10 diabetes drugs by spend were insulins – three dispensed as pre-filled insulin pens. Unit cost for the top insulin, Lantus, decreased 13.7%. However, unit cost trend reflects the increased price for most pre-filled insulin pens and the availability of newer and more expensive treatments – Trulicity® (dulaglutide) and Synjardy® (empagliflozin/metformin) – which launched in 2015. Another pre-filled insulin pen, Levemir® FlexTouch® (insulin detemir), approved in late 2014, rose to seventh place for diabetes drug spend in 2015.

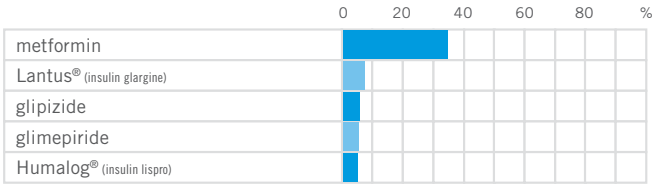
Currently, no generic insulins are available, but Basaglar® (insulin glargine) – the first "follow-on" insulin to Lantus – will launch in December 2016. Four of the most commonly used diabetes treatments – metformin, glipizide, glimepiride and pioglitazone – have been generic for years. Approximately 53% of diabetes prescriptions were generic in 2015.

Spend increased by **14.0%** influenced equally by utilization and unit cost.

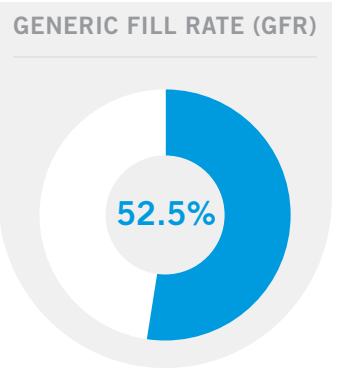
			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	**Diabetes**	**$77.50**	**6.7%**	**7.4%**	**14.0%**
2	Pain/inflammation	$40.65	0.8%	2.1%	**2.9%**
3	High blood cholesterol	$32.66	-0.3%	-8.8%	**-9.2%**
4	Attention disorders	$29.44	5.9%	2.5%	**8.5%**
5	High blood pressure/heart disease	$25.70	2.4%	-14.9%	**-12.5%**
6	Heartburn/ulcer disease	$23.95	-0.7%	36.3%	**35.6%**
7	Mental/neurological disorders	$23.28	2.4%	-2.2%	**0.2%**
8	Asthma	$22.72	5.8%	-7.5%	**-1.6%**
9	Compounded drugs	$20.62	-55.7%	1.8%	**-53.9%**
10	Skin conditions	$20.18	1.4%	26.4%	**27.8%**
	TOTAL TRADITIONAL	**$565.00**	**1.9%**	**-1.4%**	**0.6%**

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.82 number of prescriptions PMPY

5.1% prevalence of use

$94.21 average cost per prescription

42.8% of patients are nonadherent

TRADITIONAL SPEND RANK 2

Pain/inflammation

Medications used to treat pain and inflammation became the second-highest cost therapy class in 2015, reflecting the consolidation of opioids, nonsteroidal anti-inflammatory drugs (NSAIDS) and gamma-aminobutyric acid (GABA) analogs into a combined pain and inflammation class. Small increases in utilization (0.8%) and unit cost (2.1%) contributed to an overall increase of only 2.9% in PMPY spend.

Trend in this class reflects both the reclassification of some controlled substances and the increasing availability of generics. In October 2014, hydrocodone combination products (HCPs) were reclassified as Schedule II controlled substances, making them harder to obtain since fewer prescribers are allowed to write prescriptions for them. In 2015, hydrocodone/acetaminophen (a generic combination) increased in plan cost by 18.3% but decreased in utilization by 14.7%. This utilization decline could be a response to tighter regulations, with unit cost increasing by manufacturers in an attempt to recoup revenue from decreased sales. Generic introductions for Celebrex® (celecoxib) in December 2014 prompted a switch of almost all prescriptions to the generic form throughout 2015, influencing the lower 2.1% unit cost trend.

Despite the additional generic availability in the class, two branded drugs led spend this year: Lyrica® (pregabalin) and the reformulated tamper-resistant, extended-release form of oxycodone, OxyContin® (oxycodone extended release). Although Lyrica increased in spend by 19.8%, OxyContin decreased by 4.4%, mostly due to a utilization decline.

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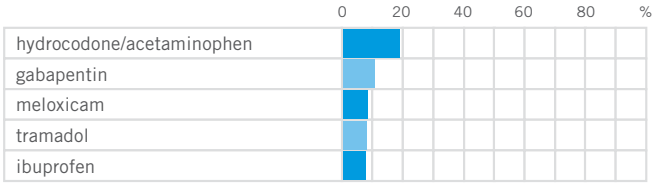

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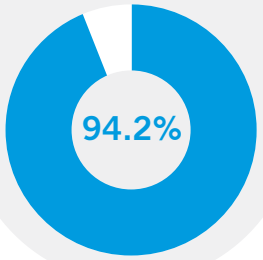

By the numbers

1.06 number of prescriptions PMPY

22.1% prevalence of use

$38.36 average cost per prescription

TRADITIONAL SPEND RANK 3

High blood cholesterol

A decrease in both utilization and unit cost resulted in a downward trend of 9.2% in spend for high blood cholesterol treatments in 2015. The class moved down to the third most costly traditional therapy class.

Overall trend is heavily influenced by the availability of generic medications, which represent 83.1% of the market share in this class. Four of the top 10 drugs in this class are statins. Most are available as generics and had negative unit cost increases. Omega-3 acid ethyl esters, prescription-only formulations of fish oil, have increased in plan cost by 57.8%, influenced by a 78.2% utilization trend and a -20.4% unit cost trend. This increase may be the result of patients filling through the pharmacy benefit.

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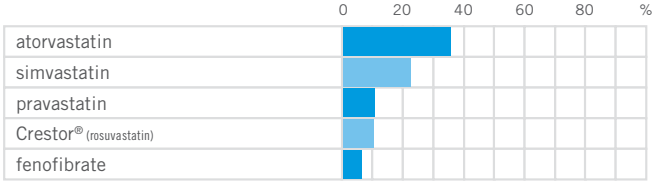
6	Heartburn/ulcer disease	$23.95	-0.7%	36.3%	35.6%
7	Mental/neurological disorders	$23.28	2.4%	-2.2%	0.2%
8	Asthma	$22.72	5.8%	-7.5%	-1.6%
9	Compounded drugs	$20.62	-55.7%	1.8%	-53.9%
10	Skin conditions	$20.18	1.4%	26.4%	27.8%
	TOTAL TRADITIONAL	$565.00	1.9%	-1.4%	0.6%

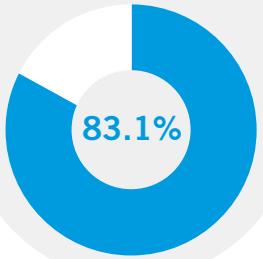
A decrease in both utilization and unit cost **decreased trend by 9.2%**.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

- **1.1** number of prescriptions PMPY
- **10.6%** prevalence of use
- **$29.78** average cost per prescription
- **28.0%** of patients are nonadherent

TRADITIONAL SPEND RANK 4

Attention disorders

PMPY spend for medications used to treat attention disorders increased 8.5% in 2015, driven by a 5.9% increase in utilization and a 2.5% increase in unit cost.

Vyvanse® (lisdexamfetamine), one of the leading brands in this class, increased in both utilization and unit cost. Spend for Vyvanse won't decrease soon, as its manufacturer has secured patent protection until at least 2023, and in January 2015 received an additional indication for treating adults with binge eating disorder (BED).

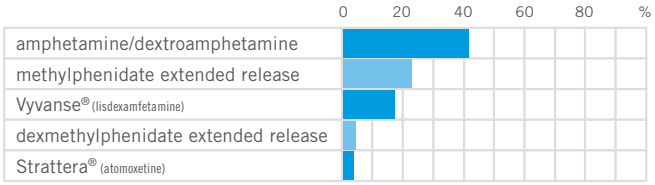
The first generic of Intuniv™ (guanfacine), a nonstimulant attention disorder medication, became available in December 2014, followed by several others in June 2015. Guanfacine became the sixth most utilized attention disorder drug in 2015. Most of the top 10 drugs in spend and utilization are stimulants, and five are branded formulations. Increased utilization for this therapy class reflects increased prevalence of use by adults, including in the elderly population.

The **8.5%** trend was influenced by increased utilization by adults.

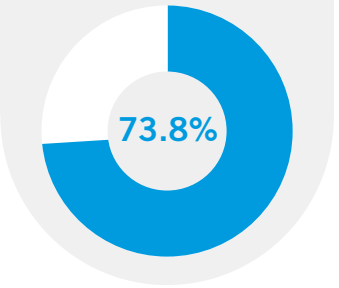
			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$77.50	6.7%	7.4%	**14.0%**
2	Pain/inflammation	$40.65	0.8%	2.1%	**2.9%**
3	High blood cholesterol	$32.66	-0.3%	-8.8%	**-9.2%**
4	**Attention disorders**	**$29.44**	**5.9%**	**2.5%**	**8.5%**
5	High blood pressure/heart disease	$25.70	2.4%	-14.9%	**-12.5%**
6	Heartburn/ulcer disease	$23.95	-0.7%	36.3%	**35.6%**
7	Mental/neurological disorders	$23.28	2.4%	-2.2%	**0.2%**
8	Asthma	$22.72	5.8%	-7.5%	**-1.6%**
9	Compounded drugs	$20.62	-55.7%	1.8%	**-53.9%**
10	Skin conditions	$20.18	1.4%	26.4%	**27.8%**
	TOTAL TRADITIONAL	**$565.00**	**1.9%**	**-1.4%**	**0.6%**

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.23 number of prescriptions PMPY

2.8% prevalence of use

$125.96 average cost per prescription

TRADITIONAL SPEND RANK 5

High blood pressure/ heart disease

Spend for medications used to treat high blood pressure/heart disease decreased for a second year, this year by 12.5%. The decrease was driven mostly by a 14.9% decline in unit cost. Generic medications made up 95.7% of total 2015 market share. The number of PMPY prescriptions for high blood pressure/heart disease medications was the highest among the traditional therapy classes in the top 10.

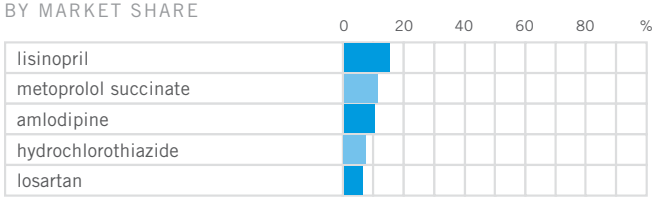
Although overall cost in this class is stable and some branded drugs have increased in unit cost, patent expirations have decreased the unit costs of specific therapies. The first U.S. generic for Diovan® (valsartan) was launched in mid-June 2014 with multiple generic options available by early 2015, thus further decreasing spend for generic valsartan in 2015. Overall, in this therapy class there was a small increase in utilization of 2.4%, possibly due to affordability within the class.

The **12.5%** decrease in trend was driven mostly by the decline in unit cost.

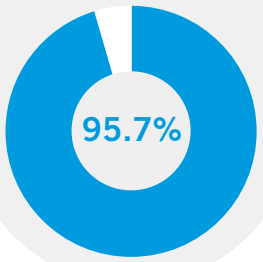
			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$77.50	6.7%	7.4%	**14.0%**
2	Pain/inflammation	$40.65	0.8%	2.1%	**2.9%**
3	High blood cholesterol	$32.66	-0.3%	-8.8%	**-9.2%**
4	Attention disorders	$29.44	5.9%	2.5%	**8.5%**
5	**High blood pressure/heart disease**	**$25.70**	**2.4%**	**-14.9%**	**-12.5%**
6	Heartburn/ulcer disease	$23.95	-0.7%	36.3%	**35.6%**
7	Mental/neurological disorders	$23.28	2.4%	-2.2%	**0.2%**
8	Asthma	$22.72	5.8%	-7.5%	**-1.6%**
9	Compounded drugs	$20.62	-55.7%	1.8%	**-53.9%**
10	Skin conditions	$20.18	1.4%	26.4%	**27.8%**
	TOTAL TRADITIONAL	**$565.00**	**1.9%**	**-1.4%**	**0.6%**

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

2.46 number of prescriptions PMPY

16.7% prevalence of use

$10.45 average cost per prescription

33.3% of patients are nonadherent

TRADITIONAL SPEND RANK 6

Heartburn/ulcer disease

In 2015, PMPY spend for medications used to treat heartburn, ulcer disease and gastroesophageal reflux disease (GERD) increased 35.6%.

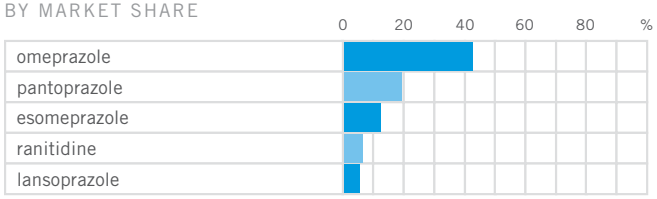
Drugs to treat heartburn and ulcer disease had the largest total trend this year, heavily influenced by a 36.3% increase in unit cost. All of the top five ulcer drugs by market share are generic medications, which now make up 92.3% of total market share in the class. Although dominated by generics, the price per unit trend for heartburn and ulcer medications was heavily influenced by the increase in branded products like Nexium, Dexilant and Prevacid. The availability of generic Nexium in February 2015, and some shift to over-the-counter Nexium, should result in lower overall unit cost increases for the class.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$77.50	6.7%	7.4%	**14.0%**
2	Pain/inflammation	$40.65	0.8%	2.1%	**2.9%**
3	High blood cholesterol	$32.66	-0.3%	-8.8%	**-9.2%**
4	Attention disorders	$29.44	5.9%	2.5%	**8.5%**
5	High blood pressure/heart disease	$25.70	2.4%	-14.9%	**-12.5%**
6	**Heartburn/ulcer disease**	**$23.95**	**-0.7%**	**36.3%**	**35.6%**
7	Mental/neurological disorders	$23.28	2.4%	-2.2%	**0.2%**
8	Asthma	$22.72	5.8%	-7.5%	**-1.6%**
9	Compounded drugs	$20.62	-55.7%	1.8%	**-53.9%**
10	Skin conditions	$20.18	1.4%	26.4%	**27.8%**
	TOTAL TRADITIONAL	**$565.00**	**1.9%**	**-1.4%**	**0.6%**

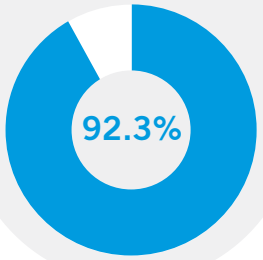
Generic medications represent **92.3%** of medications filled in this class.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.56 number of prescriptions PMPY

7.8% prevalence of use

$43.14 average cost per prescription

TRADITIONAL SPEND RANK 7

Mental and neurological disorders

Overall trend in this class was relatively flat (0.2%), influenced by a small increase in utilization offset by a small decrease in unit cost. The negative cost trend is heavily influenced by the availability of generic medications, including aripiprazole, the generic version of Abilify® (aripiprazole), an antipsychotic that lost patent protection in April 2015. Conversely, the branded products in this class, including Namenda® (memantine), Abilify and Seroquel® (quetiapine), had moderate increases in unit costs of 5.7%, 4.9% and 6.7%, respectively.

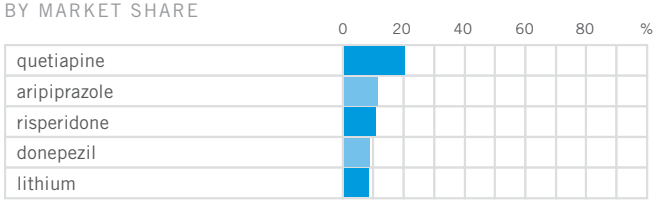
Modest decreases in utilization were observed across the majority of medications in this class. The largest utilization increases influencing the 2.4% increase in trend were observed for mood stabilizers and bipolar disorder therapies.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$77.50	6.7%	7.4%	**14.0%**
2	Pain/inflammation	$40.65	0.8%	2.1%	**2.9%**
3	High blood cholesterol	$32.66	-0.3%	-8.8%	**-9.2%**
4	Attention disorders	$29.44	5.9%	2.5%	**8.5%**
5	High blood pressure/heart disease	$25.70	2.4%	-14.9%	**-12.5%**
6	Heartburn/ulcer disease	$23.95	-0.7%	36.3%	**35.6%**
7	**Mental/neurological disorders**	**$23.28**	**2.4%**	**-2.2%**	**0.2%**
8	Asthma	$22.72	5.8%	-7.5%	**-1.6%**
9	Compounded drugs	$20.62	-55.7%	1.8%	**-53.9%**
10	Skin conditions	$20.18	1.4%	26.4%	**27.8%**
	TOTAL TRADITIONAL	**$565.00**	**1.9%**	**-1.4%**	**0.6%**

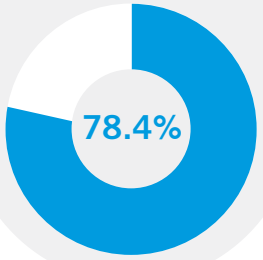
Overall trend in this class was **0.2%**, influenced by a small increase in utilization offset by a small decrease in unit cost.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.12 number of prescriptions PMPY

1.5% prevalence of use

$199.62 average cost per prescription

TRADITIONAL SPEND RANK 8

Asthma

Spend for asthma medications decreased 1.6%. A 5.8% increase in utilization was more than offset by a 7.5% decrease in unit cost, moving asthma down to the eighth most expensive traditional therapy class. Montelukast, the generic of Singulair®, is the most commonly prescribed asthma therapy. However, it has decreased in spend by 37.4% due to a sharp decline of 45.4% in unit cost, despite an 8.0% increase in utilization. This oral tablet holds 33.6% of market share for this therapy class. The next four asthma drugs by utilization are all branded inhalers.

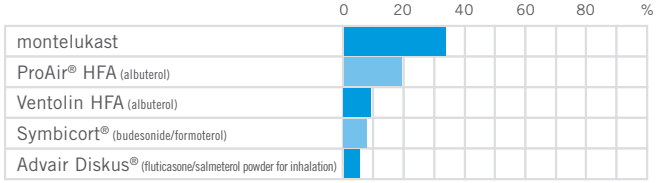
Advair Diskus® (fluticasone/salmeterol powder for inhalation), an inhaler therapy, declined sharply in unit cost – by 29.6%. Utilization increased, possibly due to this decrease in cost. Of the top 10 most utilized asthma drugs, only Flovent® HFA (fluticasone inhalation aerosol) decreased in utilization, by 10.7%, among commercial members. As asthma prevalence continues to rise, spend for branded inhalers will increase.

With **-1.6%** trend, asthma moved down to the **eighth** most expensive traditional therapy class.

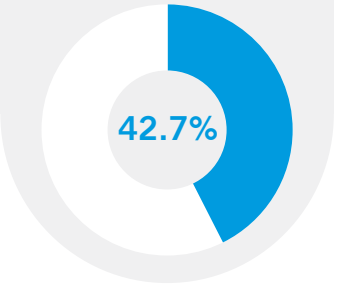
			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$77.50	6.7%	7.4%	**14.0%**
2	Pain/inflammation	$40.65	0.8%	2.1%	**2.9%**
3	High blood cholesterol	$32.66	-0.3%	-8.8%	**-9.2%**
4	Attention disorders	$29.44	5.9%	2.5%	**8.5%**
5	High blood pressure/heart disease	$25.70	2.4%	-14.9%	**-12.5%**
6	Heartburn/ulcer disease	$23.95	-0.7%	36.3%	**35.6%**
7	Mental/neurological disorders	$23.28	2.4%	-2.2%	**0.2%**
8	**Asthma**	**$22.72**	**5.8%**	**-7.5%**	**-1.6%**
9	Compounded drugs	$20.62	-55.7%	1.8%	**-53.9%**
10	Skin conditions	$20.18	1.4%	26.4%	**27.8%**
	TOTAL TRADITIONAL	**$565.00**	**1.9%**	**-1.4%**	**0.6%**

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

- **0.44** number of prescriptions PMPY
- **9.0%** prevalence of use
- **$51.37** average cost per prescription
- **55.2%** of patients are nonadherent

TRADITIONAL SPEND RANK 9

Compounded drugs

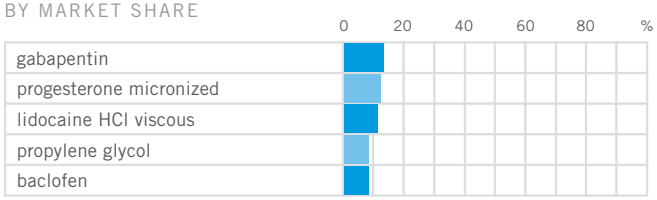
For the first time last year, compounded drugs appeared in the top 10 traditional therapy classes by spend, ranking third in overall spend. Due to various compound management solutions, utilization dropped 55.7% in 2015. Regulations that were implemented in 2012 required that all components of compounded drugs be specified and billed at the ingredient level. Previously, they were billed by the cost of the most expensive ingredient. Consequently, bulk manufacturers and compounding pharmacies raised prices substantially for many components of compounded medications, resulting in much higher drug spend in 2014. Uptake of compound management solutions within the commercial sector yielded a 53.9% decrease in PMPY spend for compounded drugs in 2015. The most common ingredients within compounded drugs were muscle relaxants, hormones and pain medications.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$77.50	6.7%	7.4%	**14.0%**
2	Pain/inflammation	$40.65	0.8%	2.1%	**2.9%**
3	High blood cholesterol	$32.66	-0.3%	-8.8%	**-9.2%**
4	Attention disorders	$29.44	5.9%	2.5%	**8.5%**
5	High blood pressure/heart disease	$25.70	2.4%	-14.9%	**-12.5%**
6	Heartburn/ulcer disease	$23.95	-0.7%	36.3%	**35.6%**
7	Mental/neurological disorders	$23.28	2.4%	-2.2%	**0.2%**
8	Asthma	$22.72	5.8%	-7.5%	**-1.6%**
9	**Compounded drugs**	**$20.62**	**-55.7%**	**1.8%**	**-53.9%**
10	Skin conditions	$20.18	1.4%	26.4%	**27.8%**
	TOTAL TRADITIONAL	**$565.00**	**1.9%**	**-1.4%**	**0.6%**

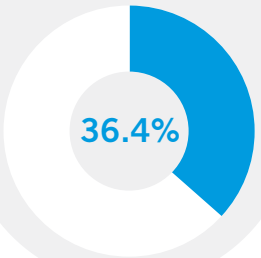
Uptake of compound management solutions within the commercial sector yielded a **53.9% decrease** in PMPY spend.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.02 number of prescriptions PMPY

0.6% prevalence of use

$1,182.83 average cost per prescription

TRADITIONAL SPEND RANK 10

Skin conditions

The skin conditions therapy class had a large increase in overall trend of 27.8%. This trend was largely due to a nearly 26.4% increase in unit cost of medications in the class, which occurred with both brand and generic therapies. Mergers and acquisitions of manufacturers of drugs in this class have led to a less competitive market. Of the top 10 drugs in spend for this class, six are generics. Eight of the top 10 drugs in this class by spend increased in unit cost, five of them by more than 40%.

Nine of the 10 most utilized drugs were generics, and many had sharp cost increases. For example, the two most utilized drugs, clobetasol and triamcinolone – both generic corticosteroids – increased in unit cost by 96.2% and 28.0%, respectively.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$77.50	6.7%	7.4%	**14.0%**
2	Pain/inflammation	$40.65	0.8%	2.1%	**2.9%**
3	High blood cholesterol	$32.66	-0.3%	-8.8%	**-9.2%**
4	Attention disorders	$29.44	5.9%	2.5%	**8.5%**
5	High blood pressure/heart disease	$25.70	2.4%	-14.9%	**-12.5%**
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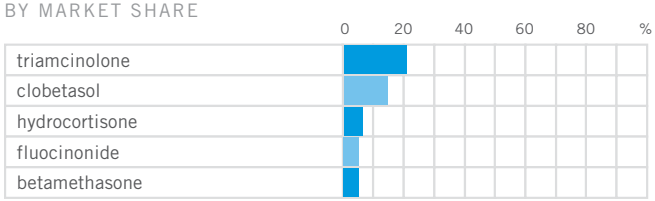
8	Asthma	$22.72	5.8%	-7.5%	**-1.6%**
9	Compounded drugs	$20.62	-55.7%	1.8%	**-53.9%**
10	**Skin conditions**	**$20.18**	**1.4%**	**26.4%**	**27.8%**
	TOTAL TRADITIONAL	**$565.00**	**1.9%**	**-1.4%**	**0.6%**

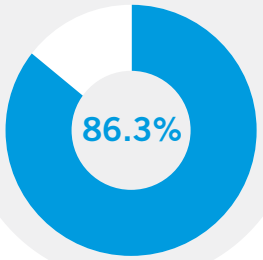
The **27.8%** trend was largely due to a nearly **26.4%** increase in unit cost.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.15 number of prescriptions PMPY

7.2% prevalence of use

$136.61 average cost per prescription

Top 10 traditional drugs

Only six of the top 10 drugs in 2015 were branded medications when ranked by PMPY spend, compared to nine branded medications on the list in 2014. Two of the 2014 top 10 traditional drugs, Nexium and Abilify, became available as generics in 2015. Their equivalents, esomeprazole and aripiprazole, both appear in the top 10. Esomeprazole ranks second and encompasses 2.3% of traditional drug spend. The two other generic therapies on the list are for attention disorders: amphetamine/dextroamphetamine, the generic form of Adderall®, and methylphenidate, the generic for Ritalin®. Lantus, a branded insulin, now takes the top place, with more than 2.5% of total traditional drug spend, despite a double-digit decrease in unit cost. The sharp 46.9% decline in utilization of Abilify is due to brand-to-generic shift, but the branded therapy remained in the top 10 traditional drugs in spend for 2015, since generic formulations weren't available until the end of April.

Two of the 2014 top 10 traditional drugs, Nexium and Abilify, became **available as generics** in 2015.

TOP 10 TRADITIONAL THERAPY DRUGS

RANKED BY 2015 PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL TRADITIONAL SPEND	UTILIZATION	UNIT COST	TOTAL
1	Lantus® (insulin glargine)	Diabetes	$14.24	2.5%	2.3%	-13.7%	**-11.4%**
2	esomeprazole	Heartburn/ulcer disease	$13.28	2.3%	–	–	–
3	Crestor® (rosuvastatin)	High blood cholesterol	$10.20	1.8%	-7.1%	12.4%	**5.3%**
4	Lialda® (mesalamine)	Inflammatory conditions	$8.29	1.5%	0.8%	10.3%	**11.1%**
5	Humalog® (insulin lispro injection)	Diabetes	$8.18	1.4%	8.2%	9.0%	**17.2%**
6	amphetamine/dextroamphetamine	Attention disorders	$7.71	1.4%	9.7%	-12.2%	**-2.5%**
7	Januvia® (sitagliptin)	Diabetes	$7.54	1.3%	5.5%	14.3%	**19.8%**
8	aripiprazole	Mental/neurological disorders	$7.23	1.3%	–	–	–
9	methylphenidate extended release	Attention disorders	$7.01	1.2%	0.0%	16.2%	**16.3%**
10	Vyvanse® (lisdexamfetamine)	Attention disorders	$6.70	1.2%	7.4%	11.5%	**18.9%**

Specialty therapy classes and insights: commercially insured

Specialty medications contributed 37.7% of total drug spend in 2015, with an overall trend of 17.8%. All of the top 10 therapy classes increased in spend, and all had increases in unit cost of medications. Together, spend for the top three specialty therapy classes when ranked by PMPY spend – inflammatory conditions, multiple sclerosis and oncology – contributed 56.3% of the spend for all specialty medications billed through the pharmacy benefit in 2015. Therapies for inflammatory conditions (such as rheumatoid disease and psoriasis) remained at the top, while transplant disappeared from the top 10. This year, we further sub-categorized the miscellaneous specialty conditions, resulting in cystic fibrosis and sleep disorders making the top 10 list, ranked at 7 and 10, respectively.

The **top three** specialty therapy classes accounted for **56.3%** of all specialty spend.

COMPONENTS OF TREND FOR THE TOP 10 SPECIALTY THERAPY CLASSES

RANKED BY 2015 PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Inflammatory conditions	$89.10	10.3%	14.7%	**25.0%**
2	Multiple sclerosis	$53.31	3.5%	6.2%	**9.7%**
3	Oncology	$49.62	9.3%	14.4%	**23.7%**
4	Hepatitis C	$38.44	-2.2%	9.2%	**7.0%**
5	HIV	$31.53	4.6%	12.0%	**16.6%**
6	Growth deficiency	$7.12	2.8%	2.8%	**5.6%**
7	Cystic fibrosis	$6.64	12.5%	40.9%	**53.4%**
8	Pulmonary hypertension	$5.85	13.4%	4.8%	**18.1%**
9	Hemophilia	$5.79	4.9%	15.4%	**20.4%**
10	Sleep disorders	$4.57	5.5%	18.5%	**24.1%**
	TOTAL SPECIALTY	**$341.21**	**6.8%**	**11.0%**	**17.8%**

Highlights

- Trend for cystic fibrosis (CF) medications reached 53.4% in 2015. The entire therapy class contains only 10 drugs, with an average cost per prescription of $6,441.27. Many of the therapies in this class are different dose forms of tobramycin, several of which are now either inhaled solutions or powder form. Orkambi® (lumacaftor/ivacaftor), one of the two most costly drugs in this class, was approved in mid-2015, driving trend.

- Inflammatory conditions, trending at 25.0%, remained at the top of the specialty therapy classes when ranked by PMPY spend, as the top two drugs, Humira® Pen (adalimumab) and Enbrel® (etanercept), had double-digit unit cost increases. Brand innovation is driving some of this increased spend, with newer drugs like Otezla® (apremilast) and Entyvio® (vedolizumab), both approved in 2014, showing triple-digit utilization increases.

- There were 19 new FDA approvals in 2015 for oncology therapies, contributing greatly to the 23.7% increase in spend for this class. Both increased utilization and unit cost of the drugs in this class drove trend. Gleevec, the oncology treatment with the largest market share, increased in unit cost by 19.3%, a common practice by pharmaceutical manufacturers before an expected patent expiration.

- Hemophilia drugs continued to rise in spend for 2015, driven by a 15.4% increase in unit cost of medications. Brand inflation occurred for clotting and antihemophilic factor drugs such as Eloctate® (antihemophilic factor [recombinant], Fc fusion protein), which had triple-digit utilization and unit cost increases. Trends for expensive medications to treat rare conditions such as hemophilia are susceptible to small changes in a plan sponsor's patient populations.

- Trend for HIV medications was driven by brand inflation and utilization, as all of the top 10 HIV therapies are brand medications. Six of these top drugs increased in spend in 2015 by double and triple digits. The top two drugs in utilization, Atripla® (efavirenz/emtricitabine/tenofovir disoproxil fumarate) and Truvada® (emtricitabine/tenofovir disoproxil fumarate), were also the top two drugs in spend; both had unit cost increases in 2015, and utilization of Truvada increased by 29.3%.

There were **19 new FDA approvals** in 2015 for oncology therapies, contributing to the **23.7%** increase in spend for this class.

SPECIALTY SPEND RANK 1

Inflammatory conditions

Inflammatory conditions topped spend in specialty drugs for the seventh year in a row, trending upward by a total of 25.0%, driven by 14.7% trend in unit cost and 10.3% increase in utilization. Most of the top drugs in this category are disease modifying anti-rheumatic drugs (DMARDs), which treat rheumatoid arthritis, inflammatory bowel diseases, psoriasis and several other conditions.

Spend for all of the leading inflammatory condition drugs increased in 2015, with an average cost per prescription of $3035.95. Together, the top two, Humira Pen and Enbrel, captured more than 66% of market share for the class and almost 15% of overall specialty market share. Unit costs for each increased more than 17% in 2015, proving these are major trend drivers.

Overall utilization trend was influenced by positive utilization trend of Humira Pen, Xeljanz® (tofacitinib) and Stelara® (ustekinumab). Two medications approved in 2014 – Otezla, for plaque psoriasis and psoriatic arthritis, and Entyvio, for ulcerative colitis and Crohn's disease – affected utilization.

Inflammatory conditions topped spend in specialty drugs for the **seventh year in a row**.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	**Inflammatory conditions**	**$89.10**	**10.3%**	**14.7%**	**25.0%**
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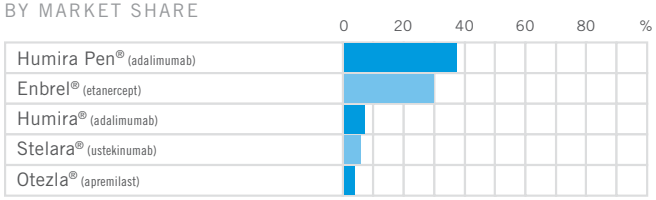
8	Pulmonary hypertension	$5.85	13.4%	4.8%	**18.1%**
9	Hemophilia	$5.79	4.9%	15.4%	**20.4%**
10	Sleep disorders	$4.57	5.5%	18.5%	**24.1%**
	TOTAL SPECIALTY	**$341.21**	**6.8%**	**11.0%**	**17.8%**

TOP DRUGS

BY MARKET SHARE



By the numbers

0.03 number of prescriptions PMPY

0.3% prevalence of use

$3,035.95 average cost per prescription

43.7% of patients are nonadherent

SPECIALTY SPEND RANK 2

Multiple sclerosis

Total trend for multiple sclerosis (MS) medications was 9.7%, due to increases in unit cost (6.2%) and utilization (3.5%). Overall trend was influenced by the unit price increase of the top five most-prescribed medications in the class, which accounted for 84% of the spend. Unit cost increases for these medications ranged from 3.8% to 9.4%. Copaxone® (glatiramer) is the most widely used and had the highest spend in this class. Glatopa™ (glatiramer), a generic alternative for Copaxone's 20mg/mL dosage form, was launched in June 2015.

Several injected interferon beta-1 drugs had decreases in utilization: Avonex® (-16.8%), Betaseron® (-21.0%) and Rebif® (-13.9%). Tecfidera® (dimethyl fumarate) and Gilenya® (fingolimod), oral medications introduced in the last few years, have similar outcomes but fewer side effects than the interferons, making them preferable to patients.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Inflammatory conditions	$89.10	10.3%	14.7%	**25.0%**
2	**Multiple sclerosis**	**$53.31**	**3.5%**	**6.2%**	**9.7%**
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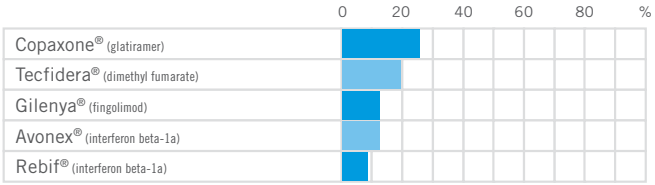
9	Hemophilia	$5.79	4.9%	15.4%	**20.4%**
10	Sleep disorders	$4.57	5.5%	18.5%	**24.1%**
	TOTAL SPECIALTY	$341.21	6.8%	11.0%	17.8%

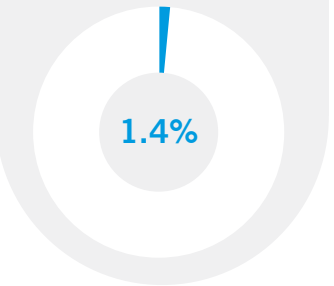
The **9.7%** trend was due to increases in unit cost and utilization.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.01 number of prescriptions PMPY

0.1% prevalence of use

$4,549.22 average cost per prescription

25.1% of patients are nonadherent

SPECIALTY SPEND RANK 3

Oncology

For 2015, trend for the oncology therapy class increased by 23.7%, due to growth in both utilization (9.3%) and unit cost (14.4%). Together, the two drugs that captured the most spend, Gleevec and Revlimid® (lenalidomide), accounted for more than 22% of market share for oncology drugs.

Gleevec, the oncology treatment with the largest market share, increased in unit cost by 19.3%, a common practice by pharmaceutical manufacturers before an expected patent expiration. Utilization trend for Gleevec was relatively flat at 1.1%.

Several oncology drugs had substantial increases in utilization. Imbruvica® (ibrutinib), now approved for multiple types of cancer, is the only FDA-approved Bruton's tyrosine kinase (BTK) inhibitor; its effectiveness for hard-to-treat cancers, oral dosing and relatively mild side effects resulted in a 2015 utilization surge of 78.1%. Utilization for capecitabine, a generic to Genentech's chemotherapy drug Xeloda®, rose 39.3%, following its launch in April 2014. Xtandi, an oral hormone modifier for prostate cancer, increased in utilization by 39.0%.

The two drugs that captured the most spend accounted for more than **22%** of market share for oncology drugs.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Inflammatory conditions	$89.10	10.3%	14.7%	25.0%
2	Multiple sclerosis	$53.31	3.5%	6.2%	9.7%
3	**Oncology**	**$49.62**	**9.3%**	**14.4%**	**23.7%**
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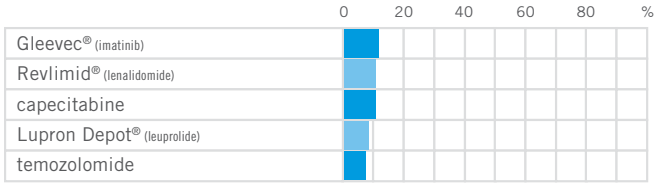
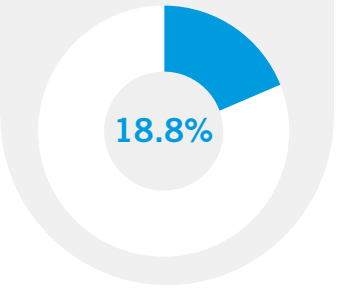
	TOTAL SPECIALTY	$341.21	6.8%	11.0%	17.8%

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.01 number of prescriptions PMPY

0.1% prevalence of use

$7,158.53 average cost per prescription

38.4% of patients are nonadherent

SPECIALTY SPEND RANK 4

Hepatitis C

Hepatitis C drug spend increased 7.0% in 2015. After the 2014 record increase in spend due to a few new and effective, but expensive, oral antiviral therapies, 2015 trend was lower. While utilization decreased 2.2%, a 9.2% increase in unit cost drove most of the change in spend. Viekira Pak and Harvoni, two of the therapies approved in 2014, together captured more than 57% of market share for this therapy class. Many of the other therapies concurrently fell in utilization, with several dropping in use by more than 75%.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Inflammatory conditions	$89.10	10.3%	14.7%	**25.0%**
2	Multiple sclerosis	$53.31	3.5%	6.2%	**9.7%**
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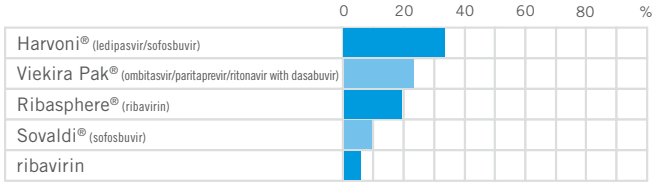
10	Sleep disorders	$4.57	5.5%	18.5%	**24.1%**
	TOTAL SPECIALTY	**$341.21**	**6.8%**	**11.0%**	**17.8%**

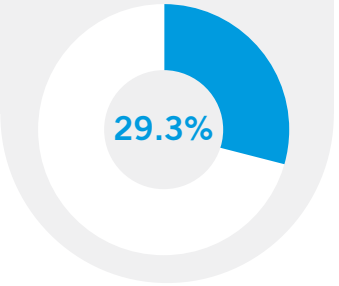
Increase in unit cost drove most of the **7.0%** change in spend.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

- **0.002** number of prescriptions PMPY
- **0.05%** prevalence of use
- **$17,090.18** average cost per prescription
- **8.9%** of patients are nonadherent

SPECIALTY SPEND RANK 5

HIV

A 4.6% increase in utilization and a 12.0% unit cost increase resulted in an overall 2015 trend increase of 16.6% in PMPY spend for HIV treatments, moving them up to the fifth most costly specialty therapy class.

The average unit cost increase for the top 10 most commonly prescribed medications was 4.8%. In addition, for the most prescribed medications, unit cost was influenced by large price increases in medications with smaller market share. At 48.7% and 997.8%, respectively, two of the largest spend increases were for Stribild® (cobicistat/elvitegravir/emtricitabine/tenofovir disoproxil fumarate), and Triumeq® (abacavir/dolutegravir/lamivudine). These are attributable to large upticks in utilization trend, as more patients move to combination therapies. All but one of the drugs in the top 10 for HIV had only small unit cost increases. Three new combination treatments for HIV hit the U.S. market in 2015: Evotaz™ (atazanavir/cobicistat), Prezcobix® (darunavir/cobicistat), and Genvoya® (elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide).

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Inflammatory conditions	$89.10	10.3%	14.7%	**25.0%**
2	Multiple sclerosis	$53.31	3.5%	6.2%	**9.7%**
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4	Hepatitis C	$38.44	-2.2%	9.2%	**7.0%**
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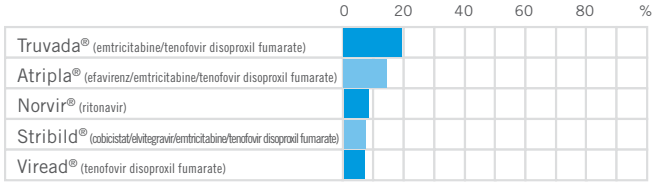
9	Hemophilia	$5.79	4.9%	15.4%	**20.4%**
10	Sleep disorders	$4.57	5.5%	18.5%	**24.1%**
	TOTAL SPECIALTY	$341.21	6.8%	11.0%	17.8%

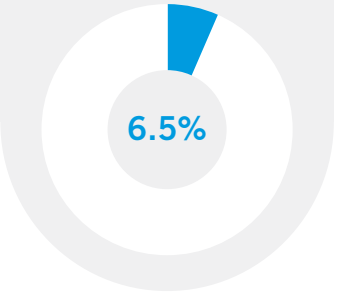
The **16.6%** increase in PMPY spend moved HIV up to the **fifth** most costly specialty therapy class.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.02 number of prescriptions PMPY

0.20% prevalence of use

$1,272.01 average cost per prescription

24.9% of patients are nonadherent

SPECIALTY SPEND RANK 6

Growth deficiency

In 2015, growth deficiency medications trended 5.6%, from equal trends in utilization (2.8%) and unit cost (2.8%). Norditropin® FlexPro® (somatropin) continued to dominate this class for the fourth year in a row, capturing 49.1% of market share. It's also the drug with the highest spend in this therapy class, increasing in both utilization and unit cost by approximately 11%. For Genotropin® (somatropin), the second drug in spend for 2015, trend decreased 12.0%, due mostly to a 11.2% decrease in unit cost. Increlex® (mecasermin) had the highest trend this year, with an overall increase in spend of 140.6%, mostly due to a 126.8% increase in utilization. Increlex treats a rare condition, primary insulin-like growth factor deficiency (IGFD), which affects approximately 6,000 children in the United States. Trends for expensive medications to treat rare conditions, such as growth deficiency, are susceptible to small changes in a plan sponsor's patient population.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Inflammatory conditions	$89.10	10.3%	14.7%	**25.0%**
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6	**Growth deficiency**	**$7.12**	**2.8%**	**2.8%**	**5.6%**
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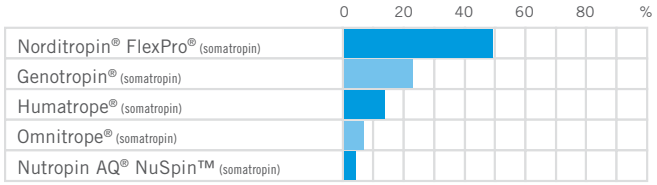
10	Sleep disorders	$4.57	5.5%	18.5%	**24.1%**
	TOTAL SPECIALTY	**$341.21**	**6.8%**	**11.0%**	**17.8%**

Growth deficiency medications trended **5.6%** from equal trends in utilization and unit cost.

TOP DRUGS

BY MARKET SHARE



By the numbers

0.003 number of prescriptions PMPY

0.03% prevalence of use

$2,735.29 average cost per prescription

39.9% of patients are nonadherent

SPECIALTY SPEND RANK 7

Cystic fibrosis

In 2015, drugs that treat cystic fibrosis broke into the top 10 therapy classes in spend for the first time. Currently, the therapy class contains only 10 drugs. Of those 10, only one is available as a generic and many therapies have been recently approved. CF drugs trended 53.4% in 2015, largely from a 40.9% increase in unit cost that was mostly due to use of Orkambi, one of the new branded therapies that hit the market in mid-2015. Orkambi is an oral combination therapy, which is clinically effective for CF, but costs more than $20,000 per month. Utilization in the class increased by 12.5%. Together, all the therapies derived from tobramycin, an antibiotic that has been available in generic inhaled form since late 2013, captured 26.4% of market share for this class. Some of the newer, brand-name forms of tobramycin include the TOBI® Podhaler™ (tobramycin inhalation powder), Bethkis® (tobramycin inhalation solution) and the Kitabis™ Pak (tobramycin), averaging approximately $3,500 to $4,700 for a 30-day supply.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Inflammatory conditions	$89.10	10.3%	14.7%	25.0%
2	Multiple sclerosis	$53.31	3.5%	6.2%	9.7%
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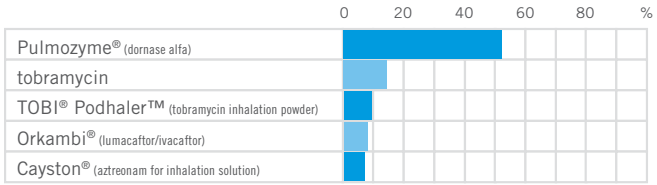
10	Sleep disorders	$4.57	5.5%	18.5%	24.1%
	TOTAL SPECIALTY	$341.21	6.8%	11.0%	17.8%

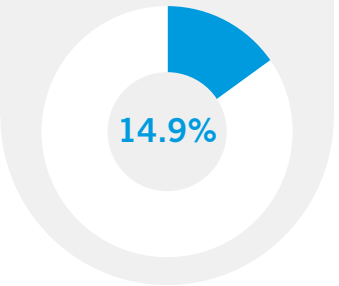
Currently, the therapy class contains only 10 drugs; **only one is available as a generic**.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.001 number of prescriptions PMPY

0.01% prevalence of use

$6,441.27 average cost per prescription

SPECIALTY SPEND RANK 8

Pulmonary hypertension

Spend for pulmonary hypertension increased by 18.1% in 2015. A 13.4% utilization increase and a 4.8% unit cost increase were responsible for the trend. For the top 10 drugs in spend for this class, utilization increased for all but three older drugs. Sildenafil, a generic oral tablet therapy for World Health Organization (WHO) Group 1 pulmonary arterial hypertension, remains the most prescribed drug in this class, with 36.4% of the market share. However, Orenitram® (treprostinil), Opsumit® (macitentan) and Adempas® (rociguat) increased greatly in utilization – by 315.8%, 111.2% and 72.3%, respectively. All three are relatively new drugs, approved in the fourth quarter of 2013 and launched in late 2013 or early 2014, explaining some of their 2015 utilization increases. As oral therapies, they're more convenient than some other PH therapies requiring inhalation or infusion.

In 2015, Orenitram decreased in unit cost by 53.2%, which likely contributed to its utilization increase. Sildenafil's unit cost decreased by 25.1% in 2015. Uptravi® (selexipag), expected to hit the U.S. market early in 2016, is predicted to compete with Orenitram.

For the top 10 drugs in spend for this class, utilization increased for all but **three** older drugs.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
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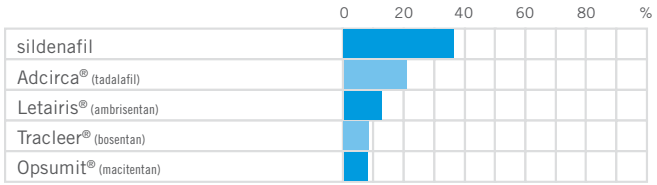
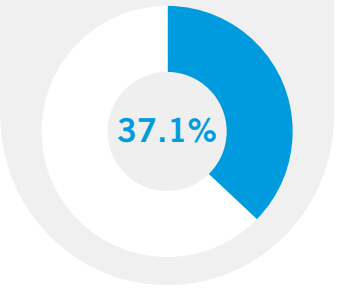
TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.002 number of prescriptions PMPY

0.02% prevalence of use

$3,892.31 average cost per prescription

31.3% of patients are nonadherent

SPECIALTY SPEND RANK 9

Hemophilia

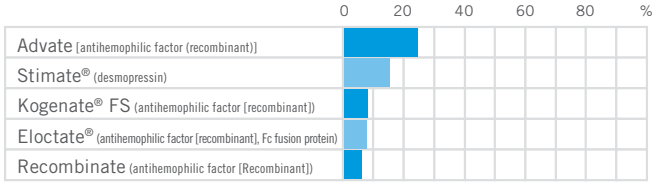
Of the top 10 classes, hemophilia drugs have the lowest market share. In 2015, trend of 20.4% was driven by a 15.4% increase in unit cost and a 4.9% increase in utilization. Eloctate and Alprolix® (coagulation factor IX [recombinant], Fc fusion protein), two long-acting therapies that were approved in 2014, are now in the top 10 in spend for this class. In 2015, each had large increases in utilization of more than 400%, in 2015. Eloctate also had a unit cost trend of 141.0%. Because this class has such small market share and high average cost of therapy, even a small increase in utilization can have a large impact on overall spend. The average 2015 cost per 30-day adjusted prescription for the top 10 utilized hemophilia drugs was $22,857.79.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Inflammatory conditions	$89.10	10.3%	14.7%	**25.0%**
2	Multiple sclerosis	$53.31	3.5%	6.2%	**9.7%**
3	Oncology	$49.62	9.3%	14.4%	**23.7%**
4	Hepatitis C	$38.44	-2.2%	9.2%	**7.0%**
5	HIV	$31.53	4.6%	12.0%	**16.6%**
6	Growth deficiency	$7.12	2.8%	2.8%	**5.6%**
7	Cystic fibrosis	$6.64	12.5%	40.9%	**53.4%**
8	Pulmonary hypertension	$5.85	13.4%	4.8%	**18.1%**
9	**Hemophilia**	**$5.79**	**4.9%**	**15.4%**	**20.4%**
10	Sleep disorders	$4.57	5.5%	18.5%	**24.1%**
	TOTAL SPECIALTY	**$341.21**	**6.8%**	**11.0%**	**17.8%**

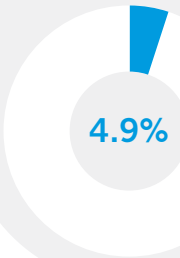
Because this class has such **small market share** and **high average cost of therapy**, even a small increase in utilization can have a **large impact** on overall spend.

TOP DRUGS

BY MARKET SHARE



GENERIC FILL RATE (GFR)



By the numbers

0.0002 number of prescriptions PMPY

0.005% prevalence of use

$25,668.55 average cost per prescription

SPECIALTY SPEND RANK 10

Sleep disorders

In the 2014 Express Scripts Drug Trend Report, sleep disorders were included in the miscellaneous specialty conditions therapy class. With an average cost of approximately $9,000 per prescription, sleep disorders medications easily made the top 10 specialty medications ranked by PMPY spend, despite low market share. In 2015, the PMPY spend for medications to treat sleep disorders increased by 24.1%, influenced by an 18.5% increase in cost and a 5.5% increase in utilization. Xyrem® (sodium oxybate) and Hetlioz® (tasimelteon) account for 100% of the market share in the sleep disorder therapy class.

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Inflammatory conditions	$89.10	10.3%	14.7%	**25.0%**
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4	Hepatitis C	$38.44	-2.2%	9.2%	**7.0%**
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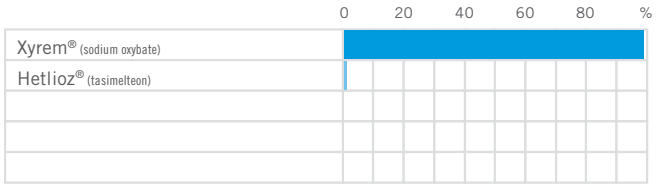
6	Growth deficiency	$7.12	2.8%	2.8%	**5.6%**
7	Cystic fibrosis	$6.64	12.5%	40.9%	**53.4%**
8	Pulmonary hypertension	$5.85	13.4%	4.8%	**18.1%**
9	Hemophilia	$5.79	4.9%	15.4%	**20.4%**
10	**Sleep disorders**	**$4.57**	**5.5%**	**18.5%**	**24.1%**
	TOTAL SPECIALTY	**$341.21**	**6.8%**	**11.0%**	**17.8%**

Xyrem and Hetlioz account for **100%** of the specialty market share in the sleep disorder class.

TOP DRUGS

BY MARKET SHARE



By the numbers

0.0005 number of prescriptions PMPY

0.01% prevalence of use

$8,928.96 average cost per prescription

Top 10 specialty drugs

In 2015, all but two of the top 10 specialty drugs increased in PMPY spend, and all but one with increased in unit cost. Seven of the top 10 therapies had increases in utilization. Humira Pen remained the drug with the highest spend, with 9.8% of total specialty drug spend. Harvoni and Viekira Pak moved into the top 10 specialty drugs, leading in the highest trends for utilization and unit cost. Enbrel moved down to the second most expensive drug, capturing 7% of total specialty drug spend. Two oncology drugs, Gleevec and Revlimid, remained among the most expensive specialty drugs, with increases in both utilization and unit cost. Three drugs for multiple sclerosis and one HIV drug, Atripla, comprise the remainder of this list. Atripla and Copaxone were the only top specialty drugs with a decrease in overall spend in 2015. Atripla decreased in spend despite a 6.3% increase in unit cost. The decline was due to downward utilization trend by 8.9%, which was the result of new, competing HIV therapies rising in popularity. Decrease in Copaxone spend was due to a decline in utilization, a result of the availability of a generic alternative.

TOP 10 SPECIALTY THERAPY DRUGS

RANKED BY 2015 PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL SPECIALTY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Humira® Pen (adalimumab)	Inflammatory conditions	$33.54	9.8%	10.5%	18.1%	**28.6%**
2	Enbrel® (etanercept)	Inflammatory conditions	$23.85	7.0%	-5.2%	17.7%	**12.5%**
3	Harvoni® (ledipasvir/sofosbuvir)	Hepatitis C	$21.35	6.3%	293.6%	-16.7%	**276.9%**
4	Copaxone® (glatiramer)	Multiple sclerosis	$13.76	4.0%	-5.4%	3.8%	**-1.6%**
5	Tecfidera® (dimethyl fumarate)	Multiple sclerosis	$11.81	3.5%	9.8%	9.2%	**19.0%**
6	Viekira Pak® (dasabuvir/ombitasvir/ paritaprevir/ritonavir)	Hepatitis C	$9.85	2.9%	–	–	–
7	Gleevec® (imatinib)	Oncology	$7.85	2.3%	1.1%	19.3%	**20.4%**
8	Revlimid® (lenalidomide)	Oncology	$7.74	2.3%	6.4%	8.3%	**14.7%**
9	Gilenya® (fingolimod)	Multiple sclerosis	$7.30	2.1%	20.3%	7.5%	**27.8%**
10	Atripla® (efavirenz/emtricitabine/tenofovir)	HIV	$7.23	2.1%	-8.9%	6.3%	**-2.6%**

2016 – 2018 trend forecast

Traditional trend forecast

Traditional trend will continue with modest increases over the next few years. Diabetes will continue to be a significant contributor to trend, driven by increases in both utilization and unit cost. The trend forecast is negative for several of the top 10 classes over the next three years, primarily due to decreases in unit cost. It's important to note that unit cost reflects the price change across the class, including both the brand and generics within that class. These forecasted numbers include the anticipated effects of SafeGuardRx inflation protection to ensure that drug price increases will be mitigated. The significant increase in trend in 2015 for heartburn/ulcer disease medications is not likely to be sustained. High 2015 trend for the skin conditions class should moderate as well. Although compounded drugs remained in the top 10 therapy classes in 2015, they're expected to continue to decrease in trend over the next three years, as more clients adopt the Express Scripts trend management solutions. The compounded medication class may drop out of the top 10 in the near future.

Diabetes

PMPY drug spend for diabetes medications is projected to increase slightly, then stabilize in the upper teens for 2016 through 2018. Positive utilization trend is a result of increasing disease prevalence. As type 2 diabetes progresses, patients may require more than one therapy to adequately control the disease. Many of these therapies have been merged into new combination products that entered the market in 2014 and 2015. As patients switch from older regimens that require multiple pills per day to the new combination products, increased spend is anticipated, since these combination therapies are branded. Additional continuing unit cost increases are likely due to steady price increases for branded drugs, especially insulin. The first follow-on insulin product, Basaglar, which will compete with Lantus and other basal insulins, will be launched in the U.S. in December 2016. A number of Lantus biosimilars are in development, which will lead to additional competition.

2016 – 2018 TREND FORECAST

	2016	2017	2018
TOTAL OVERALL	**6.8%**	**7.3%**	**8.4%**

TREND FORECAST FOR KEY TRADITIONAL THERAPY CLASSES

2016 – 2018

	TREND FORECAST		
THERAPY CLASS	**2016**	**2017**	**2018**
Diabetes	18.0%	17.7%	16.6%
Pain/inflammation	2.9%	10.2%	12.1%
High blood cholesterol	-11.5%	-14.1%	-13.3%
Attention disorders	9.2%	6.5%	5.5%
High blood pressure/heart disease	-4.6%	-9.1%	-7.6%
Heartburn/ulcer disease	-11.8%	-9.8%	-10.7%
Mental/neurological disorders	-4.0%	-7.0%	-3.0%
Asthma	4.0%	6.1%	0.0%
Compounded drugs	-7.7%	-6.4%	-5.1%
Skin conditions	21.2%	16.2%	11.1%
Other traditional classes	-3.6%	-4.5%	-4.5%
TOTAL TRADITIONAL	**0.4%**	**0.7%**	**1.3%**

Pain/inflammation

The pain/inflammation therapy class is the second highest cost therapy class for 2015. PMPY spend for pain and inflammation drugs is forecast to go up modestly in 2016 and then by double digits in 2017 and 2018, driven almost entirely by increases in unit cost. The October 2014 reclassification of hydrocodone combination products as schedule II controlled substances limits ease of refill on the most utilized drugs in the class. Although the class is dominated by generics, three brand-name drugs are in the top five pain/inflammation drugs according to 2015 PMPY spend and are expected to continue to dominate the class. Generics for the leading brand, Lyrica, are not due until 2019. Additionally, reformulated tamper-resistant or abuse-deterrent opioids, such as the number two drug, OxyContin, are only available as branded therapies. Abuse-deterrent formulations (ADF) of opioids are typically much more expensive than non-ADF alternatives. Additionally, the new formulations give years of extra patent protection to the brand manufacturer.

High blood cholesterol

Although expensive injectable treatments known as proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitors were approved in 2015, statins remain the standard of therapy for most patients with high blood cholesterol. PCSK9s are currently indicated for a small and specific subset of patients. Thus they're examined within a separate specialty therapy class. Negative trends for traditional high blood cholesterol therapies are forecast for the next several years, mostly as a result of decreases in drug costs. In May 2016, Generic competition for the last popular brand statin, Crestor® (rosuvastatin) will be followed by generics for Zetia® (ezetimibe) in December 2016 and Vytorin® (ezetimibe/simvastatin) in April 2017. New guidelines for treating high blood cholesterol and the introduction of PCSK9s have not yet caused significant changes in utilization, but statins are prescribed widely for preventative use and for patients who have had a cardiovascular event. Any potential increases in utilization will be more than offset by overall generic cost savings and savings from the uptake of the Express Scripts Cholesterol Care Value Program as a part of SafeGuardRx.

Attention disorders

We expect trend for drugs used to treat attention disorders to increase at progressively smaller rates from 2016 through 2018. There's a shift in the population that utilizes attention disorder medications, as pediatric patients who utilized medications in this therapy class grow into adulthood and continue therapy. Positive utilization trend is likely as this patient population continues to age. Unit cost for medications used to treat attention disorders also is forecast to increase in each of the next three years. Generics for the nonstimulant Intuniv, which launched in December 2014, and scheduled patent expiration for Strattera® (atomoxetine) in May 2017 should slightly alleviate cost increases. However, brand loyalty is high in the class, with patients, physicians and caregivers reluctant to switch therapies. The top brand in the class, Vyvanse, was recently approved for binge eating disorder, which may increase its utilization in coming years. Most products in the pipeline are new formulations of currently available amphetamines.

High blood pressure/heart disease

With current market saturation levels and the dominance of generic therapies, the predicted trend decreases for the high blood pressure/heart disease class stem from flat utilization and falling unit costs. Valsartan, the generic for Diovan, was first released in July of 2014, with several manufacturers following with their own generics in January of 2015. All the main subclasses used to treat high blood pressure and heart disease are predominantly generic, resulting in falling unit cost as reflected in the forecasted trend for this class.

Increases in utilization for PCSK9s will be more than offset by overall generic cost savings and savings from the uptake of the Express Scripts Cholesterol Care Value Program as a part of SafeGuardRx.

Heartburn/ulcer disease

No new drugs are in development for heartburn/ulcer disease. The two remaining principal brands aren't among the most commonly used drugs in the class, indicating Nexium had high cost increases leading up to the introduction of a generic in February 2015. Negative trends are forecast for 2016 through 2018, since patients will continue using less expensive generic and over-the-counter (OTC) versions of the most common medications in the class. Over the next three years, the anticipated generic competition for Nexium should drive unit cost down, resulting in decreased overall trend.

Mental/neurological disorders

Trend for medications used to treat mental/neurological disorders is forecast to decrease for each of the next three years. Utilization may increase marginally, as atypical antipsychotics are used more for treatment-resistant depression and other difficult-to-manage psychiatric conditions. Generics for Abilify, which launched in May 2015, brought both utilization and cost down by more than 40% for what had been the top drug in the class. Several other brands are in the top 10 drugs by spend, contributing to expected brand inflation for the class. Unit cost trend for multiple popular generics was down significantly in 2015, helping to mitigate some brand cost increases. This effect is expected to continue over the next three years and is reflected in the forecast.

Asthma

PMPY spend for asthma medications will increase slightly in 2016 and 2017 from anticipated brand inflation. For 2018, however, trend is forecasted to drop to zero after the first generic for Advair Diskus is approved by the FDA, which is expected in late 2017. Another popular inhaler, ProAir® HFA (albuterol), could face generic competition in December 2016. However, a settlement agreement will only allow limited supplies of the generic to become available, which will decrease competition in the market and result in reduced cost savings.

Compounded medications

Continued decreases in utilization for compounded medications will be seen, as more clients adopt the Express Scripts compound utilization management program. However, the drops in trend will not be as significant over the next three years, as some of the utilization in this class has been already been affected. The lower, more moderate trend is likely to be driven exclusively by this decrease in utilization, as there is no expectation that the prices for these medications will decrease over the next few years, given their continued rise in 2015. The forecast in this category is dependent upon client adoption of utilization management strategies, rather than events within the compounded medications market itself.

Skin conditions

This year's skin condition therapy class incurred a 34.9% increase in unit cost, with both brand and generic therapies showing substantially higher costs. Consolidations among drug manufacturers have led to a less competitive market, allowing some companies to increase prices drastically. For the next three years we foresee trends decreasing from 21.0% in 2016 to 11.0% in 2018 as plans continue to reap benefits of the' trend management strategies implemented by Express Scripts in 2015.

Specialty trend forecast

Specialty trend is forecast to increase around 17% annually between 2016 and 2018. Existing specialty drugs will gain approval for other indications and will be prescribed more often, and new therapies will receive approval from the FDA. All of these factors will increase utilization trend. However, the major contributors to rising PMPY spend for specialty medications will continue to be both brand inflation and high starting costs for new, highly targeted therapies.

Inflammatory conditions

Trend for the class is forecast to remain above 25.0% due to increases in utilization and unit cost. Cosentyx® (secukinumab), approved in January 2015 for psoriasis, received expanded approvals for ankylosing spondylitis and psoriatic arthritis in January 2016. It's anticipated to be a major driver of increased utilization trend for this class. However, two competitors for Cosentyx are expected to enter the market in 2016: ixekizumab in March and brodalumab in November, which may drive unit cost down as they compete for marketshare.

Beginning in 2017, potential launches of biosimilars to the top two therapies in the class – Remicade® and Humira – may lower the unit cost of therapy. Several biosimilar-related regulatory issues remain unanswered. Once these are resolved, biosimilars may either be expedited or delayed to the market. Several competitors to Xeljanz, the first FDA-approved Janus kinase (JAK) inhibitor, should reach the market in 2017.

Multiple sclerosis

Brand inflation continues to be the primary driver of the trend predicted for medications used to treat MS over the next three years. Launched in June 2015, Glatopa – an A-rated generic to Copaxone 20mg/mL – was expected to lessen the previous predicted cost increases for the class. However, many patients were switched to Copaxone's newer 40mg/mL strength before Glatopa was marketed, which may limit uptake. Generics for Copaxone's higher strength are not expected until February 2017. Older, injectable medications with adverse side effects continue to lose ground to newer, more convenient oral MS drugs.

TREND FORECAST FOR KEY SPECIALTY THERAPY CLASSES

2016 – 2018

	TREND FORECAST*		
THERAPY CLASS	2016	2017	2018
Inflammatory conditions	25.5%	25.5%	26.7%
Multiple sclerosis	11.2%	10.2%	7.2%
Oncology	21.1%	20.0%	20.0%
Hepatitis C	10.2%	8.1%	8.0%
HIV	17.7%	17.8%	18.9%
Growth deficiency	9.1%	9.1%	9.0%
Cystic fibrosis	58.2%	36.2%	28.8%
Pulmonary hypertension	16.6%	5.8%	5.9%
Hemophilia	17.3%	18.3%	22.4%
Sleep disorders	22.6%	21.5%	20.5%
Other specialty classes	6.7%	6.4%	6.4%
TOTAL SPECIALTY	17.4%	16.8%	17.2%

*Trend is forecast only for specialty medications billed through the pharmacy benefit.

Oncology

Over the next three years, trend for the oncology class will continue to increase at approximately 20% annually. As more patients survive initial cancer treatment, utilization will increase as these patients may need maintenance therapy or treatment for recurring disease. Additionally, with more oral and self-administered drugs available, coverage shifts from medical benefits to pharmacy benefits continue, causing increases in utilization and cost on the pharmacy side. Cost also will continue to escalate as more expensive, targeted drugs are introduced. The first generic to Gleevec launched in February 2016, and is expected to result in cost savings. A generic for the prostate cancer drug Zytiga® (abiraterone) is expected in October 2018. However, the lower cost of available generics won't offset high prices for branded oncology drugs.

Hepatitis C

In the next three years, moderate increases in trend are likely for drugs to treat hepatitis C. Two new drugs were approved in July 2015. Daklinza™ (daclatasvir) was approved for use with Sovaldi® (sofosbuvir) to treat genotype 3 hepatitis C, and Technivie® (ombitasvir/paritaprevir/ritonavir) was approved to treat genotype 4 for patients without cirrhosis. In January 2016, the approval of Zepatier™ (elbasvir/grazoprevir) introduced another option for genotypes 1 and 4. Multiple regimens that treat more than one genotype are expected to be approved through 2018. As a result, more competition and more affordable pricing may increase utilization and help to alleviate costs. The implementation of the Hepatitis Cure Value Program as a part of SafeGuardRx is reflected in these trend forecasts.

The first generic to Gleevec launched on Feb. 1, 2016, and is expected to result in cost savings.

HIV

Medications used to treat HIV are expected to trend upward with continued use of branded products. Utilization continues to increase modestly, partially because screening for HIV is more accessible and a greater number of patients are surviving longer after diagnosis. Double-digit increases in unit cost are the major driver of trend in 2016. The convenience and improvement of newer drugs that combine several different drugs in a once-daily dose will increase utilization in this class. Additionally, Genvoya, which contains a new version of tenofovir, abbreviated as TAF, is less likely to cause bone and kidney side effects than tenofovir disoproxil fumarate (TDF) and was approved in November 2015. The manufacturer plans to replace several other combinations that contain TDF with new TAF-containing brands, effectively making drugs containing TDF obsolete. As these new, more expensive, branded TAF formulations replace existing TDF brand formulations, unit cost is expected to increase. Patent protection for brands in the market will also lengthen.

Growth deficiency

In 2015, trend for growth hormone products was influenced equally by utilization and unit cost increases. In each of the next few years, positive trend is expected to be roughly 9%. Brand inflation will drive trend in all three years. Utilization is expected to remain flat as utilization management programs ensure that patients requiring the therapy receive appropriate and affordable care. In 2017, some market share may go to new, expensive and long-acting products that are currently in development.

Cystic fibrosis

At 53.4%, 2015 trend for CF was the greatest increase among the top 10 specialty classes. It was driven primarily by drug costs associated with the July 2015 FDA approval of the very expensive combination drug Orkambi, which treats the underlying disease in some patients. Originally, Orkambi was approved only for patients 12 years of age and older. However, approval for use in children ages 6 to 11 could come in 2017. Additional new medications to treat CF are in development for possible approval in 2018. In the meantime, trend for CF should remain high for 2016, and then begin to moderate as these new products reach a saturation point among this population.

Pulmonary hypertension

Steady utilization and a slight increase in drug cost are projected for pulmonary hypertension drugs in 2016. However, with generic formulations of Tracleer® (bosentan) tablets expected to be marketed in 2016, cost trend could be lower in 2017 and 2018. Several generic medications are expected in 2018 that should increase competition and reduce total trend considerably in 2017 and 2018. Generics are expected for Adcirca® (tadalafil) tablets in May, Remodulin® (treprostinil) injection in June, Letairis® (ambrisentan) tablets in July and Tyvaso® (treprostinil) inhalation solution in November.

Hemophilia

Through 2018, double-digit increases are anticipated in PMPY spend for medications used to treat hemophilia and other bleeding disorders. Utilization should be fairly steady as patients use maintenance drugs regularly to prevent bleeds, rather than occasionally to control bleeding episodes. Although utilization is expected to remain steady, unit cost – and therefore overall trend – will rise, due to increasing use of longer-acting products that were launched in 2014 and 2015.

Sleep disorders

PMPY spend for medications used to treat sleep disorders is expected to increase by double digits for the next three years resulting from unit cost increases. Utilization is expected to remain relatively flat over the next three years.

Through 2018, **double-digit increases** are anticipated in PMPY spend for medications used to treat hemophilia and other bleeding disorders.

Looking to the future

Express Scripts is constantly monitoring and anticipating indications with potential for high-cost and high-use drugs, and preemptively developing strategies to counter widespread drug spend problems before they occur. Nonalcoholic steatohepatitis and Alzheimer's disease (AD) are two such disease states.

Nonalcoholic steatohepatitis

According to the National Institutes of Health (NIH), 2% to 5% (approximately 6 million to 16 million) of Americans are affected by nonalcoholic steatohepatitis (NASH). NASH is inflammation and damage of the liver due to fatty buildup in people who drink little or no alcohol. Most prevalent in middle-age individuals who are overweight or obese, NASH affects more than 25% of obese Americans. Although NASH may be asymptomatic, it can lead to cirrhosis or permanent liver damage. Currently, the best treatment options are weight reduction or a balanced diet and physical activity, as well as avoidance of alcohol and substances that cause liver damage. While no true pharmacologic treatments are currently specific for NASH, several products are in various stages of development, with the first approvals expected in 2016. The prevalence of NASH, coupled with a PCSK9-like price tag, could dramatically affect drug spend.

Alzheimer's disease

As the baby boomer generation reaches the age of 65, the potential financial and clinical impact of pharmacotherapy to prevent, delay or treat AD looms large. It's estimated that each of the 5.4 million Americans who suffers from AD incurs an annual cost of $35,000 in treatment. Currently, fewer than 10 pharmacologic treatments are available. With no cure and no drugs to prevent AD progression, treatments provide only symptomatic relief, temporarily improving brain function in patients with mild to moderate disease. Despite the large potential population, these patients accounted for only $1.92 PMPY in 2015. Many of these medications are generic, with Namenda being the latest to go generic in July 2015. However, newer agents with potential disease-modifying characteristics are entering into clinical Phase III trials. If the pricing for new hepatitis C therapies was any indication of how manufacturers set prices for drugs that demonstrate substantial improvement in clinical outcomes, it's likely that AD medications will come to market with hefty price tags.

It's estimated that each of the 5.4 million Americans who suffers from AD incurs an **annual cost of $35,000** in treatment.

Trend drivers

2015 patent expirations

PATENT EXPIRATION DATE	BRAND (GENERIC) NAME	PRIMARY INDICATION	ESTIMATED ANNUAL SALES (MILLIONS)
Dec. 7, 2015	Patanol® (olopatadine) ophthalmic solution	Eye allergy	$223
Nov. 30, 2015	Viramune XR® (nevirapine extended release)	HIV	$60
Nov. 19, 2015	Jalyn® (dutasteride/tamsulosin)	Benign prostatic hyperplasia	$91
Nov. 5, 2015	Naprelan® (naproxen sodium)	Pain	$58
Oct. 9, 2015	Avodart® (dutasteride)	Benign prostatic hyperplasia	$499
Sep. 28, 2015	Invega® (paliperidone extended release)	Schizophrenia	$612
Sep. 21, 2015	Testred® (methyltestosterone)	Hypogonadism	$15
Sep. 18, 2015	Lescol® XL (fluvastatin extended release)	High cholesterol	$38
Sep. 9, 2015	Exelon® Patch (rivastigmine transdermal system)	Alzheimer's disease	$611
Aug. 24, 2015	hydroxyprogesterone	Female hormone-related conditions	N/A
Aug. 17, 2015	Xenazine® (tetrabenazine)	Huntington's disease	$242
Aug. 12, 2015	Mirapex ER® (pramipexole extended release)	Parkinson's disease	$45
Jul. 28, 2015	Megace® ES (megestrol oral suspension)	Cachexia of AIDS	$44
Jul. 13, 2015	Namenda® (memantine)	Alzheimer's disease	$1,588
Jul. 9, 2015	Targretin® (bexarotene) capsules	Lymphoma	$156
Jul. 9, 2015	Angiomax® (bivalirudin)	Blood clot prevention	$485
Jul. 7, 2015	Axert® (almotriptan)	Migraine	$32
Jul. 1, 2015	Aggrenox® (aspirin/dipyridamole extended release)	Blood modifying	$460
Jun. 29, 2015	Pristiq® (desvenlafaxine)	Depression	$719
Jun. 23, 2015	Zyvox® (linezolid) tablets	Bacterial infections	$470
Jun. 19, 2015	Copaxone® (glatiramer) 20mg	Multiple sclerosis	$2,493
Jun. 1, 2015	Actonel® (risedronate) 5mg, 30mg, 35mg tablets	Osteoporosis	$158
May 28, 2015	Lotronex® (alosetron)	Irritable bowel syndrome with diarrhea	$80
May 18, 2015	Atelvia® (risedronate)	Osteoporosis	$74
Apr. 28, 2015	Abilify® (aripiprazole)	Schizophrenia/bipolar disorder	$7,838
Apr. 24, 2015	Fusilev® (levoleucovorin injection)	Colorectal cancer/methotrexate toxicity	$185
Apr. 15, 2015	Suprax® (cefixime) oral suspension	Bacterial infections	$120
Mar. 10, 2015	Temovate® (clobetasol 0.05%) cream	Skin conditions	$185
Feb. 26, 2015	Tarka® (trandolapril/verapamil)	High blood pressure/heart disease	$24
Jan. 26, 2015	Nexium® (esomeprazole magnesium)	Gastroesophageal reflux	$5,931

Jan. 26, 2015	Lamictal® ODT™ (lamotrigine) orally disintegrating tablets	Seizures	$51
Jan. 12, 2015	AndroGel® (testosterone gel) 1%	Hypogonadism	$1,267
Jan. 12, 2015	Clobex® (clobetasol) Spray	Psoriasis	$100
Jan. 9, 2015	Zyvox® (linezolid) injection	Bacterial infections	$260

Highlights

- At the end of April, the FDA approved the first AB-rated generics for Abilify tablets. An atypical antipsychotic, aripiprazole is indicated to treat mental and neurological disorders, including autism, bipolar disorder, depression, mania, schizophrenia and Tourette's syndrome. Generics from four manufacturers were approved and at least one launched immediately, despite continuing litigation concerning three patents that might have covered Abilify for several more years. According to the IMS Institute for Healthcare Informatics, nondiscounted spend for Abilify in the United States amounted to $7.8 billion in 2014, making it second only to the hepatitis C drug Sovaldi among the country's top-selling drugs. Other atypical antipsychotics are available – many in generic versions – and two new brands, Rexulti® (brexpiprazole) and Vraylar™ (cariprazine), were approved in 2015.

- In December 2015, the FDA announced the approval of Basaglar, a long-acting human insulin analog to improve glycemic control in patients with diabetes. Although it's a new branded insulin, it has the same amino acid sequence as Sanofi's Lantus. The FDA designated it as a "follow-on," not a biosimilar, because insulins are FDA approved under provisions of the Food, Drug, and Cosmetic Act while biologic products are granted approval under a different law, the Public Health Service Act. Following terms of a settlement agreement, Basaglar will launch in December 2016. It will be dispensed in 3mL cartridges, 100 units/mL for KwikPen® delivery devices. Dosing is once daily.

- The first FDA-approved generic to Targretin® (bexarotene) capsules was introduced to the U.S. market on July 9, 2015. Originally approved by the FDA in December 1999, it's used for the treatment of cutaneous (skin) manifestations of cutaneous t-cell lymphoma for patients who are refractory to at least one prior systemic therapy. Generics to topical Targretin gel 1% aren't expected until October 2016 at the earliest.

- Glatopa, an A-rated generic to Copaxone, launched in mid-June 2015. Glatiramer is a disease-modifying drug administered by subcutaneous (SC) injection to treat relapsing forms of MS. It's not a biological drug, but it's more complex and difficult to replicate than most traditional drugs. Copaxone has been available for nearly 20 years as a 20mg/mL formulation that's injected once daily. Several patents on the original formulation expired in 2014, but litigation over a later patent delayed the release of a generic. In addition, Copaxone 40mg/mL – a strength that's needed only three times a week – was FDA approved in January 2014. It will have protection from direct generic competition until at least May 2017, but likely longer following the issuance of additional patents. Up to 70% of patients shifted to the higher strength before Glatopa launched.

- In August 2015, the FDA approved a generic for Delalutin® (hydroxyprogesterone) injection, 250 mg/mL, even though the brand was discontinued in 1999. Hydroxyprogesterone treats a wide variety of female hormone-related conditions, including advanced uterine cancer and abnormal uterine bleeding. Since the original brand product was withdrawn from the market for business, not safety or effectiveness reasons, the FDA approved the generic. Launch isn't expected until mid-2016. Hydroxyprogesterone in the same strength is in the branded drug Makena®, which is indicated only to prevent premature births.

- Generics for the $1 billion seller Namenda tablets were released in July 2015. Namenda is indicated twice a day for treating moderate to severe dementia of Alzheimer's type. A settlement agreement allowed several other generics after a secondary Namenda patent expired in October. A once-daily follow-on product, Namenda XR® (memantine extended release), was marketed in June 2013, and the brand manufacturer intended to discontinue Namenda before the patent expired. However, in December 2014, a district court ruled that Namenda tablets were required to remain on the market. In this instance, the "hard switch" strategy, in which a manufacturer discontinues one formulation of a product in favor of another, was prevented. Still, a majority of Namenda patients have transitioned to the longer-acting form.

- The FDA approved the first AB-rated generics to Janssen's Invega® (paliperidone) extended-release tablets. Invega is indicated to treat schizophrenia in adults and adolescents 12 years of age and older. It's also approved for the treatment of schizoaffective disorder as monotherapy and as an adjunct to mood stabilizing and/or antidepressant therapy in adults. Since Invega was first approved, longer-lasting injectable versions have also received FDA approval. Invega Sustenna® is injected once a month for treating bipolar disorder and schizophrenia. More recently, Invega Trinza™ won FDA approval in May 2015, for treating adult patients with schizophrenia. Each intramuscular (IM) Invega Trinza injection, which must be given by a healthcare provider, lasts for three months. Before starting on Invega Trinza, patients have to be treated with monthly Invega Sustenna injections for at least four months.

- In August 2015, the first A-rated generic to Xenazine® (tetrabenazine) tablets was launched in the U.S. Tetrabenazine is the only FDA-approved drug that treats chorea (involuntary, unpredictable movements) associated with Huntington's disease. Its individualized dosing requires careful weekly titration. The first week's starting dose is 12.5mg daily with a maximum recommended dose of no more than 100mg per day for most adults. Although Xenazine is only available through a limited network of specialty pharmacies, tetrabenazine is marketed through open distribution.

In the instance of Namenda, the **"hard switch" strategy**, in which a manufacturer discontinues one formulation of a product in favor of another, **was prevented**.

2015 brand approvals

APPROVAL DATE	BRAND (GENERIC) NAME	PRIMARY INDICATION	PRODUCT UNIQUENESS
Dec. 22 2015	Zurampic® (lesinurad)	Gout	New mechanism of action
Dec. 21, 2015	Uptravi® (selexipag)	Pulmonary arterial hypertension	Similar to existing products
Dec. 15, 2015	Bridion® (sugammadex)	Neuromuscular blockade reversal	New mechanism of action
Dec. 11, 2015	Alecensa® (alectinib)	ALK-positive lung cancer	Similar to existing products
Dec. 11, 2015	Vistogard® (uridine triacetate)	Fluorouracil toxicity	New mechanism of action
Dec. 10, 2015	Otiprio™ (ciprofloxacin) otic suspension	Otitis media	Refinement of an existing product
Dec. 8, 2015	Kanuma™ (sebelipase alfa)	Lysosomal acid lipase deficiency	New mechanism of action
Dec. 7, 2015	Bendeka™ (bendamustine)	Chronic lymphocytic leukemia/non-Hodgkin lymphoma	Refinement of an existing product
Dec. 4, 2015	QuilliChew ER™ (methylphenidate) extended release	Attention deficit hyperactivity disorder	Existing product with new dosing form
Nov. 30, 2015	Empliciti™ (elotuzumab)	Multiple myeloma	New mechanism of action
Nov. 24, 2015	Portrazza™ (necitumumab)	Non-small cell lung cancer	Similar to existing products
Nov. 20, 2015	Ninlaro® (ixazomib)	Multiple myeloma	New mechanism of action
Nov. 18, 2015	Narcan® (naloxone) Nasal Spray	Opioid overdose	Existing product with new dosing form
Nov. 16, 2015	Darzalex™ (daratumumab)	Multiple myeloma	New mechanism of action
Nov. 13, 2015	Targrisso™ (osimertinib)	Non-small cell lung cancer	New mechanism of action
Nov. 13, 2015	Adynovate [antihemophilic factor (recombinant)],	Hemophilia A	Refinement of an existing product
Nov. 10, 2015	Cotellic™ (cobimetinib)	Melanoma	New mechanism of action
Nov. 5, 2015	Genvoya® (elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide)	HIV	Refinement of an existing product
Nov. 4, 2015	Nucala® (mepolizumab)	Asthma	New mechanism of action
Oct. 29, 2015	Seebri™ Neohaler® (glycopyrrolate/indacaterol)	Chronic obstructive pulmonary disease	New combination of existing products
Oct. 29, 2015	Ultibron™ Neohaler® (glycopyrrolate)	Chronic obstructive pulmonary disease	New mechanism of action
Oct. 27, 2015	Imlygic™ (talimogene laherparepvec)	Melanoma	New mechanism of action
Oct. 23, 2015	Belbuca™ (buprenorphine) buccal film	Pain	Existing product with new dosing form
Oct. 23, 2015	Strensiq™ (asfotase alfa)	Hypophosphatasia	New mechanism of action
Oct. 23, 2015	Yondelis® (trabectedin)	Soft tissue sarcomas	Similar to existing products
Oct. 22, 2015	Vivlodex™ (meloxicam) capsules	Osteoarthritis	Existing product with new dosing form
Oct. 22, 2015	Onivyde™ (irinotecan) liposomal injection	Pancreatic cancer	Existing product with new dosing form
Oct. 21, 2015	Veltassa™ (patiromer)	Hyperkalemia	Similar to existing products
Oct. 20, 2015	Coagadex® (coagulation factor X, human)	Hereditary Factor X Deficiency	New mechanism of action

Oct. 19, 2015	Dynavel™ XR (amphetamine) oral suspension, extended release	Attention deficit hyperactivity disorder	Existing product with new dosing form
Oct. 16, 2015	Praxbind® (idarucizumab)	Pradaxa® (dabigatran) anticoagulant reversal	New mechanism of action
Oct. 16, 2015	Enstilar® (calcipotriene/betamethasone dipropionate) Foam	Psoriasis	Existing product with new dosing form
Oct. 6, 2015	Aristada™ (aripiprazole lauroxil)	Schizophrenia	Refinement of an existing product
Oct. 2, 2015	MorphaBond™ (morphine) extended-release tablets	Pain	Existing product with new dosing form
Sep. 25, 2015	Tresiba® (insulin degludec)	Diabetes	Similar to existing products
Sep. 25, 2015	Ryzodeg®70/30 (insulin aspart/insulin degludec)	Diabetes	New combination of existing products
Sep. 22, 2015	Lonsurf® (trifluridine/tipiracil)	Colorectal cancer	New mechanism of action
Sep. 17, 2015	Vraylar™ (cariprazine)	Schizophrenia/Bipolar disorder	Similar to existing products
Sep. 15, 2015	Nuwiq® (human coagulation factor VIII (rDNA), simoctocog alfa)	Hemophilia A	Similar to existing products
Sep. 4, 2015	Xuriden™ (uridine triacetate)	Hereditary orotic aciduria	New mechanism of action
Sep. 4, 2015	Durlaza™ (aspirin) extended-release capsules	Heart attack/stroke prevention	Existing product with new dosing form
Sep. 2, 2015	Varubi™ (rolapitant)	Chemotherapy-induced nausea and vomiting	Similar to existing products
Aug. 27, 2015	Repatha™ (evolocumab)	Familial hypercholesterolemia	Similar to existing products
Aug. 26, 2015	Synjardy® (empagliflozin/metformin),	Diabetes	New combination of existing products
Aug. 18, 2015	Addyi™ (flibanserin)	Female hypoactive sexual desire disorder	New mechanism of action
Aug. 13, 2015	Ximino® (minocycline) extended-release capsules	Acne	Existing product with new dosing form
Jul. 31, 2015	Spritam® (levetiracetam)	Seizures	Existing product with new dosing form
Jul. 29, 2015	Finacea® (azelaic acid) Foam 15%	Rosacea	Existing product with new dosing form
Jul. 24, 2015	Technivie® (ombitasvir/paritaprevir/ritonavir)	Hepatitis C	New combination of existing products
Jul. 24, 2015	Daklinza™ (daclatasvir)	Hepatitis C	New mechanism of action
Jul. 24, 2015	Odomzo® (sonidegib)	Basal cell carcinoma	Similar to existing products
Jul. 24, 2015	Praluent® (alirocumab)	Familial hypercholesterolemia	New mechanism of action
Jul. 15, 2015	Epiduo® Forte (adapalene/benzoyl peroxide) Gel	Acne	Refinement of an existing product
Jul. 10, 2015	Envarsus® XR (tacrolimus extended-release)	Transplant rejection	Existing product with new dosing form
Jul. 10, 2015	Rexulti® (brexpiprazole)	Schizophrenia/Depression	Similar to existing products
Jul. 7, 2015	Entresto™ (sacubitril/valsartan)	Heart failure	New mechanism of action
Jul. 2, 2015	Orkambi® (lumacaftor/ivacaftor)	Cystic fibrosis	New mechanism of action
Jun. 22, 2015	Kengreal™ (cangrelor)	Blood clot prevention	New mechanism of action
Jun. 22, 2015	Tuxarin ER® (codeine/chlorpheniramine)	Cough and cold	New combination of existing products
May 27, 2015	Viberzi® (eluxadoline)	Irritable bowel syndrome with diarrhea	New mechanism of action
May 21, 2015	Stiolto™ Respimat® (tiotropium/olodaterol)	Chronic obstructive pulmonary disease	New combination of existing products

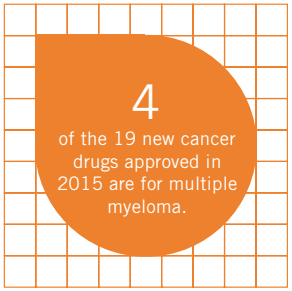
May 19, 2015	Invega Trinza™ (paliperidone) extended-release injectable suspension	Schizophrenia	Refinement of an existing product
Apr. 30, 2015	Tuzistra™ XR (codeine polistirex/chlorpheniramine polistirex)	Cough and cold	New combination of existing products
Apr. 29, 2015	Ixinity® (coagulation factor IX [recombinant])	Hemophilia B	Similar to existing products
Apr. 29, 2015	Kybella® (deoxycholic acid)	Submental fat	New mechanism of action
Apr. 17, 2015	Aptensio XR™ (methylphenidate)	Attention deficit hyperactivity disorder	Refinement of an existing product
Apr. 15, 2015	Corlanor® (ivabradine)	Heart failure	New mechanism of action
Mar. 31, 2015	ProAir® RespiClick (albuterol) dry-powder inhaler	Reversible obstructive airway disease	Refinement of an existing product
Mar. 30, 2015	Jadenu™ (deferasirox)	Chronic iron overload	Refinement of an existing product
Mar. 17, 2015	Cholbam® (cholic acid)	Bile acid synthesis disorders	New mechanism of action
Mar. 10, 2015	Unituxin™ (dinutuximab)	Neuroblastoma	Similar to existing products
Mar. 6, 2015	Cresemba™ (isavuconazonium)	Invasive aspergillosis/Invasive mucormycosis	New mechanism of action
Feb. 26, 2015	Liletta® (levonorgestrel-releasing intrauterine system)	Contraception	Refinement of an existing product
Feb. 25, 2015	Toujeo® (insulin glargine)	Diabetes	Similar to existing products
Feb. 25, 2015	Avycaz™ (ceftazidime/avibactam)	Complicated intra-abdominal infections/Complicated urinary tract infections	New mechanism of action
Feb. 23, 2015	Farydak (panobinostat)	Multiple myeloma	New mechanism of action
Feb. 13, 2015	Lenvima™ (lenvatinib)	Thyroid cancer	Similar to existing products
Feb. 6, 2015	Dutrebis™ (lamivudine/raltegravir)	HIV	New combination of existing products
Feb. 3, 2015	Ibrance® (palbociclib)	Breast cancer	New mechanism of action
Jan. 30, 2015	Pazeo® (olopatadine ophthalmic solution) 0.7%	Eye allergy	Refinement of an existing product
Jan. 30, 2015	Glyxambi® (empagliflozin/linagliptin)	Diabetes	New combination of existing products
Jan. 30, 2015	Zohydro® ER (hydrocodone) with abuse deterrents	Pain	Refinement of an existing product
Jan. 29, 2015	Evotaz™ (atazanavir/cobicistat)	HIV	New combination of existing products
Jan. 29, 2015	Prezcobix® (darunavir/cobicistat)	HIV	New combination of existing products
Jan. 23, 2015	Natpara® (parathyroid hormone)	Hypocalcemia of hypoparathyroidism	New mechanism of action
Jan. 23, 2015	Triferic® (ferric pyrophosphate citrate)	Chronic kidney disease	New mechanism of action
Jan. 21, 2015	Cosentyx™ (secukinumab)	Psoriasis	New mechanism of action
Jan. 21, 2015	Prestalia® (amlodipine/perindopril)	High blood pressure	New combination of existing products
Jan. 9, 2015	Duopa™ (carbidopa/levodopa) enteral suspension	Parkinson's disease	Existing product with new dosing form
Jan. 8, 2015	Savaysa® (edoxaban)	Blood clot prevention	Similar to existing products
Jan. 7, 2015	Rytary™ (carbidopa/levodopa)	Parkinson's disease	Refinement of an existing product

Highlights

Approvals

- Addyi™ (flibanserin) was approved by the FDA in August 2015 as the first drug to treat female sexual dysfunction. Specifically, it's indicated for acquired, generalized hypoactive sexual desire disorder (HSDD) among premenopausal women. Unlike drugs for male erectile dysfunction, which influence muscle tone, blood supply or testosterone levels, Addyi affects neurotransmitter levels in the brain, increasing the desire for sex. It must be taken daily. Prescribers of Addyi are trained and certified, each potential patient is assessed using a Patient-Provider Agreement Form and the drug is dispensed only through certified pharmacies.

- Four of the 19 new cancer drugs that were FDA approved in 2015 are for treating multiple myeloma. A relatively uncommon, but frequently aggressive cancer of the blood-forming cells in bone marrow, multiple myeloma has an overall five-year survival rate under 50%. Currently, it can't be cured and the incidence of recurrence is high. Additionally, most drug treatments for multiple myeloma lose effectiveness after they've been used repeatedly, so other drugs are needed – usually in combinations.



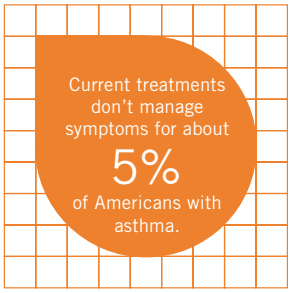
- A new cardiovascular drug, Entresto™ (sacubitril/valsartan), was approved in July 2015. Containing a well-established angiotensin receptor blocker, it also includes the first drug in a new class called neprilysin inhibitors. Entresto is indicated to reduce the risk of cardiovascular death and hospitalization for patients with chronic heart failure and reduced ejection fraction – around 2.2 million Americans. In clinical trials, Entresto outperformed the previous standard of care, angiotensin converting enzyme (ACE) inhibitors. However, it's significantly more expensive than most other cardiovascular drugs.

- In November 2015, the FDA approved the combination drug Genvoya for the once-daily treatment of specific patients who have HIV-1. In addition to three drugs already approved for treating HIV, Genvoya includes a new nucleotide reverse transcriptase inhibitor (NRTI), tenofovir alafenamide (TAF). Although it's similar to Viread® (tenofovir disoproxil fumarate or TDF), TAF is effective in much smaller doses, so it has less risk of causing kidney damage and bone mineral density problems than TDF. Two other combination products that contain TAF are being reviewed by the FDA with action dates in the first half of 2016. They're expected to replace the older TDF-containing combinations.

- Five specialty products were approved in 2015 to treat hemophilia and related conditions. Among them is Coagadex® (Coagulation Factor X [human]), the first drug FDA approved to treat hereditary Factor X deficiency. A rare blood-clotting disorder, Factor X deficiency is estimated to affect between 300 and 600 patients in the United States. Coagadex is used to manage bleeding before, during and after surgical procedures, as well as to treat and control acute bleeding episodes.

- Narcan® Nasal Spray, the first noninjected form of naloxone, was approved by the FDA in November 2015. To treat opioid overdoses in emergency situations, the first spray (4mg) should be administered immediately. One spray is given every two to three minutes until the patient recovers consciousness or emergency medical help arrives. Narcan nasal spray can be used for both adults and children. It will be available by prescription at retail pharmacies across the United States, but in some states a prescription won't be required.

- The FDA approved Nucala® (mepolizumab) injection for use as an add-on maintenance treatment for severe eosinophilic asthma. The first humanized interleukin-5 (IL-5) antagonist monoclonal antibody to be approved, it's injected subcutaneously by a healthcare professional once every four weeks. Current treatments don't manage symptoms for about 5% of the estimated 25.7 million people in the U.S. who have asthma. For many of these resistant cases, Nucala could be added to inhaled corticosteroids and other current asthma treatments. Nucala reduces severe asthma attacks by sticking to IL-5 receptors. Blocking the action of IL-5 decreases eosinophils, white blood cells that contribute to increased sensitivity of the airways among asthma patients.



- Several orphan drugs, intended to treat patient populations of 200,000 or less, were approved during 2015. Considered specialty drugs, many are the first approved treatments for rare but severe conditions. These drugs include:
    - Cholbam® (cholic acid) – indicated for treating rare disorders of bile acid synthesis caused by an enzyme defect. It's also approved for a group of very serious inherited conditions that result from missing or malfunctioning peroxisomes – parts of cells that produce enzymes to break down fatty acids. Around one person in 50,000 has a condition that Cholbam might treat.
    - Kanuma™ (sebelipase alfa) – for the treatment of patients with lysosomal acid lipase (LAL) deficiency. Individuals with LAL deficiency have defective genes that prevent the proper metabolism and storage of fats, causing damage to the blood vessels, heart, liver and other organs. In the general population, fewer than 20 patients in one million have LAL deficiency.
    - Keveyis™ (dichlorphenamide) – an oral carbonic anhydrase inhibitor. It's indicated for the treatment of primary hyperkalemic and hypokalemic periodic paralysis, inherited disorders that cause episodes of muscle weakness or paralysis for approximately 5,000 patients in the U.S.
    - Xuriden™ (uridine) – oral granules that treat hereditary orotic aciduria (HOA). It's the first approved treatment for this rare metabolic disorder that's been reported in only about 20 patients in the world.
- In the summer of 2015, two specialty drugs were approved for specific types of hard-to-treat high cholesterol. Praluent and Repatha are the first in a new class, proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitors. Praluent was approved to be used once every two weeks for treating patients with heterozygous familial hypercholesterolemia (HeFH) and patients with clinical atherosclerotic cardiovascular disease (ASCVD) who require additional lowering of low-density lipoprotein cholesterol (LDL-C). Repatha is indicated once or twice a month for the same two conditions and also for homozygous familial hypercholesterolemia (HoFH). Both drugs are available in self-injectors and each is used in tandem with dietary and statin therapies. About 11 million Americans have one of the three indicated conditions, but the use of PCSK9 inhibitors may expand if results from ongoing clinical trials show they reduce heart disease risks. PCSK9 inhibitors are included on our specialty formulary.
- Pradaxa® (dabigatran) is an oral direct thrombin inhibitor anticoagulant that was approved in 2010 to reduce the risk of stroke and blood clots for patients with nonvalvular atrial fibrillation. It's also approved to treat and prevent deep venous thrombosis (DVT) and pulmonary embolism (PE). Although it's less complicated to use than earlier anticoagulants, its effects couldn't be counteracted when needed. In 2015, the first reversal agent for it, Praxbind® (idarucizumab), was approved for emergency surgery/urgent procedures and in life-threatening or uncontrolled bleeding episodes. Praxbind is a humanized monoclonal antibody fragment that's administered as a single intravenous (IV) infusion.
- In 2015, the FDA approved a number of older drugs redesigned as new dosage forms, developed in new strengths, combined in new ways or repurposed for different indications. They include a new form and dose of aspirin; a topical acne cream remade into a foam for rosacea; a new combination of blood pressure medications; a former glaucoma treatment now approved as the first treatment for a rare condition. Even though many of the drugs have been generic for years, the newly approved versions are all branded. As new technologies become available, more older drugs will probably be repurposed in similar ways.
- In August 2015, the FDA approved Spritam®, a new version of the anti-seizure drug levetiracetam. Spritam is the first FDA-approved drug to be manufactured by a 3-D printing process. Using proprietary technology, the unique process allows layers of powdered medication to be formed into spongy, mint-flavored tablets that disintegrate very quickly when taken.

Among FDA approvals in 2015 are a number of older drugs that have been redesigned as new dosage forms, developed in new strengths, combined in new ways or repurposed for different indications.

New indications

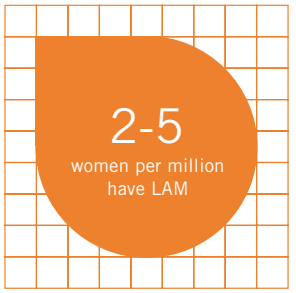
- In April 2015, the FDA granted Breo® Ellipta® a new indication for treating adults with asthma. Initially approved in May 2013 for the treatment of chronic obstructive pulmonary disease (COPD), it includes a corticosteroid (fluticasone furoate) to reduce inflammation and a bronchodilating long-acting beta blocker (LABA), vilanterol. Breo Ellipta isn't indicated for treating asthma patients under the age of 18 and it's not a rescue medicine for acute bronchospasms. For asthma, adult patients use one inhalation daily.

- Clozapine, an oral drug for treating schizophrenia, is used when other antipsychotic medications don't adequately manage symptoms. However, severe and possibly fatal neutropenia – very low numbers of a white blood cell type known as neutrophils – can be caused by taking clozapine. Its prescribing information has been changed to better describe monitoring for and treating neutropenia if needed. Additionally, beginning in October 2015, the registries previously kept separately by manufacturers of clozapine were replaced by a single risk evaluation and mitigation strategy (REMS) program for all patients. Prescribers and dispensing pharmacies now have to be certified, and clozapine is available only through the REMS. Clozapine is available as generic tablets and orally disintegrating tablets, as well as under the brand names Clozaril® tablets, FazaClo® Orally Disintegrating Tablets and Versacloz™ Oral Suspension.

- In March 2015, Kalydeco® (ivacaftor) was FDA approved for use in children age two to five who have CF and who have one of 10 mutations in the CF transmembrane conductance regulator (CFTR) gene. Approximately 300 children in the U.S. age two to five have these mutations. Previously, Kalydeco was indicated only for appropriate patients six years of age and older. The FDA also approved a new oral granule formulation of Kalydeco, which can be mixed in soft foods and liquids.

- Opdivo® (nivolumab) injection is a human programmed death receptor-1 (PD-1) immune checkpoint inhibitor first approved by the FDA in December 2014. It enhances immune response by blocking specific receptors that deactivate immune cells. Originally, it was indicated for treating progressed and malignant melanoma, as well as for second-line, single-agent therapy for advanced squamous and nonsquamous-cell nonsmall cell lung cancer (NSCLC). In 2015, Opdivo also was approved for metastatic renal cell carcinoma (RCC) and as first-line monotherapy for treating patients with inoperable or metastatic BRAF V600 wild-type melanoma.

- After priority review and with orphan and breakthrough designations, the FDA approved Rapamune® (sirolimus) in May 2015 to treat lymphangioleiomyomatosis (LAM). A very rare disease of the lungs, LAM almost exclusively affects women; about two to five women per million have it. In LAM, smooth muscle tissue that grows in the lungs clogs airways, blood vessels and lymph channels, restricting breathing and eventually destroying lung function. Current treatment includes symptom relief with bronchodilators, fluid removal from the lungs and lung transplants. Initially approved more than 15 years ago to help prevent rejection of transplanted kidneys, Rapamune is the first treatment to slow the progression of LAM.



- The FDA approved the over-the-counter (OTC) use of Rhinocort® (budesonide) nasal spray for the temporary relief of symptoms of hay fever or other upper respiratory allergies (nasal congestion, runny nose, itchy nose and sneezing) in adults and children age six and older. An estimated 50 million Americans have nasal allergies. Most treat their symptoms with OTC products. Rhinocort Allergy Spray will compete in the nonprescription market with Flonase® Allergy Relief (fluticasone propionate) and Nasacort® Allergy 24HR (triamcinolone acetonide).

- A new indication for Saphris® (asenapine) was approved in March 2015, under an FDA priority review. An atypical antipsychotic medication that's been on the U.S. market for nearly six years, Saphris is already indicated for both acute and maintenance treatment of adults with schizophrenia and/or bipolar disorder. Now, it's also approved for treating bipolar I disorder for children as young as 10 years. For pediatric patients, it will be used alone to manage acute episodes of mania or mixed manic-depressive behaviors resulting from bipolar I disorder. Saphris is manufactured as sublingual, black-cherry-flavored tablets that may be easier for children to take than other oral dose forms.

- The FDA released a Drug Safety Communication in December 2015 about possible adverse effects from sodium-glucose cotransporter-2 (SGLT2) inhibitors. Following up on a warning issued in May, the FDA found more than 70 reports of ketoacidosis, which is a dangerous accumulation of ketones (a type of fatty acid) in the blood, due to lack of insulin among patients taking an SGLT2 inhibitor. Additionally, the FDA identified cases of urosepsis

(blood infections caused by infections in the urinary tract) and pyelonephritis (kidney infections) associated with SGLT2 inhibitor use. Labeling for all SGLT2 inhibitors will now have warnings about the potential side effects and how to monitor for them. Manufacturers of SGLT2 inhibitors are required to investigate reported incidences of ketoacidosis for the next five years. SGLT2 inhibitors that have been approved in the U.S. include Farxiga™ (dapagliflozin), Glyxambi® (linagliptin/empagliflozin), Invokamet® (canagliflozin/metformin), Invokana, Jardiance® (empagliflozin), Synjardy and Xigduo® XR (dapagliflozin/metformin extended release).

- In January 2015, an expanded indication for the treatment of moderate to severe binge eating disorder (BED) in adults was granted for Vyvanse capsules. Vyvanse is the first drug approved for BED, which results in patients overeating when not feeling hungry. BED patients often eat to the point of being uncomfortably full. Vyvanse, a central nervous system (CNS) stimulant, was already approved as a maintenance treatment for adults and children six years of age and older with attention deficit hyperactivity disorder (ADHD).

Vyvanse is the **first drug** approved for BED, which results in patients overeating when not feeling hungry.

Express Scripts Prescription Price Index

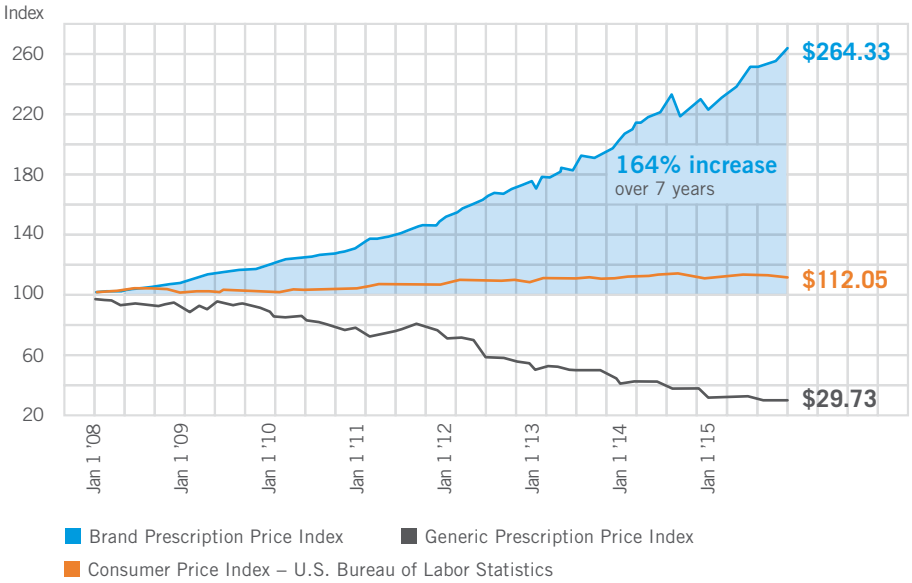
Roughly half of Americans take prescription medications. Generic products comprise 84% of filled prescriptions. By achieving higher generic fill rates, there's still opportunity for employers, state governments, unions and members to ensure cost savings. According to the Express Scripts Prescription Price Index, the average price for the most commonly used brand-name drugs has increased 164% since 2008, whereas generic drug prices have continued to decline. Between 2014 and 2015, the price of generic products, on average, decreased 19.9%, while the price of brand name products increased, on average, 16.2%.

Express Scripts mitigates the risk of drug price inflation for our clients and members by utilizing our task force of clinical experts who assess and recommend additional potential savings measures as they arise.

While news reports focus on a few outliers, payers should remain confident that, on the whole, generic medications continue to deliver significant cost savings. Encouraging use of generics over more expensive brand alternatives, when clinically appropriate, keeps costs down and helps patients adhere to their prescribed therapy.

The gap between brand inflation and generic deflation increased slightly, from 35.5 percentage points in December 2014 to 36.1 percentage points in December 2015. From the base price of $100.00 set in January 2008, in December 2015 prices for the most commonly used generic medications decreased to $29.73 (in 2008 dollars), and prices for the most commonly used brand medications increased to $264.33 (in 2008 dollars). In contrast, a market basket of commonly used household goods costing $100.00 in 2008, as measured by the Bureau of Labor Statistics consumer price index, grew to only $112.05 (in 2008 dollars) by December 2015.

THE EXPRESS SCRIPTS PRESCRIPTION PRICE INDEX



Medicare

Medicare overview

The Centers for Medicare and Medicaid Services (CMS) celebrated the 50th year of Medicare in 2015. The Medicare prescription drug benefit through Part D also reached its 10-year milestone in 2015. In that time, the Medicare Part D Program has saved Medicare beneficiaries more than $7 billion on their prescription drugs, and 94% of members reported being satisfied with their Medicare prescription drug benefit.[5]

Approximately two million new members became eligible for Medicare in 2015. In terms of Medicare plan spread, more than 24 million members were enrolled in Medicare prescription drug plans (PDPs), nearly 17 million members were enrolled in Medicare Advantage plans (MAPD) and approximately 8.1 million Medicare beneficiaries were enrolled in Employer Group Waiver Plans (EGWP).[6]In the past year, MAPD enrollment has shown the most growth, with an increase of nearly one million members.[6]

Approximately **two million new members** became eligible for Medicare in 2015.

The Medicare-eligible population will only continue to grow over the next decade. As CMS requirements and strategies change, the future of the Medicare prescription drug benefit will continue to be dynamic.

Future trend drivers introduced in 2015 will further shape the Medicare landscape:

- **New 2017/2018 Star Measures:** CMS-proposed changes to Star Ratings will continue to affect Medicare trend if finalized,[7] including Part C measures focusing on asthma and depression and a Part D measure addressing the use of antipsychotic medications in elderly dementia patients.
- **New 2017 Formulary Tiering Structure:** The recommended introduction of a nonpreferred drug tier is an additional opportunity to influence trend by allowing plans to place their highest cost generics alongside their nonpreferred brand drugs within the same copayment tier.[8] As the costs of some generics drastically rise, management through strategic tier placement will be critical to continued success for plans.
- **Increased Competition:** As the market changes and Medicare enrollment maintains its rapid growth, competition among plans continues to increase. In 2016, 53 net new Medicare plans will enter the marketplace, providing an additional layer of competition.[9] More plans are utilizing aggressive benefit designs, closed formularies and preferred pharmacy networks to differentiate themselves from and stay ahead of the competition.

Ten years into the program, Medicare is now leading the change as to how healthcare is delivered. Clearly, plans respond to risk (enforcement actions) and reward (quality bonus payments). This is exactly what CMS hoped to accomplish. We're seeing innovative programs taking the risk and reward concept to new frontiers.

What's driving Medicare trend?

In 2015, total per-member-per-year (PMPY) spend for Medicare plans rose 10.9%, to $2,914.20, as the result of a modest increase in PMPY utilization (2.2%), combined with a significant increase in unit cost (8.7%). Traditional drug spend increased 4.8%, driven by an almost equal increase in PMPY utilization (2.2%) and unit cost (2.6%).

Specialty

Specialty drug spend increased 27.9% in 2015, following a much larger 2014 trend increase of 45.9% which was attributed to newly introduced hepatitis C medications. Oncology, hepatitis C, multiple sclerosis and inflammatory conditions classes each accounted for at least $100 of PMPY spend in 2015. Express Scripts continues to maintain an unwavering focus on doing what's right to keep specialty medications affordable and accessible. Unlike commercial health plans, Medicare plans have additional challenges with managing expensive drug classes. Medicare formulary placement and utilization management must be approved by CMS and can only be implemented at certain times in the plan year.

The handful of biosimilars approved in 2015 and expected to launch in 2016 won't radically mitigate the marked increases in specialty trend. But significant discounts of 20-30% are anticipated when biosimilar costs are compared to their reference products, potentially saving the United States more than $250 billion over the next decade.[10]

Compounded drugs

Overall, Medicare trend for compounded drugs increased by 32.7% from 2014, moving it from the 19th therapy class to the 13th, based on PMPY spend. Although MAPDs saw an increase in compounded drug trend of 5.1% and EGWPs of 78.1%, PDP trend decreased by 35.3%. This overall trend decline was influenced by a 31.5% drop in compounded drug utilization among PDPs.

Star Ratings

Quality Star Ratings remain a key factor in determining which plans remain in the Medicare marketplace and which ones receive top reimbursements. Medicare Star Ratings and The Healthcare Effectiveness Data and Information Set (HEDIS) measures affect Medicare trend directly and indirectly. Medicare plans have earned higher Star Ratings than ever before, with the average increasing from 4.0 for 2015 to 4.5 stars for 2016. Currently, 71% of Medicare enrollment is in 4-star-or-better-performing plans.[11]

Star Rating measures that focus on adherence to medications commonly used to treat diabetes, high cholesterol and hypertension play a key role in driving trend. These therapy classes remain in Medicare's top-five traditional therapy classes by PMPY spend. All three have average adherence rates that increased for MAPDs and PDPs between 2013 and 2015.[12] Express Scripts plan sponsors had an average of 4% higher adherence rates in 2015 compared to industry adherence rates.[13] As CMS continues to develop new quality ratings, quality measures will play a major role in Medicare trend.

STAR RATINGS ADHERENCE MEASURES

2015

	TRADITIONAL THERAPY CLASS RANK (BY OVERALL MEDICARE PMPY SPEND 2015)	2015 MAPD INDUSTRY ADHERENCE	2015 PDP INDUSTRY ADHERENCE
Diabetes	1	78.21%	78.93%
High Cholesterol*	4	80.31%	78.20%
High Blood Pressure**	5	76.91%	80.50%

*CMS measures statin adherence specifically for Star Ratings
**High blood pressure grouped with heart disease for drug trend report

A look at Medicare overall drug trend for 2015

PMPY spend for Medicare plans rose 10.9% to $2,914.20 from 2014 to 2015. Increased trend resulted primarily from an increase in unit cost (8.7%), complemented by a small increase in utilization (2.2%). Medicare continues to be a rapidly expanding market. By 2035, one in five Americans will be over the age of 65.[14] These numbers place a substantial burden on the Medicare system, driving the CMS to continue focusing on both cost containment and quality performance.

Trend by plan type

We examined Medicare trend in 2015 by Medicare plan type: MAPD, PDP and EGWP. Overall, we saw the impact of benefit and formulary design driving significant trend differences among the three plan types.

MAPD

Traditional spend for MAPDs decreased 3.2%, with a PMPY spend of $1,479.10, stemming from a 4.3% decline in unit cost combined with a 1.0% increase in PMPY utilization. This decrease could be a reflection of a higher (87.5%) generic fill rate (GFR) for MAPDs compared to the other two types. MAPD plans at Express Scripts have achieved success in driving down traditional drug spend with the highest percentage of closed formularies and the use of five tiers in their formulary structures. Specialty PMPY spend for MAPDs increased to $621.22 in 2015, a 24.3% increase over 2014.

COMPONENTS OF MEDICARE TREND

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$2,025.67	2.2%	2.6%	**4.8%**
Specialty	$888.53	10.7%	17.2%	**27.9%**
TOTAL OVERALL	**$2,914.20**	**2.2%**	**8.7%**	**10.9%**

January-December 2015 compared to same period in 2014

COMPONENTS OF MAPD TREND

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$1,479.10	1.0%	-4.3%	**-3.2%**
Specialty	$621.22	9.9%	14.3%	**24.3%**
TOTAL OVERALL	**$2,100.33**	**1.1%**	**2.5%**	**3.5%**

January-December 2015 compared to same period in 2014

PDP

Medicare traditional drug spend increased 9.8%, to $2,236.77, for PDP plans, driven by a 5.2% increase in unit cost and a 4.6% increase in PMPY utilization. In addition, PDP plans had a higher specialty spend increase (36.3%) than the two other types of Medicare plans. Data suggest that richer benefits typically associated with PDPs (which still generally follow a five-tier formulary design and utilize open formularies in their prescription drug benefit) may be driving higher PMPY spend.

EGWP

EGWPs, which consist of plan sponsors that continue to offer benefits to their retirees, tend to have broader formularies, lower copayments and fewer member restrictions. In 2015, EGWP plans had the highest PMPY spend ($2,452.31) for traditional drugs among the three Medicare plan types. However, they had a somewhat lower increase in utilization for traditional drugs than PDP plans. For specialty drugs, EGWPs had a 27.2% increase, to $925.94 PMPY spend. They also had the lowest GFR (82.4%) among the three plan types.

Generic fill rate by plan type

In 2015, GFR differed by plan type, with MAPD and PDP plans with similar GFRs (87.5% and 87.2%, respectively), and EGWP with the lowest GFR (82.4%).

Components of Medicare trend by brand generic classification

As expected, our analysis of Medicare trend by brand and generic medications found that utilization of brand medications decreased (-6.6%) in alignment with an increase in unit cost (21.9%). Utilization of generic medications increased 3.8%, with a 3.4% decrease in unit costs.

COMPONENTS OF PDP TREND

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$2,236.77	4.6%	5.2%	**9.8%**
Specialty	$1,141.27	15.6%	20.7%	**36.3%**
TOTAL OVERALL	**$3,378.04**	**4.7%**	**12.9%**	**17.5%**

January-December 2015 compared to same period in 2014

COMPONENTS OF EGWP TREND

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$2,452.31	1.4%	6.5%	**7.9%**
Specialty	$925.94	11.4%	15.7%	**27.2%**
TOTAL OVERALL	**$3,378.25**	**1.5%**	**11.1%**	**12.6%**

January-December 2015 compared to same period in 2014

COMPONENTS OF MEDICARE TREND BY BRAND GENERIC CLASSIFICATION

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Brand	$2,126.14	-6.6%	21.9%	**15.4%**
Generic	$788.06	3.8%	-3.4%	**0.4%**
TOTAL OVERALL	**$2,914.20**	**2.2%**	**8.7%**	**10.9%**

January-December 2015 compared to same period in 2014

Trend by plan type and brand generic classification

MAPD

Significant decrease in unit costs for generic medications (-11.1%) offset the 2.2% increase in utilization for MAPD plans, resulting in a trend of -9.0% for generics. The decrease in generic unit costs can be attributed to formulary tiering and placing high-cost generics on a higher tier, thus increasing utilization of lower-cost generic medications. However, the 16.4% increase in unit cost far outweighed the 6.3% decrease in utilization for brand medications, contributing to a brand trend of 10.1% for MAPDs.

PDP

For PDP plans, generic unit cost remained nearly unchanged from 2014 to 2015, but a 25.9% increase in brand drug unit cost resulted in an overall increase in unit costs of 12.9% for PDPs. Concurrently, PMPY utilization also increased for PDPs (4.7%), primarily from a 6.0% increase in utilization of generic medications. Brand utilization fell 3.8%.

EGWP

Unit costs for generic medications changed minimally by 0.6%, but brand medication costs jumped by 25.8% for EGWPs. Although utilization of brand medications decreased by 10.3%, most of the utilization for EGWPs was from generics, increasing overall PMPY utilization by 1.5%.

COMPONENTS OF MAPD TREND BY BRAND GENERIC CLASSIFICATION

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Brand	$1,463.46	-6.3%	16.4%	**10.1%**
Generic	$636.87	2.2%	-11.1%	**-9.0%**
TOTAL OVERALL	**$2,100.33**	**1.1%**	**2.5%**	**3.5%**

January-December 2015 compared to same period in 2014

COMPONENTS OF PDP TREND BY BRAND GENERIC CLASSIFICATION

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Brand	$2,515.59	-3.8%	25.9%	**22.1%**
Generic	$862.45	6.0%	-0.1%	**5.9%**
TOTAL OVERALL	**$3,378.04**	**4.7%**	**12.9%**	**17.5%**

January-December 2015 compared to same period in 2014

COMPONENTS OF EGWP TREND BY BRAND GENERIC CLASSIFICATION

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Brand	$2,490.49	-10.3%	25.8%	**15.5%**
Generic	$887.76	4.4%	0.6%	**5.0%**
TOTAL OVERALL	**$3,378.25**	**1.5%**	**11.1%**	**12.6%**

January-December 2015 compared to same period in 2014

Trend by plan type and low-income subsidy classification

Focusing on quality ratings for Medicare plans, CMS has taken significant steps to better understand the impact of dual-eligible members (Medicare-Medicaid Plans [MMP]) and Low-Income Cost-Sharing Subsidy (LICS) members on Star Ratings. Acknowledging that MMP and LICS status of beneficiaries impacts quality ratings, CMS is working to devise an appropriate adjustment to Star Ratings for these members.

In light of CMS findings, this year's report breaks down plan type trend by the LICS status of beneficiaries. The differences between LICS and non-LICS members utilization and unit cost trends for traditional drugs varied between each plan type. However, the utilization trend was significantly lower (4.5%) for LICS members compared with non-LICS members (14.1%), and unit cost trend was higher for LICS members (18.5%) compared with non-LICS members (16.0%) for specialty medications. The overall trend of lower utilization and higher unit cost for LICS members when compared with non-LICS members can be seen in MAPD and PDP plan types, and EGWPs showed lower utilization trend and unit cost trend in the LICS population. This trend analysis confirms that disparities existing between LICS and non-LICS members are not always consistent based on plan type. Express Scripts continues to closely monitor and track the impact of low-income status on trend and quality measures.

COMPONENTS OF MEDICARE TREND BY PLAN TYPE AND LOW-INCOME SUBSIDY CLASSIFICATION

2015

	OVERALL MEDICARE		MAPD		PDP		EGWP	
	LICS	NON-LICS	LICS	NON-LICS	LICS	NON-LICS	LICS	NON-LICS
TRADITIONAL								
Utilization	2.3%	2.1%	0.8%	0.5%	2.8%	4.5%	0.3%	1.4%
Unit cost	1.5%	3.0%	-0.8%	-7.7%	4.4%	-1.2%	1.8%	6.6%
TOTAL	3.8%	5.1%	-0.1%	-7.2%	7.2%	3.3%	2.1%	8.1%
SPECIALTY								
Utilization	4.5%	14.1%	5.0%	10.8%	6.9%	19.9%	7.9%	11.5%
Unit cost	18.5%	16.0%	14.9%	13.8%	20.5%	19.7%	4.7%	15.9%
TOTAL	23.0%	30.1%	19.9%	24.6%	27.3%	39.6%	12.6%	27.4%

January-December 2015 compared to same period in 2014

Traditional therapy classes and insights: Medicare

Total traditional trend for Medicare plans in 2015 was 4.8%, the result of small increases in both unit costs (2.6%) and PMPY utilization (2.2%). Together, spend for the top three Medicare traditional therapy classes when ranked by PMPY spend contributed 32.1% of the total for all traditional medications used by Medicare beneficiaries in 2015. Total trend was negative in three of the top 10 traditional therapy classes, with the sharpest decline for medications used to treat high blood pressure/heart disease.

Spend for the **top three** Medicare traditional therapy classes when ranked by PMPY contributed **32.1%** of total Medicare traditional spend.

COMPONENTS OF TREND FOR THE TOP 10 OVERALL MEDICARE TRADITIONAL THERAPY CLASSES

RANKED BY 2015 OVERALL MEDICARE PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$309.17	4.5%	15.0%	**19.5%**
2	Pain/inflammation	$183.48	-0.4%	-0.7%	**-1.2%**
3	Mental/neurological disorders	$157.14	1.4%	-0.9%	**0.5%**
4	High blood cholesterol	$154.94	2.3%	-10.3%	**-8.0%**
5	High blood pressure/heart disease	$141.79	1.2%	-16.9%	**-15.7%**
6	Asthma	$110.76	7.1%	-5.3%	**1.8%**
7	Heartburn/ulcer disease	$90.67	2.7%	24.4%	**27.2%**
8	Anticoagulants	$72.65	4.6%	40.3%	**44.8%**
9	Urinary disorders	$64.84	5.2%	1.0%	**6.3%**
10	Chronic obstructive pulmonary disease	$52.39	2.1%	6.8%	**9.0%**
	TOTAL TRADITIONAL	**$2,025.67**	**2.2%**	**2.6%**	**4.8%**

Highlights

- Diabetes saw a higher PMPY spend ($309.17) than any other traditional therapy class among Medicare beneficiaries. Trend for diabetes medications was 19.5%, driven by an increase in utilization (4.5%) and an even greater increase in unit cost (15.0%). Highly utilized oral medications, including metformin, glipizide, glimepiride, and Januvia® (sitagliptin), are driving the utilization increase. Insulins, such as Lantus® (insulin glargine) and some commonly used diabetes-testing supplies, such as pen needles and OneTouch® Delica® lancets, had unit cost increases.

- Total PMPY spend for medications used to treat pain/inflammation decreased 1.2%, due to slight decreases in both unit costs (-0.7%) and utilization (-0.4%). PMPY spend declined (compared to 9.1% increase in 2014) in accordance with availability of generic medications that continue to dominate this class. Together, the five most commonly used pain/inflammation drugs captured 57.8% of market share for this therapy class.

- Unit costs for medications used to treat high blood pressure/heart disease decreased 16.9%, resulting in the largest drop (-15.7%) in PMPY spend among the top 10 traditional therapy classes. Even with an increase in utilization, total trends were negative for both high blood pressure/heart disease medications and high blood cholesterol medications in 2015. Declines in unit costs can be attributed to the availability of generics in these classes, and increase in utilization may reflect greater adherence to medications by beneficiaries. In addition, the GFRs for the high blood pressure/heart disease and high blood cholesterol classes increased to 97.4% and 85.5%, respectively, in 2015.

- The 40.3% increase in unit cost for traditional anticoagulant medications was primarily driven by unit cost increases for the newer oral products Xarelto® (rivaroxaban) and Eliquis® (apixaban). Both drugs also experienced significant increases in utilization, likely as a result of patients switching from less-convenient warfarin and specialty injectable anticoagulants. The overall trend for the class was 44.8%.

Unit costs for medications used to treat high blood pressure/heart disease decreased **16.9%**, resulting in the largest fall **(-15.7%)** in PMPY spend.

Top traditional classes by Medicare plan type

When analyzing therapy class details by Medicare plan types, the top 10 traditional therapy classes by PMPY spend in MAPD, PDP and EGWP plan types mostly remained the same as overall Medicare classes. However, the ranking by PMPY spend within the top 10 classes varied.

MAPD

The only plan type to see a negative traditional trend was MAPD (-3.2%). Among MAPD plans, trend for seven of the top 10 traditional classes was negative in 2015, mostly due to decreased unit costs. With the exception of chronic obstructive pulmonary disease (COPD), which was almost flat (-0.3%), all other classes among the top 10 saw a slight to moderate increase in utilization. Asthma had the highest utilization increase at 6.2%.

MAPD was the only plan type to see negative traditional trend **(-3.2%)**.

COMPONENTS OF TREND FOR THE TOP 10 MAPD TRADITIONAL THERAPY CLASSES

RANKED BY 2015 MAPD PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$258.62	2.3%	4.6%	**6.9%**
2	Pain/inflammation	$136.74	0.8%	-5.2%	**-4.4%**
3	High blood pressure/heart disease	$108.00	0.4%	-20.8%	**-20.4%**
4	High blood cholesterol	$104.04	0.5%	-18.7%	**-18.1%**
5	Mental/neurological disorders	$103.47	0.7%	-1.4%	**-0.8%**
6	Asthma	$97.66	6.2%	-9.1%	**-2.9%**
7	Anticoagulants	$57.57	2.5%	37.2%	**39.6%**
8	Urinary disorders	$50.93	2.5%	-2.9%	**-0.4%**
9	Chronic obstructive pulmonary disease	$48.57	-0.3%	7.0%	**6.8%**
10	Heartburn/ulcer disease	$43.95	2.0%	-7.4%	**-5.3%**
	TOTAL TRADITIONAL	**$1,479.10**	**1.0%**	**-4.3%**	**-3.2%**

PDP

Medicare traditional drug spend increased 9.8%, to $2,236.77, for PDP plans, driven by a 5.2% increase in unit costs and a 4.6% increase in utilization. Five of the top 10 traditional therapy classes saw double-digit increases in trend. The top five classes alone accounted for nearly 50% of the total PMPY spend for traditional classes. Compared to overall Medicare, the seizures class replaced urinary disorders in the top 10 by PMPY spend among PDP plans. PMPY spend for seizures increased 20.6%, driven by substantial increases in both unit costs (11.5%) and utilization (9.0%).

Five of the top 10 traditional therapy classes saw **double-digit increases** in trend.

COMPONENTS OF TREND FOR THE TOP 10 PDP TRADITIONAL THERAPY CLASSES

RANKED BY 2015 PDP PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$322.88	7.5%	21.3%	**28.8%**
2	Mental/neurological disorders	$255.37	9.0%	3.0%	**12.0%**
3	Pain/inflammation	$234.13	2.0%	5.8%	**7.8%**
4	High blood cholesterol	$149.22	3.8%	-4.1%	**-0.3%**
5	High blood pressure/heart disease	$144.57	2.2%	-10.0%	**-7.8%**
6	Asthma	$124.60	10.6%	-2.5%	**8.1%**
7	Heartburn/ulcer disease	$84.88	4.8%	-3.3%	**1.5%**
8	Anticoagulants	$63.20	5.9%	42.8%	**48.6%**
9	Chronic obstructive pulmonary disease	$58.56	8.5%	9.8%	**18.3%**
10	Seizures	$56.54	9.0%	11.5%	**20.6%**
	TOTAL TRADITIONAL	**$2,236.77**	**4.6%**	**5.2%**	**9.8%**

EGWP

In 2015, EGWP plans had the highest PMPY spend ($2,452.31) for traditional drugs among the three Medicare plan types. The trend for EGWPs (7.9%) resulted mainly from a 6.5% increase in unit costs. Remarkably, compounded drugs replaced chronic obstructive pulmonary disease in the top 10 classes for EGWPs. Trend for compound drugs increased by 78.1% due to increase in unit cost trend (77.8%). In 2015, Express Scripts made additional compound drug coverage options available to plans. Another class of medications that saw a significant increase in EGWP trend compared to other plan types is heartburn/ulcer disease (84.2%). While at 2.4% PMPY utilization increased very little, unit costs of these medications increased dramatically (81.8%).

Compounded drugs replaced chronic obstructive pulmonary disease in the top 10 classes for EGWPs.

COMPONENTS OF TREND FOR THE TOP 10 EGWP TRADITIONAL THERAPY CLASSES

RANKED BY 2015 EGWP PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$355.30	2.3%	20.1%	**22.4%**
2	High blood cholesterol	$223.74	1.2%	-9.8%	**-8.6%**
3	Pain/inflammation	$182.62	0.3%	-5.5%	**-5.2%**
4	High blood pressure/heart disease	$179.93	0.9%	-20.3%	**-19.4%**
5	Heartburn/ulcer disease	$154.42	2.4%	81.8%	**84.2%**
6	Asthma	$110.93	6.2%	-4.9%	**1.3%**
7	Mental/neurological disorders	$110.25	-0.7%	-5.6%	**-6.2%**
8	Anticoagulants	$101.90	4.6%	37.4%	**42.0%**
9	Urinary disorders	$94.10	3.1%	8.4%	**11.6%**
10	Compounded drugs	$88.01	0.3%	77.8%	**78.1%**
	TOTAL TRADITIONAL	**$2,452.31**	**1.4%**	**6.5%**	**7.9%**

Top 10 Medicare traditional drugs

Together, the nine brand drugs in the top 10 accounted for 18.5% of PMPY spend for all of Medicare's traditional therapy drugs. Esomeprazole magnesium, the generic formulation of the brand Nexium® (esomeprazole magnesium), was approved by the FDA in January 2015 and brought to market in mid-February. It was the only generic medication to rank in the top 10 overall Medicare traditional therapy drugs.

Three diabetes treatments – Lantus, Januvia and Levemir® FlexTouch® (insulin detemir) – were among the 10 most-expensive traditional therapies for Medicare beneficiaries when ranked by PMPY spend. All three medications had double-digit increases in PMPY spend, and together they captured 6.9% of PMPY spend for all traditional therapy drugs used by Medicare beneficiaries in 2015.

The highest trend for a brand medication in the top 10 was for the oral anticoagulant Xarelto (40.4%). Its trend was driven largely by a 26.5% increase in PMPY utilization, likely as a result of patients switching from less-convenient traditional oral and specialty injectable anticoagulants.

The only top 10 brand drug that decreased in unit cost trend (-5.5%) was Advair Diskus® (fluticasone/salmeterol), a dry-powder inhaler for asthma and COPD. Utilization of Advair Diskus increased 10.2%, possibly due to its decrease in cost. Utilization declined significantly for some of the top 10 brands. Lantus, a diabetes medication, was down by 0.7%; Crestor® (rosuvastatin), a high blood cholesterol treatment, by 2.0%; and Namenda XR® (memantine extended release), a treatment for dementia and Alzheimer's disease, by 21.3%.

TOP 10 OVERALL MEDICARE TRADITIONAL THERAPY DRUGS

RANKED BY 2015 OVERALL MEDICARE PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL TRADITIONAL SPEND	UTILIZATION	UNIT COST	TOTAL
1	Lantus® (insulin glargine)	Diabetes	$73.50	3.6%	-0.7%	11.2%	**10.5%**
2	Spiriva® (tiotropium)	Chronic obstructive pulmonary disease	$45.92	2.3%	2.9%	6.0%	**8.8%**
3	Advair Diskus® (fluticasone/salmeterol)	Asthma	$44.50	2.2%	10.2%	-5.5%	**4.7%**
4	Crestor® (rosuvastatin)	High blood cholesterol	$41.93	2.1%	-2.0%	11.2%	**9.3%**
5	esomeprazole magnesium	Heartburn/ulcer disease	$38.90	1.9%	–	–	–
6	Januvia® (sitagliptin)	Diabetes	$37.16	1.8%	16.6%	9.1%	**25.7%**
7	Xarelto® (rivaroxaban)	Anticoagulants	$35.34	1.7%	26.5%	13.9%	**40.4%**
8	Lyrica® (pregabalin)	Pain/inflammation	$34.25	1.7%	5.0%	22.1%	**27.1%**
9	Namenda® extended release (memantine)	Mental/neurological disorders	$32.80	1.6%	-21.3%	5.7%	**-15.6%**
10	Levemir® FlexTouch® (insulin detemir)	Diabetes	$28.98	1.4%	16.3%	16.9%	**33.2%**

Top 10 traditional drugs by Medicare plan type

MAPD

By PMPY spend, three of the top 10 drugs for MAPD plans were for diabetes. PMPY utilization for the top insulin, Lantus, decreased 13.5% in 2015. After another pre-filled insulin pen, Levemir FlexTouch, was approved in late 2013, it rose to sixth place for MAPD drug spend, with a 51.8% utilization increase in 2015. Currently, no generic insulin pens are available. Another medication that made the top 10 for MAPD was OneTouch Ultra® Test Strips, a diagnostic aid. A significant decrease in unit cost (16.6%) was partially offset by an increase in utilization (7.8%), resulting in a MAPD trend of -8.9% for OneTouch Ultra Test Strips.

Three of the top 10 drugs for MAPD plans were for **diabetes**.

TOP 10 MAPD TRADITIONAL THERAPY DRUGS

RANKED BY 2015 MAPD PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL TRADITIONAL SPEND	UTILIZATION	UNIT COST	TOTAL
1	Lantus® (insulin glargine)	Diabetes	$68.95	4.7%	-13.5%	11.2%	**-2.3%**
2	Spiriva® (tiotropium)	Chronic obstructive pulmonary disease	$43.24	2.9%	0.2%	6.7%	**6.9%**
3	Advair Diskus® (fluticasone/salmeterol)	Asthma	$39.61	2.7%	-1.4%	-3.8%	**-5.2%**
4	Xarelto® (rivaroxaban)	Anticoagulants	$30.24	2.0%	25.6%	13.8%	**39.4%**
5	Januvia® (sitagliptin)	Diabetes	$30.15	2.0%	7.6%	8.5%	**16.2%**
6	Levemir® FlexTouch® (insulin detemir)	Diabetes	$27.30	1.8%	51.8%	4.1%	**55.8%**
7	Namenda® extended release (memantine)	Mental/neurological disorders	$23.93	1.6%	-23.1%	5.3%	**-17.8%**
8	Crestor® (rosuvastatin)	High blood cholesterol	$22.77	1.5%	-5.0%	13.5%	**8.5%**
9	OneTouch Ultra® Test Strips	Diagnostic aid	$22.39	1.5%	7.8%	-16.6%	**-8.9%**
10	Lyrica® (pregabalin)	Pain/inflammation	$21.40	1.4%	2.3%	23.2%	**25.4%**

PDP

Among PDP plans, brand Nexium remained in the top 10 by spend rankings even though its generic, esomeprazole magnesium, was launched in February 2015. However, as a result of generic availability, PMPY utilization for Nexium decreased 54.1%. Its unit cost rise of 29.2% resulted in a total PDP trend of -24.9% for Nexium. Another new drug in the top 10 was Renvela® (sevelamer carbonate), used to treat kidney patients receiving dialysis. For 2015, Renvela captured 56.8% market share in its class among PDPs. With increases in both PMPY utilization (39.9%) and unit cost (40.7%), total trend for Renvela was 80.5%.

Brand **Nexium remained in the top 10** by spend rankings even though its generic was launched in February 2015.

TOP 10 PDP TRADITIONAL THERAPY DRUGS

RANKED BY 2015 PDP PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL TRADITIONAL SPEND	UTILIZATION	UNIT COST	TOTAL
1	Lantus® (insulin glargine)	Diabetes	$81.36	3.6%	10.5%	16.2%	**26.7%**
2	Spiriva® (tiotropium)	Chronic obstructive pulmonary disease	$50.58	2.3%	8.9%	10.0%	**18.9%**
3	Crestor® (rosuvastatin)	High blood cholesterol	$49.71	2.2%	-4.2%	18.8%	**14.6%**
4	Advair Diskus® (fluticasone/salmeterol)	Asthma	$48.58	2.2%	40.8%	-19.8%	**20.9%**
5	Abilify® (aripiprazole)	Mental/neurological disorders	$41.56	1.9%	-51.8%	8.1%	**-43.6%**
6	Lyrica® (pregabalin)	Pain/inflammation	$41.34	1.8%	14.5%	23.1%	**37.6%**
7	Namenda® extended release (memantine)	Mental/neurological disorders	$39.03	1.7%	-15.9%	9.7%	**-6.2%**
8	Nexium® (esomeprazole magnesium)	Heartburn/ulcer disease	$38.11	1.7%	-54.1%	29.2%	**-24.9%**
9	Januvia® (sitagliptin)	Diabetes	$37.95	1.7%	38.0%	3.0%	**41.0%**
10	Renvela® (sevelamer)	Kidney disease	$36.31	1.6%	39.9%	40.7%	**80.5%**

EGWP

In 2015, EGWP plans had the highest PMPY spend ($2,452.31) for traditional drugs among the three Medicare plan types. The top 10 medications accounted for 21.4% of the total traditional spend for EGWPs. At $96.19, esomeprazole magnesium, the generic for Nexium, ranked number one by PMPY spend for EGWPs. Higher PMPY for esomeprazole in EGWP could be driven by multiple factors, such as composition of plan design, beneficiaries, formulary decisions and negotiated discounts. Unit cost increased for all of the top 10 medications. The only two top 10 medications that decreased in total PMPY spend for EGWPs were Advair Diskus and Namenda extended release, both due primarily to decreases in utilization.

The **top 10** medications accounted for **21.4%** of the total traditional spend for EGWPs.

TOP 10 EGWP TRADITIONAL THERAPY DRUGS

RANKED BY 2015 EGWP PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL TRADITIONAL SPEND	UTILIZATION	UNIT COST	TOTAL
1	esomeprazole magnesium	Heartburn/ulcer disease	$96.19	3.9%	–	–	–
2	Lantus® (insulin glargine)	Diabetes	$70.07	2.9%	1.9%	6.1%	**8.0%**
3	Crestor® (rosuvastatin)	High blood cholesterol	$56.47	2.3%	2.4%	5.6%	**8.1%**
4	Advair Diskus® (fluticasone/salmeterol)	Asthma	$45.81	1.9%	-5.8%	3.8%	**-2.0%**
5	Xarelto® (rivaroxaban)*	Anticoagulants	$44.86	1.8%	17.6%	13.9%	**31.5%**
6	Januvia® (sitagliptin)	Diabetes	$44.83	1.8%	5.7%	13.2%	**18.9%**
7	Spiriva® (tiotropium)	Chronic obstructive pulmonary disease	$43.86	1.8%	-1.0%	1.1%	**0.0%**
8	Zetia® (ezetimibe)	High blood cholesterol	$43.20	1.8%	-0.2%	20.5%	**20.2%**
9	Lyrica® (pregabalin)	Pain/inflammation	$41.84	1.7%	0.1%	21.3%	**21.4%**
10	Namenda® extended release (memantine)	Mental/neurological disorders	$36.53	1.5%	-23.8%	2.0%	**-21.9%**

Specialty therapy classes and insights: Medicare

PMPY spend on specialty medications for Medicare beneficiaries increased 27.9% in 2015, driven by a 17.2% increase in unit costs and 10.7% increase in PMPY utilization. Ranked by PMPY spend, the top three therapy classes – oncology, hepatitis C and multiple sclerosis – together contributed nearly 60% of total specialty PMPY spend. Each of these therapy classes had double-digit increases in 2015 PMPY spend. All but three – immune deficiency, osteoporosis and central nervous system CNS/autonomic disorders – had unit cost increases, and only two therapy classes – HIV and blood cell deficiency – had decreases in PMPY utilization. Therapies for immune deficiency, osteoporosis, CNS/autonomic disorder and blood cell deficiency (the seventh, eighth, ninth and 10th specialty classes, respectively, when ranked by PMPY spend) were unique to the top 10 list for Medicare beneficiaries when compared to the commercially insured and Medicaid populations. Primarily, the medications in these four classes are used to treat conditions that more commonly affect older populations. Specialty medications treating rare conditions are sensitive to changes in population composition, which may affect their trend. By far, the key drivers of trend were drugs to treat cancer, hepatitis C and multiple sclerosis.

COMPONENTS OF TREND FOR THE TOP 10 OVERALL MEDICARE SPECIALTY THERAPY CLASSES

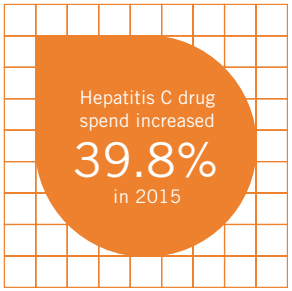
RANKED BY 2015 OVERALL MEDICARE PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Oncology	$275.73	17.1%	14.7%	**31.8%**
2	Hepatitis C	$133.77	12.3%	27.5%	**39.8%**
3	Multiple sclerosis	$119.82	9.5%	10.5%	**20.0%**
4	Inflammatory conditions	$104.11	8.4%	18.0%	**26.3%**
5	HIV	$65.37	-0.5%	11.0%	**10.5%**
6	Pulmonary hypertension	$38.55	14.6%	6.8%	**21.4%**
7	Immune deficiency	$15.66	29.8%	-5.4%	**24.4%**
8	Osteoporosis	$15.33	52.8%	-26.6%	**26.2%**
9	Central nervous system (CNS)/autonomic disorders	$15.25	20.1%	-2.2%	**17.8%**
10	Blood cell deficiency	$14.15	-1.9%	13.1%	**11.1%**
	TOTAL SPECIALTY	**$888.53**	**10.7%**	**17.2%**	**27.9%**

Highlights

- At 31.8%, the increase in PMPY spend for oncology treatments continued to top that of other specialty medications in 2015. It was driven almost equally by a 14.7% increase in cost and a 17.1% increase in utilization. The utilization increase likely results from several factors, including the expansion of indications for several drugs; the continued development of newer, more targeted therapies; and an increase in the survival rates of patients living with cancer but continuing medication therapy. Moreover, a CMS proposal suggested that manufacturers are keeping the cost of certain "protected classes of drugs" (PCDs) high because of coverage requirement and, moreover, that plan sponsors are limited in their ability to implement restrictions on patients who currently use these medications.[15] As a result, the status of cancer therapies as PCDs also may be contributing to high unit cost trend for this class.

- Hepatitis C drug spend increased 39.8% in 2015. After the 2014 record 1,000+% increase in hepatitis C spend due to a few new and effective, but expensive, oral antiviral therapies, 2015 trend was much slower; while utilization increased 12.3%, a 27.5% increase in unit cost drove most of the change in spend. Viekira Pak® (ombitasvir/paritaprevir/ritonavir with dasabuvir) and Harvoni® (ledipasvir/sofosbuvir), two of the therapies approved at the end of 2014, together captured over 67% of market share for this therapy class, while Sovaldi® (sofosbuvir) accounted for an additional 11.9%.



- Total trend for multiple sclerosis medications was 20.0%, due to increases in both PMPY utilization and unit cost. More than one in four multiple sclerosis patients is covered by Medicare.[16] In addition, two of the most expensive and highly utilized drugs in the class – Tecfidera® (dimethyl fumarate), released in April 2013, and Aubagio® (teriflunomide), released in September 2012 – are oral medications. Their convenience, compared to the mainstay injectables, is appealing. Glatopa™, a generic alternative for the 20mg/mL strength of Copaxone® (glatiramer), was launched in the United States in June 2015. However, the brand manufacturer is hoping to continue the shift of existing Copaxone users to a new, longer-acting formulation that has patent protection until 2030.

- Spend for inflammatory conditions increased 26.3%. PMPY utilization increased substantially (8.4%), but the main driving factor for the increased trend was the 18.0% increase in unit cost. One of the key treatments in this class is Xeljanz® (tofacitinib), the most recent oral disease-modifying anti-rheumatic drug approved. At the time of U.S. Food and Drug Administration (FDA) approval in 2012, its place in therapy was unclear due to questions concerning its safety profile. Now that longer-term safety and effectiveness data is available, Xeljanz has begun to capture Medicare market share (nearly 5% in 2015) from some more-established injectable treatments in the same class.

- Trend for medications used to treat blood cell deficiencies, a potential temporary result of taking powerful chemotherapy agents, increased 11.1% in 2015, the unit-cost trend dampened somewhat by a 1.9% decrease in utilization.

Top specialty classes by Medicare plan type

The top 10 specialty therapy classes by PMPY spend in MAPD, PDP and EGWP plan types mostly remained the same, as with overall Medicare classes. However, rankings by PMPY spend within the top 10 classes varied.

MAPD

Among all three plan types, MAPD plans had the least overall PMPY trend increase (24.3%). Idiopathic pulmonary fibrosis and anticoagulants replaced immune deficiency and osteoporosis in the top 10 rankings compared to overall Medicare rankings. Anticoagulants were the only specialty class to see a decrease in unit cost, resulting in a total trend of -20.1%. This could be a result of the availability of traditional medications to treat the same condition. With the exception of blood cell deficiency and CNS/autonomic disorders, all other classes among the top 10 saw small-to-significant utilization increases, with hepatitis C having the highest at 15.8%.

MAPD plans had the least overall PMPY specialty trend increase (**24.3%**) among all three plan types.

COMPONENTS OF TREND FOR THE TOP 10 MAPD SPECIALTY THERAPY CLASSES

RANKED BY 2015 MAPD PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Oncology	$199.82	15.5%	14.6%	**30.1%**
2	Hepatitis C	$102.59	15.8%	16.0%	**31.7%**
3	Multiple sclerosis	$98.70	10.4%	9.5%	**19.9%**
4	Inflammatory conditions	$59.81	1.8%	16.1%	**17.9%**
5	HIV	$33.58	2.5%	12.5%	**15.0%**
6	Pulmonary hypertension	$26.94	9.6%	3.0%	**12.7%**
7	Idiopathic pulmonary fibrosis	$11.37	–	–	–
8	Anticoagulants	$10.00	0.1%	-20.2%	**-20.1%**
9	Blood cell deficiency	$9.40	-5.5%	8.8%	**3.3%**
10	Central nervous system (CNS)/autonomic disorders	$8.41	-0.3%	5.6%	**5.3%**
	TOTAL SPECIALTY	**$621.22**	**9.9%**	**14.3%**	**24.3%**

PDP

Medicare specialty drug spend increased 36.3%, to $1,141.27, for PDP plans due to increases in both utilization (15.6%) and unit cost (20.7%). All of the top 10 specialty therapy classes showed double-digit increases in trend. The top four classes accounted for 71.0% of the total PMPY spend for specialty classes.

All of the top 10 specialty therapy classes showed **double-digit increases** in trend.

COMPONENTS OF TREND FOR THE TOP 10 PDP SPECIALTY THERAPY CLASSES

RANKED BY 2015 PDP PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Oncology	$300.12	23.8%	14.4%	**38.2%**
2	Hepatitis C	$214.01	18.8%	38.2%	**57.0%**
3	Multiple sclerosis	$161.73	15.1%	11.9%	**27.0%**
4	HIV	$134.90	9.2%	11.8%	**21.0%**
5	Inflammatory conditions	$95.50	10.7%	17.2%	**27.9%**
6	Pulmonary hypertension	$46.27	28.3%	4.0%	**32.3%**
7	Central nervous system (CNS)/autonomic disorders	$25.44	28.6%	-3.0%	**25.6%**
8	Immune deficiency	$20.75	29.1%	-5.7%	**23.4%**
9	Idiopathic pulmonary fibrosis	$13.77	–	–	–
10	Blood cell deficiency	$13.41	5.5%	12.2%	**17.7%**
	TOTAL SPECIALTY	**$1,141.27**	**15.6%**	**20.7%**	**36.3%**

EGWP

In 2015, the PMPY specialty spend for EGWP plans was $925.94. The trend for EGWPs (27.2%) resulted mostly from a 15.7% increase in unit cost. Two of the top 10 specialty classes – osteoporosis and immune deficiency – saw unit cost decreases of 19.0% and 1.3% respectively. Even with a 19.0% decrease in unit cost, spend for osteoporosis still increased 23.2%, driven by a drastic 42.2% rise in PMPY utilization. Blood cell deficiency was the only class that decreased in utilization (-6.9%).

The trend for EGWPs resulted mostly from a **15.7% increase** in unit cost.

COMPONENTS OF TREND FOR THE TOP 10 EGWP SPECIALTY THERAPY CLASSES

RANKED BY 2015 EGWP PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Oncology	$340.62	12.8%	15.8%	**28.6%**
2	Inflammatory conditions	$168.16	8.3%	19.4%	**27.7%**
3	Multiple sclerosis	$97.65	8.0%	10.9%	**19.0%**
4	Hepatitis C	$79.97	12.2%	22.2%	**34.4%**
5	Pulmonary hypertension	$43.92	6.8%	12.8%	**19.7%**
6	Osteoporosis	$26.29	42.2%	-19.0%	**23.2%**
7	HIV	$24.60	4.2%	12.4%	**16.6%**
8	Blood cell deficiency	$20.81	-6.9%	16.3%	**9.5%**
9	Immune deficiency	$18.72	44.5%	-1.3%	**43.2%**
10	Idiopathic pulmonary fibrosis	$17.47	–	–	–
	TOTAL SPECIALTY	**$925.94**	**11.4%**	**15.7%**	**27.2%**

Top 10 Medicare specialty drugs

The top 10 specialty drugs accounted for 43.3% of PMPY spend for all Medicare specialty drugs in 2015. They represented only four therapy classes – four drugs for treating cancer, two for hepatitis C, two for inflammatory conditions and two for multiple sclerosis. Together, the four oncology medications in the top 10 contributed 15.9% of Medicare specialty drug spend: Revlimid® (lenalidomide), Gleevec® (imatinib), Xtandi® (enzalutamide) and Zytiga® (abiraterone). PMPY spend among the top 10 drugs ranged from a low of $18.45 for Sovaldi to a high of $99.99 for Harvoni. Sovaldi was the only specialty drug in the top 10 that decreased in PMPY utilization (-64.7%), unit cost (-4.0%) and PMPY spend (-68.8%) in 2015. After its launch in late 2014, Harvoni alone contributed 11.3% of all Medicare specialty drug spend in 2015. Aside from the hepatitis C medications, the largest increases in utilization (62.8%) and total spend (72.5%) were observed for Xtandi, an oral hormone modifier for prostate cancer. The incidence of prostate cancer rises substantially with age.[17]

The **top 10** drugs represented only **four therapy classes** – cancer, hepatitis C, inflammatory conditions and multiple sclerosis.

TOP 10 OVERALL MEDICARE SPECIALTY THERAPY DRUGS

RANKED BY 2015 OVERALL MEDICARE PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL SPECIALTY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Harvoni® (ledipasvir/sofosbuvir)	Hepatitis C	$99.99	11.3%	641.0%	-114.4%	**526.6%**
2	Revlimid® (lenalidomide)	Oncology	$58.72	6.6%	10.0%	9.2%	**19.2%**
3	Gleevec® (imatinib)	Oncology	$37.84	4.3%	6.0%	20.4%	**26.4%**
4	Enbrel® (etanercept)	Inflammatory conditions	$36.99	4.2%	-5.1%	24.2%	**19.1%**
5	Copaxone® (glatiramer)	Multiple sclerosis	$36.11	4.1%	-4.4%	10.8%	**6.4%**
6	Humira® Pen (adalimumab)	Inflammatory conditions	$28.75	3.2%	9.7%	17.0%	**26.7%**
7	Xtandi® (enzalutamide)	Oncology	$23.07	2.6%	62.8%	9.7%	**72.5%**
8	Tecfidera® (dimethyl fumarate)	Multiple sclerosis	$22.92	2.6%	27.5%	11.6%	**39.2%**
9	Zytiga® (abiraterone)	Oncology	$21.60	2.4%	-7.4%	8.9%	**1.5%**
10	Sovaldi® (sofosbuvir)	Hepatitis C	$18.45	2.1%	-64.7%	-4.0%	**-68.8%**

Top 10 specialty drugs by Medicare plan type

MAPD

The top 10 drugs for MAPD plans were the same as those for Medicare overall. A decrease in utilization (-59.8%) and unit cost (-5.6%) for Sovaldi resulted in the only negative trend (-65.5%) for a specialty medication in the top drugs for MAPD. Utilization of prostate cancer medications is higher in MAPD beneficiaries, as observed from the high utilization trend for Xtandi (83.9%). Harvoni was the only drug among the top 10 to have a triple-digit trend increase (508.4%), because it entered the market in the last quarter of 2014.

A **decrease in utilization** and **unit cost** for Sovaldi resulted in the **only negative trend** for specialty medication in the top drugs for MAPD.

TOP 10 MAPD SPECIALTY THERAPY DRUGS

RANKED BY 2015 MAPD PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL SPECIALTY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Harvoni® (ledipasvir/sofosbuvir)	Hepatitis C	$78.79	12.7%	703.2%	-194.8%	**508.4%**
2	Revlimid® (lenalidomide)	Oncology	$39.19	6.3%	5.5%	9.2%	**14.8%**
3	Gleevec® (imatinib)	Oncology	$28.36	4.6%	7.1%	22.6%	**29.6%**
4	Copaxone® (glatiramer)	Multiple sclerosis	$27.14	4.4%	1.3%	8.7%	**10.0%**
5	Enbrel® (etanercept)	Inflammatory conditions	$20.28	3.3%	-8.8%	20.7%	**11.9%**
6	Tecfidera® (dimethyl fumarate)	Multiple sclerosis	$20.18	3.2%	25.1%	11.0%	**36.1%**
7	Humira® Pen (adalimumab)	Inflammatory conditions	$18.31	2.9%	10.1%	15.6%	**25.7%**
8	Xtandi® (enzalutamide)	Oncology	$17.88	2.9%	83.9%	11.5%	**95.4%**
9	Zytiga® (abiraterone)	Oncology	$16.64	2.7%	-7.1%	9.7%	**2.6%**
10	Sovaldi® (sofosbuvir)	Hepatitis C	$16.47	2.7%	-59.8%	-5.6%	**-65.5%**

PDP

Among PDPs, H.P.Acthar® (repository corticotropin) replaced Zytiga in the top 10 rankings by PMPY spend. H.P.Acthar decreased in unit costs by 3.0%. However, due to a 28.6% increase in PMPY utilization, it had a 25.6% total trend. Similar to MAPD plans, with the exception of Harvoni, Xtandi had the highest increase in PMPY utilization (64.9%) for PDPs. The next highest increase in utilization was for Tecfidera – an oral multiple sclerosis medication. Going forward, Tecfidera is expected to continue taking market share from older injectable medications.

With the exception of Harvoni, Xtandi had the **highest increase** in PMPY utilization (**64.9%**) for PDPs.

TOP 10 PDP SPECIALTY THERAPY DRUGS

RANKED BY 2015 PDP PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL SPECIALTY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Harvoni® (ledipasvir/sofosbuvir)	Hepatitis C	$160.89	14.1%	765.7%	-117.5%	**648.3%**
2	Revlimid® (lenalidomide)	Oncology	$66.62	5.8%	17.0%	8.2%	**25.2%**
3	Copaxone® (glatiramer)	Multiple sclerosis	$50.91	4.5%	-2.6%	12.2%	**9.6%**
4	Gleevec® (imatinib)	Oncology	$41.14	3.6%	11.5%	21.4%	**32.8%**
5	Enbrel® (etanercept)	Inflammatory conditions	$32.98	2.9%	-7.7%	30.1%	**22.4%**
6	Tecfidera® (dimethyl fumarate)	Multiple sclerosis	$31.91	2.8%	40.5%	12.9%	**53.3%**
7	Sovaldi® (sofosbuvir)	Hepatitis C	$31.06	2.7%	-61.1%	-3.3%	**-64.5%**
8	H.P.Acthar® (repository corticotropin)	Central nervous system (CNS)/ autonomic disorders	$25.44	2.2%	28.6%	-3.0%	**25.6%**
9	Humira® Pen (adalimumab)	Inflammatory conditions	$25.03	2.2%	11.9%	10.5%	**22.4%**
10	Xtandi® (enzalutamide)	Oncology	$23.89	2.1%	64.9%	9.5%	**74.4%**

EGWP

The top 10 medications accounted for 44.8% of the total specialty spend for EGWPs. Imbruvica® (ibrutinib) and Forteo® (teriparatide) replaced Tecfidera and Sovaldi among the top 10 rankings for EGWP. Imbruvica, first approved for mantle cell lymphoma in November 2013, now has indications for chronic lymphocytic leukemia (CLL) and Waldenstrom's macroglobulinemia (a type of lymphoma). As the only FDA-approved Bruton's tyrosine kinase (BTK) inhibitor, Imbruvica's effectiveness with hard-to-treat cancers, oral dosing and relatively mild side effects resulted in a 2015 utilization surge of 98.7% in EGWPs. Although utilization trend was the highest for Imbruvica (with the exception of Harvoni), its unit cost increase (2.0%) was the lowest among the top 10 drugs for EGWPs. At a PMPY spend of $21.78 in 2015, Forteo, an injection used for the treatment of osteoporosis, ranked last among the top 10 drugs for EGWPs.

The top 10 medications accounted for **44.8%** of the total specialty spend for EGWPs.

TOP 10 EGWP SPECIALTY THERAPY DRUGS

RANKED BY 2015 EGWP PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL SPECIALTY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Revlimid® (lenalidomide)	Oncology	$73.55	7.9%	8.7%	10.2%	**18.9%**
2	Enbrel® (etanercept)	Inflammatory conditions	$62.01	6.7%	-3.4%	21.6%	**18.2%**
3	Harvoni® (ledipasvir/sofosbuvir)	Hepatitis C	$56.15	6.1%	386.2%	-7.2%	**379.0%**
4	Humira® Pen (adalimumab)	Inflammatory conditions	$45.80	4.9%	5.9%	22.4%	**28.3%**
5	Gleevec® (imatinib)	Oncology	$45.67	4.9%	1.1%	18.4%	**19.5%**
6	Copaxone® (glatiramer)	Multiple sclerosis	$30.14	3.3%	-1.1%	11.0%	**9.9%**
7	Xtandi® (enzalutamide)	Oncology	$28.49	3.1%	49.2%	9.0%	**58.2%**
8	Zytiga® (abiraterone)	Oncology	$27.95	3.0%	-10.9%	8.0%	**-3.0%**
9	Imbruvica® (ibrutinib)	Oncology	$22.85	2.5%	98.7%	2.0%	**100.6%**
10	Forteo® (teriparatide)	Osteoporosis	$21.78	2.4%	-0.6%	21.6%	**21.0%**

Comparison of Medicare and commercial trend

Comparison of traditional therapy classes

Overall, trend for traditional therapy classes experienced by Medicare clients (4.8%) was higher than trend for commercial clients (0.6%). With the exception of medications used to treat pain/inflammation and asthma, trend for each of the top 10 classes moved in the same direction for both groups of clients. Pain/inflammation trend for Medicare decreased by 1.2%, but increased 2.9% in commercial plans. Asthma trend for Medicare increased by 1.8%, but decreased 1.6% in commercial plans. Medicare trend was moderately lower than the commercial trend for four classes – pain/inflammation, high blood pressure/heart disease, heartburn/ulcer disease and urinary disorders. The biggest differences in trend for the two client groups were seen for anticoagulants (a 44.8% increase for Medicare vs. 36.3% for commercial), heartburn/ulcer disease (27.2% vs. 35.6%) and COPD (9.0% vs. 1.6%).

The magnitude of trend for the diabetes therapy class was greater for Medicare clients than for commercial clients because the prevalence of diabetes is higher in older individuals, and diabetes worsens even with treatment. Because these medications are more highly utilized by older populations, the decline in spend for high blood cholesterol medications was less for Medicare clients than for commercial clients. Conversely, the increase in spend for asthma medications observed among Medicare beneficiaries (as opposed to the decline in spend seen for the commercially insured) likely is related to the utilization of some treatments classified as asthma medications to treat COPD, a condition that usually affects older populations. Interesting to note is that both asthma and COPD are in the top 10 rankings by PMPY spend for Medicare, which indicates a high prevalence of pulmonary diseases among older adults compared to commercially insured populations.

MEDICARE TREND VS. COMMERCIAL TREND FOR THE TOP 10 MEDICARE TRADITIONAL THERAPY CLASSES

RANKED BY 2015 OVERALL MEDICARE PMPY SPEND

		TREND				
RANK	THERAPY CLASS	OVERALL MEDICARE	MAPD	PDP	EGWP	COMMERCIAL
1	Diabetes	19.5%	6.9%	28.8%	22.4%	14.0%
2	Pain/inflammation	-1.2%	-4.4%	7.8%	-5.2%	2.9%
3	Mental/neurological disorders	0.5%	-0.8%	12.0%	-6.2%	0.2%
4	High blood cholesterol	-8.0%	-18.1%	-0.3%	-8.6%	-9.2%
5	High blood pressure/heart disease	-15.7%	-20.4%	-7.8%	-19.4%	-12.5%
6	Asthma	1.8%	-2.9%	8.1%	1.3%	-1.6%
7	Heartburn/ulcer disease	27.2%	-5.3%	1.5%	84.2%	35.6%
8	Anticoagulants	44.8%	39.6%	48.6%	42.0%	36.3%
9	Urinary disorders	6.3%	-0.4%	2.2%	11.6%	9.4%
10	Chronic obstructive pulmonary disease	9.0%	6.8%	18.3%	1.6%	1.6%
	TOTAL TRADITIONAL	**4.8%**	**-3.2%**	**9.8%**	**7.9%**	**0.6%**

Comparison of specialty therapy classes

In general, the trends for specialty therapy classes that were experienced by Medicare clients were consistent with those for commercial clients.

Both Medicare and commercial clients experienced double-digit trend for all of the top 10 specialty classes except for hepatitis C, multiple sclerosis and CNS/autonomic disorders in the commercial population. For all of the top 10 specialty conditions except HIV, the magnitude of trend was higher for Medicare, potentially related to higher prevalence of the conditions those medications treat among older populations.

For **all** of the top 10 specialty conditions except HIV, the magnitude of trend was **higher** for Medicare.

MEDICARE TREND VS. COMMERCIAL TREND FOR THE TOP 10 MEDICARE SPECIALTY THERAPY CLASSES

RANKED BY 2015 OVERALL MEDICARE PMPY SPEND

		TREND				
RANK	THERAPY CLASS	OVERALL MEDICARE	MAPD	PDP	EGWP	COMMERCIAL
1	Oncology	31.8%	30.1%	38.2%	28.6%	23.7%
2	Hepatitis C	39.8%	31.7%	57.0%	34.4%	7.0%
3	Multiple sclerosis	20.0%	19.9%	27.0%	19.0%	9.7%
4	Inflammatory conditions	26.3%	17.9%	27.9%	27.7%	25.0%
5	HIV	10.5%	15.0%	21.0%	16.6%	16.6%
6	Pulmonary hypertension	21.4%	12.7%	32.3%	19.7%	18.1%
7	Immune deficiency	24.4%	16.3%	23.4%	43.2%	24.2%
8	Osteoporosis	26.2%	18.5%	32.4%	23.2%	23.6%
9	Central nervous system (CNS)/autonomic disorders	17.8%	5.3%	25.6%	39.5%	0.9%
10	Blood cell deficiency	11.1%	3.3%	17.7%	9.5%	10.4%
	TOTAL SPECIALTY	**27.9%**	**24.3%**	**36.3%**	**27.2%**	**17.8%**

2016 – 2018 Medicare trend forecast

Trend for Medicare is expected to increase an average of 13.3% over the next three years.

Forecast for key traditional therapy classes

Medicare traditional trend was 4.8% in 2015, after accounting for rebates. The PMPY traditional spend for Medicare overall was $2,025.67 – lower than the traditional spend in 2014 and mainly due to the inclusion of rebates in estimating drug spend in 2015. Traditional drug trend is anticipated to increase by an average of 8.9% over the next three years. Four of the top 10 traditional therapy classes – mental/neurological disorders, high blood cholesterol, high blood pressure/heart disease and heartburn/ulcer disease – are forecast to continue with negative trends all three years, due to declines in unit cost resulting from patent expirations and greater generic dispensing. The largest increases in the next three years are expected in the anticoagulants and diabetes classes. Insulins will continue to drive the diabetes trend in Medicare. However, the availability of biosimilar insulin therapies may mitigate the trend in 2018. The continued shift from warfarin to the newer oral anticoagulant therapies will continue to fuel trends of more than 50% during the next three years.

2016 – 2018 TREND FORECAST

	2016	2017	2018
TOTAL OVERALL	**12.4%**	**13.3%**	**14.3%**

TREND FORECAST FOR KEY TRADITIONAL THERAPY CLASSES

2016 – 2018

	TREND FORECAST		
THERAPY CLASS	**2016**	**2017**	**2018**
Diabetes	16.5%	16.6%	14.4%
Pain/inflammation	6.0%	9.1%	8.1%
Mental/neurological disorders	-3.0%	-5.1%	-2.0%
High blood cholesterol	-9.1%	-10.2%	-11.1%
High blood pressure/heart disease	-3.1%	-7.1%	-5.1%
Asthma	4.0%	6.1%	0.0%
Heartburn/ulcer disease	-6.1%	-4.1%	-3.0%
Anticoagulants	53.7%	51.6%	53.7%
Urinary disorders	6.1%	5.0%	16.6%
COPD	11.2%	11.2%	11.2%
Other traditional classes	10.4%	9.6%	9.6%
TOTAL TRADITIONAL	**7.8%**	**8.7%**	**10.2%**

Forecast for key specialty therapy classes

Medicare specialty drug trend was 27.9% in 2015 and the PMPY spend in Medicare of $888.53 was about $164 higher, compared to specialty drug spend in 2014. Medicare specialty trend is expected to decline over the next three years, although the average trend may still be more than 22%. However, increased adoption, brand inflation and rise in costs of newer therapies may continue to fuel utilization trends as well as total specialty drug spending. It's anticipated that oncology will see the largest trends (more than 30%) due to several factors, including approval of newer targeted therapies as well as expanded indications for existing therapies and increased survival of cancer patients on chemotherapy. The projected launch of the generic imatinib is predicted to have a small impact on trend due to high utilization and brand inflation in this therapy class. Market saturation will lead to stabilization of hepatitis C trend in Medicare over the next three years. Medications used to treat inflammatory conditions are expected to continue to trend in double digits, the result of newer, more convenient oral therapies as well as expanded indications for existing therapies. Similar factors may contribute to large trends in immune deficiency and CNS/autonomic disorders drugs over the next three years.

TREND FORECAST FOR KEY SPECIALTY THERAPY CLASSES

2016 – 2018

	TREND FORECAST*		
THERAPY CLASS	2016	2017	2018
Oncology	33.3%	33.3%	31.0%
Hepatitis C	12.2%	14.2%	10.0%
Multiple sclerosis	16.6%	15.6%	12.9%
Inflammatory conditions	26.5%	26.5%	27.7%
HIV	15.3%	15.3%	16.3%
Pulmonary hypertension	18.8%	7.9%	8.0%
Immune deficiency	26.0%	22.8%	20.8%
Osteoporosis	17.0%	8.0%	-1.0%
Central nervous system (CNS)/ autonomic disorders	17.6%	17.6%	17.6%
Blood cell deficiency	9.9%	4.0%	4.0%
Other specialty classes	21.1%	18.6%	18.6%
TOTAL SPECIALTY	**22.8%**	**22.5%**	**21.5%**

*Trend is forecast only for specialty medications billed through the pharmacy benefit

Solutions

Solutions for Medicare challenges

To address plans' challenges in today's competitive Medicare landscape, Express Scripts offers a range of innovative solutions. Our Medicare formularies, compound management, and star ratings solutions deliver better outcomes and true overall value for our Medicare clients and members.

Express Scripts continues to be at the forefront of addressing challenges facing Medicare health plans.

Formulary solutions

Express Scripts strategic Medicare formulary options allow plans to be at the forefront of offering the most competitive benefit designs in the marketplace. **Express Scripts formularies drive significant savings through formulary coverage, tier placement and utilization management** (with specialty-specific utilization management programs to drive down costs for these expensive drug classes), yielding more than $100 million in savings in 2015.[18]

Compound management

In 2015, all Express Scripts Medicare plans adopted our compound management solution, which includes forecasting analysis and compound coverage options. As a result, compounded drugs dropped out of the top 10 traditional therapy classes by spend. Express Scripts Medicare plans experienced, on average, a decrease of nearly 40% in compound claims year over year (comparing December 2014 to December 2015), with some showing nearly a 50% decrease in compound claims and an 80% decrease in compound spend from 2014 to 2015.[19]

Star Ratings solutions

Constellation

Recognizing the importance of predictive analytics in helping plans project Star Ratings performance, Express Scripts revamped its industry-leading Constellation® ratings advisor tool. The new web-enabled version builds upon the tool's established foundation of providing plans with a customized model that identifies areas where they can boost Star Ratings performance and maximize reimbursements from the CMS. **Using Constellation to analyze and project improvements across all Part C and Part D measures, plans can evaluate which seemingly minor changes can have a major impact on CMS ratings and reimbursements.**

Pay-for-Performance Pharmacy Network

Express Scripts developed one of the first and the largest pharmacy-quality network pay-for-performance programs. Pharmacies in this program achieved higher performance ratings for high-risk medications and diabetes treatment of 60% and 23%, respectively, compared to a national sample of retail pharmacies. This program also achieved statistically significant favorable differences for hypertension and diabetes adherence rates.[20] Offering incentives to pharmacies to be more accountable through a financial risk-and-reward arrangement and involved in Medicare quality can improve member health outcomes and plan Star Ratings. **As new Star Rating measures are introduced, Express Scripts will continue to evolve the quality pay-for-performance pharmacy network program.**

Throughout the year, Express Scripts Medicare experts will report on Medicare trends in greater detail.

Offering **incentives** to pharmacies through a financial risk-and-reward arrangement to be **more accountable** and involved in **Medicare quality** can improve member health outcomes and plan Star Ratings.

Medicaid

Medicaid overview

Medicaid at 50

Enacted in 1965 through Title XIX of the Social Security Act, Medicaid covers 72 million beneficiaries. It's now the largest health insurance program for Americans with limited incomes, including the elderly and the disabled.

Here are some of the most notable changes to the program over the last 50 years:[21]

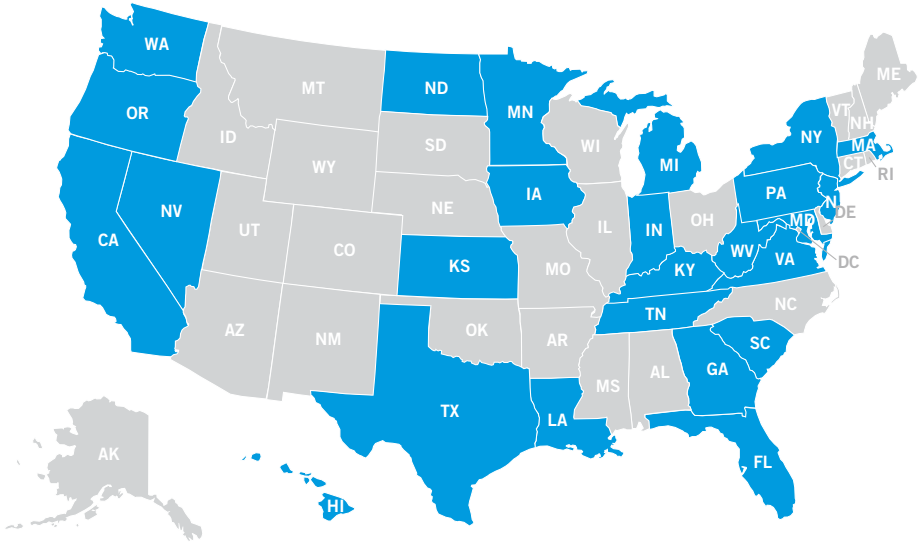
- The Medicaid Drug Rebate Program, implemented in 1991, required drug manufacturers to return part of Medicaid drug spending to the states and the federal government in exchange for having drugs covered under Medicaid. When the rebate program was amended as part of the Patient Protection and Affordable Care Act (ACA) in 2010, federal rebates were extended to managed care claims. Many states were prompted to shift the management of their prescription drug benefit to managed care organizations (MCOs) which were already administering the medical benefit for Medicaid members.
- In 1996, the replacement of Aid to Families with Dependent Children (AFDC) with Temporary Assistance for Needy Families (TANF) prevented employed Medicaid members from losing their medical benefits.
- The creation of the State Children's Health Insurance Program (CHIP) in 1997 as part of the Balanced Budget Act extended benefits to low-income children who didn't meet their state's Medicaid eligibility criteria. The Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) provided states with significant new funding and additional incentives for covering children through Medicaid and CHIP.
- Finally, the expansion of Medicaid eligibility under the ACA has resulted in 15 million new beneficiaries gaining Medicaid coverage since January 2014.

The expansion of Medicaid eligibility has resulted in **15 million new beneficiaries** gaining coverage since January 2014.

Federal legislative proposals

Beyond 2015, Medicaid is poised for numerous potential changes proposed by the Centers for Medicare and Medicaid Services (CMS). Specifically, CMS seeks to align requirements among Medicaid, CHIP, Medicare Advantage and Health Insurance Exchange programs when possible in an attempt to simplify administrative processes. Additionally, CMS has proposed changes to encounter data and formulary reporting, addressed quality ratings and standard performance measures and a minimum medical loss ratio. With more than 800 comments, including those made by Express Scripts, the proposed legislation received an extensive and thorough reaction, with publishing of the final rule delayed until the end of June 2016.

In an effort to improve the 340B program, the Health Resources Services Administration (HRSA) also released new and extensive proposed guidance in August 2015, including proposals to modify the definition of an eligible patient, registration protocols for Covered Entities and the manner in which Covered Entities identify if they will dispense 340B drugs to Medicaid beneficiaries. Given the number of changes recommended and the amount of feedback received on the proposed rule, it's clear that a desire to modify the 340B program exists.



Express Scripts and Medicaid

Since partnering with our first Medicaid client in 1995, Express Scripts has served the Medicaid population. The number of low-income and underserved populations served by Express Scripts continues to grow as states move more of their enrollees to Medicaid managed care (MMC). Our commitment to the Medicaid population remains steadfast while continuing to evolve, as patients with more complex pharmacy needs are covered by MMC. With Medicaid-specific pharmacy solutions and strategic support available to all of our health plans, our Medicaid line of business has expanded to more than 35 health plans in 25 states (highlighted in blue in the map at right). Our passion for serving Medicaid and CHIP beneficiaries is evident in our ongoing advocacy for MMC and our focus on Medicaid innovation. Additionally, we have a strong record of compliance in meeting constantly evolving Medicaid regulations.

Our Medicaid line of business has expanded to more than **35 health plans in 25 states**.

What's driving Medicaid trend?

Specialty medications

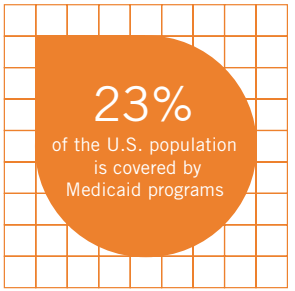
Medicaid spending on specialty drugs continues to grow. Total per-member-per-year (PMPY) specialty drug spend accounted for nearly 36.5% of the total Medicaid drug spend in 2015, despite the small proportion of the Medicaid population utilizing specialty medications.

In 2015, the HIV and hepatitis C therapy classes continued to lead Medicaid specialty drug trend, with eight of the top 10 specialty medications as ranked by PMPY spend belonging to one of these two therapy classes. Medicaid is estimated to be the largest source of coverage for HIV care, covering half of all HIV patients in the U.S.[22] The approval of newer combination therapies, which have convenient once-daily dosing, means that spending on HIV will maintain its large impact on specialty drug spending in Medicaid. Second only to HIV's $131.80, the 2015 PMPY spend on hepatitis C medications ($62.96) accounted for 17.7% of specialty spend. Faced with severe financial concerns over the price of specialty medications, state Medicaid agencies and Medicaid health plans continue to implement a diverse set of benefit design, utilization management and formulary administration techniques to contain utilization and costs for specialty drugs, particularly hepatitis C drugs.

In addition to HIV and hepatitis C, the approvals of newer specialty medications for traditional disease conditions, several new therapies and approval of expanded indications for existing therapies are influencing upward trend in specialty drug spending in Medicaid for the near future.

Medicaid is estimated to be the largest source of coverage for HIV care, covering half of all HIV patients in the U.S.

Continuing expansion of state Medicaid programs and Medicaid managed care



About 23% of the U.S. population is covered by Medicaid programs, including 15 million new beneficiaries who gained Medicaid coverage since the beginning of 2014.[23] Currently, approximately 51 million Americans, or 70% of all Medicaid beneficiaries, receive their health benefits from MMC. This growth has been propelled by changes in the Medicaid Drug Rebate Program as part of the ACA and the use of MMC for new ACA Medicaid expansion enrollees in states that haven't historically enrolled their beneficiaries in managed care. CMS data shows that newly enrolled Medicaid beneficiaries had higher benefit costs than previously estimated, mostly due to a surge in the number of newly enrolled patients who lacked health insurance and had previously unmet healthcare needs and untreated conditions, such as diabetes.[24, 25]

In 2015, Alaska, Indiana and Pennsylvania expanded their Medicaid programs under the ACA. Montana's state legislature approved Medicaid expansion for implementation in 2016. In February 2016, through an executive order by the state's governor, Louisiana also approved Medicaid expansion. Given the impending decrease in federal funding for Medicaid expansion, the federal government continues to look for ways to provide incentives for states to expand their programs. States such as South Dakota, Tennessee, Utah, Virginia and Wyoming continue to have active discussions on Medicaid expansion.[26] The use of Alternative Benefit Plans (ABPs) continues to influence state decisions on expanding Medicaid, with many ABP proposals now encouraging the use of benefit designs that promote personal responsibility and engage participants in making healthcare decisions based on cost and quality. States use MMC not only to help new members receive needed care, but also to effectively limit costs. Given these challenges, Medicaid health plans must implement advanced clinical and utilization management solutions to ensure appropriate access to care while reigning in spiraling healthcare costs.

Mental health and controlled substances

Medicaid beneficiaries are disproportionately affected by mental and behavioral health issues, making Medicaid the single largest payer for mental health services in the U.S.[27] Among Medicaid beneficiaries, medications for treating mental/neurological disorders, attention disorders, pain/inflammation, depression and chemical dependence were among the top 10 traditional therapy classes ranked by PMPY spend in 2015. These five therapy classes accounted for 33.4% of the total traditional drug spend in Medicaid. The increase in utilization of antipsychotics, antidepressants, mood stabilizers, attention disorder drugs and anti-anxiety drugs – collectively referred to as psychotropic medications – among children in Medicaid is also of growing concern. Findings from a study done at Express Scripts showed that pediatric use of psychotropic drugs accounted for 16.0% of total Medicaid drug costs in 2012.[28]

Prescription painkiller abuse, overdose and associated deaths have reached epidemic proportions nationally.[29] In addition, a recent report from the Centers for Disease Control and Prevention (CDC) highlighted the increased prevalence of hepatitis C and HIV due to injectable opioid abuse.[30] Previous research by Express Scripts found troubling trends:

- **Nearly 60%** of patients taking opioid pain treatments were prescribed potentially dangerous combinations of medications.
- **Two-thirds of patients** using these medication combinations were prescribed the drugs by two or more physicians and **nearly 40%** filled their prescriptions at more than one pharmacy.[31]

Moreover, medical fraud and abuse that includes but isn't limited to billing for unnecessary or unfurnished services or items, upcoding, unbundling and taking kickbacks and using other tactics, can divert significant resources away from necessary care for Medicaid recipients. Such practices signal the need for bold strategies as being essential to ensure appropriate management of psychotropic and pain medications for this vulnerable population.

edicaid's PMPY total spend in 2015 was $969.56, which was up 5.7% from 2014. Still, our Medicaid health plans had the lowest overall 2015 drug trend

The increase in utilization of **psychotropic medications** among children in Medicaid is of growing concern.

A look at Medicaid overall drug trend for 2015

Medicaid trend increased 5.7% when compared to our commercial insurance, Medicare and health insurance exchange lines of business. The overall Medicaid trend increase in 2015 was driven by a 2.0% increase in utilization and a 3.7% increase in unit cost trend.

Overall drug trend for traditional medications rose 3.3%, reflecting a 1.3% increase in unit cost and a 2.1% bump in utilization. For specialty medications, drug trend increased by 10.1%, driven by a 12.3% increase in unit cost and lessened somewhat by a 2.2% decline in utilization. Faced with financial pressures, state Medicaid programs aggressively countered rising drug costs in 2015 by implementing various programs or policies, including decisions to carve out coverage of certain therapy classes, like hepatitis C, from the health plan's managed pharmacy benefit. Although these decisions had an impact on the reduced drug trend, they had only a modest effect on unit cost trend.

In 2015, we updated our Medicaid section to provide expanded insights into drug trend observed for different populations within our Medicaid book of business:

- **Temporary Assistance for Needy Families (TANF) –** includes all TANF members and similar populations including but not limited to pregnant women, foster children, the homeless and ACA Medicaid Expansion members
- **Children's Health Insurance Program (CHIP) –** includes separate CHIP plans, as well as Medicaid extension CHIP programs
- **Aged, Blind and Disabled (ABD) –** includes all ABD members or members classified as long-term care (LTC) members

Dual-eligible beneficiaries were excluded, since the majority of their drug benefits are managed by Medicare Part D drug plans.

Components of Medicaid trend

When looking at Medicaid trend by different populations, we made note of a few initial observations:

- The TANF population had the highest total trend (6.1%) despite a nominally lower PMPY drug spend ($1,029.28) compared to the ABD population
- The CHIP population had the highest overall specialty trend (20.6%) despite the majority of their $287.75 PMPY spend being attributed to traditional drugs ($228.13)
- The ABD population had the lowest total trend (2.9%) but the highest PMPY drug spend ($1,170.71)

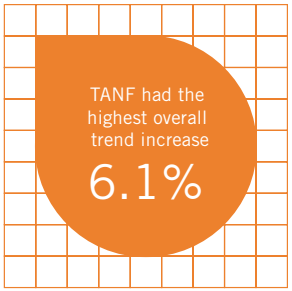
COMPONENTS OF MEDICAID TREND

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$615.36	2.1%	1.3%	**3.3%**
Specialty	$354.20	-2.2%	12.3%	**10.1%**
TOTAL OVERALL	**$969.56**	**2.0%**	**3.7%**	**5.7%**

January-December 2015 compared to same period in 2014

The TANF population had the highest overall trend increase (6.1%) and the second highest PMPY spend ($1,029.28) among the three populations. The overall trend was driven by a unit cost trend of 4.0% and a 2.1% trend in utilization – the greatest utilization trend increase among the three Medicaid population groups. The overall trend was affected primarily by specialty drug spending, which accounted for 38.0% of the total spend for this population, despite a 3.0% decrease in specialty drug utilization. Additionally, the 13.9% jump in unit cost trend for specialty drugs drove the overall 4.0% increase in unit cost.



When looking at the trend in the CHIP population, we observed the highest overall specialty trend at 20.6%, driven by significant increases in both utilization (8.3%) and unit cost trend (12.3%). The significant rise in specialty trend was the main contributor to the 4.3% overall trend and 5.3% total unit cost trend for the CHIP population. Despite significant trend increases in specialty utilization and unit cost, over 79% of the total PMPY spend for CHIP members came from traditional drug spend ($228.13). Specialty drug utilization among children has been found to be increasing as well, as reflected in the 8.3% CHIP specialty trend.[32]

The overall drug trend for ABD members was the lowest of the three populations analyzed; however, their overall PMPY spend was the highest of the three groups at $1,170.71. The ABD population's higher PMPY drug spend reflects the fact that these beneficiaries have some of the highest health care needs. This is due to a higher number of comorbidities and, consequently, a higher number of PMPY prescription claims filled (16.0 PMPY) when compared to TANF (14.6 PMPY) and CHIP (4.9 PMPY). Of the ABD population's total PMPY spend, 72% was spent on traditional drugs ($845.96), a result attributable to a high number of comorbidities that can be treated with traditional drugs. When looking more closely at the PMPY spend for traditional drugs, we note that the total traditional trend of 6.3% resulted primarily from a 4.5% increase in traditional unit cost trend. Conversely, total specialty trend for ABD members declined by 4.8%, in large part due to a 6.3% decline in specialty drug utilization for this population.

TANF

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$638.10	2.2%	1.3%	**3.4%**
Specialty	$391.18	-3.0%	13.9%	**10.8%**
TOTAL OVERALL	**$1,029.28**	**2.1%**	**4.0%**	**6.1%**

January-December 2015 compared to same period in 2014

CHIP

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$228.13	-1.0%	1.8%	**0.8%**
Specialty	$59.61	8.3%	12.3%	**20.6%**
TOTAL OVERALL	**$287.75**	**-1.0%**	**5.3%**	**4.3%**

January-December 2015 compared to same period in 2014

ABD

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$845.96	1.8%	4.5%	**6.3%**
Specialty	$324.74	-6.3%	1.5%	**-4.8%**
TOTAL OVERALL	**$1,170.71**	**1.7%**	**1.2%**	**2.9%**

January-December 2015 compared to same period in 2014

Traditional therapy classes and insights: Medicaid

For Medicaid plans, trend for traditional medications was 3.3% in 2015, resulting from a 2.1% increase in utilization and a 1.3% upswing in unit cost. When ranked by PMPY spend, the top three traditional therapy classes – diabetes, mental/neurological disorders and asthma – contributed to 37.7% of the total traditional drug spend among Medicaid beneficiaries. Diabetes medications alone accounted for 15.8% of the total traditional drug spend. Five of the top 10 traditional therapy classes had negative total trend, with medications used to treat depression having the largest drop in trend for the second year in a row.

When ranked by PMPY spend, the **top three** traditional therapy classes contributed **37.7%** of the total traditional drug spend.

COMPONENTS OF TREND FOR THE TOP 10 MEDICAID TRADITIONAL THERAPY CLASSES

RANKED BY 2015 PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$97.03	4.1%	17.6%	**21.7%**
2	Mental/neurological disorders	$71.97	-1.5%	-4.8%	**-6.4%**
3	Asthma	$62.73	-2.0%	4.6%	**2.6%**
4	Attention disorders	$52.00	1.1%	7.0%	**8.0%**
5	Pain/inflammation	$51.18	-0.1%	0.1%	**0.0%**
6	Seizures	$20.57	-0.1%	-0.6%	**-0.7%**
7	Infections	$20.47	-1.9%	-2.2%	**-4.1%**
8	Depression	$15.38	7.3%	-31.3%	**-24.0%**
9	Chemical dependence	$15.21	10.7%	-6.2%	**4.5%**
10	High blood pressure/heart disease	$14.19	3.5%	-6.9%	**-3.4%**
	TOTAL TRADITIONAL	**$615.36**	**2.1%**	**1.3%**	**3.3%**

Highlights

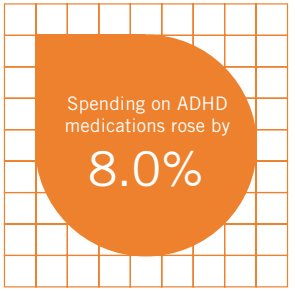
- Diabetes had the highest PMPY spend ($97.03) of all traditional therapy classes among Medicaid beneficiaries for the third consecutive year. Among the top 10 Medicaid traditional therapy classes, trend for diabetes medications was highest, at 21.7%. It was driven by a unit cost trend of 17.6%, and a smaller rise in utilization (4.1%). Brand inflation for Lantus® (insulin glargine) and Humalog® (insulin lispro) was the key driver. An interplay of several factors is responsible for the trends observed in diabetes drug spending. These include the current unavailability of any generic insulins, the 2015 approvals for newer therapies such as Tresiba® (insulin degludec), Ryzodeg® 70/30 (insulin degludec/insulin aspart), and Toujeo® (insulin glargine) and the anticipated approvals of brand and follow-on insulin therapies beginning in 2016.

- Mental illnesses are highly prevalent among the Medicaid-eligible population; an estimated 35% of low-income, nonelderly, adult Medicaid enrollees have some form of mental illness.[33] Although mental/neurological disorder therapies had the second highest PMPY spend at $71.97, their total trend declined by 6.4%, resulting from negative utilization (-1.5%) and unit cost trends (-4.8%). Multiple generic versions of the antipsychotic drug Abilify® (aripiprazole) were launched after patent expiration in April 2015. Combined, Abilify and generic aripiprazole contributed to 49.8% of the total PMPY spend for the mental/neurological disorders therapy class, with generic aripiprazole accounting for 24.0%.

- Asthma drugs continue to be among the top three traditional therapy classes. Medicaid enrollees have a high prevalence of asthma, with Medicaid being the largest payer for asthma-related hospitalizations among children and adults.[34] PMPY drug spend was up by 2.6% to $62.73, fueled by an uptick in unit cost (4.6%) and a drop in utilization (-2.0%). While Symbicort® (budesonide/formoterol) had the highest PMPY drug spend in Medicaid ($10.74), Ventolin® HFA (albuterol sulfate) had the highest asthma market share in Medicaid.

Brand inflation for insulin products was a key driver in spend growth for diabetes medications.

- PMPY spend on attention disorders medications rose by 8.0% in 2015 to $52.00, mostly influenced by a unit cost trend of 7.0%. Despite concerns regarding use of attention disorders drugs among children in Medicaid,[35] spending on these drugs continued to rise from last year. Although the generic drugs methylphenidate and dextroamphetamine/amphetamine dominate this class in the Medicaid population, utilization and unit cost for the brand drug Vyvanse® (lisdexamfetamine) have shown continued increases in 2015. Use of Vyvanse is up among adults aged 18 or older who are treating attention disorders or binge eating disorder, for which it gained FDA approval in January 2015.[36]



- Pain/inflammation medications had a PMPY spend of $51.18, but trend balanced between a 0.1% increase in unit cost and a 0.1% decline in utilization. Although generics continue to dominate this class in Medicaid, the brand drug Lyrica® (pregabalin) had the highest PMPY spend, at $7.96. In fact, brand inflation for Lyrica and the tamper-resistant formulation OxyContin® (oxycodone) elevated unit cost for the class.

- Depression medications had the largest negative total trend (-24.0%), driven mainly by a 31.3% drop in unit cost. This therapy class has one of the highest generic penetrations with a generic fill rate (GFR) of 98.5% in 2015. Decreased unit cost trend in 2015 may be due in part to no new therapies approved and no new drugs in the pipeline for treating depression.

- Along with mental illnesses, substance abuse disorders are also prevalent in the Medicaid population. Drugs used to treat chemical dependence had a total trend of 4.5%, mainly due to a 10.7% increase in utilization, but offset by a 6.2% reduction in unit cost. Suboxone® (buprenorphine/naloxone), which had the highest drug spend, was the most commonly used drug in this class among the Medicaid patients, followed by its generic version buprenorphine/naloxone. Combined, the brand and generic versions captured more than 94% of chemical dependence market share in 2015 among the Medicaid population.

Top 10 Medicaid traditional drugs

Together, the six brand drugs in the top 10 accounted for 15.8% of PMPY spend for all traditional therapy drugs. Three of the top 10 traditional drugs used by Medicaid beneficiaries in 2015 were generics, up from only one in 2014. An amphetamine salt combination used to treat attention disorders and the atypical antipsychotic aripiprazole joined methylphenidate on this list. Aripiprazole, the generic version of Abilify approved in April 2015, won significant marketshare. The drop in utilization for Abilify (-60.3%) was offset only slightly by a sustained increase in unit cost (7.2%), leading to a total trend of -53.1%, which was the lowest among the top 10 traditional therapies. Lantus overtook Abilify to have the highest PMPY traditional drug spend ($28.88) for Medicaid in 2015. Humalog had the highest trend among the top 10 traditional therapies (17.7%), mainly from 20.4% unit cost inflation. Trends for several brand drugs, such as Symbicort, Lantus and Humalog, were found to stabilize despite rising in 2015.

Three of the top 10 traditional drugs were generics, up from only **one** in 2014.

TOP 10 MEDICAID TRADITIONAL THERAPY PRODUCTS

RANKED BY 2015 PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL TRADITIONAL SPEND	UTILIZATION	UNIT COST	TOTAL
1	Lantus® (insulin glargine)	Diabetes	$28.88	4.7%	3.4%	10.7%	**14.1%**
2	Abilify® (aripiprazole)	Mental/neurological disorders	$18.56	3.0%	-60.3%	7.2%	**-53.1%**
3	Humalog® (insulin lispro)	Diabetes	$17.97	2.9%	-2.7%	20.4%	**17.7%**
4	aripiprazole	Mental/neurological disorders	$17.28	2.8%	–	–	–
5	methylphenidate extended release	Attention disorders	$14.24	2.3%	-5.9%	12.2%	**6.2%**
6	Symbicort® (budesonide/formoterol)	Asthma	$10.74	1.7%	5.7%	7.6%	**13.3%**
7	Suboxone® (buprenorphine/naloxone)	Chemical dependence	$10.62	1.7%	5.1%	-1.2%	**3.9%**
8	Ventolin® HFA (albuterol sulfate)	Asthma	$10.30	1.7%	-2.3%	6.9%	**4.6%**
9	dextroamphetamine/amphetamine	Attention disorders	$10.00	1.6%	-6.6%	-10.2%	**-16.8%**
10	OneTouch Ultra® Test Strips	Diagnostic aids	$9.93	1.6%	12.3%	-6.1%	**6.2%**

Specialty therapy classes and insights: Medicaid

Specialty medications accounted for 36.5% of total Medicaid pharmacy spend in 2015. PMPY spend for specialty medications for Medicaid ($354.20) rose by 10.1%, primarily boosted by a unit cost trend of 12.3%, but tempered slightly by a 2.2% decline in utilization. Ranked by PMPY spend, the top three specialty therapy classes – HIV, hepatitis C and inflammatory conditions – together contributed almost 67.0% of total specialty PMPY spend. At $131.80, medications used to treat HIV displaced hepatitis C as the specialty therapy class having the highest PMPY drug spend in 2015. This change was propelled by a negative utilization trend (-39.9%) for hepatitis C drugs, which more than offset a 30.2% unit cost trend. Anticoagulants along with hepatitis C were the only two of the top 10 specialty therapy classes with negative total trends, while both anticoagulants and pulmonary hypertension had declining unit cost trends.

Ranked by PMPY spend, the **top three** specialty therapy classes contributed **almost 67.0%** of total specialty PMPY spend.

COMPONENTS OF TREND FOR THE TOP 10 MEDICAID SPECIALTY THERAPY CLASSES

RANKED BY 2015 PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	HIV	$131.80	-5.9%	10.8%	**4.9%**
2	Hepatitis C	$62.96	-39.9%	30.2%	**-9.7%**
3	Inflammatory conditions	$41.30	24.5%	21.1%	**45.6%**
4	Oncology	$27.50	12.1%	17.3%	**29.4%**
5	Multiple sclerosis	$24.36	6.4%	9.7%	**16.0%**
6	Growth deficiency	$9.55	9.1%	14.7%	**23.7%**
7	Cystic fibrosis	$7.89	-2.1%	21.3%	**19.2%**
8	Pulmonary hypertension	$5.32	11.4%	-1.7%	**9.8%**
9	Anticoagulants	$4.78	0.7%	-6.8%	**-6.1%**
10	Hemophilia	$4.12	54.8%	40.0%	**94.8%**
	TOTAL SPECIALTY	**$354.20**	**-2.2%**	**12.3%**	**10.1%**

Highlights

- The PMPY spend for HIV treatments topped that of other specialty medications, with a unit cost trend of 10.8% and a decline in utilization by 5.9%. Despite the wave of patent expirations, brand drugs continue to dominate this class due to pipeline replenishment with newer and more potent drugs that tackle the continually mutating virus strains. Additionally, the one-a-day dosage regimens offered by some newer combination brand drugs such as Complera® (emtricitabine/tenofovir disoproxil fumarate), Stribild® (cobicistat/elvitegravir/emtricitabine/tenofovir disoproxil fumarate) and Triumeq® (abacavir/dolutegravir/lamivudine) have led to large increases in the utilization. Truvada® (emtricitabine/tenofovir disoproxil fumarate) had the highest PMPY spend ($24.64) and the highest market share (17%) in Medicaid. Atripla® (efavirenz/emtricitabine/tenofovir disoproxil fumarate) had the next highest drug spend in Medicaid ($17.08).

- Hepatitis C spending declined by 9.7% in 2015, heavily influenced by a 39.9% fall in utilization. Harvoni® (ledipasvir/sofosbuvir), which was approved in October 2014, still captured more than half (51.0%) of the hepatitis C Medicaid marketshare in 2015, with Sovaldi® (sofosbuvir) a distant second (14.3%). Viekira Pak™ (ombitasvir/paritaprevir/ritonavir; with dasabuvir), which was also approved at the end of 2014, took only 10.8% of the marketshare for Medicaid users in 2015. As mentioned earlier, state Medicaid programs implemented a variety of strategies to address the substantial strain on their budgets due to expensive hepatitis C therapies. Such strategies include:

    - Managing utilization through limiting drug treatments to the sickest patients or those with comorbid HIV or liver damage.
    - Imposition of various restrictions on the use of these drugs, such as assessing patients for drug and alcohol use or monitoring adherence to the drug regimen.
    - Carving out coverage for these drugs from the health plan managed pharmacy benefit to fee-for-service Medicaid.

  Medicaid health plans also implemented utilization management controls, including more thorough reviews of prior-authorization requests and quantity management protocols for hepatitis C drugs. Health plans were careful to develop these with thoughtful attention to the FDA-approved indications, as well as drawing on input from their hepatitis specialists.

- Spend for inflammatory conditions, the number-three specialty therapy class, surged by 45.6%, influenced by increases in utilization (24.5%) and unit cost (21.1%). Positive utilization trends for Humira Pen® (adalimumab), Enbrel® (etanercept), Stelara® (ustekinumab) and Xeljanz® (tofacitinib) contributed considerably to overall class trend. Costs continued to rise among the Medicaid population due to brand inflation. Humira Pen had the highest unit cost trend of 27.3% among the top 10 specialty drugs, followed by Enbrel with 21.7%. Otezla® (apremilast), the newest oral prescription drug to treat psoriatic arthritis, had a total trend of 989.5%, caused largely by a utilization trend increase of 855.2%. This may have resulted, in part, from an additional indication for psoriasis in September 2014 – after Otezla's initial approval in April 2014 for the much smaller pool of patients with psoriatic arthritis.

- In 2015, PMPY spend for oncology medications increased by 29.4% for the Medicaid population. Trend was driven by large rises in unit cost (17.3%) and utilization (12.1%). The utilization increase was likely the result of several factors, including the expansion of indications for several drugs such as Imbruvica® (ibrutinib), the continued development of newer, more targeted therapies and lengthening survival rates for patients living with cancer but continuing medication therapy. Utilization of a generic, capecitabine, went up by 37.4% in 2015, gaining the top marketshare spot in the Medicaid oncology drug class. On the other hand, utilization for the brand version of the same drug, Xeloda®, which lost patent in April 2014, plummeted by more than 96% in 2015. Nonetheless, brands still dominate this class, with eight of the top 10 oncology medications among Medicaid beneficiaries being brands. The leader was Gleevec® (imatinib), which had the highest PMPY spend in the class, due to a 17.8% unit cost trend. Going forward, generic versions of Gleevec, which were introduced in February 2016, should have a positive impact on oncology trend.

Among Medicaid specialty medications, drug spend for HIV treatments was highest in 2015.

- Total trend for multiple sclerosis (MS) medications was 16.0%, due to growth in both PMPY utilization (6.4%) and unit cost (9.7%). Copaxone® (glatiramer) is the most widely used MS drug in Medicaid, and also had the highest PMPY spend ($6.84), followed by the oral medication Tecfidera® (dimethyl fumarate) with a PMPY spend of $5.63. Glatopa™, a generic alternative for Copaxone's 20mg/mL dosage form, was launched in the U.S. in June 2015. However, the brand manufacturer is hoping to continue the shift of existing users to a new, longer-acting 40mg/mL formulation with patent protection until 2030.

- In 2015, trend for growth deficiency medications rose by 23.7%. Double-digit inflation (of 14.7%) in unit cost trend was the main factor. Norditropin® FlexPro® (somatropin) and Omnitrope® (somatropin) continue to dominate growth deficiency Medicaid marketshare and both had high unit cost trends (19.6% and 18.9%, respectively) in 2015. For cystic fibrosis (CF) medications, trend also rose significantly; by 19.2% relative to 2014's 8.5%. A unit cost increase of 21.3% greatly overshadowed the 2.1% utilization decrease for the class. Pulmozyme® (dornase alfa), which went up 10.0% in unit cost, continues to dominate the CF Medicaid market, followed by generic tobramycin inhalation. Orkambi® (lumacaftor/ivacaftor), which was approved in July 2015, quickly gained more than 4% of the Medicaid CF marketshare. At $1.34, it ranked second behind Pulmozyme's $3.10 in PMPY drug spend. We note that trends for expensive medications to treat rare conditions, such as growth deficiency, cystic fibrosis and hemophilia, are more susceptible to small changes in a plan sponsor's patient population.

Trends for expensive medications to treat rare conditions are **more susceptible to small changes** in a plan sponsor's patient population.

Top 10 Medicaid specialty drugs

Six of the top 10 specialty drugs were HIV medications, four of which are combination products with two or more different drugs in one tablet. Collectively, these six drugs contributed 25.0% of the total Medicaid specialty drug spend. Stribild and Complera were the only two HIV drugs with positive total trends. Stribild's total trend of 40.3% was driven by a 36.3% lift in utilization; the uptick was likely from the convenience offered by the combination of several drugs. Harvoni had a utilization increase of more than 1,100%, capturing the top Medicaid hepatitis C marketshare from Sovaldi, which dropped in utilization by 78.1%. The utilization increase for Harvoni may be attributed to a variety of influences, including significant cure rates, and consequently greater formulary preference over competing therapies. Humira Pen had the second highest total trend after Harvoni, with substantial rises in utilization (22.5%) and unit cost (27.3%) contributing to an overall trend of 49.8%. The other anti-inflammatory drug in the top 10, Enbrel, also had an uptick in drug spending (34.4%) driven by increases in utilization (12.7%) and unit cost (21.7%).

TOP 10 MEDICAID SPECIALTY THERAPY PRODUCTS

RANKED BY 2015 PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL SPECIALTY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Harvoni® (ledipasvir/sofosbuvir)	Hepatitis C	$44.56	12.6%	1,101.2%	-188.1%	**913.0%**
2	Truvada® (emtricitabine/tenofovir disoproxil fumarate)	HIV	$24.64	7.0%	-6.1%	3.9%	**-2.1%**
3	Atripla® (efavirenz/emtricitabine/tenofovir disoproxil fumarate)	HIV	$17.08	4.8%	-18.2%	5.6%	**-12.6%**
4	Humira® Pen (adalimumab)	Inflammatory conditions	$15.53	4.4%	22.5%	27.3%	**49.8%**
5	Stribild® (elvitegravir/cobicistat/ emtricitabine/tenofovir disoproxil fumarate)	HIV	$14.42	4.1%	36.3%	4.0%	**40.3%**
6	Complera® (emtricitabine/rilpivirine/ tenofovir disoproxil fumarate)	HIV	$12.68	3.6%	9.0%	4.8%	**13.8%**
7	Sovaldi® (sofosbuvir)	Hepatitis C	$11.49	3.2%	-78.1%	-1.1%	**-79.1%**
8	Prezista® (darunavir)	HIV	$11.38	3.2%	-8.5%	6.1%	**-2.4%**
9	Enbrel® (etanercept)	Inflammatory conditions	$10.65	3.0%	12.7%	21.7%	**34.4%**
10	Reyataz® (atazanavir)	HIV	$8.21	2.3%	-25.0%	5.0%	**-20.0%**

2016 – 2018 Medicaid trend forecast

The Medicaid traditional drug trend for 2015 was 3.3%, with a PMPY traditional spend of $615.36. We anticipate that over the next three years, the traditional drug trend will rise by an average of 5.7%. Smaller utilization increases due to stabilization of the influx of new Medicaid beneficiaries, coupled with modest unit cost changes for traditional therapies, will lead to a moderate trend upturn in 2016. This will be followed by only small trend increases thereafter. Trend is forecast to be negative for three of the top 10 traditional therapy classes (mental/neurological disorders, depression and high blood pressure/heart disease) for all three years, due to unit cost declines resulting from patent expirations and greater generic dispensing. The largest average traditional class increases in the next three years are expected for the diabetes and attention disorder therapy classes. Despite small increases in utilization of diabetes drugs, unit cost trend will plateau due to the availability of follow-on insulin therapies beginning in December 2016. In the attention disorders therapy class over the next three years, multiple factors including market saturation, generic availability and utilization management will lead to smaller trends among Medicaid beneficiaries.

In addition to the benefit and utilization management strategies employed by health plans, state and federal legislative actions will also play a role in impacting Medicaid prescription drug trend.

In Medicaid, PMPY specialty drug spend was $354.20 in 2015. The total trend was 10.1%. Due to a large drop in utilization, Hepatitis C, the main trend driver in 2014, reversed trend in 2015. The decrease was fueled by state regulations such as therapy class carve-outs, coupled with appropriate utilization management strategies by health plans. Moving forward, specialty

2016 - 2018 TREND FORECAST

	2016	2017	2018
TOTAL OVERALL	7.5%	8.8%	9.9%

TREND FORECAST FOR KEY TRADITIONAL THERAPY CLASSES

2016 - 2018

	TREND FORECAST		
THERAPY CLASS	2016	2017	2018
Diabetes	23.9%	22.4%	21.8%
Mental/neurological disorders	-2.0%	-3.6%	-2.6%
Asthma	2.0%	2.0%	2.0%
Attention disorders	7.1%	6.1%	4.0%
Pain/inflammation	1.5%	6.1%	5.0%
Seizures	3.0%	3.0%	3.0%
Infections	-1.1%	0.9%	0.9%
Depression	-14.2%	-8.1%	-4.8%
Chemical dependence	4.5%	1.3%	1.3%
High blood pressure/heart disease	-5.2%	-4.2%	-5.1%
Other traditional classes	3.3%	2.4%	2.4%
TOTAL TRADITIONAL	5.1%	5.8%	6.3%

trend is expected to increase steadily by an average of 13.6% over the next three years. Several factors, such as expanded indications for existing drugs, newer therapies in the pipeline, higher prescribing rates and wider adoption of these therapies, will lead to rising utilization from 2016 through 2018. However, double-digit growth in unit costs will also fuel trends. Pipeline replenishment with newer drugs that attack mutating HIV strains, along with the convenience of once-daily dosage regimens offered by some combination brand drugs, will continue to drive the HIV trend in Medicaid. In the inflammatory conditions therapy class, newer, more convenient oral drugs, along with expanded indications for existing drugs, will lead to sustained double-digit increases in both utilization and unit cost. Despite the launch of generic imatinib, oncology trends will continue to escalate at high levels due to targeted-drug approvals, increased utilization and brand inflation. Similar factors will contribute large trends in CF and hemophilia drugs over the next three years.

Specialty trend is expected to **increase steadily by an average of 13.6%** over the next three years.

TREND FORECAST FOR KEY SPECIALTY THERAPY CLASSES

2016 - 2018

	TREND FORECAST*		
THERAPY CLASS	**2016**	**2017**	**2018**
HIV	7.7%	7.8%	10.0%
Hepatitis C	-5.0%	0.0%	0.0%
Inflammatory conditions	40.0%	36.2%	32.7%
Oncology	27.8%	25.7%	26.6%
Multiple sclerosis	12.3%	10.2%	10.2%
Growth deficiency	15.5%	15.5%	13.0%
Cystic fibrosis	30.0%	27.8%	26.6%
Pulmonary hypertension	16.6%	6.9%	6.9%
Anticoagulants	-3.0%	-1.0%	1.0%
Hemophilia	30.0%	24.4%	27.5%
Other specialty classes	3.3%	3.4%	3.4%
TOTAL SPECIALTY	**11.8%**	**13.7%**	**15.4%**

*Trend is forecast only for specialty medications billed through the pharmacy benefit

Solutions

Solutions for Medicaid challenges

Express Scripts works tirelessly to address the issues facing Medicaid plan sponsors, such as high drug prices, through negotiations with pharmaceutical manufacturers and through benefit management solutions. Although we will continue to advocate for more sustainable and fair drug pricing along with our client and industry partners, we encourage Medicaid health plans to take advantage of our benefit and utilization management strategies, clinical solutions and innovative tools and unique services to ensure the most appropriate use of these medications.

Superior specialty care management

The rising number of Medicaid beneficiaries with chronic and complex disease states requires new strategies to manage healthcare needs. Express Scripts offers beneficiaries with chronic and complex conditions several industry-leading clinical solutions utilizing our Specialized Care group at our clinically specialized Therapeutic Resource Centers℠ (TRCs). **At our 20-plus TRCs, more than 1,000 advanced clinicians – pharmacists, nurses and patient advocates – receive clinically specialized training in one disease state, allowing them to focus almost exclusively on these specific clinical conditions.** This commitment to specialized expertise ensures an optimal patient experience and assures the highest performance in pharmacy safety, improved medication adherence and overall medical care. With their highly specialized knowledge of these complex disease states and complicated treatment protocols, our advanced clinicians are experts at identifying gaps in care – such as failure to prescribe an essential therapy, inappropriate dosing, dangerous drug interactions or patient nonadherence. They can also identify opportunities to reduce waste and out-of-pocket costs by moving patients to a different medication or pharmacy.

Express Scripts offers beneficiaries with chronic and complex conditions several **industry-leading clinical solutions** utilizing our Specialized Care group at our clinically specialized Therapeutic Resource Centers.

Our specialty pharmacy, Accredo, currently treats approximately 600,000 active specialty patients, with patient satisfaction levels well above 90%. Accredo's delivery of specialty pharmacy services results in better health and financial

outcomes for Medicaid health plans, providers and, most importantly, patients. A recent study of patients with rheumatoid arthritis underscores the importance of the pharmacy services and care Accredo provides through our specialty pharmacists, who conduct outreach to and serve as resources for patients: Accredo's clinical care resulted in 16% higher adherence over other pharmacies, 23% fewer doctors' office visits, 9% fewer annual ER visits and $1,797 in annual medical cost savings per patient.[37]

Specialty drug management

Specialty medications contribute significantly to rising prescription drug spending, which continues to strain state Medicaid agency and MMC plan budgets.[38] Controlling this trend will require an integrated approach that involves the active management of specialty drugs and the use of best pharmacy practices to achieve improved patient outcomes along with better savings. One such best practice is the use of medical benefit management services, such as those available through Accredo, to enhance patient care and reduce wasteful expenses associated with specialty drugs. With Accredo, medications are billed through the medical benefit using the industry's most comprehensive range of utilization, trend and claims management tools for medically billed drugs. Additionally, Accredo's Site of Care Management Program utilizes 600 Accredo-employed nurses across the country to deliver and infuse specialty medications in patients' homes rather than in expensive infusion suites and outpatient surgery centers. **No other PBM has this many employed nurses – nurses who receive the same training to provide consistent care according to clinical guidelines.**

Express Scripts innovative specialty care programs such as the Cholesterol Care Value Program℠ (CCV) and Oncology Care Value Program℠ (OCV) use rigorous clinical review processes to provide cost-effective and value-based prescription drug purchase and management solutions. We encourage Medicaid health plans to evaluate marketplace best practices and consider our solutions as they create their own guidelines.

Innovative clinical solutions

Among Medicaid enrollees, medication adherence is imperative to medication effectiveness. Increases in prescription drug use have been associated with decreases in nondrug costs, such as inpatient and outpatient spending.[39] Medicaid health plans can benefit tremendously from our proprietary ScreenRx® predictive modeling platform that identifies potential future nonadherence among Medicaid beneficiaries and can be extremely useful in designing tailored interventions that drive adherence among patients. Additionally, our RationalMed® platform uses proprietary clinical analyses of prescription, medical and lab data to identify trends and safety risks, thus providing plan sponsors greater precision in directing resources to address important patient issues.

In addition to using data to identify adherence or intervention opportunities, Express Scripts uses claims data at the pharmacy counter to identify excessive dosing of opiates. At the point of sale, at a member level, Express Scripts can calculate the analgesic effectiveness of all opiate medications prescribed for an equivalent dose of morphine, which can then be compared to a designated threshold to ensure that patients receive only a clinically appropriate amount of opiates. Using sensitivity in the design, we can ensure that patients with conditions requiring higher doses of pain relief, such as cancer, have access to higher doses of needed opiates.

Smart formulary management

To preserve patient access and choice while helping payers obtain fair and affordable pricing, Express Scripts effectively uses smart management techniques in a transparent manner to build effective formularies for our Medicaid health plans, while complying with state Medicaid agency regulations. These techniques ensure that plan formularies cover essential medications that are both superior to other products and clinically effective, while excluding costly drugs providing no additional clinical benefit. **Our Medicaid health plans benefit from formulary management decisions and recommendations that provide additional leverage to more effectively negotiate lower drug prices and compel manufacturers to charge fair and reasonable prices for their drugs.** Without a well-managed formulary, Medicaid health plans may end up paying significantly more for medications.

Fraud, waste and abuse prevention

Express Scripts Fraud, Waste and Abuse program uses industry-leading, proprietary data analytics and reporting tools to help uncover and flag potential fraud or abuse committed by providers, pharmacists or members. Using these advanced analytic insights, Express Scripts launched a proactive opioid education pilot program to identify members at higher risk for prescription drug abuse, at the time of their first fill. In addition, our data analytics solutions help identify physicians prescribing many more opioids than their practice would warrant and "pill mill" pharmacies filling opioids excessively. With this data, Express Scripts can make additional recommendations for members who should be evaluated for a lock-in, an effective program that state Medicaid agencies and Medicaid health plans use to restrict members to one prescriber or pharmacy, for one or more classes of medications. Express Scripts' advanced diagnostic and data-mining platform, MediCUBE®, integrates medical and pharmacy claims data, giving real-time access to more than 15 billion records for nearly 180 million patients. Express Scripts continually works to develop solutions that can be leveraged for any fraud, waste and abuse interventions that Medicaid health plans may need.

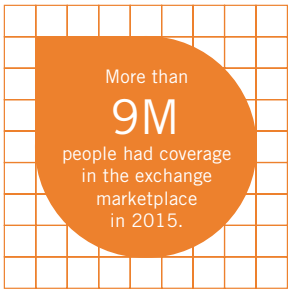
MediCUBE integrates medical and pharmacy claims data, giving real-time access to more than **15 billion records** for nearly **180 million patients**.

Health insurance exchange

Exchange overview

Since 2015 was just the second year of health insurance exchanges ("exchanges") – a major tenet of the Patient Protection and Affordable Care Act (ACA) – it's the first year for which Express Scripts can analyze this population's year-over-year trends. The Centers for Medicare and Medicaid Services (CMS) reported that more than nine million people had coverage in the exchange marketplace in 2015.[40] With access to approximately one third of the nation's state and federal health exchange pharmacy claims, Express Scripts is uniquely positioned to provide insights and identify emerging trends.

Prescription medication utilization and spending patterns provide valuable insights into the health status of exchange members. Our knowledge helps health insurers anticipate potential risks and take advantage of proactive prescription medication solutions that address the needs of their populations. Working with our clients, we can help implement strategies that deliver safe, affordable prescription care while helping them remain competitive in the exchange marketplace.



The exchange market is still young and subject to a high degree of change and uncertainty. These factors are evident in the trends we see. In the near term, we expect market growth projections, population health indicators and government regulations to remain volatile. Despite these variables, we believe this early analysis offers helpful insights and highlights a substantial opportunity to make pharmacy care more affordable and accessible to the exchange population.

In 2014, Express Scripts introduced the Exchange Pulse™ reports, which examined in depth the behavior and medication usage of exchange members. This, our first Health Insurance Exchange Drug Trend Report, continues our effort to share cutting-edge data and insights drawn from the exchange population. We're pleased to offer this detailed look at drug trend in this unique group.

With access to approximately **one third** of the nation's state and federal health exchange pharmacy claims, Express Scripts is **uniquely positioned** to provide insights and identify emerging trends.

A look at exchange overall drug trend for 2015

The exchange market has grown, albeit slower than previously projected by the Congressional Budget Office (CBO).[41] Even so, exchange enrollment was volatile in 2015. According to the U.S. Department of Health and Human Services (HHS), just over half of the enrollees who selected a plan through HealthCare.gov in 2015 didn't have coverage in the previous year. Additionally, of those who re-enrolled using HealthCare.gov, 29% selected a new plan.[42] In comparison, studies show that approximately 13% of Medicare Part D enrollees change plans in a given year and only about 7.5% of those with employer-sponsored coverage switch plans for reasons other than a job change.[42] As we examine exchange membership, we expect drug trend to reflect the changing nature of this still developing marketplace, as well as general industry trends.

COMPONENTS OF EXCHANGE TREND

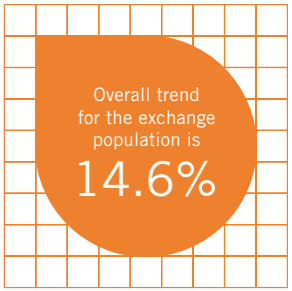
2015

		TREND		
	PMPY* SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$391.13	8.7%	0.7%	**9.4%**
Specialty	$386.14	4.7%	15.8%	**20.4%**
TOTAL OVERALL	**$777.27**	**8.6%**	**6.0%**	**14.6%**

*Per member per year

Components of exchange trend

Overall trend for the exchange population is 14.6%, which is notably higher than the trends among our commercial, Medicare and Medicaid populations. Trend in the exchanges was driven by increases in utilization (8.6%) and drug costs (6.0%). Although unit costs remained relatively flat (0.7%) for traditional medications, they increased significantly (15.8%) for specialty medications, similar to the commercially insured population. However, utilization increases for traditional medications outpaced those for specialty drugs (8.7% vs. 4.7%), a trend that may be due to patients in this population filling a previously unmet need. Overall per-member-per-year (PMPY) spend was nearly the same for traditional and specialty drugs.



As noted in the Express Scripts Exchange Pulse reports, specialty medications remain a significant contributor to overall exchange cost trend – a common theme throughout the industry. In the exchanges, specialty trend may also be attributed to an overall increase in drug utilization, as newly insured and existing exchange members fully utilize their prescription drug benefit. Many of the individuals enrolled in exchange plans were persistently uninsured prior to 2014. Prior to the ACA, many individuals with chronic and high-cost diseases such as HIV/AIDS did not qualify for insurance coverage due to pre-existing conditions. As outlined in the April 2014 edition of the Exchange Pulse Report, exchange plan members were four times more likely to have a prescription for at least one HIV medication than members in our commercial book of business. Over time, we expect utilization patterns to reflect general market characteristics, as fewer newly insured members with pent-up demand enter the market.

Specialty medications remain a significant contributor to overall exchange cost trend. However, traditional medication usage – compared to our other lines of business – indicates this is a new market whose members are just beginning to fully use their benefits.

Exchange trends by age groups and metal levels

Components of exchange trend by age group

As expected, total trend increased with older age groups. Beneficiaries aged 0 to 19 had the lowest trend (8.6%) and the 45 to 64 age groups had the highest at 19.5%. With the exception of unit cost trend for traditional medications, which remained relatively stable across all adult age groups, cost and utilization trend components increased for most age groups.

Total overall trend for the youngest exchange beneficiaries was much lower than the total aggregate trend across all exchange beneficiaries (8.6% vs. 14.6%). Primary drivers of 2015 trend were a big jump (18.8%) in unit costs and a smaller increase (3.9%) in utilization of specialty medications. A moderate 3.1% increase in unit costs of traditional medications also contributed. The youngest group also had the lowest percentage of total spend (about 30%) attributed to specialty drugs.

As anticipated, we saw low unit cost trend for traditional therapies in the 20 to 34 age bracket, but the group's utilization trend (9.9%) was particularly high. Total trend for this group was 12.7%, due to increased utilization of traditional medications (9.9%) and increases in both utilization and costs for specialty medications (4.5% and 11.3% respectively). Among beneficiaries 20 to 34, per member per year (PMPY) spending for specialty was actually $1.44 higher than spend for traditional drugs.

The 14.9% overall trend for exchange beneficiaries in the 35 to 44 age group slightly outpaced the 14.6% total overall trend across all exchange beneficiaries. A 10.3% increase in utilization for traditional drugs and a 17.2% unit cost increase for specialty medications were the main contributing factors. For beneficiaries in the 35 to 44 cohort, PMPY spend for specialty drugs ($374.80) was 12.7% more than spend for traditional drugs ($332.54).

Among beneficiaries aged 45 to 54, total trend increased by 19.5%, largely resulting from increased unit cost for specialty (18.4%) and increased utilization for traditional medications (13.2%). Specialty spend accounted for 54% of total PMPY spend by the group.

AGES 0 TO 19

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$130.26	0.4%	3.1%	**3.5%**
Specialty	$55.64	3.9%	18.8%	**22.8%**
TOTAL OVERALL	**$185.90**	**0.4%**	**8.2%**	**8.6%**

January-December 2015 compared to same period in 2014

AGES 20 TO 34

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$242.86	9.9%	-0.2%	**9.7%**
Specialty	$244.30	4.5%	11.3%	**15.8%**
TOTAL OVERALL	**$487.17**	**9.8%**	**2.9%**	**12.7%**

January-December 2015 compared to same period in 2014

AGES 35 TO 44

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$332.54	10.3%	0.7%	**11.0%**
Specialty	$374.80	1.5%	17.2%	**18.7%**
TOTAL OVERALL	**$707.34**	**10.2%**	**4.8%**	**14.9%**

January-December 2015 compared to same period in 2014

PMPY spend and total trend were higher for exchange beneficiaries aged 55 to 64 years than most other age groups included in the exchanges. Spend increased 19.5%, driven by high utilization growth for both traditional and specialty medications. Despite an almost flat traditional cost trend, a 13.6% increase in costs for specialty medications pushed total overall unit cost trend to 6.9%. PMPY utilization trend of 54.4% for osteoporosis was the highest among the top 10 specialty classes in this group. In this age bracket, PMPY spend for specialty medications was the highest among all age groups, but PMPY spend for traditional and specialty drugs differed by less than $71.00 due to significant growth in traditional medication spend.

Components of exchange trend by metal level

Exchanges give individuals a choice by offering a selection of qualified health plans at varying metal-level coverage values labeled platinum, gold, silver or bronze. In general, platinum plans have the highest monthly premiums, but also offer the highest coverage value. Individuals in bronze plans typically have the lowest premiums, but have the lowest coverage value. Correspondingly, premiums and coverage values for gold and silver plans fall between those for platinum and bronze. To understand how costs and utilization trends varied by metal-level plan selection, we examined a sample of exchange beneficiaries by the type of plan they chose. Similar to the distribution presented by CMS,[40] most members selected a silver-level plan, followed by bronze, gold and platinum plans respectively. Not surprisingly, the ratio of enrollees to benefit users increased with higher-level benefit plans. Bronze plans had the lowest ratio of utilizers to enrolled beneficiaries.

At 20.5%, silver benefit plans had the highest overall trend, driven by increases in utilization (12.0%) and unit costs (8.5%). However, the platinum benefit plans – with the lowest overall trend – had more than twice the annual PMPY spend of the silver plans and 10 times the spend for bronze plan members. This strongly indicates that those who selected platinum plans, which carry the highest coverage value, began utilizing their benefit for known, costly conditions upon plan enrollment in 2014.

AGES 45 TO 54

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$439.50	13.2%	0.5%	**13.7%**
Specialty	$516.53	6.4%	18.4%	**24.9%**
TOTAL OVERALL	**$956.03**	**13.1%**	**6.4%**	**19.5%**

January-December 2015 compared to same period in 2014

AGES 55 TO 64

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Traditional	$593.03	12.5%	0.1%	**12.6%**
Specialty	$522.59	14.8%	13.6%	**28.3%**
TOTAL OVERALL	**$1,115.62**	**12.5%**	**6.9%**	**19.5%**

January-December 2015 compared to same period in 2014

COMPONENTS OF EXCHANGE TREND BY METAL LEVEL

2015

		TREND		
	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
Platinum	$2,191.16	-0.1%	4.4%	**4.4%**
Gold	$1,543.80	-3.4%	9.4%	**6.0%**
Silver	$1,086.08	12.0%	8.5%	**20.5%**
Bronze	$208.09	10.2%	-5.8%	**4.5%**

January-December 2015 compared to same period in 2014

Traditional therapy classes and insights: exchanges

Total traditional trend for exchange plans in 2015 was 9.4%, almost entirely the result of an 8.7% increase in PMPY utilization. When ranked by PMPY spend, the top three traditional therapy classes – diabetes, pain/inflammation and mental/neurological disorders – contributed 32.7% of total spend for all traditional medications used by exchange beneficiaries in 2015. Although total trend was negative in just one of the top 10 traditional therapy classes (depression), unit costs decreased for five classes – high blood pressure/heart disease (-5.8%), asthma (-8.1%), high blood cholesterol (-4.3%), depression (-33.4%), and infections (-1.2%). Interestingly, PMPY utilization for all of the top 10 traditional therapy classes increased, ranging from 4.8% to 17.8%. This suggests general coverage fulfillment for previously unmet needs.

PMPY utilization for all of the top 10 traditional therapy classes increased. This suggests general coverage fulfillment for **previously unmet needs**.

COMPONENTS OF TREND FOR THE TOP 10 OVERALL EXCHANGE TRADITIONAL THERAPY CLASSES

RANKED BY 2015 OVERALL EXCHANGE PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Diabetes	$67.22	8.2%	3.6%	**11.8%**
2	Pain/Inflammation	$40.74	4.8%	12.1%	**16.9%**
3	Mental/Neurological Disorders	$19.78	9.4%	5.5%	**15.0%**
4	Attention Disorders	$17.81	17.8%	3.8%	**21.6%**
5	High Blood Pressure/Heart Disease	$16.67	9.1%	-5.8%	**3.3%**
6	Asthma	$16.31	12.9%	-8.1%	**4.8%**
7	High Blood Cholesterol	$16.02	7.3%	-4.3%	**2.9%**
8	Depression	$15.54	12.0%	-33.4%	**-21.4%**
9	Contraceptives	$14.46	17.2%	7.2%	**24.4%**
10	Infections	$12.59	8.0%	-1.2%	**6.9%**
	TOTAL TRADITIONAL	**$391.13**	**8.7%**	**0.7%**	**9.4%**

Highlights

- Diabetes saw a higher PMPY spend ($67.22) than any other traditional therapy class among exchange beneficiaries. Trend for diabetes medications was 11.8%, driven by an increase in PMPY utilization (8.2%) and a smaller increase in unit cost (3.6%). Highly utilized medications, including metformin, glimepiride, and Januvia® (sitagliptin) drove the utilization and cost increases.

- Total PMPY spend for medications used to treat pain/inflammation grew 16.9%, the result of an increase in PMPY utilization (4.8%) and an even greater rise in unit costs (12.1%). Although generic medications continue to dominate the class, PMPY spend has not declined accordingly. Together, the five most commonly used pain/inflammation drugs – hydrocodone/acetaminophen, gabapentin, meloxicam, tramadol and oxycodone/acetaminophen – all generic medications, captured 58.9% of market share for this therapy class.

- PMPY spend for medications used to treat attention disorders increased 21.6% in 2015, mostly from a 17.8% increase in PMPY utilization, but also from a 3.8% increase in unit cost. Vyvanse® (lisdexamfetamine), one of the leading brand medications in this class, increased in both PMPY utilization (19.3%) and unit cost (12.7%). Spend for Vyvanse is not likely to decrease in the near future, as the product has patent protection until at least 2023. In January 2015, Vyvanse was approved by the U.S. Food and Drug Administration (FDA) to treat patients aged 18 and older who have binge eating disorder. By June, over half of Vyvanse patients were adults.[43] Increased utilization for this therapy class is likely due to coverage provided by the ACA and the new criteria for diagnosing attention disorders in adults.[44]

- In 2015, the unit cost trends for both the high blood pressure/heart disease and high blood cholesterol classes were negative. Declines in unit costs can be attributed to the availability of generics in each class. In 2015, the generic fill rate (GFR) for the high blood pressure/heart disease class increased to 98.6%, while the GFR for high blood cholesterol medications went up to 94.4%.

- Unit costs for medications used to treat depression decreased 33.4%, resulting in the only decrease (-21.4%) in PMPY spend among the top 10 traditional therapy classes. Four of the top five most-utilized antidepressants were generics, representing almost 72% of all utilization in this class. These four drugs had double-digit decreases in unit cost trends: sertraline (-34.8%), citalopram (-36.3%), bupropion extended release (-21.1%) and escitalopram oxalate (-84.2%).

- The highest increase (24.4%) in PMPY spend among the top 10 traditional therapy classes was for contraceptives, driven by increases in PMPY utilization (17.2%) and unit costs (7.2%). The ACA mandate requiring exchange plans to offer access to at least one contraceptive medication in each of the 18 categories of contraceptives without a copayment[45] is largely responsible for the increases in this category.

Four of the top five most-utilized antidepressants were generics, representing **almost 72%** of all utilization in this class.

Top 10 exchange traditional drugs

Together, seven of the top 10 brand name drugs ranked by PMPY spend accounted for 12.3% of PMPY spend for all traditional therapy drugs. Five injectable diabetes treatments were among the top 10 traditional therapies for exchange beneficiaries based on PMPY spend: Lantus® (insulin glargine), Levemir® FlexTouch® (insulin detemir), NovoLog® FlexPen® (insulin aspart), Victoza® 3-Pak (liraglutide) and Humalog® U-100 KwikPen® (insulin lispro). They captured 9.6% of PMPY spend for all traditional therapy drugs used by exchange beneficiaries in 2015. Two of them (NovoLog FlexPen and Victoza 3-Pak) had double-digit increases in PMPY spend.

Five injectable diabetes treatments captured **9.6%** of PMPY spend for all traditional therapy drugs used by exchange beneficiaries in 2015.

TOP 10 OVERALL EXCHANGE TRADITIONAL THERAPY DRUGS

RANKED BY 2015 OVERALL EXCHANGE PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL TRADITIONAL SPEND	UTILIZATION	UNIT COST	TOTAL
1	Lantus® (insulin glargine)	Diabetes	$11.34	2.9%	-7.2%	-8.2%	**-15.4%**
2	Levemir® FlexTouch® (insulin detemir)	Diabetes	$9.06	2.3%	19.2%	-18.2%	**1.0%**
3	dextroamphetamine/amphetamine	Attention disorders	$7.93	2.0%	20.1%	-7.6%	**12.5%**
4	aripiprazole	Mental/neurological disorders	$6.70	1.7%	-	-	**-**
5	NovoLog® FlexPen® (insulin aspart)	Diabetes	$6.14	1.6%	-2.9%	16.5%	**13.6%**
6	Victoza® 3-Pak (liraglutide)	Diabetes	$5.94	1.5%	20.1%	21.9%	**42.1%**
7	duloxetine	Depression	$5.92	1.5%	23.2%	-61.8%	**-38.6%**
8	Lyrica® (pregabalin)	Pain/inflammation	$5.23	1.3%	10.2%	26.2%	**36.5%**
9	Humalog® U-100 KwikPen® (insulin lispro)	Diabetes	$5.23	1.3%	12.6%	-21.7%	**-9.0%**
10	APRISO® (mesalamine)	Inflammatory conditions	$5.23	1.3%	5.3%	12.1%	**17.4%**

The highest trend for a brand medication in the top 10 (42.1%) was for Victoza 3-Pak, a type 2 diabetes treatment which, as the brand-name Saxenda®, is also approved to treat obesity. The trend was driven by large increases in both PMPY utilization (20.1%) and unit costs (21.9%) and represents Victoza 3-Pak alone (excluding Saxenda).

The only three brand name drugs that saw unit cost trend decreases were insulin therapies (Lantus, Levemir FlexTouch and Humalog U-100 KwikPen) that are sold in pre-filled pens. Unit cost for the top insulin, Lantus, decreased 8.2% in 2015. After Levemir FlexTouch was approved in late 2013, it rose to second place for all traditional drug spend for exchange members in 2015. Currently, no generic insulins are available in the U.S. Basaglar® (insulin glargine) – the first "follow-on" insulin to Lantus – is expected to reach the market by December 2016.[46]

Utilization declined for only two of the top 10 drugs. Both were insulins: Lantus (-7.2%) and NovoLog FlexPen (-2.9%).

Abilify® (aripiprazole), an antipsychotic, lost patent protection in April 2015. By the end of 2015, the generic medication aripiprazole already ranked fourth among traditional medications. At PMPY spend of $6.70, aripiprazole alone accounted for 1.7% of total traditional spend.

In 2015, the generic drug duloxetine, an antidepressant, had the largest decrease (-61.8%) in unit costs and the highest increase (23.2%) in PMPY utilization among the top 10 traditional drugs. Prior evidence suggests antidepressants are the most common drug class utilized by patients aged 18 to 44[47], who constitute the largest part of the exchange population.

By the end of 2015, the generic version of Abilify ranked fourth among traditional medications and accounted for 1.7% of the total traditional spend.

Lyrica® (pregabalin), a drug to treat pain/inflammation, ranked eighth in traditional therapy drugs among the exchange population. Its trend (36.5%) was driven by double-digit increases in unit cost (26.2%) as well as utilization (10.2%). The unit cost is expected to remain high, as generic pregabalin is not likely to enter the U.S. market until December 2018.[48]

Specialty therapy classes and insights: exchanges

Specialty medications account for nearly 50% of total pharmacy spend in the exchanges. PMPY spend for specialty medications among exchange beneficiaries increased 20.4% in 2015, fueled by a 15.8% increase in unit cost and a 4.7% increase in PMPY utilization. Ranked by PMPY spend, the top three therapy classes – HIV, hepatitis C and inflammatory conditions – contributed almost 65% of total specialty PMPY spend. Two of the three – HIV and inflammatory conditions – had double-digit PMPY spend increases in 2015. All of the top 10 therapy classes increased in unit cost, but four of them – HIV, hepatitis C, hereditary angioedema and hemophilia – decreased in PMPY utilization. Specialty medications which treat rare conditions are sensitive to changes in population composition which may affect their trends. By far, the key drivers of trend were drugs to treat HIV, hepatitis C and inflammatory conditions.

Specialty medications which treat rare conditions are **sensitive** to changes in **population composition** which may affect their trends.

COMPONENTS OF TREND FOR THE TOP 10 OVERALL EXCHANGE SPECIALTY THERAPY CLASSES

RANKED BY 2015 OVERALL EXCHANGE PMPY SPEND

			TREND		
RANK	THERAPY CLASS	PMPY SPEND	UTILIZATION	UNIT COST	TOTAL
1	HIV	$99.96	-3.1%	13.8%	**10.7%**
2	Hepatitis C	$86.81	-1.0%	7.1%	**6.1%**
3	Inflammatory conditions	$63.94	33.5%	19.1%	**52.6%**
4	Oncology	$47.45	21.3%	15.8%	**37.2%**
5	Multiple sclerosis	$41.94	10.1%	11.4%	**21.4%**
6	Pulmonary hypertension	$5.41	48.1%	25.7%	**73.8%**
7	Hereditary angioedema	$5.21	-6.5%	9.2%	**2.8%**
8	Hemophilia	$4.66	-7.6%	13.3%	**5.7%**
9	Sleep disorders	$4.13	2.4%	15.8%	**18.2%**
10	Cystic fibrosis	$3.63	23.6%	25.5%	**49.2%**
	TOTAL SPECIALTY	**$386.14**	**4.7%**	**15.8%**	**20.4%**

Highlights

- The increase in PMPY spend for HIV treatments topped that of other specialty medications. Despite a 3.1% PMPY utilization decrease, a 13.8% unit cost increase led to an overall 2015 trend increase of 10.7% in PMPY spend for HIV treatments, moving them up to the most costly specialty therapy class. Our third Exchange Pulse Report, released in July 2015, found that exchange members have a higher prevalence of use for HIV medications: "more than 1 out of every 2 specialty claims are for HIV – making it the #1 specialty condition impacting 18 to 64 year olds in the exchanges."[49]

- Hepatitis C drug spend increased 6.1% in 2015 after a few effective but expensive oral antiviral therapies were introduced to the market. While utilization decreased 1.0%, a 7.1% increase in unit cost caused most of the change in spend. Harvoni® (ledipasvir/sofosbuvir) and Sovaldi® (sofosbuvir) together captured nearly 75% of market share for this therapy class. Viekira Pak® (ombitasvir/paritaprevir/ritonavir with dasabuvir), which was approved at the end of 2014, only took 2.5% of market share among exchange users in 2015.

- Spend for the number three therapy class, inflammatory conditions, jumped 52.6%. Unit cost increased substantially (19.1%), but an even bigger component of the PMPY spend trend was a 33.5% increase in PMPY utilization. Together, the top two drugs (both injected), Humira® Pen (adalimumab) and Enbrel® (etanercept), accounted for about two-thirds of market share for the inflammatory conditions class and more than 9% of overall specialty market share. Unit costs for each increased more than 21% in 2015, contributing a major portion of the escalation in overall class spend. One of the key treatments in this class is Xeljanz® (tofacitinib), a relatively new oral disease-modifying antirheumatic drug. With longer-term safety and effectiveness data now available, Xeljanz has begun capturing exchange market share (nearly 2% in 2015) from some of the more established, but less convenient, injectable treatments in the class.

The top five specialty therapy classes by PMPY spend contributed 88% of total specialty PMPY spend for health insurance exchanges.

- In 2015, PMPY spend for oncology drugs increased 37.2% among exchange beneficiaries. This trend was due to large increases in both PMPY utilization (21.3%) and unit cost (15.8%). The utilization increase was likely the result of several factors, including the expansion of indications for several drugs, the continued development of newer, more targeted therapies and an increase in the survival rates of patients living with cancer, but continuing medication therapy. For instance, Imbruvica® (ibrutinib) is the only currently FDA-approved Bruton's tyrosine kinase (BTK) inhibitor. Its effectiveness for hard-to-treat cancers, additional indications, oral dosing and relatively mild side effects contributed to a 2015 utilization surge of 80.5%.

- Total trend for multiple sclerosis medications was 21.4%, due to increases in both PMPY utilization (10.1%) and unit cost (11.4%). Copaxone® (glatiramer) has the highest PMPY spend and is the most widely used medication in the class. Glatopa™, a generic alternative for Copaxone's 20mg/mL dosage form was launched in the U.S. in June 2015. However, the brand manufacturer is hoping to continue the shift of existing users to a new, longer-acting 40mg/mL formulation that has patent protection until 2030. In addition, another drug with a high PMPY spend in the class – Tecfidera® (dimethyl fumarate), released in April 2013, is an oral medication. Its convenience compared to injectables is appealing to many patients.

Top 10 exchange specialty drugs

The top 10 specialty drugs accounted for 53.2% of PMPY spend for all specialty drugs used by exchange participants in 2015. The top 10 specialty medications for exchanges represented four therapy classes – four drugs for HIV, two drugs each for hepatitis C, multiple sclerosis and inflammatory conditions.

The top four HIV medications are all combination products with two or more different drugs in one tablet: Atripla® (efavirenz/emtricitabine/tenofovir disoproxil fumarate), Stribild® (cobicistat/elvitegravir/emtricitabine/tenofovir disoproxil fumarate), Truvada® (emtricitabine/tenofovir disoproxil fumarate) and Complera® (emtricitabine/rilpivirine/tenofovir disoproxil fumarate). Together they contributed 16.2% of exchange specialty trend. Although trend for Stribild, Truvada and Complera increased, a utilization drop for Atripla more than offset its increased unit cost to result in a negative 5.8% trend for the year.

PMPY spend among the top 10 specialty drugs ranged from a low of $7.87 for Complera, an HIV medication, to a high of $62.27 for Harvoni, a hepatitis C drug. Even though it didn't launch until late 2014, Harvoni alone contributed 16.1% of all exchange specialty drug spend in 2015. Another hepatitis C medication, Sovaldi, was the only specialty drug in the top 10 to see decreases in PMPY utilization (-59.0%), unit cost (-4.9%) and PMPY spend (-64.0%) in 2015.

TOP 10 OVERALL EXCHANGE SPECIALTY THERAPY DRUGS

RANKED BY 2015 OVERALL EXCHANGE PMPY SPEND

					TREND		
RANK	DRUG NAME	THERAPY CLASS	PMPY SPEND	% OF TOTAL SPECIALTY SPEND	UTILIZATION	UNIT COST	TOTAL
1	Harvoni® (ledipasvir/sofosbuvir)	Hepatitis C	$62.27	16.1%	511.1%	-178.8%	**332.3%**
2	Humira® Pen (adalimumab)	Inflammatory conditions	$23.76	6.2%	35.5%	25.1%	**60.6%**
3	Atripla® (efavirenz/emtricitabine/tenofovir disoproxil fumarate)	HIV	$21.97	5.7%	-14.4%	8.6%	**-5.8%**
4	Sovaldi® (sofosbuvir)	Hepatitis C	$19.67	5.1%	-59.0%	-4.9%	**-64.0%**
5	Stribild® (cobicistat/elvitegravir/ emtricitabine/tenofovir disoproxil fumarate)	HIV	$17.21	4.5%	28.1%	6.8%	**34.9%**
6	Enbrel® (etanercept)	Inflammatory conditions	$16.03	4.2%	6.8%	21.2%	**28.0%**
7	Truvada® (emtricitabine/tenofovir disoproxil fumarate)	HIV	$15.33	4.0%	-0.8%	6.3%	**5.6%**
8	Copaxone® (glatiramer)	Multiple sclerosis	$12.14	3.1%	11.0%	12.1%	**23.0%**
9	Tecfidera® (dimethyl fumarate)	Multiple sclerosis	$9.29	2.4%	10.2%	11.5%	**21.6%**
10	Complera® (emtricitabine/rilpivirine/ tenofovir disoproxil fumarate)	HIV	$7.87	2.0%	15.5%	9.0%	**24.5%**

With the exception of Harvoni, the largest increases in utilization (35.5%), unit cost (25.1%) and total spend (60.6%) were observed for Humira Pen, a drug to manage inflammatory conditions. These findings are consistent with those from the third Exchange Pulse Report, released in June 2015, which states that use of medications to treat inflammatory conditions is on the rise among exchange members older than age 55.

With a biosimilar alternative for Humira expected in the near future, plans will eventually be able to offer lower-cost versions of these complex drugs.

The newer, 40 mg/mL, three-times-a-week formulation of Copaxone continued to lead the multiple sclerosis class in spend, with double-digit increases in both PMPY utilization (11.0%) and unit cost (12.1%). However, Glatopa, a generic alternative for Copaxone's 20mg/mL dosage form, launched in the U.S. in June 2015. It may capture some of the higher-strength brand market share in the next few years. Tecfidera, another medication used in the treatment of multiple sclerosis, also had high increases in both PMPY utilization (10.2%) and unit cost (11.5%). The 2014 Commercial Drug Trend Report forecasted Tecfidera, an oral medication approved by the FDA in March 2013, would capture market share from older injectables. More recent data indicates that this forecast held true for the exchange population.

Comparison of exchange, Medicaid and commercial trend

In examining therapy class trends, we identified areas of difference between the exchange population and other lines of business – specifically Medicaid and commercial plans. Among traditional therapy classes, pain/inflammation, mental/neurological disorders, attention disorders, asthma and infections all had much higher 2015 trends within the exchange population than Medicaid or commercial members. Contraceptives, which the ACA requires be provided at zero cost sharing, also had a markedly higher trend within the exchange. The increase was most likely caused by exchange members continuing to take advantage of their new benefits.

Among specialty classes, trends were considerably higher for the inflammatory conditions, oncology, multiple sclerosis and pulmonary hypertension classes in the exchange population than in Medicaid or commercial plans. Hepatitis C trend in the exchange population was comparable to the commercial line of business. Pulmonary hypertension trend was markedly greater than both Medicaid and commercial populations.

Whether these therapy class trends represent a continuing departure from other lines of business, or reflect a new exchange population that is just beginning to use their benefits, remains to be determined. As the exchanges continue to evolve, we'll continue to monitor, report and assist in managing trends.

EXCHANGE TREND VS. MEDICAID AND COMMERCIAL TREND FOR THE TOP 10 EXCHANGE TRADITIONAL THERAPY CLASSES

RANKED BY 2015 OVERALL EXCHANGE PMPY SPEND

		TREND		
RANK	THERAPY CLASS	EXCHANGE	MEDICAID	COMMERCIAL
1	Diabetes	11.8%	21.7%	14.0%
2	Pain/inflammation	16.9%	0.0%	2.9%
3	Mental/neurological disorders	15.0%	-6.4%	0.2%
4	Attention disorders	21.6%	8.0%	8.5%
5	High blood pressure/heart disease	3.3%	-3.4%	-12.5%
6	Asthma	4.8%	2.6%	-1.6%
7	High blood cholesterol	2.9%	-3.9%	-9.2%
8	Depression	-21.4%	-24.0%	-30.1%
9	Contraceptives	24.4%	6.8%	1.5%
10	Infections	6.9%	-4.1%	-5.4%
	TOTAL TRADITIONAL	**9.4%**	**3.3%**	**0.6%**

EXCHANGE TREND VS. MEDICAID AND COMMERCIAL TRENDS FOR THE TOP 10 EXCHANGE SPECIALTY THERAPY CLASSES

RANKED BY 2015 OVERALL EXCHANGE PMPY SPEND

		TREND		
RANK	THERAPY CLASS	EXCHANGE	MEDICAID	COMMERCIAL
1	HIV	10.7%	4.9%	16.6%
2	Hepatitis C	6.1%	-9.7%	7.0%
3	Inflammatory conditions	52.6%	45.6%	25.0%
4	Oncology	37.2%	29.4%	23.7%
5	Multiple sclerosis	21.4%	16.0%	9.7%
6	Pulmonary hypertension	73.8%	9.8%	18.1%
7	Hereditary angioedema	2.8%	8.7%	29.6%
8	Hemophilia	5.7%	94.8%	20.4%
9	Sleep disorders	18.2%	40.9%	24.1%
10	Cystic fibrosis	49.2%	19.2%	53.4%
	TOTAL SPECIALTY	**20.4%**	**10.1%**	**17.8%**

Solutions

Solutions for exchange challenges

Balancing regulatory requirements and consumer needs with optimal pharmacy benefit designs will remain challenging in the near term. As the health insurance exchanges mature, health plans will increasingly look at managing both cost and patient risk within their health insurance exchange portfolios.

Managing cost to lower premiums

Cost management will remain a critical challenge. Cost also will continue to be a key element in consumer decision making. Offering a regulatory compliant, competitively priced benefit that attracts and retains members is essential to a plan's positioning in the consumer market. Express Scripts is uniquely positioned to help exchange plans lower premium costs through the use of pharmacy benefit designs. **Our formularies, channel management solutions and disease-specific utilization management tools can meet the needs of the exchange populations.** In fact, nearly half of our exchange clients have taken advantage of additional savings though our home delivery programs.

The exchange market is still **new and volatile**. Quickly understanding and managing patient risk is crucial for exchange sponsors and patient health.

Understanding patient risk

The exchange market is still new and volatile. In addition, the exchange population is currently using high-cost specialty medications at a higher rate than any other line of business. Quickly understanding and managing patient risk is crucial for exchange sponsors and patient health. **Leveraging pharmacy data and Knowledge Solution resources from Express Scripts not only identifies patients most at risk, but also helps predict and mitigate potentially costly gaps in care.**

Member retention

Member churn among plans makes providing cohesive patient management difficult. Thus, plans may not readily see quantifiable returns on their population heath initiatives. To help members with high-cost, complex and chronic conditions achieve optimal outcomes and to coordinate with the health plan's member retention strategies, Express Scripts offers specialized care through our Therapeutic Resource Centers℠ (TRC). Because TRC specialist pharmacists, field nurses and support teams are extensively trained in the drugs used to treat specific conditions, they provide a personal approach to healthcare management. They actively elicit member participation in managing healthcare needs. Clinical specialization is a fundamental component of the way Express Scripts practices pharmacy. **The expertise of our TRC specialists impacts our patients in many ways.** For example, our TRC specialist pharmacists have advanced training to understand what patients with complex, chronic conditions like hepatitis C, multiple sclerosis and HIV experience on a daily basis. They're able to provide the in-depth information that members need in order to understand how taking their medications appropriately affects their overall health. All members have access to our TRCs and staff of specialists at no additional charge, regardless of where their prescriptions are filled.

With more than 20 years experience in supporting regulated market clients and their members, Express Scripts is well positioned to handle the ever-changing complexities of the exchange market.

Specialty trend management

Specialty medications continue to drive up plan and individual costs in the exchange population – most notably within oncology, hepatitis C, HIV and pulmonary hypertension therapy classes. Accredo Specialty Benefit Services are available for our clients who are looking for better ways to manage their specialty trend. Specialty Benefit Services improve care for patients through our specialized behavioral and clinical care approach to pharmacy. **By coordinating Specialty Benefit Services with specific network, utilization and medical benefit management strategies, Express Scripts is better able to manage costly specialty trends for plan sponsors.**

The Health Insurance Exchange Marketplace will continue to present the industry with unprecedented opportunities and unique challenges. Health plans require partners with recognized expertise, proven capabilities and innovative solutions to navigate through complex uncertainties. Express Scripts offers all of this and provides dedication and personal support to help plans take advantage of opportunities, while minimizing risks.

Appendix

The Drug Trend Report methodology

Our research team analyzes prescription drug use data for members with drug coverage provided by Express Scripts plan sponsors[50] for this report. The plan sponsors providing the pharmacy benefit paid at least some portion of the cost for the prescriptions dispensed to their members, providing what is known as a funded benefit.

Both traditional and specialty drugs are included in the data. Specialty medications include injectable and noninjectable drugs that are typically used to treat chronic, complex conditions and may have one or more of the following qualities: frequent dosing adjustments or intensive clinical monitoring; intensive patient training and compliance assistance; limited distribution; and specialized handling or administration. Nonprescription medications (with the exception of diabetic supplies billed under the pharmacy benefit) and prescriptions that were dispensed in hospitals, long-term care facilities and other institutional settings or billed under the medical benefit aren't included.

Trend and other measures are calculated separately for those members with commercial insurance coverage, for Medicaid recipients and for Medicare beneficiaries receiving prescription benefits through Employer Group Waiver Plans (EGWPs), managed Medicare Prescription Drug Plans (PDPs) or Medicare Advantage Prescription Drug Plans (MAPDs). Members used Express Scripts for retail and home delivery pharmacy services; they used Accredo, the Express Scripts specialty pharmacy, for specialty drug prescriptions.

Gross drug trend measures the rate of change in plan costs, which include ingredient costs, taxes, dispensing fees, administrative fees, rebates and member cost share.

Total trend measures the rate of change in plan costs, which include ingredient costs, taxes, dispensing fees and administrative fees. Rebates are included as a component of cost, reflecting more managed trends as noted in this report. Total trend comprises utilization trend and unit cost trend. Utilization trend is defined as the rate of change in total days' supply of medication per member, across prescriptions. Unit cost trend is defined as the rate of change in costs due to inflation, discounts, drug mix, rebates and member cost share. Utilization and cost are determined on a PMPY basis. Metrics are calculated by dividing totals by the total number of member-months, which is determined by adding the number of months of eligibility for all members in the sample.

The Express Scripts Prescription Price Index measures inflation in prescription drug prices by monitoring changes in consumer prices for a fixed market basket of commonly used prescription drugs. Separate market baskets are defined for brand drugs and for generic drugs and are based on the top 80% of utilized drugs.

Please note: Although up to nine decimal places were allowed in making all calculations, in most cases the results were rounded down to one or two decimals for easier reading. Therefore, dollar and percentage calculations may vary slightly.

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