



Leading the way for patients and plans

Our clients place a great deal of trust in Express Scripts. They ask us to care for their plan members and to help make medicine more affordable. This trust is part of what enables our success in putting medicine within reach of patients who rely on it to lead healthier, more productive lives.

It is this trust in our people, and in our solutions for improving care and reducing costs, that helped us achieve **record-low drug trend** – the year-over-year change in drug spending – **across commercial, Medicare, Medicaid and health insurance exchange plans in 2017.**

For commercial plans, we achieved the lowest drug trend since we began measuring drug trend data in 1993. **Nearly half of our commercial plans saw their drug spending per beneficiary decrease in 2017.** Low trend and decreases in spending go a long way toward helping plans maintain meaningful and affordable health benefits.

We're proud of what we accomplished for patients and plans in 2017, but **our work is far from done.** While the average plan member's share of prescription drug costs held steady, we know many still struggled to afford their medication. We will continue to help plans create even more headroom so they can keep member cost-share low and coverage broad, and do more for those patients who are challenged by their out-of-pocket costs.

Here are key areas of focus for us in 2018:

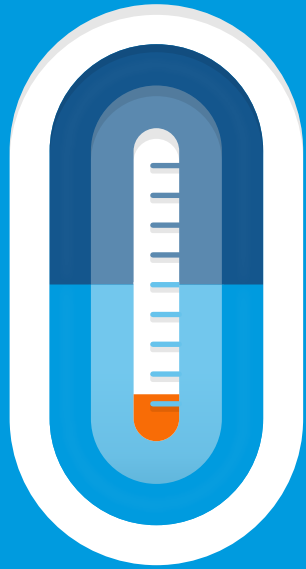
- **Gaps in coverage.** In 2017, we helped Americans who can't afford medication due to inadequate coverage by launching InsideRxSM, which saved tens of millions of dollars on prescriptions through significant discounts on generics and 100 commonly used brand-name drugs. Another program called SmartShare RxSM gave clients the flexibility to share the value of brand rebates with patients at the time of purchase.



- **Opioid abuse.** We made extraordinary progress in reducing the amount of unnecessary and dangerous dispensing of opioids to our members through the launch of Advanced Opioid ManagementSM. We're on the right track and will do even more this year to reduce the harm associated with opioids and to urge clinical best practices in their prescribing, dispensing and use.
- **Specialty medications.** They account for 40.8% of total spending under the pharmacy benefit, and that figure will continue to increase. Solutions such as Express Scripts SafeGuardRx[®] help patients and payers obtain the full value of a medication and reduce the financial risk of treatment failures involving costly therapies. In 2017, plans avoided \$340 million in costs by using SafeGuardRx solutions.
- **Gene therapy.** We're excited about the potential of gene therapies to cure previously untreatable and difficult-to-treat conditions and transform people's lives. Affording these new treatments will require reimbursement models as innovative as these therapies. We need new, patient-centric approaches to the distribution, dispensing and administration of gene therapies to put them within reach, and Express Scripts has the right mix of capabilities and expertise to make it happen.
- **Public policy.** Our companion report on public policy highlights three new areas that require regulatory attention to make medication safer and more affordable for Americans:
 - 1) Improve the speed of adoption of biosimilars
 - 2) Encourage value-based reimbursement across all types of benefits
 - 3) Leverage the potential of e-prescribing technology to improve the safety of opioids and other controlled substances

Our work is complex, but our mission is simple. We will continue leading the way for patients and plans, guiding them toward better health by prioritizing care and increasing savings.

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



Low increases
and even decreases
in spending

Medicare
↑ 2.3%

Medicaid
↑ 3.7%

Health Insurance Exchanges
↓ -3.3%

Achieving record-low drug trend

In 2017, U.S. drug spending **increased 1.5%** for commercial plans

- For plans covering employees and their families, per-person spending on prescription drugs rose 1.5% in 2017, less than half of the increase reported in 2016 and the lowest increase in 24 years of tracking drug-trend data.
- Spending on traditional drugs, which accounted for 59.2% of total spending, decreased 4.3%, due primarily to a 4.9% drop in unit costs. Generic fill rates increased from 85.1% in 2016 to 86.2% in 2017.
- Spending on specialty drugs, which accounted for 40.8% of total spending, was up 11.3% in 2017 – the lowest increase we've seen – driven by higher utilization (8.1%) and unit costs (3.2%), and mitigated by plans participating in our Inflammatory Conditions Care Value ProgramSM. Unit cost trend was influenced by the availability of generic versions of Gleevec[®] (imatinib mesylate) and Copaxone[®] (glatiramer acetate injection).
- Lower unit cost trend for pain/inflammation, high blood cholesterol and mental/neurological disorder medications helped push spending down 3.3% for health insurance exchange plans.



In 2017,
plans saved

\$32B

through our clinical
solutions alone

"We partner with Express Scripts to explore alternatives and solve challenges. This is evidenced by the cost savings we've experienced with programs such as SafeGuardRx and Advanced Utilization Management, as well as by their willingness to implement our Fund's ideas."

Boilermakers National Fund

Protecting against the costs of chronic and specialty conditions

Drug spending **decreased for 44%** of commercial plans in 2017

- Nearly one-half of commercial plans spent less per person on prescription drugs in 2017 compared to 2016.
 - Express Scripts SafeGuardRx® solutions introduced in 2017 improved care and value for patients with inflammatory conditions and for those battling diabetes, and protected plans from unexpected market events.
 - Plans representing 23.8 million lives avoided approximately \$340 million in wasteful spending in 2017 by participating in SafeGuardRx solutions.
 - Plans that adopted a broader variety of SafeGuardRx, specialty and other core PBM solutions had lower trend than those adopting fewer solutions. Spending for plans that implemented all three types of solutions decreased 1.2%.
-

[View changes in brand and generic drug pricing since 2008](#)



~96%

of patients in the program filled a seven-day or less supply for an initial opioid prescription

"We cannot express enough the importance of reducing excess medication in our homes and increasing patient education when opioids are prescribed. Programs like the one created by Express Scripts make a significant difference with every patient they touch."

Jim and Jeanne Moser

Parents who lost a child to overdose and founded Zero Left to encourage safe opioid storage and disposal

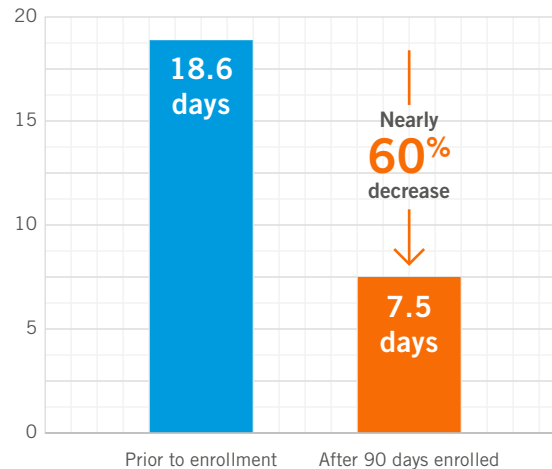
Curtailing the opioid epidemic

Average days' supply **declined nearly 60%** in just 90 days for patients in our program receiving a first-time opioid prescription

- An estimated 2 million Americans abuse or are dependent on prescription narcotics.¹
- The U.S. loses more than 115 lives each day to opioid overdose.²
- Among plans participating in our **Advanced Opioid ManagementSM** solution, launched September 2017, we observed a 60% reduction in the average days' supply per initial fill, from 18.6 days to just 7.5 days.
- Among commercial plans, the days' supply of opioids dispensed per person per year decreased 10.3%, while utilization of drugs to treat opioid dependence rose 8.5%.

AVERAGE DAYS' SUPPLY PER INITIAL FILL

2017, for patients in Advanced Opioid Management



UTILIZATION TREND

2017, for patients across plan types

1. Boscarino JA, Rukstalis M, Hoffman SN, et al. Risk factors for drug dependence among out-patients on opioid therapy in a large US health-care system. *Addiction* 2010;105:1776–82. <http://dx.doi.org/10.1111/j.1360-0443.2010.03052.x> <https://www.cdc.gov/drugoverdose/data/overdose.html> Accessed Jan. 23, 2018

2. Rudd RA, Seth P, David F, Scholl L. Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. *MMWR Morb Mortal Wkly Rep.* ePub: 16 December 2016. DOI: <http://dx.doi.org/10.15585/mmwr.mm655051e1> <https://www.cdc.gov/drugoverdose/epidemic/index.html> Accessed Jan. 23, 2018

In a year of uncertainty, we stayed focused on patient care and value

1 Share of costs per prescription paid by members held steady

Commercial members paid 14.3% of total prescription costs in 2017, the same as in 2016.

2 Average member out-of-pocket cost for a 30-day prescription was \$11.24

Members saw a modest 12¢ increase in OOP costs per Rx vs. 2016.

3 Tens of thousands of patients used innovative tools for monitoring and improving their health

- With smart glucometers from Livongo and LifeScan and support from pharmacists in our Diabetes Therapeutic Resource Center®, patients took better control of their blood sugar.
- An engaging platform from Mango Health rewarded patients who made taking their medicine a daily habit.



“Express Scripts has shown their commitment to ensuring the health and safety of each member. It’s a partnership that enables us to provide members with access to the medications they need every day.”

Natalie Tate, VP Pharmacy
BlueCross BlueShield of Tennessee

4 At-risk diabetes patients added medication to prevent heart attacks

15.1% of patients identified through our Diabetes Care Value ProgramSM added statin therapy. If all plans participated in the program, it could prevent heart attacks among an estimated 12,792 patients over 10 years.

5 Online experience improved for patients with disabilities

Disability affects 1 in 5 Americans and 2 in 5 age 65+.³ We conducted 400+ in-person member sessions that led to 120+ enhancements for patients with disabilities.

6 Patients in high-deductible plans have higher OOP costs

Patients in high-deductible consumer-directed healthcare (CDH) plans paid more in average yearly out-of-pocket costs (\$268.86) than those in standard commercial plans (\$200.24), despite 23.5% lower utilization.

TREND AND SPEND OVERVIEW FOR

Commercial

Total per-person spending increased 1.5%, with inflammatory conditions leading all classes

UTILIZATION TREND

↑0.7%

UNIT COST TREND

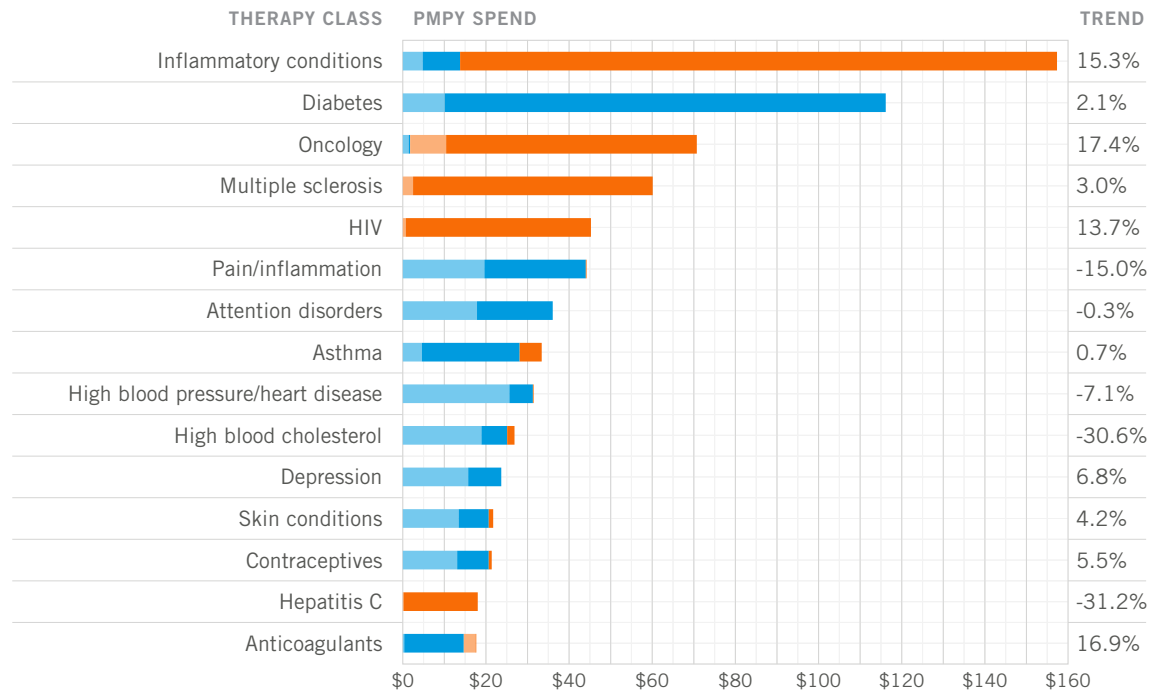
↑0.8%

TOTAL TREND

↑1.5%

COMPONENTS OF TREND FOR TOP 15 THERAPY CLASSES

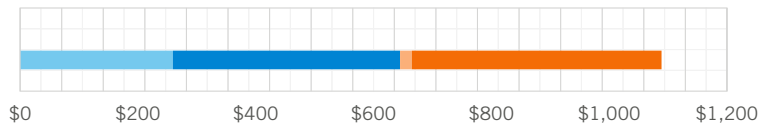
Ranked by 2017 PMPY* spend for commercial plans



KEY Traditional Generic Traditional Brand Specialty Generic Specialty Brand



COMPONENTS OF PMPY* SPEND



TREND FOR THE TOP 15 therapy classes varied greatly, with some declining by more than 30% and others increasing by more than 17%.

TOP TREND DRIVERS included drugs for inflammatory conditions, cancer and HIV, all with unit cost increases of more than 10% and moderate lifts in utilization.

UNIT COSTS for diabetes drugs decreased by 2.1%, due in part to pricing pressure among insulins with the availability of a follow-on insulin for Lantus® (insulin glargine).

LOWER UNIT COSTS drove down spending for pain/inflammation, high blood cholesterol and especially heartburn/ulcer disease, which dropped out of the top 15. The ongoing decline in use of hepatitis C drugs also contributed to low overall trend.

THE OVERALL RISE in unit costs for 2017 was not as high as forecasted in 2016, due in part to many plans adopting our trend management and Express Scripts SafeGuardRx® care value programs.

*Per member per year

TREND AND SPEND OVERVIEW FOR

Medicare

Total per-person spending increased 2.3%, with diabetes leading all classes

UTILIZATION TREND

↑ 1.1%

UNIT COST TREND

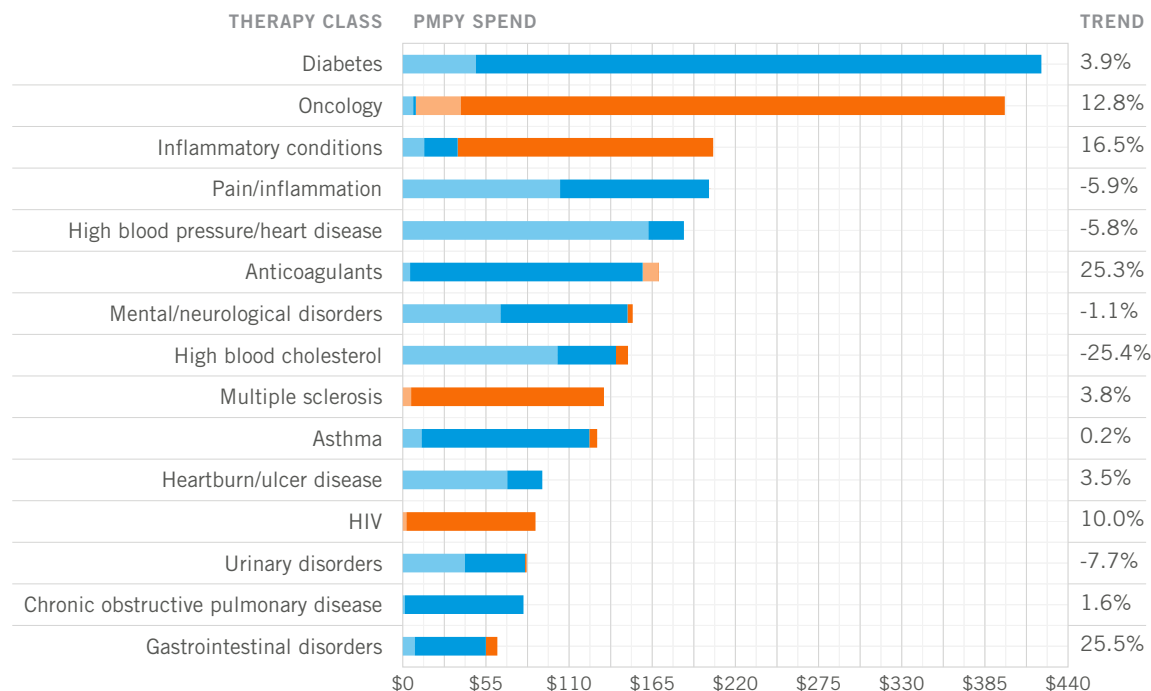
↑ 1.2%

TOTAL TREND

↑ 2.3%

COMPONENTS OF TREND FOR TOP 15 THERAPY CLASSES

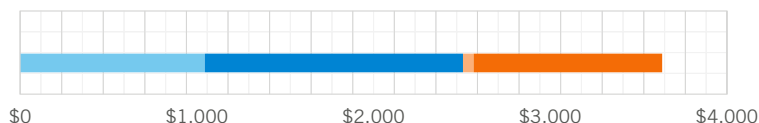
Ranked by 2017 PMPY* spend for Medicare plans



KEY Traditional Generic Traditional Brand Specialty Generic Specialty Brand

2017 █ █ █ █

COMPONENTS OF PMPY* SPEND



SPECIALTY MEDICATIONS

accounted for close to one-third of total Medicare drug spend, while traditional therapeutic classes accounted for 68.9%.

TOTAL SPENDING DECREASED for five of the top 15 therapy classes, due mostly to declines in unit cost. The 27.2% decline in unit cost for high blood cholesterol drugs was due to available generics for Crestor® (rosuvastatin) and Zetia® (ezetimibe). Hepatitis C fell out of the top 15 therapy classes, driven by a 35.0% decrease in utilization, as patients using newer therapies completed treatment.

ONE OF THE LARGEST spending increases (25.3%) was for anticoagulants, with a 20.4% rise in unit cost and a 4.9% increase in utilization. Most of this trend was due to increased use of newer, more costly oral anticoagulants.

ONCOLOGY, inflammatory conditions and HIV contributed heavily to spending increases, mainly due to higher unit cost. Oncology and HIV are among the protected classes of drugs mandated by the Centers for Medicare & Medicaid Services.

IN 2017, spending continued to decrease for classes where generics predominate, such as pain/inflammation, high blood pressure/heart disease and high blood cholesterol.

TREND AND SPEND OVERVIEW FOR

Medicaid

Total per-person spending increased 3.7%, with HIV leading all classes

UTILIZATION TREND

↑ 0.9%

UNIT COST TREND

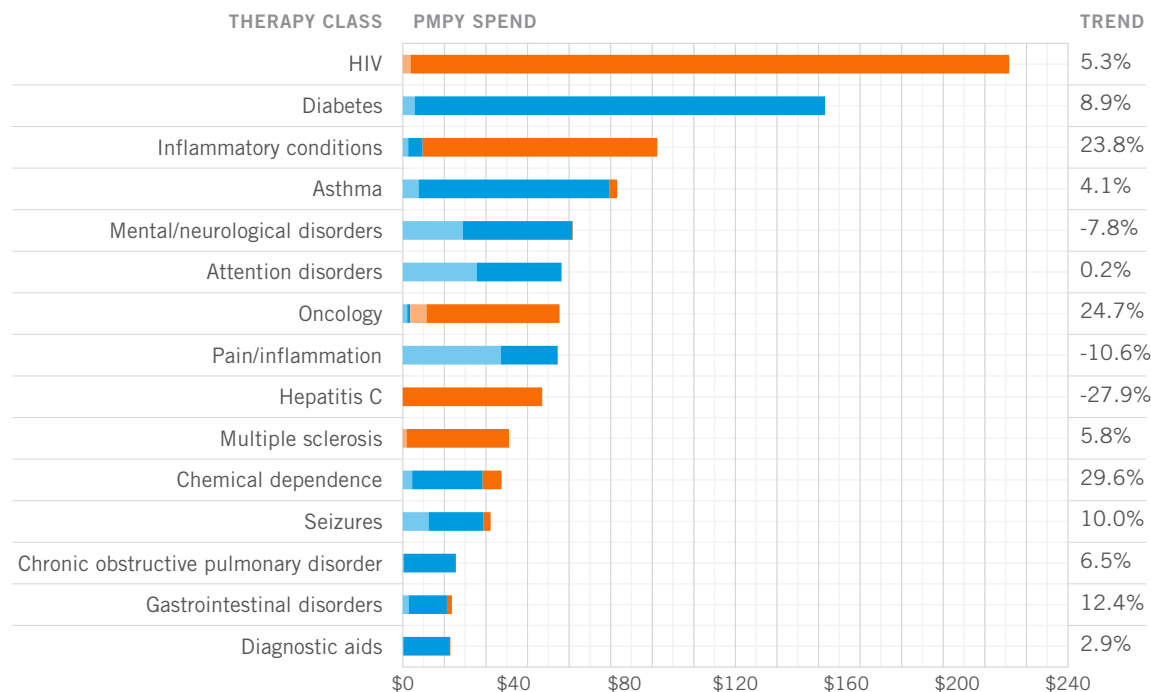
↑ 2.8%

TOTAL TREND

↑ 3.7%

COMPONENTS OF TREND FOR TOP 15 THERAPY CLASSES

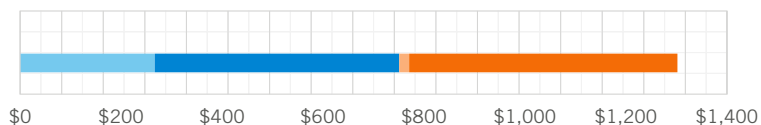
Ranked by 2017 PMPY* spend for Medicaid plans



KEY Traditional Generic Traditional Brand Specialty Generic Specialty Brand



COMPONENTS OF PMPY* SPEND



SPECIALTY MEDICATIONS

contributed 42.3% to total Medicaid drug spending in 2017, increasing 7.4% in PMPY spend compared to 2016.

THREE OF THE TOP 15 CLASSES

had spending increases of more than 20%, led by the chemical dependence class, mostly due to higher utilization of medications treating opioid dependence or withdrawal.

HIV AND DIABETES

accounted for 28.5% of total Medicaid drug spend. Use of HIV drugs decreased 7.6%, due in part to greater use of newer combination therapies, which require fewer prescriptions.

DRUGS TO TREAT

hepatitis C had the largest spending decrease due to declines in utilization. Spending went down for pain/inflammation and mental/neurological disorders because of lower unit costs.

IN THE TOP 15 for the first time, the 12.4% trend for gastrointestinal disorders was driven by increases in utilization and unit cost for Creon[®] (pancrelipase) and Xifaxan[®] (rifaximin).

*Per member per year

TREND AND SPEND OVERVIEW FOR

Health insurance exchanges

Total per-person spending decreased 3.3%, due to a 4.2% reduction in unit costs

UTILIZATION TREND

↑ 0.9%

UNIT COST TREND

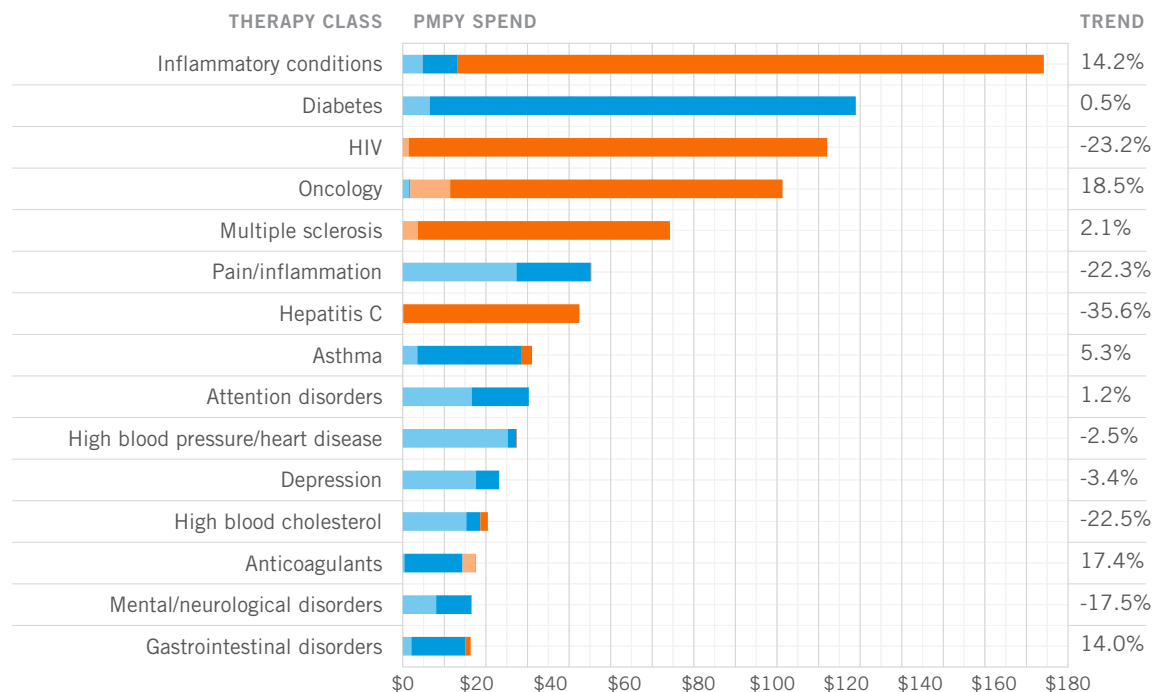
↓ -4.2%

TOTAL TREND

↓ -3.3%

COMPONENTS OF TREND FOR TOP 15 THERAPY CLASSES

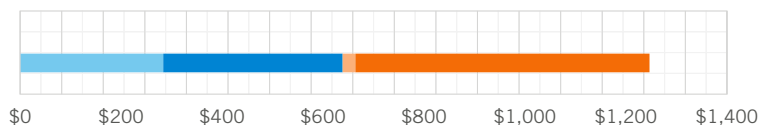
Ranked by 2017 PMPY* spend for exchange plans



KEY Traditional Generic Traditional Brand Specialty Generic Specialty Brand

2017

COMPONENTS OF PMPY* SPEND



WHEN RANKED by PMPY spend, the top 15 drug therapy classes contributed 71.4% of the total drug spend for the exchanges.

SPENDING ON SPECIALTY DRUGS, which accounted for nearly half (48.7%) of total PMPY spend, declined 1.0%. While unit costs for specialty drugs rose 11.1%, their effect on total spend was mitigated entirely by a 12.1% decrease in utilization.

USE OF DRUGS to treat opioid dependence among the health exchange population decreased 10.6%, even though utilization increased across commercial, Medicare and Medicaid plans.

TOTAL SPENDING DECREASED for seven of the top 15 therapy classes. The largest declines were for hepatitis C and HIV drugs. Pain/inflammation, high blood cholesterol and mental/neurological disorders all had double-digit decreases, mostly due to lower unit costs.

THE LARGEST DECLINE in unit cost among the top 15 classes was for high blood cholesterol, due to uptake of generics for Crestor® (rosuvastatin calcium) and Zetia® (ezetimibe).

*Per member per year

Forecasting trend for commercial plans 2018-2020

We expect overall annual drug spending to increase 1% to 3% over each of the next three years

TREND FORECAST FOR KEY THERAPY CLASSES

2018-2020, ranked by 2017 PMPY* spend

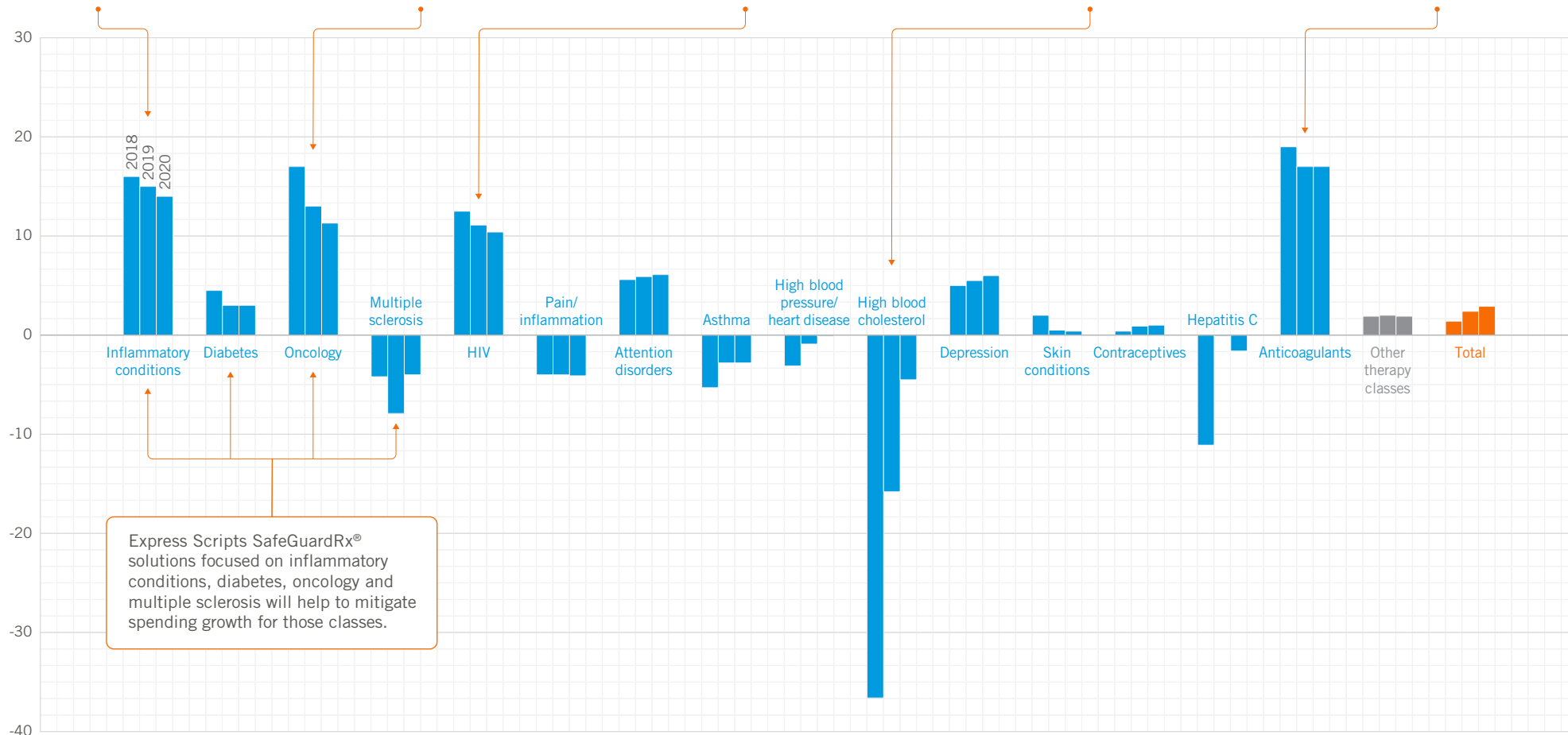
Inflation for brand drugs to treat **inflammatory conditions** will continue, as biosimilar savings are not expected until after 2020.

For **oncology**, higher introductory prices for drugs that treat rare cancers will drive unit costs, as longer treatment duration and more oral therapies shifting to the pharmacy benefit will increase utilization.

HIV medications will have high trend due to the shift from older TDF† drugs to newer, often more expensive TAF† combination therapies that have fewer side effects and equivalent effectiveness.

With few new **high blood cholesterol** drugs in the pipeline, we expect downward unit cost trend to continue as market share shifts from brands to recently approved generics for Zetia® (ezetimibe) and Vytorin® (ezetimibe/simvastatin).

Spending for **anticoagulants** will rise due to brand inflation and additional indications for newer drugs, along with increased utilization as prescribers gain experience with these new drugs.



*Per member per year †TDF = Tenofovir disoproxil fumarate; TAF = tenofovir alafenamide

Methodology

WE ANALYZED THE DE-IDENTIFIED PRESCRIPTION DRUG USE DATA

of approximately 34.3 million members with a pharmacy benefit plan administered by Express Scripts. The plans providing the pharmacy benefit paid at least some portion of the cost for the prescriptions dispensed to their members, providing what's known as a funded benefit. Both traditional and specialty drugs were included in the analysis. Specialty medications include injectable and noninjectable drugs 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 (except for 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 are not included.

Total trend measures the rate of change in gross costs, which include ingredient costs, taxes, dispensing fees and administrative fees. Gross cost includes member cost and is net of rebates received by plans. 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 and member cost share. Utilization and cost are determined on a

per-member-per-year (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) multiplied by the number of months per period. 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: Plans were excluded if they weren't clients in both 2016 and 2017, if they had less than 12 months of claims data in either year, if they had retail-only benefits, if they had 100% or 0% copayment benefits, if they had eligibility shifts exceeding 20% for commercial plans (eligibility shifts exceeding 50% for Medicare and Medicaid plans), or if they were contractually prohibited from inclusion. Individual members might be covered, and thus included, for only a portion of the time periods of interest. 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 due to rounding.

2017 Drug Trend Report

More insights: express-scripts.com/corporate

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