



A quarter century ago, the prescription drug market looked very different. The era of blockbuster drugs was taking off, representing one of the first major challenges to sustainable prescription drug coverage. It was a time of significant, mid-to-high-double-digit annual increases in drug spending.

Today, we have entered an age of million-dollar-per-treatment drug launches and emerging gene therapies. Innovations that deliver potentially breakthrough treatments with stratospheric prices require us to be equally innovative in how we manage medications. In 2018, it was through innovation that we achieved **the lowest commercial drug trend in 25 years, just 0.4% across our clients' commercial plans**. In delivering these results, we drove a 0.4% decline in unit costs by guiding plan members to effective, lower-cost therapies and by securing deeper discounts from manufacturers and pharmacies. And, 50% of our commercial plans had a negative trend, a decline in per member drug spending.

Further, we delivered an unprecedented 0.3% decline in drug spending across Medicare plans. We worked with our clients to drive a 1.4% decrease in unit cost trend, allowing them to absorb a 1.1% increase in utilization – another sign that our innovations for fostering the use of lower-net-cost treatments are making medication more accessible for beneficiaries.

Even as we help to create a sustainable future, our work is not done. Looking ahead to 2019 and beyond, we're doubling down on our focus on better outcomes, and **making care more personal and better connected across the care continuum**, the cornerstone of our work for decades that will become even more important as we look to simplify care for members. Here are some examples of how we're making health care better in 2019:

- **Value-Based Care:** Our industry-leading Express Scripts SafeGuardRx® platform delivered significant improvements in member outcomes in 2018. Plans enrolled in our SafeGuardRx Care Value programs experienced better trends in the therapy classes targeted versus non-enrolled plans. Our newest care value programs – for managing treatment of rare conditions and migraine headaches – rely on care coordination and personalized patient support to reduce the time to proper diagnosis for people with rare diseases, and to help prevent debilitating migraine headaches. Making second opinions easier for people with rare diseases and creating risk-based reimbursement strategies with drug innovators, improves affordability, access and outcomes for everyone.
- **Formulary Innovation:** We're exposing opportunities with our National Preferred *Flex* Formulary, which provides a way for plans to leverage new pricing models for expensive therapies to help lower out-of-pocket costs for members. For plans that want to reduce their reliance on rebates, the *Flex* formulary encourages brand manufacturers to offer lower overall list prices and to introduce authorized alternatives at lower prices to their flagship brands. Our plans continued to see average price decreases in 2018 for curative hepatitis C drugs (24.6%) and PCSK9 inhibitors (25.9%), two classes that have such authorized alternatives, and we expect more.



GETTING BETTER, TOGETHER

SIMPLIFYING CARE FOR PATIENTS, PRESCRIBERS AND PAYERS

- **Prescriber-Minded Solutions:** Building on our legacy to empower prescribers and patients to find the lowest-cost therapies, we've been making that information even easier to access. Whether delivering real-time benefit information to more than 100,000 prescribers in their electronic health record, rendering prior authorization decisions instantly and electronically, or meeting face-to-face with select physicians to help them help their patients, we're simplifying the prescribing experience so doctors can focus on what matters most.
- **Informing Members:** We continue to put patients in the driver's seat of their own health, improving adherence and helping them find savings through digital resources. A survey we conducted in 2018 revealed that people prefer technology-based medication reminders, with 74% of those ages 18-34, and 62% of people ages 35-54, stating that mobile apps or wearable devices would help them be more adherent. Our digital remote monitoring programs are helping members take control of their health by rewarding them for making healthy decisions. In addition, millions of our members are saving money using our digital tools to compare prices, find in-network pharmacies and lower-cost therapies, and order medications through home delivery.
- **Safer Opioid Use:** Last year, through our Advanced Opioid Management (AOM) program, we made significant strides to help curb the opioid epidemic by reducing days' supply for first-time patients, educating members, alerting prescribers to high-risk individuals, and encouraging proper disposal with easy-to-use bags. We also expanded our program to provide physician care alerts to limit potentially dangerous use of opioid adjacent therapies such as benzodiazepines, gabapentin and muscle relaxants, while also increasing access to overdose reversal medications, such as naloxone.

The market has changed over the past 25 years, but not our mission to imagine a better health care system and make it happen. We will continue to see breakthrough treatments with break-the-bank pricing on the horizon. We expect manufacturers of high-priced specialty drugs, which currently consume half of all drug spending, to continue to raise prices faster than core inflation. And we expect the contentious public policy debate on how to make prescription medicine, and especially insulin and other biologics, more affordable for the uninsured and underinsured to continue.

Despite these market forces, we are forecasting an annual drug trend of 2% for the next three years, as we continue working together with our plans, our partners, policy makers and the supply chain to make medicine safer, more effective and more affordable for America.

Glen Stettin, MD
Senior Vice President & Chief Innovation Officer



EXPOSING OPPORTUNITY

DRIVING DRUG TREND TO RECORD LOWS FOR COMMERCIAL PLANS

In 2018, U.S. drug spending increased 0.4% for commercial plans, the **lowest trend in 25 years**.

50%

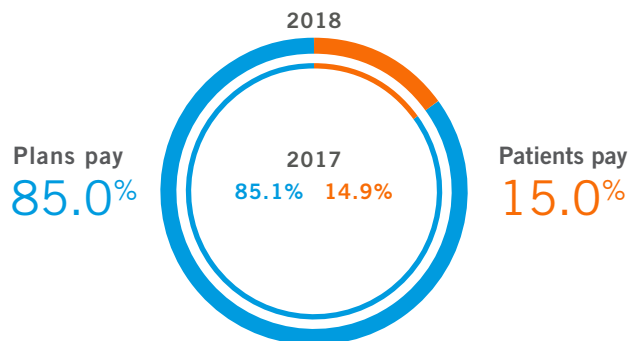
of plans *decreased* drug spending in 2018, up from 44% in 2017

\$11.55

average per 30-day Rx paid by patients, just 6 cents more than in 2017

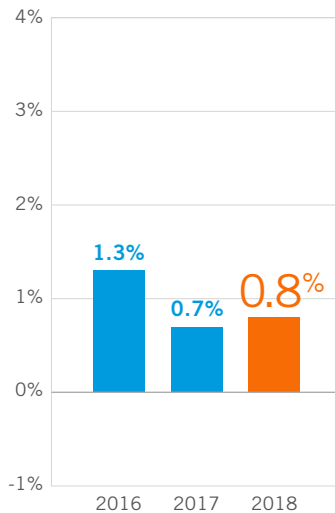
PERCENT OF TOTAL PHARMACY COSTS PAID BY PLANS AND PATIENTS

2017 vs. 2018



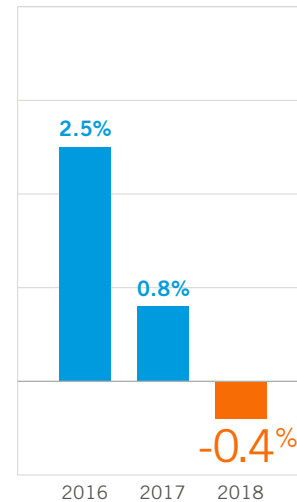
UTILIZATION TREND

2016-2018



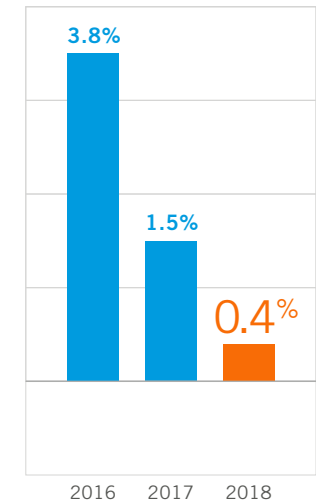
UNIT COST TREND

2016-2018



TOTAL TREND

2016-2018





EXPOSING OPPORTUNITY
**CONTROLLING
 UNIT DRUG COSTS
 DESPITE INFLATION**

Unit costs declined **0.4%** for commercial plans, **1.4%** for Medicare plans and **0.6%** for health exchange plans.

2.1%

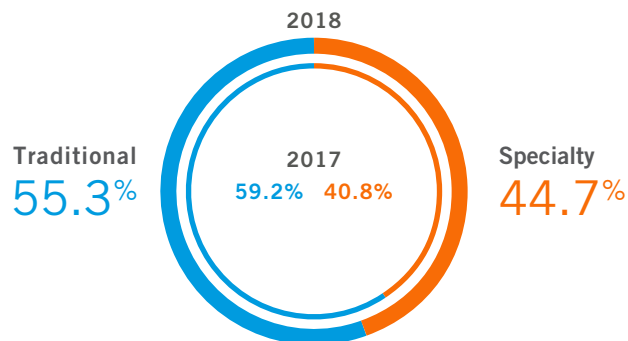
unit cost trend for specialty brand drugs for our commercial plans, despite a 7.1% rise in list prices

-6.5%

unit cost trend for traditional brand drugs for our commercial plans, despite a 7.3% rise in list prices

PERCENT OF TOTAL DRUG SPEND

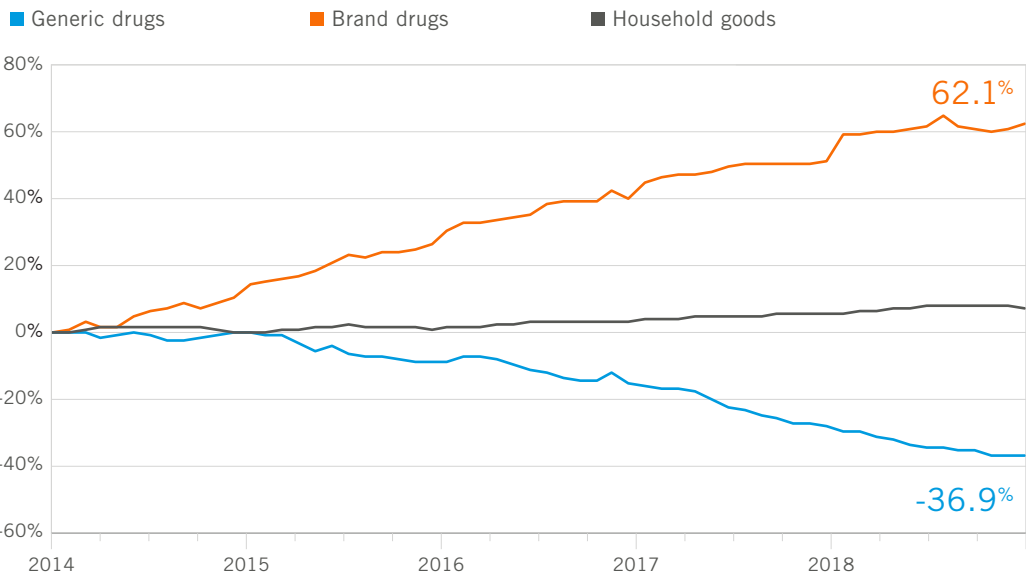
2017 vs. 2018



EXPRESS SCRIPTS OVERALL PRESCRIPTION PRICE INDEX

2014-2018

Over the past 5 years, the most commonly used brand drugs experienced list price inflation of 62.1%. In contrast, a market basket of commonly used household goods rose only 7.4%, and prices for the most commonly used generic medications declined 36.9%. Over the past year alone, prices increased 7.3% for brand drugs and declined 12.1% for generics.





GETTING BETTER, TOGETHER

KEEPING MEDICATION AFFORDABLE AND ACCESSIBLE

Our clinical solutions delivered **\$45 billion** in savings and improved outcomes in 2018.

\$2.4B

in savings for plans enrolled in our value-based SafeGuardRxSM programs

30M

people taking advantage of the care provided under the programs

4.3%

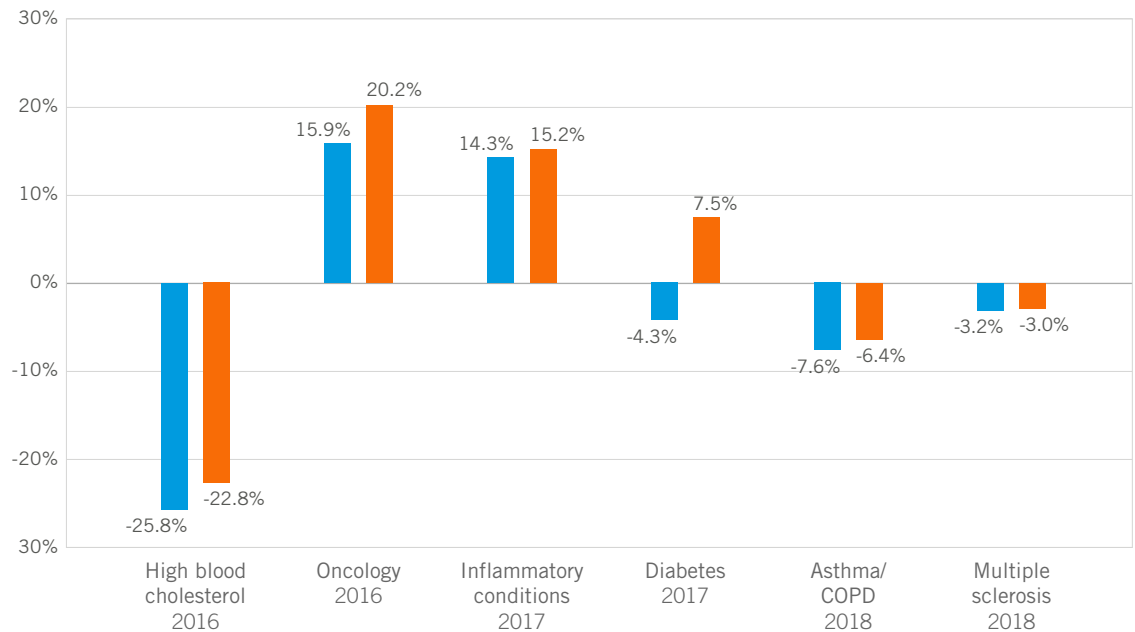
lower spending on diabetes medications in 2018 by plans enrolled in our Diabetes Care ValueSM program, despite increased utilization; non-enrolled plans spent 7.5% more in 2018

Among the top therapy classes in 2018, plans enrolled in our SafeGuardRx programs experienced lower trend than non-enrolled plans.

TREND FOR PLANS ENROLLED/NOT ENROLLED IN SAFE GUARD RX PROGRAMS

By therapy class, 2018, in order of SafeGuardRx program launch

■ Enrolled ■ Not enrolled





TAKING ON THE TOUGHEST
**LEADING THE WAY
 FOR SAFER
 OPIOID USE**

In 2018, Advanced Opioid ManagementSM had a **major impact** on patients and prescribers.

55%

reduction in average days' supply for patients' first opioid prescription

93%

of patients with >7 days' supply had quantities reduced to ≤7

879,000+

interventions for at-risk patients, including at-home disposal bags to prevent access to leftover drugs

53,000+

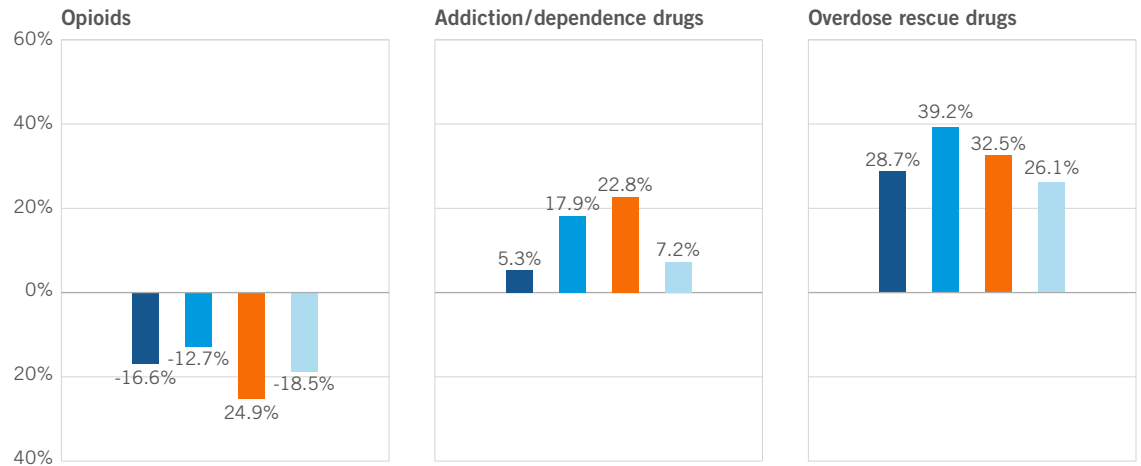
alerts for high-prescribing physicians and prescribers with at-risk patients

While the annual rate of opioid prescribing has dropped 19% since 2006, the rate of prescription-opioid-related deaths has not declined.^{1,2} New features of our solution for 2019 focus on patients at 12x higher risk of fatal overdose from combining opioids with benzodiazepines and skeletal muscle relaxants.³ Our neuroscience specialist pharmacists counseled thousands of patients taking high-risk regimens.

OPIOID-RELATED UTILIZATION TREND

By plan and medication type, 2018

■ Commercial ■ Medicare ■ Medicaid ■ Health exchanges



In 2018, our formularies preferred lower cost, equally effective generics and Narcan® (naloxone) nasal spray for overdose rescue drugs, while excluding Evzio® (naloxone injection). This helped drive utilization up 28.7% and unit costs down 47.9%, with Narcan use up 71.8%.



TAKING ON THE TOUGHEST
**USING INNOVATION
 TO CARE FOR PEOPLE
 WITH DIABETES**

Commerical plans enrolled in our solution saw a 4.3% **decline in spending** for diabetes medications in 2018.

50,300

patients took better control of their blood sugar with smart glucometers and support from our diabetes specialist pharmacists

20,000+

heart attacks could be avoided over 10 years if all plans joined our Diabetes Care ValueSM program, which had 19.2% more patients adding statin therapy

80,000+

patients earned rewards from Mango Health for adherence to medication for diabetes and other conditions

64%

of high-deductible plans used the preventive drug list recommended by Express Scripts which includes first-dollar coverage of insulin

0.3%

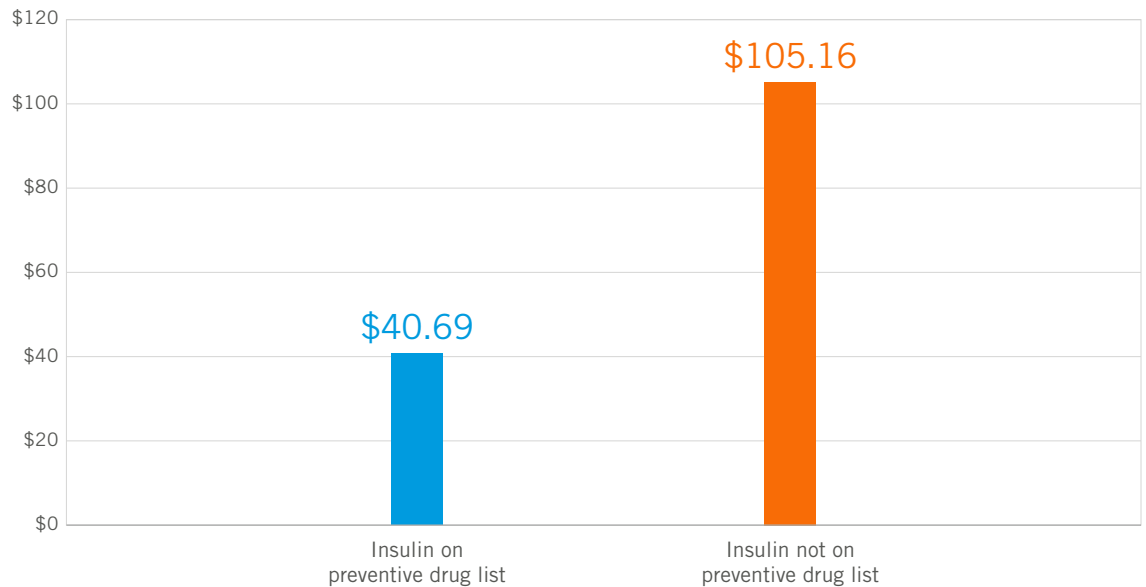
increase in insulin spending, with a 1.5% decline in unit costs and a 1.8% rise in utilization in 2018

16.9%

of total insulin costs were paid by patients in 2018, with an average price of \$43.19 per adjusted Rx

OUT-OF-POCKET COSTS FOR PATIENTS IN HIGH-DEDUCTIBLE PLANS

Per 30 day adjusted Rx, 2018



TREND AND SPEND OVERVIEW

COMMERCIAL

Total per-member-per-year (PMPY) spending increased 0.4%, with inflammatory conditions leading all classes



ONCOLOGY

HIV

INFLAMMATORY CONDITIONS

DIABETES

MULTIPLE SCLEROSIS

ASTHMA

ATTENTION DISORDERS

DEPRESSION

PAIN/INFLAMMATION

HIGH BLOOD PRESSURE/HEART DISEASE

↕ TREND
↔ PMPY SPEND
○ ADJUSTED RX VOLUME

TREND AND SPEND OVERVIEW

COMMERCIAL

UTILIZATION TREND

↑ 0.8%

UNIT COST TREND

↓ 0.4%

TOTAL TREND

↑ 0.4%

INFLAMMATORY CONDITIONS TREND was driven by continuing brand inflation and some market share shift to Stelara® (ustekinumab), given a 2016 additional indication for Crohn's disease.

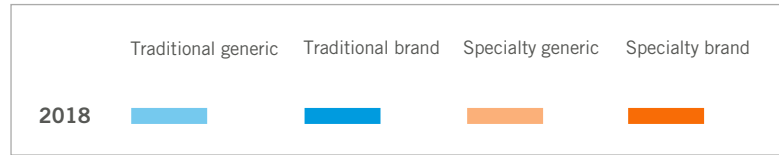
UNIT COSTS FOR DIABETES DRUGS remained low, due in part to a -1.5% unit cost trend for insulins, while insulin utilization rose 1.8%.

UTILIZATION OF NEWER THERAPIES for lung and breast cancer drove oncology trend, as these therapies have higher costs than older treatments. Expanded indication approvals for multiple higher-cost therapies also drove trend.

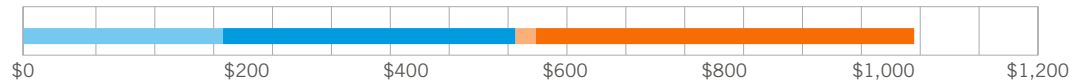
UNIT COSTS DECREASED for classes dominated by generics, including high blood pressure/heart disease, high blood cholesterol and pain/inflammation. Lower opioid use also drove declines in spending for pain/inflammation.

HEPATITIS C dropped out of the top therapy classes due to a 46.7% decline in PMPY spend from lower utilization and unit cost trend.

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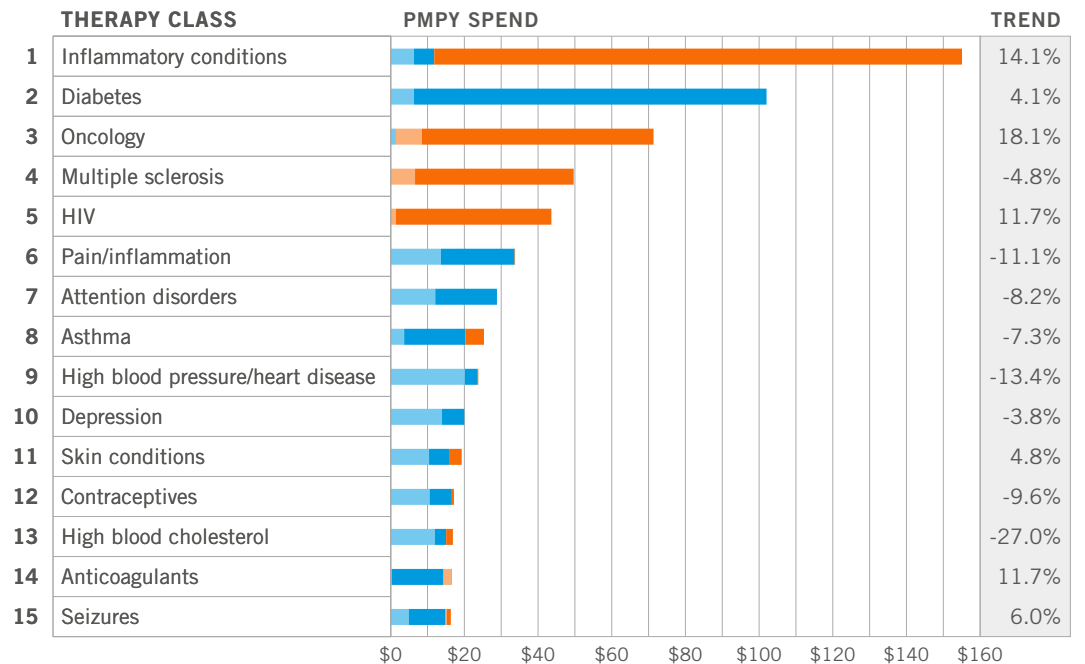


COMPONENTS OF PMPY SPEND



COMPONENTS OF TREND FOR TOP 15 THERAPY CLASSES

Ranked by 2018 PMPY spend for commercial plans



TREND AND SPEND OVERVIEW

MEDICARE

For the first time, total PMPY spending declined 0.3% and oncology topped spending for all classes

ANTICOAGULANTS

ONCOLOGY

INFLAMMATORY CONDITIONS

DIABETES

ASTHMA

MENTAL/NEUROLOGICAL DISORDERS

HIGH BLOOD PRESSURE/HEART DISEASE

MULTIPLE SCLEROSIS

PAIN/INFLAMMATION

HIGH BLOOD CHOLESTEROL

↑↓ TREND
↔ PMPY SPEND
○ ADJUSTED RX VOLUME

TREND AND SPEND OVERVIEW

MEDICARE

UTILIZATION TREND

↑ 1.1%

UNIT COST TREND

↓ 1.4%

TOTAL TREND

↓ 0.3%

SPEND FOR THE TOP FIVE THERAPY CLASSES contributed 41.4% of the total for all classes. Spending declined for eight of the top 15 therapy classes, due primarily to lower unit costs.

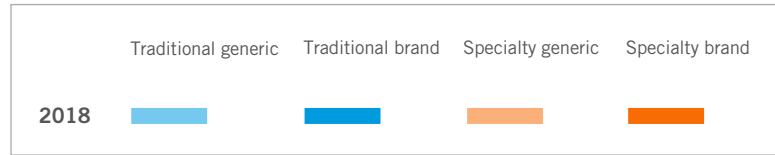
ONCOLOGY REPLACED DIABETES as the top therapy class by PMPY spend, driven mainly by a 13.3% increase in unit costs. Oncology is among the protected classes of drugs mandated by the Centers for Medicare & Medicaid Services.

ANTICOAGULANTS MOVED INTO THE TOP FIVE for the first time, as warfarin and other traditional drugs were supplanted by new branded oral products. A 16.0% rise in unit costs resulted in the 21.7% trend for this class.

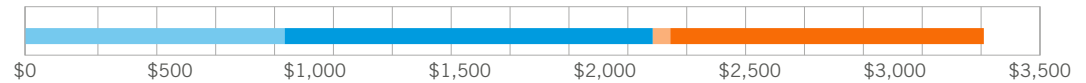
HEARTBURN/ULCER DISEASE had the largest drop in spending among the top 15 therapy classes, followed by high blood cholesterol. Omeprazole, the most frequently used heartburn/ulcer disease drug, had a 17.2% drop in spending. Four out of the top five high cholesterol drugs were generics.

SPENDING CONTINUED TO DECREASE for classes where generics predominate, such as pain/inflammation, high blood pressure/heart disease and high blood cholesterol.

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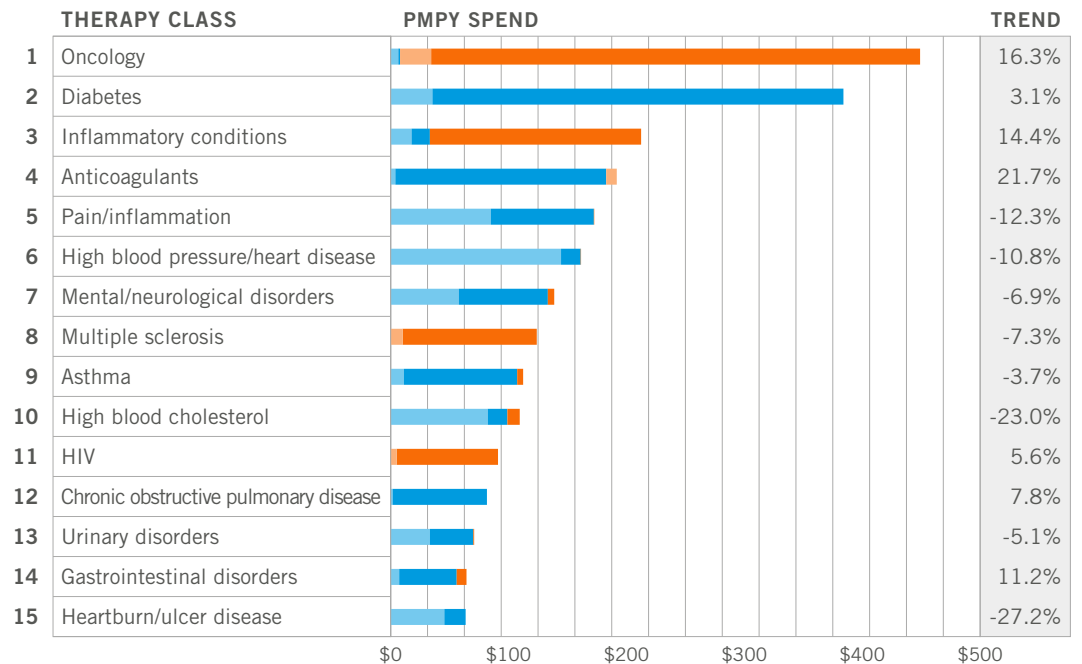


COMPONENTS OF PMPY SPEND



COMPONENTS OF TREND FOR TOP 15 THERAPY CLASSES

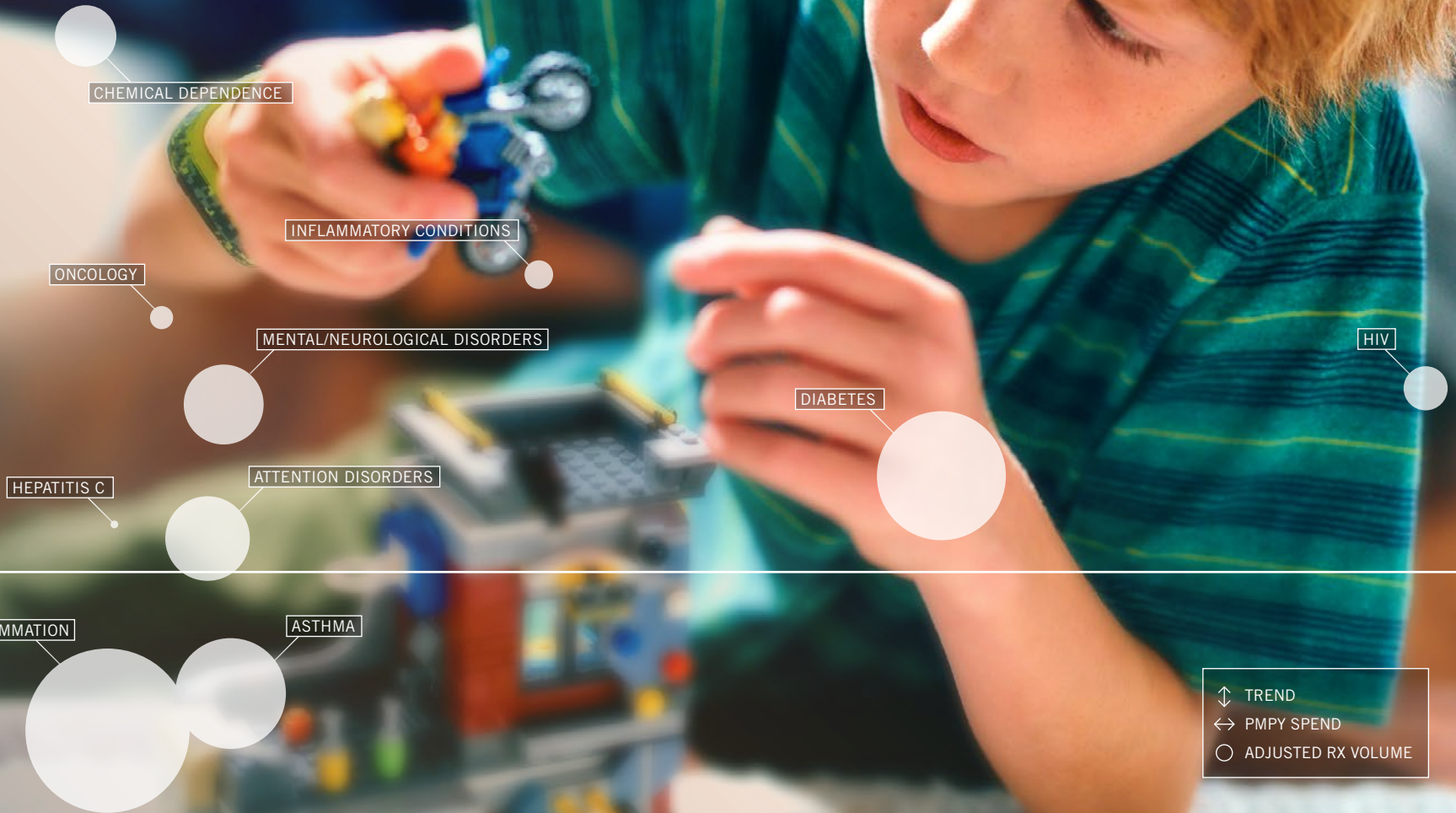
Ranked by 2018 PMPY spend for Medicare plans



TREND AND SPEND OVERVIEW

MEDICAID

Total PMPY spending increased 8.2%, with HIV leading all classes



↑↓ TREND
↔ PMPY SPEND
○ ADJUSTED RX VOLUME

TREND AND SPEND OVERVIEW

MEDICAID

UTILIZATION TREND

↑ 2.9%

UNIT COST TREND

↑ 5.3%

TOTAL TREND

↑ 8.2%

SPECIALTY MEDICATIONS CONTRIBUTED 44.2% to total drug spending, increasing 14.5% in PMPY spend compared to 2017. The top 15 drug therapy classes contributed 77.6% of total drug spend.

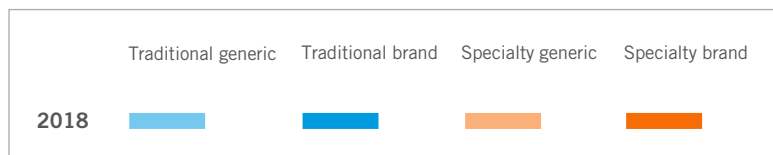
BRAND DRUGS CONTINUED TO DOMINATE THE HIV CLASS, accounting for 14 of the top 15 drugs by PMPY spend or market share.

THE TOP TWO CLASSES ACCOUNTED FOR 29.6% of total drug spend.

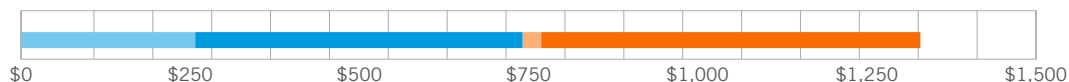
ANTICOAGULANTS WERE AMONG THE TOP 15 therapy classes by PMPY spend for the first time, due to increases in utilization and unit costs for new, brand oral anticoagulants.

SPENDING ON HEPATITIS C DRUGS increased for the first time in 4 years. Approved in August 2017, Mavyret™ (glecaprevir/pibrentasvir) has been the fastest-growing drug in this class.

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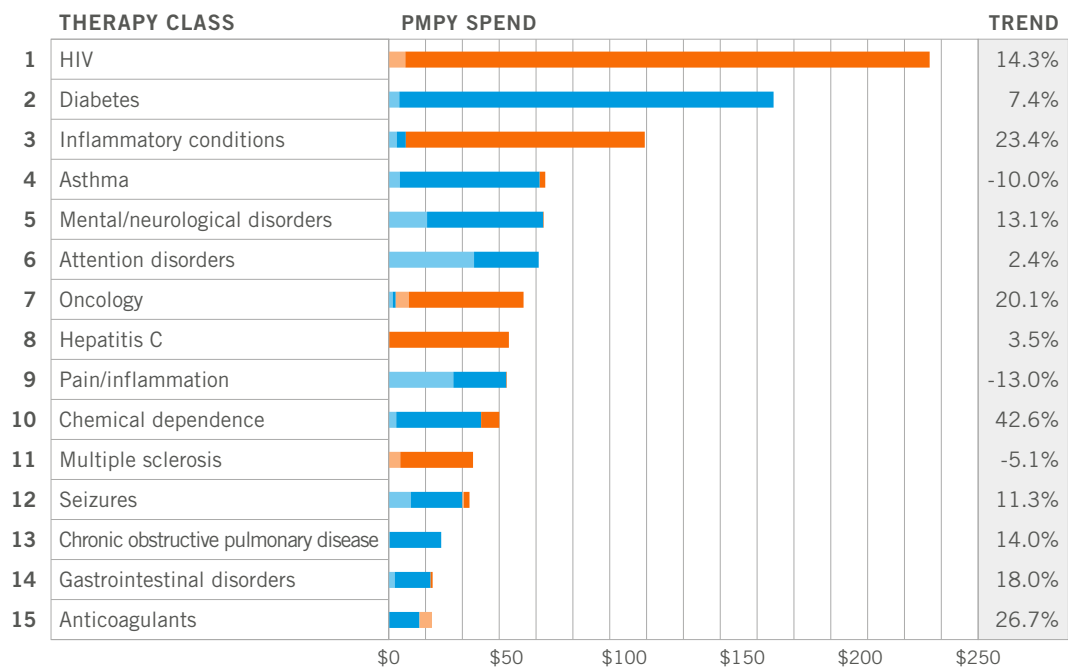


COMPONENTS OF PMPY SPEND



COMPONENTS OF TREND FOR TOP 15 THERAPY CLASSES

Ranked by 2018 PMPY spend for Medicaid plans



TREND AND SPEND OVERVIEW

EXCHANGES

Total PMPY spending increased 1.9%, due to a 7.0% increase in specialty trend



TREND AND SPEND OVERVIEW

EXCHANGES

UTILIZATION TREND

↑ 2.5%

UNIT COST TREND

↓ 0.6%

TOTAL TREND

↑ 1.9%

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

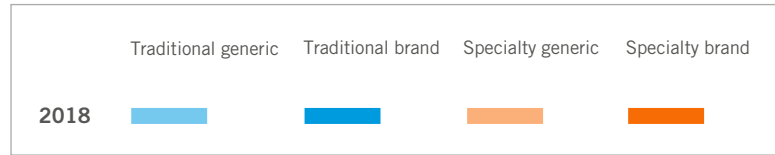
THE TOP 15 DRUG THERAPY CLASSES CONTRIBUTED 71.7% of the total drug spend, when ranked by PMPY spend.

SPENDING ON SPECIALTY DRUGS accounted for more than half (51.5%) of total PMPY spend.

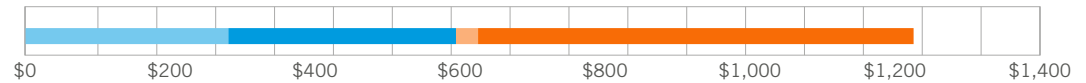
TOTAL SPENDING DECREASED FOR EIGHT OF THE TOP 15 therapy classes with the largest decline for hepatitis C drugs.

THE LARGEST UNIT COST DECLINE among the top 15 classes was for hepatitis C, due to Mavyret, with a unit cost trend of -21.7%, rapidly rising to 42.2% of the class market share to become the most utilized drug in the class.

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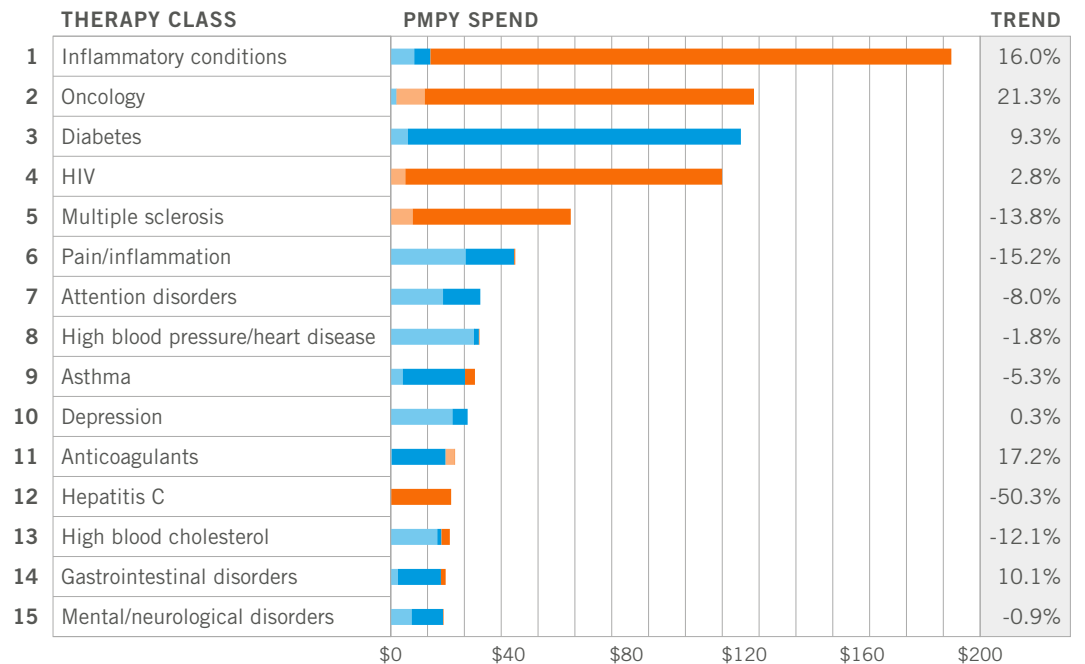


COMPONENTS OF PMPY SPEND



COMPONENTS OF TREND FOR TOP 15 THERAPY CLASSES

Ranked by 2018 PMPY spend for health insurance exchange plans



FORECASTING 2019-2021 TREND FOR COMMERCIAL PLANS

We expect drug spending to increase about 2% over each of the next three years, less than projected U.S. inflation rates.

TREND FORECAST FOR KEY THERAPY CLASSES

2019-2021, in order of 2018 PMPY spend

Unit cost increases for brand drugs to treat inflammatory conditions will continue, as biosimilar savings are not expected until at least 2020.

Diabetes trend will increase as no new widely used generics are coming to market until Januvia® (sitagliptin) generics become available in 2023. Greater utilization of diabetes medications is expected due to population aging and the obesity epidemic.

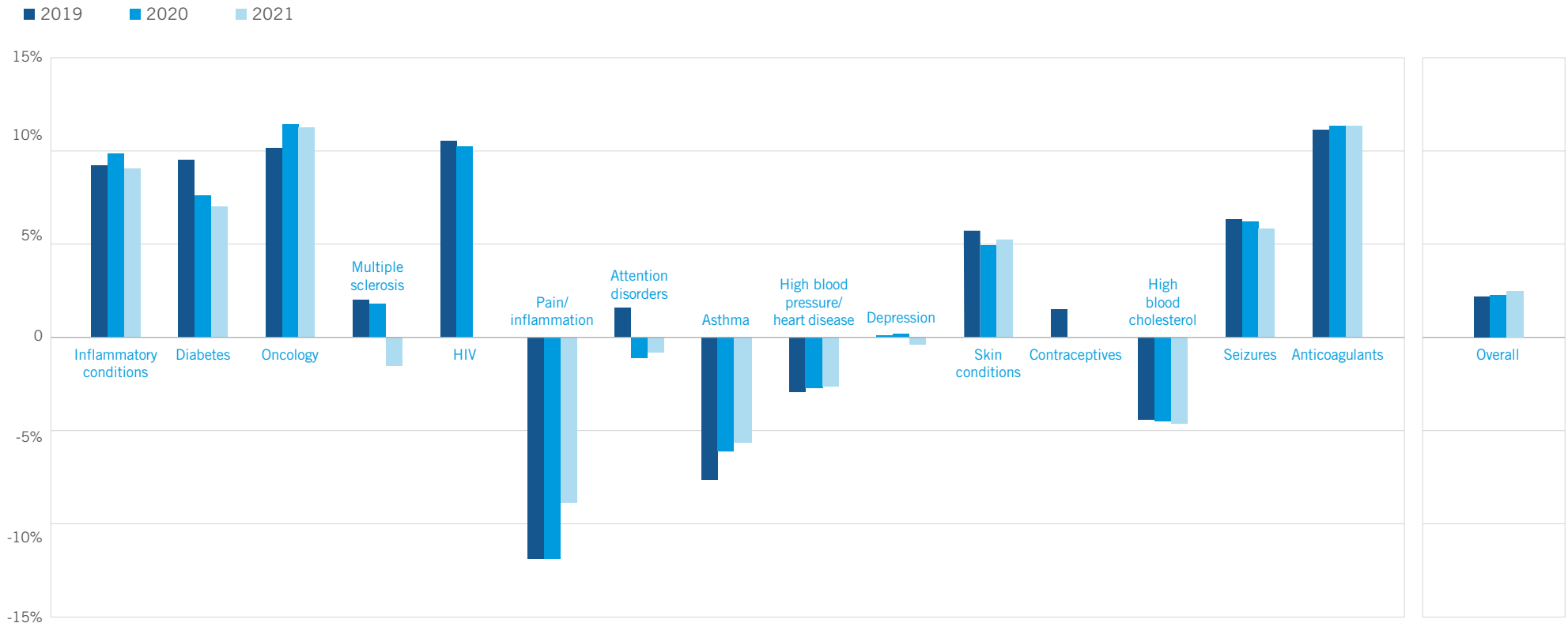
Pain and inflammation trend is expected to be negative through 2021, due to savings from the utilization of the generic for Lyrica® (pregabalin) and to lower opioid utilization, along with the impact of our Advanced Opioid Management solution.

Spending on multiple sclerosis drugs declined in 2018, due in part to negative utilization trend as patients taking Tecfidera® (dimethyl fumarate) moved to Ocrevus® (ocrelizumab), which is typically adjudicated through the medical benefit. The impact of this market share shift may be diminished, leading to positive trend for the next two years.

Attention disorder medications had an unprecedented drop in unit cost in 2018, which is not expected to continue.

Declining prices of PCSK9 inhibitors greatly impacted high blood cholesterol trend in 2018, but are not expected to continue in future years. There are no patent expirations nor generic launches that would likely impact trend.

Newer oral anticoagulants will continue to take market share from older, less expensive drugs, like warfarin, which will continue to drive spending increases through 2021.



Methodology

For this report, we analyzed the prescription drug use data of approximately 34.2 million members with a pharmacy benefit plan administered by Express Scripts⁴. 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 within each therapy class. 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.

Trend and other measures are calculated separately for those members with commercial insurance coverage. Members used Express Scripts for retail and home delivery pharmacy services; they used Accredo, the Express Scripts specialty pharmacy, for specialty drug prescriptions. Total trend measures the rate of change in gross costs, which include ingredient costs, taxes, dispensing fees and administrative fees. Gross cost does not exclude member cost share, and is net of rebates. 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. 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 (PPI) measures inflation in prescription drug prices by monitoring changes in list 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, starting in 2014. The Specialty PPI uses the same methodology, but is limited to specialty therapies, starting with 80% of the most commonly used brand and 100% of generic specialty medications.

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 due to rounding.

References

- ¹ Prescription Opioid Data | Drug Overdose | CDC Injury Center. <https://www.cdc.gov/drugoverdose/data/prescribing.html>. Published December 21, 2018. Accessed December 28, 2018.
- ² Scholl L, Seth P, Kariisa M, Wilson N, Baldwin G. Drug and Opioid-Involved Overdose Deaths — United States, 2013–2017. *MMWR Morb Mortal Wkly Rep* 2019;67:1419–1427. DOI: <http://dx.doi.org/10.15585/mmwr.mm675152e1>
- ³ Garg RK, Fulton-Kehoe D, Franklin GM. Patterns of Opioid Use and Risk of Opioid Overdose Death Among Medicaid Patients: *Medical Care*. 2017;55(7):661-668. doi:10.1097/MLR.0000000000000738
- ⁴ Plan sponsors were excluded if they were not Express Scripts clients in both 2017 and 2018, if they had less than 12 months of claims data in either year, 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.

All images are for representative purposes only and do not depict actual patients or prescribers.

2018 Drug Trend Report

More insights: [express-scripts.com/corporate](https://www.express-scripts.com/corporate)

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