



HEALTH CARE  
COST INSTITUTE

# 2021 HEALTH CARE COST AND UTILIZATION REPORT





# 2021 Health Care Cost and Utilization Report

On behalf of the Health Care Cost Institute, I am pleased to present the 2021 Health Care Cost and Utilization Report. With new data from 2021 and by tracking spending over the 2017–2021 period, this report demonstrates how the health care system continued to evolve during the COVID-19 pandemic, including what has changed—and what has not.

In 2020, lower use of health care services led to the first decline in per person health care spending that we have seen in 12 years. That decline in utilization, however, was concentrated in the early months of the pandemic. By mid-2020, our data show that use (and spending) had largely returned to pre-pandemic levels.

In 2021, we see a full rebound in per person health care spending, which was nearly \$6,500 (15% higher than in 2020). A 13% increase in utilization from 2020 to 2021 contributed to this growth, following the 7.5% decline in use in 2020. Average prices grew 2% from 2020 to 2021; this lower growth rate than in previous years reflects that the overall mix of care was less expensive in 2021 than in 2020 when many lower cost preventive services were delayed.

Overall, prices grew close to 14% over the 2017-2021 period while use grew just over 7%. The largest growth in prices was for inpatient hospital services, which grew 28% even as use declined over the five-year period. Growth in health care prices, and particularly in hospital prices, remains a persistent challenge to access and affordability.

Although we hope that these data and this report contribute to our broader understanding of how the health care system has changed due to COVID-19 and implications for individuals and families, we also acknowledge that the pandemic has impacted all of us in ways far beyond what we can capture in our data, including everything from changes in the way we work to the devastating loss of life. Moreover, the 2021 HCCUR focuses only on one segment of society, people who get health insurance through work. While our data are representative of this population, the experiences of people with fewer resources may be different and should be studied carefully.

HCCI's mission is to get to the heart of the key issues affecting the U.S. health care system by using the best data to get the best answers. We hope this report does that and sparks discussion about the causes of and solutions to challenges we have identified—both COVID-related and otherwise. We also hope that HCCI's data can help researchers and policymakers answer their important questions. As in previous years, all data underlying the figures and analysis presented in this report are available for download on our website.

I would like to acknowledge the HCCI team—especially John Hargraves, Jessica Chang, and Aditi Sen—for drafting this report and the work that underlies it. We are grateful for our partners, CVSHealth/Aetna, Humana, Kaiser Permanente, and Blue Health Intelligence and for additional technical advice and input from Mike Chernew, Stacie Dusetzina, Roy Goldman, Rebecca Owen, and Kosali Simon.

Katie Martin  
President and CEO, HCCI

## About HCCI

The Health Care Cost Institute was launched in 2011 to promote independent, nonpartisan research and analysis on the causes of the rise in U.S. health spending. HCCI holds one of the largest databases for the commercially insured population, and in 2014 became the first national Qualified Entity (QE) entitled to hold Medicare data. For more information, visit [healthcostinstitute.org](https://www.healthcostinstitute.org), email us at [info@healthcostinstitute.org](mailto:info@healthcostinstitute.org), or follow us on Twitter [@healthcostinst](https://twitter.com/healthcostinst)



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If you are interested in exploring state trends, the data that powers this report, or our methodology visit:

<https://healthcostinstitute.org/health-care-cost-and-utilization-report/annual-reports>



# Executive Summary

The 2021 Health Care Cost and Utilization Report presents data on health care spending, utilization, and average prices from 2017 through 2021 for individuals under the age of 65 who receive health insurance coverage through an employer. The report relies on de-identified commercial health insurance claims contributed by CVS Health/Aetna, Humana, and Blue Health Intelligence during this period. The key findings are:



In 2021, per-person spending rose to \$6,467 from \$5,630 in 2020. This total includes amounts paid for medical and pharmacy claims but does not subtract manufacturer rebates for prescription drugs. The average out-of-pocket spending increased to \$825 per person from \$725 in 2020.



Per person health care spending increased 15% in 2021, following a 3.5% decrease in 2020, the first year of the COVID-19 pandemic.



Average prices grew 2% in 2021. Cumulatively, prices were 14% higher in 2021 than 2017. Prices grew most for inpatient services (28%) and least for professional services (7%) over the five-year period. Prices reflect changes in unit prices as well as changes in the mix of services provided.



Utilization rose 13% from 2020 to 2021, following a 7.5% decline in 2020. Use increased in all service categories (inpatient, outpatient, and professional services and prescription drugs) in 2021.



There was growth in spending on several services that are likely related, at least in part, to care associated with COVID-19, including respiratory hospital admissions, lab tests, and vaccines.

This report examines trends across four broad categories of service: inpatient admissions; outpatient services; professional (i.e., physician and other clinician) services; and prescription drugs. We also look at granular trends within each category. All data were weighted to reflect the age, gender, and geographic mix of the employer-sponsored insurance (ESI) population by year. We do not adjust for changes in the composition of services provided over time in our main report. We believe the racial and ethnic distribution of the population in HCCI's data is similar to the national ESI population. Nationally, however, Black, American Indian and Alaska Native, and Hispanic populations are under-represented in ESI, so health care costs and use among these people are likely under-represented in this report's findings.

## Definitions of Reported Measures

**Spending per person:** Total expenditures per person on medical and prescription drug claims (defined as sum of payer paid and patient out-of-pocket amounts) weighted by age, sex, and geographic mix of the ESI population. The prescription drug component reflects point-of-sale expenditures and does not include manufacturer rebates provided through separate transactions because these data are not readily available at the transaction level.

**Out-of-pocket spending per person:** Total payments per person paid by patients for health care services (defined as sum of deductibles, co-payments, and co-insurance amounts) weighted by age, sex, and geographic mix of the ESI population.

**Utilization:** The count of inpatient admissions, outpatient facility procedures, professional services, and days covered by a filled prescription. In the results presented in this report, utilization does not account for changes in the mix of services over time.

**Average Price:** Spending per service (admissions, visits, procedures, or days supplied depending on the service category). Spending and utilization were aggregated across all services in a category. The average price per service in a category was then calculated by dividing total spending by total utilization. The year-over-year change in average prices reflects both inflation and service price growth above inflation as well as any changes in the mix of services provided.

**Average Out-of-Pocket Price:** Out-of-pocket spending per service (admissions, visits, procedures, or days supplied depending on the service category). Out-of-pocket spending and utilization were aggregated across all services in a category. The average out-of-pocket price per service in a category was then calculated by dividing total out-of-pocket spending by total utilization.

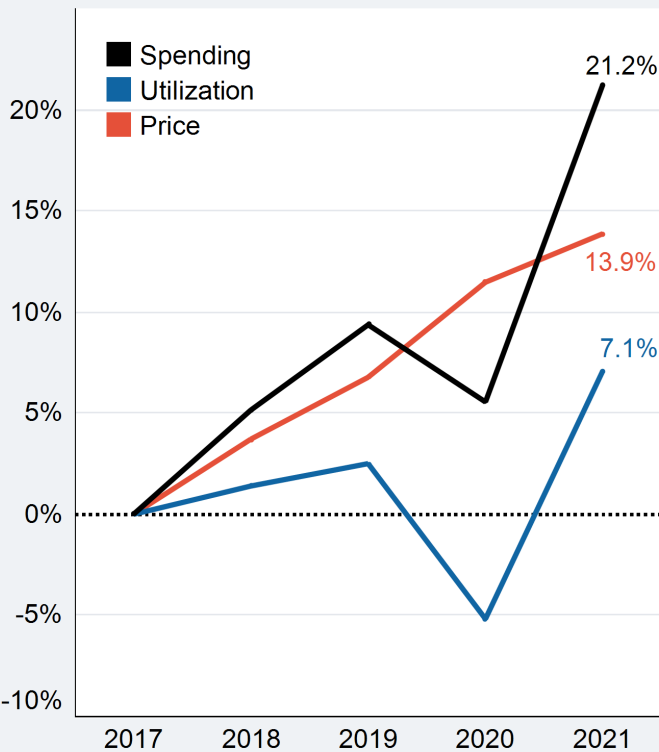


# Health Care Spending: Changes Between 2017 and 2021

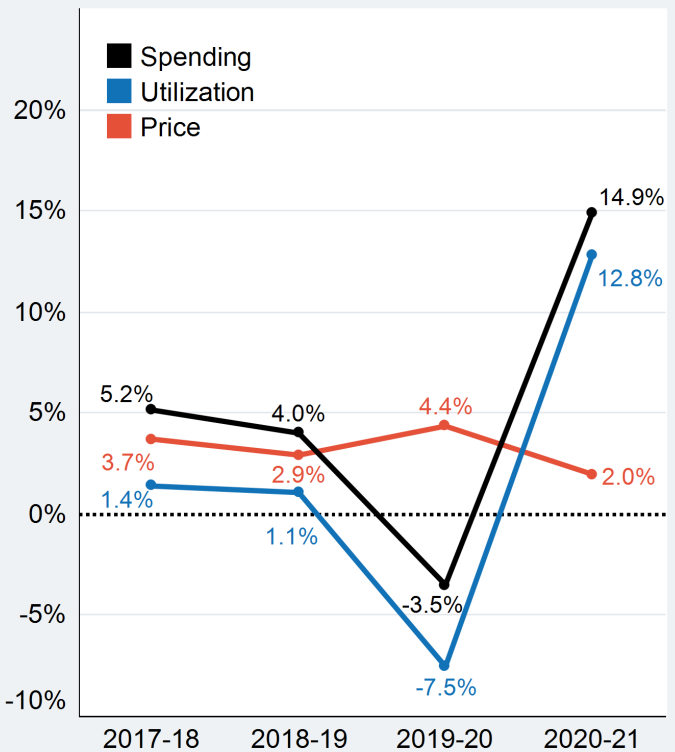
From 2017 to 2021, **spending** per person increased \$1,133 from \$5,334 to \$6,467 (21.2%). The increase in spending was driven by rising average **prices**, which grew close to 14% over 2017–21. In that period, there was a cumulative 7.1% increase in **use** [Figure 1].

**Utilization** was relatively flat over 2017–19, followed by a 7.5% drop in 2020 during the first year of the COVID-19 pandemic [Figure 2]. In 2021, there was a rebound in utilization, resulting in a 12.8% increase from 2020 to 2021 and a 7.1% cumulative increase over the five-year period. After average annual growth of close to 4% over 2017–2020, **prices** grew 2% in 2021, reflecting increased use of less costly (e.g., preventive) services as the initial phase of the COVID-19 pandemic ended and people returned to typical (i.e., pre-pandemic) use of health care services.

**Figure 1: Cumulative Percent Change in Spending per Person, Utilization, and Price**



**Figure 2: Annual Percent Change in Spending per Person, Utilization, and Price**



**Note:** Unless otherwise stated, prices are not adjusted for inflation or service mix; therefore, any references to changes in prices in this report include the effect of inflation and service price growth above inflation as well as effects of changes in the mix of services provided. Changes in utilization include the effects of age and sex composition changes in the ESI population and changes in the quantity of services used. Further, spending per person measures include non-utilizers, who account for one quarter of the population in the setting of medical use and one third of the population in the context of prescription drug use.



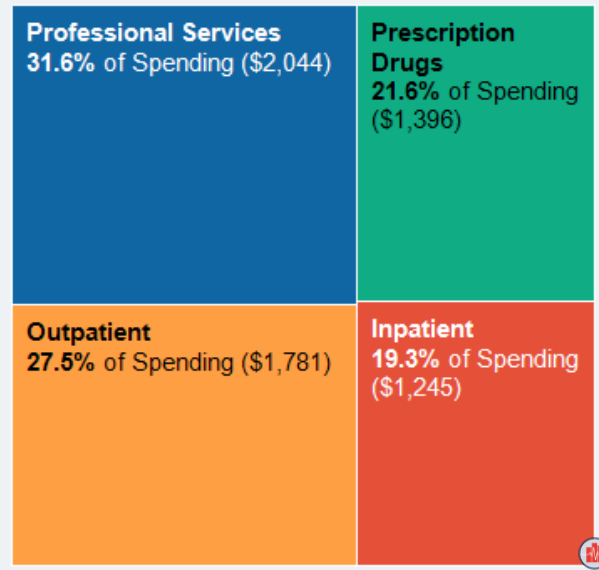
# Health Care Spending: Variation by Service Category

Per-person spending grew to \$5,834 in 2019, decreased to \$5,630 in 2020, and rose to \$6,467 in 2021. As shown in Figure 3, the largest category of spending was **professional services** (\$2,044), which includes professional (e.g., physician) services provided in offices as well as in facilities (e.g., during a hospital admission). The second largest category of spending was facility payments for **outpatient** visits and procedures (\$1,781), followed by **prescription drugs** (\$1,396), and facility payments for **inpatient** admissions (\$1,245). Note that spending on prescription drugs reflects negotiated discounts from wholesale or list prices but does not account for manufacturer rebates provided through separate transactions; therefore, prescription drug prices in this report are point-of-sale.

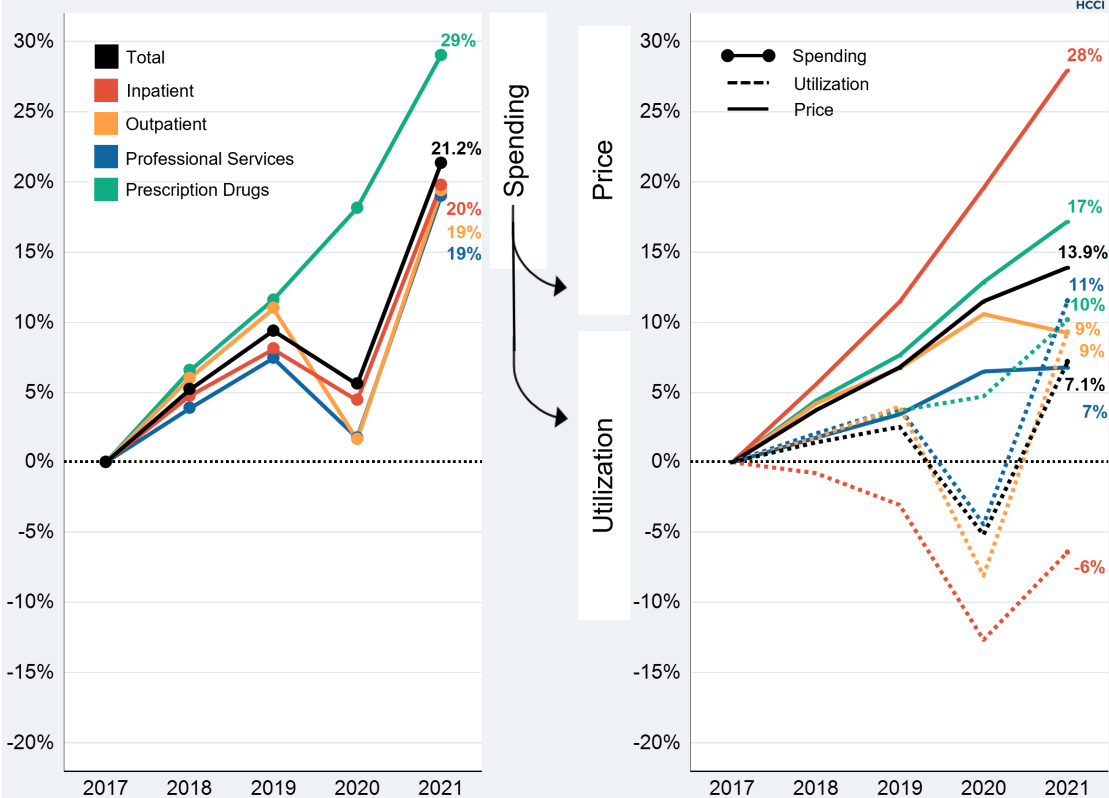
Spending increases were largely driven by rising prices for services within each category. Between 2017 and 2021, utilization increased 7.1%. Over the same period, prices increased 13.9% [Figure 4]. Across the service categories, the contribution of average prices and utilization to the change in spending varied. Inpatient services experienced the largest cumulative decline in use (-6.4%) while prices grew 27.9%. Outpatient and professional services and prescription drugs had cumulative increases in use of 9-11%, driven by rising use in 2021.

In all categories, prices grew between 2017 and 2021. Inpatient prices had the greatest cumulative increase (27.9%) while the smallest increase in prices was for professional services (6.8%). Rising prices drove cumulative increases in spending across all service categories, with the largest growth in prescription drug spending (29.0%).

**Figure 3: Share of Spending per Person in 2021**



**Figure 4: Cumulative Percent Change in Spending per Person, Utilization, and Price by Service**



# Changes in Spending by Service Category

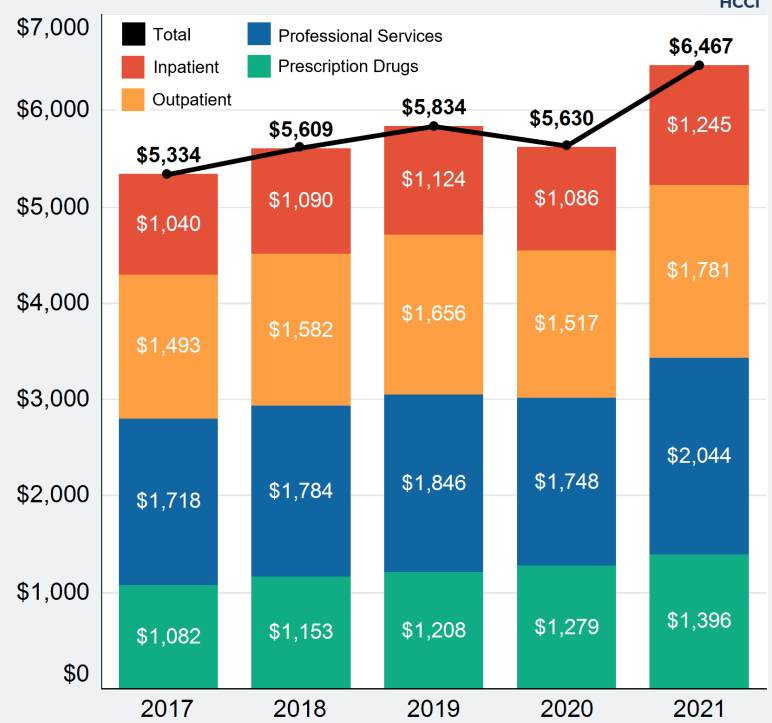
Annual spending per person increased year-over-year from 2017 through 2019, decreased in 2020, the first year of the COVID-19 pandemic, and then increased in 2021 [Figure 5]. Over the five-year period, spending increased \$1,133 per person, an average increase of \$250 each year from 2017–2019, followed by a \$204 decrease in 2020, and a large increase of \$837 in 2021 [Figures 5 and 6].

## Spending rose in all service categories from 2020 to 2021.

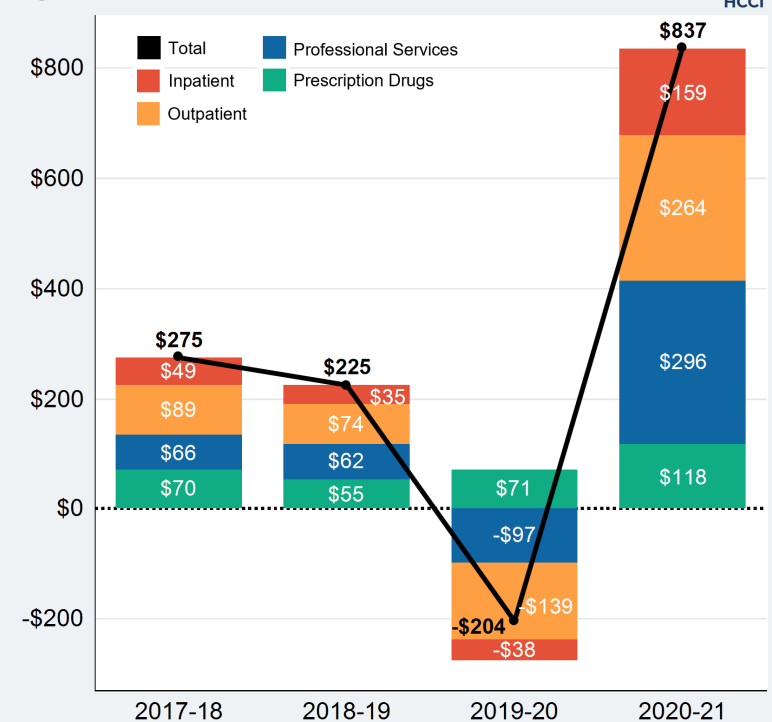
**Outpatient** and **professional services** had the largest increases in spending per person in 2021, following these categories experiencing the largest decreases in spending per person in 2020 [Figure 6]. Relative to 2020:

- Per-person spending on facility payments for **outpatient** visits and procedures increased \$264 in 2021.
- Professional** service spending per person increased \$296 in 2021.
- Per-person spending on facility payments for **inpatient** admissions increased \$159 in 2021.
- These changes are consistent with other evidence that use of health services rebounded in 2021 following a dramatic drop in 2020 during the initial phases of the COVID-19 pandemic.
- Per person spending on **prescription drugs** rose \$118 in 2021. Prescription drugs was the only category with growth in spending in 2020. As noted earlier, this total does not reflect manufacturer rebates.

**Figure 5: Annual Spending per Person by Service**



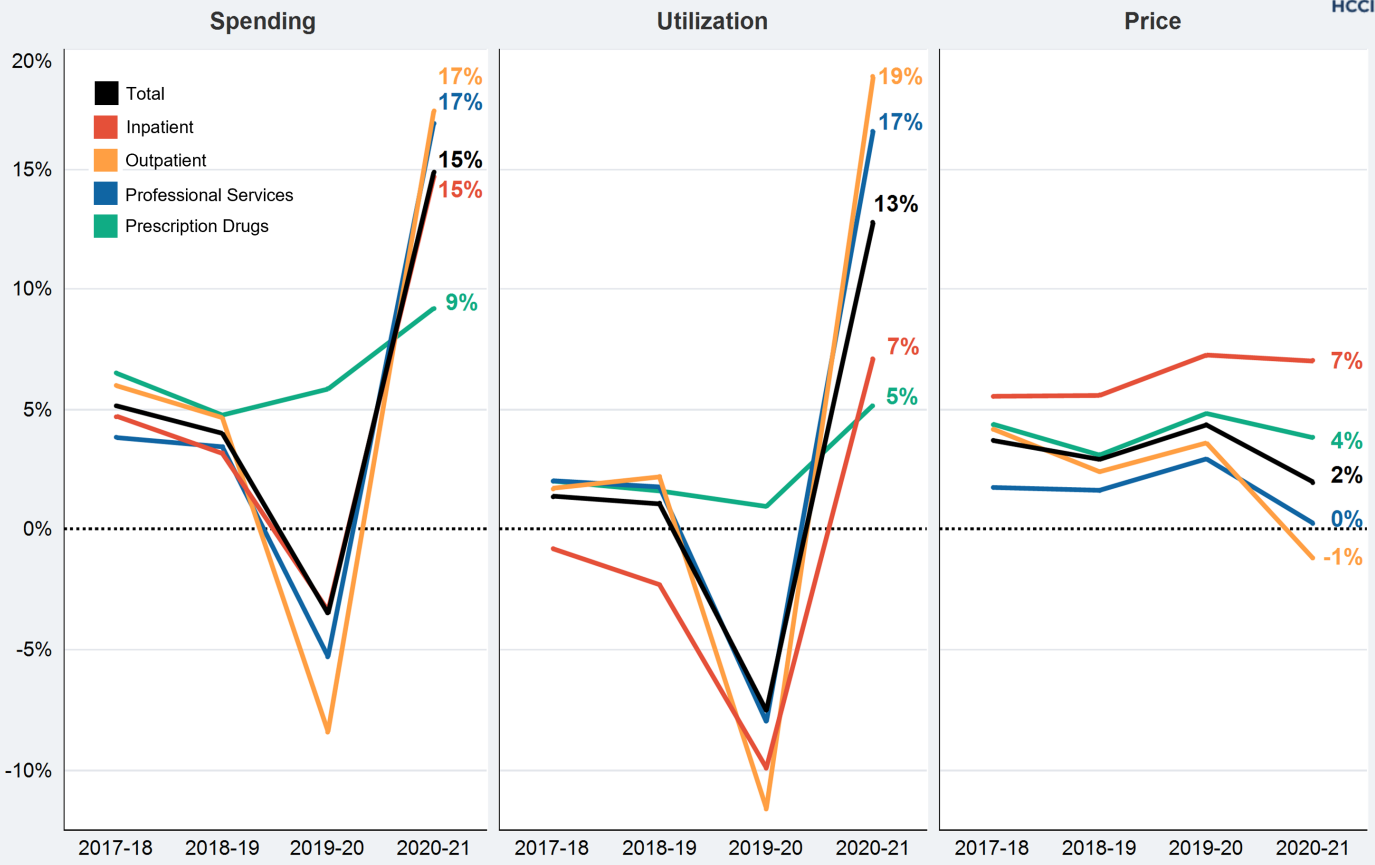
**Figure 6: Annual Change in Spending per Person by Service**





# Annual Changes in Spending, Utilization, and Price

Figure 7: Annual Percent Change in Spending per Person, Utilization, and Price by Service



Year-to-year changes in spending are the product of changes in utilization and changes in prices. Between 2017 and 2019, increases in spending largely reflected changes in prices while changes in utilization were much smaller. In 2020 and 2021, the substantial drop in utilization followed by the large rebound in use was the main factor driving spending.

Utilization increased across all service categories from 2020 to 2021, an overall increase of 13% [Figure 7].

- **Outpatient** visits and procedures experienced the biggest increase, 19%, from 2020 to 2021.
- **Inpatient** admissions rose 7% from 2020 to 2021.
- After several years of relatively small increases, followed by a decline in 2020, utilization of **professional services** increased 17% from 2020 to 2021.
- Utilization of **prescription drugs** rose 5% from 2020 to 2021 after modest increases in 2018–2020.

Prices grew 2% from 2020 to 2021, following price growth of around 4% in 2018–2020.

- **Inpatient** admissions was the category with the highest growth in average prices, 7% in 2021, similar to the price change in 2020.
- The average price of **outpatient** visits and procedures declined 1% in 2021, following rising prices in 2018–2020. This price measure reflects changes in unit prices as well as in the mix of less and more expensive services provided. In 2021, the mix of outpatient services used by ESI enrollees was relatively less expensive as people returned to health care facilities for elective services following the early phase of the pandemic. The average price in this category also reflects growing use of COVID vaccines, a relatively low-cost service, in 2021.
- The average price for a **professional service** did not change between 2020 and 2021, following a 3% increase in 2020, the highest annual percent change in price for this category between 2017 and 2020.
- Point-of-sale **prescription drug** prices grew 4% in 2021, slightly lower than price growth in this category in 2020.





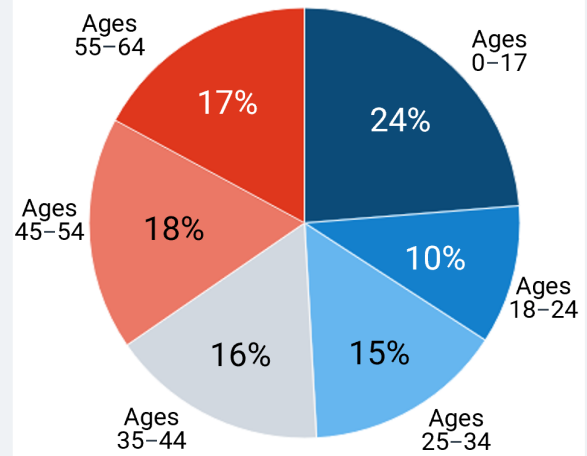
# Annual Spending by Age and Sex

The ESI population includes people who receive health insurance coverage from their employer, as well as their dependents, such as spouses and eligible children. In the HCCI data in 2021, one-quarter of this group was 17 years old or younger [Figure 8]. The age distribution of the ESI population in our data (i.e., the share of people in each age group) was consistent over the 2017 to 2021 period. The sex distribution was also consistent over time, with the population evenly divided between females and males.

Per-person spending in the HCCI data was highest for those between 55 and 64 years old. In general, per-person spending increased with age [Figure 9]. One exception was males under 18, who had higher spending (\$3,724) than males ages 18 to 24 (\$2,837) and males ages 25 to 34 (\$3,291).

The comparison of spending across men and women varied with age. Among children, males had slightly higher average spending than females, while average spending among females was consistently higher than that of males between the ages of 18 and 54. Spending was slightly higher for men (\$12,016) than women (\$11,670) among those in the 55-64 age range.

**Figure 8: 2021 ESI Age Distribution**



**Figure 9: Spending per Person in 2021 by Age and Sex**





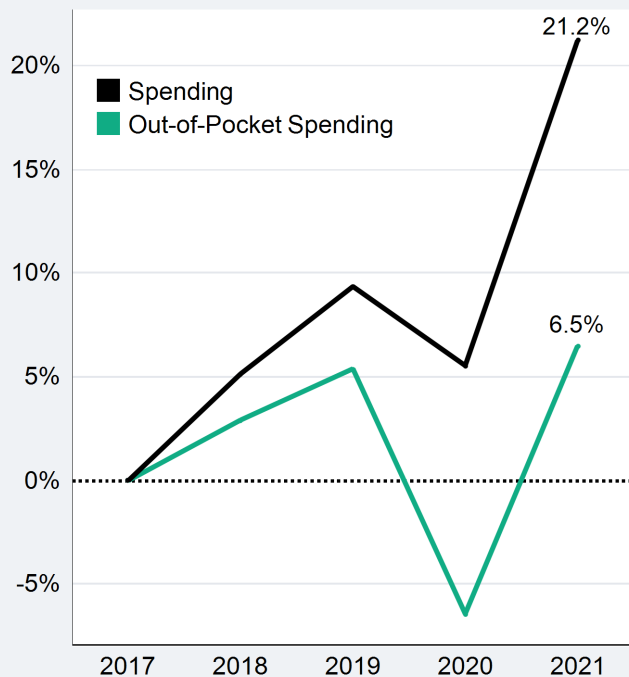
# Out-of-Pocket Spending Trends

Out-of-pocket (OOP) spending includes payments made by patients for health care services and prescription drugs covered by insurance but does not include the cost of insurance or premiums. OOP spending includes deductibles, co-payments, and co-insurance, so estimates are a function of plan benefit design offerings by employers. In addition, some individuals may use flexible spending accounts (FSAs), health savings accounts (HSAs), and health reimbursement accounts (HRAs) to pay for these costs. While these types of accounts still reflect out-of-pocket costs to employees, they also confer tax savings that we cannot factor into our analysis.

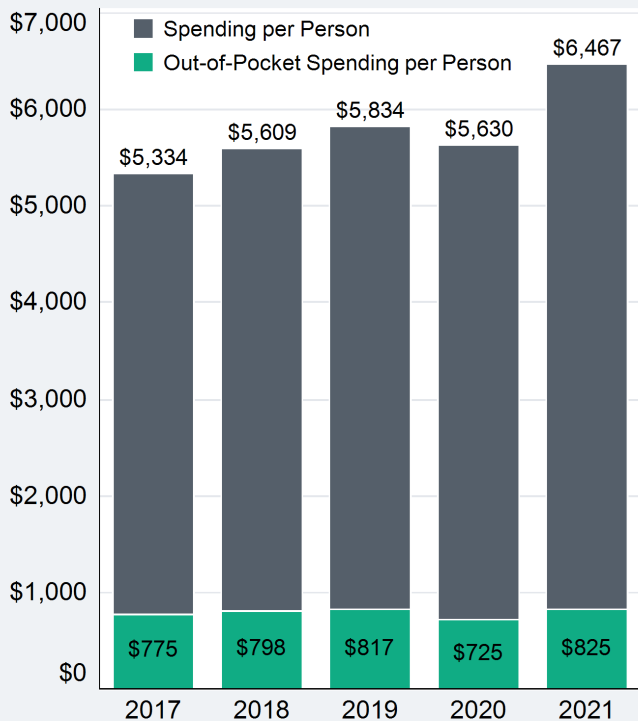
Total OOP spending increased year-over-year each year between 2017 and 2019. The cumulative increase over this period was \$42 (5%). The growth in OOP spending was lower than the growth in total spending over 2017–19 (9%). Both total and OOP spending declined in 2020, followed by an increase in 2021. The cumulative increase in OOP spending over the five-year period was \$50 (6.5%) [Figure 10].

Out-of-pocket spending per person was \$825 in 2021 [Figure 11]. The share of OOP spending attributable to each service category remained relatively constant over the full five years, with the highest percentage of OOP spending—close to half—on professional services [Figure 12].

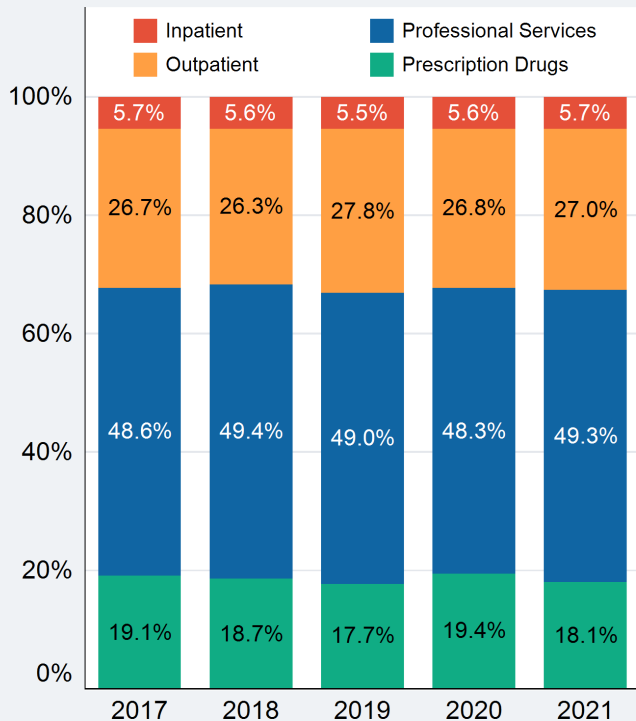
**Figure 10: Cumulative Percent Change in Spending per Person and Out-of-Pocket Spending per Person**



**Figure 11: Total and Out-of-Pocket Spending per Person**



**Figure 12: Share of Out-of-Pocket Spending by Service**



# Drivers of Health Care Spending, 2017-2021

To better understand what drove the changes in health care spending per person over the five-year period from 2017 to 2021, we looked at four factors [Figure 13]:

- General inflation (using CPI-U)
- Service prices
- Changes in the mix of services provided
- Quantity of services

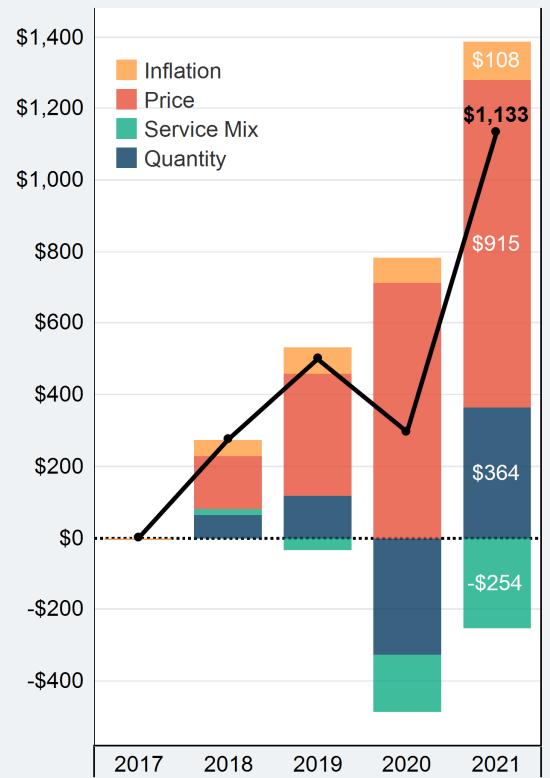
In all years, **inflation** and **prices** contributed positively to the change in spending per person. From 2017 to 2021, **inflation** accounted for \$108 (7%) of the spending change while rising **prices** accounted for \$915 (56%) of the change in spending. This price effect is distinct from price changes due to changes in service mix.

In all years other than 2020, the **quantity** of services also contributed positively—though less than prices—to the growth in total spending. Over the 2017–2021 period, the quantity of services accounted for \$364 (22%) of the total spending change. Since 2019, the change in the **mix of services** (within service category) has offset some of the growth in spending. This occurs as the mix of services used by the ESI population becomes less expensive, including the shift from brand to generic drugs.

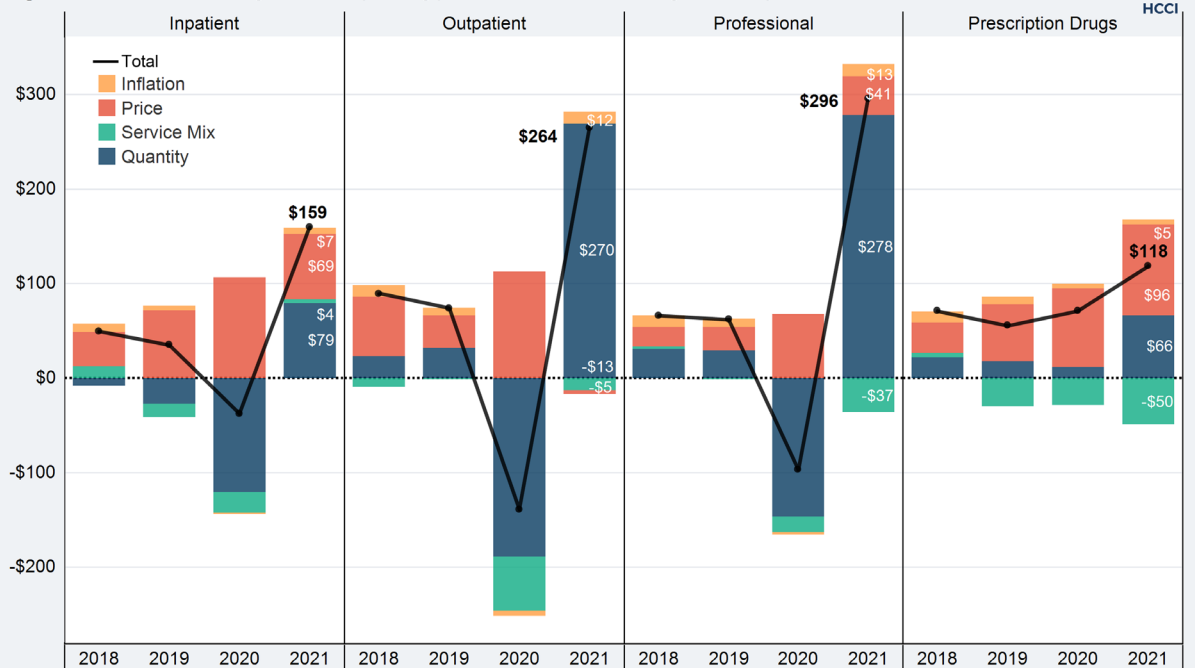
The relative drivers of spending changes across service categories varied [Figure 14]. Other than for inpatient care, quantity contributed positively to spending changes in medical care categories in all years other than 2020.

Prices contributed positively to spending in all years in all categories other than a small offsetting effect of price to outpatient spending growth in 2021.

**Figure 13: Cumulative Change in Total Spending per Person and Contributing Factors**



**Figure 14: Cumulative Change in Total Spending per Person and Contributing Factors by Service**



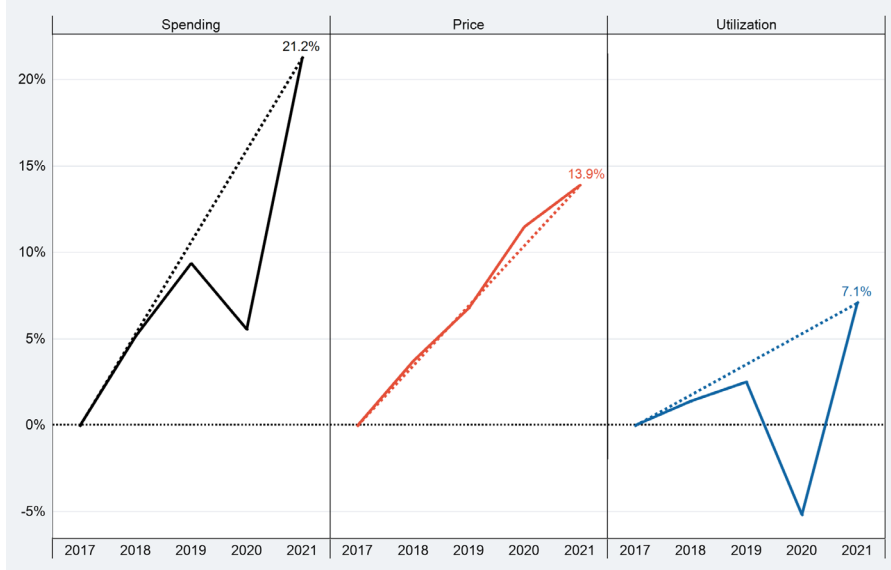
# Spending in 2021 in the Context of COVID-19

Despite noticeable changes in certain health services, total per-person health care **spending** and **utilization** largely returned to pre-pandemic trends in 2021, following a substantial drop in 2020. Over this period, there was little deviation in **prices** from the five-year trend, even in 2020 [Figure 15].

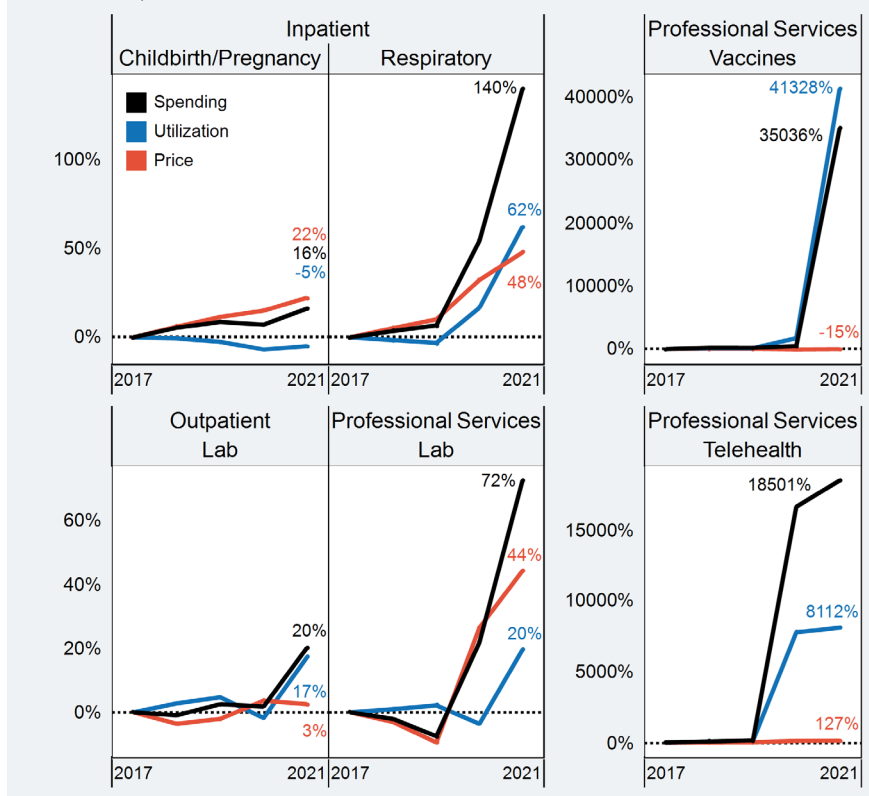
To start to examine lasting impacts of COVID-19 on health care spending, utilization, and prices, we compare data from 2021 to 2020, the first year of the pandemic, and to 2019, pre-pandemic, in the following sections of the report. While overall spending, use, and price trends did not shift dramatically as a result of the first year of the pandemic, there are changes in certain services that reflect utilization and spending associated with COVID-19. For example:

- Spending on **respiratory inpatient admissions** increased 140% between 2017 and 2021, driven by large increases in 2020 and 2021. In contrast, spending on childbirth admissions—the most common admission in the ESI population—grew only 16% [Figure 16].
- As COVID-19 **vaccination** became more widespread, there was increased spending on vaccines in 2021. Spending on vaccines grew over 350-fold, with the vast majority of the increase between 2020 and 2021.
- Cumulative spending on lab services grew between 2017 and 2021, reflecting increased spending on **COVID-19 tests**. Spending per person on (professional) labs rose 72%, driven by a large increase in 2021.
- There is continued evidence of the impacts of changes in reimbursement, coverage, and other regulatory policies related to **telehealth** made during the pandemic. Spending on telehealth evaluation and management services increased 185-fold from 2017 to 2021. While most of that increase occurred from 2019 to 2020, there was continued growth in professional telehealth spending from 2020 to 2021.

**Figure 15: Cumulative Percent Change in Spending per Person, Utilization and Price Compared to Constant Growth**



**Figure 16: Cumulative Percent Change in Spending per Person, Utilization, and Price for Select Services**





# Service Category and Subcategory Trends

The health care claims in the underlying data were categorized into four service categories: inpatient facility, outpatient facility, professional services, and prescription drugs. This classification reflects the way claims were processed and paid, and not necessarily how patients interacted with health care providers. In many cases, a single episode of care will have claims in multiple categories. It is also possible that the classification of claims for similar types of episodes vary by provider, or groups of providers, depending on how claims were submitted. Such variation can also occur across years within the same provider.

Physician services that occur in physician offices as well as those that occur in facilities (e.g., hospitals) are captured in the professional services category. See the [methodology document](#) for further detail.

Year-to-year changes in spending, use, and average price in each service category may reflect changes in the site of service for certain procedures. For example, if mammograms that were previously performed in a physician's office, and therefore classified as a professional service, shift to an outpatient facility, the trends in spending, use, and price for the radiology subcategory in outpatient facility and professional services categories will be affected. These service category-level shifts were not examined, but their possibility should be noted when interpreting the findings presented in this report.

Broadly, spending on drugs may include spending on administered drugs (e.g., injections or infusions), generally paid under the medical benefit, and prescription drugs covered by the pharmacy benefit. In this report, administered drug spending, use, and prices is captured in the professional and outpatient facility categories. Prescription drug spending includes the amount paid for pharmacy claims. These point-of-sale prices reflect discounts from the wholesale or list prices of prescription drugs, but do not account for manufacturer rebates that occur in separate transactions.

## Inpatient



## Outpatient



## Professional Services



## Prescription Drugs

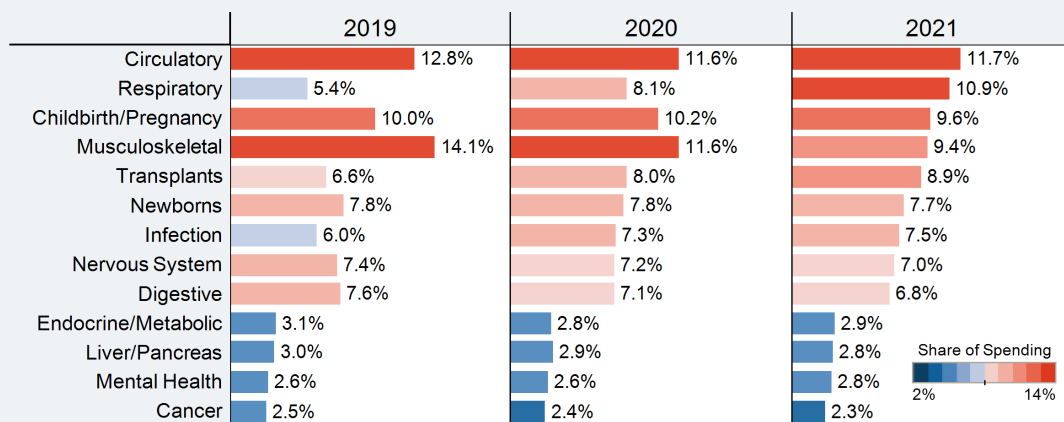




# Inpatient Spending Trends

Inpatient spending includes payments to facilities (e.g., hospitals) for services delivered during an admission or other overnight stay. In many cases, this spending does not include payments to the physician or other clinicians, which are captured in the professional services category.

**Figure 17: Share of Inpatient Facility Spending**

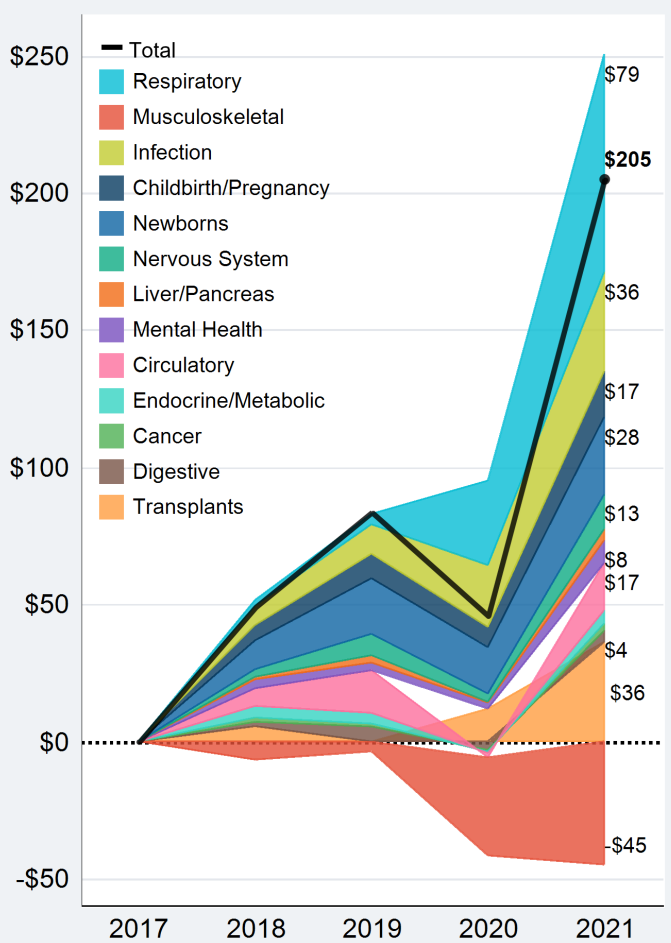


Per-person spending on inpatient admissions increased \$205 (20%) between 2017 and 2021 [Figure 18]. That reflects an increase of \$84 from 2017–2019, followed by a drop (\$38) in 2020, and a substantial increase (\$159) in 2021.

Together, **circulatory**, **respiratory**, **childbirth/ pregnancy**, and **musculoskeletal** admissions accounted for over 40% of inpatient spending in 2021 [Figure 17]. Between 2017 and 2021, spending on **childbirth/pregnancy** and **circulatory** admissions increased moderately (cumulative change of \$17 in each category) [Figure 18]. Spending on **musculoskeletal** admissions declined, particularly in 2020; declining spending on musculoskeletal admissions over this period (-\$45 from 2017–2021) is at least partly due to a shift in some of these services (e.g., joint replacement) to outpatient settings.

Respiratory admissions (including for COVID-19 in 2020 and 2021) made up close to 11% of inpatient spending in 2021, up from 5% in 2019, prior to the COVID-19 pandemic. Spending on **respiratory** admissions had the largest cumulative increase, \$79 (140%) between 2017 and 2021, driven by large increases in 2020 and 2021.

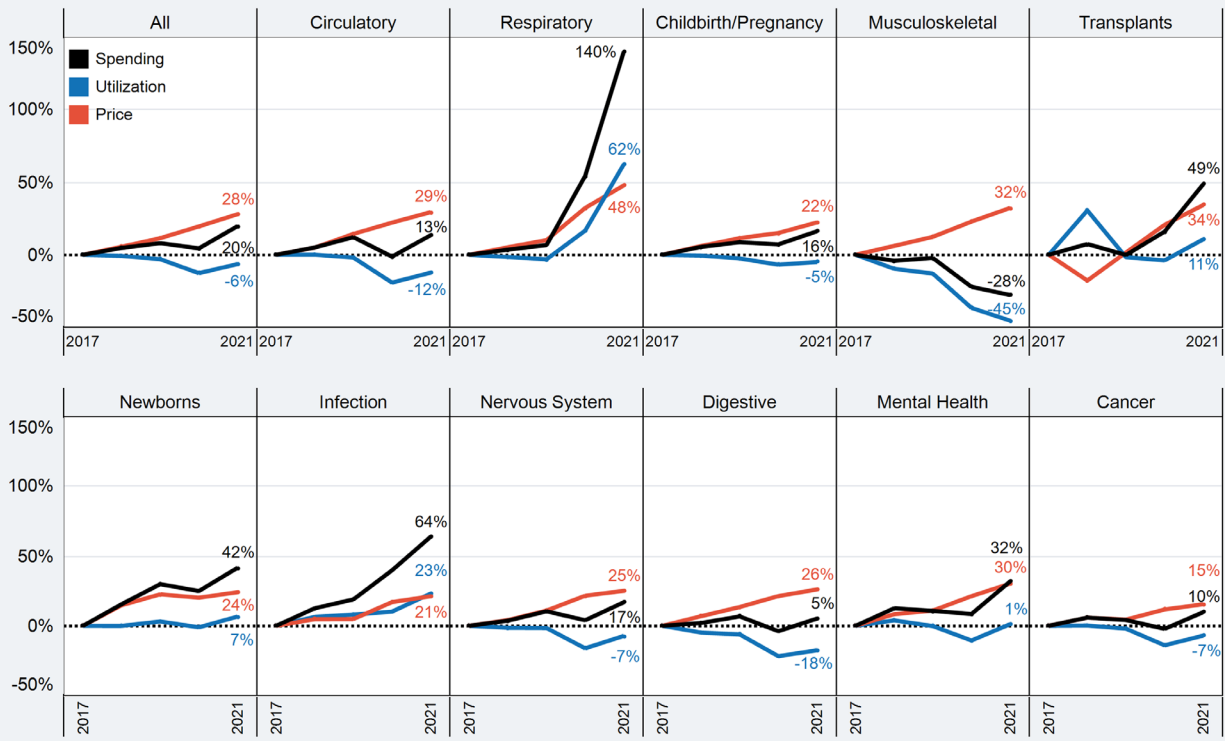
**Figure 18: Cumulative Change in Inpatient Facility Spending per Person**





# Trends in Inpatient Spending, Utilization, and Price

**Figure 19: Cumulative Percent Change in Inpatient Facility Spending per Person, Utilization, and Price for Select Services**

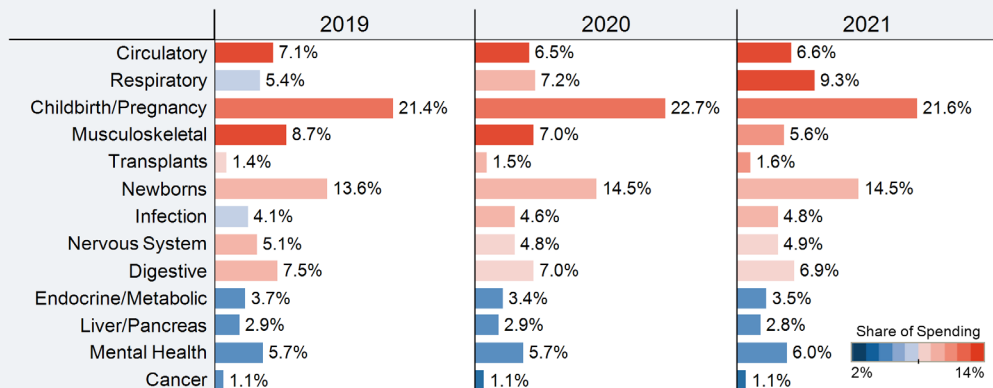


Overall, growth in the average price of an inpatient admission more than offset declines in the number of admissions between 2017 and 2021, leading to **spending** growth of 20% over the five-year period [Figure 19]. Among the top sub-categories of inpatient spending, spending growth over this period was highest for respiratory admissions (140%). Unlike other sub-categories of inpatient care, there was an increase in use (as well as price) for respiratory admissions, consistent with admissions related to COVID-19. In most other sub-categories, use and spending declined in 2020, but the cumulative five-year growth in spending remained positive. Cumulative spending growth was negative for musculoskeletal admissions (-28%), reflecting a substantial decline in utilization (-45%).

**Utilization** declined 6% overall and in most of the top sub-categories of inpatient services, including circulatory admissions (-12%), childbirth/pregnancy admissions (-5%), and musculoskeletal admissions (-45%). The number of respiratory admissions declined each year from 2017–2019 but increased in 2020 and 2021, likely due to COVID-19 hospitalizations.

The cumulative growth in the average **price** of an inpatient admission was 28% between 2017 and 2021. Average price grew in each sub-category of inpatient admissions over this period. The smallest cumulative price growth was for trauma admissions (20%) while the largest growth was for respiratory admissions (48%).

**Figure 20: Share of Inpatient Admissions Utilization**

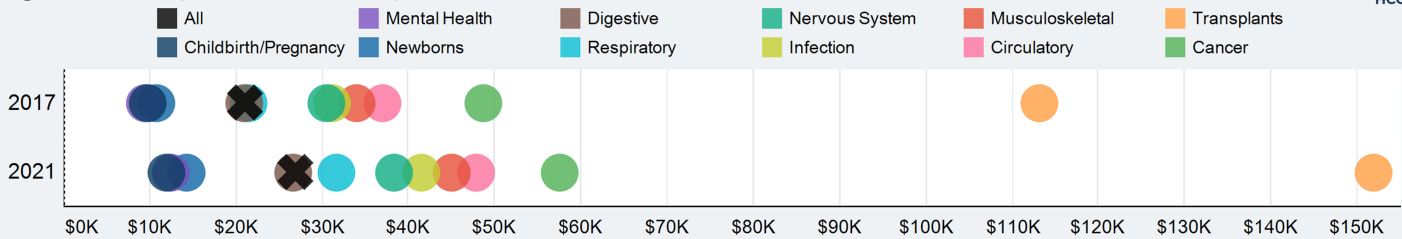


**Note:** All numbers presented in charts are available as downloadable data tables. Data in charts do not total to 100% since selected categories are shown. Data for all detailed subcategories of inpatient services are available to download and explore.

## Average prices increased across all subcategories of inpatient admissions between 2017 and 2021 [Figure 21].

- Overall, the average price (x) for an inpatient admission was \$26,979 in 2021, up from \$21,089 in 2017.
- Average prices were highest, and increased most from 2017–2021, for **transplants** (\$151,922 in 2021, up from \$113,123 in 2017).
- The price of **circulatory** admissions and **respiratory** admissions, which made up the largest shares of inpatient spending in 2021, grew from \$36,962 to \$47,818 and \$21,452 to \$31,702, respectively between 2017 and 2021.
- The average price of **childbirth/pregnancy** admissions, which made up over 20% of inpatient admissions in 2021, was \$9,823 in 2017 and \$12,013 in 2021.
- The average price of an admission for **cancer** was \$57,499 in 2021, up from \$48,690 in 2017.

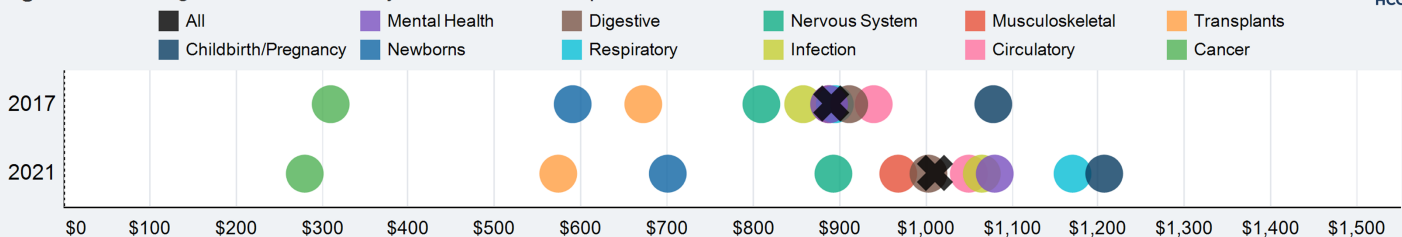
Figure 21: Average Prices of Select Inpatient Admissions in 2017 and 2021



## Average out-of-pocket payments increased for most subcategories of inpatient admissions between 2017 and 2021 [Figure 22]. These amounts capture only the out-of-pocket payment for facility costs; payments associated with professional services received during an inpatient stay are in the professional spending category.

- Overall, the average out-of-pocket payment (x) for the facility component of an inpatient admission rose close to 14% from \$891 in 2017 to \$1,012 in 2021.
- Childbirth/pregnancy** admissions accounted for the plurality of admissions and had among the highest average out-of-pocket payments, \$1,206 in 2021, a \$127 increase for this type of admission since 2017.
- The biggest increase in average out-of-pocket payment for an inpatient admission between 2017 and 2021 was for **respiratory** admissions; patients paid, on average, \$1,170 for this type of admission (including for COVID-19) in 2021, a \$276 increase from 2017.
- For a **musculoskeletal** admission, patients paid \$967 on average in 2021, up from \$888 in 2017. For a **circulatory** admission, the average out-of-pocket payment in 2021 was \$1,049, up from \$940 in 2017.

Figure 22: Average Out-of-Pocket Payments for Select Inpatient Admissions in 2017 and 2021

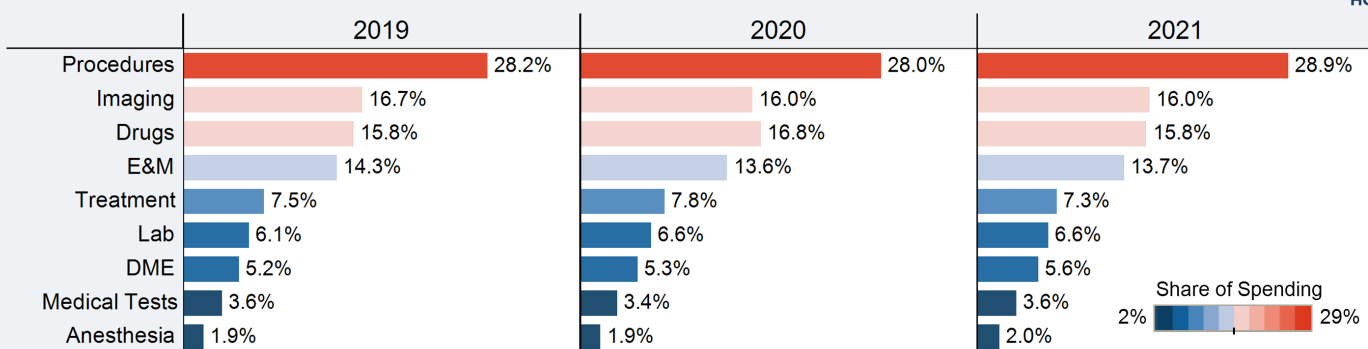






# Outpatient Spending Trends

### Figure 23: Share of Outpatient Facility Spending



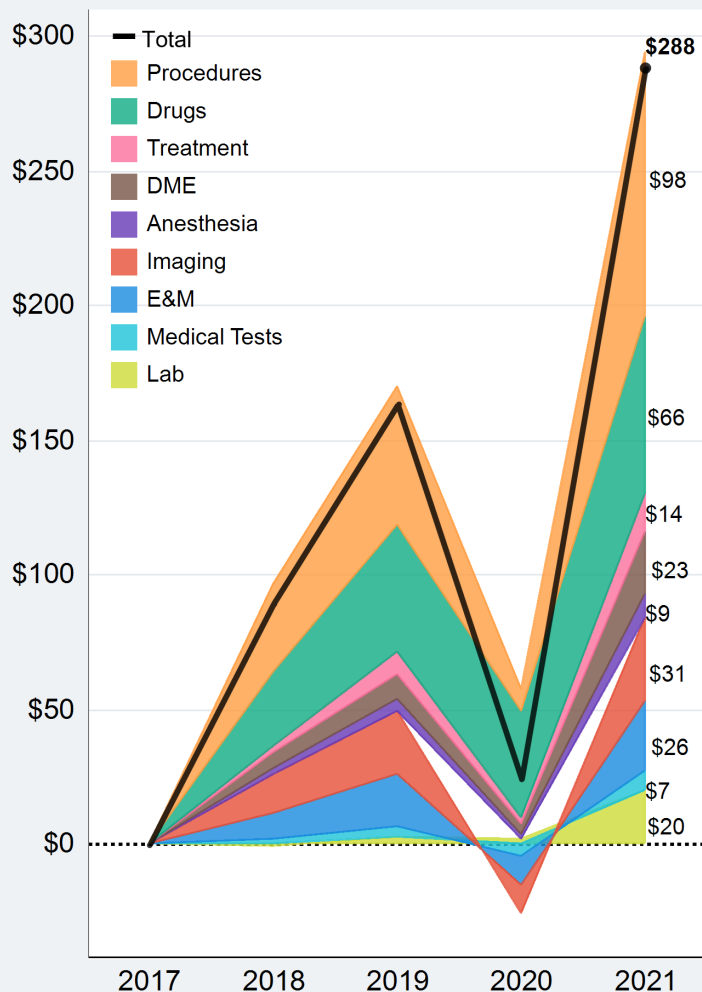
Between 2017 and 2019, spending per person on outpatient services grew faster than any other medical service category, rising an average of 5% year-over-year. In 2020, outpatient spending experienced the biggest decline of all categories (-8%), followed by the largest increase in spending of all categories in 2021 (17%), resulting in a cumulative \$288 (19%) change over the five-year period [Figure 24].

Close to 45% of outpatient spending fell into two subcategories: **procedures** (29%) and **imaging** (16%) [Figure 23]. The **procedures** subcategory also saw the largest growth in spending between 2017 and 2021 (\$98). While **imaging** services experienced a large decline in spending in 2020, spending increased in 2021, resulting in a cumulative increase of \$31 over 2017–2021.

**Drugs** was the next largest subcategory of outpatient spending, accounting for close to 16% of spending in 2021. This subcategory also saw the second largest growth in spending between 2017 and 2021 (\$66). Evaluation and Management (**E&M**) visits (including in the emergency room), accounted for about 14% of outpatient facility spending in 2021.

The remaining subcategories, including treatments, laboratory procedures, durable medical equipment (DME), and tests, and anesthesia services, accounted for about one-quarter of outpatient facility spending.

### Figure 24: Cumulative Change in Outpatient Facility Spending per Person

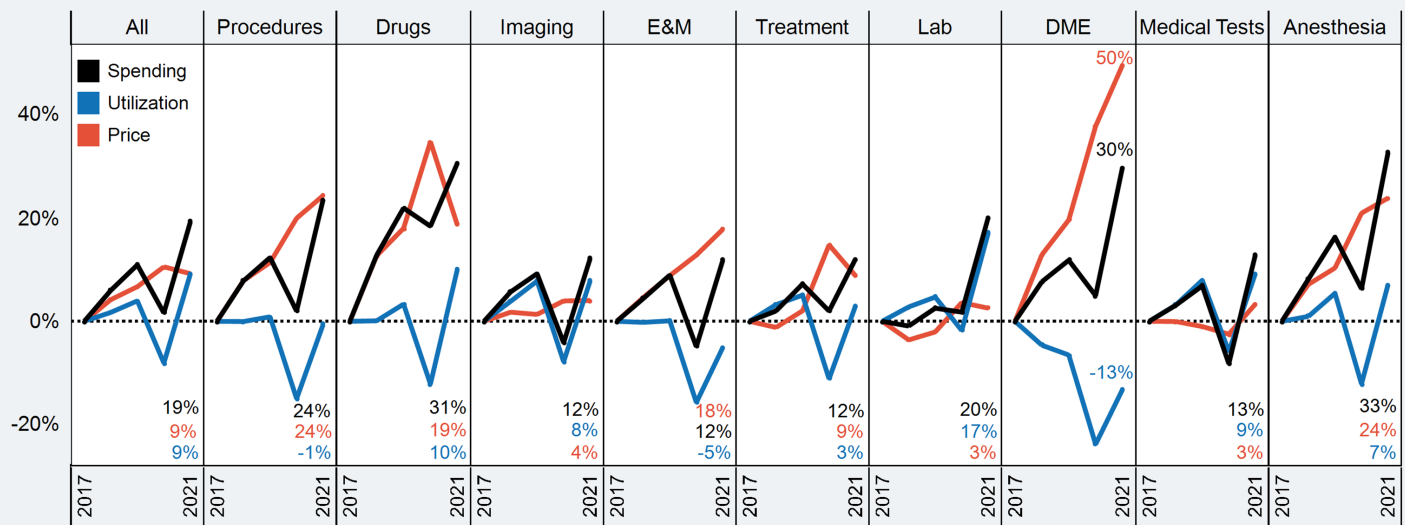




# Trends in Outpatient Spending, Utilization, and Price



**Figure 25:** Cumulative Percent Change in Outpatient Facility Spending per Person, Utilization, and Price for Select Services

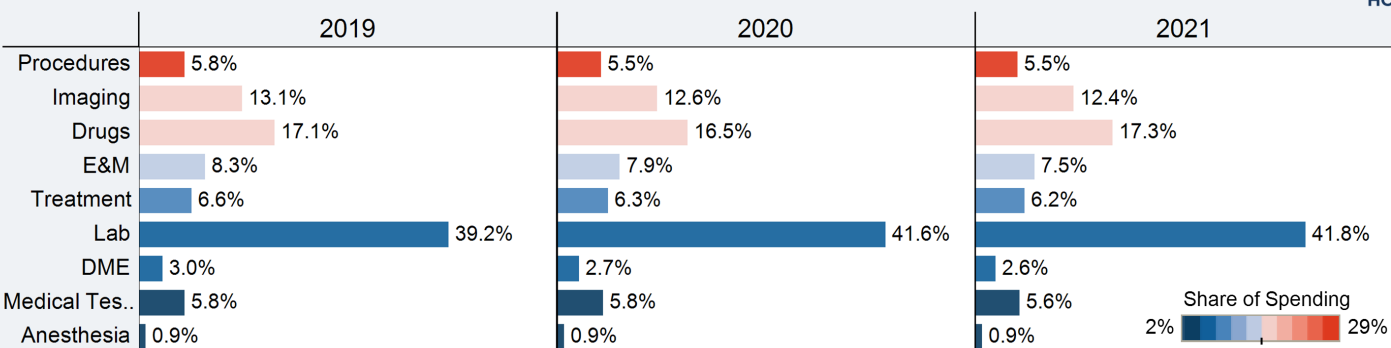


In all subcategories of outpatient services, **spending** increased between 2017 and 2021 despite declines in spending in 2020. Overall, there was an 19% cumulative increase in spending between 2017 and 2021, driven by a 9% increase in price and a 9% increase in utilization [Figure 25]. The cumulative rise in spending was highest for anesthesia (33%), outpatient drugs (physician-administered injections/infusions) (31%), and durable medical equipment (DME) (30%).

**Utilization** increased 9% overall and in all sub-categories other than procedures (-1%), evaluation and management (E&M) services (-5%), and DME (-13%) over the 2017–2021 period. The biggest increases in utilization were for lab services (17%) and drugs (10%). **Prices** rose between 2017 and 2021 for all outpatient services, with the biggest increases in DME (50%), procedures (24%), and anesthesia (24%).

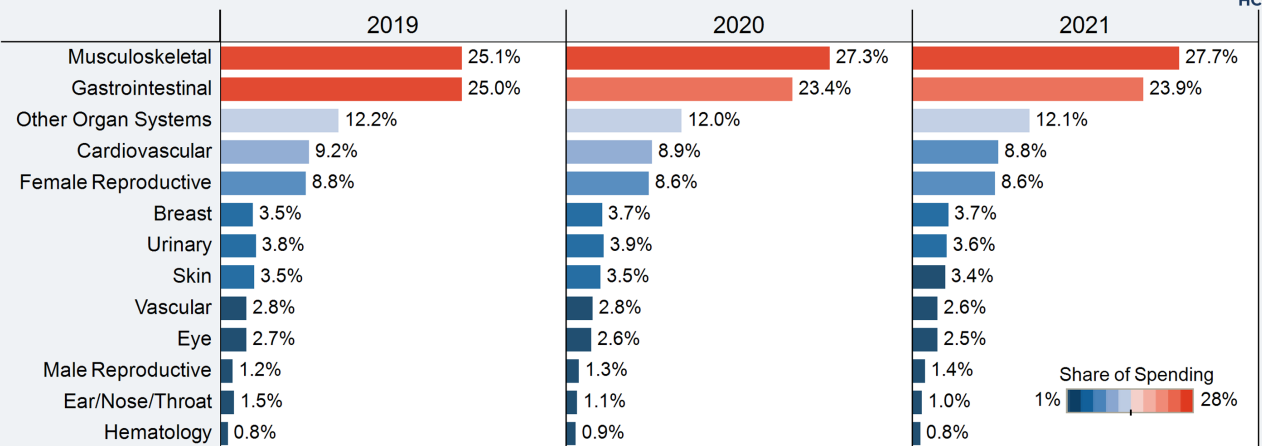
**General labs accounted for over 40% of outpatient services in 2021 [Figure 26].** Drugs (17%) and imaging (12%) made up the next largest shares of outpatient services in 2021. Outpatient E&M visits accounted for 7.5% of outpatient services; just over half of these occurred in the emergency room. Outpatient treatments, tests, and procedures each accounted for approximately 6% of outpatient services.

**Figure 26:** Share of Outpatient Facility Services Utilization



**Note:** All numbers presented in charts are available as downloadable data tables. Data in charts do not total to 100% since selected categories are shown. Data for all detailed subcategories of outpatient services are available to download and explore.

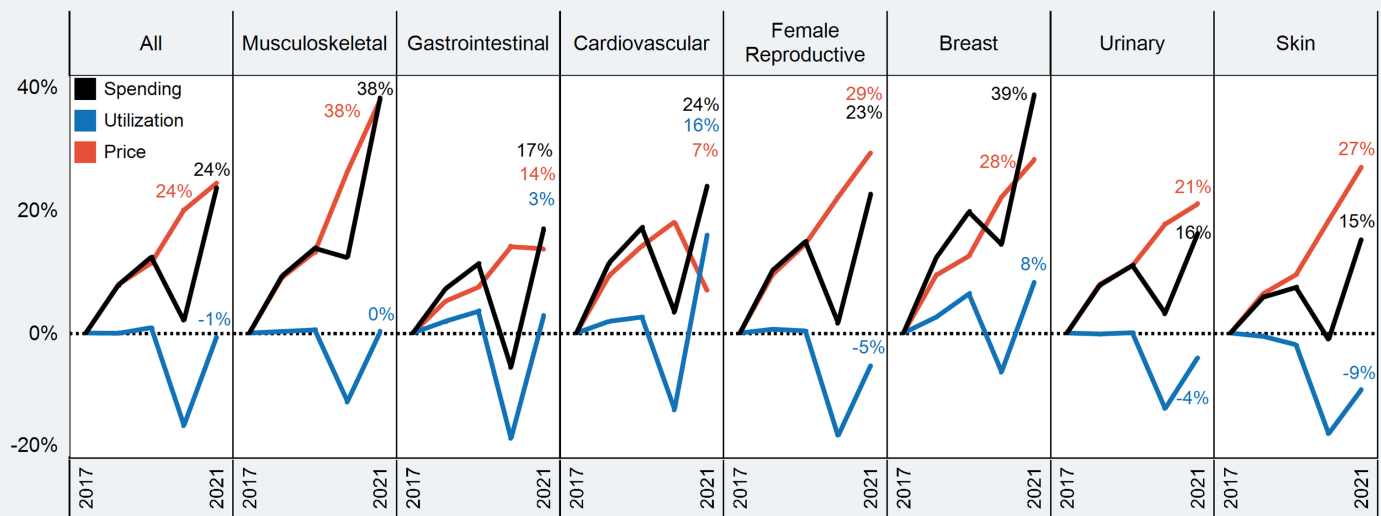
**Figure 27: Share of Outpatient Procedures Facility Spending**



Procedures accounted for over one-quarter of (facility) spending on outpatient services. Within the procedures category, musculoskeletal procedures represent the largest share of spending (28%), closely followed by gastrointestinal (GI) procedures (24%) [Figure 27]. These two categories made up half of all facility spending on outpatient procedures in 2019, 2020, and 2021.

From 2020 to 2021, utilization of all subcategories of procedures increased, following declines in 2020 during the beginning of the COVID-19 pandemic. Over the five-year period from 2017–2021, most subcategories of procedures had consistent utilization, but use of cardiovascular procedures grew 16% over this period and use of breast procedures grew 8%. Over the five-year period, prices for outpatient procedures increased. Musculoskeletal procedures had the largest price growth, a 38% increase in average price from 2017 to 2021. Female reproductive procedures had the second highest price growth, 29%. Price growth over five years was slower for cardiovascular (7%) and GI (14%) procedures [Figure 28].

**Figure 28: Cumulative Percent Change in Outpatient Procedures Facility Spending per Person, Utilization, and Price for Select Services**



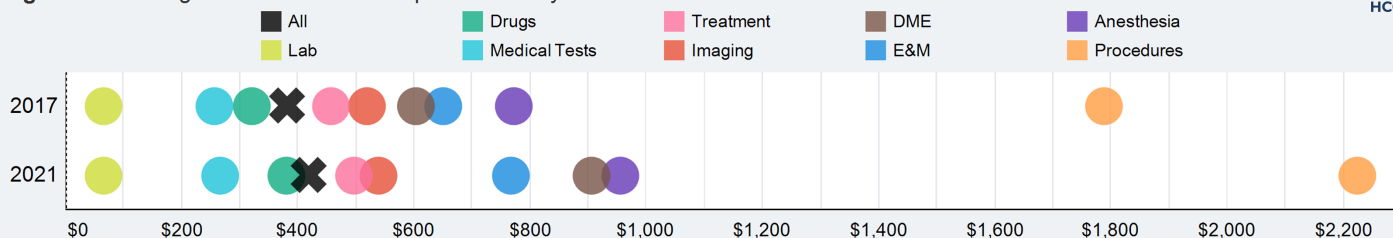


# Outpatient Visit Prices and Out-of-Pocket Payments

Average prices increased across all major (in terms of volume and spending) subcategories of outpatient visits between 2017 and 2021 [Figure 29].

- Overall, the average price for an outpatient service (x) was \$420 in 2021, up from \$384 in 2017.
- Average prices were highest for outpatient **procedures** (\$2,224) and **anesthesia** (\$956).
- The increase in average price was largest for outpatient **procedures**, rising from \$1,789 in 2017 to \$2,224 in 2021.
- Durable medical equipment [DME]** had the next highest average price increase during the period, rising from \$605 in 2017 to \$905 in 2021.
- The average price of **anesthesia** was \$956 in 2021, up from \$772 in 2017, the third largest price increase among outpatient categories shown [Figure 25].

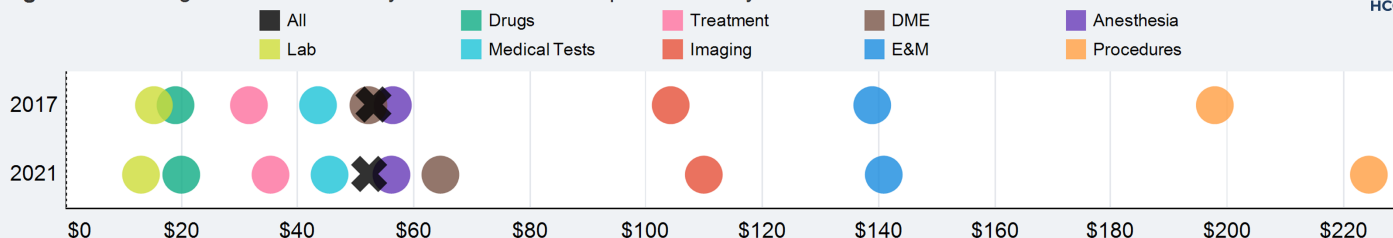
Figure 29: Average Prices of Select Outpatient Facility Services in 2017 and 2021



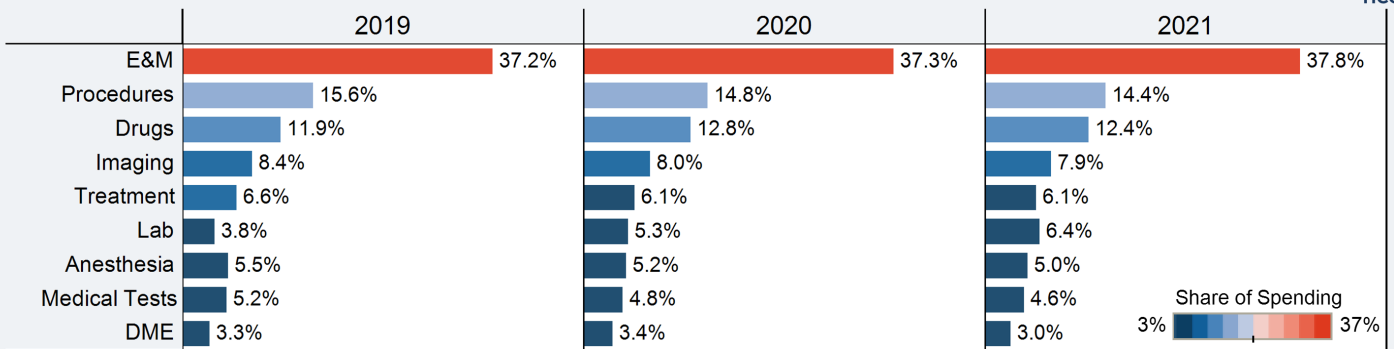
Average out-of-pocket payments increased slightly for most subcategories of outpatient services.

- Overall, patients paid \$52 on average out-of-pocket (x) for an outpatient service in 2021, similar to the average out-of-pocket payment for an outpatient service in 2017 (\$53).
- The average out-of-pocket payment varied substantially across outpatient services, including relatively low-cost services such as **labs** (\$13) as well as high-cost services such as outpatient **procedures** (\$225).
- The average out-of-pocket payment increased most for outpatient **procedures**, rising from \$198 in 2017 to \$225 in 2021.
- In general, outpatient services with higher average prices [Figure 29] had higher out-of-pocket payments [Figure 30].

Figure 30: Average Out-of-Pocket Payments for Select Outpatient Facility Services in 2017 and 2021



**Figure 31: Share of Professional Services Spending**



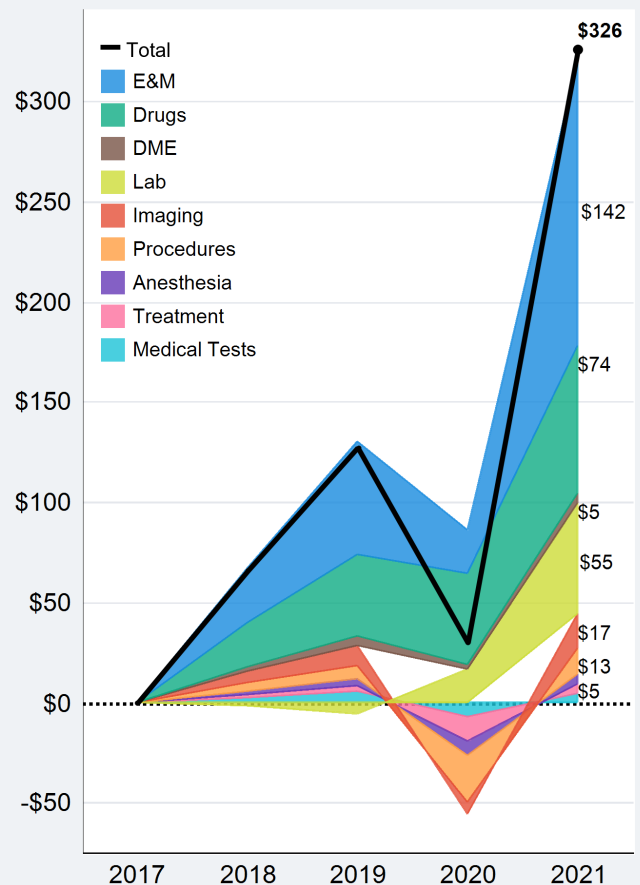
Professional services spending includes payments to physicians and other members of a clinical care team. This spending also includes payments for drugs, labs, and other components of care that the clinical team may provide. Often, professional services occur in a doctor’s office. However, this category also includes services provided by physicians in hospitals during an inpatient admission, as well as in the emergency room and other outpatient settings.

Spending on professional services rose steadily between 2017 and 2019, declined in 2020, and rebounded in 2021, resulting in a cumulative 19% increase (\$326) over the five-year period [Figure 32]. Spending growth was driven by increases in spending on evaluation and management (E&M) visits, administered drugs, and labs.

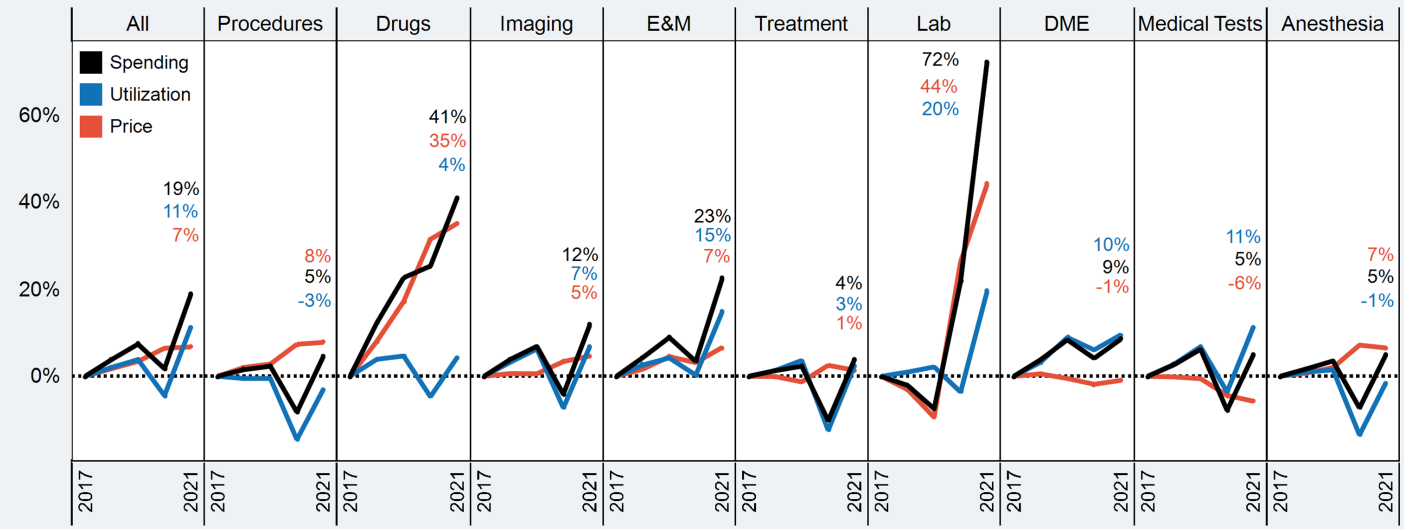
E&M visits accounted for the largest share of spending among professional services (close to 40%) in 2021 [Figure 31] and increased \$142, the largest increase in spending over the 2017–2021 period. These visits include those that occur in a physician’s office as well as those that occur via telehealth. The second largest growth in spending occurred among administered drugs, which increased a cumulative \$74 over the period. Together, the increases in spending on E&M visits, administered drugs, and labs accounted for over 80% of the increase in spending on professional services between 2017 and 2021.

In 2021, spending on the professional services accompanying procedures accounted for 14% of professional spending. Spending on these services rose between 2017 and 2019, declined significantly in 2020, and rose in 2021 for a cumulative increase of \$13.

**Figure 32: Cumulative Change in Professional Services Spending per Person**



**Figure 33: Cumulative Percent Change in Professional Services Spending per Person, Utilization, and Price for Select Services**

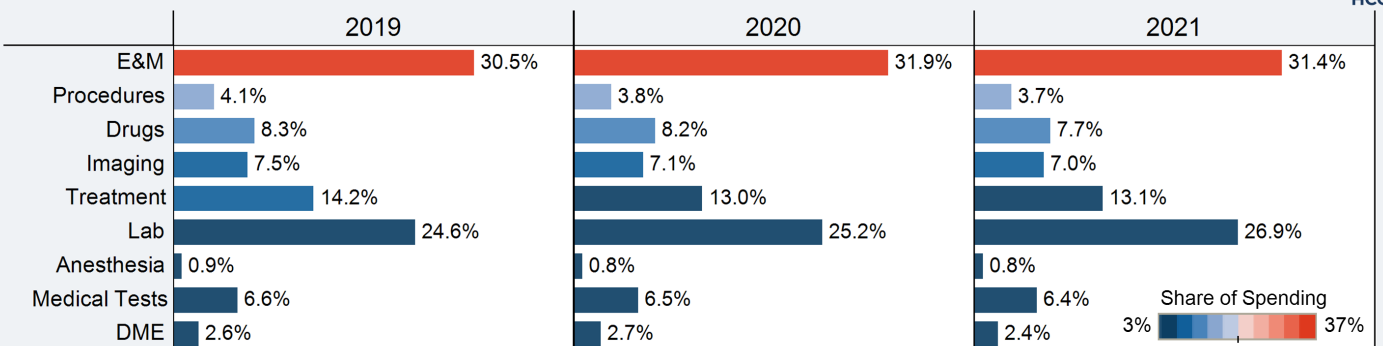


Overall, the average price of professional services rose from 2017 through 2021 (7%) while utilization rose from 2017–2019, declined in 2020, and rose in 2021 for a cumulative increase of 11%. Together, rising use and prices lead to cumulative **spending** growth of 19% over the five-year period [Figure 33]. Among sub-categories of professional services, spending rose most for lab services (72%) and physician-administered drugs (41%). The increase in lab service spending was likely related to COVID-19 tests, the costs of which fall in this category.

**Utilization** increased 11% overall and in most sub-categories over the 2017–2021 period. Two subcategories, procedures (-3%) and anesthesia services (-1%), saw small declines in use over the five-year period. The cumulative growth in the average **price** of a professional service was 7% between 2017 and 2021. Average price grew in each sub-category of professional services over this period, with the exception of medical tests (-6%) and DME (-1%). The largest price increase over the five-year period was for general labs (44%), which included COVID-19 tests in 2020 and 2021, and drugs administered by a professional (35%), which included vaccines for COVID-19.

Evaluation and management visits (E&M) made up about 31% of professional service use in 2021, similar to the shares in 2019 and 2020. Lab tests made up the next largest share of professional services, about 27% in 2021 [Figure 34].

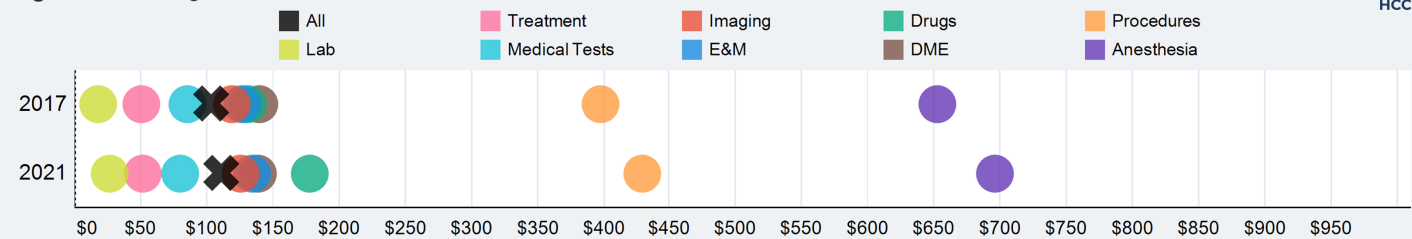
**Figure 34: Share of Professional Services Utilization**



Average prices increased across nearly all subcategories of professional services between 2017 and 2021 [Figure 35], with the largest increases for anesthesia, procedures, and administered drugs.

- Overall, the average price for a professional service (x) was \$111 in 2021, up from \$104 in 2017.
- Anesthesia** was the highest priced subcategory within the professional services category in both 2017 and 2021, with an average price of \$653 in 2017 and \$696 in 2021.
- Professional services associated with **procedures** were the second highest priced subcategory in both 2017 and 2021, with an average price of \$398 in 2017 and \$429 in 2021.
- Administered drugs** were the third highest priced professional service, with an average price of \$177 in 2021. This subcategory also had the largest increase in average price (\$46) between 2017 and 2021.

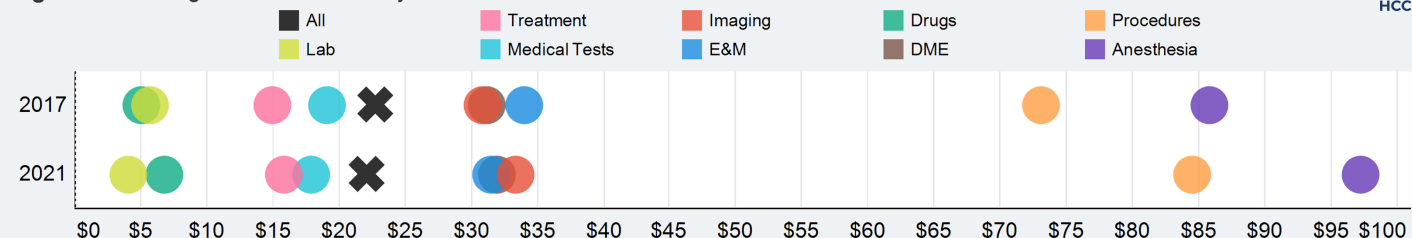
Figure 35: Average Prices of Select Professional Services in 2017 and 2021



Changes in average out-of-pocket payments between 2017 and 2021 were small for most subcategories of professional services [Figure 36].

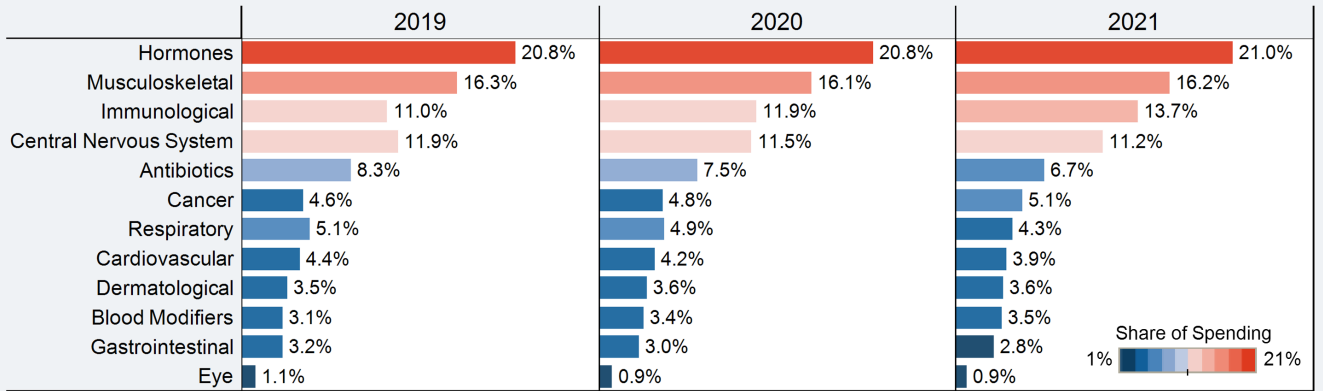
- Overall, the average out-of-pocket payment for a professional service (x) was \$22 in 2021, similar to the average in 2017 (\$23). The average out-of-pocket payment ranged from \$4 for labs to \$97 for anesthesia procedures in 2021.
- The largest increases in out-of-pocket payments occurred for **procedures**, which rose from \$73 in 2017 to \$85 in 2021, and for **anesthesia**, which rose from \$86 to \$97 over this five-year period. These costs may include payments to physicians who bill separately for services provided during an outpatient (e.g., ER) visit and are in addition to any outpatient facility payments.
- Durable medical equipment [DME], E&M visits, and imaging** services had the next-highest average out-of-pocket payments in 2017 and 2021, just over \$30 in both years. Again, these reflect the payments to physicians and are often associated with either an inpatient admission or outpatient visit.

Figure 36: Average Out-of-Pocket Payments for Select Professional Services in 2017 and 2021



# Prescription Drug Spending Trends

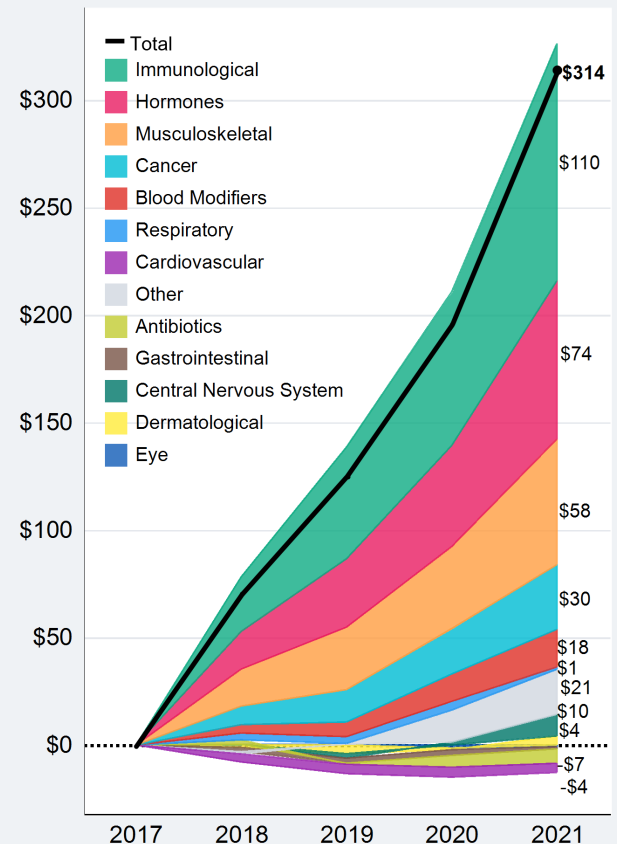
**Figure 37: Share of Prescription Drug Spending**



Prescription drug spending includes payments made for drugs dispensed by retail and mail-order pharmacies. This does not include certain drugs administered by physicians or other health care providers during inpatient admissions, in outpatient facilities, or in doctors' offices. Per-person spending on prescription drugs, based on point-of-sale payments, totaled \$1,396 in 2021, an increase of \$314 (29%) from 2017. This change reflects increases in expenditures for the same drugs, increases in expenditures for newly approved medications, and decreases due to generic entry.

The largest subcategory of prescription drug spending was **hormones** (21%), followed by **musculoskeletal** (16%), and **immunological** (14%) drugs [Figure 37]. Since 2017, spending per person in these categories, as well as most other categories of drugs, increased [Figure 38]. Spending increased most for immunological drugs (\$110), which includes drugs used to treat rheumatoid arthritis and other autoimmune diseases. The second largest spending increase was for hormones (\$74), this includes insulin, contraceptives, and drugs used to treat thyroid conditions. Spending on musculoskeletal drugs, including arthritis drugs and muscle relaxants, increased \$58 over this period.

**Figure 38: Cumulative Change in Prescription Drug Spending per Person**



**Methods Note:**

These estimates do not reflect manufacturer rebates, coupons, or other discount programs, because those data are not available. They do, however, include negotiated discounts from the wholesale or "list" price, and are the amounts that appear on the pharmacy claim. Thus, the term, "point-of-sale" price is used to describe the spending per filled day. Any additional manufacturer rebates occur through separate transactions. The degree to which rebates offset point-of-sale spending varies across types of drugs, as well as across specific products, depending on details of the negotiations between manufacturers and pharmacy benefit managers (PBM). Further, how the value of the rebates is distributed across PBMs, insurers, and consumers also varies. Information on these aspects of manufacturer rebates are not available in pharmacy claims data. The change in point-of-sale prices estimated in this report reflects a combination of higher point-of-sale prices for the same drugs and shifts in use to more expensive products, including those introduced during the period.

**Note:** All numbers presented in charts are available as downloadable data tables. Data in charts do not total to 100% since selected categories are shown. Data for all detailed subcategories of prescription drugs are available to download and explore.



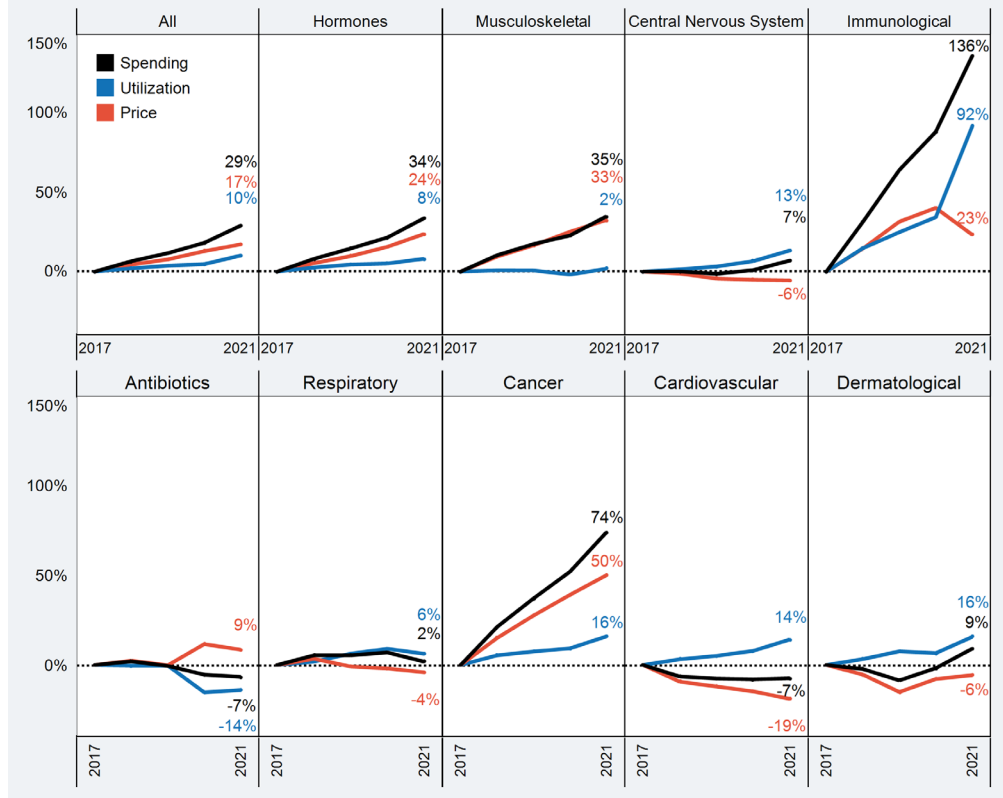
# Trends in Prescription Drug Spending, Utilization, and Price

**Spending** on prescription drugs grew steadily between 2017 and 2021 for a cumulative growth of 29%, driven by increasing utilization and prices.

Spending grew most for immunological drugs (136%), cancer drugs (74%), musculoskeletal drugs (35%), and hormones (34%). There were moderate declines in cumulative spending over the 2017–2021 period for antibiotics (-7%) and cardiovascular drugs (-7%).

**Utilization** is measured as the number of filled days per person; utilization increased between 2017 and 2021, with a cumulative increase of 10% over the five-year period. Utilization trends varied by subcategory [Figure 39].

**Figure 39: Cumulative Percent Change in Prescription Drug Spending per Person, Utilization, and Price for Select Drug Categories**

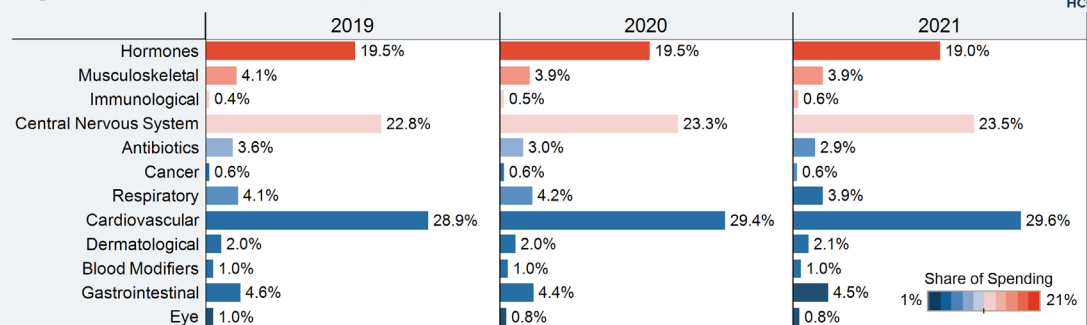


For example, use of immunological medications rose 92% from 2017 to 2021. Use of cancer-related medications rose 16% over the five-year period while use of cardiovascular drugs rose 14%. On the other hand, use of antibiotics was flat from 2016 to 2019 and then declined sharply in 2020, with a total decline of 14% between 2017 and 2021. The average point-of-sale **price** for prescription drugs was 17% higher in 2021 than 2017. Over the five-year period, prices increased for all categories of drugs other than cardiovascular drugs (-19%), central nervous system (CNS) drugs (-6%), dermatological drugs (-6%), and respiratory drugs (-4%). These categories of drugs have experienced high and increasing use of generics in recent years. The substitution of lower price generics for brand medications results in a decrease in average price and spending.

Cardiovascular drugs made up the largest share of total days supplied of prescription drugs in 2021, close to 30%.

CNS drugs, which include most drugs for mental health conditions (e.g., antidepressants), made up almost one-quarter of days supplied. Hormones, including insulin and contraceptive pills, made up another 19% of days supplied [Figure 40].

**Figure 40: Share of Prescription Drug Days Supplied**





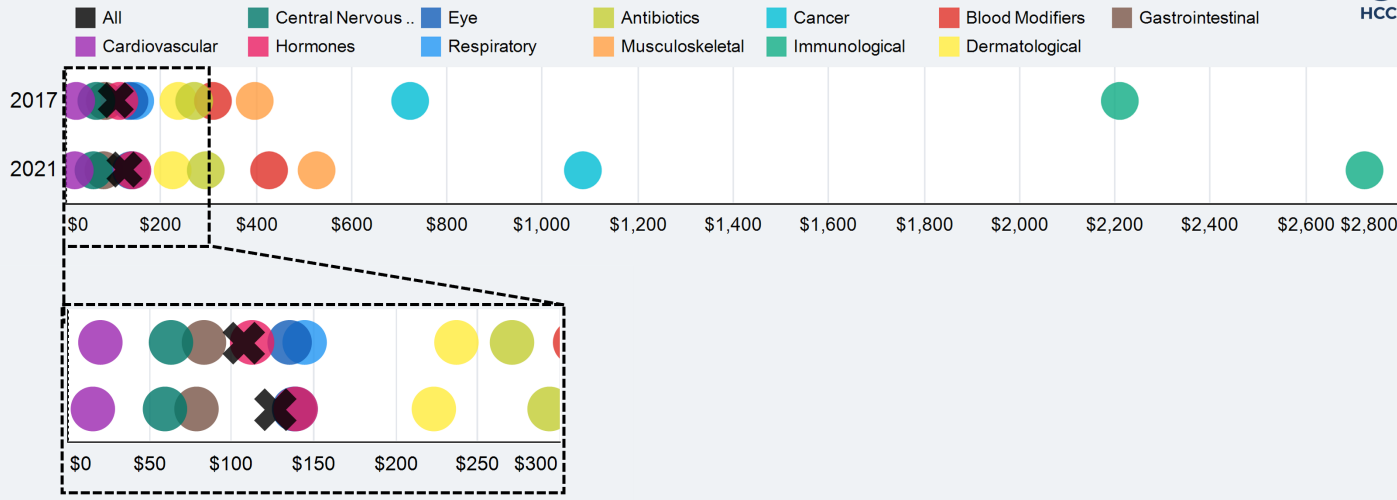
# Prescription Drug Prices and Out-of-Pocket Payments

## Changes in drug prices between 2017 and 2021 varied by type of drug [Figure 41].

Average prices and out-of-pocket payments are measured for a 30-day supply. These estimates do not reflect manufacturer rebates, coupons, or other discount programs, because those data are not available.

- The largest increase in average price (\$512) occurred for **immunological** drugs. These drugs are the highest priced in both 2017 (\$2,211) and 2021 (\$2,723) by far.
- **Cancer** drugs had the second highest prices in both years and experienced the second greatest increase in price between 2017 and 2021, rising more than \$360.
- **Musculoskeletal** drug prices increased from \$397 in 2017 to \$526 in 2021.
- The average price for a 30-day supply decreased between 2017 and 2021 for **central nervous system (CNS)**, **cardiovascular**, dermatological, **GI**, and **respiratory** drugs.

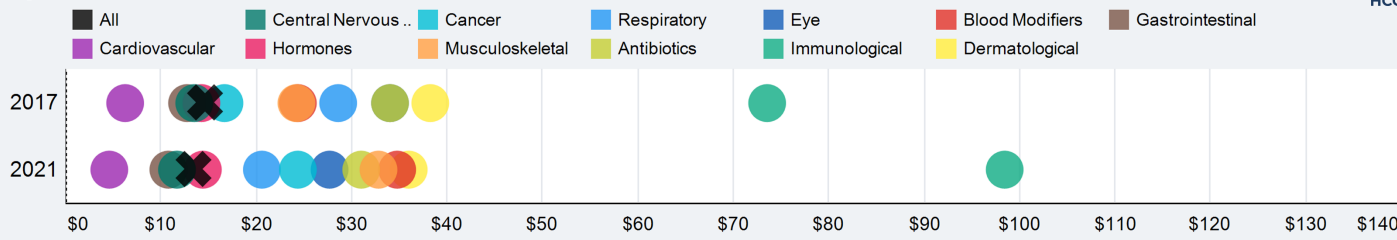
Figure 41: Average Point-of-Sale Prices for Prescription Drugs 30-Day Supply in 2017 and 2021



## The average out-of-pocket cost a patient faced for a 30-day supply across all drugs in our data was \$13 in 2021, down from \$15 in 2017 [Figure 42].

- The average out-of-pocket payment across drugs ranged from \$5 for **cardiovascular** drugs to \$99 for **immunological** drugs in 2021. The average out-of-pocket payment for **immunological** drugs was close to three times higher than the average out-of-pocket payment for dermatological drugs, the subcategory with the next highest average out-of-pocket payment (\$36).
- Changes in average out-of-pocket payments for drugs between 2017 and 2021 were small for nearly all categories, except for **immunological** drugs, which increased \$25 over the five-year period.

Figure 42: Average Out-of-Pocket Payments for Prescription Drugs 30-Day Supply in 2017 and 2021





# Brand and Generic Prescription Drug Spending and Use



**Figure 43:** Share of Prescription Drug Utilization, Spending, and Out-of-Pocket Spending on Brand and Generic Drugs in 2021

	Share of Utilization (days supply)		Share of Spending		Share of Out-of-Pocket Spending	
	Generic	Brand	Generic	Brand	Generic	Brand
All Prescription Drugs	86%	14%	18%	82%	45%	55%
Hormones	56%	44%	8%	92%	25%	75%
Musculoskeletal	91%	9%		96%	21%	79%
Immunological	62%	38%	13%	87%		94%
Central Nervous System	93%	7%	32%	68%	58%	42%
Antibiotics	91%	9%	20%	80%	54%	46%
Cancer	91%	9%	10%	90%	24%	76%
Respiratory	68%	32%	16%	84%	37%	63%
Cardiovascular	98%		60%	40%	82%	18%
Dermatological	87%	13%	31%	69%	47%	53%
Blood Modifiers	48%	52%		96%	9%	91%
Gastrointestinal	94%	6%	30%	70%	57%	43%
Eye	76%	24%	21%	79%	42%	58%

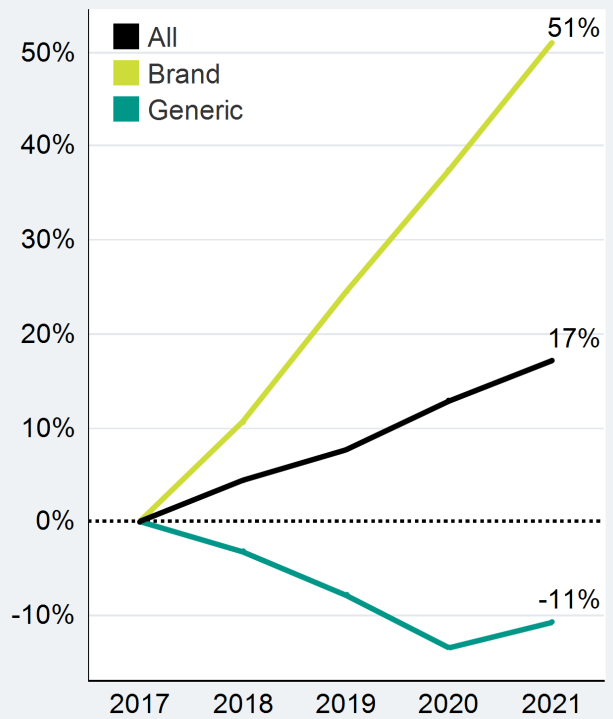
In 2021, **brand** name prescription drugs accounted for only 14% of the utilization of prescription drugs (in terms of days supplied) but over 80% of total prescription drug spending [Figure 43]. In contrast, **generic** prescription drugs represented 86% of prescription drug utilization in 2021 and 18% of spending.

Cardiovascular, gastrointestinal, and central nervous system drugs had the highest shares of generic utilization. Generic use was also over 90% as a share of utilization among musculoskeletal drugs, antibiotics, and drugs related to treating cancer. Blood modifiers, hormones, and immunological drugs had the lowest shares of generic use.

While **brand** prescriptions represented 82% of total prescription drug spending per person, their share of out-of-pocket spending was 55%. Prescription drug coverage benefits and formularies often use copayments as the main form of cost-sharing over coinsurance or deductible, which helps protect people from the prices of more expensive brand name drugs. This measure of out-of-pocket spending does not capture use of coupons or other forms of patient assistance which may lower the final out-of-pocket amount that patients spend on brand name drugs.

From 2017 to 2021 the average price of a 30-day supply of **brand** name prescription drugs increased 51%, while the price for generic drugs decreased 11% [Figure 44].

**Figure 44:** Cumulative Percent Change in Brand and Generic Prescription Drug Point-of-Sale Prices





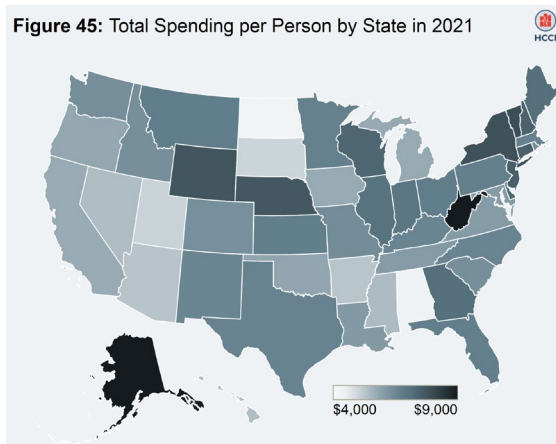
# Beyond the Report: Using the Public Health Care Cost and Utilization Report Data

Data underlying all the figures in this report are available on HCCI’s website. In addition, more detailed data on per person spending, utilization, and prices by service category, state, and age and sex are available. Below we give three examples of how researchers, policymakers, and others can use these data.

## 1. Take a Closer Look Utilization, Spending, and Prices of Services by State: *Per Person Health Care Spending by State*

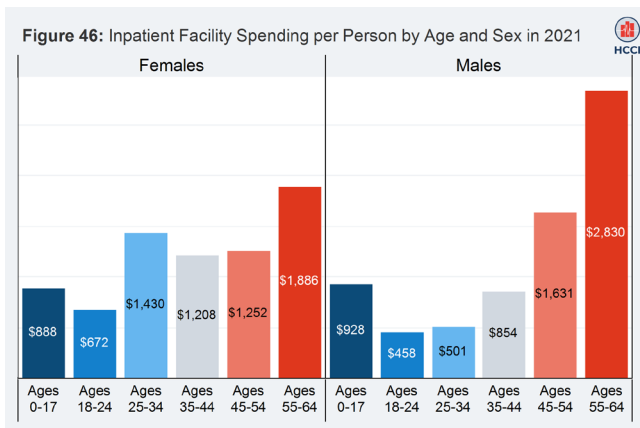
Per person spending on health care varied dramatically across states [Figure 45]. Compared to the national average, \$6,467, state-level average spending per person with ESI ranged from \$4,230 in Montana to \$10,703 in Alaska in 2021. The downloadable data accompanying this report also includes per person spending by state for each category of care—inpatient, outpatient, professional, and prescription drugs.

Figure 45: Total Spending per Person by State in 2021



## 2. Take a Closer Look Utilization, Spending, and Prices of Services by Age and Sex: *An Example of Inpatient Services*

Figure 46: Inpatient Facility Spending per Person by Age and Sex in 2021

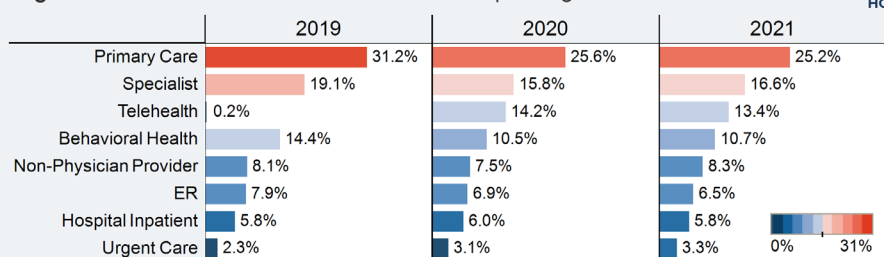


Use of inpatient services varied by age and sex. While females between the ages of 18 and 44 had substantially higher spending per person on inpatient admissions than males in these age groups, younger (ages 0-17) and older (ages 45-64) males had higher average spending per person on these services than females [Figure 46]. This pattern is consistent with childbirth/pregnancy being the most common type of hospital admission in the HCCI data.

## 3. Take a Closer Look at Utilization, Spending, and Prices of Specific Services: *An Example of Evaluation and Management (E&M) Services*

E&M visits accounted for over one-third of spending on professional services. Within the E&M category, in-person primary care visits represented the largest share of spending, 25%, in 2021 [Figure 47]. In 2020, there was a large increase in the share of E&M spending on telehealth visits; this share remained relatively stable in 2021.

Figure 47: Share of Professional E&M Services Spending





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