



SPENDING AND USE AMONG MARYLAND'S PRIVATELY INSURED

Annual Report

Maryland Health Care Commission

CENTER FOR ANALYSIS AND INFORMATION SYSTEMS

2018

Highlights

- ❖ **Overall, the per member spending growth rate for all services combined among Maryland's privately insured residents increased by 2.9%:**
 - Per member spending for all services combined increased by 2.9% from 2017-2018. In comparison, Maryland experienced a 6.5% spending increase for all services combined among the privately insured from 2016-2017.
 - **Per member spending increased across all three markets:**
 - In the individual market, spending grew by 15.8% in 2018. This increase is up slightly (0.5 percentage points) compared to 2017, which had an increase of about 15.3% in per member spending.
 - Per member spending in the small employer market increased by about 4.9% in 2018 compared to a 5.4% growth rate in 2017.
 - In the large employer market, per member spending grew more slowly in 2018 (1.8%) compared to a 5.4% increase in 2017.
- ❖ **An increase in inpatient hospital facility services per member spending was the primary contributor to the increase in spending for 2018:**
 - **Inpatient hospital facility services spending increased by 6.2% across all markets.** This increase was driven by an increase in unit cost of about 5.2%.
 - All three market types, (large employer, small employer and individual), contributed to the increased inpatient hospital facility services spending at 5.8%, 6.8%, and 17.2%, respectively.
 - Inpatient hospital facility services accounted for about 16% of the total privately insured per member spending in 2018.
- ❖ **Per member spending changes in 2018 in other service categories:**
 - **Outpatient hospital facility services spending declined across all markets from 2017-2018.** Per member spending for outpatient hospital facility services dropped in the large employer market (1.2%) but rose slightly in the small employer market (2.9%) and rose significantly in the individual market (11.8%).
 - **Outpatient non-hospital facility services showed the largest increase of 16%.** The overall impact is modest as outpatient non-hospital facility services account for about 2% of overall spending.
 - **Labs/Imaging services continue to show a decrease in per member spending in 2018.** The rate of decline was slower than the previous year (1.7% decrease in 2018 and 3.2% decrease in 2017).
 - The 1.7% decrease was mainly driven by a 3.4% decrease in utilization, offset by a 1.8% increase in unit cost.
 - **Professional services increased by 2.4% in per member spending from 2017 to 2018.** Professional services made up about 30% of all per member spending in 2018.
 - **Prescription drug per member spending across all markets grew by 4% in 2018.** Even though the prescription drug per member spending grew at 19.3% for the individual market in 2018, the large employer and small employer markets showed per member spending growth of 3.1% and 3.9%, respectively.



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Background

This report examines health care spending and utilization patterns for Maryland residents insured through the privately-insured (i.e., commercial) individual, small employer, and large employer markets.¹ The analysis relies on 2016, 2017, and 2018 data from Maryland's Medical Care Database (MCDB), which contains health insurance enrollment, health care claims, and encounter data for Maryland residents². These data are submitted quarterly to the Maryland Health Care Commission (MHCC) by private health insurance carriers. Most private health insurance carriers serving Maryland residents submit MCDB data, including CareFirst, United HealthCare, Kaiser Permanente (Kaiser — claims are not included in this report), Cigna, and Aetna. This report is limited to data for Maryland residents who are enrolled in fully insured, self-insured non-ERISA and self-insured ERISA (very limited — payers who report ERISA data voluntarily) health plans and are under 65 years of age. For this year report we calculated spending metric in terms of annual per member instead of per member per month (PMPM).

We are excited to mention two additions to the 2018 report. First, we have included primary care spending among the privately insured as a percentage of overall outpatient medical spending, based on the primary care specialty definition from a Milbank report³. We show a description of primary care spending by market and selected demographic characteristics. The proportion of spending on primary care compared to all services also is reported.

Second, we report on the most expensive drugs in the privately insured population during 2018 using the Multum lexicon database. This database contains tables which, together, provide a comprehensive suite of drug product and disease nomenclature information. Per member spending for prescription drugs in the United States is higher than in all other countries, largely driven by brand-name drugs. To determine the most expensive drugs, we summed total spending which includes payor reimbursement and member out-of-pocket (OOP) costs. We calculated the cost per prescription, member cost per prescription, and then ranked the drugs based on total spending and total number of prescriptions. In addition to the most expensive drugs in all markets, we include data specific to state employees enrolled in private insurance, as this is an area of focus for the newly formed Prescription Drug Affordability Board⁴.

Part 1 of this report presents enrollment, spending, utilization, and unit cost data for all privately insured health insurance markets, including comparisons among the individual, small employer, and large employer markets. Data on variation by geography, age, and service category are also included. Part 2 of this report focuses exclusively on the small employer market. Part 3 of the report provides similar data for the individual market only. Part 4 of this report describes primary care spending as a percentage of overall outpatient medical spending.

This report is one in a series of reports that fulfills the annual reporting requirements for information from the MCDB, as required under Maryland law. Measures used in this analysis are defined in the Methods section of Appendix B at the end of the report.

¹ Data on self-insured non-ERISA and self-insured ERISA (on a very limited basis) plan products are included in this report.

² About 20 other states have developed data systems similar to the Medical Care Data Base, operatively these are named All Payer Claim Database (APCD). Like the MCDB, these APCDs do not include some payers or certain coverage types.

Data Limitations for this Report

This report does not include data from self-insured private employers exempt from state insurance oversight due to Employee Retirement Income Security Act of 1974 (ERISA). The report does include data for individuals covered through self-insured non-ERISA employer-sponsored plans from Maryland/ local governments, and public schools in Maryland. Medical and pharmacy utilization for these individuals are grouped in the large employer market and in the overall total findings.

MHCC excluded the Federal Employee Health Benefit (FEHB) Program PPO data from this year's report because we found that Caremark (a PBM) understated FEHB PPO pharmacy claims for all four quarters of 2018. Because of the reporting restriction imposed by the Office of Personnel Management (OPM) on payers who have a contract with the Office to stop reporting all FEHB data to APCDs, Caremark could not resubmit the 2018 data to correct the understatement of claims. We are reporting primary care spending as a percent of total expenditures (medical and prescription drug) for the first time in the privately insured report. Including the FEHB PPO medical claims without the correct FEHB PPO prescription drug claims would have overstated the primary care results. Therefore, all FEHB PPO data (enrollment and claims) are excluded from this report.

MHCC also excluded all medical devices pharmacy claims from this year's report because these claims had not been included by all payers in previous years. Including medical devices claims would have produced a misleading overall spending growth rate.

The elimination of FEHB PPO and medical device claims required MHCC to re-estimate 2017 and 2016 analyses to make them comparable to 2018. As a result, estimates reported this year for 2016 and 2017 spending will differ slightly from the results reported in the 2017 privately insured report

Kaiser did not provide claim-level payment information because the bulk of their health care practitioner services are delivered by salaried practitioners. MHCC is working with Kaiser to develop service-level payment estimates, and we plan to resolve this issue in 2020 using an approach Kaiser used in Colorado and California. As in the past, members of Kaiser plans are only included in the individual and small employer market data discussed in Part 2 and Part 3 of this report. The only data that include Kaiser members are the overall enrollment data at the end of a year and the median expenditure risk score results.

Part 1: The Privately Insured Market in Maryland

This part of the report presents enrollment, spending, risk, utilization, and unit cost data for all privately insured health insurance markets for years 2016, 2017 and 2018. The individual, small employer, and large employer markets are compared throughout the report. Data on variation by demographics (age group and geography) and service category are also included.

Enrollment, Spending, and Risk across Maryland's Privately Insured Markets: 2016, 2017 and 2018

This section provides information on enrollment in privately insured health insurance in Maryland, as well as spending and risk (as measured through member health status). This information is essential in understanding trends over time in health care costs and insurance participation, as well as how the individual market, small employer market, and large employer market differ. This section also provides information on consumer out-of-pocket (OOP) costs across markets and variation in spending across different types of services.

Exhibit 1 and Exhibit 2 illustrate the following:

- Enrollment as of 12/31 by year in privately insured health plans overall decreased by 0.7% in 2018.³ Similar to the previous year's trends, the individual market experienced a large decrease of 27.6% that could be attributable to declining enrollment in off-exchange plans since those enrollees are not eligible for federal premium subsidies and saw large increases in their premiums.⁴ However, the large employer and small employer markets saw increases of 3.0% and 4.6%, respectively.
- Overall per capita spending (all services combined) across all markets increased by about 2.9% from 2017 to 2018. This increase is lower than the 4.4% increase in per capita spending reported by the Health Care Cost Institute (HCCI) report on healthcare spending for 2018. Medical per capita shows about a 2.5% increase in spending compared to HCCI's spending increase of 4.2% for medical. Prescription drug spending increased by about 4.0% compared to HCCI's 5.4% increase in pharmacy spending for 2018. However, there are differences in the populations for the privately insured (PI) report and HCCI. The HCCI report only includes members enrolled in employer-sponsored insurance plans. That means the HCCI report excludes the individual market. For the PI report, the self-insured ERISA and FEHB PPO plan data are excluded but included in the HCCI report.
- Within each market type, we observed different growth rates. Spending increased in the large employer market by 1.8% but rose in both the small employer and individual markets by 4.9% and 15.8%, respectively. In comparison, there was a 4.4% spending growth experienced nationally in the private employer market.⁵

³ Nationally, the percentage of people with private health insurance declined slightly, with employer-based coverage declining 0.3 percent and direct purchase and marketplace coverage declining 0.2 percent, although none of these changes are statistically significant.

⁴ <https://www.cms.gov/CCIIO/Resources/Forms-Reports-and-Other-Resources/Downloads/Trends-Subsidized-Unsubsidized-Enrollment-BY17-18.pdf>

⁵ https://healthcostinstitute.org/images/pdfs/HCCI_2018_Health_Care_Cost_and_Utilization_Report.pdf

- The outpatient non-hospital facility services category (e.g., Ambulatory Surgery Centers, Home Health, Outpatient Rehabilitation Facilities, Federally Qualified Health Centers) showed the highest increase (16%) in per member spending among all services categories for 2018. However, as a share of total per member spending, outpatient non-hospital facility services were only about 2.4% of total per member spending for all services combined. In addition, the unit costs per visit varied substantially due to the wide-ranging mix of services included in this category from ambulatory surgery visits which can be very costly, to basic clinic visits in an FQHC or outpatient rehabilitation visit which are much less costly.
- In 2018, OOP spending (all services combined) rose in the three market types. Similar to 2016 and 2017, OOP spending was highest in the individual market in 2018, at \$1,517, compared to \$1,066 for the small employer market and \$556 for the large employer market.
- Both outpatient hospital facility services as well as labs and imaging services showed a decrease in per member spending across all markets (0.4% and 1.7%, respectively). These declines in spending for both service categories were driven by declines in utilization offset by slight increases in unit costs.
- Maryland's privately insured population illness burden worsened over time from 2016 through 2017 as the median expenditure risk scores for these years increased (1.37 in 2016 v. 1.41 in 2017) but increased marginally from 2017 to 2018 from 1.41 to 1.42, for all markets combined. In 2016 and 2017, the median expenditure risk score was highest in the individual market (1.44 and 1.32, respectively). In 2018 the illness burden continues to be the highest in the individual market which has a median expenditure risk score of 1.50 vs. 1.41 in the large employer market and 1.37 in the small employer market. The expenditure risk scores represent factors above the national average which is 1.00 (e.g., a 0.50 risk score for the individual market means that this population's illness is 50% higher than the national average. The 50% higher than the national average for the individual market's population for 2018 is primarily due to healthier members exiting this market leaving the sicker population behind. The Maryland Health Benefit Exchange reported that enrollment in the individual market modestly recovered after premiums fell in 2019 when Maryland launched a State Reinsurance Program enabled by state law and supported through a Section 1332 State Innovation Waiver⁶.

⁶ 2019 Annual Report: Maryland Health Benefit Exchange, p 19, accessed at https://www.marylandhbe.com/wp-content/uploads/2019/MHC_Annual_Report%202019.pdf

Exhibit 1. Enrollment, Spending, and Risk Scores for Privately Insured Markets in Maryland, 2016, 2017, and 2018

	2016				2017				2018			
	Total	Large Employers	Small Employers	Individual	Total	Large Employers	Small Employers	Individual	Total	Large Employers	Small Employers	Individual
Members												
Total members as of December 31 (000 omitted)	1,547	1,087	227	233	1,434	1,026	224	183	1,424	1,057	235	133
Member Months												
Total member months (000 omitted)	18,646	13,006	2,738	2,902	17,634	12,727	2,581	2,327	17,146	12,632	2,816	1,698
Spending												
Per Capita spending, all services combined	\$4,958	\$4,924	\$4,431	\$5,611	\$5,279	\$5,190	\$4,669	\$6,471	\$5,434	\$5,284	\$4,896	\$7,495
Per Capita OOP, all services combined	\$751	\$545	\$1,007	\$1,438	\$738	\$546	\$1,062	\$1,433	\$735	\$556	\$1,066	\$1,517
Per Capita OOP, Medical Only	\$595	\$413	\$779	\$1,237	\$584	\$417	\$841	\$1,214	\$591	\$432	\$863	\$1,326
Per Capita OOP, Prescription Drugs	\$156	\$131	\$227	\$201	\$154	\$129	\$222	\$218	\$143	\$124	\$203	\$191
Per Capita Spending By Service Category												
Inpatient Hospital Facility	\$756	\$733	\$689	\$925	\$794	\$759	\$753	\$1,035	\$844	\$803	\$804	\$1,213
Outpatient Hospital Facility	\$933	\$894	\$780	\$1,249	\$942	\$905	\$811	\$1,288	\$938	\$894	\$834	\$1,440
Outpatient Non-Hospital Facility	\$102	\$97	\$104	\$122	\$110	\$101	\$110	\$157	\$127	\$119	\$123	\$194
Professional Services	\$1,438	\$1,454	\$1,302	\$1,495	\$1,572	\$1,565	\$1,417	\$1,779	\$1,610	\$1,574	\$1,504	\$2,053
Labs/Imaging	\$391	\$383	\$368	\$451	\$379	\$374	\$350	\$437	\$373	\$363	\$355	\$478
SubTotal (Medical Only)	\$3,619	\$3,560	\$3,243	\$4,241	\$3,797	\$3,704	\$3,441	\$4,697	\$3,892	\$3,753	\$3,620	\$5,378
Prescription Drugs ¹	\$1,338	\$1,364	\$1,188	\$1,370	\$1,482	\$1,486	\$1,228	\$1,774	\$1,542	\$1,532	\$1,276	\$2,117
Risk Score												
90 th Percentile	3.22	3.28	2.86	3.28	3.38	3.40	2.97	3.73	3.38	3.34	3.06	4.14
Median expenditure risk score	0.37	0.39	0.28	0.32	0.41	0.43	0.31	0.44	0.41	0.40	0.37	0.50
10 th Percentile	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05

Note: (1) Prescription drug spending results exclude FEHB PPO members (See Appendix B for more information).
(2) Some calculations in the above exhibit might not be exact due to rounding.
(3) The large employer market includes State of Maryland employees (self-insured non-ERISA) and other self-insured non-ERISA plans. However, the large employer market excludes FEHB PPO members.
(4) Expenditure risk score differences are measured as absolute differences from 2016 to 2017 and 2017 to 2018.
(5) Results exclude Kaiser plans.

Exhibit 2. Percentage Changes in Enrollment, Spending, and Risk Scores for the Privately Insured, 2017 over 2016, and 2018 over 2017

	% Change 2017/2016				% Change 2018/2017			
	Total	Large Employers	Small Employers	Individual	Total	Large Employers	Small Employers	Individual
Members								
Total members as of December 31	-7.3%	-5.6%	-1.1%	-21.4%	-0.7%	3.0%	4.6%	-27.6%
Member Months								
Total member months	-5.4%	-2.1%	-5.7%	-19.8%	-2.8%	-0.7%	9.1%	-27.0%
Spending								
Per Capita spending, all services combined	6.5%	5.4%	5.4%	15.3%	2.9%	1.8%	4.9%	15.8%
Per Capita OOP, all services combined	-1.8%	0.2%	5.6%	-0.4%	-0.4%	1.9%	0.3%	5.9%
Per Capita OOP, Medical Only	-1.9%	0.9%	7.9%	-1.9%	1.2%	3.6%	2.7%	9.2%
Per Capita OOP, Prescription Drugs	-1.3%	-1.7%	-2.4%	8.8%	-6.8%	-3.8%	-8.6%	-12.6%
Per Capita Spending By Service Category								
Inpatient Hospital Facility	5.1%	3.6%	9.4%	12.0%	6.2%	5.8%	6.8%	17.2%
Outpatient Hospital Facility	1.0%	1.2%	3.9%	3.2%	-0.4%	-1.2%	2.9%	11.8%
Outpatient Non-Hospital Facility	8.1%	4.9%	5.6%	28.4%	16.0%	18.0%	11.8%	23.4%
Professional Services	9.3%	7.7%	8.9%	19.0%	2.4%	0.5%	6.1%	15.4%
Labs/Imaging	-3.2%	-2.3%	-5.0%	-3.0%	-1.7%	-3.1%	1.4%	9.3%
SubTotal (Medical Only)	4.9%	4.1%	6.1%	10.8%	2.5%	1.3%	5.2%	14.5%
Prescription Drugs ¹	10.7%	8.9%	3.4%	29.4%	4.0%	3.1%	3.9%	19.3%
Risk Score	Difference				Difference			
90 th Percentile	0.16	0.12	0.11	0.46	0.00	-0.06	0.09	0.41
Median expenditure risk score	0.04	0.03	0.03	0.11	0.00	-0.02	0.06	0.06
10 th Percentile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unit Costs by Market and Service Category for Privately Insured Health Plans: 2016, 2017 and 2018

Unit Cost is one component of the per member spending calculation (along with utilization, which is addressed in the next section). Since the unit cost measure has two components (the price for a given service and the intensity of that service), a change in the unit cost measure allows us to observe if the change was driven by price or intensity (mix of services). In other words, a change in either price or intensity will cause a change in the unit cost and, subsequently, a change in the overall per member spending. However, intensity results are not shown in this report, as time did not allow for that calculation. A study on intensity of services and its impact on unit costs will be included in the next release of this report.

Exhibit 3 and Exhibit 4 illustrate the following:

- Across all markets, unit costs increased for all service categories in 2018 compared to 2017 except for prescription drugs. Inpatient hospital facility services jumped by 5.2% compared to an increase of 0.8% during the 2017/2016 reporting period. Meanwhile, prescription drugs unit cost was flat compared to a 7.6% increase during the 2017/2016 reporting period .
- Unit costs increased across all three markets for outpatient non-hospital facility services, professional services, Labs/Imaging, and prescription drugs, with the small employer market showing the highest jump for inpatient hospital facility services (7.6%).
- Unit costs for prescription drugs were stable overall in all market types compared to 2017. Unit costs growth was flat in large employer markets (increased by 6% in 2017), rose by 0.3% in the small employer market (increased by 5% in 2017), and rose by 5.1% in the individual market (increased by 17.4% in 2017).

Exhibit 3. Unit Cost by Market and Service Category, 2016, 2017, and 2018

Service Category	2016				2017				2018			
	Total	Large Employers	Small Employers	Individual	Total	Large Employers	Small Employers	Individual	Total	Large Employers	Small Employers	Individual
Inpatient Hospital Facility (Cost per IP Day)	\$2,973	\$2,669	\$3,740	\$4,017	\$2,998	\$2,679	\$3,917	\$4,207	\$3,155	\$2,842	\$4,215	\$4,291
Outpatient Hospital Facility (Cost per Visit)	\$1,183	\$1,121	\$1,276	\$1,364	\$1,200	\$1,154	\$1,336	\$1,309	\$1,230	\$1,189	\$1,392	\$1,292
Outpatient Non-Hospital Facility (Cost per Visit)	\$683	\$707	\$683	\$610	\$677	\$699	\$675	\$610	\$772	\$797	\$742	\$698
Professional Services (Cost per Visit)	\$189	\$186	\$190	\$199	\$194	\$191	\$195	\$206	\$196	\$193	\$199	\$217
Labs/Imaging (Cost per Visit)	\$130	\$126	\$131	\$146	\$123	\$121	\$123	\$132	\$125	\$123	\$126	\$138
Prescription Drugs (Cost per Script) ¹	\$101	\$103	\$95	\$99	\$109	\$109	\$100	\$116	\$109	\$109	\$100	\$122

Note: (1) Prescription drug unit cost results exclude FEHB PPO members (See Appendix B for more information).

(2) Results exclude Kaiser HMO plans.

(3) Some calculations in the above exhibit might not be exact due to rounding.

(4) The large employer market includes State of Maryland employees (self-insured non-ERISA) and other self-insured non-ERISA health plans. However, the large employer market excludes FEHB PPO members.

Exhibit 4. Unit Cost Per member Percent Change by Market and Service Category, 2018

Service Category	% Change (2017 over 2016)				% Change (2018 over 2017)			
	Total	Large Employers	Small Employers	Individual	Total	Large Employers	Small Employers	Individual
Inpatient Hospital Facility (Cost per IP Day)	0.8%	0.4%	4.7%	4.7%	5.2%	6.1%	7.6%	2.0%
Outpatient Hospital Facility (Cost per Visit)	1.5%	2.9%	4.7%	-4.0%	2.5%	3.1%	4.2%	-1.3%
Outpatient Non-Hospital Facility (Cost per Visit)	-0.9%	-1.2%	-1.2%	0.1%	14.0%	14.1%	10.0%	14.3%
Professional Services (Cost per Visit)	2.6%	2.5%	2.6%	3.7%	1.3%	0.8%	2.0%	5.1%
Labs/Imaging (Cost per Visit)	-5.5%	-4.0%	-6.2%	-9.8%	1.8%	1.5%	2.2%	5.1%
Prescription Drugs (Cost per Script) ¹	7.6%	6.0%	5.0%	17.4%	0.1%	-0.3%	0.3%	5.1%

Note: (1) Prescription drug unit cost % change results exclude FEHB PPO members (See Appendix B for more information).

(2) Results exclude Kaiser HMO plans.

(3) The large employer market includes State of Maryland employees (self-insured non-ERISA) and other self-insured non-ERISA health plans.

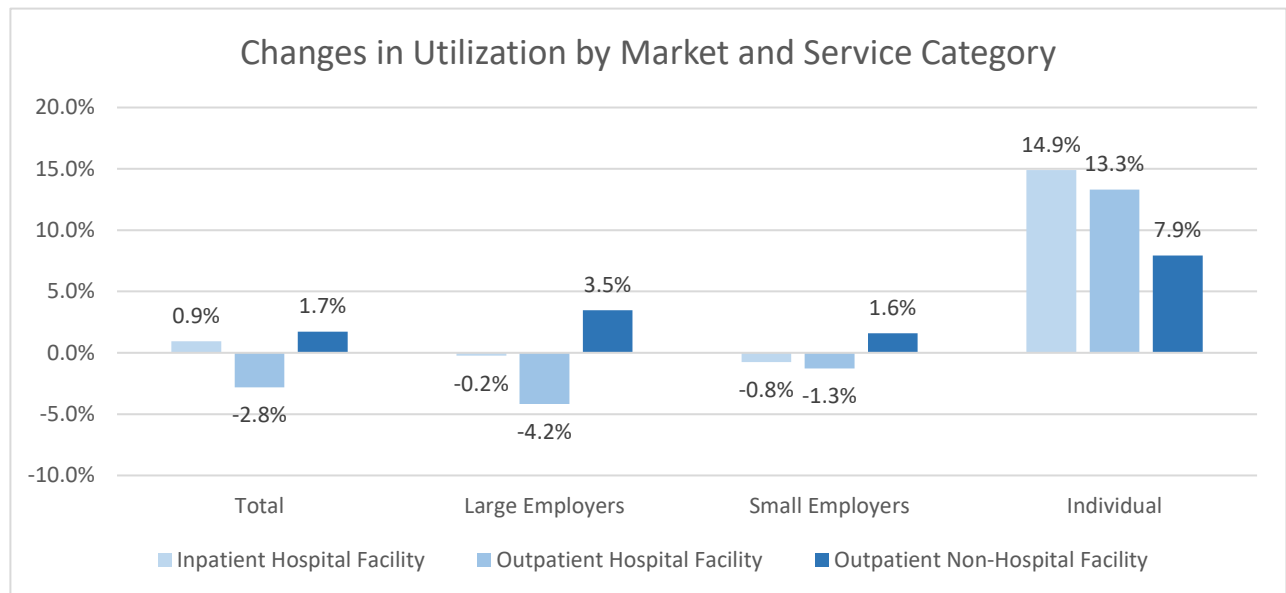
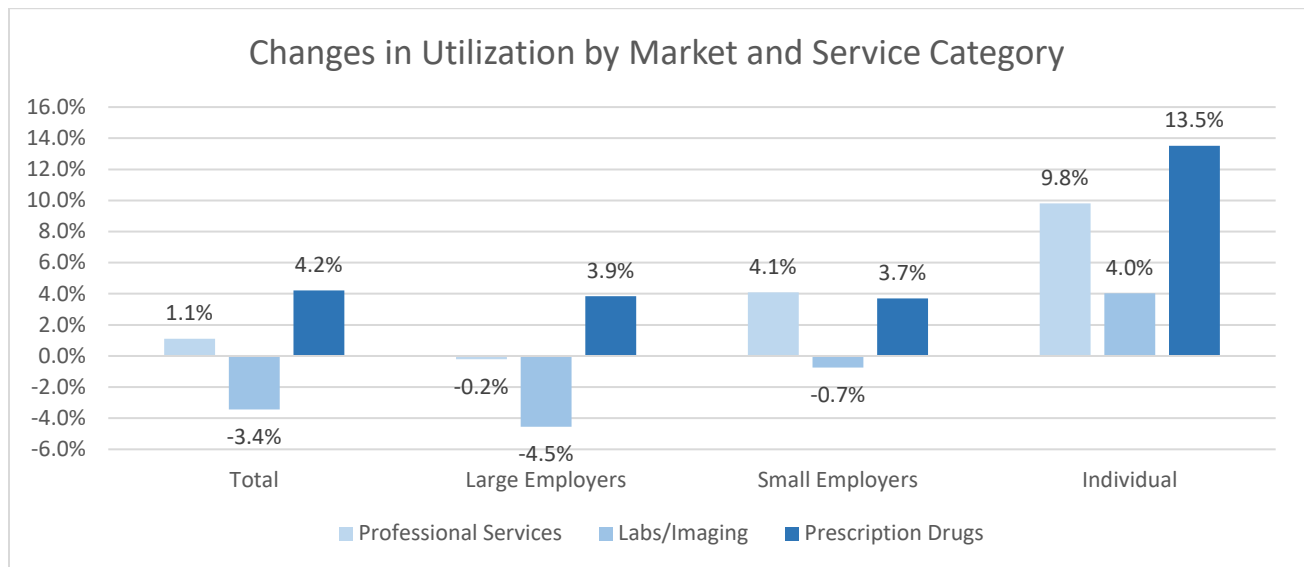
(4) Some calculations in the above exhibit might not be exact due to rounding.

Utilization of Services by Service Category in Maryland's Privately Insured Markets: 2017 vs. 2018

Utilization of services is one component of the per member spending calculation (along with unit cost, discussed in the previous section). Information on utilization allows us to see the role of consumer demand for services in overall spending for the service. Utilization data can be helpful to providers to plan for future service offerings, as well as to carriers who pay for health services and to policymakers who want to make sure that patients receive necessary care, but not unnecessary care. In this report, utilization is presented as the number of units per 1,000 covered members per year for claims incurred during a given year, providing a standardized, comparable measure. Examples of units are the number of discharge days for inpatient hospital facility services; number of visits for outpatient hospital facility and professional services; and number of scripts for prescription drugs.

Exhibit 5 and Exhibit 6 illustrate the following:

- Across markets, the individual market experienced the highest increases in utilization of inpatient hospital facility services and outpatient hospital facility services.
- While the large employer and small employer markets saw a decline in the utilization of inpatient and outpatient hospital facility services, the individual market showed increases in these services.
- All three markets showed an increase in outpatient non-hospital facility services in 2018.
- Utilization of professional services remained flat in the large employer market but rose in the small employer and individual markets (4.1% and 9.8%, respectively).
- The individual market showed a 14% increase in prescription drug utilization, but the large employer market remained flat, and the small employer market experienced a modest decline.

Exhibit 5: Per member Percentage Changes in Utilization of Inpatient and Outpatient Facility Services by Market (2017 – 2018)**Exhibit 6: Per member Percentage Changes in Utilization of Professional Services, Labs/Imaging, and Prescription Drugs by Market (2017 – 2018)****Notes:**

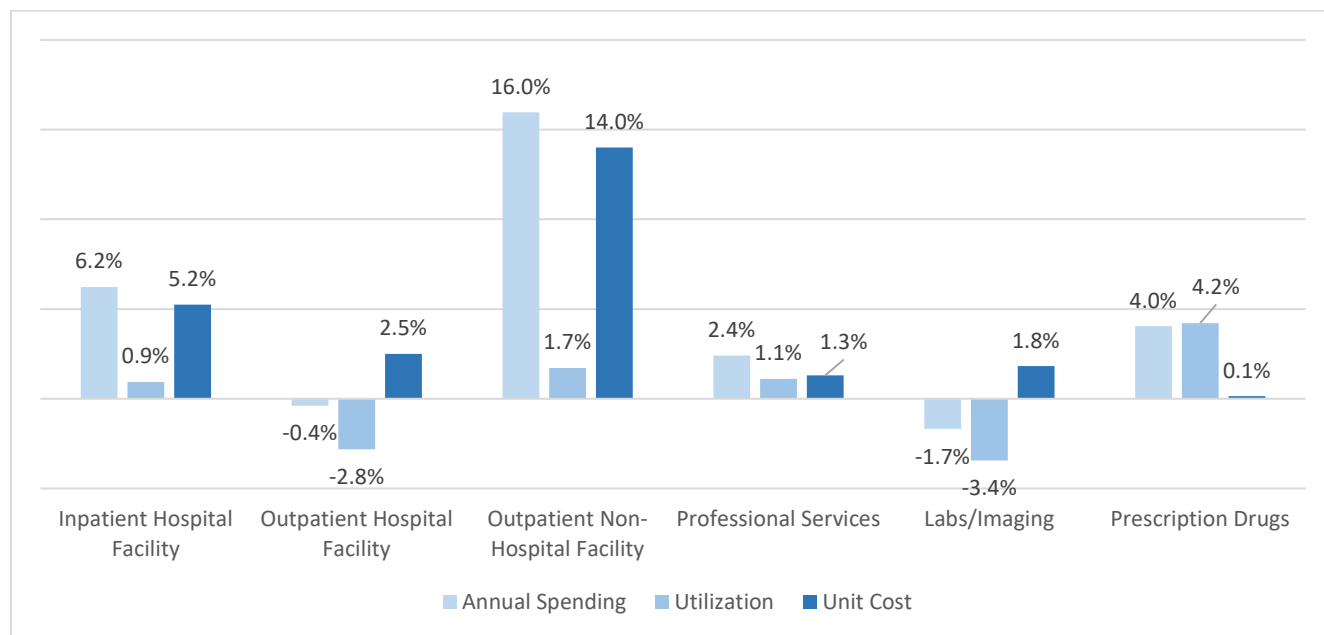
- 1) Prescription drug spending results exclude FEHB PPO members (See Appendix B for more information).
- 2) Results exclude Kaiser HMO plans.
- 3) Some calculations in the above exhibit might not be exact due to rounding.
- 4) The large employer market includes State of Maryland employees (self-insured non-ERISA) and other self-insured non-ERISA health plans. However, the large employer market excludes FEHB PPO members.

Drivers of Spending Containment, All Markets Combined: 2017 v. 2018

As shown in Exhibit 7:

- Per member spending growth across services is due to a combination of changes in service use and unit costs. Unit cost changes are the result of changes in both prices and the intensity of the services provided; these have not been separately examined here due to data limitations.
- Per member spending for inpatient hospital facility services increased due to an increase in unit cost compared to utilization as measured by inpatient days per 1,000.
- For outpatient hospital facility services, per member spending fell due to utilization declining more than the increase in unit costs.
- The overall increase in per member spending for outpatient non-hospital facility services was driven by an increase in unit costs and a small increase in utilization.
- For professional services, there was a small change in per member spending, due to small increases in both unit costs and utilization.
- The decrease in per member spending growth for labs/imaging services was driven by a decline in utilization, somewhat offset by an increase in unit costs.
- Prescription drug per member spending also experienced a small increase due to small increases in utilization and the relatively flat trend in unit costs.

Exhibit 7: Percentage Changes in Annual Spending, Utilization per 1,000 Members, and Cost per Unit by Service Category, All Markets Combined: 2017 – 2018



Note: (1) Prescription drug results exclude FEHB PPO members (See Appendix B for more information).

(2) Results exclude Kaiser HMO plans.

(3) The large employer market includes State of Maryland employees (self-insured non-ERISA) and other self-insured non-ERISA health plans. However, the large employer market excludes FEHB PPO members.

(4) Some calculations in the above exhibit might not be exact due to rounding.

Prevalence of Select Chronic Medical Conditions, All Markets Combined: 2016, 2017, and 2018

The chronic conditions focused on in this report are diabetes, hypertension, and depression. In particular, diabetes and hypertension are two of the priority areas in the Maryland Total Cost of Care model for improving population health.⁷

Chronic health conditions contribute to higher health care spending and controlling or preventing them can have a significant impact on health care spending.⁸ Hypertension is the most common chronic condition and its control can help prevent development of more severe and costly acute-care conditions such as heart failure and strokes.⁹ Similarly, helping patients with prediabetes make important lifestyle changes can help prevent the onset of Type 2 diabetes which, if not managed well, can lead to the development of additional expensive and life changing chronic conditions such as heart disease, kidney failure, and blindness.

⁷ <https://innovation.cms.gov/initiatives/md-tccm/>

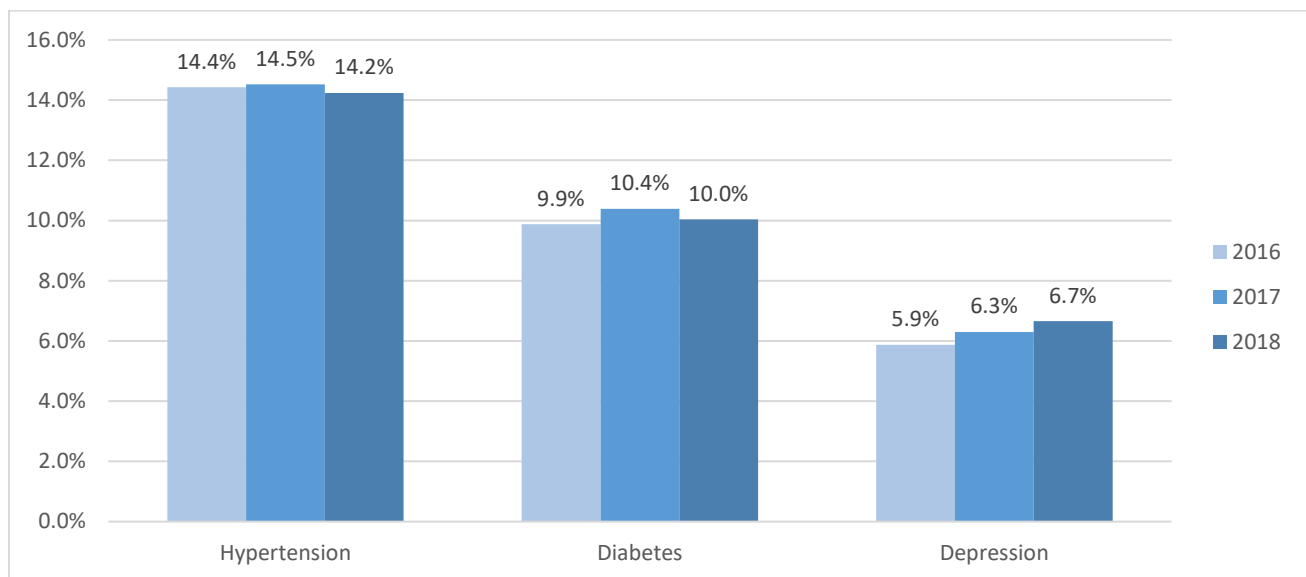
⁸ <https://www.cdc.gov/chronicdisease/about/costs/index.htm>

⁹ http://www.fightchronicdisease.org/sites/default/files/TL221_final.pdf

Similarly, depression can also prove costly in terms of increased healthcare costs measured by direct medical costs, as well as comorbidities, reduced work productivity, and other indirect costs. Depression is estimated to impose a total economic burden of over \$210 billion per year.¹⁰

As shown in Exhibit 8, the prevalence of all three chronic conditions experienced showed marginal decrease in hypertension and diabetes and marginal increase in depression.

Exhibit 8: Prevalence of Select Chronic Conditions, All Markets Combined: 2016, 2017, and 2018



¹⁰ Greenberg, P.E., Fournier, A., Sisitsky, T., Pike, C., & Kessler, R.C. (2015). The economic burden of adults with major depressive disorder in the United States (2005 and 2010). *The Journal of Clinical Psychiatry*, 76 2, 155-62.

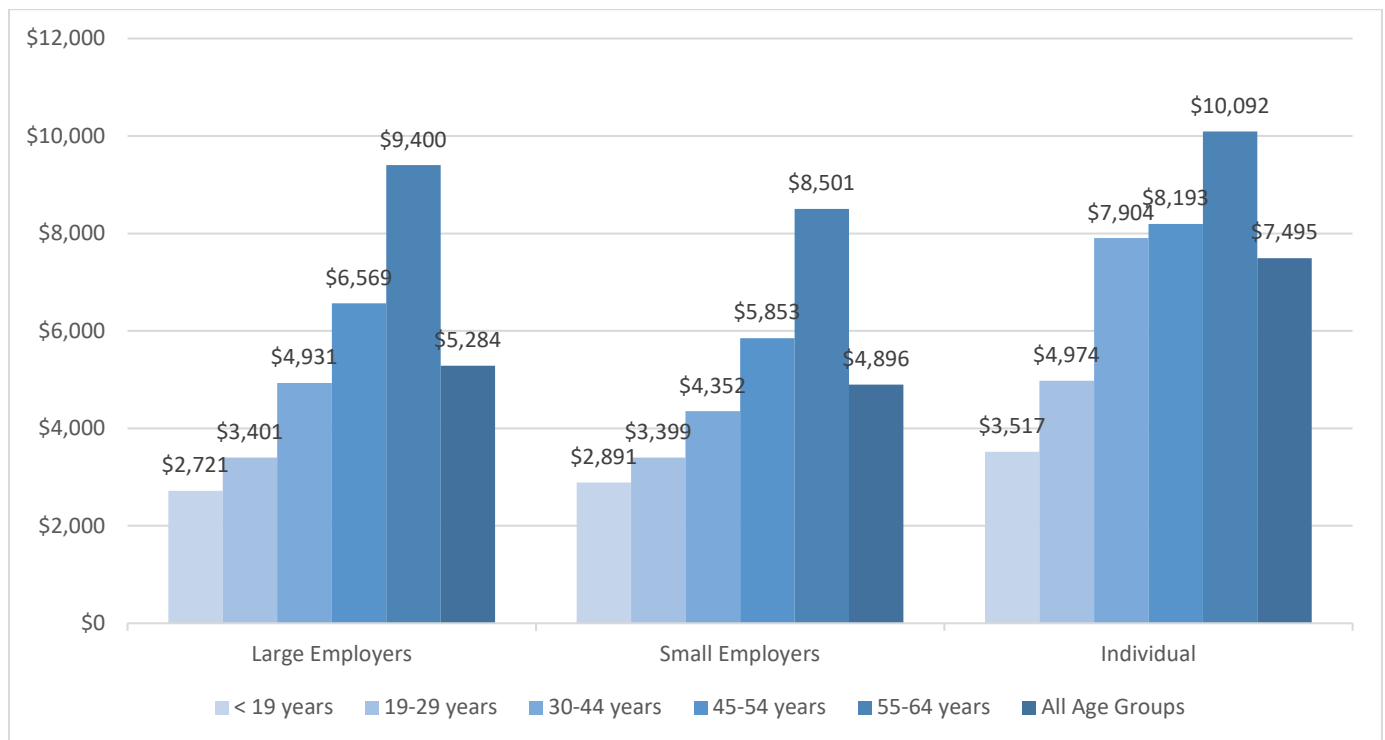
Per member Spending by Age in Maryland's Privately Insured Markets, 2018

The cost of health care varies by age and is related to the relative health needs of different age populations. This cost variation is an essential factor in understanding health insurance risk pools and the influence of demographic mix by age on health plan costs and sustainability, among other factors.

Exhibit 9 illustrates the following:

- Similar to the previous year, within each market, per member spending increased with age in 2018.
- In 2018, the individual market had the highest per member spending for age groups <19, 19 – 29, 30 – 44, and 45 – 54. Within the large employer market had the highest spending for the 55 - 64 age group.

Exhibit 9: Per member Spending by Age Group and Market, 2018



Distribution of the Privately Insured Market by Age

The age distribution varies between the individual and employer-based markets. This helps explain some of the average spending and utilization trends we observe across markets. The large group market has the largest share of insured individuals under age 19, accounting for 23% of the insured population in the large group market. In contrast, this age group makes up only 13% of the population in the individual market.

The under 19 age group has the lowest per member spending. In contrast, the most expensive age group, adults age 55 to 64, accounts for 28% of the insured in the individual market, a full 10% higher than in the large group market. These differences in age help explain a large part of the differences in spending across insurance markets. Overall, the distribution in the middle age groups is relatively similar across market types.

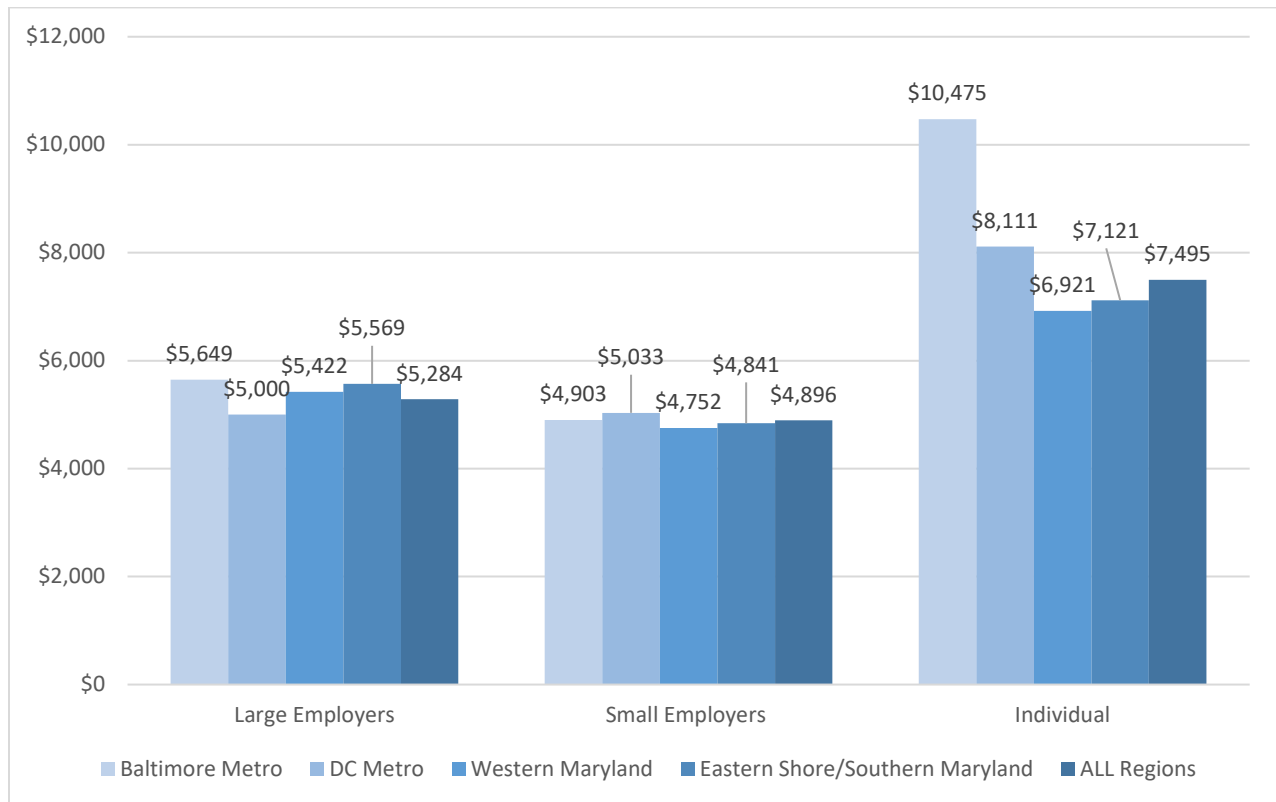
The age distribution also varies across regions, and the distribution has shifted over time. While the average age is relatively similar across the four regions, Baltimore has seen the biggest increase in average age, increasing from 35.7 years in 2016 to 36.6 years in 2018. Baltimore now has the highest average age among the privately insured population in the State. The DC metro region had the second biggest increase, rising from 35.4 years in 2016 to 35.9 years in 2018. Western Maryland saw only a 0.1 rise in average age with an average of 36.1 years in 2018. In 2016, the Eastern Shore/Southern Maryland region had the highest average age at 36.2, but the average increased only slightly, to 36.3 in 2018.

Per member Spending by Region in Maryland's Privately Insured Market, 2018

Geographic variation in cost has been a long-standing issue nationally, related both to pricing and variation in utilization. The data in this report provide a comparison of per member spending across four (4) geographic regions in Maryland, for each market category.

Exhibit 10 illustrates the following:

- The variation in per member spending across regions was small to moderate in the large and small employer markets, with a maximum regional variation in per member spending at about 4% in the small employer market, and 14% in the large employer market. However, the individual market displayed a much larger amount of regional variation at 46%.
- Across the large and individual markets, the Baltimore Metro region had the highest per member spending levels, while in the small employer market, the D.C metro region had the highest per member spending.
- However, for the large employer market, the D.C. metro had the lowest per member spending, while in the small employer and individual markets, Western Maryland had the lowest per member spending.

Exhibit 10: Per member Spending by Region and Market, 2018

Member and Carrier Shares of Health Spending across Markets: 2016, 2017, and 2018

This section compares the share of health care spending that is paid out-of-pocket by health insurance members for the large employer, small employer, and individual markets¹¹. The burden of health care costs on individuals and payers is an important issue as health care spending continues to increase and consume more significant portions of individual, employer, and government budgets. These data provide some insight into how that burden is shared between individual consumers and carriers in the privately insured markets in Maryland.

Exhibit 11 illustrates the following:

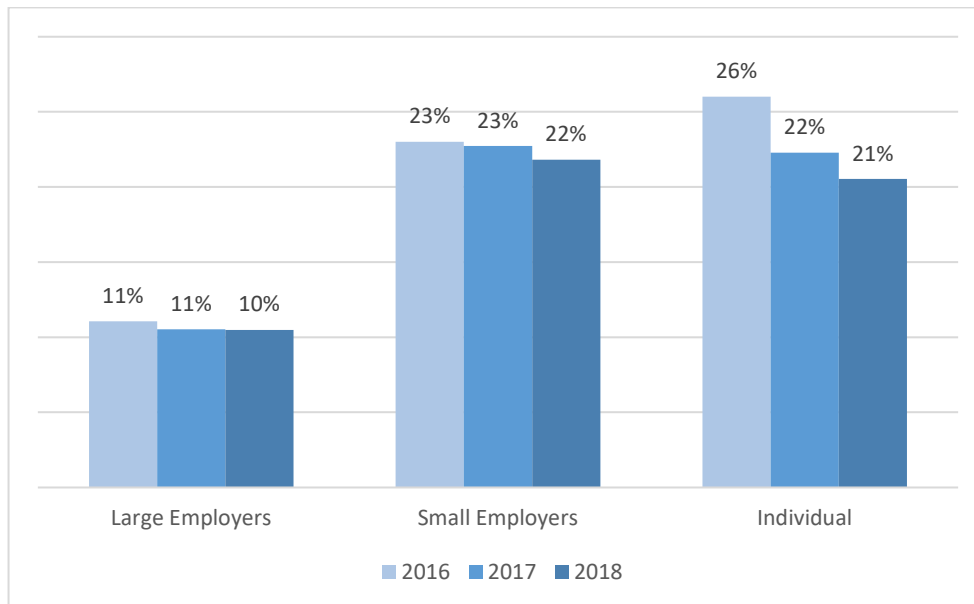
- In 2018, members bore the highest share of the cost of healthcare in the small employer market (22% of total per member spending) followed closely by the individual market (21%), compared to the large employer market (10% of total per member spending).
- The member OOP share was slightly higher in the small employer market in 2018 as well as 2017, in contrast to 2016 when the individual market saw members bearing a higher

¹¹ Member cost-sharing does not reflect the cost sharing reductions (CSR) available to members with family incomes below 250% of the federal poverty line that purchase insurance through Maryland's state-based insurance exchange. In 2017, about 57% of individuals who purchased a qualified health plan on the State-based exchange received cost sharing subsidies.

share of health care costs. Also, member share has decreased in every year (2016 to 2018). One of the reasons is that as healthy members exit the individual market, the sicker members remaining are mostly on-exchange members who qualify for subsidies under the ACA to reduce monthly premiums, and out-of-pocket (OOP) costs thus lowering these members OOP costs over time. More research with carriers is needed to find out more on the topic.

- Across all three markets, the member OOP share declined or remained stable from 2016 - 2018.

Exhibit 11: Member Out-of-Pocket Share of Total Spending by Market: 2016 – 2018



Top 25 Most Expensive Drugs, All Markets, 2018

High and continually increasing prescription drug spending is a major health and health policy concern in the United States. In addition to their contribution to health care spending, increasing drug costs have important clinical implications. Because cost-containment efforts require patients to pay higher copayments for their medications, such increases can reduce the affordability of prescribed regimens and thus patient adherence, leading to negative health outcomes¹². The primary reason for increasing drug spending is the high price of branded products protected by market exclusivity provisions granted by the US Patent and Trademark Office and the Food and Drug Administration (FDA). A study conducted by Nathan E. Wineinger et al¹³ mapped drug costs of top selling brand names in the United States over a 6-year period from 2012 through 2017 using pharmacy claims of private insurers from the Blue Cross Blue

¹² Shrank WH, Hoang T, Ettner SL, et al. The implications of choice: prescribing generic or preferred pharmaceuticals improves medication adherence for chronic conditions. *Arch Intern Med.* 2006;166 (3):332–337. doi:10.1001/archinte.166.3.332

¹³ Wineinger NE, Zhang Y, Topol EJ. Trends in Prices of Popular Brand-Name Prescription Drugs in the United States. *JAMA Netw Open.* 2019;2 (5):e194791. Published 2019 May 3. doi:10.1001/jamanetworkopen.2019.4791

Shield Axis database. This study showed specialty drugs Stelara, Humira, Enbrel, Simponi, and Orencia as the top five (5) most expensive brand drugs in 2017. The study found that insulin and tumor necrosis factor inhibitors (Humira and Enbrel) experienced high price increases.

For our analysis, we used the Multum Lexicon database to obtain drug name, drug type and drug categories. We merged the MCDB pharmacy table and the Multum database at the National Drug Code (NDC) level to consistently identify the drug name. We excluded medical supplies from the most expensive analysis. To determine the expensive drugs, we summed total spending which includes payor reimbursement and member out-of-pocket cost. Payor reimbursement includes the discount and other adjustment amounts; therefore, the total cost in our analysis might actually be higher than the actual total cost. We calculated the average cost per prescription and ranked drugs based on total spending and total number of prescriptions.

Exhibit 12 illustrates the following:

- The top 25 most expensive drugs comprised only 8% of total prescriptions but contributed to 37% (\$0.8 billion) of the total prescription drug spending (\$2.1 billion) across all markets among Maryland's privately insured in 2018.
- 32% (8) of the 25 most expensive drugs according to MCDB data were specialty drugs belonging to the biologics category: Humira Pen, Humira, Stelara, Enbrel, and Cosentyx (prescribed for psoriasis and some types of arthritis), and Tecfidera, Copaxone, and Gilenya (prescribed for Multiple Sclerosis). This list is comparable to the most expensive drugs reported by Nathan E. Wineinger et al¹¹. Refer to Exhibit A17 for Brand names.
- 24% (6) of the 25 most expensive drugs in the MCDB were anti-diabetes drugs. Except for Trulicity (incretin mimetic,) all other expensive drugs were insulin injections.
- Biologics and anti-diabetes drugs comprised 56% of the top 25 most expensive drugs. In other words, about 1 out of every 2 of the most costly drugs belonged to either biologics or anti-diabetes drugs.
- Six (24%) of the 25 most expensive drugs were available both as brand and generic equivalents. We calculated generic dispensing rates (See Appendix A for formula) to understand what providers would prefer when a drug is available in both generic and brand forms. Our analysis showed wide variations in generic dispensing rates for these drugs. Tadalafil (19%) (used for erectile dysfunction and enlarged prostate), Glatiramer (28%), and Fluticasone- Salmeterol (0.5%) (used for asthma and COPD) had low generic dispensing rates, whereas Ethinyl Estradiol (76%) (a contraceptive), Mesalamine (47%) (used for ulcerative colitis,) and Metformin (100%) (an anti-diabetic drug) had higher generic dispensing rates.

Exhibit 12: Top 25 Most Expensive Drugs By Spend, All Markets Combined, 2018

Drug Name	Drug Class	Prescription						
		Users	Prescriptions	Total Cost	Member Cost	Cost Per Prescription	Member Cost Per Prescription	Member Cost%
Adalimumab	Antirheumatics	3,792	25,363	\$148,976,335	\$2,853,056	\$5,874	\$112	2%
Cobicistat/Elvitegravir/Emtricitabine/Tenofovir	Antiviral Combinations	1,864	14,236	\$42,599,243	\$1,225,686	\$2,992	\$86	3%
Ustekinumab	Interleukin Inhibitors	730	5,002	\$40,210,078	\$507,338	\$8,039	\$101	1%
Etanercept	Antirheumatics	1,057	7,810	\$38,533,950	\$850,059	\$4,934	\$109	2%
Dimethyl Fumarate	Selective Immunosuppressants	698	5,051	\$37,764,423	\$417,270	\$7,477	\$83	1%
Dulaglutide	Incretin Mimetics	6,748	50,646	\$35,719,298	\$1,906,114	\$705	\$38	6%
Insulin Aspart	Insulin	8,109	54,837	\$30,552,130	\$2,060,576	\$557	\$38	7%
Emtricitabine-Tenofovir	Antiviral Combinations	2,837	17,931	\$30,332,780	\$1,407,040	\$1,692	\$78	5%
Lisdexamfetamine	CNS Stimulants	17,012	97,268	\$29,321,422	\$5,233,736	\$301	\$54	22%
Glatiramer	Other Immunostimulants	689	5,185	\$28,686,667	\$666,250	\$5,533	\$128	2%
Tadalafil	Impotence Agents	22,254	77,416	\$28,333,791	\$3,066,270	\$366	\$40	12%
Abacavir/Dolutegravir/Lamivudine	Antiviral Combinations	1,127	8,840	\$25,023,535	\$710,146	\$2,831	\$80	3%
Ledipasvir-Sofosbuvir	Antiviral Combinations	329	791	\$24,626,523	\$161,433	\$31,133	\$204	1%
Uraglutide	Incretin Mimetics	4,808	31,727	\$23,851,356	\$1,329,373	\$752	\$42	6%
Lenalidomide	Miscellaneous Antineoplastics	217	1,534	\$21,703,906	\$117,588	\$14,149	\$77	1%
Insulin Lispro	Insulin	5,799	36,844	\$21,005,886	\$1,133,309	\$570	\$31	6%
Ethinyl Estradiol-Norethindrone	Contraceptives	60,844	402,760	\$20,631,205	\$1,008,361	\$51	\$3	5%
Mesalamine	5-Aminosalicylates	5,231	30,092	\$19,948,264	\$1,150,497	\$663	\$38	6%
Pregabalin	Gamma-Aminobutyric Acid Analogs	6,908	37,816	\$19,110,986	\$1,430,323	\$505	\$38	8%
Emtricitabine/Rilpivirine/Tenofovir	Antiviral Combinations	844	6,730	\$18,153,735	\$521,692	\$2,697	\$78	3%
Insulin Degludec	Insulin	4,810	36,338	\$17,768,855	\$1,361,384	\$489	\$37	8%
Methylphenidate	CNS Stimulants	21,215	99,538	\$17,726,335	\$2,483,968	\$178	\$25	16%
Sitagliptin	Dipeptidyl Peptidase 4 Inhibitors	5,434	42,497	\$17,690,863	\$1,213,531	\$416	\$29	7%
Secukinumab	Interleukin Inhibitors	455	3,122	\$17,583,775	\$340,598	\$5,632	\$109	2%
Fluticasone-Salmeterol	Bronchodilator Combinations	10,372	44,434	\$17,285,142	\$2,010,514	\$389	\$45	13%
All Other		5,070,768	17,917,321	1,308,083,184	154,218,595	\$73	\$9	13%
Grand Total *		5,264,951	19,061,129	\$2,081,223,667	\$189,384,707	\$109	\$10	10%

Top 25 Most Expensive Drugs: State Employees, 2018

In an effort to shed light on drug costs and increase transparency, MHCC is now tracking the most expensive drugs among privately insured state employees. For this analysis, we identified state employees based on their employer federal tax identification number in the dataset. We included employees who were Maryland residents. In other words, if a state employee's primary residence was not in Maryland, then these employees were not included in this analysis. In 2018, state employees comprised 8% (about 260,000) of the total privately insured population. The breakdown by age group was: 19% in <=18 years; 11% in 19-25 years; 26% in 26-44 years; 18% in 45-54 years; and 24% in 55-64 years. State employees were enrolled in the large employer market (CareFirst, Kaiser, and United HealthCare). Female members comprised 56% of the total enrollees.

Exhibit 13 and Exhibit 13a illustrates the following:

- Per member prescription drug spending among State employees was approximately \$1 billion (47%), compared to an overall \$2.1 billion in total prescription drug spending in 2018.
- The top 25 most expensive drugs made up 8% of total prescriptions but cost 36% (\$360 million) of overall spending. Percentage cost share of the most expensive drugs among state employees was comparable to all markets.
- The top 5 most expensive drugs among state employees were specialty drugs such as Humira Pen (\$5,844 per prescription), Trulicity (\$708 per prescription), Enbrel (\$4,996 per prescription), Stelara (\$9,233 per prescription), and Tecfidera (\$7442 per prescription).

Exhibit 13: Top 25 Most Expensive Drugs By Spend: State Employees, 2018

Drug Name	Drug Class	Prescription			Member Cost	Cost Per Prescription	Member	
		Users	Prescriptions	Total Cost			Cost Per Prescription	Member Cost%
Adalimumab	Antirheumatics	1,490	10,500	\$62,792,153	\$245,147	\$5,980	\$23	0%
Dulaglutide	Incretin Mimetics	3,541	28,770	\$20,372,931	\$528,530	\$708	\$18	3%
Etanercept	Antirheumatics	485	3,642	\$18,085,859	\$75,775	\$4,966	\$21	0%
Ustekinumab	Interleukin Inhibitors	292	1,918	\$17,637,553	\$41,225	\$9,196	\$21	0%
Tadalafil	Impotence Agents	11,948	43,194	\$16,622,153	\$827,945	\$385	\$19	5%
Dimethyl Fumarate	Selective Immunosuppressants	276	2,156	\$16,042,210	\$42,890	\$7,441	\$20	0%
Glatiramer	Other Immunostimulants	322	2,455	\$13,475,913	\$148,087	\$5,489	\$60	1%
Lisdexamfetamine	CNS Stimulants	7,049	43,198	\$13,099,569	\$1,027,292	\$303	\$24	9%
Insulin Aspart	Insulin	3,514	23,053	\$13,014,954	\$368,216	\$565	\$16	3%
Cobicistat/Elvitegravir/Emtricitabine/Tenofovir	Antiviral Combinations	492	4,114	\$12,302,036	\$128,848	\$2,990	\$31	1%
Insulin Lispro	Insulin	2,882	20,556	\$12,218,900	\$368,764	\$594	\$18	3%
Ledipasvir-Sofosbuvir	Antiviral Combinations	145	379	\$11,598,916	\$15,907	\$30,604	\$42	0%
Metformin	Biguanides	24,630	191,941	\$11,419,683	\$459,331	\$59	\$2	4%
Pregabalin	Gamma-Aminobutyric Acid Analogs	3,851	21,935	\$11,170,687	\$480,167	\$509	\$22	4%
Liraglutide	Incretin Mimetics	2,127	14,517	\$10,936,743	\$278,959	\$753	\$19	3%
Sitagliptin	Dipeptidyl Peptidase 4 Inhibitors	3,186	26,174	\$10,897,329	\$394,257	\$416	\$15	4%
Lenalidomide	Miscellaneous Antineoplastics	99	767	\$10,780,451	\$18,066	\$14,055	\$24	0%
Emtricitabine-Tenofovir	Antiviral Combinations	957	6,195	\$10,618,043	\$149,993	\$1,714	\$24	1%
Insulin Glargine	Insulin	4,324	29,480	\$9,956,811	\$546,581	\$338	\$19	6%
Ethinyl Estradiol-Norethindrone	Contraceptives	25,167	176,740	\$9,127,468	\$422,346	\$52	\$2	5%
Mesalamine	5-Aminosalicylates	2,222	14,024	\$8,923,506	\$213,168	\$636	\$15	2%
Insulin Degludec	Insulin	2,159	16,122	\$8,499,402	\$269,812	\$527	\$17	3%
Secukinumab	Interleukin Inhibitors	198	1,498	\$8,464,205	\$33,078	\$5,650	\$22	0%
Interferon Beta-1A	Interferons	123	1,165	\$8,095,872	\$30,198	\$6,949	\$26	0%
Follicle Stimulating Hormone	Gonadotropins	717	1,499	\$7,909,106	\$71,845	\$5,276	\$48	1%
All Other		2,243,321	8,099,873	\$631,903,461	\$49,883,023	\$78	\$6	9%
Grand Total *		2,345,517	8,785,865	\$985,965,914	\$57,069,450	\$112	\$6	6%

Exhibit 13a: Top 5 Brand Drugs By Spend, State Employees, 2018

Brand Name	Drug Class	Prescription					Member Cost	
		Users	Prescriptions	Total Cost	Member Cost	Cost Per Prescription	Per Prescription	Member Cost%
Humira Pen	Antirheumatics	1,117	9,073	\$53,021,807	\$215,305	\$5,844	\$24	0%
Trulicity Pen	Incretin Mimetics	3,541	28,770	\$20,372,931	\$528,530	\$708	\$18	3%
Stelara Pfs	Interleukin Inhibitors	285	1,896	\$17,505,620	\$40,771	\$9,233	\$22	0%
Tecfidera	Selective Immunosuppressants	237	2,115	\$15,739,499	\$41,887	\$7,442	\$20	0%
Enbrel Sureclick	Antirheumatics	361	2,805	\$14,013,979	\$56,405	\$4,996	\$20	0%
All Other		301,473	1,198,301	\$666,052,777	\$24,586,490	\$556	\$21	4%
Grand Total *		307,014	1,242,960	\$786,706,613	\$25,469,388	\$633	\$20	3%

Part 2: The Privately Insured, Small Employer Market in Maryland

This part of the report highlights enrollment, spending, risk, utilization, and drivers of spending in the small group market. The small employer market data in this report are limited to fully-insured Maryland residents who are under age 65. Data for insureds covered by Kaiser are included in enrollment at the end of the year and in risk score analyses but are not included in other data segments of this report.

The SHOP Exchange

The Affordable Care Act (ACA) created the Small Business Health Options Program (SHOP) to give small businesses and their employees more alternatives to compare and purchase health plans. Eighteen states, including Maryland and the District of Columbia, operate a state-run SHOP alongside an individual insurance marketplace. SHOP provisions assist small businesses and small tax-exempt organizations with the cost of covering their employees' health insurance¹⁴. A small business with fewer than 25 employees that provides health insurance may qualify for a small business tax credit of up to 50 percent (up to 35 percent for non-profits) to offset the cost of insurance. This tax credit can make the cost of providing insurance significantly lower for the two years while the credit is available. Despite opportunities in SHOP, take-up has been disappointing.

Multiple factors contribute to the low take-up rate. Many small businesses that want to offer health insurance already do so and the tax credits available to small businesses if they purchase through SHOP expire after two years. Loss of a tax credit may mean that the small business no longer is able to offer coverage or to offer coverage with higher employee contributions, creating the perception among the employees that the employer is reducing benefits. Some small businesses oppose the "employee choice" option that can be offered in SHOP, which allows small businesses to offer a wider array of health plans on the same metal level across multiple insurance carriers. Some small businesses argue that this option further complicates their management of employee benefits.

Several implementations of a SHOP exchange have been launched in Maryland, but no more than several hundred employers have ever sought to use this insurance option.

MHCC did not present spending by groups that purchased through SHOP because of the small number of covered lives.

¹⁴ https://www.commonwealthfund.org/blog/2016/state-run-shops-update-three-years-post-aca-implementation?redirect_source=/publications/blog/2016/jul/state-run-shops

Enrollment, Per Member Spending, Risk, and Utilization in Maryland's Small Employer Market: 2016 – 2018

This section provides information on enrollment in the small employer market in Maryland, as well as data on spending, utilization, and risk (as measured through member health status). This information is essential in understanding trends over time in health care spending, consumer out-of-pocket costs, and insurance participation.

Exhibit 14 illustrates the following:

- Total members (including Kaiser HMO members) in the small employer market rose between 2017 and 2018.
- Per member spending for all services combined increased by 4.9% between 2017 and 2018 compared to 5.4% growth rate from 2016 - 2017.
- Main contributors to this increase in per member spending growth in the small employer market include:
 - Inpatient hospital facility services per member spending increased by about 7%.
 - Outpatient hospital facility services per member spending increased by 3%.
 - Outpatient non-hospital facility services per member spending increased by 12%.
 - Professional services per member spending increased by 6%.
 - Labs/imaging services and prescription drugs per member spending increased by 1%.
- The median expenditure risk scores (excluding Kaiser) increased from 2016 to 2017 but fell slightly in 2018. A similar trajectory was noted for the risk scores that included the Kaiser population.

Exhibit 14: Enrollment, Spending, and Risk Score in the Small Employer Market

	2016	2017	2018	% Change 2017/2016	% Change 2018/2017
Members as of 12/31					
Total members (w/o Kaiser)	226,695	224,289	234,545	-1.1%	4.6%
Total members (w/ Kaiser)	235,034	233,528	245,175	-0.6%	5.0%
Member Months					
Total member months	2,738,319	2,580,928	2,815,941	-5.7%	9.1%
Spending					
Per Capita spending, all services combined	\$4,431	\$4,669	\$4,896	5.4%	4.9%
Per Capita OOP, all services combined	\$1,007	\$1,062	\$1,066	5.6%	0.3%
Per Capita OOP, Medical Only	\$779	\$841	\$863	7.9%	2.7%
Per Capita OOP, Prescription Drugs	\$227	\$222	\$203	-2.4%	-8.6%
Per Capita Spending By Service Category					
Inpatient Hospital Facility	\$689	\$753	\$804	9.4%	6.8%
Outpatient Hospital Facility	\$780	\$811	\$834	3.9%	2.9%
Outpatient Non-Hospital Facility	\$104	\$110	\$123	5.6%	11.8%
Professional Services	\$1,302	\$1,417	\$1,504	8.9%	6.1%
Labs/Imaging	\$368	\$350	\$355	-5.0%	1.4%
SubTotal (Medical Only)	\$3,243	\$3,441	\$3,620	6.1%	5.2%
Prescription Drugs	\$1,188	\$1,228	\$1,276	3.4%	3.9%
Risk Score					
Median expenditure risk score (w/o Kaiser)	0.28	0.43	0.37	0.14	-0.05
Median expenditure risk score (w/ Kaiser)	0.25	0.27	0.32	0.02	0.04

Notes: (1) Individuals can have multiple types of coverage during the year but are counted only once in the total enrollment.

(2) Per member spending for insureds is overall spending per year (all services combined) less per member spending OOP (all services combined).

(3) Some calculations in the above exhibit might not be exact due to rounding.

Drivers of Per Member Spending Growth in the Small Employer Market: 2016 – 2018

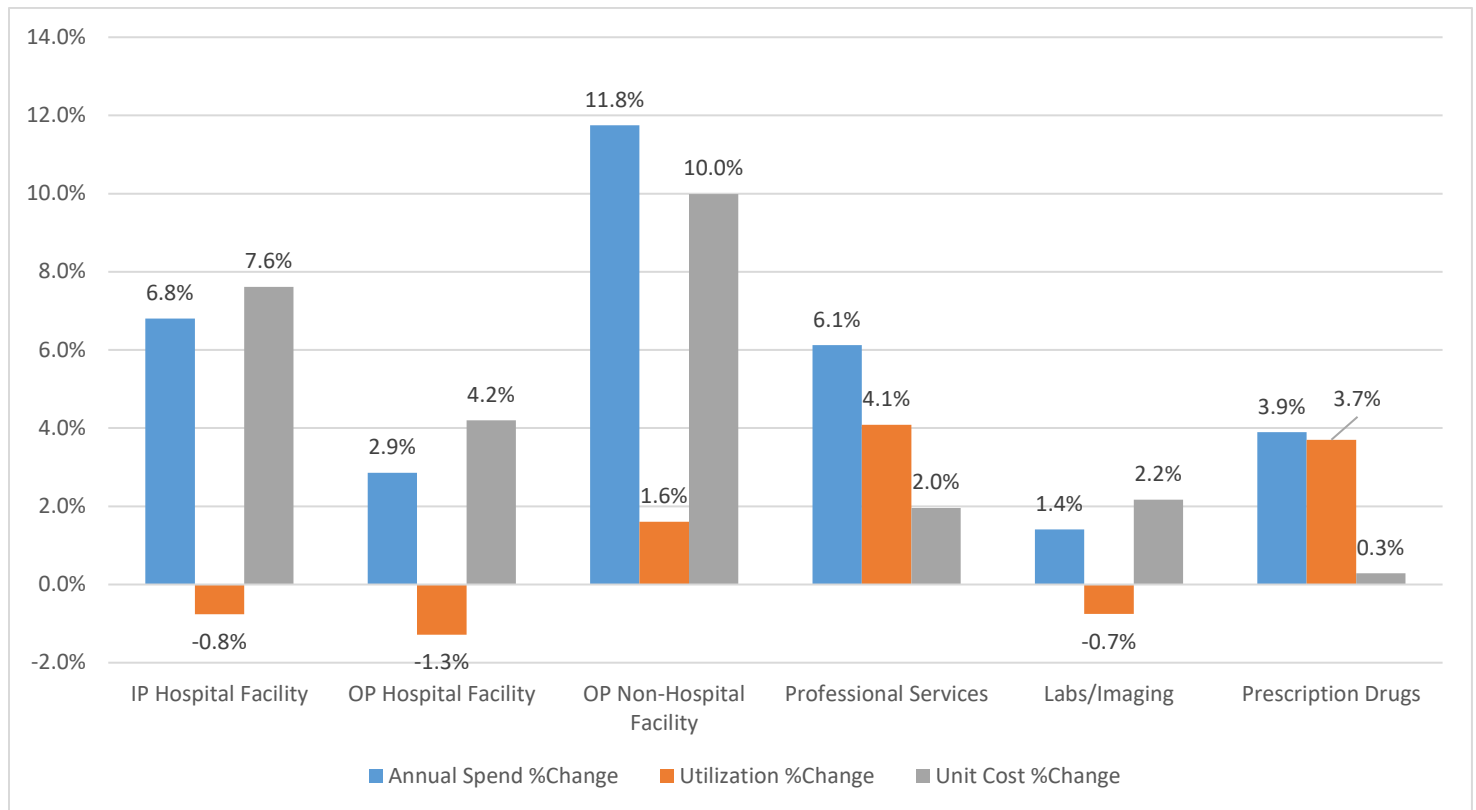
Increases in unit costs primarily drove per member spending growth in 2018—as opposed to utilization increases—for all service categories except professional services, which saw a slightly higher increase in utilization compared to unit costs.

Exhibit 15 illustrates the following:

- Inpatient hospital facility services per member spending grew by 7% in 2018, driven mainly by an increase in unit cost (8%) which was offset by a decrease in utilization (1%).
- Outpatient hospital facility services per member spending grew by 3%, driven by a 4% growth in unit costs offset by a 1% decline in utilization.
- Outpatient non-hospital facility services per member spending grew by 12%, with a 2% increase in utilization and a 10% increase in unit costs.
- The per member spending for professional services increased by 6% in 2018, driven by increases in utilization at 4% and unit costs at 2%.

- Per member spending for labs/imaging services grew by 1%, primarily driven by a 2% increase in unit costs, slightly offset by a 1% drop in utilization.
- The 4% growth in prescription drug spending was driven by a 4% increase in utilization, while unit costs stayed flat.

Exhibit 15: Percentage Changes in Per Member Spending, Utilization per 1,000 Members, and Cost per Unit in the Small Employer Market, 2017 – 2018



5 Most Expensive Drugs By Spend, Small Employers, 2018

Exhibit 16 illustrates the following:

- Total prescription drug spending among small employers in 2018 was \$284 million. Of this spending, brand name prescriptions were 3% which contributed to 35% (\$98 million) of total spending.
- The top 5 most expensive brand drugs cost \$45 million (16%) which consisted of specialty drugs (biologics) used for treatment of psoriasis, some types of arthritis, and multiple sclerosis.

Exhibit 16: Top 5 Expensive Brand Drugs By Spend, Small Employers, 2018

Brand Name	Drug Class	Prescription			Member Cost	Cost Per Prescription	Member Cost Per	
		Users	Prescriptions	Total Cost			Prescription	Member Cost%
Humira Pen	Antirheumatics	538	3,901	\$21,499,394	\$792,355	\$5,511	\$203	4%
Stelara Pfs	Interleukin Inhibitors	139	1,050	\$7,393,859	\$212,901	\$7,042	\$203	3%
Tecfidera	Selective Immunosuppressants	97	829	\$6,268,380	\$122,133	\$7,561	\$147	2%
Vyvanse	CNS Stimulants	3,266	18,134	\$5,435,480	\$1,767,332	\$300	\$97	48%
Enbrel Sureclick	Antirheumatics	114	866	\$4,269,367	\$225,898	\$4,930	\$261	6%
All Other		805,761	2,816,841	\$239,198,294	\$42,047,534	\$85	\$15	21%
Grand Total *		809,915	2,841,621	\$284,064,774	\$45,168,153	\$100	\$16	19%

Part 3: The Individual Market in Maryland

Part 3 of this report focuses exclusively on the individual health insurance market. This market expanded as a result of reforms under the Affordable Care Act (ACA) but has faced instability due to rising premiums, declining insurer participation, and changing federal policy over the past few years. This market was most adversely affected by the health insurance reforms under the ACA.

The MCDB allows comparisons across the entire individual market, including ACA-compliant plans sold on and off the Exchange and ACA non-compliant plans. ACA-compliant plans are plans that meet the requirements for minimum essential coverage under the ACA. ACA non-compliant plans do not meet these requirements and, until 2019, individuals in non-compliant plans could be subject to the ACA tax penalties for not maintaining mandatory health insurance coverage. The level of benefits provided to consumers varies between ACA-compliant and non-compliant plans. Also, premium subsidies are available to lower-income consumers enrolled in On-Exchange ACA-compliant plans; however, premium subsidies are not available under other plan types. In this time of relative market instability in the individual market, tracking relative changes among different plan types can clarify causes for the instability.

Individual market data in this report are limited to fully insured Maryland residents who are under age 65. Data for individuals covered by Kaiser are included in enrollment at the end of the year and in risk score analyses but are not included in other data segments of this report.

Enrollment, Spending, Risk, and Utilization in Maryland's Individual Market: 2016 – 2018

This section provides information on enrollment in the individual health insurance market in Maryland, as well as data on spending, utilization, and risk (as measured through member health status). This information is essential in understanding trends over time in health care spending, consumer out-of-pocket costs, and insurance participation. This section also provides information on variation in

spending across different service types. Finally, this section includes data for both ACA-compliant and non-compliant plans.¹⁴

Exhibit 17 illustrates the following:

- Total members (including Kaiser HMO members) in the individual market declined between December 31, 2017 and December 31, 2018. However, members without Kaiser coverage showed a 28% decline at the end of 2018, compared to a 21% decrease at the end of 2017. These results imply that Kaiser's market share in the individual market continues to stay stable compared to other carriers in Maryland.
- Per member spending for all services combined increased by about 16% in 2018, in comparison to the 15% increase from 2016 to 2017.
- Main contributors to this growth in spending in the individual market include:
 - Inpatient hospital facility services per member spending increased by 17% in 2018 vs. the 12% increase in 2017.
 - Outpatient hospital facility services per member spending increased by 12%, compared to the 3.2% increase in 2017.
 - Professional services per member spending increased slower by 15% in 2018 vs. a 19% increase in 2017.
 - Labs and imaging services per member spending increased by 9% in 2018 vs. a smaller decline of 3% in 2017.
 - Prescription drug per member spending increased by 19% in 2018 vs. 29% in 2017.
- The median expenditure risk scores (excluding Kaiser) grew at a slightly slower rate in 2018 than in 2017. Risk scores increased from 0.32 to 0.44 between 2016 and 2017, compared with increases from 0.44 to 0.50 between 2017 and 2018.

¹⁴See Appendix B for a description of ACA-compliant and non-compliant plans.

Exhibit 17: Enrollment, Spending, and Risk Score in the Individual Market (ACA-Compliant and Non-Compliant Plans)

	2016	2017	2018	% Change 2017/2016	% Change 2018/2017
Members as of 12/31					
Total members (w/o Kaiser)	232,672	182,913	132,506	-21.4%	-27.6%
Total members (w/ Kaiser)	270,126	234,211	197,462	-13.3%	-15.7%
Member Months					
Total member months	2,901,961	2,326,865	1,697,511	-19.8%	-27.0%
Spending					
Per Capita spending, all services combined	\$5,611	\$6,471	\$7,495	15.3%	15.8%
Per Capita OOP, all services combined	\$1,438	\$1,433	\$1,517	-0.4%	5.9%
Per Capita OOP, Medical Only	\$1,237	\$1,214	\$1,326	-1.9%	9.2%
Per Capita OOP, Prescription Drugs	\$201	\$218	\$191	8.8%	-12.6%
Per Capita Spending By Service Category					
Inpatient Hospital Facility	\$925	\$1,035	\$1,213	12.0%	17.2%
Outpatient Hospital Facility	\$1,249	\$1,288	\$1,440	3.2%	11.8%
Outpatient Non-Hospital Facility	\$122	\$157	\$194	28.4%	23.4%
Professional Services	\$1,495	\$1,779	\$2,053	19.0%	15.4%
Labs/Imaging	\$451	\$437	\$478	-3.0%	9.3%
SubTotal (Medical Only)	\$4,241	\$4,697	\$5,378	10.8%	14.5%
Prescription Drugs	\$1,370	\$1,774	\$2,117	29.4%	19.3%
Risk Score					
Median expenditure risk score (w/o Kaiser)	0.32	0.44	0.50	0.11	0.06
Median expenditure risk score (w/ Kaiser)	0.29	0.30	0.27	-0.01	-0.05

Notes: (1) Individuals can have multiple types of coverage during the year but are counted only once in the total enrollment.
 (2) Per member spending portion for insureds is overall per member spending (all services combined) less per member spending OOP (all services combined).
 (3) Some calculations in the above exhibit might not be exact due to rounding.

Drivers of Spending Growth in the Individual Market: 2016 - 2018

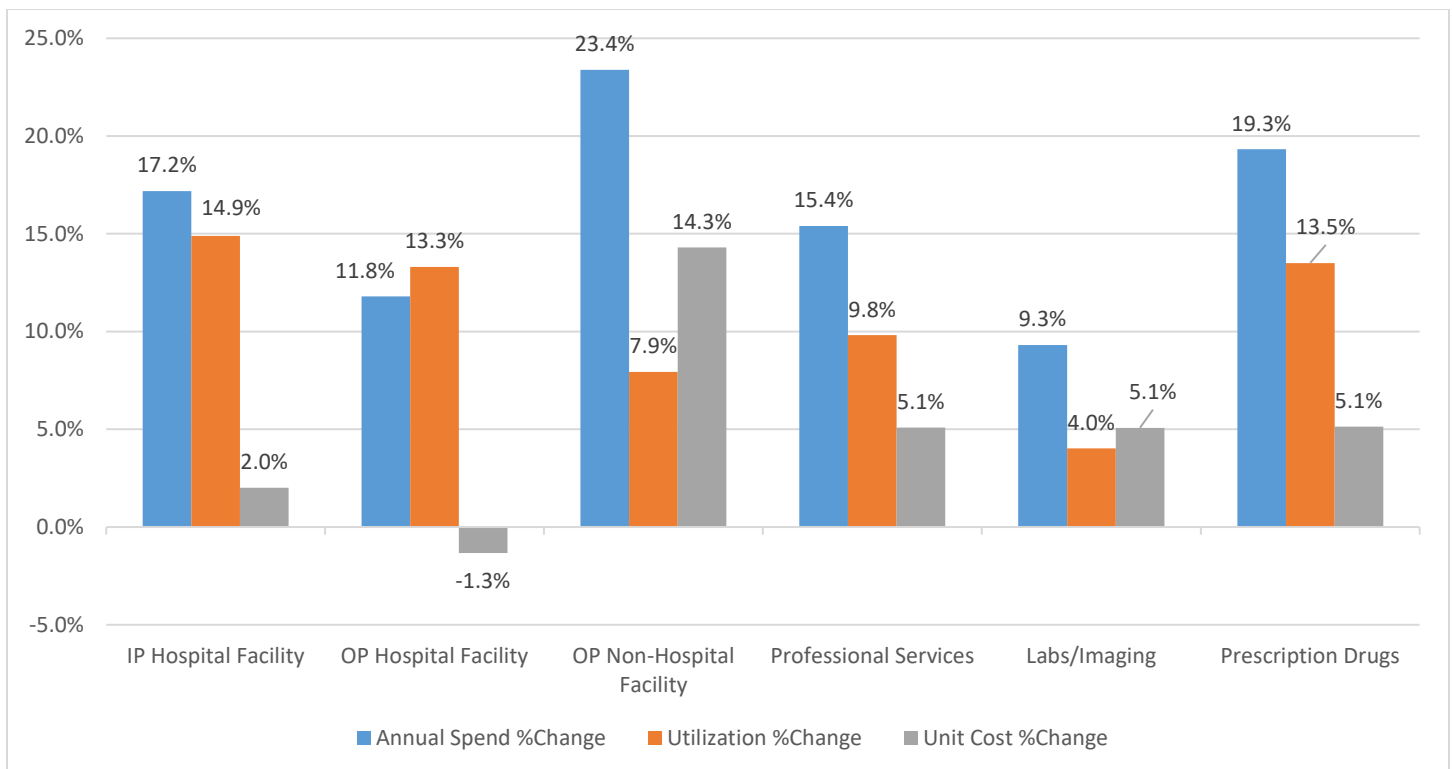
Exhibit 18 illustrates the following:

Per member spending growth in 2018 was primarily driven by increases in utilization—as opposed to unit cost increases—for inpatient hospital facility services and prescription drugs. For outpatient non-hospital facility services, the per member spending increase was driven by unit cost increases. For the remaining service categories that saw declines in per member spending, these declines were due to greater declines in utilization than increases/decreases in unit costs.

- Per member spending for inpatient hospital facility services rose by 17%, driven by an increase of 15% in utilization and a 2% growth in unit costs.
- Per member spending for outpatient hospital facility services rose by 12%, driven by an increase of 13% in utilization and a 1% decline in unit costs.

- Outpatient non-hospital facility services experienced a 23% increase in per member spending, driven by a 14% increase in unit costs and an 8% growth in utilization.
- Per member spending for professional services increased by 15%, driven by a 10% growth in utilization and a 5% increase in unit costs.
- Per member spending for labs/imaging services increased by 9%, primarily driven by a 4% growth in utilization and a 5% growth in unit costs.
- The 19% growth in prescription drug spending was driven by a 14% increase in utilization supplemented by a 5% increase in unit costs.

Exhibit 18: Percentage Changes in Per Member Spending, Utilization per 1,000 Members, and Cost per Unit, by Service Category in the Individual Market (ACA-Compliant and Non-Compliant Plans): 2017 – 2018



Note: (1) Results exclude Kaiser HMO plans.
 (2) Exhibit 3 shows unit costs by market and service category (2016 – 2018).
 (3) Some calculations in the above exhibit might not be exact due to rounding.

5 Most Expensive Drugs By Spend, Individual Market, 2018

Exhibit 19 illustrates the following:

- Total prescription drug spend among individual market members in 2018 totaled \$267 million. Brand drugs utilization was only 2.4% but contributed to 41% (\$108 million) of total spending.
- The top 5 most expensive brand drugs cost \$46 million (17%) of total drug spending. These 5 drugs were Humira Pen, Enbrel (prescribed for psoriasis and some type of arthritis), Genvoya, Triumeq, and Stribild (prescribed for HIV/AIDS).

Exhibit 19: Top 5 Expensive Brand Drugs By Spend, Individual Market, 2018

Brand Name	Drug Class	Prescription			Member Cost	Cost Per Prescription	Member Cost Per Prescription	Member Cost%
		Users	Prescriptions	Total Cost				
Humira Pen	Antirheumatics	353	2,808	\$15,892,859	\$547,772	\$5,660	\$195	4%
Genvoya	Antiviral Combinations	534	4,317	\$12,818,456	\$431,261	\$2,969	\$100	3%
Triumeq	Antiviral Combinations	365	3,025	\$8,545,461	\$337,446	\$2,825	\$112	4%
Stribild	Antiviral Combinations	183	1,455	\$4,547,288	\$138,026	\$3,125	\$95	3%
Enbrel Sureclick	Antirheumatics	112	906	\$4,536,707	\$174,921	\$5,007	\$193	4%
All Other		555,584	2,172,314	\$20,752,279	\$22,461,325	\$102	\$10	11%
Grand Total *		557,131	2,184,825	\$267,093,050	\$24,090,751	\$122	\$11	10%

ACA-Compliant Health Plan Enrollment, Spending, Risk, and Utilization: 2016 – 2018 (On-Exchange and Off-Exchange Plans)

This section provides information on enrollment in ACA-compliant plans in the individual health insurance market in Maryland, as well as data on spending, utilization, and risk (as measured through member health status). This information is essential in understanding trends over time in health care spending, consumer out-of-pocket costs, and insurance participation within the ACA-regulated market, which has undergone tremendous change since the launch in January 2014. This section also provides information on variation in spending across different service types. This section includes data for ACA-compliant plans offered through the Maryland Health Benefit Exchange (MHBE), which provides access to federal premium subsidies for low-income members, as well as data on ACA-compliant plans offered off the Exchange.

Exhibit 20 illustrates the following:

- At the end of 2018, total members (insureds including Kaiser HMO members) enrolled on the Exchange remained flat in 2018 compared to a 2.2% decrease at the end of 2017, indicating that member enrollment began to stabilize in 2018.
- Off-Exchange plan enrollment with Kaiser HMO members declined by about 37% at the end of 2018, compared to a 24.5% decline in 2017. Nationally, this trend also held true with much of the decline in the individual market enrollment being concentrated in the off-exchange market. This is attributable in large part to the significant premium increases in 2017 and 2018, which off-exchange enrollees were subject to since these enrollees are not eligible for any of the federal subsidies.¹⁵
- All per member spending (both On-Exchange and Off-Exchange) excludes Kaiser HMO members.
- Per member spending for all services combined for On-Exchange members grew by about 10.8% (down from 22.8% in 2017); likewise, per member spending for Off-Exchange members grew by about 23.7% in 2018 vs. the 11.6% increase in 2017. The 10.8% On-Exchange increase in per member spending was driven by significant increases in per member spending for the following services categories:
 - Inpatient hospital facility services On-Exchange per member spending increased by 9.8% from 2017 to 2018.

¹⁵ <https://www.kff.org/private-insurance/issue-brief/data-note-changes-in-enrollment-in-the-individual-health-insurance-market-through-early-2019/>

- Outpatient hospital facility services On-Exchange per member spending showed a 9.5% increase.
- An 18.9% increase in On-Exchange per member spending was observed for outpatient non-hospital facility services.
- Professional services displayed a 13.9% increase in On-Exchange per member spending.
- On-Exchange per member spending for labs and imaging services grew by 7.5%.
- Prescription drugs had about a 9.3% increase in On-Exchange per member spending.
- Prescription drug spending growth was much higher among Off-Exchange members (28.4%) than On-Exchange members (9.3%).
- Median expenditure risk score (excluding Kaiser) continued to increase in 2018 for On-Exchange members compared to those enrolled in Off-Exchange plans.

Exhibit 20: On-Exchange vs. Off-Exchange Enrollment, Spending, and Risk Score for ACA-Compliant Insurance in the Individual Market

	2016		2017		2018		% Change 2017/2016		% Change 2018/2017	
	On-Exchange	Off-Exchange	On-Exchange	Off-Exchange	On-Exchange	Off-Exchange	On-Exchange	Off-Exchange	On-Exchange	Off-Exchange
Members as of 12/31										
Total members (w/o Kaiser)	95,477	107,488	79,223	78,012	65,486	44,888	-17.0%	-27.4%	-17.3%	-42.5%
Total members (w/ Kaiser)	121,186	118,401	118,527	89,354	118,605	56,233	-2.2%	-24.5%	0.1%	-37.1%
Distribution (w/o Kaiser)	47%	53%	50%	50%	59%	41%	7.1%	-6.3%	17.8%	-18.0%
Distribution (w/ Kaiser)	51%	49%	57%	43%	68%	32%	12.7%	-13.0%	19.0%	-25.2%
Member Months										
Total member months	1,177,321	1,354,186	991,460	1,015,283	822,141	598,428	-15.8%	-25.0%	-17.1%	-41.1%
Distribution	47%	53%	49%	51%	58%	42%	6.2%	-5.4%	17.1%	-16.7%
Spending										
Per Capita spending, all services combined	\$5,768	\$5,705	\$7,085	\$6,365	\$7,847	\$7,872	22.8%	11.6%	10.8%	23.7%
Per Capita OOP, all services combined	\$1,076	\$1,731	\$1,143	\$1,723	\$1,266	\$1,860	6.3%	-0.4%	10.8%	8.0%
Per Capita OOP, Medical Only	\$892	\$1,524	\$942	\$1,489	\$1,102	\$1,653	5.6%	-2.3%	17.0%	11.0%
Per Capita OOP, Prescription Drugs	\$183	\$207	\$201	\$235	\$164	\$207	9.6%	13.3%	-18.5%	-11.6%
Per Capita Spending By Service Category										
Inpatient Hospital Facility	\$1,004	\$876	\$1,237	\$953	\$1,358	\$1,243	23.2%	8.7%	9.8%	30.5%
Outpatient Hospital Facility	\$1,060	\$1,496	\$1,232	\$1,444	\$1,349	\$1,764	16.2%	-3.4%	9.5%	22.1%
Outpatient Non-Hospital Facility	\$125	\$121	\$183	\$144	\$217	\$183	45.6%	19.2%	18.9%	26.9%
Professional Services	\$1,509	\$1,500	\$1,872	\$1,736	\$2,131	\$2,075	24.0%	15.7%	13.9%	19.5%
Labs/Imaging	\$474	\$436	\$468	\$430	\$503	\$479	-1.4%	-1.5%	7.5%	11.5%
SubTotal (Medical Only)	\$4,174	\$4,430	\$4,992	\$4,707	\$5,559	\$5,744	19.6%	6.3%	11.4%	22.0%
Prescription Drugs	\$1,595	\$1,275	\$2,093	\$1,657	\$2,288	\$2,127	31.3%	30.0%	9.3%	28.4%
Risk Score (3)										
Median expenditure risk score (w/o Kaiser)	0.40	0.30	0.52	0.39	0.58	0.46	0.12	0.09	0.06	0.07
Median expenditure risk score (w/ Kaiser)	0.22	0.26	0.29	0.32	0.24	0.33	-0.04	0.02	-0.02	-0.04

Notes: (1) Kaiser plan data are excluded from this report except for membership at the end of the year and median expenditure risk scores.

(2) Per member spending portion for insureds is calculated as per member spending for all services combined less per member spending OOP for all services combined.

(3) Some calculations in the above exhibit might not be exact due to rounding.

Part 4: Primary Care Spending among Maryland's Privately Insured Markets: 2016, 2017 and 2018

Overwhelming research evidence has shown that a relatively high investment in primary care spending is associated with higher quality and low overall cost of care. The United States spends relatively less on primary care services compared to other industrialized nations and this has been described as one of the reasons why cost effectiveness of US health systems continues to lag behind.¹⁶ Although the methods used in measuring primary care are not yet clearly standardized across institutions and states, a report published by the Milbank Memorial Fund in 2017 assessed the feasibility of calculating the percentage of privately-insured medical spending to primary care providers relative to overall medical expenses.¹⁷ This report classified four types of primary care definitions, A through D, based on provider specialty only and provider specialty plus rendered services. For each group, only spending for services designated as primary care by the organization were captured. A list of primary care provider types and service types in terms of ICD codes and CPT codes are included in Appendix B.

Using the second provider level definition labelled PCP-B, the Milbank Memorial Fund calculated a national benchmark for the average percent Fee For Service primary care spending by private payers at 6.0 (4.6 - 7.6) for PPO plans and 6.5 (3.1 - 9.2) for HMO plans in 2014.¹⁵ After discussions with an expert panel, we used the PCP-B definition in this report. We used industry standard taxonomy codes to identify primary care providers belonging to PCP-B definition. Then, to identify primary care encounters in the claims data, we used ICD codes and CPT codes used by the Oregon Health Authority in 2019 which published primary care spending in the State of Oregon using the APCD database¹⁶. These codes were determined to be similar to the services designated as primary care in the Milbank Memorial Fund report and they were developed from review of the Oregon State Senate Bill 231 (2015), the National Uniform Claim Committees' Health Care Provider Taxonomy code sets, and the Health Cost Guidelines medical code set.¹⁶ Only primary care spending for physician office encounters and hospital outpatient departments were included in this report. Inpatient or ER visits were excluded. Qualified medical encounters include all products across the individual, small employer, and large employer markets. The percent of primary care spending compared to total medical plus prescription drug spending were calculated and displayed by demographic variables, as shown in Exhibit 21.

Exhibit 21 illustrates the following:

- The average per member spending on primary care visits was \$248 among the privately insured for all ages 0-64 years from 2016 to 2018.
- Primary care alone constituted an average of 4.7% of all medical and prescription drug spending each year. This is comparable to national benchmark percentages calculated by the Milbank Memorial Fund.
- The percent per member spending on primary care was highest (12.1% - 12.9%) for ages 0-18 years compared to any other age group (less than 6%). The higher primary care spending percent observed among this age group could be attributed to more primary care services required for recurrent brief illnesses and preventive care, compared to adults who seek care mostly when there is significant morbidity or risk factors of concern.

¹⁶ References 1. Koller, C.F., Khullar, D. (2017) Primary Care Spending Rate — A Lever for Encouraging Investment in Primary Care, NEJM, 377:1709-1711 <https://www.nejm.org/doi/10.1056/NEJMp1709538>

¹⁷ 2. Bailit, M.H., Friedberg, M.W., Houy, M.L. (2017). Standardizing the Measurement of Commercial Health Plan Primary Care Spending. (Retrieved 01/27/2020: <https://www.milbank.org/publications/standardizing-measurement-commercial-health-plan-primary-care-spending/>)

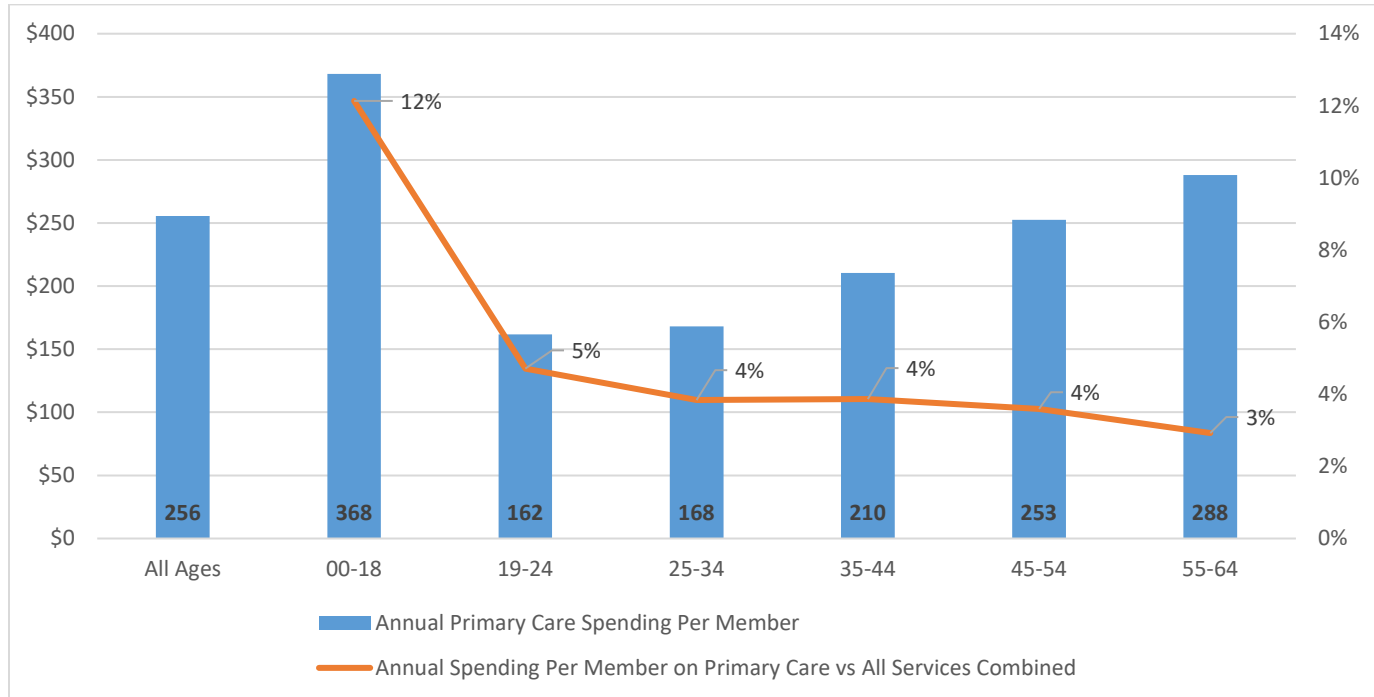
Exhibit 21: Per Member Spending on Primary Care Compared to All Services Combined: 2016 – 2018

	2016				2017				2018			
	Total	Large Employers	Small Employers	Individual	Total	Large Employers	Small Employers	Individual	Total	Large Employers	Small Employers	Individual
Per member Primary Care Spending Per Member by Market												
Gender												
Male	\$217	\$225	\$200	\$197	\$221	\$231	\$199	\$196	\$229	\$238	\$212	\$197
Female	\$263	\$270	\$244	\$243	\$268	\$278	\$244	\$239	\$280	\$290	\$263	\$241
Total	\$241	\$249	\$222	\$221	\$246	\$256	\$221	\$219	\$256	\$265	\$237	\$221
Age												
00-18	\$343	\$350	\$325	\$317	\$353	\$360	\$340	\$314	\$368	\$372	\$367	\$329
19-24	\$142	\$144	\$135	\$137	\$148	\$152	\$134	\$137	\$162	\$163	\$162	\$152
25-34	\$160	\$161	\$154	\$161	\$161	\$164	\$152	\$157	\$168	\$171	\$162	\$159
35-44	\$200	\$205	\$186	\$191	\$202	\$210	\$179	\$186	\$210	\$219	\$189	\$190
45-54	\$239	\$248	\$220	\$219	\$247	\$258	\$218	\$219	\$253	\$265	\$227	\$216
55-64	\$274	\$286	\$247	\$247	\$278	\$293	\$239	\$247	\$288	\$304	\$255	\$250
Total	\$241	\$249	\$222	\$221	\$246	\$256	\$221	\$219	\$256	\$265	\$237	\$221
Per member Spending Per Member on Primary Care/All Services Combined												
Gender												
Male	4.7%	5.1%	4.8%	3.6%	5.0%	5.5%	4.7%	3.4%	4.7%	4.9%	4.9%	3.2%
Female	4.6%	4.8%	4.7%	3.9%	4.8%	5.1%	4.6%	3.6%	4.5%	4.6%	4.9%	3.6%
Total	4.7%	4.9%	4.7%	3.8%	4.9%	5.3%	4.7%	3.5%	4.6%	4.7%	4.9%	3.4%
Age												
00-18	12.7%	13.2%	11.8%	11.0%	12.9%	13.6%	11.4%	10.1%	12.1%	12.3%	12.4%	9.8%
19-24	4.4%	4.5%	4.1%	4.2%	4.7%	5.0%	4.0%	3.9%	4.7%	4.8%	4.7%	3.9%
25-34	3.9%	4.1%	4.1%	2.9%	3.9%	4.2%	4.1%	2.7%	3.8%	4.0%	4.3%	2.7%
35-44	3.9%	4.1%	4.2%	3.1%	4.1%	4.4%	4.1%	2.8%	3.9%	4.0%	4.2%	2.9%
45-54	3.6%	3.7%	3.7%	3.3%	3.8%	4.1%	3.5%	3.1%	3.6%	3.7%	3.7%	3.1%
55-64	3.0%	3.1%	2.9%	2.9%	3.2%	3.4%	2.9%	2.7%	2.9%	2.9%	3.0%	2.8%
Total	4.5%	4.7%	4.6%	3.7%	4.7%	5.1%	4.5%	3.4%	4.5%	4.6%	4.8%	3.3%

Note: (1) Prescription drug spending results exclude FEHB PPO members (See Appendix B for more information).
 (2) Some calculations in the above exhibit might not be exact due to rounding.
 (3) The large employer market includes State of Maryland employees (self-insured non-ERISA) and other self-insured non-ERISA plans.
 (4) Results exclude Kaiser plans.

As shown in Exhibits 21 and 22, the average per member spending for both primary care and all services combined increased modestly for the 19 to 64 age group throughout the study period. However, the percentage of primary care spending compared to overall spending declined with age, from 5% to 3%. There were no remarkable differences in primary care spending by gender.

Exhibit 22: Per member Spending, All Services vs. % Per member Spending on Primary Care, by Age Group, 2018



Appendix A: Additional Exhibits

Exhibit A1. Per member Utilization of Inpatient and Outpatient Facilities by Market, 2018

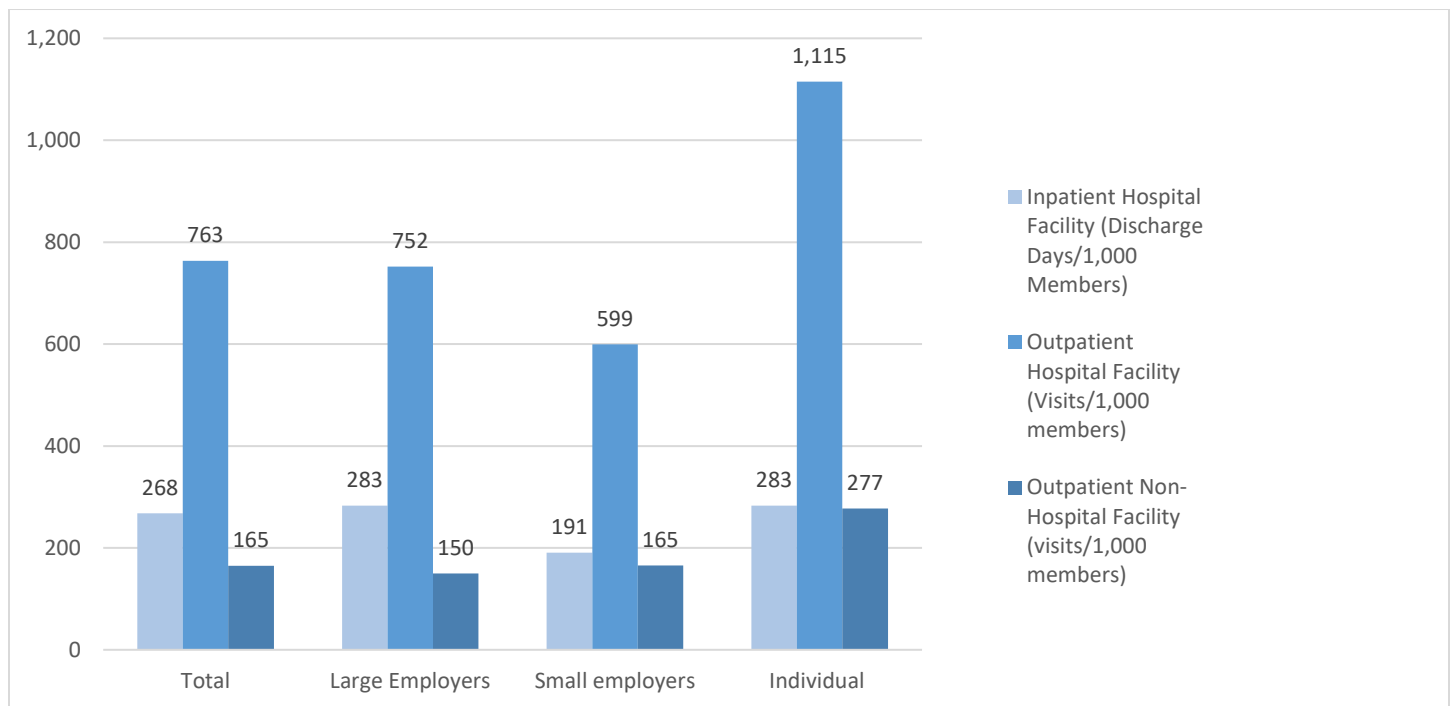


Exhibit A2. Per member Utilization of Professional Services, Labs/Imaging, and Prescription Drugs by Market, 2018

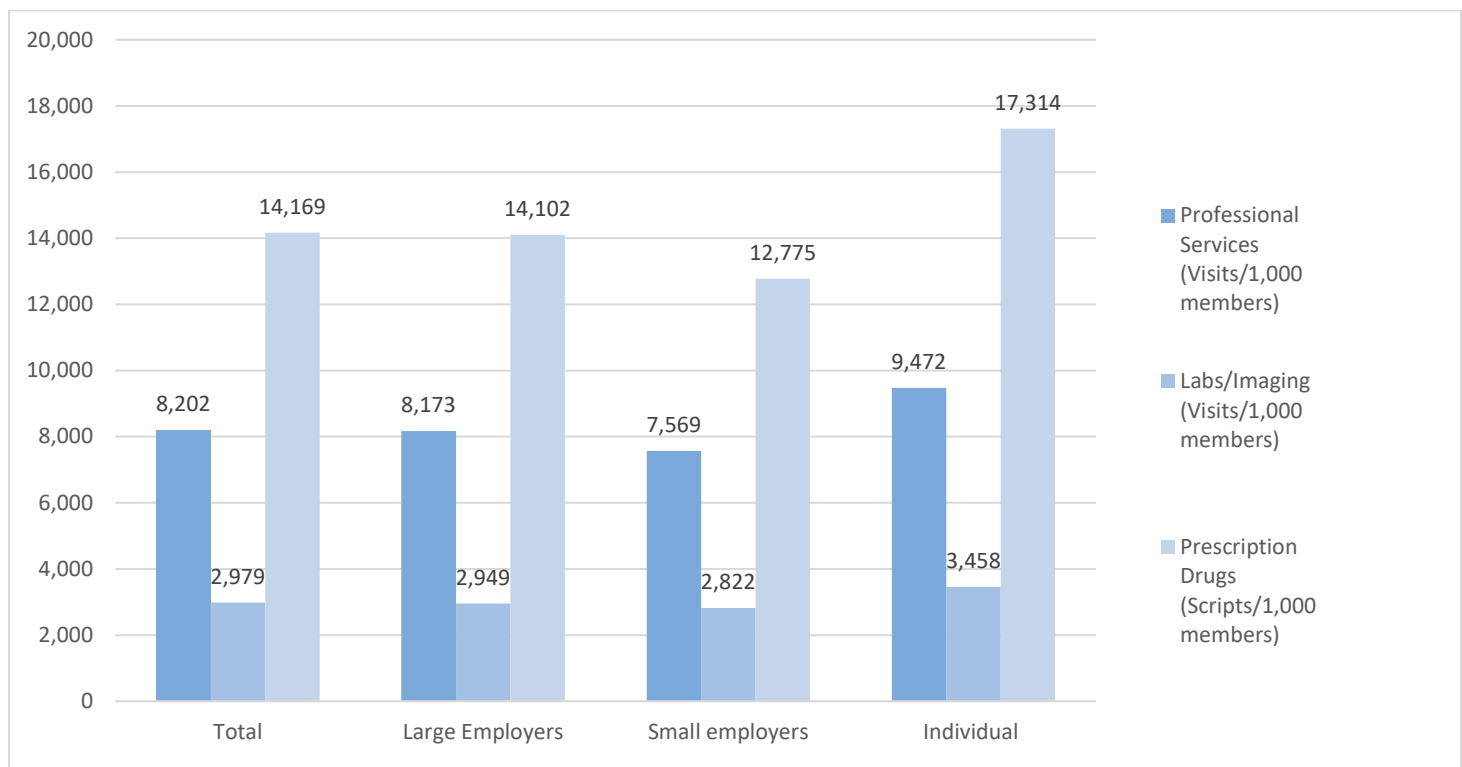


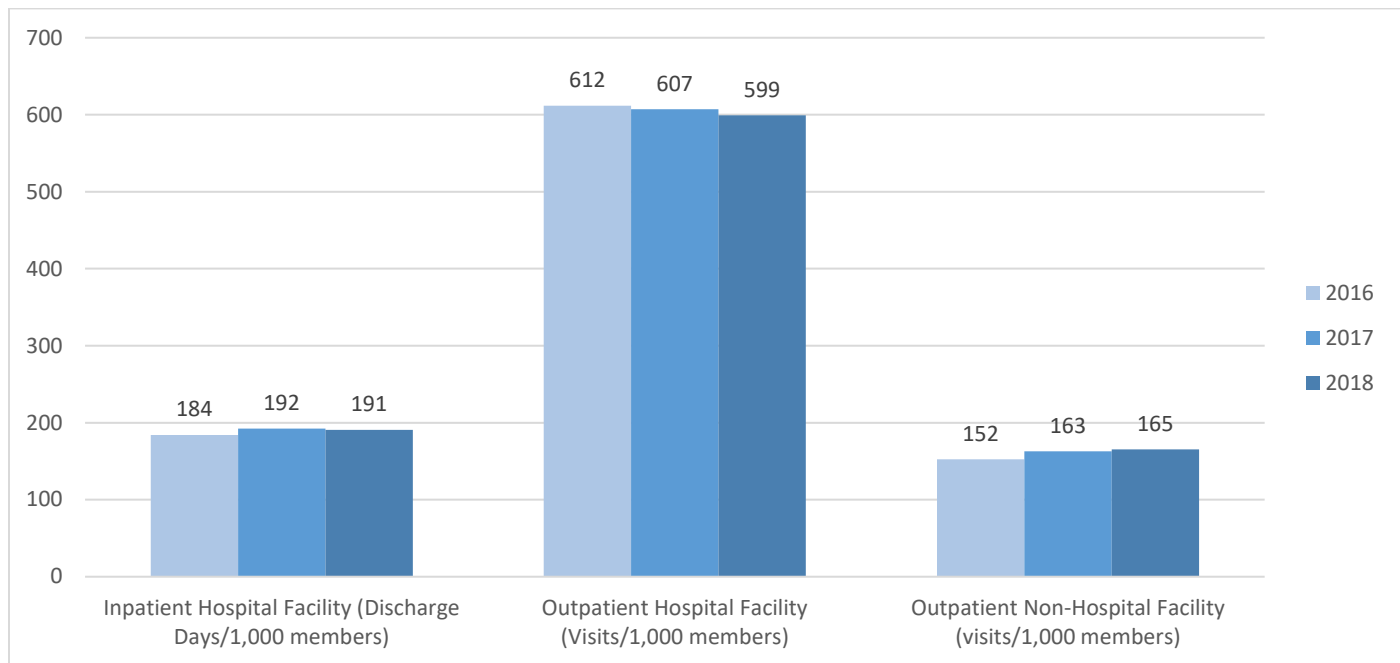
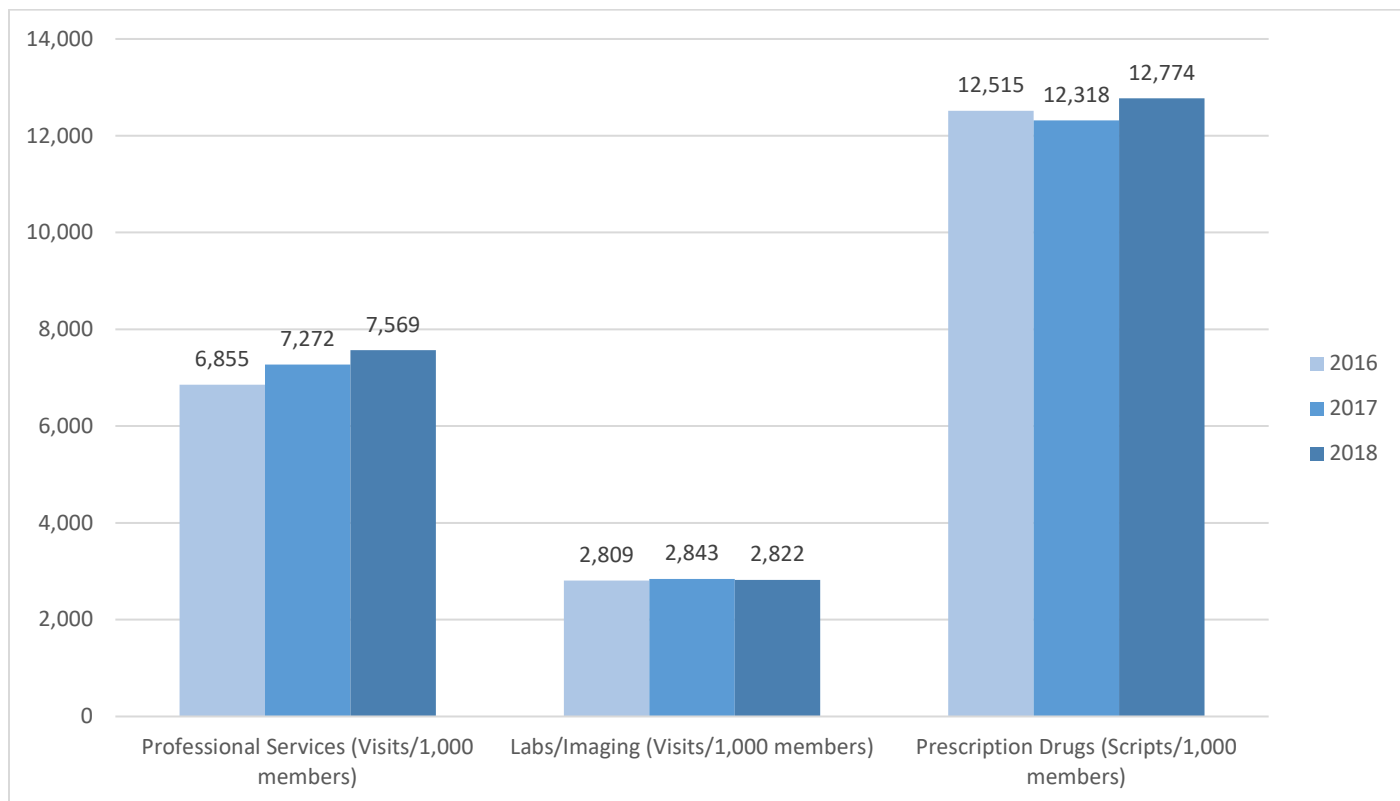
Exhibit A3: Hospital Inpatient and Outpatient Utilization, Small Employer Market, 2016-2018**Exhibit A4: Utilization of Professional Services, Labs/Imaging, and Prescription Drugs, Small Employer Market, 2016-2018**

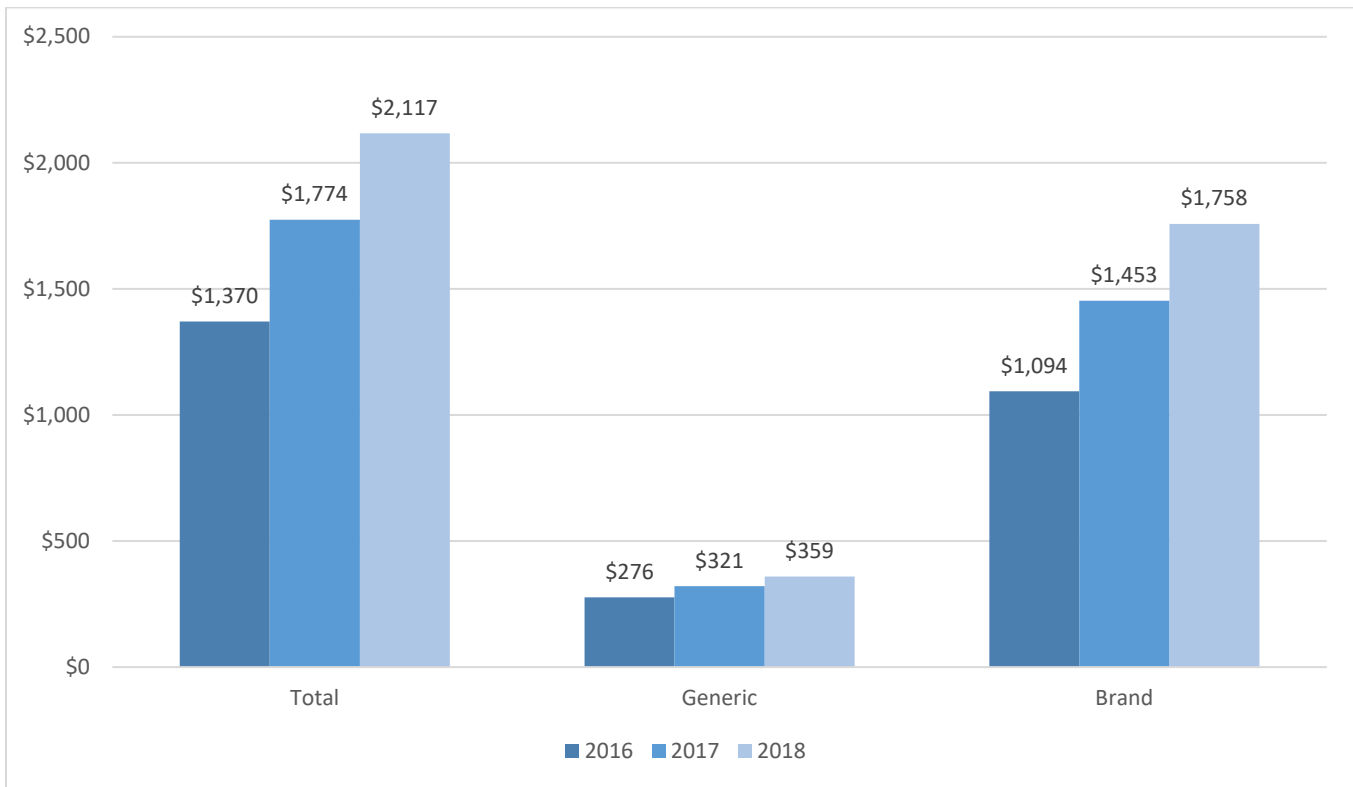
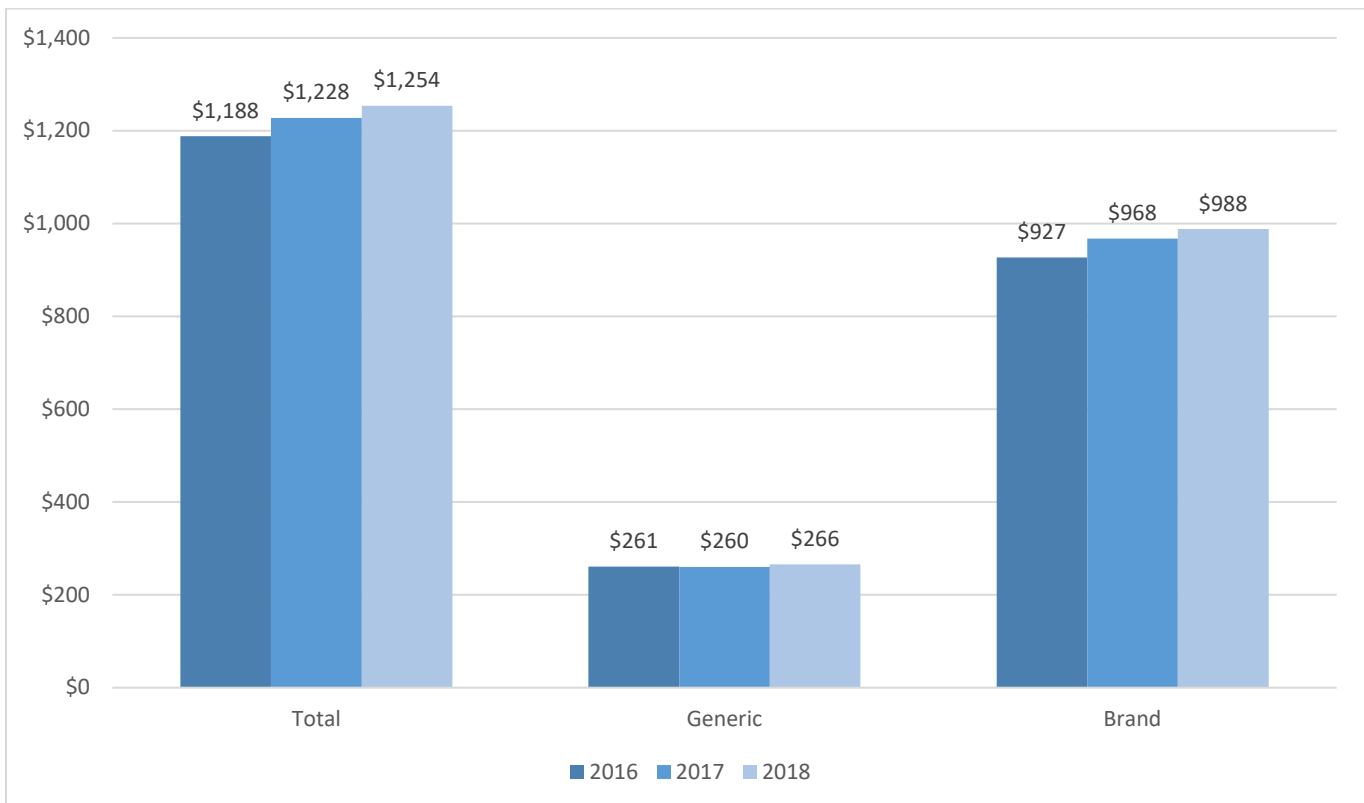
Exhibit A5. Prescription Drug Per member Spend Changes by Drug Type, Individual Market, 2016-2018**Exhibit A6. Prescription Drug Per member Spend Changes by Drug Type, Small Employer Market, 2016-2018**

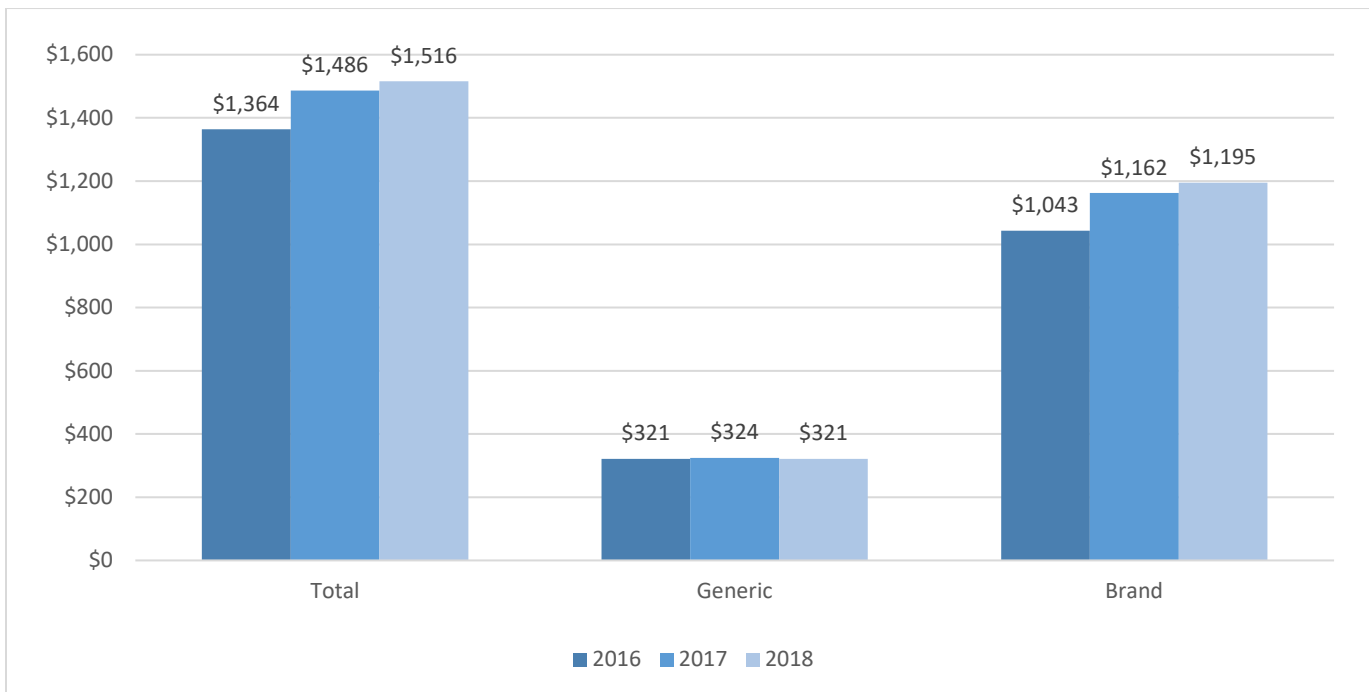
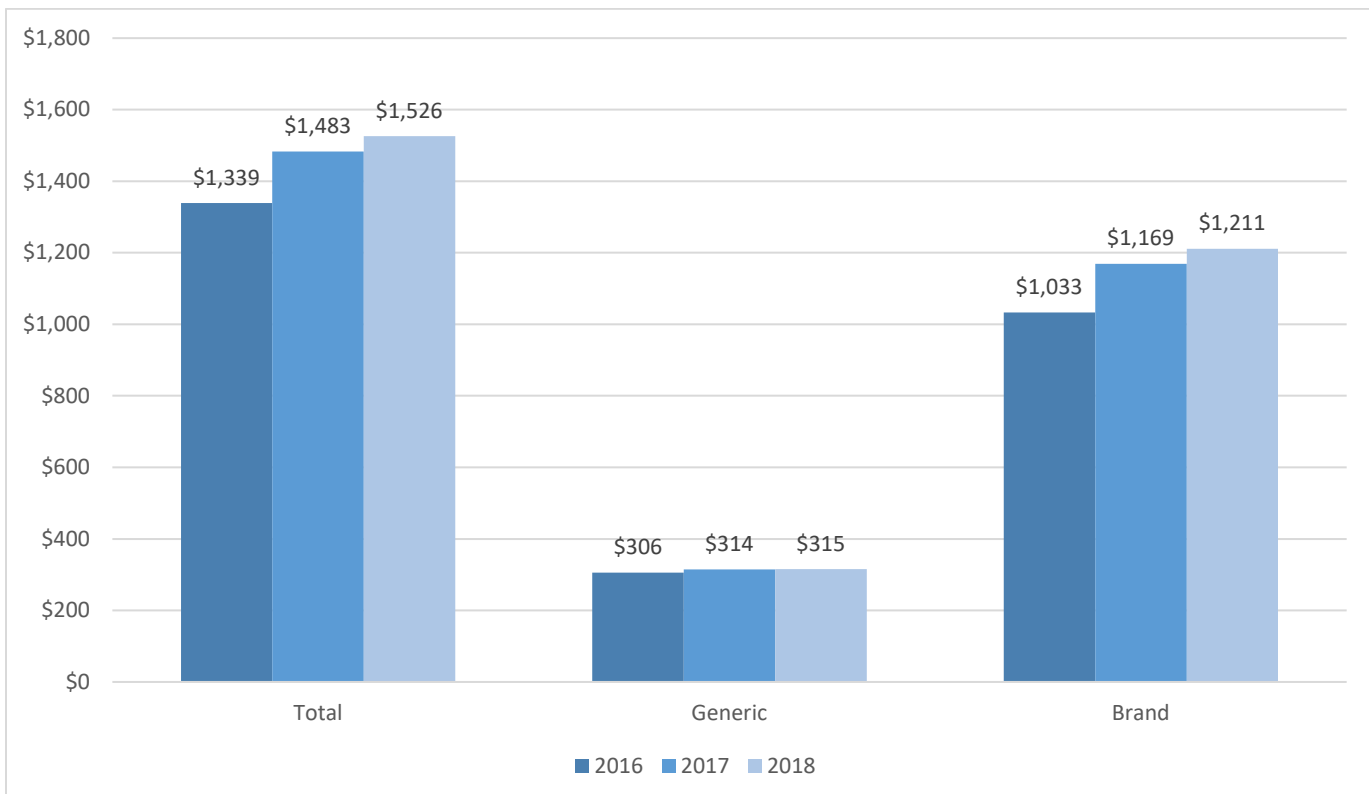
Exhibit A7. Prescription Drug Per member Spend Changes by Drug Type, Large Employer Market, 2016-2018**Exhibit A8. Prescription Drug Per member Spend Changes by Drug Type, All Markets Combined, 2016-2018**

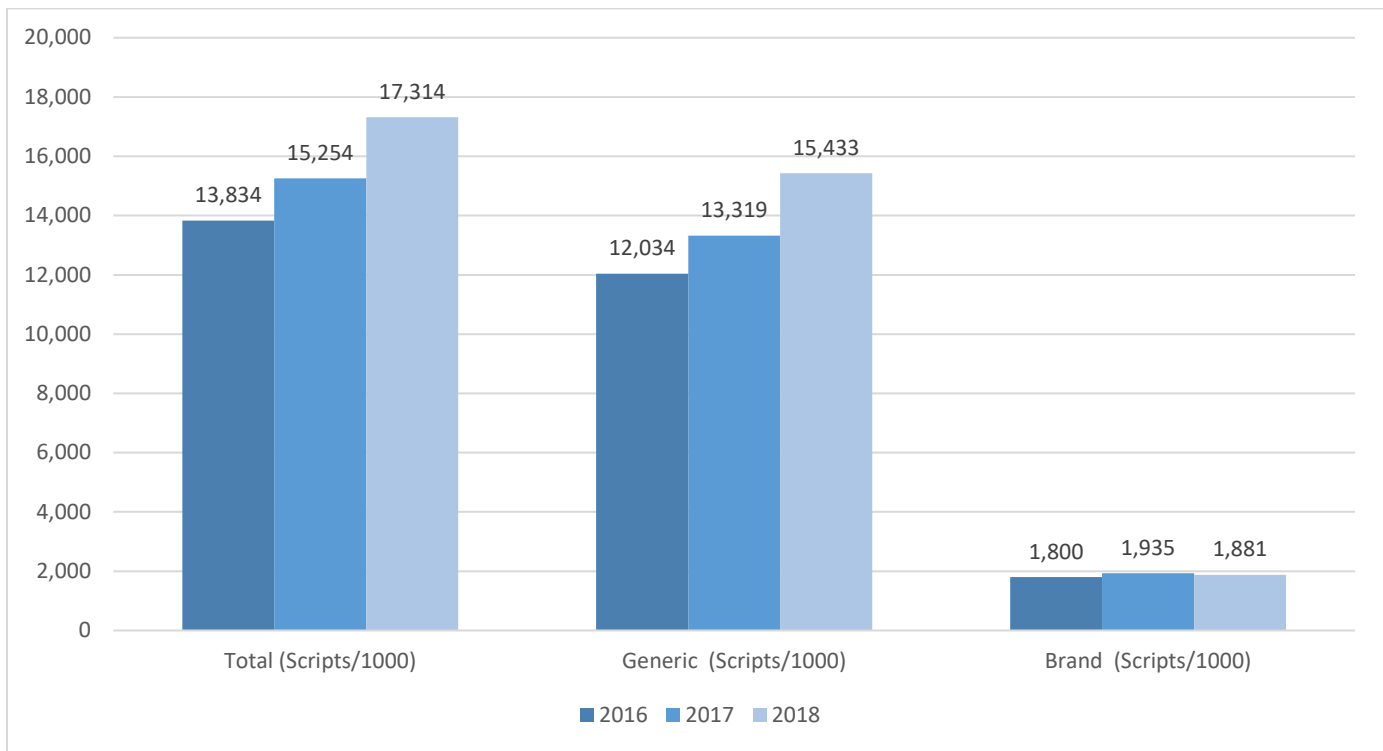
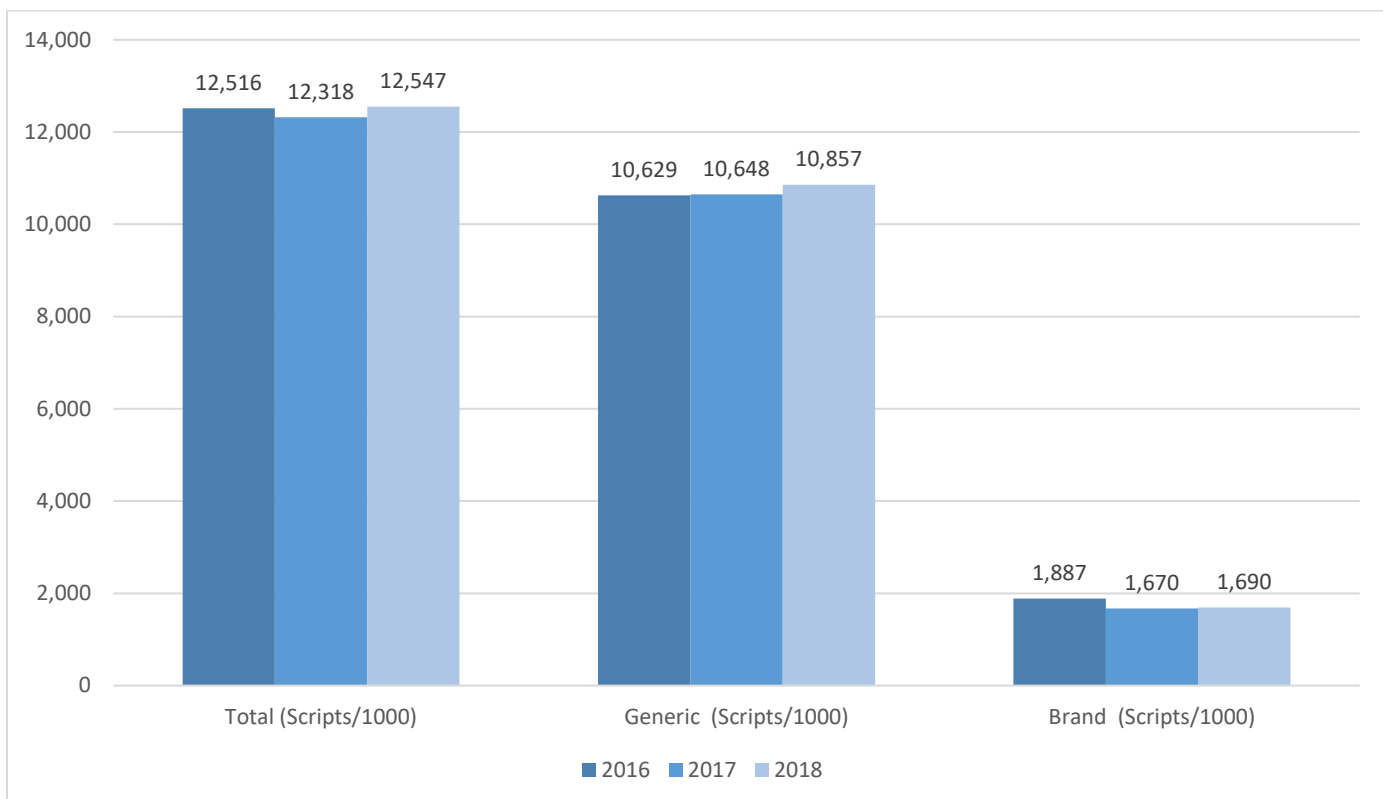
Exhibit A9. Prescription Drug Utilization by Drug Type, Individual Market, 2016-2018**Exhibit A10. Prescription Drug Utilization by Drug Type, Small Employer Market, 2016-2018**

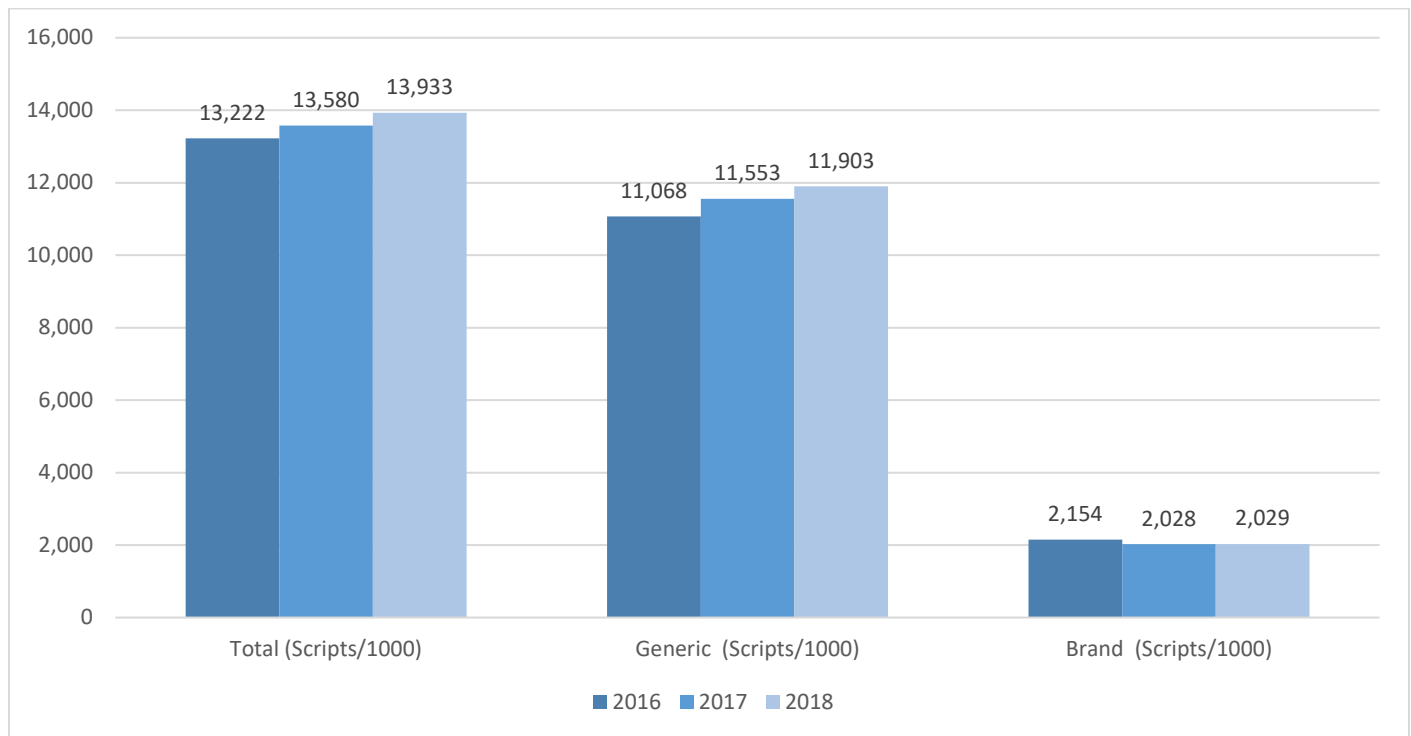
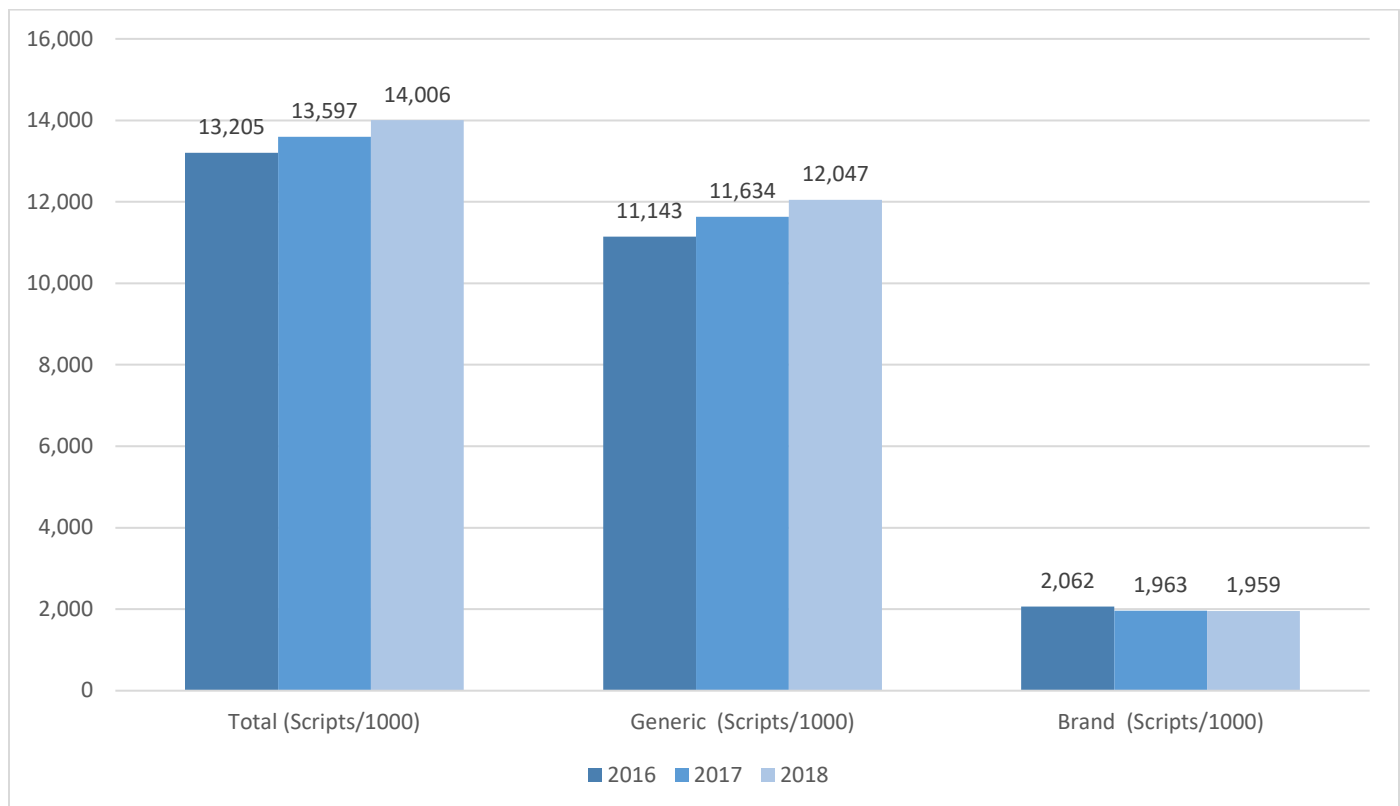
Exhibit A11. Prescription Drug Utilization by Drug Type, Large Employer Market, 2016-2018**Exhibit A12. Prescription Drug Utilization by Drug Type, All Markets Combined, 2016-2018**

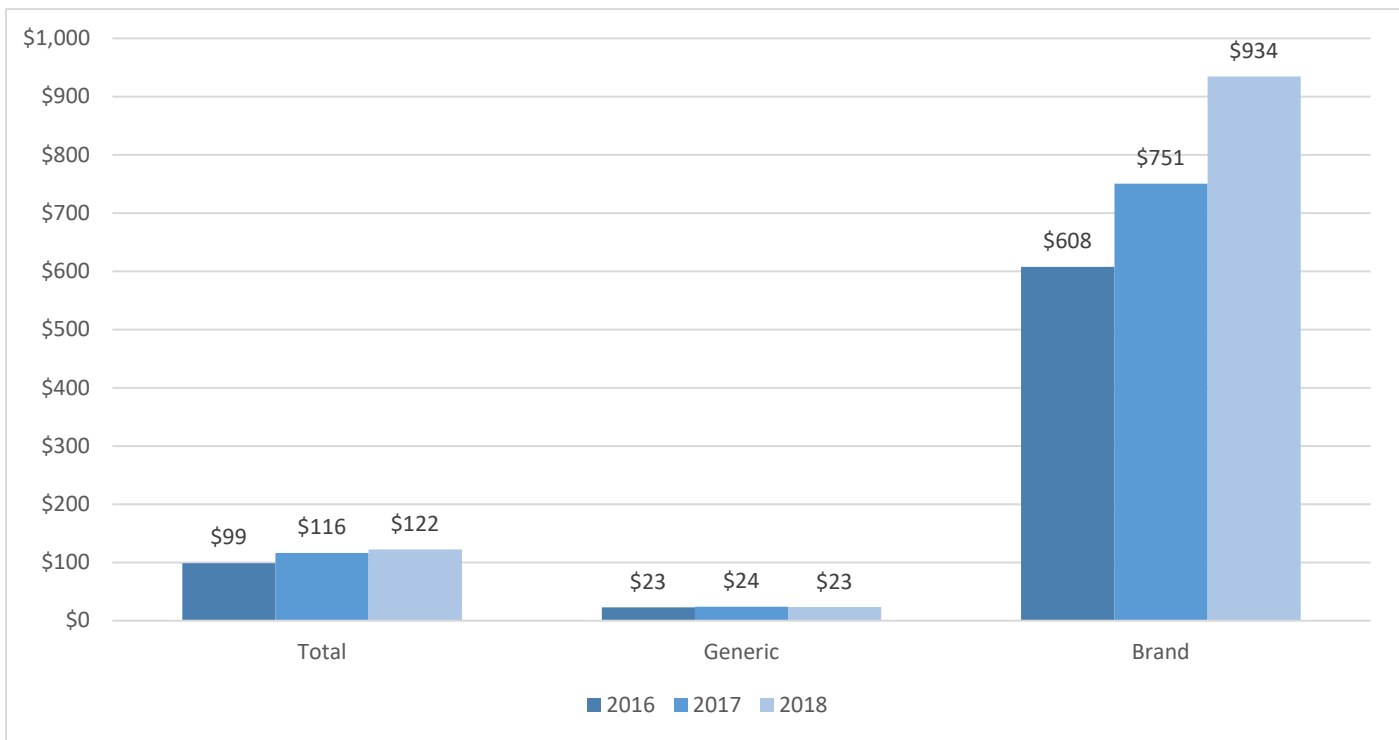
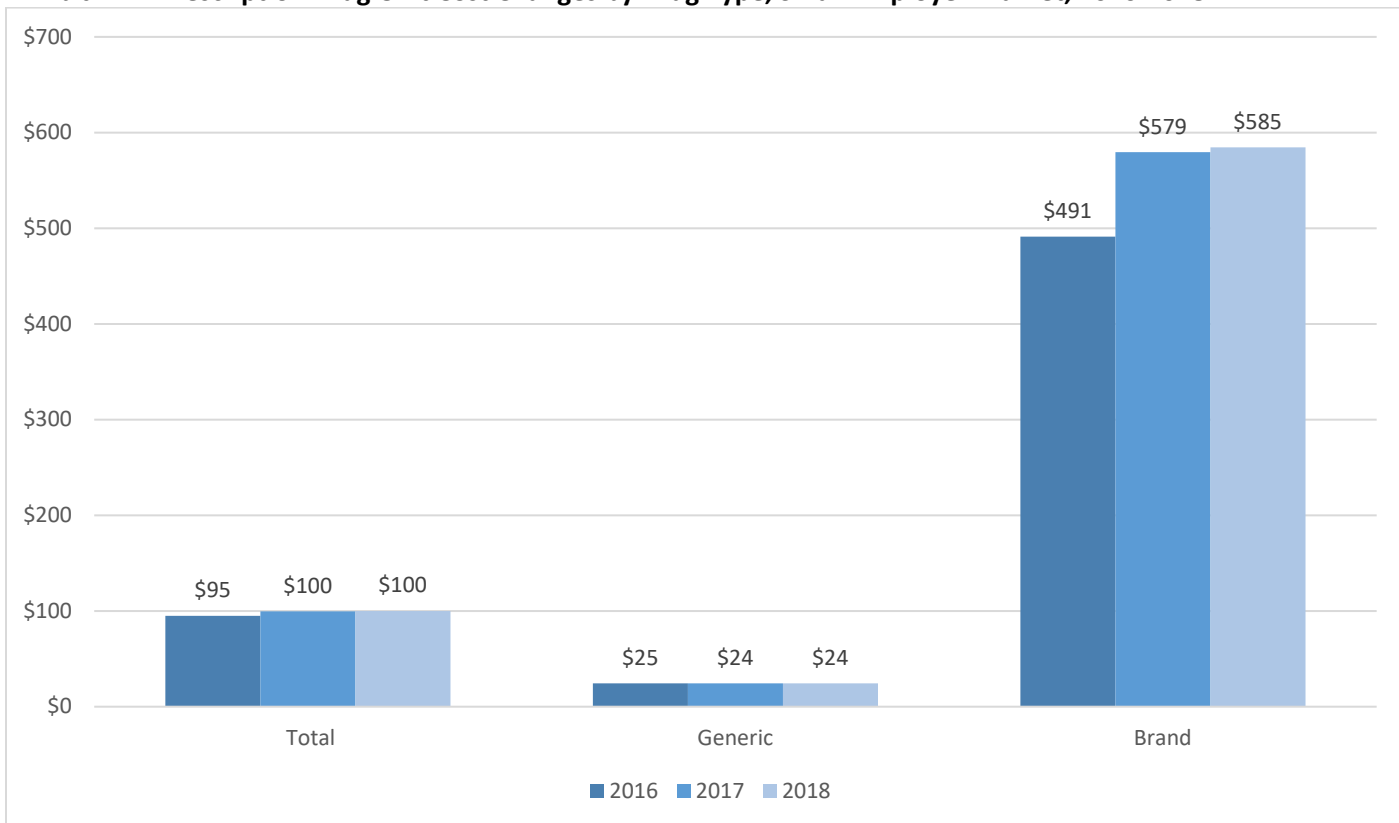
Exhibit A13. Prescription Drug Unit Cost Changes by Drug Type, Individual Market, 2016-2018**Exhibit A14. Prescription Drug Unit Cost Changes by Drug Type, Small Employer Market, 2016-2018**

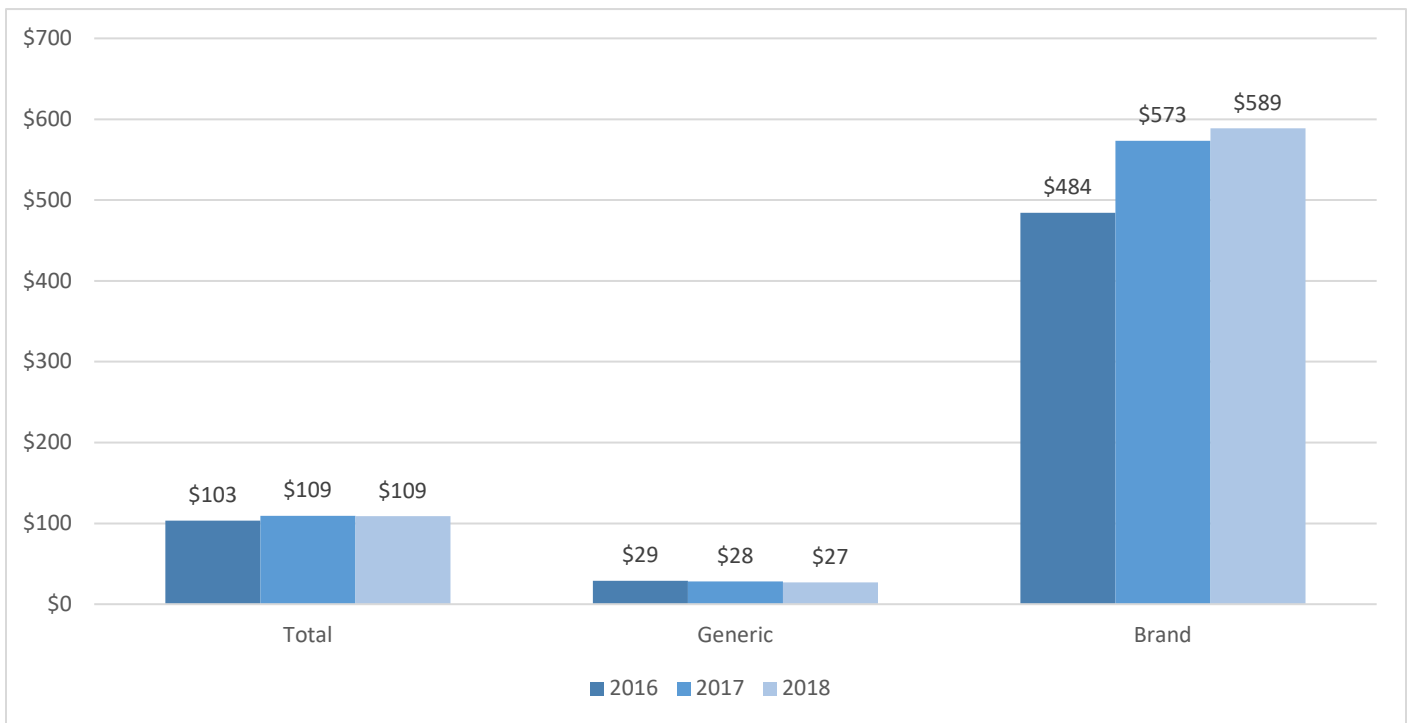
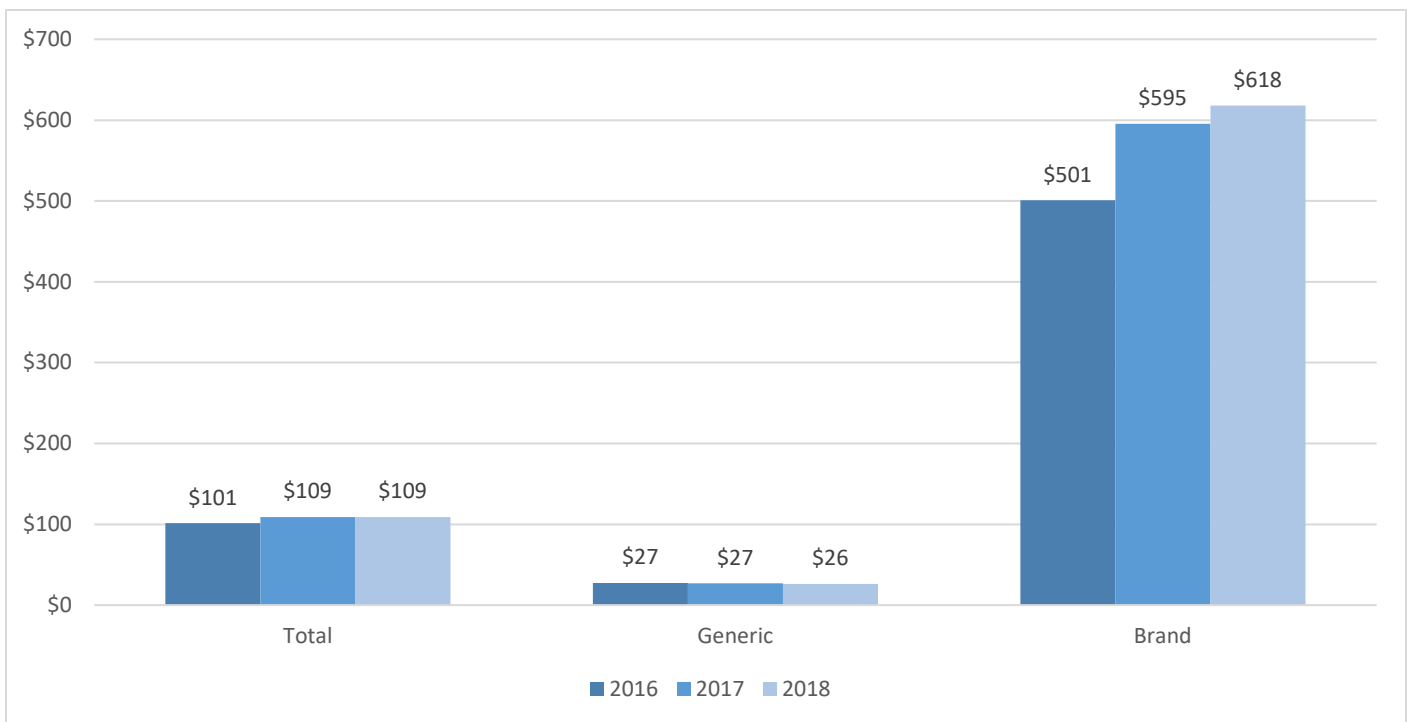
Exhibit A15. Prescription Drug Unit Cost Changes by Drug Type, Large Employer Market, 2016-2018**Exhibit A16. Prescription Drug Unit Cost Changes by Drug Type, All Markets Combined, 2016-2018**

Exhibit A17. Top 25 Expensive Brand Drugs By Spend, All Markets Combined, 2018

Brand Name	Drug Class	Prescription		Total Cost	Member Cost	Cost Per	Member Cost	Member
		Users	Prescriptions			Prescription	Per Prescription	Cost%
Humira Pen	Antirheumatics	2,913	22,035	\$126,146,116	\$2,332,238	\$5,725	\$106	2%
Stelara Pfs	Interleukin Inhibitors	719	4,970	\$40,053,517	\$504,808	\$8,059	\$102	1%
Tecfidera	Selective Immunosuppressants	595	4,946	\$36,979,492	\$395,624	\$7,477	\$80	1%
Trulicity Pen	Incretin Mimetics	6,748	50,646	\$35,719,298	\$1,906,114	\$705	\$38	6%
Genvoya	Antiviral Combinations	1,473	11,383	\$33,737,712	\$1,012,695	\$2,964	\$89	3%
Enbrel Sureclick	Antirheumatics	776	5,935	\$29,572,474	\$648,108	\$4,983	\$109	2%
Vyvanse	Cns Stimulants	17,012	97,268	\$29,321,422	\$5,233,736	\$301	\$54	22%
Triumeq	Antiviral Combinations	1,127	8,840	\$25,023,535	\$710,146	\$2,831	\$80	3%
Harvoni	Antiviral Combinations	329	791	\$24,626,523	\$161,433	\$31,133	\$204	1%
Cialis	Impotence Agents	14,993	62,606	\$22,906,581	\$2,755,145	\$366	\$44	14%
Victoza	Incretin Mimetics	4,516	30,222	\$22,226,630	\$1,261,965	\$735	\$42	6%
Truvada	Antiviral Combinations	2,150	12,988	\$22,009,522	\$1,135,948	\$1,695	\$87	5%
Copaxone	Other Immunostimulants	470	3,767	\$21,815,244	\$563,748	\$5,791	\$150	3%
Revlimid	Miscellaneous Antineoplastics	217	1,534	\$21,703,906	\$117,588	\$14,149	\$77	1%
Lyrica	Gamma-Aminobutyric Acid Analogs	6,902	37,809	\$19,107,344	\$1,429,720	\$505	\$38	8%
Tresiba Flextouch	Insulin	4,810	36,338	\$17,768,855	\$1,361,384	\$489	\$37	8%
Januvia	Dipeptidyl Peptidase 4 Inhibitors	5,434	42,497	\$17,690,863	\$1,213,531	\$416	\$29	7%
Gilenya	Selective Immunosuppressants	240	2,064	\$16,088,965	\$172,858	\$7,795	\$84	1%
Novolog Flexpen	Insulin	4,892	31,179	\$15,988,626	\$1,100,719	\$513	\$35	7%
Cosentyx Sensoready Pen	Interleukin Inhibitors	403	2,814	\$15,865,259	\$312,551	\$5,638	\$111	2%
Humira	Antirheumatics	372	2,563	\$15,318,715	\$345,430	\$5,977	\$135	2%
Farxiga	Sgl t-2 Inhibitors	4,344	32,926	\$14,829,912	\$1,457,894	\$450	\$44	11%
Advair Diskus	Bronchodilator Combinations	8,676	38,251	\$14,804,536	\$1,751,420	\$387	\$46	13%
Metformin Hydrochloride Er	Biguanides	19,722	142,053	\$13,386,397	\$472,159	\$94	\$3	4%
Novolog	Insulin	2,743	21,193	\$13,164,642	\$877,466	\$621	\$41	7%
All Other		5,152,375	18,353,511	\$1,415,367,581	\$160,150,279	\$77	\$9	13%
Grand Total *		5,264,951	19,061,129	\$2,081,223,667	\$189,384,707	\$109	\$10	10%

Exhibit A18. Top 25 Expensive Brand Drugs By Spend, Individual Market, 2018

Brand_Name	Drug Class	Prescription		Total Cost	Member Cost	Cost Per	Member Cost	Member Cost%
		Users	Prescriptions			Prescription	Per Prescription	
Humira Pen	Antirheumatics	353	2,808	\$15,892,859	\$547,772	\$5,660	\$195	4%
Genvoya	Antiviral Combinations	534	4,317	\$12,818,456	\$431,261	\$2,969	\$100	3%
Triumeq	Antiviral Combinations	365	3,025	\$8,545,461	\$337,446	\$2,825	\$112	4%
Stribild	Antiviral Combinations	183	1,455	\$4,547,288	\$138,026	\$3,125	\$95	3%
Enbrel Sureclick	Antirheumatics	112	906	\$4,536,707	\$174,921	\$5,007	\$193	4%
Odefsey	Antiviral Combinations	189	1,614	\$4,329,399	\$147,116	\$2,682	\$91	4%
Stelara Pfs	Interleukin Inhibitors	78	578	\$4,311,406	\$104,660	\$7,459	\$181	2%
Harvoni	Antiviral Combinations	58	128	\$4,064,825	\$48,032	\$31,756	\$375	1%
Tecfidera	Selective Immunosuppressants	64	536	\$4,033,380	\$89,413	\$7,525	\$167	2%
Atripla	Antiviral Combinations	175	1,404	\$3,862,730	\$121,427	\$2,751	\$86	3%
Truvada	Antiviral Combinations	332	2,250	\$3,800,381	\$283,420	\$1,689	\$126	8%
Revlimid	Miscellaneous Antineoplastics	34	253	\$3,665,278	\$45,267	\$14,487	\$179	1%
Menopur	Gonadotropins	303	654	\$3,149,477	\$71,913	\$4,816	\$110	2%
Trulicity Pen	Incretin Mimetics	591	4,281	\$3,005,420	\$246,758	\$702	\$58	9%
Tivicay	Integrase Strand Transfer Inhibitor	227	1,601	\$2,871,885	\$116,541	\$1,794	\$73	4%
Descovy	Antiviral Combinations	224	1,680	\$2,838,979	\$110,078	\$1,690	\$66	4%
Vyvanse	Cns Stimulants	1,634	9,255	\$2,818,573	\$852,410	\$305	\$92	43%
Copaxone	Other Immunostimulants	54	451	\$2,616,433	\$196,374	\$5,801	\$435	8%
Victoza	Incretin Mimetics	474	3,359	\$2,496,952	\$182,244	\$743	\$54	8%
Ibrance	Multikinase Inhibitors	37	224	\$2,489,535	\$38,472	\$11,114	\$172	2%
Novolog Flexpen	Insulin	688	4,838	\$2,417,955	\$210,753	\$500	\$44	10%
Tresiba Flex touch	Insulin	615	5,118	\$2,402,332	\$280,159	\$469	\$55	13%
Follistim Aq Cartridge	Gonadotropins	216	393	\$2,400,054	\$44,473	\$6,107	\$113	2%
Cosentyx Sensorready Pen	Interleukin Inhibitors	57	424	\$2,375,733	\$130,531	\$5,603	\$308	6%
Humira	Antirheumatics	44	320	\$2,096,115	\$126,352	\$6,550	\$395	6%
All Other		549,490	2,132,953	158,705,437	19,014,932	\$74	\$9	14%
Grand Total *		557,131	2,184,825	\$267,093,050	\$24,090,751	\$122	\$11	10%

Exhibit A19. Top 25 Expensive Brand Drugs By Spend, State Employees, 2018

Brand_Name	Drug Class	Prescription Users	Prescriptions	Total Cost	Member Cost	Cost Per Prescription	Member Cost Per Prescription	Member Cost%
Humira Pen	Antirheumatics	1,117	9,073	\$53,021,807	\$215,305	\$5,844	\$24	0%
Trulicity Pen	Incretin Mimetics	3,541	28,770	\$20,372,931	\$528,530	\$708	\$18	3%
Stelara Pfs	Interleukin Inhibitors	285	1,896	\$17,505,620	\$40,771	\$9,233	\$22	0%
Tecfidera	Selective Immunosuppressants	237	2,115	\$15,739,499	\$41,887	\$7,442	\$20	0%
Enbrel Sureclick	Antirheumatics	361	2,805	\$14,013,979	\$56,405	\$4,996	\$20	0%
Cialis	Impotence Agents	7,879	34,698	\$13,492,205	\$752,906	\$389	\$22	6%
Vyvanse	Cns Stimulants	7,049	43,198	\$13,099,569	\$1,027,292	\$303	\$24	9%
Harvoni	Antiviral Combinations	145	379	\$11,598,916	\$15,907	\$30,604	\$42	0%
Lyrica	Gamma-Aminobutyric Acid Analogs	3,846	21,929	\$11,167,419	\$479,938	\$509	\$22	4%
Januvia	Dipeptidyl Peptidase 4 Inhibitors	3,186	26,174	\$10,897,329	\$394,257	\$416	\$15	4%
Revlimid	Miscellaneous Antineoplastics	99	767	\$10,780,451	\$18,066	\$14,055	\$24	0%
Genvoya	Antiviral Combinations	410	3,476	\$10,337,755	\$113,554	\$2,974	\$33	1%
Metformin Hydrochloride Er	Biguanides	8,721	67,093	\$10,222,673	\$210,151	\$152	\$3	2%
Copaxone	Other Immunostimulants	205	1,751	\$10,165,438	\$134,259	\$5,806	\$77	1%
Victoza	Incretin Mimetics	1,955	13,702	\$10,043,236	\$249,518	\$733	\$18	3%
Tresiba Flextouch	Insulin	2,159	16,122	\$8,499,402	\$269,812	\$527	\$17	3%
Cosentyx Sensoready Pen	Interleukin Inhibitors	181	1,379	\$7,816,488	\$30,119	\$5,668	\$22	0%
Truvada	Antiviral Combinations	744	4,534	\$7,810,957	\$105,015	\$1,723	\$23	1%
Triumeq	Antiviral Combinations	330	2,708	\$7,738,113	\$70,914	\$2,858	\$26	1%
Gilenya	Selective Immunosuppressants	105	994	\$7,690,846	\$16,579	\$7,737	\$17	0%
Farxiga	Sgl t-2 Inhibitors	2,098	16,145	\$7,300,614	\$262,897	\$452	\$16	4%
Novolog Flexpen	Insulin	2,211	13,614	\$7,122,503	\$228,357	\$523	\$17	3%
Advair Diskus	Bronchodilator Combinations	3,741	17,387	\$6,701,484	\$334,267	\$385	\$19	5%
Duexis	Nonsteroidal Anti-Inflammatory Agents	1,044	2,923	\$6,434,520	\$143,188	\$2,201	\$49	2%
Humira	Antirheumatics	157	1,067	\$6,317,114	\$21,774	\$5,920	\$20	0%
All Other		2,293,711	8,451,166	\$680,075,046	\$1,307,782	\$80	\$6	8%
Grand Total *		2,345,517	8,785,865	\$985,965,914	\$57,069,450	\$112	\$6	6%

Exhibit A20. Top 25 Most Frequently Used Drugs, All Markets, 2018

Drug Name	Drug Class	Prescription Users	Prescriptions	Total Cost	Member Cost	Cost Per Prescription	Member Cost Per Prescription	Member Cost%
Levothyroxine	Thyroid Hormones	73,752	663,885	\$10,356,338	\$6,601,593	\$16	\$10	64%
Atorvastatin	HMG-CoA Reductase Inhibitors	79,787	627,832	\$4,960,940	\$1,674,511	\$8	\$3	34%
Lisinopril	Angiotensin Converting Enzyme Inhibitors	61,566	486,042	\$1,247,687	\$888,908	\$3	\$2	71%
Amlodipine	Calcium Channel Blocking Agents	57,004	437,295	\$1,306,835	\$935,973	\$3	\$2	72%
Metformin	Biguanides	59,173	428,487	\$15,892,564	\$1,137,911	\$37	\$3	7%
Ethinyl Estradiol-Norethindrone	Contraceptives	60,844	402,760	\$20,631,205	\$1,008,361	\$51	\$3	5%
Metoprolol	Beta Blockers, Cardioselective	45,002	343,631	\$3,357,025	\$1,787,374	\$10	\$5	53%
Sertraline	SSRI Antidepressants	47,423	333,797	\$1,909,467	\$1,136,075	\$6	\$3	59%
Escitalopram	SSRI Antidepressants	44,890	304,507	\$2,437,093	\$1,307,131	\$8	\$4	54%
Bupropion	Miscellaneous Antidepressants	43,746	289,018	\$9,242,549	\$2,675,558	\$32	\$9	29%
Losartan	Angiotensin II Inhibitors	36,297	279,792	\$1,240,094	\$841,572	\$4	\$3	68%
Hydrochlorothiazide	Thiazide And Thiazide-Like Diuretics	38,061	267,708	\$518,935	\$429,916	\$2	\$2	83%
Ergocalciferol	Vitamins	58,026	258,541	\$489,210	\$412,477	\$2	\$2	84%
Montelukast	Leukotriene Modifiers	42,423	243,010	\$2,131,113	\$1,189,261	\$9	\$5	56%
Rosuvastatin	HMG-CoA Reductase Inhibitors	30,504	234,008	\$7,178,322	\$1,263,469	\$31	\$5	18%
Albuterol	Adrenergic Bronchodilators	127,651	221,953	\$11,660,103	\$6,088,344	\$53	\$27	52%
Amoxicillin	Aminopenicillins	171,410	219,195	\$992,043	\$852,306	\$5	\$4	86%
Ethinyl Estradiol-Norgestimate	Contraceptives	36,100	215,813	\$2,931,849	\$217,987	\$14	\$1	7%
Amphetamine-Dextroamphetamine	CNS Stimulants	38,596	208,713	\$15,182,050	\$3,711,282	\$73	\$18	24%
Pantoprazole	Proton Pump Inhibitors	38,644	207,187	\$1,459,873	\$803,400	\$7	\$4	55%
Fluoxetine	SSRI Antidepressants	26,736	191,031	\$3,475,334	\$833,604	\$18	\$4	24%
Ibuprofen	Nonsteroidal Anti-Inflammatory Agents	123,765	182,842	\$626,132	\$511,456	\$3	\$3	82%
Omeprazole	Proton Pump Inhibitors	34,058	173,895	\$1,357,457	\$691,283	\$8	\$4	51%
Azithromycin	Macrolides	142,233	173,055	\$1,217,756	\$860,492	\$7	\$5	71%
Simvastatin	HMG-CoA Reductase Inhibitors	20,045	164,588	\$635,464	\$217,959	\$4	\$1	34%
All Other		3,727,215	11,502,544	1,958,786,229	151,306,504	\$170	\$13	8%
Grand Total *		5,264,951	19,061,129	\$2,081,223,667	\$189,384,707	\$109	\$10	9%

Exhibit A21. Top 25 Most Frequently Used Drugs, Individual Markets, 2018

Drug Name	Drug Class	Prescription Users	Prescriptions	Total Cost	Member Cost	Cost Per Prescription	Member Cost Per Prescription	Member Cost%
Levothyroxine	Thyroid Hormones	9,168	84,944	\$1,340,246	\$822,516	\$16	\$10	61%
Atorvastatin	HMG-CoA Reductase Inhibitors	9,466	77,139	\$345,512	\$94,869	\$4	\$1	27%
Lisinopril	Angiotensin Converting Enzyme Inhibitors	7,326	60,205	\$58,079	\$32,909	\$1	\$1	57%
Metformin	Biguanides	6,838	52,461	\$1,257,418	\$71,215	\$24	\$1	6%
Amlodipine	Calcium Channel Blocking Agents	6,012	47,994	\$52,942	\$29,000	\$1	\$1	55%
Metoprolol	Beta Blockers, Cardioselective	5,609	44,119	\$332,232	\$142,023	\$8	\$3	43%
Sertraline	SSRI Antidepressants	5,314	38,629	\$102,066	\$57,037	\$3	\$1	56%
Bupropion	Miscellaneous Antidepressants	5,550	37,872	\$772,916	\$255,146	\$20	\$7	33%
Ethinyl Estradiol-Norethindrone	Contraceptives	5,683	36,611	\$1,918,625	\$48,894	\$52	\$1	3%
Escitalopram	SSRI Antidepressants	5,224	35,915	\$201,423	\$103,389	\$6	\$3	51%
Losartan	Angiotensin II Inhibitors	4,396	35,175	\$77,989	\$44,330	\$2	\$1	57%
Amphetamine-Dextroamphetamine	CNS Stimulants	5,342	30,469	\$1,681,570	\$390,374	\$55	\$13	23%
Hydrochlorothiazide	Thiazide And Thiazide-Like Diuretics	3,943	29,621	\$38,649	\$21,846	\$1	\$1	57%
Ergocalciferol	Vitamins	6,800	26,125	\$53,542	\$25,346	\$2	\$1	47%
Gabapentin	Gamma-Aminobutyric Acid Analogs	4,909	24,969	\$207,705	\$58,287	\$8	\$2	28%
Fluoxetine	SSRI Antidepressants	3,207	24,011	\$411,544	\$80,568	\$17	\$3	20%
Montelukast	Leukotriene Modifiers	4,054	23,907	\$128,019	\$62,279	\$5	\$3	49%
Rosuvastatin	HMG-CoA Reductase Inhibitors	3,051	23,793	\$596,904	\$79,282	\$25	\$3	13%
Simvastatin	HMG-CoA Reductase Inhibitors	2,649	22,333	\$23,747	\$3,659	\$1	\$0	15%
Pantoprazole	Proton Pump Inhibitors	4,680	21,624	\$79,986	\$38,099	\$4	\$2	48%
Ethinyl Estradiol-Norgestimate	Contraceptives	3,293	19,728	\$254,670	\$11,878	\$13	\$1	5%
Trazodone	Phenylpiperazine Antidepressants	3,289	18,893	\$77,532	\$28,833	\$4	\$2	37%
Pravastatin	HMG-CoA Reductase Inhibitors	2,314	18,797	\$140,152	\$6,482	\$7	\$0	5%
Alprazolam	Benzodiazepines	5,110	18,698	\$59,005	\$23,442	\$3	\$1	40%
Amoxicillin	Aminopenicillins	14,462	18,485	\$52,802	\$33,167	\$3	\$2	63%
All Other		419,442	1,312,308	\$256,827,775	\$21,525,881	\$196	\$16	8%
Grand Total *		557,131	2,184,825	\$267,093,050	\$24,090,751	\$122	\$11	9%

Exhibit A22. Top 25 Most Frequently Used Drugs, State Employees, 2018

Drug Name	Drug Class	Prescription Users	Prescriptions	Total Cost	Member Cost	Cost Per Prescription	Member Cost Per Prescription	Member Cost%
Levothyroxine	Thyroid Hormones	29,469	284,774	\$4,186,442	\$2,320,200	\$15	\$8	55%
Atorvastatin	HMG-CoA Reductase Inhibitors	32,587	274,625	\$2,414,529	\$544,363	\$9	\$2	23%
Lisinopril	Angiotensin Converting Enzyme Inhibitors	25,034	213,353	\$483,924	\$305,786	\$2	\$1	63%
Amlodipine	Calcium Channel Blocking Agents	24,502	203,662	\$513,324	\$318,585	\$3	\$2	62%
Metformin	Biguanides	24,630	191,941	\$11,419,683	\$459,331	\$59	\$2	4%
Ethinyl Estradiol-Norethindrone	Contraceptives	25,167	176,740	\$9,127,468	\$422,346	\$52	\$2	5%
Metoprolol	Beta Blockers, Cardioselective	19,119	156,083	\$1,526,464	\$732,198	\$10	\$5	48%
Sertraline	SSRI Antidepressants	19,184	143,992	\$810,131	\$409,448	\$6	\$3	51%
Escitalopram	SSRI Antidepressants	17,998	131,707	\$1,020,111	\$438,365	\$8	\$3	43%
Losartan	Angiotensin II Inhibitors	15,038	123,166	\$503,090	\$316,981	\$4	\$3	63%
Hydrochlorothiazide	Thiazide And Thiazide-Like Diuretics	16,684	121,612	\$218,974	\$194,998	\$2	\$2	89%
Ergocalciferol	Vitamins	24,532	121,173	\$175,608	\$169,502	\$1	\$1	97%
Bupropion	Miscellaneous Antidepressants	16,947	120,827	\$4,191,343	\$898,773	\$35	\$7	21%
Montelukast	Leukotriene Modifiers	19,373	117,772	\$1,103,664	\$568,103	\$9	\$5	51%
Rosuvastatin	HMG-CoA Reductase Inhibitors	14,019	115,623	\$3,587,254	\$322,319	\$31	\$3	9%
Albuterol	Adrenergic Bronchodilators	60,926	109,018	\$5,744,768	\$2,138,740	\$53	\$20	37%
Amoxicillin	Aminopenicillins	77,029	101,499	\$431,800	\$397,954	\$4	\$4	92%
Ethinyl Estradiol-Norgestimate	Contraceptives	15,206	94,689	\$1,237,033	\$104,072	\$13	\$1	8%
Pantoprazole	Proton Pump Inhibitors	16,017	93,833	\$688,404	\$314,608	\$7	\$3	46%
Omeprazole	Proton Pump Inhibitors	15,071	86,977	\$732,517	\$281,218	\$8	\$3	38%
Ibuprofen	Nonsteroidal Anti-Inflammatory Agents	55,577	85,356	\$270,016	\$244,528	\$3	\$3	91%
Fluticasone Nasal	Nasal Steroids	35,128	83,377	\$772,620	\$456,688	\$9	\$5	59%
Fluoxetine	SSRI Antidepressants	10,622	81,133	\$1,648,418	\$278,064	\$20	\$3	17%
Azithromycin	Macrolides	62,942	78,022	\$444,932	\$336,996	\$6	\$4	76%
Amphetamine-Dextroamphetamine	CNS Stimulants	12,748	74,921	\$5,451,171	\$739,779	\$73	\$10	14%
All Other		1,659,968	5,399,990	\$27,262,226	\$43,355,505	\$172	\$8	5%
Grand Total *		2,345,517	8,785,865	\$985,965,914	\$57,069,450	\$112	\$6	6%

Appendix B: Definitions and Methods

DATA SOURCES

The figures and tables in this report are based on 2016, 2017, and 2018 data analyses from Maryland's Medical Care Data Base (MCDB). It includes all members, regardless of whether an individual used any health care services. The data are for privately insured Maryland residents (i.e., only those individuals who live in Maryland).

MARKETS

Large Employer: The large employer market refers to businesses with more than 50 full-time employees. All Federal Employee Health Benefit (FEHB) Program medical data are included in the report with the exception of FEHB PPO plans. However, for prescription drugs, some FEHB spending may not be captured due to a limitation on linking patient-encrypted identifiers.

Small Employer: The small employer market refers to businesses with between 2 and 50 full-time employees.

Individual: The individual market refers to members who purchased a health benefit plan directly from an insurer, not through an employer.

INDIVIDUAL PLAN TYPES

ACA-Compliant: This includes non-grandfathered plans only.

ACA-non-Compliant: This includes grandfathered plans only.

On-Exchange: Includes ACA-compliant products sold on the Maryland Health Benefit Exchange.

Off-Exchange: Includes ACA non-compliant products sold off the Maryland Health Benefit Exchange.

SERVICE CATEGORY DESCRIPTIONS

Inpatient Hospital Facility: Includes non-capitated facility services for medical, surgical, maternity, mental health and substance abuse, skilled nursing, and any other services provided in an inpatient facility setting and billed by the facility.

Outpatient Hospital Facility: Includes non-capitated facility services for surgical, emergency room, lab, radiology, therapy, observation, and other services provided in an outpatient hospital facility setting including hospital outpatient departments and freestanding medical facilities billed by the facility.

Outpatient Non-Hospital Facility: Primarily includes services provided at ambulatory surgery centers, outpatient rehabilitation facilities, clinics, and home health outpatient centers.

Professional Services: Includes non-capitated primary care, specialist, therapy, the professional component of laboratory and radiology, and other professional services. This service category also includes "Other Medical" such as non-capitated ambulance, home health care, durable medical equipment (DME), prosthetics, supplies, and other services (excluding vision exams and dental services not collected in the MCDB).

Labs/Imaging (radiology) services are reported separately for this report.

MEASURES

Expenditure Risk Score: The expenditure risk score calculated in exhibits 1, 14, 17 and 20 are based on the Johns Hopkins ACG® Software System ©1990, 2016, Johns Hopkins University, All Rights Reserved, a risk stratification system that assesses the risk of current utilization based on diagnoses reported in current claims. In straightforward terms, a patient file (identifying an eligible individual) is merged with diagnoses and pharmacy codes to produce a series of risk factors and risk scores. For this year's report, we used v11.1 of the Johns Hopkins ACG® Software System, with an updated ICD-10 CM mapping file version 11.1 1st Quarter 2020 Release (Release Date: December 18, 2019) to calculate unscaled concurrent risk score.

Per member Spending is calculated as the total aggregate spending during the calendar year [with three (3) months of claims run-out] divided by the number of years insured for all members. Per member spending for medical and prescription drugs was calculated separately because not all members had drug coverage. All claims incurred in 2017 but paid through March of 2018 excluded adjustments for outstanding claims.

Out-of-Pocket (OOP) spending is the member's cost-sharing responsibility.

Inpatient Facility (hospital and non-hospital) (Number of Discharge Days per 1,000 Members) is calculated as the Total Number of Discharge Days/Total Medical Member Months*1000*12. MHCC introduced the concept of per member spending in 2014 and started with admissions per 1,000 members as a measure of inpatient utilization to be consistent with what was used by insurance carriers in Actuarial Memoranda sent to the Maryland Insurance Administration (MIA) via rate filings. However, for this year's report, MHCC elected to use discharge days per 1,000 members, which is more widely used in the health policy community.

Total Discharge Days are the sum of the number of days spent in the hospital for each inpatient who was discharged during the time examined (2016, 2017 2018), regardless of when the patient was admitted (discharge basis).

Total Discharges are the number of inpatients released from the hospital during 2016, 2017, and 2018.

Outpatient Facility (Number of visits per 1,000 Members) is calculated as Total Number of Outpatient Visits/Total Medical Member Months*1000*12.

Professional Services (Number of visits per 1,000 Members) is calculated as Total Number of Visits for Professional Services/Total Medical Member Months*1000*12.

Labs/Imaging Services (Number of visits per 1,000 Members) is calculated as Total Visits for Labs and Imaging Services/Total Medical Members Months*1000*12.

Prescription Drugs (Number of Scripts per 1,000 Members) is calculated as Total Number of Prescription Drugs Filled/Total Prescription Drug Member Month *1000*12.

Cost per Prescription is calculated as Total Aggregated Pharmacy Spending/Total Number of Prescriptions.

Member cost per Prescription is calculated as Total Aggregated Pharmacy Member Spending/Total Number of Prescriptions.

Generic Dispensing Rate is calculated as Number of Generic Prescriptions/Total Number of Prescriptions

Unit Cost: The unit cost is the insurer's allowed amount for the claim divided by the utilization count (e.g., number of visits) for that type of service category or drug.

Notes:

Prescriptions have been “normalized” or adjusted so that they are counted based on a 30-day supply of medication. Therefore, each 90-day prescription is counted as three 30-day prescriptions. Prescription drug member months are for those pharmacy members who also have medical benefits throughout the experience period (2016, 2017, and 2018).

For outpatient, professional, and labs/imaging services, all visits in each service category that occur on the same day are counted as one visit.

Primary Care Spending:

Primary care spending for this report is defined as the percentage of the total professional, institutional, and prescription drug spending paid for select non-emergency department outpatient medical encounters by primary care providers identified by any of the taxonomy codes listed below. Encounters consisting of any of the CPT or ICD 10 codes listed below were selected.

Primary Care Taxonomy Codes, CPT Codes, and ICD Codes

Taxonomy Codes

261QF0400X	Federally Qualified Health Center
261QP2300X	Primary care clinic
261QR1300X	Rural health clinic
207Q00000X	Physician, family medicine
207R00000X	Physician, general internal medicine
208000000X	Physician, pediatrics
208D00000X	Physician, general practice
363L00000X	Nurse practitioner
363LA2200X	Nurse practitioner, adult health
363LF0000X	Nurse practitioner, family
363LP0200X	Nurse practitioner, pediatrics
363LP2300X	Nurse practitioner, primary care
363A00000X	Physician's assistant
363AM0700X	Physician's assistant, medical
175L00000X	Homeopathic medicine
2083P0500X	Physician, preventive medicine
163W00000X	Nurse, non-practitioner

CPT Codes

90460-90461	Immunization through age 18, including provider consult
90471-90472	Immunization by injection
90473-90474	Immunization by oral or intranasal route
96160-96161	Administration of health risk assessment
96372	Therapeutic, prophylactic, or diagnostic injection
98966-98968	Non-physician telephone services
98969	Online assessment, management services by non-physician
99201-99205	Office or outpatient visit for a new patient
99211-99215	Office or outpatient visit for an established patient
99241-99245	Office or other outpatient consultations
99339-99340	Physician supervision of patient in home or rest home
99341-99345	Home visit for a new patient
99347-99350	Home visit for an established patient
99381-99387	Preventive medicine initial evaluation

99391-99397	Preventive medicine periodic reevaluation
9401-99404	Preventive medicine counseling or risk reduction intervention
99406-99407	Smoking and tobacco use cessation counseling visit
99408-99409	Alcohol or substance abuse screening and brief intervention
99411-99412	Group preventive medicine counseling or risk reduction intervention
99429	Unlisted preventive medicine service
99441-9944	Telephone calls for patient management
99444	Non-face-to-face on-line medical evaluation
99495-99496	Transitional care management services
G0008-G0010	Administration of influenza virus, pneumococcal, hepatitis B vaccine
G0396-G0397	Alcohol or substance abuse assessment
G0438-G0439	Annual wellness visit, personalized prevention plan of service
G0442	Annual alcohol screening
G0443	Brief behavioral counseling for alcohol misuse
G0444	Annual depression screening
G0502	Initial psychiatric collaborative care management
G0503	Subsequent psychiatric collaborative care management
G0504	Initial or subsequent psychiatric collaborative care management
G0505	Cognition and functional assessment
G0506	Comprehensive assessment of and care planning for patients requiring chronic care management services
G0507	Care management services for behavioral health conditions
G0513-G0514	Prolonged preventive service

ICD 10 Codes

Z00	Encounter for general exam without complaint
Z000	Encounter for general adult medical examination
Z0000	Encounter for general adult medical exam without abnormal findings
Z0001	Encounter for general adult medical exam with abnormal findings
Z001	Encounter for newborn, infant and child health examinations
Z0011	Newborn health examination
Z00110	Health examination for newborn under 8 days old
Z00111	Health examination for newborn 8 to 28 days old
Z0012	Encounter for routine child health examination
Z00121	Encounter for routine child health exam with abnormal findings
Z00129	Encounter for routine child health exam without abnormal findings
Z008	Encounter for other general examination

County definitions for Regions as per the Maryland Insurance Administration (MIA)

Baltimore Metro means Baltimore City, Baltimore County, Harford County, Howard County, and Anne Arundel County.

DC Metro means Montgomery County and Prince George's County.

Western Maryland means Garrett County, Allegany County, Washington County, Carroll County, and Frederick County.

Eastern Shore/Southern Maryland means St. Mary's County, Charles County, Calvert County, Cecil County, Kent County, Queen Anne's County, Talbot County, Caroline County, Dorchester County, Wicomico County, Somerset County, and Worcester County.

Payers excluded from the report

The following payers were excluded from the report due to data quality issues:

Humana Insurance

Harrington Insurance (TPA)

Kaiser – fee-for-service equivalents not available from payer

United Healthcare Medicare Advantage – Medicare and Medicaid are excluded from this report

American Specialty Health (TPA)

HealthScope (TPA) (Public plan only)

The Loomis Company (TPA) (excluded from prescription drug spending/utilization/unit cost calculations)

TPA means Third Party Administrator

Required Proprietary Rights Notices on Privately Insured Report

The expenditure risk score information herein contained in exhibits 1, 14, 17 and 20 has been processed by a software called The Johns Hopkins ACG® System ©1990, 2016, Johns Hopkins University, All Rights Reserved

Version 11.1 was used in the report to generate expenditure risk score results. The Unscaled Concurrent Risk Score was used.

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This report on health care spending and use was conducted by the Center for Analysis and Information Services staff (Kenneth Yeates-Trotman, Shankar Mesta and Janet Ennis, Editor) of the Maryland Health Care Commission. The report was primarily written by Niranjana Kowlessar, PhD; Craig Lisk, MS; and Joseph Evans, BA of Social & Scientific Systems, Inc. Parts of the report were written by Kenneth Yeates-Trotman, Shankar Mesta, Oseizame Emasealu and Adebola Akinyemi. The programmers were Sane Maphungphong, Ling Wu, and Edward Hock from Social and Scientific Systems, Inc.

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The Maryland Health Care Commission is an independent regulatory commission administratively located within the Maryland Department of Health.

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