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An Analysis of the US National Health Expenditure Report

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The Centers for Medicare and Medicaid (CMS) released its annual National Health Expenditure (NHE) report and accompanying data in December 2019. This release was updated to include 2018 data for various economic indicators, medical expenses and enrollment broken out by different categories. The data described can be found in NHE tables download from the following link: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical. [1] This report examines 2018 results and makes comparisons to historical NHE data as well as to 2018 projections released in February of 2019.

A Brief Summary of the NHE Data:

NHE data largely consists of aggregated health cost data and enrollment statistics along with some more general economic data, such as Gross Domestic Product (GDP) and inflation. The NHE release includes an overall data table titled: "National Health Expenditures by Type of Service and Source of Funds: Calendar Years 1960-2018". In addition, CMS published twenty-four other tables in excel and six sub-tables that provide additional details on the fifth main table. The titles of these tables can be found in Appending A below. In addition to these reports, CMS published several other explanatory documents which go over some of the methodologies used to derive and aggregate this data along with some charts which summarize where healthcare dollars are sourced from and where they are spent.

Summary of Overall Calendar Year 2018 Results:

Overall medical expenses rose by 4.6% in 2018 relative to 2017 from $3.487 trillion to $3.649 trillion. The data within the NHE tables allows for a more detailed breakout of these expenses as well as per capita spending changes and comparisons to overall Gross Domestic Product (GDP). Appendix B below shows how 2018 NHE Expenditures were broken out between different sources of revenue as well as how the expenditures were distributed by types of services and medical equipment.

The overall NHE trends by source were driven by higher trends in health insurance spending which increased by 5.3% in 2018, representing 75% of total costs. This trend is about 0.4% higher than the previous 10-year average and roughly 1% higher than last year's trend. Out of pocket trends were also higher in 2018, while trends for Other Third-Party Payers and Programs, public health activity and investments were lower in 2018. Non-investment expenses grew by 4.7% overall in 2018.

Overall NHE trends by service category are derived from the Personal Health Care cost category. These costs increased by 4.1% in 2018, the same as in 2017. Some of the larger Personal Health Care expense categories are for hospital care which represents almost 39% of total personal health care costs in 2018. The trends for this category came in at 4.5% in 2018, slightly higher than the overall personal health care trend, but below 2017 hospital care trends. Of these 2018 hospital trends, private insurance had a 5.9% trend, while Veterans Affairs trends came in at 6.9% and Medicare was at 4.6%. The categories with lower 2018 hospital care trends than average were: Medicaid, CHIP, and Department of Defense.

Total 2018 physician and clinical expenses came in 4.1% higher than 2017, the same as the overall Personal Health care trend for 2018. Here, higher Medicare Trends led the way, while most other subcategories of physician and clinical trends were positive. Dental service trends in 2018 were at 4.6%, driven by higher private health insurance and Medicare trends.

Other professional service trends came in at 6.5% for 2018 which was higher than observed levels of 2017 trend. The main driver was again private insurance and Medicare trends.

2018 Prescription drug trends came in at 2.5% which is relatively low, but still above the 2017 trend of 1.4%. Here Medicare trends were significantly higher at 5.9%, while almost all other categories saw below average trends.

For the most part, private insurance and Medicare exhibited the highest level of trends, particularly for those subcategories where trends exceeded the personal health care trend average.

Summary of Per Enrollee Changes

The per capita changes are a slightly different aspect of trend which removes the impact of overall population growth. In 2018, the US population grew by 0.6%. Therefore, 0.6% of the total medical expense increase was due to population growth, while roughly 4.0% was due to the changes in population mix, utilization of services, intensity of services, and costs per service.

While per capita increases are for the overall population, the NHE tables also include enrollment breakouts and annual costs per enrollee using more detailed categories. When examining the total population enrolled in some form of health insurance, there is a different pattern of per enrollee trends. In 2018, the per enrollee costs increased by 5.0%, which is slightly higher than the overall cost trends. This is partly because overall enrollment in health insurance only rose by 0.2% in 2018. the 2018 enrollment increase was substantially lower than in many of the previous years, with the largest increases being in 2014 and 2015 when the Health Insurance exchanges went live and when Medicaid Expansion began to take hold. The main drivers of the higher per enrollee health insurer costs are the Health Insurance Exchange and employer sponsored cost increases.

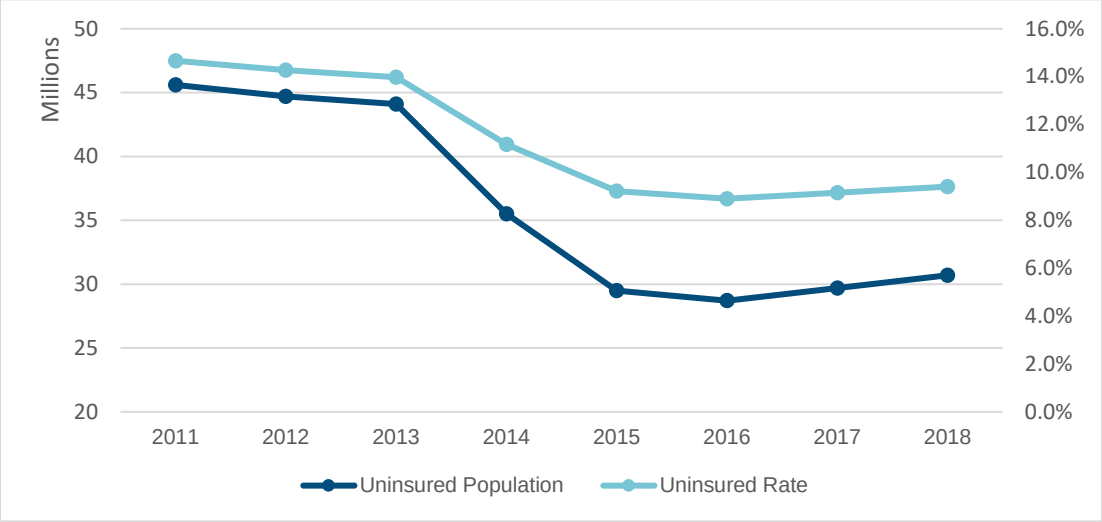
Private insurance costs by enrollee also had the highest trends in hospital, professional and home health services. In addition, net costs of private health insurance had higher trends driven by the reinstatement of the Health Insurance fee in 2018.

Other Ancillary Statistics

In 2018, lower enrollment in insured plans helped to drive up the uninsured population by 1.0 million or 3.4% relative to 2017. The overall 2018 uninsured rate stood at 9.4%, which is at its highest level since 2014 and a reversal of the 8.9% uninsured rate observed at its low point in 2016. Figure 1 below illustrates the changes in the uninsured population as well as the uninsured rate since 2011. It is worth noting that the biggest decreases in the uninsured population and the uninsured rate coincided with the implementation of the Health Insurance Exchanges and the Expansion of Medicaid in many of the states.

Figure 1

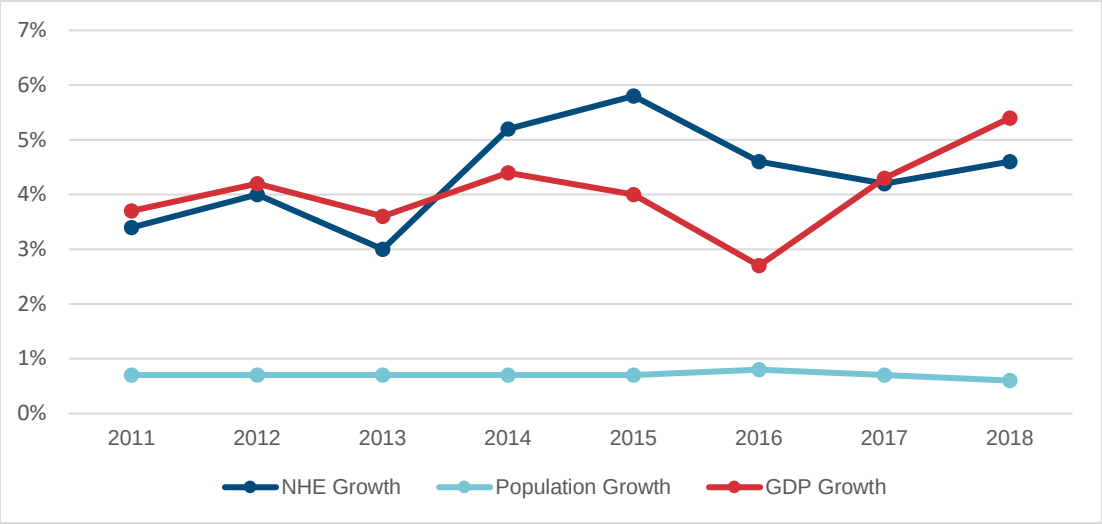
CHANGE IN UNINSURED POPULATION IN THE 2010s



In 2018, the GDP increased by 5.4% vs. 2017 (including inflation), reaching a value of $20.58 trillion. By comparison, overall NHE spending rose by 4.6% to $3.65 trillion in 2018. Figure 2 below shows the annual trend for GDP, National Health Expenditures, and the overall US population. In addition, this figure demonstrates that from 2011 – 2018, NHE growth only exceeded GDP growth from 2014 – 2016.

Figure 2

2011-2018 ANNUAL NATIONAL HEALTH EXPENDITURE PERCENTAGE INCREASES

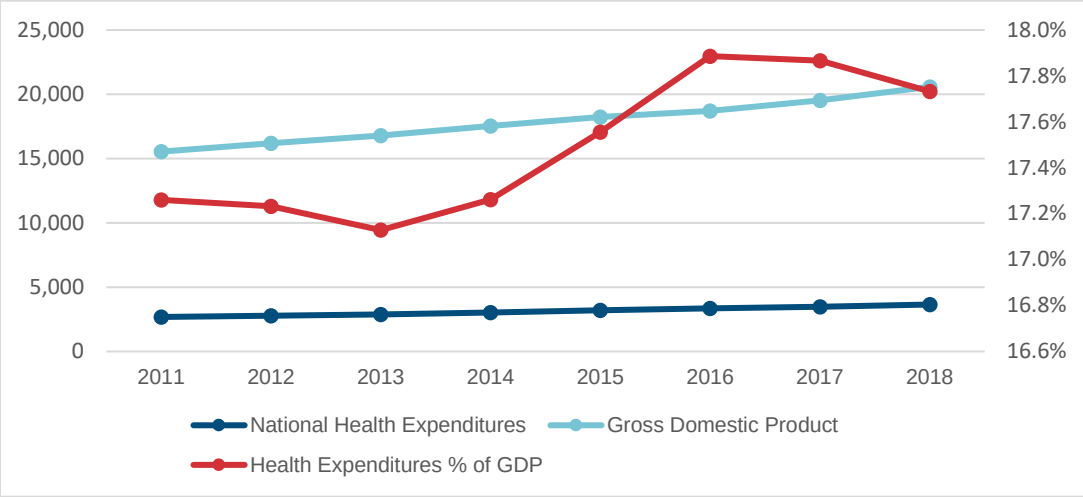


The result of those changes means that overall 2018 health expenditures reached a level of 17.7% of total GDP which is below the 17.9% figure from 2017. In total, health expenditures as a percent of GDP have not risen since 2016. This pattern also took place from 2010 – 2013 when National Health Expenditures fell from 17.3% in 2010 to

17.1% in 2013. This was again reversed from 2014 – 2016 when the ACA exchanges and Medicaid Expansion were ramping up. Figure 3 below illustrates many of those points.

Figure 3

COMPARISON OF GROWTH IN HEALTH EXPENDITURES AND GROSS DOMESTIC PRODUCT



Based on these two sets of patterns it is possible that the US may be transitioning towards an environment where health care cost increases might be more in line with overall nominal GDP growth. This will need to be tracked in the next few years as the population continues to age and more people near retirement. While the health care utilization of those individuals will be expected to increase, the increased shifting from commercial to Medicare pricing of services may help to keep some of the future health care inflation in check.

Comparison to previous 2018 Projections

In February of 2019, CMS published their health care cost projections for 2018 – 2027. This report will also include some comparisons between projected and actual 2018 results as a potential indicator of where future projections might lead. These projections can be found in the following website: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.[2]

The published 2018 projections included many of the same factors as the NHE data although there were only 17 separate tables provided in contrast to the 24 main tables and six sub-tables provided in the NHE data. However, many of the projection factors can be compared to actual results. A summary of some comparisons between actual and projected 2018 NHE data points is included.

Overall 2018 Nation Health Expenditures were $2.5 billion, or .1% higher than the 2018 projections from early last year. This increase was despite lower than projected 2018 personal health care costs. The largest contributor to the increase in actual total 2018 National Health Expenditures was the $11.3 billion increase in Net Cost of Health Insurance.

2018 GDP came in 0.4% or $81.6 higher than the estimate. This means that health expenditures as a % of GDP ended up being 0.1% lower than what was previously estimated.

2018 US population came in at 327 million, which was roughly 1 million below the prior estimate. One effect of this change was to increase the per capita national health expenditures by 0.5% or $51. Per capita GDP for 2018 also came in 0.8% or $492 higher than the earlier estimate.

In 2018, the total Private Health Insurance expenditures were $5.3 billion or 0.4% higher than the earlier projections. This difference was driven by significantly higher actual direct purchase expenses and offset by lower Employer Sponsored private health insurance expenses. Similarly, 2018 Medicare expenses came in $2.8 billion or 0.4% higher than projected. Medicaid had $2.6 billion or 0.4% higher 2018 costs than projected. 2018 CHIP costs were 0.6 billion or 3.1% lower than projected. Private Health enrollment was 3.1 million or 1.6% higher than projected in 2018. The result of this was a per enrollee expenditure of $71 or 1.1% lower than projected. The main driver of higher private enrollment came in direct purchase policies, where the actual policy count was 19.3% higher than the projections. Conversely, the 2018 decrease in per enrollee expenditures relative to the earlier projection was driven by lower per enrollee costs of employer sponsored health insurance. 2018 per enrollee costs for Medicare and Medicaid were higher than the initial projections due to higher than projected expenditures for both of those products coupled with lower Medicaid enrollment than projected. The lower CHIP 2018 per enrollee costs were due to decreases in total CHIP expenditures despite slightly higher than projected 2018 CHIP enrollment.

Within service categories of private insurance, there were some key categories that helped drive the variance between the original 2018 projections and the final NHE 2018 results. Overall private health insurance 2018 costs came in $5.3 billion or 0.4% above the 2018 estimates, mainly due to higher net costs of private health insurance. 2018 net costs of private health insurance were $10.9 billion or 7.1% higher than the original 2018 projections. When this administrative factor was removed, 2018 personal health care costs were below the original projections by $5.6 billion or 0.5%. These results varied significantly by category of service. Some of the largest negative variances in 2018 results relative to projections came in prescription drug and physician / clinical services. These were partly offset by higher than projected personal health care costs in hospital, dental, and other professional services.

Finally, the 2018 uninsured population came in at 30.7 million which was higher than the prior estimate by 0.8 million. This resulted in a change in the 2018 uninsured rate from an initial estimate of 9.1% to an actual rate of 9.4%. It is worth noting that the uninsured population differs slightly from the total population less the enrollment in different insurance programs, since some of the population is enrolled in more than one type of insurance. One example of this is the dual eligible population that has both Medicare and Medicaid coverage.

Conclusion:

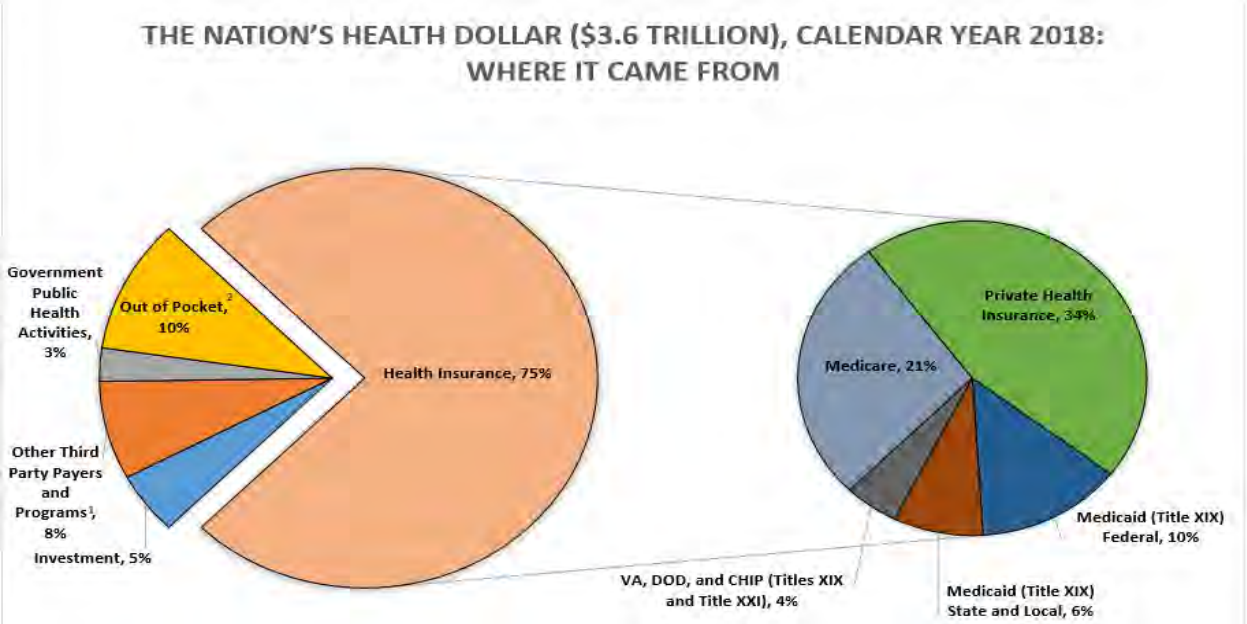
Overall, the National Health Expenditure data and reports are useful tools for evaluating large scale historical trends in US healthcare. The level of detail in the exhibits allows for drill downs into sources of funds and categories of health spending. This information can be used as a reasonability check when Actuaries are examining their own company trends or to help diagnose whether observed company trend outliers are in line with trends aggregated across the entire country. In addition, the existence of many years of historical data combined with CMS NHE projections allows for the development of future trend factors.

The results of the report itself show that despite some moderation of trends in the 2010's there does appear to be a slight uptick in the 2018 trend results. Another interesting development is the deceleration of medical expenses relative to overall economic activity. The ratio of medical expenses to GDP only rose by 0.4% from 2011 to 2018, with much of that increase being attributable to coverage expansions associated with the ACA. This will be an interesting pattern to evaluate in the event of an economic downturn or due to legislative changes that may take place over the next decade.

APPENDIX A – A List of Data Tables in the National Health Expenditures Report

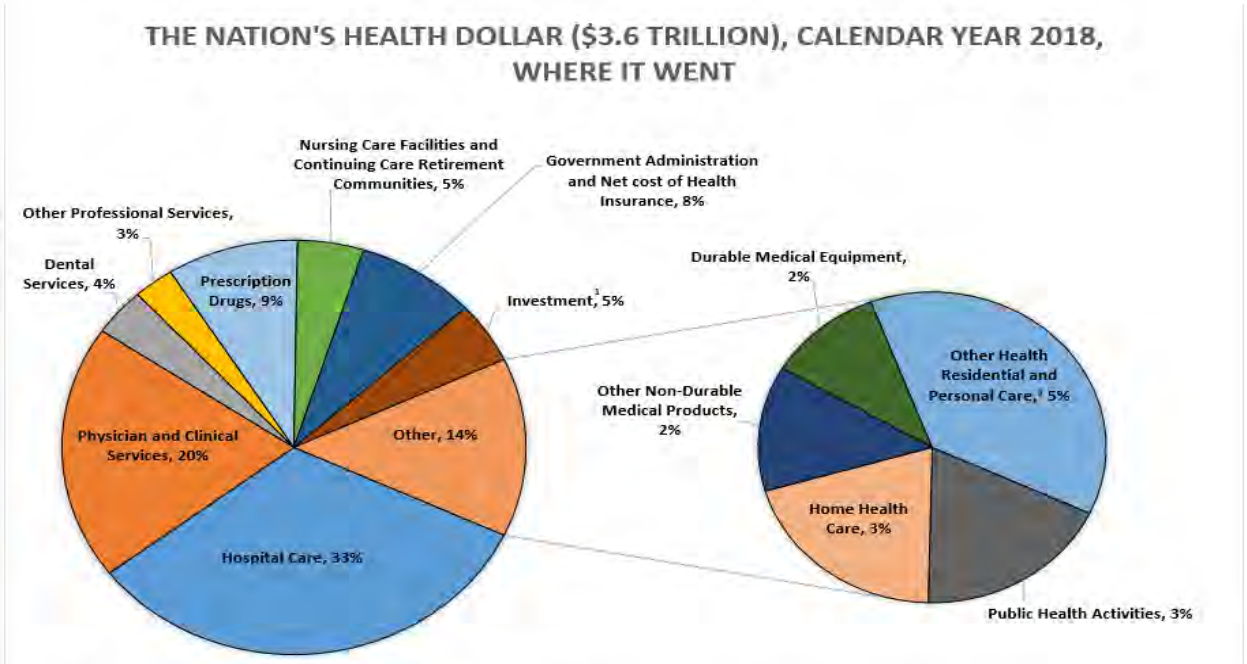
- Table 01 National Health Expenditures; Aggregate and Per Capita Amounts.xlsx
- Table 02 National Health Expenditures, Aggregate and Per Capita Amounts, by Type of Expenditure.xlsx
- Table 03 National Health Expenditures, by Source of Funds.xlsx
- Table 04 National Health Expenditures by Source of Funds and Type of Expenditures.xlsx
- Table 05 National Health Expenditures by Type of Sponsor.xlsx
- Table 05-1 Private Business Sponsor Expenditures.xlsx
- Table 05-2 Household Sponsor Expenditures.xlsx
- Table 05-3 Federal Government Sponsor Expenditures.xlsx
- Table 05-4 State and Local Government Sponsor Expenditures.xlsx
- Table 05-5 Medicare Spending by Sponsor.xlsx
- Table 05-6 Private Health Insurance by Sponsor.xlsx
- Table 06 Personal Health Care Expenditures.xlsx
- Table 07 Hospital Care Expenditures.xlsx
- Table 08 Physician and Clinical Services Expenditures.xlsx
- Table 09 Physician Services Expenditures.xlsx
- Table 10 Clinical Services Expenditures.xlsx
- Table 11 Other Professional Services Expenditures.xlsx
- Table 12 Dental Services Expenditures.xlsx
- Table 13 Other Health, Residential, and Personal Care Expenditures.xlsx
- Table 14 Home Health Care Expenditures.xlsx
- Table 15 Nursing Care Facilities and Continuing Care Retirement Communities Expenditures.xlsx
- Table 16 Retail Prescription Drugs Expenditures.xlsx
- Table 17 Durable Medical Equipment Expenditures.xlsx
- Table 18 Other Non-Durable Medical Products Expenditures.xlsx
- Table 19 National Health Expenditures by Type of Expenditure and Program.xlsx
- Table 20 Private Health Insurance Benefits and Net Cost.xlsx
- Table 21 Expenditures, Enrollment and Per Enrollee Estimates of Health Insurance.xlsx
- Table 22 Health Insurance Enrollment and Uninsured.xlsx
- Table 23 National Health Expenditures; Nominal Dollars Real Dollars Price Indexes and Annual Percent Change.xlsx
- Table 24 Employer-Sponsored Private Health Insurance.xlsx

Appendix B: Sources and Destinations of Calendar Year 2018 Health Care Dollars spent:



[1] Includes worksite health care, other private revenues, Indian Health Service, workers' compensation, general assistance, maternal and child health, vocational rehabilitation, Substance Abuse and Mental Health Services Administration, school health, and other federal and state local programs.
[2] Includes co-payments, deductibles, and any amounts not covered by health insurance.
Note: Sum of pieces may not equal 100% due to rounding.

SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.



[1] Includes Noncommercial Research and Structures and Equipment.
[2] Includes expenditures for residential care facilities, ambulance providers, medical care delivered in non-traditional settings (such as community centers, senior citizens centers, schools, and military field stations), and expenditures for Home and Community Waiver programs under Medicaid.
Note: Sum of pieces may not equal 100% due to rounding.

SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

Endnotes

[1] This and all items related to the National Health Expenditure Report can be found at the following link: : https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical .

2 All items related to the February 2019 projections of 2018-2027 can be found at the following link: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected .