Policy Research Perspectives

National Health Expenditures, 2020: Spending Accelerates Due to Spike in Federal Government Expenditures Related to the COVID-19 Pandemic

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Introduction

This Policy Research Perspective (PRP) is the most recent installment in a series of reports from the American Medical Association (AMA) that examine the U.S. National Health Expenditures (NHE). The Centers for Medicare and Medicaid Services (CMS) released the 2020 NHE data and revised estimates for previous years in December 2021. This PRP examines the breakdown of health care spending in 2020 and how its various subcomponents were affected by the COVID-19 pandemic. It also touches on the projected 2021 NHE data which were released by CMS in March 2022 as part of its projections through 2030.

In 2020, NHE increased by 9.7 percent to $4.1 trillion or $12,530 per capita and became 19.7 percent of GDP. This growth is substantially higher than the 4.2 percent average annual growth rate of the preceding 10 years. This substantial acceleration in spending can be attributed to increases in government spending to manage the unprecedented COVID-19 pandemic. This includes expenditures by the government to disseminate vaccines and public health information as well as expenditures related to federal relief programs for health care organizations and providers.

This report also examines the levels of health care spending that would have resulted in the absence of federal government spending which, in 2020, related to the pandemic. In doing so, the pandemic driven decrease in utilization of medical goods and services and subsequent impact on spending becomes apparent. Notably, when excluding expenditures related to government spending on federal relief programs, 2020 spending on physician services and hospital care were 1.0 percent and 0.7 percent lower than in 2019, reflecting the decreased utilization of goods and services during the pandemic.

What are national health expenditures?

The NHE are the official estimates of total U.S health care spending (Centers for Medicare and Medicaid Services, 2021a). These estimates provide a comprehensive picture of health spending as they incorporate all the main components of the health care system. The NHE not only include expenditures for medical goods and services, but it also incorporates the financiers/origin of these expenditures. As such, it exhaustively encompasses all dollars flowing in and out of the health care system. Additionally, the estimates utilize common definitions and methods that allow for comparisons over time (dating back to 1960) and across categorization schemes. Regarding the latter, an attribute that differentiates the NHE data from other sources is that it can be decomposed into three different categorization schemes. For each of the three breakdowns described below, the

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components will sum to $4.1 trillion. It is also possible to examine the cross section between two breakout types (e.g., see Exhibit 3).

1. *Source of funds*: health care spending is broken down into what was invested (i.e. put towards research, structures and equipment), government public health activities, and what was spent under different health insurance programs (private health insurance, Medicare, Medicaid, and other), out-of-pocket, and by other (non-insurance) third-party payers (i.e. workers compensation and other federal programs). This breakdown addresses the question, “who pays the bill?”.
2. *Type of expenditure:* health care spending is broken down into what was invested, government public health activities, personal health care spending (which includes spending on hospital care services, physician services, and prescription drugs), government administration, and net costs for health insurers (i.e., administration, taxes, fees, and profits of private health insurers). This breakdown answers the question, “where does the money go?”.
3. *Sponsor:* health care spending is broken down by the financiers (i.e. “sponsors”) of health spending which include households, private businesses, the federal government, state and local governments, and other private revenues. Unlike source of funds, sponsors reflect the original financing source of the spending. For example, private health insurance (PHI) is a source of funds but spending by insurers for patients covered by PHI comes from insurer premium revenue, which, in turn, is funded by employees and employers. Thus, households and private businesses would be the sponsors of PHI spending since they are the original financing source for that spending. This breakdown addresses the question, “how is the spending financed?”

In December 2021, CMS released the official historical 2020 NHE estimates along with revisions for previous years (see Centers for Medicare and Medicaid Services, 2021a). In March 2022, CMS released the *projections* for 2021-2030 NHE (see Centers for Medicare and Medicaid Services, 2022a). Different from the historical NHE, the projections do not provide as much granularity in the breakouts of the three categorization schemes. Further, while the Centers for Medicare and Medicaid Services (2022b) try to provide the best technical projections possible with available information, “inherent in the projections, however, is considerable uncertainty, which can result in inexact projections.” As such, this report will focus on the official historical 2020 NHE estimates and only briefly touch on relevant projections of 2021 NHE. The official historical 2021 NHE estimates, which are expected to be released in December 2022, will be covered in much greater detail in an AMA report in the spring of 2023.

Spending by source of funds: who pays the bill?

Exhibit 1 presents the total spending for each source of funds in 2019 and 2020 as well as the projections for 2021, along with the share of total spending attributed to each source and the spending growth from the previous year.

Share of spending by source of funds

In 2020, the largest share of NHE, 27.9 percent (or $1151.4 billion), came from PHI. Medicare spending was 20.1 percent of total spending (or $829.5 billion), Medicaid spending was 16.3 percent (or $671.2 billion), and out of-pocket spending was 9.4 percent (or $388.6 billion). The relative ordering of these shares has been consistent since 2000. From year to year, the shares themselves

generally change by no more than half a percentage point.[1] However, Exhibit 1 shows a substantial shift in this pattern between 2019 and 2020, as there was a 3.1 percentage point decline in the PHI share of spending, a 1.3 percentage point decline in the out-of-pocket share of spending, and a 1.2 percentage point decline in the Medicare share of spending. These share declines relate to substantial spikes in spending from government public health activity, which increased from 2.8 percent of total spending in 2019 to 5.4 percent in 2020, and other federal programs, which increased from 0.4 percent of total spending in 2019 to 4.7 percent in 2020. Although the absolute shares for these two categories are small compared to others, their substantial spikes in spending due to the pandemic resulted in the unprecedented growth in NHE.

Government public health activities refers to spending by federal, state, and local governments to prevent or control public health concerns and to organize and deliver publicly provided health services (Centers for Medicare and Medicaid Services, 2021b). Government efforts to control the pandemic through public health activity resulted in substantial spending growth, a notable 113.1 percent increase in spending from 2019 to 2020. Spending on vaccination services, including funding for Operation Warp Speed to accelerate the development of a COVID-19 vaccine (U.S. Government Accountability Office, 2021), as well as epidemiological surveillance, disease prevention programs, and the operation of public health laboratories played a substantial role in 2020 NHE (Centers for Medicare and Medicaid Services, 2021b and Hartman et al., 2022).

Other federal programs include pandemic-related funding provided through the Provider Relief Fund and the Paycheck Protection Program.[2] The Provider Relief Fund was specifically designed as relief for the health care industry, as eligible recipients included providers that diagnose, test, or care for patients that possibly have COVID-19 and have expenses or revenue loss from the pandemic (Health Resources and Services Administration, 2021). The Paycheck Protection Program was broadly designed to assist small businesses, including health care organizations such as physician practices, keep their workforce employed during the pandemic by offering loans backed by the U.S. Small Business Administration (U.S. Small Business Administration, 2022). Although often referred to as loan programs, in practice, both programs function as subsidies, with the Provider Relief Fund providing direct federal subsidies to providers and the Paycheck Protection Program allowing for loans to be forgiven if used for qualifying expenses (roughly 99 percent have been forgiven to date) (Hartman et al., 2022). Government sponsored pandemic relief has resulted in substantial growth in other federal programs, a notable 1282.0 percent increase in spending from 2019 to 2020.

The projected share of spending for each source of funds category in 2021 is expected to remain within one percentage point of that of 2020, except for Medicare and other federal programs. The share of spending for Medicare is expected to increase by 1.4 percentage points due to an acceleration in Medicare spending on personal health care from higher use of patient care services and from the suspension of the 2 percent sequestration payment adjustment for Medicare fee-for-services claims that was initially instituted for most of 2020 under the CARES Act (Poisal et al., 2022). The share of spending for other federal programs is expected to decrease by 3 percentage

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[1]A notable exception is 2006, during the implementation of Medicare Part D, in which Medicare share of spending increased by 1.9 percentage points and Medicaid share of spending decreased by 1.1 percentage points.
[2]Other federal programs also include federal general hospital/medical expenditures (i.e., federal health care funds and grants budgeted to federal agencies) as well as the defunct Office of Economic Opportunity and Non-XIX Federal programs.

points. Poisal et al. (2022) indicate this is due to the expected drop in funding that was considered healthcare spending from the Provider Relief Fund (from $121.6 billion in 2020 to $28.3 billion in 2021) and the Paycheck Protection Program (from $53.3 billion in 2020 to $22.0 billion in 2021) despite additional funding from the American Rescue Plan Act of 2021.

Spending growth by source of funds

This section examines the driving forces for spending in the four largest source of funds categories (out of pocket spending, PHI, Medicare, and Medicaid). Exhibit 2 presents the 2019 and 2020 enrollment growth rates and per enrollee spending growth rates for each source.[3] Exhibit 3 presents the total spending growth as well as the spending growth for each type of expenditure category in 2019 and 2020. The 2021 projections are not included in Exhibits 2 and 3 although most, but not all, type of expenditure breakouts for each source are available.

Private Health Insurance (PHI) spending

PHI spending declined by 1.2 percent in 2020. In contrast, PHI spending grew 3.1 percent in 2019 and had an average annual growth rate of 3.9 percent over the 10-year period ending in 2019 (data not shown). Exhibit 2 shows this was driven by both a 0.8 percent decline in enrollment, related to pandemic-related shifts in employment, and a 0.4 percent decline in per enrollee spending, related to decreased utilization of services. PHI primarily consists of direct purchase insurance (11 percent of PHI spending, data not shown) and employee-sponsored insurance (89 percent). The former saw an increase in both enrollment and per enrollee spending, due to increased utilization of Marketplace plans as the pandemic may have allowed more individuals to qualify for subsidies and existing enrollees to keep their coverage for a longer period of time (Hartman et al., 2022). Employee-sponsored insurance, the driving force of PHI patterns, saw a 1.3 percent decline in enrollment and 0.3 percent decline in per enrollee spending.

As indicated earlier, the decline in per enrollee spending and, ultimately, total spending for PHI, reflect decreased utilization of health care services due to the pandemic and subsequent economic shutdowns. As Exhibit 3 shows, there were substantial decreases in 2020 spending for hospital care, by 5.9 percent, and physician services, by 4.3 percent. Only spending for government administration and net cost of health insurance (GA/NCHI) substantially increased. NCHI is the difference between the premiums incurred and benefits paid out by insurers. As such, it includes the net profits of private plans that, in 2020, were affected by the pandemic-related drop in utilization. Research from the Kaiser Family Foundation shows gross margins (on per member per month basis) in 2020 were higher than 2019 (by 4 percent in the individual market and 16 percent in the fully-insured group market plans) suggesting many insurers remained profitable in 2020 and, further, medical loss ratios were relatively low (McDermott et al., 2021). NCHI also includes the fixed annual fee imposed by the Affordable Care Act (ACA) which was suspended in 2019 but reinstated in 2020 for its final year (Cigna, 2022). Prior to the pandemic, a change in the application of this fee would have driven the overall NHE estimates (i.e., Rama 2020 show the 2018 ACA fee played a prominent role in the 2018 spending growth). In 2020, however, fee-related increases in the NCHI category that would have

[3]Unlike Exhibit 1 and 3, Exhibit 2 does not include enrollment or per enrollee spending information related to out-of-pocket spending. This is because out-of-pocket spending not only includes spending from uninsured patients, but also coinsurance and deductibles for patients with health insurance.

resulted in positive spending growth for PHI were overshadowed by the drop in personal health care spending (driven by lack of utilization in hospital care and physician services), ultimately resulting in negative spending growth for PHI.[4]

In 2021, PHI spending is projected to increase by 6.3 percent. Poisal et al. (2022) notes this relates to 0.8 percent growth in enrollment and 5.5 percent growth in per enrollee spending (data not shown), the latter reflecting an increase in patient use of medical goods and services after the decrease in 2020.

Out-of-pocket spending

Similar to PHI, out-of-pocket spending declined in 2020 by 3.7 percent (Exhibit 3). This is the first time out-of-pocket spending has declined since the 2009 Great Recession and contrasts with the 4.4 percent growth in 2019 and the average annual growth rate of 3.1 percent over the 10-year period ending in 2019 (data not shown). The shift in 2020 was driven by utilization changes caused by the pandemic. Notably, there was an 11.7 percent decline in spending for dental services (data not shown), 12.6 percent for hospital services, 5.6 percent for physician services, and 4.2 percent for spending on prescription drugs. Hartman et al. (2022) note that there was little to no cost sharing requirements for COVID-19 testing and treatment in 2020. Thus pandemic-related services that were utilized were unlikely to generate impactful out-of-pocket spending. In 2021, out-of-pocket spending is projected to increase by 4.6 percent as private plans revert to more standard cost-sharing requirements and the availability and patient use of medical goods and services increase (Poisal et al., 2022).

Medicare spending

Unlike out-of-pocket and PHI spending, Medicare spending increased in 2020. However, the 3.5 percent growth in 2020 was substantially less than the 6.9 percent growth in 2019 and even the 4.9 percent annual average growth rate for the 10-year period ending in 2019 (data not shown). Although the deceleration in 2020 is the result of slower growth in both enrollment and per enrollee spending (see Exhibit 2), there were substantial differences across Medicare plans. Medicare private plans, which make up roughly 40 percent of enrollees, had stable per enrollee spending growth while enrollment growth increased from 7.7 percent in 2019 to 9.5 percent in 2020. As such, the deceleration in total Medicare spending was driven by decreases in enrollment and per enrollee spending for the traditional fee-for-service plan. Hartman et al. (2022) note that declines in fee-for-service expenditures were driven by a drop in expenditures for medical goods and services.

More specifically, decreases in utilization from Medicare patients delaying or forgoing care led to slower spending growth rates for both hospital services, from 5.8 percent in 2019 to 0.4 percent in 2020, and physician services, from 9.3 percent in 2019 to 0.9 percent in 2020 (see Exhibit 3) (Hartman et al., 2022). However, spending growth increased for nursing home care and continuing care retirement communities, from 1.1 percent in 2019 to 4.2 percent in 2020, and GA/NCHI, from

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[4]For PHI, personal health care spending decreased by 3.5 percent. Data on personal health care spending by source of funds is not presented in this report as it has in past reports. However, Exhibit 3 shows the growth rates of several key components of personal health spending, including hospital care and physician services.

6.6 percent in 2019 to 33.0 percent in 2020.[5] In the Medicare program, NCHI relates only to Medicare private plans and, as with PHI, reflects their net profits and obligation for the ACA health insurance fee. Research from the Kaiser Family Foundation shows that annual gross margins (on per member per month basis) in 2020 for Medicare Advantage (which accounts for most beneficiaries) were 24 percent higher than 2019 (McDermott et al., 2021). In 2021, Medicare spending is projected to grow by 11.3 percent. As mentioned earlier, this is driven by increased use of medical services as well as the suspension of the sequestration payment adjustment for Medicare fee-for-services claims.

Medicaid spending

Lastly, spending for Medicaid grew 9.2 percent in 2020, up from 3.0 percent growth in 2019 but on par with the growth that occurred during the ACA implementation (12.0 percent in 2014 and 9.0 percent in 2015). Exhibit 2 shows that Medicaid enrollment accelerated, growing -1.5 percent in 2019 but 5.1 percent in 2020 due to pandemic-related job losses. Per enrollee spending had a growth rate of 4.6 percent in 2019 compared to 4.0 percent in 2020, stability that was driven by acceleration in spending on hospital services and other health, residential, and personal care services. Exhibit 3 shows hospital care spending, which makes up one third of Medicaid spending (data not shown), had a growth rate of 6.7 percent in 2020 compared to 4.6 percent in 2019. Hartman et al. (2022) note that this faster growth relates to both increased enrollment in Medicaid (Exhibit 2) and increased Medicaid supplemental payments. Other services, which make up one fifth of Medicaid spending, had a growth rate of 9.0 percent in 2020 compared to only 1.5 percent in 2019. This category includes spending for Medicaid home and community-based waivers and care provided in residential care facilities (Centers for Medicare and Medicaid Services, 2021b). In 2020, Centers for Medicare and Medicaid Services (2021d) made efforts to expand and strengthen home and community-based services, particularly long-term services and support which is primarily covered by Medicaid (not by Medicare or PHI).[6] As with PHI and Medicare, for Medicaid, the substantial acceleration in GA/NCHI spending was related to the net profits and ACA health insurance fee obligation of Medicaid managed care plans. In 2021, Medicaid spending is projected to increase by 10.4 percent due to enrollment growth.

Breakdown by type of expenditure: where does the money go?

Share of spending by type of expenditure

The previous section provided a detailed examination of total spending by the major source of funds categories, including how each was affected by the pandemic through its effects on enrollment, per enrollee spending, and through changes by type of expenditure category within each source. This section recalibrates and returns to the question posed earlier, “where does the money go?”. In the type of expenditure breakdown, spending goes towards either investment, government public health activities, personal health care spending, government administration, and net cost of health

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[5]The Skilled Nursing Facility 3-Day Rule Waiver, which waives the requirement for a 3-day inpatient hospital stay prior to an extended-care service for eligible beneficiaries (Centers for Medicare and Medicaid Services, 2021c), may have increased utilization and spending in this category (Stulick, 2021).
[6]Kaiser Family Foundation (2021) catalogues all such related efforts, including temporary expansions to eligibility and services in certain states.

insurance (Exhibit 4). In 2020, 4.7 percent of NHE went towards investment (or $192.7 billion) and, as discussed earlier, 5.4 percent towards public health activities (or $223.7 billion). Net cost of health insurance (i.e., the difference between what insurers incur in premiums and the amount paid in benefits that goes towards insurers' administrative costs, taxes, fees, net profits/losses, etc.) made up 7.3 percent of total spending (or $301.4 billion). Government administration, which includes the administrative cost of running government health care programs, made up 1.2 percent of total spending (or $48.4 billion).

The remaining 81.4 percent of total spending (or $3357.8 billion) went towards personal health care spending. The main categories of personal health care spending are hospital care (30.8 percent of total spending or $1270.1 billion), physician services (14.4 percent or $593.1 billion), clinical services (5.2 percent or $216.3 billion), and prescription drugs (8.4 percent or $348.4 billion).[7,8] CMS utilizes an establishment approach to identify spending for such services. For example, physician services consist of spending made in establishments where physician services are the primary activity (i.e., Offices of Physicians and Doctors of Osteopathy under the North American Industry Classification System) and, as such, it will also include independently billing labs (Centers for Medicare & Medicaid Services, 2021b). Personal health care spending also includes spending on nursing care facilities (4.8 percent of total spending or $196.8 billion), home health care (3.0 percent or $123.7 billion), and other personal health care services (14.8 percent or $609.2 billion).[9]

Although the spending shares for most type of expenditure categories have been relatively constant year to year since at least 2000, the substantial increase in public health activity in 2020 led to unusually large percentage point changes in the shares for many type of expenditure categories.[10,11,12] The projected shares by type of expenditure in 2021 are expected to remain within half a percentage point of that of 2020 (data not shown).[13]

Spending growth by type of expenditure

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[7]Clinical services include spending made in establishments classified as outpatient care centers under North American Industry Classification System (Centers for Medicare & Medicaid Services, 2021b). Outpatient care centers include family planning, outpatient mental health and substance abuse, HMO medical, kidney dialysis, freestanding ambulatory surgical and emergency, and other not already categorized outpatient care centers.
[8]In the tables prepared by CMS, physician and clinical services are generally presented as a combined category and, combined they make up the second largest spending category. In this PRP, they are shown separately because of notable differences between the two categories.
[9]Other personal health care services include dental and other professional services, durable medical equipment and other non-durable medical products, as well as other health, residential, and personal care.
[10]2000 is the earliest year in which the NHE provides estimates on the immediately following year. Since 2000, the shares of the main type of expenditure categories have remained within one percentage point of the share in the following year. Only from 2019 to 2020 were larger percentage point changes in the shares observed.
[11]Government public health activities is both a source of funds category and a type of expenditure category. As such, it sits as its own category in both categorization schemes and has no impact on personal health care spending in the type of expenditure categorization scheme
[12]Unlike government public health activities, other federal programs is a source of funds category that is divided into several subcategories of personal health care spending under the type of expenditure scheme. In 2020, roughly 45 percent of other federal programs went towards hospital care, 18 percent towards physician services, 10 percent towards nursing care facilities and continuing retirement communities, 8 percent towards clinical services, and 5 percent towards home health care.
[13]Share of spending by type of expenditure can be calculated for the 2021 NHE projections, although the physician services and clinical services categories cannot be separated from each other.

The spending shares described above provide the big picture of how spending is distributed. However, 2020 health care spending in the absence of spending on public health activities and federal relief programs looks substantially different. To better illustrate the impact of those pandemic-related government expenditures, Exhibit 5 presents spending levels and growth rates where spending on government public health activities and other federal programs are both included and excluded for 2019 and 2020.[14] Exhibit 5 does not include 2021 projections as the amount of spending on public health activities and federal relief programs is only available for total NHE but not the type of expenditure categories, and physician services and clinical services cannot be distinguished from one another in the projections data. For most types of expenditure categories, 2020 growth was substantially greater than that of 2019 when public health activities and other federal programs remained part of spending but substantially less than that of 2019 when they were excluded.

NHE grew 9.7 percent in 2020 compared to only 4.3 percent in 2019 – a 5 percentage point difference driven by federal spending related to the pandemic. After removing spending on public health activities and other federal programs from total NHE, the growth rate in 2019 is 4.2 percent but drops to 1.8 percent in 2020. When essentially comparing only spending related to utilization of medical goods and services as well as operations and insurer net costs, the growth rate for 2020 plummets by 8 percentage points. For 2021, the growth was driven by the rebound in utilization of medical goods and services and acceleration in growth across Medicare, Medicaid and PHI (Poisal et al., 2022), while there is a deceleration in growth for other federal programs and public health activities (see Exhibit 1). Thus, for 2021 NHE, which is projected to grow 4.2 percent, has a growth rate of 8.2 percent when excluding spending on public health activities and other federal programs (data not shown).

Personal health care spending grew 5.8 percent in 2020, compared to 5.1 percent in 2019. Spending growth for hospital care services, the largest category of personal health care spending, slightly increased from 6.3 percent in 2019 to 6.4 percent in 2020 while spending growth for physician services substantially increased from 3.8 percent in 2019 to 5.3 percent in 2020. While the growth in 2019 for hospital care and physician services was driven by use and intensity of services (Martin et al., 2021), the growth in 2020 was driven by expenditures related to the relief funds since utilization of medical goods and services substantially plummeted.

As such, when removing other federal programs, which predominantly consists of relief funds, from personal health care spending, the growth rate remains 5.1 percent in 2019 but drops substantially to 0.1 percent in 2020. For hospital services, $86.7 billion was from other federal programs in 2020, compared to less than $2 billion in 2019. When removing other federal programs from hospital care spending, the growth rate remains 6.3 percent in 2019 but drops to -0.7 percent in 2020. Likewise, for physician services spending, $35.5 billion was attributed to other federal programs in 2020 compared to $0 in 2019. When removing other federal programs from physician services spending, the growth rate in 2019 remains 3.8 percent but drops to -1.0 percent in 2020. The deceleration in personal health care spending and the decline in hospital care and physician services spending in 2020 that result after removing other federal programs (i.e., relief funds) from the estimates better reflects the substantial drop in utilization of medical goods and services in 2020.

[14]For details on historical growth rates, Rama (2021) assesses the spending growth rates by type of expenditure categories from 2009 through 2019

Spending by sponsor: how is all that financed?

Lastly, health care spending can be broken down by sponsor (i.e., the origin of the funding or the initial financing of the spending) (see Exhibit 6). In 2020, the federal government was by far the largest sponsor, financing over one third of total spending (36.3 percent or $1498.7 billion), followed by households which financed over a quarter of total spending (26.1 percent or $1078.3 billion). Households were the largest financier until 2015 when their share was surpassed by that of the federal government. Nonetheless, federal government and household spending shares remained within a percentage point of each other through 2019. In 2020, however, federal government spending increased by 36.0 percent, resulting in an unprecedented 7 percentage point increase in the federal government share of total spending from 29.3 percent in 2019 to 36.3 percent in 2020.

Increases in federal government spending were driven by three categories. First, other federal programs, which mostly consists of funds from the Paycheck Protection Program and Provider Relief Fund in 2020, increased by 1282.0 percent and made up 4.7 percent of NHE in 2020 (compared to only 0.4 percent in 2019). Second, the federal portion of public health activity increased by 863.9 percent and made up 3.1 percent of NHE in 2020 (compared to 0.0 percent in 2019). The United States Department of Health and Human Services is the primary source of financing for this category, namely the Food and Drug Administration and Center for Disease Control and Prevention (CDC) departments. During the pandemic, the Public Health and Social Services Emergency Fund and the CDC saw increased funding (Centers for Medicare and Medicaid, 2021b). Lastly, the federal portion of Medicaid payments grew by 18.8 percent and made up 11.2 percent of NHE in 2020. Hartman et al. (2022) indicate this relates to both recent state expansions of Medicaid coverage for which the federal government contributed as well as the increasing share of spending taken on by the federal government due to the Families First Coronavirus Response Act (FFCRA).

For household spending, growth decreased from 5.5 percent in 2019 to 3.8 percent in 2020 for employer sponsored health insurance premiums, increased from -0.5 percent in 2019 to 2.1 percent in 2020 for household contribution to direct purchase insurance, and decreased from 4.4 percent to3.7 percent for out-of-pocket spending. These patterns are consistent with the earlier discussion on the shift away from employer sponsored health insurance and towards direct purchase and Medicaid due to job losses during the pandemic.

The smallest sponsors in 2020 were private businesses (financing 16.7 percent of total spending or $690.5 billion), state and local governments (14.3 percent or $588.0 billion), and then other private revenues (6.5 percent or $268.6 billion).

For private business spending, due to changes in employment during the pandemic, employer contributions to employer sponsored health insurance premiums decreased by 3.6 percent and payments for worker's compensation and temporary disability insurance decreased by 6.6 percent. Employer Medicare Hospital Insurance Trust Fund payroll taxes decelerated to a 2.0 percent growth rate in 2020 from a 4.8 percent growth rate in 2019. This relates to the employment shifts during the pandemic (i.e., job losses and economic shutdown generated less payroll taxes). The employee retention credit (ERC) (a refundable tax credit capped at $5000 per employee and was used to

reduce federal taxes for qualifying wages paid between March 12, 2020 and January 1, 2021) (Internal Revenue Service, 2021) may have also played a role.

Conclusion

U.S. health care spending increased by 9.7 percent in 2020 to $4,124.0 billion or $12,530 per capita. In comparison, spending grew 4.3 percent in 2019, stable since the spike in spending during the implementation of the Affordable Care Act in 2014 and 2015. Health spending was 19.7 percent of GDP in 2020 compared to 17.6 percent in 2019. The acceleration in spending was driven by pandemic-related expenditures by the government to manage the pandemic, which offset decreased utilization of services and shifts in employment during the economic shutdown that resulted from the pandemic.

In 2020, government public health activities, which includes government expenditures to prevent or control public health concerns and to organize and deliver publicly provided health services, made up 5.4 percent of total health spending and increased by 113.1 percent from the previous year. Other federal programs, which was mostly pandemic-related relief from the Provider Relief Fund and the Paycheck Protection Program in 2020, made up 4.7 percent of total health spending and increased by 1282.0 percent. Although public health activities and other federal programs are relatively small shares of total health spending, their substantial growth was the driver for the acceleration in 2020 NHE. Without those expenditures NHE would have only increased by 1.8 percent to $3,706.4 billion in 2020.

With regard to source of funds, the largest share of spending in 2020 came from private health insurance (27.9 percent of total health spending or $1,151.4 billion). Medicare spending made up 20.1 percent of total health spending ($829.5 billion), Medicaid spending made up 16.3 percent ($671.2 billion), and out-of-pocket spending made up 9.4 percent ($388.6 billion). Between 2019 and 2020, private health insurance and out of pocket spending decreased in absolute terms, Medicare spending continued to grow but at a slower rate, and Medicaid spending accelerated. These growth patterns relate to shifts in enrollment (e.g., changes in employment during the pandemic resulted in decreases in PHI enrollment and increases in Medicaid enrollment), as well as changes in per enrollee spending and spending on personal health care expenditures (e.g., out-of-pocket and PHI spending for hospital care and physician services decreased due to, respectively, low cost-sharing requirements and decreased use and intensity of services caused by the pandemic). Lastly, for private plans, the drop in personal health care spending more than offset increases in expenditures from the reinstatement of the ACA health insurance fee in 2020 and the increased difference between premiums paid and benefits incurred (net profits) due to lack of utilization from the pandemic.

Examining total health spending by type of expenditure, the largest share of spending in 2020 came from hospital care (30.8 percent or $1,270.1 billion), followed by physician services (14.4 percent or $593.1 billion), and prescription drugs ($348.4 billion or 8.4 percent). Spending accelerated for hospital care (from 6.3 percent growth in 2019 to 6.4 percent growth in 2020) and physician services (from 3.8 percent growth in 2019 to 5.3 percent growth in 2020). However, much of the 2020 growth was driven by relief provided from the Paycheck Protection Program and Provider Relief Fund. When removing expenditures attributed to such federal programs from the estimates, hospital care

spending decreased by 0.7 percent and physician services spending decreased by 1.0 percent, reflecting the decreased utilization of these services.

Finally, breaking down total health spending by sponsors revealed that, in 2020, the largest share of spending came from the federal government (36.3 percent of total spending or $1,498.7 billion). This was a substantial increase from its share in 2019 (29.3 percent) and was due to expenditures from public health activities and other federal programs and, to a lesser extent, the federal government's increasing portion of Medicaid payments. Households financed 26.1 percent of total health care spending (or $1,078.3 billion), private businesses financed 16.7 percent (or $690.5 billion), and state and local governments financed 14.3 percent (or $588.0 billion).

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Exhibit 1. NHE source of funds in 2019, 2020, and projected 2021 (billions of dollars)

	2019 (official estimate)			2020 (official estimate)			2021 (projection)		
	Level	**Share of total spending**	**Growth from previous year**	**Level**	**Share of total spending**	**Growth from previous year**	**Projected level**	**Projected share of total spending**	**Projected growth from previous year**
Out-of-pocket	$403.7	10.7%	4.4%	$388.6	9.4%	-3.7%	$406.5	9.5%	4.6%
Private health insurance	$1,165.6	31.0%	3.1%	$1,151.4	27.9%	-1.2%	$1,224.2	28.5%	6.3%
Medicare	$801.4	21.3%	6.9%	$829.5	20.1%	3.5%	$923.0	21.5%	11.3%
Medicaid	$614.4	16.3%	3.0%	$671.2	16.3%	9.2%	$740.8	17.2%	10.4%
Other health insurance programs	$145.0	3.9%	6.2%	$157.2	3.8%	8.4%	$176.7	4.1%	12.3%
Government public health activity	$105.0	2.8%	5.3%	$223.7	5.4%	113.1%	$212.1	4.9%	-5.2%
Other federal programs	$14.0	0.4%	9.3%	$193.9	4.7%	1282.0%	$74.7	1.7%	-61.5%
Other third party payers and programs	$315.2	8.4%	3.9%	$315.8	7.7%	0.2%	$330.2	7.7%	4.6%
Investment	$194.9	5.2%	3.4%	$192.7	4.7%	-1.2%	$208.8	4.9%	8.4%
Total NHE	$3,759.2	100.0%	4.3%	$4,124.0	100.0%	9.7%	$4,297.1	100.0%	4.2%

Source: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html. Tables 2, 3, NHE2020 in NHE Tables [ZIP].

Source: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected. Table 3 in NHE Tables [ZIP].

Note: In the NHE tables, the “other third party payers and programs” category includes “other federal programs”. In Exhibit 1, “other federal programs” is distinguished as its own category and not included in “other third party payers and programs”.

Exhibit 2. NHE source of funds enrollment and per enrollee spending growth rates

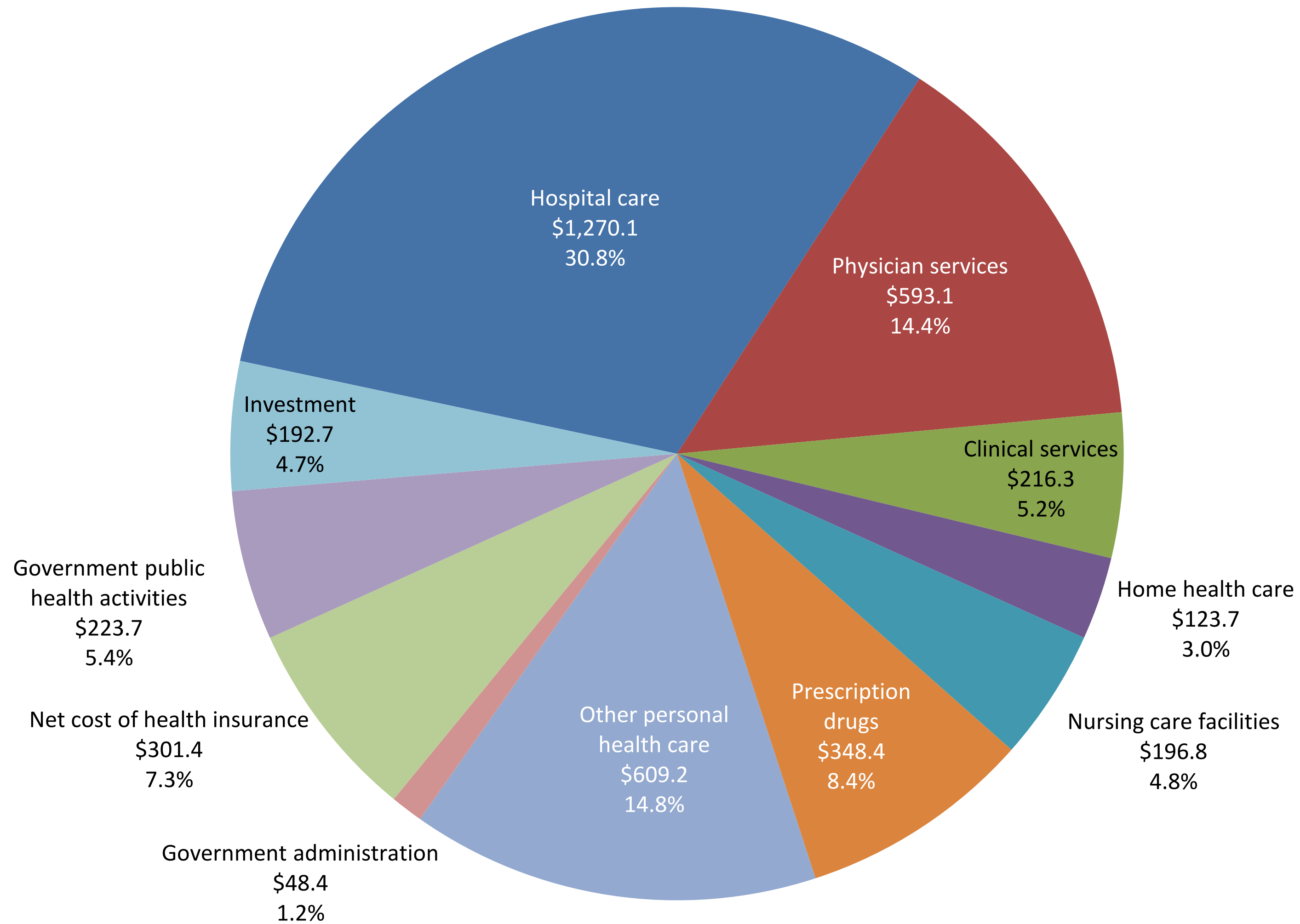
	2019			2020		
	Total spending	Enrollment	Per enrollee spending	Total spending	Enrollment	Per enrollee spending
Private health insurance	3.1%	0.7%	2.3%	-1.2%	-0.8%	-0.4%
Employer sponsored	3.5%	0.7%	2.8%	-1.6%	-1.3%	-0.3%
Direct purchase	-0.5%	-0.2%	-0.3%	1.6%	2.3%	-0.6%
Medicare	6.9%	2.6%	4.2%	3.5%	2.1%	1.4%
Medicare private plans	15.3%	7.7%	7.0%	17.1%	9.5%	6.9%
Fee-for-service program	2.1%	-0.2%	2.3%	-5.3%	-2.2%	-3.2%
Medicaid	3.0%	-1.5%	4.6%	9.2%	5.1%	4.0%

Source: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html. Table 21 in NHE Tables [ZIP] and Hartman et. al (2022).

Exhibit 3. NHE source of funds by type of expenditure growth rates

Type of expenditure	Source of funds: Out of pocket		Private health insurance		Medicare		Medicaid	
	2019	2020	2019	2020	2019	2020	2019	2020
Hospital care services	8.3%	-12.6%	6.6%	-5.9%	5.8%	0.4%	4.6%	6.7%
Physician services	0.2%	-5.6%	1.8%	-4.3%	9.3%	0.9%	5.9%	4.5%
Clinical services	5.8%	1.5%	5.1%	2.5%	2.6%	-5.8%	7.3%	3.5%
Home health care	7.1%	-0.7%	11.3%	-2.1%	6.3%	-3.4%	5.9%	8.2%
Nursing care facilities and continuing care retirement communities	4.7%	-1.0%	8.7%	-0.7%	1.1%	4.2%	1.3%	2.0%
Prescription drugs	2.3%	-4.2%	2.9%	2.3%	7.5%	5.1%	4.3%	8.9%
Other health, residential, and personal care	2.7%	6.5%	6.1%	2.4%	-1.8%	-8.4%	1.5%	9.0%
Government administration and net cost of health insurance	NA	NA	-7.6%	16.7%	6.6%	33.0%	-4.8%	37.1%
Total	4.4%	-3.7%	3.1%	-1.2%	6.9%	3.5%	3.0%	9.2%

Source: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html. Table 4, 9, 10 in NHE Tables [ZIP].



Source: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html. Tables 6, 7, 9, 10, and 16 in NHE Tables [ZIP].

Exhibit 5. NHE Type of expenditure in 2019 and 2020 (billions of dollars)

Category	modification	2019		2020	
		Level	**Growth from previous year**	**Level**	**Growth from previous year**
NHE	none	$3,759.1	4.3%	$4,124.0	9.7%
NHE	excludes other federal programs	$3,745.1	4.3%	$3,930.1	4.9%
NHE	excludes other federal programs and government public health activity	$3,640.1	4.2%	$3,706.4	1.8%
Personal healthcare spending	none	$3,175.2	5.1%	$3,357.8	5.8%
Personal healthcare spending	excludes other federal programs	$3,161.7	5.1%	$3,164.4	0.1%
Hospital care services	none	$1,193.7	6.3%	$1,270.1	6.4%
Hospital care services	excludes other federal programs	$1,191.8	6.3%	$1,183.5	-0.7%
Physician services	none	$563.2	3.8%	$593.1	5.3%
Physician services	excludes other federal programs	$563.2	3.8%	$557.6	-1.0%

Source: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html. Tables 6, 7, 9, 10, 16, and NHE2020 in NHE Tables [ZIP] and Hartman et al. (2022).

Exhibit 6. NHE Financing in 2019 and 2020 (billions of dollars)

	2019			2020		
SPONSOR	**Level**	**Share of total spending**	**Growth from previous year**	**Level**	**Share of total spending**	**Growth from previous year**
Private business						
Employer contribution to employer sponsored health insurance premiums	$540.6	14.4%	4.1%	$521.3	12.6%	-3.6%
Employer Medicare Hospital Insurance Trust Fund payroll taxes	$118.5	3.2%	4.8%	$120.9	2.9%	2.0%
Workers' compensation and temporary disability insurance	$45.8	1.2%	-2.1%	$42.8	1.0%	-6.6%
Worksite health care	$7.6	0.2%	5.2%	$5.4	0.1%	-28.4%
Total private business	**$712.5**	**19.0%**	**3.8%**	**$690.5**	**16.7%**	**-3.1%**
Household						
Employee contribution to employer-sponsored health insurance premiums	$280.2	7.5%	5.5%	$290.9	7.1%	3.8%
Household contribution to direct purchase insurance	$73.6	2.0%	-0.5%	$75.1	1.8%	2.1%
Medical portion of property and casualty insurance	$38.0	1.0%	5.0%	$37.9	0.9%	-0.5%
Employee and self-employment payroll taxes and voluntary premiums paid to Medicare Hospital Insurance Trust Fund	$176.1	4.7%	4.0%	$182.6	4.4%	3.7%
Premiums paid by individuals to Medicare Supplementary Medical Insurance Trust Fund and the Pre-existing Condition Insurance Plan	$95.5	2.5%	5.9%	$103.2	2.5%	8.1%
Out-of-pocket health spending	$403.7	10.7%	4.4%	$388.6	9.4%	-3.7%
Total household	**$1,067.0**	**28.4%**	**4.4%**	**$1,078.3**	**26.1%**	**1.1%**
Other private revenues	**$270.7**	**7.2%**	**4.7%**	**$268.6**	**6.5%**	**-0.8%**

Exhibit 6. continued

SPONSOR	2019 Level	2019 Share of total spending	2019 Growth from previous year	2020 Level	2020 Share of total spending	2020 Growth from previous year
Federal government						
Employer contribution to employer-sponsored health insurance premiums	$38.6	1.0%	0.6%	$39.8	1.0%	3.2%
Employer Medicare Hospital Insurance Trust Fund payroll taxes	$4.6	0.1%	1.8%	$4.7	0.1%	1.8%
Federal general revenue and Medicare Net Trust Fund expenditures	$359.3	9.6%	10.0%	$370.0	9.0%	3.0%
Federal portion of Medicaid payments	$387.3	10.3%	4.1%	$460.0	11.2%	18.8%
Federal portion of Medicare buy-in premiums	$11.8	0.3%	3.8%	$14.1	0.3%	19.6%
Retiree Drug Subsidy payments to employer-sponsored health insurance plans	$0.7	0.0%	-14.1%	$0.6	0.0%	-8.6%
Federal portion of government public health activity	$13.3	0.0%	10.3%	$128.2	3.1%	863.9%
Other federal programs	$14.0	0.4%	9.3%	$193.9	4.7%	1282.0%
Other federal health insurance and programs	$222.9	5.9%	5.3%	$237.2	5.8%	6.4%
Marketplace tax credits and subsidies	$49.8	1.3%	-1.8%	$50.2	1.2%	0.8%
Total federal government	**$1,102.3**	**29.3%**	**5.9%**	**$1,498.7**	**36.3%**	**36.0%**
State and local government						
Employer contribution to employer-sponsored health insurance premiums	$176.6	4.7%	-0.4%	$167.7	4.1%	-5.0%
Employer Medicare Hospital Insurance Trust Fund payroll taxes	$15.4	0.4%	4.1%	$15.2	0.4%	-1.0%
State portion of Medicaid payments	$227.1	6.0%	1.3%	$211.2	5.1%	-7.0%
State portion of Medicare buy-in premiums	$7.9	0.2%	2.9%	$7.2	0.2%	-8.1%
State phase down payments (Part D)	$12.3	0.3%	5.1%	$11.6	0.3%	-5.7%
State portion of government public health activities	$91.7	2.4%	4.6%	$95.5	2.3%	4.1%
Other programs	$75.7	2.0%	3.5%	$79.6	1.9%	5.2%
Total state and local government	**$606.6**	**16.1%**	**1.7%**	**$588.0**	**14.3%**	**-3.1%**
TOTAL	**$3,759.1**	**100%**	**4.3%**	**$4,124.0**	**100%**	**9.7%**

Source: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html. Tables 5, 5-1,5-2,5-3,5-4 in NHE Tables [ZIP].