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DOI: 10.1377/hlthaff.2023.01360
HEALTH AFFAIRS 43,
NO. 1 (2024): 6–17
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National Health Care Spending In 2022: Growth Similar To Prepandemic Rates

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ABSTRACT Health care spending in the US grew 4.1 percent to reach \$4.5 trillion in 2022, which was still a faster rate of growth than the increase of 3.2 percent in 2021 but was much slower than the rate of 10.6 percent seen in 2020. In 2022, strong Medicaid and private health insurance spending growth, including a turnaround in the net cost of insurance, was somewhat offset by continued declines in federal spending associated with the COVID-19 pandemic. The insured share of the population reached a historic high of 92.0 percent in 2022 as enrollment in private health insurance increased at a faster rate relative to 2021 and Medicaid enrollment continued to experience strong growth. The share of the economy accounted for by the health sector was 17.3 percent in 2022, which was down from a peak of 19.5 percent in 2020 but was more consistent with the average share of 17.5 percent during 2016–19.

In 2022, health care spending in the United States reached \$4.5 trillion and increased 4.1 percent, which was a faster rate than in 2021 (exhibit 1). During the period 2020–22, both the COVID-19 pandemic and the unprecedented government response to the public health emergency dramatically affected health care expenditure trends. After increasing by 10.6 percent in 2020, total expenditures grew at a slower rate of 3.2 percent in 2021 as reductions in COVID-19 supplemental funding and public health expenditures partly offset strong growth in the use of health care goods and services. In comparison, the prepandemic average annual growth rate for overall health spending was 4.4 percent during 2016–19. In 2022, nominal gross domestic product (GDP) continued to increase at a strong rate of 9.1 percent after growth of 10.7 percent in 2021—the two highest increases in GDP since 1984 (11.1 percent).¹ With health care spending growth at a lower rate of 4.1 percent, the share of GDP devoted to health care fell to 17.3 percent in 2022, which is lower than both the 18.2 percent share in 2021 and the 19.5 percent share in

2020 (which was the highest share in the history of the National Health Expenditure Accounts).

In 2022, nominal GDP growth was largely driven by rapid economywide inflation (unlike in 2021), as the GDP price index increased 7.1 percent (the fastest rate since 1981),² after growth of 4.6 percent in 2021 (exhibit 1). Medical price inflation, in contrast, increased only 3.2 percent in 2022 after even slower growth of 1.5 percent in 2021.³ Inflation in the medical sector might not follow the patterns of the overall economy, as prices for some goods and services that are predominantly paid for by insurance (such as Medicare, Medicaid, and private health insurance) tend to be set in advance through legislation, regulation, or contractual agreements.

Personal health care prices, which reflect the prices associated with the goods and services consumed, increased by 2.3 percent in 2022 compared with 2.1 percent in 2021 (data not shown). Price growth for providers that receive a large share of their payments from health insurance increased at a relatively low rate. In 2022, price growth for hospitals, physician and clinical services, and retail prescription drugs

EXHIBIT 1
National health expenditures (NHE), aggregate and per capita amounts, share of gross domestic product (GDP), and annual growth, calendar years 2016–22

	2016 ^a	2017	2018	2019	2020	2021	2022
EXPENDITURE AMOUNT							
NHE, billions	\$3,305.3	\$3,443.7	\$3,601.2	\$3,756.4	\$4,156.3	\$4,289.1	\$4,464.6
GDP, billions	\$18,804.9	\$19,612.1	\$20,656.5	\$21,521.4	\$21,323.0	\$23,594.0	\$25,744.1
NHE as percent of GDP	17.6	17.6	17.4	17.5	19.5	18.2	17.3
Population (millions) ^b	322.8	324.8	326.5	328.0	329.1	329.6	330.9
NHE per capita	\$10,241	\$10,603	\$11,030	\$11,453	\$12,629	\$13,012	\$13,493
GDP per capita	\$58,264	\$60,383	\$63,267	\$65,619	\$64,788	\$71,579	\$77,808
Prices (2017 = 100.0)							
Chain-weighted NHE deflator	98.9	100.0	102.2	103.3	106.3	108.0	111.4
GDP price index	98.2	100.0	102.3	104.0	105.4	110.2	118.0
Real spending							
NHE, billions of chained dollars	\$3,342	\$3,444	\$3,523	\$3,637	\$3,909	\$3,973	\$4,007
GDP, billions of chained dollars	\$19,142	\$19,612	\$20,194	\$20,692	\$20,234	\$21,408	\$21,822
ANNUAL GROWTH							
NHE	4.5%	4.2%	4.6%	4.3%	10.6%	3.2%	4.1%
GDP	2.8	4.3	5.3	4.2	–0.9	10.7	9.1
Population ^b	0.7	0.6	0.5	0.5	0.3	0.2	0.4
NHE per capita	3.7	3.5	4.0	3.8	10.3	3.0	3.7
GDP per capita	2.0	3.6	4.8	3.7	–1.3	10.5	8.7
Prices (2017 = 100.0)							
Chain-weighted NHE deflator	1.3	1.1	2.2	1.0	3.0	1.5	3.2
GDP price index	1.0	1.8	2.3	1.7	1.3	4.6	7.1
Real spending							
NHE, billions of chained dollars	3.1	3.0	2.3	3.2	7.5	1.6	0.9
GDP, billions of chained dollars	1.8	2.5	3.0	2.5	–2.2	5.8	1.9

SOURCES Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group; and Department of Commerce, Bureau of Economic Analysis and Census Bureau. **NOTES** Definitions, sources, and methods for NHE categories can be found in CMS, National Health Expenditure Accounts: methodology paper, 2022, definitions, sources, and methods [Internet]. Baltimore (MD): CMS; 2023 Dec 13 [cited 2023 Dec 13]. Available from: <https://www.cms.gov/files/document/definitions-sources-and-methods.pdf>. Numbers might not add to totals because of rounding. Percent changes are calculated from unrounded data. ^aAnnual growth, 2015–16. ^bEstimates reflect the Census Bureau’s definition of resident-based population, which includes all people who usually reside in the 50 states or Washington, D.C., but excludes residents living in Puerto Rico and areas under US sovereignty, members of the US Armed Forces overseas, and US citizens whose usual place of residence is outside of the US. Estimates also include a small (typically less than 0.2 percent of the population) adjustment to reflect census undercounts.

continued to be low, with rates of 2.8 percent,⁴ 0.5 percent,⁵ and 1.2 percent,⁶ respectively, and it was also relatively low for home health care agencies (2.5 percent)⁷ and nursing care facilities and continuing care retirement communities (3.0 percent).⁸ Conversely, other services that receive a smaller share of payments from health insurance, including dental services, other nondurable medical products, and durable medical equipment, can react more quickly to changing market conditions such as increased underlying price inflation, and these services experienced higher price growth in 2022 compared with 2021.³

For non–personal health care, which includes government administration, the net cost of insurance, government public health activities, noncommercial research, and structures and equipment, prices increased 7.5 percent in 2022 after a decline of 1.1 percent in 2021 (data not shown). Prices for government administration, government public health activities, non-

commercial research, and structures and equipment reflected strong growth in input prices such as wages and supplies in 2022, and increases in net gains or profits for insurers contributed to faster price growth in the net cost of insurance (data not shown).

Nominal health spending of \$4.5 trillion in 2022, which reflects an increase of 4.1 percent over 2021 levels, consisted of personal health care (an 83 percent share in 2022), government administration and the net cost of insurance (a 7 percent share), investment (a 5 percent share), and government public health activities (a 5 percent share). Spending for personal health care increased 4.0 percent in 2022 after faster growth of 5.5 percent in 2021 (exhibit 2). The slower growth in personal health care spending in 2022 was due to slower growth in hospital care (from 4.5 percent in 2021 to 2.2 percent in 2022), dental services (from 18.2 percent in 2021 to 0.3 percent in 2022), and physician and clinical services (from 5.3 percent in 2021 to 2.7 percent

EXHIBIT 2

National health expenditures (NHE) amounts and annual growth, by spending category, calendar years 2016–22

Spending category	2016 ^a	2017	2018	2019	2020	2021	2022
EXPENDITURE AMOUNT (BILLIONS)							
NHE	\$3,305.3	\$3,443.7	\$3,601.2	\$3,756.4	\$4,156.3	\$4,289.1	\$4,464.6
Health consumption expenditures	3,139.1	3,263.0	3,411.6	3,562.3	3,962.2	4,081.6	4,246.8
Personal health care	2,793.7	2,901.3	3,017.1	3,171.2	3,375.3	3,561.5	3,704.8
Hospital care	1,035.4	1,077.6	1,122.7	1,193.6	1,268.0	1,325.2	1,355.0
Professional services	895.0	937.5	978.1	1,022.3	1,076.1	1,160.4	1,190.7
Physician and clinical services	676.7	709.4	736.2	767.8	818.5	861.8	884.9
Other professional services	92.1	96.9	104.5	110.9	118.1	133.8	140.6
Dental services	126.2	131.1	137.4	143.7	139.4	164.8	165.3
Other health, residential, and personal care	174.2	184.0	189.9	194.8	210.6	224.7	246.5
Home health care	93.8	99.4	105.6	112.4	125.1	125.4	132.9
Nursing care facilities and continuing care retirement communities	162.0	163.4	167.6	174.1	196.4	181.1	191.3
Retail outlet sales of medical products	433.3	439.5	453.3	474.0	499.1	544.6	588.4
Prescription drugs	313.3	315.7	322.7	335.7	350.6	374.5	405.9
Durable medical equipment	46.7	47.5	49.9	53.4	53.8	63.8	67.1
Other nondurable medical products	73.3	76.3	80.7	84.8	94.7	106.4	115.4
Government administration	44.1	44.1	46.5	47.6	48.2	52.0	54.2
Net cost of health insurance	211.3	222.3	248.6	235.2	296.9	257.5	279.4
Government public health activities	90.0	95.5	99.4	108.4	241.9	210.6	208.4
Investment	166.2	180.6	189.6	194.0	194.2	207.5	217.8
Noncommercial research	47.6	50.9	53.7	56.6	60.1	61.9	64.8
Structures and equipment	118.6	129.7	135.9	137.5	134.1	145.5	153.0
ANNUAL GROWTH							
NHE	4.5%	4.2%	4.6%	4.3%	10.6%	3.2%	4.1%
Health consumption expenditures	4.6	3.9	4.6	4.4	11.2	3.0	4.0
Personal health care	4.5	3.9	4.0	5.1	6.4	5.5	4.0
Hospital care	4.7	4.1	4.2	6.3	6.2	4.5	2.2
Professional services	6.0	4.7	4.3	4.5	5.3	7.8	2.6
Physician and clinical services	6.2	4.8	3.8	4.3	6.6	5.3	2.7
Other professional services	5.4	5.3	7.8	6.1	6.5	13.2	5.1
Dental services	5.2	3.9	4.8	4.6	-2.9	18.2	0.3
Other health, residential, and personal care	6.1	5.6	3.2	2.6	8.1	6.7	9.7
Home health care	4.7	5.9	6.2	6.5	11.2	0.3	6.0
Nursing care facilities and continuing care retirement communities	3.3	0.9	2.6	3.9	12.8	-7.8	5.6
Retail outlet sales of medical products	1.1	1.4	3.2	4.5	5.3	9.1	8.0
Prescription drugs	0.4	0.7	2.2	4.0	4.4	6.8	8.4
Durable medical equipment	1.1	1.6	5.2	7.1	0.6	18.6	5.1
Other nondurable medical products	4.2	4.2	5.7	5.1	11.7	12.3	8.5
Government administration	5.6	-0.2	5.6	2.3	1.2	7.9	4.2
Net cost of health insurance	5.5	5.2	11.8	-5.4	26.2	-13.3	8.5
Government public health activities	5.2	6.1	4.1	9.0	123.2	-12.9	-1.0
Investment	1.9	8.7	5.0	2.3	0.1	6.9	5.0
Noncommercial research	2.6	6.9	5.6	5.3	6.3	3.1	4.7
Structures and equipment	1.6	9.4	4.7	1.2	-2.5	8.6	5.1

SOURCE Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group. **NOTES** Definitions, sources, and methods for NHE categories can be found in CMS. National Health Expenditure Accounts: methodology paper 2022 (see the exhibit 1 notes). Numbers might not add to totals because of rounding. Percent changes are calculated from unrounded data. ^aAnnual growth, 2015–16.

in 2022). Growth in non–personal health care spending, which increased 4.4 percent in 2022 after declining 6.8 percent in 2021, more than offset the slowdown in personal health care spending growth (data not shown).

Growth in health care spending in 2022 was also influenced by continued strong growth in Medicaid spending of 9.6 percent in 2022 (com-

pared with 9.3 percent in 2020 and 9.4 percent in 2021) and by growth in private health insurance spending of 5.9 percent in 2022 (after a decline of 0.8 percent in 2020 and an increase of 6.3 percent in 2021) (exhibit 3). In 2022, private health insurance enrollment increased at a faster rate compared with 2021, and Medicaid experienced continued strong enrollment growth, all of

EXHIBIT 3
National health expenditures (NHE) and annual growth, by source of funds, calendar years 2016–22

Source of funds	2016 ^a	2017	2018	2019	2020	2021	2022
EXPENDITURE AMOUNT (BILLIONS)							
NHE	\$3,305.3	\$3,443.7	\$3,601.2	\$3,756.4	\$4,156.3	\$4,289.1	\$4,464.6
Health consumption expenditures	3,139.1	3,263.0	3,411.6	3,562.3	3,962.2	4,081.6	4,246.8
Out of pocket	364.6	370.0	385.7	402.3	398.3	442.2	471.4
Health insurance	2,396.3	2,495.7	2,611.0	2,718.0	2,807.4	3,011.8	3,211.5
Private health insurance	1,030.1	1,080.2	1,128.3	1,155.7	1,146.2	1,218.3	1,289.8
Medicare	675.9	705.0	749.6	802.3	832.2	892.1	944.3
Medicaid	564.9	578.5	596.5	615.0	672.0	735.4	805.7
Federal	357.8	361.4	372.3	387.7	460.6	514.0	569.7
State and local	207.0	217.1	224.2	227.3	211.4	221.4	236.1
Other health insurance programs ^b	125.4	132.1	136.5	145.0	157.0	166.0	171.6
Other third-party payers and programs	288.3	301.8	315.5	333.6	514.6	417.1	355.5
Other federal programs ^c	12.4	12.2	12.8	14.0	193.6	72.3	17.2
Other third-party payers and programs less other federal programs	276.0	289.6	302.7	319.6	321.0	344.8	338.4
Public health activity	90.0	95.5	99.4	108.4	241.9	210.6	208.4
Federal ^d	11.8	12.6	12.1	13.3	139.3	101.1	92.0
State and local	78.2	82.9	87.3	95.1	102.6	109.5	116.4
Investment	166.2	180.6	189.6	194.0	194.2	207.5	217.8
ANNUAL GROWTH							
NHE	4.5%	4.2%	4.6%	4.3%	10.6%	3.2%	4.1%
Health consumption expenditures	4.6	3.9	4.6	4.4	11.2	3.0	4.0
Out of pocket	3.4	1.5	4.2	4.3	–1.0	11.0	6.6
Health insurance	4.7	4.2	4.6	4.1	3.3	7.3	6.6
Private health insurance	5.5	4.9	4.5	2.4	–0.8	6.3	5.9
Medicare	4.3	4.3	6.3	7.0	3.7	7.2	5.9
Medicaid	4.0	2.4	3.1	3.1	9.3	9.4	9.6
Federal	4.4	1.0	3.0	4.1	18.8	11.6	10.8
State and local	3.4	4.9	3.3	1.4	–7.0	4.7	6.6
Other health insurance programs ^b	3.6	5.3	3.4	6.2	8.2	5.8	3.4
Other third-party payers and programs	5.2	4.7	4.5	5.7	54.3	–19.0	–14.8
Other federal programs ^c	–1.6	–1.1	5.2	9.3	1,279.6	–62.6	–76.2
Other third-party payers and programs less other federal programs	5.5	4.9	4.5	5.6	0.5	7.4	–1.9
Public health activity	5.2	6.1	4.1	9.0	123.2	–12.9	–1.0
Federal ^d	4.0	7.0	–4.3	10.3	947.8	–27.4	–9.0
State and local	5.3	6.0	5.4	8.9	7.9	6.7	6.3
Investment	1.9	8.7	5.0	2.3	0.1	6.9	5.0
NHE IMPACTS BY DIRECT FEDERAL COVID-19 SUPPLEMENTAL FUNDING^e							
NHE excluding federal public health activity expenditures	\$3,293.6	\$3,431.0	\$3,589.2	\$3,743.1	\$4,017.1	\$4,188.0	\$4,372.5
NHE excluding federal public health activity expenditures and other federal programs	\$3,281.2	\$3,418.8	\$3,576.3	\$3,729.0	\$3,823.5	\$4,115.7	\$4,355.4
NHE IMPACTS, ANNUAL GROWTH							
NHE excluding federal public health activity expenditures	4.5%	4.2%	4.6%	4.3%	7.3%	4.3%	4.4%
NHE excluding federal public health activity expenditures and other federal programs	4.5	4.2	4.6	4.3	2.5	7.6	5.8

SOURCE Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group. **NOTES** Definitions, sources, and methods for NHE categories can be found in CMS, National Health Expenditure Accounts: methodology paper 2022 (see the exhibit 1 notes). Numbers might not add to totals because of rounding. Percent changes are calculated from unrounded data. ^aAnnual growth, 2015–16. ^bIncludes health-related spending for CHIP Titles XIX and XXI, Defense, and VA. ^cFederal COVID-19 supplemental funding here includes Paycheck Protection Program (PPP) loans and Provider Relief Fund. ^dIncludes COVID-19-related federal public health spending. ^eBillions of dollars. Includes PPP loans, Provider Relief Fund, and COVID-19-related federal public health spending.

which contributed to the insured share of the population reaching a historic high of 92.0 percent (exhibit 4).

During the period 2019–22, Medicaid spend-

ing increased 31.0 percent, or 9.4 percent per year, on average, according to our calculations, as enrollment increased by 24.6 percent (about 18 million people) (exhibit 4). Medicaid's share

EXHIBIT 4

National health expenditures (NHE) and health insurance enrollment, aggregate and per enrollee amounts, and annual growth, by source of funds, calendar years 2016–22

	2016 ^a	2017	2018	2019	2020	2021	2022
PRIVATE HEALTH INSURANCE							
Expenditure (billions)	\$1,030.1	\$1,080.2	\$1,128.3	\$1,155.7	\$1,146.2	\$1,218.3	\$1,289.8
Expenditure growth	5.5%	4.9%	4.5%	2.4%	–0.8%	6.3%	5.9%
Per enrollee expenditure	\$5,103	\$5,343	\$5,623	\$5,718	\$5,727	\$6,067	\$6,330
Per enrollee expenditure growth	4.7%	4.7%	5.3%	1.7%	0.2%	5.9%	4.3%
Enrollment (millions)	201.9	202.2	200.7	202.1	200.1	200.8	203.8
Enrollment growth	0.8%	0.2%	–0.8%	0.7%	–1.0%	0.3%	1.5%
MEDICARE							
Expenditure (billions)	\$675.9	\$705.0	\$749.6	\$802.3	\$832.2	\$892.1	\$944.3
Expenditure growth	4.3%	4.3%	6.3%	7.0%	3.7%	7.2%	5.9%
Per enrollee expenditure	\$12,121	\$12,332	\$12,775	\$13,324	\$13,535	\$14,266	\$14,814
Per enrollee expenditure growth	1.6%	1.7%	3.6%	4.3%	1.6%	5.4%	3.8%
Enrollment (millions)	55.8	57.2	58.7	60.2	61.5	62.5	63.7
Enrollment growth	2.7%	2.5%	2.6%	2.6%	2.1%	1.7%	1.9%
MEDICAID							
Expenditure (billions)	\$564.9	\$578.5	\$596.5	\$615.0	\$672.0	\$735.4	\$805.7
Expenditure growth	4.0%	2.4%	3.1%	3.1%	9.3%	9.4%	9.6%
Per enrollee expenditure	\$7,690	\$7,821	\$8,127	\$8,441	\$8,816	\$8,681	\$8,873
Per enrollee expenditure growth	1.2%	1.7%	3.9%	3.9%	4.4%	–1.5%	2.2%
Enrollment (millions)	73.5	74.0	73.4	72.9	76.2	84.7	90.8
Enrollment growth	2.7%	0.7%	–0.8%	–0.7%	4.6%	11.1%	7.2%
UNINSURED AND POPULATION							
Uninsured (millions)	28.7	29.7	30.6	31.8	31.2	28.5	26.6
Uninsured growth	–2.8%	3.7%	2.9%	3.8%	–1.9%	–8.6%	–6.6%
Population (millions) ^b	322.8	324.8	326.5	328.0	329.1	329.6	330.9
Population growth	0.7%	0.6%	0.5%	0.5%	0.3%	0.2%	0.4%
Insured share of total population	91.1%	90.8%	90.6%	90.3%	90.5%	91.4%	92.0%

SOURCES Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group; and Department of Commerce, Census Bureau. **NOTES** Definitions, sources, and methods for NHE categories can be found in Centers for Medicare and Medicaid Services. National Health Expenditure Accounts: methodology paper 2022 (see the exhibit 1 notes). Numbers might not add to totals because of rounding. Percent changes are calculated from unrounded data. ^aAnnual growth, 2015–16. ^bEstimates reflect the Census Bureau's definition of resident-based population, which includes all people who usually reside in the 50 states or Washington, D.C., but excludes residents living in Puerto Rico and areas under US sovereignty, members of the US Armed Forces overseas, and US citizens whose usual place of residence is outside of the US. Estimates also include a small (typically less than 0.2 percent of the population) adjustment to reflect census undercounts.

of national health expenditures increased from 16.4 percent in 2019 to 18.0 percent in 2022. Strong growth in the number of newly insured people, as well as the continuous enrollment requirement from the Families First Coronavirus Response Act of 2020, contributed to strong enrollment and spending growth in the program. However, per enrollee, the growth rate for Medicaid spending averaged 1.7 percent during 2020–22, in part because of large increases in the enrollment of qualifying children and adults, who tend to have lower per enrollee expenditures than disabled and elderly enrollees.⁹

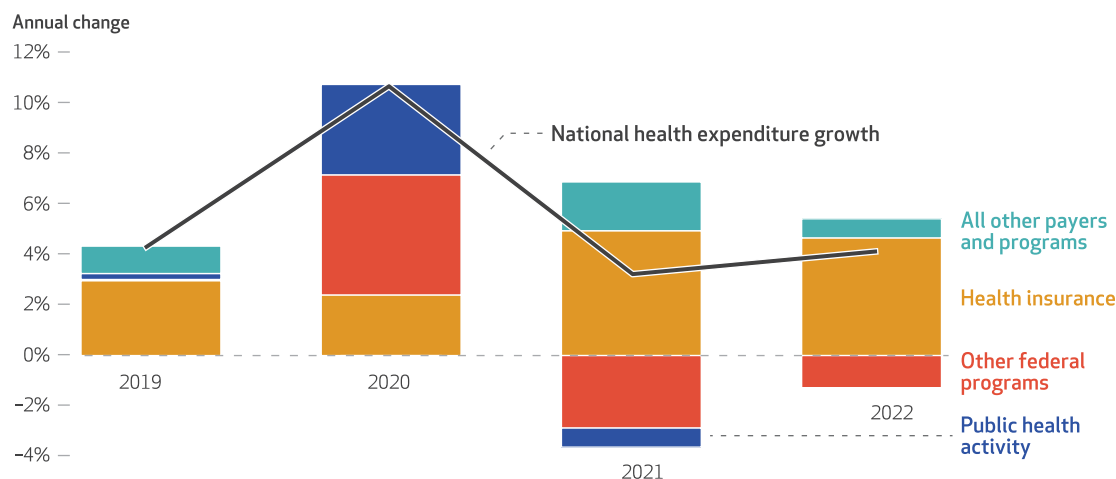
Private health insurance spending growth was strong in 2021 and 2022, at 6.3 percent and 5.9 percent, respectively (exhibit 4). During that time, private health insurance enrollment grew by 0.9 percent, on average, with increased Marketplace coverage in both years and increased employer-provided insurance enrollment in 2022 (data not shown). Marketplace

enrollment increased partly because of the American Rescue Plan Act of 2021, which expanded subsidies in the Marketplace and lowered premium contributions for certain people.¹⁰

COVID-19 supplemental funding, included in “other federal programs” in the exhibits, was highest in 2020 and continued to affect health care expenditures in 2021 and 2022, although at reduced levels (exhibit 5). Funding to the health sector through the Paycheck Protection Program and the Provider Relief Fund was \$174.6 billion in 2020 but just \$2.0 billion in 2022 (data not shown). Similarly, spending for federal government public health activities peaked in 2020 at \$139.3 billion, largely because of increased spending for vaccine development and health facility preparedness, compared with \$13.3 billion in 2019 (exhibit 3). In 2022, such spending amounted to \$92.0 billion, as additional funding from the American Rescue Plan Act was spent in 2022.

EXHIBIT 5

Components of national health expenditure growth, 2019–22



SOURCE Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group. **NOTES** The categories represent the contribution of the indicated payer to overall national health expenditure growth. "Other federal programs" includes COVID-19 supplemental funding provided through Paycheck Protection Program loans and the Provider Relief Fund.

Sponsors Of Health Care

Private businesses, households, and governments are ultimately responsible for financing the nation's health care bill and are the sponsors of private health insurance premiums, out-of-pocket spending, and government program expenditures (financed through dedicated taxes or general revenue). The federal government accounted for the largest share of national health spending (33 percent in 2022), followed by households (28 percent), private businesses (18 percent), state and local governments (15 percent), and other private revenues (6 percent) (exhibit 6).

Federal government health care spending increased 1.0 percent in 2022 after a 3.4 percent decline in 2021 (exhibit 6). This low growth rate, compared with overall health care spending growth of 4.1 percent, led to a reduction in the federal government's share of overall health care expenditures, from 34 percent in 2021 to 33 percent in 2022. The federal government's share of total spending peaked in 2020 at 37 percent—the highest share recorded during 1987–2022 (the time frame for which this share is available). In 2022, the federal portion of Medicaid payments accounted for the largest component of federal government health expenditures (38 percent) and increased 10.8 percent (compared with growth of 11.6 percent in 2021). Continued strong growth in federal Medicaid expenditures can be attributed to rapid enrollment growth and to the Families First Coronavirus Response Act's 6.2-percentage-point increase in the federal medical assistance percentage.⁹ In 2022, federal

Medicaid spending increased faster than state spending as a result of faster growth in the adult expansion population (which had a much higher federal match rate). Conversely, spending for other federal health insurance and programs continued to decline, decreasing by 12.5 percent in 2022 after falling 25.2 percent in 2021, as supplemental federal funding in response to the COVID-19 pandemic continued to wane (exhibit 6).

Household health care expenditures grew 6.9 percent in 2022, similar to the rate of 6.8 percent in 2021 (exhibit 6). Faster growth in premiums and payroll taxes that were paid for Medicare, as well as faster growth in household contributions to employer-sponsored private health insurance premiums, offset slower growth in out-of-pocket spending. The largest share of household health spending was out-of-pocket expenditures (a 38 percent share in 2022), which increased 6.6 percent in 2022, after faster growth of 11.0 percent in 2021 (exhibits 3 and 6). The slower growth in out-of-pocket expenditures was primarily influenced by out-of-pocket spending for dental services, durable medical equipment, and physician and clinical services, all of which slowed in 2022 after experiencing a rebound in use in 2021 (data not shown). Employee contributions to employer-sponsored private health insurance premiums constituted the second-largest category within households (a 25 percent share), and these expenditures increased 5.1 percent in 2022 after growth of 2.8 percent in 2021 (data not shown).

Health spending by private businesses grew

EXHIBIT 6

National health expenditures (NHE) amounts, annual growth, and percent distribution, by type of sponsor, calendar years 2016–22

Type of sponsor	2016 ^a	2017	2018	2019	2020	2021	2022
EXPENDITURE AMOUNT (BILLIONS)							
NHE	\$3,305.3	\$3,443.7	\$3,601.2	\$3,756.4	\$4,156.3	\$4,289.1	\$4,464.6
Businesses, household, and other private revenues	1,790.9	1,880.8	1,965.7	2,045.1	2,041.4	2,188.9	2,308.0
Private businesses	625.7	656.1	686.7	708.5	690.5	742.8	787.3
Household	937.1	975.6	1,021.1	1,063.5	1,078.6	1,151.7	1,231.6
Other private revenues	228.1	249.1	258.0	273.0	272.3	294.4	289.1
Governments	1,514.5	1,562.8	1,635.5	1,711.3	2,114.9	2,100.3	2,156.6
Federal government	959.1	988.8	1,041.7	1,104.5	1,519.9	1,468.3	1,483.5
Federal government contribution to employer-sponsored private health insurance premiums	36.2	37.5	38.3	38.6	39.8	41.0	41.5
Federal general revenue and Medicare net trust fund expenditures ^b	303.3	307.4	326.4	360.0	373.4	400.5	400.1
Federal portion of Medicaid payments	357.8	361.4	372.3	387.7	460.6	514.0	569.7
Other federal health insurance and programs ^c	213.3	226.0	237.4	251.1	573.2	428.8	375.1
All other federal health expenditures ^d	48.6	56.6	67.3	67.2	72.8	84.1	97.2
State and local governments	555.3	574.0	593.8	606.8	595.0	631.9	673.1
ANNUAL GROWTH							
NHE	4.5%	4.2%	4.6%	4.3%	10.6%	3.2%	4.1%
Businesses, household, and other private revenues	4.6	5.0	4.5	4.0	−0.2	7.2	5.4
Private businesses	4.8	4.9	4.7	3.2	−2.5	7.6	6.0
Household	4.0	4.1	4.7	4.2	1.4	6.8	6.9
Other private revenues	6.6	9.2	3.6	5.8	−0.2	8.1	−1.8
Governments	4.3	3.2	4.6	4.6	23.6	−0.7	2.7
Federal government	4.7	3.1	5.3	6.0	37.6	−3.4	1.0
Federal government contribution to employer-sponsored private health insurance premiums	6.6	3.6	2.3	0.6	3.2	3.1	1.0
Federal general revenue and Medicare net trust fund expenditures ^b	3.4	1.4	6.2	10.3	3.7	7.3	−0.1
Federal portion of Medicaid payments	4.4	1.0	3.0	4.1	18.8	11.6	10.8
Other federal health insurance and programs ^c	4.7	6.0	5.1	5.8	128.2	−25.2	−12.5
All other federal health expenditures ^d	15.1	16.4	19.0	−0.2	8.4	15.4	15.7
State and local governments	3.6	3.4	3.5	2.2	−1.9	6.2	6.5
PERCENT DISTRIBUTION							
NHE	100%	100%	100%	100%	100%	100%	100%
Businesses, household, and other private revenues	54	55	55	54	49	51	52
Private businesses	19	19	19	19	17	17	18
Household	28	28	28	28	26	27	28
Other private revenues	7	7	7	7	7	7	6
Governments	46	45	45	46	51	49	48
Federal government	29	29	29	29	37	34	33
Federal government contribution to employer-sponsored private health insurance premiums	1	1	1	1	1	1	1
Federal general revenue and Medicare net trust fund expenditures ^b	9	9	9	10	9	9	9
Federal portion of Medicaid payments	11	10	10	10	11	12	13
Other federal health insurance and programs ^c	6	7	7	7	14	10	8
All other federal health expenditures ^d	1	2	2	2	2	2	2
State and local governments	17	17	16	16	14	15	15

SOURCE Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group. **NOTES** Definitions, sources, and methods for NHE categories can be found in Centers for Medicare and Medicaid Services. National Health Expenditure Accounts: methodology paper 2022 (see the exhibit 1 notes). Numbers might not add to totals because of rounding. Percent changes are calculated from unrounded data. ^aAnnual growth, 2015–16. ^bExcludes Medicare Hospital Trust (HI) Fund payroll taxes and premiums, Medicare Supplementary Medical Insurance premiums, Part D state phase-down payments to Medicare beginning in 2006, Medicare premium buy-in programs by Medicaid for people eligible for both Medicaid and Medicare, and Trust Fund revenues from the income taxation of Social Security benefits. ^cIncludes maternal and child health, vocational rehabilitation, SAMHSA, IHS, federal workers' compensation, other federal programs, public health activities, Defense, Veterans Affairs, CHIP Titles XIX and XXI, and investment (research, structures, and equipment). Also includes government subsidy payments for COBRA coverage for 2009–11, small business tax credits beginning in 2010, Early Retirement Reinsurance Program payments for 2010–11, and payments for the Basic Health Program beginning in 2015. Excludes premiums paid for the Pre-Existing Condition Insurance Plan for 2010–14. ^dIncludes employer Medicare HI Trust Fund payroll taxes, federal portion of Medicare buy-in premiums, retiree drug subsidy payments to employee plans, and Marketplace tax credits and cost-sharing subsidies (beginning in 2014).

6.0 percent in 2022, which was a slower rate than the increase of 7.6 percent in 2021 (exhibit 6). The largest share of private businesses' health spending consisted of contributions to employer-sponsored private health insurance premiums (a 75 percent share in 2022), which increased 5.9 percent in 2022 after growth of 7.2 percent in 2021 (data not shown). The second-largest category, employer payroll taxes allocated to the Medicare Hospital Insurance Trust Fund, accounted for an 18 percent share and increased 7.7 percent in 2022 after growth of 10.1 percent in 2021 (data not shown).

State and local government health care expenditures increased at similar rates in 2021 and 2022—6.2 percent and 6.5 percent, respectively (exhibit 6). The state portion of Medicaid payments accounted for the largest share of total state and local government health expenditures (35 percent in 2022) (exhibits 3 and 6). These payments grew 6.6 percent in 2022, increasing from a rate of 4.7 percent in 2021 (exhibit 3). Faster growth in the state portion of Medicaid more than offset slower growth in state and local government contributions to employer-sponsored private health insurance premiums, which increased 6.5 percent in 2022 after growth of 8.2 percent in 2021 and accounted for a 29 percent share of total state and local government health expenditures (data not shown).

Medicare

Medicare spending accounted for 21 percent of total national health care expenditures and reached \$944.3 billion in 2022. In total, Medicare spending (for the fee-for-service program and Medicare private plans combined) grew 5.9 percent in 2022, slowing from a rate of 7.2 percent in 2021 (exhibit 3). Medicare fee-for-service expenditures declined by 1.9 percent in 2022 after increasing 3.8 percent in 2021, and Medicare private plan spending continued to increase rapidly, growing at a rate of 15.1 percent in 2022 after growth of 11.5 percent in 2021. Medicare private plans accounted for 50 percent of total Medicare program spending and 46 percent of total Medicare enrollment in 2022 (data not shown).

Overall Medicare enrollment grew 1.9 percent in 2022, which was slightly faster than the rate of 1.7 percent in 2021 (exhibit 4). Enrollment in Medicare private plans increased 8.5 percent in 2022 after increasing 10.0 percent in 2021. Fee-for-service Medicare enrollment, in contrast, continued to decline for the fourth consecutive year, decreasing 3.0 percent in 2022 after falling 3.8 percent in 2021 (data not shown). Total Medicare per enrollee spending increased

3.8 percent in 2022, which was a slower rate of growth than in 2021, when spending increased 5.4 percent (exhibit 4).

Medicare spending for personal health care, which reflects spending for medical goods and services and represents 92 percent of total Medicare expenditures, increased 4.9 percent in 2022 compared with growth of 9.4 percent in 2021 (data not shown). This slower rate was driven by slower growth in spending for hospital care (from 8.3 percent in 2021 to 1.2 percent in 2022) and for physician and clinical services (from 13.0 percent in 2021 to 6.8 percent in 2022) (data not shown).

After significant declines in the use and intensity of services in 2020 that were due to forgone and delayed health care, and the subsequent rebound in 2021, physician and clinical services and outpatient hospital care exhibited low growth in use in 2022.¹¹ For inpatient hospital care, use declined in 2022 after low growth in 2021.¹¹ The slower rate of growth for physician and clinical services expenditures in 2022 was also affected by the elimination of the 2021 temporary physician fee schedule update factor of 3.75 percent, whereas hospital care was affected by the smaller number of COVID-19 admissions and their associated 20 percent add-on payment.¹¹

Medicaid

In 2022, Medicaid spending accounted for 18 percent of total health care expenditures, reaching \$805.7 billion, and increased 9.6 percent—the third consecutive year of growth above 9 percent (exhibit 3). Medicaid enrollment grew 7.2 percent in 2022 after increasing 11.1 percent in 2021 and 4.6 percent in 2020 (exhibit 4). Faster Medicaid enrollment growth since 2019 reflects newly enrolled people as well as the continuous enrollment requirement of the Families First Coronavirus Response Act, which was enacted March 18, 2020, and ended March 31, 2023.¹²

Medicaid spending for goods and services increased 9.9 percent in 2022, the same rate of growth as in 2021 (data not shown). The two largest Medicaid services showed diverging trends in 2022, with an acceleration in growth for other health, residential, and personal care expenditures and a deceleration in hospital spending growth. Faster growth in other health, residential, and personal care expenditures, which increased 14.1 percent in 2022 compared with 7.7 percent in 2021, was driven by faster growth in home and community-based waivers (data not shown). Conversely, Medicaid hospital spending growth slowed from 10.9 percent in

2021 to 6.9 percent in 2022 (data not shown).

Federal Medicaid spending increased 10.8 percent in 2022 after growth of 11.6 percent in 2021 and 18.8 percent in 2020 (exhibit 3). The double-digit growth rates in 2020–22 can be attributed to rapid growth in Medicaid enrollment and the associated 6.2-percentage-point increase in the federal medical assistance percentage under the Families First Coronavirus Response Act.¹³ State Medicaid spending grew 6.6 percent in 2022 after an increase of 4.7 percent in 2021 and a decline of 7.0 percent in 2020. In 2022, the federal government's share of Medicaid spending reached 71 percent, compared with 70 percent in 2021, 69 percent in 2020, and 63 percent in 2019 (exhibit 3).

Private Health Insurance

Private health insurance spending accounted for 29 percent of total health care expenditures in 2022, or \$1.3 trillion, and increased 5.9 percent, which was a slightly lower rate than the increase of 6.3 percent in 2021 (exhibit 3). Personal health care expenditures (goods and services), which constituted 90 percent of total private health insurance spending in 2022, increased 5.6 percent in 2022 after growth of 10.1 percent in 2021 (data not shown). The slower growth was due to spending for hospital care, physician and clinical services, and dental services; for all of these categories, expenditures grew more slowly in 2022 after a much stronger increase in 2021, when growth in private health insurance medical spending rebounded after a declining or low growth rate in 2020 (data not shown).

The net cost of private health insurance, which represents the difference between revenues received by private health insurers and the amounts paid by those insurers for medical care incurred, increased 8.0 percent in 2022 (data not shown). This increase followed two prior years of volatile growth. In 2020, the net cost of private health insurance increased 17.2 percent, whereas in 2021 there was a decline of 18.7 percent. In 2022, net underwriting gains were higher and administrative costs grew more rapidly, contributing to the overall increase.

Private health insurance enrollment grew 1.5 percent in 2022 (exhibit 4). This was the fastest increase since 2015 (2.9 percent) and reflected increased enrollment in both Marketplace plans (a 1.7 million increase in 2022) and employer-sponsored insurance (a 1.5 million increase in 2022) (data not shown). Faster growth in Marketplace enrollment in 2021 and 2022 was in part a result of increased premium subsidies for 2021 and 2022 (via the American Rescue Plan Act) and additional efforts to in-

crease the enrollment of eligible people.¹⁴ Employer-sponsored insurance accounted for 86 percent of total private health insurance enrollment and 88 percent of the spending in 2022. Per enrollee, spending for employer-sponsored insurance plans continued to grow relatively quickly, increasing at a rate of 4.8 percent in 2022 after growing 6.3 percent in 2021 (data not shown).

Out-Of-Pocket Spending

Out-of-pocket spending accounted for 11 percent of total national health expenditures in 2022, reaching \$471.4 billion, and increased 6.6 percent, which was slower than the rate of 11.0 percent in 2021 but faster than the annual average growth rate of 4.8 percent during 2019–21 (exhibit 3). Dental services, durable medical equipment, and physician and clinical services, which collectively accounted for 34 percent of all out-of-pocket spending in 2022, were the main contributors to the slower growth in 2022, after rapid growth in 2021. Out-of-pocket spending for dental services (2.1 percent growth in 2022) and durable medical equipment (1.5 percent growth in 2022) increased much more slowly than in 2021, when growth rates were 20.9 percent and 26.1 percent, respectively; for both of these categories, spending had declined in 2020 as a result of the COVID-19 pandemic. Out-of-pocket spending for physician and clinical services increased 2.3 percent in 2022, which was a slower rate of growth than the increase of 9.7 percent in 2021 (data not shown).

Hospital Care

Hospital spending reached \$1.4 trillion (a 30 percent share of total national health expenditures) and increased 2.2 percent in 2022, which was slower than the 4.5 percent growth seen in 2021 (exhibit 2). This low rate of growth in 2022 was driven by slower growth in spending for hospital care by private health insurance, Medicare, and Medicaid and by a decline in other private revenues. Trends in both prices and use of services also contributed to the low growth in 2022 (data not shown).

Private health insurance hospital spending increased 6.4 percent in 2022 after growth of 13.2 percent in 2021 (the fastest rate since 1982). The slowdown was due to a return to growth that was closer to the average annual increase of 5.5 percent during 2016–19, just before the pandemic. After growth of 8.3 percent in 2021, Medicare hospital expenditures increased 1.2 percent in 2022; this slower rate resulted from a decline in fee-for-service hospital spend-

By 2022, very little of the additional COVID-19-related funding that occurred in 2020 and 2021 remained.

ing and a deceleration in private plan spending growth. Medicaid spending for hospital care increased 6.9 percent in 2022 after growing 10.9 percent in 2021. In 2022, private health insurance, Medicaid, and Medicare spending for hospital services accounted for 81 percent of total hospital expenditures. Other private revenues—which include funding from nonpatient sources such as investments, philanthropy, and retail gift shop and parking lot receipts, as well as medical spending from property and casualty insurance—fell by 8.9 percent in 2022, in part because of reported losses from investments during the year (data not shown).¹⁵

Hospital price growth slowed slightly to 2.8 percent in 2022 (from 3.1 percent in 2021 and 3.2 percent in 2020), but it continued, for the third year in a row, to be higher than any annual increase during 2011–19.⁴ In 2022, hospital days and discharges declined by 0.6 percent and 1.1 percent, respectively.¹⁶ This decline followed strong growth in utilization in 2021, which resulted from a rebound in medical care after restrictions on such care and on certain elective procedures in 2020.¹⁷

Physician And Clinical Services

Spending for physician and clinical services reached \$884.9 billion (accounting for 20 percent of total health care expenditures) and increased 2.7 percent in 2022, the slowest rate of growth in almost a decade and lower than the increases of 5.3 percent in 2021 and 6.6 percent in 2020 (exhibit 2). Factors contributing to the 2022 slowdown in growth include slower growth in the use of services¹⁸ and slower growth in prices.⁵ In addition, growth in spending for independently billing laboratories, which are categorized as physician and clinical services in the National Health Expenditure Accounts, slowed in 2022 because of reduced COVID-19-related testing.¹⁹

Slower spending growth for physician and clinical services was observed for all of the major

payers—Medicare, Medicaid, private health insurance, and out-of-pocket spending. Growth in Medicare expenditures for these services slowed to 6.8 percent after increasing 13.0 percent in 2021 (data not shown), as spending declined in the fee-for-service program (both physician and clinical services) as a result of a negative payment update in 2022 and lower growth in use of services, whereas private plan spending slowed.¹¹ Medicaid expenditures for physician and clinical services increased 10.9 percent in 2022 after faster growth of 13.7 percent in 2021 (data not shown). Private health insurance spending for these services grew 4.6 percent in 2022 (down from 6.9 percent in 2021), and out-of-pocket spending increased 2.3 percent (after growth of 9.7 percent in 2021) (data not shown).

Retail Prescription Drugs

Retail prescription drug spending reached \$405.9 billion in 2022 (representing 9 percent of total health care expenditures) and grew 8.4 percent, increasing from a rate of 6.8 percent in 2021 (exhibit 2). The faster growth resulted from a combination of factors, including increased use of retail prescription drugs, faster growth in overall prescription drug prices, and shifts in the mix of drugs purchased.

The growth rate for utilization, as measured by the number of prescriptions dispensed (based on a thirty-day supply), was 3.6 percent in 2022, accelerating from 2.4 percent in 2021 and 1.7 percent in 2020.²⁰ Although fewer doctor visits during the pandemic contributed to slower growth in the number of prescriptions dispensed during 2020 (particularly for new prescriptions), total dispensed prescriptions increased at a faster rate in 2021 and 2022 as these visits rebounded. In addition, for 2022, a severe influenza season, along with increased seasonal illness among children, contributed to the increase in the number of new prescriptions dispensed.²⁰

Also influencing the faster growth in prescription drug spending in 2022 was an increase in prices after four consecutive years of declines. In 2022, retail prescription drug prices grew 1.2 percent after decreasing 2.3 percent in 2021.⁶ Prices for brand-name drugs increased faster in 2022, coupled with a decline in prices for generic drugs that was smaller than in 2021, although generic drug prices decreased for the fifth consecutive year.²¹

Although overall expenditures for generic drugs continued to decline in 2022, spending for higher-price brand-name drugs continued to increase (partly influenced by an increase in the use of drugs for diabetes and obesity).^{20,22} Spending on brand-name medicines accounted

for 85.4 percent of the total retail prescription drug market—an increase from 2021, when the share for such spending was 83.3 percent.²⁰ Although constituting a larger share of overall prescription drug spending, these medications represented only 8.1 percent of total retail prescriptions dispensed.²⁰ Conversely, generic medicines (including branded generics) accounted for the majority of prescriptions dispensed (91.9 percent in 2022) but only 14.6 percent of total retail prescription drug spending.²⁰

Although growth in overall retail prescription drug spending was faster in 2022, trends were mixed for the four largest payers of retail prescription drugs (Medicare, out-of-pocket spending, private health insurance, and Medicaid). Medicare prescription drug spending (a 32 percent share) grew 9.4 percent in 2022, increasing from a rate of 6.3 percent in 2021, and was driven by Part D benefit spending (which increased 7.8 percent in 2022) (data not shown). Out-of-pocket retail prescription drug spending (a 14 percent share) increased 11.6 percent in 2022 after slower growth of 6.4 percent in 2021 (data not shown).

Spending by private health insurance for retail prescription drugs, the largest payer (a 38 percent share), increased 4.9 percent in 2022, which is slightly lower than the growth rate of 5.3 percent in 2021. Retail prescription drug spending increased at a faster rate, at 14.2 percent, for Medicaid (an 11 percent share) than for the other three largest payers; however, growth was slower than in 2021, when the rate of increase was 15.1 percent (data not shown).

flected volatile patterns that are primarily linked to the COVID-19 pandemic and the significant response by the federal government to the public health emergency. Expenditures grew sharply in 2020, reaching a rate of 10.6 percent as increased federal funding through the Provider Relief Fund, the Paycheck Protection Program, and increased federal public health activity supported the health sector's response to the pandemic. In 2021, growth in health care spending slowed significantly because of substantial reductions in federal COVID-19 supplemental funding and reduced federal public health activity—factors that far outweighed the increased demand for health care goods and services. By 2022, very little of the additional COVID-19-related funding that occurred in 2020 and 2021 remained, and the health care expenditure growth rate was 4.1 percent, which was more consistent with the prepandemic average annual growth rate of 4.4 percent during the period 2016–19. The health share of GDP also returned to a nearly prepandemic level in 2022 (17.3 percent), although this result was partly influenced by rapid economywide inflation that contributed to fast nominal GDP growth in that year. Although economywide inflation is expected to recede and economic growth to slow from the postpandemic highs for 2023 and beyond, it remains to be seen how future health care spending growth will materialize, as trends are expected to be driven more by health-specific factors such as medical-specific price inflation, the use and intensity of medical care, and demographic impacts associated with the continuing enrollment of the baby-boom generation in Medicare.²³ ■

Conclusion

Since 2020, health care expenditures have re-

The opinions expressed here are the authors' and not necessarily those of the Centers for Medicare and Medicaid Services. The authors thank the other members of the National Health Expenditure Accounts Team: Joseph Benson, Regina Butler, Bridget Dickensheets, Nathan Espinosa, Alyssa Gross, David Lassman, Heidi Oumarou, and Benjamin Washington. The authors also thank Catherine Curtis, Stephen

Heffler, John Poisal, Chris Truffer, Paul Spitalnic, and anonymous peer reviewers for their helpful comments. An interactive datagraphic that maps health expenditure sponsors to payers and payers to services during the period 1987–2022 is available online at <https://www.healthaffairs.org/health-spending/interactive-datagraphic/mapping-sponsors-payers-services-1987-2022>. This is an open access article

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NOTES

1 Authors' calculations based on Bureau of Economic Analysis. National data: national income and product accounts, Section 1—domestic product and income [Internet]. Washington (DC): BEA; 2023 Sep 28. Table 1.1.5, Gross domestic product; [last updated 2023 Oct 26;

cited 2023 Nov 21]. Available via query from: <https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey>

2 Bureau of Economic Analysis. National data: national income and product accounts, Section 1—domestic product and income [Inter-

net]. Washington (DC): BEA; 2023 Sep 28. Table 1.1.4, Price indexes for gross domestic product; [last updated 2023 Sep 28; cited 2023 Nov 14]. Available via query from: <https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey>

- 3 Medical care prices are measured by the Centers for Medicare and Medicaid Services Office of the Actuary's National Health Expenditure Deflator. Centers for Medicare and Medicaid Services. Historical [Internet]. Baltimore (MD): CMS; 2023 Dec 13. Table 23, National health expenditures; nominal dollars, real dollars, price indexes, and annual percent change: selected calendar years 1980–2022; [cited 2023 Dec 13]. Available for download (NHE Tables [ZIP]) from: <https://www.cms.gov/data-research/statistics-trends-and-reports/national-health-expenditure-data/historical>
- 4 Bureau of Labor Statistics. Producer Price Index industry data, series report: series ID PCU622---622--- [Internet]. Washington (DC): BLS; [cited 2023 Nov 14]. Available via query from: <https://data.bls.gov/cgi-bin/srgate>
- 5 Authors' analysis of Producer Price Index data for North American Industry Classification Codes 6211 and 6215, as of September 2023. See Bureau of Labor Statistics. Producer Price Indexes [Internet]. Washington (DC): BLS; [cited 2023 Nov 14]. Available from: <https://www.bls.gov/ppi/>
- 6 Based on the Office of the Actuary's adjustments to the published Consumer Price Index for prescription drugs to account for the impact of discounts and rebates. See Bureau of Labor Statistics. Consumer Price Indexes [Internet]. Washington (DC): BLS; [cited 2023 Nov 14]. Available from: <https://www.bls.gov/cpi/>
- 7 Bureau of Labor Statistics. Producer Price Index industry data, series report: series ID PCU6216--6216-- [Internet]. Washington (DC): BLS; [cited 2023 Nov 14]. Available via query from: <https://data.bls.gov/cgi-bin/srgate>
- 8 Bureau of Labor Statistics. Producer Price Index industry data, series report: series ID PCU623110623110 [Internet]. Washington (DC): BLS; [cited 2023 Nov 14]. Available via query from: <https://data.bls.gov/cgi-bin/srgate>
- 9 Williams E, Rudowitz R, Burns A. Medicaid financing: the basics [Internet]. San Francisco (CA): KFF; 2023 Apr 13 [cited 2023 Nov 21]. Available from: <https://www.kff.org/medicaid/issue-brief/medicaid-financing-the-basics/>
- 10 Pollitz K. How the American Rescue Plan will improve affordability of private health coverage [Internet]. San Francisco (CA): KFF; 2021 Mar 17 [cited 2023 Nov 14]. Available from: <https://www.kff.org/health-reform/issue-brief/how-the-american-rescue-plan-will-improve-affordability-of-private-health-coverage/>
- 11 Boards of Trustees. 2023 annual report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds [Internet]. Baltimore (MD): Centers for Medicare and Medicaid Services; 2023 Mar 31 [cited 2023 Nov 14]. Available from: <https://www.cms.gov/oact/tr/2023>
- 12 Wikle S, Wagner J. Unwinding the Medicaid continuous coverage requirement [Internet]. Washington (DC): Center on Budget and Policy Priorities; [last updated 2023 Apr 28; cited 2023 Nov 14]. Available from: <https://www.cbpp.org/research/health/unwinding-the-medicaid-continuous-coverage-requirement>
- 13 Williams E, Burns A, Rudowitz R. Fiscal implications for Medicaid of enhanced federal funding and continuous enrollment [Internet]. San Francisco (CA): KFF; 2023 Jun 16 [cited 2023 Nov 14]. Available from: <https://www.kff.org/medicaid/issue-brief/fiscal-implications-for-medicaid-of-enhanced-federal-funding-and-continuous-enrollment/>
- 14 Amin K, Millman J. Marketplace sign-ups increased by 21% in 2022 [Internet]. San Francisco (CA): KFF; 2022 Jan 28 [cited 2023 Nov 14]. Available from: <https://www.kff.org/private-insurance/slide/marketplace-sign-ups-increased-by-21-in-2022/>
- 15 Condon A, Thomas N. 20 health systems reporting losses in 2022 [Internet]. Chicago (IL): Becker's Healthcare; 2023 Mar 2 [cited 2023 Nov 14]. Available from: <https://www.beckershospitalreview.com/finance/20-health-systems-reporting-losses-in-2022.html>
- 16 Authors' analysis of Census Bureau data. Census Bureau. Quarterly services: latest quarterly services report: 2nd quarter 2023 time series/trend charts (industry 622: hospitals) [Internet]. Washington (DC): Census Bureau; 2023 Sep 7 [cited 2023 Nov 14]. Available for download from: <https://www.census.gov/services/index.html>
- 17 Nguyen JL, Benigno M, Malhotra D, Khan F, Angulo FJ, Hammond J, et al. Pandemic-related declines in hospitalization for non-COVID-19-related illness in the United States from January through July 2020. *PLoS One*. 2022;17(1):e0262347.
- 18 Abelson R. Higher bills are leading Americans to delay medical care. *New York Times* [serial on the Internet]. 2023 Feb 16 [cited 2023 Nov 17]. Available from: <https://www.nytimes.com/2023/02/16/health/inflation-delayed-health-care.html>
- 19 Avalon. 2023 Lab trend report [Internet]. Tampa (FL): Avalon; 2023 [cited 2023 Nov 28]. Available from: <https://www.avalonhcs.com/wp-content/uploads/2023/06/2023-Lab-Trend-Report.pdf>
- 20 IQVIA. The use of medicines in the U.S. 2023: usage and spending trends and outlook to 2027 [Internet]. Durham (NC): IQVIA; 2023 Apr [cited 2023 Nov 14]. Available for download (registration required) from: <https://www.iqvia.com/insights/the-iqvia-institute/reports-and-publications/reports/the-use-of-medicines-in-the-us-2023>
- 21 Based on unpublished data from the Bureau of Labor Statistics, Consumer Price Index.
- 22 Authors' analysis of unpublished data purchased from IQVIA.
- 23 Keehan SP, Fiore JA, Poisal JA, Cuckler GA, Sisko AM, Smith SD, et al. National health expenditure projections, 2022–31: growth to stabilize once the COVID-19 public health emergency ends. *Health Aff (Millwood)*. 2023;42(7):886–98.