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How CBO Analyzes the Costs of Proposals for Single-Payer Health Care Systems That Are Based on Medicare's Fee-for-Service Program

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To enhance the transparency of the work of the Congressional Budget Office and to encourage external review of that work, CBO's working paper series includes papers that provide technical descriptions of official CBO analyses as well as papers that represent independent research by CBO analysts. Papers in this series are available at http://go.usa.gov/xUzd7.

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Abstract

In this paper, CBO describes the methods it has developed to analyze the federal budgetary costs of proposals for single-payer health care systems that are based on the Medicare fee-for-service program. Five illustrative options show how differences in payment rates, cost sharing, and coverage of long-term services and supports under a single-payer system would affect the federal budget in 2030 and other outcomes. CBO's projections of national health expenditures under current law are a key basis for the estimates.

CBO projects that federal subsidies for health care in 2030 would increase by amounts ranging from $1.5 trillion to $3.0 trillion under the illustrative single-payer options—compared with federal subsidies in 2030 projected under current law—raising the share of spending on health care financed by the federal government. National health expenditures in 2030 would change by amounts ranging from a decrease of $0.7 trillion to an increase of $0.3 trillion. Lower payment rates for providers and reductions in payers' administrative spending are the largest factors contributing to the decrease. Increased use of care is the largest factor contributing to the increase.

Health insurance coverage would be nearly universal and out-of-pocket spending on health care would be lower—resulting in increased demand for health care—under the design specifications that CBO analyzed. The supply of health care would increase because of fewer restrictions on patients' use of health care and on billing, less money and time spent by providers on administrative activities, and providers' responses to increased demand. The amount of care used would rise, and in that sense, overall access to care would be greater. The increase in demand would exceed the increase in supply, resulting in greater unmet demand than the amount under current law, CBO projects. Those effects on overall access to care and unmet demand would occur simultaneously because people would use more care and would have used even more if it were supplied. The increase in unmet demand would correspond to increased congestion in the health care system—including delays and forgone care—particularly under scenarios with lower cost sharing and lower payment rates.

Keywords: Costs of single-payer health care systems

JEL Classification: I13

Contents

Notes

All years mentioned in this paper are calendar years, unless otherwise specified.

This analysis is based on CBO's September 2020 baseline budget projections and July 2020 economic projections.

Numbers in the text and exhibits may not add up to totals because of rounding.

All references to prices for prescription drugs under current law are net of rebates and discounts, as applicable.

Section 1.
Summary

The Congressional Budget Office has developed methods to analyze a single-payer health care system in the United States. This paper describes those methods and illustrates their use by estimating the effects of various illustrative single-payer systems on the federal budget, total U.S. health care spending, and other outcomes. The analytic framework that CBO developed builds on a report that the agency published last year about some of the design considerations for a single-payer system.[1]

This paper shows how CBO's methods can be applied by analyzing five hypothetical single-payer systems, all based on Medicare's fee-for-service (FFS) program, that have differing design features. The design specifications used for this analysis are not recommendations. Many alternative designs for a single-payer system are possible; the effects of such a system would depend crucially on its specifications. In addition, policies other than a single-payer system could provide health insurance to a similar number of people.[2]

What Design Features Did CBO Analyze?

Under each of the five illustrative options in this analysis, the single-payer system would replace comprehensive private health insurance plans and Medicare. It would also replace all of the coverage provided by Medicaid—except that under most of the options, Medicaid would continue to provide long-term services and supports (LTSS), which help people with functional or cognitive limitations perform routine daily activities for an extended period.

All five of the options that CBO analyzed share some major features that are consistent with proposals for single-payer systems introduced in the 116th Congress (2019-2020):

- *Coverage and eligibility.* Each option would cover a broad range of medical services, including services provided by hospitals, physicians, and other health care providers; prescription drugs; dental, vision, and hearing care; and school-based health services. In addition, each option would cover nearly all residents of the United States (including residents who were not lawfully present in the country).

- *Payment method.* Each option would use a fee-for-service approach—similar in many ways to the Medicare FFS program—in which health care providers would be paid for each service (or bundle of services) they performed. Under that approach, the federal

[1] See Congressional Budget Office, *Key Design Components and Considerations for Establishing a Single-Payer Health Care System* (May 2019), www.cbo.gov/publication/55150. The current paper provides CBO's first estimates of the budgetary effects of a single-payer system since 1993. Those previous estimates were published in Congressional Budget Office, *Single-Payer and All-Payer Health Insurance Systems Using Medicare's Payment Rates* (April 1993), www.cbo.gov/publication/16595.

[2] See Congressional Budget Office, *Policies to Achieve Near-Universal Health Insurance Coverage* (October 2020), www.cbo.gov/publication/56620. In that report, CBO examines four general approaches that could achieve nearly universal coverage, which is defined as having close to 99 percent of citizens and noncitizens who are present in the country lawfully be insured, either by enrolling in comprehensive major medical coverage or by receiving automatic coverage through a default plan.

government would set payment rates for health care administratively (including prices for prescription drugs) and would pay providers directly. Providers would not be owned or operated by the single-payer system. Providers would be allowed to furnish covered services outside the single-payer system, and be paid only by patients, if those providers opted not to receive any payment from the system during a given year. Private insurance for such services would not be allowed. (Seeing a provider outside the single-payer system would not preclude patients from receiving care from providers within the system.)

- *Administration.* In each option, the single-payer system would be administered using the processes of the Medicare FFS program—including using tools to manage enrollees' use of health care and monitor providers only to the extent that the Medicare FFS program is projected to do so in CBO's baseline budget projections. CBO assumed that such utilization management would be less intensive, on average, under the single-payer system than it is projected to be under private insurance in CBO's baseline.

The design features in all of the single-payer options that CBO considered would result in higher federal spending (and the need to finance that spending), nearly universal health insurance coverage, and lower total out-of-pocket spending on health care. (Out-of-pocket spending includes patients' cost-sharing payments, spending on services not covered by insurance, and payments covered by health savings accounts, but it does not include people's payments for health insurance premiums.) The demand for health care would increase under all of the options that CBO analyzed. The supply of care would also increase, mainly because of three types of factors: fewer restrictions on patients' use of health care and providers' billing, less money and time spent by providers on administrative activities, and providers' responses to increases in demand.

The total amount of health care used would rise, and in that sense, overall access to care would expand. CBO estimates that the increase in demand under its single-payer options would exceed the increase in supply, resulting in more unmet demand. That increase in unmet demand would correspond to greater congestion in the health care system, including delays and forgone care. (Overall access to care and unmet demand would grow simultaneously because people would use more care and would have used even more if it were supplied.)

The extent of those and other effects of a single-payer system would depend on its design. To illustrate that, CBO differentiated the five options it analyzed by varying three key features:

- *Payment rates for providers and prices for prescription drugs* (in general, lower payment rates would push down federal costs and have little effect on the demand for care while pushing down the supply of care);

- *Cost sharing by patients, such as copayments and other out-of-pocket spending* (in general, lower cost sharing would push up federal costs, push down people's out-of-pocket payments, push up the amount of care used, and push up the demand for care by more than the supply); and

- *Long-term services and supports* (in general, including LTSS as a covered benefit would push up federal costs, push down people's out-of-pocket payments, and push up the demand for LTSS care by about the same amount as its supply).

CBO developed two scenarios for payment rates (higher and lower), two scenarios for cost sharing (higher and lower), and two scenarios for LTSS coverage (included in the single-payer benefit package and not included). It combined those features in the following ways to produce the five options:

- *Option 1*. Higher payment rates, higher cost sharing, no LTSS.
- *Option 2*. Lower payment rates, higher cost sharing, no LTSS.
- *Option 3*. Lower payment rates, lower cost sharing, no LTSS.
- *Option 4*. Higher payment rates, lower cost sharing, no LTSS.
- *Option 5*. Higher payment rates, lower cost sharing, coverage of LTSS.

Payment Rates. In the scenario with higher payment rates, the average payment rates for health care providers under the single-payer system would be close to the average of the rates that CBO projects for all payers (including government programs and private insurers) in 2030 under current law. Those single-payer rates would be the same as or higher than Medicare's projected average payment rates, and they would be lower than the average rates projected to be paid by private health insurers. Prices for retail prescription drugs (prescription medicines that people purchase at pharmacies or by mail order) would equal the average of the prices projected for all payers under current law in 2025 and would then grow each year at the rate of increase in the consumer price index for all urban consumers (CPI-U) plus 4 percentage points. The resulting prescription drug prices would be lower than the prices that Medicare would pay in 2030 under current law, CBO estimates, and lower than the average prices that private insurers would pay.

In the lower scenario, average payment rates for providers would be lower than the average of the rates that CBO projects for all payers in 2030 under current law. Those single-payer rates would be the same as or higher than Medicare's projected average payment rates, and they would be considerably lower than the average rates projected to be paid by private health insurers. Prices for retail prescription drugs would equal the average of Medicare's and Medicaid's projected drug prices under current law in 2025 (lower than in the higher payment-rate scenario), and they would grow more slowly thereafter, increasing at the same rate as the CPI-U.

Cost Sharing. In the higher cost-sharing scenario, people with income below 150 percent of the federal poverty level would pay nothing out of pocket for covered medical services or retail prescription drugs. Everyone else would pay 7.5 percent of the total amount spent on those services, on average—with the exception that certain preventive services would be exempt from cost sharing. (That 7.5 percent share would be about three-quarters of the average cost sharing for enrollees in private health insurance plans and Medicare under current law.) As a result, out-of-pocket payments would cover about 5 percent of total spending on covered services and retail prescription drugs in the higher scenario, on average.

In the lower scenario, no one would pay out of pocket for covered medical services. Low-income people would also pay nothing out of pocket for prescription drugs, whereas other people would pay about 3 percent of drug costs. As a result, out-of-pocket payments would cover about 2 percent of total spending on retail prescription drugs in the lower scenario, on average.

Long-Term Services and Supports. In the option that includes LTSS coverage in the single-payer benefit package, benefits would be much broader than the benefits provided under current law through Medicaid or private insurers. The single-payer system would cover all services that are currently available through any state Medicaid program, including institutional and community-based care. Eligibility for LTSS benefits would be less restrictive than it is projected to be under Medicaid. Services would be available to anyone requiring assistance with one or more activities of daily living, such as bathing or dressing, or instrumental activities of daily living, such as managing finances or home maintenance. (In the options without an LTSS benefit, current federal and state funding of LTSS would continue.)

What Is the Scope of This Analysis?

This paper focuses on the effects of a single-payer system on federal subsidies and national expenditures for health care. Federal subsidies for health care include the government's spending for various programs, such as Medicare and Medicaid, and forgone revenues from various tax preferences for health benefits, such as the tax exclusion for employment-based coverage. National health expenditures (NHE) reflect total spending on health care in the United States. This analysis also discusses the effects of a single-payer system on out-of-pocket spending (a subset of NHE) and access to care.

CBO examined options for a single-payer system that would greatly increase the federal government's subsidies for health care. That increase would require new financing mechanisms—such as raising existing taxes or introducing new ones, reducing certain spending, or issuing government debt. As an example, if the government required employers to make contributions toward the cost of health insurance under a single-payer system that would be similar to their contributions under current law, it would have to impose new taxes.

In a paper to be published in early 2021, which will provide economic analysis outside the scope of this paper, CBO will assess how various highly stylized ways to finance a large increase in federal spending would affect the economy. For instance, increases in income taxes would reduce incentives to work and to invest in productive capital (such as equipment), thus holding down economic growth.

In addition to its financing mechanisms, a single-payer system itself would affect the U.S. economy in multiple ways. For instance, employers would no longer partially compensate some workers by providing them with health insurance, so compensation for those workers would shift toward higher wages. In addition, eliminating the link between employment and health insurance would let people make decisions about work without feeling constrained to stay with a particular employer to maintain health insurance coverage. Ending the link between employment and health insurance would also encourage entrepreneurship and could boost productivity. People would be less concerned about paying for future medical expenses. That reduction in uncertainty would cause reductions in private saving and the capital stock of the economy, which would tend to decrease output in the long term. Such economic effects are outside the scope of this analysis;

CBO will assess the macroeconomic effects of single-payer systems, separately from the effects of financing mechanisms, in another paper, to be published in the spring of 2021.

For the illustrative purposes of this analysis, CBO assumed that the legislation establishing a single-payer system was enacted in 2020. To allow time for the federal government to develop the necessary infrastructure to prepare for the new system, CBO assumed that the system would begin providing health insurance coverage in 2025. CBO analyzed the single-payer system's effects in 2030—the last year of CBO's September 2020 baseline projections of federal spending and revenues—in order to present estimates of the hypothetical policy after it had been operating for five years and was fully implemented. (Responses to the policy would probably continue to evolve over time, however.)

CBO's estimates of costs in 2030 do not include the earlier costs of setting up the single-payer system. Experience with the implementation of Medicare and the Affordable Care Act suggests that establishing a single-payer system over a five-year period would be possible and that it would be extremely difficult. The options that CBO analyzed would build on existing health care systems, which would facilitate implementation. Making changes that would affect the entire nation would be an enormously complex endeavor.

What Are the Effects of the Design Features CBO Analyzed?

To demonstrate how CBO would analyze a proposal for a single-payer system based on Medicare's fee-for-service program, CBO estimated how the five illustrative options would affect federal subsidies for health care, total national health expenditures, total out-of-pocket spending, the supply of and demand for health care, and other outcomes. Those estimates illustrate the impact of design features common to all of the options, such as the way in which payments to providers would be administered, as well as the effects of the three design features that vary among the options: payment rates, cost sharing, and coverage of long-term services and supports.

A high degree of uncertainty surrounds CBO's estimates. That uncertainty stems from many factors, including estimates of how providers and patients would respond to the single-payer system, administrative costs under the system and under current law, how regulations and other administrative actions following enactment of the legislation creating the system would affect costs, health care spending and economic conditions in the future under current law, spending on certain components of health care today, and aftereffects of the current coronavirus pandemic.

CBO will continue to incorporate feedback about its methods to improve its estimates over time. It also expects to benefit from new research that may be spurred in part by the information provided in this paper. In addition, some aspects of CBO's methods will be useful for analyzing other health-related policies, such as an expansion of benefits for long-term services and supports. CBO will continue to refine its methods for those other purposes as well.

Overall Size of the Effects. Under all of the single-payer options that CBO analyzed, federal subsidies for health care would be significantly larger in 2030 than they would be under current law (see Exhibit 1-1). Nearly all of the $2.8 trillion in federal subsidies that would otherwise be provided through Medicare, Medicaid, the Children's Health Insurance Program, the tax

Exhibit 1-1.

Summary of CBO's Projections Under Current Law and the Illustrative Single-Payer Options, 2030

Billions of Dollars

	Current Law	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
Federal Subsidies for Health Care[a]						
Total	2,820	4,916	4,333	4,588	5,217	5,816
Change compared with current law	n.a.	2,097	1,513	1,769	2,397	2,996
National Health Expenditures						
Total	6,631	6,473	5,888	5,981	6,589	6,922
Change compared with current law						
From changes in payment rates	n.a.	-67	-533	-508	-41	-22
From increased use of care	n.a.	321	206	272	407	718
From reductions in payers' administrative spending	n.a.	-411	-416	-414	-409	-406
Overall change	n.a.	-158	-743	-650	-42	290
Out-of-Pocket Spending						
Total	721	579	577	415	394	255
Change compared with current law	n.a.	-142	-144	-306	-327	-466

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

LTSS = long-term services and supports; n.a. = not applicable.

a. Excludes discretionary spending for health care (such as spending on veterans' health programs) because any reductions in discretionary spending under the illustrative single-payer options would depend on future appropriation action by lawmakers.

exclusion for employment-based coverage, and other sources in 2030 under current law would instead be provided through the single-payer system.

National health expenditures could decline or increase under a single-payer system depending on its design features. CBO broke down its estimates of the options' effects on NHE into effects stemming from changes in payment rates, from increased use of care, and from reductions in payers' administrative spending. Under the design specifications that CBO analyzed, the most important factors tending to reduce NHE are lower payment rates (in Options 2 and 3) and reductions in payers' administrative spending (in all of the options). The most important factor tending to increase NHE is increased use of care (especially increased use of LTSS in Option 5). Total out-of-pocket costs would be smaller under all five single-payer options.

The importance of different combinations of design features in CBO's illustrative options can be seen by comparing Options 2 and 5. Those two options differ the most in their specifications: Option 2 has lower payment rates, higher cost sharing, and no LTSS coverage, whereas Option 5 has higher payment rates, lower cost sharing, and expanded coverage of LTSS (relative to the benefits available from Medicaid or private insurers under current law). Those two alternatives for a single-payer system would produce the following effects:

- Federal subsidies for health care in 2030 would increase by $1.5 trillion under Option 2 and by $3.0 trillion under Option 5 relative to federal subsidies in 2030 projected under current law.

- National health expenditures would decline by $0.7 trillion under Option 2 and would increase by $0.3 trillion under Option 5.

- Total out-of-pocket spending would decline by $0.1 trillion under Option 2 and by $0.5 trillion under Option 5.

The estimated effects of the five illustrative options on federal subsidies, national health expenditures, and out-of-pocket costs span considerable ranges. The effects of a single-payer system could also be outside those ranges under other design specifications, such as higher or lower payment rates than those used in the options.

Effects of Design Features Underlying All of the Options. Virtually all U.S. residents would be enrolled in the single-payer system under each of the options. The main exception, in CBO's estimation, is that about 2 million of the roughly 10 million U.S. residents not lawfully present in the country in 2030 would not enroll in the single-payer system because of fears about providing information to the federal government or challenges related to language or literacy. In all, close to 99 percent of U.S. residents would be insured, meeting CBO's definition of near-universal coverage.

Because of design specifications they share, all of the options would substantially reduce insurers' administrative spending for health care. In addition, both the supply of care and the demand for care would rise under all of the options—by amounts that differ depending on the option. Demand would grow by more than supply, so some of the additional demand would be unmet, corresponding to increased congestion in the health care system.

Administration. Under all five options, the single-payer system would spend less on administration than the total amount that all payers would spend on administration under current law, CBO estimates. That reduction would be a major factor exerting downward pressure on total national health expenditures.

The single-payer system would be administered more like the fee-for-service component of Medicare and less like private insurance plans. The reasons that administrative spending by payers would be lower under a single-payer system can be understood by considering two types of factors: how the Medicare FFS program's spending differs from that of private insurers, and how spending under the illustrative single-payer options would differ from that of the Medicare FFS program.

Under current law, spending on administration is projected to make up about 2 percent of total spending for the Medicare FFS program, compared with 12 percent for private insurers. The Medicare FFS program's percentage of spending on administration is smaller for several main reasons, all of which would also apply under a single-payer system:

- The Medicare FFS program does not face the fragmentation, complexity, and duplication that stem from complying with different state regulations, providing different employment-based benefits, and negotiating different payment rates with many groups of providers. In addition, administering a single benefit package using a common process for setting payment rates nationwide is much simpler than a system in which many private insurers set their own payment rates and use their own processes.

- It does not pay state taxes and regulatory fees, incur costs for salespeople and brokers, or earn profits. In addition, a smaller percentage of its spending is devoted to activities such as utilization management.

- It experiences greater economies of scale than most private insurers from spreading the fixed costs of information technology across a larger total amount of spending and from being able to specialize more in its claims processing.

Under a single-payer system, additional factors would tend to push down administrative spending as percentage of total spending compared with that of the Medicare FFS program. A single-payer system would not need to engage in some types of administrative activities, such as determining whether patients are eligible to enroll because of their work history or disabilities. Its economies of scale would be larger than those of Medicare FFS. And the single-payer system would cover a population that would be younger and healthier, on average, than Medicare enrollees; thus, a smaller proportion of its claims would involve hospitalizations or other complex situations that include multiple services and providers—for which verifying that the correct amounts are billed is more complicated.

Several other factors would put upward pressure on administrative spending as a percentage of total spending under Options 1 through 4, CBO projects, although they would affect smaller amounts of spending and be outweighed by the sources of downward pressure. Spending would tend to be increased because of claims for prescription drugs, which are paid outside the FFS program (by Medicare Part D) under current law. Fixed costs per enrollee (such as for enrollee education programs) and fixed costs per claim would also tend to push up administrative spending as a percentage of total spending in the single-payer system, compared with Medicare FFS. That would occur because enrollment and the number of claims under the single-payer system are projected to increase by a larger percentage, compared with Medicare FFS, than total spending would. Other administrative spending, such as for fraud prevention, would generally increase by the same percentage as total spending. In all, the amount spent on administrative activities under Options 1 through 4 would be about five times larger than the total amount spent on such activities in Medicare FFS, whereas total spending for the single-payer system would be seven to eight times larger than total spending for Medicare FFS. As a result, administrative spending as a percentage of total spending would decline.

Under Option 5, spending on administration would be greater than under Options 1 through 4 because of the additional costs of administering LTSS benefits.

Supply of Care and Demand for Care. Under all of the illustrative single-payer options, the supply of prescription drugs in 2030 would equal the amount demanded, CBO projects. Similarly, under Option 5, the supply of long-term services and supports would equal the amount demanded. The quantity of other types of care would be determined by providers' supply of care—specifically, by the number of qualified providers and by the amount of care they would be willing to offer at the payment rates in the options. That situation would occur because the demand for those types of health care is projected to exceed the supply.

Several types of factors would increase the supply of health care, on net, under all five options:

- With fewer restrictions on patients' use of health care and on billing—such as fewer requirements for prior approval before patients could receive intensive procedures or for a referral before patients could see specialists—providers would tend to furnish a greater volume and intensity of care. That increase would stem mainly from providers' recommending greater use of care, providing more-intensive services, and coding services as more intensive, in CBO's assessment.

- Providers would spend less money and time on administrative activities, which would free up resources to provide more care.

- In response to the upsurge in demand under a single-payer system, manufacturers would increase the supply of prescription drugs they produced, and providers would increase the amount of care they supplied (within constraints on their labor and other capacities).

- A small share of providers would opt out of the single-payer system and charge higher prices. They would supply more care at those higher prices than they would have under the payment rates of the single-payer system.

The effects of those factors would be partially offset by downward pressure on the amount of care supplied, compared with current law, because of changes in payment rates and reductions in supplemental payments for providers. Such changes could, for example, put pressure on hospitals to spend less on staffing. (That response would add to the reduction in nominal spending that would occur because prices would be lower, in CBO's assessment.)

The composition of care supplied would shift under all of the options because of changes in payment rates. From 2025 through 2030, the distribution of payment rates for providers under the options would gradually be compressed around the nationwide average and modeled on the Medicare FFS program. By 2030, providers would be paid on the basis of a single national rate for a given service, with adjustment factors applied similar to those used in the Medicare FFS program (for things like geographic variation in input costs and quality of care). For example, the payment rates for a visit to a general practitioner's office and for a visit to a specialist's office would be more similar than the average rates that private insurers would pay for those types of visits under current law, under which specialists are projected to be paid much more than general

practitioners. As a result, the amount of care supplied by general practitioners would increase relative to the amount of care supplied by specialists, in CBO's assessment.

Demand for health care would increase under all of the options, compared with the demand projected in CBO's baseline. The main reasons are that patients' cost sharing would generally be lower, more people would have insurance coverage, and there would be fewer restrictions on use of care and provider networks.

Under all of the options, the total increase in demand would exceed the total increase in supply, CBO estimates. As a result, some of the additional demand for health care under the options would go unmet, corresponding to increased congestion in the health care system. (CBO's measure of unmet demand reflects the additional amount of care that people would obtain if it were supplied, given what they would pay for it. That measure tends to increase when patients pay less for care. It is not a measure of additional need for care to help reach goals for a patient's health. Such measurement is outside the scope of this analysis, as is measuring the effects on health from increases in the use of care or from greater congestion in the health care system.)

Overall access to care would rise at the same time that congestion would increase. That situation would occur because people would use more care (corresponding to greater overall access), but they would have used even more if it were supplied (corresponding to greater unmet demand and congestion).

Effects of Lower Payment Rates. Comparing the outcomes under Option 1 with those under Option 2, and comparing the outcomes under Option 4 with those under Option 3, illustrates the impact of changing from higher payment rates to lower payment rates. Those lower rates are the largest single factor resulting in lower national health expenditures under Options 2 and 3 compared with the amounts under current law.

Total federal subsidies for health care in 2030 would be about 12 percent smaller with the lower payment rates than with the higher payment rates (see Exhibit 1-2). National health expenditures would be smaller with the lower payment rates by a similar dollar amount as federal subsidies, or by about 9 percent of NHE. About four-fifths of that difference would stem directly from the lower payment rates themselves; the other one-fifth would occur because less health care would be supplied under the lower rates than under the higher rates.

To illustrate how changes in payment rates and changes in the use of health care would affect national health expenditures, CBO focused on changes in the part of NHE that consists of personal health care (medical services and goods provided to individuals). That category includes spending on hospital services, physician and clinical services, prescription drugs, LTSS, and all other health care services. It excludes spending on public health activities, payers' administrative spending, and investment in the medical sector.

The increase in the demand for care relative to current law would be about the same under the lower payment-rate scenario as under the higher scenario when measured as a percentage of personal health care. The increase in supply would be smaller with the lower payment rates, resulting in less overall access to care than with the higher payment rates. On net, the difference between the increase in demand and the increase in supply—the amount of demand going

Exhibit 1-2.

Effects of Lower Payment Rates

	Options With Higher Cost Sharing and No LTSS				Options With Lower Cost Sharing and No LTSS			
	With Higher Payment Rates (Option 1)	With Lower Payment Rates (Option 2)	Difference	Percentage Change	With Higher Payment Rates (Option 4)	With Lower Payment Rates (Option 3)	Difference	Percentage Change
Federal Subsidies for Health Care (Billions of dollars)	4,916	4,333	-584	-12	5,217	4,588	-629	-12
National Health Expenditures (Billions of dollars)	6,473	5,888	-585	-9	6,589	5,981	-607	-9
Total Out-of-Pocket Spending (Billions of dollars)	579	577	-2	*	394	415	21	5
Increase in Demand for Personal Health Care (Percent)[a]	7	7	*	n.a.	12	11	*	n.a.
Increase in Supply of Personal Health Care (Percent)[a]	6	4	-2	n.a.	7	5	-2	n.a.
Increase in Demand for Personal Health Care That Would Not Be Met (Percentage points)[a,b]	1	3	2	n.a.	5	6	2	n.a.

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

Personal health care consists of medical services and goods provided to individuals.

LTSS = long-term services and supports; n.a. = not applicable; * = between -0.5 percent and 0.5 percent.

a. The increase is measured as a percentage of personal health care at quantities under current law and payment rates under the option.

b. The increase in unmet demand is the amount by which changes in demand for care if supply was unconstrained are projected to exceed changes in supply.

unmet—would be 2 percentage points larger with the lower payment rates, CBO estimates, corresponding to more congestion in the health care system.

Effects of Lower Cost Sharing. Comparing the outcomes under Option 1 with those under Option 4, and comparing the outcomes under Option 2 with those under Option 3, illustrates the impact of changing from higher cost sharing to lower cost sharing.

Total federal subsidies for health care in 2030 would be about 6 percent larger under the lower cost-sharing scenario (see Exhibit 1-3). The majority of that difference would stem directly from people paying for a smaller share of total spending on covered services and the single-payer system paying for a bigger share of such spending. NHE would be about 2 percent larger.

Exhibit 1-3.

Effects of Lower Cost Sharing by Patients

	Options With Higher Payment Rates and No LTSS				Options With Lower Payment Rates and No LTSS			
	With Higher Cost Sharing (Option 1)	With Lower Cost Sharing (Option 4)	Difference	Percentage Change	With Higher Cost Sharing (Option 2)	With Lower Cost Sharing (Option 3)	Difference	Percentage Change
Federal Subsidies for Health Care (Billions of dollars)	4,916	5,217	300	6	4,333	4,588	255	6
National Health Expenditures (Billions of dollars)	6,473	6,589	115	2	5,888	5,981	93	2
Total Out-of-Pocket Spending (Billions of dollars)	579	394	-185	-32	577	415	-162	-28
Increase in Demand for Personal Health Care (Percent)[a]	7	12	5	n.a.	7	11	4	n.a.
Increase in Supply of Personal Health Care(Percent)[a]	6	7	2	n.a.	4	5	1	n.a.
Increase in Demand for Personal Health Care That Would Not Be Met (Percentage points)[a,b]	1	5	3	n.a.	3	6	3	n.a.

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

Personal health care consists of medical services and goods provided to individuals.

LTSS = long-term services and supports; n.a. = not applicable.

a. The increase is measured as a percentage of personal health care at quantities under current law and payment rates under the option.

b. The increase in unmet demand is the amount by which changes in demand for care if supply was unconstrained are projected to exceed changes in supply.

Demand for care would be 4 percent to 5 percent greater with the lower cost sharing than with the higher cost sharing. About one-third of the increase in demand would be met with an increase in the amount of care supplied, such as through providers' responses and increased manufacturing of prescription drugs, resulting in greater overall access to care. The other two-thirds of the increase in demand would not be met, because providers would not supply that care, corresponding to more congestion in the health care system. On net, the amount of demand going unmet would be 3 percentage points larger as a result of the lower cost sharing, CBO estimates.

Effects of Including LTSS as a Covered Benefit. Option 5 resembles Option 4 in all respects except that it includes coverage for long-term services and supports beyond what Medicaid and the Children's Health Insurance Program would cover under current law. Comparing the effects

Exhibit 1-4.

Effects of Covering Long-Term Services and Supports

	Options With Higher Payment Rates and Lower Cost Sharing			
	Without LTSS Coverage (Option 4)	With LTSS Coverage (Option 5)	Difference	Percentage Change
Federal Subsidies for Health Care (Billions of dollars)	5,217	5,816	599	11
National Health Expenditures (Billions of dollars)	6,589	6,922	333	5
Total Out-of-Pocket Spending (Billions of dollars)	394	255	-139	-35
Increase in Demand for Personal Health Care (Percent)[a]	12	17	5	n.a.
Increase in Supply of Personal Health Care (Percent)[a]	7	13	5	n.a.
Increase in Demand for Personal Health Care That Would Not Be Met (Percentage points)[a,b]	5	5	*	n.a.

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

Personal health care consists of medical services and goods provided to individuals.

LTSS = long-term services and supports; n.a. = not applicable; * = between -0.5 percent and zero.

a. The increase is measured as a percentage of personal health care at quantities under current law and payment rates under the option.

b. The increase in unmet demand is the amount by which changes in demand for care if supply was unconstrained are projected to exceed changes in supply.

of those two options illustrates the impact of providing an LTSS benefit in a single-payer system (see Exhibit 1-4).

Federal subsidies for health care in 2030 would be about 11 percent larger with the LTSS benefit in Option 5. About two-fifths of that increase would result because federal spending would replace state and out-of-pocket spending on long-term services and supports that would have occurred under current law. NHE would be about 5 percent larger with the LTSS benefit in Option 5.

CBO estimates that all of the demand for LTSS under Option 5 would be met with an increase in the amount of care supplied. The additional demand for LTSS under that option would be entirely for home- and community-based services (rather than for institutional care), CBO estimates. Option 5's payment rates for those services would be higher than Medicaid's projected rates under current law. (And because Medicaid is the main payer for home- and community-based services in CBO's baseline, Option 5's payment rates would also be higher than the average rates among all payers under current law.) CBO projects that the supply of care would increase by enough to meet the increase in demand mainly because of those higher payment rates and because most jobs providing home- and community-based services generally do not require a bachelor's or specialized degree. There would also be a large number of potential workers available, including many of the family members and friends who would otherwise provide unpaid care under current law.

Effects on Access to Care. Under the illustrative single-payer options, lower financial barriers would increase overall access to care both for people who would have been uninsured in 2030 under the current system and for people who would have had insurance coverage. Under Option 5, financial barriers to accessing LTSS, particularly home- and community-based services, would largely be eliminated.

CBO projects that the total amount of health care that people use would rise under all of the options, and in that sense, overall access to care would increase. That increase would be larger for care supplied by providers whose payment rates would rise, on average, under the single-payer options—such as pediatricians, general practitioners, and providers with higher percentages of patients who would be uninsured or covered by Medicaid under current law. Prescription drug use would also increase under all of the options.

The options' effects on access to care would differ for different groups of people. For example, access would increase for some of the people who would have been uninsured or had high cost sharing under current law. Access would decline for some of the people who would have had private insurance with low cost sharing under current law and who live in areas that would see the greatest increases in congestion in the health care system.

The increases in unmet demand and congestion projected under the options would add to the total amount of unmet demand and congestion projected to occur under current law. Under current law, for example, some demand for care by Medicaid beneficiaries goes unmet because they face long waiting times for appointments or cannot find providers who accept their coverage.

Increased congestion would affect access to care by causing delays in treatment or longer travel times, particularly for specialty care. Under the single-payer options, patients would continue to make appointments and pay any required cost sharing, as under current law. But increased congestion would mean that some patients would have more difficulty finding an available provider. In addition, some patients would forgo care, some would contract for care privately (with providers who opted out of the single-payer system), and some would pay for care abroad. Some of the same people who would experience reductions in financial barriers to accessing care would face increases in other barriers to accessing providers.

The options that CBO analyzed do not include new mechanisms to allocate the available services to people in need. Policymakers might add such mechanisms if people found it difficult to obtain medical appointments—which CBO projects would be more likely under options with lower payment rates and lower cost sharing. The use of existing third-party platforms that assist with scheduling patients and allocating care could increase, and new methods of assistance could be developed in the future. The administrative savings from a single-payer system would be reduced if mechanisms to allocate health care services were paid for by the system.

Other Outcomes. In addition to analyzing the options' effects on federal subsidies, NHE, out-of-pocket spending, the supply of and demand for health care, and access to care, CBO considers the following topics in this paper:

- *Effects on the quality of care and on patients' satisfaction and health*. CBO qualitatively assesses factors that could cause each of those outcomes to increase or decrease under a single-payer system.

- *Short-term considerations for establishing a single-payer system*. CBO reviews categories of start-up costs associated with establishing a provider payment system and enrolling providers, developing an enrollment and verification system for beneficiaries, financing the new system, and winding down existing public programs. CBO also discusses transitional issues, such as phasing in new payment rates for providers and monitoring changes in people's access to and quality of care.

- *Long-term considerations for a single-payer system*. CBO qualitatively assesses factors that could cause the supply of care and medical innovation to increase or decrease under a single-payer system after 2030. For example, CBO discusses how, in the long term, payments lower than those projected under current law might lead fewer people to enter health care professions and fewer new drugs to be developed.

- *How CBO's estimates compare with those of other analysts*. CBO compares its analysis with the design specifications and results of recent analyses of single-payer systems by four other organizations.

CBO's estimates of the effects of a single-payer system on federal subsidies and NHE are generally lower than estimates in other published analyses. One important contributor to those differences is that CBO projects that the supply of health care under the single-payer options would not expand to meet all of the new demand for care; other analysts project greater expansions of supply and correspondingly higher spending. Another source of differences is that CBO's estimates of administrative spending for a single-payer system are lower than those of other analysts.

Section 2.
Specifications of CBO's Illustrative Options and Comparisons With Existing Proposals

In this working paper, CBO analyzes five illustrative options for a single-payer health care system. Under all five options, coverage would be made available to all residents of the United States (including noncitizens who are not lawfully present), a broad range of services would be covered, and providers would be paid using the structure of the Medicare fee-for-service (FFS) payment system. The payment rates under all of the illustrative options would generally be higher than Medicare's rates would be under current law, but they would be lower than the average rates paid by private health insurers.

All five of the options include major features that are consistent with proposals introduced in the 116th Congress (2019-2020). As one example of that consistency, CBO assumed that the single-payer system would use tools to manage enrollees' use of health care and monitor providers only to the extent that the Medicare FFS program would under current law, which would be less extensive than what private insurers are projected to do under current law. Under all of the options, the single-payer system would replace the existing Medicare program. Medicaid would continue under four of the five options, but it would cover only long-term services and supports (LTSS), which help people with functional or cognitive limitations perform routine daily activities for an extended period. Under the final option, which includes an LTSS benefit, Medicaid would cease to exist.

Overview of the Five Illustrative Options

To illustrate how the effects of a single-payer system would depend on its design features, CBO designed the five illustrative options to vary along three key dimensions:

- Provider payment rates and prescription drug prices,
- Cost sharing, and
- Coverage of long-term services and supports.

CBO developed higher and lower scenarios for provider payment rates and drug prices as well as higher and lower scenarios for cost sharing. It included LTSS coverage in one of the options (see Exhibit 2-1).

In the higher payment-rate scenario, average payment rates for providers would be close to the average rates projected across all payers under current law in 2030—in other words, the same as or higher than Medicare's average rates but lower than private health insurers' average rates. In the lower payment-rate scenario, average payment rates for providers would be lower than (rather than close to) the average rates projected across all payers under current law in 2030—but the same as or higher than Medicare's average rates. Both payment-rate scenarios would follow the structure of the Medicare FFS payment system.

Exhibit 2-1.

Summary of Key Design Specifications of CBO's Illustrative Single-Payer Options

	Option 1	Option 2	Option 3	Option 4	Option 5
Provider Payment Rates and Prescription Drug Prices	Higher	Lower	Lower	Higher	Higher
Cost Sharing	Higher	Higher	Lower	Lower	Lower
Coverage of Long-Term Services and Supports	No	No	No	No	Yes

Data source: Congressional Budget Office.

See the main text for descriptions of the scenarios. The higher and lower payment-rate and cost-sharing scenarios generally represent reductions relative to average values under current law. However, payment rates for hospital services and physician and clinical services under the higher scenario would be similar to rates under current law.

The two payment-rate scenarios also include different prices for prescription drugs. In the higher scenario, average drug prices would be somewhat lower than the average prices projected across all payers under current law in 2030. In the lower scenario, drug prices would be substantially lower than the average across all payers.

CBO also modeled two cost-sharing scenarios for the single-payer options. In the lower scenario, patients would face no cost sharing for medical services and a small amount of cost sharing for retail prescription drugs (an average of 3 percent of those drugs' costs for people with household income above 150 percent of the federal poverty level). In the higher scenario, patients would face higher amounts of cost sharing for medical services and prescription drugs, but average cost sharing would still be lower than what patients would face on average under current law.

In both the lower and the higher cost-sharing scenarios, low-income people—defined as people with household income below 150 percent of the federal poverty level—would be exempt from all cost sharing for medical services and prescription drugs. Both scenarios also include a limit on the maximum out-of-pocket amount a patient could pay per year.

In four of CBO's illustrative options, the single-payer system would not cover long-term services and supports. In those options, LTSS benefits would be limited to the benefits projected to be covered under current law (mainly by Medicaid). In the single-payer option with LTSS coverage, benefits would be available without regard to people's income or assets and without cost sharing.

The various specifications that CBO adopted for this analysis are not recommendations, and many alternative specifications are possible. CBO's illustrative options mix those design features as follows:

- Option 1 includes the higher payment-rate scenario and the higher cost-sharing scenario; it excludes LTSS as a covered benefit in the single-payer system.
- Option 2 is identical to Option 1 except that it includes the lower payment-rate scenario.
- Option 3 is identical to Option 2 except that it includes the lower cost-sharing scenario.

- Option 4 is identical to Option 3 except that it includes the higher payment-rate scenario.
- Option 5 is identical to Option 4 except it includes LTSS as a covered benefit in the single-payer system.

By varying only one feature with each successive option, CBO intended for its analysis to provide information about how changing those three key features—payment rates, cost sharing, and LTSS coverage—would alter the effects of the illustrative single-payer options on federal subsidies for health care and national health expenditures. (For explanations of those and other important accounting concepts used in this analysis, see Box 2-1.)

For all of the options, CBO assumed that legislation to create the single-payer system was enacted in 2020 and that the system would begin providing coverage in 2025. (The year of enactment is for illustrative purposes only. Designing such a system and writing legislative language to establish it would require substantial effort.) CBO analyzed the effects of the single-payer system in 2030, the last year of the agency's latest current-law baseline projections of federal spending and revenues. The year 2030 was chosen to illustrate the effects of the system after it had been fully implemented, although features of the system would probably continue to evolve over time. (Section 17 of this paper discuss implementation and transition issues for a single-payer system before 2030, and Section 18 discusses long-term considerations after 2030.)

The illustrative options that CBO analyzed draw on the broad features of existing legislation, but they do not correspond to any specific legislative proposal, and the results would differ under alternative policy specifications. In general, under any single-payer system, federal spending on health care would increase substantially because the government would take over responsibility for providing coverage. As a result, the federal government would pay a much larger share of national health expenditures (NHE) than under current law. Thus, CBO expects that any single-payer system would need substantial additional government resources and would require new financing mechanisms—such as raising existing taxes or introducing new ones, reducing certain spending, or issuing government debt.

Administration of the Single-Payer System

Under all five of the illustrative options, the single-payer system would be administered by the federal government, but the government would contract with private entities to process claims and carry out some other administrative functions. That situation would resemble the structure of the current Medicare FFS program, which sets federal payment guidelines and formulas but contracts out many activities to private contractors.

CBO's options assume that the single-payer system's role would be to set rates and pay claims and that benefits would be administered in much the same way as in the Medicare FFS program. Those design features resemble two versions of the Medicare for All Act proposed in the 116th

Box 2-1.
Key Accounting Concepts and Definitions Used in This Analysis

National Health Expenditures: The nation's total spending on health care. Consists of *health consumption expenditures* (defined below) and *investment in the medical sector* (spending on structures, equipment, and research).

Health Consumption Expenditures: Consists of *personal health care expenditures* (defined below), *payers' administrative spending* (defined below), and *government spending on public health activities* (such as epidemiological surveillance, vaccination programs, disease prevention programs, and public health laboratories).

Personal Health Care Expenditures: Spending by all payers on all goods and services to treat or prevent a disease or a condition in a specific person. CBO divided personal health care into five categories:

- *Hospital services*, including inpatient and outpatient care;
- *Physician and clinical services*, including services provided in the offices of physicians and other health practitioners (such as physical therapists and mental health practitioners) as well as in outpatient care centers (such as ambulatory surgical and emergency centers, outpatient mental health and substance abuse centers, and kidney dialysis centers);
- *Prescription drugs*;
- *Long-term services and supports* (health care and related services provided to people with functional or cognitive limitations to help them perform routine daily activities over an extended period of time); and
- *Other services*, including dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, durable medical equipment (such as eyeglasses and hearing aids), and nondurable medical equipment (such as over-the-counter medications). In CBO's single-payer options, the "other services" category includes all of those listed services except nondurable medical equipment, which would not be covered by the illustrative single-payer system. In addition, although home health care and skilled nursing facility care are sometimes classified as long-term services and supports, CBO included them in "other services" because Medicare covers those services under current law and because CBO included all Medicare-covered benefits in the illustrative single-payer benefit packages.

(Continued)

Box 2-1. Continued

CBO also classified personal health care expenditures by source of payment. The major sources of payment include private health insurance, Medicare, Medicaid, other payers, and out-of-pocket spending (direct spending by consumers for health care goods and services). Out-of-pocket spending includes patients' cost-sharing payments, spending on services not covered by insurance, and payments covered by health savings accounts, but it does not include people's payments for health insurance premiums. (Payments for insurance premiums are categorized with the payer that receives the premiums. For example, payments for private health insurance premiums, minus the insurers' administrative expenses, would be categorized as spending by private insurance.)

Payers' Administrative Spending: Consists of the administrative costs of government health programs, such as Medicare, and the nonclaims spending and profits or losses of private health insurers. Administrative spending pays for such things as claims processing and appeals, quality-improvement programs, fraud-reduction programs, education programs for enrollees, certification of providers, general information technology and accounting costs, salaries, rent, and postage.

Federal Subsidies for Health Care: Consists of mandatory spending on federal health care programs (such as Medicare and Medicaid) net of offsetting receipts (such as premiums paid by Medicare beneficiaries), plus health-related tax benefits (such as the tax revenues that the federal government forgoes because premiums for people with employment-based insurance are excluded from federal income and payroll taxes), minus penalties paid by large employers that do not offer health insurance coverage to their employees. CBO excludes discretionary spending (such as spending on veterans' health programs) from its definition of federal subsidies for health care because any reductions in that spending under the illustrative single-payer options would be subject to future appropriation action by lawmakers. However, discretionary spending (adjusted to reflect growth in potential gross domestic product rather than the growth in CBO's baseline projections) is included in CBO's estimates of national health expenditures (see Section 3 and Appendix A).

Congress (H.R. 1384 and S. 1129).[3] As a result, the single-payer system would only use tools to manage enrollees' use of health care and monitor providers to about the same extent that Medicare FFS would under current law.

Eligibility

As in proposed legislation, all residents of the United States would be eligible for coverage under the single-payer system in each of the five illustrative options, regardless of legal status. Residents who were not in the country lawfully would be included, but temporary foreign visitors would be excluded from coverage.[4]

Covered Services

Similar to the single-payer systems in proposed legislation, the system in CBO's five options would cover all of the services currently covered by Medicare, including hospital services, physician and clinical services, prescription drugs, and other services.[5] The system's benefit package would also include services not typically used by Medicare beneficiaries—such as prenatal and infant care—as well as additional services, such as dental, vision, and hearing care and school health services. Under Options 1 through 4**,** the single-payer system would not cover long-term services and supports; those services would be covered by Medicaid, as under current law.

Option 5 includes an LTSS benefit under the illustrative single-payer system. That benefit is based on the various LTSS benefits in proposed legislation. It would cover institutional care (provided in nursing facilities and other residential facilities) and care provided in people's

[3] See Medicare for All Act of 2019, H.R. 1384, 116th Cong. (2019), www.congress.gov/bill/116th-congress/house-bill/1384; and Medicare for All Act of 2019, S. 1129, 116th Cong. (2019), www.congress.gov/bill/116th-congress/senate-bill/1129. The Medicare FFS program covers inpatient and post-acute care services (some of which can be administered at home) through its Part A benefit, and physician and outpatient services through Part B. (Unlike Part A and Part B services, Medicare's retail prescription drug benefit under Part D is administered through private plans rather than through the federal government.) Under the Medicare FFS program, the federal government pays directly for health care services received by beneficiaries. The program carries out several other activities as well, including efforts to measure and improve the quality of care, demonstration projects that test alternative payment models, data collection and dissemination, surveys and certification of providers, and program integrity (which involves paying the correct amount to legitimate providers for covered, necessary, and reasonable services provided to eligible beneficiaries while reducing fraud, waste, and abuse).

[4] CBO estimates that 10 million people living in the United States in 2020 are not lawfully present, making up 3 percent of the total U.S. population. About 5 million of those people lack health insurance; they account for 16 percent of the uninsured population in 2020. For this analysis, CBO assumed that, as in proposed legislation, the Secretary of Health and Human Services would establish criteria for determining residency aimed at not allowing people to travel to the United States for the sole purpose of obtaining health care under the single-payer system. CBO did not estimate any changes in immigration resulting from its illustrative options.

[5] Hospital services include both inpatient and outpatient services. Physician and clinical services include services provided in the offices of physicians and other health care practitioners (such as physical therapists and metal health practitioners) as well as in outpatient care centers (such as ambulatory surgical and emergency centers, outpatient mental health and substance abuse centers, and kidney dialysis centers). In addition, Medicare pays for home health care and for the first 100 days of skilled nursing care following an inpatient hospitalization (often referred to as post-acute care). Home health care and skilled nursing facility care are sometimes classified as LTSS, but CBO included them in the "other services" category because they are currently covered by Medicare and CBO included all of Medicare's covered benefits in the illustrative single-payer benefit packages.

homes or community settings. Home- and community-based services (HCBS) encompass a wide variety of services, including help with activities of daily living (ADLs), such as bathing or dressing; help with instrumental activities of daily living (IADLs), such as managing finances or home maintenance; adult day care; and supported employment. Such services are provided by professional care givers, by family members or friends, and by nonprofit organizations (such as Meals on Wheels). The single-payer system would cover all long-term services and supports currently available through any state Medicaid program. Those services would be available to anyone who needed help with one or more ADLs or IADLs.

Changes in the Role of Existing Health Care Systems and Programs

Under all five of CBO's illustrative options, private health insurance that duplicated the benefits of the single-payer system would not be allowed. (That specification is similar to provisions in H.R. 1384 and S. 1129.) In addition, private supplemental insurance to cover cost sharing under the single-payer system would not be allowed. CBO adopted that assumption both to simplify its analysis and to illustrate how cost sharing in a single-payer system would affect the federal budget and national health expenditures.

Proposed legislation provides varying levels of detail about what would happen to existing federal health care programs under a single-payer system. To the extent that those details exist, CBO generally adopted similar assumptions for its illustrative options. Thus, under those options, the single-payer system would replace some federal programs, including Medicare, the Federal Employees Health Benefits program, and the Children's Health Insurance Program (CHIP).

Most existing services provided by Medicaid and CHIP would instead be covered by the single-payer system. Medicaid would continue under Options 1 through 4 but only to cover LTSS, with the same eligibility, benefits, and cost sharing that Medicaid and CHIP would have under current law. Those options include a maintenance-of-effort provision that would require states to keep their spending on LTSS at a level that would, at a minimum, be equal to projected levels under current law.[6] Under Option 5, whose single-payer system includes an LTSS benefit, Medicaid would cease to exist.

As in proposed legislation, other federal health programs that deliver care to specific patient populations would continue to operate alongside the single-payer system, including the health care programs of the Veterans Health Administration (VHA), the Department of Defense (DoD), and the Indian Health Service (IHS). Although VHA's facilities and existing funding mechanism would continue as under current law, people who would be enrolled in VHA's programs would probably rely less on those services. Likewise, a portion of health benefits administered by DoD

[6] CBO projects that under current law, the Medicaid program would spend $262 billion on LTSS in 2030, and CHIP would spend less than $0.5 billion. (Those totals include spending to administer LTSS benefits.) For the options in which the single-payer system would not cover LTSS, CBO expects that states would continue to provide the same total amount of LTSS but that all benefits would be provided through Medicaid because CHIP would no longer exist.

to eligible beneficiaries would continue under the single-payer system.[7] Specifically, DoD would go on administering direct care through government-owned and operated military treatment facilities. Any care that DoD provided through its purchased-care network—a large network of private physicians, hospitals, and pharmacies that agree to accept DoD payment rates—would move to the single-payer system under all of the options.

The single-payer system would subsume the medical-benefit component of the workers' compensation program, state and local general assistance programs, school health services, the Maternal and Child Health program (administered by the Health Resources and Services Administration), and the portion of vocational rehabilitation programs related to personal health care services.[8] Programs that would continue under current law include federal spending on investment in the medical sector (such as spending by the National Institutes of Health), other federal health-related programs (such as spending by the Centers for Disease Control and Prevention), and state and local public health departments.

Provider Payment Rates and Prescription Drug Prices

CBO developed a higher scenario and a lower scenario for the rates that the single-payer system would pay providers for hospital services, physician and clinical services, and prescription drugs. The two scenarios demonstrate the effects that different payment rates for those services would have under a single-payer system that used rate-setting processes like those in the Medicare FFS program. For long-term services and supports and for other services, payment rates would generally equal Medicare's projected rates in 2030 (where available) in both scenarios.[9]

Provider Payment Rates for Hospital Services and Physician and Clinical Services. For hospital services and physician and clinical services, both the higher and lower payment-rate scenarios would start with the same rates in 2025 (when the single-payer system is assumed to begin operating). In both scenarios, average payment rates in 2025 would equal the current-law weighted-average rates across all payers that CBO projects for that year, after incorporating the difference in supplemental payments between current law and the single-payer system. Under the single-payer system, supplemental payments were adjusted to eliminate payments that hospitals receive from Medicare and Medicaid and that safety-net providers (which primarily serve uninsured and low-income populations) receive from local governments. Supplemental payments

[7] Eligible beneficiaries include people currently on active duty in the armed forces, certain members of the Selected Reserve, and veterans who retired from the armed forces with a pension from DoD, as well as family members and survivors.

[8] To simplify its analysis, CBO assumed that the medical-benefit component of the workers' compensation program would end and that services that would have been covered by the program would instead be covered by the single-payer system. In existing legislative proposals, workers' compensation carriers would be required to reimburse the single-payer system for the cost of services included in the medical-benefit component of the workers' compensation program.

[9] Those other services include dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, and durable medical equipment, such as eyeglasses and hearing aids. (Home health care and skilled nursing facility care are sometimes classified as LTSS, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.) CBO anticipates that the single-payer system would develop new rates for services that Medicare does not cover now by adapting and expanding the current Medicare fee schedule.

to hospitals for graduate medical education and to physicians in certain underserved areas would be retained because those activities would continue. With those adjustments to supplemental payments, the current-law weighted-average payment rates in 2025 would be 139 percent of Medicare's rates for hospital services, 115 percent of Medicare's rates for physician and clinical services, and 107 percent of Medicare's rates for other services.[10] (For details about how the illustrative single-payer payment rates compare with private health insurers' payment rates under current law, see Section 4.)

From 2025 through 2030, payment rates under the higher and lower scenarios would grow by different average amounts for both hospital services and physician and clinical services. Under the higher payment-rate scenario (Options 1, 4, and 5), average payment rates from 2025 through 2030 would grow at roughly the same pace as hospital- and physician-specific measures of input prices (prices paid for inputs used to produce medical care, such as nurses' labor, equipment, and land), with a downward adjustment for economywide increases in multifactor productivity in the private nonfarm business sector.[11] The adjustment for productivity would be applied separately to hospital services and to physician and clinical services. Average payment rates for hospital services would be increased by an additional 0.5 percentage points per year between 2025 and 2030, resulting in an average annual growth rate of 2.8 percent during those years under the higher scenario. That growth rate would be similar to the weighted-average growth rate projected across all payers under current law for 2025 to 2030.[12] Average payment rates for physician and clinical services would be reduced (rather than increased) by an additional 0.5 percentage points per year between 2025 and 2030, resulting in an average annual growth rate of 1.6 percent during those years under the higher scenario. That growth rate would be slightly higher than the weighted-average growth rate projected across all payers under current law for 2025 to 2030. Under the lower payment-rate scenario (Options 2 and 3), average payment rates for hospital services and physician and clinical services would remain fixed in nominal terms from 2025 to 2030.

In 2030, payment rates for hospital services under the higher scenario would equal 142 percent of Medicare's rates for hospital services in that year under current law, CBO projects—similar to the projected weighted-average rates across all payers, and 58 percent of the average rates that private insurers are projected to pay. Under the lower scenario, CBO projects, payment rates in 2030 would equal 123 percent of Medicare's rates for hospital services under current law—87 percent of the projected weighted-average rates across all payers under current law in 2030, and 50 percent of the average rates that private insurers are projected to pay (see Exhibit 2-2).

[10] CBO assumed that the legislation establishing payment rates would specify that each provider's payment rate would initially be determined using that provider's individual weighted average payment rate in 2020. From 2020 to 2025, those rates would be updated for the increase in average payment rates for hospital services and physician and clinical services.

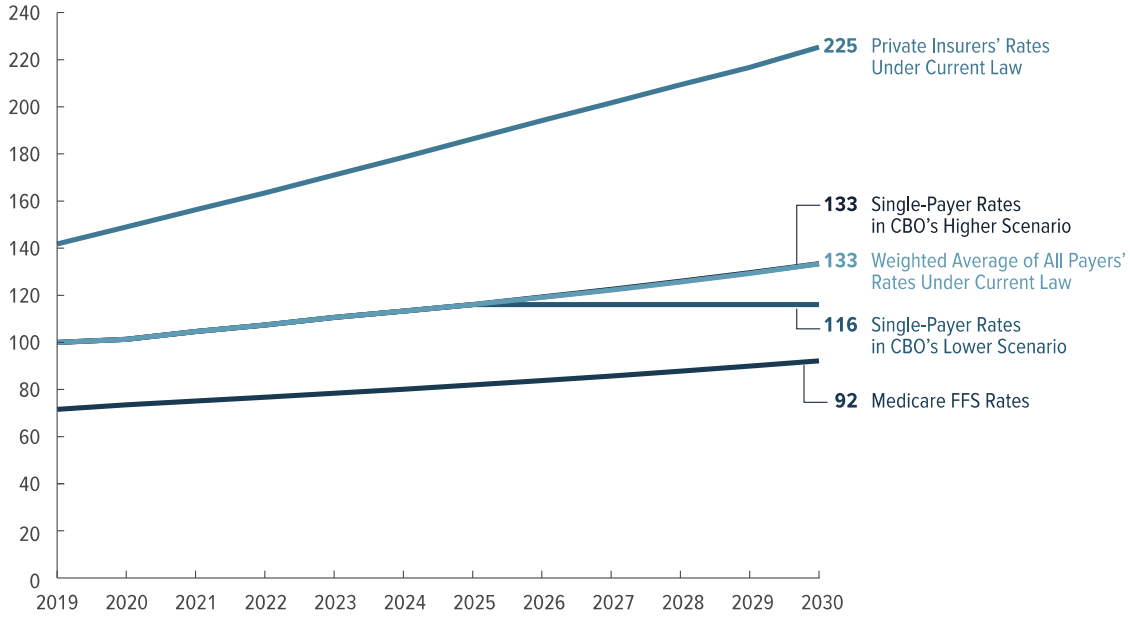
[11] See Centers for Medicare & Medicaid Services, "Methodology for Projecting Multifactor Productivity" (no date), www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareProgramRatesStats/Downloads/MFPMethodology.pdf (248 KB).

[12] Historically, the growth rate of hospital input prices minus the growth of economywide multifactor productivity has amounted to about 2 percent to 2.5 percent per year.

Exhibit 2-2.

Payment Rates for Hospital Services Under CBO's Illustrative Single-Payer Options, 2019-2030

100 = Weighted Average of All Payers' Rates in 2019



Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

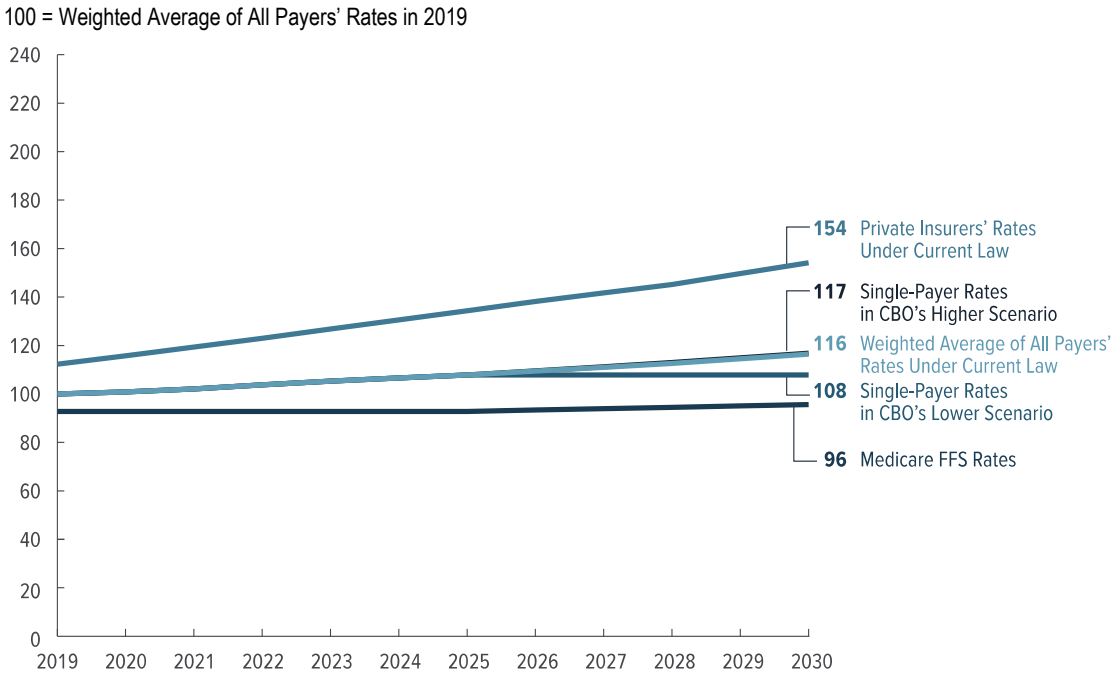
FFS = fee for service.

For physician and clinical services, CBO projects that in 2030, payment rates under the higher scenario would equal 120 percent of Medicare's rates—similar to the projected weighted-average rates across all payers under current law in 2030, and 75 percent of the average rates that private insurers are projected to pay. (Under current law, the average for all payers is projected to grow more slowly than input prices because Medicare's payment rates for physicians grow at a pace well below that of input prices.) Under the lower scenario, payment rates in 2030 would equal 111 percent of Medicare's rates for physician and clinical services—93 percent of the projected weighted-average rates across all payers under current law in 2030, and 69 percent of the average rates that private insurers are projected to pay (see Exhibit 2-3).

Under the current health care system, private health insurers' payment rates for providers vary widely both within and among geographic areas, because of differences in providers' and insurers' market power and other factors. As an example of that variation, CBO analysts found that among private health insurers' rates for inpatient hospital services, the weighted average of the payment rates for the top 20 diagnosis-related groups (DRGs) was 68 percent higher in the metropolitan area at the 90th percentile than in the metropolitan area at the 10th percentile. Medicare FFS rates, by comparison, exhibited much less variation than private health insurance rates, those analysts found. For Medicare FFS, the weighted-average payment rate for the top

Exhibit 2-3.

Payment Rates for Physician and Clinical Services Under CBO's Illustrative Single-Payer Options, 2019-2030



Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

FFS = fee for service.

20 DRGs was 35 percent higher in the metropolitan area at the 90th percentile than in the metropolitan area at the 10th percentile.[13]

CBO analysts also found that private health insurers' payment rates for several conditions varied greatly among hospitals within the same metropolitan area.[14] Similar patterns were found for physician services.[15] That variation in private health insurance rates, combined with the different mix of payers for different providers, causes individual providers to be paid substantially different amounts under the current system.

Under both of CBO's payment-rate scenarios, each provider would be paid its own average payment rate in 2025. From 2025 through 2030, the distribution of payment rates for individual providers would gradually be compressed around the nationwide average and would be modeled on the distribution in the Medicare FFS program. By 2030, providers would be paid on the basis of a single national rate for a given service, with adjustment factors similar to those used in the

[13] See Jared Lane Maeda and Lyle Nelson, *An Analysis of Private-Sector Prices for Hospital Admissions*, Working Paper 2017-02 (Congressional Budget Office, April 2017), www.cbo.gov/publication/52567.

[14] Ibid.

[15] See Daria Pelech, "Prices for Physicians' Services in Medicare Advantage and Commercial Plans," *Medical Care Research and Review*, vol. 77, no. 3 (June 2020), pp. 236-248, https://doi.org/10.1177/1077558718780604.

Medicare FFS program (for things like geographic variation in input costs, quality of care, and teaching-hospital status).[16]

Currently, payment rates for the same service vary widely among types of providers. For instance, physicians within certain specialties are often paid much more for an office visit by private health insurers than a general practitioner would be, and some hospitals or clinics are paid more by private health insurers because they have more bargaining power. A single-payer system that established a more uniform payment rate would cause some providers (such as certain high-cost specialists) to face payment cuts relative to what they would receive under current law and would cause other providers (such as certain low-cost general practitioners) to face payment increases, depending on their all-payer weighted-average rate under current law.

Under CBO's higher payment-rate scenario, there would be a redistribution in payment rates across providers—providers whose all-payer weighted-average rate under current law would be higher than Medicare's average rates would be more likely to face a decrease in their average payment rate under the illustrative single-payer system. By contrast, providers whose all-payer weighted-average rate under current law would be lower than Medicare's average rates would be more likely to experience an increase in their average payment rate under the illustrative single-payer system. Under the lower payment-rate scenario, most providers would face a lower average payment rate under the single-payer system in 2030 than they would under current law. Under both scenarios, individual providers might face substantial changes in their overall payment rate depending on their mix of patients and services under current law.

After 2030, the single-payer system's payment rates in the higher and lower scenarios would be updated in the same way. The annual change in rates would be determined by changes in hospital- and physician-specific proxies for input prices, with a downward adjustment for economywide increases in multifactor productivity in the private nonfarm business sector. In addition, under the higher scenario, payment rates for hospital services would continue to be increased by an additional 0.5 percentage points per year after 2030, and payment rates for physician and clinical services would continue to be reduced by 0.5 percentage points per year after 2030. (For a discussion of how providers might adapt to slower growth in their payment rates, see Section 18.)

Prices for Retail Prescription Drugs. Prices for drugs that people purchase at pharmacies or by mail order would be lower in 2030 under both of CBO's payment-rate scenarios than they would be under current law, but by differing amounts. (Prices for drugs provided or administered by physicians and hospitals are included in CBO's estimated payment rates for physician and clinical services and hospital services.) For the higher price scenario, CBO assumed that the price for each retail prescription drug in 2025 would be set at the projected weighted-average net price across all payers (after accounting for all rebates and discounts from manufacturers). For

[16] In addition to those adjustments, payments to certain providers could be adjusted to support access to those types of providers, as under current law.

the lower price scenario, CBO assumed that the price for each retail prescription drug in 2025 would be set at the average of net prices paid by Medicare Part D and Medicaid.[17]

After 2025, prices for brand-name drugs would grow at the annual rate of increase in the consumer price index for all urban consumers (CPI-U) plus 4 percentage points under the higher scenario. That specification was set to largely avoid affecting drug manufacturers' lifetime global revenues for new drugs or their overall incentives for innovation. Drug prices would generally be lower but quantities sold would be higher, which would have offsetting effects on manufacturers' lifetime global revenues.[18] Under the lower scenario, prices for brand-name drugs would grow at the rate of increase in the CPI-U. Average prices for generic drugs would follow a similar path as under current law in both scenarios. On average, CBO estimates, that approach would yield no reduction in average prescription drug prices in 2025 under the higher price scenario and a 16 percent reduction in average prescription drug prices in 2025 under the lower price scenario. In 2030, CBO estimates, the average price for drugs that were on the market in 2025 would be 7 percent lower than the average projected price across all payers under current law in the higher price scenario and 30 percent lower in the lower price scenario.

In general, that approach to setting drug prices cannot be applied to prescription drugs that would be introduced after the single-payer system began operating in 2025, because current-law prices would not exist for those drugs. In both scenarios, prices for new brand-name drugs would be set to grow at the same rate as prices for brand-name drugs that were already on the market in 2025. That price growth would be slower than it would be under current law, which would put additional downward pressure on prices for new brand-name drugs over time.

CBO anticipates that the federal government could restrain the average launch prices of brand-name drugs introduced after 2025 by using various tools, such as price-setting based on comparative-effectiveness analyses (which identify which treatment works best for improving health) or cost-effectiveness analyses (which compare the cost of a treatment with the number of additional quality-adjusted years of life it provides). To make those types of price-setting tools effective, the single-payer system would have the ability to not pay for a drug if a manufacturer did not accept the system's price. Exclusion from the single-payer system's formulary (list of covered drugs) is one possible tool to restrain drug prices. Authority to impose a high tax if a manufacturer did not agree to the single-payer system's price would have the same effect as excluding a drug from the system's formulary if the tax was high enough to cause the manufacturer to lose money on sales of the drug in the United States.[19]

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[17] Medicare Part D drug plans receive discounts and rebates from manufacturers. Medicaid's drug prices are based on a combination of the lowest price paid to a private health insurer and other statutory discounts. See Congressional Budget Office, *Prices for and Spending on Specialty Drugs in Medicare Part D and Medicaid* (March 2019), www.cbo.gov/publication/54964.

[18] CBO estimated lifetime global revenues using the methods described in Congressional Budget Office, cost estimate for H.R. 3, the Elijah E. Cummings Lower Drug Costs Now Act (December 10, 2019), pp. 6-7, www.cbo.gov/publication/55936.

[19] For an analysis of the effects of such a tax, see Congressional Budget Office, cost estimate for H.R. 3, the Elijah E. Cummings Lower Drug Costs Now Act (December 10, 2019), www.cbo.gov/publication/55936.

CBO estimates that in 2030, those combined price reductions for new drugs would be about one-quarter of the price reductions for existing brand-name drugs in that year. In the higher scenario, CBO estimates that the average price in 2030 for brand-name drugs introduced after 2025 would be about 2 percent lower than the average projected price for such drugs across all payers under current law. In the lower scenario, the average price in 2030 for those drugs would be about 11 percent lower than the average projected price across all payers under current law.

Provider Payment Rates for Long-Term Services and Supports. For LTSS, CBO assumed that the single-payer system would establish payment rates using a methodology similar to that used for providers of "other services" (described below). The reason for that assumption is that LTSS most resembles post-acute care, which includes skilled nursing facility (SNF) and home health care—both of which are included in the "other services" category under the single-payer options. CBO included SNF and home health care with other services instead of with LTSS because, under current law, both services would mainly be paid for by Medicare, and CBO expects that they would be covered by the single-payer system, regardless of whether it included an LTSS benefit.

For LTSS provided in institutions, the single-payer system would set payment rates in 2025 equal to the projected weighted-average rate across all payers. Those rates would be updated in a manner consistent with adjustments to Medicare's payment rates for SNFs. Setting the payment rate in that way would keep payment rates for long-term care in nursing facilities at a constant percentage of payment rates for SNF care.

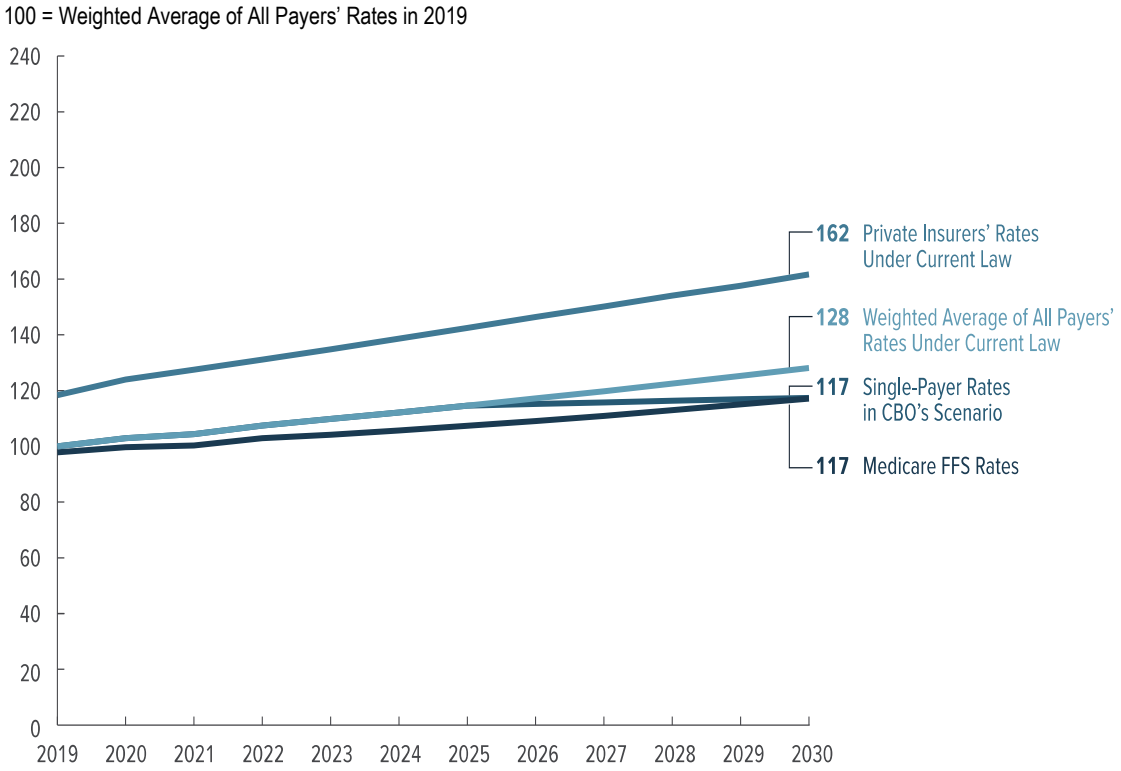
For home- and community-based services, the single-payer system would need to establish new payment rates—because under current law, those services would generally be paid for either entirely out of pocket or by Medicaid. HCBS providers tend to be similar to home health workers. Thus, under CBO's illustrative Option 5, the single-payer system would adapt Medicare's payment system for home health care to incorporate new payment rates for HCBS. CBO estimates that Medicare's payment rates for home health workers would be approximately 8 percent higher than Medicaid's under current law. Based on that estimate, CBO projects that moving from the Medicaid system to the single-payer system would increase payment rates for HCBS by 8 percent. Unlike the gradual changes in payment rates for other types of providers, that increase would be immediate under CBO's options—partly to avoid having services shifted between home health care and HCBS and partly because of the process for establishing payment rates for services not previously covered by payers other than Medicaid. After 2025, payments for HCBS would increase at the same rate as Medicare's payments for home health care.

Provider Payment Rates for Other Services. For other services (such as durable medical equipment, dental care, ambulance services, home health care, and SNF care), CBO specified that average payment rates for providers would equal 107 percent of Medicare's rates in 2025—about the same as the projected weighted-average rates across all payers.[20] Rates would be higher for providers that would receive grants from state and local governments under current law (to offset the loss of those grants under the illustrative options); rates would be lower for

[20] That estimate relies in part on assumptions about how Medicare's payment rates for dental, vision, and hearing services would compare with those of other payers if Medicare covered those services.

Exhibit 2-4.

Payment Rates for Other Services Under CBO's Illustrative Single-Payer Options, 2019-2030



Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

FFS = fee for service.

providers that would not receive such grants. As with rates for hospital services and physician and clinical services, payment rates for other services would also differ among individual providers in 2025, based on each provider's current mix of payers.

Under both of CBO's payment-rate scenarios, rates for other services would grow nominally by 0.5 percent per year from 2025 through 2030, and the distribution of payment rates would gradually converge to match the projected distribution in the Medicare FFS program in the same period. CBO used that 0.5 percent growth rate so that payment rates for other services would equal 100 percent of Medicare's rates in 2030 under both scenarios. The payment rates under the options would be 92 percent of the projected weighted-average rates across all payers under current law in 2030, and 72 percent of the average rates that private health insurers are projected to pay (see Exhibit 2-4).

CBO used the same payment rates in both of its scenarios for two reasons. First, other services is a smaller category of spending than hospital services or physician and clinical services. Second, unlike those two types of services, Medicare accounts for a larger proportion of spending on other services than private insurance does; thus, many providers of other services are already paid Medicare rates.

Supplemental Payments for Providers. Existing legislative proposals for a single-payer system do not specify what would happen to the various supplemental payments that Medicare and Medicaid make to providers. Under CBO's options, most of the supplemental payments to providers that exist under current law would be eliminated under the illustrative single-payer system. In addition, supplemental payments to cover providers' costs for uncompensated care would no longer be needed, because the uninsured population would mostly disappear under the single-payer system. For example, the disproportionate share hospital (DSH) payments and bad-debt payments that Medicare and Medicaid make to providers would be eliminated. However, payments to hospitals that provide graduate medical education and add-on payments for new technology would continue.[21]

Capital Expenditures. Under all five illustrative options, private capital would continue to finance providers' purchases of medical structures and equipment, as it would under current law. For example, providers would pay for capital improvement projects from their profits or net revenues or through equity financing (such as issuing stock) or debt financing (such as issuing bonds or obtaining bank loans).

Cost Sharing

As noted above, CBO designed two cost-sharing scenarios for the illustrative single-payer options: a higher scenario used in Options 1 and 2 and a lower scenario used in Options 3 through 5. Under both scenarios, cost sharing would be lower than what patients would face under current law, on average. In addition, both scenarios would include a limit on the maximum amount that a patient could pay out of pocket each year for covered services. And both would exempt low-income people from all cost sharing for medical services and prescription drugs.[22]

In the higher cost-sharing scenario, people with household income greater than 150 percent of the federal poverty level would pay an average of 7.5 percent of the costs of their medical services out of pocket—about one-third less, on average, than they would pay under current law. Those patients would pay the same cost-sharing percentage for prescription drugs, but certain preventive care services would be exempt from cost sharing. Cost-sharing designs that meet those parameters could be structured in a variety of ways, using copayments, coinsurance rates, deductibles, and different limits on out-of-pocket spending. CBO estimates that in the higher cost-sharing scenario, out-of-pocket payments would cover about 5 percent of total health care costs under the single-payer system, on average, and the system would cover the remaining 95 percent.

Because cost sharing is specified as a percentage of total costs, the amount of cost sharing required of patients in the higher cost-sharing scenario would differ somewhat depending on

[21] Hospitals whose share of low-income and uninsured patients exceeds a certain threshold receive Medicare DSH payments. Hospitals incur bad debt when they cannot obtain reimbursement for care provided, such as when patients are unwilling to pay their bills or are unable to pay their bills and do not apply for financial assistance. Hospitals that operate medical residency training programs receive graduate medical education payments. New-technology payments include additional payments to hospitals for new high-cost technologies.

[22] Under current law, Medicare beneficiaries with household income below 150 percent of the federal poverty level qualify for various amounts of assistance with paying premiums and cost sharing in Parts A, B, and D of Medicare. Those beneficiaries would face no cost sharing under the illustrative options.

whether that scenario was combined with the higher or lower payment-rate scenario. Total costs would be higher under a system that paid providers higher payment rates, requiring more total spending out of pocket from patients to finance the same percentage of total costs. Because patients would be responsible for higher out-of-pocket payments under a system with higher cost sharing and higher payment rates, CBO estimates that their demand for care would be somewhat lower than under a system with higher cost sharing and lower payment rates.

In CBO's lower cost-sharing scenario, no patients would face any cost sharing for medical services (including LTSS under Option 5). In the case of prescription drugs, people with household income above 150 percent of the federal poverty level would pay 3 percent of the total costs of their prescription drugs, on average (compared with 7.5 percent in the higher scenario).[23] Cost sharing for prescription drugs would be designed to encourage patients to use generic drugs instead of brand-name drugs when generics were available.

Provider Opt-Outs

Under all five illustrative options, providers would be allowed to furnish covered services outside the single-payer system if they agreed not to receive any payment from the system during a given year. To do that, providers would need to sign an agreement prior to each year saying that they planned to opt out of the single-payer system for all covered services for a one-year period.

Providers that opted out would not be able to receive payment from the single-payer system for any services furnished during that period; they would instead bill patients directly. Private insurance would not be available to cover the cost of those services, so providers would have to enter into private contracts with patients to deliver services outside the single-payer system. Those providers could charge whatever payment rates their patients agreed to pay. Patients could obtain treatment from both the single-payer system and from opt-out providers. If they received care from opt-out providers, they would have to pay the full price of those services.[24]

How CBO's Illustrative Options Compare With Proposed Legislation

CBO's five illustrative single-payer options were informed by legislation proposed in the 116th Congress—specifically, the House and Senate versions of the Medicare for All Act of 2019 (H.R. 1384 and S. 1129). However, CBO's illustrative options differ from that legislation in various ways to demonstrate the effects of key design parameters of a single-payer system (see Exhibit 2-5).

Like the proposed legislation, all of the illustrative single-payer options that CBO analyzed would provide comprehensive major medical coverage. Like S. 1129, Options 3, 4, and 5 would have no cost sharing for medical services and limited cost sharing for prescription drugs for all U.S. residents. Also, similar to proposed legislation, the single-payer system in Option 5 would cover long-term services and supports. That LTSS benefit would include coverage of a broad

[23] Medicaid beneficiaries pay an average of 3 percent of net prescription drug costs under current law.

[24] Under all of the illustrative options, tax-preferred savings vehicles for health care, such as flexible spending accounts and health savings accounts, would not be allowed.

Exhibit 2-5.

Comparison of Features of CBO's Illustrative Single-Payer Options, Medicare FFS, and Recent Legislative Proposals

	Fee-for-Service Medicare Under Current Law	H.R. 1384, Medicare for All Act of 2019	S. 1129, Medicare for All Act of 2019	Illustrative Single-Payer Options Analyzed by CBO
All U.S. Residents Eligible	No	Yes	Yes	Yes
Provides Comprehensive Major Medical Coverage	Yes	Yes	Yes	Yes
Covers Dental, Vision, and Hearing Care	No	Yes	Yes	Yes
Covers Long-Term Services and Supports	No	Yes, any service needed	Yes, home and community-based services covered by any state Medicaid program under current law	Yes, in Option 5 only, services covered by any state Medicaid program under current law (see Exhibit 2-6 for details)
Eligibility for LTSS Benefit	Not applicable	People with one or more ADL or IADL limitations	People with one or more ADL or IADL limitations	People with one or more ADL or IADL limitations
Cost Sharing for Medical Services	Yes	No	No	Yes, in Options 1 and 2, an average of 7.5 percent cost sharing, except for low-income people; No, in Options 3 through 5
Cost Sharing for Retail Prescription Drugs	Yes, except for low-income people	No	Yes, limited copayments	Yes, an average of 7.5 percent cost sharing in Options 1 and 2, and an average of 3 percent cost sharing in Options 3 through 5, except for low-income people
Role for Private Health Insurance	Yes	No[a]	No[a]	No[a]
Role for Medicare	Yes	No	No	No
Role for FEHB	No[b]	No	No	No
Role for Medicaid	Yes, covers cost sharing and premiums for people eligible for both Medicare and Medicaid	No	Yes	Yes, in Options 1 through 4, covers long-term services and supports; No, in Option 5
Role for DoD, VHA, or IHS	Yes	Yes	Yes	Yes
Basis of Payments for Hospital Services in 2030	Medicare FFS	Global budget	Same process as Medicare FFS	142 percent of Medicare FFS in Options 1, 4, and 5; 123 percent of Medicare FFS in Options 2 and 3
Basis of Payments for Physician and Clinical Services in 2030	Medicare FFS	Global budget for institutional providers and group practices; FFS for individual providers[c]	Same process as Medicare FFS	120 percent of Medicare FFS in Options 1, 4, and 5; 111 percent of Medicare FFS in Options 2 and 3
Basis of Prices for Retail Prescription Drugs in 2030	Negotiations with Medicare Part D private plans	Negotiations with Secretary of HHS	Negotiations with Secretary of HHS	Prices would be set in 2025 for existing drugs and then grow at the rate of either the CPI-U plus 4 percentage points or the CPI-U. Prices for drugs introduced after 2025 would be constrained.

Continued

Comparison of Features of CBO's Illustrative Single-Payer Options, Medicare FFS, and Recent Legislative Proposals

	Fee-for-Service Medicare Under Current Law	H.R. 1384, Medicare for All Act of 2019	S. 1129, Medicare for All Act of 2019	Illustrative Single-Payer Options Analyzed by CBO
Basis of Payments for LTSS in 2030	Not applicable	Global budget for institutional providers and group practices; FFS for individual providers[c]	Same process as Medicare FFS[d]	Equal to or greater than the average payment rates across all payers for LTSS. Payment rates for institutional LTSS would be set to equal projected weighted-average payment rates across all payers under current law. For HCBS, payment rates would be about 8 percent higher than the average rates across all payers under current law.
Basis of Payments for Other Services in 2030	Medicare FFS	Global budget for institutional providers and group practices; FFS for individual providers[c]	Same process as Medicare FFS	100 percent of Medicare FFS
Private Insurance Allowed for Covered Services for Eligible Populations	Yes	No	No	No
Cost Containment Mechanism	No spending limit	National global budget to contain costs	National global budget to contain costs	No spending limit
States' Maintenance-of-Effort Requirements[e]	State maintenance-of-effort for Part D	No state maintenance-of-effort specified	State maintenance-of-effort for institutional LTSS and other benefits provided by state Medicaid programs not covered by the single-payer system	State maintenance-of-effort for LTSS in Options 1 through 4

Data source: Congressional Budget Office.

ADL = activity of daily living; CPI-U = consumer price index for all urban consumers; DoD = Department of Defense; FEHB = Federal Employees Health Benefits Program; FFS = fee for service; HCBS = home- and community-based services; HHS = Department of Health and Human Services; H.R. = House of Representatives; IADL = instrumental activity of daily living; IHS = Indian Health Service; LTSS = long-term services and supports; S. = Senate; VHA = Veterans Health Administration.

a. Only insurance for services not covered by the single-payer system.

b. Some FEHB plans provide supplemental coverage for annuitants with both Medicare and FEHB.

c. The global budgets for institutional providers would be established through negotiations with regional offices, but the legislation does not specify the level at which fee-for-service payments for individual providers would be set.

d. Medicare pays for home health care and for the first 100 days of skilled nursing care following an inpatient hospitalization (often referred to as post-acute care). Home health care and skilled nursing facility care are sometimes classified as LTSS. However, CBO included them in its "other services" category because Medicare covers those services under current law and because CBO included all Medicare-covered benefits in the illustrative single-payer benefit packages.

e. Maintenance-of-effort requirements are federal rules requiring states to continue all or part of their current level of spending.

set of home- and community-based services. And as in H.R. 1384, the LTSS benefit would be available to a larger number of people than under current law and would include care provided in institutions.

Provider Payments. None of the legislative proposals for a single-payer system specify the level of payment rates for providers, although some proposals mention that payment rates would be set using a similar process to that of the Medicare FFS program—suggesting that the rates would be a ratio of those projected for Medicare under current law. The provider payment methods in CBO's illustrative options are intended to be consistent with S. 1129, which indicates that provider payment rates would be set in a manner consistent with the processes used for Medicare. CBO interpreted the language of that bill to mean that relative payment rates for different services would be established in the same way as in Medicare. However, the legislative language does not specify how the conversion factor—which would convert those relative prices into payment amounts—would be determined. CBO's two scenarios for payment rates for hospital services and physician and clinical services illustrate the effects that different rates would have under a single-payer system that used rate-setting processes like those in Medicare.

H.R. 1384 specifies a different approach for paying hospitals, other institutional providers, and group practices—through global budgets. Under a global budget, providers receive a fixed payment for a specific time period (usually a year). With that type of payment arrangement, providers bear the financial risk if the cost of delivering care exceeds the global budget. Global budgets could be used at the national or regional level or for an entire system. The government could set the global budget administratively, or it could negotiate the budget with providers.

H.R. 1384 and S. 1129 give the Secretary of Health and Human Services (HHS) responsibility for developing a national health budget, but neither bill specifies how amounts in the budget would be set or what would happen if actual spending exceeded the budget. To simplify the analysis, CBO did not incorporate global budgets for hospital-based care and institutional providers or a national health budget in its illustrative options.

In addition, H.R. 1384 and S. 1129 give the HHS Secretary responsibility for planning for capital expenditures, and the national health budget would include a component for capital spending. However, CBO specified that providers' capital improvement projects would continue to be financed with private capital.

Prescription Drug Prices. Under both H.R. 1384 and S. 1129, the HHS Secretary would negotiate prescription drug prices with manufacturers. CBO's illustrative options use a different approach for setting drug prices because that proposed legislation does not include enough detail about the negotiation process to allow CBO to estimate its effects. In CBO's assessment, for negotiations by the HHS Secretary to result in significant savings, they would require a source of pressure that could cause a drug manufacturer to agree to a lower price. Possible sources of such pressure include the authority to establish a formulary or the authority to impose a high tax if a manufacturer did not agree to a price (which could have the same effect as creating a formulary). Details about such authority, as well as details about how prices would be determined, would be necessary for estimating the effects of a proposal to allow the HHS Secretary to negotiate prescription drug prices with manufacturers.

Exhibit 2-6.

Comparison of LTSS Coverage in CBO's Illustrative Option 5 and Recent Legislative Proposals

	H.R. 2452, Medicare for America Act of 2019	H.R. 1384, Medicare for All Act of 2019	S. 1129, Medicare for All Act of 2019	CBO's Illustrative Option 5
Type of System	Federal health plan[a]	Single-payer system	Single-payer system	Single-payer system
Includes Institutional Care	No	Yes	No	Yes
Includes HCBS	Yes	Yes	Yes	Yes
Breadth of HCBS Coverage	Services and supports needed, including all benefits covered by any state's Medicaid program under current law	Benefits covered by Medicaid under current law	Certain benefits covered by Medicaid	Any benefits currently offered to any Medicaid beneficiary by any state's Medicaid program
Eligibility Criteria	One or more ADL or IADL limitations	One or more ADL or IADL limitations	Not specified	One or more ADL or IADL limitations
Payment Rates	Medicare basis	Medicare basis	Medicare basis	Medicare basis[b]
Role for Medicaid	Yes, covers institutional LTSS	No	Yes, covers institutional LTSS	No

Data source: Congressional Budget Office.

ADL = activity of daily living; HCBS = home- and community-based services; H.R. = House of Representatives; IADL = instrumental activity of daily living; LTSS = long-term services and supports; S. = Senate.

a. Under H.R. 2452, a federal health plan would provide comprehensive benefits (including LTSS) for people who would otherwise be enrolled in Medicare, Medicaid, or the Children's Health Insurance Program; for people who would otherwise purchase health insurance on their own; and for people who would otherwise be uninsured. Employers would be allowed to provide insurance to their employees under certain conditions, or they could direct their contribution to the Medicare for America plan.

b. Although Medicare currently does not cover LTSS, CBO interpreted the legislative proposals to suggest that Medicare's payment systems for post-acute care would be expanded and used as a basis for the newly covered long-term services and supports.

LTSS Coverage. The single-payer benefit covering long-term services and supports that CBO included in Option 5 is broad and consistent with those in recent legislative proposals (see Exhibit 2-6). Unlike some proposals, however, it covers institutional care as well as home- and community-based services.

Section 3.
How CBO Estimated the Effects of a Single-Payer System on the Federal Budget and National Health Expenditures

CBO regularly updates and releases baseline projections of federal spending on government health programs, such as Medicare and Medicaid, and federal tax subsidies for private health insurance coverage.[25] But CBO does not typically produce estimates of total national health expenditures (NHE) as part of its baseline projections. For this analysis, CBO developed baseline projections of NHE through 2030 under current law and used those projections to estimate the effects of the illustrative single-payer options on federal subsidies for health care and NHE. (Those effects are detailed in Sections 9 and 11, respectively.)

How CBO Projected National Health Expenditures Under Current Law

For its projections of NHE, CBO started with its baseline budget and economic projections, which include projections of federal spending on health care over the next 10 years. CBO then adjusted the baseline projections of spending subject to appropriation (discretionary spending) to match the projected growth of potential gross domestic product (GDP) rather than inflation.[26] In producing its baseline, CBO is generally required by law to assume that future appropriations for all budget accounts will equal the amount of the most recent appropriations plus various adjustments for projected inflation.[27] Specifically, discretionary funding related to federal personnel must be adjusted for inflation using the employment cost index for wages and salaries, and other discretionary funding must be adjusted for inflation using the GDP price index.

Discretionary spending on health has historically grown faster than those price indices—at an average annual rate of about 3.4 percent between fiscal years 2009 and 2019, compared with annual averages of 2.2 percent for the employment cost index and 1.7 percent for the GDP price index. As a result, for this analysis, CBO adjusted its projections of discretionary spending to grow at the same rate as potential GDP, which rose at an average annual rate of 3.3 percent over that period.

For categories of health-related spending that CBO does not project itself, the agency relied on estimates from the Centers for Medicare & Medicaid Services (CMS), which produces the government's official tabulations of NHE. From its starting point of adjusted baseline projections of federal subsidies for health care, CBO added CMS's projections of health care spending by state and local governments and private entities and spending for home- and community-based

[25] See, for example, Congressional Budget Office, *An Update to the Budget Outlook: 2020 to 2030* (September 2020), www.cbo.gov/publication/56517, and *Federal Subsidies for Health Insurance Coverage for People Under 65: 2020 to 2030* (September 2020), www.cbo.gov/publication/56571.

[26] Potential GDP is an estimate of the maximum sustainable output of the economy. When actual GDP is greater than potential GDP, the overall demand for goods and services exceeds the economy's maximum sustainable level of production, leading to upward pressure on inflation and interest rates.

[27] The construction of CBO's baseline is governed by section 257 of the Balanced Budget and Emergency Deficit Control Act of 1985 and by the Budget Control Act of 2011 (as amended). In producing its baseline, CBO is also required to assume that discretionary appropriations will be subject to the caps on spending specified in the amended Budget Control Act.

services not financed by Medicaid to produce baseline projections of NHE. (For details, see Appendix A.)

How CBO Used Its Current-Law Projections of NHE to Estimate the Effects of the Illustrative Options

After projecting total national health expenditures under current law, CBO divided all of the components of NHE into the following categories:

- Spending on personal health care (medical services and goods provided to individuals) that would be covered by the illustrative single-payer system;

- Spending on personal health care that would not be covered by the illustrative single-payer system (including services not included in the single-payer benefit, such as aesthetic procedures and over-the-counter medications, and services provided by certain government programs, such as the Veterans Health Administration, that would continue to operate alongside the single-payer system); and

- Other types of spending that are part of NHE but are not for personal health care (spending on investment in the medical sector, spending on public health programs, and insurers' administrative spending).

For its current-law projections of spending on personal health care, CBO further divided that spending into five categories of services—hospital services, physician and clinical services, prescription drugs, long-term services and supports, and all other health care services.[28] For each of those service categories, CBO projected total spending and spending by source of payment (such as private health insurance, Medicare, Medicaid, and out-of-pocket payments).

Next, for each combination of service category and source of payment, CBO used data from the Medical Expenditure Panel Survey Household Component (MEPS-HC) to allocate the agency's projections of personal health care spending among the following coverage groups:

- People covered by private health insurance,

- People covered by Medicare,

- People covered by Medicaid or the Children's Health Insurance Program,

- People with other coverage (such from the Veterans Health Administration or the Indian Health Service),

- People who are uninsured,

[28] Those other services include dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, durable medical equipment (such as eyeglasses and hearing aids), and nondurable medical equipment (such as over-the-counter medications).

- People not lawfully present in the United States who are insured, and
- People not lawfully present who are uninsured.

CBO allocated spending by coverage type because people in the different coverage groups would, on average, experience meaningfully different changes in out-of-pocket costs under the illustrative single-payer options. Based on an evaluation of the research literature, CBO assumed that those different changes in out-of-pocket costs would result in different effects on the demand for care among the coverage groups.

People with more than one type of coverage were grouped by their primary source of coverage.[29] CBO could not use the MEPS-HC to allocate personal health care spending among coverage groups for people living in institutions or active-duty military personnel because those populations are not included in the survey. Therefore, CBO treated those two populations as separate coverage groups in its analysis.

CBO based its allocation of spending by coverage type on methods that researchers at the federal Agency for Healthcare Research and Quality and CMS developed to correct for underreporting of health care spending in the MEPS-HC.[30] Because CBO's projections of health insurance coverage reflect both survey data and administrative data (such as CMS data on enrollment), CBO also adjusted the MEPS-HC data to be consistent with its current-law projections of health insurance coverage, which addresses some of the misreporting of coverage in the survey and accounts for projected changes in coverage over the next decade.

To estimate how the single-payer systems in its illustrative options would affect national health expenditures, CBO estimated the following for each of the five categories of services in this analysis:

- The change in personal health care spending resulting from an option's changes in provider payment rates (holding constant the amount of care provided);
- The change in the demand for personal health care resulting from reductions in cost sharing and increases in the number of people with health insurance;
- The change in the supply of personal health care resulting from changes in provider payment rates; and
- Other factors that would affect both the demand for and supply of care under an option, such as changes in utilization management, changes in providers' administrative spending, and the number of providers that would decide to furnish covered services outside the single-payer system.

[29] CBO used a hierarchy to assign people's source of coverage to capture the relative importance of coverage types.

[30] See Didem M. Bernard and others, *Reconciling Medical Expenditure Estimates from the MEPS and NHEA, 2012* (Agency for Healthcare Research and Quality and Centers for Medicare & Medicaid Services, no date), https://meps.ahrq.gov/data_files/publications/workingpapers/wp_17003.pdf (259 KB).

Sections 4, 5, and 6 of this paper provide more details about the methods that CBO used to estimate changes in provider supply, patient demand, and other factors that would affect spending under the illustrative single-payer options. CBO also analyzed how the costs of administering the single-payer system under those options would differ from the costs of administering health care under current law for payers such as private insurance, Medicare, Medicaid, and other sources of insurance coverage (see Section 7). In addition, CBO analyzed how spending for public health and medical investment under the illustrative options would differ from such spending under current law (see Section 11).

How CBO Estimated the Effects of the Illustrative Options on Federal Subsidies for Health Care

After comparing NHE under the five illustrative options with its current-law projections of NHE, CBO estimated the effects of the options on total federal subsidies for health care. Those subsidies comprise mandatory spending on federal health care programs (such as Medicare and Medicaid) net of offsetting receipts (such as Medicare beneficiaries' premium payments), plus health-related tax benefits (including their effects on both federal income and federal payroll taxes), minus penalties paid to the federal government related to health insurance coverage. CBO excludes discretionary spending (such as spending on veterans' health programs) from its definition of federal subsidies for health care because any reductions in that spending under the illustrative single-payer options would be subject to future appropriation action. (As noted above, however, discretionary spending is included in CBO's estimates of NHE.)

For each of the illustrative options, CBO estimated mandatory federal spending for the single-payer system. CBO also estimated savings from federal programs that would be eliminated or reduced under the options, such as Medicare, Medicaid, the Children's Health Insurance Program, and federal subsidies for private health insurance (including subsidies for employment-based insurance and for insurance purchased through marketplaces established under the Affordable Care Act).

Section 4.
How CBO Analyzed the Effects of Changes in Provider Payment Rates

CBO used two steps to analyze the effects that changes in provider payment rates would have on personal health care spending under the illustrative single-payer options. The first step was to calculate health care spending using an option's payment rates but holding the amount of health care provided unchanged from the amount projected under current law. That step yielded a measure of the direct effect of the change in payment rates, before accounting for behavioral responses by providers. The second step was to estimate how providers would adjust the amount of services they would provide in response to the changes in payment rates.

This section focuses on the effects of changes in payment rates on health care spending for four broad categories of services: hospital services, physician and clinical services, prescription drugs, and other services. CBO's approach to estimating the effects of changes in payment rates for long-term services and supports (which are included as a covered benefit only in Option 5) is discussed in Section 8.

Estimating the Effects of Changes in Payment Rates, With the Supply of Care Unchanged From Current Law

To assess how payments to providers and drug manufacturers would change under the illustrative single-payer options relative to current law if the quantity of care did not change, CBO estimated the difference between projected payment rates under current law and payment rates under the five options for each combination of service category and coverage type. Specifically, CBO estimated the change in spending for people with Medicare, Medicaid, private health insurance, other types of insurance, or no insurance by holding the use of health care under current law constant and changing the relative payment rates for each type of coverage. Those estimates varied by the category of health care service provided.

Hospital Services and Physician and Clinical Services. To estimate how payment rates for hospital services and physician and clinical services under the single-payer options would compare with rates under current law, CBO conducted a review of the research literature on how payments by other payers compare with payments by Medicare's fee-for-service (FFS) program.[31] On the basis of that review, CBO estimates that in 2020:

- Hospitals receive an average of 203 percent of Medicare payment rates for a given patient with private health insurance, 108 percent of Medicare rates for a Medicaid patient

[31] Hospital services include both inpatient and outpatient services; physician and clinical services include services provided in the offices of physicians and other health practitioners (such as physical therapists and mental health practitioners) as well as in outpatient care centers (such as ambulatory surgical and emergency centers, outpatient mental health and substance abuse centers, and kidney dialysis centers). In computing the ratio of average payment rates under the single-payer options to average payment rates under Medicare, CBO excluded supplemental payments from Medicare (such as payments to hospitals with a disproportionate share of low-income and uninsured patients) because most supplemental payments would be eliminated under the illustrative options. CBO accounted for the elimination of those supplemental payments in its analysis of the effects of the illustrative single-payer system on the federal budget and NHE (that analysis is described in Section 3).

(including supplemental payments), about the same as Medicare rates for a patient with some other type of coverage (such as from the Veterans Health Administration), and 80 percent of Medicare rates for an uninsured patient.[32]

- Physicians and other medical professionals, such as nurse practitioners and physician assistants, receive an average of 125 percent of Medicare payment rates for a given patient with private health insurance, 73 percent of Medicare rates for a Medicaid patient, about the same as Medicare rates for a patient with some other type of coverage, and about 80 percent of Medicare rates for an uninsured patient.

CBO's estimates of the rates that private insurers pay hospitals differ from the estimates of many outside analysts. Unlike many of those estimates, CBO's estimates of the relative rates paid by Medicare and private insurers for hospital services capture the average rates paid for both inpatient services and outpatient services. Including the rates for outpatient services in CBO's analysis increases the ratio of private rates to Medicare rates, because private rates for hospital outpatient services are significantly higher relative to Medicare rates than private rates for inpatient services are. Many outside analysts did not include outpatient services in their estimates of relative rates, so they may have underestimated payment-rate-related savings for hospital services under a single-payer system. CBO also adjusted its estimates of private insurers' payment rates for hospitals downward because many of the studies it reviewed are based on insurers' allowed amounts. Those allowed amounts do not reflect the fact that a portion of a patient's cost sharing might not have been collected by the provider, resulting in a lower total payment.

Payment rates for different types of payers and services are projected to grow at different rates under current law, so CBO adjusted its estimated price ratios over time to account for the differential growth in rates by payer and service between 2020 and 2030. For hospital services, CBO projects that the payment rates of private health insurers will increase faster than the payment rates of other payers. For example, CBO projects that private health insurance rates for hospitals will increase to 245 percent of Medicare rates in 2030 (from 203 percent in 2020). For people with other types of coverage, the ratios are projected to change less dramatically because other payers' rates typically move in tandem with Medicare rates.

The single-payer system's payment rates for hospital services in 2030 under CBO's higher payment-rate scenario would be an average of 42 percent higher than Medicare rates, 59 percent higher than Medicaid rates, 42 percent lower than private insurance rates, and 78 percent higher than the rates that hospitals would receive for uninsured patients in that year under current law, CBO estimates (see Exhibit 4-1). On average, hospital payment rates under that scenario would

[32] If supplemental payments by both Medicare and Medicaid are not taken into account, CBO estimates, hospitals received 84 percent of Medicare rates for a Medicaid patient, on average, in 2020. Payments for the uninsured represent the amount actually collected by a hospital for uninsured people who self-pay. Those collections may range from very little in some cases to amounts that exceed average payments from private insurers in other cases, depending on a hospital's policies and a patient's ability to pay. For example, in some cases, payments for the uninsured may include payments by high-income international patients seeking specialized care in the United States or payments by higher-income uninsured patients. Hospitals' write-offs of payments and payment deductions stemming from charitable care programs are not counted as payments for the uninsured.

Exhibit 4-1.

Payment Rates for Major Service Categories Under the Illustrative Single-Payer System's Higher and Lower Scenarios, Compared With Other Payers' Rates Under Current Law, 2030

	Hospital Services	Physician and Clinical Services	Prescription Drugs	Other Services[a]
		Higher Payment-Rate Scenario		
Percentage of Medicare Rates Under Current Law	142	120	90	100
Percentage of Medicaid Rates Under Current Law	159	150	145	110
Percentage of Private Insurance Rates Under Current Law	58	75	80	72
Percentage of Average Payment Rates for Uninsured Patients Under Current Law	178	151	90	125
Percentage of Weighted-Average Rates Across All Payers Under Current Law[b]	100	100	94	92
		Lower Payment-Rate Scenario		
Percentage of Medicare Rates Under Current Law	123	111	69	100
Percentage of Medicaid Rates Under Current Law	138	138	112	110
Percentage of Private Insurance Rates Under Current Law	50	69	62	72
Percentage of Average Payment Rates for Uninsured Patients Under Current Law	154	139	69	125
Percentage of Weighted-Average Rates Across All Payers Under Current Law[b]	87	93	72	92

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

a. Includes dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, and durable medical equipment (such as eyeglasses and hearing aids). Home health care and skilled nursing facility care are sometimes classified as long-term services and supports, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.

b. The weighted-average payment rates represent the average payment rates that providers receive from payers, accounting for the fact that different payers represent different shares of the overall volume of services.

be similar to the projected weighted-average payment rates across all payers under current law in 2030.

Under the lower payment-rate scenario, by comparison, the single-payer system's hospital payment rates in 2030 would be an average of 23 percent higher than Medicare rates, 38 percent higher than Medicaid rates, 50 percent lower than private insurance rates, and 54 percent higher than the rates that hospitals would receive for uninsured patients under current law, CBO estimates. On average, hospital payment rates under that scenario would be 13 percent lower than the projected weighted-average rates across all payers under current law in 2030.

For physician and clinical services, both private and Medicaid payment rates are projected to increase relative to Medicare rates over the next decade under current law, primarily because Medicare rates are projected to increase very modestly. Under current law, Medicare FFS payment rates for physician and clinical services are projected not to grow in each year through 2025 and then to grow only by an estimated 0.6 percent per year between 2025 and 2030. As a result, private payment rates for physician and clinical services will rise to 161 percent of

Medicare rates by 2030 (from 125 percent in 2020), CBO projects, and Medicaid rates will rise to 80 percent of Medicare rates (from 73 percent in 2020).

The single-payer system's payment rates for physician and clinical services would differ from those payers' projected current-law rates. For instance, under the higher payment-rate scenario, the single-payer system's rates for physician and clinical services in 2030 would be an average of 20 percent higher than Medicare rates, 50 percent higher than Medicaid rates, 25 percent lower than private insurance rates, and 51 percent higher than the rates that providers would receive for uninsured patients in that year under current law, CBO estimates. On average, the rates for physician and clinical services under that scenario would be similar to the projected weighted-average rates across all payers under current law in 2030.

Under the lower payment-rate scenario, the single-payer system's rates for physician and clinical services in 2030 would be an average of 11 percent higher than Medicare rates, 38 percent higher than Medicaid rates, 31 percent lower than private insurance rates, and 39 percent higher than the rates that providers would receive for uninsured patients in that year under current law, CBO estimates. On average, payment rates for physician and clinical services under that scenario would be 7 percent lower than the projected weighted-average rates across all payers under current law in 2030.

Prescription Drugs. For existing prescription drugs—those already on the market in 2025—CBO compared the prices that would be paid under the illustrative single-payer system with the prices (net of rebates and discounts) that would be paid under current law. Under the higher payment-rate scenario, the single-payer system's drug prices in 2025 would be an average of 4 percent lower than Medicare prices, 59 percent higher than Medicaid prices, 16 percent lower than private insurance prices, and 4 percent lower than the prices that uninsured patients would pay in that year under current law, CBO estimates.[33] On average across all populations, drug prices under that scenario would be equal to average prices under current law in 2025.

Under the lower payment-rate scenario, the single-payer system's prescription drug prices in 2025 would be 19 percent lower than Medicare prices, 34 percent higher than Medicaid prices, 29 percent lower than private insurance prices, and 19 percent lower than the prices that uninsured patients would pay in that year under current law, CBO estimates. Weighted-average prices across all payers would be 16 percent lower under that scenario than under current law in 2025.

Medicare's net prices for retail prescription drugs are the result of negotiations between Medicare Part D drug plans and manufacturers. Those prices are relatively close to the net drug prices of private insurers because both payers use similar negotiation methods and operate under a similar set of incentives. For example, both payers have greater leverage to negotiate rebates

[33] In many cases, uninsured people probably pay about the same for prescription drugs as insured people do—and possibly more, because they pay retail prices and do not benefit from the rebates that payers negotiate with drug manufacturers. However, uninsured people may be more likely to be eligible for—and take advantage of—certain charitable programs that provide discounts for purchases of high-cost drugs. Those discounts are also likely to be larger than the ones available to the insured population because insurers pay the majority of drug costs for their enrollees. Those charitable programs tend to be funded by pharmaceutical manufacturers, so CBO treats such discounts as price reductions for the purposes of this analysis.

when close substitutes are available for a particular drug. The primary difference in incentives is that the highest rebate that a manufacturer offers to a private plan must also be made available to Medicaid, whereas rebates provided to Medicare Part D plans do not directly affect Medicaid prices. As a result, CBO expects that the average net price for a given drug paid by private plans will be somewhat higher than the average net prices paid by Part D plans.

Accounting for the projected growth of drug prices from 2025 to 2030 and price differences for drugs introduced after 2025, CBO estimates that the single-payer system's average drug prices in 2030 under the higher scenario would be 10 percent lower than Medicare prices, 45 percent higher than Medicaid prices, 20 percent lower than private insurance prices, and 10 percent lower than the prices that for uninsured patients would pay in that year under current law (see Exhibit 4-1). On average across all payers, prices for prescription drugs would be 6 percent lower under that scenario than under current law in 2030. (For more details about CBO's assumptions about the growth of drug prices during the 2025-2030 period and about prices for new drugs, see Section 2.)

Under the lower payment-rate scenario, the single-payer system's average drug prices in 2030 would be 31 percent lower than Medicare prices, 12 percent higher than Medicaid prices, 38 percent lower than private insurance prices, and 31 percent lower than the prices that uninsured patients would pay in that year under current law, CBO estimates. Weighted-average prices across all payers would be 28 percent lower under that scenario than under current law in 2030.

Other Services. Because the category of "other services" consists primarily of outpatient services, such as home health care or dental services, CBO specified that the payment rates for other services in 2020 relative to Medicare rates would be similar to the payment rates for physician and clinical services. One difference between other services and physician and clinical services, however, is in their projected growth over time. Under current law, CBO projects that the all-payer weighted-average payment rates for other services would grow more quickly than the all-payer rates for physician and clinical services (and just slightly more slowly than the all-payer rates for hospital services).

Under both payment-rate scenarios, CBO specified that the illustrative single-payer system's payment rates for other services would grow by 0.5 percent per year from 2025 through 2030 and that the distribution of payment rates would gradually converge to match the Medicare FFS distribution in the same period. In 2030, the payment rates for other services would be the same as Medicare rates, an average of 10 percent higher than Medicaid rates, 28 percent lower than private insurance rates, and 25 percent higher than the rates that providers would receive for uninsured patients in that year under current law, CBO estimates (see Exhibit 4-1).[34] On average, payment rates for other services under both scenarios would be 8 percent lower than the projected weighted-average rates across all payers under current law in 2030.

CBO used the same payment rates for other services in both of its scenarios for two reasons. First, other services is a smaller category of spending than hospital services or physician and

[34] Those estimates are partly driven by CBO's assumptions about how Medicare's payment rates for dental, vision, and hearing services would compare with those of other payers if Medicare covered those services.

clinical services. Second, unlike those services, Medicare accounts for a larger proportion of spending on other services than private insurance does; thus, many providers of other services are already paid Medicare rates.

Estimating How Providers Would Alter the Supply of Care in Response to Changes in Payment Rates

After estimating how payment rates for various types of services would change if the supply of care was held constant, CBO estimated providers' responses to the changes in those rates based on an elasticity of supply.[35] CBO's estimate of the elasticity of supply was derived from a review of the research literature on providers' responses to changes in payment rates. (The studies about providers' elasticity of supply that CBO reviewed are included in the list of references in Appendix B.)

Elasticity of Supply. On the basis of studies published since 2000 about how providers have responded to payment changes, CBO estimates that the elasticity of supply for health care services is positive—in other words, that lower payment rates lead providers to supply less care. Under the illustrative single-payer options, payment rates would be set administratively. Thus, providers and other health care professionals would have less market power, and the administrative process for setting payment rates would become more important in determining how much those professionals were paid.

Findings from the literature on the elasticity of supply vary greatly, with substantial disagreement about how providers respond to changes in payment rates. The literature generally indicates that providers' responses are symmetric—meaning that the supply of health care would increase in response to increases in payment rates and decrease in response to decreases in payment rates. But some studies have shown that providers can respond to a reduction in their payment rates by increasing their volume of services, increasing the intensity of the services they provide, or billing for more intensive services. Further, many existing studies measure responses to changes in payments in a multipayer system, and those results may not apply to a single-payer system.

To calculate its estimate of the elasticity of supply, CBO took an average of the elasticities in studies that examined how the volume or intensity of health care changes in response to payment changes. CBO then reduced the magnitude of that response to reflect the fact that most studies were conducted in a multipayer system, where providers have more flexibility to respond to payment cuts by shifting volume to other payers. Under the illustrative single-payer options, changes in payment rates would apply to all payments a provider received (unless that provider opted out of receiving any payment from the single-payer system during the year), thus limiting potential responses. CBO then used its elasticity estimates to project the quantity of care supplied in response to the changes in payment rates under the illustrative options. The elasticities vary for different categories of services but are all fairly small (see Exhibit 4-2).

CBO estimated that providers' responses would be not only symmetric but also uniform—meaning that the supply of care provided would change proportionately with the size of the

[35] An elasticity of supply is a measure of how responsive a supplier of a good or service is to a change in its price.

Exhibit 4-2.

Elasticity and the Implied Change in the Supply of Care Provided, by Type of Service

	Point Elasticity of Supply[a]	Change in Supply in Response to a 10 Percent Reduction in Payment Rates
Hospital Services	0.20	-2 percent
Physician and Clinical Services	0.45	-4.5 percent
Prescription Drugs	0.00	0 percent
Other Services[b]	0.45	-4.5 percent

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

a. The elasticity of supply measures the percentage change in the supply of care that would result from a 1 percent change in the payment rates paid to providers. It differs from the semielasticity measure that CBO used to estimate changes in the demand for care (see Section 5).

b. Includes dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, and durable medical equipment (such as eyeglasses and hearing aids). Home health care and skilled nursing facility care are sometimes classified as long-term services and supports, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.

change in the average payment rate. That approach simplified CBO's analysis because the change in the average payment rate is sufficient for projecting providers' responses, and the estimate does not depend on whether some providers receive a payment increase and other providers receive a payment decrease.

For prescription drugs, CBO estimated that manufacturers would supply 100 percent of the prescribed drugs that patients would want to purchase under the single-payer options. CBO does not expect that the change in prescription drug prices would affect the quantity that manufacturers would be willing to supply for drugs that were already on the market during the five-year period analyzed in this paper. Any changes in the profile of drugs coming to market would be likely to occur after 2030 because most drugs that would be coming to market by 2030 under current law would be too far along in their development to be affected by the introduction of a single-payer system. Therefore, CBO did not incorporate any changes in pharmaceutical innovation in its estimates of the financial effects of a single-payer system in 2030. Under the lower payment-rate scenario, lower revenues would lead manufacturers to change their investment in research and development, CBO projects, which would affect the number of new drugs introduced after 2030 (as discussed in Section 18).

Shortages currently occur for a small number of prescription drugs, most commonly for generic drugs. Those shortages tend to result from short-term disruptions at manufacturing plants or from prices being too low to support the continued investment in manufacturing capability for a particular drug. (For example, manufacturing disruptions and relatively low prices have both contributed to shortages of BCG, an immunotherapy treatment for bladder cancer.) CBO estimates that prices for generic drugs under both of the pricing scenarios in the single-payer options would be about the same as projected prices under current law. Therefore, CBO does

not anticipate that the likelihood of shortages for generic drugs would increase under the single-payer system.[36]

Average prices for brand-name drugs would be lower under both pricing scenarios than under current law. But CBO expects that those prices would remain high enough to support supplying the quantity of prescriptions that patients would demand. Marginal production costs for brand-name drugs tend to be much lower than the prices paid for prescriptions, in part because a large portion of a manufacturer's cost for a given drug consists of costs that were already sunk into the drug's research and development. For that and the other reasons described above, CBO estimates that the supply of prescription drugs under the single-payer system would equal the amount demanded.

For drugs that would already be on the market in 2030, CBO estimates that manufacturers would not change the quantity of drugs supplied if prices changed—an elasticity of supply of zero. Because of the long time frames involved in developing drugs, decisions about which drugs would be available in 2030 would generally be unaffected, in CBO's assessment, by price changes of the size of those considered here. In particular, the manufacturing costs of available drugs are generally low enough that the drugs would be supplied if prices were reduced by the amounts included in the single-payer options.

How the Supply of Providers Might Change. The size and composition of the labor force in the medical professions might be different in 2030 under both of CBO's single-payer payment scenarios than they would be under current law. Some physicians and nurses who were already in the workforce might respond to lower payment rates by retiring or working fewer hours. However, under the higher payment-rate scenario, not all physicians and nurses would receive lower payment rates than they would under current law. (For example, general practitioners might see similar or higher rates than under current law.) There is also significant uncertainty about how providers would respond to the changes under the illustrative options. CBO expects that many of the services provided by physicians who would retire would instead be provided by new medical graduates or by other less costly health care professionals, such as nurse practitioners and physician assistants, which would decrease spending. In addition, because the average reduction in payment rates would vary among specialties under both payment scenarios, the differential changes in rates might encourage more medical graduates to go into primary care rather than into medical specialties.

Some hospitals might operate differently in 2030 under both payment scenarios in ways that would reduce their operating expenses, such as by lowering spending on patient amenities, consolidating the types of services they provide, reducing staffing levels, spending less on

[36] CBO expects that the federal government would be able to approximate prices for generic drugs that would be similar to projected prices under current law. The reason is that the pricing patterns for a generic drug tend to relate strongly to various market conditions, such as the price of the equivalent brand-name drug, the number of manufacturers producing that generic drug, and how long the generic product has been on the market.

equipment and supplies, and devoting less to other capital expenditures.[37] If hospitals could not adjust their cost structure effectively, some might close or merge with other hospitals or health systems. CBO does not anticipate major waves of hospital closures, in part because many of the hospitals with the lowest profit margins under current law (such as hospitals serving low-income communities) could be paid more under the illustrative single-payer options than they would be under current law. In addition, many more people would have health insurance coverage, reducing hospitals' burden of bad debt. However, there is significant uncertainty about how hospitals would respond to the changes under the illustrative options.

[37] For example, hospitals that are under great financial pressure have been found to reduce their costs and generate profits from Medicare patients, whereas hospitals that have strong market power and high revenues from commercial payers have less pressure to contain their costs. See Jeffrey Stensland, Zachary R. Gaumer, and Mark E. Miller, "Private-Payer Profits Can Induce Negative Medicare Margins," *Health Affairs*, vol. 29, no. 5 (May 2010), pp. 1045-1051, https://doi.org/10.1377/hlthaff.2009.0599; and Chapin White and Vivian Wu, "How Do Hospitals Cope With Sustained Slow Growth in Medicare Prices?" *Health Services Research*, vol. 49, no. 1 (February 2014), pp. 11-31, https://doi.org/10.1111/1475-6773.12101.

Section 5.
How CBO Analyzed the Effects of Changes in Cost Sharing and Coverage

CBO estimated the effects of changes in out-of-pocket costs on the demand for health care under the illustrative single-payer options by analyzing those effects separately for people who would be insured under current law and people who would be uninsured. For people who would have insurance under current law, CBO calculated the difference in cost sharing between current law and the single-payer system and then applied an elasticity derived from the research literature to estimate the change in patients' desired quantities of health care utilization.[38]

For people who would be uninsured under current law, CBO relied on estimates from the literature measuring how people's use of services increases when they gain coverage. That approach is better than applying a demand elasticity from the literature because those elasticities measure responses to changes in cost sharing for people who have insurance, and uninsured people who gain coverage can be expected to respond differently because they experience a much larger change in out-of-pocket costs. A related consideration is that out-of-pocket costs for uninsured people take a different form than out-of-pocket costs for people with insurance, which consist of costs related to deductibles, copayments, and coinsurance. Among uninsured people, out-of-pocket costs are affected by charity care and incomplete payment of medical bills. As a result of those differences, a given change in out-of-pocket costs would prompt a different response among people without insurance coverage than among people with insurance coverage.

This section focuses on the effect of changes in cost sharing for four broad categories of services: hospital services, physician and clinical services, prescription drugs, and other services. CBO's approach to estimating the effects of changes in cost sharing for long-term services and supports (which are included as a covered benefit only in Option 5) is discussed in Section 8.

Estimating Increases in Demand for Care Among People Who Would Be Insured Under Current Law

To estimate the effect of a change in cost sharing for people who would have insurance under current law, CBO measured cost sharing as the amount that people pay out of pocket for health care as a share of the total spending for that care—that is, the out-of-pocket share. CBO compared the out-of-pocket share under current law with the out-of-pocket share under the illustrative options, in both cases computing that share using the out-of-pocket costs that people would incur for services covered under the single-payer system. With that approach, the difference in the out-of-pocket share between current law and the single-payer system captures differences in spending on deductibles, coinsurance, and copayments as well as differences in people's out-of-pocket spending for services that their health plan might not cover under current law, such as dental, vision, and hearing care.

CBO estimated the change in the out-of-pocket share for people according to their primary source of coverage under current law, such as private health insurance, Medicare, or Medicaid.

[38] An elasticity of demand in health care measures the change in utilization associated with an incremental change in cost sharing.

CBO developed those estimates by starting with its projections of national health expenditures (NHE) and using the Medical Expenditure Panel Survey Household Component (MEPS-HC) to allocate total spending on each service category (and spending by source of payment) across the population classified by primary type of health insurance (for more details, see Section 3). An advantage of the MEPS-HC is that it identifies spending that is actually paid out of pocket, so CBO did not have to explicitly account for the effects of different cost-sharing requirements on actual out-of-pocket spending among people with the same primary source of coverage (for example, among Medicare beneficiaries who may or may not have supplemental coverage).

To model the change in demand in response to changes in out-of-pocket costs, CBO used the percentage-point change in the out-of-pocket share for all health care services covered under the single-payer system rather than estimating the out-of-pocket share separately for different types of services. One of the main advantages of that approach is that it aligns with the way in which estimates are reported in much of the relevant research literature, including the RAND Health Insurance Experiment (HIE). Many of the research studies that CBO relied on for this analysis examined changes that affected the out-of-pocket share of spending for all services at the same time (rather than the out-of-pocket share only for individual services) and did not report changes in out-of-pocket costs separately for each type of service.[39]

Another advantage of CBO's approach is that it accounts for the fact that the demand for a given service depends not only on the price patients face for that service but also on the price of related services. Unlike in other analyses that CBO might conduct, this approach does not explicitly account for how changes in cost sharing for particular services affect demand for other services. If CBO was analyzing a policy, for example, that would change cost sharing for prescription drugs, it might explicitly estimate how that change would also affect the demand for hospital services. CBO's approach in this analysis makes that type of accounting unnecessary because the effects of cost sharing for one service on the utilization of another service are already accounted for implicitly.

CBO estimated the size of the response to the change in out-of-pocket costs for people who would have insurance under current law by using a semielasticity of demand, which measures the percentage change in the quantity demanded that would occur in response to a 1 percentage-point change in the out-of-pocket share.[40] CBO chose to use a semielasticity for a number of reasons. Using that measure does not require having to know any specific benefit design, such as a specific deductible amount, coinsurance rate, or copayment amount. In other analyses, CBO would take into account a specific benefit design, but a simpler approach makes sense in this

[39] Estimating patients' responses using the share of out-of-pocket costs for each type of service individually would require applying estimates of own-price elasticities. Such estimates are generally not available from the RAND Health Insurance Experiment and many other studies whose results could be directly compared with the results of that experiment. The RAND HIE assigned study participants to plans that each largely applied a single coinsurance rate to all services, up to an out-of-pocket maximum. Although the nominal coinsurance rate was largely the same for all services, the share of costs that patients were responsible for paying out of pocket did vary by service type because expensive services, such as inpatient care, were much more likely to be subject to the out-of-pocket maximum.

[40] A semielasticity of demand differs from a traditional elasticity of demand (also known as a point elasticity) by measuring the percentage change in demand that would result from a 1 percentage-point change in the share of health care costs paid out of pocket, rather than from a 1 percent change in that share.

case given the wide variety of benefit designs that plans use under current law. Another advantage of using a semielasticity is its stability, because that measure generates reasonable estimates of the effects of policies with zero cost-sharing requirements. (Other commonly used measures of elasticities, such as point elasticities and arc elasticities, do not generate reasonable estimates when cost sharing falls to zero.)

To estimate the semielasticity of demand, CBO started with elasticity estimates from the RAND Health Insurance Experiment and updated them on the basis of relevant research published more recently. The RAND HIE, which was conducted from 1974 to 1982, randomly assigned people to health insurance plans with different levels of cost sharing and then compared total spending on health care for those people. The RAND experiment has many features that make it a useful starting point—particularly the fact that it was a randomized experiment and included a health plan with no cost sharing, similar to the lower cost-sharing scenario in Options 3 through 5. Nevertheless, many characteristics of health insurance and health care technologies and services have changed since the 1970s and 1980s, and more recent literature suggests that somewhat smaller elasticities might be appropriate. On the basis of more recent evidence, CBO adjusted the elasticities of demand derived from the RAND experiment downward by roughly 15 percent to account for the results of later studies.[41] (For a list of those studies, see Appendix B.) The resulting semielasticities of demand range from -1.1 for hospital services to -1.7 for prescription drugs (see Exhibit 5-1). The semielasticity for "other services" (which include dental services and durable medical equipment, such as eyeglasses and hearing aids) is -1.3.

CBO applied those semielasticities of demand to changes in the out-of-pocket shares for people who would have different sources of primary coverage under current law to determine the increase in demand for different types of services among people who would be insured under current law. For those people, CBO estimates that demand for all services that would be covered by the single-payer system would increase by 10 percent under the lower cost-sharing scenario in Options 3 and 4 and would increase by 5 percent under the higher cost-sharing scenario in Options 1 and 2. Differences in provider payment rates between the different options have only slight effects on those results.

[41] CBO's semielasticity estimates based on the RAND Health Insurance Experiment were estimated by computing the percentage change in spending for each major service category in that study (inpatient, outpatient, and prescription drugs) for each 1 percentage-point change in the out-of-pocket share for all services, comparing the 25 percent coinsurance plan (which had an out-of-pocket share of 16 percent) with the zero coinsurance plan. CBO averaged the outpatient and inpatient estimates to model the demand response for hospital care, because CBO's hospital services category consists of about half inpatient and half outpatient hospital care. CBO used the outpatient estimate to model the demand response for physician and clinical services. For its updating, CBO identified recent studies that evaluated the types of cost-sharing changes most similar to those under the illustrative single-payer options and that reported their effects in such a way that the estimates could be compared among the studies and with the RAND HIE. When CBO translated the results of the RAND HIE and the recent studies into a form that made the results comparable, CBO found that the average demand elasticity from the recent studies was about 30 percent smaller than the elasticity it derived from comparing the 25 percent and zero coinsurance plans in the RAND HIE. CBO weighted the results from the recent studies and the RAND HIE equally to arrive at a final estimate that is about 15 percent smaller than the elasticity it derived from comparing the 25 percent and zero coinsurance plans in the RAND HIE.

Exhibit 5-1.

Elasticity and the Implied Increase in the Demand for Care Among People With Health Insurance in Response to Lower Out-of-Pocket Costs, by Type of Service

	Semielasticity of Demand	Increase in Demand in Response to a 10 Percentage-Point Reduction in the Share of Total Costs Paid Out of Pocket
Hospital Services	-1.1	11 percent
Physician and Clinical Services	-1.5	15 percent
Prescription Drugs	-1.7	17 percent
Other Services[a]	-1.3	13 percent

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

For the purposes of estimating changes in out-of-pocket costs and the effects on demand for care, CBO considered the following coverage groups within the insured population: people covered by private health insurance, Medicare, Medicaid, or the Children's Health Insurance Program; people not lawfully present in the United States who would be insured under current law; people living in institutions; active-duty military personnel; and people with all other types of coverage. CBO used the semielasticities presented here to estimate demand responses for all but two of those coverage groups: people who are not lawfully present and people living in institutions. The demand for care by people not lawfully present would be somewhat less responsive to changes in cost sharing because some of those people would not enroll in and seek care under the single-payer system. CBO estimates that about 20 percent of U.S. residents who are not lawfully present would not enroll in the single-payer system because they would fear providing information to the federal government or face challenges related to language or literacy. CBO also expects that demand would be less responsive to changes in cost sharing among people living in institutions because decisions about their health care utilization are frequently made by providers in the institutions rather than by the individuals themselves. Therefore, to estimate changes in demand among people living in institutions, CBO multiplied the semielasticities presented here by 0.5.

a. Includes dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, and durable medical equipment (such as eyeglasses and hearing aids). Home health care and skilled nursing facility care are sometimes classified as long-term services and supports, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.

Estimating Increases in Demand for Care Among People Who Would Be Uninsured Under Current Law

To estimate how the demand for care would change among people who would be uninsured under current law, CBO used a two-step approach. In the first step, CBO applied a percentage increase in demand for each service category that represents the effect on previously uninsured people of newly gaining insurance with zero cost sharing. In the second step, CBO used the semielasticities described above to estimate the effect of moving from a plan with zero cost sharing to a plan with the level of cost sharing that those people would face under each of the five illustrative single-payer options. CBO followed that two-step approach because the research literature it consulted to estimate demand responses by the uninsured generally studied the effects of gaining public insurance coverage with zero or minimal cost sharing.

CBO's approach required having estimates of the percentage increases in demand for each type of service that correspond to newly gaining coverage with zero cost sharing. In developing those estimates, CBO used the results of the Oregon Health Insurance Experiment as a starting point and then made adjustments to incorporate other findings from the literature and to account for differences between the populations studied.

The Oregon Health Insurance Experiment began in 2008 when the state of Oregon used a lottery to randomly extend Medicaid eligibility to an additional 10,000 people out of more than

85,000 applicants. Following the lottery, researchers compared the health care spending and health outcomes of the new Medicaid enrollees with those of applicants who were not selected by the lottery. Like the RAND experiment, the Oregon experiment has many features that make it a useful starting point for estimating the increased use of care among people who previously lacked coverage. For example, it was a randomized experiment that showed how people's use of different health care services changed when they obtained health insurance, and the insurance they obtained covered all major medical care with no cost sharing (as would be the case under the lower cost-sharing scenario in Options 3 through 5).[42]

The first adjustment that CBO made to the results of the Oregon experiment was to incorporate findings from other research. Different studies have produced different estimates of how gaining insurance coverage affects demand for health care. Although some of those differences result from the studies' methodologies, they probably also reflect different demand responses among distinct populations in distinct settings. The Oregon experiment used a sound methodology, but it was confined to a particular policy intervention in a single state and focused on low-income adults prior to the Affordable Care Act's Medicaid expansion. CBO identified many other studies that examined the effect of health insurance on health care utilization (see Appendix B). Those studies varied in their methods as well as in the age, health status, income, and location of the populations they studied.

To adjust for those studies' findings, CBO calculated a weighted average of the different estimates of demand responses for each service category. In that average, the results of the Oregon experiment were assigned 50 percent of the total weight, and the other studies' estimates together shared the other 50 percent. That approach reflects the methodological strength of the Oregon experiment as well as the possibility that its participants were not representative of the population that would become insured nationwide under the illustrative single-payer options. That adjustment increased the estimate of the demand response for hospital services by about 80 percent, but it changed the estimates of the demand responses for physician and clinical services, prescription drugs, and other services by less than 5 percent each.

The second adjustment that CBO made was to account for the prevalence of access to subsidized insurance coverage among the population that would be uninsured under current law. CBO projects that 18 percent of the lawfully present uninsured population in 2030 would be eligible for Medicaid, and an additional 55 percent would have access to partially subsidized insurance coverage (either through an employer or through subsidized policies purchased on the marketplaces set up under the Affordable Care Act). In contrast, participants in the Oregon experiment were not previously eligible for Medicaid and had to actively sign up for the Medicaid lottery. Those who were selected in the lottery then had to apply for coverage. Like the Oregon experiment, other studies generally estimate the effects of insurance on people who actively obtain it when they become eligible. On average, such people probably value insurance—and increase their health care use upon gaining coverage—to a greater extent than people who do not become insured when they are eligible for free or subsidized coverage. As a result, demand response estimates taken from the Oregon experiment and other studies are likely

[42] Vision and nonemergency dental services were not covered for participants in the Oregon experiment, but they would be covered under the single-payer options.

Exhibit 5-2.

Increase in the Demand for Care Among People Who Would Be Uninsured Under Current Law in Response to Obtaining Insurance With No Cost Sharing, by Type of Service

	Increase in Demand in Response to Obtaining Insurance With Zero Cost Sharing
Hospital Services	37 percent
Physician and Clinical Services	40 percent
Prescription Drugs	32 percent
Other Services[a]	41 percent

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

These numbers apply to uninsured people lawfully present in the United States. CBO estimates that the corresponding values for uninsured people not lawfully present are 20 percent lower.

a. Includes dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, and durable medical equipment (such as eyeglasses and hearing aids). Home health care and skilled nursing facility care are sometimes classified as long-term services and supports, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.

to be greater than the responses that would be expected from the uninsured people who would newly gain coverage under a single-payer system.

To make that adjustment, CBO relied on published estimates from the literature on "welcome mat" effects—the effects of public insurance expansions on people who were already eligible for public insurance coverage. The results of those studies allowed CBO to estimate the relative increases in demand for people who were previously eligible for insurance coverage versus the increases for people who would be newly eligible for comprehensive insurance without cost sharing. With those estimates, CBO calculated different demand responses for three segments of the population that would be uninsured under current law: those who would be eligible for Medicaid, those who would be eligible for partially subsidized coverage, and those who would not have access to subsidized coverage under current law.[43] For the uninsured population as a whole, that adjustment reduced the estimated demand responses for all types of services by about 10 percent.

After applying those two adjustments, CBO estimated that demand for health care by people who would be uninsured under current law would increase substantially if they received insurance coverage with zero cost sharing. Those increases in demand would range from 32 percent for prescription drugs to 41 percent for other services (see Exhibit 5-2).

CBO then estimated the out-of-pocket share that the newly insured would face under each illustrative single-payer option and the reduction in demand that would result from that

[43] CBO used the ratio of the demand response for previously eligible people to the demand response for newly eligible people from the welcome-mat literature to estimate the demand response for the Medicaid-eligible group relative to the group that would not have access to subsidized coverage. For people who would be eligible for partially subsidized coverage, CBO used the average of the demand responses for the other two groups.

Exhibit 5-3.

Out-of-Pocket Shares and Increases in Demand From Changes in Cost Sharing and Coverage Under the Illustrative Single-Payer Options, by Current-Law Coverage, 2030

Coverage Group in 2030 Under Current Law	Share of Costs Paid Out of Pocket		Percentage Increase in Demand for Care[c]				
	Under Current Law[a]	Under the Illustrative Single-Payer Options[b]	Hospital Services	Physician and Clinical Services	Prescription Drugs	Other Services[d]	Total
			Higher Cost Sharing, Higher Provider Payment Rates (Option 1)				
Insured	9	5	4	6	6	4	5
Uninsured	38	5	30	30	20	32	30
			Higher Cost Sharing, Lower Provider Payment Rates (Option 2)				
Insured	9	5	4	6	7	5	5
Uninsured	38	5	30	31	21	33	31
			Lower Cost Sharing, Lower Provider Payment Rates (Option 3)				
Insured	9	*	8	13	14	9	10
Uninsured	38	*	37	40	32	41	39
			Lower Cost Sharing, Higher Provider Payment Rates (Option 4)				
Insured	9	*	8	13	14	9	10
Uninsured	38	*	37	40	32	41	38

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

* = between zero and 0.5 percent.

a. The out-of-pocket share under current law is the percentage of total 2030 spending by coverage group that is paid directly by patients. Such spending includes cost-sharing payments, spending on services not covered by insurance, and payments covered by health savings accounts, but not patients' premium payments.

b. The out-of-pocket share under the single-payer options is the percentage of total spending that would be paid directly by patients if utilization and provider prices were held constant at current-law 2030 levels but if the single-payer system's cost-sharing rules were in place.

c. The increases in demand shown here do not include the effects of having fewer restrictions on utilization, provider networks, and billing under the single-payer options. The percentage increases in demand are calculated after converting payment rates to the levels that would apply under each option.

d. Includes dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, and durable medical equipment (such as eyeglasses and hearing aids). Home health care and skilled nursing facility care are sometimes classified as long-term services and supports, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.

out-of-pocket share, relative to a plan with zero cost sharing. CBO estimated that reduction in demand using the same approach and the same semielasticities that it used to estimate changes in demand for people who would have insurance under current law. The resulting estimates suggest that the single-payer options with higher cost sharing would result in smaller increases in demand among people who would be uninsured under current law than the options with lower cost sharing would (see Exhibit 5-3).

Section 6.
How CBO Analyzed Other Factors That Would Affect the Demand for and Supply of Care

In addition to provider payment rates, coverage, and cost sharing, four other factors would affect the demand for and supply of care under the illustrative single-payer options, in CBO's assessment:

- There would be fewer restrictions on utilization, provider networks, and billing under the options than there would be under current law, which would increase both the demand for care and the supply of care.

- Providers would spend less time and money on administrative activities, which would allow them to shift resources to providing more care to patients.

- Providers would find various ways to expand their capacity to provide services in response to the increase in demand for care under a single-payer system. As a result, CBO estimates, they would increase their supply of care beyond the level that would be expected on the basis of all of the other supply-driven factors accounted for in this analysis.

- A small percentage of providers would choose to opt out of the single-payer system under all of the options, CBO estimates. They would charge much higher rates than those established under the single-payer system, and if demand exceeded supply under that system, they would deliver more services than they would have if they had not been permitted to opt out. (Their patients would be a subset of the people who could afford to pay out of pocket for such care.)

The increases in the demand for and supply of care that would result from those four factors would be in addition to the changes in supply that would result from changes in provider payment rates. CBO expects that the combination of those four factors would increase the total amount of care delivered under all of the illustrative options.

Patients' and Providers' Reponses to Having Fewer Restrictions on Utilization, Provider Networks, and Billing

As in proposed legislation, CBO assumed that the single-payer system would use tools to manage enrollees' use of health care and monitor providers only to the extent that the Medicare fee-for-service (FFS) program uses them under current law. As a result, CBO projects that under the options, patients and providers would face fewer of the restrictions on utilization, provider networks, and billing that restrain the use of health care than they would face under current law, for four reasons:

- The use of tools that employ nonprice mechanisms to manage the amount of health care consumption would decline under the single-payer options. Those care management tools include requiring prior approval before patients can receive certain expensive procedures (such as MRIs), requiring a referral before patients can see many types of specialists, or

imposing direct limits on the number of visits or types of services that patients can use each year. Less use of such tools would tend to increase the volume and intensity of care that patients would demand and that providers would recommend under the single-payer system.

- For prescription drugs, the single-payer system would tend to use fewer tools that constrain drug spending than are used under current law. Those tools include formularies (lists of drugs that an insurer covers, often with different levels of cost sharing), step therapy (requiring that patients try less-expensive drugs before granting coverage of more-expensive drugs), prior authorization, and in some cases, limits on the quantity of prescription drugs that patients can use in a given time period.

- Provider networks would be broader, on average, under the options than under current law. In general, all practicing providers that did not opt out would be included in the illustrative single-payer system, whereas under current law many providers participate in networks and only accept patients with certain types of insurance.

- There would be fewer constraints on providers' billing practices, which could lead providers to bill for more-expensive care or to record the services they provide as being more complex or intensive, resulting in higher payments (a practice called increased coding intensity).

Research estimating how the use of care changes in response to having fewer restrictions on utilization, provider networks, and billing is limited because, in most cases, insurance arrangements that have different care management strategies also have different cost-sharing requirements for patients. To estimate the size of that response, CBO started with a study that found that Medicare beneficiaries who enrolled in private managed care plans (known as Medicare Advantage, or MA) used either an estimated 9 percent or an estimated 25 percent less medical care than beneficiaries with similar characteristics participating in the Medicare FFS program, depending on the modeling approach used.[44] In evaluating that study, CBO placed significantly more weight on the lower estimate, which accounted for unobserved differences in patients' health between the two groups of Medicare beneficiaries. On the basis of that estimate and other research about the Medicare program and about differences between people who enroll in MA plans and beneficiaries in Medicare FFS, CBO estimated that MA enrollees would have 10 percent greater use of medical services if they were moved into Medicare FFS with no additional changes in cost sharing or coverage. CBO adjusted that estimate to apply to other coverage groups by analyzing differences in patient populations as well as differences between the care management strategies employed by MA plans and those used by other insurers and other public programs (see Exhibit 6-1).

To determine the effect of having fewer restrictions on the use of prescription drugs, CBO considered how heavily various payers manage prescription drug utilization under current law

[44] See Vilsa Curto and others, "Health Care Spending and Utilization in Public and Private Medicare," *American Economic Journal: Applied Economics*, vol. 11, no. 2 (April 2019), pp. 302-332, http://dx.doi.org/10.1257/app.20170295.

Exhibit 6-1.

Increases in the Supply of and Demand for Services Under the Illustrative Single-Payer Options in Response to Having Fewer Restrictions on Utilization, Provider Networks, and Billing

Coverage Under Current Law	Percentage Increase Relative to Current Law			Notes About Restrictions
	Increase in Supply of Medical Care	Increase in Demand for Medical Care	Increase in Demand for Prescription Drugs	
Medicare Fee-for-Service Program	0	0	6	CBO's illustrative single-payer options are based on the Medicare fee-for-service program for medical care, so no change in the management of care would occur for medical services. For prescription drugs, the single-payer options would have less care management than Medicare Part D.
Medicare Advantage (MA)	5	5	6	Relative to the single-payer options, MA has more restrictive care management and narrower provider networks for medical services and somewhat more management of prescription drugs.
Private Insurance Through an Employer	2.5	2.5	4	Employment-based insurance tends to be less tightly managed than MA for both medical services and prescription drugs.
Private Insurance Purchased Individually	5	5	6	Individually purchased private insurance tends to be more tightly managed and have smaller provider networks than employment-based insurance.
Medicaid and Children's Health Insurance Program	5	5	10	Relative to MA, fewer providers accept patients with Medicaid. Some states also have explicit limits on the numbers or types of services that patients can receive or limit the number of prescriptions they can fill. Other care management tools may be less restrictive than under MA.
Uninsured	5	5	10	Estimates of the increased use of care among the uninsured draw heavily on studies in which uninsured people enrolled in Medicaid, so CBO applied the same factor of fewer restrictions on utilization, networks, and billing to the uninsured population to account for the fact that single-payer coverage would be less managed and have a broader provider network than Medicaid.
Not Lawfully Present in the United States and Insured	2	2	3	CBO attributed an increase in utilization equal to 80 percent of the size of the effect for people who are lawfully present and covered by employment-based insurance under current law, because CBO expects that roughly 20 percent of people who are not lawfully present would not enroll in the single-payer system.[a]
Not Lawfully Present in the United States and Uninsured	4	4	8	CBO attributed an increase in utilization equal to 80 percent of the size of the effect for people who are lawfully present and uninsured under current law, because CBO expects that roughly 20 percent of people who are not lawfully present would not enroll in the single-payer system.[a]

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

MA = Medicare Advantage.

a. CBO estimates that about one-fifth of not lawfully present U.S. residents would choose not to enroll in the single-payer system because they would fear providing information to the federal government or would face challenges related to language or literacy.

and how that management compares with the design of the illustrative single-payer system. CBO estimates that some of the increase in care in systems with fewer restrictions is attributable to patients seeking additional care, and some is attributable to providers recommending greater use of care, providing more (or more-expensive) services, and coding services as more intensive. However, CBO did not find research that divided the increase in care into the amount demanded by patients and the amount generated by providers.

The split between demand and supply is important for CBO's analysis because some increases in demand would not be met under the single-payer options, and constraints on supply would determine total spending. For example, making networks broader would encourage patients to seek more care, but it would not necessarily increase the supply of care by the same amount if providers had insufficient capacity or insufficient interest in supplying care. Alternatively, reporting services as more complex and thereby receiving higher payments would not affect patients' demand, but it would increase the measured quantity of care supplied. Because demand would increase in some cases, supply would increase in other cases, and research was not available to identify the split between the two, CBO divided the effects of having fewer restrictions on utilization, provider networks, and billing equally between increased demand and increased supply. Supply plays a larger role than demand in determining spending for medical services in CBO's analysis. Thus, the equal split implies that all of the supply-related half of the total estimated effect and a portion of the demand-related half translate into an increase in national health expenditures.

For prescription drugs, CBO attributed the entire effect of those factors to increased demand, because prescription drug manufacturers would willingly supply the entire increase in demand, in CBO's assessment. Thus, the full amount of the increase in demand for drugs resulting from having fewer restrictions on utilization, provider networks, and billing translates into an increase in national health expenditures. CBO accounted for the increase in supply from greater manufacturing of drugs in its own category, along with all changes in the supply of drugs. That category is separate from the category of changes in supply attributable to having fewer restrictions.

Providers' Responses to Changes in Administrative Activities

In addition to their responses to facing fewer restrictions, providers would increase their supply of care under the single-payer options because they would spend less money on administrative staff and less time on the administrative activities common in a multipayer system, CBO estimates. The research literature suggests that several types of administrative activities projected to occur under current law would occur less frequently under the options. Providers would realize substantial administrative savings under all of CBO's illustrative options as a result of interacting with only one payer that had a single benefit structure, payment system, and set of quality metrics. CBO's current-law projections of administrative activities in 2030 and the magnitude of the potential effects of the options are uncertain, in part because they depend on judgments about information technology, which can evolve rapidly.

Providers' Administrative Activities Under Current Law. In CBO's current-law projections for 2030, providers incur administrative spending to verify the insurance status of patients, bill and collect payments, and keep track of cost sharing from multiple payers, each of which has different billing requirements and cost-sharing structures. Providers are also projected to spend a

significant amount of time under current law checking formularies, securing prior authorization for services, and reporting quality measures for multiple payers.[45] Moreover, differences in those payers' reporting requirements for quality measures and rules for prior authorizations cause providers to incur significant costs from having to comply with the myriad rules and reporting requirements.[46]

In addition, although many providers have adopted electronic health records, CBO expects continued challenges with using those systems. CBO expects that those challenges would persist in 2030 under current law because insurers have limited incentives to streamline systems for providers. No single insurer has an incentive to incur the costs of streamlining billing systems because it would bear all of the costs of that effort while other insurers would share in the benefits. Indeed, streamlining could be viewed as making it easier for doctors and hospital systems to contract with that insurers' competitors.[47] Many providers do not have integrated clinical and billing systems, and although many billing functions have become electronic, providers still face administrative burdens that stem from a lack of coordination among payers. For example, each payer generally has different data and documentation standards, and most maintain separate billing systems.

Providers' Administrative Activities Under the Illustrative Options. Under all of CBO's illustrative single-payer options, providers' administrative activities would change relative to current law. For example, tracking patients' cost sharing and billing for and collecting payments would be greatly streamlined by having one payer with a single system. Prior authorization would be largely eliminated, and formularies and quality reporting would be greatly simplified because there would be a single payer with a single set of requirements. That streamlining and simplification would take some time to materialize, and it is uncertain whether it would occur in 2030 to a lesser or greater extent than CBO's estimates project.

Providers would face an additional administrative activity under a single-payer system: having to prioritize care because of increased demand. Under current law, providers prioritize patients based on whether they are new patients or have an existing relationship with the provider and on whether the provider accepts a patient's insurance. Interviews with experts suggest that providers that accept most types of insurance, such as hospitals, may recommend more intensive interventions to patients with private insurance, and they may allocate Medicaid patients and the uninsured to medical residents and nurses instead of to specialist physicians.

Under a single-payer system, decisionmaking rules used under current law would have to be adjusted, and the need to prioritize patients could impose more administrative burdens on

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[45] See David M. Cutler, *Reducing Administrative Costs in U.S. Health Care*, Hamilton Project Policy Proposal 2020-09 (Brookings Institution, March 2020), www.brookings.edu/research/reducing-administrative-costs-in-u-s-health-care.

[46] See Lawrence P. Casalino and others, "U.S. Physician Practices Spend More Than $15.4 Billion Annually to Report Quality Measures," *Health Affairs*, vol. 35, no. 3 (March 2016), pp. 401-406, https://doi.org/10.1377/hlthaff.2015.1258.

[47] See David M. Cutler, *Reducing Administrative Costs in U.S. Health Care*, Hamilton Project Policy Proposal 2020-09 (Brookings Institution, March 2020), www.brookings.edu/research/reducing-administrative-costs-in-u-s-health-care.

providers. To some degree, the costs of prioritizing patients is embedded in CBO's estimate of providers' net administrative savings under the options, because many studies used to construct that estimate compare the administrative time and money spent by U.S. providers with those of providers in Canada, who currently allocate care on the basis of the severity and urgency of a patient's condition.

In addition, the use of third-party platforms that assist with patient scheduling (such as Zocdoc) could increase. If so, providers' total spending on such mechanisms would exceed the amounts under current law, which would be a source of upward pressure on their administrative spending. (For further discussion of the allocation of care and how it might evolve over time, see Section 15.)

CBO estimates that providers' administrative spending would not vary much between single-payer scenarios that include cost sharing and those that do not (such as CBO's lower cost-sharing scenario, in which no one would pay out of pocket for covered medical services). CBO anticipates that the increased costs for providers from prioritizing patients in scenarios with no cost sharing might be offset by slightly lower administrative spending from not collecting cost-sharing payments. The majority of providers' administrative savings on cost sharing would stem from transitioning to a single unified billing structure, in place of a billing structure that varies among payers—and, within payers, among plans—as under current law. Interviews with experts suggest that the administrative burden of collecting cost-sharing payments occurs mainly when a payer changes cost-sharing requirements and providers incur additional costs from tracking and learning to comply with the new requirements. Under a single-payer system with greatly simplified cost sharing, that burden to providers would be reduced. In addition, providers face a significant burden in collecting cost-sharing payments when patients do not pay them initially. That burden would also be alleviated by lower cost sharing and a simplified benefit structure.

Based on a literature review, CBO separated providers' administrative savings into two categories:

- Monetary savings (from reductions in spending on staff and equipment to handle administration and billing), and

- Time savings (from reductions in administrative activities, such as obtaining prior authorizations and checking the formularies of multiple payers).

In CBO's assessment, providers' monetary savings on administrative activities would reduce their costs of providing care, and providers' time savings would free up availability to provide more care to patients. Thus, CBO estimated the effects of those two categories of administrative savings separately.

CBO estimated the two categories of administrative savings by examining the research literature and averaging studies' estimates of administrative activities (or the time savings from reducing those activities). CBO then used those historically based estimates to project changes that would occur in 2030 under the illustrative options relative to current law using the methods described below. Some studies estimated both providers' monetary savings and their time savings. To avoid double counting, CBO made certain that when a study reported savings both for

administrative staff and for providers involved in direct patient care, CBO did not count the savings in more than one category. For instance, if a study reported time savings for physicians, nurses, and billing professionals or other office staff, CBO applied the savings of nurses and physicians to its "time savings" estimates and the savings of billing professionals to its "monetary savings" estimates (after converting them to dollar terms). In instances where separating costs was not possible, CBO incorporated a finding into its estimate of average time savings or average monetary savings, but not both.

Providers' Monetary Savings From Lower Spending on Administrative Staff and Equipment. CBO estimates that providers would spend less on administrative staff and billing systems under all of the illustrative single-payer options than they would under current law. Because of those savings, providers would be willing to accept some reduction in their payment rates without adjusting the supply of care they would provide. To quantify that effect, CBO constructed a "shadow price" that reflects both the changes in payment rates and the changes in providers' spending on administrative staff and equipment. The shadow price is the effective price that determines providers' desired level of care to supply. To estimate the shadow price, CBO estimated providers' spending on administrative activities under current law from a review of the research literature and then estimated how that spending would change under the single-payer options. (That estimate of the shadow price accounts for providers' monetary savings but not their time savings.)

CBO used different methods to estimate administrative savings from the results of different types of studies. For studies that compared administrative spending in the United States with such spending in countries that have single-payer systems, CBO used the difference in the two groups' share of providers' spending on administrative activities to calculate the change that would occur under a single-payer system. For studies that reported administrative spending by provider activity, CBO estimated which of those activities would be reduced or eliminated under a single-payer system. CBO then determined which activities would remain under a single-payer system and summed their costs. The difference between current administrative spending and new spending was calculated as the change in administrative spending from moving to a single-payer system. Lastly, for studies that reported total administrative spending and costs of billing and insurance-related (BIR) activities, CBO estimated that non-BIR administrative spending would remain fixed under a single-payer system and that BIR administrative spending would be reduced by half.

On the basis of its literature review, CBO estimates that hospitals currently spend 19 percent of net revenues on administrative spending, providers of physician and clinical services spend 15 percent of net revenues, and providers of other services spend 9 percent of net revenues. CBO projects that those percentages would continue to apply in 2030 under current law. Under an illustrative single-payer system, administrative spending would decline by 35 percent for hospitals (to 12 percent of net revenues), by 40 percent for providers of physician and clinical services (to 9 percent of net revenues), and by 33 percent for providers of other services (to 6 percent of net revenues), CBO estimates. Those reductions are based on the results of the different types of studies that CBO reviewed (for a list of those studies, see Appendix B).

CBO then incorporated providers' responses to reduced administrative spending into the overall supply responses stemming from changes in payment rates under the illustrative single-payer

options. Providers would shift resources from paying for administrative staff and equipment to providing care. Providers' responses to their administrative savings partially offset the effects of any reductions in payments—and amplify the effects of any increases in payments—on the amount of care provided.

For example, CBO estimates that hospitals would face a 13 percent cut in payment rates, on average, under the lower payment-rate scenario. On its own, that cut would lead hospitals to decrease the amount of care they would provide by 2.6 percent relative to the quantity projected under current law in 2030. (For more discussion of how CBO estimated providers' responses to changes in payment rates, see Section 4.) But after accounting for administrative savings, CBO estimates that hospitals would reduce the quantity of care they would provide by an average of 1.6 percent instead. Likewise, CBO estimates that under the higher payment-rate scenario, hospitals would not face a payment cut and would not change the quantity of care they would supply. But after accounting for hospitals' lower administrative spending, CBO estimates that they would actually increase the amount of care they would provide—by an average of 1.6 percent—relative to the supply of care in 2030 projected under current law (see Exhibit 6-2).

In the case of physician and clinical services, payment rates for those services in 2030 would be 7 percent lower, on average, under CBO's lower payment-rate scenario for a single-payer system than under current law. That difference would imply a 3.3 percent reduction in the amount of care that physicians would want to supply under the single-payer system, CBO estimates. After accounting for administrative savings to physicians, however, CBO estimates that supply would decrease by just 0.8 percent. Under the higher payment-rate scenario, physicians would experience a less than 0.5 percent increase in payment rates, and they would respond to that increase by increasing the quantity of care they would supply by 0.2 percent. But after accounting for administrative savings, CBO estimates that physicians would increase the quantity of care they would provide by 3.2 percent.

In the case of prescription drugs, CBO does not anticipate that spending on drugs would increase because of pharmaceutical companies' realizing administrative savings under a single-payer system. The reason is that CBO expects manufacturers to supply enough drugs to cover 100 percent of the prescriptions that patients would seek to have filled under both of the single-payer scenarios. (Drug manufacturers and developers might realize savings because of reductions in their administrative burdens, but those savings would accrue to the companies and would not change the supply of prescription drugs through 2030.) In addition, although pharmacists might realize savings from reductions in administrative activities, CBO does not project that they would fill more prescriptions as a result.

For other services, CBO anticipates that providers would face an 8 percent cut in payment rates under both scenarios and would respond by reducing their services by 3.8 percent relative to the amount projected for 2030 under current law.[48] But after accounting for the reduction in their

[48] CBO used the same payment rates for other services in both of its scenarios because, unlike hospital services or physician and clinical services, Medicare accounts for a larger proportion of spending on other services than private insurance does. Thus, many providers of other services are already paid Medicare rates.

Exhibit 6-2.

Providers' Response to Changes in Payment Rates Before and After Accounting for Their Savings From Lower Spending on Administrative Staff and Equipment, by Service Category, 2030

	Single-Payer Payment Rates as a Percentage of Current-Law Rates	Percentage Change in Supply Before Accounting for Providers' Administrative Savings	Percentage Change in Supply After Accounting for Providers' Administrative Savings
		Lower Payment-Rate Scenario (Options 2 and 3)	
Hospital Services	87	-2.6	-1.6
Physician and Clinical Services	93	-3.3	-0.8
Prescription Drugs[a]	72	0	0
Other Services[b]	92	-3.8	-2.7
		Higher Payment-Rate Scenario (Options 1, 4, and 5)	
Hospital Services	100	*	1.6
Physician and Clinical Services	100	0.2	3.2
Prescription Drugs[a]	94	0	0
Other Services[b]	92	-3.8	-2.7

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

* = between zero and 0.05 percent.

a. CBO expects that despite the decrease in drug prices, manufacturers would supply enough drugs to cover all of the prescriptions that patients would seek to have filled under both of the scenarios.

b. Includes dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, and durable medical equipment (such as eyeglasses and hearing aids). Home health care and skilled nursing facility care are sometimes classified as long-term services and supports, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.

administrative spending, CBO estimates that providers of other services would decrease the quantity of care they would supply by only 2.7 percent, on average.

For various reasons, providers' administrative spending in 2030 under current law could be larger or smaller than in CBO's baseline projections. On the one hand, although administrative costs have not decreased substantially in the past decade despite technological advances, administrative efficiencies could be gained in the coming decade as providers adapt to using information technology.[49] On the other hand, administrative burdens may increase as medical care becomes more complicated and expensive and as payers apply additional scrutiny to that care.

If a single-payer system imposed requirements that were substantially more burdensome for providers than the ones that Medicare uses under current law, CBO's estimates of administrative savings could be too large. The opposite could be the case if CBO has underestimated the

[49] See Abe Dunn, Joshua D. Gottlieb, and Adam Hale Shapiro, "Administration Above Administrators: The Changing Technology of Health Care Management," *AEA Papers and Proceedings*, vol. 110 (May 2020), pp. 274-278, https://doi.org/10.1257/pandp.20201031.

proportion of administrative activity that could be eliminated under the illustrative options. For instance, CBO's estimate that some administrative spending increases proportionally with the volume of administrative activity does not account for potentially nonlinear economies of scale.

Providers' Administrative Time Savings. Besides facing fewer administrative costs, providers would spend less time on administrative activities under a single-payer system, CBO estimates. As a result, they would be able to increase the amount of care they could provide to patients. CBO reviewed the research literature on providers' administrative burdens and converted all estimates of time savings into the number of hours per week that physicians and nurses spent on administrative activities. In cases where a study also compared the time that U.S. providers spent on administrative activities with that of a comparison group, such as Canadian physicians, CBO used the comparison to estimate the time savings from moving to a single-payer system. Other studies reported the time that providers spent on specific administrative activities, which allowed CBO to estimate which of those activities would be reduced or eliminated under a single-payer system. For example, physicians would not have to check multiple formularies when prescribing medications and would not have to seek prior authorization from multiple payers before referring patients for other services or to other specialists. On the basis of all of those studies, CBO estimates that physicians currently spend about 10 percent of their time on administrative activities, and nurses spend about 23 percent.

Under an illustrative single-payer system, the amount of time spent on administrative activities would be reduced by 48 percent for physicians, CBO estimates, and the amount of time spent on such activities for nurses would be reduced by 80 percent. Those reductions would increase the amount of care that those providers would be able to supply. (CBO incorporated several types of nurses into its analysis, but it lacked evidence about other types of providers, such as physician assistants. To the degree that other providers would realize large time savings too, CBO's estimates would understate total time savings.)

To incorporate time savings into the supply of physician and clinical services, CBO translated its estimate of physicians' time savings into spending using Medicare's relative value units for work and then inflated the spending figure into dollars using Medicare's conversion factor and current-law weighted-average payment rate for physicians.[50] In that way, CBO estimated that the time savings under a hypothetical single-payer system would allow each physician to provide an additional $10,700 in direct patient care in 2025. CBO inflated that number by the projected number of physicians in 2030 and by payment growth in the higher and lower payment-rate scenarios. As a result, CBO estimates that the additional care physicians would be able to provide in 2030 under the single-payer system would translate into an additional $12 billion in spending (or a 1.0 percent increase in physician care) under the higher payment-rate scenario and an additional $11 billion in spending (or a 0.9 percent increase in physician care) under the lower payment-rate scenario.

[50] To set payments for physician services, Medicare uses a physician fee schedule that is based on relative value units, which measure the amount of resources (work, practice expense, and malpractice) used to provide different services. The relative value units for a given service are multiplied by a dollar conversion factor to determine Medicare's fee.

CBO also translated nurses' time savings into spending on physician and clinical services or hospital services using an approach similar to that used for physicians. After calculating time savings, CBO scaled down spending based on the relative difference between the wages of physicians and of each type of nurse: nurse practitioners, registered nurses, and licensed practical nurses. CBO applied the results to the supply of both hospital services and physician and clinical services based on the distribution of settings where nurses worked in 2018.[51] CBO estimated that at 2020 payment rates, each nurse practitioner would be able to provide an additional $20,800 in direct care, and each registered nurse and licensed practical nurse would be able to facilitate an additional $13,900 and $9,000 in direct care, respectively. Those numbers were inflated by the projected number of nurses in 2030 and by the growth of payment rates in the higher and lower payment-rate scenarios. As a result, CBO estimates that the additional care nurses would be able to provide in 2030 would translate into an additional $51 billion in spending (or a 1.9 percent increase in hospital care and a 1.1 percent increase in care in physicians' offices) under the higher payment-rate scenario and an additional $45 billion in spending (or a 1.7 percent increase in hospital care and a 1.1 percent increase in care in physicians' offices) under the lower payment-rate scenario.

CBO estimates that the time savings for providers of other services would be half of those for nurses and doctors in physicians' offices. That estimate was then scaled down to reflect the volume of spending on other services relative to spending on physician and clinical services. As a result, CBO estimates that the additional services those providers would be able to supply in 2030 would translate into an additional $9 billion (or 1.1 percent increase in spending) for other services under the higher payment-rate scenario and an additional $8 billion (or 1.0 percent increase in spending) for other services under the lower payment-rate scenario.

Providers' Responses to Increased Demand

In addition to the factors considered above, CBO expects that providers would increase their supply of care in response to the greater demand for care under the illustrative single-payer options. Hospitals and physicians would find various ways to expand their capacity to provide services. However, they would not meet all of the new demand for care under the single-payer options, CBO estimates.

Under a single-payer system, as under current law, the amount of health care that people used would largely be determined by the amount supplied rather than the amount demanded. Under current law, for example, congestion resulting from excess demand plays a role in allocating available care for certain patients, such as Medicaid beneficiaries. In principle, Medicaid enrollees are covered by a broad set of benefits with little or no cost sharing, but in reality, they face hurdles to access, such as a limited set of doctors willing to see them. Additionally, some Medicare beneficiaries and people with private insurance do not seek care because they face high

[51] See Bureau of Labor Statistics, "Occupational Employment and Wages, May 2017: Nurse Practitioners" (March 30, 2018), www.bls.gov/oes/2017/may/oes291171.htm, "Occupational Outlook Handbook: Registered Nurses" (April 10, 2020), www.bls.gov/ooh/healthcare/registered-nurses.htm#tab-3, and "Occupational Outlook Handbook: Licensed Practical and Licensed Vocational Nurses" (April 10, 2020), www.bls.gov/ooh/healthcare/licensed-practical-and-licensed-vocational-nurses.htm#tab-6.

out-of-pocket costs.[52] All of those types of beneficiaries would benefit from greater access to treatment under the single-payer system. (For more details about how the options would affect people's access to care, see Section 15.)

To calculate the actual use of care under its illustrative single-payer options, CBO made a broad assessment of the potential for providers to increase supply in ways other than those considered elsewhere in this analysis and thereby reduce the remaining difference between demand and supply—given the extent of changes in federal law, expectations about state and local laws, and other factors. CBO's assessment was based in part on experience with smaller-scale coverage expansions, as well as estimates of how particular innovations in health care delivery systems might increase the supply of care. As a result of that assessment, CBO estimates that hospitals would increase their supply of care to cover 15 percent of the initial gap between the demand for and supply of hospital services under the single-payer options. For physician and clinical services and other services, CBO estimates that providers of those services would increase their supply of care to meet 20 percent of the initial gap between the demand for and supply of their services.

The difference in the magnitude of the responses by hospitals and physicians reflects the recognition that providers' responses to unmet demand would be hampered by capacity constraints and a limited labor supply. For example, it might be easier to increase the provision of care in outpatient settings by expanding care in clinics, making greater use of nonphysician professionals, or opening new urgent or retail care centers. CBO expects that the size of the percentage increase in the supply of care by hospitals and by physicians and other providers would be the same under all of the options, regardless of the size of the initial gap between supply and demand. CBO anticipates that providers and policymakers would feel additional pressure to expand the provision of services when the initial gap between supply and demand was higher and, likewise, that they would feel less pressure to expand service provision when there was less unmet demand.

CBO expects the supply of physician and clinical services to rise through a mix of measures that would increase providers' efficiency, such as reductions in slack capacity, shorter visits with patients, greater use of team-based health care, increased use of nurses and other providers who have less training than physicians, and a shift toward providing care in less intensive settings (such as retail clinics and urgent care centers). Providing care in less intensive settings or through professionals who have fewer years of training than physicians would tend to increase the amount of care available. Other changes could also increase providers' supply, such as advances in new medical technologies. But it is difficult for CBO to predict how those advances would roll out under current law and whether a single-payer system would affect the pace or nature of those advances.

Changes in the way that medical care is delivered could affect the quality of care. CBO is unable to determine whether quality would improve or worsen under the single-payer options, however,

[52] See Jeffrey T. Kullgren and others, "Nonfinancial Barriers and Access to Care for U.S. Adults," *Health Services Research*, vol. 47, no. 1, part 2 (February 2012), pp. 462-485, https://doi.org/10.1111/j.1475-6773.2011.01308.x.

in part because the ways in which quality would be monitored and reported are difficult to predict. (For more details about how the options would affect the quality of care, see Section 16.)

Like physicians, hospitals might be able to increase their supply of care to meet higher demand. Research on hospitals shows that for the nation overall, bed occupancy rates were at historic lows in 2013 and had been decreasing for some time, although they rose slightly before the coronavirus pandemic.[53] That finding suggests the possibility that the supply of hospital care could increase, although the number of providers could limit the supply of hospital care. Therefore, the key issues are to what extent hospitals would be willing and able to increase their supply of care under a single-payer system and whether enough health care workers would be available to staff those hospitals. Limited evidence from other transitions to systems that achieved universal coverage suggests that hospitals have increased their supply of care in response to increased demand.[54] Using some medical facilities and equipment more intensively outside traditional business hours would be one way to increase the supply of hospital services. CBO's assessment of what might happen under a single-payer system to the number of hospitals and the volume of hospital care provided is one of the most significant sources of uncertainty in this analysis.

Experience with the Affordable Care Act (ACA) may also offer suggestive evidence about how providers might respond to increases in demand for care. For example, researchers have found that providers responded to the ACA by increasing capacity, changing their practice styles, and redirecting patients to alternate settings (such as retail clinics) to meet additional demand.[55] Such changes can mitigate the impact that increased demand has on congestion in the supply of care. However, the coverage expansions under CBO's illustrative single-payer options would lead to a greater increase in the demand for care than the coverage expansions under the ACA did. In addition, the illustrative single-payer scenarios would reduce cost sharing, on average, for people who would otherwise be insured under current law, and the single-payer system would use restrictions on utilization, provider networks, and billing only to the extent that Medicare FFS does under current law. For all of those reasons, the increase in demand would be much larger than the one experienced under the ACA.

If patients encountered particular challenges with accessing providers in a given area or a given specialty under the single-payer system, state and local governments might respond with policy changes. State and local policies that affect the supply of care include rules about licensing providers (such as foreign medical professionals), establishing the scope of practice for each

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[53] See National Center for Health Statistics, "Table 89: Hospitals, Beds, and Occupancy Rates, by Type of Ownership and Size of Hospital: United States, Selected Years 1975-2015" (2017), www.cdc.gov/nchs/data/hus/2017/089.pdf (131 KB); and Medicare Payment Advisory Commission, *A Data Book: Health Care Spending and the Medicare Program* (June 2019), Chart 6-13, p. 65, http://medpac.gov/docs/default-source/data-book/jun19_databook_sec6_sec.pdf?sfvrsn=0 (PDF, 705 KB).

[54] See Ayako Kondo and Hitoshi Shigeoka, "Effects of Universal Health Insurance on Health Care Utilization, and Supply-Side Responses: Evidence From Japan," *Journal of Public Economics*, vol. 99 (March 2013), pp. 1-23, https://doi.org/10.1016/j.jpubeco.2012.12.004.

[55] See Jane B. Wishner and Rachel A. Burton, *How Have Providers Responded to the Increased Demand for Health Care Under the Affordable Care Act?* (Urban Institute, November 2017), www.urban.org/research/publication/how-have-providers-responded-increased-demand-health-care-under-affordable-care-act.

provider type, and limiting the number of hospital beds or facilities in an area. CBO expects that such changes could have the net effect of partially increasing the supply of care, which would help to address—but would not eliminate—the unmet demand for care.

Providers' Opt-Outs Under the Illustrative Options

CBO anticipates that under all five of its options, some providers would opt out of the single-payer system. In each option, the demand for care is estimated to exceed the supply of care by more than would be the case under current law. CBO expects that some high-income patients would be willing to obtain care from providers outside the single-payer system (and would be willing to pay the full price for that care) in order to skip queues in the system or to obtain additional services or higher-quality care. Providers who opted out of the single-payer system would not be able to receive payment from the system for any services they furnished.

CBO anticipates that the providers opting out of the single-payer system would most likely be ones providing either physician and clinical services or other services. It is possible that some hospitals and providers of long-term services and supports could opt out, perhaps in a few locations. But in its analysis, CBO treated all of the spending on services furnished by those providers as if it was furnished inside the single-payer system. It is unlikely that drug manufacturers would opt out of the single-payer system.

For its analysis of opt-outs under the single-payer options, CBO used the percentage of physicians who opt out of Medicare as a starting point. Specifically, CBO expects that the percentage of providers who would opt out of the single-payer system under the illustrative option with the smallest estimated gap between supply and demand (Option 1) would equal the percentage of physicians who opt out of Medicare.[56] A larger percentage of providers would opt out under the options with larger supply gaps, in CBO's assessment. Lacking evidence about the magnitude of that effect—but accounting for its direction and the differences in supply gaps among the options—CBO posited that each additional 1 percentage-point increase in the supply gap (relative to the option with the smallest gap) would increase the share of providers who would opt out by 0.1 percentage point.

[56] In 2016, 0.7 percent of physicians in clinical practice opted out of Medicare. For more information, see Cristina Boccuti and Tricia Neuman, *Private Contracts Between Doctors and Medicare Patients: Key Questions and Implications of Proposed Policy Changes*, Kaiser Family Foundation Issue Brief (January 2017), http://files.kff.org/attachment/Issue-Brief-Private-Contracts-Between-Doctors-and-Medicare-Patients (PDF, 734 KB).

CBO also anticipates that a larger share of providers would opt out under the options with the lower payment-rate scenario (Options 2 and 3).[57] CBO expects that providers who opted out of the single-payer system would charge rates substantially higher than the average rates that private insurers would pay under current law. To illustrate that effect, CBO used average payment rates for opt-out providers that were equal to three times the average rates paid by Medicare.

CBO estimated the total amount of spending for care delivered by opt-out providers by starting with its previous estimate of spending for the care that those providers would have delivered under the single-payer system. CBO scaled up that spending estimate to reflect the fact that providers would be paid higher rates outside the single-payer system. CBO also projected the increased quantity of services that such providers would be expected to furnish in response to the higher payment rates.[58] After removing the spending that would have occurred under the single-payer system from its estimates of federal subsidies for health care, CBO added the spending estimate that it adjusted for higher prices and higher quantity supplied outside the single-payer system to its estimates of national health expenditures and total out-of-pocket spending (because patients would pay the full price of those outside services).

[57] In CBO's analysis, 0.7 percent of physicians would opt out under Option 1, 1.3 percent under Option 2, 1.8 percent under Option 3, 1.3 percent under Option 4, and 1.3 percent under Option 5. The percentage of other providers opting out under the five options would be 0.7 percent, 0.8 percent, 1.2 percent, 1.1 percent, and 1.1 percent, respectively. One study found that a 10 percent increase in Medicaid fees led to a 1.08 percentage-point increase in the probability that a doctor would accept Medicaid; see Abe Dunn and others, *The Costs of Payment Uncertainty in Healthcare Markets*, Working Paper 2020-13 (Federal Reserve Bank of San Francisco, April 2020), https://doi.org/10.24148/wp2020-13. For physicians, payment rates in CBO's lower scenario are 8 percent lower than payment rates in the higher scenario. CBO applied one-fifth of the effect from the study of Medicaid fees to that difference in payment rates because it anticipates that providers would be less willing to opt out of the single-payer system than to opt out of Medicaid in a multipayer system. For other services, payment rates are the same in both of CBO's scenarios, so no adjustment was necessary.

[58] CBO used an elasticity of supply of 0.23 (versus an elasticity of supply of 0.45 for the rest of its analysis) to reflect the fact that providers outside the single-payer system might not be able to increase their supply of care as much as desired because of demand constraints.

Section 7.
How CBO Analyzed Changes in Payers' Administrative Spending

In addition to administrative spending by health care providers, administrative spending by payers (such as government health care programs or private insurers) would change under a single-payer system. To estimate the changes that would result from operating a single-payer system in 2030, CBO first projected payers' administrative spending in 2030 under current law and then estimated the spending that would be associated with administering a single-payer system in that year. The illustrative single-payer system that CBO analyzed would be less like private insurance and more like the fee-for-service (FFS) component of Medicare, in that it would do less to manage utilization, would spend much less on advertising and would not collect profits, would not be responsible for the taxes and fees that private insurers often pay, and would be able to spread its fixed costs over a large total amount of spending.

CBO also estimated administrative spending for current-law programs that would continue under the new system, such as Medicaid (under some of the illustrative options) and health care programs for veterans and military personnel. The sum of that spending and administrative spending for the single-payer system represents payers' total administrative spending under the new system. CBO subtracted the estimate of total administrative spending under the single-payer system from its estimate of payers' administrative spending under current law to estimate how the single-payer system would affect payers' administrative spending. (That analysis does not include the substantial start-up costs associated with establishing a single-payer system. For a discussion of those costs, see Section 17.)

Estimating Payers' Administrative Spending Under Current Law

To estimate what different payers would spend on administration in 2030 under current law, CBO used its baseline projections as well as historical estimates of the share of payers' total spending devoted to administrative activities from the national health expenditure accounts produced by the Centers for Medicare & Medicaid Services (CMS). Those estimates cover administrative spending by private health insurers, Medicare, Medicaid and the Children's Health Insurance Program (CHIP), and all other payers combined. CBO estimates that administrative spending would account for varying percentages of those payers' total spending in 2030 under current law:

- 12 percent of total spending on private health insurance,
- 8 percent of total spending on Medicare (including the FFS program, Medicare Advantage, and Medicare Part D plans),
- 2 percent of spending on Medicare FFS,
- 8 percent of spending on Medicaid and CHIP, and
- 15 percent of spending by all other payers.

Estimating Administrative Spending Under a Single-Payer System

CBO used data on the federal government's administrative spending for the Medicare FFS program as the starting point for estimating administrative spending under the illustrative single-payer options. CBO chose that approach because the single-payer system in the options would be administered similarly to the Medicare FFS program. CBO used a detailed accounting of Medicare's administrative spending from fiscal year 2019 as a basis for estimating the administrative spending of the illustrative single-payer system. (After accounting for changes in Medicare's spending from the conversion to the single-payer system, CBO calculated administrative spending using 2019 dollars and projected it forward to 2030 on the basis of projected changes in the growth of potential gross domestic product.) For a more detailed analysis, CBO divided that spending into four categories:

- Administrative spending that would be eliminated under a single-payer system;
- Administrative spending that would not increase with the number of providers, enrollment, or volume of claims and spending under a single-payer system;
- Administrative spending that would increase with the number of providers, enrollment, or volume of claims under a single-payer system; and
- New administrative spending under a single-payer system.

Administrative Spending That Would Be Eliminated Under a Single-Payer System. The administrative spending for Medicare that would largely cease under the illustrative single-payer system would include funds paid to the Social Security Administration (SSA) and spending by CMS to oversee and audit private plans operating in the Medicare Advantage and Medicare Part D programs (see Exhibit 7-1). Under current law, SSA collects premiums for Medicare Part B, ensures that beneficiaries have sufficient work history to be eligible for Medicare Part A, and determines whether people with disabilities are eligible for Medicare. The single-payer system in CBO's illustrative options would not charge premiums. (CBO's assumptions about administrative spending to finance the system are discussed in the next subsection.) And because all U.S. residents would be eligible for the single-payer system, CBO estimated that the process for determining residency and eligibility would be far simpler and less costly than the current process for determining Medicare eligibility, particularly adjudicating eligibility appeals for people with disabilities. Thus, CBO eliminated this category of spending in its analysis and constructed a separate estimate for eligibility determination under the single-payer system (discussed below in the subsection on new administrative spending).

Administrative Spending That Would Not Increase With a Single-Payer System. In CBO's assessment, several types of administrative spending would be the same for a single-payer system as for Medicare under current law regardless of increases in the number of providers, enrollment, or the volume of claims and spending under the single-payer system. Those fixed administrative expenditures include spending on research activities (such as collecting survey data, spending for a payment advisory commission, and spending on oversight and evaluation of demonstration programs) and administrative payments to the Treasury.

Exhibit 7-1.

How Administrative Spending for Medicare FFS Is Projected to Relate to Administrative Spending Under the Illustrative Single-Payer Options

Administrative Spending Category for Medicare FFS Under Current Law	Status of That Spending Under CBO's Illustrative Single-Payer Options	Scaling Factor
Funds paid to SSA for premium collection and disability determination; CMS's costs of interacting with private plans, including reviewing risk adjustment and auditing bids	Is eliminated	0
Funds paid to the Treasury to collect Medicare taxes; research budget; spending on medical innovation; administration of provider incentive programs	Continues but does not increase with the number of participating providers, enrollment, or the volume of claims and spending	Fixed Factor: 1.0
Provider surveys and certification, including HIPAA compliance and adding national provider identifiers	Increases with the number of participating providers	Provider Participation Factor: 1.24
Enrollee education programs; bidding for durable medical equipment; quality programs[a]	Increases with enrollment	Enrollment Factor: 9.32
General IT costs for accounting; salaries and rent for office space	Increases with enrollment or spending and with a fixed IT factor or other scaling factor	Enrollment Factor: 9.32 IT Factor or Other Scaling Factor: 0.75
Claims and appeals costs; contracting costs for processing claims[b]	Increases with enrollment, claims volume, a factor to reflect increased spending on drugs, and a health factor	Enrollment Factor: 9.32 Claims Factor: between 1.05 and 1.09 (based on the amount of additional spending in the scenario) Factor for Drugs and Dental, Vision, and Hearing Care: 1.29 Health Factor: 0.56
IT systems for processing claims[c]	Increases with enrollment, claims volume, a factor to reflect increased spending on drugs, a health factor, and a fixed IT cost factor	Enrollment Factor: 9.32 Claims Factor: between 1.05 and 1.09 (based on the amount of additional spending in the scenario) Factor for Drugs and Dental, Vision, and Hearing Care: 1.29 Health Factor: 0.56 IT Factor: 0.75
Quality improvement; fraud-reduction programs; program management[d]	Increases as a fixed percentage of spending or with potential gross domestic product	Spending on these administrative activities would be roughly 7 to 10 times larger under the single-payer system than it would be under Medicare FFS in 2030, CBO projects
Spending on LTSS and miscellaneous activities, such as federal spending on tools to reduce drug prices, spending to administer school-based services, and spending to verify eligibility for the single-payer system	Does not currently exist in Medicare FFS (and thus was estimated using evidence from other programs)	Not applicable

Data source: Congressional Budget Office.

CMS = Centers for Medicare & Medicaid Services; FFS = fee for service; HIPAA = Health Insurance Portability and Accountability Act; IT = information technology; LTSS = long-term services and supports; SSA = Social Security Administration.

a. "Quality programs" include such programs as the Medicare Shared Savings and Hospital Readmissions Reduction Program.

b. "Contracting costs for processing claims" are for Medicare administrative contractors.

c. "IT systems for processing claims" are for processing claims for Medicare Parts A and B.

d. "Quality improvement" refers to the quality improvement organizations (health quality experts, clinicians, and consumer organizations) that work to improve the quality of care for Medicare beneficiaries.

Under current law, the Treasury is responsible for collecting taxes that finance Medicare. For the purposes of this analysis, CBO assumed that administrative spending to finance the single-payer system would be similar to the funds that Medicare currently transfers to the Treasury to collect those taxes and verify eligibility. Although some aspects of financing the single-payer system could be more complicated than Medicare's current financing mechanism, others could be simplified. For instance, the Treasury would no longer be responsible for administrative activities related to Medicare Advantage, Medicare Part D, or Medicare enrollees who are also covered by Medicaid. CBO's estimates incorporate administrative spending to finance the single-payer system that is equal to the amount of such spending for Medicare under current law; the actual amounts would depend on the financing mechanism and could be higher or lower.

Administrative Spending That Would Increase With a Single-Payer System. Some administrative spending for Medicare would increase with the greater number of participating providers, enrollment, or volume of claims and spending under the illustrative single-payer system.

Provider Surveys and Certification. Spending that would change with the number of providers includes spending related to accreditation of providers or facilities (such as for Medicare's Provider Survey and Certification Program). CBO estimated that such spending would increase with the projected difference between the number of providers currently accepting Medicare payments and the number that would be likely to participate in the single-payer system.

Additional providers under the single-payer system include pediatricians, dentists, optometrists, and audiologists, as well as other providers who opt out of Medicare under current law. To estimate the single-payer system's spending for provider surveys and certification, CBO multiplied Medicare spending in that category by 1.24 (what CBO refers to as a scaling factor) to account for additional providers who would participate in the single-payer system, according to CBO's analysis.

Education Programs for Enrollees, Bidding for Durable Medical Equipment, and Quality Programs. Several small categories of Medicare spending under current law—such as spending to educate enrollees, operate a competitive bidding system to set payment rates for durable medical equipment, and administer programs that monitor the quality of care—would simply scale with the increased number of enrollees covered by the single-payer system. To create a scaling factor for that spending, CBO calculated the ratio of enrollment in the single-payer system to enrollment in Medicare Parts A and B. Enrollment in the single-payer system was estimated using the assumption that the single-payer system would cover all U.S. residents, including the Medicare population currently enrolled in private plans. CBO estimated that the weighted-average enrollment in Medicare Parts A and B was roughly 36 million in 2019, and the U.S. population was roughly 332 million. On the basis of those estimates, CBO calculated that spending for such activities would be roughly nine times as large in the single-payer system as in the Medicare FFS program.

General IT Costs for Accounting and Salaries and Rent for Office Space. For categories such as spending on Medicare's general information technology (IT) infrastructure for accounting and salaries and rent for office space, CBO estimates that spending would generally increase with the higher enrollment or spending under the single-payer system. (In that calculation, CBO

distinguished between general IT costs for accounting and costs related to IT for processing claims.) However, increases in IT costs would vary: Some costs would remain fixed, some would increase by a smaller percentage than the change in enrollment, and some would increase by the same percentage as the change in enrollment. Thus, CBO estimates that spending on IT infrastructure, maintenance, and personnel for accounting would not grow on a one-for-one basis with enrollment. On the basis of information from industry experts, CBO applied a scaling factor of 9.32 for the difference in enrollment and an IT scaling factor of 0.75. CBO also estimates that salaries and rent for office space would not grow on a one-for-one basis with enrollment. For such spending, CBO applied a scaling factor of 9.32 for the difference in enrollment and an "other" scaling factor of 0.75.

Claims and Appeals Costs and Contracting Costs for Processing Claims. For most claims-processing activities, such as contracting, adjudication, and appeals, CBO first scaled Medicare's costs by the greater enrollment under the single-payer system and then scaled the enrollment-adjusted costs by three additional factors. Those factors reflect how spending on claims relates to the increased volume of claims, differences in administrative activities, and differences in the average health of patients under the single-payer system. Specifically:

- An additional scaling factor—which varied from 1.05 to 1.09 depending on the scenario—was applied to reflect how administrative spending on processing claims for services covered by the Medicare FFS program would increase with the additional volume of claims in the single-payer system. Under all of the illustrative options, people would use more care (because of generally lower cost sharing and fewer restrictions on utilization, provider networks, and billing) and thus would incur more claims.[59]

- A scaling factor of 1.29 was applied to reflect additional spending incurred by the single-payer system to process claims for retail prescription drugs and additional covered benefits, such as dental, vision, and hearing care. (Under current law, claims for retail prescription drugs in Medicare are processed entirely by private insurers in Medicare Advantage and Medicare Part D. Thus, those costs are not reflected in administrative spending for Medicare FFS.)

- A scaling factor of 0.56 was applied to reduce the estimated costs of processing claims to reflect the assessment that the average beneficiary in the single-payer system would be younger and in better health than the average Medicare FFS beneficiary under current law and therefore would incur fewer and less complex claims. (That factor was developed on the basis of CBO's internal analysis of Medicare and commercial claims data.) Less complex claims are less costly to process because they involve fewer procedures and providers, are more likely to be billed correctly, and thus result in fewer amendments and denials.

[59] Based on interviews with industry experts, CBO estimates that administrative spending to implement the different cost-sharing requirements under the higher and lower scenarios would be negligible, because those changes would involve a one-time change to IT systems. Instead, administrative spending differs between the scenarios because of differences in the volume of claims that the single-payer system would process.

Medicare's accounting of claims and appeals costs also includes most of the costs that CMS incurs in determining payment rates for providers, such as costs to collect data, contract with researchers, survey providers, and engage with stakeholders and the public. Accordingly, CBO scaled those costs up with the factors described above to reflect its expectation that additional spending would be necessary to determine appropriate payment rates under a single-payer system.

IT Systems for Processing Claims. For IT systems related to claims-processing costs, CBO applied the enrollment, claims, drugs, and health factors described above and an additional factor to reflect its assessment that spending for information technology does not scale on a one-for-one basis, as spending for other things does.

Quality Improvement, Fraud Reduction, and Program Management. CBO estimated that spending on programs related to improving quality and controlling health care fraud and abuse would increase proportionally with total spending for the single-payer system. That estimate reflects CBO's assessment that the costs of monitoring a program like a single-payer system would probably be tied to the volume of spending for that program. Relatedly, CBO estimated that spending on program management—which in Medicare includes data-use fees, the National Medicare Education program, IT infrastructure, beneficiary and consumer outreach programs, ongoing research, and other activities—would increase proportionally with potential gross domestic product (GDP).

To project administrative spending on quality improvement and fraud reduction, CBO estimated the share of Medicare FFS spending devoted to those activities and multiplied that share by spending on personal health care by the single-payer system. CBO projected that administrative spending on those activities would be 7 to 10 times larger under the single-payer system (depending on the option) than it would be for Medicare in 2030 under current law.

CBO also anticipates that the single-payer system would be involved in monitoring and managing high-cost prescription drugs and drugs that are prone to fraud and abuse. Medicare currently monitors specific drugs, such as opioids, through its Health Care Fraud and Abuse Control program. CBO expects that such activities would increase proportionally with total spending, as described above. Although Medicare FFS does not currently have measures to reduce the use of high-cost prescription drugs, CBO anticipates that spending on those activities under the single-payer system would be roughly similar to what the Health Care Fraud and Abuse Control program spends on validating data from private plans under current law (an activity that would be eliminated under the single-payer system). Thus, CBO did not account for that spending separately.

New Administrative Spending Under a Single-Payer System. The final category of administrative spending that CBO projected under the illustrative single-payer system was spending for certain ongoing activities not currently covered by the Medicare FFS program.[60]

[60] Although CBO anticipates that the single-payer system would incur large administrative costs in its initial years, projections of start-up costs are outside the scope of this analysis. Instead, this paper focuses on the system's spending in 2030, 10 years after it is assumed to have been created and 5 years after it is assumed to have begun operating.

The largest example would be spending to administer a long-term services and supports (LTSS) benefit under Option 5 (which is discussed in the next subsection). Other categories of new administrative spending would include the costs of setting prescription drug prices (which is currently done by private plans through Medicare Part D), spending to verify people's U.S. residency, spending on nonemergency medical transport, and spending to administer school-based services that are currently covered by Medicaid.

CBO projected the costs of determining eligibility for the single-payer system by using an estimate of states' average per capita costs of determining residency for Medicaid and by scaling those costs up to the population covered by the single-payer system. However, because state Medicaid programs verify people's citizenship as well as their residency, those per capita costs for Medicaid are higher than a single-payer system's costs would be. CBO did not adjust those costs further, however, because the single-payer system might undertake additional spending on verifying eligibility. For the system's administrative costs of establishing the prices it would pay for prescription drugs, CBO anticipated that the federal government could use various tools—such as price setting based on comparative-effectiveness analyses or cost-effectiveness—to set the prices of new drugs introduced after 2025.

Estimating Administrative Spending for the Long-Term Services and Supports Benefit

For Option 5, in which the single-payer system would cover long-term services and supports, CBO augmented its estimate of administrative spending to include the costs of administering an LTSS benefit that would cover both institutional care and home- and community-based services (HCBS), as well as other costs associated with all LTSS services.

Institutional Care. To estimate the administrative spending that would be needed to administer a benefit for institutional care, CBO added up estimates of costs in 2019 for medical review, claims filing, and survey and certification of new providers. The costs for medical review and claims filing were estimated using information from the Medicare FFS program, and the costs for surveying and certifying new providers were estimated to be similar to those in Medicaid under current law. That total was projected forward to 2030 using the projected growth rate of potential GDP.

The costs of medical review refer to the costs of determining a person's eligibility for institutional care. CBO estimated medical review costs as a per capita cost that was scaled by CBO's projection of the number of people who would use institutional care under the single-payer system. The per capita cost of medical review was based on Medicare's average per capita cost of medical review in 2019. In CBO's estimate, medical review for institutional care would occur once a year under the single-payer system.

CBO also estimated the cost of filing claims for institutional care as a per capita cost, which it scaled up by its projection of the number of people who would use institutional care under the single-payer system. The per capita cost was based on the average cost of processing a Medicare claim in 2019. CBO multiplied that cost by 12 because claims for institutional care are often filed on a monthly basis.

The costs to survey and certify new institutional LTSS providers would be similar to Medicaid's costs under current law to conduct those activities for nursing homes, CBO estimates. It is

unlikely that many new providers would be added to the single-payer system or that the number of nursing home residents would substantially increase. CBO anticipates that with similar numbers of patients and providers, the costs of conducting those activities would be similar to Medicaid's projected costs under current law. The costs of those activities were estimated using 2019 Medicaid financial data and projected forward with the estimated growth of potential GDP.

Home- and Community-Based Services. To estimate the administrative spending that would be needed to administer an HCBS benefit, CBO summed the costs in 2019 of medical review, payments to fiscal intermediaries, and electronic visit verification systems for users of HCBS. Medicaid pays those costs for HCBS under current law. The 2019 per capita administrative spending amount was increased using the projected growth rate of potential GDP to arrive at a 2030 estimate, which was then scaled by CBO's projection of the number of HCBS users in the single-payer system in 2030.

Medical review costs refer to the costs of determining a person's eligibility for home- and community-based services. CBO estimated medical review costs as a per capita cost that was scaled by CBO's projection of the number of HCBS users under the single-payer system. The per capita cost of medical review was based on the average per capita cost of medical review in Medicare in 2019. In CBO's estimate, medical review for HCBS would occur once a year under the single-payer system.

CBO also estimated the cost of using a fiscal intermediary—an entity that would contract with the single-payer system and be responsible for all aspects of administering the HCBS benefit except medical review and electronic visit verification. Its activities would include certifying and conducting background checks on caregivers, determining caregivers' wages, assisting with patients' questions and complaints, processing claims, and processing payroll and taxes. To estimate the cost of a fiscal intermediary, CBO used an average monthly per capita amount based on information obtained from a subset of state Medicaid agencies. That amount was scaled by the projected number of HCBS users under the single-payer system and multiplied by 12 to produce an annual figure.

CBO used similar methods to estimate the cost of electronic visit verification, a method used to document that a provider of home- and community-based services has delivered the billed services to a patient. To estimate the cost of that activity, CBO used an average monthly per capita amount based on information obtained from a subset of the state Medicaid agencies that operate such programs. That amount was scaled by the projected number of HCBS users and multiplied by 12.

Other Administrative Spending Associated With All Long-Term Services and Supports. For all services covered by the LTSS benefit, CBO projected that the costs of fraud monitoring and quality initiatives currently undertaken by CMS would increase proportionally under the single-payer system with the increase in LTSS spending.

Likewise, the costs of IT infrastructure and support would need to increase with LTSS spending, but they would not scale on a one-for-one basis, similar to all other IT spending in the single-payer system. Specifically, IT costs associated with supporting claims processing would be lower because LTSS claims are easier to process than claims for other services. But the federal

government would face increased costs for interacting with fiscal intermediaries and the contractors that would provide electronic visit verification. CBO used CMS's IT costs for contracting with Medicare Advantage and Medicare Part D plans as a proxy for those costs, because they are the closest example of CMS's IT expenses associated with third-party coordination and claims processing. In CBO's assessment, the costs to the federal government under a single-payer system are likely to be similar to those costs to CMS under current law, because the new system's reductions in costs from not engaging in certain activities—such as not submitting detailed bid information or risk-adjustment data in the same way that Medicare Advantage and Part D plans do—would be offset by the increase in IT costs from processing a greater volume of claims. CBO estimated those IT costs using 2019 information and projected them forward to 2030 using the projected growth rate of potential GDP.

Estimating Administrative Spending for Current-Law Programs That Would Continue Under a Single-Payer System

Some current government health care programs would keep operating alongside the single-payer system and would continue to incur administrative costs under all five illustrative options. Additionally, under Options 1 through 4, which would not cover LTSS, Medicaid and private long-term care insurance plans would continue to exist solely to cover the same long-term service and supports that they provide to enrollees under current law. (The rest of the services that Medicaid provides would be delivered through the single-payer system instead.)

To estimate the administrative spending associated with Medicaid's remaining services, CBO used the 2019 Medicaid Financial Management Report to classify categories of administrative spending that would continue under Options 1 through 4.[61] CBO further divided that spending into activities that would require about the same amount of funding as under current law and activities that would be substantially smaller. For instance, all of Medicaid's costs for reviewing residents of institutions would continue as under current law because LTSS would still be covered by Medicaid under those options. For other categories of Medicaid's administrative spending, such as spending associated with paying claims, a much smaller share would persist. In all, CBO estimates that 25 percent of the administrative spending for Medicaid projected under current law would continue under Options 1 through 4. (Medicaid's administrative spending is projected to total $88 billion in 2030 under current law.)

In addition, under all of CBO's illustrative options, some programs that receive federal funding and run health care facilities would continue to operate alongside the single-payer system. They include programs of the Veterans Health Administration and the Indian Health Service, as well as the Department of Defense's health care program for military personnel. As a result, administrative costs for those programs would mostly continue.

Spending to administer private health insurance plans would be greatly reduced under all five illustrative options—from $254 billion in 2030 under current law to $2 billion in 2030 under Options 1 through 4 and zero under Option 5. All of that administrative spending under the options would be for private long-term care insurance plans. Such plans would be allowed to

[61] That report does not include spending by Medicaid managed care organizations, so CBO added in those costs to estimate Medicaid's total administrative spending (and scaled them based on the percentage of care that would remain covered by Medicaid under the single-payer system in Options 1 through 4).

operate under Options 1 through 4 because the single-payer systems in those options would not cover LTSS. (Private insurance would not be allowed to pay for services covered by the single-payer system.)

Section 8.
How CBO Analyzed the Effects of Including Long-Term Services and Supports in a Single-Payer System

This section describes long-term services and supports (LTSS) and the ways in which they are provided and paid for now. It also describes the methods that CBO used to estimate spending on LTSS under current law and under the illustrative single-payer system in Option 5, which includes an LTSS benefit.

Background on Long-Term Services and Supports

Long-term services and supports consist of health care and related services provided to people who have functional or cognitive limitations to help them perform routine daily activities over an extended period of time. Functional limitations restrict a person's ability to perform routine "activities of daily living" (ADLs), such as eating, bathing, and dressing, or "instrumental activities of daily living" (IADLs), such as paying bills and preparing meals. Cognitive limitations can also restrict a person's ability to perform such tasks. The conditions that lead to limitations vary with age: Among younger people, problems performing ADLs or IADLs are more likely to be caused by conditions such as intellectual or developmental disabilities, whereas among older people, Alzheimer's disease and other types of dementia are more likely to contribute to such limitations.[62]

Long-term services and supports differ from acute care services, which are intended to prevent, diagnose, or treat medical conditions. They also differ from post-acute care services, such as home health care services and skilled nursing facility (SNF) services, which are typically provided to help someone recover after a hospitalization. In contrast, LTSS are aimed at assisting with self-care needs over an extended period.

Diversity of LTSS. Long-term services and supports are diverse in many ways. They can be provided in various settings, including institutions (such as nursing homes) and community settings (such as a person's home or an adult day care center). The services themselves also vary widely. They can include nursing home care, personal care services (such as help with bathing or dressing), assistance with tasks around the home (such as cooking or cleaning), home modifications to accommodate functional limitations, and employment support.

LTSS can also involve many different kinds of providers. For example, people who use LTSS may receive paid care from long-term care workers, unpaid care from family members and friends, or a combination of paid and unpaid care. Paid LTSS caregivers include home health

[62] For more information about Alzheimer's disease and other types of dementia, see Julie Hugo and Mary Ganguli, "Dementia and Cognitive Impairment: Epidemiology, Diagnosis, and Treatment," *Clinics in Geriatric Medicine*, vol. 30, no. 3 (August 2014), pp. 421-442, https://dx.doi.org/10.1016/j.cger.2014.04.001; and National Academies of Sciences, Engineering, and Medicine, *Preventing Cognitive Decline and Dementia: A Way Forward* (National Academies Press, 2017), https://dx.doi.org/10.17226/24782.

aides, personal care aides, workers in the social services sectors, and nursing assistants.[63] The paid LTSS workforce generally receives low wages, and jobs typically require a high school education.[64] Although estimates of the formal LTSS workforce vary, some research suggests there may be shortages of workers.[65]

Sources of Coverage for LTSS. Long-term services and supports are seldom covered by health insurance because they are not intended to treat medical conditions, as acute care services are. For example, Medicare and private health insurance cover post-acute care—to help beneficiaries recover from acute conditions for which they are also receiving medical care—but generally do not cover LTSS.[66] In contrast, Medicaid and private long-term care insurance (LTCI) plans cover LTSS and do not require that the need for assistance be connected with an acute health care episode. (References to Medicaid coverage of LTSS in this paper include the Children's Health Insurance Program, or CHIP, which pays for a small amount of LTSS for its beneficiaries.)

Medicaid and LTCI plans cover LTSS for people who meet functional requirements, which are typically determined by limitations to ADLs. They also cover people with cognitive impairments, which may reflect a range of conditions, such as intellectual disabilities, traumatic brain injuries, and Alzheimer's or other types of dementia. Private LTCI plans generally require someone to have limitations to at least two ADLs or a cognitive impairment to qualify for covered services.[67] Functional requirements for LTSS under Medicaid vary broadly among

[63] For background on the paid LTSS workforce, see Kezia Scales, *It's Time to Care: A Detailed Profile of America's Direct Care Workforce* (PHI, January 2020), https://phinational.org/wp-content/uploads/2020/01/Its-Time-to-Care-2020-PHI.pdf (2.5 MB); and Sarah True and others, *COVID-19 and Workers at Risk: Examining the Long-Term Care Workforce* (Kaiser Family Foundation, April 2020), www.kff.org/coronavirus-covid-19/issue-brief/covid-19-and-workers-at-risk-examining-the-long-term-care-workforce. Family members and relatives can get paid under Medicaid waivers that allow for self-directed personal care. See Molly O'Malley Watts, MaryBeth Musumeci, and Priya Chidambaram, *Medicaid Home and Community-Based Services Enrollment and Spending* (Kaiser Family Foundation, February 2020), www.kff.org/medicaid/issue-brief/medicaid-home-and-community-based-services-enrollment-and-spending.

[64] See Bureau of Labor Statistics, "Occupational Outlook Handbook: Home Health Aides and Personal Care Aides" (September 1, 2020), www.bls.gov/ooh/healthcare/home-health-aides-and-personal-care-aides.htm; and Kezia Scales, *It's Time to Care: A Detailed Profile of America's Direct Care Workforce* (PHI, January 2020), https://phinational.org/wp-content/uploads/2020/01/Its-Time-to-Care-2020-PHI.pdf (2.5 MB).

[65] See Melissa M. Favreault, *Incorporating Long-Term Services and Supports in Health Care Proposals: Cost and Distributional Considerations* (Urban Institute, May 2020), p. 8, www.urban.org/research/publication/incorporating-long-term-services-and-supports-health-care-proposals.

[66] Medicare Advantage plans may provide LTSS benefits. For background on the number of plans and types of services offered, see Pedro L. Alcocer, Robert Eaton, and Pamela Laboy, *LTSS Services in Medicare Advantage Plans* (Milliman, February 2019), www.milliman.com/en/insight/ltss-services-in-medicare-advantage-plans.

[67] For background on long-term care insurance, see National Association of Insurance Commissioners, *A Shopper's Guide to Long-Term Care Insurance* (revised 2019), www.naic.org/documents/prod_serv_consumer_ltc_lp.pdf (15 MB).

states; the criteria are defined both in terms of limitations to ADLs and in terms of specific types of cognitive impairments.[68]

Medicaid is available only to people who meet certain financial requirements, including limits on their income and assets. There are various pathways that allow people with significant health or LTSS needs to deduct medical expenses from their income when determining eligibility for Medicaid. As a result, some people whose income is too high for them to qualify for Medicaid in other ways may be eligible because of significant health or LTSS spending through Medicaid's Medically Needy program.[69]

Private long-term care insurance plans are generally available to people who can afford them and choose to purchase such coverage, but the market for those plans is far from robust.[70] In addition, LTCI policies typically require medical underwriting, in which the insurer reviews an applicant's health status prior to issuing a policy. According to conversations with actuaries, only 10 percent of the U.S. population age 65 or older is enrolled in LTCI plans, and for those enrollees, the policies are expected to pay about one-third of total LTSS costs, on average.[71]

LTSS benefits under both Medicaid and private LTCI plans can be limited. Some institutional care is mandatory for states to provide under their Medicaid program and must be provided equally to all eligible applicants. Home- and community-based services (HCBS), however, are optional benefits provided under state Medicaid waivers, which allow states to provide different types of benefits to different types of enrollees. Nearly all states and Washington, D.C., have HCBS waivers, and in most states, those waivers provide a more expansive set of LTSS benefits to people with intellectual and developmental disabilities than to other groups. States can also impose caps on costs or enrollment for LTSS benefits, and most states have waiting lists for the waivers that include more expansive LTSS benefits, such as supported employment and

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[68] See Medicaid and CHIP Payment and Access Commission, "Functional Assessments for Long-Term Services and Supports," Chapter 4 in *Report to Congress on Medicaid and CHIP* (June 2016), www.macpac.gov/publication/june-2016-report-to-congress-on-medicaid-and-chip.

[69] For more information on Medicaid's financial eligibility requirements for LTSS, see Medicaid and CHIP Payment and Access Commission, "Eligibility for Long-Term Services and Supports" (accessed October 14, 2019), www.macpac.gov/subtopic/eligibility-for-long-term-services-and-supports.

[70] According to one study, annual premiums for long-term care insurance averaged about $2,700 in 2015. That study also found that the cost of LTCI policies was a barrier for most people who were surveyed and chose not to purchase LTCI. See LifePlans, *Who Buys Long-Term Care Insurance? Twenty-Five Years of Study of Buyers and Non-Buyers in 2015-2016* (prepared for America's Health Insurance Plans, January 2017), www.ahip.org/wp-content/uploads/2017/01/LifePlans_LTC_2016_1.5.17.pdf (753 KB). For a discussion of the challenges in the LTCI market, see the testimony of Marc A. Cohen, Clinical Professor of Gerontology, University of Massachusetts, Boston, before the Subcommittee on Health Care of the Senate Committee on Finance, "Enhancing the Affordability and Accessibility of Private Long-Term Care Insurance" (November 20, 2019), www.finance.senate.gov/imo/media/doc/20NOV2019CohenSTMNT.pdf (89 KB). According to that testimony, affordability is one factor contributing to the limited size of the private LTCI market, in which fewer than 60,000 individual policies were sold in 2018.

[71] A 2011 study found a similar share of the population age 65 or older enrolled in LTCI plans. See Richard W. Johnson and Janice Park, *Who Purchases Long-Term Care Insurance?* (Urban Institute, April 2011), www.urban.org/research/publication/who-purchases-long-term-care-insurance.

around-the-clock care.[72] In private LTCI plans, coverage of LTSS is typically subject to limits on daily and lifetime benefits, with benefits provided for only three to five years.[73]

Costs for LTSS. The types of payers and structures of benefits for LTSS mean that the concept of "insurance coverage" is fundamentally different for long-term services and supports than for other health care services. More than half of people who use paid LTSS have Medicaid coverage; for that population, minimal out-of-pocket spending is required for covered services. However, many services are only available to certain types of beneficiaries, and people may have to spend their income and assets down to meet Medicaid's eligibility criteria. Other people who use paid LTSS pay most or all of the costs for their care out of pocket. People who cannot afford to pay out of pocket rely on unpaid care or have unmet needs.[74]

The costs of LTSS can vary according to the type of service and setting, but for people without Medicaid coverage, LTSS can be expensive. According to one estimate, the national median private-pay price for a private room in a nursing home was about $102,000 a year in 2019.[75] The median costs of home- and community-based care were estimated to be lower: about $53,000 a year for home health aide services and about $20,000 a year for adult day care.[76] Because many people use more than one type of home- and community-based service, estimating the total costs of care per user can be challenging.

Data Availability and Gaps

Compared with other health care services discussed in this paper, a distinguishing feature of analyses of LTSS is a significant dearth of data on the use of those services (particularly among younger people) and a limited research literature (especially about the supply of LTSS workers in community settings). Other researchers have noted that such limitations are an impediment to

[72] States can apply for HCBS waivers to provide LTSS benefits in people's homes or in the community instead of in institutional settings. Those waivers may include restrictions on access to care that restrain the costs of LTSS, such as waiting lists or limits on an individual's amount of spending or number of visits. According to a 50-state survey, over three-quarters of states report a waiting list under their HCBS waiver. See MaryBeth Musumeci, Molly O'Malley Watts, and Priya Chidambaram, *Key State Policy Choices About Medicaid Home and Community-Based Services* (Kaiser Family Foundation, February 2020), www.kff.org/medicaid/issue-brief/key-state-policy-choices-about-medicaid-home-and-community-based-services.

[73] See Richard W. Johnson, *Who Is Covered by Private Long-Term Care Insurance?* (Urban Institute, August 2016), www.urban.org/research/publication/who-covered-private-long-term-care-insurance.

[74] For an estimate of unmet needs among adults age 65 or older living in the community, see Chris Pope, *Taking the Strain Off Medicaid's Long-Term Care Program* (Manhattan Institute, September 2020), www.manhattan-institute.org/limiting-medicaid-qualifications-long-term-care.

[75] See Genworth, "Cost of Care Survey" (accessed June 5, 2020), www.genworth.com/aging-and-you/finances/cost-of-care.html.

[76] Ibid. The cost of care for a home health aide was based on 44 hours per week, and the cost of adult day care was based on 5 days per week.

rigorous policy analysis.[77] To address the limitations in data and research, CBO used a wide variety of studies and surveys for its analysis and circulated preliminary results to a range of external experts early in the development of this paper. As a result, CBO's final estimates of the modeling parameters underlying its estimates of LTSS spending and use have received considerable scrutiny and have been revised accordingly. (The assistance of those external reviewers implies no responsibility for CBO's final choices about LTSS parameters and estimates. CBO continues to monitor new relevant research and will incorporate any pertinent findings in its analyses for future estimates.)

The shortage of data is an important factor that contributes to the limited research literature on LTSS. Data sources include individual- and provider-level surveys, administrative data from government programs, and the federal government's official national health expenditure (NHE) accounts. However, some of the key surveys only sample older populations, and other data sources only reflect services that are paid for by Medicare and Medicaid. As a result, there is limited information about the use of LTSS in the younger population or among people who are not covered by Medicare or Medicaid.

A number of national surveys include questions related to LTSS, but the information provided by those surveys can vary. The surveys differ in terms of the types of people they include (for example, some are restricted to certain age groups), the types of information available to identify people with LTSS needs, and whether they include use of and spending for LTSS. For instance, the Health and Retirement Study has data on LTSS needs and use only for people age 50 or older, and the National Health and Aging Trends Study only surveys Medicare beneficiaries age 65 or older.[78] The National Post-Acute and Long-Term Care Study (formerly known as the National Study of Long-Term Care Providers) is a nationally representative study of providers. It includes information about adult day care centers, home health agencies, hospices, nursing homes, and residential care communities, as well as about the characteristics of their users.[79] That study excludes several types of Medicaid providers, such as those providing care exclusively for patients with intellectual or developmental disabilities.

Administrative data are available to estimate Medicaid spending on LTSS. Overall expenditures are available through states' Medicaid statements of expenditures (CMS-64), which record

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[77] See Deborah D. Newquist, Marguerite DeLiema, and Kathleen H. Wilber. "Beware of Data Gaps in Home Care Research: The Streetlight Effect and Its Implications for Policy Making on Long-Term Services and Supports," *Medical Care Research and Review*, vol. 72, no. 5 (June 9, 2015), pp. 622-640, https://doi.org/10.1177/1077558715588437; Long-Term Quality Alliance, *Data Resources to Determine the LTSS Needs of Working Age Adults with Disabilities: Gaps and Recommendations* (July 2018), www.ltqa.org/white-paper-disability-data-resources; and Melissa M. Favreault, *Incorporating Long-Term Services and Supports in Health Care Proposals: Cost and Distributional Considerations* (Urban Institute, May 2020), www.urban.org/research/publication/incorporating-long-term-services-and-supports-health-care-proposals.

[78] For more information about those surveys, see University of Michigan, "The Health and Retirement Study" (accessed June 15, 2020), https://hrs.isr.umich.edu/about; and National Health and Aging Trends Study, "About NHATS & NSOC: At-a-Glance" (accessed October 28, 2020), www.nhats.org/researcher/about.

[79] See L. Harris-Kojetin and others, *Long-Term Care Providers and Services Users in the United States, 2015-2016*, Vital and Health Statistics Series 3, Number 43 (National Center for Health Statistics, February 2019), www.cdc.gov/nchs/data/series/sr_03/sr03_43-508.pdf (1.1 MB). In January 2020, the study was renamed the National Post-Acute and Long-Term Care Study.

aggregate spending on certain categories of LTSS and include payments to Medicaid-only providers, such as institutions caring for people with intellectual or developmental disabilities.[80] Such data exclude payments that managed care organizations make to LTSS providers for beneficiaries who receive services from Medicaid managed care.[81] Beneficiary-level data are available to some researchers through Medicaid claims data and include claims that show the use of LTSS among people receiving services from managed care organizations.[82] But those data only became available recently, and there are not yet any analyses of LTSS use or spending that rely on them. The Minimum Data Set and the Home Health Outcome and Assessment Information Set provide data on patients who use nursing facilities and home health services that are certified to participate in Medicare or Medicaid. Although both data sets provide rich data on patients' characteristics and outcomes, they do not include information on the costs of LTSS.[83]

The Centers for Medicare & Medicaid Services (CMS) produces the national health expenditure accounts, a source of information about total spending on health care in the United States by type of service and funding (including private, public, and individual payers). However, CMS's NHE accounts do not include home- and community-based services, unless they are financed by the federal government or delivered through agencies that are also licensed to provide home health services. To include spending on HCBS by all payers in its projections of national health expenditures, CBO added estimates of out-of-pocket spending on HCBS to its estimates of HCBS spending (see Appendix A).

Estimating Spending for LTSS Under Current Law

Because Medicaid is the predominant payer for long-term services and supports, CBO divided its estimates of LTSS spending and users under current law into two categories of payers: Medicaid (including CHIP) and all other payers. CBO's projections of LTSS spending are subject to considerable uncertainty.

LTSS Spending Financed by Medicaid. CBO's current-law baseline budget projections include projections of Medicaid spending—broken down by service category, including LTSS—and Medicaid enrollment. CBO uses CMS-64 forms that states submit to the federal government to

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[80] See Medicaid.gov, "Expenditure Reports From MBES/CBES" (accessed April 20, 2020), www.medicaid.gov/medicaid/financial-management/state-expenditure-reporting-medicaid-chip/expenditure-reports-mbescbes/index.html.

[81] The number of states operating managed Medicaid LTSS programs has grown in recent years. As of June 2019, 24 states had such programs. For more information, see Advancing States, "Managed Long Term Services and Supports" (accessed July 22, 2020), www.advancingstates.org/initiatives/managed-long-term-services-and-supports.

[82] Those data are known as the Transformed Medicaid Statistical Information System, or T-MSIS. For details, see Medicaid.gov, "Transformed Medicaid Statistical Information System" (accessed June 9, 2020), www.medicaid.gov/medicaid/data-systems/macbis/transformed-medicaid-statistical-information-system-t-msis/index.html.

[83] For more information on the Minimum Data Set, see Research Data Assistance Center, "Long Term Care Minimum Data Set (MDS) 3.0" (accessed July 10, 2020), www.resdac.org/cms-data/files/mds-3.0. For more information on the Home Health Outcome and Assessment Information Set, see Research Data Assistance Center, "Home Health Outcome and Assessment Information Set" (accessed July 10, 2020), www.resdac.org/cms-data/files/oasis.

calculate spending on institutional care and HCBS paid directly by the Medicaid program.[84] In addition, CBO accounts for LTSS spending by Medicaid managed care organizations using 2017 estimates from the research literature, updated on the basis of other spending trends for Medicaid.[85] Although CBO's baseline generally projects only federal spending on Medicaid (which is a joint federal and state program), the projections used in this analysis reflect Medicaid spending by all payers, including state governments and individuals who are required to remit a portion of their income to the state to cover some of the costs of LTSS. (Payments by individuals are included to the extent that they are captured by Medicaid administrative data.)

CBO's baseline usually includes home health care as a type of HCBS. However, for the purposes of this analysis, CBO subtracted spending on home health care from its HCBS baseline because home health services would be covered by the single-payer system under all five of CBO's illustrative options. The categories that remain in HCBS include spending on personal care services, private-duty nursing, and other spending that states classify as HCBS.

CBO estimates that Medicaid spending for HCBS totals $105 billion in 2020, and Medicaid spending for institutional care totals $68 billion (see Exhibit 8-1). By 2030, that spending is expected to grow to $160 billion for HCBS and $80 billion for institutional care. The increase in Medicaid spending over that 10-year period reflects the projected growth of payment rates for LTSS providers, projected enrollment in Medicaid by eligibility group, and the assumption that LTSS will continue a longstanding shift from institutions to community settings.[86]

Significant uncertainty exists, however, about whether the shift in LTSS from institutions to the community will continue and, if so, at what pace. To the extent that some people with extensive LTSS needs can only be served in an institutional setting, there may be a limit to the trend of moving toward community settings. If such a limit exists, it is unclear when that limit may be reached. Also unclear is whether technological developments will increasingly make it possible for people who would otherwise receive care in institutions to move into community settings.

CBO estimated the number of LTSS users with Medicaid coverage by dividing total Medicaid spending for LTSS by an estimate of per capita spending for LTSS users (which was based on Medicaid claims). Using that approach, CBO estimates that 4.9 million Medicaid beneficiaries use HCBS in 2020, and 0.9 million use institutional care (see Exhibit 8-1). By 2030, CBO projects, the number of HCBS users in Medicaid would grow to 5.8 million under current law, and the number of users of institutional care would be largely unchanged.

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[84] See Medicaid.gov, "Expenditure Reports From MBES/CBES" (accessed April 20, 2020), www.medicaid.gov/medicaid/financial-management/state-expenditure-reporting-medicaid-chip/expenditure-reports-mbescbes/index.html.

[85] See Elizabeth Lewis and others, "The Growth of Managed LTSS Programs: A 2017 Update" (Truven Health Analytics, January 2018), www.medicaid.gov/medicaid/downloads/mltssp-inventory-update-2017.pdf (2.5 MB); and other reports listed at Medicaid.gov, "Managed Long Term Services and Supports" (accessed April 20, 2020), www.medicaid.gov/medicaid/managed-care/managed-long-term-services-and-supports/index.html.

[86] For historical trends in HCBS spending as a percentage of total Medicaid spending for LTSS, see Steve Eiken and others, *Medicaid Expenditures for Long-Term Services and Supports in FY 2016* (IBM Watson Health, May 2018), Figure 8, www.medicaid.gov/sites/default/files/2019-12/ltssexpenditures2016.pdf (6.9 MB).

Exhibit 8-1.

Spending for and Users of Long-Term Services and Supports Under Current Law, by Setting and Payer, 2020 and 2030

	Community Settings[a]		Institutions	
	2020	2030	2020	2030
	LTSS Spending Under Current Law (In billions of dollars)[b]			
Medicaid[c]	105	160	68	80
Other Payers[d]	52	81	76	104
Total Spending	**158**	**241**	**144**	**184**
	LTSS Users Under Current Law (In millions)			
Medicaid Beneficiaries	4.9	5.8	0.9	0.9
Other	1.0	1.2	1.0	0.9
Total Users	**5.8**	**6.9**	**1.9**	**1.8**

Data source: Congressional Budget Office, based on analysis of administrative data from Medicaid, the National Post-Acute and Long-Term Care Study, the national health expenditure accounts, Genworth Cost of Care Surveys, and estimates from Melissa M. Favreault, *Incorporating Long-Term Services and Supports in Health Care Proposals: Cost and Distributional Considerations* (Urban Institute, May 2020), p. 7, www.urban.org/research/publication/incorporating-long-term-services-and-supports-health-care-proposals. See www.cbo.gov/publication/56811#data.

LTSS = long-term services and supports.

a. This category consists of home- and community-based services, excluding home health care (which CBO included in the category of "other services" in its analysis of a single-payer system).

b. The spending shown here excludes spending to administer LTSS benefits.

c. Medicaid spending includes spending by the federal and state governments under Medicaid as well as a small amount of LTSS spending by the Children's Health Insurance Program. It also includes spending by enrollees who are required to remit a portion of their income to the state to cover some of the costs of LTSS. (Payments by individuals are included to the extent that they are captured by administrative data for Medicaid and the Children's Health Insurance Program.)

d. Spending by other payers includes payments that individuals make out of pocket and payments by private long-term care plans, the Department of Defense, the Department of Veterans Affairs, and state and local governments. Spending by institutions also includes philanthropic support and income received by nursing homes.

LTSS Spending Not Financed by Medicaid. Spending for institutional care that is not financed by Medicaid includes payments that individuals make out of pocket and payments by private long-term care insurance plans, the Department of Defense, the Department of Veterans Affairs, and state and local governments. Such spending is included in CMS's national health expenditure accounts and in CBO's projections of NHE (see Appendix A). CBO estimates that such spending totals $76 billion in 2020 and would grow to $104 billion by 2030 under current law (see Exhibit 8-1).[87] CBO's projections incorporate a modest decline in the number of institutional LTSS users because of the shift toward community-based care; the increase in spending for institutional LTSS reflects projected growth in the costs of institutional care.

[87] Those figures include philanthropic support and income received by nursing homes.

CBO estimated the number non-Medicaid beneficiaries using institutional LTSS on the basis of data from the National Post-Acute and Long-Term Care Study. It adjusted those data for several factors: to reflect the fact that the data represent the population of institutional LTSS users on a given day rather than over a full year, to remove people who only used short-term services in a nursing facility, and to account for providers that may have been excluded from the survey.[88] To project the number of users in 2030, CBO assumed that the number of people using institutional care not paid for by Medicaid would fall at the same rate as the number of Medicaid users of institutional care. As a result, CBO estimates that in 2020, roughly 1 million people use institutional long-term services and supports that are financed outside of Medicaid. That number is projected to decline to 900,000 people by 2030.

CMS's national health expenditure accounts include some, but not all, of the HCBS spending funded by payers other than Medicaid. To estimate the full range of spending on HCBS, CBO surveyed the research literature to develop an estimate of the number of people using HCBS who had Medicaid coverage. On the basis of those studies, CBO estimates that about 80 percent of people receiving paid help in the community (including in people's homes) are enrolled in Medicaid.[89] Thus, CBO estimates that 1.0 million people without Medicaid use paid HCBS in 2020; it expects that number to grow to 1.2 million by 2030 under current law (see Exhibit 8-1). Those estimates incorporate the assumption that the share of people receiving paid help in the community who were enrolled in Medicaid would stay the same throughout the next decade under current law.

CBO estimated costs per user of non-Medicaid HCBS based on a 2019 survey of long-term care insurers and updated that number to 2020 and 2030 using its own projections of the growth of the employment cost index (which measures the change in labor costs).[90] Altogether, CBO estimates that spending on HCBS by payers other than Medicaid (which primarily consists of out-of-pocket spending) would grow from $52 billion in 2020 to $81 billion in 2030 under current law (see Exhibit 8-1).

Uncertainty About Future Use of LTSS Because of the Coronavirus Pandemic

The current coronavirus pandemic is a significant source of uncertainty for CBO's baseline projections of LTSS spending under current law and, as a result, for its estimates of the effects of covering LTSS under an illustrative single-payer system. Although CBO's modeling

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[88] For example, the survey excludes Medicaid-only providers and assisted living facilities. See L. Harris-Kojetin and others, *Long-Term Care Providers and Services Users in the United States, 2015-2016*, Vital and Health Statistics Series 3, Number 43 (National Center for Health Statistics, February 2019), www.cdc.gov/nchs/data/series/sr_03/sr03_43-508.pdf (1.1 MB).

[89] See Melissa M. Favreault, *Incorporating Long-Term Services and Supports in Health Care Proposals: Cost and Distributional Considerations* (Urban Institute, May 2020), p. 7, www.urban.org/research/publication/incorporating-long-term-services-and-supports-health-care-proposals. That study cites research showing that a total of 8.3 million people used LTSS in 2016 and 3.7 million people with Medicaid coverage used HCBS in 2013. CBO updated the number of Medicaid beneficiaries using HCBS in 2013 for 2016 on the basis of growth in HCBS spending in the NHE accounts, which resulted in an estimate of 4.8 million people with Medicaid coverage using HCBS in 2016. To estimate the percentage of LTSS users who were receiving HCBS, CBO subtracted its estimate of 2.4 million users of institutional care in 2016, which left 5.9 million people using HCBS.

[90] See Genworth, "Cost of Care Survey" (accessed June 5, 2020), www.genworth.com/aging-and-you/finances/cost-of-care.html.

incorporates economic and population projections that have been updated for the pandemic, the current situation is likely to change the demand for, supply of, and delivery of LTSS in numerous ways. The uncertainty about those changes is substantial.

Deaths from COVID-19 have occurred disproportionately among residents of nursing facilities, so people may be more reluctant to use institutional LTSS in the future than they were before the pandemic.[91] How the pandemic might affect the demand for institutional LTSS is unclear, however, for two reasons. First, people may have similar concerns about using home- and community-based services if the caregivers work in multiple homes. Second, it is unclear to what extent the population living in nursing facilities could be cared for in the community. Many residents of institutions have significant needs for health care, social services, and housing, and meeting all of those needs in the community may not be possible. In addition, there may be insufficient numbers of HCBS workers to provide care for people who wish to receive HCBS instead of institutional care. Finally, under current law, some people who would prefer to move from institutional care to HCBS may be eligible for Medicaid coverage of institutional care but not for Medicaid coverage of HCBS, or they may be unable to receive HCBS through Medicaid because of states' waiting lists or other policies designed to limit total spending on HCBS.

The costs of providing both institutional LTSS and home- and community-based services are likely to rise as patients and policymakers demand increased safeguards and personal protective equipment. The LTSS sector is also likely to be subject to significant new regulations, which would further increase the costs of providing care.

CMS has encouraged state Medicaid programs to consider mechanisms to increase the supply of HCBS workers during the pandemic, which would tend to reduce costs per user. In response, states have taken various emergency actions, such as allowing more types of people to provide personal care services, allowing the use of self-directed services (which let patients to pay family and friends for care, in some circumstances), and providing a broader set of services via telehealth.[92] Whether states will preserve those changes after the pandemic has subsided is unclear. In the case of telehealth, it is also unclear what technologies will emerge to make telehealth increasingly feasible as a delivery system for HCBS.

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[91] For a discussion of the impact of COVID-19 on nursing homes, see Priya Chidambaram, "Key Questions About the Impact of Coronavirus on Long-Term Care Facilities Over Time" (Kaiser Family Foundation, September 1, 2020), www.kff.org/coronavirus-covid-19/issue-brief/key-questions-about-the-impact-of-coronavirus-on-long-term-care-facilities-over-time; and testimony of David C. Grabowski, Professor, Department of Health Care Policy, Harvard Medical School, before the Subcommittee on Health of the House Committee on Ways and Means, "Examining the COVID-19 Nursing Home Crisis" (June 25, 2020), https://waysandmeans.house.gov/sites/democrats.waysandmeans.house.gov/files/documents/David%20Grabowski_Testimony.pdf (237 KB)

[92] See MaryBeth Musumeci, Rachel Dolan, and Madeline Guth, "State Actions to Sustain Medicaid Long-Term Services and Supports During COVID-19" (Kaiser Family Foundation, August 26, 2020), www.kff.org/medicaid/issue-brief/state-actions-to-sustain-medicaid-long-term-services-and-supports-during-covid-19. For more information about self-direction, which permits beneficiaries to choose their own caregivers (including legally responsible relatives), see Medicaid.gov, "Self-Directed Services" (accessed April 27, 2020), www.medicaid.gov/medicaid/long-term-services-supports/self-directed-services/index.html.

Another area of uncertainty is whether people who survived serious cases of COVID-19 will experience ongoing health needs and, if so, whether those needs would continue through 2030. Such needs could increase the demand for LTSS after people had recovered from the acute illness.

The pandemic may also have long-term effects on the labor force for low-skilled professions and on patterns of immigration. Such effects could either increase or decrease the potential supply of LTSS workers.

CBO's Illustrative Single-Payer LTSS Benefit

In the fifth of its illustrative single-payer options, CBO specified a broad LTSS benefit that would be available to anyone who had one or more limitations to either activities of daily living or instrumental activities of daily living. Social workers or health care providers would certify people's eligibility for the LTSS benefit, which would cover institutional care and HCBS. (For more details about the various features of CBO's illustrative options, see Section 2.)

Several existing legislative proposals for single-payer systems would retain Medicaid to cover institutional LTSS and include only HCBS in the single-payer benefit. CBO did not incorporate that feature into Option 5 because it was unclear how such a policy could be implemented without creating incentives for state Medicaid programs to stop funding institutional care to the extent that they could. If the single-payer system covered HCBS but required states to continue providing institutional care through Medicaid, states would have an incentive to eliminate their entire Medicaid program. If that occurred, it is not clear what would happen to people living in nursing facilities or who would pay for their care.

Under Option 5, the single-payer system would cover any home- and community-based services that would be offered by any state Medicaid program under current law. For example, employment supports (services that specifically support an employment goal or outcome for people who meet state-specified eligibility criteria) would become available much more broadly. Personal care services would also become more widely available under that single-payer option, and beneficiaries would have the ability to self-direct their services. In 2018, 34 states offered personal care services as a benefit in their Medicaid programs, and 20 states allowed self-direction for that benefit.[93] There would not be explicit limits on the quantity or costs of LTSS that people could use, but the single-payer system would keep some cost containment strategies used under current law (see Exhibit 8-2). For example, patients would need a detailed plan of care to ensure that the services they received were appropriate and necessary. In addition, electronic verification of visits would be used to minimize fraud.

The single-payer system would not require any cost sharing for LTSS under Option 5. In addition, there would be no private long-term care insurance. The Veterans Health Administration would continue to offer LTSS to its beneficiaries with the same benefits and cost sharing as under current law. CBO expects that all LTSS providers would participate in the

[93] See Molly O'Malley Watts, MaryBeth Musumeci, and Priya Chidambaram, *Medicaid Home and Community-Based Services Enrollment and Spending* (Kaiser Family Foundation, February 2020), www.kff.org/medicaid/issue-brief/medicaid-home-and-community-based-services-enrollment-and-spending.

Exhibit 8-2.

Cost Containment Strategies That State Medicaid Programs Use to Limit Spending on HCBS and Their Role in CBO's Illustrative Option 5

Cost Containment Strategy Under Current Law	Description	Included in CBO's Illustrative Option 5
Certify Eligibility	Determine who meets the functional criteria needed to qualify for the long-term services and supports benefit	Yes
Limit Use or Costs per Person	Limit the number of visits, the duration of services, or the total costs for a given person	No
Target Benefits	Have different conditions trigger eligibility for different benefits within functionally eligible populations	No
Impose Waiting Lists	Impose limits on the number of people who can receive a specific service or group of services	No
Process and Review Claims for Medical Necessity	Ensure that services are appropriate and necessary, generally by administering a detailed plan of care	Yes
Use Electronic Visit Verification or Enhanced Monitoring	Use electronic methods to track services and their duration to minimize fraud	Yes

Data source: Congressional Budget Office.

HCBS = home- and community-based services.

single-payer system, because the payment rates would be equal to or greater than the rates that would be paid under current law.

Estimating the Effects of a Single-Payer LTSS Benefit on Spending for Institutional Care

On the basis of findings in the research literature, CBO expects that the number of users of institutional care would not change under its illustrative single-payer system.[94] That expectation is consistent with surveys that show that the majority of people prefer to stay in their homes as they age.[95] In addition, the national average occupancy rate for nursing homes was 80 percent in 2019, suggesting that there is not a shortage of supply currently.[96] It is possible that the number

[94] One study, for example, found that as states expanded their Medicaid nursing home coverage, there was no increase in utilization. See David C. Grabowski and Jonathan Gruber, "Moral Hazard in Nursing Home Use," *Journal of Health Economics*, vol. 26, no. 3 (May 2007), pp. 560-577, https://doi.org/10.1016/j.jhealeco.2006.10.003. Another study assessed how differences in Social Security income among otherwise similar beneficiaries (resulting from different birth years) affected their use of long-term care; it found that an increase in income led to an increase in the use of home-based care and a decrease in the use of nursing home care. See Gopi Shah Goda, Ezra Golberstein, and David C. Grabowski, "Income and the Utilization of Long-Term Care Services: Evidence From the Social Security Benefit Notch," *Journal of Health Economics*, vol. 30, no. 4 (July 2011), pp. 719-729, https://doi.org/10.1016/j.jhealeco.2011.04.001. The authors argue that one reason for that result may be that home-based care is a preferred substitute for nursing home care.

[95] See, for example, Joanne Binette and Kerri Vasold, *2018 Home and Community Preferences Survey: A National Survey of Adults Age 18-Plus* (AARP, revised July 2019), www.aarp.org/research/topics/community/info-2018/2018-home-community-preference.html.

[96] See Kaiser Family Foundation, "State Health Facts: Certified Nursing Facility Occupancy Rate" (accessed October 28, 2020), www.kff.org/other/state-indicator/nursing-facility-occupancy-rates.

of users of institutional care could be slightly higher under the illustrative single-payer system than under current law, given that such care would be available at no cost, without limits on income or assets, and potentially to a population with fewer needs (as few as one ADL or IADL limitation). However, it is also possible that with HCBS more widely available, the number of users of institutional care could be slightly lower than under current law, if people who lived in institutions and were able to live in the community decided to use HCBS instead.

Per capita spending for institutional care would be the same under Option 5 as under current law, CBO estimates, because there would be no change in the scope of services or the complexity of the average user of institutional LTSS, and because payment rates would be set to equal the weighted average of current-law payment rates. As a result, CBO estimates that there would be no change in total spending for institutional care under Option 5, although spending would shift from nonfederal payers to the federal government.

Estimating the Effects of a Single-Payer LTSS Benefit on Spending for Home- and Community-Based Care

To estimate total spending on home- and community-based services under the single-payer system in Option 5, CBO multiplied the projected per-user cost of the HCBS benefit by the number of projected users. No similar benefit exists under current law, so CBO started with Medicaid's costs per HCBS user and adjusted them to reflect the single-payer system's payment rates and the expanded scope of benefits relative to current-law Medicaid. CBO then estimated the number of people who would be eligible for the benefit, the percentage of the eligible population that would use the benefit, and how those people's use of HCBS would compare with that of HCBS users under current-law Medicaid. CBO also evaluated whether enough care would be available to meet the projected increase in demand for HCBS under Option 5.

Adjusting the Medicaid Per-User Cost for Single-Payer Payment Rates. CBO assumed that payment rates for HCBS would be 8 percent higher under the single-payer system in Option 5 than they would be under current law. That increase is based on CBO's expectation that the single-payer system would have payment rates more like those of Medicare under current law. It is difficult to project what Medicare would pay for HCBS because the program does not cover those services under current law. However, CBO compared Medicare and Medicaid payment rates for other types of health care professionals and concluded that, on average, Medicare pays 8 percent more than Medicaid for similarly trained professionals providing similar services. CBO expects that if the single-payer system was establishing payment rates for new types of professionals and services, such as LTSS, it would still pay rates that were more representative of Medicare fee-for-service rates and higher than those paid by Medicaid.

Adjusting the Medicaid Per-User Cost for the Expanded Scope of Benefits. The HCBS benefit under Option 5 is similar to those described in legislative proposals but is unlike the benefit offered by any payer of LTSS under current law. Although some states may offer similar benefits to small groups of Medicaid beneficiaries who are enrolled in special waiver programs, no state provides such a broad HCBS benefit to all Medicaid enrollees. Option 5's benefit would be available to all beneficiaries of the single-payer system who met the functional criteria, and there would be no limits on the amount of services used, their costs, or the number of users.

To estimate the per-user cost of such a benefit, CBO made two adjustments to the per-user cost of Medicaid HCBS under current law to account for how that cost might change under Option 5:

- Eliminating states' ability to use explicit caps on the amount of services available or spending accrued, and

- Making all HCBS benefits mandatory for all Medicaid beneficiaries.

CBO estimates that almost half of Medicaid spending on HCBS occurs in states that have per-user caps to limit their spending on those services.[97] To estimate the increase in spending that would result from eliminating those caps, CBO analyzed what happened when Maine's Medicaid program adopted a cap on personal care services in 2015. In that year, Medicaid spending on personal care declined by 4 percent in Maine, whereas it increased by 7 percent in similar states that did not make any changes to their HCBS programs. As a result, CBO estimates that eliminating states' caps would increase per-user HCBS costs for Medicaid by 11 percent in affected states. The net effect nationwide of eliminating those caps would be to increase the per-user cost of Medicaid HCBS by roughly 5 percent.

Under current law, states can offer different benefit packages to different groups of Medicaid beneficiaries through waiver programs, and they can restrict access to those programs by limiting the number of recipients and creating a waiting list. About 800,000 people were on such waiting lists in 2018, and the number grew at an average rate of 10 percent a year between 2002 and 2018.[98] People on HCBS waiting lists who are eligible for Medicaid generally already receive some long-term services and supports through Medicaid—usually home health or personal care. Once they moved off the waiting list, they would become eligible for a much broader set of benefits, which would increase per-user costs. In other cases, people may not be eligible for expanded HCBS benefits because those benefits are only available to populations with a different type of impairment. Per-user costs would increase if such people became eligible for the full scope of benefits. Requiring all states to provide full access to a set of HCBS benefits that is currently available only to subsets of beneficiaries in selected states would increase the per-user cost of delivering Medicaid HCBS by about 60 percent in 2030 (if there was no change in the level of need for HCBS users).

The net effect of those two adjustments caused CBO's projected per-user cost of Medicaid HCBS in 2030 to increase from about $30,000 to about $50,000. Those costs reflect total Medicaid spending per user of HCBS. As described below, CBO also adjusted the Medicaid per-user cost to reflect the single-payer system's expected payment rates for HCBS and to reflect

[97] For more information about states' HCBS programs, see MaryBeth Musumeci, Molly O'Malley Watts, and Priya Chidambaram, *Key State Policy Choices About Medicaid Home and Community-Based Services* (Kaiser Family Foundation, February 2020), www.kff.org/medicaid/issue-brief/key-state-policy-choices-about-medicaid-home-and-community-based-services; and Molly O'Malley Watts, MaryBeth Musumeci, and Priya Chidambaram, *Medicaid Home and Community-Based Services Enrollment and Spending* (Kaiser Family Foundation, February 2020), www.kff.org/medicaid/issue-brief/medicaid-home-and-community-based-services-enrollment-and-spending.

[98] See MaryBeth Musumeci, Molly O'Malley Watts, and Priya Chidambaram, *Key State Policy Choices About Medicaid Home and Community-Based Services* (Kaiser Family Foundation, February 2020), www.kff.org/medicaid/issue-brief/key-state-policy-choices-about-medicaid-home-and-community-based-services.

the characteristics of people who would be eligible for LTSS benefits under the single-payer system but not under Medicaid.

There is significant uncertainty about how much the Medicaid per-user cost would change if the HCBS benefit was broadened as described above because not all people with access to the expanded benefit would necessarily use those services. Although there are data about differences between costs for people with access to different types of Medicaid HCBS, it is unclear to what extent those costs reflect differences in the availability of services rather than differences in the need for services.

Estimating the Number of People Eligible for the Single-Payer HCBS Benefit. CBO estimated the number of HCBS users under the illustrative single-payer system in Option 5 by estimating the number of people who would be eligible for the HCBS benefit under that system and the type of LTSS that the eligible population would use under current law in 2030.

The Eligible Population in 2030. The HCBS benefit in Option 5 would be available to anyone with an ADL or IADL limitation. Estimating how many people in the United States have such limitations is difficult, however, because of gaps in the available survey data. In addition, CBO anticipates that the eligibility criteria would be further refined through the regulatory and administrative processes as the law creating the single-payer system was implemented. For the purposes of this analysis, CBO defined the eligible population as including people who reported having one or more ADL limitations, regardless of age; people under the age of 50 who reported having an intellectual or developmental disability and one or more IADL limitations; and people age 50 or older who reported having Alzheimer's or another type of dementia.

To approximate the size of the population that might be eligible for the HCBS benefit, CBO estimated the percentage of people who would be eligible by age group, using information about noninstitutionalized people from the following surveys:[99]

- For data from the 2016 American Community Survey, CBO classified people in all age groups as reporting ADL limitations if they reported self-care difficulties (dressing or bathing) or ambulatory difficulties (walking or climbing stairs).[100]

- For data from the 2014-2018 National Health Interview Survey, CBO classified people younger than 50 as reporting an intellectual or developmental disability and one or more IADL limitations if they reported that "an intellectual disability, also known as mental retardation," caused a limitation or if "other developmental problems," such as cerebral palsy, caused limitations and if the individual reported having a limitation with one or more IADLs.[101]

[99] CBO used seven age groups: 0 to 18, 19 to 34, 35 to 49, 50 to 64, 65 to 74, 75 to 84, and 85 or older.

[100] The question was asked to respondents age 5 or older. CBO assumed that the share of children under age 5 with ADL limitations was the same as the share for people ages 5 to 18.

[101] Using multiple survey years increased the precision of the estimated size of the population.

- For data from the 2016 Health and Retirement Study (HRS), CBO classified people age 50 or older as reporting Alzheimer's disease or another type of dementia if they responded yes to having either condition.[102]

CBO selected those three sources of survey data after carefully analyzing the various surveys that ask respondents about their functional limitations, the population covered by each survey, and the way in which the estimates that CBO derived from each of those surveys compare with other published estimates.[103]

After estimating the percentage of the population that would be eligible for the single-payer HCBS benefit by age group, CBO applied those percentages to its population projections through 2030, under the assumption that the share of people eligible for the benefit in each age group would remain constant over time. In all, CBO estimates, 31 million people, or 9 percent of the U.S. population, would qualify for the HCBS benefit in Option 5 in 2030. (Estimating the share of the eligible population that would use home- and community-based services presents additional challenges, as discussed below.)

Comparing CBO's estimate of the population that would qualify for the HCBS benefit with estimates from other studies is difficult because the criteria, data, and reference year used to identify the population with LTSS needs vary greatly. Other studies have estimated that the number of people living in the community who may have needed LTSS in recent years has ranged from 8 million to 13 million.[104] The lower figure (8 million people in 2007) represents an estimate of the total noninstitutionalized population with any ADL difficulties, whereas the higher figure (13 million in 2018) represents people age 18 or older living outside institutions who needed LTSS.

Use of HCBS by the Eligible Population Under Current Law. In estimating the percentage of people who would use the single-payer HCBS benefit, CBO accounted for the predicted use of HCBS under current law. CBO apportioned the population that would be eligible for the single-payer benefit in 2030 into three groups, according to the type of service they are projected to use in that year under current law: people who would use paid care (alone or in combination with unpaid care), people who would use only unpaid care only, and people who would not use any care.

CBO's estimate of HCBS users under current law suggests that 7 million people, or 23 percent of the eligible population under Option 5, would use some paid HCBS in 2030. Based on analysis

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[102] People younger than 50 can also have Alzheimer's, but they represent a very small share of the population with the disease. See Alzheimer's Association, *2019 Alzheimer's Disease Facts and Figures* (2019), www.alz.org/media/documents/alzheimers-facts-and-figures-2019-r.pdf (2 MB).

[103] To further refine the analysis, CBO also compared estimates of the population over age 50 that has one or more ADLs based on analysis of the American Community Survey with estimates based on analysis of the Health and Retirement Study.

[104] For more information, see H. Stephen Kaye, Charlene Harrington, and Mitchell P. LaPlante, "Long-Term Care: Who Gets It, Who Provides It, Who Pays, and How Much?" *Health Affairs*, vol. 29, no. 1 (January 2010), pp. 11-21, https://doi.org/10.1377/hlthaff.2009.0535; and Edem Hado and Harriet Komisar, *Long-Term Services and Supports* (AARP, August 2019), www.aarp.org/ppi/info-2017/long-term-services-and-supports.html.

of the 2016 Health and Retirement Study, with adjustments for evidence from the research literature, CBO estimates that an additional 7 million people would use unpaid HCBS care under current law in 2030, and 17 million would not use any care.[105]

There is considerable uncertainty about the size of the population that would use unpaid home- and community-based services under current law. That parameter affects CBO's estimate of the costs of the single-payer LTSS benefit because CBO estimates that people who would use unpaid HCBS care under current law would be more likely to use the single-payer benefit and have higher per-person costs than people who would use no care under current law. CBO relied on data from the 2016 HRS for its analysis, but those data do not include people under age 50. It is also unclear whether some people do not report receiving care if it is provided by someone living in the same household, as many types of personal care overlap with the household responsibilities that families routinely share, such as cooking or cleaning. In addition, there are very few studies or data about the population that reports needing help with ADLs or IADLs but does not use any care.

Estimating What Percentage of Eligible People Would Use the HCBS Benefit. CBO expects that people who would use paid HCBS in 2030 under current law would also use paid care under the single-payer system, because their out-of-pocket costs would be the roughly same or much lower (see Exhibit 8-3). In addition, CBO projects, 50 percent of current-law users of unpaid care would become users of paid care under the single-payer system. That estimate is highly uncertain.

CBO also expects that 25 percent of people who are not projected to use HCBS under current law would become users of paid care under the single-payer system. That expectation was informed by a 2006 study that analyzed households' responses to an increase in the availability of publicly financed home care in Canada, including responses from people who had been using unpaid care and people who had not been using care.[106] Although it is unclear whether that study—based on data from another country in the 1990s—would apply to a U.S. single-payer system in 2030, it was the study most directly related to CBO's analysis. The limited amount of evidence that is available about how the use of LTSS changes in response to increases in access to care highlights the challenges for CBO in finding appropriate evidence on which to base its analysis. As a result, in developing the 25 percent estimate, CBO consulted with numerous outside experts and refined the estimate to fall in the middle of the range of the feedback provided by those experts.

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[105] For more information, see Vicki A. Freedman and Brenda C. Spillman, "Disability and Care Needs Among Older Americans," *Milbank Quarterly*, vol. 92, no. 3 (September 2014), pp. 509-541, https://doi.org/10.1111/1468-0009.12076; H. Stephen Kaye, Charlene Harrington, and Mitchell P. LaPlante, "Long-Term Care: Who Gets It, Who Provides It, Who Pays, and How Much?" *Health Affairs*, vol. 29, no. 1 (January 2010), pp. 11-21, https://doi.org/10.1377/hlthaff.2009.0535; and Amber Willink and others, *Are Older Americans Getting the Long-Term Services and Supports They Need?* (Commonwealth Fund, January 2019), www.commonwealthfund.org/publications/issue-briefs/2019/jan/are-older-americans-getting-LTSS-they-need.

[106] See Mark Stabile, Audrey Laporte, and Peter C. Coyte, "Household Responses to Public Home Care Programs," *Journal of Health Economics*, vol. 25, no. 4 (July 2006), pp. 674-701, https://doi.org/10.1016/j.jhealeco.2005.03.009. The study concluded that the probability of receiving paid care increased by 15 percent for every $100 increase in spending per person by the government.

Exhibit 8-3.

Characteristics of the Population Eligible for the HCBS Benefit Under CBO's Illustrative Option 5, by Use of HCBS Under Current Law

	People Who Would Use Paid HCBS Care Under Current Law	People Who Would Use Unpaid HCBS Care Under Current Law	People Who Would Not Use Any HCBS Care Under Current Law
Number of Eligible People in 2030 (Millions)	7	7	17
Percentage of Eligible People Who Would Use the HCBS Benefit Under Option 5	100	50	25
Per-User HCBS Cost Under Option 5 as a Percentage of the Per-User HCBS Cost Under Current Law	110	75	25

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

HCBS = home- and community-based services.

Estimating the Per-User Cost for Single-Payer HCBS. CBO expects that people who are projected to use LTSS in the absence of a single-payer system would increase their use of LTSS under Option 5, causing costs to increase by 10 percent (see Exhibit 8-3). In particular, CBO expects that users of Medicaid HCBS under current law—who make up about 80 percent of all HCBS users under current law—would experience minimal changes in their out-of-pocket cost of care under the single-payer system and therefore would not change their use of paid care (beyond the increased use of care that would occur as a result of broader coverage, which is captured in the adjusted per-user cost described above). The rest of current-law HCBS users would go from having virtually no coverage and 100 percent out-of-pocket costs to virtually complete coverage with no out-of-pocket costs. CBO expects that their use of care would rise, causing their costs to increase by 50 percent. Thus, the weighted-average increase in costs across the two groups would be 10 percent.

There is considerable uncertainty about how much the use of care would grow among people who would use paid HCBS under current law. Research is lacking about how the use of paid care responds to changes in covered benefits. Rather, most studies look at how the use of *unpaid* care changes in response to the changes in the availability of paid care.[107]

CBO estimated the relative cost of HCBS among new users of paid care by analyzing how the average number of limitations among people who use unpaid HCBS or no HCBS compares with that of people who use paid HCBS. CBO's analysis of the 2016 Health and Retirement Study showed that people who used unpaid care had 25 percent fewer ADL limitations and 25 percent fewer caregivers than people who used paid care, which suggests a 25 percent lower need for paid care. On the basis of that analysis, CBO expects that care for current-law users of unpaid

[107] See Lydia W. Li, "Longitudinal Changes in the Amount of Informal Care Among Publicly Paid Home Care Recipients," *Gerontologist*, vol. 45, no. 4 (August 2005), pp. 465-473, https://doi.org/10.1093/geront/45.4.465; Ezra Golberstein and others, "Effect of Medicare Home Health Care Payment on Informal Care," *INQUIRY*, vol. 46, no. 1 (Spring 2009), pp. 58-71, https://doi.org/10.5034/inquiryjrnl_46.01.58; and Mark Stabile, Audrey Laporte, and Peter C. Coyte, "Household Responses to Public Home Care Programs," *Journal of Health Economics*, vol. 25, no. 4 (July 2006), pp. 674-701, https://doi.org/10.1016/j.jhealeco.2005.03.009.

care would cost 75 percent as much under Option 5 as care for current-law users of paid care (see Exhibit 8-3).

CBO's analysis of the 2016 HRS also showed that people who used no care had 50 percent fewer ADL limitations than people who used paid care, suggesting that their HCBS would cost 50 percent as much under Option 5 as HCBS for current-law users of paid care. However, because that population is currently performing ADLs with no reported help, CBO used a value of 25 percent for that group in its analysis, halfway between 50 percent and zero (see Exhibit 8-3).

Evaluating Whether There Would Be Sufficient Supply to Meet the Increase in Demand for HCBS. To better understand the types of people who provide home- and community-based services, CBO analyzed data from the Current Population Survey for the first three months of 2020.[108] CBO focused its analysis on personal care aides who work in home health care services or in individual and family services. The job of personal care aide typically requires a high school diploma or the equivalent.[109] CBO found that most of those workers are female and that about one-quarter are foreign born. Hourly wages are low for personal care aides—about $13 per hour, on average—and almost half of aides work fewer than 35 hours per week. As a sensitivity analysis, CBO examined a much broader assortment of occupation and industry combinations; the findings were similar.

Demand for HCBS would increase substantially under the broad single-payer benefit in Option 5. To determine whether there would be a sufficient supply of such care, CBO estimated the minimum payment increase necessary to meet the projected growth in demand. In CBO's assessment, the supply of potential HCBS workers is large because the United States has a sizable pool of low-skilled labor and the jobs of HCBS workers generally do not require a bachelor's or specialized degree. In addition, HCBS workers make up only a small percentage of low-skilled workers who earn less than $15 per hour, so there is a broad population from which additional workers could be drawn. CBO also expects that many of the relatives and friends who currently provide unpaid care would be eligible to be reimbursed for that care as part of the self-directed services available under the single-payer system. That change would result in a large increase in the supply of paid caregivers.

Given those factors and an estimated elasticity of supply of roughly 20—meaning that the number of HCBS workers would increase by 20 percent for every 1 percent rise in wages—CBO estimates that an increase of 4 percent in payment rates for HCBS providers would be sufficient to meet the additional demand for care projected to occur under Option 5. That estimate is lower than the 8 percent increase in payment rates that would occur under that option as a result of moving to Medicare rates.

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[108] The Current Population Survey first started reporting personal care aides as an occupation in 2020, so there were only three months of data available prior to the coronavirus pandemic. CBO chose not to include more recent data in the analysis because the employment data during the pandemic are unlikely to be representative of longer-term labor trends.

[109] See Bureau of Labor Statistics, "Occupational Outlook Handbook: Home Health Aides and Personal Care Aides" (September 1, 2020), www.bls.gov/ooh/healthcare/home-health-aides-and-personal-care-aides.htm.

That assessment is subject to considerable uncertainty stemming from the following factors:

- The long-run elasticity of supply among HCBS workers is uncertain. Researchers have found that small increases in potential earnings lead to very large increases in the amount of labor supplied by Uber drivers and real estate agents, but no studies have focused on the long-run labor supply of HCBS workers.[110] It is unclear whether more low-skilled workers would be willing to work as Uber drivers than as HCBS workers, for example.

- Because many HCBS workers are foreign born, any changes to immigration trends or policy would affect the supply of workers.

- Shifting from a situation in which most of the population does not have access to paid HCBS to a situation in which paid HCBS is a near-universal benefit would have enormous ramifications for the structure of the industry and the nature of the labor force. Under current law, a significant amount of HCBS is delivered by state, local, and nonprofit organizations, and it is unclear how their role would change if home- and community-based care was reimbursed by a single payer. For example, services could continue to be delivered by the same types of organizations under a single-payer system, or other types of health care organizations could expand to offer HCBS.

- It is difficult to predict what percentage of people who provide unpaid care would seek reimbursement under the single-payer system. If fewer people sought reimbursement, use of paid care under the single-payer system would be lower than CBO estimates; if more people sought reimbursement, use of paid care would be higher.

- It is also unclear whether people who provide unpaid care would continue to do so once a paid LTSS benefit was available.

[110] See Jonathan V. Hall, John J. Horton, and Daniel T. Knoepfle, "Ride-Sharing Markets Re-Equilibrate" (draft, June 17, 2020), https://john-joseph-horton.com/papers/uber_price.pdf (539 KB); and Chang-Tai Hsieh and Enrico Moretti, "Can Free Entry Be Inefficient? Fixed Commissions and Social Waste in the Real Estate Industry," *Journal of Political Economy*, vol. 111, no. 5 (October 2003), pp. 1076-1122, https://doi.org/10.1086/376953.

Section 9.
Effects of the Illustrative Options on the Federal Budget and Uncertainty of the Estimates

CBO estimates that implementing a single-payer health care system would substantially increase federal subsidies for health care because the federal government would finance a much larger share of total national health expenditures (NHE) than it would under current law. The increase in federal subsidies would range from about 50 percent to more than 100 percent under the five illustrative single-payer options that CBO analyzed. The effects of those options are highly uncertain, however, and other policy designs for a single-payer system could yield larger or smaller changes in federal subsidies.

CBO's estimates of effects on the federal budget account for net federal subsidies, which include mandatory outlays (direct spending) and tax preferences for health benefits (including their effects on both federal income and federal payroll taxes), net of revenues that the federal government receives through the payment of penalties. (Those estimates are based on CBO's September 2020 baseline budget projections.) The most significant tax preference for health benefits under current law is the income and payroll tax exclusion for health benefits offered by an employer. Most employment-based health benefits, including health insurance, would cease to exist under the single-payer options that CBO analyzed. In the staff of the Joint Committee on Taxation's (JCT's) estimate of the increase in revenues from repealing that exclusion, reductions in employers' spending on health benefits are offset by increased wages, such that total compensation remains unchanged. Thus, the elimination of employment-based health benefits would be projected to increase taxable wages by the amount that would otherwise be spent on such benefits under current law.[111]

For the purposes of estimating changes in national health expenditures, CBO also projected federal health care spending subject to appropriation (discretionary spending). However, discretionary spending is not included in CBO's estimates of the options' effects on federal subsidies because reductions in such spending would be subject to future appropriation action by lawmakers.

State and local governments would experience significant reductions in spending because the joint federal-state Medicaid program and Children's Health Insurance Program (CHIP) would be either reduced substantially or eliminated. States with income taxes would realize greater income tax revenues because of the increase in employees' taxable wages that would result from the elimination of employment-based health insurance.

CBO's analysis does not include any estimate of the new financing mechanisms necessary to pay for a single-payer system—such as raising existing taxes, enacting new ones, reducing other federal spending, or issuing government debt—or the effects that such financing mechanisms might have on the economy. Changes in taxes or spending that would be large enough to pay for

[111] Eliminating the tax exclusion could lead to behavioral responses by workers and employers. Most of their responses would alter the supply of labor, so those effects would be reflected in a dynamic analysis of the budgetary impact of a single-payer system. Such an analysis is beyond the scope of this paper.

the increase in federal subsidies for health care would have important economic effects. For example, increases in income taxes would reduce incentives to work and to invest in productive capital (such as equipment), thus holding down economic growth. In a forthcoming paper, CBO will assess how various highly stylized ways to finance a large increase in federal spending would affect the economy.

CBO's analysis also does not include any estimates of the effects that a single-payer system itself would have on the U.S. economy. A single-payer system would induce changes in patterns of saving, labor force participation, and possibly people's productivity. CBO will assess the macroeconomic effects of single-payer systems that are based on the Medicare FFS program, separately from the effects of financing mechanisms, in another forthcoming paper.

Effects on the Federal Budget

Under current law, federal subsidies for health care would total $2.8 trillion in 2030, excluding discretionary spending, CBO projects (see Exhibit 9-1). Under the illustrative single-payer options, those subsidies would range from $4.3 trillion under Option 2 (an increase of $1.5 trillion) to $5.8 trillion under Option 5 (an increase of $3.0 trillion). All of the options would increase federal subsidies for health care because the federal government's share of national health expenditures would rise substantially.

The range in the estimates of total federal subsidies for health care in 2030 under the five options, $4.3 trillion to $5.8 trillion, illustrates how the effects of a single-payer system would depend on its design. Specifically, raising provider payment rates, reducing cost sharing, and expanding the scope of covered services all increase costs to the federal government. Federal subsidies could span an even broader range if the single-payer system had different design specifications than the ones CBO analyzed.

In CBO's illustrative options:

- Raising payment rates (comparing Option 4 with Option 3) would increase federal subsidies by $629 billion (14 percent).

- Reducing cost sharing (comparing Option 3 with Option 2) would increase federal subsidies in 2030 by $255 billion (6 percent).

- Adding coverage of long-term services and supports, or LTSS (comparing Option 5 with Option 4), would increase federal subsidies by $599 billion (11 percent).

Under Options 1 through 4, which do not include coverage of LTSS, the federal government would continue to spend $157 billion for the federal portion of Medicaid's coverage of LTSS. In addition, under all five options, $8 billion in other federal subsidies would continue, CBO estimates. Those other subsidies include mandatory spending for direct care that the Department of Defense (DoD) administers through government-owned and -operated military treatment facilities and mandatory funding for the Health Resources and Services Administration.

Exhibit 9-1.

Projected Federal Subsidies for Health Care Under Current Law and CBO's Illustrative Single-Payer Options, 2030

Billions of Dollars

Federal Subsidies	Current Law	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
Single-Payer System	n.a.	4,751	4,167	4,423	5,051	5,808
Medicare	1,343	0	0	0	0	0
Medicaid and CHIP	736	157	157	157	157	0
Employment-Based Coverage[a]	574	0	0	0	0	0
Marketplace-Related Nongroup Coverage and Basic Health Program[b]	79	0	0	0	0	0
Federal Employees Health Benefits Program	36	0	0	0	0	0
Employer Mandate Penalties	-3	0	0	0	0	0
Other Subsidies[c]	55	8	8	8	8	8
Net Subsidies	**2,820**	**4,916**	**4,333**	**4,588**	**5,217**	**5,816**
Memorandum:						
Discretionary Federal Spending on Health[d]	312	240	240	240	240	240

Data sources: Congressional Budget Office; staff of the Joint Committee on Taxation. See www.cbo.gov/publication/56811#data.

CBO's estimates of the options' effects on federal subsidies do not include discretionary spending, because reductions in such spending would be subject to future appropriation action by lawmakers.

CHIP = Children's Health Insurance Program; LTSS = long-term services and supports; n.a. = not applicable.

a. Consists of the tax exclusion for employer-sponsored contributions toward health benefits, including health insurance and long-term care insurance premiums; the tax deduction for health expenses of self-employed people, including health insurance and long-term care insurance premiums; the tax exclusion for workers' compensation medical benefits; and the tax credit for small businesses that purchase employer insurance.

b. Consists of premium tax credits for health insurance purchased through the marketplaces established under the Affordable Care Act, payments for the Basic Health Program, and collections and payments for risk adjustment.

c. Consists primarily of forgone revenues from the tax deduction for itemized medical expenses and mandatory spending on health benefits administered by the Department of Defense.

d. In CBO's projections of national health expenditures (NHE), federal discretionary spending generally reflects discretionary spending for 2020 inflated by the projected growth rate of potential gross domestic product. CBO's baseline and NHE projections include emergency appropriations enacted in 2020 in response to the coronavirus pandemic (and the outlays expected to result from those appropriations in the next few years). But CBO did not include such spending in the amount it extrapolated into future years because of the unusual size and nature of that funding.

New spending by the illustrative single-payer system would be partially offset by savings from several sources:

- Eliminating mandatory spending for Medicare ($1.3 trillion in savings in 2030);[112]

- Eliminating federal subsidies for employment-based coverage ($574 billion in savings);[113]

- Eliminating federal subsidies for health insurance purchased through marketplaces established under the Affordable Care Act (ACA) and for the Basic Health Program, which allows states to provide coverage to low-income people who would otherwise be eligible to receive subsidies in the ACA marketplaces ($79 billion in savings);

- Eliminating mandatory spending for the Federal Employees Health Benefits program ($36 billion in savings);

- Reducing federal spending for Medicaid and CHIP from $736 billion to $157 billion under Options 1 through 4, because CHIP would be eliminated and Medicaid would only provide LTSS, which would not be covered by the single-payer system ($579 billion in savings), or eliminating both programs entirely under Option 5, which includes a single-payer LTSS benefit ($736 billion in savings); and

- Reducing other subsidies not subject to appropriation from $55 billion to $8 billion, largely by eliminating the tax deduction for itemized medical expenses and eliminating mandatory spending for care that DoD provides through its purchased-care network ($47 billion in savings).

In the other direction, eliminating the revenues from penalties on large employers that do not offer health insurance coverage to their employees would increase the federal deficit by $3 billion in 2030, according to estimates by CBO and JCT.

CBO also estimates that in 2030, federal discretionary spending for health care would be $72 billion lower under all five illustrative options than it would be if discretionary spending in

[112] The estimated mandatory costs of Medicare are calculated net of offsetting receipts, including premiums paid by Medicare beneficiaries, premiums paid by states on behalf of beneficiaries who are also enrolled in Medicaid, states' contributions toward Medicare Part D (often called the clawback), and amounts paid to providers that are later recovered.

[113] The estimates in this analysis are consistent with guidelines for budget scorekeeping; as a result, this analysis does not include the increase in outlays for Social Security benefits that would result from the increase in taxable wages. (JCT estimates that employers would increase wages if they were no longer paying for health benefits.) This estimate of the savings from eliminating all federal subsidies for employment-based coverage differs from estimates by JCT for the tax exclusion for employment-based coverage shown in CBO's report *Federal Subsidies for Health Insurance Coverage for People Under 65: 2020 to 2030* (September 2020), www.cbo.gov/publication/56571. The biggest differences are that this estimate includes costs for people age 65 or older and the tax exclusion for workers' compensation medical benefits, whereas JCT's estimates in that report do not. For more information about those federal subsidies and how they are estimated, see Staff of the Joint Committee on Taxation, *Exclusion for Employer-Provided Health Benefits and Other Health-Related Provisions of the Internal Revenue Code: Present Law and Selected Estimates*, JCX-25-16 (April 12, 2016), www.jct.gov/publications/2016/jcx-25-16.

2020 (reduced by supplemental spending for the coronavirus pandemic) grew at the same rate as potential gross domestic product (see Appendix A). That estimated reduction assumes future appropriation action consistent with the policy for the illustrative options. The reduction would come mainly from eliminating discretionary spending for the Federal Employees Health Benefits program and administrative spending for Medicare (which would be replaced by mandatory spending under the options), as well as from reducing discretionary spending for DoD's health care program and the Veterans Health Administration (because some of the care provided through those programs under current law would instead be paid for through the single-payer system).

Much of the federal government's other health-related discretionary spending would continue under all five of CBO's illustrative options, assuming appropriation action consistent with those options. That spending would include funds for care that would continue to be provided through DoD and the Veterans Health Administration, as well as discretionary funding for the National Institutes of Health, the Indian Health Service, the Substance Abuse and Mental Health Services Administration, the Centers for Disease Control and Prevention, the Food and Drug Administration, and most funding for the Health Resources and Services Administration.

Sources of Uncertainty in CBO's Estimates

The effects of CBO's illustrative single-payer options on federal subsidies could differ substantially from the projections described above. The largest source of uncertainty concerns how providers would change the amount of care they would furnish in response to new payment rates and to increases in demand for care under a single-payer system. Another highly uncertain factor is how the prices paid to providers from different sources, particularly private payers, would change over the next decade under current law, which affects the relative size of reductions or increases in payments under the single-payer system. An additional major source of uncertainty is how much the demand for care would increase and how that increase might be influenced by providers' responses. Smaller sources of uncertainty include the extent of changes in payers' and providers' administrative costs, considerations about implementing a single-payer system, and the uncertainty underlying CBO's current-law projections.

CBO has endeavored to develop budget estimates for its single-payer options that are in the middle of the distribution of potential outcomes. Despite the uncertainty of those estimates, each of the five illustrative options would increase federal subsidies for health care because the government would fund a much larger percentage of NHE than it would under current law. Those increased subsidies would increase the federal deficit if the additional spending was not offset by higher taxes or by lower spending on other federal programs.

Uncertainty About Providers' Responses to Lower Payment Rates, Increased Demand, and Lower Administrative Costs. Uncertainty about how providers would change the amount of care supplied in response to changes in payment rates is the largest source of uncertainty in CBO's estimates—in part because, unlike for other factors, the research literature on the elasticity of supply suggests that the supply of care might increase or decrease. CBO estimated that providers would respond to payment rates' being lower than under current law in the lower payment-rate scenario by reducing the amount of care they would supply. The supply elasticities in CBO's analysis were based on averages of supply elasticities reported in the literature (see Section 4). The estimates in the literature encompass a broad range, however. Some estimates

imply that providers would respond to reductions in payment rates by increasing the volume of care supplied, whereas other estimates imply that providers would reduce supply by more than CBO's estimate indicates.

Uncertainty about providers' responses to changes in payment rates could cause federal subsidies to be either higher or lower under the five options than CBO estimates. If the reduction in payment rates under the lower payment-rate scenario caused a substantial number of hospitals to close and physicians to retire, less health care would be supplied than in CBO's estimates, which would increase the amount of unmet demand.[114] Some patients might wait longer to receive care or would forgo care entirely, which would cause federal subsidies under Options 2 and 3 to be lower than CBO estimates. Alternatively, providers might respond to reductions in payment rates in ways that would cause federal subsidies to be higher than CBO estimates. For example, if providers were able to reduce their costs more than CBO anticipates, they might provide more care than CBO estimates and increase the total volume of care supplied. Providers might also respond to the reduction in payment rates and the shift to a single payer by becoming more adept at billing for services in ways that would maximize reimbursement. Changes in providers' practices could also affect the quality of care, patients' satisfaction with their care, and health outcomes (see Section 16).

Another major source of uncertainty is how providers might adjust the supply of care in response to an increase in demand. CBO estimates that if the supply of care did not change in response to greater demand, the gap between demand and supply would be wider under all of the illustrative options than it would be under current law. CBO estimates that hospitals would increase their supply of care by enough to meet 15 percent of the initial gap between the demand for and supply of hospital care. For physician and clinical services and other services (excluding LTSS), CBO estimates that physicians and other providers would increase their supply to meet 20 percent of those initial gaps.

There is no direct evidence in the research literature about how providers operating under a single-payer system with the features of the five illustrative options would respond to the large increase in demand that CBO estimates for some options. To develop such an estimate, CBO considered how providers and governments might react to a situation in which the demand for care exceeded the supply and then estimated how much those responses could increase the supply of health care. CBO also considered providers' responses to recent expansions in coverage in the United States and to recent trends that have increased supply, such as the greater prevalence of telehealth, retail clinics, and urgent care centers. If providers increased their supply of care to fully meet the increase in demand under a single-payer system—as some other analyses of potential single-payer systems in the United States have assumed (see Section 19)—federal subsidies under the illustrative options would be higher than CBO estimates. Conversely, federal subsidies under the options would be lower than CBO estimates if the supply of care grew by less than CBO anticipates and more of the additional demand for care went unmet.

[114] Some providers would also face much lower payment rates under the higher payment-rate scenario than under current law, because relative payment rates would be determined using the methods used in the Medicare fee-for-service program. Those lower payment rates might prompt some hospitals to close and some physicians to retire.

Other sources of uncertainty include CBO's estimates of how providers' administrative spending would change under a single-payer system and how providers would respond to that change. CBO based its estimates of the change in providers' administrative spending on estimates in the literature that took two different approaches: comparing the administrative spending of providers in the United States with those of providers in countries that have a single-payer system, and estimating providers' spending for each administrative activity. For the latter type of research, CBO developed estimates of how providers' administrative spending for each activity would change under a single-payer system, based on expectations about how the administrative burden on providers in 2030 would differ under a single-payer system than under current law. The estimates from each approach are subject to some uncertainty.

CBO's estimates of how providers would react to changes in their administrative spending under a single-payer system are uncertain because there is limited evidence about how much the supply of health care increases when administrative burdens shrink. CBO estimated that all of the reductions in the time clinicians spend on administrative activities would be used to increase the time they devote to patient care. In addition, CBO estimated that providers would respond to a reduction in spending on administrative activities by nonclinical staff in the same way they would respond to a comparable increase in payment rates. Providers' supply of care under the single-payer options would differ from CBO's estimates if either the change in providers' administrative spending or their response to that change differed from CBO's estimates. Also, the effects of the illustrative options depend on the differences between providers' administrative spending under those options and under current law. If completing administrative tasks in 2030 was less time-consuming under current law than CBO projects, then a smaller amount of time would shift from administration to patient care under the options. The opposite would be true if administrative tasks proved more time-consuming in 2030 under current law than CBO projects.

A final source of uncertainty about providers' responses concerns the number of providers that would opt out of a single-payer system—and the total spending on services they would deliver. CBO developed its estimates of the share of providers that would opt out of a single-payer system partly on the basis of evidence about the share of providers that opt out of Medicare. There is limited evidence in the research literature to guide CBO's estimates of how the share of providers opting out of the single-payer system would vary among the five illustrative options. CBO developed those estimates on the basis of its expectations about how the differences in excess demand and provider payment rates among the options would influence providers' decisions about whether to opt out. If more providers chose not to participate in the single-payer system than CBO anticipates, federal subsidies for health care would be lower, and NHE would be higher, than CBO estimates. The opposite would be true if fewer providers opted out.

Uncertainty About Providers' and Patients' Responses to Changes in the Administration of Benefits. Changes in how benefits would be administered under a single-payer system would be likely to increase the amount of care that providers would supply and patients would demand, but the size of those effects is highly uncertain. Under the illustrative options, the single-payer system would be administered similarly to the Medicare fee-for-service (FFS) program, which has fewer restrictions on utilization, provider networks, and billing than an average insurer does under the current system. Payers' use of such restrictions tends to reduce spending on health care.

CBO projects that having fewer restrictions would lead to an increase in both the supply of care and the demand for care, but the size of those increases is difficult to quantify. CBO's assessment is based partly on a study that compares the use of care by Medicare FFS patients and people enrolled in Medicare Advantage plans and partly on qualitative evidence about the amount of restrictions that different types of insurers use under current law. If the restrictions used under current law were less widespread or less effective in lowering costs than CBO estimates, federal subsidies under a single-payer system would be lower than CBO projects, because moving to a single-payer system would have less effect on the use of care. Conversely, if such restrictions were more widespread or more effective than CBO estimates, federal subsidies under a single-payer system would be higher than CBO projects, because the increases in the demand for and supply of health care would be larger. Federal spending could also be much higher if the elimination of private insurance plans and their utilization-management and fraud-detection efforts caused major changes in medical practice patterns that increased the volume and intensity of care. The opposite could be the case if the single-payer system's utilization-management and fraud-detection practices had much larger effects on the supply of care than CBO projects.

CBO apportioned the effects on medical services from having fewer restrictions on utilization, provider networks, and billing equally between patients' demand and providers' supply, because it estimates that those effects would increase the amount of care that patients would want to use and the amount of care that providers would supply. The extent to which the increased use of care would reflect greater supply, greater demand, or a combination of the two is unclear.

Uncertainty About Patients' Responses to Lower Cost Sharing. The effect of changes in cost sharing on patients' demand for care has been studied extensively, and it is well documented that patients use more care when cost sharing declines. But the size of the increase in demand that would result from lower cost sharing remains uncertain. CBO estimated the effect of changes in cost sharing under its illustrative options separately for people who would be insured under current law and those who would be uninsured. For each group, CBO's estimate of people's response is a weighted average of the results of several research studies.

To develop its estimate of increased demand by people who would have health insurance under current law, CBO gave the greatest weight to estimates from the RAND Health Insurance Experiment, a randomized experiment that provides a plausible causal relationship between cost sharing and demand. However, that experiment was conducted in the 1970s, under a health care system that was very different from today's system, so CBO also drew on evidence from more recent studies. To develop its estimate of increased demand by people who would be uninsured under current law, CBO gave greatest weight to results from an experiment in Oregon in which uninsured people who applied for Medicaid coverage were randomly enrolled in the program. To avoid relying entirely on estimates from a single state, however, CBO also drew on results from other studies that have estimated the effect of insurance coverage on the demand for care. The estimates of demand responses in those studies for both the otherwise insured and the otherwise uninsured encompass a range of values, resulting in uncertainty in CBO's estimates for both groups.

Under all five of the illustrative options that CBO analyzed, patients' average cost sharing would be lower than under current law, which means that the demand for care would increase. But

patients might be more or less responsive to changes in cost sharing than CBO estimates. That uncertainty means that federal subsidies for health care could be either higher or lower than CBO estimates.

The greatest uncertainty about patients' responses to the illustrative single-payer options concerns the quantity of long-term services and supports that people would use under Option 5. Many people who have functional limitations that would qualify them for the single-payer LTSS benefit under that option either receive no LTSS under current law or receive unpaid LTSS provided by relatives or friends but no care from paid providers. The number of such people who would use the LTSS benefit under a single-payer system is highly uncertain, as is the quantity and types of services they would use. If the demand for LTSS was greater than CBO projects—and the supply of LTSS could increase sufficiently to meet the additional demand—the total cost of the LTSS benefit would be higher than CBO estimates. But if the number of people who would provide LTSS at Option 5's payment rates was insufficient to meet the additional demand, some of that demand would be unmet, and total spending on LTSS would be lower than CBO estimates. Spending would also be lower if the demand for LTSS was smaller than CBO projects. It is also unclear whether widespread access to LTSS could reduce spending on medical care for people under Option 5.

Uncertainty About Payers' Administrative Spending. CBO estimates that total administrative spending by payers would decline under a single-payer system, but the size of that decline is uncertain. CBO used data on the federal costs of administering the Medicare FFS program as a starting point for estimating administrative spending by the single-payer system under the illustrative options. (CBO used that approach because the options would be administered similarly to the Medicare FFS program.) Administrative spending could vary, however, depending on how the single-payer system was designed and implemented. For example, if the processes for determining eligibility and enrolling people were more complex than Medicare's, administrative spending for the single-payer system would be higher. Further, CBO expects that the single-payer system would use tools to manage utilization and detect fraud only to the extent that Medicare FFS does under current law. If the single-payer system was structured differently—with more utilization management and fraud detection—administrative spending would also be higher than CBO estimates (but use of and spending for health care would be lower). If, by contrast, the single-payer system used fewer tools to improve quality or had fewer education programs for enrollees than CBO projects, administrative spending would be lower.

It is highly uncertain how the single-payer system would administer benefits that are not now covered by Medicare FFS, particularly long-term services and supports. Such services are mainly covered by Medicaid, so CBO estimated the potential administrative cost of its illustrative single-payer LTSS benefit using administrative spending by state Medicaid programs, as well as a variety of other data sources. If the federal government structured or administered the LTSS benefit differently than CBO projects, administrative spending could be higher or lower than CBO estimates. In addition, although CBO estimates that the federal government would realize greater economies of scale than state governments do, the size of that difference is unclear.

Uncertainty About Implementation of a Single-Payer System. Legislation to establish a single-payer system would need to specify many details, but it would also leave many details about implementation to be determined by the executive branch through rulemaking, guidance,

and other administrative activities. For consistency with recent legislative proposals, CBO assumed that the illustrative single-payer system would be administered in a manner similar to that of the Medicare FFS program. However, implementing a single-payer system would be a complex undertaking that would require the government to administer a health care program much larger than Medicare and to take on new responsibilities. Consequently, implementation of that system might differ in important ways from what CBO estimated for this analysis—and those differences could have substantial effects on health care spending. For example, CBO expects that a single-payer system would use payment arrangements to reward providers for quality and efficiency, as Medicare and private insurers do on a limited basis today. However, the design of such payment arrangements under a single-payer system is highly uncertain, leading to uncertainty about their effects on health care spending.

A single-payer system would also need information technology (IT) systems to perform a range of administrative functions, such as enrolling people, processing claims, and monitoring the quality of care. CBO expects that many of those functions would be carried out by private contractors (as is the case for Medicare FFS) and that the IT systems would be fully operational in 2030. The complexity of the IT systems that would be required and their need to communicate with one another raise the risk of malfunctions, particularly in the initial years of operation.

Uncertainty About CBO's Projections of NHE Under Current Law. Uncertainty about the total amount of health care projected to be provided under current law—beyond the amount that would be subsidized by the federal government, which is included in CBO's baseline—contributes to uncertainty about the quantity of care that would be demanded under a single-payer system and the quantity of care that could potentially be supplied. Some of the uncertainty about national health expenditures under current law reflects uncertainty in CBO's economic projections: Those projections are constructed to be in the middle of the distribution of potential outcomes, but fluctuations in economic conditions around those projections will affect NHE. For example, movements in interest rates and wages will affect the supply of health care.

In some cases, uncertainty about CBO's NHE projections largely reflects uncertainty about spending and prices today. For example, the amount of care uninsured people currently use and the prices they pay for that care are especially uncertain. Both of those factors affect CBO's projections of NHE under current law and estimates of the amount of care that would be demanded under the single-payer system.

There is also considerable uncertainty in CBO's current-law projections of provider payment rates for private insurance plans. Uncertainty about payment rates under current law contributes significantly to the uncertainty of CBO's estimates of the costs of a single-payer system because the system's effects on payment rates would affect both the price of health care and the quantity of services that providers would supply. Under current law, some payment rates (such as most of Medicare's) are established statutorily; others are set administratively by the federal or state governments; and still others (such as the rates paid by private health plans) are a product of market forces. CBO projected the increases in payment rates for all payers between 2020 and 2030 on the basis of current statutes, prior growth rates, projected growth rates from other analyses, and the projected growth of input prices. If future growth rates differ from CBO's projections, the effects of moving to a single-payer system could be larger or smaller than CBO estimates.

Uncertainty About CBO's Projections of Federal Subsidies for Health Care Under Current Law. CBO's baseline projections of federal subsidies for health care over the next 10 years are also inherently uncertain. For example, projections of Medicare spending under current law depend in part on projections of the growth in the volume and intensity of services provided to beneficiaries, which are uncertain. Projections of federal spending on Medicaid under current law depend partly on states' decisions about payment rates, eligibility, and other policies (such as waiting lists or spending caps for LTSS), all of which are also uncertain. In addition, projections of federal tax subsidies for employment-based insurance under current law depend on the number of people with such insurance and the premiums they pay for it, which are uncertain.

Additional Uncertainty Stemming From the Coronavirus Pandemic

The length and severity of the current pandemic add a significant source of uncertainty to CBO's analysis. The pandemic creates additional uncertainty because it affects the supply of health care providers, the settings in which they deliver services, and the nature of their interactions with patients. It also affects the quantities and types of health care that patients demand, the types of health insurance that people have, the overall economy, and federal spending.

The supply of all types of providers is likely to be affected, but the pandemic may have the most significant and long-lasting impact on providers of LTSS. For example, nursing homes have experienced a disproportionate number of coronavirus-related deaths, and the pandemic has raised concerns about having LTSS workers visit patients in their homes. As a result, the industry may experience profound changes (see Section 8).

Other providers are also likely to be affected by the pandemic, but it is unclear whether those effects will last until 2030. Depending on the length of the pandemic, there may be additional financial or organizational changes in the markets for hospitals and other types of practices. But even if such changes persisted through 2030, the types of effects they would have on CBO's estimates are unclear. For example:

- Telehealth will probably continue to be used at a higher rate than previously because of the pandemic, but it is unclear whether that change would cause higher or lower spending under current law and whether the effects of moving to a single-payer system would differ because of greater use of telehealth.

- Some hospitals and other providers have struggled with losses in revenues from more profitable procedures as elective care has been deferred. As a result, some hospitals or other providers could close or be acquired by other organizations.

- Policies governing the practice of medicine, such as licensing requirements and scope-of-practice laws, have been temporarily relaxed to increase the supply of health care workers during the pandemic. Whether many or all of those restrictions will be reinstated after the pandemic has subsided is unclear.

The current situation and public policies to address it may have other lasting impacts on people's use of health care and on health care spending. For example, in the short term, fewer people have employment-based coverage and more people have coverage through Medicaid. Such shifts in coverage are likely to spur changes in use of and spending on health care.

Section 10.
Effects of the Illustrative Options on Sources of Coverage

Nearly everyone in the United States would have health insurance coverage in 2030 under CBO's illustrative single-payer options—an increase from the 91 percent of people who would have insurance under current law in that year, CBO projects. Of the 350 million people expected to be living in the United States in 2030, 318 million are projected to have health insurance under current law, and a monthly average of 31 million—or 9 percent—are projected to be uninsured.

People who are currently insured receive their coverage through various sources, the three largest being employment-based health insurance plans, Medicaid, and Medicare. CBO projects that 172 million people, or roughly half of the population, would be covered by employment-based insurance in 2030 under current law. Medicare and Medicaid would cover 78 million and 77 million people, respectively, or another one-quarter of the population apiece.[115]

Under each of the options that CBO analyzed, almost all U.S. residents would be enrolled in the single-payer system. The main exception, CBO projects, is that about 2 million of the roughly 10 million U.S. residents not lawfully present in the country in 2030 would not enroll in the single-payer system because of fears about providing information to the federal government or challenges related to language or literacy.[116] In all, close to 99 percent of U.S. residents would be insured, meeting CBO's definition of near-universal coverage.[117]

All of the illustrative single-payer options would involve large-scale changes in the ways that most people receive health insurance coverage. People who would have private insurance under current law would instead have public coverage through the single-payer system. People who would have coverage from various federal and state programs under current law would continue to have public coverage under the options, but they would be enrolled in the single-payer system instead.[118] Virtually all U.S. residents—whether publicly insured, privately insured, or uninsured under current law—would have a broader set of covered benefits under the new system, and most would also experience considerable reductions in their cost sharing.

[115] To arrive at the estimates of coverage in this analysis, CBO did not assign a primary source of coverage to people with multiple sources of coverage. Estimates of employment-based coverage include people enrolled in both Medicare and employment-based insurance through a former employer.

[116] In addition, a small number of people might opt out of the single-payer system because of religious beliefs. CBO anticipates that in emergency situations, providers would care for people who were not enrolled in the single-payer system. Providers could be paid for that care if they pursued retroactive enrollment on behalf of their patients.

[117] See Congressional Budget Office, *Policies to Achieve Near-Universal Health Insurance Coverage* (October 2020), www.cbo.gov/publication/56620.

[118] People serving on active duty in the armed forces, certain members of the Selected Reserve, and retired service members with military pensions would continue to receive health care through the Department of Defense. In addition, federal health programs run by the Veterans Health Administration and the Indian Health Service would continue to operate alongside the single-payer system.

Section 11.
Effects of the Illustrative Options on National Health Expenditures

CBO projects that under current law, national health expenditures (NHE) would total $6.6 trillion, or 21 percent of gross domestic product (GDP), in 2030. (CBO's current-law projections of NHE are described in Appendix A.) Under the five illustrative options for a single-payer system that CBO analyzed, national health expenditures in 2030 could be smaller or larger than under current law—ranging from a total of $5.9 trillion (19 percent of GDP) under Option 2 to $6.9 trillion (22 percent of GDP) under Option 5, CBO estimates (see Exhibit 11-1). Those estimates do not account for any changes in GDP, labor supply, savings, or productivity that would result from the single-payer system (as described in Section 9).

CBO's illustrative options include scenarios with higher and lower payment rates and cost sharing. In those options, both lower payment rates and higher cost sharing would reduce NHE, but the lower payment rates would have a much larger effect. Specifically, under Option 2, with lower payment rates and higher cost sharing, NHE would decline by 11 percent, or $743 billion, relative to current law in 2030 (see Exhibit 11-1). By comparison, under Option 1, with higher payment rates and higher cost sharing, NHE would decline by 2 percent, or $158 billion. In other words, moving from the lower to the higher payment-rate scenario would lessen the decline in NHE by 9 percentage points. The effects of cost sharing are evident from comparing Option 1 with Option 4, which has the same higher payment rates but lower cost sharing. Under Option 4, NHE would decline by just 1 percent, or $42 billion, relative to current law in 2030. Thus, moving from the higher to the lower cost-sharing requirements would lessen the decline in NHE by 1 percentage point.

The options that CBO analyzed are illustrative; a single-payer system's changes to current-law payment rates and cost sharing could differ from the changes under CBO's options in many respects. In general, lower payment rates would tend to reduce NHE and have little effect on the demand for care, while decreasing the supply. Lower cost sharing would tend to increase NHE and the amount of care used and would increase the demand for care by more than the supply. The relative size of the effects on NHE stemming from changes in payment rates and cost sharing would depend on a single-payer system's design specifications.

The changes in payment rates under CBO's options affect NHE differently than the changes in cost sharing do in two key ways. First, reducing payment rates decreases NHE directly through lower spending for a fixed quantity of health care services; it also reduces the supply of health care but leaves the demand for care largely unaffected, resulting in more unmet demand and lower NHE. Reducing cost sharing, by contrast, increases the amount of health care that people demand but not the amount of spending for a fixed quantity of health care services. Second, the increased use of care stemming from lower cost-sharing requirements would be constrained by the amount of health care supplied under CBO's options, limiting the effect on NHE. The increase in the supply of care would not be sufficient to meet the entire increase in demand.

Changing the benefit package offered by a single-payer system can also have large effects on national health expenditures. For example, under Option 5, which would cover long-term services and supports (LTSS), NHE would increase by 4 percent, or $290 billion, relative to

Exhibit 11-1.

National Health Expenditures Under Current Law and CBO's Illustrative Single-Payer Options, 2030

	Current Law	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
National Health Expenditures (Billions of dollars)	6,631	6,473	5,888	5,981	6,589	6,922
Percentage Change in NHE from Current Law	n.a.	-2	-11	-10	-1	4
NHE as a Percentage of Current-Law Gross Domestic Product[a]	21	21	19	19	21	22
Amount of NHE Financed by the Single-Payer System (Billions of dollars)	n.a.	4,751	4,167	4,423	5,051	5,808
Percentage of NHE Financed by the Single-Payer System	n.a.	73	71	74	77	84

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

LTSS = long-term services and supports; n.a. = not applicable; NHE = national health expenditures.

a. CBO projects that under current law, gross domestic product would total $31,022 billion in 2030.

current law in 2030. Compared with Option 4, which would reduce NHE by 1 percent, keeping all other specifications the same but adding LTSS coverage to the single-payer benefit package would increase NHE by 5 percentage points.

The share of total health care spending that is financed by different sources would change substantially under the illustrative single-payer options. The portion of NHE financed by the single-payer system would range from 71 percent ($4.2 trillion) under Option 2 to 84 percent ($5.8 trillion) under Option 5. Under all of the illustrative options, Medicare and the Children's Health Insurance Program (CHIP) would be subsumed by the single-payer system, as would most spending by Medicaid. The reductions in Medicaid and CHIP spending would significantly reduce the amount of money that states would spend on health care. Private insurance would also virtually be eliminated under all five illustrative options, and people's out-of-pocket spending would decline significantly.

Factors Contributing to Changes in NHE

Under all five of the illustrative options, changes in payment rates and reductions in administrative spending for payers relative to current law would reduce national health expenditures, but the greater amount of health care that people would use would increase NHE, CBO estimates (see Exhibit 11-2).[119] Under Options 1 through 4, the increase in NHE from

[119] Even in the scenario with higher payment rates, rates for some services and providers would be lower than the average of the rates that CBO projects for all payers (including government programs and private insurers) in 2030 under current law. For more details about payment rates for different providers under the scenarios, see Section 2.

Exhibit 11-2.

Sources of Changes in National Health Expenditures Under CBO's Illustrative Single-Payer Options, 2030

Billions of Dollars

	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
Change in NHE From Changes in Payment Rates Under the Single-Payer System[a]	-67	-533	-508	-41	-22
Change in NHE From Increased Use of Care Under the Single-Payer System[b]	321	206	272	407	718
Change in NHE From Reductions in Payers' Administrative Spending Under the Single-Payer System	-411	-416	-414	-409	-406
Total Change in NHE	**-158**	**-743**	**-650**	**-42**	**290**

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

LTSS = long-term services and supports; NHE = national health expenditures.

a. Includes the effects of changes in payment rates for providers within the single-payer system as well as for providers who would opt out of the system and receive payments directly from patients. CBO estimates that payment rates for providers outside the system would be higher than the single-payer system's rates. Although the system's payment rates would be identical in Options 1 and 4 and in Options 2 and 3, the same rates would have differing effects on NHE because of differences in the relative amounts of care delivered by providers within the single-payer system and by providers outside the system. In the options with lower cost sharing, there would be more unmet demand for care within the system and thus an increase in demand for care by providers who opted out of the system. In Option 5, the single-payer system's payment rates for all services other than LTSS would be the same as in Options 1 and 4, but providers of noninstitutional LTSS would be paid at rates 8 percent higher than under current law.

b. Most of the increased use of care would occur within the single-payer system, but under all five options, CBO estimates that patients would demand more care than providers would be willing to supply. The amount of care provided outside the single-payer system would increase when the amount of unmet demand for care within the single-payer system was larger. The total increase in the use of care reflects both care within and care outside the single-payer system.

greater use of care would be smaller than the reduction in NHE from other factors, resulting in lower NHE overall. Under Option 5, including long-term services and supports in the single-payer benefit package would significantly increase the use of LTSS, resulting in higher NHE overall.

CBO estimates that the various design features and effects of its illustrative single-payer options would have the following impacts on NHE:

- The change in NHE attributable to changes in payment rates under the single-payer system ranges from a reduction of $22 billion (less than 1 percent) under Option 5 to a reduction of $533 billion (8 percent) under Option 2. Even under the options with higher payment rates (Options 1, 4, and 5), some providers would be paid lower rates under the single-payer system than they would be under current law in 2030. (Those providers include manufacturers of prescription drugs, hospitals and specialists that are

paid especially high rates under current law, and providers of "other services.") The total change in NHE reflects reductions in payment rates for those providers, increases in payment rates for other providers (especially providers who serve relatively large numbers of uninsured people or Medicaid enrollees), and increases in payment rates for the small number of providers who would elect to opt out of the single-payer system. (For more details, see Section 12.)

- The change in NHE attributable to greater use of care ranges from an increase of $206 billion (3 percent) under Option 2 to an increase of $718 billion (11 percent) under Option 5, CBO estimates. The amount of care that would be used under a single-payer system depends on how much cost sharing patients would have to pay, the services that would be covered by the system, and the payment rates for providers. (For more details, see Section 12.)

- The change in NHE attributable to a decline in payers' total administrative spending is similar under all of the options, ranging from a reduction of $406 billion (6 percent) under Option 5 to a reduction of $416 billion (6 percent) under Option 2, CBO estimates. Those declines in total administrative spending by payers would result largely from a reduction in administrative spending by private insurers, streamlining of administrative activities, and the single-payer system's economies of scale. (For more details about how the options would affect payers' administrative spending, see Section 14.)

Sources of Uncertainty About Effects on NHE

CBO's estimates of the effects of the illustrative single-payer options on NHE are highly uncertain. The main sources of uncertainty concern providers' and patients' responses to the changes under the single-payer system, payment rates under current law, certain components of spending under current law (such as the amount of care used by uninsured people), implementation of the single-payer system, and projections of federal subsidies for health care. (For more details about those factors, see Section 9.)

CBO's estimates of NHE not financed by the federal government—such as out-of-pocket spending, spending by private insurers, and spending by state and local governments—are additional sources of uncertainty. CBO developed those estimates from existing projections of private health insurance premiums, private insurance enrollment, and states' spending on Medicaid and CHIP. But CBO also relied heavily on projections by the Centers for Medicare & Medicaid Services for the components of NHE for which it had no existing estimates, such as state and local spending on public health programs and private spending on investment in the medical sector. (For details, see Appendix A.)

Effects on NHE by Payer

The changes in financing under the illustrative single-payer system would cause a much larger share of NHE to be financed by the federal government than under current law and smaller shares to be financed by state and local governments and by private sources, such as businesses and households. Specifically, CBO estimates that the portion of NHE financed by the federal government, including discretionary spending, would increase from 47 percent in 2030 under current law to 78 percent to 87 percent under the various options (see Exhibit 11-3).

Exhibit 11-3.

National Health Expenditures Under Current Law and CBO's Illustrative Single-Payer Options, by Payer, 2030

Billions of Dollars

	Current Law	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
Health Care Consumption, by Payer						
Single-payer system	n.a.	4,751	4,167	4,423	5,051	5,808
Medicare[a]	1,625	0	0	0	0	0
Medicaid and CHIP (Federal and state)	1,082	263	263	263	263	0
Private insurance	2,137	6	6	6	6	0
Other payers and public health[b]	767	575	575	575	575	559
Out-of-pocket spending	721	579	577	415	394	255
Subtotal, All Payers	6,331	6,174	5,588	5,682	6,289	6,622
Investment[c]	300	300	300	300	300	300
Total NHE	**6,631**	**6,473**	**5,888**	**5,981**	**6,589**	**6,922**
Memorandum:						
Percentage of NHE Financed by the Single-Payer System	n.a.	73	71	74	77	84
Percentage of NHE Financed by the Federal Government (Including discretionary spending)	47	80	78	81	83	87

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

CHIP = Children's Health Insurance Program; LTSS = long-term services and supports; n.a. = not applicable; NHE = national health expenditures.

a. Reflects gross Medicare spending before offsetting receipts are subtracted.

b. Includes the Department of Defense; the Department of Veterans Affairs; worksite health care programs; the Indian Health Service; programs that provide workers' compensation, general assistance, maternal and child health care, and vocational rehabilitation, among other services; the federal government's funding for other programs (such as the Substance Abuse and Mental Health Services Administration); various other state and local programs; and school health. This category also includes philanthropic support and income that institutions such as hospitals receive from operating gift shops, cafeterias, parking lots, and educational programs, as well as income from their investments.

c. Spending by medical establishments on structures, equipment, and research.

Other payers' portions of national health expenditures would change as follows, CBO estimates:

- The amount of NHE financed by Medicare under current law—which is estimated to total $1.6 trillion in 2030—would be entirely subsumed by the single-payer system.[120]

- The amount of NHE financed by Medicaid and CHIP (including both federal and state funding) would decline by $819 billion in 2030—from $1.1 trillion under current law to $263 billion—under Options 1 through 4, which do not include a single-payer LTSS benefit. Some spending by Medicaid would persist under those options because the Medicaid program would continue to pay for some LTSS.[121] Under Option 5, which includes a single-payer LTSS benefit, Medicaid spending would cease to exist.

- The amount of NHE financed by private insurance (whether purchased individually or through employment) would be virtually or completely eliminated, falling from $2.1 trillion in 2030 under current law to $6 billion under Options 1 through 4 and zero under Option 5. Under current law, private insurers' share of NHE includes spending on health care services paid for by major medical insurance, stand-alone benefit plans (such as dental or long-term care insurance), and other insurance products.[122] Under the illustrative options, private insurance would only be allowed to cover services not included in the single payer's benefit package—most notably, LTSS under Options 1 through 4. In other words, it would be illegal for private companies to sell health insurance in the United States covering care provided by physicians or other entities that opted out of accepting payments from the single-payer system if the insurance covered services available through that system. As a result, employers would realize substantial savings because they would no longer need to make payments for health benefits for their employees (savings that CBO expects would cause workers' wages to increase over the long term) or for their retirees.

- The amount of NHE financed by other payers would decline from $767 billion in 2030 under current law to $575 billion under Options 1 through 4 and to $559 billion under Option 5. Much of that reduction stems from spending that would be subsumed by the single-payer system, such as the medical-benefit component of the workers' compensation program ($77 billion) and payments by state and local governments to

[120] The amount of NHE financed by Medicare reflects gross Medicare spending before offsetting receipts are subtracted.

[121] CBO projects that under current law, the Medicaid program would spend $262 billion on LTSS in 2030, whereas CHIP would spend less than $0.5 billion. (Those totals include spending to administer LTSS benefits.) For the options in which the single-payer system would not cover LTSS, CBO expects that states would continue to provide the same total amount of LTSS but that all benefits would be provided through Medicaid because CHIP would no longer exist.

[122] The private insurance category also includes medical spending that is paid for by property and casualty insurance and other types of private insurance that is not major medical coverage, such as policies with limited insurance benefits (known as mini-med plans), some types of short-term limited-duration policies, and health care sharing ministries. Under the illustrative options, such spending would be paid for by the single-payer system.

hospitals, home health agencies, and other facilities ($56 billion).[123] (State and local subsidies to LTSS institutional facilities would continue under Options 1 through 4.) The change in spending by other payers also reflects reduced spending by the Department of Defense (because the portion of health care that it purchases in the private sector would be replaced by the single-payer system) and reduced spending by the Veterans Health Administration (because CBO estimates that its patients would receive a greater portion of their care outside the veterans' health system).

- The amount of NHE financed by all other payers—such as the Indian Health Service, federal public health programs, philanthropies, state and local public health departments, and worksite health care—would continue as projected under current law, CBO estimates.[124]

- Some out-of-pocket spending for health care outside the single-payer system would persist under all of the options, CBO expects. But out-of-pocket spending would decline from $721 billion in 2030 under current law to an amount ranging from $255 billion under Option 5 to $579 billion under Option 1. Some of the remaining out-of-pocket spending would be for goods and services not covered by the single-payer system, including over-the-counter medications and services outside the single-payer benefit package (such as aesthetic procedures, or LTSS under Options 1 through 4). Other out-of-pocket spending reflects CBO's assessment that some patients and providers would opt out of the single-payer system, because some people would be willing to pay higher prices out of pocket to obtain greater access to care than they could get under that system.

CBO also expects that some people would continue to pay out of pocket for health care services in other countries or for insurance (such as travel policies) that covers health care provided in other countries. However, spending on such care is excluded from NHE and from this analysis. Estimates of national health expenditures only account for care provided in the United States, and CBO does not estimate the amount of health care spending for U.S. residents that occurs elsewhere. CBO assumes that insurance policies covering international care would continue to be offered, because recent legislative proposals for a single-payer system prohibit insurance coverage that duplicates single-payer coverage, but the illustrative single-payer options would not cover care provided outside the United States.

CBO estimates that spending on investment in the medical sector would remain at $300 billion under both current law and all of the illustrative options in 2030. Investment consists of spending

[123] The following categories of spending would also be subsumed by the single-payer system: state and local general assistance programs ($10 billion), school health services ($9 billion), the Maternal and Child Health program administered by the Health Resources and Services Administration ($6 billion), and the portion of vocational rehabilitation programs related to personal health care services ($1 billion).

[124] Worksite health care is provided by employers at the location where employees work. Spending on such care might decline under a single-payer system because employers would have less incentive to pay directly for workers' health care under that system. Conversely, spending on worksite health care might increase under a single-payer system because one of the motivations for offering such care is that it increases employees' productivity and reduces absenteeism. If the wait to see a doctor was longer under a single-payer system than under current law, employers might increase the range and scope of services they provided on site.

on medical structures and equipment and medical research by noncommercial entities.[125] CBO estimates that overall purchases of medical structures and equipment would remain relatively unchanged in 2030 under the single-payer options because of some factors that would decrease such purchases and other factors that would increase them. For example, spending on structures and equipment could decline for hospitals and some other clinical settings in response to lower payment rates. But such spending might increase—particularly for lower-intensity settings of care, such as retail clinics and urgent care centers—in response to the large increase in demand for care. Providers might also increase purchases of new equipment or technology that would reduce the costs of providing care in response to lower payment rates. In years after 2030, the relative importance of those various factors could change, decreasing or increasing investment under the single-payer options. The long-term effect on investment under CBO's higher payment-rate scenario is unclear. Under the lower payment-rate scenario, investment would decline over the long term, CBO estimates.

Revenues from philanthropic support and other private sources (such as income from hospitals' parking lots and cafeterias and from investment income), which are projected to total $243 billion in 2030 under current law, would remain at that level under all five illustrative options, CBO estimates, for various reasons. On the one hand, additional congestion under a single-payer system could lead to an increase in philanthropic contributions from people seeking to facilitate access to care for themselves or others. Under CBO's design specification for the single-payer system, directly linking those contributions with access to care would not be allowed. Nevertheless, such contributions could result in quicker appointments or other preferential treatment if providers were able to do so in ways that were difficult to identify. On the other hand, CBO anticipates that philanthropic contributions made under current law to help uninsured people obtain care would decline. Lacking a basis for estimating the extent of those upward and downward pressures, CBO did not include any net effect on philanthropic contributions in its estimates for the single-payer options.

Effects on Spending by State and Local Governments

Although some state and local spending for health care would continue under the illustrative single-payer options—particularly for public-health-related activities—state governments in particular would realize significant savings under all of the options as spending shifted to the federal government. The largest decline in states' spending would result from a reduction in spending for Medicaid and CHIP of $279 billion (or 73 percent) under Options 1 through 4 and $384 billion (or 100 percent) under Option 5.

CBO considered whether a single-payer system could be designed with features that would allow it to recoup the savings realized by state and local governments. However, the Supreme Court has held that the Constitution prevents the federal government from compelling states to

[125] As defined in the NHE accounts, structures and equipment encompass new construction and capital (including software) put in place by the medical sector. The estimate of investment in structures and equipment includes spending by health care providers but not by retail establishments that sell medical goods. Noncommercial research encompasses research spending by nonprofit institutions and government entities. It excludes research and development spending by for-profit companies because the value of their research is expected to be recouped through product sales.

contribute to federal programs.[126] Therefore, the federal government as the single payer could not demand that states contribute saved amounts to the single-payer system.

The government typically navigates around that constitutional restriction by inducing states to make voluntary contributions as a condition for receiving money or benefits offered by the federal government. CBO assessed the feasibility of a variety of such conditions that could be tied to states' participation in the single-payer system but concluded that it was legally uncertain whether any of those conditions could withstand the prohibition on coercive conditions on federal spending addressed in *National Federation of Independent Business v. Sebelius*.[127] Thus, CBO's options do not include a requirement that states contribute to the single-payer system.

CBO also considered whether states' contributions to Medicare Part D could serve as a model for a system in which the single payer would recoup savings realized by state and local governments. Under that model, which is sometimes referred to as the clawback, states are required to make payments to Medicare Part D as a condition for receiving federal matching payments in the Medicaid program. However, the requirement for states to contribute to Medicare Part D was established before the *National Federation of Independent Business v. Sebelius* decision. In addition, because the single-payer system would be the sole national health care system, any conditions placed on state and local participation could be more likely to be found coercive than conditions placed on participation in Medicaid.

Effects on Various Categories of Personal Health Care Spending

Most of NHE consists of spending on personal health care (defined as national health expenditures by all payers, excluding spending on public health activities, payers' administrative activities, and investment). To better understand how changes in payment rates and changes in the use of health care would affect NHE, CBO analyzed changes in spending on personal health care alone. In total, that spending would increase under the single-payer options with higher payment rates (Options 1, 4, and 5) and decrease under the options with lower payment rates (Options 2 and 3), CBO estimates (see Exhibit 11-4).

The effects of a single-payer system on spending for personal health care would vary among the categories of services included in this analysis: hospital services, physician and clinical services, prescription drugs, LTSS, and other services. Spending on physician and clinical services would increase under all five of CBO's illustrative options, but spending on "other services" would decline. Spending on hospital services and prescription drugs would increase under the options with higher payment rates (Options 1, 4, and 5) but would decrease under the options with lower payments rates (Options 2 and 3). Spending on LTSS would rise under Option 5, which includes an LTSS benefit, but would remain the same under Options 1 through 4. (The mechanisms behind those changes in personal health care spending are explored in more detail in Section 12.)

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[126] *New York v. United States*, 505 U.S. 144 (1992) and *Printz v. United States*, 521 U.S. 898 (1997).

[127] As enacted, the Patient Protection and Affordable Care Act required states to participate in an expansion of Medicaid coverage or lose all Medicaid funding from the federal government. In *National Federal of Independent Business v. Sebelius*, the Supreme Court considered the constitutionality of that condition on federal spending and found that it was unconstitutional because it rose to the level of being coercive on the states. See *National Federation of Independent Business v. Sebelius*, 132 S. Ct. 2566 (2012).

Exhibit 11-4.

Spending for Personal Health Care Under Current Law and CBO's Illustrative Single-Payer Options, by Service Category, 2030

	Current Law	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
	Spending for Personal Health Care (Billions of Dollars)					
Hospital Services[a]	2,226	2,355	2,027	2,039	2,370	2,370
Physician and Clinical Services	1,414	1,547	1,424	1,457	1,584	1,584
Prescription Drugs	574	602	471	499	643	643
Long-Term Services and Supports	425	425	425	425	425	756
Other Services[b]	1,022	986	987	1,006	1,006	1,006
All Personal Health Care Services	5,662	5,915	5,334	5,426	6,028	6,359
	Percentage Change in Spending for Personal Health Care From Current Law					
Hospital Services[a]	n.a.	6	-9	-8	6	6
Physician and Clinical Services	n.a.	9	1	3	12	12
Prescription Drugs	n.a.	5	-18	-13	12	12
Long-Term Services and Supports	n.a.	0	0	0	0	78
Other Services[b]	n.a.	-4	-3	-2	-2	-2
All Personal Health Care Services	n.a.	4	-6	-4	6	12

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

LTSS = long-term services and supports; n.a. = not applicable.

a. Includes both inpatient and outpatient hospital care.

b. Includes dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, durable medical equipment (such as eyeglasses and hearing aids), and nondurable medical equipment (such as over-the-counter medications). Home health care and skilled nursing facility care are sometimes classified as LTSS, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.

Section 12.
Effects of Changes in Payment Rates and Increased Use of Care on National Health Expenditures

Changes in payment rates for providers under an illustrative single-payer system would have a direct effect on national health expenditures (NHE) and also affect the supply of health care. Various other factors that would alter the demand for and supply of care would affect the use of care and NHE as well. To better understand how changes in payment rates and in the use of health care under the illustrative single-payer options would affect NHE, CBO analyzed changes in spending on personal health care (which equals NHE minus spending on public health activities, payers' administrative activities, and investment). That analysis concluded the following:

- Changes in payment rates relative to current law would have little effect on total spending for personal health care under the options with higher payment rates (Options 1, 4, and 5). The lower payment rates under Options 2 and 3 would reduce total spending for personal health care.

- Lower payment rates would reduce spending mechanically because the single-payer system would spend less to reimburse providers. Lower payment rates would also reduce spending by decreasing the amount of health care that providers would be willing to supply. CBO estimates that the use of health care would increase relative to current law among both insured and uninsured individuals under all five illustrative options. Despite that increase, CBO estimates that the amount of care that providers would supply at a given payment rate would constrain the amount of care that people would use under all of the options. That constraint would be more binding under Options 2 and 3 because of their lower payment rates.

- The increase in the use of health care would be largest under Option 5 because of greater use of long-term services and supports (LTSS). CBO expects that under that option, payment rates for many LTSS providers would rise by enough that there would be a sufficient supply of LTSS providers to meet the increased demand for care.

- The difference between the increase in demand for care and the increase in supply of care would be smallest, 1 percentage point, under Option 1, whose cost sharing, payment rates, and provision of LTSS are the closest to current law among the options. The difference between the increases in demand and supply would be largest, 6 percentage points, under Option 3, with increases in demand from having no cost sharing for covered medical services and decreases in supply from paying lower rates.

Changes in Payment Rates for Different Types of Services

The size and range of the changes in payment rates vary significantly among the categories of services included in this analysis. For hospital services and physician and clinical services, the changes in payment rates would cause spending to decline under Options 2 and 3 (see Exhibit 12-1). Under the other options, however, the changes in payment rates would have little net effect on spending for hospital services and would increase spending for physician and clinical

Exhibit 12-1.

Changes in Spending for Personal Health Care Relative to Current Law Under CBO's Illustrative Single-Payer Options, by Service Category, 2030

	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
	Percentage Change in Spending for Personal Health Care From Current Law Resulting From Changes in Payment Rates				
Hospital Services[a]	*	-12	-12	*	*
Physician and Clinical Services	2	-4	-3	3	3
Prescription Drugs	-6	-27	-27	-6	-6
Long-Term Services and Supports	0	0	0	0	4
Other Services[b]	-5	-5	-4	-4	-4
All Personal Health Care Services	-1	-9	-9	-1	*
	Percentage Change in Spending for Personal Health Care From Current Law Resulting From Increases in the Use of Care[c]				
Hospital Services[a]	6	3	4	6	6
Physician and Clinical Services	8	5	6	9	9
Prescription Drugs	12	13	19	20	20
Long-Term Services and Supports	0	0	0	0	70
Other Services[b]	2	2	3	3	3
All Personal Health Care Services	6	4	5	7	13

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

Payment rates would be identical in Options 1 and 4 and in Options 2 and 3, but the same payment rates would have differing effects on national health expenditures because of differences in the relative amounts of care delivered by providers within the single-payer system and by providers outside the system. In the options with lower cost sharing, there would be more unmet demand for care within the system and thus an increase in demand for care delivered by providers who opted out of the system. CBO estimates that the payment rates for such providers would be higher than the single-payer system's rates. In Option 5, the single-payer system's rates for all services other than LTSS would be the same as in Options 1 and 4, but providers of noninstitutional LTSS would be paid at rates 8 percent higher than under current law.

LTSS = long-term services and supports; * = between -0.5 percent and 0.5 percent.

a. Includes both inpatient and outpatient hospital care.

b. Includes dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, durable medical equipment (such as eyeglasses and hearing aids), and nondurable medical equipment (such as over-the-counter medications). Home health care and skilled nursing facility care are sometimes classified as LTSS, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.

c. The percentage change in health care spending resulting from increases in the use of care is applied to the current-law quantity of care at the prices under each of the single-payer options. For that reason, adding that percentage change to the percentage change in spending from changes in payment rates would not equal the net change in spending for personal health care.

services. Spending for LTSS would increase under Option 5 as the result of moving from a system in which Medicaid was the primary payer for such services to a single-payer system that would cover LTSS. Spending for prescription drugs and for other services would decline under all of the illustrative options because of lower payment rates.[128]

Increases in the Amount of Care That Patients Would Use

CBO estimates that increases in the use of health care under the single-payer options would offset some or all of the reductions in health care spending that would stem from changes in payment rates. Under Options 1, 4, and 5, the increases in the use of care would more than offset the reductions in health care spending resulting from changes in payment rates (even with the higher payment rates in those options, some providers would be paid at lower rates than under current law). Consequently, spending on personal health care would rise under those options. Under Options 2 and 3, the increases in the use of care would be smaller than the reductions in health care spending resulting from changes in payment rates, so total spending on personal health care would decline.

To better understand changes in the use of care, CBO apportioned those changes to factors that affect the demand for care and factors that affect the supply of care. The increases in the use of care under the illustrative options reflect the net effects of factors that would increase patients' demand for care and factors that would increase or decrease the amount of care that providers would supply.

To estimate changes in the use of health care, CBO first projected the percentage change in the demand for health care that would occur if people had the coverage and cost sharing specified under the illustrative options, without accounting for any constraints on the supply of care. CBO then estimated the percentage change in the quantity of care that would be supplied given that increase in demand. Percentage changes in the quantity of care that would be demanded and supplied were applied to the amount of care that would be used under current law but at the prices under a given option. As a result, the same percentage change in the amount of care demanded or supplied could yield different changes in spending on personal health care because of the different payment rates.

On the demand side, lower out-of-pocket costs, increased health insurance coverage, and fewer restrictions on utilization, provider networks, and billing would increase the amount of care demanded. For the LTSS benefit in Option 5, CBO estimated an increase in the use of LTSS among people who would already be using such services under current law, as well as an increase in the number of people who would use paid LTSS under that option. Most of the new users would be people who would receive unpaid LTSS from family or friends under current law but would begin using paid LTSS under the illustrative option. In many such cases, existing

[128] The estimates reported here account both for services delivered inside the single-payer system and for services delivered outside the system. As a result, these estimated percentage changes from current law are generally smaller than would be expected from the change in payment rates reported in Section 4. That section focused on payment rates within the single-payer system and did not consider the rates that would be received by providers who opted out of the system.

unpaid caregivers would be eligible to be paid by the single-payer system under the benefit for self-directed services (see Section 8).

On the supply side, lower payment rates for some providers, particularly in the lower payment scenario, would reduce the supply of care, on net. Other characteristics of the single-payer system—including lower administrative spending for providers and fewer restrictions on utilization, provider networks, and billing—would increase the amount of care supplied. CBO expects that the net effect of those different incentives would increase the supply of health care under all of the single-payer options. On the basis of CBO's initial estimates incorporating those incentives, the increase in demand for care would be greater than the initial increase in supply. CBO's total estimates of effects on the supply of care incorporate responses to the initial gap between supply and demand within the single-payer system and additional care delivered by providers who opt out of the single-payer system.

The total increase in demand for care would exceed the total increase in care supplied under all five of the illustrative options, CBO estimates. Because supply would determine the amount of care provided under the options, in CBO's assessment, some of the increase in demand would go unmet. CBO projects that providers—both within the single-payer system and outside it—would supply more care in situations in which the amount of unmet demand increased, but those responses would not be large enough to meet all of the additional demand for care. The additional amount of care that would be demanded but not supplied would range from 1 percentage point ($68 billion) under Option 1, which includes higher payment rates for providers and higher cost sharing for patients, to 6 percentage points ($319 billion) under Option 3, which includes lower payment rates and lower cost sharing (see Exhibit 12-2).

It is possible to specify combinations of cost sharing and payment rates high enough that CBO would estimate an increase in the supply of care that would exceed the increase in the demand for care. In such cases, CBO estimates, the amount of care used could rise because of the increase in supply, and unmet demand could decline relative to its amount under current law.

Increases in the Demand for Care. CBO estimates that in 2030, increases in the demand for health care services covered by the single-payer system, relative to demand under current law, would result in an increase in demand for personal health care ranging from 7 percent under the higher cost-sharing scenario in Options 1 and 2 to 17 percent in Option 5, which has lower cost sharing and includes LTSS (see Exhibit 12-2). Those estimates reflect no constraints on the amount of care supplied. If all of the increased demand for care was supplied, the total increase in NHE from greater demand would range from $372 billion in Option 2 to $973 billion in Option 5. The rise in demand under the illustrative single-payer options stems from three factors:

- Lower out-of-pocket costs among people who would be insured under current law;
- Higher demand for care among people newly gaining insurance; and
- Fewer restrictions on utilization, provider networks, and billing.

Exhibit 12-2.

Effects on the Demand for and Supply of Personal Health Care Under CBO's Illustrative Single-Payer Options, 2030

	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
			Change in Billions of Dollars		
Increase in Patients' Demand for Personal Health Care Due to:					
Lower out-of-pocket costs among people who are insured under current law[a]	200	205	412	459	585
Higher demand for care among people newly gaining insurance[a]	48	45	56	62	248
Fewer restrictions on utilization, provider networks, and billing[b]	140	123	123	140	140
Total Increase in Demand	**388**	**372**	**591**	**661**	**973**
Change in Providers' Supply of Personal Health Care Due to:					
Change in payment rates and reduction in supplemental payments	-27	-114	-114	-27	-27
Reduced administrative spending by providers on equipment and personnel	79	55	55	79	79
Reduced time spent by clinicians on administrative activities	72	64	64	72	72
Fewer restrictions on utilization, provider networks, and billing[b]	110	99	99	110	110
Increased demand for prescription drugs	65	53	81	105	105
Increased demand for LTSS	0	0	0	0	312
Initial estimate of the increase in supply	298	158	186	338	650
Providers' responses to the initial gap between supply and demand within the single-payer system	17	38	73	58	58
Additional care delivered by providers who opted out of the single-payer system	6	9	13	10	10
Total Increase in Supply	**321**	**206**	**272**	**407**	**718**
Increase in Demand That Would Not Be Met	**68**	**166**	**319**	**254**	**254**
Memorandum:					
Current-Law Quantity of Care That Would Be Used at Prices Specified in the Option	5,595	5,129	5,154	5,621	5,640
Initial Gap Between Supply and Demand[c]	90	214	405	323	323
			Percentage Change		
Increase in Patients' Demand for Personal Health Care Due to:					
Lower out-of-pocket costs among people who are insured under current law[a]	3.6	4.0	8.0	8.2	10.4
Higher demand for care among people newly gaining insurance[a]	0.9	0.9	1.1	1.1	4.4
Fewer restrictions on utilization, provider networks, and billing[b]	2.5	2.4	2.4	2.5	2.5
Total Increase in Demand	**6.9**	**7.3**	**11.5**	**11.8**	**17.3**

Continued

Effects on the Demand for and Supply of Personal Health Care Under CBO's Illustrative Single-Payer Options, 2030

	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
	Percentage Change (Continued)				
Change in Providers' Supply of Personal Health Care Due to:					
Change in payment rates and reduction in supplemental payments	-0.5	-2.2	-2.2	-0.5	-0.5
Reduced administrative spending by providers on equipment and personnel	1.4	1.1	1.1	1.4	1.4
Reduced time spent by clinicians on administrative activities	1.3	1.3	1.2	1.3	1.3
Fewer restrictions on utilization, provider networks, and billing[b]	2.0	1.9	1.9	1.9	1.9
Increased demand for prescription drugs	1.2	1.0	1.6	1.9	1.9
Increased demand for LTSS	0	0	0	0	5.5
Initial estimate of the increase in supply	5.3	3.1	3.6	6.0	11.5
Providers' responses to the initial gap between supply and demand within the single-payer system	0.3	0.7	1.4	1.0	1.0
Additional care delivered by providers who opted out of the single-payer system	0.1	0.2	0.2	0.2	0.2
Total Increase in Supply	**5.7**	**4.0**	**5.3**	**7.2**	**12.7**
Increase in Demand That Would Not Be Met (Percentage points)	**1.2**	**3.2**	**6.2**	**4.5**	**4.5**
Memorandum:					
Initial Gap Between Supply and Demand (Percentage points)[c]	1.6	4.2	7.9	5.7	5.7

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

All changes in demand and supply are estimated relative to the quantity of care that would be used under current law at the prices specified in each option. For that reason, the changes in the demand for and supply of care reflect both changes in the use of care and differences in payment rates under the options. The single-payer system's payment rates would be identical in Options 1 and 4 and in Options 2 and 3, but the same payment rates would have differing effects on national health expenditures because of differences in the relative amounts of care delivered by providers within the single-payer system and by providers outside the system. In the options with lower cost sharing, more health care would be delivered by providers who opted out of the system, and CBO estimates that the payment rates for such providers would be higher than the single-payer system's rates. In Option 5, the single-payer system's payment rates for all services other than LTSS would be the same as in Options 1 and 4, but providers of noninstitutional LTSS would be paid at rates 8 percent higher than under current law.

LTSS = long-term services and supports.

a. For LTSS, lower out-of-pocket costs correspond to a change in LTSS spending among people who would use LTSS provided by paid caregivers under current law. Higher demand for care among people newly gaining insurance corresponds to a change in LTSS spending among people who either would use no LTSS under current law or would use only LTSS provided by unpaid caregivers, such as family and friends.

b. CBO expects that because the single-payer system would be similar to the Medicare fee-for-service program, health insurance would have fewer restrictions on utilization, provider networks, and billing than it would under current law. Except for prescription drugs, CBO applied half of the total effect of having fewer restrictions to the demand response and half to the supply response; for prescription drugs, all of the effect was applied to the demand response.

c. The difference between the total increase in demand and the initial estimate of the increase in supply.

Estimates of the increase in demand under the options account for the broader set of benefits that would be covered by the single-payer system (relative to current law), changes in the number of services people would use, and changes in the intensity of those services. For example, spending on personal health care would rise if patients saw their physician more often, but it would also rise if they had an MRI instead of an X-ray or went to the emergency room instead of an outpatient clinic. CBO expects that both types of spending increases would occur in a system with lower cost sharing for medical services and fewer other restrictions on utilization.

Under CBO's illustrative options, out-of-pocket costs for covered services would be lower than under current law. That reduction in costs is expected to increase the demand for health care among both people who would have insurance and people who would be uninsured under current law.

Lower Out-of-Pocket Costs Among People Who Would Be Insured Under Current Law. People who would have insurance under current law would generally face lower cost sharing under the illustrative single-payer options. In 2030, that decline in cost sharing would increase total demand for care by 4 percent under the higher cost-sharing scenario in Options 1 and 2 and by 8 percent under the lower cost-sharing scenario (and no LTSS coverage) in Options 3 and 4. Those percentage increases in demand would raise spending by about $200 billion in Options 1 and 2 and by more than $410 billion in Options 3 and 4. (For details about how CBO modeled the effects of changes in out-of-pocket costs, see Section 5.)

Under Option 5, the estimated rise in demand resulting from lower out-of-pocket spending also accounts for the increased use of LTSS among people who would use LTSS provided by a paid caregiver under current law. Including that additional increase in demand brings the total rise in demand among people who would be insured under current law to 10 percent, which translates to a dollar amount of $585 billion. (For details about how CBO modeled an increase in the demand for LTSS, see Section 8.)

Higher Demand for Care Among People Newly Gaining Insurance. Individuals who would be uninsured under current law would realize significant increases in access to care and would face substantially lower cost sharing under the illustrative single-payer options. In 2030, such changes would increase total demand for care by about 1 percent under Options 1 through 4. That percentage increase in demand translates to dollar amounts of $45 billion to $62 billion, depending on the option.

Demand for care would rise between 30 percent and 39 percent among people who would gain coverage through the single-payer system. But because spending on the uninsured makes up only about 2 percent of personal health care spending under current law, the large increases in demand among those people translate into a smaller overall effect on spending in percentage terms. (For details about how CBO modeled the effects of gaining coverage, see Section 5.)

Under Option 5, the estimated rise in demand among people who would otherwise be uninsured also includes the increased demand for LTSS among people who would not use LTSS provided by a paid caregiver under current law. Including the increased use of LTSS among people not previously using paid LTSS brings the total rise in demand attributable to this factor to 4 percent,

which translates to a dollar amount of $248 billion. (For details about how CBO modeled an increase in the demand for LTSS, see Section 8.)

Fewer Restrictions on Utilization, Provider Networks, and Billing. In addition to the increases in demand stemming from reductions in out-of-pocket costs and new access to insurance coverage, CBO estimates that the combination of having fewer restrictions on utilization, provider networks, and billing would increase the demand for health care in 2030 by 2 percent to 3 percent under all of the options.[129] Those percentage increases in demand translate to dollar amounts of $123 billion under Options 2 and 3 and $140 billion under Options 1, 4, and 5. (The effects of having fewer restrictions on utilization, provider networks, and billing would increase the amount of care that patients would want to use and the amount of care that providers would supply. In CBO's estimates, half of those effects on medical services were apportioned to patients' demand and half to providers' supply. For prescription drugs, the effects of having fewer restrictions were apportioned entirely to demand, because prescription drug manufacturers would be willing to increase supply to meet the entire amount of additional demand, CBO estimates. For details about the methods underlying those estimates, see Section 6.)

Total Increase in Demand. After incorporating all three of the factors described above that would increase the demand for care—relative to the amount of care that would be used under current law in 2030—CBO estimates that the total quantity of care demanded would rise by 7 percent under the options with higher cost sharing (Options 1 and 2), by 11 percent to 12 percent under the options with lower cost sharing and no LTSS coverage (Options 3 and 4), and by 17 percent under the option with lower cost sharing and an LTSS benefit (Option 5). If all of the demanded care were supplied, those percentage increases in demand would cause spending to rise by an amount ranging from $372 billion under Option 2 to $973 billion under Option 5 (see Exhibit 12-2).

That increase in demand for care is what CBO expects would happen in a single-payer system that was similar to the illustrative options that CBO modeled but without accounting for supply considerations. Effects on supply are described below because the size of those effects depends not only on how providers would respond to the single-payer system itself but also on how they would respond to the increased demand resulting from the system. The percentage of increased demand that would not be met depends on several factors and would range from 17 percent under Option 1 to 54 percent under Option 3, CBO estimates.

Changes in the Supply of Care. Relative to the amount of care that would be delivered in 2030 under current law, CBO estimates that the supply of care would increase, on net, under all of the illustrative single-payer options (see Exhibit 12-2). The supply of health care would rise by as

[129] CBO expects that because the single-payer system would be similar to the Medicare fee-for-service (FFS) program, health insurance would have fewer restrictions on utilization, provider networks, and billing than it would under current law. CBO estimates that insurers in the employment-based and nongroup markets spend about 2 percent of their premium revenues on cost containment expenses and that, in the absence of any constraints on supply or adjustments for prices, moving to an FFS system would increase spending by people with employment-based or nongroup coverage by 5.5 percent. That estimate implies that each $1 of spending on cost containment reduces spending by roughly $3. CBO did not find any research estimating insurers' return on specific cost containment activities, such as prior authorization, utilization review, or network formation. However, interviews with experts suggest that insurers generally reduce utilization by more than they spend on such activities.

little as 4 percent under Option 2 (with lower payment rates and higher cost sharing) to as much as 7 percent under Option 4 (with higher payment rates and lower cost sharing) or 13 percent under Option 5 (with higher payment rates, lower cost sharing, and LTSS coverage). Those estimated increases reflect the net effects of supply responses to one factor that would reduce supply—lower average payment rates for some providers under the single-payer system—and to various factors that would increase supply: less money and time spent on administrative activities by providers; fewer restrictions on the types of care that providers could recommend, on provider networks, and on billing; and providers' responses to the greater demand for health care services.

CBO estimates that for prescription drugs and LTSS, supply would increase to match the amount of care that would be demanded. For all other categories of health care services, supply would increase, but not by as much as demand.

Changes in Payment Rates and Reductions in Supplemental Payments. CBO estimates that providers' responses to changes in payment rates and to reductions in supplemental payments would reduce the amount of care that providers would otherwise supply by less than 1 percent under the options with higher payment rates (Options 1, 4, and 5) and by 2 percent under the options with lower payment rates (Options 2 and 3). Those percentage reductions in supply translate to reductions in spending of $114 billion in the lower payment-rate scenario and $27 billion in the higher payment-rate scenario. (For details about how CBO estimated providers' responses to changes in payment rates, see Section 4.)

Reductions in Providers' Administrative Spending on Equipment and Personnel. CBO estimates that the supply of care would increase by roughly 1 percent under all of the options because of providers' monetary savings on administrative personnel and equipment. That increase would raise spending by $55 billion in the lower payment-rate scenario and by $79 billion in the higher payment-rate scenario. (For details about how CBO estimated providers' responses to changes in spending on administrative activities, see Section 6.)

Reductions in Clinicians' Time Spent on Administrative Activities. CBO also expects that the supply of care would increase by about 1 percent under all of the illustrative options because of providers' time savings on administrative activities. That increase would boost spending by $64 billion in the lower payment-rate scenario and by $72 billion in the higher payment-rate scenario. (For details about how CBO estimated providers' responses to changes in the amount of time they would spend on administrative activities, see Section 6.)

Fewer Restrictions on Utilization, Provider Networks, and Billing. CBO expects that the supply of care would increase by about 2 percent under all of the illustrative options because the single-payer system would apply fewer restrictions on utilization, provider networks, and billing than would occur under current law. Reducing such restrictions tends to encourage the use of additional care. That 2 percent increase in supply would result in $110 billion of additional spending in the options with higher payment rates (Options 1, 4, and 5) and $99 billion of additional spending in the options with lower payment rates (Options 2 and 3). (For details about the methods underlying these estimates, see Section 6.)

Increased Demand for Prescription Drugs. CBO estimates that in 2030, manufacturers of prescription drugs would generally produce the entire amount of drugs that patients would demand and be prescribed under the single-payer options. Those amounts translate to an increase in spending on prescription drugs ranging from 1 percent (or $53 billion) under Option 2 to 2 percent (or $105 billion) under Options 4 and 5. (For details about the methods CBO used to estimate effects on demand, see Sections 5 and 6.) Under the lower payment-rate scenario, CBO estimates, manufacturers would have less incentive to invest in the development of new drugs. The resulting effects on the use of drugs are estimated to occur after 2030. (For more details about the effects of changes in prices and quantities of drugs on the future development of new drugs, see Section 18.)

Increased Demand for Long-Term Services and Supports. Under Option 5, changes in the supply of LTSS providers would be substantially different from changes in the supply of other providers. LTSS providers would see a payment increase from moving from a system in which Medicaid was the primary source of coverage for LTSS to a single-payer system that covered those services. In addition, many people who are projected to provide unpaid LTSS under current law would be eligible to be paid by the single-payer system. For those reasons, CBO expects that under Option 5, the supply of LTSS care would be sufficient to meet the increased demand. As a result, spending on LTSS would increase by 6 percent (or $312 billion) under that option, CBO projects. (For a description of how CBO estimated the supply of LTSS, see Section 8.)

Initial Estimates of Increases in Supply. CBO used the estimated effects of the supply factors discussed above to project an initial increase in the supply of care under each of the options, which ranges from 3 percent (or $158 billion) in Option 2 to 12 percent (or $650 billion) in Option 5. In those initial estimates, the percentage increase in demand exceeds the percentage increase in supply under the options by amounts ranging from 2 percentage points (or $90 billion) in Option 1 to 8 percentage points (or $405 billion) in Option 3. Those estimates were used as inputs to project how providers would respond to the initial gap between increased demand and increased supply.

Providers' Responses to the Initial Gap Between Supply and Demand in the Single-Payer System. CBO estimates that providers in a single-payer system would respond to the initial gap between supply and demand by increasing the amount of care they would provide. CBO estimates that the additional increase in the supply of care from that response would cause the total supply of care to rise by an amount ranging from 0.3 percent (or $17 billion) in Option 1 to 1.4 percent (or $73 billion) in Option 3. (For details about how CBO estimated providers' responses to the gap between supply and demand, see Section 6.)

Additional Care Delivered by Providers Who Opted Out of the Single-Payer System. CBO estimates that providers who chose to opt out of the single-payer system would supply a greater amount of care than they would have provided if they had participated in that system, because they would receive higher payment rates outside the system. CBO expects that the amount of that additional care would be greatest under the option with the largest initial gap between supply and demand and lower single-payer payment rates (Option 3), because more providers would opt out of the single-payer system under such conditions.

CBO estimates that the additional care supplied by providers who opted out would cause the supply of care to increase by amounts ranging from 0.1 percent in Option 1 to 0.2 percent in Option 3.[130] To be consistent with how other increases in demand and supply are measured in this section, CBO estimated the increased spending that would have resulted if the providers of those additional services had been paid using the single-payer system's rates. That method resulted in estimates of increased spending ranging from $6 billion in Option 1 to $13 billion in Option 3.

Those amounts do not measure the total spending on the additional services supplied by providers who opted out, however, because CBO expects that the rates those providers were paid would be higher than the single-payer system's rates. The effects of those differences in rates are not included in the estimates of changes in the supply of care shown in Exhibit 12-2. However, those effects are included in the analysis in Section 11 as part of the change in spending under each option resulting from the change in payment rates. (For details about how CBO estimated providers' responses to the gap between supply and demand, see Section 6.)

Total Increase in Supply. After accounting for all of the effects on supply, CBO estimates that the total amount of care provided in 2030 under the single-payer system would exceed the amount of care that would be provided under current law by amounts ranging from 4 percent under Option 2 (which has lower payment rates and higher cost sharing) to 7 percent under Option 4 (which has higher payment rates and lower cost sharing). Including LTSS coverage in Option 5 causes the total supply of care to increase by 13 percent relative to current law. Those increases in supply translate to increases in spending on health care that range from $206 billion in Option 2 to $718 billion in Option 5.

Increase In Demand That Would Not Be Met. The total increase in demand that would not be met under the illustrative single-payer system is equal to the increase in demand minus the increase in supply. That difference would be greatest for the option in which payment rates and cost sharing were both lower, because the increase in demand would be largest with lower cost sharing and the increase in supply would be smallest with lower payment rates. The increase in unmet demand compared with current law would range from 1 percentage point ($68 billion) under Option 1, which includes higher payment rates for providers and higher cost sharing for patients, to 6 percentage points ($319 billion) under Option 3, which includes lower payment rates and lower cost sharing (see Exhibit 12-2).

[130] Those estimates do not indicate the total amount of care supplied by providers who opt out, but rather the additional care they would supply relative to what they would have supplied if they had not been allowed to opt out of the single-payer system.

Section 13.
Effects of the Illustrative Options on Out-of-Pocket Spending

The payments that people make out of pocket for health care would, on average, decline under all five of CBO's illustrative single-payer options. Those out-of-pocket payments include cost-sharing payments, spending on services not covered by insurance, and payments covered by health savings accounts, but they exclude all payments for insurance premiums.[131] CBO projects that out-of-pocket spending would total $721 billion in 2030 under current law. Under the illustrative single-payer options, total out-of-pocket spending would range from $255 billion under Option 5 to $579 billion under Option 1 (see Exhibit 13-1). Those changes represent reductions in total out-of-pocket spending ranging from 20 percent (or $142 billion) under Option 1 to 65 percent (or $466 billion) under Option 5. Average out-of-pocket spending per person in 2030 would fall from $2,062 under current law to amounts ranging from $729 under Option 5 to $1,655 under Option 1, CBO estimates.

A reduction in out-of-pocket spending would benefit patients financially. At the same time, it would increase the demand for health care, which in turn would increase the use of care, CBO estimates. As a result, lower out-of-pocket spending under a single-payer system would increase total national health expenditures and costs to the federal government.

Two policy specifications in CBO's illustrative options significantly affect cost sharing:

- The cost-sharing requirements under the single-payer system for services other than long-term services and support (LTSS), and

- Whether the single-payer system would cover LTSS and what the cost sharing for those services would be.

CBO used two cost-sharing scenarios for its options. In the higher cost-sharing scenario, people with income greater than 150 percent of the federal poverty level would pay an average of 7.5 percent of the total costs of medical services and retail prescription drugs covered by the single-payer system.[132] That higher scenario applies in Options 1 and 2, and CBO estimates that total cost-sharing payments for covered benefits under those options would range from $211 billion to $240 billion. (Those out-of-pocket payments exclude spending on LTSS, which is not covered by the single-payer system in Options 1 and 2.) In the lower cost-sharing scenario, cost sharing would be required only for prescription drugs (and only for people with household income above 150 percent of the federal poverty level). That scenario applies in Options 3

[131] CBO did not count payments for insurance premiums as part of out-of-pocket spending but instead categorized those payments with the payer that received the premiums. For example, premium payments for private health insurance were categorized as spending by private insurance.

[132] People with income below that threshold would not pay any cost sharing under either scenario. In addition, certain preventive care services would be exempt from cost sharing, and there would be a limit on the maximum amount that people could pay out of pocket each year for covered services.

Exhibit 13-1.

Out-of-Pocket Spending Under Current Law and CBO's Illustrative Single-Payer Options, 2030

	Current Law	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
Total Out-of-Pocket Spending (Billions of dollars)	721	579	577	415	394	255
Change in Total Out-of-Pocket Spending From Current Law						
Change in billions of dollars	n.a.	-142	-144	-306	-327	-466
Percentage change	n.a.	-20	-20	-42	-45	-65
Per Capita Out-of-Pocket Spending (Dollars)	2,062	1,655	1,650	1,187	1,126	729
Out-of-Pocket Spending by Type of Spending (Billions of dollars)						
For services covered by the single-payer system	n.a.	240	211	10	13	13
For opt-out services[a]	n.a.	57	85	124	99	99
For services not covered by the single-payer system	n.a.	282	282	282	282	143
Out-of-Pocket Spending by Service Category (Billions of dollars)						
Hospital services	63	108	93	6	6	6
Physician and clinical services	158	129	148	108	84	84
Prescription drugs	81	30	23	10	13	13
Long-term services and supports	139	139	139	139	139	0
Other services[b]	281	173	175	152	152	152

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

n.a. = not applicable.

a. Consists of services furnished by providers who opt out of participating in the single-payer system.

b. Includes dental services, ambulance services, home health care, hospice care, skilled nursing facility care, school health services, durable medical equipment (such as eyeglasses and hearing aids), and nondurable medical equipment (such as over-the-counter medications). Home health care and skilled nursing facility care are sometimes classified as long-term services and supports, but CBO included them in the "other services" category because Medicare covers those services under current law, and CBO included all benefits covered by Medicare in the illustrative single-payer benefit packages.

through 5, and CBO estimates that total cost-sharing payments for prescription drugs under those options would amount to less than $15 billion.

For LTSS, CBO estimates that people would pay a total of $139 billion out of pocket for those services in 2030 under Options 1 through 4, which do not cover LTSS, and nothing out of pocket under Option 5, which includes LTSS benefits and uses the lower cost-sharing scenario for other services. That difference in LTSS coverage is the reason that total out-of-pocket spending would be higher under the first four options than under Option 5.

Under the illustrative single-payer system, some health care costs would continue to be paid out of pocket for several reasons:

- Under all five options, some people would pay cost sharing for prescription drugs.

- Under Options 1 and 2, some people would also pay cost sharing for certain medical services.

- Under all five options, people would pay for some services not covered by the single-payer system, such as aesthetic procedures and over-the-counter medicines. (CBO grouped spending on nondurable medical equipment, including over-the-counter medicines, with "other services," which is why that category is estimated to be the largest source of out-of-pocket spending under all five options. Spending on nondurable medical equipment estimated to total $112 billion in 2030. In addition, some aesthetic procedures would occur in hospitals, which is why Exhibit 13-1 shows out-of-pocket spending for hospital services under Options 3 through 5, which have no cost-sharing requirements for hospital services.) Under Options 1 through 4, people would also pay for LTSS out of pocket unless they were eligible for Medicaid.

- Under all five options, some providers would opt out of the single-payer system, and some patients would choose to pay the full prices charged by those outside providers to receive care. CBO expects that the providers who opted out would be providers of physician and clinical services and of other services. (It is possible that some hospitals and LTSS providers might opt out, perhaps in a few locations. But in its analysis, CBO treated all of the spending on services furnished by those providers as if it was furnished inside the single-payer system.) The rates charged by providers who opted out would be two to three times higher than the single-payer system's payment rates, CBO estimates.

Section 14.
Effects of the Illustrative Options on Administrative Spending by Payers

CBO estimates that lower administrative spending by payers under its illustrative single-payer options than under current law would reduce national health expenditures (NHE) in 2030 by amounts ranging from $406 billion to $416 billion, depending on the option. Administration of payments in a single-payer system would be more like that of the fee-for-service (FFS) component of Medicare and less like that of private insurance. The reasons that administrative spending by payers would be lower under such a system can be understood by considering two types of factors: how the Medicare FFS program's spending differs from that of private insurers, and how spending under CBO's illustrative single-payer options would differ from that of the Medicare FFS program.

Spending on administration is projected to make up a smaller share of total spending for the Medicare FFS program in 2030 under current law than it is for private insurers. Specifically, administrative spending is projected to equal about 2 percent of total spending for the Medicare FFS program under current law, compared with 8 percent for the entire Medicare program (which includes some private insurers that administer Medicare benefits) and 12 percent for private insurance, on average. The FFS program's percentage of spending on administration is smaller for several main reasons, all of which would also apply under a single-payer system:

- The Medicare FFS program does not face the fragmentation, complexity, and duplication that stem from complying with different state regulations, providing different employment-based benefits, and negotiating different payment rates with many provider groups. In addition, administering a single benefit package using a common process for setting payment rates nationwide is much simpler than a system in which many private insurers set their own payment rates using their own processes.

- It does not pay state taxes and regulatory fees, incur costs for salespeople and brokers, or earn profits. In addition, a smaller percentage of its spending is devoted to activities such as utilization management.

- It experiences greater economies of scale than most private insurers from spreading the fixed costs of information technology across a larger total amount of spending and from being able to specialize more in its claims processing.

(For a discussion of what private health plans spend on specific administrative activities, see Box 14-1 at the end of this section. For a discussion of the administrative costs of providers, such as hospitals and doctor's offices, under the single-payer options, see Section 12.)

Under a single-payer system, additional factors would tend to push down administrative spending compared with that of the Medicare FFS program. A single-payer system would not need to engage in some types of administrative activities, such as determining whether patients would be eligible to enroll because of their work history or disabilities. Its economies of scale would be larger. And because the single-payer system would cover a population that would be

younger and healthier, on average, than Medicare enrollees, a smaller proportion of its claims would involve hospitalizations or other complex situations that include multiple services and providers—for which verifying that the correct amounts are billed is more complicated.

Several other factors would put upward pressure on administrative spending as a percentage of total spending under Options 1 through 4, although they would affect smaller amounts of spending and be outweighed by the sources of downward pressure, CBO projects. Fixed costs per enrollee (such as for enrollee education) and fixed costs per claim would tend to push up administrative spending as a percentage of total spending, compared with Medicare FFS, because enrollment is projected to increase by a larger percentage under the single-payer system than is total spending. Other administrative spending, such as for fraud prevention, would generally increase by the same percentage as total spending. In all, the amount spent on administrative activities under Options 1 through 4 would be about five times larger than the total amount spent on such activities in Medicare FFS, whereas total spending for the single-payer system would be seven to eight times larger than total spending for Medicare FFS. As a result, administrative spending as a percentage of total spending would decline.

Under Option 5, spending on administration would be greater than under Options 1 through 4 because of the added costs of administering the benefit covering long-term services and supports (LTSS), processing additional claims, and monitoring those claims for fraud and abuse.

CBO's estimate of payers' administrative spending as a percentage of total spending under the options is comparable to, or slightly lower than, the percentages for other countries with single-payer health care systems. For the purposes of this analysis, CBO chose to treat administrative spending under the options as mandatory spending, but policymakers could instead make some or all of the single-payer system's administrative spending subject to appropriation (discretionary spending), as is the case for some of Medicare's administrative spending.

Comparison of Administrative Spending by Medicare FFS and All of Medicare

Administrative spending as a percentage of total spending is lower for the Medicare FFS program than it is for Medicare as a whole. The reason is that the private insurers that participate in Medicare Advantage and Medicare Part D have proportionally higher administrative spending than the Medicare FFS program does. CBO projects that under current law, administrative spending would represent 2 percent of FFS spending and 8 percent of spending for the entire Medicare program in 2030. Those estimates reflect CBO's expectation that the share of Medicare beneficiaries enrolling in Medicare Advantage instead of Medicare FFS would grow over time under current law.

Private Medicare Advantage plans accept both the responsibility and financial risk of providing nearly all of the benefits covered by Parts A and B of Medicare to enrollees (inpatient and post-acute care medical services and physician and outpatient services). Private Part D plans provide prescription drug benefits to Medicare beneficiaries. The entire Medicare prescription drug program is delivered by private plans, whereas beneficiaries can choose to have their medical benefits covered by Medicare FFS or a Medicare Advantage plan.

Comparison of Administrative Spending by Medicare FFS and a Single-Payer System

The single-payer system in CBO's illustrative options would resemble the Medicare FFS program in its formula-based payment policy, network of providers, and oversight. For that reason, CBO's estimate of the administrative spending that would be incurred under that system is based on a detailed analysis of administrative spending for Medicare FFS under current law. (For details about the methods underlying that analysis, see Section 7.)

On the basis of its analysis of the FFS program in 2019, CBO estimates that administrative spending under the single-payer system would total $69 billion to $102 billion in 2030, depending on the option. Administrative spending as a share of total spending would range from 1.5 percent to 1.8 percent, compared with 2.3 percent (or $15 billion) for the FFS program in 2030 under current law (see Exhibit 14-1). The single-payer options without an LTSS benefit are at the lower end of that range, and the option with an LTSS benefit is at the upper end.

Single-Payer Options Without LTSS Coverage. Under Options 1 through 4, administrative spending would range from $69 billion to $75 billion, or 1.5 percent to 1.6 percent of total spending. Those dollar amounts are much larger than for Medicare FFS under current law, mainly because enrollment in the single-payer system would be about nine times larger. Administrative spending as a percentage of total spending is lower than for Medicare FFS, however, in part because about one-quarter of the FFS program's administrative spending would be eliminated under the single-payer system—mainly spending for the Social Security Administration to collect Medicare Part B premiums and determine eligibility for Medicare.

In its comparison of administrative spending under a single-payer system and Medicare FFS, CBO divided administrative spending into categories based on how it would change with the shift to a single-payer system. In addition to administrative spending that would be eliminated under the new system, the categories include administrative spending that would not increase with the number of providers, enrollment, or volume of claims and spending; administrative spending that would increase with the number of providers, enrollment, or volume of claims and spending; and new administrative spending under a single-payer system.

Economies of scale would occur under a single-payer system for several activities for which spending does not increase, or increases by a small amount, when total spending rises. For example, spending for some activities that are not related to the number of enrollees or providers, such as administering incentive programs for hospitals, would be almost the same under the single-payer options as under the current-law Medicare FFS program, CBO projects.

Spending that is related to the number of providers, such as spending for accreditation of providers through Medicare's Provider Survey and Certification Program, would grow much less than total spending under the options, compared with the FFS program under current law, because the changes in the number of providers would be relatively small.

Spending on several other administrative activities would be about the same percentage of total spending under the options than in the FFS program under current law, as the result of various offsetting factors. Specifically, general information technology (IT) costs, costs of IT systems for claims processing, and claims and appeals costs would all increase by a smaller percentage than total spending under the options, on net. That would occur because some fixed costs for IT

Exhibit 14-1.

Administrative Spending Under Medicare FFS and CBO's Illustrative Single-Payer Options, 2030

Spending Category	Medicare FFS in 2030 Under Current Law	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
			Administrative Spending in Billions of Dollars			
			Spending That Would Be Eliminated Under the Single-Payer Options			
Funds paid to SSA for premium collection and disability determination; CMS's costs of interacting with private plans, including reviewing risk adjustment and auditing bids	3.6	0	0	0	0	0
			Spending That Would Not Increase With the Number of Participating Providers, Enrollment, or the Volume of Claims and Spending			
Funds paid to the Treasury to collect Medicare taxes; research budget; spending on medical innovation; administration of provider incentive programs	2.1	2.2	2.2	2.2	2.2	2.2
			Spending That Would Increase With the Number of Participating Providers			
Provider surveys and certification, including HIPAA compliance and adding national provider identifiers	0.9	1.1	1.1	1.1	1.1	1.1
			Spending That Would Increase With Enrollment or the Volume of Claims and Spending			
Enrollee education programs; bidding for durable medical equipment; quality programs	0.4	3.6	3.6	3.6	3.6	3.6
General IT costs for accounting; salaries and rent for office space	1.4	10.2	10.2	10.2	10.2	10.2
Claims and appeals costs; contracting costs for processing claims	1.6	11.9	11.7	11.9	12.1	12.1
IT system for processing claims	1.1	6.2	6.1	6.2	6.3	6.3
Quality improvement; fraud-reduction programs; program management	3.6	29.9	25.9	27.6	32.0	37.1
			New Spending Under the Single-Payer Options			
Miscellaneous new administrative spending, such as federal spending on tools to reduce drug prices, spending to administer school-based services, and spending to verify eligibility for the single-payer system	n.a.	7.9	7.9	7.9	7.9	7.9
Spending on LTSS	n.a.	0	0	0	0	21.7
			All Administrative Spending			
Total Administrative Spending	**14.7**	**73.1**	**68.7**	**70.7**	**75.5**	**102.3**

Continued

Administrative Spending Under Medicare FFS and CBO's Illustrative Single-Payer Options, 2030

Spending Category	Medicare FFS in 2030 Under Current Law	Option 1: Higher Payment Rates, Higher Cost Sharing, No LTSS	Option 2: Lower Payment Rates, Higher Cost Sharing, No LTSS	Option 3: Lower Payment Rates, Lower Cost Sharing, No LTSS	Option 4: Higher Payment Rates, Lower Cost Sharing, No LTSS	Option 5: Higher Payment Rates, Lower Cost Sharing, Coverage of LTSS
	Administrative Spending as a Percentage of Total Spending					
	Spending That Would Be Eliminated Under the Single-Payer Options					
Funds paid to SSA for premium collection and disability determination; CMS's costs of interacting with private plans, including reviewing risk adjustment and auditing bids	0.57	0	0	0	0	0
	Spending That Would Not Increase With the Number of Participating Providers, Enrollment, or the Volume of Claims and Spending					
Funds paid to the Treasury to collect Medicare taxes; research budget; spending on medical innovation; administration of provider incentive programs	0.33	0.05	0.05	0.05	0.04	0.04
	Spending That Would Increase With the Number of Participating Providers					
Provider surveys and certification, including HIPAA compliance and adding national provider identifiers	0.14	0.02	0.03	0.03	0.02	0.02
	Spending That Would Increase With Enrollment or the Volume of Claims and Spending					
Enrollee education programs; bidding for durable medical equipment; quality programs	0.06	0.08	0.09	0.08	0.07	0.06
General IT costs for accounting; salaries and rent for office space	0.22	0.22	0.25	0.23	0.20	0.18
Claims and appeals costs; contracting costs for processing claims	0.25	0.25	0.28	0.27	0.24	0.21
IT system for processing claims	0.18	0.13	0.15	0.14	0.13	0.11
Quality improvement; fraud-reduction programs; program management	0.56	0.63	0.62	0.62	0.63	0.64
	New Spending Under the Single-Payer Options					
Miscellaneous new administrative spending, such as federal spending on tools to reduce drug prices, spending to administer school-based services, and spending to verify eligibility for the single-payer system	n.a.	0.17	0.19	0.18	0.16	0.14
Spending on LTSS	n.a.	0	0	0	0	0.37
	All Administrative Spending					
Total Administrative Spending as a Percentage of Total Spending	**2.31**	**1.54**	**1.65**	**1.60**	**1.49**	**1.76**

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

CMS = Centers for Medicare & Medicaid Services; FFS = fee for service; HIPAA = Health Insurance Portability and Accountability Act; IT = information technology; LTSS = long-term services and supports; n.a. = not applicable; SSA = Social Security Administration.

would be spread over a larger amount of spending and because greater efficiency could be obtained through specialization of tasks within claims processing. In addition, claims for younger and healthier enrollees would have lower administrative costs per dollar of total spending than claims for Medicare beneficiaries, CBO estimates, because less complex claims (for which the correct billing amounts are easier to verify) are less costly to process.

Those downward pressures would be roughly offset by several sources of upward pressure. For example, total spending related to IT and claims under the options would tend to increase to accommodate claims for prescription drugs, which are currently handled outside the FFS program (by Medicare Part D). Additionally, fixed per-claim costs would tend to increase claims-related spending as a percentage of total spending because younger people are projected to submit more claims (per $1,000 of spending) than beneficiaries in Medicare FFS.

Other categories of administrative activities would also account for roughly the same proportion of spending under the options as they are projected to do in Medicare FFS under current law. For instance, spending on quality-improvement and fraud-prevention programs are projected to rise by a similar percentage as total spending.

Spending that is a fixed amount per enrollee—such as spending for enrollee education programs—would make up a higher percentage of total spending under the options because it would increase by the same ratio as enrollment, which would rise by more than total spending. That type of administrative spending would make up less than 0.1 percent of total spending (see Exhibit 14-1).

CBO also projected that a single-payer system would undertake administrative activities that the Medicare FFS program does not engage in currently, such as paying for school-based services and nonemergency medical transport (which is paid for by the Medicaid program under current law). In addition, CBO separately estimated the costs of verifying residency for the single-payer system using state Medicaid programs' reported costs of verifying state residency. Spending on those new administrative activities would make up about 0.2 percent of total spending under the single-payer system.

The Single-Payer Option With LTSS Coverage. Under Option 5, administrative spending by the single-payer system would total $102 billion, or 1.8 percent of the system's total spending. The long-term services and supports covered under that option include care provided in institutions and in a variety of home- or community-based settings. Administrative costs for institutional care would stem from medical review, claims filing, and survey and certification of new providers. Administrative costs for home- and community-based services would stem from medical review, electronic visit verification, and payments to contractors. Those contractors would be responsible for certifying and conducting background checks on caregivers, determining caregivers' wages, assisting with patients' questions and complaints, processing claims, and processing payroll and taxes. Together, those costs of administering the LTSS benefit under Option 5 would total $22 billion, CBO estimates, or 0.4 percent of the single-payer system's total spending. CBO also estimates that the single-payer system would incur an additional $5 billion for fraud monitoring, quality initiatives, and IT infrastructure related to LTSS coverage, relative to Option 4, which is otherwise similar to Option 5 with the exception

of coverage for LTSS. (The various types of administrative spending for the LTSS benefit are described in more detail in Section 7.)

Under Option 5, the increase in administrative spending by the single-payer system associated with covering LTSS would be almost entirely offset by the elimination of administrative spending on LTSS that Medicaid and private insurers would pay for under Options 1 through 4. On the one hand, the single-payer system would not incur some administrative costs for LTSS that Medicaid would incur under current law, such as determining eligibility based on income and assets, recovering funds from the estates of decedents, or managing waiting lists for LTSS. Also, the single-payer system would not manage multiple LTSS programs or contract separately with service providers in each state, as Medicaid does, and thus would realize economies of scale. On the other hand, more people would use the single-payer LTSS benefit than would use LTSS benefits through Medicaid and private long-term care insurance under current law.

Comparison With Single-Payer Systems in Other Countries

CBO's estimate that administrative spending under its illustrative single-payer options would range from 1.5 percent to 1.8 percent of total spending is similar to or slightly lower than administrative spending by other nations' single-payer health care systems. For example, administrative spending by the single-payer systems in Australia, Canada, Denmark, Sweden, and the United Kingdom ranged from 2 percent to 3 percent of those countries' national health expenditures in 2016 (see Exhibit 14-2). Those countries have populations that range from 2 percent to 20 percent of the size of the U.S. population. Countries with smaller populations than the United States might have larger administrative spending as a percentage of national health expenditures because they have fewer economies of scale, all else being equal.

Budgetary Treatment of Administrative Spending in CBO's Estimates

CBO's estimates for the illustrative options incorporate the assumption that the Congress would constrain administrative spending for a single-payer system to an extent similar to what it does now for the Medicare FFS program. The tools that the Congress currently uses to limit spending on administration in the Medicare FFS program include Congressional oversight and a mix of discretionary spending (which is subject to annual appropriation) and mandatory spending (which is not). For the purposes of this analysis, CBO displayed administrative spending under the single-payer options as mandatory spending so it could be included in the measure of total federal subsidies for health care (which excludes discretionary spending). Policymakers could choose to make administrative spending for a single-payer system subject to appropriation, as they have for many other federal programs.

Exhibit 14-2.

Administrative Spending as a Share of Total National Health Expenditures, by Country, 2016

	Administrative Spending as a Percentage of National Health Expenditures	Type of System	Population (Millions)
United States	8[a]	Multipayer	323
Germany	5	Multipayer	83
Netherlands	4	Multipayer	17
Switzerland	4	Multipayer	8
Australia	3	Single-payer	24
Canada	3	Single-payer	36
Denmark	2	Single-payer	6
Sweden	2	Single-payer	10
United Kingdom	2	Single-payer	66
France	1	Multipayer[b]	64
Japan	1	Multipayer[b]	127

Data sources: Irene Papanicolas, Liana R. Woskie, and Ashish K. Jha, "Health Care Spending in the United States and Other High-Income Countries," *JAMA*, vol. 319, no. 10 (March 13, 2018), pp. 1024-1039, http://dx.doi.org/10.1001/jama.2018.1150; and Commonwealth Fund, "International Health Care Systems Profile" (2020), www.commonwealthfund.org/international-health-policy-center/system-profiles. See www.cbo.gov/publication/56811#data.

a. Administrative spending under current law.

b. The statutory health insurers (SHIs) in France are noncompetitive and are based on where people work. Japan also has SHIs, which are noncompetitive, quasi-public, employer-based insurers.

Box 14-1.
What Do Fully Insured Private Health Plans Spend on Administrative Activities?

A large portion of the total estimated savings in payers' administrative spending under the single-payer options in 2030 results from people who would have private insurance under current law instead having coverage through the single-payer system, which would have lower administrative spending. To better understand how those administrative savings might occur, CBO examined the available data on recent spending by private insurers on administrative activities. That analysis sheds light on activities that would be eliminated under the single-payer system and areas where spending would decline as a percentage of total spending—specifically, spending on claims adjustment (such as claims processing), general administrative expenses (including advertising), and expenditures on quality programs. The analysis provided information to supplement CBO's estimation of the options' effects on administrative spending by payers, which started with spending by the Medicare fee-for-service (FFS) program and built up to total spending by a single-payer system (as opposed to working down through each category of payers' administrative spending under current law).

Historically, in CBO's assessment, there have been three main reasons that spending on administration has made up a lower percentage of total spending for the Medicare FFS program than for private insurers. CBO expects that those reasons would apply under a single-payer system as well. The first reason is reduced fragmentation. The administrative costs of private insurance stem in part from its fragmented nature, with administrative details varying among employers and providers and with regulations varying by state and segment of the market. Under a single-payer system, costs stemming from those factors would not occur.

The second main reason is task reduction. CBO's analysis of private insurers' administrative activities indicates that a single-payer system would eliminate more than half of the current spending on administration by fully insured private plans (state-regulated plans that assume the financial risk for providing insurance coverage in exchange for premiums, see Exhibit 14-3). Thus, in 2030, a substantial portion of private insurers' total administrative spending would probably also be eliminated under a single-payer system, although CBO has not projected that amount.

The third reason is economies of scale. Currently, a range of entities operate as private insurers—including some covering small numbers of people and some covering large numbers—that work with many employers or public programs in many states. Only two insurers (United Healthcare and Anthem) have a number of enrollees comparable to that of the Medicare FFS program; the average number of enrollees per insurer is much smaller. Under a single-payer system, economies of scale would allow fixed costs to be spread over more enrollees and more spending and would allow more efficiency from greater specialization in particular administrative tasks, compared with the averages for private insurers.

How CBO Assessed Private Insurers' Administrative Activities

To estimate private insurers' administrative spending under current law, CBO started with historical estimates of the percentage of private insurers' total spending devoted to administrative

Exhibit 14-3.

Spending on Claims and Administrative Activities by Fully Insured Plans in Various Markets, as a Percentage of Premiums Net of Reinsurance, 2015-2018

	Individual Comprehensive Market	Small-Group Comprehensive Market	Large-Group Comprehensive Market	Overall
Net Incurred Claims After Reinsurance	83.3	79.7	85.8	84.0
Types of Spending That Would Be Eliminated Under the Single-Payer Options				
Federal and state taxes, licenses, and regulatory fees	5.1	5.2	4.2	4.6
Direct salespeople's salaries, brokers' fees and commissions	2.6	4.9	2.3	2.9
Underwriting gain/loss or profit	-0.3	2.7	1.3	1.3
Types of Spending That Would Be Reduced Under the Single-Payer Options				
Claims adjustment expenses	2.5	2.4	2.1	2.3
General administrative expenses	5.9	4.3	3.5	4.2
Quality-improvement expenditures	0.9	0.8	0.8	0.8
Total Administrative Spending, Including Profit	**16.7**	**20.3**	**14.2**	**16.0**

Data source: Congressional Budget Office, using data from the National Association of Insurance Commissioners and the Health Coverage Portal™ by Mark Farrah Associates. See www.cbo.gov/publication/56811#data.

Data do not include spending on services provided by self-insured plans or by managed care plans from the state of California. CBO estimates that self-insured plans accounted for 69 percent of the enrollment in major medical plans during the 2015-2018 period. Data also do not include U.S. territories.

Insurers in the fully insured market generally obtain reinsurance to reduce their likelihood of large obligations that would exceed their premium revenues and reserves. During the 2015-2018 period, reinsurance was sometimes available through state governments, the federal government, or private reinsurers. CBO calculated administrative spending as a percentage of premiums after subtracting payments to reinsurers and reinsurance programs; it similarly adjusted claims to be net of payments from reinsurers and reinsurance programs. Results using total premiums and claims (including reinsurance payments) were similar, except for the individual market. In that market, including reinsurance increased the percentage of premiums that went to pay for claims, thus reducing administrative spending as a percentage of premiums.

activities (from the NHE accounts produced by the Centers for Medicare & Medicaid Services) and applied those percentages to CBO's estimates of total spending by private insurers. Administrative spending by private insurers is projected to make up 12 percent of their total spending in 2030.[133] However, those projections do not provide a detailed accounting of private insurers' administrative activities.

[133] In its analysis of the illustrative single-payer options, CBO excluded patients' cost sharing for medical services from total spending when calculating administrative spending as a share of total spending.

Private health insurance can be split into two broad categories:

- *Fully insured plans*, which are regulated by state insurance commissioners and in which an employer or an individual pays a fixed premium and the insurer accepts insurance risk; and

- *Self-insured plans*, in which employers choose to bear insurance risk themselves and usually contract with a third party to administer benefits.

To better understand private insurers' administrative spending, CBO analyzed data from the National Association of Insurance Commissioners (NAIC) and from the Health Coverage Portal™ by Mark Farrah Associates (an electronic publisher of business information and analytics for the U.S. health care industry). Those data covered only fully insured plans, which tend to be smaller than self-insured plans and are subject to more regulation. Fully insured plans accounted for 31 percent of the enrollment in private major medical plans between 2015 and 2018, CBO estimates.

CBO estimates that administrative spending for fully insured plans varies by segment of the market, ranging from 14 percent of premiums (net of payments to and from private reinsurers and government reinsurance programs) in the large-group market to 20 percent of net premiums in the small-group market, and averaging 16 percent of net premiums (see Exhibit 14-3). It is difficult to compare those estimates with the NHE estimate of private insurers' administrative spending as a percentage of total spending, primarily because the data from NAIC and the Health Coverage Portal™ by Mark Farrah Associates apply only to fully insured plans. CBO does not know of any data that describe self-insured plans' administrative spending in detail. However, those plans generally have lower administrative costs than fully insured plans, in part because they are not subject to state regulations and in part because they usually cover more people and thus enjoy greater economies of scale.[134] The difference between the estimate that fully insured plans spend an average of 16 percent of premiums on administrative activities and CBO's projection that administrative spending equals 12 percent of total spending on people with private insurance is probably attributable to the omission of self-insured plans.

Types of Costs That Would Be Eliminated Under the Single-Payer Options

The kinds of administrative spending by private insurers that would largely cease under the single-payer system include payments of federal and state taxes and regulatory fees, spending on brokers' commissions and salaries, and underwriting gains and losses or profits. Private insurers spend roughly 4.2 percent of premiums on federal and state taxes, licenses, and regulatory fees in the large-group market and 5.1 percent to 5.2 percent of premiums on those expenses in the individual and small-group markets.

Private insurers also spend 2.3 percent of premiums in the large-group market and 4.9 percent of premiums in the small-group market on salaries for direct salespeople, fees for brokers, and

[134] Self-insured plans may result in higher administrative costs for employers than fully insured plans, but CBO did not model such costs. See Christine Eibner and others, *Employer Self-Insurance Decisions and the Implications of the Patient Protection and Affordable Care Act as Modified by the Health Care and Education Reconciliation Act of 2010* (RAND, 2011), www.rand.org/content/dam/rand/pubs/technical_reports/2011/RAND_TR971.pdf (837 KB).

commissions.[135] CBO estimated that those categories of administrative spending would not apply under the single-payer options.

Between 2015 and 2018, private insurers in the individual market operated at a loss equal to -0.3 percent of premiums, and private insurers in the small group market operated at a profit equal to 2.7 percent of premiums, CBO estimates. Those figures varied substantially from year to year, particularly in the individual market. However, CBO assumes that under a single-payer system, the federal government would not record any net profit.

Types of Costs That Would Be Reduced Under the Single-Payer Options

Some categories of payers' administrative spending would be reduced, but not eliminated, under a single-payer system. They include expenditures for claims adjustment, general administrative activities, and quality-improvement programs.

Claims Adjustment Expenses. Overall, private insurers devote roughly 2.3 percent of premiums to claims adjustment, which includes such activities as validating the coding of claims, handling appeals, preventing and detecting fraud, verifying eligibility for coverage, negotiating and forming networks, and reviewing the utilization of care. The category of spending in CBO's analysis that corresponds most closely to the first two activities—claims and appeals costs and contracting costs for processing claims—accounts for between 0.2 percent and 0.3 percent of total spending under Medicare FFS and the illustrative options in 2030, CBO estimates. (Spending on fraud-reduction programs is grouped with spending on quality-improvement programs, which are discussed below, in CBO's categorization of administrative spending under the single-payer options.)

In the specifications of the single-payer options, CBO assumed that activity in the categories of provider network formation and enrollee eligibility verification would be greatly reduced. For example, eligibility verification in 2030 under the single-payer system would mainly be focused on the eligibility of noncitizen U.S. residents not lawfully present and on the ineligibility of temporary foreign visitors. (The costs of eligibility verification are included in CBO's category of new spending on activities not currently covered by the Medicare program).

Under the options, CBO assumed that tools to reduce utilization would be used only to the extent that Medicare FFS uses them under current law. In other words, although claims would be reviewed for fraudulent activity, less restrictive controls on utilization and billing would be imposed under the single-payer system than private insurers impose now. Under current law, private insurers' spending on utilization review and other cost containment measures results in lower use of care by patients—either because patients receive fewer medical services or drugs, or because they receive less expensive services instead of more expensive services. Accordingly, although CBO projects that the single-payer system would devote less administrative spending to claims adjustment than private insurers would under current law in 2030, reductions in that

[135] For details about why private insurers' administrative spending varies among segments of the market, see Congressional Budget Office, *Private Health Insurance Premiums and Federal Policy* (February 2016), www.cbo.gov/publication/51130.

administrative spending would be offset by increased utilization. CBO has not analyzed whether patients' outcomes would be affected by those changes.

General Administrative Expenses. Private insurers also spend resources on general administrative activities; that spending ranges from 3.5 percent of premiums in the large-group market to 5.9 percent of premiums in the individual market. Such expenses include corporate salaries, legal fees, costs for actuarial services, rent, medical examination expenses, inspection reports, accreditation fees, professional consulting, travel, advertising, postage, payments to rating agencies, utilities, and other overhead costs.

Some of those costs would continue under the illustrative single-payer options, but they would be reduced because of the elimination of duplicative spending by different insurers and because of economies of scale. For example, spending on advertising would be reduced because multiple insurers would not be attempting to reach the same set of customers. Rent would be lower as a percentage of spending under the options because administrative operations could be housed in fewer locations than with many private insurers, and the number of administrative staff members for functions involving fixed costs (such as information technology) would be smaller as a percentage of spending. Other costs, such as payments to rating agencies and accreditation fees, would be eliminated.

Quality-Improvement Expenditures. Roughly 0.8 percent of private insurers' spending as a percentage of premiums is devoted to quality-improvement activities, such as case management, efforts to promote accurate and interoperable medical records, post-discharge planning, and wellness and health promotion.[136] Under the Medicare FFS program in 2019 and under the illustrative single-payer options in 2030, spending on quality-improvement programs (combined with spending on fraud-prevention programs) accounts for about 0.6 percent of total spending, CBO estimates (see Exhibit 14-1 on page 147).

[136] Insurers may devote additional spending to other quality-improvement activities, such as improving consumers' experience or promoting IT interoperability. However, such activities are not accounted for separately in the NAIC's data and would therefore probably be included in general administrative expenses.

Section 15.
Effects of the Illustrative Options on Access to Care

Access to health care depends on providers' availability—such as geographic accessibility, willingness and ability to treat a patient, and convenience and timeliness of care—as well as on patients' ability to pay.[137] Under current law, some patients (such as Medicaid enrollees) may experience long waiting times to see a specialist and face other barriers in accessing providers, which limit their use of some types of care.[138] For many other U.S. residents under current law (including some Medicare beneficiaries and privately insured people facing high out-of-pocket costs), a limited willingness or ability to pay is a main constraint on their use of health care.[139]

Under CBO's illustrative single-payer options, access to care for people who would be uninsured under current law would increase, mainly because financial barriers would be reduced or eliminated. Overall access to care would also increase for people who would have insurance under current law, in the sense that they would use a greater total amount of care under all of the options, CBO projects. Under Option 5, access to long-term services and supports, particularly home- and community-based services, would increase for all eligible people because financial barriers would be eliminated.

The extent to which people would face new challenges in obtaining care (relative to current law) would vary among the options depending on the amount of additional congestion in the health care system—that is, on the additional unmet demand that is projected to result when the demand for care grows by more than the supply. The larger the increase in congestion under the options, the more that people would be constrained by willingness to wait for care rather than by willingness to pay for it. Under Option 3, for example, the combination of lower payment rates and little or no cost sharing would create the largest difference (an estimated 6 percentage points) between the increase in demand for care and the increase in supply. Under Option 1, in comparison, the combination of higher payment rates and higher cost sharing would create the smallest difference (an estimated 1 percentage point) between the increase in demand for care and the increase in supply (see Exhibit 12-2 on page 134).

Some of the same people who would face lower financial barriers to accessing care would face other barriers to accessing providers under the illustrative options that CBO examined. Those effects depend on the specifications of the options, and the results would differ under alternative specifications. For example, it is possible to specify combinations of cost sharing and payment

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[137] See Roy Penchansky and J. William Thomas, "The Concept of Access: Definition and Relationship to Consumer Satisfaction," *Medical Care*, vol. 19, no. 2 (February 1981), pp. 127-140, www.jstor.org/stable/3764310?seq=1; and Lu Ann Aday and Ronald Andersen, "A Framework for the Study of Access to Medical Care," *Health Services Research*, vol. 9, no. 3 (Fall 1974), pp. 208-220, www.ncbi.nlm.nih.gov/pmc/articles/PMC1071804.

[138] See Kayla Holgash and Martha Heberlein, *Physician Acceptance of New Medicaid Patients* (Medicaid and CHIP Payment and Access Commission, January 2019), www.macpac.gov/wp-content/uploads/2019/01/Physician-Acceptance-of-New-Medicaid-Patients.pdf (306 KB).

[139] For example, among nonelderly U.S. residents, 25 percent of people without insurance and 6 percent of people with private insurance reported delaying medical care because of cost in 2018. See Centers for Disease Control and Prevention, "National Health Interview Survey: Tables of Summary Health Statistics" (November 5, 2019), Table P-9c, www.cdc.gov/nchs/nhis/shs/tables.htm.

rates high enough that CBO would estimate an increase in the supply of care exceeding the increase in the demand for care. In such cases, CBO estimates that the quantity of care provided could rise because of the increase in supply, and unmet demand could decline relative to its amount under current law. By contrast, it is possible to specify combinations of cost sharing and payment rates that would result in larger estimates of unmet demand than under any of the options that CBO analyzed.

If a single-payer system was implemented, federal policymakers would observe over time how access to care changed and how supply responded. They could react to those changes in various ways. For example, if patients had difficulty accessing care, policymakers could allow patients to pay for care outside the single-payer system through private contracts with a wider range of providers, including providers that also received payments from the single-payer system. Such care might be faster or easier to obtain, although it would also be more expensive. Alternatively, policymakers could raise provider payment rates to increase the supply of care—potentially causing some providers to delay retirement, increase their work hours in other ways, and so on. State policymakers could also respond by reducing barriers to entry for providers, such as by changing medical licensure requirements, scope-of-practice laws (which define the tasks that different types of providers can perform), or certificate-of-need laws (which require new health care facilities to demonstrate the need for additional services in their community in order to be approved).

How Access to Care Could Change Under the Single-Payer Options

CBO projects that on average, people would have lower out-of-pocket costs and fewer restrictions on utilization, provider networks, and billing under its illustrative single-payer options. That would be the case both for people who would be uninsured under current law and for people who would have insurance under current law. Because the demand for care would increase more than the supply, and some of that additional demand would be unmet, CBO anticipates that increased congestion for certain types of care would lead to some delays in treatment or longer travel times to see providers.[140] In addition, some patients would forgo care, some would contract for care privately, and some would pay for care abroad.

Some people would experience different effects on access to care under the options than other people would. For example, access would increase for some of the people who would be uninsured or have high cost sharing under current law. It would decrease for some of the people projected to have private insurance with low cost sharing under current law who live in areas where the greatest increases in congestion in the health care system would occur.

Under the options, patients would continue to make appointments and pay any required cost sharing, as under current law. If there was increased congestion, however, patients would have more trouble finding an available provider. Use of existing third-party platforms that assist with scheduling patients and allocating care could increase. CBO's single-payer options do not specify new mechanisms to allocate the available services to people in need. Policymakers might

[140] See John G. Cullis, Philip R. Jones, and Carol Propper, "Waiting Lists and Medical Treatment: Analysis and Policies," in Anthony J. Culyer and Joseph P. Newhouse, eds., *Handbook of Health Economics*, vol. 1B (Elsevier, 2000), pp. 1201-1249, www.sciencedirect.com/science/article/pii/S1574006400800360.

add such mechanisms if people found it difficult to obtain medical appointments. Such circumstances would be more likely under Options 3 through 5, which would have larger projected gaps between demand and supply than in Options 1 and 2, CBO projects. The administrative savings from a single-payer system would be reduced if more mechanisms to allocate health care services were added to the system.

Prescription drugs that are currently on the market or that would be newly introduced between 2020 and 2030 would probably be available at sufficient levels to meet the additional demand under all of the illustrative options. In the options with lower payment rates (Options 2 and 3), some drugs that would have been introduced in later years under current law might no longer be developed or might be developed over a longer time frame.

How Providers Would Respond to Increases in the Demand for Care

CBO expects that providers would expand the supply of care in response to the changes under the illustrative single-payer options. In part, that expansion would occur as providers reallocated time and resources previously spent on administrative activities to patient care. In addition, under some options, some types of physicians (such as general practitioners) would be paid higher average rates than under current law, which would lead them to provide more care. CBO also anticipates that providers would respond to increases in the demand for care by increasing their capacity and adapting practice patterns to accommodate more patients.

Two factors would limit the extent to which the supply of care would expand in response to new demand under the single-payer system:

- Existing barriers to entry for new physicians would probably continue.[141] Limits on the number of medical residency slots, combined with licensure standards defined by state medical boards, restrict the number of physicians who are able to practice in the United States. In addition, it takes years to train new doctors. As a result of existing barriers, any increase in the number of practicing doctors from the current-law level would probably be small by 2030.

- Lower payment rates for some providers under Options 2 and 3 would limit the incentives for existing providers to work additional hours and for new providers to enter the market. Those problems would be more acute for types of providers that would face larger cuts in payments relative to current law, such as certain specialists or hospitals that are paid more by private insurers. Providers in other specialties, such as family practitioners and pediatricians, might face smaller pay cuts or even pay increases under the single-payer system, particularly under the options with higher payment rates. The amount of care supplied by those types of providers would probably remain about the same as under current law or increase slightly.

[141] The supply of nurse practitioners, physician assistants, and other health care providers could expand to fill in the role of physicians, but state scope-of-practice laws would need to be relaxed for that to happen. See E. Kathleen Adams and Sara Markowitz, *Improving Efficiency in the Health-Care System: Removing Anticompetitive Barriers for Advanced Practice Registered Nurses and Physician Assistants*, Hamilton Project Policy Proposal 2018-08 (Brookings Institution, June 2018), www.hamiltonproject.org/assets/files/AM_Web_20190122.pdf (3.7 MB).

CBO anticipates that in response to limited supply and increased demand, practice patterns in the single-payer system would become less intensive in order to allocate resources toward additional patients. That reduction in intensity would be achieved by providing some care using less costly providers and other care in a less intensive manner, CBO expects. For example, some care would shift to less expensive settings, such as retail clinics and urgent care centers, and other care would be provided by less expensive providers, such as nurse practitioners and physicians' assistants. Physicians could also reduce the time they spend with each patient and the frequency of recommended follow-up appointments in order to accommodate additional patients. Practice guidelines, formal and informal, could also emerge and evolve in order to allocate limited clinical resources.[142] In addition, CBO expects that some providers would opt out of the single-payer system, and some patients would choose to obtain care from those providers, partly to avoid congestion in the system.

[142] See Henry J. Aaron, *The Painful Prescription: Rationing Hospital Care* (Brookings Institution Press, 1984).

Section 16.
Effects of the Illustrative Options on Quality of Care, Patients' Satisfaction, and Health Outcomes

In addition to their other effects, CBO expects that the illustrative single-payer options would have effects on the quality of health care, patients' satisfaction with their care, and patients' health. Some of those effects are difficult to measure, however, and are likely to vary for different groups of people.

Changes in the Quality of Health Care

The quality of the medical care that people receive can affect their health. Quality of care depends on a number of factors related to providers, such as their financial resources, competitive pressures, training and education, and medical technology. Insurers' systems for monitoring and reporting quality and their incentive programs for performance also play a role. Although providers would have the same legal liability to ensure that patients received quality care under the single-payer options as under current law, other factors would change under the options. Some of those changes would tend to reduce the quality of care, and others would tend to increase it.

Factors Tending to Decrease Quality. Under CBO's lower payment-rate scenario, quality of care could be affected as providers adapted to lower payment rates by supplying less care. For example, doctors might shorten appointments or reduce the number of follow-up visits in order to see more patients. Lower payment rates under a single-payer system might also increase the financial pressure for some providers to reduce their investments in equipment, training, and efforts to improve quality. The pressures from unmet demand associated with lower cost sharing would have similar effects on providers.

In addition, quality could decline if the single-payer system under the illustrative options monitored the quality of care to a lesser degree than private insurers do, as a result of using fewer tools to manage utilization. Quality could also decline under a single-payer system if financial incentives to provide high-quality care were made too small, were eliminated, or were counteracted by other incentives in the system.

Factors Tending to Increase Quality. Under the single-payer options, providers would have an incentive to compete for patients on the basis of quality of care, in part because they could no longer compete directly on price. That incentive could tend to increase quality. The extent to which that incentive would be strengthened under the options is unclear, however, because the role of price competition is limited under current law and because providers could compete on the basis of other aspects of access to care, such as location or waiting times.

The monitoring and reporting of quality could improve under a single-payer system because quality reporting would be consolidated under a single umbrella, with a consistent set of reporting requirements. Under current law, an insurer's quality-improvement incentives may affect only a small fraction of a provider's reimbursement and, therefore, may have limited effects on a provider's behavior. For example, the Medicare program gives providers financial incentives to invest in quality improvements, but those incentives may be too diffuse to have

much impact when providers interact with multiple payers. In addition, different insurers use different quality measures and have different ways of adjusting providers' payments to account for quality. Thus, each incentive system has a diffuse effect on providers' behavior. Under a single-payer system, a consistent set of targets for achievement, combined with one set of reporting requirements, could cause quality to improve from current-law levels if the federal government continued to devote the administrative resources to gathering that information and following through on it. Large improvements in quality, relative to current law, might involve greater administrative spending than CBO estimated for the single-payer options.

Changes in Patients' Satisfaction

Patients' satisfaction with their health care could increase or decrease under the single-payer options, with access to care being a major contributing factor. On the one hand, some patients would face greater barriers to care—such as longer waiting times or fewer available appointments—than they would if using private insurance under current law. On the other hand, some patients would have greater access to care under the single-payer options, which could improve their satisfaction. Those patients include people who, under current law, would be uninsured or would have insurance not accepted by many providers, would face significant cost sharing, or would face tight restrictions by their insurance on their use of care.

With nearly all providers participating in a single-payer system, patients would be much less likely to have providers stop accepting their insurance coverage than under current law. As a result, they could have longer relationships with providers if they wanted to—subject to the possible effects of congestion in the health care system on their access to care. Some patients would have to change providers if changes in payment rates under the single-payer system caused certain providers to no longer offer care or to opt out of the system rather than be paid lower rates than under current law.

Under a single-payer system, people would also have less need to stay in their job to obtain health insurance. In addition, they would have greater flexibility to change jobs without having to worry about changes in their health insurance coverage.

Changes in Health Outcomes

The expansion of coverage under a single-payer system could lead to improvements in people's health, but other aspects of the system could result in poorer health. Determining how insurance coverage affects health outcomes is challenging—in simple comparisons of the health of insured and uninsured populations, the differences found by researchers may result from insurance status or from other differences between those populations that can affect health.[143] To address that challenge, researchers have increasingly used more methodologically sound study designs such as to look at the effects that expanding eligibility for public insurance programs has on health

[143] For a discussion of the challenges of estimating the effects of health insurance on health, see Helen Levy and David Meltzer, "The Impact of Health Insurance on Health," *Annual Review of Public Health*, vol. 29 (April 2008), pp. 399-409, http://dx.doi.org/10.1146/annurev.publhealth.28.021406.144042.

outcomes, such as self-reported health, mortality, and the prevalence of certain medical conditions.[144]

There is growing evidence that having health insurance coverage improves the health of some people. Recent comprehensive reviews of the literature have found some health benefits from insurance coverage, though not always consistently.[145] Most studies have shown that health insurance results in significant improvements in people's self-reported health. Similarly, studies increasingly have concluded that gains in insurance coverage reduce mortality rates.[146]

Results may differ for different types of health outcomes—either because insurance coverage improves some aspects of health but not others, or because effects on some aspects of health (particularly those relevant to only a subset of the population) are more challenging to measure. In addition, whether health conditions improve with gains in health insurance can depend on the setting. For example, analysis from the Oregon Health Insurance Experiment suggested that gaining Medicaid coverage reduced the prevalence of depression. But that study showed no statistically significant improvements in hypertension or high cholesterol, perhaps because of the small sample size.[147] Another study, however, found improved control of hypertension in federally funded community health centers after expansions of Medicaid.[148]

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[144] The expansions that have been studied in that way include the introduction of Medicare in 1965 and the Medicare Part D drug benefit in 2006, health reform in Massachusetts in 2006, and the Affordable Care Act's dependent-coverage provision and optional Medicaid expansions.

[145] Those reviews focused on studies that examined recent health insurance expansions, including ones in Massachusetts, Oregon, and states that expanded Medicaid as a result of the Affordable Care Act. See Benjamin D. Sommers, Atul A. Gawande, and Katherine Baicker, "Health Insurance Coverage and Health—What the Recent Evidence Tells Us," *New England Journal of Medicine*, vol. 377, no. 6 (August 10, 2017), pp. 586-593, http://dx.doi.org/10.1056/NEJMsb1706645; Jonathan Gruber and Benjamin D. Sommers, *The Affordable Care Act's Effects on Patients, Providers and the Economy: What We've Learned So Far*, Working Paper 25932 (National Bureau of Economic Research, June 2019), www.nber.org/papers/w25932; Madeline Guth, Rachel Garfield, and Robin Rudowitz, *The Effects of Medicaid Expansion Under the ACA: Updated Findings From a Literature Review* (Kaiser Family Foundation, March 2020), http://files.kff.org/attachment/Report-The-Effects-of-Medicaid-Expansion-under-the-ACA-Updated-Findings-from-a-Literature-Review.pdf (1.4 MB); and Heidi Allen and Benjamin D. Sommers, "Medicaid Expansion and Health: Assessing the Evidence After 5 Years," *JAMA*, vol. 322, no. 13 (September 6, 2019), pp. 1253-1254, http://dx.doi.org/10.1001/jama.2019.12345.

[146] See Jason Huh and Julian Reif, "Did Medicare Part D Reduce Mortality?" *Journal of Health Economics*, vol. 53 (May 2017), pp. 17-37, http://dx.doi.org/10.1016/j.jhealeco.2017.01.005; and Jacob Goldin, Ithai Z. Lurie, and Janet McCubbin, *Health Insurance and Mortality: Experimental Evidence From Taxpayer Outreach*, Working Paper 26533 (National Bureau of Economic Research, December 2019), www.nber.org/papers/w26533. In contrast, another study found that the creation of Medicare had no discernible effect on the mortality rates of older people during the first 10 years of the program's operation. See Amy Finkelstein and Robin McKnight, "What Did Medicare Do? The Initial Impact of Medicare on Mortality and Out of Pocket Medical Spending," *Journal of Public Economics*, vol. 92, no. 7 (July 2008), pp. 1644-1668, https://doi.org/10.1016/j.jpubeco.2007.10.005.

[147] See Katherine Baicker and others, "The Oregon Experiment—Effects of Medicaid on Clinical Outcomes," *New England Journal of Medicine*, vol. 368, no. 18 (May 2, 2013), pp. 1713-1722, https://doi.org/10.1056/NEJMsa1212321.

[148] See Megan B. Cole and others, "At Federally Funded Health Centers, Medicaid Expansion Was Associated With Improved Quality of Care," *Health Affairs*, vol. 36, no. 1 (January 2017), pp. 40-48, https://doi.org/10.1377/hlthaff.2016.0804.

The effects on health of reducing or eliminating financial barriers for people who are already insured are less clear. For example, analysis from the RAND Health Insurance Experiment found that for people with poor vision and for low-income people with high blood pressure, the elimination of cost sharing was followed by an improvement in health. But for other subgroups of people and for participants on average, there were no significant effects on the health outcomes measured in the study.[149]

In addition, whether increased congestion under a single-payer system would affect the health of people who would be insured under current law is unknown—both because the evidence is limited and because the effects would depend on whether any care being reduced was wasteful or beneficial. Increases in congestion in the health care system could result in poorer health outcomes if they caused beneficial care to be forgone or treatment of time-sensitive conditions to be delayed. However, the health of some people might improve under a single-payer system if their use of care increased.

Finally, a single-payer system could result in unintended shifts in the delivery of care. Some potential changes, such as the movement to shorter physician visits, might have effects on patients' health, but there is insufficient evidence to determine whether or not that would be the case.

[149] See Robert H. Brook and others, *The Effects of Coinsurance on the Health of Adults: Results from the RAND Health Insurance Experiment* (RAND Corporation, 1984), www.rand.org/pubs/reports/R3055.html.

Section 17.
Short-Term Considerations for Establishing and Transitioning to a Single-Payer System

Implementing a single-payer health care system would be an enormously complex undertaking. In establishing such a system, policymakers would have several short-term considerations for the period between enactment of the legislation creating the system and the system's initial operation. Those considerations would include the initial costs associated with setting up a provider payment system, enrolling providers, and developing an enrollment and verification system for beneficiaries. In addition, the federal government would face start-up costs related to financing the new system. The federal and state governments would face other start-up costs as well, such as the costs of winding down existing public programs. In the short term, a single-payer system might encounter unforeseen risks that could increase its costs and disrupt the health care system.

Policymakers would also have several factors to consider about making the transition to a single-payer system once it was ready to begin operating. Those considerations include how best to phase in new payment rates for providers and monitor changes in patients' access to and quality of health care.

Start-Up Costs for Implementation

In the period following enactment of legislation to establish it, a single-payer system would incur substantial start-up costs that CBO did not estimate for this analysis (which focuses on costs in 2030, a decade after the system's assumed enactment). For example, the system would incur implementation costs associated with establishing a uniform payment system for providers. There would also be costs to educate providers about the new payment and claims-processing systems and to enroll types of providers (such as dentists, optometrists, and audiologists) that do not typically participate in the Medicare fee-for-service (FFS) program now.

A single-payer system would also have start-up costs associated with enrolling beneficiaries. All U.S. residents would need to have their eligibility verified, and they would need to be enrolled in the new system and issued identification cards. Conducting outreach and educating beneficiaries about the new system would also be necessary. If the single-payer system included cost sharing that varied by income, as specified in CBO's illustrative options, systems for measuring and verifying income would have to be established.

Any new financing mechanism for the single-payer system would have implementation costs of its own. In addition, the federal government would incur costs associated with winding down the Medicare and Federal Employees Health Benefits programs. The federal and state governments would also incur costs to wind down the Children's Health Insurance Program and to either scale back or eliminate Medicaid. Employers and unions would incur costs as well, such as the costs of renegotiating employment contracts.

A single-payer system might incur other start-up costs as well, such as for temporary programs to provide assistance to workers in the health insurance industry and other health care

administrative staff displaced by the new system. Such costs would increase government spending in the near term.

During its implementation, a single-payer system might encounter unforeseen problems that could increase its costs. For example, the government could run into challenges with implementing a standardized information technology system that could delay the enrollment of beneficiaries or the payment of providers. The single-payer system could also face judicial challenges, although CBO assumed that the legislation establishing the system would be constitutional.

Transitional Issues

A single-payer system would encounter several transitional issues in the years following initial implementation that are not modeled in this analysis. One feature of the illustrative options is that they would transition providers from payment rates that vary widely under current law to a more uniform set of rates. One major challenge that the single-payer system would face prior to its implementation is accurately measuring the average all-payer payment rate for each provider. That effort would probably require the federal government to establish a comprehensive national database of claims payments by all payers that would collect information retrospectively about providers' claims activity in 2020 as well as about activity in future years. Such a database would have to cover all providers, including those not participating in federal health programs. It would also need to cover all services and payments, including capitation payments (fixed monthly payments that providers receive per patient) and other transactions that do not occur on a fee-for-service basis.

The Medicare program provides numerous examples of transitions to more-uniform sets of provider payment rates, some of which went smoothly and others of which were highly disruptive. Before enactment of the Social Security Amendments of 1983, Medicare paid hospitals on a retrospective cost basis (reimbursing them for the amounts they had spent). Partly because of the incentives created by that payment system, hospital costs increased much faster than inflation. Beginning in October 1983, Medicare implemented the inpatient prospective payment system (IPPS), which paid hospitals a fixed amount depending on the type of discharge (which was based on a patient's diagnoses).[150] Hospitals did not exhibit any major disruptions in their operations, and the overarching goals of the IPPS—to spur increases in efficiency in the hospital sector and recoup savings for the federal government—were largely achieved. The successful rollout of the IPPS may have resulted partly from the fact that it affected hospitals' revenues from only one payer, albeit an important one, and partly from its familiarity. The hospital IPPS had been under development for more than a decade, and versions of it were being used by some states before it was introduced to the Medicare program.[151]

By contrast, the rollout of Medicare's prospective payment systems for post-acute care resulted in several challenges during their implementation. The Balanced Budget Act of 1997 mandated

[150] See Stuart Guterman and Allen Dobson, "Impact of the Medicare Prospective Payment System for Hospitals," *Health Care Financing Review*, vol. 7, no. 3 (Spring 1986), pp. 97-114, www.ncbi.nlm.nih.gov/pmc/articles/PMC4191526/pdf/hcfr-7-3-97.pdf (1,641 KB).

[151] See Joseph P. Newhouse, "Medicare's Challenges in Paying Providers," *Health Care Financing Review*, vol. 27, no. 2 (Winter 2005), pp. 35-44, www.ncbi.nlm.nih.gov/pmc/articles/PMC4194926.

that providers of post-acute care be paid using a prospective payment system (PPS) rather than the cost reimbursement basis then in use. A PPS for skilled nursing facilities (SNFs) was implemented in 1998, and a PPS for providers of home health care followed in 2000.[152] The disruptive effects of the post-acute care PPSs may have stemmed from several factors, including those providers' heavy reliance on Medicare, payment rates that were designed to produce budgetary savings for the federal government, and relatively short transition periods that did not allow much time to develop the new payment systems.[153]

The size of the change in payment rates that a provider would face under a single-payer system would depend on how different the provider's average individual payment rate under current law would be from the single-payer system's rates. For example, in CBO's higher payment-rate scenario, average payment rates under the single-payer system would equal the current-law weighted-average rates across all payers that CBO projects for 2025. From 2025 through 2030, the system's average payment rates would grow with hospital- and physician-specific measures of input prices, with a downward adjustment for economywide increases in multifactor productivity in the private nonfarm business sector.[154] Payment rates for physician and clinical services would be reduced by an additional 0.5 percentage points per year between 2025 and 2030, whereas rates for hospital services would be increased by an additional 0.5 percentage points per year between 2025 and 2030. As a result, providers that would receive more than the single-payer system's rates under current law would face a reduction in payments, whereas providers that would receive less than the single-payer system's payment rates under current law would see an increase in payments.

A slower transition to the new system's payment rates would probably be less disruptive to providers and could help ease their transition. But it would also be more costly to the government under CBO's lower payment-rate scenario because a slower transition to lower payment rates would require paying higher average rates until the transition was complete. (Under the higher payment-rate scenario, average rates for hospital services and physician and clinical services would be similar to projected rates under current law in 2030, so a slower transition would have less effect on the government's average payment rates.)

As described in Section 15, the illustrative single-payer system could affect the quality of care and people's access to care. Policymakers might face pressure to raise the system's payment rates as they were being phased in to ensure access and quality, which would increase

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[152] See Nelda McCall and others, "Medicare Home Health Before and After the BBA," *Health Affairs*, vol. 20, no. 3 (May/June 2001), pp. 189-198, https://doi.org/10.1377/hlthaff.20.3.189; Chapin White and Susanne Seagrave, "What Happens When Hospital-Based Skilled Nursing Facilities Close? A Propensity Score Analysis," *Health Services Research*, vol. 40, no. 6 (December 2005), pp. 1883-1897, https://doi.org/10.1111/j.1475-6773.2005.00434.x; and Barbara Gage, "Impact of the BBA on Postacute Care," *Health Care Financing Review*, vol. 20, no. 4 (Summer 1999), pp. 103-126, www.ncbi.nlm.nih.gov/pmc/articles/PMC4194611/.

[153] The Centers for Medicare & Medicaid Services had only a few months to implement a prospective payment system for skilled nursing facilities, and it adapted a payment method that was used for chronic long-term care patients. That method was not well suited to many Medicare patients in SNFs, who were recovering from acute conditions.

[154] CBO assumed that the legislation creating the system would specify that each provider's payment rate would initially be determined using the provider's individual weighted-average payment rate in 2020. From 2020 to 2025, those rates would be updated by the actual increase in average payment rates for hospitals and physicians.

government spending. Policymakers might also choose to establish a process and a data-gathering system to monitor enrollees' access to care and the quality of care as providers adapted to the new payment rates and as demand for care rose in the early years of the single-payer system. The federal government maintains an array of surveys and data-gathering systems, including the Area Health Resources Files, the National Health Interview Survey, and the Healthcare Cost and Utilization Project, but those systems are generally not geared to the real-time or near-real-time detection of problems with access or quality of care.

Section 18.
Long-Term Considerations for a Single-Payer System

The long-term outcomes from a single-payer system would depend on future policy decisions. Historically, major government programs have been altered over time through regulatory decisions and sometimes through major legislative changes. Policymakers might make changes to the single-payer system to reduce federal budgetary costs, for example, or to increase access to care.

The system's long-term outcomes would also depend on its design. Although a wide range of outcomes are possible, no one outcome is inherent to a single-payer system. This section highlights two of many potential long-term considerations: what would happen to the number of providers and the supply of care if payment rates were too low, and how the single-payer system's payment rates would affect future innovation in the health care sector.

Supply of Care

Under CBO's illustrative single-payer options, the government would set payment rates for providers without market signals from the private sector to guide and inform those rates. As a result, policymakers would need to consider how to update provider payment rates over the long run, balancing budgetary pressures with the goal of ensuring that the mix of services and specialties continued to meet the changing needs of enrollees.

Updates to provider payment rates under a single-payer system could have long-term effects on the number of providers. For example, if payment rates under the system were significantly lower than under current law—causing providers to be paid less than under current law (possibly much less, in the case of some types of specialists)—fewer people might seek to enter health care professions in the future. Providers might also have trouble adapting to the slower growth in payment rates over time under a single-payer system than they would be used to under current law. (In CBO's lower payment-rate scenario, for example, rates for hospital services and for physician and clinical services would not grow at all in dollar terms during the system's first five years of operations, 2025 to 2030. If providers had trouble adapting, policymakers might raise payment rates above the amounts initially planned.)

If providers were unable to adjust to slower growth in payment rates by operating more efficiently and remaining financially viable, they could cease to operate, possibly leading to greater congestion in the health care system. The total number of hospitals and other health care facilities might decline, and there might be less investment in new or existing facilities.

If policymakers decided to substantially reduce funding for the single-payer system because of budgetary pressures, or if users found the system administratively burdensome, there could be disruptions in service. In that case, providers and patients might increasingly opt out of the single-payer system.

Although paying lower rates to physicians would reduce government spending, it could also reduce physicians' incentives to invest in their practices, which could affect their capacity and

the amount and intensity of care they would provide over the long term.[155] A decline in the supply of care could increase congestion in the health care system and reduce the quality of care. Providers might also gradually change the mix of services they provide because of changes in payment rates. To encourage a sufficient supply of providers over the long term, the government could more heavily subsidize the costs of graduate medical education to encourage people to continue to enter medical professions. Other changes that could increase the supply of care include advances in medical technologies. But it is difficult for CBO to predict how and when such advances would occur under current law and whether the single-payer system would affect the pace or nature of technological change.

Medical Innovation

The effects of a single-payer system on innovation are highly uncertain because profitability would be likely to increase for some types of innovations but decrease for other types, and the net impact on innovation as a whole is unclear. For example, one effect of the single-payer options is that demand for care would increase, potentially spurring innovation aimed at meeting that demand. Another effect is that providers who are projected to receive the highest payment rates under current law would experience the largest payment reductions from the compression of rates under the illustrative options, potentially lessening innovation by those providers.

Effects on innovation would depend on how the single-payer system set payment rates for innovative devices, services, and prescription drugs. Because there would be less information over time about what market-determined prices would have been in the absence of a single-payer system, policymakers might need to adjust the system's payment rates to encourage continued innovation in medical devices, services, and drugs.

Devices and Services. Effects on the development of medical devices and new services would depend on what the single-payer system chose to cover. Those effects would also depend on how the payment rates for devices and new services and the quantities purchased would differ under current law and the single-payer options over long periods of time. CBO has not estimated those differences.

If prices for medical devices and new services grew more slowly under the options than under current law in a way that was not offset by a larger volume of purchases, expected lifetime revenues for new products would be lower under a single-payer system. If so, those lower lifetime revenues would reduce the incentives for manufacturers to invest in new technologies and products.

Under current law, the Medicare FFS program often makes additional payments when providers use new technologies. The additional payments vary depending on the setting for services. For example, additional payments from Medicare for the use of approved new technologies during a hospital inpatient stay can cover up to 65 percent of the cost of the technology after accounting

[155] If such investment affected providers' clinical output or quality in the long run, the longer-term effects of changes in payment rates might be missed if providers' responses were only observed in the short run. See Jeffrey Clemens, Joshua D. Gottlieb, and Jeffrey Hicks, *How Would Medicare for All Affect Health System Capacity? Evidence From Medicare for Some*, Working Paper 28062 (National Bureau of Economic Research, November 2020), www.nber.org/papers/w28062.

for the Medicare severity diagnosis-related group (MS-DRG) payment, whereas such additional payments generally cover the full cost of new technologies used in hospitals' outpatient departments and ambulatory surgery centers (ASCs). Those additional payments continue for a maximum of three years, to allow time for the government to obtain enough data on the costs of the new technology to incorporate that information into Medicare's payment systems. Once that happens, Medicare's payments to providers who use the new technology are computed in the usual way.

The method that Medicare uses to compute additional payments for new technologies used in, for example, a hospital inpatient stay consists of multiplying the MS-DRG weight by the base payment amount and making certain other adjustments required by law. Whether a single-payer system that adopted the Medicare FFS program's approach to paying for new technologies used during hospital inpatient stays would pay higher or lower rates for those technologies would depend on two factors: how the base payment rates under the single-payer system would compare with the average payment rates across all payers under current law (after adjusting for case mix), and how Medicare's relative payment rates for stays in which a new technology is used compare with those of other payers under current law. Similar considerations would apply to whether payment rates for new technologies used in hospitals' outpatient departments and ASCs would be higher or lower under a single-payer system than the average rates across all payers under current law.

Prescription Drugs. Past evidence shows that increases in the size of the market for prescription drugs, such as the increase resulting from the creation of the Medicare Part D drug benefit, can foster substantial investment in research and development by drug manufacturers.[156] CBO estimates that reduced out-of-pocket costs for patients under the illustrative single-payer system would tend to increase spending on prescription drugs by 13 percent to 20 percent compared with current law in 2030, depending on the cost-sharing scenario. The percentage increase in patients' use of new drugs might be somewhat smaller than the percentage increase in spending on prescription drugs, particularly if part of the spending increase stemmed from a shift to more-expensive drugs. That said, implementing a single-payer system would result in slower price growth for drugs under both of CBO's payment-rate scenarios, which would tend to reduce drug manufacturers' investment in research and development.

Lifetime global revenues for new drugs would be roughly unchanged, on average, under the higher payment-rate scenario, CBO estimates, and would fall by about 10 percent under the lower payment-rate scenario. The reason that drug spending in 2030 would be higher under the higher payment-rate scenario than under current law but drugs' lifetime global revenues would be roughly unchanged is that prices are specified to grow more slowly in that scenario than under current law, whereas the relative difference in the amount of drugs purchased is not projected to change systematically over time.

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[156] See Margaret E. Blume-Kohout and Neeraj Sood, "Market Size and Innovation: Effects of Medicare Part D on Pharmaceutical Research and Development," *Journal of Public Economics*, vol. 97 (January 2013), pp. 327-336, http://dx.doi.org/10.1016/j.jpubeco.2012.10.003; and Pierre Dubois and others, "Market Size and Pharmaceutical Innovation," *RAND Journal of Economics*, vol. 46, no. 4 (Winter 2015), pp. 844-871, https://dx.doi.org/10.1111/1756-2171.12113.

CBO's estimates suggest that manufacturers and investors would face similar incentives to invest in pharmaceutical research and development under the higher payment-rate scenario as under current law. They would have reduced incentives to invest under the lower payment-rate scenario, which would lead to fewer new drugs being produced after 2030 than under current law. (CBO projects that the drugs sold in 2030 would essentially all be far enough along in the process of research and development that they would be produced even if a single-payer system with lower payment rates began operating in 2025.)

CBO's estimates of how lifetime global revenues for new drugs would change under a single-payer system are particularly uncertain because both the responsiveness of demand to changes in cost sharing and the future growth of prices under current law depend on the nature of the drugs coming to market. In addition, the nature of the drugs that would be developed might be different under either payment-rate scenario than under current law because increases in demand and price changes would vary for people with different health status or disease profiles—and, therefore, changes in profitability would vary among treatments.

Section 19.
How CBO's Estimates Compare With Other Analyses of Single-Payer Systems

CBO's estimates of the effects of its illustrative single-payer options on federal subsidies for health care and national health expenditures (NHE) differ from the estimates in other published analyses of single-payer systems. On the whole, CBO estimates lower percentage increases in federal subsidies under all of its illustrative options than other analyses do. In addition, CBO estimates that the change in NHE under its five single-payer options would range from an 11 percent decline to a 4 percent increase, whereas other studies' estimates of the effects of a single-payer system on NHE range from a 6 percent decline to a 21 percent increase. Comparing the results of different studies is difficult, however, because of differences in the policy specifications of the single-payer systems they analyze—including the benefits that would be covered, the payment rates for providers, and the role of other health care programs. In addition, different analyses vary in scope and in the time periods they cover.

Two factors are the main contributors to the difference between CBO's estimates and those of other analyses. First, CBO projects that the supply of health care under a single-payer system would not meet all of the new demand for care, thus constraining increases in NHE more than most other analyses project. Second, CBO estimates lower payers' administrative spending for the new system than other analyses do.

To put its findings in context, CBO compared them with recent analyses by four other entities:

- In 2018, Charles Blahous of George Mason University's Mercatus Center published an analysis of the Medicare for All Act of 2017 (S. 1804), which Senator Sanders sponsored in the 115th Congress.[157] In a scenario with payment rates unchanged from estimates of current national average rates, Blahous projected that the bill would increase NHE by $3.3 trillion over the 2022-2031 period and increase federal subsidies for health care by about $38.0 trillion. In a scenario with payment rates set at 100 percent of Medicare's rates, Blahous projected that the bill would reduce NHE by $2.1 trillion over the 2022-2031 period and increase federal subsidies for health care by $32.6 trillion, which he considered to be lower-bound estimates.

- In 2019, the Urban Institute (UI) published an analysis of two single-payer options.[158] One option—which the study referred to as "single-payer enhanced" because it would cover all U.S. residents (including those not present in the country lawfully), would have no cost sharing, and would cover long-term services and supports (LTSS) and dental, vision, and hearing care—is similar to CBO's Option 5. UI estimated that the enhanced option would increase NHE by $720 billion in 2020 and increase federal spending by $34.0 trillion over the 2020-2029 period. The other option—which the study referred to

[157] See Charles Blahous, *The Costs of a National Single-Payer Healthcare System*, Mercatus Center Working Paper (George Mason University, July 2018), https://tinyurl.com/yafjznux.

[158] See Linda Blumberg and others, *From Incremental to Comprehensive Health Insurance Reform: How Various Reform Options Compare on Coverage and Costs* (Urban Institute, October 2019), https://tinyurl.com/yy9atuf7.

as "single-payer lite" because it would not cover U.S. residents who were not lawfully present, would require some cost sharing, and would not cover LTSS or dental, vision, and hearing care—is most similar to CBO's Option 2. The study estimated that the lite option would reduce NHE by $210 billion in 2020 and increase federal spending by $17.6 trillion over the 2020-2029 period.[159]

- In 2016, Kenneth Thorpe of Emory University published analyses of the single-payer system proposed by Senator Sanders's 2016 presidential campaign.[160] Thorpe estimated that the proposal would increase federal spending by $24.7 trillion over the 2017-2026 period. He did not estimate its effects on national health expenditures.

- In 2019, the RAND Corporation released an analysis of a national Medicare for All plan that would provide comprehensive health coverage and LTSS benefits.[161] RAND estimated that in 2019, the plan would increase NHE by about $70 billion and federal spending by $2.4 trillion. RAND estimated that there would be insufficient supply to meet the entire demand for care, limiting the increases in NHE and federal spending.

How the Features of CBO's Illustrative Single-Payer Options Compare With Those of Other Analyses

As detailed in Section 2, CBO modeled the effects of five illustrative versions of a single-payer system, with design specifications that include some of the major features of proposals introduced in the 116th Congress. To make up for a lack of detail in those legislative proposals or to simplify the analysis, CBO made assumptions about how the illustrative single-payer system would be structured. Some of those assumptions differ from the ones made by the analyses listed above.

CBO's five options vary by three key features: provider payment rates, cost sharing, and coverage of long-term services and supports. CBO developed higher and lower scenarios for payment rates, higher and lower scenarios for cost sharing, and one scenario that includes LTSS as a single-payer benefit. Payment rates for providers of hospital services and physician and clinical services are higher under both of CBO's payment-rate scenarios than they are in most of the other studies (see Exhibit 19-1).

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[159] In 2020, the Urban Institute released a report analyzing three stylized options for an LTSS benefit in a single-payer system. It estimated that under intermediate cost assumptions, its third option (the one most similar to the LTSS benefit in CBO's Option 5) would increase NHE by $321 billion and increase federal spending by $525 billion in 2020. See Melissa M. Favreault, *Incorporating Long-Term Services and Supports in Health Care Proposals: Cost and Distributional Considerations* (Urban Institute, May 2020), https://tinyurl.com/y59bsbnp. However, that report did not estimate the costs of a comprehensive single-payer system that included services other than LTSS. For that reason, this section compares CBO's estimates of the effects of a single-payer system with the estimates in the Urban Institute's 2019 report instead.

[160] See Kenneth Thorpe, "An Analysis of Senator Sanders Single Payer Plan" (January 27, 2016), https://tinyurl.com/tpqglho (PDF, 2.2 MB); and Kenneth Thorpe, "Why Sanders's Single-Payer Plan Would Cost More Than His Campaign Says," *American Prospect* (February 29, 2016), https://tinyurl.com/y8z8q883.

[161] See Jodi L. Liu and Christine Eibner, *National Health Spending Estimates Under Medicare for All* (RAND Corporation, 2019), www.rand.org/pubs/research_reports/RR3106.html.

Exhibit 19-1.

Comparison of Specifications of CBO's Illustrative Options and Single-Payer Systems in Other Analyses

	Illustrative Single-Payer Options Analyzed by CBO	Blahous (2018)	Urban Institute Single-Payer Enhanced (2019)	Urban Institute Single-Payer Lite (2019)	Thorpe (2016)	RAND (2019)
All U.S. Residents Eligible	Yes	Yes	Yes	No, excludes people not lawfully present	Yes	Yes
Provides Comprehensive Major Medical Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Covers Dental, Vision, and Hearing Care	Yes	Yes	Yes	No, except pediatric dental and vision care	Yes	Yes
Covers Long-Term Services and Supports[a]	No in Options 1 through 4 Yes in Option 5	No	Yes, covers home- and community-based services for people with disabilities	No	No	Yes
Cost Sharing for Medical Services	Yes in Options 1 and 2 No in Options 3 through 5	No	No	Yes	No	No
Cost Sharing for Retail Prescription Drugs	Yes	No	No	Yes	No	No
Role for Private Health Insurance	No[b]	No	No	No	No	No
Role for Medicare and FEHB	No	No	No	No	No	No
Role for Medicaid	Yes, for LTSS only in Options 1 through 4 No in Option 5	Yes, for LTSS only	Yes, for LTSS only	Yes, for LTSS only	No	No
Role for DoD, VHA, or IHS	Yes	Yes	Yes	Yes	Yes, except for DoD	Yes, only for DoD
Basis of Payments for Hospital Services	142 percent or 123 percent of Medicare FFS[c]	100 percent of Medicare FFS or average of all payers under current law	115 percent of Medicare FFS	115 percent of Medicare FFS	105 percent of hospitals' costs (116 percent of Medicare FFS)	Blended average of all payers under current law (124 percent of Medicare FFS)
Basis of Payments for Physician and Clinical Services	120 percent or 111 percent of Medicare FFS[d]	100 percent of Medicare FFS or average of all payers under current law	100 percent of Medicare FFS	100 percent of Medicare FFS	105 percent of providers' costs	Blended average of all payers under current law (107 percent of Medicare FFS)
Basis of Prices for Retail Prescription Drugs	Prices would be set in 2025 for existing drugs and grow at the rate of the CPI-U plus 4 percentage points or the CPI-U; prices for new drugs would be constrained[e]	Negotiations with the Secretary of Health and Human Services	Rebates about halfway between Medicare's and Medicaid's	Rebates about halfway between Medicare's and Medicaid's	Not specified	Negotiations with the federal government

Continued

Comparison of Specifications of CBO's Illustrative Options and Single-Payer Systems in Other Analyses

	Illustrative Single-Payer Options Analyzed by CBO	Blahous (2018)	Urban Institute Single-Payer Enhanced (2019)	Urban Institute Single-Payer Lite (2019)	Thorpe (2016)	RAND (2019)
Basis of Payments for Other Services	100 percent of Medicare FFS	100 percent of Medicare FFS or average of all payers under current law	100 percent of Medicare FFS	100 percent of Medicare FFS	105 percent of providers' costs	Blended average of all payers under current law
Global Budget	No	No	No	No	No	No
States' Maintenance-of-Effort Requirements[f]	Yes, for LTSS spending only in Options 1 through 4	Yes, for LTSS spending only	No	No	Yes, for 75 percent of Medicaid and CHIP spending	No

Data source: Congressional Budget Office, using information from Charles Blahous, *The Costs of a National Single-Payer Healthcare System*, Mercatus Center Working Paper (George Mason University, July 2018), https://tinyurl.com/yafjznux; Linda Blumberg and others, *From Incremental to Comprehensive Health Insurance Reform: How Various Reform Options Compare on Coverage and Costs* (Urban Institute, October 2019), https://tinyurl.com/yyuvkqw4; Kenneth Thorpe, "An Analysis of Senator Sanders Single Payer Plan" (January 27, 2016), https://tinyurl.com/tpqglho (PDF, 2.2 MB); Kenneth Thorpe, "Why Sanders's Single-Payer Plan Would Cost More Than His Campaign Says," *American Prospect* (February 29, 2016), https://tinyurl.com/y8z8q883; and Jodi L. Liu and Christine Eibner, *National Health Spending Estimates Under Medicare for All* (RAND Corporation, 2019), www.rand.org/pubs/research_reports/RR3106.html.

CHIP = Children's Health Insurance Program; CPI-U = consumer price index for all urban consumers; DoD = Department of Defense; FEHB = Federal Employees Health Benefits program; FFS = fee for service; IHS = Indian Health Service; LTSS = long-term services and supports; VHA = Veterans Health Administration.

a. Medicare pays for home health care and for the first 100 days of skilled-nursing care following an inpatient hospitalization (often referred to as post-acute care). Home health care and skilled nursing facility care are sometimes classified as LTSS. However, CBO included them in its "other services" category because Medicare covers those services under current law and because CBO included all Medicare-covered benefits in the illustrative single-payer benefit packages.

b. Only insurance for services not covered by the single-payer system would be allowed under Options 1 through 4.

c. Payment rates for hospital services would equal 142 percent of Medicare FFS rates under Options 1, 4, and 5 and 123 percent of Medicare FFS rates under Options 2 and 3.

d. Payment rates for physician and clinical services would equal 120 percent of Medicare FFS rates under Options 1, 4, and 5 and 111 percent of Medicare FFS rates under Options 2 and 3.

e. Under Options 1, 4, and 5, prices for prescription drugs would be set at the weighted-average net price across all payers for existing drugs in 2025 and then would grow at the rate of the CPI-U plus 4 percentage points. Under Options 2 and 3, drug prices would be set at the average of net prices paid by Medicare Part D and Medicaid for existing drugs in 2025 and then would grow at the rate of the CPI-U. Under both of CBO's payment-rate scenarios, various tools would be used to limit prices for new brand-name drugs introduced after 2025.

f. Maintenance-of-effort requirements are federal rules requiring states to continue all or part of their current level of spending.

Exhibit 19-2.

Scope of CBO's Analysis Compared With That of Other Analyses

	CBO	Blahous (2018)	Urban Institute Single-Payer Enhanced (2019)	Urban Institute Single-Payer Lite (2019)	Thorpe (2016)	RAND (2019)
Time Period Examined	2030	2022-2031	2020-2029	2020-2029	2017-2026	2019
Analysis Estimates Changes in National Health Expenditures	Yes	Yes	Yes	Yes	No	Yes
Analysis Estimates Gross Cost of New System	Yes	Yes	Yes	Yes	Yes	Yes
Analysis Estimates Changes in Federal Subsidies for Health Care	Yes	Yes	Yes	Yes	Yes	Yes
Analysis Accounts for Changes in Federal Tax Subsidies as Well as Changes in Federal Spending	Yes	Yes	Partially[a]	Partially[a]	No	Yes
Analysis Incorporates Macroeconomic Feedback	No	No	No	No	No	No

Data source: Congressional Budget Office, using information from Charles Blahous, *The Costs of a National Single-Payer Healthcare System*, Mercatus Center Working Paper (George Mason University, July 2018), https://tinyurl.com/yafjznux; Linda Blumberg and others, *From Incremental to Comprehensive Health Insurance Reform: How Various Reform Options Compare on Coverage and Costs* (Urban Institute, October 2019), https://tinyurl.com/yyuvkqw4; Kenneth Thorpe, "An Analysis of Senator Sanders Single Payer Plan" (January 27, 2016), https://tinyurl.com/tpqglho (PDF, 2.2 MB); Kenneth Thorpe, "Why Sanders's Single-Payer Plan Would Cost More Than His Campaign Says," *American Prospect* (February 29, 2016), https://tinyurl.com/y8z8q883; and Jodi L. Liu and Christine Eibner, *National Health Spending Estimates Under Medicare for All* (RAND Corporation, 2019), www.rand.org/pubs/research_reports/RR3106.html.

a. The Urban Institute estimated increases in federal income tax revenues resulting from the elimination of employment-based coverage and subtracted those additional revenues from the estimated amount of financing that the single-payer system would need. However, the analysis did not include those additional revenues in its estimate of the change in federal subsidies for health care that would result from implementing the single-payer system.

How the Scope of CBO's Analysis Compares With Those of Other Analyses

In addition to modeling different policy specifications, the various studies of illustrative single-payer systems differ in the scope of their analysis (see Exhibit 19-2). All of the analyses estimate the federal costs of establishing a single-payer system before accounting for offsetting savings, and most analyses report estimated changes in national health expenditures. However, the studies differ in the scope of the offsetting savings they include when estimating the net federal cost of a single-payer system. CBO's analysis incorporates savings from the reduction in costs for current federal health programs as well as savings from the elimination of many tax preferences for health benefits—particularly the tax exclusion for employment-based coverage. Although the other analyses incorporate savings from lower spending for existing federal health programs, not all of them include savings from the elimination of health-related tax benefits, which are substantial.

How CBO's Modeling Parameters and Estimates Compare With Those of Other Analyses

On the whole, CBO's estimates of the percentage increase in federal subsidies for health care under a single-payer system are lower than the estimates in other analyses, despite the fact that CBO's payment rates are generally higher. Under its five illustrative options, CBO estimates that

the increase in federal subsidies for health care would range from 54 percent to 106 percent, compared with increases ranging from 57 percent to 222 percent in other studies (see Exhibit 19-3). CBO's estimates of the increases in federal subsidies are lower mainly because CBO's estimates of changes in NHE tend to be lower than those in other analyses, although such estimates range considerably among the studies. In addition, CBO's analysis includes the effects of repealing many tax preferences for health benefits on both federal income and federal payroll taxes, which results in substantial savings. For example, savings from repealing the tax exclusion for employer-sponsored contributions to health benefits (including health insurance and long-term care insurance premiums) are projected to total $550 billion in 2030. Not all of the other estimates include such savings.

Under CBO's single-payer options, the total change in NHE ranges from a decline of 11 percent to an increase of 4 percent. On balance, that range is lower than the range of estimates from other studies, which span a decline of 6 percent to an increase of 21 percent. For its illustrative options without LTSS coverage, CBO estimates that NHE would decline by as much as 11 percent under the option with lower payment rates and higher cost sharing (Option 2) or would decrease by 1 percent under the option with higher payment rates and lower cost sharing (Option 4). For Option 5, which includes LTSS coverage, CBO estimates an increase in NHE of 4 percent, which is well within the range of estimates from other analyses.[162]

The differences in estimates of the percentage change in NHE stem from a number of factors, two of which are the most significant. First, CBO and RAND both estimate that the supply of care under a single-payer system would be insufficient to meet all of the new demand for care, whereas Blahous, the Urban Institute, and Thorpe do not. RAND estimates sufficient supply for prescription drugs and medical devices, but it estimates that the expansion in the supply of hospital services and physician and clinical services would amount to just half of the increase in demand for those services. CBO also estimates that there would be sufficient supply of prescription drugs and LTSS; however, it estimates that the increased supply of care under all of its illustrative options would be sufficient to satisfy a portion—but not all—of the increase in demand for hospital services, physician and clinical services, and other services.

Specifically, CBO estimates that hospitals would increase their supply of care to cover 15 percent of the difference between the demand for and supply of hospital services under the single-payer options. For physician and clinical services and other services, CBO estimates that providers would increase their supply of care to meet 20 percent of the difference between the demand for and supply of those services.

Second, CBO estimates that payers' administrative spending would equal 1.5 percent to 1.8 percent of total spending under the single-payer system, whereas other analyses estimate that share at between 4.7 percent and 6 percent. CBO used a substantially different methodology than other studies to estimate the administrative spending of a single-payer system: Its estimates are

[162] CBO estimates that LTSS spending would equal $756 billion in 2030 under Option 5, compared with the Urban Institute's estimate of $630 billion in 2020 and RAND's estimate of $687 billion in 2019. CBO's estimate of LTSS spending is larger because it is for a later year. If the estimates from the Urban Institute and RAND were projected forward to 2030 using the growth rate of LTSS spending under current law, they would be larger than CBO's estimate of LTSS spending in 2030.

Exhibit 19-3.

CBO's Modeling Approach and Estimates Compared With Those of Other Analyses

	CBO	Blahous (2018)	Urban Institute Single-Payer Enhanced (2019)	Urban Institute Single-Payer Lite (2019)	Thorpe (2016)	RAND (2019)
Percentage Increase in the Demand for Care (Excluding LTSS) Under a Single-Payer System in the Absence of a Supply Constraint						
By people without insurance under current law	30 to 39[a]	89[b]	100[c]	59[c]	70[b]	25
By people with private insurance under current law	8 to 14[a]	11	28	0	10	2.6
By people with Medicare coverage under current law	4 to 12[a,d]	16[e]	18	-2	6[e]	2.2[e]
Payers' Administrative Spending as a Percentage of Total Single-Payer Spending	1.5 to 1.8	6	6	6	4.7	5.3
Includes Estimates of Providers' Savings on Administrative Spending	Yes	No	No[f]	No[f]	No	Yes
Includes Increase in Supply That Does Not Meet Increase in Demand	Yes	No	No	No	No	Yes
Percentage Change in National Health Expenditures	-11 to 4	-2 to 6	20.6	-6	n.r.	1.8
Percentage Change in Federal Subsidies for Health Care	54 to 106[g]	57 to 79	221.5	118.6	n.r.	221
Total Federal Spending on the Single-Payer System (Trillions of dollars)	4.2 to 5.8 (in 2030)	3.6 to 3.9 (in 2019)	4.1 (in 2020)	2.8 (in 2020)	3.2 (in 2019)	3.2 (in 2019)

Data source: Congressional Budget Office, using information from Charles Blahous, *The Costs of a National Single-Payer Healthcare System*, Mercatus Center Working Paper (George Mason University, July 2018), https://tinyurl.com/yafjznux; Linda Blumberg and others, *From Incremental to Comprehensive Health Insurance Reform: How Various Reform Options Compare on Coverage and Costs* (Urban Institute, October 2019), https://tinyurl.com/yyuvkqw4; Linda Blumberg, Urban Institute, personal communication (November 19, 2020); Kenneth Thorpe, "An Analysis of Senator Sanders Single Payer Plan" (January 27, 2016), https://tinyurl.com/tpqglho (PDF, 2.2 MB); Kenneth Thorpe, "Why Sanders's Single-Payer Plan Would Cost More Than His Campaign Says," *American Prospect* (February 29, 2016), https://tinyurl.com/y8z8q883; and Jodi L. Liu and Christine Eibner, *National Health Spending Estimates Under Medicare for All* (RAND Corporation, 2019), www.rand.org/pubs/research_reports/RR3106.html. See www.cbo.gov/publication/56811#data.

LTSS = long-term services and supports; n.r. = not reported.

a. The increase in demand is larger under Options 3 through 5, which include lower cost-sharing requirements than CBO's other illustrative options.

b. The increase in demand among uninsured people also reflects changes in out-of-pocket costs.

c. To estimate the increase in demand for care by people without insurance under current law, the Urban Institute's Health Insurance Policy Simulation Model combined out-of-pocket spending by the uninsured and uncompensated care demanded by the uninsured under current law and compared that sum with total spending by the previously uninsured under a single-payer policy. As a result, the Urban Institute's estimate of the percentage increase in spending by the uninsured is probably larger than a corresponding percentage increase in the use of care would be. Estimates of uncompensated care were based on Teresa A. Coughlin and others, *Uncompensated Care for the Uninsured in 2013: A Detailed Examination* (Kaiser Family Foundation, May 2014), www.kff.org/uninsured/report/uncompensated-care-for-the-uninsured-in-2013-a-detailed-examination.

d. Estimate for all Medicare beneficiaries.

e. Estimate for Medicare beneficiaries without supplemental coverage.

f. The Urban Institute did not quantify providers' savings on administrative spending, but it did consider those savings in assessing the feasibility of lower payment rates for providers.

g. Excludes changes in federal discretionary spending for health care.

based on a detailed analysis of administrative spending for the Medicare fee-for-service (FFS) program in 2019 (see Section 7). RAND, Blahous, and the Urban Institute based their estimates on figures for Medicare administrative spending from the national health expenditure accounts, which include administrative spending by Medicare Advantage and Medicare Part D plans as well as by the Medicare FFS program. Some of those plans' administrative spending—particularly for processing prescription drug claims—would continue under the single-payer system, but other categories of spending, such as profits and marketing by Medicare Advantage plans and fees paid by private insurers to state governments, would not. Thorpe's estimate that administrative spending would make up 4.7 percent of total health care spending was based on estimates from Vermont's proposal for a single-payer system.

Appendix A.
CBO's Current-Law Projections of National Health Expenditures

The Congressional Budget Office does not typically estimate total health care spending in the United States, but it did so for this analysis to have a point of comparison for measuring the effects of a single-payer system on national health expenditures (NHE). CBO started with its September 2020 baseline budget projections, which include projections of federal spending on health care under current law. Those projections reflect CBO's July 2020 economic outlook. CBO adjusted its baseline projections to capture the entire scope of U.S. health care spending, such as incorporating spending by state and local governments and private entities. In producing its NHE projections, CBO used the framework established by the Centers for Medicare & Medicaid Services (CMS), which produces annual estimates of NHE.

CBO estimates that national health expenditures total $4.1 trillion in 2020. If current laws did not change, NHE would grow at an average rate of 4.9 percent a year over the next decade, CBO projects, and would total $6.6 trillion in 2030. The vast majority of national health spending is for health care that is consumed (rather than investment in health care). Most of that consumption is financed by private insurance, Medicare, and Medicaid.

How National Health Expenditures Differ From CBO's Baseline Projections of Federal Subsidies for Health Care

The Office of the Actuary within CMS developed the government's official NHE accounts, following the same general accounting structure used for other tabulations of national income (such as the government's national income and product accounts).[163] Each year, CMS releases tables of historical and projected NHE. Those estimates are widely regarded as the authoritative source of information about total spending on health care in the United States.[164]

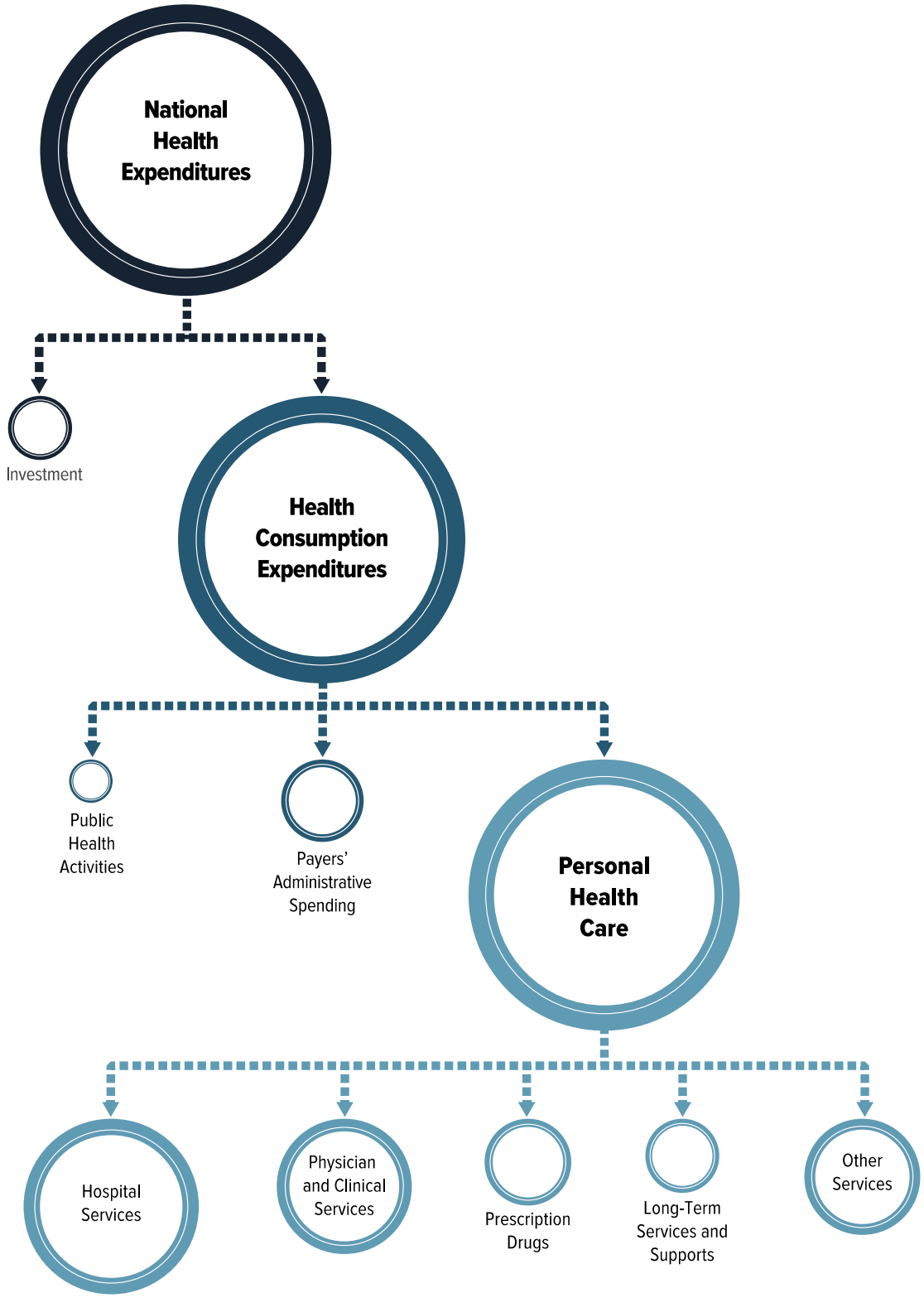
NHE consists of a variety of health consumption expenditures and investment in the medical sector (spending on structures, equipment, and research). Health consumption expenditures, which are projected to account for about 95 percent of NHE in 2030, consist mainly of medical goods and services provided to individuals, a category known as personal health care (see Exhibit A-1). Personal health care expenditures can be classified in several ways, such as by the type of service, the source of payment for the service (private insurance, a government program, or out-of-pocket spending, for example), or the individual's primary source of health insurance coverage. In addition to personal health care, health consumption expenditures include payers' administrative spending and government spending on public health activities (such as

[163] For more information, see Centers for Medicare & Medicaid Services, *National Health Expenditure Accounts: Methodology Paper, 2018—Definitions, Sources, and Methods* (accessed Oct 9, 2020), www.cms.gov/files/document/definitions-sources-and-methods.pdf (559 KB).

[164] See Centers for Medicare & Medicaid Services, "National Health Expenditure Data: Historical" (accessed Oct 9, 2020), www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical, and "National Health Expenditure Data: Projected" (accessed Oct 9, 2020), www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.

Exhibit A-1.

The Structure of National Health Expenditures



Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

The sizes of the circles are proportional to their dollar values in 2030, as projected by CBO.

epidemiological surveillance, vaccination programs, disease prevention programs, and public health laboratories).[165]

CBO regularly releases projections of federal spending on government health care programs, such as Medicare and Medicaid, and of federal subsidies for private health insurance coverage.[166] Those baseline budget projections differ in several important ways from the projections of national health expenditures that CBO produced for this analysis:

- CBO's NHE projections account for spending from all sources, whereas its baseline projections account only for federal spending. Thus, spending is higher in the NHE projections, particularly for Medicaid and the Children's Health Insurance Program (CHIP), which are partially funded by the states. In addition, the NHE projections account for amounts paid by beneficiaries out of pocket, whereas the baseline projections do not.

- The NHE projections show total spending, whereas the baseline projections show spending net of offsetting receipts. In the Medicare program, for instance, offsetting receipts include premiums paid by beneficiaries, premiums paid by states on behalf of beneficiaries who are also enrolled in Medicaid, state contributions toward Medicare Part D (often called the clawback), and amounts paid to providers that are later recovered. In 2019, offsetting receipts equaled 17 percent of gross Medicare outlays.167 Thus, spending for a given payer (particularly for Medicare) is higher in the NHE projections than in the baseline.

- For the NHE projections, CBO estimated federal health care spending subject to appropriation (discretionary spending) by assuming that current policies for discretionary programs would continue and that the amount of such spending would grow each year at the same rate as potential gross domestic product (GDP). For CBO's baseline, by contrast, the methods used to project discretionary spending are governed by law. Such funding is assumed to grow at the annual rate of inflation and is subject to caps set in the Budget Control Act of 2011 (as amended).

- CBO's NHE projections use calendar years, whereas its baseline projections use federal fiscal years (see Exhibit A-2).

[165] Payers' administrative spending consists of the administrative costs of government health programs, such as Medicare, and the nonclaims spending and profits or losses of private health insurers.

[166] See, for example, Congressional Budget Office, *Federal Subsidies for Health Insurance Coverage for People Under Age 65: 2020 to 2030* (September 2020), www.cbo.gov/publication/56571, and *An Update to the Budget Outlook: 2020 to 2030* (September 2020), www.cbo.gov/publication/56517.

[167] See Congressional Budget Office, "Medicare—CBO's Baseline as of March 6, 2020" (March 2020), www.cbo.gov/system/files/2020-03/51302-2020-03-medicare.pdf (758 KB).

Exhibit A-2.

Conceptual Differences Between CBO's Projections of National Health Expenditures and Baseline Projections of Federal Subsidies for Health Care

	Projections of National Health Expenditures	Baseline Projections of Federal Subsidies for Health Care
Scope of Spending	All sources (federal, state, and local governments, private entities, and out of pocket), but excluding spending outside the United States	Federal spending only
Definition of Spending by Payer	Total spending	Spending net of offsetting receipts
Growth of Federal Discretionary Spending	Grows at the same rate as potential gross domestic product	Governed by statutory rules (grows at the rate of inflation and is subject to federal spending caps)
Time Unit	Calendar year	Fiscal year

Data source: Congressional Budget Office.

CBO's Current-Law Projections of National Health Expenditures

CBO estimates that of the $4.1 trillion in total national health expenditures in 2020, $3.9 trillion consists of health consumption expenditures, and the other $188 billion consists of investment (see Exhibit A-3). For health consumption expenditures, the largest source of spending is private health insurance, which accounts for $1.3 trillion (33 percent) in 2020. (Spending by private insurers includes not only spending on benefit payments but also administrative spending and profits.) The two next-largest payers are Medicare, with $845 billion (22 percent), and Medicaid and CHIP, with $699 billion (18 percent). (The figure for Medicaid and CHIP spending includes the roughly two-thirds paid by the federal government and the remainder paid by the states.) Various other payers, together with government spending on public health, account for about $651 billion (17 percent) of health consumption expenditures.

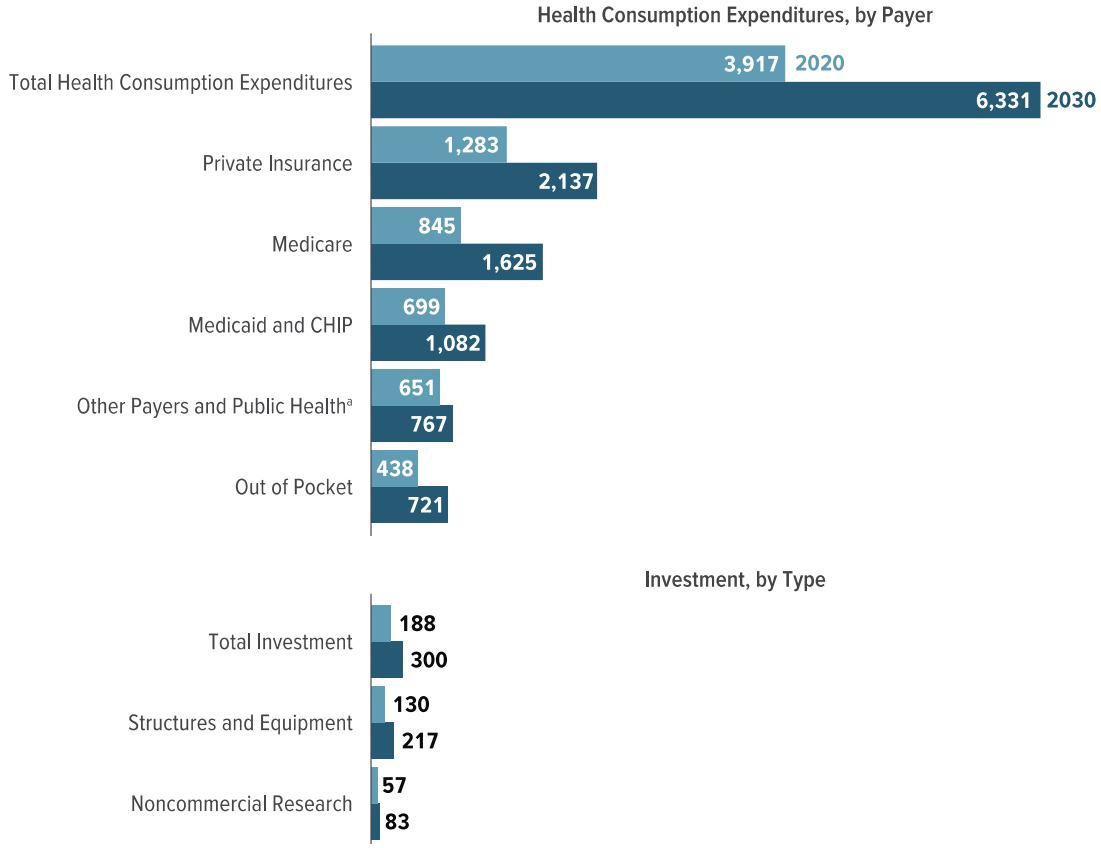
The remaining $438 billion (11 percent) of health consumption expenditures in 2020 are paid by individuals out of pocket. That category includes spending for services that are not covered by insurance, cost sharing paid by people who have insurance coverage, and health care spending by people without insurance. Payments covered by health savings accounts are included in out-of-pocket spending, but premiums paid for insurance coverage are included in the categories for various payers (private insurance, Medicare, and so on).

The NHE accounts also include two categories for investment in the medical sector. Spending by health care establishments on structures and equipment totals $130 billion in 2020, CBO estimates, and spending on medical research by nonprofit institutions and government entities totals $57 billion. (Spending on research and development by private entities is not included in

Exhibit A-3.

CBO's Projections of National Health Expenditures, by Category, 2020 and 2030

Billions of Dollars



Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

CHIP = Children's Health Insurance Program.

a. Includes the Department of Defense; the Department of Veterans Affairs; worksite health care programs; the Indian Health Service; programs that provide workers' compensation, general assistance, maternal and child health care, and vocational rehabilitation, among other services; the federal government's funding for other programs (such as the Substance Abuse and Mental Health Services Administration); various other state and local programs; and school health. It also includes philanthropic support and income that institutions such as hospitals receive from operating gift shops, cafeterias, parking lots, and educational programs, as well as income from their investments.

NHE because, under national income accounting definitions, such spending is considered to be intermediate purchases that will be recouped through product sales.)[168]

In the absence of a single-payer system or other changes to current laws, national health expenditures would increase at an average rate of 4.9 percent per year through 2030, CBO projects. That growth rate would be higher than the projected growth rate for the economy as a whole. By 2030, NHE would total $6.6 trillion, CBO estimates, and equal 21.4 percent of GDP, up from 20.2 percent in 2020 (see Exhibit A-4).

Medicare spending is projected to be the fastest growing category of health consumption expenditures under current law, mainly because of growth in enrollment as more members of the large baby-boom generation turn 65 and qualify for the program. By 2030, Medicare would be paying for 26 percent of health consumption expenditures, up from 22 percent in 2020, CBO projects. The other payers and public health category would have the largest decrease in its share of health consumption expenditures: from 17 percent in 2020 to 12 percent in 2030. All other payers would see their spending increase in the next decade under current law, but their shares of health consumption expenditures would not change much. Private insurance would account for 34 percent of health consumption expenditures in 2030, up from 33 percent in 2020; Medicaid and CHIP would account for 17 percent of health consumption expenditures in 2030, down from 18 percent in 2020; and out-of-pocket spending's share in 2030 would remain the same as in 2020, 11 percent.

How CBO Projected National Health Expenditures

To calculate NHE, CBO began with the 10-year projections of federal health care spending under current law in its baseline budget projections.[169] For federal discretionary programs, CBO adjusted its projections to better reflect the historical growth of those programs rather than the statutory rules that govern CBO's baseline.

From that starting point, CBO added projections of spending by state and local governments, spending by private entities, and spending for home- and community-based services not financed by Medicaid (described below). For types of spending that CBO does not project itself, it relied on CMS's estimates and projections of NHE. Examples of such spending include state and local spending on public health activities and private spending on medical structures and equipment. In a number of cases, CBO began with CMS's estimates of past spending for specific programs and then projected future spending for those programs using CMS's projected growth rates for broader categories of health care programs (because CMS provides more detail about past spending than about projected spending). The programs for which CBO used CMS's historical NHE estimates and projections accounted for $461 billion (13 percent of NHE) in 2018, the latest year for which CMS data were available (see Exhibit A-5).

[168] See Centers for Medicare & Medicaid Services, *National Health Expenditure Accounts: Methodology Paper, 2018—Definitions, Sources, and Methods* (accessed April 22, 2020), www.cms.gov/files/document/definitions-sources-and-methods.pdf (559 KB).

[169] For CBO's most recent baseline projections, see Congressional Budget Office, *An Update to the Budget Outlook: 2020 to 2030* (September 2020), www.cbo.gov/publication/56517.

Exhibit A-4.

CBO's Projections of National Health Expenditures Under Current Law, 2020-2030

Billions of Dollars

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Health Consumption Expenditures, by Payer											
Private insurance	1,283	1,411	1,481	1,530	1,567	1,615	1,683	1,765	1,875	2,001	2,137
Medicare	845	836	947	1,022	1,095	1,172	1,255	1,343	1,437	1,532	1,625
Medicaid and CHIP	699	764	763	769	802	843	886	931	977	1,027	1,082
Other payers and public health[a]	651	607	575	585	605	629	654	681	708	737	767
Out of pocket	438	487	505	525	544	565	590	617	649	684	721
Subtotal	3,917	4,106	4,271	4,431	4,614	4,825	5,068	5,337	5,647	5,981	6,331
Investment											
Structures and equipment	130	137	144	151	159	168	177	186	196	206	217
Noncommercial research	57	59	61	63	66	69	72	74	77	80	83
Subtotal	188	197	205	214	225	237	249	260	273	286	300
Total NHE	**4,105**	**4,302**	**4,476**	**4,645**	**4,839**	**5,061**	**5,316**	**5,597**	**5,920**	**6,268**	**6,631**
Gross Domestic Product	20,339	21,313	22,298	23,209	24,214	25,287	26,415	27,583	28,747	29,874	31,022
NHE as a Percentage of Gross Domestic Product	20.2	20.2	20.1	20.0	20.0	20.0	20.1	20.3	20.6	21.0	21.4

Data source: Congressional Budget Office. See www.cbo.gov/publication/56811#data.

CHIP = Children's Health Insurance Program; NHE = national health expenditures.

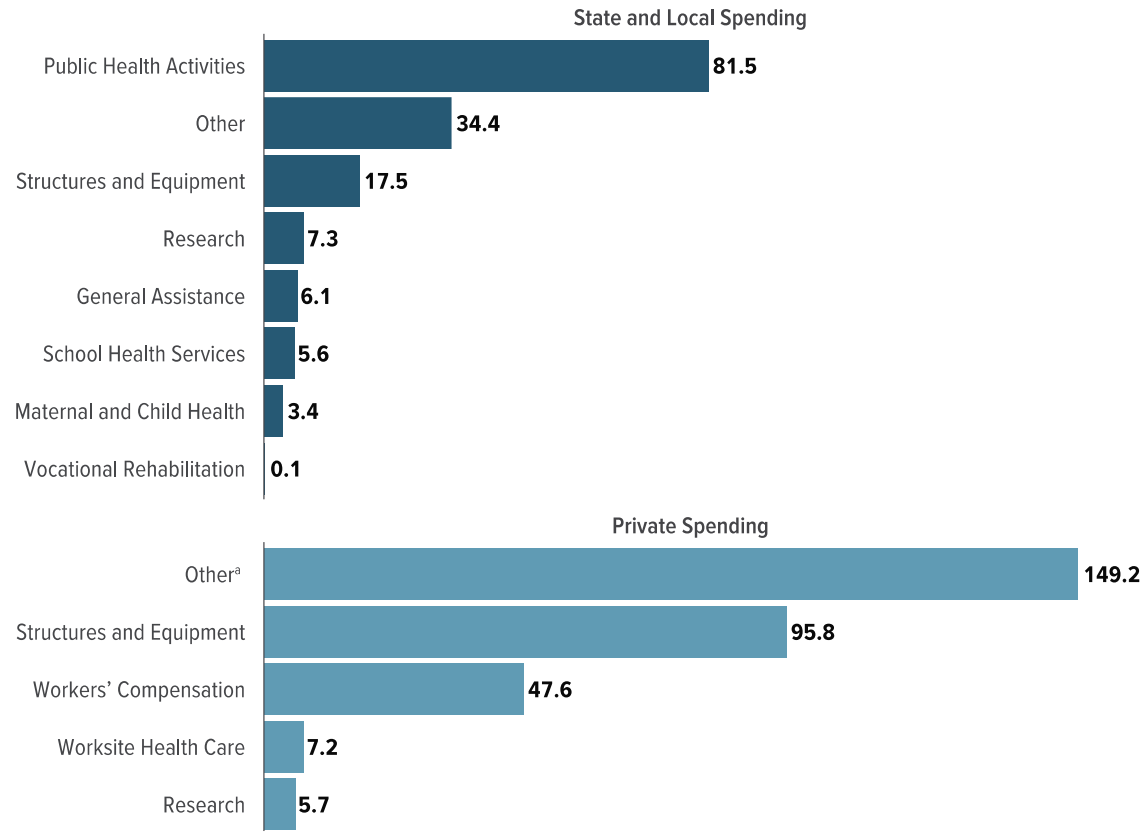
a. Includes the Department of Defense; the Department of Veterans Affairs; worksite health care programs; the Indian Health Service; programs that provide workers' compensation, general assistance, maternal and child health care, and vocational rehabilitation, among other services; the federal government's funding for other programs (such as the Substance Abuse and Mental Health Services Administration); various other state and local programs; and school health. It also includes philanthropic support and income that institutions such as hospitals receive from operating gift shops, cafeterias, parking lots, and educational programs, as well as income from their investments.

Spending for Medicaid and CHIP by State and Local Governments. CBO's published baseline projections of spending by Medicaid and CHIP show only federal spending. To estimate total national health expenditures, CBO needed to also include spending by state and local governments. CBO estimated total Medicaid and CHIP spending by using 2019 data from CMS on total spending for those programs and applying the same growth factors for enrollment and prices that CBO uses to project federal spending for Medicaid and CHIP under its baseline methodology.[170]

[170] See Centers for Medicare & Medicaid Services, "Expenditure Reports From MBES/CBES" (accessed October 28, 2020), https://go.usa.gov/xR7jV, and "CMS-21 Annual CHIP Expenditures Reports" (accessed October 28, 2020), www.medicaid.gov/medicaid/data-systems/macbis/macbis-financial-medicaid-budget-expenditure-system-mbes/quarterly-chip-expenditures-report-cms-21/cms-21-annual-chip-expenditures-reports/index.html.

Exhibit A-5.

Estimates by CMS of Health Spending in 2018 That CBO Used as a Starting Point for Its Projections of National Health Expenditures



Data source: Centers for Medicare & Medicaid Services (CMS). See www.cbo.gov/publication/56811#data.

a. Other private spending includes private payments from sources other than businesses and individuals. Most of those sources are philanthropic. Other sources of private funds include income that institutions such as hospitals receive from operating gift shops, cafeterias, parking lots, educational programs, as well as income from their investments.

The share of total Medicaid and CHIP spending financed by state governments is projected to decline from 2019 to 2021. The main reason is that legislation enacted in response to the coronavirus pandemic raised the federal government's matching rates substantially for both programs. The share of total Medicaid and CHIP spending paid by state governments is projected to rise significantly after 2021 because those higher matching rates are scheduled to end midway through 2022. After 2023, the state share of spending is expected to decline again slightly as additional states expand eligibility for Medicaid to adults under age 65 with income no higher than 138 percent of the federal poverty level. (The federal government pays a larger share of Medicaid's costs for those enrollees than for people who qualify for the program in other ways.) All told, CBO projects that the share of total Medicaid and CHIP spending financed by state governments in 2030 would be slightly higher than the share in 2019.

Spending by Private Entities. National health expenditures includes all types of private health-related spending, such as spending by private insurers, people's out-of-pocket payments for health care, and spending on investment in the medical sector. CBO used data from a number of sources to estimate those expenditures, and some of its projections relied heavily on CMS's projections of NHE.

Private Insurance Spending. CBO started with projections of enrollment and premiums for employment-based plans and nongroup plans from its health insurance simulation model to project total premium revenues for private insurers.[171] CBO then added the following components to those projections to arrive at estimates of total health care spending by private insurers:

- Premiums for supplemental coverage purchased by Medicare enrollees (known as medigap insurance), which CBO estimated on a per capita basis for 2015, projected forward using its estimates of the growth of Medicare's per capita costs, and multiplied by its estimates of enrollment in medigap insurance.[172] (The estimates of medigap enrollment were based on 2017 data from the Current Population Survey and projected forward using the projected growth rate of Medicare enrollment.)

- Premiums for dental coverage, which CBO estimated on the basis of CMS's projections.

- Premiums for other types of private insurance that is not major medical coverage, such as policies with limited insurance benefits (known as mini-med plans); some types of short-term, limited-duration policies; and health care sharing ministries. CBO based its estimates of premiums for those types of insurance on data from the National Association of Insurance Commissioners' (NAIC's) *Accident and Health Policy Experience Report* and conversations with industry experts.

- Spending for long-term services and supports (LTSS) by long-term care insurance plans that reimburse nursing facilities and other institutional providers. CBO based its estimates of that spending on 2018 data from the aforementioned NAIC report and conversations with industry experts and projected the estimates forward using the projected growth rates for the number of non-Medicaid LTSS users and for the employment cost index for wages and salaries.[173]

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[171] For more information about that model, see Congressional Budget Office, "HISIM2—The Health Insurance Simulation Model Used in Preparing CBO's Spring 2019 Baseline Budget Projections" (presentation, April 18, 2019), www.cbo.gov/publication/55097.

[172] For more information about estimated premiums for medigap insurance in 2015, see Medicare Payment Advisory Commission, "Trends in Medigap Enrollment, 2010 to 2015," *MedPAC Blog* (February 13, 2017), www.medpac.gov/-blog-/trends-in-medigap-enrollment-2010-to-2015/2017/02/13/trends-in-medigap-enrollment-2010-to-2015.

[173] According to conversations with actuaries and other industry experts, most payments by long-term care insurers reimburse people for expenses they have paid out of pocket. CBO included those expenditures in its estimates of out-of-pocket spending. However, a small portion of the payments by long-term care insurers are made directly to nursing facilities and other institutional LTSS providers, CBO estimates; those payments are included in the private insurance category.

- Health care spending by property and casualty insurance policies, which CBO estimated on the basis of information from the Medical Expenditure Panel Survey Household Component (MEPS-HC) for 2016 and projected forward using projected growth rates for the total U.S. population and private insurance premiums.

Out-of-Pocket Spending. CBO projected out-of-pocket spending by starting with CMS's 2018 estimate of out-of-pocket spending on all services except nursing care facilities, continuing care facilities, dental care, and nondurable medical equipment (such as over-the-counter medications). Next, CBO used the MEPS-HC to estimate the share of total out-of-pocket costs paid by people with each type of primary health insurance coverage. CBO then used those shares to divide the CMS estimate of total out-of-pocket spending by coverage type so that out-of-pocket costs could grow at different rates for people with different types of insurance. To project out-of-pocket spending by coverage type through 2030, CBO used projected growth rates for both health care costs and enrollment. CBO summed its individual projections of out-of-pocket spending for each of the coverage types to produce its estimate of total out-of-pocket spending in each year. Finally, CBO used CMS's projections to calculate the share of total out-of-pocket costs paid for each category of services in each year of the next decade and applied those shares to CBO's total annual estimate to allocate out-of-pocket spending by service category through 2030.

To calculate the growth of out-of-pocket spending by people enrolled in private health insurance, CBO used its projections for growth in private health insurance premiums and for enrollment in private insurance plans. The resulting projections of out-of-pocket spending reflect CBO's assessment that the average actuarial value of private health plans—which can be defined as the share of total costs not paid out of pocket by a person—will decline in future years as average deductibles and other cost-sharing provisions grow faster than overall spending. As a result of the increased cost sharing and deductibles, per capita out-of-pocket costs are projected to grow slightly faster than total medical spending for people with private insurance.

To calculate the growth of out-of-pocket spending for people enrolled in Medicare, CBO used its projection of Medicare enrollment and its projection of the growth rate for per capita Medicare spending because Medicare's cost sharing is fixed by law and remains roughly constant relative to outlays for the program. For people enrolled in Medicaid, CBO assumed that cost sharing would remain at the nominal levels allowed under current law and that total out-of-pocket spending would grow only with changes in enrollment. Finally, for people with other types of coverage or no insurance, CBO estimated that per capita out-of-pocket costs would grow at the same rate as private insurance premiums.

To estimate out-of-pocket spending on nursing care facilities, continuing care facilities, dental care, and nondurable medical equipment, CBO used CMS's estimates for 2018 as well as CMS's projections for those categories of spending. CBO also added out-of-pocket costs for home- and community-based services (HCBS), which are discussed below.

Private Investment Spending. CBO estimated private-sector investment in noncommercial medical research and in medical structures and equipment on the basis of CMS's projections for that category of investment. (Estimates of the federal government's health-related investment spending are discussed below.)

Spending for Home- and Community-Based Services Not Financed by Medicaid. HCBS encompasses a broad range of long-term services and supports, including help performing activities of daily living (such as bathing and dressing) and help with instrumental activities of daily living (such as cleaning or paying bills). In some cases, HCBS may even include services such as supported employment. Many home- and community-based services fall outside the Bureau of Labor Statistics' classification of health care services; therefore, such spending is generally not accounted for in CMS's projections of NHE unless it is reimbursed by Medicaid.

CBO projects HCBS spending financed by Medicaid as part of its baseline budget projections. (Such spending is projected to total $105 billion in 2020 and grow to $160 billion in 2030 under current law.) But CBO's baseline does not include spending on HCBS by other payers. To develop an estimate of total spending on such services regardless of payer, CBO reviewed the research literature and analyzed various data sources to estimate the number of people using non-Medicaid HCBS under current law and total spending on such services. Those data sources include administrative data from Medicaid, CMS's national health expenditure accounts, the Genworth Cost of Care Surveys, and estimates from the Urban Institute.[174]

On the basis of its literature review, CBO estimates that 1.0 million people without Medicaid coverage use HCBS in 2020—roughly 20 percent of the estimated number of Medicaid HCBS users.[175] CBO estimated costs for non-Medicaid HCBS users by using the average annual costs of home health aide and homemaker services from the Genworth Cost of Care Surveys. CBO projected those costs forward using its projections for the employment cost index, which measures the change in labor costs. As a result, CBO estimates that non-Medicaid HCBS spending totals $52 billion in 2020 and would grow to $81 billion in 2030 under current law (see Exhibit A-6).

Of the $52 billion in estimated non-Medicaid HCBS spending in 2020, about $2 billion in out-of-pocket spending and $4 billion in spending by the Department of Veterans Affairs were already included in CBO's projections of national health expenditures.[176] As a result, the incremental spending added to CBO's NHE projection for non-Medicaid HCBS spending was $46 billion in 2020. That additional spending is classified as out-of-pocket spending in CBO's projections of NHE and includes payments from private long-term care insurers to reimburse individuals for a portion of their expenditures.

[174] See Melissa M. Favreault, *Incorporating Long-Term Services and Supports in Health Care Proposals: Cost and Distributional Considerations* (Urban Institute, May 2020), p. 7, www.urban.org/research/publication/incorporating-long-term-services-and-supports-health-care-proposals.

[175] Ibid.

[176] After analyzing data from the Bureau of Labor Statistics' Occupational Employment Statistics Survey and its crosswalk with the North American Industry Classification System code for home health care services (NAICS 621600), CBO estimated that the home health care services category in CBO's NHE projections reflects $2.3 billion of out-of-pocket spending for non-Medicaid HCBS costs.

Exhibit A-6.

CBO's Projections of Spending on Home- and Community-Based Services, by Payer, 2020 and 2030

Billions of Dollars

	Spending on Home- and Community-Based Services	
	2020	2030
Medicaid	105	160
Other Payers	52	81
Total	158	241

Data source: Congressional Budget Office, based on analysis of administrative data from Medicaid, the national health expenditure accounts, the Genworth Cost of Care Surveys, and estimates from Melissa M. Favreault, *Incorporating Long-Term Services and Supports in Health Care Proposals: Cost and Distributional Considerations* (Urban Institute, May 2020), p. 7, www.urban.org/research/publication/incorporating-long-term-services-and-supports-health-care-proposals. See www.cbo.gov/publication/56811#data.

Federal Investment Spending Related to Health Care. Although CBO has produced estimates of federal investment in the past, it has not specifically estimated federal investment in the health care sector.[177] To develop such an estimate, CBO first identified spending on federal investment in the health care sector in fiscal year 2019 included in its baseline budget projections. CBO largely relied on data that federal agencies reported on the Office of Management and Budget's Schedule C form to identify spending on investment within baseline budget accounts and to allocate that spending between the categories of research and of structures and equipment. CBO then projected that investment spending by federal health programs would remain a constant share of all spending for federal health programs through 2030.

Federal Discretionary Spending for Health Care. CBO's baseline projections of discretionary spending are governed by laws that require the agency to assume that future discretionary funding for all accounts will equal the amount of the most recent discretionary funding, adjusted for projections of inflation and subject to caps set in the Budget Control Act of 2011 (as amended). Specifically, in CBO's baseline budget projections, discretionary funding related to federal personnel is inflated using the employment cost index for wages and salaries, and other discretionary funding is inflated using the GDP price index. However, the growth of discretionary health spending has historically outpaced the growth of those indices. For example, discretionary spending on health grew at an average annual rate of roughly 3.4 percent between fiscal years 2009 and 2019, whereas the employment cost index and the GDP price index grew at average annual rates of 2.2 percent and 1.7 percent, respectively, over that period.

Lawmakers can, and do, set discretionary funding at amounts that differ from what is projected in CBO's baseline, and the statutory requirements in the Budget Control Act do not apply to NHE projections. To project discretionary spending for health care using growth rates more closely aligned with experience, CBO adjusted its projections of such spending to rise at the growth rate of potential GDP (CBO's estimate of the maximum sustainable growth rate of the economy). Potential GDP grew at an average rate of 3.3 percent a year between fiscal years 2009

[177] For example, see Congressional Budget Office, *Federal Investment, 1962 to 2018* (June 2019), www.cbo.gov/publication/55375.

and 2019, CBO estimates, and is projected to grow by an average of 3.6 percent a year between fiscal years 2020 and 2030.

CBO's NHE projections of federal discretionary spending reflect the results of maintaining the funding policies that are currently in place for discretionary health programs. In general, the projections for years after 2020 reflect discretionary spending for 2020 inflated by the projected growth rate of potential GDP. However, although CBO's baseline and NHE projections include emergency appropriations enacted in 2020 in response to the coronavirus pandemic (and the outlays resulting from those appropriations in the next few years), CBO did not include such spending in the amount it extrapolated into future years because of the unusual size and nature of that funding.

How CBO's NHE Projections Compare With Those of the Centers for Medicare & Medicaid Services

CBO's estimates of national health expenditures are quite similar to those of CMS for 2018. Specifically, CBO's estimate of total NHE in 2018, $3,661 billion, is 0.3 percent higher than CMS's estimate, $3,649 billion. However, for 2028, the final year of CMS's most recent NHE projections, CBO's estimate, $5,920 billion, is 4.4 percent lower than CMS's estimate, $6,193 billion (see Exhibit A-7).

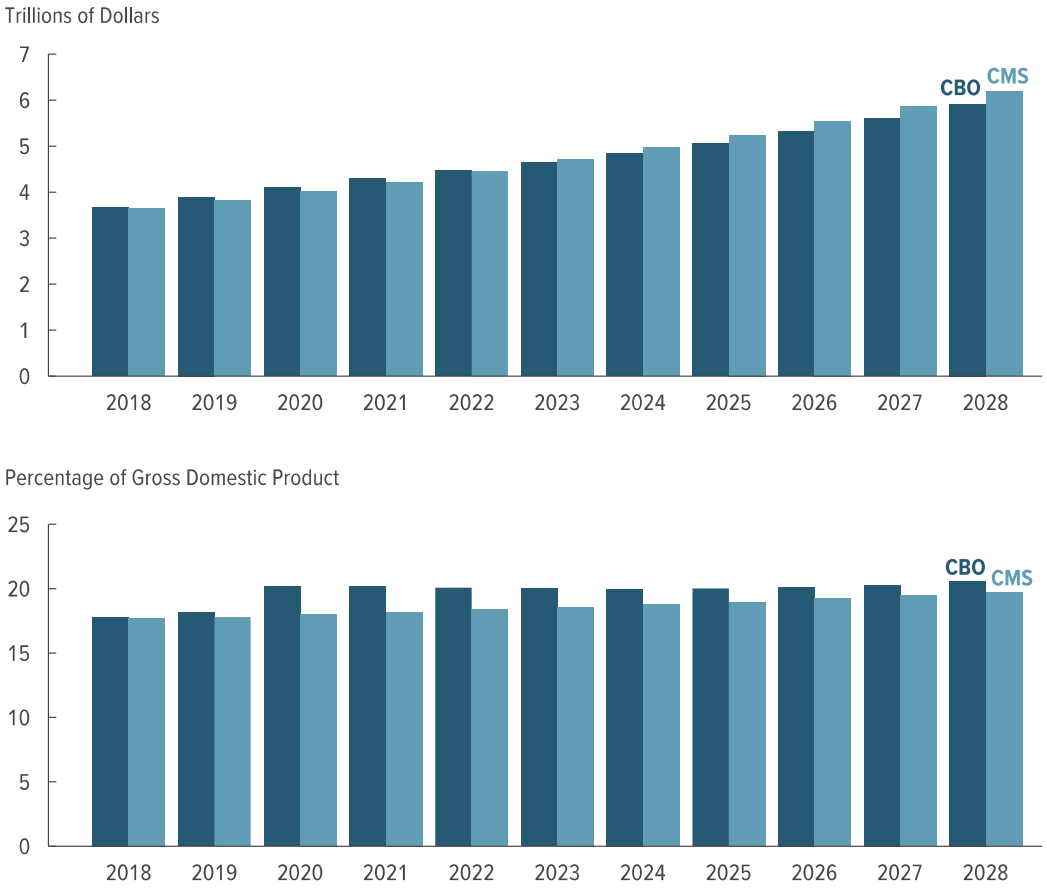
A key reason the two projections differ is that CBO's projections of NHE reflect the economic and near-term budgetary effects of the coronavirus pandemic, whereas CMS's projections, which were published in early 2020, do not. CBO's projection of NHE in 2020 is larger than CMS's because legislation enacted to address the pandemic substantially increased federal spending on health care, particularly in that year. Most of that increase came from appropriations of $225 billion for the Public Health and Social Services Emergency Fund of the Department of Health and Human Services. Much of that funding, $175 billion, was dedicated to reimbursing health care providers (such as hospitals) for expenses related to health care or lost revenues resulting from the pandemic. The increases in federal spending stemming from enacted legislation were partially offset by a reduction in health consumption expenditures in 2020 resulting from deferred care. As a result of including that net increase in spending, CBO's projections are higher than CMS's for the near term.

CBO's projections of NHE are lower than CMS's for later years, however, for two main reasons. First, CBO's economic forecast reflects the pandemic and includes downward revisions to estimates of personal disposable income, which reduce projections of premiums for private insurance. Second, CBO's economic forecast includes reductions in the estimated growth of prices for labor, goods, and services used by health care providers, which result in smaller projected increases in payment rates and therefore lower projected spending for Medicare and Medicaid.

CBO projects that NHE will grow at an average annual rate of 4.9 percent over the 2018-2028 period, compared with CMS's estimate of 5.4 percent. Although CBO projects lower total NHE in 2028 than CMS does, CBO also projects much slower growth in gross domestic product than CMS does, which outweighs the difference in total NHE. As a result, CBO estimates that national health expenditures will make up a larger share of GDP in 2028 than CMS does: 20.6 percent versus 19.7 percent (see Exhibit A-7).

Exhibit A-7

Comparison of CBO's and CMS's Projections of Total National Health Expenditures, 2018-2028



Data sources: Congressional Budget Office; Centers for Medicare & Medicaid Services (CMS). See www.cbo.gov/publication/56811#data.

Appendix B.
Research Used to Estimate Parameters for CBO's Single-Payer Model

To develop estimates of model parameters for its analysis of the illustrative single-payer options, the Congressional Budget Office drew on the following studies.

Effects of Changes in Provider Payment Rates

Research used to estimate how various payers' **payment rates for hospital services** under current law would compare with payment rates under the single-payer system:

American Hospital Association, "Trendwatch Chartbook 2018" (accessed November 2019), Table 4.2, www.aha.org/system/files/2018-05/2018-chartbook-table-4-2.pdf (158 KB).

——, "Trendwatch Chartbook 2018" (accessed November 2019), Table 4.4, www.aha.org/system/files/2018-05/2018-chartbook-table-4-4.pdf (164 KB).

Bai, Ge, "California's Hospital Fair Pricing Act Reduced the Prices Actually Paid by Uninsured Patients," *Health Affairs*, vol. 34, no. 1 (January 2015), pp. 64-70, http://dx.doi.org/10.1377/hlthaff.2014.1072.

Batty, Michael, and Benedic Ippolito, "Financial Incentives, Hospital Care, and Health Outcomes: Evidence From Fair Pricing Laws," *American Economic Journal: Economic Policy*, vol. 9, no. 2 (May 2017), pp. 28-56, https://doi.org/10.1257/pol.20160060.

Centers for Medicare & Medicaid Services, Office of the Actuary, *Projected Medicare Expenditures Under an Illustrative Scenario With Alternative Payment Updates to Medicare Providers* (June 5, 2018), www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/2018TRAlternativeScenario.pdf (441 KB).

——, "Methodology for Projecting Multifactor Productivity" (no date), www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareProgramRatesStats/Downloads/MFPMethodology.pdf (248 KB).

Community Catalyst, *What Does the Affordable Care Act Say About Hospital Bills* (June 15, 2015), www.communitycatalyst.org/resources/publications/document/CC-ACAHospitalBillsReport-F.pdf?1434480883 (154 KB).

Ginsburg, Paul B., *Wide Variation in Hospital and Physician Payment Rates Evidence of Provider Market Power*, Research Brief 16 (Center for Studying Health System Change, November 2010), www.hschange.org/CONTENT/1162.

Kronick, Richard, and Sarah Hoda Neyaz, *Private Insurance Payments to California Hospitals Average More Than Double Medicare Payments* (West Health Policy Center, May 2019), https://tinyurl.com/yb7kyxj6.

Maeda, Jared Lane, and Lyle Nelson, *An Analysis of Private-Sector Prices for Hospital Admissions*, Working Paper 2017-02 (Congressional Budget Office, April 2017), www.cbo.gov/publication/52567.

Medicaid and CHIP Payment and Access Commission, *Medicaid Hospital Payment: A Comparison Across States and to Medicare* (April 2017), www.macpac.gov/wp-content/uploads/2017/04/Medicaid-Hospital-Payment-A-Comparison-across-States-and-to-Medicare.pdf (250 KB).

Melnick, Glenn A., and Katya Fonkych, "Hospital Pricing and the Uninsured: Do the Uninsured Pay Higher Prices?" *Health Affairs*, vol. 27, supplement no. 1 (February 2008), pp. w116-w122, http://dx.doi.org/10.1377/hlthaff.27.2.w116.

Selden, Thomas M., "Differences Between Public and Private Hospital Payment Rates Narrowed 2012-2016," *Health Affairs*, vol. 39, no. 1 (January 2020), pp. 94-99, https://doi.org/10.1377/hlthaff.2019.00415.

Selden, Thomas M., and others, "The Growing Difference Between Public and Private Payment Rates for Inpatient Hospital Care," *Health Affairs*, vol. 34, no. 12 (December 2015), pp. 2147-2150, http://dx.doi.org/10.1377/hlthaff.2015.0706.

Stensland, Jeffrey, Zachary R. Gaumer, and Mark E. Miller, "Private-Payer Profits Can Induce Negative Medicare Margins," *Health Affairs*, vol. 29, no. 5 (May 2010), pp. 1045-1051, https://dx.doi.org/10.1377/hlthaff.2009.0599.

Stone, Devin A., Bridget A. Dickensheets, and John A. Poisal, "Comparison of Medicaid Payments Relative to Medicare Using Inpatient Acute Care Claims From the Medicaid Program: Fiscal Year 2010-Fiscal Year 2011," *Health Services Research*, vol. 53, no. 1 (February 2018), pp. 326-340, http://dx.doi.org/10.1111/1475-6773.12645.

White, Chapin, and Chris Whaley, *Prices Paid to Hospitals by Private Health Plans Are High Relative to Medicare and Vary Widely: Findings From an Employer-Led Transparency Initiative*, RR-3033-RWJ (RAND Corporation, 2019), www.rand.org/pubs/research_reports/RR3033.html.

Research used to estimate how various payers' **payment rates for physician and clinical services** under current law would compare with payment rates under the single-payer system:

American Academy of Physician Assistants, "Third-Party Reimbursement for PAs" (April 2018), www.aapa.org/wp-content/uploads/2017/01/Third_party_payment_2017_FINAL.pdf (770 KB).

Biener, Adam I., and Thomas M. Selden, "Public and Private Payments for Physician Office Visits," *Health Affairs*, vol. 36, no. 12 (December 2017), pp. 2160-2164, http://dx.doi.org/10.1377/hlthaff.2017.0749.

Centers for Medicare & Medicaid Services, Office of the Actuary, *Projected Medicare Expenditures Under an Illustrative Scenario With Alternative Payment Updates to Medicare*

Providers (June 5, 2018), www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/2018TRAlternativeScenario.pdf (441 KB).

Cunningham, Peter J., and others, "Identifying Affordable Sources of Medical Care Among Uninsured Persons," *Health Services Research*, vol. 42, no. 1, part 1 (February 2007), pp. 265-285, http://dx.doi.org/10.1111/j.1475-6773.2006.00603.x.

Dillon, Deborah, and Patricia McLean Hoyson, "Beginning Employment: A Guide for the New Nurse Practitioner," *Journal for Nurse Practitioners*, vol. 10, no. 1 (January 2014), pp. 55-59, http://dx.doi.org/10.1016/j.nurpra.2013.09.009.

Fairbrother, Gerry, and others, "Care for the Uninsured in General Internists' Private Offices," *Health Affairs*, vol. 22, no. 6 (November/December 2003), pp. 217-224, http://dx.doi.org/10.1377/hlthaff.22.6.217.

Ginsburg, Paul B., *Wide Variation in Hospital and Physician Payment Rates Evidence of Provider Market Power*, Research Brief 16 (Center for Studying Health System Change, November 2010), www.hschange.org/CONTENT/1162.

Government Accountability Office, *Medicaid Payment: Comparisons of Selected Services Under Fee-for-Service, Managed Care, and Private Insurance*, GAO-14-533 (July 2014), www.gao.gov/products/GAO-14-533.

Gray, Josh, and Tony Dreyfus, "Many Uninsured Patients Get Primary Care for Free," athenaInsight (October 17, 2016).

Gruber, Jonathan, and David Rodriguez, "How Much Uncompensated Care Do Doctors Provide?" *Journal of Health Economics*, vol. 26, no. 6 (December 2007), pp. 1151-1169, http://dx.doi.org/10.1016/j.jhealeco.2007.08.001.

Hargraves, John, and Jeannie Fugelsten Biniek, "Comparing Commercial and Medicare Rates for Select Anesthesia, Emergency Room, and Radiology Services by State" (blog entry, July 23, 2019), https://healthcostinstitute.org/blog/entry/median-allowed-amounts-esi-2017.

Mark, Tami L., and others, "Differential Reimbursement of Psychiatric Services by Psychiatrists and Other Medical Providers," *Psychiatric Services*, vol. 69, no. 3 (March 2018), pp. 281-285, http://dx.doi.org/10.1176/appi.ps.201700271.

Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy* (March 2019), Chapter 4, pp. 97-123, www.medpac.gov/docs/default-source/reports/mar19_medpac_ch4_sec.pdf (368 KB).

Pelech, Daria M., "Prices for Physicians' Services in Medicare Advantage and Commercial Plans," *Medical Care Research and Review*, vol. 77, no. 3 (June 2020), pp. 236-248, https://doi.org/10.1177/1077558718780604.

Saloner, Brendan, and others, "Most Uninsured Adults Could Schedule Primary Care Appointments Before the ACA, but Average Price Was $160," *Health Affairs,* vol. 34, no. 5 (May 2015), pp. 773-780, http://dx.doi.org/10.1377/hlthaff.2014.1258.

——, "Most Primary Care Physicians Provide Appointments, but Affordability Remains a Barrier for the Uninsured," *Health Affairs,* vol. 37, no. 4 (April 2018), pp. 627-634, http://dx.doi.org/10.1377/hlthaff.2017.0959.

Trish, Erin, and others, "Physician Reimbursement in Medicare Advantage Compared With Traditional Medicare and Commercial Health Insurance," *JAMA Internal Medicine*, vol. 177, no. 9 (September 2017), pp. 1287-1295, http://dx.doi.org/10.1001/jamainternmed.2017.2679.

Zuckerman, Stephen, Laura Skopec, and Marni Epstein, *Medicaid Physician Fees After the ACA Primary Care Fee Bump* (Urban Institute, March 2017), www.urban.org/research/publication/medicaid-physician-fees-after-aca-primary-care-fee-bump.

Research used to estimate how various payers' **payment rates for prescription drugs** under current law would compare with payment rates under the single-payer system:

Anderson-Cook, Anna, Jared Maeda, and Lyle Nelson, *Prices for and Spending on Specialty Drugs in Medicare Part D and Medicaid: An In-Depth Analysis*, Working Paper 2019-02 (Congressional Budget Office, March 2019), www.cbo.gov/publication/55011.

Roehrig, Charles, *The Impact of Prescription Drug Rebates on Health Plans and Consumers* (Altarum, April 2018), https://altarum.org/sites/default/files/Altarum-Prescription-Drug-Rebate-Report_April-2018.pdf (492 KB).

Research used to estimate the **elasticity of supply for hospital services**:

Congressional Budget Office, *The Impact of Medicare's Payment Rates on the Volume of Services Provided by Skilled Nursing Facilities* (July 2007), www.cbo.gov/publication/18831.

Dafny, Leemore S., "How Do Hospitals Respond to Price Changes?" *American Economic Review*, vol. 95, no. 5 (December 2005), pp. 1525-1547, http://dx.doi.org/10.1257/000282805775014236.

He, Daifeng, and Jennifer M. Mellor, "Hospital Volume Responses to Medicare's Outpatient Prospective Payment System: Evidence From Florida," *Journal of Health Economics*, vol. 31, no. 5 (September 2012), pp. 730-743, http://dx.doi.org/10.1016/j.jhealeco.2012.06.001.

Januleviciute, Jurgita, and others, "How Do Hospitals Respond to Price Changes? Evidence From Norway," *Health Economics*, vol. 25, no. 5 (May 2016), pp. 620-636, http://dx.doi.org/10.1002/hec.3179.

Perry, Bryan J., "Hospital Responses to Medicare Reimbursement Rate Changes: New Evidence From Medicare's Rural Floor" (draft, Department of Economics, Massachusetts Institute of Technology, May 2017), https://economics.mit.edu/files/14212.

Rao, Preethi, "Hospital Response to Changes in Medicaid Reimbursement" (Ph.D. dissertation, Health Care Management and Economics, University of Pennsylvania, 2016), https://repository.upenn.edu/edissertations/1964/.

Salm, Martin, and Ansgar Wübker, *Do Hospitals Respond to Increasing Prices by Supplying Fewer Services?* Ruhr Economic Paper 567 (Ruhr-Universität Bochum, Technical University of Dortmund, University of Duisburg-Essen, and RWI, July 2015), http://dx.doi.org/10.4419/86788653 (PDF, 309 KB).

Verzulli, Rossella, and others, "Price Changes in Regulated Healthcare Markets: Do Public Hospitals Respond and How?" *Health Economics*, vol. 26, no. 11 (November 2017), pp. 1429-1446, http://dx.doi.org/10.1002/hec.3435.

White, Chapin, "Cutting Medicare Hospital Prices Leads to a Spillover Reduction in Hospital Discharges for the Nonelderly," *Health Services Research*, vol. 49, no. 5 (October 2014), pp. 1578-1595, http://dx.doi.org/10.1111/1475-6773.12183.

White, Chapin, and Vivian Yaling Wu, "How Do Hospitals Cope With Sustained Slow Growth in Medicare Prices?" *Health Services Research*, vol. 49, no. 1 (February 2014), pp. 11-31, https://doi.org/10.1111/1475-6773.12101.

White, Chapin, and Tracy Yee, "When Medicare Cuts Hospital Prices, Seniors Use Less Inpatient Care," *Health Affairs*, vol. 32, no. 10 (October 2013), pp. 1789-1795, http://dx.doi.org/10.1377/hlthaff.2013.0163.

Research used to estimate the **elasticity of supply for physician and clinical services**:

Chen, Alice, and Darius N. Lakdawalla, "Healing the Poor: The Influence of Patient Socioeconomic Status on Physician Supply Responses," *Journal of Health Economics*, vol. 64 (March 2019), pp. 43-54, http://dx.doi.org/10.1016/j.jhealeco.2019.02.001.

Clemens, Jeffrey, and Joshua D. Gottlieb, "Do Physicians' Financial Incentives Affect Medical Treatment and Patient Health?" *American Economic Review*, vol. 104, no. 4 (April 2014), pp. 1320-1349, http://dx.doi.org/10.1257/aer.104.4.1320.

Coey, Dominic, "Physicians' Financial Incentives and Treatment Choices in Heart Attack Management," *Quantitative Economics*, vol. 6, no. 3 (November 2015), pp. 703-748, http://dx.doi.org/10.3982/QE365.

Congressional Budget Office, *Factors Underlying the Growth in Medicare's Spending for Physicians' Services* (June 2007), www.cbo.gov/publication/18726.

Dunn, Abe, and Adam Hale Shapiro, *Physician Market Power and Medical-Care Expenditures,* Working Paper 2012-6 (Bureau of Economic Analysis, April 2012), www.bea.gov/research/papers/2012/physician-market-power-and-medical-care-expenditures.

Hayford, Tamara B., Xiaotong Niu, and Sandra L. Decker, "Lesser-of Policies and Use of Physician Office Care Among Dual Eligibles" (paper presented at the 2018 Annual Research Meeting for Academy Health, Seattle, Wash., June 24-26, 2018, and the 2018 ASHEcon, Atlanta, Ga., June 10-13, 2018), https://ashecon.confex.com/ashecon/2018/webprogram/Paper6170.html.

Kantarevic, Jasmin, Boris Kralj, and Darrel Weinkauf, "Income Effects and Physician Labour Supply: Evidence From the Threshold System in Ontario," *Canadian Journal of Economics,* vol. 41, no. 4 (November 2008), pp. 1262-1284, http://dx.doi.org/10.1111/j.1540-5982.2008.00503.x.

Mitchell, Jean M., Jack Hadley, and Darrell J. Gaskin, "Physicians' Responses to Medicare Fee Schedule Reductions," *Medical Care,* vol. 38, no.10 (October 2000), pp. 1029-1039, http://dx.doi.org/10.1097/00005650-200010000-00007.

——, "Spillover Effects of Medicare Fee Reductions: Evidence From Ophthalmology," *International Journal of Health Care Finance and Economics*, vol. 2, no. 3 (September 2002), pp. 171-188, http://dx.doi.org/10.1023/A:1020436509217.

Effects of Changes in Cost Sharing and Coverage

Research used to estimate the **demand response to changes in cost sharing among people who would be insured** under current law:

Brot-Goldberg, Zarek C., and others, "What Does a Deductible Do? The Impact of Cost-Sharing on Health Care Prices, Quantities, and Spending Dynamics," *Quarterly Journal of Economics,* vol. 132, no. 3 (August 2017), pp. 1261-1318, dx.doi.org/10.1093/qje/qjx013.

Cabral, Marika, and Neale Mahoney, "Externalities and Taxation of Supplemental Insurance: A Study of Medicare and Medigap," *American Economic Journal: Applied Economics,* vol. 11, no. 2 (April 2019), pp. 37-73, dx.doi.org/10.1257/app.20160350.

Chandra, Amitabh, Jonathan Gruber, and Robin McKnight, "The Impact of Patient Cost-Sharing on Low-Income Populations: Evidence From Massachusetts," *Journal of Health Economics,* vol. 33 (January 2014), pp. 57-66, dx.doi.org/10.1016/j.jhealeco.2013.10.008.

Lavetti, Kurt J., Thomas DeLeire, and Nicolas R. Ziebarth, *How Do Low-Income Enrollees in the Affordable Care Act Marketplaces Respond to Cost-Sharing?* Working Paper 26430 (National Bureau of Economic Research, November 2019), www.nber.org/papers/w26430.

Leibowitz, Arleen, Willard G. Manning, and Joseph P. Newhouse, "The Demand for Prescription Drugs as a Function of Cost-Sharing," *Social Science & Medicine,* vol. 21, no. 10 (January 1985), pp. 1063-1069, dx.doi.org/10.1016/0277-9536(85)90161-3.

Manning, Willard G., and others, "Health Insurance and the Demand for Medical Care: Evidence From a Randomized Experiment," *American Economic Review*, vol. 77, no. 3 (June 1987), pp. 251-277, www.jstor.org/stable/1804094.

Research used to estimate the **demand response to gaining coverage among people who would be uninsured** under current law:

Agency for Healthcare Research and Quality, "Health Care Cost and Utilization Project: Overview of the National (Nationwide) Inpatient Sample (NIS)" (December 2019), www.hcup-us.ahrq.gov/nisoverview.jsp.

——, "Health Care Cost and Utilization Project: Overview of the Nationwide Emergency Department Sample (NEDS)" (April 2020), www.hcup-us.ahrq.gov/nedsoverview.jsp.

Almeida, Ruth A., Lisa C. Dubay, and Grace Ko, "Access to Care and Use of Health Services by Low-Income Women," *Health Care Financing Review*, vol. 22, no. 4 (Summer 2001), pp. 27-47, www.ncbi.nlm.nih.gov/pmc/articles/PMC4194740.

Anderson, Michael, Carlos Dobkin, and Tal Gross, "The Effect of Health Insurance Coverage on the Use of Medical Services," *American Economic Journal: Economic Policy*, vol. 4, no. 1 (February 2012), pp. 1-27, dx.doi.org/10.1257/pol.4.1.1.

——, "The Effect of Health Insurance on Emergency Department Visits: Evidence From an Age-Based Eligibility Threshold," *Review of Economics and Statistics*, vol. 96, no. 1 (March 2014), pp. 189-195, doi.org/10.1162/REST_a_00378.

Baicker, Katherine, and others, "The Oregon Experiment—Effects of Medicaid on Clinical Outcomes," *New England Journal of Medicine*, vol. 368, no. 18 (May 2013), pp. 1713-1722, dx.doi.org/10.1056/NEJMsa1212321.

——, "The Effect of Medicaid on Medication Use Among Poor Adults: Evidence From Oregon," *Health Affairs*, vol. 36, no. 12 (December 2017), pp. 2110-2114, doi.org/10.1377/hlthaff.2017.0925.

Biener, Adam I., Samuel H. Zuvekas, and Steven C. Hill, "Impact of Recent Medicaid Expansions on Office-Based Primary Care and Specialty Care Among the Newly Eligible," *Health Services Research*, vol. 53, no. 4 (August 2018), pp. 2426-2445, dx.doi.org/10.1111/1475-6773.12793.

Buchmueller, Thomas C., and others, "The Effect of Health Insurance on Medical Care Utilization and Implications for Insurance Expansion: A Review of the Literature," *Medical Care Research and Review*, vol. 62, no. 1 (February 2005), pp. 3-30, dx.doi.org/10.1177/1077558704271718.

Burns, Marguerite E., and others, "The Effects of Expanding Public Insurance to Rural Low-Income Childless Adults," *Health Services Research*, vol. 49, no. S2 (September 2014), pp. 2173-2187, doi.org/10.1111/1475-6773.12233.

Card, David, Carlos Dobkin, and Nicole Maestas, "The Impact of Nearly Universal Insurance Coverage on Health Care Utilization: Evidence From Medicare," *American Economic Review*, vol. 98, no. 5 (December 2008), pp. 2242-2258, doi.org/10.1257/aer.98.5.2242.

Dalton, Christina M., Gautam Gowrisankaran, and Robert Town, *Salience, Myopia, and Complex Dynamic Incentives: Evidence From Medicare Part D*, Working Paper 21104 (National Bureau of Economic Research, April 2015, revised April 2019), www.nber.org/papers/w21104.

DeLeire, Thomas, and others, "Wisconsin Experience Indicates That Expanding Public Insurance to Low-Income Childless Adults Has Health Care Impacts," *Health Affairs*, vol. 32, no. 6 (June 2013), pp. 1037-1045, doi.org/10.1377/hlthaff.2012.1026.

Finkelstein, Amy N., and others, "Effect of Medicaid Coverage on ED Use—Further Evidence From Oregon's Experiment," *New England Journal of Medicine*, vol. 375, no. 16 (October 2016), pp. 1505-1507, dx.doi.org/10.1056/NEJMp1609533.

——, "The Oregon Health Insurance Experiment: Evidence From the First Year," *Quarterly Journal of Economics*, vol. 127, no. 3 (August 2012), pp. 1057-1106, dx.doi.org/10.1093/qje/qjs020.

Fox, Michael H., and others, "Changes in Reported Health Status and Unmet Need for Children Enrolling in the Kansas Children's Health Insurance Program," *American Journal of Public Health*, vol. 93, no. 4 (April 2003), pp. 579-582, doi.org/10.2105/AJPH.93.4.579.

Frean, Molly, Jonathan Gruber, and Benjamin D. Sommers, "Premium Subsidies, the Mandate, and Medicaid Expansion: Coverage Effects of the Affordable Care Act," *Journal of Health Economics*, vol. 53 (May 2017), pp. 72-86, doi.org/10.1016/j.jhealeco.2017.02.004.

Goldman, Anna L., and others, "Effects of the ACA's Health Insurance Marketplaces on the Previously Uninsured: A Quasi-Experimental Analysis," *Health Affairs*, vol. 37, no. 4 (April 2018), pp. 253-279, doi.org/10.1377/hlthaff.2017.1390.

Kaestner, Robert, and Nasreen Khan, "Medicare Part D and Its Effects on the Use of Prescription Drugs and Use of Other Health Care Services of the Elderly," *Journal of Policy Analysis and Management*, vol. 31, no. 2 (Spring 2012), pp. 253-279, doi.org/10.1002/pam.21625.

Kempe, Allison, and others, "Changes in Access, Utilization, and Quality of Care After Enrollment Into a State Child Health Insurance Plan," *Pediatrics*, vol. 115, no. 2 (February 2005), pp. 364-371, doi.org/10.1542/peds.2004-0475.

Kenney, Genevieve, "The Impacts of the State Children's Health Insurance Program on Children Who Enroll: Findings From Ten States," *Health Services Research*, vol. 42, no. 4 (February 2007), pp. 1520-1543, doi.org/10.1111/j.1475-6773.2007.00707.x.

Kenney, Genevieve, and others, "Medicaid and SCHIP Coverage: Findings From California and North Carolina," *Health Care Financing Review,* vol. 29, no. 1 (Fall 2007), pp. 71-85, ncbi.nlm.nih.gov/pubmed/18624081.

Klein, Jonathan D., and others, "Impact of the State Children's Health Insurance Program on Adolescents in New York," *Pediatrics,* vol. 119, no. 4 (April 2007), pp. e885-e892, doi.org/10.1542/peds.2006-1953.

Lee, Jungtaek, "Effects of Health Insurance Coverage on Risky Behaviors," *Health Economics,* vol. 27, no. 4 (January 2018), pp. 762-777, doi.org/10.1002/hec.3634.

Lichtenberg, Frank R., and Shawn X. Sun, "The Impact of Medicare Part D on Prescription Drug Use by the Elderly," *Health Affairs,* vol. 26, no. 6 (November/December 2007), pp. 1735-1744, doi.org/10.1377/hlthaff.26.6.1735.

Liu, Frank Xiaoqing, and others, "The Impact of Medicare Part D on Out-of-Pocket Costs for Prescription Drugs, Medication Utilization, Health Resource Utilization, and Preference-Based Health Utility," *Health Services Research,* vol. 46, no. 4 (August 2011), pp. 1104-1123, doi.org/10.1111/j.1475-6773.2011.01273.x.

Long, Stephen H., M. Susan Marquis, and Jack Rodgers, "Do People Shift Their Use of Health Services Over Time to Take Advantage of Insurance?" *Journal of Health Economics,* vol. 17, no. 1 (January 1998), pp. 105-115, doi.org/10.1016/S0167-6296(97)00014-3.

Marquis, M. Susan, and Stephen H. Long, "The Uninsured Access Gap: Narrowing the Estimates," *Inquiry,* vol. 31, no. 4 (Winter 1994/95), pp. 405-414, jstor.org/stable/29772498.

Michalopoulos, Charles, and others, "The Effects of Health Care Benefits on Health Care Use and Health: A Randomized Trial for Disability Insurance Beneficiaries," *Medical Care,* vol. 50, no. 9 (September 2012), pp. 764-771, doi.org/10.1097/mlr.0b013e31825a8bfc.

Selden, Thomas M., and Julie L. Hudson, "Access to Care and Utilization Among Children: Estimating the Effects of Public and Private Coverage," *Medical Care,* vol. 44, no. 5 (May 2006), pp. I19-I26, doi.org/10.1097/01.mlr.0000208137.46917.3b.

Spillman, Brenda C., "The Impact of Being Uninsured on Utilization of Basic Health Care Services," *Inquiry,* vol. 29, no. 4 (Winter 1992), pp. 457-466, jstor.org/stable/29772333.

Szilagyi, Peter G., and others, "Improved Access and Quality of Care After Enrollment in the New York State Children's Health Insurance Program (SCHIP)," *Pediatrics,* vol. 113, no. 5 (May 2004), pp. e395-e404, doi.org/10.1542/peds.113.5.e395.

Taubman, Sarah L., and others, "Medicaid Increases Emergency-Department Use: Evidence From Oregon's Health Insurance Experiment," *Science,* vol. 343, no. 6168 (January 17, 2014), pp. 263-268, dx.doi.org/10.1126/science.1246183.

Yin, Wesley, and others, "The Effect of the Medicare Part D Prescription Benefit on Drug Utilization and Expenditures," *Annals of Internal Medicine*, vol. 148, no. 3 (February 5, 2008), pp. 169-177, doi.org/10.7326/0003-4819-148-3-200802050-00200.

Other Factors That Would Affect the Demand for and Supply of Health Care

Research used to estimate **patients' and providers' responses to having fewer restrictions** on utilization, provider networks, and billing:

Curto, Vilsa, and others, "Health Care Spending and Utilization in Public and Private Medicare," *American Economic Journal: Applied Economics*, vol. 11, no. 2 (April 2019), pp. 302-332, http://dx.doi.org/10.1257/app.20170295.

Research used to estimate **providers' responses to changes in administrative activities**:

Adler-Milstein, Julia, and Robert S. Huckman, "The Impact of Electronic Health Record Use on Physician Productivity," *American Journal of Managed Care*, vol. 19, special issue no. 10 (November 2013), pp. SP345-SP352, https://tinyurl.com/yxvh7omb.

Blanchfield, Bonnie B., and others, "Saving Billions of Dollars—and Physicians' Time—by Streamlining Billing Practices," *Health Affairs*, vol. 29, no. 6 (June 2010), pp. 1248-1254, http://dx.doi.org/10.1377/hlthaff.2009.0075.

Bureau of Labor Statistics, "Occupational Employment and Wages, May 2017: Nurse Practitioners" (March 30, 2018), www.bls.gov/oes/2017/may/oes291171.htm.

——, "Occupational Outlook Handbook: Licensed Practical and Licensed Vocational Nurses" (September 1, 2020), www.bls.gov/ooh/healthcare/licensed-practical-and-licensed-vocational-nurses.htm#tab-6.

——, "Occupational Outlook Handbook: Nurse Anesthetists, Nurse Midwives, and Nurse Practitioners" (September 1, 2020), www.bls.gov/ooh/healthcare/nurse-anesthetists-nurse-midwives-and-nurse-practitioners.htm.

——, "Occupational Outlook Handbook: Physicians and Surgeons" (September 1, 2020), www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm#tab-6.

——, "Occupational Outlook Handbook: Registered Nurses," (September 1, 2020), www.bls.gov/ooh/healthcare/registered-nurses.htm#tab-3.

Casalino, Lawrence P., and others, "U.S. Physician Practices Spend More Than $15.4 Billion Annually to Report Quality Measures," *Health Affairs*, vol. 35, no. 3 (March 2016), pp. 401-406, https://dx.doi.org/10.1377/hlthaff.2015.1258.

——, "What Does It Cost Physician Practices to Interact With Health Insurance Plans?" *Health Affairs*, vol. 28, supplement no. 1 (May 2009), pp. w533-w543, http://dx.doi.org/10.1377/hlthaff.28.4.w533.

Chernew, Michael E., and Jonathan Bush, "As Patients Take on More Costs, Will Providers Shoulder the Burden?" *Health Affairs Blog* (May 4, 2017), www.healthaffairs.org/do/10.1377/hblog20170504.059950/full.

Conner-Spady, Barbara L., and others, "Prioritization of Patients on Scheduled Waiting Lists: Validation of a Scoring System for Hip and Knee Arthroplasty," *Canadian Journal of Surgery*, vol. 47, no. 1 (February 2004), pp. 39-46, http://canjsurg.ca/wp-content/uploads/2014/03/47-1-39.pdf (171 KB).

Cutler, David M., *Reducing Administrative Costs in U.S. Health Care,* Hamilton Project Policy Proposal 2020-09 (Brookings Institution, March 2020), www.brookings.edu/research/reducing-administrative-costs-in-u-s-health-care.

Dunn, Abe, Joshua D. Gottlieb, and Adam Hale Shapiro, "Administration Above Administrators: The Changing Technology of Health Care Management," *AEA Papers and Proceedings*, vol. 110 (May 2020), pp. 274-78, http://dx.doi.org/10.1257/pandp.20201031.

Gottlieb, Joshua D., Adam Hale Shapiro, and Abe Dunn, "The Complexity of Billing and Paying for Physician Care," *Health Affairs,* vol. 37, no. 4 (April 2018), pp. 619-626, http://dx.doi.org/10.1377/hlthaff.2017.1325.

Health Council of Canada, *Wait Times and Access* (January 2005), https://healthcouncilcanada.ca/files/2.09-BkgrdWaitTimesENG.pdf (224 KB).

Health Resources Services Administration, *Supply and Demand Projections of the Nursing Workforce: 2014-2030* (July 21, 2017), https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/NCHWA_HRSA_Nursing_Report.pdf (833 KB).

Himmelstein, David U., Terry Campbell, and Steffie Woolhandler, "Health Care Administrative Costs in the United States and Canada, 2017," *Annals of Internal Medicine*, vol. 172, no. 2 (January 21, 2020), pp. 134-142, http://dx.doi.org/10.7326/M19-2818.

Institute of Medicine, *The Healthcare Imperative: Lowering Costs and Improving Outcomes: Workshop Series Summary* (National Academies Press, 2010), www.nap.edu/catalog/12750.html.

Kahn, James G., and others, "The Cost of Health Insurance Administration in California: Estimates for Insurers, Physicians, and Hospitals," *Health Affairs,* vol. 24, no. 6 (November/December 2005), pp. 1629-1639, http://dx.doi.org/10.1377/hlthaff.24.6.1629.

Kaiser Family Foundation, "State Health Facts: Professionally Active Physicians" (March 2020), https://tinyurl.com/ybtabysp.

McKay, Niccie L., Christy Harris Lemak, and Annesha Lovett, "Variations in Hospital Administrative Costs," *Journal of Healthcare Management,* vol. 53, no. 3 (May-June 2008), pp. 153-166, http://dx.doi.org/10.1097/00115514-200805000-00005.

Morra, Dante, and others, "US Physician Practices Versus Canadians: Spending Nearly Four Times as Much Money Interacting With Payers," *Health Affairs*, vol. 30, no. 8 (August 2011), pp. 1443-1450, http://dx.doi.org/10.1377/hlthaff.2010.0893.

Pozen, Alexis, and David M. Cutler, "Medical Spending Differences in the United States and Canada: The Role of Prices, Procedures, and Administrative Expenses," *Inquiry*, vol. 47, no. 2 (May 2010), pp. 124-134, http://dx.doi.org/10.5034/inquiryjrnl_47.02.124.

Sakowski, Julie Ann, and others, "Peering Into the Black Box: Billing and Insurance Activities in a Medical Group," *Health Affairs*, vol. 28, supplement no. 1 (May 2009), pp. w544-w554, http://dx.doi.org/10.1377/hlthaff.28.4.w544.

Tseng, Phillip, and others, "Administrative Costs Associated With Physician Billing and Insurance-Related Activities at an Academic Health Care System," *JAMA*, vol. 319, no. 7 (February 20, 2018), pp. 691-697, http://dx.doi.org/10.1001/jama.2017.19148.

Woolhandler, Steffie, and David U. Himmelstein, "Administrative Work Consumes One-Sixth of U.S. Physicians' Working Hours and Lowers Their Career Satisfaction," *International Journal of Health Services*, vol. 44, no. 4 (October 2014), pp. 635-642, http://dx.doi.org/10.2190/HS.44.4.a.

Young, Aaron, and others, "A Census of Actively Licensed Physicians in the United States, 2016," *Journal of Medical Regulation*, vol. 103, no. 2 (2017), pp. 7-21, www.fsmb.org/siteassets/advocacy/publications/2016census.pdf (1 MB).

Research used to estimate **providers' responses to increases in demand for care**:

Altschuler, Justin, and others, "Estimating a Reasonable Patient Panel Size for Primary Care Physicians With Team-Based Task Delegation," *Annals of Family Medicine*, vol. 10, no. 5 (September/October 2012), pp. 396-400, http://dx.doi.org/10.1370/afm.1400.

Ashwood, J. Scott, and others, "Retail Clinic Visits for Low-Acuity Conditions Increase Utilization and Spending," *Health Affairs*, vol. 35, no. 3 (March 2016), pp. 449-455, http://dx.doi.org/10.1377/hlthaff.2015.0995.

Auerbach, David I., "Will the NP Workforce Grow in the Future? New Forecasts and Implications for Healthcare Delivery," *Medical Care*, vol. 50, no. 7 (July 2012), pp. 606-610, http://dx.doi.org/10.1097/MLR.0b013e318249d6e7.

Bachrach, Deborah, and others, *Building a Culture of Health: The Value Proposition of Retail Clinics* (Robert Wood Johnson Foundation, April 2015), www.rwjf.org/en/library/research/2015/04/the-value-proposition-of-retail-clinics.html.

Barnes, Hilary, and others, "Rural and Nonrural Primary Care Physician Practices Increasingly Rely on Nurse Practitioners," *Health Affairs*, vol. 37, no. 6 (June 2018), pp. 908-914, http://dx.doi.org/10.1377/hlthaff.2017.1158.

Chen, Peggy Guey-Chi, Ateev Mehrotra, and David I. Auerbach, "Do We Really Need More Physicians? Responses to Predicted Primary Care Physician Shortages," *Medical Care*, vol. 52, no. 2 (February 2014), pp. 95-96, http://dx.doi.org/10.1097/MLR.0000000000000046.

Enterline, Philip E., and others, "Effects of 'Free' Medical Care on Medical Practice—The Quebec Experience," *New England Journal of Medicine*, vol. 288, no. 22 (May 31, 1973), pp. 1152-1155, http://dx.doi.org/10.1056/NEJM197305312882204.

——, "The Distribution of Medical Services Before and After 'Free' Medical Care—The Quebec Experience," *New England Journal of Medicine*, vol. 289, no. 22 (November 29, 1973), pp. 1174-1178, http://dx.doi.org/10.1056/NEJM197311292892206.

Finkelstein, Amy, "The Aggregate Effects of Health Insurance: Evidence From the Introduction of Medicare," *Quarterly Journal of Economics*, vol. 122, no. 1 (February 2007), pp. 1-37, http://dx.doi.org/10.1162/qjec.122.1.1.

Kondo, Ayako, and Hitoshi Shigeoka, "Effects of Universal Health Insurance on Health Care Utilization, and Supply-Side Responses: Evidence From Japan," *Journal of Public Economics*, vol. 99, issue C (March 2013), pp. 1-23, https://doi.org/10.1016/j.jpubeco.2012.12.004.

Lindrooth, Richard C., and others, "Understanding the Relationship Between Medicaid Expansions and Hospital Closures," *Health Affairs*, vol. 37, no. 1 (January 2018), pp. 111-120, http://dx.doi.org/10.1377/hlthaff.2017.0976.

Martsolf, Grant, and others, "Association Between the Opening of Retail Clinics and Low-Acuity Emergency Department Visits," *Annals of Emergency Medicine*, vol. 69, no. 4 (April 2017), pp. 397-403, http://dx.doi.org/10.1016/j.annemergmed.2016.08.462.

McKinlay, John B., and Lisa D. Marceau, "From Cottage Industry to a Dominant Mode of Primary Care: Stages in the Diffusion of a Health Care Innovation (Retail Clinics)," *Social Science & Medicine*, vol. 75, no. 6 (September 2012), pp. 1134-1141, http://dx.doi.org/10.1016/j.socscimed.2012.04.039.

Nantais, Thomas, and others, "One Destination, Two Journeys: Call Center Centralization at Henry Ford Medical Group and the Jackson Clinic" (American Medical Group Association Member Best Practices webinar, September 4, 2014).

O'Connell, Joan M., and others, "A Satisfaction and Return-on-Investment Study of a Nurse Triage Service," *American Journal of Managed Care*, vol. 7, no. 2 (February 2001), pp. 159-169, www.ajmc.com/journals/issue/2001/2001-02-vol7-n2/feb01-425p159-169.

Petterson, Stephen, and others, *The State of Primary Care in the United States: A Chartbook of Facts and Statistics* (Robert Graham Center, January 2018), www.graham-center.org/content/dam/rgc/documents/publications-reports/reports/PrimaryCareChartbook.pdf (572 KB).

Rochaix, Lise, "Financial Incentives for Physicians: The Quebec Experience," *Health Economics*, vol. 2, no. 2 (July 1993), pp.163-176, http://dx.doi.org/10.1002/hec.4730020209.

White, Chapin, and others, *The RAND Health Care Payment and Delivery Simulation Model (PADSIM): Concepts, Methods, and Examples*, RR-1428-RC (RAND Corporation, 2016), www.rand.org/pubs/research_reports/RR1428.html.

Wishner, Jane B., and Rachel A. Burton, *How Have Providers Responded to the Increased Demand for Health Care Under the Affordable Care Act?* (Urban Institute, November 2017), www.urban.org/research/publication/how-have-providers-responded-increased-demand-health-care-under-affordable-care-act.

Research used to estimate the share of **providers who would opt out of the single-payer system** and the amount of care they would provide:

Boccuti, Cristina, *Paying a Visit to the Doctor: Current Financial Protections for Medicare Patients When Receiving Physician Services* (Kaiser Family Foundation, November 2016) www.kff.org/medicare/issue-brief/paying-a-visit-to-the-doctor-current-financial-protections-for-medicare-patients-when-receiving-physician-services/.

Dunn, Abe, and others, *The Costs of Payment Uncertainty in Healthcare Markets*, Working Paper 2020-13 (Federal Reserve Bank of San Francisco, April 2020), https://doi.org/10.24148/wp2020-13.

Kullgren, Jeffrey T., and others, "Nonfinancial Barriers and Access to Care for U.S. Adults," *Health Services Research*, vol. 47, no. 1, part 2 (February 2012), pp. 462-485, https://doi.org/10.1111/j.1475-6773.2011.01308.x.

Lopes, Lunna, and others, *Data Note: Public Worries About and Experience With Surprise Medical Bills* (Kaiser Family Foundation, February 2020), www.kff.org/health-costs/poll-finding/data-note-public-worries-about-and-experience-with-surprise-medical-bills/.