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# MEDICARE FEE- FOR-SERVICE

Modernizing Cost-sharing Design Would Involve Trade-offs, the Results of Which Would Depend on Time Horizon

Accessible Version

# GAO Highlights

Highlights of [GAO-18-100](#), a report to congressional requesters

## Why GAO Did This Study

To address concerns with the current Medicare FFS cost-sharing design, various groups have proposed modernizing the design to make it simpler and include features found in private plans. These proposals have generally included a single deductible, modified cost-sharing requirements (e.g., a uniform coinsurance), and the addition of a cap on beneficiaries' annual cost-sharing responsibilities.

GAO was asked to review how modernized cost-sharing designs would affect beneficiaries' costs over multiple years. This report describes implications of the current cost-sharing design; options for modernizing; and how modernized cost-sharing designs could directly and indirectly affect beneficiaries' costs.

GAO reviewed studies related to modernizing Medicare's cost-sharing design and interviewed authors of those studies and other experts. GAO also used summarized Medicare claims data from 2007 to 2014 (the most recent data available) to develop four illustrative modernized designs, each including a single deductible, uniform coinsurance, and an annual cap while maintaining Medicare program spending similar to the current design. For each design, GAO calculated how beneficiaries' annual cost-sharing responsibilities compared with the current design over a 1-, 4-, and 8-year time horizon.

The Department of Health and Human Services provided technical comments on a draft of this report, which GAO incorporated as appropriate.

View [GAO-18-100](#). For more information, contact James Cosgrove at (202) 512-7114 or [cosgrovej@gao.gov](mailto:cosgrovej@gao.gov).

## MEDICARE FEE-FOR-SERVICE

### Modernizing Cost-sharing Design Would Involve Trade-offs, the Results of Which Would Depend on Time Horizon

#### What GAO Found

GAO and others have raised concerns about the design of Medicare fee-for-service (FFS) cost-sharing—the portion of costs beneficiaries are responsible for when they receive care. The current cost-sharing design has been largely unchanged since Medicare's enactment in 1965, can be confusing for beneficiaries, and can contribute to overuse of services. Additionally, the design leaves some beneficiaries exposed to catastrophic costs that can exceed tens of thousands of dollars annually. The complexity of the design and lack of an annual cap on cost-sharing responsibilities also increases demand for supplemental insurance, which can cost beneficiaries thousands annually and further contribute to overuse of services.

Modernizing Medicare FFS's cost-sharing design to include features found in private plans could help address these concerns, but would involve design trade-offs. For example, adding an annual cap on cost-sharing responsibilities while maintaining Medicare's aggregate share of costs similar to the current design would involve a trade-off between the level of the cap and other cost-sharing requirements.

In analyzing four illustrative FFS cost-sharing designs, GAO found that the direct effect of modernizing the design on beneficiaries' cost-sharing responsibilities—that is, the effect when holding utilization and enrollment constant—would depend on the specific revisions and the time horizon examined. For example, GAO found that

- During year 1, cost-sharing designs that feature relatively low deductibles (costs a beneficiary is responsible for before Medicare starts to pay) and relatively high caps would result in a median annual beneficiary cost-sharing responsibility close to or below that of the current design. In contrast, designs with relatively low caps—and therefore greater beneficiary protection from catastrophic costs—would result in a median annual cost-sharing responsibility above that of the current design.
- By the end of 8 years, there would still be differences in the median annual beneficiary cost-sharing responsibility across different designs, but they would become less pronounced.

Modernizing the Medicare FFS cost-sharing design would also affect beneficiaries' costs indirectly through altered incentives. The studies GAO reviewed and experts GAO interviewed identified several types of behavioral responses that would influence the net effect of a modernized design on beneficiaries' out-of-pocket costs, including changes in beneficiaries' demand for and insurers' supply of supplemental insurance; changes in beneficiaries' use of services; changes in Medicare beneficiaries' enrollment in FFS versus Medicare's private plan alternative; and interactions among these and other behavioral responses, including effects on the price of supplemental insurance.

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**Abbreviations**

CMS	Centers for Medicare & Medicaid Services
FFS	fee-for-service
HIE	Health Insurance Experiment
MA	Medicare Advantage
MedPAC	Medicare Payment Advisory Commission

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January 9, 2018

Congressional Requesters

GAO and others have long noted concerns about the design of Medicare fee-for-service (FFS) cost-sharing—the portion of costs for covered services that beneficiaries are responsible for when they receive care.<sup>1</sup> Generally, health care insurers set three types of cost-sharing parameters: (1) deductibles—costs a beneficiary is responsible for before the health insurance plan will start to pay any costs; (2) coinsurance or copayments (per-service payments) once the deductible is met;<sup>2</sup> and (3) caps—limits on the maximum cost-sharing amount a beneficiary can be responsible for during a year for covered services. Medicare FFS's cost-sharing is complicated and not well designed to discourage unnecessary use of services. For example, Medicare FFS's cost-sharing design includes two separate deductibles: a relatively high deductible for hospital services, which are usually not discretionary and are less likely to be influenced by cost-sharing requirements, and a relatively low deductible for outpatient services, which are more often discretionary and likely to be influenced by cost-sharing requirements. In addition, Medicare FFS lacks an annual cap, which can leave beneficiaries vulnerable to catastrophic costs.

To address these concerns, various groups have proposed revising Medicare FFS's cost-sharing design, which has been largely unchanged from when Medicare was enacted in 1965.<sup>3</sup> Specifically, groups have

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<sup>1</sup>For example, see GAO, *Medicare: Cost Sharing Policies Problematic for Beneficiaries and Program*, [GAO-01-713T](#) (Washington, D.C.: May 9, 2001); GAO, *Medicare Reform: Modernization Requires Comprehensive Program View*, [GAO-01-862T](#) (Washington, D.C.: June 14, 2001); American Academy of Actuaries, *Revising Medicare's Fee-for-Service Benefit Structure* (Washington, D.C.: March 2012); and Congressional Budget Office, *Options for Reducing the Deficit: 2014-2023* (Washington, D.C.: November 2013), 211-218.

Medicare cost-sharing amounts may be paid by beneficiaries or on their behalf, such as by their supplemental insurance.

<sup>2</sup>Cost-sharing requirements for services can be specified as a percentage of the allowable cost (referred to as coinsurance) or as a fixed dollar amount (referred to as copayments).

<sup>3</sup>For example, see National Commission on Fiscal Responsibility and Reform, *The Moment of Truth* (Washington, D.C.: December 2010); Bipartisan Policy Center, *A Bipartisan Rx for Patient-Centered Care and System-Wide Cost Containment* (Washington, D.C.: April 2013); and House Republicans, *A Better Way: Our Vision for a Confident America* (Washington, D.C.: June 22, 2016).

proposed that Medicare FFS's cost-sharing design be simplified and include features found in private plans (including in Medicare Advantage (MA), the private plan alternative to Medicare FFS), which have evolved over time to promote prudent use of health care services and protect beneficiaries from catastrophic care costs. Although the specifics of each proposal to revise Medicare FFS's cost-sharing design have varied, the proposals have generally shared three features. First, they have proposed establishing a single deductible to replace the current separate deductibles for hospital and outpatient services. Second, they have proposed modifying the per-service payments, with some proposals suggesting moving to a uniform coinsurance that would be the same for all services and others suggesting variable copayments tied to the clinical value of the service. Third, they have proposed adding an annual cap.

Modernizing Medicare's cost-sharing design would have both direct and indirect effects on beneficiaries' costs. The direct effect would be how the revised design would change beneficiaries' cost-sharing responsibilities for a given set of services. The indirect effect would be that the altered incentives under a revised design would trigger behavioral responses, such as changes in beneficiaries' utilization of health care services, enrollment in supplemental insurance to help cover their Medicare cost-sharing responsibilities, or enrollment in Medicare FFS or MA. The indirect and direct effects together would determine how a modernized design would affect beneficiaries' total out-of-pocket costs for covered services (the amount of cost-sharing paid directly by the beneficiary plus the premiums (monthly fees) that beneficiaries pay for their Medicare coverage and other supplemental insurance they may have).

Some studies have examined how modernizing Medicare's cost-sharing design would affect beneficiaries financially; however, they have primarily focused on first-year effects and may have understated the advantages to beneficiaries of adding an annual cost-sharing cap.<sup>4</sup> Over longer time horizons, the percentage of beneficiaries who would benefit from a

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<sup>4</sup>For example, see Juliette Cubanski et al., *Restructuring Medicare's Benefit Design: Implications for Beneficiaries and Spending* (Menlo Park, Calif.: Kaiser Family Foundation, November 2011); Juliette Cubanski et al., *Modifying Medicare's Benefit Design: What's the Impact on Beneficiaries and Spending?* (Menlo Park, Calif.: Kaiser Family Foundation, June 2016); and Medicare Payment Advisory Commission, *Report to the Congress: Medicare and the Health Care Delivery System* (Washington, D.C.: June 2012), ch. 1. The Congressional Budget Office has examined the effect of revising the Medicare FFS cost-sharing design over multiple years, but these analyses have focused on the financial effects on the Medicare program.

catastrophic coverage cap in at least 1 year increases. However, as the time horizon lengthens it becomes more difficult to predict beneficiaries' behavioral responses and their interactions with any degree of confidence. Analyzing the direct effect of a modernized cost-sharing design—the effect on beneficiaries' cost-sharing responsibilities, holding utilization and enrollment constant—over multiple years provides a baseline for understanding how the effect would vary depending on the parameters of the revised design and the time horizon examined. In turn, discussing behavioral responses that might be triggered by this direct effect provides a fuller picture of how a modernized cost-sharing design might affect beneficiaries' total out-of-pocket costs.

You requested that we examine the potential annual and multiyear effects on beneficiaries' costs if the Medicare FFS cost-sharing design were modernized to include a single deductible, uniform coinsurance above the deductible, and an annual cap. This report describes

1. implications of the current Medicare FFS cost-sharing design and options for modernizing while maintaining Medicare's and beneficiaries' aggregate share of costs;
2. how modernized cost-sharing designs could directly affect beneficiaries' cost-sharing responsibilities; and
3. how modernized cost-sharing designs could indirectly affect beneficiaries' out-of-pocket costs.

To identify implications of the current cost-sharing design and options for modernizing, we reviewed relevant studies and analyzed summary Medicare claims data.<sup>5</sup> In particular, we reviewed studies exploring implications of the current design and potential options for modernizing, as well as studies and documentation on cost-sharing design in private plans, including those in MA.<sup>6</sup> We also analyzed claims data from 2014

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<sup>5</sup>Specifically, we used the Medicare Master Beneficiary Summary Files.

<sup>6</sup>Modernizing the Medicare FFS cost-sharing design would also involve important implementation decisions, such as how to treat beneficiaries who are enrolled in Part A or Part B only and whether to also revise Medicare financing and premiums (which are currently separate for Part A and Part B). Additionally, modernizing the Medicare FFS cost-sharing design would have implications beyond the Medicare program, such as altering federal and state Medicaid spending on beneficiaries eligible for both programs and requiring changes to federally standardized Medicare supplemental insurance plans (Medigap) to conform with the new design. A discussion of these issues was beyond the scope of this report.

(the most recent year of data available at the time we began our study) to describe beneficiaries' cost-sharing responsibilities under the current design.<sup>7</sup> We also used claims data to develop four illustrative options for modernized cost-sharing designs, each of which included a single deductible, uniform coinsurance, and an annual cap, while maintaining Medicare's aggregate share of costs similar to the current design when holding health care utilization and beneficiary enrollment constant. To do so, we first identified the approximately 28 million Medicare FFS beneficiaries who were continuously enrolled in Medicare FFS from January 2007 through December 2014 or their death.<sup>8</sup> We then calculated each beneficiary's annual cost-sharing responsibilities under the current design and what they would have been under a revised design, holding utilization and enrollment constant. To identify the specific parameters for each illustrative design, we started with one of the four caps applicable to MA plans in 2014 and a uniform coinsurance of 20 percent (the same level as the coinsurance for most Part B services under the current design). We then tested different possible levels of the deductible until we found a level that maintained Medicare program spending and the split of costs between Medicare and beneficiaries similar to the current design.<sup>9</sup>

To illustrate how modernized cost-sharing designs could directly affect beneficiaries' cost-sharing responsibilities, we used the same cohort of 28 million beneficiaries. First, we calculated the distribution of these beneficiaries' 1-year, 4-year, and 8-year annual cost-sharing responsibilities—including the median and maximum responsibility—under the current cost-sharing design and each of the four illustrative

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<sup>7</sup>These analyses included all beneficiaries who were continuously enrolled in Medicare FFS Part A and/or Part B from January 2014 through December 2014 or their death, and excluded beneficiaries who were enrolled in MA at any point in the year.

<sup>8</sup>This cohort included Medicare FFS beneficiaries enrolled in Part A and/or Part B, but excluded those enrolled in an MA plan at any point between 2007 and 2014.

<sup>9</sup>Specifically, among our cohort in 2007, each illustrative design maintained Medicare's and beneficiaries' aggregate share of costs within 0.2 percentage points of the current design: 85 percent and 15 percent, respectively (holding utilization and enrollment constant). To identify the corresponding deductible and cap in years prior to 2014, we indexed the level of the deductible and the cap to the average growth in Medicare expenditures per beneficiary on Part A and Part B services. For the illustrative design with the \$10,000 cap in 2014, there was no level of a deductible that would have maintained Medicare's share of costs similar to the current design if the uniform coinsurance was set at 20 percent; we therefore set the deductible to \$0 and lowered the coinsurance until we found a design that met our criteria.



designs, and compared these distributions.<sup>10</sup> Second, we calculated the percentage of beneficiaries who would have experienced a change in their annual cost-sharing responsibilities in specified ranges—including at least \$100 lower or at least \$100 higher than their responsibilities under the current design—and the average change among these groups.<sup>11</sup> We also calculated how these changes were related to whether a beneficiary reached the cap at least once. To assess the accuracy of the summary Medicare claims data, we reviewed related documentation; interviewed Centers for Medicare & Medicaid Services (CMS) officials knowledgeable about the data; conducted checks for missing, duplicative, or erroneous data; and compared our results with published data. Based on these activities, we determined that the data we used were sufficiently reliable for the purposes of our reporting objectives.

To identify how modernized cost-sharing designs could indirectly affect beneficiaries' out-of-pocket costs, we reviewed relevant studies and interviewed experts. The experts we interviewed included staff from CMS's Office of the Actuary; organizations that conducted studies on modernizing the Medicare FFS cost-sharing design (the Congressional Budget Office, Kaiser Family Foundation, and Medicare Payment Advisory Commission (MedPAC)); and other entities with insight on some of the potential effects of modernizing the Medicare FFS cost-sharing design (the American Academy of Actuaries and National Association of Insurance Commissioners).

We conducted this performance audit from March 2016 to January 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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<sup>10</sup>The 1-year, 4-year, and 8-year results are presented in 2014 dollars. We calculated each beneficiary's 4-year and 8-year annual cost-sharing responsibilities as the average of the annual responsibilities (expressed in 2014 dollars) across the beneficiary's living years between 2007 and 2010, and 2007 and 2014, respectively. The median annual cost-sharing responsibility was calculated as the median across all beneficiaries of beneficiaries' average annual cost-sharing responsibilities.

<sup>11</sup>The 1-year, 4-year, and 8-year results are presented in 2014 dollars. We calculated each beneficiary's 4-year and 8-year annual change in responsibilities as the average of the annual changes. We chose a \$100 threshold to highlight those with more than minimal changes in their cost-sharing responsibilities.

## Background

### Medicare FFS Program

In 2016, Medicare spent about \$380 billion on health care services for beneficiaries enrolled in Medicare FFS, which consists of two separate parts: Medicare Part A, which primarily covers hospital services, and Medicare Part B, which primarily covers outpatient services. The majority of the 38 million Medicare FFS beneficiaries were enrolled in both Part A and Part B, although about 5 million were enrolled in Part A only and 0.3 million were enrolled in Part B only.<sup>12</sup>

### Medicare FFS Cost-Sharing Design

The general design of Medicare FFS cost-sharing has been largely unchanged since Medicare's enactment in 1965.<sup>13</sup> It includes separate deductibles for Part A and Part B services, a variety of per-service copayments and coinsurance after the deductibles are met, and no cap on beneficiaries' cost-sharing responsibilities (see table 1).

**Table 1: Medicare Fee-for-Service Cost-sharing Design (2017)**

	Category	Cost-sharing requirements
<b>Deductibles</b>	Part A	\$1,316 per inpatient episode <sup>a</sup>
	Part B	\$183 annually
<b>Copayments or coinsurance above deductibles - Part A</b>	Inpatient hospital	Days 1-60 of episode: \$0 (just deductible)
		Days 61-90: \$329 per day Days 91+: \$658 per day up to 60 lifetime reserve days; then 100% coinsurance (all costs)
<b>Copayments or coinsurance above deductibles - Part A</b>	Skilled nursing facility	Days 0-20 of episode: \$0 Days 21-100: \$164.50 per day Days 100+: 100% coinsurance (all costs)

<sup>12</sup>Medicare FFS beneficiaries may also enroll in Medicare Part D, which offers prescription drug coverage. For this report, discussions of Medicare FFS do not include Part D.

<sup>13</sup>The specific levels of certain cost-sharing requirements have changed over time.

	Category	Cost-sharing requirements
<b>Copayments or coinsurance above deductibles - Part A</b>	Home health <sup>b</sup>	\$0
<b>Copayments or coinsurance above deductibles - Part A</b>	Hospice	\$0 (5% coinsurance for respite care; up to \$5 copayment for pain management prescription drugs)
<b>Copayments or coinsurance above deductibles - Part B</b>	Physician and outpatient services	20% coinsurance for most services; \$0 for most preventive services
	Durable medical equipment	20% coinsurance
	Laboratory services	\$0 for most services
<b>Annual cap</b>	Part A	Unlimited
	Part B	Unlimited

Source: Centers for Medicare & Medicaid Services, Medicare & You 2017. | GAO-18-100

Note: This table summarizes the main Medicare FFS cost-sharing requirements as of 2017. Medicare beneficiaries also are responsible for a Medicare Part B premium (about \$1,300 per year for most beneficiaries), but generally do not pay a Part A premium. These cost-sharing responsibilities and premiums may be covered all or in part by supplemental insurance, often in exchange for an additional premium.

<sup>a</sup>The Part A deductible per inpatient episode applies for each admission to an inpatient hospital or skilled nursing facility that occurs more than 60 consecutive days after the prior admission.

<sup>b</sup>Home health services may be covered by Part A or Part B depending on the circumstances, but in both cases cost-sharing is \$0.

## Supplemental Insurance among Medicare FFS Beneficiaries

The current cost-sharing design leaves beneficiaries exposed to potentially catastrophic cost-sharing, and in part because of that, in 2015, 81 percent of Medicare FFS beneficiaries obtained supplemental insurance that covered some or all of their Medicare cost-sharing responsibilities, often in exchange for an additional premium (see table 2). For example, in 2015, 31 percent of Medicare FFS beneficiaries purchased a private Medigap plan, the most common types of which fully insulated them from Medicare cost-sharing responsibilities in exchange

for an average annual premium of \$2,400.<sup>14</sup> Another 20 percent of Medicare FFS beneficiaries enrolled in Medicaid, which generally covered most of their Medicare cost-sharing responsibilities; however, these low-income beneficiaries generally only paid a limited or no premium for this supplemental coverage.<sup>15</sup>

**Table 2: Types of Supplemental Insurance Used by Medicare Fee-for-Service Beneficiaries**

Type	Description	Percentage of beneficiaries (2015)	Coverage of Medicare cost-sharing	Premium
Medigap	Federally standardized insurance plans offered by private insurers.	31	All for most common Medigap plans.	Yes.
Employer-sponsored	Insurance offered to retirees from their former employer.	18	Generally most, after a deductible.	Yes.
Medicaid	State-administered insurance provided to certain low-income and other beneficiaries.	20	Generally most.	Generally limited or no premium.
Other	Other private or public insurance, such as that for active-duty service members and their families.	12	Varies.	Varies.

Source: Centers for Medicare & Medicaid Services and Medicare Payment Advisory Commission. | GAO-18-100

Note: The remaining 19 percent of Medicare fee-for-service beneficiaries did not have any supplemental insurance.

## Medicare FFS Cost-sharing Can Be Confusing and Lead to Overuse of Services; Modernizing

<sup>14</sup>There are currently 11 standard Medigap plans, generally identified by letters of the alphabet. Of the 11 standard packages, 2 (Plan C and non-high-deductible Plan F) cover virtually all Medicare cost-sharing responsibilities. The Medicare Access and CHIP Reauthorization Act of 2015 prohibits the issuance of Medigap policies that provide coverage of the Part B deductible to newly eligible Medicare beneficiaries after January 1, 2020. Pub. L. No. 114-10, § 401, 129 Stat. 87, 159 (codified at 42 U.S.C. § 1395ss(z)). This means that new beneficiaries purchasing Medigap plans beginning in that year would no longer be fully insulated from cost-sharing responsibilities.

<sup>15</sup>The specific Medicaid eligibility requirements, benefits, and premiums can vary by state and type of Medicaid beneficiary. Beneficiaries enrolled in Medicare and Medicaid may receive Medicare cost-sharing and/or premium assistance through full Medicaid benefits or one of four Medicare Savings Programs (programs that require states to help cover cost-sharing for certain low-income Medicare beneficiaries). Medicaid generally covers most Medicare cost-sharing responsibilities; however, beneficiaries may still be responsible for nominal Medicaid cost-sharing requirements.

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## Could Address Concerns, but Would Involve Trade-offs

The current Medicare FFS cost-sharing design can be confusing, contribute to beneficiaries' overuse of services, and leave beneficiaries exposed to catastrophic costs. Modernizing the design could address these concerns, but would involve trade-offs. For example, as shown in four illustrative designs that we evaluated, maintaining Medicare's share of costs would involve a trade-off between the level of the cap and the deductible (or other cost-sharing).

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### Medicare FFS Cost-sharing Design Can Be Confusing, Contribute to Beneficiaries' Overuse of Services, and Leave Them Exposed to Catastrophic Costs

As noted by Medicare advocacy groups and others, the current Medicare FFS cost-sharing design, which includes multiple deductibles, can be confusing for beneficiaries. In 2014, 16 percent of Medicare FFS beneficiaries were responsible for at least one Part A deductible for an episode of inpatient care as well as the annual Part B deductible. (Medicare FFS beneficiaries may be subject to more than one Part A deductible during the year, as the Part A deductible applies to each admission to an inpatient hospital or skilled nursing facility that occurs more than 60 consecutive days after the prior admission.) The Congressional Budget Office has cited the separate deductibles as one way in which Medicare FFS cost-sharing is more complicated than private plans.<sup>16</sup> In 2016, according to a survey conducted by the Kaiser Family Foundation, only 1 percent of workers with employer-sponsored insurance had a separate deductible for inpatient services.<sup>17</sup> Moreover, inpatient services tend to be nondiscretionary, and one or more deductibles for those services can create a financial burden for beneficiaries, while having minimal effect on their use of inpatient services.

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<sup>16</sup>Congressional Budget Office, *Options for Reducing the Deficit: 2017-2026* (Washington, D.C.: December 2016), 239-247.

<sup>17</sup>Kaiser Family Foundation and Health Research & Educational Trust, *Employer Health Benefits: 2016 Annual Survey* (Menlo Park, Calif.: 2016).

The cost-sharing design also affects beneficiaries' utilization of services. For example, as noted by the bipartisan Simpson-Bowles Fiscal Commission, the lack of a coherent cost-sharing system is a significant contributor to overuse and misuse of care.<sup>18</sup> This is particularly true for services such as home health and clinical laboratory services, which currently have no cost-sharing under Medicare FFS and thus do not provide beneficiaries an incentive to decline care of negligible value. Because of these concerns, MedPAC recommended adding a cost-sharing requirement for home health services that were not preceded by hospitalization or post-acute care, noting that the current lack of cost-sharing has likely contributed to the significant rise in utilization for these services, which suggests some overuse.<sup>19</sup>

At the same time, the lack of an annual cost-sharing cap prevents Medicare FFS from fulfilling a key purpose of health insurance: protecting beneficiaries from catastrophic medical expenses. While most beneficiaries had cost-sharing responsibilities under \$2,000 in 2014, 1 percent—over 300,000 beneficiaries—had responsibilities over \$15,000, including several hundred beneficiaries with responsibilities between \$100,000 and \$3 million. (See fig. 1.) Given the risk of catastrophic medical expenses, a focus group of current and future Medicare beneficiaries convened by MedPAC indicated that an annual cap is the cost-sharing design feature they were most interested in seeing added to the Medicare benefit.<sup>20</sup> Annual caps are a common design feature of private plans, as most are required to have an annual cap, including those participating in MA.<sup>21</sup> Specifically, since 2011, CMS has required most MA plans to have an annual cap of \$6,700 or less and grants them additional flexibility in their cost-sharing design if they voluntarily set their

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<sup>18</sup>National Commission on Fiscal Responsibility and Reform, *The Moment of Truth*, and *A Closer Look at the Fiscal Commission's Cost-Sharing Recommendations* (Washington, D.C.: Nov.16, 2011).

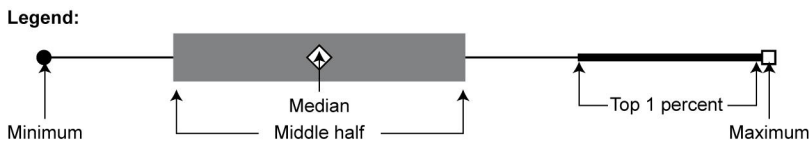
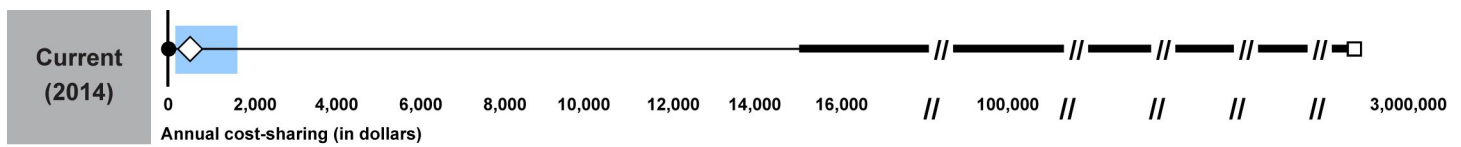
<sup>19</sup>Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy* (Washington, D.C.: March 2011), ch. 8.

<sup>20</sup>Medicare Payment Advisory Commission, *Medicare and the Health Care Delivery System* (June 2012), ch. 1.

<sup>21</sup>Effective January 1, 2014, the Patient Protection and Affordable Care Act requires group health plans to have an annual cap. See, 42 U.S.C. § 300gg-6(b). MA plans are also required to have an annual cap. See, 42 U.S.C. § 1395w-27a(b)(2); 42 C.F.R. §§ 422.100 (2016).

cap at or below \$3,400.<sup>22</sup> The mandatory and voluntary caps for certain MA plans that provide both in- and out-of-network coverage are the same (\$6,700 and \$3,400) for in-network services, and 1.5 times higher (\$10,000 and \$5,100) for combined in- and out-of-network services.

**Figure 1: Medicare Fee-for-Service Beneficiaries' Cost-sharing Responsibilities (2014)**



Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-18-100

Note: Analysis includes all beneficiaries enrolled in Medicare fee-for-service Part A and/or Part B from January 2014 through December 2014 or their death. Most beneficiaries had supplemental insurance that covered some or all of these cost-sharing responsibilities, often in exchange for an additional premium. In addition to cost-sharing responsibilities, beneficiaries are also responsible for Medicare and any supplemental premiums, as well as costs for services not covered by Medicare.

In addition to these implications of the cost-sharing design itself, the American Academy of Actuaries and others have noted that the complexity and the possibility of unlimited responsibilities increases demand for supplemental insurance, which can lead to added costs for beneficiaries and the Medicare program. It is uncommon for beneficiaries enrolled in private health insurance to have supplemental coverage.<sup>23</sup> By insulating beneficiaries from some or all cost-sharing responsibilities (and not just catastrophic costs), supplemental insurance further reduces the incentives for beneficiaries to evaluate the need for discretionary care. In part because of these reduced incentives, we previously estimated that both beneficiaries' average total out-of-pocket costs and average

<sup>22</sup>CMS set the \$6,700 and \$3,400 caps based on the 95th and 85th percentiles of cost-sharing responsibilities among Medicare FFS beneficiaries enrolled in both Part A and Part B.

<sup>23</sup>In particular, beneficiaries enrolled in MA may not be sold Medigap policies; however, they may still have supplemental insurance through Medicaid.

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Medicare program spending were higher for Medicare FFS beneficiaries with Medigap than those with FFS only.<sup>24</sup>

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## Modernizing Medicare FFS Cost-sharing Could Address Concerns, but Would Involve Design Trade-offs

Modernizing Medicare FFS cost-sharing could address these concerns, but would involve design trade-offs. Specifically, as proposed by various groups, revising Medicare's cost-sharing design to include a single deductible, modified cost-sharing requirements, and an annual cost-sharing cap could address concerns with the current cost-sharing design. However, there are multiple options for revising within this broad framework, including two key design trade-offs that would affect the extent to which a modernized structure would address concerns about the current design (and possibly also raise new concerns).

One trade-off centers on how to modify the existing complicated set of cost-sharing requirements for different services. While the reform proposals have generally suggested moving to a single deductible, they have varied in how to modify the subsequent per-service payments. Some proposals have emphasized the value of simplicity and suggested replacing the complex set of per-service payments above the deductible with a uniform coinsurance. A uniform coinsurance would simplify the cost-sharing design, provide beneficiaries insight into the total cost of each service, and introduce cost-sharing for certain potentially discretionary services, such as home health services. However, as noted by the Medicare Payment Advisory Commission and Congressional Budget Office, uniform coinsurance also has drawbacks, such as a fixed percentage of an unknown bill being harder for beneficiaries to understand and predict than copayments. Other proposals have emphasized the need to set cost-sharing based on the value of services, and have suggested moving Medicare toward a value-based insurance

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<sup>24</sup>In particular, we previously estimated that average Medicare spending for those with Medigap was nearly twice as high as for those with Medicare FFS only. Differences in Medicare FFS beneficiary characteristics between those with Medigap and those with FFS only may account for some of these differences in expenditures. Nonetheless, research that has tried to account for characteristics that influence a beneficiary's choice of coverage has found that differences in expenditures for beneficiaries with supplemental coverage persisted even after adjusting for factors such as age, health status, and income. See GAO, *Medicare Supplemental Coverage: Medigap and Other Factors Are Associated with Higher Estimated Health Care Expenditures*, [GAO-13-811](#) (Washington, D.C.: Sept. 19, 2013).



design in which per-service cost-sharing would vary based on the clinical value of the service to an individual beneficiary. While a value-based design would specifically target cost-sharing to promote prudent use of health care services, implementing it is challenging in practice and would be more complicated for beneficiaries to understand and for CMS to administer, though CMS is testing the feasibility of value-based insurance design in MA.<sup>25</sup>

A second design trade-off centers on how to set the level of the deductible and the annual cap. As shown in the four illustrative cost-sharing designs we evaluated, the lower the cap, the higher the deductible (or other cost-sharing requirements) would need to be to maintain Medicare’s and beneficiaries’ aggregate share of costs similar to that of the current design.<sup>26</sup> For example, holding utilization and enrollment constant, we found that even without any deductible, a uniform coinsurance of 18 percent (a level below the existing 20 percent coinsurance for most Part B services) would be sufficient to add a cap near \$10,000 (the mandatory cap for certain MA plans that allow beneficiaries to see any provider). In contrast, it would take a deductible near \$1,225 (a level similar to the existing Part A deductible for each inpatient episode) and a uniform coinsurance of 20 percent to establish a cap of \$3,400 (the voluntary cap for most MA plans). (See table 3.)

**Table 3: Illustrative Medicare Fee-for-Service Cost-sharing Designs That Maintain Medicare’s Aggregate Share of Costs Similar to Current Design When Holding Utilization and Enrollment Constant**

	Single annual deductible (dollars)	Uniform coinsurance (percent)	Annual cap (dollars)
Example 1	0	18	10,000
Example 2	175	20	6,700
Example 3	525	20	5,100
Example 4	1,225	20	3,400

<sup>25</sup>CMS currently has a demonstration on value-based insurance designs for certain MA plans, which allows them to offer reduced cost-sharing or supplemental benefits to beneficiaries with certain chronic conditions.

<sup>26</sup>Alternatively, offsetting changes could be made outside the Medicare cost-sharing design, such as increasing the Part B premium. In addition, some proposals have suggested more than offsetting the addition of a cap, so that Medicare’s share of costs is decreased (and beneficiaries’ is increased), in order to produce Medicare program savings.

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Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-18-100

Note: Analysis based on the 28 million beneficiaries who were enrolled in Medicare fee-for-service Part A and/or Part B from January 2007 through December 2014 or their death. Holding utilization and enrollment constant, each of the four illustrative designs would have led to the Medicare program covering approximately 85 percent of total covered costs (while beneficiaries would have been responsible in aggregate for the remaining 15 percent)—levels within 0.2 percentage points of the existing cost-sharing design in 2007. The deductible and cap in each illustrative design are described using their 2014 values, with values in prior years indexed to the average growth in Medicare expenditures per beneficiary on Part A and Part B services. As a result, the deductible and cap in a given year or set of years, expressed in 2014 dollars, can be a few hundred dollars above or below the level in 2014, depending on whether Medicare spending or inflation grew faster over that time period.

Different levels of the deductible and cap would address certain concerns of the current design raised by GAO and others but also could create new ones. For example, as our analysis of four illustrative cost-sharing designs shows, designs with relatively high caps would provide some additional protection from catastrophic costs while maintaining a deductible and coinsurance near or below the current levels for Part B services. However, per an analysis conducted by Kaiser Family Foundation and the Urban Institute, half of Medicare beneficiaries in 2016 were living on less than \$26,200 in income;<sup>27</sup> thus, caps of \$6,700 or higher may still leave some beneficiaries vulnerable to costs that are catastrophic for them and may not significantly decrease the associated demand for supplemental insurance. In contrast, designs with relatively low caps would provide greater protection from catastrophic costs. However, as noted by the Congressional Budget Office, beneficiaries who reached the cap would have less incentive to use services prudently. In addition, the higher deductible needed to offset a lower cap while maintaining Medicare's share of costs could present a financial barrier for some beneficiaries to obtain necessary care.

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## Direct Effect of Modernizing Medicare FFS Cost-sharing Design Would Depend on Specific Revisions and Time Horizon

The direct effect of modernizing the Medicare FFS cost-sharing design (i.e., the effect when holding utilization and enrollment constant) on beneficiaries' cost-sharing responsibilities would depend on the specific revisions and the time horizon examined. As we noted above, modernizing the FFS cost-sharing design while maintaining Medicare's

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<sup>27</sup>Gretchen Jacobson et al., *Income and Assets of Medicare Beneficiaries, 2016-2035* (Menlo Park, Calif.: Kaiser Family Foundation, April 2017).

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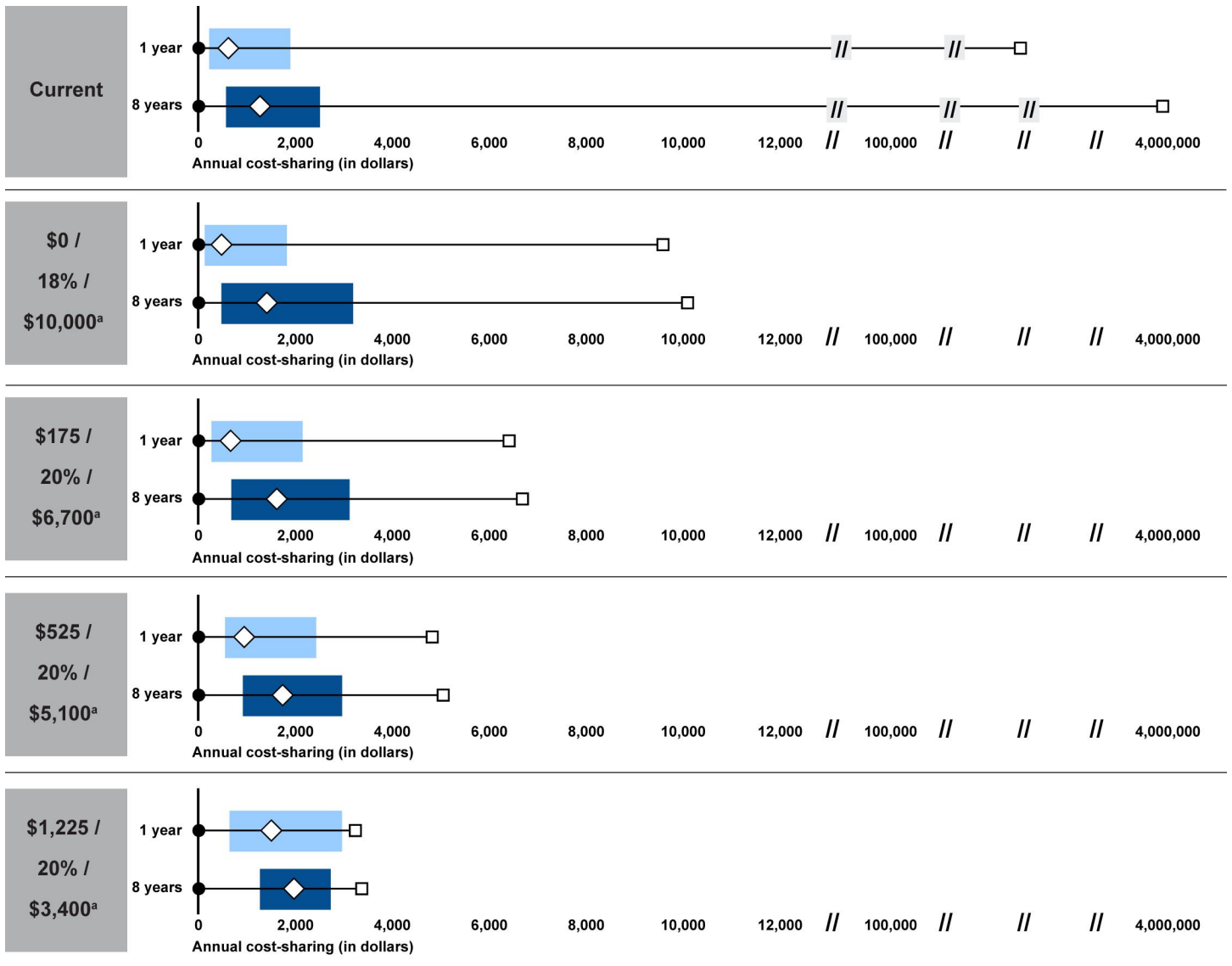
aggregate share of costs similar to the current design requires a trade-off between the level of the deductible and cap. At the beneficiary level, this design trade-off affects beneficiaries' annual cost-sharing and the degree to which beneficiaries would be protected from catastrophic costs. One way of viewing how the design trade-off affects beneficiaries is to compare across different designs the median annual cost-sharing responsibility with the level of the cap (see fig. 2). In examining the direct effect of the four illustrative modernized designs we analyzed, we found the following:

- During year 1, cost-sharing designs that feature relatively low deductibles and relatively high caps would result in a median annual beneficiary cost-sharing responsibility close to or below that of the current design. In contrast, designs with relatively low caps—and therefore greater beneficiary protection from catastrophic costs—would result in a median annual beneficiary cost-sharing responsibility above that of the current design. For example, during year 1 of a design with no deductible, 18 percent coinsurance, and a cap near \$10,000, we found that the median annual cost-sharing responsibility would be \$479, which is below that of the current design (\$621), despite the addition of a cap. In contrast, during year 1 of a design with a \$1,225 deductible, 20 percent coinsurance, and a cap near \$3,400, the median annual cost-sharing responsibility would be \$1,486, which is 2.4 times higher than that of the current design. However, in exchange for this higher median annual cost-sharing responsibility, beneficiaries would have much greater protection from catastrophic costs, as their annual cost-sharing responsibilities would be capped near \$3,400.
- By the end of 8 years, there would still be differences in the median annual beneficiary cost-sharing responsibility across different designs, but they would become less pronounced—despite the significantly different levels of catastrophic protection. As beneficiaries age and become more likely to have catastrophic costs in at least one year, the median annual cost-sharing responsibility would increase, regardless of the cost-sharing design. However, by the end of 8 years the differences in the median annual cost-sharing responsibility across different designs would become less pronounced. For example, the median annual cost-sharing responsibility under the design with a cap near \$10,000 would increase from below that of the current design in year 1 to 1.1 times higher than the current design by the end of 8 years. In contrast, the median annual cost-sharing responsibility under the design with the cap near \$3,400 would decrease from 2.4 times higher than the current design in year 1 to

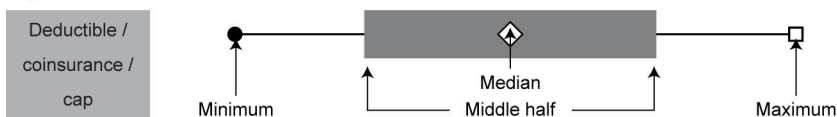
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only 1.6 times higher by the end of 8 years. (See app. I table 4 for more details, including results on our other two illustrative designs and results over 4 years.)

**Figure 2: Medicare Fee-for-Service Beneficiaries' Annual Cost-sharing Responsibilities under the Current and Illustrative Cost-sharing Designs, over 1 and 8 Years When Holding Utilization and Enrollment Constant**



**Legend:**



Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-18-100

Note: Analysis includes the 28 million beneficiaries who were enrolled in Medicare fee-for-service Part A and/or Part B from January 2007 through December 2014 or their death. Results are from 2007 (1 year) and average of 2007-2014 (8 years), expressed in 2014 dollars and holding utilization and enrollment constant. Most beneficiaries had supplemental insurance that covered some or all of these cost-sharing responsibilities, often in exchange for an additional premium. In addition to cost-sharing responsibilities, beneficiaries are also responsible for any costs for services not covered by Medicare and for Medicare and any supplemental premiums, which may also change under a revised design.

<sup>a</sup>Each of the four illustrative designs consisted of a single deductible, uniform coinsurance, and annual cap, and would have led to the Medicare program covering approximately 85 percent of total covered costs (while beneficiaries would have been responsible in aggregate for the remaining 15 percent)—levels within 0.2 percentage points of the existing cost-sharing design in 2007. The deductible and cap in each illustrative design are described using their 2014 values, with values in prior years indexed to the average growth in Medicare expenditures per beneficiary on Part A and Part B services. As a result, the deductible and cap in a given year or set of years, expressed in 2014 dollars, can be a few hundred dollars above or below the level in 2014, depending on whether Medicare spending or inflation grew faster over that time period.

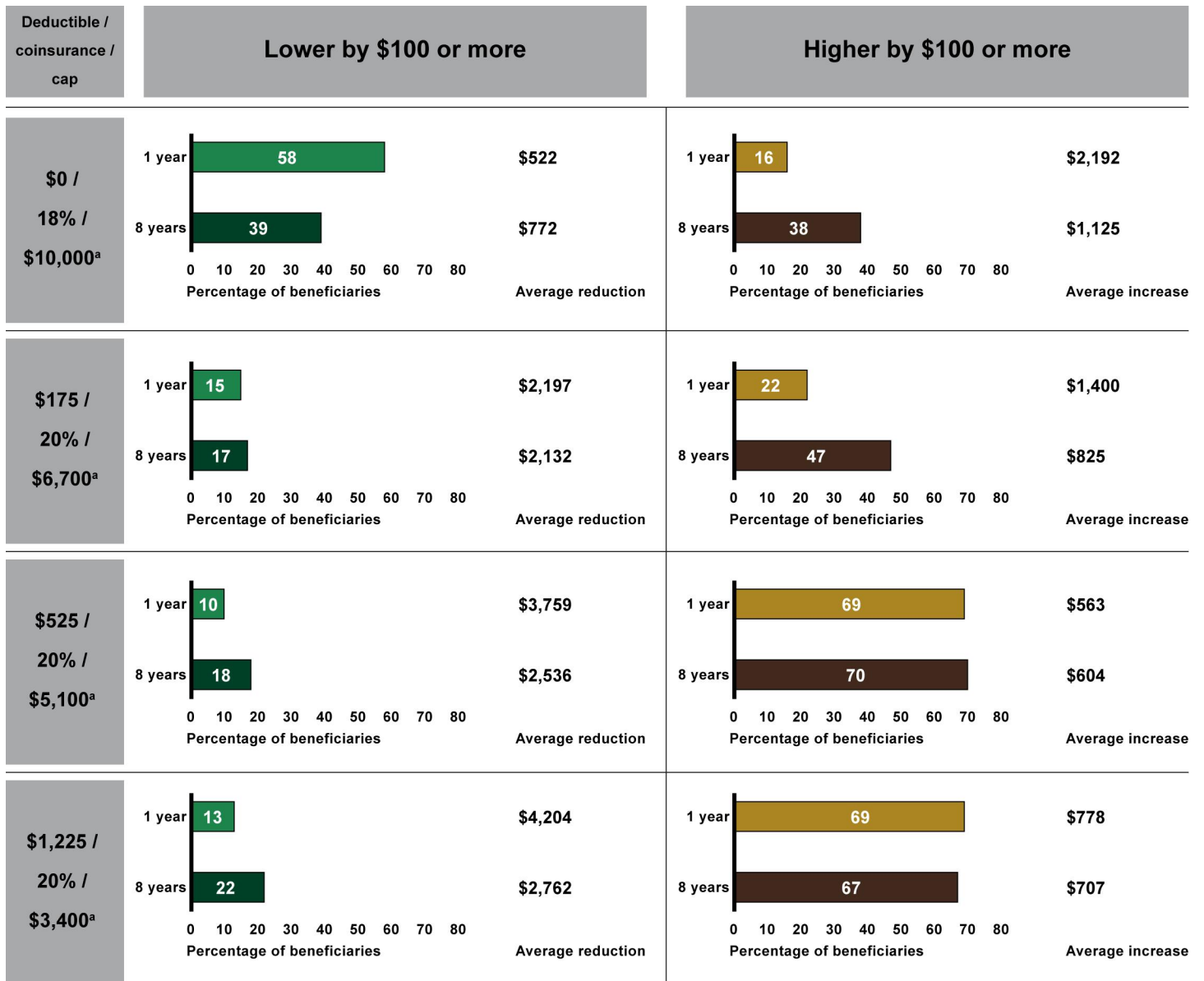
The same patterns held when looking at how the design trade-off affects beneficiaries in another way: the percentage of beneficiaries with cost-sharing responsibilities lower and higher than under the current design (see fig. 3). In examining the direct effect of our four illustrative designs, we found the following:

- During year 1, designs that feature relatively low deductibles and relatively high caps would result in a minority of beneficiaries having cost-sharing responsibilities that are at least \$100 higher than under the current design. In contrast, designs with relatively high deductibles and relatively low caps would result in the majority of beneficiaries having cost-sharing responsibilities that are higher than under the current design. For example, during year 1 of a design with no deductible, 18 percent coinsurance, and a cap near \$10,000, 16 percent of beneficiaries would have cost-sharing responsibilities at least \$100 higher than their responsibilities under the current design. In contrast, during year 1 of a design with a \$1,225 deductible, 20 percent coinsurance, and a cap near \$3,400, 69 percent of beneficiaries would have cost-sharing responsibilities at least \$100 higher than their responsibilities under the current design.
- By the end of 8 years, there would still be differences across the designs, but they would become less pronounced—despite levels of catastrophic protection that vary significantly. Over a longer time horizon, a larger percentage of beneficiaries would reach the cap at least once, regardless of the cost-sharing design (ranging from 23 percent reaching the cap at least once over 8 years under the design with a cap near \$10,000 to 66 percent under the design with a cap near \$3,400). However, the subset of these beneficiaries who nonetheless had annual cost-sharing responsibilities at least \$100 higher would also increase. Whether this increase would be augmented or offset by the changes over time in the percentage of

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beneficiaries who never reached the cap and had higher cost-sharing responsibilities would depend on the specific design. For example, the percentage of beneficiaries with annual cost-sharing responsibilities at least \$100 higher than the current design would increase from 16 percent in year 1 to 38 percent by year 8 under the design with a cap near \$10,000. In contrast, this percentage would decrease from 69 percent in year 1 to 67 percent by year 8 under the design with a cap near \$3,400. (See app. I tables 5 and 6 for more details, including results on our other two illustrative designs and results over 4 years.)

**Figure 3: Medicare Fee-for-Service Beneficiaries with Lower and Higher Annual Cost-sharing Responsibilities under Illustrative Cost-sharing Designs, over 1 and 8 Years When Holding Utilization and Enrollment Constant**



Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-18-100

Note: Analysis includes the 28 million beneficiaries who were enrolled in Medicare fee-for-service Part A and/or Part B from January 2007 through December 2014 or their death. Results are from 2007 (1 year) and average of 2007-2014 (8 years), expressed in 2014 dollars and holding utilization and enrollment constant. Most beneficiaries had supplemental insurance that covered some or all of these cost-sharing responsibilities, often in exchange for an additional premium. In addition to cost-sharing responsibilities, beneficiaries are also responsible for any costs for services not covered by



Medicare and for Medicare and any supplemental premiums, which may also change under a modernized design.

<sup>8</sup>Each of the four illustrative designs consisted of a single deductible, uniform coinsurance, and annual cap, and would have led to the Medicare program covering approximately 85 percent of total covered costs (while beneficiaries would have been responsible in aggregate for the remaining 15 percent)—levels within 0.2 percentage points of the existing cost-sharing design in 2007. The deductible and cap in each illustrative design are described using their 2014 values, with values in prior years indexed to the average growth in Medicare expenditures per beneficiary on Part A and Part B services. As a result, the deductible and cap in a given year or set of years, expressed in 2014 dollars, can be a few hundred dollars above or below the level in 2014, depending on whether Medicare spending or inflation grew faster over that time period.

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## Modernizing Medicare Cost-sharing Design Would Affect Costs Indirectly through Behavioral Responses

Modernizing the Medicare FFS cost-sharing design would affect beneficiaries' costs indirectly through beneficiaries' and supplemental insurers' behavioral responses to altered incentives, according to the studies we reviewed and the experts we spoke to. These studies and experts identified several types of behavioral responses that would influence the net effect of a modernized design on beneficiaries' out-of-pocket costs, including

- changes in beneficiaries' demand for, and insurers' supply of, supplemental insurance;
- changes in beneficiaries' utilization of services;
- changes in Medicare beneficiaries' enrollment in FFS versus MA; and
- interactions among these and other behavioral responses, including effects on the price of supplemental insurance.

According to studies we reviewed and experts we spoke to, implementing a modernized cost-sharing design would likely trigger changes in the demand for and supply of supplemental insurance. For example, a focus group of current and future Medicare beneficiaries convened by MedPAC and a report from the American Academy of Actuaries stated that the addition of an annual cap would reduce the need of some beneficiaries to purchase supplemental insurance.<sup>28</sup> While beneficiaries who drop their

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<sup>28</sup>American Academy of Actuaries, *Revising Medicare's Fee-for-Service Benefit Structure* (March 2012), and Medicare Payment Advisory Commission, *Medicare and the Health Care Delivery System* (June 2012), ch. 1.

supplemental insurance would then need to pay all their Medicare cost-sharing responsibilities, those might be less than their annual premium for supplemental insurance.<sup>29</sup> Additionally, according to the same MedPAC study and a Congressional Budget Office report, retiree coverage may change under a modernized design.<sup>30</sup> For example, with a cap in place, there would be less difference between employer-sponsored plans and Medicare, and employers may choose to alter the supplemental insurance they offer. CMS officials told us that this would continue the trend of private employers reducing retiree health coverage.

Several studies we reviewed and experts we interviewed indicated that implementing a modernized design could also trigger changes in utilization of Medicare services, the extent of which would affect beneficiaries' out-of-pocket costs. For example, the RAND Health Insurance Experiment (HIE), which some experts consider to be the most comprehensive study on price and utilization, found that patients were "moderately sensitive to price." The RAND HIE found that patients respond to increases in cost-sharing that they need to pay at least partly out-of-pocket by decreasing their use of some services.<sup>31</sup> Similarly, CMS officials told us that they would expect utilization to decrease as beneficiaries' out-of-pocket costs increased, while a study in the *American Economic Review* found that the addition of a copayment led to a decline in office visits.<sup>32</sup> The RAND HIE study suggests that a 10 percent increase in cost-sharing would lead to a 1 to 2 percent decline in

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<sup>29</sup>In 2014, the average Medigap premium was about \$2,200, which was higher than 81 percent of Medicare FFS beneficiaries' cost-sharing responsibilities.

<sup>30</sup>Congressional Budget Office, *Options for Reducing the Deficit: 2017-2026*, 239-247.

<sup>31</sup>The RAND HIE, conducted between 1971 and 1982, is considered the most comprehensive study evaluating patient response to cost-sharing. However, the study did not include individuals over age 65, which are the majority of Medicare beneficiaries. See Willard G. Manning et al., "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review*, vol. 77, no. 3 (1987).

<sup>32</sup>See Amitabh Chandra, Jonathan Gruber, and Robin McKnight, "Patient Cost-Sharing and Hospitalization Offsets in the Elderly," *American Economic Review*, vol. 100, no. 1 (2010).

patients' use of services.<sup>33</sup> In the case of the RAND HIE study, cost-sharing affected the number of contacts people initiated with their physician, which impacted preventive care and diagnostic tests. The study found that this could potentially affect patients' use of both effective and less effective services.

According to several studies and interviews with experts, design changes could trigger other behavioral responses. For example, a study by the Kaiser Family Foundation and a report by the Congressional Budget Office both anticipated that a modernized design could change the proportion of Medicare beneficiaries who decide to enroll in FFS or MA.<sup>34</sup> Similarly, officials from the American Academy of Actuaries told us that they would expect a change in demand for MA under a modernized design. Under the current Medicare design, all MA plans have an annual cap that protects beneficiaries from catastrophic medical expenses. Between 2008 and 2017, the percentage of Medicare beneficiaries who chose to enroll in an MA plan increased from 22 to 33 percent. CMS officials told us that the increases in MA enrollment may be due in part to the requirement that MA plans must include an annual cost-sharing cap. The Kaiser Family Foundation study found that a modernized design, similar to that of an MA plan, might incentivize some MA beneficiaries to move back to FFS.

According to experts we interviewed and studies we reviewed, different behavioral responses described above would also likely interact and affect beneficiaries' out-of-pocket costs. CMS officials told us that when all of the factors contributing to out-of-pocket costs are combined, it is difficult to assess the net effect of a modernized cost-sharing design on beneficiaries' out-of-pocket costs. For example, officials with the National Association of Insurance Commissioners emphasized that as both demand for supplemental insurance and expected utilization changed, supplemental premiums would also change, which would change out-of-

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<sup>33</sup>According to a study by the RAND Corporation, patients may respond differently depending on whether the service is inpatient or outpatient. Specifically, price elasticity varies for inpatient and outpatient services, with the demand for inpatient services being less responsive to changes in price than the demand for outpatient services. See Emmett B. Keeler, "Effects of Cost Sharing on Use of Medical Services and Health," *Journal of Medical Practice Management*, research conducted by RAND Health, vol. 8 (Summer 1992).

<sup>34</sup>See Cubanski et al., *Modifying Medicare's Benefit Design* (Kaiser Family Foundation), and Congressional Budget Office, *Options for Reducing the Deficit: 2017-2026*, 239-247.

pocket costs. Similarly, studies by both MedPAC and the Congressional Budget Office found that changes in beneficiaries' level of supplemental insurance might trigger additional changes in utilization, which would also result in changes to the pricing of supplemental insurance.<sup>35</sup> Specifically, if a number of relatively healthy beneficiaries dropped their supplemental insurance, and the beneficiaries left were sicker (that is, more costly), premiums for supplemental insurance might increase. Officials from the Congressional Budget Office told us that, conversely, if the more costly beneficiaries dropped their supplemental insurance, premiums might be lower.

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## Agency Comments

We provided a draft of this report to the Department of Health and Human Services for comment. The Department provided technical comments, which we incorporated as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to appropriate congressional committees, the Secretary of Health and Human Services, and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staffs have any questions about this report, please contact me at (202) 512-7114 or [cosgrovej@gao.gov](mailto:cosgrovej@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.



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<sup>35</sup>Medicare Payment Advisory Commission, *Medicare and the Health Care Delivery System* (June 2012), ch. 1, and Congressional Budget Office, *Options for Reducing the Deficit: 2017-2026*, 239-247.

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Letter

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James Cosgrove  
Director, Health Care

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*List of Requesters*

The Honorable Orrin Hatch  
Chairman  
Committee on Finance  
United States Senate

The Honorable Greg Walden  
Chairman  
Committee on Energy and Commerce  
House of Representatives

The Honorable Kevin Brady  
Chairman  
Committee on Ways and Means  
House of Representatives

The Honorable Fred Upton  
House of Representatives

## Appendix I: Direct Effect on Medicare Beneficiaries' Cost-sharing Responsibilities under Four Illustrative Cost-sharing Designs

The direct effect of modernizing the Medicare fee-for-service (FFS) cost-sharing design (i.e., the effect when holding utilization and enrollment constant) on beneficiaries' cost-sharing responsibilities would depend on the specific revisions and the time horizon examined. Tables 4, 5, and 6 present the direct effect of modernizing the Medicare FFS cost-sharing design on beneficiaries' cost-sharing responsibilities under four illustrative designs. Each table presents the direct effect of each illustrative design over 1-, 4-, and 8-year time horizons.

**Table 4: Medicare Fee-for-Service Beneficiaries' Annual Cost-sharing Responsibilities under the Current and Illustrative Cost-sharing Designs, over 1, 4, and 8 Years When Holding Utilization and Enrollment Constant**

Amount in dollars

	Cost-sharing design (deductible / coinsurance / cap)	Minimum	25th percentile	Median (50th percentile)	75th percentile	Maximum
<b>1 year (2007)</b>	Current	0	218	621	1,888	2,209,026
	\$0 / 18% / \$10,000 <sup>a</sup>	0	117	479	1,808	9,728
	\$175 / 20% / \$6,700 <sup>a</sup>	0	266	668	2,145	6,519
	\$525 / 20% / \$5,100 <sup>a</sup>	0	539	941	2,418	4,964
	\$1,225 / 20% / \$3,400 <sup>a</sup>	0	651	1,486	2,963	3,310
<b>4 years (2007-2010)</b>	Current	0	419	1,050	2,233	3,677,251
	\$0 / 18% / \$10,000 <sup>a</sup>	0	303	1,022	2,898	10,150
	\$175 / 20% / \$6,700 <sup>a</sup>	0	471	1,274	2,907	6,802
	\$525 / 20% / \$5,100 <sup>a</sup>	0	728	1,526	2,852	5,178

**Appendix I: Direct Effect on Medicare  
Beneficiaries' Cost-sharing Responsibilities  
under Four Illustrative Cost-sharing Designs**

	<b>Cost-sharing design (deductible / coinsurance / cap)</b>	<b>Minimum</b>	<b>25th percentile</b>	<b>Median (50th percentile)</b>	<b>75th percentile</b>	<b>Maximum</b>
	\$1,225 / 20% / \$3,400 <sup>a</sup>	0	1,084	1,851	2,670	3,452
<b>8 years (2007-2014)</b>	Current	0	567	1,256	2,501	3,818,411
	\$0 / 18% / \$10,000 <sup>a</sup>	0	489	1,441	3,175	10,227
	\$175 / 20% / \$6,700 <sup>a</sup>	0	677	1,619	3,114	6,854
	\$525 / 20% / \$5,100 <sup>a</sup>	0	920	1,764	2,952	5,216
	\$1,225 / 20% / \$3,400 <sup>a</sup>	0	1,261	1,974	2,713	3,477

**Amount relative to current design (ratio)**

	<b>Cost-sharing design (deductible / coinsurance / cap)</b>	<b>Minimum</b>	<b>25th percentile</b>	<b>Median (50th percentile)</b>	<b>75th percentile</b>	<b>Maximum</b>
<b>1 year (2007)</b>	Current	1.0	1.0	1.0	1.0	1.000
	\$0 / 18% / \$10,000 <sup>a</sup>	1.0	0.5	0.8	1.0	0.004
	\$175 / 20% / \$6,700 <sup>a</sup>	1.0	1.2	1.1	1.1	0.003
	\$525 / 20% / \$5,100 <sup>a</sup>	1.0	2.5	1.5	1.3	0.002
	\$1,225 / 20% / \$3,400 <sup>a</sup>	1.0	3.0	2.4	1.6	0.001
<b>4 years (2007-2010)</b>	Current	1.0	1.0	1.0	1.0	1.000
	\$0 / 18% / \$10,000 <sup>a</sup>	1.0	0.7	1.0	1.3	0.003
	\$175 / 20% / \$6,700 <sup>a</sup>	1.0	1.1	1.2	1.3	0.002
	\$525 / 20% / \$5,100 <sup>a</sup>	1.0	1.7	1.5	1.3	0.001
	\$1,225 / 20% / \$3,400 <sup>a</sup>	1.0	2.6	1.8	1.2	0.001
<b>8 years (2007-2014)</b>	Current	1.0	1.0	1.0	1.0	1.000
	\$0 / 18% / \$10,000 <sup>a</sup>	1.0	0.9	1.1	1.3	0.003



**Appendix I: Direct Effect on Medicare  
Beneficiaries' Cost-sharing Responsibilities  
under Four Illustrative Cost-sharing Designs**

\$175 / 20% / \$6,700 <sup>a</sup>	1.0	1.2	1.3	1.2	0.002
\$525 / 20% / \$5,100 <sup>a</sup>	1.0	1.6	1.4	1.2	0.001
\$1,225 / 20% / \$3,400 <sup>a</sup>	1.0	2.2	1.6	1.1	0.001

Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-18-100

Note: Analysis includes the 28 million beneficiaries who were enrolled in Medicare fee-for-service Part A and/or Part B from January 2007 through December 2014 or their death. Results are from 2007 (1 year), average of 2007-2010 (4 years), and average of 2007-2014 (8 years), expressed in 2014 dollars and holding utilization and enrollment constant. Most beneficiaries had supplemental insurance that covered some or all of these cost-sharing responsibilities, often in exchange for an additional premium. In addition to cost-sharing responsibilities, beneficiaries are also responsible for any costs for services not covered by Medicare and for Medicare and any supplemental premiums, which may also change under a modernized design.

<sup>a</sup>Each of the four illustrative designs consisted of a single deductible, uniform coinsurance, and annual cap, and would have led to the Medicare program covering approximately 85 percent of total covered costs (while beneficiaries would have been responsible in aggregate for the remaining 15 percent)—levels within 0.2 percentage points of the existing cost-sharing design in 2007. The deductible and cap in each illustrative design are described using their 2014 values, with values in prior years indexed to the average growth in Medicare expenditures per beneficiary on Part A and Part B services. As a result, the deductible and cap in a given year or set of years, expressed in 2014 dollars, can be a few hundred dollars above or below the level in 2014, depending on whether Medicare spending or inflation grew faster over that time period.

**Appendix I: Direct Effect on Medicare  
Beneficiaries' Cost-sharing Responsibilities  
under Four Illustrative Cost-sharing Designs**

**Table 5: Percentage of Medicare Fee-for-Service Beneficiaries, by Change in Annual Cost-sharing Responsibilities under Illustrative Cost-sharing Designs Relative to Current Design, over 1, 4, and 8 Years When Holding Utilization and Enrollment Constant**

	Cost-sharing design (deductible / coinsurance / cap)	Lower cost-sharing than current design				Similar	Higher cost-sharing than current design			
		-\$5,000 or more	-\$1,000 up to -\$5,000	-\$500 up to -\$1,000	-\$100 up to -\$500	Within \$100	+\$100 up to +\$500	+\$500 up to +\$1,000	+\$1,000 up to +\$5,000	+\$5,000 or more
<b>1 year (2007)</b>	\$0 / 18% / \$10,000 <sup>a</sup>	1	3	6	49	25	3	3	9	2
	\$175 / 20% / \$6,700 <sup>a</sup>	2	3	2	8	63	8	3	10	0
	\$525 / 20% / \$5,100 <sup>a</sup>	3	3	1	3	20	55	4	10	0
	\$1,225 / 20% / \$3,400 <sup>a</sup>	4	6	2	2	18	15	47	7	0
<b>4 years (2007-2010)</b>	\$0 / 18% / \$10,000 <sup>a</sup>	1	4	3	40	22	9	7	13	1
	\$175 / 20% / \$6,700 <sup>a</sup>	2	5	2	6	48	15	11	12	0
	\$525 / 20% / \$5,100 <sup>a</sup>	2	6	2	4	14	47	15	10	0
	\$1,225 / 20% / \$3,400 <sup>a</sup>	3	9	3	4	12	18	43	8	0
<b>8 years (2007-2014)</b>	\$0 / 18% / \$10,000 <sup>a</sup>	1	4	3	30	23	14	10	13	1
	\$175 / 20% / \$6,700 <sup>a</sup>	2	6	3	6	36	23	13	12	0
	\$525 / 20% / \$5,100 <sup>a</sup>	2	8	3	5	12	43	18	9	0
	\$1,225 / 20% / \$3,400 <sup>a</sup>	3	10	4	5	10	19	40	8	0

Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-18-100

Note: Analysis includes the 28 million beneficiaries who were enrolled in Medicare fee-for-service Part A and/or Part B from January 2007 through December 2014 or their death. Results are from 2007 (1 year), average of 2007-2010 (4 years), and average of 2007-2014 (8 years), expressed in 2014 dollars and holding utilization and enrollment constant. Results may not sum to 100 due to rounding. Most beneficiaries had supplemental insurance that covered some or all of their cost-sharing responsibilities, often in exchange for an additional premium. In addition to cost-sharing responsibilities, beneficiaries are also responsible for any costs for services not covered by Medicare and for Medicare and any supplemental premiums, which may also change under a modernized design.

<sup>a</sup>Each of the four illustrative designs consisted of a single deductible, uniform coinsurance, and annual cap, and would have led to the Medicare program covering approximately 85 percent of total covered costs (while beneficiaries would have been responsible in aggregate for the remaining 15 percent)—levels within 0.2 percentage points of the existing cost-sharing design in 2007. The deductible and cap in each illustrative design are described using their 2014 values, with values in prior years indexed to the average growth in Medicare expenditures per beneficiary on Part A and Part B services. As a result, the deductible and cap in a given year or set of years, expressed in 2014

**Appendix I: Direct Effect on Medicare  
Beneficiaries' Cost-sharing Responsibilities  
under Four Illustrative Cost-sharing Designs**

dollars, can be a few hundred dollars above or below the level in 2014, depending on whether Medicare spending or inflation grew faster over that time period.

**Table 6: Percentage of Medicare Fee-for-Service Beneficiaries, by Change in Annual Cost-sharing Responsibilities under Illustrative Cost-sharing Designs Relative to Current Design, and Whether Reached Cap, over 1, 4, and 8 Years When Holding Utilization and Enrollment Constant**

	Cost-sharing design (deductible / coinsurance / cap)	Never reached cap				Reached cap at least once			
		Lower by \$100 or more	Within \$100	Higher by \$100 or more	Subtotal	Lower by \$100 or more	Within \$100	Higher by \$100 or more	Subtotal
<b>1 year (2007)</b>	\$0 / 18% / \$10,000 <sup>a</sup>	56	26	13	<b>95</b>	2	<1	3	<b>5</b>
	\$175 / 20% / \$6,700 <sup>a</sup>	10	63	17	<b>90</b>	5	<1	5	<b>10</b>
	\$525 / 20% / \$5,100 <sup>a</sup>	3	20	62	<b>86</b>	7	<1	7	<b>14</b>
	\$1,225 / 20% / \$3,400 <sup>a</sup>	<1	17	60	<b>77</b>	12	1	9	<b>23</b>
<b>4 years (2007- 2010)</b>	\$0 / 18% / \$10,000 <sup>a</sup>	42	21	22	<b>86</b>	6	<1	8	<b>14</b>
	\$175 / 20% / \$6,700 <sup>a</sup>	5	47	22	<b>74</b>	10	1	15	<b>26</b>
	\$525 / 20% / \$5,100 <sup>a</sup>	1	13	52	<b>66</b>	13	2	19	<b>34</b>
	\$1,225 / 20% / \$3,400 <sup>a</sup>	<1	10	41	<b>51</b>	18	2	28	<b>49</b>
<b>8 years (2007- 2014)</b>	\$0 / 18% / \$10,000 <sup>a</sup>	31	22	25	<b>77</b>	8	1	13	<b>23</b>
	\$175 / 20% / \$6,700 <sup>a</sup>	3	33	24	<b>60</b>	14	2	23	<b>40</b>
	\$525 / 20% / \$5,100 <sup>a</sup>	<1	9	40	<b>50</b>	17	3	30	<b>50</b>
	\$1,225 / 20% / \$3,400 <sup>a</sup>	<1	7	27	<b>34</b>	22	3	40	<b>66</b>

Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-18-100

Note: Analysis includes the 28 million beneficiaries who were enrolled in Medicare fee-for-service Part A and/or Part B from January 2007 through December 2014 or their death. Results are from 2007 (1 year), average of 2007-2010 (4 years), and average of 2007-2014 (8 years), expressed in 2014 dollars and holding utilization and enrollment constant. Results may not sum to subtotal or 100 due to rounding. Most beneficiaries had supplemental insurance that covered some or all of their cost-sharing responsibilities, often in exchange for an additional premium. In addition to cost-sharing responsibilities, beneficiaries are also responsible for any costs for services not covered by Medicare and for Medicare and any supplemental premiums, which may also change under a modernized design.

<sup>a</sup>Each of the four illustrative designs consisted of a single deductible, uniform coinsurance, and annual cap, and would have led to the Medicare program covering approximately 85 percent of total covered costs (while beneficiaries would have been responsible in aggregate for the remaining 15 percent)—levels within 0.2 percentage points of the existing cost-sharing design in 2007. The deductible and cap in each illustrative design are described using their 2014 values, with values in prior years indexed to the average growth in Medicare expenditures per beneficiary on Part A and Part B services. As a result, the deductible and cap in a given year or set of years, expressed in 2014 dollars, can be a few hundred dollars above or below the level in 2014, depending on whether Medicare spending or inflation grew faster over that time period.

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## Appendix II: GAO Contact and Staff Acknowledgments

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### GAO Contact

James Cosgrove, (202)-512-7114 or [cosgrovej@gao.gov](mailto:cosgrovej@gao.gov)

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