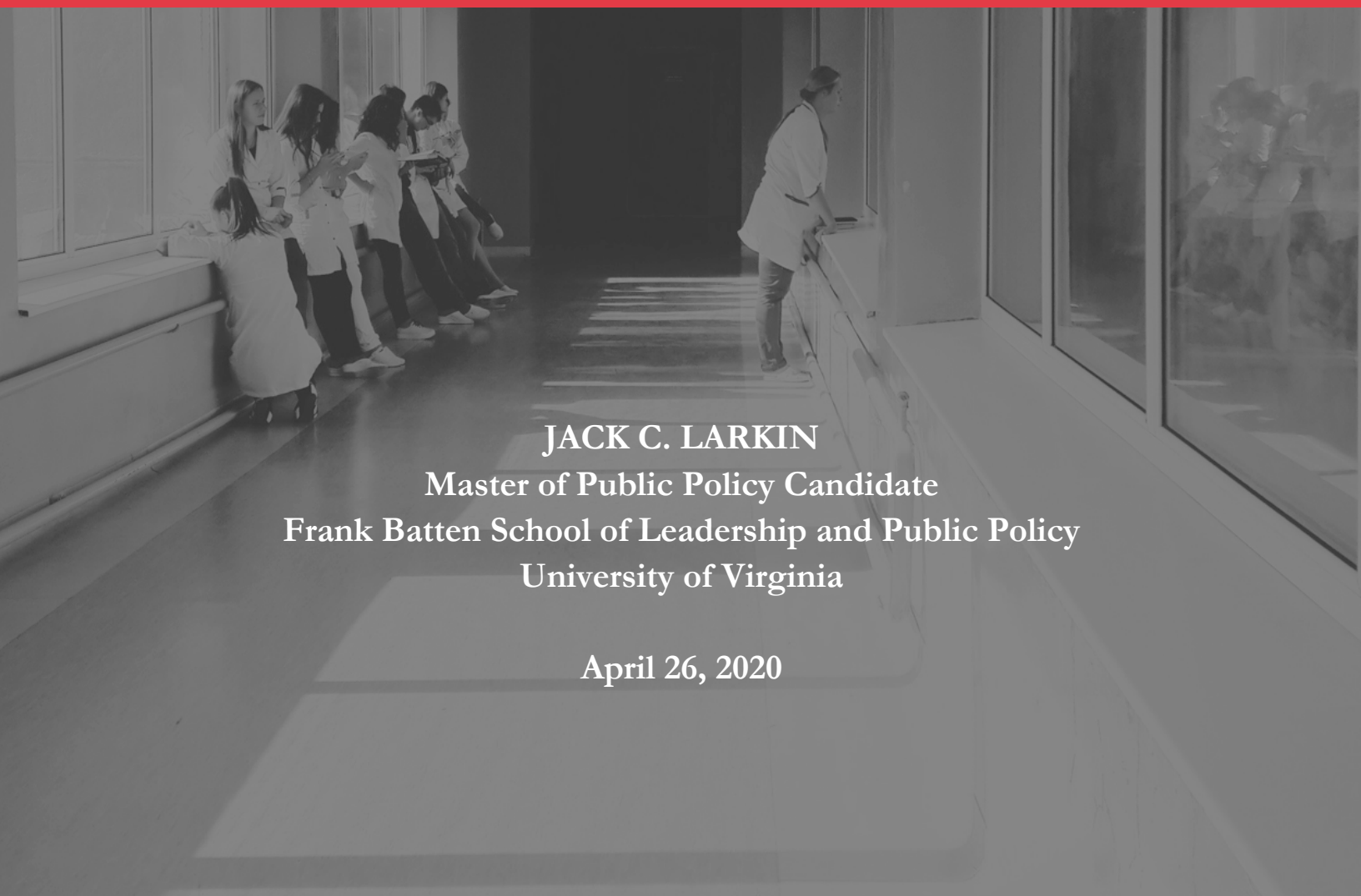
High Prices for Medicare: Evaluating Value-Based Payment Models

Applied Policy Project

Bipartisan Policy Center

Prepared for the Bipartisan Policy Center



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CLIENT: BIPARTISAN POLICY CENTER

The Bipartisan Policy Center writes policy recommendations and performs research for the United States Federal Government. Healthcare reform continues to be an important topic of discussion among D.C. think tanks. Cost containment dominates the Federal conversation.

The Bipartisan Policy Center's "Future of Healthcare" initiative started work on this issue and released a preliminary report in February 2020. This initiative brings 10 leaders in the health policy space together to discuss potential reform opportunities – the topic of cost constraint has since been shelved due to the coronavirus. The BPC's point of contact for this report, Bill Hoagland expressed that the think tank will return to these issues upon the resolution of the COVID-19 pandemic project.

The work of the health group within the Bipartisan Policy Center creates budget proposals, regulatory comments, and larger reports on government systems and spending. As such, this Applied Policy Project is written for a federal audience.

DISCLAIMER

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

HONOR STATEMENT

On my honor, I pledge that I have neither given nor received help on this assignment.

EXECUTIVE SUMMARY

The United States spends about twice as much on healthcare despite slightly lower rates of utilization and similar quality compared to similar high-income countries. The price of expensive treatments with cheaper alternatives is more than double the cost compared to other OECD countries (Hargraves & Bloschichak, 2019). In total, U.S. health care spending increased to approximately $3.6 trillion, or about 18% of national GDP, in 2018 (Papanicolas et al, 2017). Medicare, as the largest independent purchaser of healthcare, is particularly affected by these high costs. Value-based payment reforms are a popular method of curtailing these costs. This report evaluates whether or not growing value-based payment programs are worth expanding to achieve the goal of maintaining health outcomes while decreasing program costs.

The report first establishes a baseline in Alternative 1: continue current trends. The report then projects the expansion of two existing programs to evaluate whether increased enrollment in value-based payment models will achieve the goal of lower cost with consistent or improved health outcomes. The first is Alternative 2: increase Medicare Advantage Enrollment. The second is Alternative 3: increase Accountable Care Organization participation under the Medicare Shared Savings Program.

These alternatives will be evaluated on the criteria of cost, health outcomes, and political feasibility. A perfect alternative would receive a score of 2 on all criteria on a 0-to-2 scale. The cost for each alternative was calculated by modeling the per-capita cost of each program under different program enrollment growth scenarios. The total cost savings were divided by the most expensive alternative and subtracted from 2 to be evaluated amongst the other criteria. A successful policy has a lower projected cost from 2021-2028. Health outcomes use previous studies of the alternatives to determine changes in clinical outcomes and patient experience compared to the baseline. A successful policy has improved health outcomes. Political feasibility uses stakeholder analysis of previous statements and actions to determine whether the alternative will receive political backlash. A successful policy has high political feasibility.

Ultimately this analysis recommends Alternative 2: increase Medicare Advantage enrollment. This alternative improves health outcomes and is only marginally more expensive than the status quo at a high level of political feasibility. Despite heavy prioritization of cost in the analysis, projected cost changes were minimal enough to make the differences irrelevant. Improvements in risk-adjusted benchmark-setting in the process of setting reimbursement amounts for Medicare suggest that there may be more opportunities for directing cost savings toward Medicare in future policy research, as well as increasing the incentive to innovate payment models within the private system.

TABLE OF CONTENTS

FIGURES

TABLES

PROBLEM STATEMENT

The United States spends about twice as much on healthcare despite slightly lower rates of utilization and similar quality compared to similar high-income countries. The price of expensive treatments with cheaper alternatives is more than double the cost compared to other OECD countries (Hargraves & Bloschichak, 2019). In total, U.S. health care spending increased to approximately $3.6 trillion, or about 18% of national GDP, in 2018 (Papanicolas et al, 2017). Medicare is particularly affected by these high prices as the largest independent purchaser of healthcare in the United States.

BACKGROUND

The background section of this report orients Medicare spending within the broader dynamics of a fragmented U.S. healthcare sector. The report looks at the federal government as a healthcare purchaser in the U.S. The report then establishes the market power Medicare has in the system among other major payors. The background section concludes with a description of the Medicare program, its parts, and the current payment models the program uses to pay providers for beneficiary coverage.

U.S. Healthcare Environment

Public spending on healthcare represents the largest portion of spending when divided by major payors in the U.S. healthcare system: the Federal government represents about 28% of healthcare spending as an entity ultimately responsible for financing health care bills. The practices and payment models used by these public programs represent significant influence in the practices of the broader system since the programs represent such a large portion of the sector. Medicare represents a large portion of Federal spending and therefore is important in driving cost reductions and quality improvements.

Medicare

Medicare was the largest single purchaser of personal health care in 2018: about 25% of the $3.6 trillion national healthcare expenditure valued at approximately $750.2 billion, growing further to $787 billion in 2019 (MedPAC, 2020). Total national health care spending, including Medicare, has consumed an increasing share of the country's GDP: Medicare spending's percentage of GDP more than tripled since 1975 (Nunn et al., 2020). The Congressional Budget Office forecasts that trend to continue, with Medicare spending more than doubling from $750 billion in 2018 to about $1.5 trillion in 2029 (CBO, 2020; CMS Board of Trustees, 2020).

Traditional Fee-For-Service Medicare

Medicare Parts A and B constitute the original Medicare fee-for-service program. Under this arrangement, providers are reimbursed for each instance of care the provider gives an enrollee for an agreed-upon price Medicare negotiates upfront. Part A coverage is provided automatically for persons aged 65 and older who are eligible for Social Security or Railroad Retirement Benefits. The program inpatient hospital visits, services at skilled nursing facilities, services from home health agency, and hospice and end-of-life care (Curtis et al, 2020). Part B coverage is provided on a voluntary basis and requires a monthly premium in which enrollees pay a monthly fee to cost share for the program services. Part B covers medical services and supplies not covered under Part A such as outpatient physician services, durable medical equipment required in treatment, lab work, and certain physician-administered drugs in the course of outpatient care. Part B coverage is subject to additional cost-sharing mechanisms such as deductibles and co-payments schemes chosen by the enrollee (Curtis et al, 2020).

Part C: Medicare Advantage

Part C, also known as Medicare Advantage, is an alternative to traditional fee-for-service Medicare provided as a public-private partnership between Medicare and private companies. Medicare Advantage covers the services and supplies covered under both Part A and Part B. As such, only enrollees that would otherwise participate in both A & B may participate in Part C as an alternative. The private companies covering benefits in place of Medicare must cover at least what is covered in Parts A & B, except Hospice care. These plans may also cover additional services and supplies (such as vision and dental coverage) depending on the individual plan (Curtis et al, 2020).

The funding arrangement for Medicare Advantage plans differs from traditional fee-for-service Medicare in that Medicare reimburses private companies for the services they provide based on rate books based on traditional fee-for-service Medicare. Medicare sets rates for all of the services provided based on county-level estimates of the per-capita cost of traditional Medicare (Medicare Board of Trustees, 2020). Medicare pays these plans based on a bidding process. Plans submit bids based on what the plan anticipates spending on each enrollee. The plan's bid is then compared to the benchmark. If higher than the benchmark, the enrollee pays the difference. If lower than the benchmark, the private company and Medicare split the difference between the bid and the benchmark.

The private company ends up grossing whatever the difference is between the total cost of medical expenses and the payment it receives from Medicare. When the plan is more expensive than the Medicare benchmark, the enrollee covers the difference via a premium (KFF, 2019). This funding arrangement provides both an incentive to offer better benefits to enrollees with a higher willingness to pay and innovate provision and coverage models to increase gross margins for the private business.

Part D: Pharmaceuticals

Medicare Part D coverage includes most prescription drugs approved by the FDA. Part D is also on a voluntary basis and requires cost-sharing mechanisms similar to Part B. For the most part, Part D coverage is neither included in fee-for-service Medicare nor Medicare Advantage. The actual provision of these drugs varies per plan: some plans reimburse for the cost of pharmaceuticals, some create independent "formularies" from which enrollees receive drugs, and others are integrated into private Part C Medicare Advantage plans (Curtis et al, 2020).

The Affordable Care Act, passed in 2010 and implemented in 2014, had a dual goal to expand coverage and contain costs while improving care quality. The ACA created rule MCR36 setting a 2021 goal of 40% of payments made through value-based payment systems (CMS, 2020). Initial evaluations of the law suggest that Medicare's transition from fee-for-service to value-based care has begun to decrease cost growth beyond a deceleration in spending attributed to economic downturns (Orzag, 2016; Sommers et al., 2017).

LITERATURE REVIEW

As the largest independent purchaser of healthcare in the United States, it is important to frame Medicare spending within the U.S. healthcare market. This literature review first describes research on wasteful spending and drivers of cost increases. The review concludes that delivery system failures, pricing failures, and market inefficiencies are the most important areas of waste for Medicare to address. The review then describes how Value-based payment reforms have become a popular method of combatting these failures. Finally, the review describes two existing system-wide alternatives that change incentives to create value over Traditional Medicare: Medicare Advantage and Accountable Care Organizations.

Wasteful Spending

Wasteful spending is used here to approximate areas of cost inefficiency in the healthcare system from services that all of the aforementioned payers consume. The direct costs of elevated spending can also be inferred (through the use of overpriced or non-value-added care) in a dollar value. The Institute of Medicine (IOM) created a method of estimating overspending in the U.S. healthcare system in 2010 by different categories of spending to determine where the most overspending occurs (Yong et al., 2010).

Table 1. Total U.S. Healthcare Expenditure & Waste (2018)

Summary Statistics	
U.S. 2018 Total Healthcare Expenditure ($ billions)	3,649
U.S. GDP 2018 ($ billions)	20,580
U.S. 2018 Total Healthcare Expenditure (% of GDP)	17.7%
Total Wasteful Spending ($ billions)	**935.1**
Total Wasteful Spending (% Total Expenditure)	**26%**
Total Wasteful Spending (% of GDP)	**4.5%**

The study split wasteful health care spending into six categories: failures of care delivery, failures of care coordination, overtreatment, administrative complexity, pricing failures, and fraud & abuse. Tables 1 & 2 combine data from the two most recent estimations of U.S. health care expenditures and waste in the U.S. health care system in 2018 and 2019 (Shrank et al., 2019; BPC, 2020).

Shrank and colleagues updated all of Berwick & Hackbarth's estimates to 2019 using the same framework from the IOM, reflected in Tables 2 (Papanicolas et al., 2018; Shrank et al., 2019; Tikkanen et al., 2020). The original estimates by IOM collected workshop speaker estimates, whereas Shrank and colleagues aggregated estimates from 54 articles and reports from peer-reviewed literature, government reports, and "grey literature" (Shrank et al., 2019; Hargraves & Blochichak, 2019). The growth rates of this excess have a window as do the estimates at each point they have been updated – indicating that they likely should be interpreted for direction rather than precision.

Shrank and colleagues use cost estimates aggregated after 2009 to isolate the effect of the 2008-2009 financial crisis and include ACA implementation. By this estimation, about $760 billion to $935.1 billion in wasteful spending occurred in 2018: roughly 26% of total U.S. health care spending or 4.5% of U.S. 2018 GDP (according to the authors' upper range estimate). Administrative complexity and pricing failures were the largest contributors by source. Medication pricing failures and billing and coding administrative waste were the largest contributors by subcategory (Shrank et al., 2019). Papanicolas and colleagues, using an analytic technique comparing U.S. spending in 2016 to that of comparable OECD countries, found that the spending where the U.S. differs the most from other countries were prices, pharmaceuticals, and administrative costs (Papanicolas et al., 2018).

Table 2. Sources of Wasteful Spending

Shrank et al. **Wasteful Spending Sources**	**Min**	**Max**	**Max (% Total Health Expenditure)**
Failures of Care Delivery	**102.4**	**165.7**	**4.5%**
Hospital-acquired conditions and Adverse Events	5.7	46.6	1.3%
Clinician-related Inefficiency	8	8	0.2%
Lack of adopting preventative care measures	88.6	111.1	3.0%
Failures of Care Coordination	**27.2**	**78.2**	**2.1%**
Unnecessary Admissions and avoidable complications	5.9	56.3	1.5%
Readmissions	21.25	21.93	0.6%
Overtreatment	**75.7**	**101.2**	**2.8%**
Low-value medication use	14.4	29.1	0.8%
Low-value screening, testing	17.2	27.9	0.8%
Overuse of end-of-life care	44.1	44.1	1.2%
Pricing Failures	**230.7**	**240.5**	**6.6%**
Medication pricing failure	169.7	169.7	4.7%
Payer-based health services pricing failure	31.4	41.2	1.1%
Laboratory and ambulatory pricing	29.7	29.7	0.8%
Fraud and Abuse	**58.5**	**83.9**	**2.3%**
Medicare Fraud and Abuse	58.5	83.9	2.3%
Administrative Complexity	**265.5**	**265.6**	**7.3%**
Billing and Coding Waste	248	248	6.8%
Physician time spent reporting on quality measure	17.6	17.6	0.5%

Other recent government estimates are much larger. In a July 2018 testimony, Dr. Brent James of the National Academy of Medicine estimated that about 30 to over 50 percent of health care spending is unnecessary (Alexander, 2018). By this estimate, providers, insurers, payors, employers and patients unnecessarily spent approximately $1.8 trillion in 2018. Given the Center for Medicare and Medicaid Services (CMS) estimate of $11,172 per person, unnecessary spending could range from $2,904 to $5,501 per person. The original IOM framework that outlined these categories claimed that if the necessary actions were not taken to intervene in these excess cost categories, the trend would persist; Shrank and colleagues confirmed that this claim is true (Yong et al., 2010; Shrank et al., 2019).

Drivers of Cost Increases

Drivers of cost increases in the U.S. health care system can be inferred from wasteful spending calculations in determining why the United States has the highest health care costs among other developed countries. The largest areas of unnecessary spending can be grouped to determine drivers of cost increases in the health care system.

Such drivers will indicate where to direct measures that reduce cost. Building on the previous identification of extraneous costs, this report separates interventions into three categories using the three largest areas of unnecessary spending estimates: delivery-system policies, market & pricing policies, and administrative policies. Table 3 lists potential intervention areas in order of magnitude of spending that could be eliminated: delivery system interventions (9.4%), administrative interventions (7.3%), and market & pricing failure interventions (6.6%) (Shrank et al., 2019).

Table 3. Drivers of Cost Increases

Intervention Areas	Spending Sources	Shrank et al. Definitions[4]
Delivery-System Failures	Failure of Care Delivery	"Clinician- or hospital-related inefficiency: variability in care, inefficient use of high-cost clinicians or hospitals Practice- and system-based inefficiency: inefficient clinic processes, redundant testing Medical errors or adverse events, Lack of adoption of preventive care practices"
	Failure of Care Coordination	"Unnecessary ED visits or admissions Unnecessary readmissions Avoidable complications"
	Overtreatment or Low-Value Care	"Overtreatment or overuse of low-value treatments (medications and procedures) Over testing or overdiagnosis Overuse in end-of-life care"
Administrative Complexity	Administrative Complexity	"Billing and coding costs Physician administrative burden Insurance administrative burden, inefficiencies"
Pricing Failures & Inefficient Markets	Pricing Failure	"Variability and inflation in pricing of medications, testing, procedures, devices, and durable medical equipment"

Delivery System

Failures to deliver proper care, failures to coordinate care, and overtreatment and the use of low-value care all drive the costs of healthcare up. Failures to deliver proper care drive healthcare up by having variability in the quality of care or not adopting preventative care measures that address social determinants of health. Failures to coordinate care drive up costs through avoidable complications like redundant testing as a result of the fragmented system. Overtreatment and the use of low-value care drive up costs through the use of expensive medicine with the same outcomes of less expensive alternatives, over-testing, utilization-based compensation, and overuse of expensive end-of-life care (Shrank et al., 2019).

Pricing

Pricing failures drive up costs through variability and inflation of the price for physician salaries, procedures, and medication among other things. Papanicolas and colleagues found in a comparative study between the U.S. and OECD countries that the U.S. generalist physician salaries were on average $218,173 compared to a range of $86,607 to $154,126 in the countries with the next 10 highest GDPs in the OECD. The same study found that per capita spending in the U.S. was $1,443 compared to a range of $466-$939 in the other countries.

The International Federation of Health Plans identified inflation in the average price of procedures like a coronary artery bypass graft surgery that cost $78,100 but $11,670 and $35,800 in the Netherlands and Australia respectively, again, with similar utilization and mostly worse outcomes (Hargraves & Bloshchichak, 2019).

Inefficient Markets

Horizontal hospital mergers and vertical acquisitions of physician groups drive up costs by reducing price competition in many markets. A review at the *Hamilton Project* at the Brookings Institute found that a large number of mergers happen in the same area, 30% within 15 miles of each other between 2007-2011. These highly concentrated markets give hospitals increased market power to negotiate prices up without any competition. The systems are thus incentivized to maintain that power (Gaynor, 2020).

Value-Based Payment Reforms

Value-based payment reforms in Medicare have become a popular method of countering Delivery System and Pricing failures faced by the program. The Center for Medicare and Medicaid Innovation currently has dozens of Innovation Models being tested in various insurance markets in the U.S. focused on reforming multiple different aspects of the problem. (CMMI, 2021). A joint study by the Harvard Medical School, Harvard Kennedy School of Government, and the National Bureau of Economic Research cited that there are currently three larger programs in contention to reform these drivers of cost increases – Traditional Medicare, Medicare Advantage, and Accountable Care Organizations. Episode-based payment reforms, such as the Bundled Payments Care Initiative, focus on bringing down the price and increasing the quality of individual episodes of care. These episode-based payment models are too early in testing to evaluate on a system-wide level and as such are beyond the scope of this report (Newhouse & McGuire, 2014).

Medicare Advantage and Accountable Care Organizations work to change both provider and insurer incentives to provide higher quality care at lower cost by returning cost savings to the insurer in the case of Medicare Advantage and to the provider in the case of Accountable Care Organizations (Newhouse & McGuire, 2014). These two types of organizations change the competitive environment for providers and change the potential benefits for enrollees (Newhouse & McGuire, 2014). The difference and prior evidence of these incentive structures are noted in the two sections below.

Medicare Advantage

Before reforms in the mid-2000s, Medicare Advantage plans were largely considered to be more costly than Traditional Medicare and to suffer from selection bias. There were two justifications for higher per-capita spending in Medicare Advantage plans: higher quality would justify higher payment under a pay-for-performance type model, and higher payments would be justified if private innovation improved the practices of Traditional Medicare. At the time, there was little evidence of quality improvements; most of the available theoretical evidence suggested that Medicare Advantage would achieve the same quality as Traditional Medicare given that it uses the same physicians and hospitals (Newhouse & McGuire, 2014). The question of spillover effects between Medicare Advantage and Traditional Medicare remains open. The switch to risk-adjusted and bid-based payments helped improve the program.

Reforms in the Affordable Care Act make it so that since 2017, the benchmark for which Medicare Advantage plans bids its costs are solely based on risk-adjusted costs per beneficiary at a county level. The rebate the plan then receives from the difference between the bid and the benchmark is based on the quality metrics the plan reports (Newhouse & McGuire, 2014). This system is said to reduce selection bias and increase quality. A study of the Medicare Consumer Assessment of Healthcare Providers and Systems Survey and claims data found that Medicare Advantage outperformed Traditional Medicare in all 16 clinical quality measures and all 6 patient experience metrics measured (Timbie et al, 2017). Enrollment in the program has also steadily increased through these reforms.

Accountable Care Organizations

A Harvard review on Medicare Advantage described Accountable Care Organizations as "a halfway house between [Traditional Medicare] and [Medicare Advantage]" (Newhouse & McGuire, 2014). Both programs can profit from treating enrollees at a lower cost than Traditional Medicare, but how they share savings with Medicare differs. Medicare enrollees do not enroll specifically in an Accountable Care Organization. ACOs are only responsible for the times when Medicare enrollees use their services. Unlike Medicare Advantage, Medicare enrollees are not limited only to participation in ACO services and face the same cost-sharing requirements as are required in Traditional Medicare (Newhouse & McGuire, 2014).

According to the Center for Medicare and Medicaid Services, Accountable Care Organizations (ACO's) are "groups of doctors, hospitals, and other health care providers who come together voluntarily to give coordinated high-quality care to their Medicare patients" (CMS, 2020). This policy alternative operates as a form of care coordination, encouraged by the government in cost-sharing savings that occur as a result of avoiding unnecessary care, duplicate care, and preventing errors, among other initiatives, acts as an alternative to fee-per-service payment systems in which providers are paid for the volume of care rather than the outcomes of care. Some ACOs simply share savings associated with coordinated care, and some can receive savings in addition to being at risk of penalties if the group does not reach mandated benchmarks.

Systematic reviews since the implementation of ACO's have found mixed results. The organizations have up to this point only had a modest effect on costs but have not substantially improved nonfinancial metrics compared to pre-implementation care besides utilization of emergency department and measures of preventative care and chronic illness management (Kaufman et al., 2019). Other reviews reflected these mixed results, calling into question the efficacy of the programs (McWilliams et al., 2016; McClellan et al., 2017). The latter of these reviews by Dr. J Michael McWilliams and colleagues of the Harvard Medical School suggests that savings are greater in independent primary groups than in hospital-integrated groups. This is problematic given that more recent evidence suggests that ACOs, while associated with higher quality and lower costs, actually incentivize the consolidation of physician groups and therefore may be canceling out any efficiency of cost containment gains made (Kanter et al., 2019).

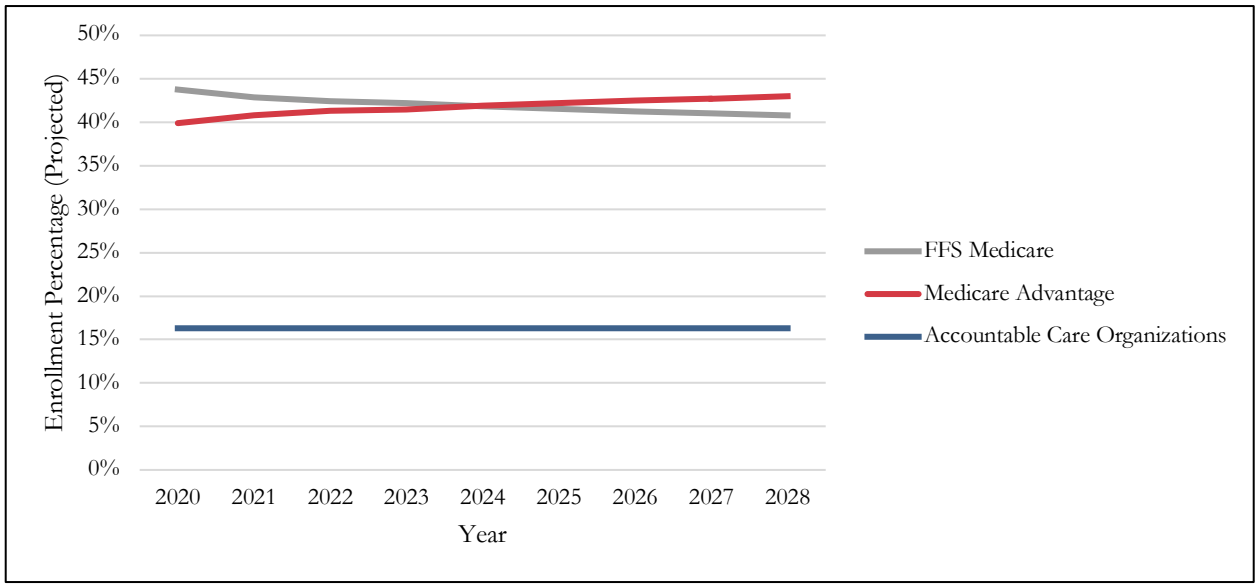
ALTERNATIVES

This report evaluates three scenarios in which the Medicare program can work to decrease spending and increase quality according to its position in the U.S. healthcare sector and existing work on payment model reforms: Alternative 1: allowing current trends to continue, Alternative 2: increasing Medicare Advantage enrollment, and Alternative 3: increasing Accountable Care Organization participation.

Alternative 1: (Status Quo) Allow Current Trends to Continue

Keep with its current trends. Allow Fee-for-service Medicare to continue expanding enrollment as projected by CMS with slow increases in Part C (Medicare Advantage) and Accountable Care Organization enrollment. Leave rule MCR36 unchanged setting a 2021 goal of 40% of payments made through value-based payment systems (CMS, 2020). Under this alternative, enrollment projections stay true to current CMS estimates as seen in Figure 3.

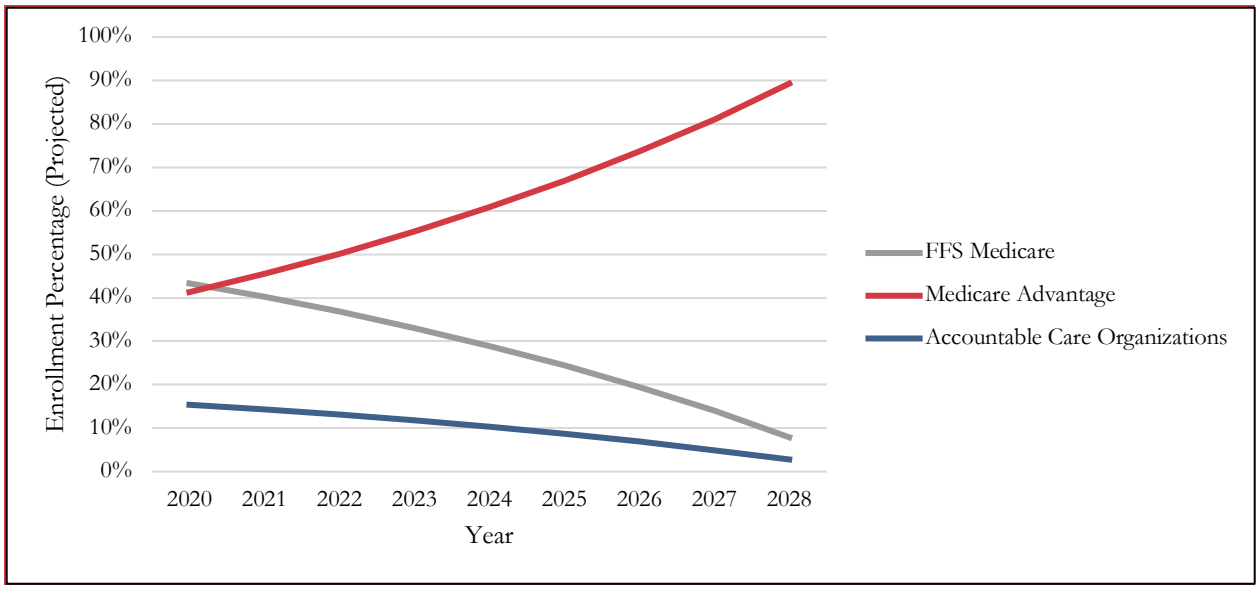
Figure 1. Alternative 1: Status Quo Enrollment Percentages



Alternative 2: Increase Medicare Advantage Enrollment

Increase Medicare Advantage Enrollment. Add a Medicare performance goal to the CMS Annual Performance Plan and Report to the Department of Health and Human Services for FY2022 that sets a benchmark of 30% Medicare Advantage enrollment of total Medicare beneficiaries by 2023 and 55% by 2026. Medicare Advantage plans create a public-private partnership that incentivizes private healthcare insurers to create processes and coverage decisions that optimize for decreased cost and increased quality. The less the private health plan spends on the quality benchmark required by CMS, the higher the profit. Under this alternative, Medicare Advantage enrollment percentages increase while FFS Medicare and Accountable Care Organization participation decreases as seen in Figure 4.

Figure 2. Alternative 2: Increasing Proportion of Medicare Advantage Enrollment

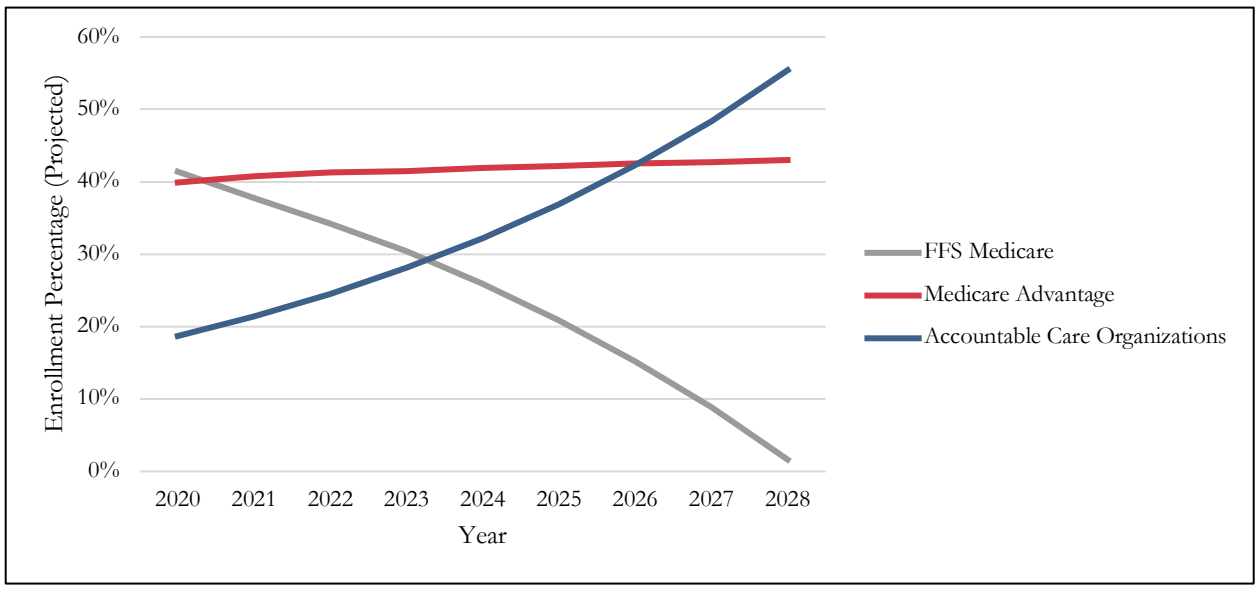


Alternative 3: Increase Accountable Care Organization participation under the Medicare Shared Savings Program

Increase Accountable Care Organization participation under the Medicare Shared Savings Program. Add a Medicare performance goal to the CMS Annual Performance Plan and Report to the Department of Health and Human Services for FY2022 that sets a benchmark of 25% ACO participation of total Medicare beneficiaries by 2023 and 42% by 2026. Accountable Care Organizations bring groups of providers together to be held responsible for the quality of their patient care to be compensated. The provider groups negotiate the amount of risk they agree to take on that is tied to how well the groups expect to uphold quality standards and avoid unnecessary spending (CMS, 2019).

The largest, most unified, and Accountable Care Organization with the most accessible data is the Medicare Shared Savings Program. The Medicare Shared Savings Program facilitates Accountable Care Organization formation and negotiates the amount of risk the ACO will take on in exchange for an opportunity to share savings (the difference between provider cost and benchmark costs from Medicare FFS) (CMS, 2021). Under this alternative, Accountable Care Organization participation increases as a percentage of FFS Medicare, and Medicare Advantage enrollment stays true to current CMS estimates as seen in Figure 5.

Figure 3: Alternative 3: Increasing Accountable Care Organization Participation



CRITERIA

These alternatives will be evaluated based on their cost, health outcomes, and political feasibility. All three will be scored on a 0-to-2 scale, 2 representing the best possible outcome. A completely successful policy has low cost, improved health outcomes, and high political feasibility. The criteria are weighted in the final composite score as 70% toward cost, 18% toward health outcomes, and 12% toward political feasibility. These criteria are weighted significantly toward costs because cost reduction is by far the main goal of the policies so long as health outcomes and political feasibility do not worsen. As such, cost is weighted as the most important, followed by health outcomes and political feasibility as gating criteria for whether the change in cost is worth the outcome. The criteria are then reweighted in a sensitivity analysis making cost 30% less important, 15% less important, and 15% more important with the other two criteria proportionately increasing in importance. This analysis will determine whether the heavy weighting toward cost has too much of an effect on the ultimate recommendation.

Cost

Each cost score is calculated based on the percentage deviation from the least expensive alternative, which is anchored at a score of 2 (the best available score). The cost is calculated using the Centers for Medicare and Medicaid Services 2020 Trustee Report projections and yearly Accountable Care Organization Public Use Files from the Center for Medicare and Medicaid Innovation.

Per-capita cost projections for each program, Traditional Medicare, Medicare Advantage, and Accountable Care Organizations, are multiplied by different enrollment percentage scenarios based on each alternative. The projected cost from 2020-2028 is then summed for each alternative and compared (given the 2020 data is not yet published).

The baseline model uses CMS projected enrollment from the 2020 trustee report under intermediate assumptions. The growth assumptions that CMS uses to project per-capita cost increases can be found in Appendix 1. This model can be seen in Appendix 2. Models for Alternatives 2 & 3 then modify the projected enrollment percentages based on the alternative's suggested enrollment goals. Given that increased enrollment in one program decreases enrollment in the others, each model is calculated as completely independent scenarios. The models operate on the per-capita cost projection assumptions from CMS as only manipulate enrollment. The cost models for Alternatives 2 & 3 can be found in Appendices 3 & 4 respectively.

Health Outcomes

Health Outcomes are scored on a 0-to-2 scale based on prior research on change in clinical quality and patient experience measures. The analysis of this criteria will anchor Alternative 1: Status Quo keeping with current trends at 1 given its neutrality and high performing outcomes relative to international peers. Alternatives 2 & 3 are weighted around this alternative.

Political Feasibility

Political feasibility is scored on a 0-to-2 scale based on past domestic successes and failures of similar changes, international comparisons, and perceived political appetites based on prior voting congressional and regulatory voting records. This feasibility score is based on prior testimonies, regulatory actions, and projections for the 117th Congress and President Biden's 2021 CMS staff.

RESULTS

Alternative 1: (Status Quo) Allow Current Trends to Continue

Keep with current trends. The 2020 Medicare Trustees Report projects that enrollment will increase 2.3 percent year-over-year on average over the next 8 years. Total spending is projected to increase 4.6 percent, early spikes of the popularity of Medicare Advantage are projected to taper off, and membership in Accountable Care Organizations under the Medicare Shared Savings Program is projected to increase concurrently with growth in total Medicare enrollment over the same period (Medicare Board of Trustees, 2020). Relevant enrollment projections can be found in Appendix 2. Alternative 1 Cost Model.

Cost

The status quo received a cost score of 2. The cost projection for this scenario can be found in Appendix 2. Alternative 1 Cost Model. Current trends of Medicare growth project total spending to reach $9.6 trillion from 2020-2028. Estimates range from $845 Billion in 2021 to $1.405 Trillion in 2028 (Medicare Board of Trustees, 2020). The baseline status quo costs 2% less than the next most expensive Alternative 3: increase Accountable Care Organization participation under the Medicare Shared Savings Program, and 1% more than Alternative 2: increase Medicare Advantage enrollment. A 2% cost difference in this scenario has a magnitude of $101 Billion, larger than the annual budget of the Supplemental Nutritional Assistance Program (CBPP, 2019).

Outcomes

The status quo received an outcome score of 1 to reflect the neutrality of the policy towards changes in current health outcomes. Health outcomes for Medicare are on par with similar OECD countries on average. The policy, therefore, does not receive any lower score for worsening health outcomes and will be used as a baseline for comparison with the other alternatives (Papanicolas et al, 2017).

Political Feasibility

The status quo received a political feasibility score of 2, the highest of all options, to reflect a tendency for recent political gridlock to favor inaction. There will likely be a decreased focus on the issue of value-based payment reform in the coming administration given that the Biden administration is focusing much of its efforts remediating the effects of the coronavirus pandemic and negotiating the passage of President Biden's infrastructure bill (White House, 2021). Allowing for current trends to continue will remain the easiest option for CMS administrators despite a change to a democratic staff that has voiced support for more beneficiary-focused reforms such as premium supports.

Alternative 1 received a composite score of **1.820.**

Alternative 2: Increase Medicare Advantage Enrollment

Increase Medicare Advantage Enrollment. Medicare is currently projected to reach 40.8% enrollment in 2021 per status quo Medicare projections (Medicare Board of Trustees, 2020). These benchmarks are achievable at a year-over-year growth rate of 10.1%, up from the 8-year historical growth rate average of 6.1%. CMS will be the lead agency responsible for meeting these thresholds by creating sub-objectives and processes to advertise and incentivize Medicare enrollees to opt into the private plans at a faster rate.

Cost

Alternative 2 received a cost score of 1.979. The alternative is 1% more expensive than the status quo and 1% less than Alternative 3. The cost projection for this scenario can be found in Appendix 3. Alternative 2 Cost Model.

This cost score is only marginally higher than fee-for-service Medicare between 2021 and 2028 under this growth scenario. This can largely be explained by looking at the difference between the projected cost of total spending on the program versus bid-based spending[1]. If the analysis were to be based on the bids private Medicare Advantage providers submit to cover enrollees rather than Medicare benchmarks, this alternative could be significantly less expensive.

The true cost of the program, Medicare reimbursement, is projected to reach $9.7 Trillion over the next 8 years. The bid-based cost to the private health plans is $9 Trillion (Medicare Board of Trustees, 2020). That is $100 Billion more than baseline under the current reimbursement process and $600 Billion less than the baseline under bid-based cost to the private programs. This differential indicates that there may be room to change the benchmarking process to bring total costs down as a part of the objectives and process changes that would be necessary to implement this alternative.

Outcomes

This alternative received an outcome score of 1.5. Multiple studies found that Medicare Advantage patients score higher on clinical quality and patient experience measures than Fee-for-service Medicare (Timbie et al., 2017; Wadill, 2020). This improvement is said to be a result of the incentive of private health insurers to increase cost-effectiveness and processes to increase profitability by driving down costs and improving quality as a result (Rooke-Ley et al., 2019; Antos & Capretta, 2019). There is some geographical variation in the improvements and the improvements are not drastic enough to warrant scoring this alternative closer to 2, which would represent a large and clear improvement over the baseline.

[1] Bid-based spending refers to the cost that Medicare Advantage plans report spending on the coverage required by CMS under the current program arrangement. This cost is compared to cost benchmarks built on county-level FFS data. CMS then splits the difference between the benchmark and the bid according to the contract with the private health plan (between 50% and 70%) (Medicare Board of Trustees, 2020).

Political Feasibility

This alternative received a political feasibility score of 1.5, the second-highest behind the status quo. Medicare Advantage plans have historically received bipartisan congressional support and support from the previous administration. The Biden administration and the new CMS director, Chiquita Brooks-LaSure, have indicated support for the program and more specifically support for the outcomes that the program has created like increased quality and decreased cost (Pear, 2018; Brooks-LaSure, 2019). Bipartisan support is expected to continue, indicating that there would be little political push back to implementing this growth trajectory save for those staunchly in favor of all-out Medicare reform proposals.

Alternative 2 received a composite score of **1.835**.

Alternative 3: Increase Accountable Care Organization participation under the Medicare Shared Savings Program

Increase Accountable Care Organization participation under the Medicare Shared Savings Program. Medicare is currently projected to reach 16.3% enrollment in 2021 per status quo Medicare projections (CMS, 2013-2019). These 25% and 42% benchmarks are achievable at a year-over-year growth rate of 14.5%. CMS will be the lead agency responsible for meeting these thresholds by creating sub-objectives and processes to advertise and incentivize Medicare enrollees to opt into the private plans at a faster rate.

Cost

Alternative 3 received a cost score of 1.951, the worst of the three alternatives. The alternative is 1% more expensive than Alternative 2 and about 2% more expensive than the baseline, Alternative 1. In dollars, Alternative 3 is projected to be $235 Billion more expensive from 2020-2028. Out of an 8-year program spending around $9 Trillion, this difference is marginal. The projections for this alternative were taken from CMS public use files to create weighted averages of all ACO MSSP program participants since 2013 (CMS, 2013-2019). The cost projections for this scenario can be found in Appendix 4. Alternative 3 Cost Model.

Outcomes

This alternative received an outcome score of 1.5. Similar to Alternative 2, accountable care organizations have been found to increase clinical outcomes and patient experience over traditional Fee-for-service Medicare (Verma, 2019). Providers in Accountable Care Organizations are incentivized to protect or improve the care of their patients to protect from its downside reimbursement risks. The improvements are not drastic, and therefore the alternative was not rated closer to 2.

Political Feasibility

This alternative received a political feasibility score of 1, the lowest political feasibility score of the three alternatives. There is a general political consensus on the benefit of Accountable Care Organizations but disagreements over whether or not they are the correct path forward in improving the provision of the Medicare program (Pittman, 2020). ACO rules are for a large part tied to ACA legislation, and face threats going forward should a Republican legislature move to repeal the ACA.

The alternative was rated a 1 due to the possibility of political backlash over aggressive growth goals for the program given some doubt about its effectiveness. The alternative was not rated lower than 1 due to general Democratic support of value-based payment initiatives given a Democratic control over the executive branch and Democratic majority in Congress.

Alternative 3 received a composite score of **1.756.**

Outcomes Matrix

Table 4. Outcomes Matrix

	Cost	Outcome	Political Feasibility	Composite
	70%	18%	12%	100%
Alt 1: Status Quo	2.000	1	2	1.820
Alternative 2	1.979	1.5	1.5	**1.835**
Alternative 3	1.951	1.5	1	1.756

RECOMMENDATION

Implement Alternative 2: increase Medicare Advantage Enrollment. Add a Medicare performance goal to the CMS Annual Performance Plan and Report to the Department of Health and Human Services for FY2022 that sets a benchmark of 55% Medicare Advantage enrollment of total Medicare beneficiaries by 2023 and 70% by 2026. Alternative 2 received the highest composite score in the weighted outcomes matrix of 1.835. This alternative is shown to increase clinical health outcomes and patient experience metrics above the baseline. It also has more bipartisan support in Congress to make implementation less politically tenuous than Alternative 3, despite not achieving the highest score of the status quo.

This alternative received the highest rating of all alternatives despite being the most expensive. This would normally be a red flag save for putting this rating in the context of the potential future decreases in costs based on the projected bid-based cost to private health insurers. Using bid-based cost projections in the outcomes matrix provides context and confidence in recommending this alternative. Alternative 2 has an aggregate cost over from 2020-2028 $164 billion less than the status quo. Relative to the status quo and Alternative 3, this is a significant improvement. So, while the alternative is relatively more expensive than the other two by 2%, there is significant reason to believe that the incentive to innovate from the private sector can bring per-capita health costs down significantly – an assumption that is not included in any of the cost models.

The result of the sensitivity analysis concluded that differences in the weighting of the cost criteria do not have any effect on the outcome of the recommendation. The small marginal differences in cost for the alternatives make the eventual differences somewhat irrelevant in the outcomes matrix. As such, improved health outcomes and political feasibility play an important role in alternative choice. The likelihood of future improvements to the program also affirms the recommendation.

This report assumes that an increase in Medicare Advantage enrollment could increase the incentive for such plans to innovate how care becomes more cost-effective. Ways in which Medicare can capitalize on these incentives to grow cost-savings from the program are included in the forthcoming implementation section of this report. Given the relative improvements in health outcomes, political feasibility of the alternative, and demonstrated potential for cost-efficiency innovation, Medicare should set more aggressive growth goals for Medicare Advantage to achieve 70% Medicare Advantage enrollment by 2026.

IMPLEMENTATION

Increase Medicare Advantage Enrollment. Add a Medicare performance goal to the CMS Annual Performance Plan and Report to the Department of Health and Human Services for FY2022 that sets a benchmark of 55% Medicare Advantage enrollment of total Medicare beneficiaries by 2023 and 74% by 2026. These benchmarks are achievable at a year-over-year growth rate of 10.1%, up from the 8-year historical growth rate average of 6.1%. Table 1 reflects the total annual growth goals.

Table 5. Recommended Medicare Advantage Performance Goals

FY	2019	2020	2021	2022	**2023**	2024	2025	**2026**	2027	2028
Status Quo	37.5%	40.8%	41%	41.3%	41.5%	41.9%	42.2%	42.5%	42.7%	43%
Target	37.5%	41%	46%	50%	**55%**	61%	67%	**74%**	81%	89%

Implementation Barriers

CMS currently does not approve of promoting Medicare Advantage over fee-for-service Medicare (CMS, 2020). However, this analysis demonstrates that a preference for Medicare Advantage enrollment has cost and quality benefits over traditional Medicare. Medicare must lean into Medicare Advantage enrollment and allow its promotion over traditional Medicare.

This policy could additionally fail if the growth goals are added, fall short of projected thresholds, and are subsequently removed from Medicare's strategic planning. This could occur if there is not enough incentive for Medicare enrollees to switch plans, not enough competition and incentive to innovate among Medicare Advantage plans for new enrollees, or per-capita costs increase significantly.

Action Items

Implement these action items to be built sustainably and overcome implementation barriers:

- Allow Medicare to promote Medicare Advantage above traditional Medicare. CMS should be able to influence overall program choice should one program be demonstrably better in cost and quality of care.
- Set new growth goals for Medicare Advantage in the Medicare Budget Justification to the Department of Health and Human Services for PY2022. The growth thresholds are listed in Table 1.
- Engage a coalition of Medicare Advantage Providers to give them time to create new offerings to win over newly available enrollees. The growth of this policy expands the overall market size for these businesses – creating new opportunities for profit and a higher incentive to

innovate payment models and patient experience. The engagement of this coalition makes this policy politically sustainable as it is much more difficult to take market share away from private actors than the inverse.

- Utilize Open Enrollment period to place spotlight on Medicare Advantage plans. Medicare already provides transparent plan information to beneficiaries in its enrollment period. Use this period to give space to Medicare Advantage plans to advertise benefits.
- Target the 2022 MA Open Enrollment Period from Jan 1 – March 31, 2022, and Medicare Open Enrollment from Oct 15 – Dec 7, 2022. The Medicare Advantage enrollment period for 2021 has already passed and the Medicare Open Enrollment period is too soon to complete these action items by October 15, 2021 (CMS, 2020).
- Collect data through the existing validation process to track changes in per-capita spending. Medicare already budgets for cost validation for Medicare Advantage. Continue tracking and analyzing costs to ensure that per-capita expenses are not increasing (CMS, 2020).

- Begin researching the process by which CMS can take advantage of Medicare Advantage cost efficiencies to rein in its total costs. Medicare Advantage uses a public-private partnership to encourage private plans to innovate the provision of the Medicare program. Medicare must start evaluating ways that it can begin reducing overall spending as Medicare Advantage programs can spend less.

Set ambitious growth goals for the Medicare Advantage program to allow the private sector to continue innovating the provision of Medicare. Clear the rule hurdle of Medicare promoting one program over another and entrench the growth goals in profit opportunities for private health plan providers. Given these action items, increasing Medicare Advantage enrollment will become a politically sustainable policy that overcomes high pricing in the U.S. healthcare system while improving care quality and reducing costs.

CONCLUSION

Ultimately this analysis recommends Alternative 2: increase Medicare Advantage enrollment. This alternative improves health outcomes and is only marginally more expensive than the status quo at a high level of political feasibility. Despite heavy prioritization of cost in the analysis, projected cost changes were minimal enough to make the differences irrelevant.

Improvements in risk-adjusted benchmark-setting in the process of setting reimbursement amounts for Medicare suggest that there may be more opportunities for directing cost savings toward Medicare in future policy research, as well as increasing the incentive to innovate payment models within the private system. Medicare must either lean into Medicare Advantage enrollment with reforms intended to further incentivize private innovation and opportunities to recoup some of the cost savings or start shifting emphasis to other cost-saving initiatives besides value-based payments.

APPENDICES

Appendix 1. Enrollment Growth Scenario Assumptions

Each enrollment growth model uses per-capita cost growth multiplied by increases in enrollment percentages between each program. The enrollment growth percentages for each model are defined by the growth rate goal set by each alternative. The percentages assume that the projected participant growth projections from the 2020 Medicare Trustee Report are accurate. The growth assumptions between alternatives only modify the internal distribution of enrollees between traditional Medicare, Medicare Advantage, and Accountable Care Organizations. As such, adding up the enrollment between these three options reflects 100% of the projected Medicare enrollment.

The per-capita cost projections of each model stay constant across each of the three scenarios. These growth projections use the Centers for Medicare and Medicaid cost growth assumptions below to reflect the per-enrollee cost between traditional Medicare, Medicare Advantage, and Accountable Care Organizations. The per-capita cost growth for Traditional Medicare and Medicare Advantage has already been projected by CMS as found in the 2020 Medicare Trustees Report. The per-capita cost growth for Accountable Care Organizations under the Medicare Shared Savings Program was not published in the 2020 Medicare Trustee Report. The per-capita cost for this program was calculated by using CMS ACO public use files and taking the weighted average of each type of beneficiary covered by the ACO to ensure that the cost of certain enrollees did not outweigh others (ERSD, Disability, Medicare-Medicaid dual enrollees, and non-dual enrollees). CMS did not project the growth of ACO per-capita cost: this model uses the same growth assumptions as those used by CMS to calculate traditional Medicare and Medicare Advantage growth to calculate ACO per-capita cost growth. These assumptions are found in the table below.

The Centers for Medicare and Medicaid Services notes that future spending on Medicare programs will depend on a lot of different factors. The 2020 Trustee report cites "the size and composition of the population eligible for benefits, changes in the volume and intensity of services, and increases in price per service" (2020 Medicare Trustee Report). In the cost models for this report, these factors are modeled off the economic and demographic assumptions included below to calculate per-beneficiary spending growth. CMS does not explicitly detail the weighting or calculations of these assumptions. As such, the cost models of this report are based only on intermediate growth assumptions for per-beneficiary spending.

	Intermediate Assumption
Economic	
Annual Percentage Change in:	
Gross Domestic Product (GDP) Per-Capita	3.7
Average Wage in Covered Employment	3.54
Private Nonfarm Business Multifactor Productivity	1.0
Consumer Price Index (CPI)	2.4
Real-Wage Differential (Percent)	1.14
Real Interest Differential (Percent)	2.3
Demographic	
Total Fertility Rate (Children Per Woman)	1.95
Annual Percentage Reduction in Total	
Age-Sex Adjusted Death Rates	0.76
Net Lawful Permanent Resident (LPR) Immigration	788,000
Net Other-Than-LPR Immigration	474,000

(Medicare 2020 Trustee Report)

Appendix 2. Alternative 1 Cost Model

The Alternative 1 Cost Model holds per-capita expense for Fee-for-service, Medicare Advantage and Accountable Care Organizations constant through the whole model. The historical and projected costs for Fee-for-service and Medicare Advantage are pulled directly from the 2020 Medicare Trustees Report. The historical and project costs for Accountable Care Organizations are calculated from an annual weighted average of ACO reported per-capita costs. The data for ACO reported costs were taken from Medicare ACO MSSP public use files.

Alternative 1 Cost Model enrollment numbers are pulled exclusively from Medicare projections found at the top of Appendix 2. The amount of Fee-for-service Medicare enrollees was calculated by subtracting Part C enrollees from Total Medicare enrollees, leaving only enrollees that are guaranteed to at least participate in Medicare Part A. Non-ACO FFS Medicare enrollees are then calculated by subtracting ACO enrollee numbers from CMS public use files from the total FFS Medicare numbers. Percent of Non-ACO FFS is divided by total Medicare enrollment to find a percentage. Medicare Advantage enrollment numbers under this scenario are pulled directly from the Medicare 2020 Trustee Report. This enrollment is divided by total Medicare enrollment to find a percentage. ACO enrollment numbers are pulled from CMS public use files and divided by total Medicare enrollment to find a percentage. ACO cost growth projections are assumed to grow at the same rate as total Medicare per-capita cost growth.

The cost model for Alternative 1 can be found on the following page.

	Historical								Projected								
	2012	2013	2014	2015	2016	2017	2018	2019	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	*2027*	*2028*
																	* projected growth rates calculated by CMS
Medicare Enrollment (in thousands)																	
Part A	50540	52169	53777	55246	56729	58344	59794	60857	62264	63814	65485	67095	68676	70303	71904	73438	74916
Part B	46477	47952	49413	50756	52094	53446	54798	56115	57311	58752	60313	61824	63313	64847	66362	67827	69242
Part D	37448	39103	40499	41804	43217	44480	45778	47197	48827	50168	51781	53222	54609	55995	57326	58606	59843
Part C	13588	14843	16244	17493	18392	19816	21336	22942	24999	26213	27207	28036	28955	29862	30745	31588	32391
Total	50874	52504	54115	55589	57073	58683	60147	61222	62642	64207	65892	67516	69111	70751	72367	73914	75404
Medicare FFS	37286	37661	37871	38096	38681	38867	38811	38280	37643	37994	38685	39480	40156	40889	41622	42326	43013
Non-ACO FFS	--	34372	32541	30826	30797	29874	28714	28282	27415	27521	27940	28477	28900	29374	29854	30311	30758
Percentage Non-ACO FFS	--	--	--	--	--	--	--	--	43.8%	42.9%	42.4%	42.2%	41.8%	41.5%	41.3%	41.0%	40.8%
Percent Changes																	
Percent Change Year over Year	--	3.1	3.0	2.7	2.6	2.7	2.4	1.8	2.3	2.4	2.6	2.4	2.3	2.3	2.2	2.1	2.0
FFS Medicare																	* projected growth rates calculated by CMS
Aggregate Reimbursement Amount (Per Capita Cost)																	
Part A	$5,196	$5,155	$5,012	$5,027	$5,093	$5,143	$5,202	$5,365	$5,644	$5,853	$6,077	$6,328	$6,570	$6,815	$7,063	$7,330	$7,606
Part B	$5,170	$5,171	$5,395	$6,642	$5,664	$5,865	$6,229	$6,617	$7,048	$7,415	$7,775	$8,226	$8,705	$9,253	$9,779	$10,349	$10,963
Part A + Part B Only	$10,366	$10,326	$10,407	$11,669	$10,757	$11,008	$11,431	$11,982	$12,692	$13,268	$13,852	$14,554	$15,275	$16,068	$16,842	$17,679	$18,569
Part D	$1,839	$1,874	$2,031	$2,152	$2,155	$2,120	$2,168	$2,168	$2,154	$2,241	$2,338	$2,438	$2,542	$2,624	$2,741	$2,862	$2,988
Total	$12,205	$12,200	$12,438	$13,821	$12,912	$13,128	$13,599	$14,150	$14,846	$15,509	$16,190	$16,992	$17,817	$18,692	$19,583	$20,541	$21,557
Enrollees (in thousands)	37286	34372	32541	30826	30797	29874	28714	28282	27415	27521	27940	28477	28900	29374	29854	30311	30758
Total FFS Program Spend (in millions)	$386,507	$354,928	$338,656	$359,706	$331,283	$328,854	$328,231	$338,878	$347,951	$365,149	$387,025	$414,454	$441,448	$471,981	$502,801	$535,868	$571,145
Percent Changes																	
Part A	--	(0.8)	(2.9)	0.3	1.3	1.0	1.1	3.0	4.9	3.6	3.7	4.0	3.7	3.6	3.5	3.6	3.6
Part B	--	0.0	4.2	18.8	(17.3)	3.4	5.8	5.9	6.1	4.9	4.6	5.5	5.5	5.9	5.4	5.5	5.6
Part D	--	1.9	7.7	5.6	0.1	(1.7)	2.2	0.0	(0.6)	3.9	4.1	4.1	4.1	3.1	4.3	4.2	4.2
Part A + Part B Only	--	(0.4)	0.8	10.8	(8.5)	2.3	3.7	4.6	5.6	4.3	4.2	4.8	4.7	4.9	4.6	4.7	4.8
Total	--	0.0	1.9	10.0	(7.0)	1.6	3.5	3.9	4.7	4.3	4.2	4.7	4.6	4.7	4.5	4.7	4.7
Medicare Advantage																	* projected growth rates calculated by CMS
Aggregate Reimbursement Amount (Per Capita Cost)																	
Total Cost Per Capita	$10,084	$9,933	$9,837	$10,004	$10,291	$10,580	$11,081	$11,844	$12,634	$13,276	$13,974	$14,764	$15,579	$16,453	$17,306	$18,226	$19,187
Per Capita Total Cost Change	($282)	($393)	($570)	($1,665)	($466)	($428)	($350)	($138)	($58)	$8	$122	$210	$304	$385	$464	$547	$618
Bid-based Cost Per Capita	$9,212	$9,091	$9,097	$9,273	$9,503	$9,784	$10,230	$10,848	$11,479	$11,960	$12,543	$13,198	$13,877	$14,620	$15,338	$16,108	$16,912
Per Capita Bid Cost Change	($1,154)	($1,235)	($1,310)	($2,396)	($1,254)	($1,224)	($1,201)	($1,134)	($1,213)	($1,308)	($1,309)	($1,356)	($1,398)	($1,448)	($1,504)	($1,571)	($1,657)
# of Enrollees (in thousands)	13588	14843	16244	17493	18392	19816	21336	22942	24999	26213	27207	28036	28955	29862	30745	31588	32391
% of Total Medicare Enrollees	26.7%	28.3%	30.0%	31.5%	32.2%	33.8%	35.5%	37.5%	39.9%	40.8%	41.3%	41.5%	41.9%	42.2%	42.5%	42.7%	43.0%
Total Program Spend (in millions)	$137,021	$147,436	$159,792	$175,000	$189,272	$209,653	$236,424	$271,725	$315,837	$348,004	$380,191	$413,924	$451,090	$491,319	$532,073	$575,723	$621,486
Total Program Bid-Based Spend (in millions)	$125,173	$134,938	$147,772	$162,213	$174,779	$193,880	$218,267	$248,875	$286,964	$313,507	$341,257	$370,019	$401,809	$436,582	$471,567	$508,820	$547,797
Total Cost Change (in millions)	($3,832)	($5,833)	($9,259)	($29,126)	($8,571)	($8,481)	($7,468)	($3,166)	($1,450)	$210	$3,319	$5,888	$8,802	$11,497	$14,266	$17,279	$20,018
Accountable Care Organization (Medicare Shared Savings Program)																	* projected growth rates mirror growth assumptions for traditional FFS Medicare
Aggregate Reimbursement Amount (Per Capita Cost)																	
Total Cost Per Capita	--	$10,397	$10,530	$10,625	$10,755	$10,865	$11,139	$11,471	$12,113	$12,634	$13,165	$13,797	$14,445	$15,153	$15,850	$16,595	$17,392
Cost Change Over Baseline (ACO-FFS)	--	$71.00	$123.02	($1,044.26)	($1.66)	($142.60)	($291.61)	($511.39)	($579.00)	($634.00)	($687.00)	($757.00)	($830.00)	($915.00)	($992.00)	($1,084.00)	($1,177.00)
# of Enrollees (in thousands)	--	3289	5330	7270	7884	8993	10097	9998	10228	10473	10745	11003	11256	11515	11768	12015	12255
% of Total Medicare Enrollees	--	6.3%	9.8%	13.1%	13.8%	15.3%	16.8%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%	16.3%
Total Program Spend (in millions)	--	$34,193	$56,123	$77,244	$84,796	$97,711	$112,473	$114,680	$123,892	$132,316	$141,458	$151,808	$162,593	$174,487	$186,523	$199,389	$213,139
Total Cost Change (in millions)	--	$233,501	$655,649	($7,591,996)	($13,067)	($1,282,344)	($2,944,381)	($5,112,700)	($5,922,012)	($6,639,882)	($7,381,815)	($8,329,271)	($9,342,480)	($10,536,225)	($11,673,856)	($13,024,260)	($14,424,135)

Appendix 3. Alternative 2 Cost Model

The cost model for Alternative 2 uses the same per-capita cost projections as Alternative 1. Enrollment numbers for Medicare Advantage are hardcoded in the model to grow at 10.1% year-over-year. As Medicare Advantage enrollment grows, total traditional Medicare enrollment decreases in the model at an equivalent rate. The internal distribution between FFS and ACO participation within traditional Medicare is held constant at 26.2% over the projected period. Everything else in the model is held constant from the baseline.

The cost model for Alternative 2 can be found on the following page.

	Historical								Projected								
	2012	2013	2014	2015	2016	2017	2018	2019	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	*2027*	*2028*
																	* projected growth rates calculated by CMS
Medicare Enrollment (in thousands)																	
Part A	50540	52169	53777	55246	56729	58344	59794	60857	62264	63814	65485	67095	68676	70303	71904	73438	74916
Part B	46477	47952	49413	50756	52094	53446	54798	56115	57311	58752	60313	61824	63313	64847	66362	67827	69242
Part D	37448	39103	40499	41804	43217	44480	45778	47197	48827	50168	51781	53222	54609	55995	57326	58606	59843
Part C	13588	14843	16244	17493	18392	19816	21336	22942	24999	26213	27207	28036	28955	29862	30745	31588	32391
Medicare FFS	37286	37661	37871	38096	38681	38867	38811	38280	37643	37994	38685	39480	40156	40889	41622	42326	43013
Non-ACO FFS	--	34372	32541	30826	30797	29874	28714	28282	--	--	--	--	--	--	--	--	--
Total	50874	52504	54115	55589	57073	58683	60147	61222	62642	64207	65892	67516	69111	70751	72367	73914	75404
Alternative 1 Medicare FFS	--	--	--	--	--	--	--	--	36771	34993	32880	30247	27092	23419	19033	13970	8068
Alternative 1 Medicare Non-ACO FFS	--	--	--	--	--	--	--	--	27137	25825	24265	22322	19994	17283	14046	10310	5954
% Alternative 1 Non-ACO FFS	--	--	--	--	--	--	--	--	43.3%	40.2%	36.8%	33.1%	28.9%	24.4%	19.4%	13.9%	7.9%
Percent Changes																	
Percent Change Year over Year	--	3.1	3.0	2.7	2.6	2.7	2.4	1.8	2.3	2.4	2.6	2.4	2.3	2.3	2.2	2.1	2.0
FFS Medicare																	* projected growth rates calculated by CMS
Aggregate Reimbursement Amount (Per Capita Cost)																	
Part A	$5,196	$5,155	$5,012	$5,027	$5,093	$5,143	$5,202	$5,365	$5,644	$5,853	$6,077	$6,328	$6,570	$6,815	$7,063	$7,330	$7,606
Part B	$5,170	$5,171	$5,395	$6,642	$5,664	$5,865	$6,229	$6,617	$7,048	$7,415	$7,775	$8,226	$8,705	$9,253	$9,779	$10,349	$10,963
Part A + Part B Only	$10,366	$10,326	$10,407	$11,669	$10,757	$11,008	$11,431	$11,982	$12,692	$13,268	$13,852	$14,554	$15,275	$16,068	$16,842	$17,679	$18,569
Part D	$1,839	$1,874	$2,031	$2,152	$2,155	$2,120	$2,168	$2,168	$2,154	$2,241	$2,338	$2,438	$2,542	$2,624	$2,741	$2,862	$2,988
Total	$12,205	$12,200	$12,438	$13,821	$12,912	$13,128	$13,599	$14,150	$14,846	$15,509	$16,190	$16,992	$17,817	$18,692	$19,583	$20,541	$21,557
# of Enrollees (in thousands)	37286	34372	32541	30826	30797	29874	28714	28282	27137	25825	24265	22322	19994	17283	14046	10310	5954
Total FFS (A+B) Program Spend (in millions)	$386,507	$354,928	$338,656	$359,706	$331,283	$328,854	$328,231	$338,878	$344,423	$342,644	$336,125	$324,879	$305,407	$277,707	$236,569	$182,268	$110,563
Percent Changes																	
Part A	--	(0.8)	(2.9)	0.3	1.3	1.0	1.1	3.0	4.9	3.6	3.7	4.0	3.7	3.6	3.5	3.6	3.6
Part B	--	0.0	4.2	18.8	(17.3)	3.4	5.8	5.9	6.1	4.9	4.6	5.5	5.5	5.9	5.4	5.5	5.6
Part D	--	1.9	7.7	5.6	0.1	(1.7)	2.2	0.0	(0.6)	3.9	4.1	4.1	4.1	3.1	4.3	4.2	4.2
Part A + Part B Only	--	(0.4)	0.8	10.8	(8.5)	2.3	3.7	4.6	5.6	4.3	4.2	4.8	4.7	4.9	4.6	4.7	4.8
Total	--	0.0	1.9	10.0	(7.0)	1.6	3.5	3.9	4.7	4.3	4.2	4.7	4.6	4.7	4.5	4.7	4.7
Medicare Advantage																	* projected growth rates calculated by CMS
Reimbursement Amount (Per Capita Cost)																	
Total Cost Per Capita	$10,084	$9,933	$9,837	$10,004	$10,291	$10,580	$11,081	$11,844	$12,634	$13,276	$13,974	$14,764	$15,579	$16,453	$17,306	$18,226	$19,187
Per Capita Total Cost Change	($282)	($393)	($570)	($1,665)	($466)	($428)	($350)	($138)	($58)	$8	$122	$210	$304	$385	$464	$547	$618
Bid-based Cost Per Capita	$9,212	$9,091	$9,097	$9,273	$9,503	$9,784	$10,230	$10,848	$11,479	$11,960	$12,543	$13,198	$13,877	$14,620	$15,338	$16,108	$16,912
Per Capita Bid-based Cost Change	($1,154)	($1,235)	($1,310)	($2,396)	($1,254)	($1,224)	($1,201)	($1,134)	($1,213)	($1,308)	($1,309)	($1,356)	($1,398)	($1,448)	($1,504)	($1,571)	($1,657)
# of Enrollees (in thousands)	13588	14843	16244	17493	18392	19816	21336	22942	25871	29214	33012	37269	42019	47332	53334	59944	67336
% of Total Medicare Enrollees	26.7%	28.3%	30.0%	31.5%	32.2%	33.8%	35.5%	37.5%	41.3%	45.5%	50.1%	55.2%	60.8%	66.9%	73.7%	81.1%	89.3%
Total Program Spend (in millions)	$137,021	$147,436	$159,792	$175,000	$189,272	$209,653	$236,424	$271,725	$326,854	$387,845	$461,310	$550,240	$654,614	$778,753	$922,998	$1,092,539	$1,291,976
Total Program Bid-Based Spend (in millions)	$125,173	$134,938	$147,772	$162,213	$174,779	$193,880	$218,267	$248,875	$296,973	$349,399	$414,070	$491,876	$583,098	$691,994	$818,037	$965,578	$1,138,786
Total Cost Change (in millions)	($3,832)	($5,833)	($9,259)	($29,126)	($8,571)	($8,481)	($7,468)	($3,166)	($1,501)	$234	$4,027	$7,826	$12,774	$18,223	$24,747	$32,789	$41,614
Accountable Care Organization (Medicare Shared Savings Program)																	* projected growth rates mirror growth assumptions for traditional FFS Medicare
Aggregate Reimbursement Amount (Per Capita Cost)																	
Total Cost Per Capita	--	$10,397.00	$10,530.02	$10,624.74	$10,755.34	$10,865.40	$11,139.39	$11,470.61	$12,113.00	$12,634.00	$13,165.00	$13,797.00	$14,445.00	$15,153.00	$15,850.00	$16,595.00	$17,392.00
Cost Change Over Baseline (ACO-FFS)	--	$71.00	$123.02	($1,044.26)	($1.66)	($142.60)	($291.61)	($511.39)	($579.00)	($634.00)	($687.00)	($757.00)	($830.00)	($915.00)	($992.00)	($1,084.00)	($1,177.00)
# of Enrollees (in thousands)	--	3289	5330	7270	7884	8993	10097	9998	9634	9168	8615	7925	7098	6136	4987	3660	2114
% of Total Medicare Enrollees	--	6.3%	9.8%	13.1%	13.8%	15.3%	16.8%	16.3%	15.4%	14.3%	13.1%	11.7%	10.3%	8.7%	6.9%	5.0%	2.8%
Total Program Spend (in millions)	--	$34,193	$56,123	$77,244	$84,796	$97,711	$112,473	$114,680	$116,697	$115,831	$113,411	$109,337	$102,532	$92,975	$79,038	$60,740	$36,763
Total Cost Change (in millions)	--	$233,501	$655,649	($7,591,996)	($13,067)	($1,282,344)	($2,944,381)	($5,112,700)	($5,578,087)	($5,812,617)	($5,918,203)	($5,999,008)	($5,891,426)	($5,614,237)	($4,946,753)	($3,967,592)	($2,487,961)

Appendix 4. Alternative 3 Cost Model

The cost model for Alternative 3 uses the same per-capita cost projections as Alternative 1. Enrollment numbers for Accountable Care Organization participation are hardcoded in the model to grow at 14.5% year-over-year within traditional Medicare. Rates of enrollment for Medicare Advantage grow at the baseline rate under this scenario. The rate of participation in Fee-for-service Medicare as a part of the internal distribution between FFS and ACO participation in traditional Medicare reduces proportionately to the increases in ACO participation.

The cost model for Alternative 3 can be found on the following page.

	Historical								Projected								
	2012	2013	2014	2015	2016	2017	2018	2019	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	*2027*	*2028*
													* projected growth rates calculated by CMS				
Medicare Enrollment (in thousands)																	
Part A	50540	52169	53777	55246	56729	58344	59794	60857	62264	63814	65485	67095	68676	70303	71904	73438	74916
Part B	46477	47952	49413	50756	52094	53446	54798	56115	57311	58752	60313	61824	63313	64847	66362	67827	69242
Part D	37448	39103	40499	41804	43217	44480	45778	47197	48827	50168	51781	53222	54609	55995	57326	58606	59843
Part C	13588	14843	16244	17493	18392	19816	21336	22942	24999	26213	27207	28036	28955	29862	30745	31588	32391
Medicare FFS	37286	37661	37871	38096	38681	38867	38811	38280	37643	37994	38685	39480	40156	40889	41622	42326	43013
Non-ACO FFS	--	34372	32541	30826	30797	29874	28714	28282	--	--	--	--	--	--	--	--	--
Total	50874	52504	54115	55589	57073	58683	60147	61222	62642	64207	65892	67516	69111	70751	72367	73914	75404
Alternative 2 Non-ACO FFS	--	--	--	--	--	--	--	--	25929	24254	22541	20508	17902	14782	11011	6552	1239
Alternative 2 Non-ACO FFS	--	--	--	--	--	--	--	--	41.4%	37.8%	34.2%	30.4%	25.9%	20.9%	15.2%	8.9%	1.6%
Percent Changes																	
Percent Change Year over Year	--	3.1	3.0	2.7	2.6	2.7	2.4	1.8	2.3	2.4	2.6	2.4	2.3	2.3	2.2	2.1	2.0
FFS Medicare																	
														* projected growth rates calculated by CMS			
Aggregate Reimbursement Amount (Per Capita Cost)																	
Part A	$5,196	$5,155	$5,012	$5,027	$5,093	$5,143	$5,202	$5,365	$5,644	$5,853	$6,077	$6,328	$6,570	$6,815	$7,063	$7,330	$7,606
Part B	$5,170	$5,171	$5,395	$6,642	$5,664	$5,865	$6,229	$6,617	$7,048	$7,415	$7,775	$8,226	$8,705	$9,253	$9,779	$10,349	$10,963
Part A + Part B Only	$10,366	$10,326	$10,407	$11,669	$10,757	$11,008	$11,431	$11,982	$12,692	$13,268	$13,852	$14,554	$15,275	$16,068	$16,842	$17,679	$18,569
Part D	$1,839	$1,874	$2,031	$2,152	$2,155	$2,120	$2,168	$2,168	$2,154	$2,241	$2,338	$2,438	$2,542	$2,624	$2,741	$2,862	$2,988
Total	$12,205	$12,200	$12,438	$13,821	$12,912	$13,128	$13,599	$14,150	$14,846	$15,509	$16,190	$16,992	$17,817	$18,692	$19,583	$20,541	$21,557
# of Enrollees (in thousands)	37286	34372	32541	30826	30797	29874	28714	28282	25929	24254	22541	20508	17902	14782	11011	6552	1239
Total Program Spend (in thousands)	$455,076	$419,342	$404,747	$426,043	$397,650	$392,187	$390,483	$400,194	$384,941	$376,151	$364,946	$348,472	$318,965	$276,303	$215,624	$134,577	$26,713
Percent Changes																	
Part A	--	(0.8)	(2.9)	0.3	1.3	1.0	1.1	3.0	4.9	3.6	3.7	4.0	3.7	3.6	3.5	3.6	3.6
Part B	--	0.0	4.2	18.8	(17.3)	3.4	5.8	5.9	6.1	4.9	4.6	5.5	5.5	5.9	5.4	5.5	5.6
Part D	--	1.9	7.7	5.6	0.1	(1.7)	2.2	0.0	(0.6)	3.9	4.1	4.1	4.1	3.1	4.3	4.2	4.2
Part A + Part B Only	--	(0.4)	0.8	10.8	(8.5)	2.3	3.7	4.6	5.6	4.3	4.2	4.8	4.7	4.9	4.6	4.7	4.8
Total	--	0.0	1.9	10.0	(7.0)	1.6	3.5	3.9	4.7	4.3	4.2	4.7	4.6	4.7	4.5	4.7	4.7
Medicare Advantage																	
														* projected growth rates calculated by CMS			
Aggregate Reimbursement Amount (Per Capita Cost)																	
Total Cost Per Capita	$10,084	$9,933	$9,837	$10,004	$10,291	$10,580	$11,081	$11,844	$12,634	$13,276	$13,974	$14,764	$15,579	$16,453	$17,306	$18,226	$19,187
Per Capita Total Cost Change	(282)	(393)	(570)	(1665)	(466)	(428)	(350)	(138)	(58)	8	122	210	304	385	464	547	618
Bid-based Cost Per Capita	$9,212	$9,091	$9,097	$9,273	$9,503	$9,784	$10,230	$10,848	$11,479	$11,960	$12,543	$13,198	$13,877	$14,620	$15,338	$16,108	$16,912
Per Capita Bid-based Cost Change	(1154)	(1235)	(1310)	(2396)	(1254)	(1224)	(1201)	(1134)	(1213)	(1308)	(1309)	(1356)	(1398)	(1448)	(1504)	(1571)	(1657)
# of Enrollees (in thousands)	13588	14843	16244	17493	18392	19816	21336	22942	24999	26213	27207	28036	28955	29862	30745	31588	32391
% of Total Medicare Enrollees	26.7%	28.3%	30.0%	31.5%	32.2%	33.8%	35.5%	37.5%	39.9%	40.8%	41.3%	41.5%	41.9%	42.2%	42.5%	42.7%	43.0%
Total Program Spend (in thousands)	$137,021	$147,436	$159,792	$175,000	$189,272	$209,653	$236,424	$271,725	$315,837	$348,004	$380,191	$413,924	$451,090	$491,319	$532,073	$575,723	$621,486
Total Program Bid-Based Spend (in millions)	$125,173	$134,938	$147,772	$162,213	$174,779	$193,880	$218,267	$248,875	$286,964	$313,507	$341,257	$370,019	$401,809	$436,582	$471,567	$508,820	$547,797
Total Cost Change (in millions)	(3832)	(5833)	(9259)	(29126)	(8571)	(8481)	(7468)	(3166)	(1450)	210	3319	5888	8802	11497	14266	17279	20018
Accountable Care Organization (Medicare Shared Savings Program)																	
													* projected growth rates mirror growth assumptions for traditional FFS Medicare				
Aggregate Reimbursement Amount (Per Capita Cost)																	
Total Cost Per Capita	--	10,397.00	10,530.02	10,624.7	10,755.34	10,865.40	11,139.39	11,470.61	12,113	12,634	13,165	13,797	14,445	15,153	15,850	16,595	17,392
Cost Change Over Baseline (ACO-FFS)	--	71.00	123.02	(1,044.26)	(1.66)	(142.60)	(291.61)	(511.39)	(579)	(634)	(687)	(757)	(830)	(915)	(992)	(1,084)	(1,177)
# of Enrollees (in thousands)	--	3289	5330	7270	7884	8993	10097	9998	11714	13740	16144	18972	22254	26107	30611	35774	41774
% of Total Medicare Enrollees	--	6.3%	9.8%	13.1%	13.8%	15.3%	16.8%	16.3%	18.7%	21.4%	24.5%	28.1%	32.2%	36.9%	42.3%	48.4%	55.4%
Total Program Spend (in thousands)	--	$34,193	$56,123	$77,244	$84,796	$97,711	$112,473	$114,680	$141,892	$173,595	$212,530	$261,757	$321,455	$395,601	$485,188	$593,676	$726,530
Total Cost Change (in millions)	--	$233,501	$655,649	($7,591,996)	($13,067)	($1,282,344)	($2,944,381)	($5,112,700)	($6,782,437)	($8,711,349)	($11,090,612)	($14,361,801)	($18,470,606)	($23,888,014)	($30,366,351)	($38,779,424)	($49,167,781)

Appendix 5. Cost Comparisons

Under each Alternative, the alternative cost comparisons look at both the scenario of the total cost the government pays to Medicare Advantage plans and spending using the bid-based expenditures of Medicare Advantage plans instead (i.e., the actual cost to cover the enrollees). Ultimately, the total cost to the government is used in the analysis, but the bid expenditures of Medicare Advantage plans are important to the interpretation of the end result of the analysis in this report.

	Projected									Total
	2020	*2021*	*2022*	*2023*	*2024*	*2025*	*2026*	*2027*	*2028*	
Alternative 1: Baseline (in millions)										
Total (MA Total)	$787,681	$845,468	$908,673	$980,186	$1,055,130	$1,137,788	$1,221,397	$1,310,980	$1,405,770	**$9,653,074**
Total (MA Bid-based)	$758,807	$810,972	$869,740	$936,281	$1,005,849	$1,083,051	$1,160,891	$1,244,077	$1,332,081	$9,201,749
Alternative 2 (in millions)										
Total (MA Total)	$787,974	$846,320	$910,846	$984,455	$1,062,553	$1,149,435	$1,238,605	$1,335,547	$1,439,302	**$9,755,037**
Total (MA Bid-based)	$758,093	$807,874	$863,605	$926,092	$991,036	$1,062,676	$1,133,644	$1,208,586	$1,286,113	$9,037,719
Baseline Comparison (MA Total)	$293	$852	$2,172	$4,269	$7,422	$11,647	$17,208	$24,567	$33,532	$101,963
Baseline Comparison (MA Bid-based)	($714)	($3,098)	($6,135)	($10,190)	($14,813)	($20,375)	($27,247)	($35,491)	($45,968)	($164,030)
Alternative 3 (in millions)										
Total (MA Total)	$842,670	$897,749	$957,667	$1,024,153	$1,091,509	$1,163,223	$1,232,885	$1,303,976	$1,374,729	**$9,888,562**
Total (MA Bid-based)	$813,797	$863,253	$918,734	$980,248	$1,042,228	$1,108,486	$1,172,379	$1,237,072	$1,301,040	$9,437,237
Baseline Comparison (MA Total)	$54,990	$52,281	$48,993	$43,967	$36,379	$25,435	$11,488	($7,004)	($31,041)	$235,488
Baseline Comparison (MA Bid-based)	$54,990	$52,281	$48,993	$43,967	$36,379	$25,435	$11,488	($7,004)	($31,041)	$235,488

Appendix 6. Outcomes Matrix Sensitivity Analysis

30% Decreased Weight on Cost					15% Decreased Weight on Cost					15% Increased Weight on Cost				
	Cost	Outcomes	Political Feasibility	Composite		Cost	Outcomes	Political Feasibility	Composite		Cost	Outcomes	Political Feasibility	Composite
WEIGHTS	49%	31%	20%	100%	WEIGHTS	59.5%	24%	16%	100%	WEIGHTS	81%	12%	8%	100%
Baseline	2.000	1	2	1.69	Baseline	2.000	1	2	1.757	Baseline	2.000	1	2	1.883
Alternative 1	1.979	1.5	1.5	**1.74**	Alternative 1	1.979	1.5	1.5	**1.785**	Alternative 1	1.979	1.5	1.5	**1.886**
Alternative 2	1.951	1.5	1	1.62	Alternative 2	1.951	1.5	1	1.687	Alternative 2	1.951	1.5	1	1.824

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