

# Improving Affordability and Equity in Medicare Advantage

INQUIRY: The Journal of Health Care Organization, Provision, and Financing  
Volume 56: 1–7  
© The Author(s) 2019  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/0046958019852873  
journals.sagepub.com/home/inq



Zirui Song, MD, PhD<sup>1,2,3</sup>   
and Sanjay Basu, MD, PhD<sup>3,4,5</sup>

## Abstract

Facing projected growth in federal deficits, policymakers may increasingly look to Medicare for opportunities to slow spending. Medicare Advantage, which has grown to over one-third of the Medicare population, now costs the federal government over \$230 billion a year. Competition in the program is weak in many parts of the country and federal subsidies are distributed unevenly to beneficiaries who are enrolled. This article offers a potential approach toward reforming the Medicare Advantage payment system, which could lower federal costs and enhance equity in the program. It builds a simple framework containing policy options and uses 2015 Centers for Medicare and Medicaid Services data to estimate the stylized impact on federal spending and enrollee benefits.

## Keywords

Medicare Advantage, Affordable Care Act, health insurance, Medicare payment, competition

### What do we already know about this topic?

The Medicare Advantage program, founded on private insurers competing in a regulated market, has grown to 21 million beneficiaries but faces challenges surrounding affordability and equity.

### How does your research contribute to the field?

Reforming the Medicare Advantage payment system, by allowing insurer pricing decisions (the bids) to competitively set plan payments (the benchmarks) with a protective adjustment factor at the discretion of policymakers as proposed here, could generate savings for taxpayers and the Medicare Trust Fund while improving equity of benefits across Medicare beneficiaries.

### What are your research's implications toward theory, practice, or policy?

Reforming the way Medicare Advantage plans are paid could render the Medicare Advantage program more affordable for the government and more equitable for beneficiaries.

## Introduction

The federal deficit is poised to grow after passage of 2 recent laws. The 2017 Tax Cuts and Jobs Act and the 2018 Budget Act are estimated to add over \$1.7 trillion in deficits over the next decade, according to the Congressional Budget Office (CBO). As a result, lawmakers will face pressure to cut spending, and Medicare Advantage may be an increasingly likely target.

Medicare Advantage, which has grown to 21 million enrollees or 36% of the Medicare population (40% of Medicare beneficiaries with Part A and Part B coverage), now costs the federal government more than \$230 billion a year—over 1% of the US economy.<sup>1</sup> Founded on private insurers competing to offer beneficiaries an alternative option to traditional Medicare, the program typically pays insurers more than the cost and allowed profit of insuring

beneficiaries.<sup>2,3</sup> Although the Affordable Care Act (ACA) aimed to lower federal payments to Medicare Advantage plans, much of the cuts were effectively offset through quality-based payments to plans.

<sup>1</sup>Department of Health Care Policy, Harvard Medical School, Boston, MA, USA

<sup>2</sup>Department of Medicine, Massachusetts General Hospital, Boston, MA, USA

<sup>3</sup>Center for Primary Care, Harvard Medical School, Boston, MA, USA

<sup>4</sup>Research and Analytics, Collective Health, San Francisco, CA, USA

<sup>5</sup>School of Public Health, Imperial College London, London, UK

Received 10 July 2018; revised 20 March 2019; revised manuscript accepted 29 April 2019

### Corresponding Author:

Zirui Song, Department of Health Care Policy, Harvard Medical School, 180A Longwood Avenue, Boston, MA 02115, USA.

Email: [song@hcp.med.harvard.edu](mailto:song@hcp.med.harvard.edu)



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons

Attribution-NonCommercial 4.0 License (<http://www.creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

In addition to costs, policymakers face other important problems in Medicare Advantage. Competition between insurers, a key tenet of the program, is weak in many parts of the country.<sup>4</sup> Moreover, federal subsidies are distributed to beneficiaries unequally. For example, the benefits provided by Medicare Advantage plans beyond traditional Medicare (called “rebates”) including reduced cost-sharing and coverage of additional benefits were worth \$344 per month in Miami-Dade, Florida, in 2015, compared with \$68 among similar plans in Faulkner, Arkansas, even though enrollee risk scores in both counties were nearly identical.<sup>5</sup> Making Medicare Advantage more affordable while improving the equity of program benefits for beneficiaries is an important policy goal that could be achieved through reforming the way Medicare Advantage plans are paid.

### Current Medicare Advantage Payments

To date, Medicare Advantage plan payments have been set using traditional Medicare costs. The Centers for Medicare and Medicaid Services (CMS) sets a “benchmark” payment rate annually, for each county, that it is willing to pay a plan for insuring a Medicare beneficiary.<sup>6</sup> In response, plans submit to CMS the payment they request to insure a beneficiary—the plan “bid.” The relationship between this bid and the benchmark determines a plan’s payment and its rebate. If a plan’s bid is higher than the benchmark, CMS pays the plan the benchmark, and the plan charges enrollees a premium for the difference. If the bid is lower than the benchmark, the plan is paid its bid plus a share of the difference between its bid and the benchmark (50%-70%, depending on plan quality) as its rebate, which the plan must return to beneficiaries through lower cost-sharing or additional benefits (such as vision, hearing, or dental coverage). Thus, the lower the bid, the larger the rebate a plan receives with which to attract enrollees. If the market is competitive, plans have an incentive to bid low.

### Reforming Medicare Advantage Payments

Under current law, because the CMS benchmark—the key federal policy lever—is not determined at all by the plan bid, the ability of competition among Medicare Advantage plans to lower government spending is blunted. Allowing bids to, in part, determine the benchmark would enable bids below the benchmark to directly reduce government costs through lowering the final benchmark. In so doing, it could enhance insurer competition (as plans would need to bid lower to generate the same amount of rebates), make rebates more equitable across the country, and notably lower the cost of Medicare Advantage for the government and taxpayers.

In its simplest form, this can be achieved by setting each county’s benchmark to be the lesser of 2 numbers—the current benchmark (based solely on traditional Medicare costs)

and the average bid in a county. In other words, the final benchmark would be the lesser of:

Current benchmark versus average bid.

Under this scenario, if the average bid exceeds the current benchmark (plans asking for more than what the government is willing to pay), the current benchmark would still be final. However, if the average bid is less than the current benchmark (plans asking for less than what the government is willing to pay), then the average bid would be the final benchmark. Rebates would be calculated based on the bid and benchmark in the same way as under current law. This provides an opportunity for competition through bids to drive down federal spending, notably in regions where traditional Medicare costs are high (due to more intensive practice patterns and other factors) and rebates are concentrated among relatively few enrollees. Moreover, this guarantees that, in every county, the final benchmark is no higher than that under current law.

Driving benchmarks all the way down to average bids (implying fairly large reductions in rebates), however, may be untenable for some plans or beneficiaries, possibly causing them to exit Medicare Advantage. To mitigate the reductions in rebates and help prevent such exit, the new benchmark could include a protective factor for plans and beneficiaries—a “buffer”—that allows policymakers to decide how many enrollees are affected by the new benchmark (and to what extent), as well as how much federal savings are generated. This buffer amount could be set as a percentage, “*x*,” of the current law benchmark, such that the final benchmark is the lesser of the following (for more details on the data and methods, please see the appendix):

Current benchmark versus

(average bid + *x* \* current benchmark).

### Projected Savings and Rebates

Table 1 illustrates the potential impact of this policy under different buffer scenarios using 2015 CMS data, assuming a zero plan bid response—in other words, no changes in plan bids in response to resulting changes in benchmarks. The new benchmark would decrease the cost of Medicare Advantage under every buffer scenario. Projected savings for the government ranged from 0.8% of Medicare Advantage costs when the buffer is 20% (affecting a small share of enrollees), to 7.3% of Medicare Advantage costs when the buffer is 5% (affecting the majority of enrollees). In the extreme, projected savings were largest (11.4%) when there was no buffer—in other words when the new benchmark was simply the average bid.

Disparities in rebates would be narrowed at every buffer level, as enrollees in counties with the most generous rebates

**Table 1.** Potential Impact of Reforming the Medicare Advantage Payment System, Assuming No Plan Bid Response.

	Current law	New benchmark scenarios				
		Average bid + 20% buffer	Average bid + 15% buffer	Average bid + 10% buffer	Average bid + 5% buffer	Average bid (no buffer)
Benchmark						
Average final benchmark <sup>a</sup>	808.85	801.61	789.46	768.60	735.73	696.26
Rebates						
Average enrollee rebates	83.03	76.57	66.86	52.01	31.14	12.30
Quartile of average rebates <sup>b</sup>						
Lowest rebate quartile	16.71	16.66	16.35	14.86	8.23	1.12
Second rebate quartile	49.31	48.80	46.93	41.10	22.73	5.48
Third rebate quartile	87.72	86.67	80.58	62.18	37.58	15.17
Highest rebate quartile	181.09	156.21	124.89	90.78	56.58	27.80
Enrollees affected						
Facing current benchmark	100.0	79.8	62.7	36.0	9.0	0.1
Facing new benchmark	—	20.2	37.3	64.0	91.0	99.9
Savings for Medicare <sup>c</sup>						
Relative to current law	—	0.8	2.1	4.2	7.3	11.4

Note. Medicare Advantage public use data from the Centers for Medicare and Medicaid Services, 2015; HMO plans, local PPO plans, private fee-for-service plans, medical savings account plans, and special needs plans were included in the analysis. These plan types comprise the vast majority of enrollment. Employer group waiver plans, regional PPOs, and cost contracts were excluded as they have different payment systems and incentives. Details of the data and methods are provided in the appendix. HMO = health maintenance organization; PPO = preferred provider organization.

<sup>a</sup>National average final benchmark weighted by enrollment and adjusted for quality (plan star level). Under the new benchmark scenarios, the final benchmark equals the lesser of the current law and the new benchmark.

<sup>b</sup>Rebate quartiles were calculated based on enrollment and kept consistent across definitions of the new benchmark. These quartiles are unrelated to the quartiles of counties by which the Affordable Care Act calculates county-level benchmarks.

<sup>c</sup>Estimated federal savings assuming no change in plan bids and enrollment.

would face a decrease in rebates and enrollees already receiving lower rebates would be less affected by the policy. For example, under the 20% and 15% buffer scenarios, rebates in the 3 lowest quartiles (75% of enrollees) would face a 0% to 8% cut (Table 1). Nevertheless, under the assumption of no changes in plan bids, rebates could be substantially lower relative to the level under current law in areas with generous rebates, depending on the buffer level. Lower rebates could lead to decreased enrollment in Medicare Advantage (eg, beneficiaries choosing traditional Medicare instead). To the extent this happens, the projected federal savings would be an overestimate, especially if less healthy enrollees transfer their costs to traditional Medicare. However, a prior decline in rebates from 2009 to 2010 of roughly 20% did not suppress Medicare Advantage enrollment; instead, enrollment continued to grow.<sup>7,8</sup>

On the contrary, the assumption of no changes in plan bids may render the projected savings conservative. Evidence shows that Medicare Advantage plans change their bids when benchmarks change; within 2006 to 2015, for every dollar change in the benchmark, bids changed by 50 to 60 cents and rebates by about 27 to 34 cents in the same direction.<sup>9-11</sup> Therefore, because competition is imperfect and plans are evidently not bidding their costs, lower final benchmarks would likely lead to lower bids, which would mitigate the reduction in rebates. Lower bids then would directly lower Medicare Advantage spending, which

would boost projected savings, again assuming no changes in enrollment.

Table 2 shows the analogous projections assuming a plan bid response of 50%—in other words, for every dollar that the final benchmark is below the current law benchmark, projected bids were \$0.50 lower (eg, if the final benchmark is \$100 less than the current law benchmark, the projected bid would be \$50 less than the bid under current law). Under each buffer scenario, projected federal savings are larger than that under the assumption of no plan bid response, from 0.9% savings at a 20% buffer to 8.3% savings at a 5% buffer, due to the lower bids. Disparities in rebates would similarly narrow, but rebates are larger than those under a zero bid response at every level of the buffer, again due to the lower bids protecting beneficiary rebates from facing the full effects of the benchmark decrease.

## Implications

Reforming the Medicare Advantage payment system by allowing plan pricing decisions (bids) to partially set plan payments (benchmarks) with a flexible adjustment factor (buffer) that helps protect beneficiary rebates at the discretion of policymakers has several advantages. First, it saves money. By lowering final benchmarks and encouraging lower bids, the policy makes the Medicare Advantage program more affordable for the government and taxpayers.

**Table 2.** Potential Impact of Reforming the Medicare Advantage Payment System, Assuming a 50% Plan Bid Response.

	Current law	New benchmark scenarios				
		Average bid + 20% buffer	Average bid + 15% buffer	Average bid + 10% buffer	Average bid + 5% buffer	Average bid (no buffer)
Benchmark						
Average final benchmark <sup>a</sup>	808.85	801.61	789.46	768.60	735.73	696.26
Rebates						
Average enrollee rebates	83.03	79.80	74.84	67.02	55.66	43.17
Quartile of average rebates <sup>b</sup>						
Lowest rebate quartile	16.71	16.68	16.48	15.56	11.27	4.51
Second rebate quartile	49.31	49.05	47.94	44.53	34.40	22.47
Third rebate quartile	87.72	87.20	84.13	74.63	61.54	48.03
Highest rebate quartile	181.09	168.65	152.83	135.14	117.06	99.18
Enrollees affected						
			% of enrollees			
Facing current benchmark	100.0	79.8	62.7	36.0	9.0	0.1
Facing new benchmark	—	20.2	37.3	64.0	91.0	99.9
Savings for Medicare <sup>c</sup>						
			% of current law spending			
Relative to current law	—	0.9	2.3	4.7	8.3	12.8

Note. Medicare Advantage public use data from the Centers for Medicare and Medicaid Services, 2015; HMO plans, local PPO plans, private fee-for-service plans, medical savings account plans, and special needs plans were included in the analysis. These plan types comprise the vast majority of enrollment. Employer group waiver plans, regional PPOs, and cost contracts were excluded as they have different payment systems and incentives. Details of the data and methods are provided in the appendix. HMO = health maintenance organization; PPO = preferred provider organization.

<sup>a</sup>National average final benchmark weighted by enrollment and adjusted for quality (plan star level). Under the new benchmark scenarios, the final benchmark equals the lesser of the current law and the new benchmark.

<sup>b</sup>Rebate quartiles were calculated based on enrollment and kept consistent across definitions of the new benchmark. These quartiles are unrelated to the quartiles of counties by which the Affordable Care Act calculates county-level benchmarks.

<sup>c</sup>Estimated federal savings assuming no change in plan enrollment and a 50% plan bid response (for every dollar that the final benchmark is lower than the current law benchmark, bids would be \$0.50 lower than the observed bids under current law).

Second, it may enhance plan competition. By allowing bids to play a role in determining the benchmark, bidding lower becomes more important for plans looking to earn a rebate with which to attract enrollees. Third, it makes Medicare Advantage more equitable by narrowing the gap in rebates; enrollees living in counties with preexisting less generous rebates are less affected. This policy proposal is related to theoretical advancements in selection in insurance markets that suggest benchmarks should generally be set lower than average costs in traditional Medicare.<sup>12</sup>

In the fiscal year 2017 budget, the Obama Administration proposed a similar system with the new benchmark equal to the average bid plus a buffer of 5%.<sup>13</sup> The CBO projected it would save \$77.2 billion over 10 years. Notably, this proposal was among a set of Medicare reforms that was the principal source of savings expected to fund the remainder of federal government outlays. It is also related to a recent proposal to expand competitive bidding in Medicare Advantage.<sup>14</sup>

By allowing policymakers to choose the buffer level, this policy allows them to toggle a critical trade-off between federal savings and enrollee rebates, which encourages plan efficiency. Having a buffer to help plans stay in the market is substantially less draconian than lowering the benchmark to the average bid. It is also less draconian than prior proposals to set the benchmark as the second-lowest bid in each county (eg, the Ryan-Wyden and Domenici-Rivlin proposals), which allow only 1 plan in each county to receive a rebate.<sup>15</sup>

This proposal has several notable limitations. First, even with the protective buffer and the aid of a plan bid response, the narrowing of disparities in rebates requires some beneficiaries (albeit those already receiving the most generous rebates) to see a decrease in rebates. Lowering benefits after they have been established is always a challenging prospect. Second, this proposal does not address incentives for advantageous selection of healthier beneficiaries, which has been documented in Medicare Advantage.<sup>16</sup> In fact, it is possible that plans might respond to a decline in their benchmark by intensifying selection behavior, rather than improving efficiency or quality to compete more effectively. Third, this proposal also does not address the quality incentives for plans, which has been shown to help offset some of the intended effects of the ACA on Medicare Advantage spending. The influence of plan star ratings on the calculation of the benchmark and rebate was kept the same as under current law in the calculation of savings and rebates.

As Medicare spending grows amid burgeoning deficits, some policymakers advocate reforming the entire Medicare program toward a Medicare Advantage model. If this happens, finding savings in Medicare Advantage will be critical. Others argue for abolishing private plans altogether in favor of a Medicare-for-All program. In that case, reducing Medicare costs will also be needed. In the middle of this crucial debate, the approach proposed here to generate savings while improving equity in Medicare Advantage may offer a path forward.

## Appendix

This appendix describes the data and methods used to conduct the analysis of potential impact of reforming the Medicare Advantage benchmark formula.

### Data

To construct the analytic data set, this study used the following Centers for Medicare and Medicaid Services (CMS) public use data.

- Monthly enrollment and plan information by contract /plan/state/county in 2015 (<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MCRAdvPartDENrolData/Monthly-Enrollment-by-Contract-Plan-State-County.html>).
- Medicare Advantage benchmark data by county in 2015 (<https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Ratebooks-and-Supporting-Data.html>).
- Medicare Advantage star ratings data by contract in 2015 (<https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/PerformanceData.html>).
- Medicare Advantage plan payment data by county and by plan in 2015 (<https://www.cms.gov/Medicare/Medicare-Advantage/Plan-Payment/Plan-Payment-Data.html>).

These data were combined to create an analytic data set comprising enrollment, benchmark, bid, rebate, and plan characteristics (including plan type and star rating) at the plan-by-county level. Of note, to verify the accuracy of plan rebates in the Medicare Advantage plan payment data, the 2012 plan payment data were compared with the 2012 Medicare Advantage bid pricing data public use files, which contained plan bids, rebates, and other information, and were released pursuant to §422.272 Release of Medicare Advantage bid pricing data (<https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/DataFiles.html>).

### Methods

This analysis included health maintenance organization (HMO) plans, local preferred provider organization (PPO) plans, private fee-for-service plans, medical savings account plans, and special needs plans. These plan types operate under the same bidding system and comprise the bulk of Medicare Advantage enrollment. Employer group waiver plans, regional PPO plans, and cost contracts were excluded as they are governed by different payment systems or have different incentives.

Each county has its own benchmark. Under current law, this benchmark is determined by historical traditional Medicare spending. Each plan submits a single bid, but can offer itself in multiple counties. The relationship between the bid and the benchmark determines the final plan payment, with plan quality (stars) also playing a role in the benchmark starting in 2012. In this study, the mean bid was calculated as a weighted average (based on plan enrollment) of observed plan bids with each county. Under different scenarios of the new benchmark, the mean bid was augmented by a “buffer” that was set to equal a percentage of the county benchmark, as follows:

- New benchmark = Mean bid (ie, no buffer)
- New benchmark = Mean bid + 0.05 × Current law benchmark
- New benchmark = Mean bid + 0.10 × Current law benchmark
- New benchmark = Mean bid + 0.15 × Current law benchmark
- New benchmark = Mean bid + 0.20 × Current law benchmark.

Under each buffer scenario, the new benchmark was compared with the current law benchmark. The lesser of the 2 was the final benchmark for the county under the proposed policy. Of note, the role of plan quality on the benchmark was unchanged within the 2 benchmarks.

To calculate new rebates under each scenario of the proposed policy, the final benchmark was compared with the actual bids. Following Medicare Advantage current law, if the bid is *less* than the final benchmark, the rebate is set equal to a given percent of the difference depending on a plan’s star rating. Plans with 4.5 to 5 stars receive 70% of the difference as a rebate, plans with 3.5 to 4 stars received 65%, and plans with 3 or fewer stars received 50%. This formula is shown below:

$$\text{Rebate} = \left. \begin{array}{ll} 0.50(\text{final benchmark} - \text{bid}) & \\ (\text{plan risk}) & \text{if } < 3.5 \text{ stars} \\ 0.65(\text{final benchmark} - \text{bid}) & \\ (\text{plan risk}) & \text{if } 3.5 \text{ to } 4.49 \text{ stars} \\ 0.70(\text{final benchmark} - \text{bid}) & \\ (\text{plan risk}) & \text{if } \geq 4.5 \text{ stars} \end{array} \right\}$$

If the bid is *greater* than the final benchmark, then the rebate is zero (Medicare Advantage plans must charge this difference as an additional premium). The risk score is applied to the equations above, as rebates are calculated by CMS as risk-adjusted dollars reflecting plan risk.

A national average of the new rebate was calculated, weighted by plan enrollment, as shown below, where  $n$  denotes the number of plans in 2015. For comparison, a

national average of the rebate was calculated under current law rules, similarly weighted. This rebate calculated under current law rules was similar, but not identical, to the actual rebates because it used the plans' projected risk scores (published in the plan payment data) rather than the actual risk scores which were used to determine the actual rebates (which were not publicly available). Nevertheless, the correlation between the rebates calculated using projected risk scores and actual rebates was 0.93, and a regression of the former on the latter produced a coefficient of 0.9997. Thus, the projected risk scores were used for consistency in calculating the rebate under scenarios of the buffer and under current law. The final benchmark under buffer scenarios and benchmark under current law were calculated in an analogous fashion, using enrollment as the weight:

$$\text{Rebate}_{\text{US\_weighted\_average}} = \frac{\sum_{i=1}^n (\text{rebate}_i \times \text{enrollment}_i)}{\sum_{i=1}^n \text{enrollment}_i}$$

Average weighted new rebates were then calculated by quartile and compared with quartiles of the rebates calculated under current law. Each quartile contained the same plans and enrollees as it did under current law.

The share of Medicare Advantage enrollees in the data that would be affected by the new benchmark reflects, under each definition of the new benchmark, enrollees who lived in a county where the new benchmark would have been the final benchmark (in other words, the new benchmark was lower than the current law benchmark).

Savings for Medicare were calculated by comparing total federal spending for all enrollees in the data under current law relative to under each scenario of the new benchmark. This savings was converted to a percentage of current law spending.

Of note, the proposed policy does not change the fundamental structure of Medicare Advantage payment. The benchmark, bid, and rebate are all still tied to each other by the same mathematical relationships as under current law. The proposed payment policy simply allows plan bids to play a role in determining the benchmark, rather than the benchmark being administratively set based on historical traditional Medicare spending. Furthermore, the proposed policy does not interfere with the current law system of determining benchmarks at the county level based on quartiles of Medicare spending implemented by the Affordable Care Act (ACA). It compares the average bid in each county (with a buffer) with its current law benchmark, after the latter has been determined.

In Table 1, these analyses used observed 2015 plan bids and enrollment. Thus, they assumed no changes in bids or enrollment if the new benchmark becomes the final benchmark (ie, if the benchmark changes).

However, research shows that plans do indeed change their bids in response to changes in the benchmark, on average in the same direction by about 50 to 60 cents for every \$1 change in the benchmark.<sup>9,17</sup> Federal savings would be larger, and the reduction in rebates smaller, if plans lower their bids in response to the decrease in benchmarks. Thus, in Table 2, analogous results are shown assuming a 50% bid response—in other words, for every dollar that the final benchmark is below the current law benchmark, projected bids would be assumed to be \$0.50 lower (eg, if the final benchmark is \$100 less than the current law benchmark, the projected bid would be \$50 less than the bid under current law).


### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

### ORCID iD

Zirui Song  <https://orcid.org/0000-0002-1042-1162>

### References

- Centers for Medicare & Medicaid Services. 2018 annual report of the boards of trustees of the federal hospital insurance and federal supplementary medical insurance trust funds. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/downloads/tr2018.pdf>. Published 2018. Accessed May 18, 2019.
- McGuire TG, Newhouse JP, Sinaiko AD. An economic history of Medicare part C. *Milbank Q*. 2011;89(2):289-332.
- Frakt AB. The cost of Medicare Advantage. *JAMA*. 2016;315(22):2387-2388.
- Frank RG, McGuire TG. Regulated Medicare Advantage and marketplace individual health insurance markets rely on insurer competition. *Health Aff (Millwood)*. 2017;36(9):1578-1584.
- Centers for Medicare & Medicaid Services. Plan payment data. <https://www.cms.gov/Medicare/Medicare-Advantage/Plan-Payment/Plan-Payment-Data.html>. Published 2017. Accessed May 18, 2019.
- Medicare Payment Advisory Commission. Medicare Advantage program payment system. [http://medpac.gov/docs/default-source/payment-basics/medpac\\_payment\\_basics\\_17\\_ma\\_final](http://medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_17_ma_final). Published 2017. Accessed May 18, 2019.
- Jacobson G, Newman T, Huang J. Projecting Medicare Advantage enrollment: expect the unexpected? Kaiser Family Foundation. <https://www.kff.org/medicare/perspective/projecting-medicare-advantage-enrollment-expect-the-unexpected/>. Published 2013. Accessed May 18, 2019.
- Medicare Payment Advisory Commission. *Report to the Congress: Medicare Payment Policy*. Washington, DC: Medicare Payment Advisory Commission; 2018.

9. Song Z, Landrum MB, Chernew ME. Competitive bidding in Medicare Advantage: effect of benchmark changes on plan bids. *J Health Econ.* 2013;32(6):1301-1312.
10. Song Z, Landrum MB, Chernew ME. Competitive bidding in Medicare: who benefits from competition. *Am J Manag Care.* 2012;18(9):546-552.
11. Pelech D, Song Z. Pricing and pass-through in response to subsidies and competition: evidence from Medicare Advantage before and after the Affordable Care Act. [https://www.hcp.med.harvard.edu/sites/default/files/Pricing\\_Pass-through\\_MA\\_10-19-2018\\_HCP.pdf](https://www.hcp.med.harvard.edu/sites/default/files/Pricing_Pass-through_MA_10-19-2018_HCP.pdf). Published 2018. Accessed May 18, 2019.
12. Glazer J, McGuire TG. Paying Medicare Advantage plans: to level or tilt the playing field. *J Health Econ.* 2017;56:281-291.
13. Department of Health & Human Services. Fiscal year 2017 budget in brief: strengthening health and opportunity for all Americans. Date unknown. <http://www.hhs.gov/sites/default/files/fy2017-budget-in-brief.pdf>. Accessed May 18, 2019.
14. Lieberman SM, Adler L, Trish E, Antos J, Bertko J, Ginsburg P. A proposal to enhance competition and reform bidding in the Medicare Advantage program. USC-Brookings Schaeffer Initiative for Health Policy. <https://www.brookings.edu/wp-content/uploads/2018/05/ma-bidding-paper.pdf>. Published 2018. Accessed May 18, 2019.
15. Song Z, Cutler DM, Chernew ME. Potential consequences of reforming Medicare into a competitive bidding system. *JAMA.* 2012;308(5):459-460.
16. Geruso M, Layton TJ. Selection in health insurance markets and its policy remedies. *J Econ Perspect.* 2017;31(4):23-50.
17. Zuckerman S, Skopec L, Guterman S. Do Medicare Advantage plans minimize costs? investigating the relationship between benchmarks, costs, and rebates. *Issue Brief(Commonw Fund).* 2017:1-11.