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Changes in Medicare Shared Savings Program Savings from 2013 to 2014

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In the Medicare Shared Savings Program (MSSP), participating accountable care organizations (ACOs) are eligible for shared-savings bonuses from the Centers for Medicare & Medicaid Services (CMS) if spending for their patient population falls below a financial benchmark. In 2013, the first full year of the MSSP, modest spending reductions were entirely offset by bonus payments.[1] Program savings beyond 2013 have not been formally evaluated.

METHODS

For each year from 2009–2014, Medicare data for a random 20% sample of fee-for-service beneficiaries were analyzed. In each year, beneficiaries were attributed to an ACO based on the plurality of their office visits with primary care physicians.[1] Difference-in-difference regression models were used to compare changes in total (Part A and B) Medicare spending for ACO-attributed beneficiaries from before to after the start of ACO contracts with concurrent changes for beneficiaries attributed to non-ACO providers (the control group). The pre-contract period was 2009–2011 for ACOs entering the MSSP in April or July 2012, 2009–2012 for ACOs entering in January 2013, and 2009–2013 for ACOs entering in January 2014. Differential changes in spending (estimated spending reductions attributable to the MSSP) were estimated separately for each entry cohort through each post-contract year, except 2012 was excluded as a transition year for the 2012 cohort. Model covariates included patients' sociodemographic and clinical characteristics and fixed effects for each hospital referral region by year combination to adjust for local spending changes in the control group. Within cohorts, differential changes were estimated for subgroups of ACOs with baseline spending above vs. below their region's average and for independent physician groups vs. ACOs financially integrated with hospitals. Detailed methods have been previously described.[1] Analyses were conducted with SAS version 9.4 (SAS Institute Inc, Cary, NC). Statistical significance was defined as $P<0.05$ for two-sided tests.

Aggregate spending reductions or increases were calculated by multiplying per-beneficiary estimates by the number of beneficiaries in each ACO cohort, inflated by a factor of 5 to

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Data Access and Analysis Dr. McWilliams had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

account for the 20% sampling. Net savings or losses to Medicare were calculated by subtracting bonus payments reported by CMS from aggregate spending changes.[2]

RESULTS

The analysis included 25,544,650 beneficiary-years, with ACO-attributed patients accounting for 19% of annual samples on average. As in 2013,[1] differences in patient characteristics between the MSSP and control groups were mostly small and changed minimally from the pre-contract to post-contract period. Pre-contract spending trends also were similar for the MSSP and control groups (Table 1).

In comparisons of the 2012 cohort with the control group, estimated spending reductions (Table 1) grew significantly (P=0.008 for change) from 2013 (−$146/beneficiary or −1.5%; P=0.03) to 2014 (−$268/beneficiary or −2.6%; P<0.001). In the 2013 cohort, estimated spending reductions also significantly changed (P=0.04) from 2013 (+$4/beneficiary or 0.0%; P=0.94) to 2014 (−$92/beneficiary or −0.09%; p=0.07). In the 2014 cohort, an estimated spending reduction of −$42/beneficiary (−0.4%) in 2014 was not statistically significant (P=0.35). In subgroup analyses, spending reductions in 2014 were driven largely by ACOs with baseline spending above their region's average and by independent physician groups without financial ties to hospitals (Table 1).

In 2013, bonus payments exceeded aggregate spending reductions, constituting a net loss of $73.5 million to Medicare (Table 2). In 2014, aggregate spending reductions across all 3 cohorts exceeded bonus payments, constituting a net savings of $287 million to Medicare, or $67 per ACO-attributed beneficiary (0.7% of total spending for ACO-attributed beneficiaries).

DISCUSSION

By 2014, spending reductions in the MSSP exceeded bonus payments, suggesting that shared-savings contracts without downside risk for excess spending—in which 95% of MSSP ACOs currently participate—may be a fiscally viable alternative payment model for Medicare. The growth in MSSP savings suggests continued growth may be possible, particularly if incentives for ACOs to lower spending are strengthened,[1,3,4] though results may not generalize to future years and cohorts. Findings from subgroup analyses suggest that physician-hospital integration is unnecessary for ACO success and that CMS's plan to lower benchmarks for ACOs with high spending toward a regional average should proceed cautiously, lest the MSSP lose its most valuable participants.[5,6]

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REFERENCES

1. McWilliams JM, Hatfield LA, Chernew ME, Landon BE, Schwartz AL. Early Performance of Accountable Care Organizations in Medicare. N Engl J Med. Apr 13; 2016 374(24):2357–2366. [PubMed: 27075832]
2. Centers for Medicare and Medicaid Services. [Accessed July 12, 2016] Shared Savings Program. News and Updates. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/News-and-Updates.html
3. Douven R, McGuire TG, McWilliams JM. Avoiding unintended incentives in ACO payment models. Health Aff (Millwood). Jan; 2015 34(1):143–149. [PubMed: 25561655]
4. McWilliams JM, Chernew ME, Dalton JB, Landon BE. Outpatient care patterns and organizational accountability in Medicare. JAMA Intern Med. Apr 21; 2014 174(6):938–945. [PubMed: 24756690]
5. Rose S, Zaslavsky AM, McWilliams JM. Variation In Accountable Care Organization Spending And Sensitivity To Risk Adjustment: Implications For Benchmarking. Health Aff (Millwood). Mar 1; 2016 35(3):440–448. [PubMed: 26953298]
6. Department of Health and Human Services and Centers for Medicare and Medicaid Services. [Accessed July 12, 2016] Medicare program; Medicare Shared Savings Program; Accountable care organization-revised benchmark rebasing methodology, facilitating transition to peformance-based risk, and administrative finality of financial calculations. Final rule. 2016. https://s3.amazonaws.com/public-inspection.federalregister.gov/2016-13651.pdf

Table 1

Adjusted differential changes in total Medicare spending per beneficiary in ACOs vs. control group for post-contract years 2013 and 2014[a]

	Difference between ACOs and control group in pre-contract period, $ (95% CI)	Difference in trend between ACOs and control group in pre-contract period, $/year (95% CI)	Differential change for ACOs vs. control group			
			2013 performance year		2014 performance year	
			Estimate, $ (95% CI)	P value	Estimate, $ (95% CI)	P value
2012 MSSP cohort (N=114 ACOs)	135 (−78,348)	−21 (−76,35)	−146 (−274,−18)	0.03	−264 (−398,−130)	<0.001
Subgroups [b]						
Organizational structure:						
Independent physician groups (N=69)	33 (−322,387)	−22 (−111,66)	−217 (−449,15)	0.07	−334 (−559,−110)	0.004
Hospital-integrated (N=45)	166 (40,292)	−14 (−68,41)	−48 (−144,47)	0.32	−179 (−285,−72)	0.001
Baseline spending:						
Above regional average (N=57)	501 (149,852)	9 (−62,80)	−228 (−434,−21)	0.03	−371 (−586,−156)	0.001
Below regional average (N=57)	−266 (−398,−134)	−43 (−105,19)	3 (−102,109)	0.95	−105 (−205,−4)	0.04
2013 MSSP cohort (N=106 ACOs)	3 (−113,119)	−8 (−44,28)	3 (−100,106)	0.96	−94 (−194,6)	0.07
Subgroups [b]						
Organizational structure:						
Independent physician groups (N=59)	52 (−133,238)	−32 (−84,21)	−192 (−339,−46)	0.010	−175 (−341,−9)	0.04
Hospital-integrated (N=47)	38 (−74,150)	14 (−29,58)	99 (−17,215)	0.09	−66 (−197,65)	0.32
Baseline spending:						
Above regional average (N=53)	292 (159,426)	−17 (−62,27)	−25 (−154,103)	0.70	−156 (−285,−27)	0.02
Below regional average (N=53)	−336 (−508,−164)	21 (−28,70)	27 (−120,174)	0.72	−27 (−189,134)	0.74
2014 MSSP cohort (N=115 ACOs)[c]	20 (−118,158)	−1 (−27,26)	-	-	−49 (−137,38)	0.27

[a]All estimates are adjusted for hospital referral region (HRR), HRR by year fixed effects to control for local changes over the study period, and the following sociodemographic and clinical characteristics of patients: age, sex, race and ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, or other), Medicaid coverage, disability as the original reason for Medicare eligibility, long-term nursing home residence, end-stage renal disease, indicators of conditions from the Chronic Condition Data Warehouse (CCW) being present at the start of the study year, indicators of multiple conditions, hierarchical condition category (HCC) risk score determined from the prior year of claims, and average educational attainment and poverty rates assessed at the level of patients' zip code tabulation area of residence. Estimates for 2013 were previously published,[1] but 2013 estimates presented in Table 1 differ slightly from previously reported estimates because beneficiaries assigned to ACOs entering in 2014 were removed from the control group. Unadjusted estimates of differential changes were similar to adjusted estimates, and sensitivity analyses indicated that changes over the study period in composition of physicians billing under ACO taxpayer identification numbers did not significantly affect estimates.

[b] Subgroup analyses were conducted for ACO cohorts with overall spending reductions in 2014 (the 2012 and 2013 cohorts). We categorized ACOs as financially integrated with hospitals vs. independent physician groups using CMS descriptions and information on participating organizations' websites.[1] We categorized ACOs as having above vs. below regional average baseline spending by comparing whether risk-adjusted spending for its attributed beneficiaries was above or below risk-adjusted spending for the control group in its service area.[1] To eliminate bias from regression to the mean, we used claims from 2008 (prior to the study period) to assess baseline spending. Estimates for all subgroups in a cohort were produced by the same model; thus, differences in spending reductions between ACOs with different organizational structures were adjusted for differences in spending reductions related to differences in baseline spending. Subgroup estimates were also adjusted for differences in spending reductions between ACOs in areas with high vs. low areas, which were not statistically significant.

[c] Four ACOs were excluded from the 2014 ACO cohort because they had previously participated in the Pioneer ACO model.

Table 2

Net savings to Medicare from the MSSP in the 2013 and 2014 performance years

	2013 Performance Year			2014 Performance Year		
	Aggregate spending reduction or increase,[a] $ in millions	Bonus payments to ACOs from Medicare,[b] $ in millions	Net program savings or losses to Medicare, $ in millions	Aggregate spending reduction or increase,[a] $ in millions	Bonus payments to ACOs from Medicare,[b] $ in millions	Net program savings or losses to Medicare, $ in millions
2012 ACO cohort (N=330,585 in 2014)	−242.7	243.7	1.0	−436.5	178.7	−257.8
2013 ACO cohort (N=284,698 in 2014)	4.3	68.2	72.5	−133.4	94.7	−38.7
2014 ACO cohort (N=236,533 in 2014)	-	-	-	−58.3	67.9	9.6
Total	−238.4	311.9	73.5	−628.2	341.3	−286.9

[a]Aggregate spending reductions or increases were calculated by multiplying per-beneficiary estimates by the number of beneficiaries in the study sample attributed to an ACO cohort in the relevant performance year, inflated by a factor of 5 because analyses were conducted for a 20% sample of Medicare beneficiaries. Reductions are expressed as negative values and increases as positive values.

[b]Bonus payments reported by CMS (available at: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/News-and-Updates.html) were summed across ACOs in each cohort, net of any losses recouped by CMS from the few ACOs in contracts with downside risk. Bonus payments are calculated based on how far below the benchmark ACO spending is during the performance year, but starting in the second performance year (which was 2013 for both the 2012 and 2013 cohorts) bonus payments are additionally adjusted (only downward) for an ACO's performance on the set of quality measures in the contract. In the first performance year, ACOs receive maximum quality scores for reporting only. The adjustment for performance on quality measures explains why bonus payments decreased from 2012 to 2013 in the 2012 cohort and did not rise in the 2013 cohort in proportion to the increased spending reduction from 2012 to 2013.