MILLIMAN WHITE PAPER

Evaluating the effect of risk score increases in MSSP on federal expenditures across MSSP and Medicare Advantage

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Increases to CMS-HCC risk scores in the Medicare Shared Savings Program (MSSP) cause an increase in shared savings payments to MSSP accountable care organizations (ACOs), but also cause a decrease in payments to Medicare Advantage organizations (MAOs) due to the Medicare Advantage (MA) normalization factor methodology. The combined effect of MSSP ACO risk score increases across MSSP and MA is a net decrease to the Medicare Trust Fund expenditures under CMS's current MA and MSSP regulations and methodology.

The increase in payments to MSSP ACOs and decrease in payments to MAOs are roughly the same magnitude as a percent of benchmark – less than 1% of benchmark in each program. The net decrease is largely caused by the leveraging effect created by the larger membership in MA relative to the number of MSSP assigned beneficiaries. We estimate that if MSSP raw risk scores rise by 1% for every $1 of additional shared savings paid to MSSP ACOs, payments to MAOs decrease by $5.

Key findings

We estimate how increases in MSSP raw risk scores will affect the overall federal expenditures for MSSP and MA from 2025 to 2030. We test the following two hypothetical scenarios:

Scenario 1: MSSP average raw risk score increases 1% in CY 2025 and returns to its expected trend.

Scenario 2: MSSP average raw risk score increases 1% in CY 2025 and continues to grow at 1% more than expected.

In both scenarios, we project the decrease in MA expenditures exceeds the projected increase in MSSP expenditures.

Figure 1 summarizes the overall impact in both scenarios over six years from 2025 to 2030: **The combined federal expenditures in both MSSP and MA would decrease by 0.2% in Scenario 1 and 0.5% in Scenario 2.**

The step-by-step dynamic is depicted in Figure 2, using Scenario 1 as an example. Key data points supporting the flow charts in Figure 2 are listed in Figure 3. In MSSP, a 1% increase in raw risk score results in a 0.39% increase in benchmark, due to dynamics created by MSSP program rules. In MA, a 1% increase in MSSP raw risk score results in a 0.4% to 0.6% increase in MA normalization factor, which lowers the MA bid benchmark proportionately.

FIGURE 1: EXECUTIVE SUMMARY (IN $ BILLIONS)

Estimated MA expenditures (2025–2030)	A	$4,065.0	
Estimated MSSP expenditures (2025–2030)	B	$19.9	
Total expenditures	C = A + B	$4,084.9	
		SCENARIO 1	**SCENARIO 2**
Decrease in MA expenditures (2025–2030)	D	($11.0)	($27.1)
Increase in MSSP expenditures (2025–2030)	E	$2.1	$7.0
Net decrease in total expenditures	F = D + E	($8.9)	($20.1)
As a % of total expenditures	**G = F / C**	**-0.2%**	**-0.5%**

FIGURE 2: FLOW CHART—IF MSSP 2025 RISK SCORES ARE 1.0% HIGHER THAN THEY OTHERWISE WOULD HAVE BEEN (I.E., SCENARIO 1)

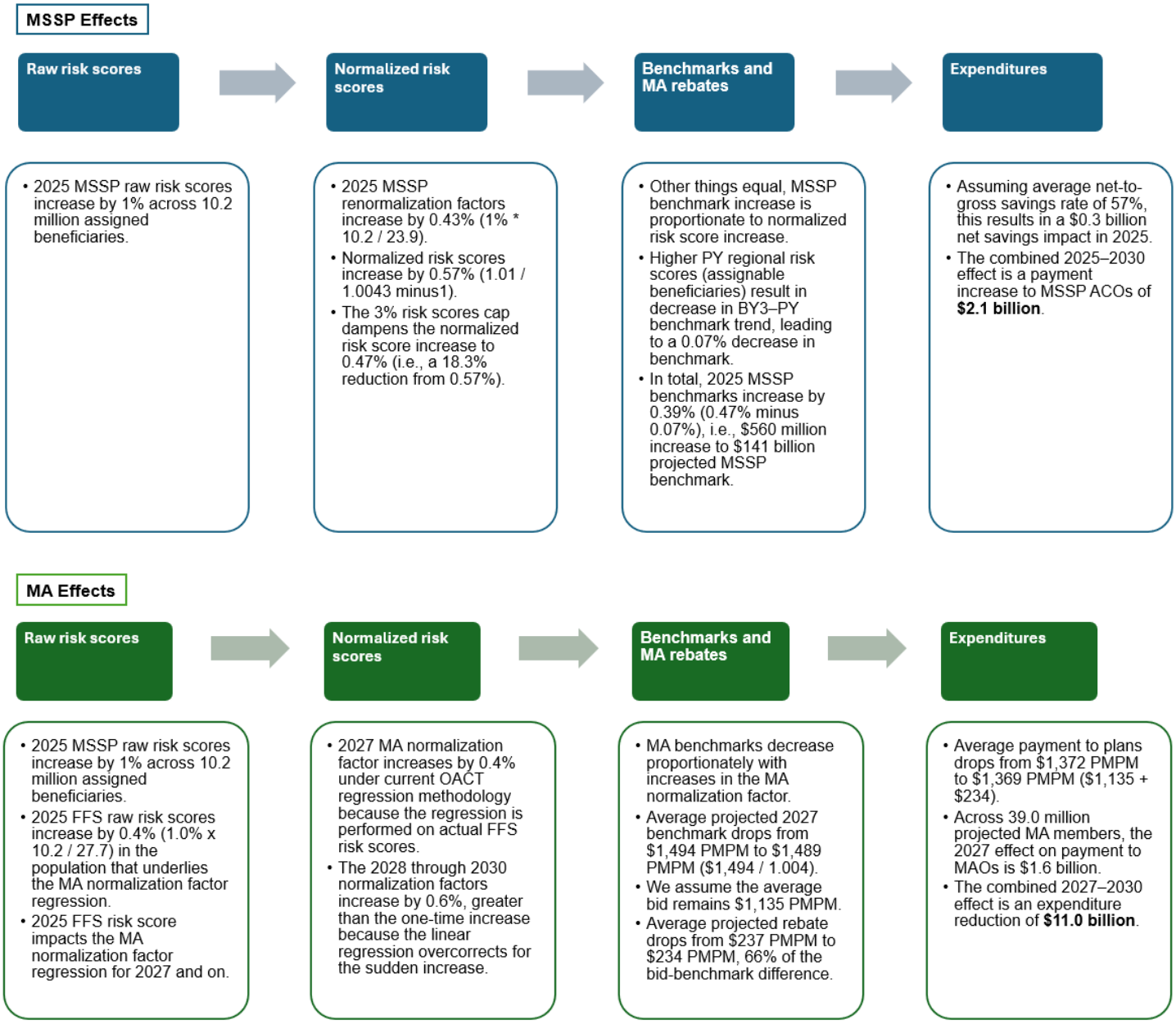

FIGURE 3: KEY DATA POINTS FOR FIGURE 2

MSSP KEY STATISTICS

DATA POINT	AMOUNT	SOURCE[1]
2022 assigned beneficiaries (person-year)	10.2 million	2022 MSSP Public Use File (PUF)
2022 assignable beneficiaries (person-year)	23.9 million	2022 MSSP PUF
2022 net-to-gross savings ratio (calculated)	57.1%	2022 MSSP PUF
2022 dampening effect of 3% risk score cap on benchmarks	-18.3%	2022 MSSP PUF
Estimated dampening effect of decrease in BY3-PY regional rate on benchmark	-0.07%	2022 MSSP PUF
2025 projected aggregate benchmark	$141 billion	Projection from 2022 using OACT FFS USPCC growth rates

MA KEY STATISTICS

DATA POINT	AMOUNT	SOURCE
2022 estimated FFS beneficiaries in MA normalization regression	27.7 million	CMS and MedPAC publications
2027 projected benchmark PMPM	$1,494	2024 Medicare Trustees Report
2027 projected bid PMPM	$1,135	2024 Medicare Trustees Report
2027 projected rebate as % of (benchmark – bid)	66.0%	2024 Medicare Trustees Report
2027 projected MA beneficiaries with Part A and Part B	39.0 million	2024 Medicare Trustees Report

Background: Why do CMS-HCC risk scores for MSSP ACOs affect payments to MAOs?

WHAT ARE CMS-HCC RISK SCORES?

The CMS-HCC (Centers for Medicare & Medicaid Services-Hierarchical Condition Categories) model is a risk adjustment tool developed and used by CMS. It is designed to predict healthcare costs for Medicare beneficiaries by categorizing patients based on their health conditions and demographic information. Each health or demographic condition category is assigned a risk weight, which reflects the expected cost of care for patients with that condition. A beneficiary's raw risk score is the sum of all the applicable risk weights. How payment risk scores are calculated based on raw risk scores differs across Medicare programs but generally involves normalization and a program-specific calibration. The final payment risk scores are used to adjust payments to MA plans and MSSP ACOs.

HOW DO CMS-HCC RISK SCORES AFFECT MSSP ACO BENCHMARKS AND SHARED SAVINGS?

In the MSSP, ACO expenditures are compared to a financial benchmark, and the ACO and CMS share the resulting savings (if expenditure is less than benchmark) or losses (if expenditure exceeds benchmark). The financial benchmarks are determined in a multistep process that generally involves the ACO's historical expenditure level, risk adjustment, trend adjustment, and regional adjustment. CMS-HCC risk scores are used in several places in this process, such as the calculation for regional trend and historical benchmark. Most importantly, the performance year (PY) benchmark is risk-adjusted to reflect the PY payment risk score. Everything else equal, higher risk score results in a proportionately higher benchmark, and therefore, higher savings.

MSSP payment risk scores are determined by a three-step process:

1. Normalization: Raw CMS-HCC risk scores are first normalized by the normalization factors used for MA for that payment year. MA normalization factors are prospectively determined by CMS, prior to each MA payment year.
2. Renormalization: Normalized risk scores are then renormalized, such that the national average risk score for the MSSP assignable beneficiaries for each of the four beneficiary categories equals 1.0. The renormalization factors are retrospectively determined.
3. Risk score ceiling: A +3% ceiling relative to the ACO's third benchmark year (BY3) is applied, allowing for demographic risk score change.

This three-step process is done separately for the four MSSP enrollment categories (i.e., aged non-dual, dual, disabled, and end-stage renal disease (ESRD)).

In this paper, we use the term "renormalized risk score" to refer to the MSSP risk score after both normalization and renormalization. An increase in MSSP raw risk score would affect the calculation of both the MA normalization and MSSP renormalization factors. However, given the retrospective calibrating nature of the renormalization factor, the ultimate risk score (after normalization and renormalization) does not change whether we model the change in MA normalization or not. For this reason, we did not implicitly consider the change in MA normalization when estimating funding impact in MSSP.

The MSSP assigned population (i.e., the population assigned to providers participating in the MSSP) is a subset of the MSSP

[1] See Data Sources section for details on source files.

assignable population that determines the renormalization factor. Therefore, an increase in raw CMS-HCC risk score of the MSSP assigned population will result in a dampened increase in the renormalization factor. The net impact on the payment risk score, calculated as the raw risk score divided by the renormalization factor, will be an increase. This will increase the financial benchmarks of the ACOs, resulting in CMS paying out more shared savings to the ACOs.

HOW DO CMS-HCC RISK SCORES AFFECT FEDERAL PAYMENT TO MAOs?

Prior to each MA payment year, MAOs submit bids to CMS,[2] where the bid represents the amount needed to provide standard Medicare benefits to an average beneficiary in an MA plan, including administrative cost and profit.

The bidding target for an MA plan is called the benchmark. County-level benchmarks are determined using statutory formulas and represent the maximum that the Medicare program will pay a private plan for an average-risk beneficiary in a given county. The plan's benchmark is a member-weighted average of the county-level benchmarks, reflecting the plan's expected county mix. High star ratings can increase benchmark.

The per-member-per-month (PMPM) rate CMS pays to each MA plan depends on the relationship between the benchmark and the bid, determined as follows:

- If the plan's bid is above the risk-adjusted benchmark, the PMPM rate is the risk-adjusted benchmark.
- If the plan's bid is below the risk-adjusted benchmark, the PMPM rate is the bid plus the rebate (a share of the difference between the risk-adjusted benchmark and the bid, where the share can be as low as 50% but is typically either 65% or 70%, depending on a plan's star rating).

Currently, the CMS-HCC models are calibrated to the Fee-for-Service (FFS) population. Each version of the CMS-HCC model is calibrated to a specific "denominator year," such that the average risk score of all FFS beneficiaries is 1.0 in the denominator year. The raw risk score is calculated as the sum of relative risk factors assigned to each beneficiary. Then, payment risk score in MA is calculated using the raw risk score in two steps:

1. CMS applies a normalization factor to the raw risk scores to account for the expected change in the average FFS risk score between the denominator year and the payment year. This effectively ensures the average normalized risk score in the payment year is 1.0.
2. An MA coding pattern adjustment is then applied. The purpose of this adjustment is to reflect the expected difference in diagnoses coding pattern between FFS and MA. This adjustment has remained at the statutory minimum of 5.90% (i.e., a multiplicative factor of 0.941) since 2019.

Everything else equal, an increase in the normalization factor will result in a decrease of the payment risk score, and in turn results in lower risk adjusted benchmark, lower rebate, and lower total expenditure.

For calendar year (CY) 2026, CMS estimated the MA normalization factor by applying a multiple linear regression to five years of historical FFS risk scores (2020 to 2024). The *y* variable of the regression is the risk score, and the *x* variables are the year and a binary indicator for COVID status, which is set to 1 for year 2021 and after. The PY 2026 normalization factor is the predicted *y* value for year 2026, based on the intercept and coefficients of the regression. CY 2025 normalization factors were developed using the same methodology.

Assuming normalization factors of future years are determined in the same manner, since MSSP beneficiaries make up a subset of the population that supports the normalization regression, an increase in MSSP risk score in a given year means shifting up one data point in the regression. The refitted linear regression will then produce a higher predicted *y* value. That is, an increase in MSSP risk score in a given year will increase the MA normalization factor in future years, and therefore, reduce the payment risk score and payments to MA plans in the future year.

Sensitivity tests

The cause-and-effect dynamics we model in this paper between MSSP risk scores and MSSP and MA funding are complex and requires assumptions for many parameters, many of which are listed in Figure 3.

To test the robustness of our conclusion, we performed sensitivity tests on a number of key parameters. The scenario descriptions and results are shown in Figure 4. In the last scenario, the change in MA normalization factor from 2028 to 2030 is held constant at the 2027 level (i.e., 0.4% increase as shown in Figure 7). As shown, all scenarios are consistent with our main conclusion that the total expenditures in MSSP and MA decrease as a result of MSSP raw risk score increase.

[2] For a quick primer on MA bid and payment, MedPAC's Payment Basics series is a good resource. Retrieved February 23, 2025, from https://www.medpac.gov/wp-content/uploads/2024/10/MedPAC_Payment_Basics_24_MA_FINAL_SEC.pdf.

FIGURE 4: SENSITIVITY TESTS—NET DECREASE IN TOTAL MSSP AND MA EXPENDITURES 2025–2030 (IN $ BILLION)

		SCENARIO 1		SCENARIO 2	
SCENARIO DESCRIPTION		NET DECREASE IN TOTAL EXPENDITURES	AS A % OF TOTAL EXPENDITURES	NET DECREASE IN TOTAL EXPENDITURES	AS A % OF TOTAL EXPENDITURES
Baseline	Baseline	($8.9)	-0.2%	($20.1)	-0.5%
MSSP assigned beneficiaries	10% increase	($8.8)	-0.2%	($17.9)	-0.4%
MSSP assigned beneficiaries	10% decrease	($8.7)	-0.2%	($20.5)	-0.5%
MSSP assigned-assignable ratio	10% increase	($9.1)	-0.2%	($20.7)	-0.5%
MSSP assigned-assignable ratio	10% decrease	($8.6)	-0.2%	($19.6)	-0.5%
Avg. MSSP shared savings rate	5% increase	($7.0)	-0.2%	($17.8)	-0.4%
Avg. MSSP shared savings rate	5% decrease	($10.8)	-0.3%	($22.5)	-0.5%
MA members	10% increase	($10.0)	-0.2%	($22.8)	-0.5%
MA members	10% decrease	($7.9)	-0.2%	($17.4)	-0.5%
MA benchmark PMPM	1% increase	($8.6)	-0.2%	($19.4)	-0.5%
MA benchmark PMPM	1% decrease	($9.2)	-0.2%	($20.9)	-0.5%
MA bid PMPM	1% increase	($9.2)	-0.2%	($20.9)	-0.5%
MA bid PMPM	1% decrease	($8.6)	-0.2%	($19.4)	-0.5%
Change in MA normalization factors	Held at 2027 level (0.4% increase)	($5.2)	-0.1%	($0.3)	0.0%

Methodology and data sources

STUDY DESIGN

We estimate how an increase in MSSP raw risk score will impact federal Medicare funding. We assume the risk score increase is due to changes in providers' coding patterns and not a result of underlying demographic or morbidity changes. We estimate the net change in Medicare funding across MA and MSSP over the six-year horizon of CY 2025 to CY 2030 in four steps.

Step 1: Project the change in federal MSSP expenditures (i.e., shared savings payments to ACOs) if MSSP average raw risk scores increase.

Step 2: Project the change in the MA normalization factor if MSSP average raw risk score increases.

Step 3: Project the change in federal MA expenditures if the MA normalization factor increases by the amount projected in Step 2.

Step 4: Sum up Step 1 and Step 3 and project the net change in federal expenditures across MA and MSSP.

Step 1: Effect of MSSP risk score on federal MSSP expenditures

In this step, we used 2022 PUF to estimate the impact on MSSP shared shavings if the assigned beneficiaries' raw risk scores increase by 1%. The following impacts are considered:

1. Normalization dampening: An assignable beneficiary is a Medicare FFS beneficiary who receives at least one primary care service with a date of service during the 12-month assignment window (which differs depending on the assignment type of the MSSP ACO) from a Medicare-enrolled physician who is a primary care physician or who has one of the specialty designations that is considered primary care as specified by CMS. Therefore, the MSSP assignable beneficiaries represent a larger population than the assigned beneficiaries.

   Based on MSSP 2022 PUF, there are approximately 23.9 million assignable beneficiaries and approximately 10.2 million assigned beneficiaries in the MSSP. We project that a 1% increase in the average raw risk score of the MSSP assigned beneficiaries would result in a 0.43% (= 1% x 10.2 / 23.9) increase in the renormalization factor, and therefore, a 0.57% increase in the renormalized risk score (= 1.01 / 1.0043 – 1) across all ACOs. Everything else equal, an increase in the renormalized risk score would result in an increase in the benchmark, and thus, an increase in gross and shared savings paid to ACOs by CMS.
2. Risk score cap dampening: The MSSP payment risk score of the performance year is subject to a +3% ceiling relative to BY3.[3] In our simulation, the risk score cap dampens the renormalized risk score increase by approximately 18.3%, so a 0.57% increase in renormalized risk score as calculated in the previous paragraph translates to a 0.47% increase in payment risk score.
3. Regional trend dampening: The historical benchmark is trended from BY3 to PY with one-third Accountable Care

[3] This cap is applied separately for each Medicare enrollment type for agreement periods (APs) started before 2024 and in aggregate across the four enrollment types for new APs starting after 2024. In our projection, we applied this cap by enrollment category.

Prospective Trend (ACPT)[4] and two-thirds retrospective national-regional blended trend, where the weight of the regional trend is (1 – market share % of the ACO in its region) and calculated with risk-adjusted regional expenditure (i.e., normalized to 1.0 risk score).

Everything else equal and setting aside the increase in payment risk score, an increase in MSSP raw risk score will also result in a small decrease in benchmark. The mechanics are as follows:

- An ACO raw risk score increase results in an increase in regional assigned beneficiary raw risk score.
- Regional assignable beneficiary normalized risk score increases.
- PY regional expenditure at 1.0 risk score decreases.
- BY3–PY regional trend (which is calculated at 1.0 risk score) decreases.

Hence PY benchmark decreases. We use the term "regional trend dampening" to refer to this dynamic.

We used 2022 PUF to estimate the impact of regional trend dampening. Among all 2022 MSSP ACOs, 2019 and 2020 starters will reset in PY 2025, where the three benchmark years would be 2022 to 2024. These ACOs will be subject to the regional trend dampening described above. The remaining ACOs are 2022 starters and are scheduled to reset in PY 2027 (i.e., assuming the ACO goes through the entire five-year agreement period and does not choose to reset early), where the three benchmark years would be 2024 to 2026. For these ACOs, BY3 to PY trend will not be impacted since both BY3 and PY would experience the risk score increase.

We estimate that a 0.57% increase (previously calculated) in the renormalized risk score across all MSSP ACOs would result in a 0.24% increase in the regional assignable renormalized risk score, lowering the benchmark by 0.07%. The impact is small, because the national-regional blended trend only accounts for two-thirds of BY3–PY benchmark trend, and the share of regional trend is relatively small. The average ACO's market share is about 19%.

4. Combined impact of 1 through 3: We estimate a 1.0% increase in MSSP raw risk score would increase the aggregate benchmark by 0.39%. Assuming the average sharing rate is 57.1%,[5] this results in an increase in the aggregate final shared savings payment of $265 million, equivalent to 0.22% of the $120 billion aggregate benchmark without the risk score increase.

   We also simulate the impact to shared savings if the risk score increases by higher percentages (from 1% to 6% at 1% increments). Due to the risk score cap and shared savings mechanics, the relationship is not completely linear. The results are summarized below.

FIGURE 5: PROJECTED % INCREASE IN MSSP SHARED SAVINGS DUE TO INCREASE IN MSSP RAW RISK SCORE

% INCREASE IN MSSP RAW RISK SCORE	INCREASE IN MSSP SHARED SAVINGS AS % OF BENCHMARK
1%	0.22%
2%	0.46%
3%	0.65%
4%	0.83%
5%	0.97%
6%	1.08%

To project the increase in MSSP shared savings for 2025 to 2030, we assume aggregate benchmark growth at the prospective United States Per Capita Cost (USPCC) trends from the 2026 MA Advance Notice[6] and apply the percentage increase estimated in Figure 4. In Scenario 1, shared savings will increase by 0.22% in all future years. In Scenario 2, the impact is compounding since the renormalized risk score will continue to increase every year, so shared savings will increase by 0.22% in 2025, 0.46% in 2026, etc.

As shown in Figure 6, the projected total MSSP expenditures increase from 2025 to 2030 is $2.1 billion and $7.0 billion, for Scenarios 1 and 2, respectively.

FIGURE 6: PROJECTED INCREASE IN MSSP SHARED SAVINGS IN BOTH SCENARIOS

	AGGREGATE BENCHMARK—BASELINE	INCREASE IN SHARED SAVINGS (IN $ BILLIONS)	
PY	(IN $ BILLIONS)	SCENARIO 1	SCENARIO 2
2025	$140.8	$0.3	$0.3
2026	$146.4	$0.3	$0.7
2027	$154.4	$0.3	$1.0
2028	$162.8	$0.4	$1.3
2029	$171.7	$0.4	$1.7
2030	$181.1	$0.4	$2.0
Total increase (2025 to 2030)		**$2.1**	**$7.0**

[4] The one-third weight on ACPT will only apply to new APs starting in or after 2024. APs that started before 2024 will continue to only use the national-regional blended trend.

[5] We recalculated this ratio using 2022 MSSP PUF assuming savings and losses are calculated per MSSP program rule for all ACOs. In practice, ACOs can petition financial hardship to be relieved from paying shared losses, and several ACOs did so in 2022.

[6] The implicit assumption here is that in the baseline scenario, the renormalization process fully accounts for coding in the MSSP assigned population, such that the renormalized risk score stays flat throughout the years.

Step 2: Effect of MSSP risk score on MA normalization factor

The CY 2026 MA normalization factor is based on a multiple linear regression of the average 2020 to 2024 FFS risk score. The two independent variables are the year and a COVID-19 indicator with the value of 0 before 2021 and 1 after. The 2026 normalization factor is calculated as the predicted value for year 2026 using the coefficients and intercept of the regression. The CY 2025 MA normalization factors are computed using similar methodology. Due to the inherent two-year lag in this method, a change in the average FFS risk score in 2025 will affect the MA normalization factors from CY 2027 to CY 2030.

The MA risk score normalization regression model is calculated using FFS beneficiaries who are entitled to Part A, enrolled in Part B, who do not have ESRD, and are not in hospice status.[7] Only a subset of this population is attributed to MSSP ACOs. In 2022, the population that supports the MA normalization regression model is approximately 27.7 million, and there are about 10.2 million assigned beneficiaries in MSSP in the same year. Therefore, we estimate that a 1% increase in the average raw risk score of the MSSP beneficiaries would result in a 0.37% (= 1.0% x 10.2 / 27.7) increase in the average overall FFS risk score.

To project the effect on future MA normalization factors, we use the 2019 to 2024 actual average FFS risk score published by CMS in the 2026 MA Advance Notice. We project risk scores for 2025 and beyond using the coefficients and intercept of the regression underlying the 2026 normalization factor. We then apply increases to the risk scores as described in the scenarios and rerun the regression for each future year using the updated risk scores. For instance, the simulated regression for 2030 normalization would use the predicted average risk score from 2024 to 2028, plus any additional risk score increase we want to model.

Figure 7 shows how much the projected normalization factor will change from CY 2025 to CY 2030 in both scenarios.

FIGURE 7: EFFECT OF MSSP RAW RISK SCORE INCREASE ON MA CMS-HCC MODEL NORMALIZATION FACTOR

		% INCREASE IN CMS-HCC NORMALIZATION FACTOR	
CY / PY	REGRESSION YEARS	SCENARIO 1	SCENARIO 2
2025	2019–2023	0.0%	0.0%
2026	2020–2024	0.0%	0.0%
2027	2021–2025	0.4%	0.4%
2028	2022–2026	0.6%	0.9%
2029	2023–2027	0.6%	1.6%
2030	2024–2028	0.6%	2.1%

Step 3: Effect of MA normalization factor on federal MA expenditures

In this step, we use projected MA enrollment, benchmark PMPM, bid PMPM, and rebate PMPM for 2025–2030 published in the 2024 Medicare Trustees Report.[8] According to the March 2024 MedPAC report, almost 100% of plans bid below their benchmarks in 2024, and therefore, receive the bid plus the rebate.

All else equal, a 1% increase in the MA normalization factor would result in a 1% decrease (1 / 1.01 = 0.99) in the payment risk score, and therefore, the risk-adjusted benchmark. We assume no change to the plan benefits, administrative costs, or profit margin, based on recent published research that suggests a decrease in risk-adjusted benchmark has an adverse but modest impact on the generosity of plan benefits and premium level.[9] Therefore, we assume MA bid amounts will not change, but MAOs will receive a lower rebate payment due to the lower risk-adjusted benchmark. Total federal MA expenditure, calculated as the sum of the bid amount and the rebate, will decrease. In our analysis, for each 1% increase in normalization factor, the projected decrease in MA expenditure ranges from $3.7 billion in 2025 to $5.9 billion in 2030.

The projected reductions in MA expenditures from CY 2025 to CY 2030, as a result of a 1% increase in MSSP raw risk score in both scenarios, are shown below. We project the total reduction from 2025 to 2030 to be $11.0 billion in Scenario 1 and $27.1 billion in Scenario 2.

[7] 2026 MA Advance Notice. (January 10, 2025). Centers for Medicare and Medicaid Services. Page 66. Retrieved February 23, 2025, from www.cms.gov/files/document/2026-advance-notice.pdf.

[8] 2024 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. (May 6, 2024). Centers for Medicare and Medicaid Services. Tables IV.C1 and IV.C4. Retrieved February 23, 2025, from http://www.cms.gov/oact/tr/2024.

[9] Chernew, M.E., Miller, K., Petrin, A., & Town, R.J. (March 22, 2023). Reducing Medicare Advantage benchmarks will decrease plan generosity, but those effects will likely be modest. *Health Affairs,* 42. Available from www.healthaffairs.org/doi/abs/10.1377/hlthaff.2022.01031?journalCode=hlthaff.

FIGURE 8: ESTIMATED DECREASE IN MA EXPENDITURES

	DECREASE IN MA EXPENDITURE DUE TO 1% INCREASE IN NORMALIZATION FACTOR (IN $ BILLIONS)	% CHANGE IN MA NORMALIZATION FACTOR (BASED ON FIGURE 7)		ESTIMATED DECREASE IN MA EXPENDITURES (IN $ BILLIONS)	
	A	B		C = A X B / 1.0%	
CY / PY		SCENARIO 1	SCENARIO 2	SCENARIO 1	SCENARIO 2
2025	($3.7)	0.0%	0.0%	$0.0	$0.0
2026	($4.0)	0.0%	0.0%	$0.0	$0.0
2027	($4.5)	0.4%	0.4%	($1.6)	($1.6)
2028	($4.9)	0.6%	0.9%	($2.7)	($4.5)
2029	($5.4)	0.6%	1.6%	($3.4)	($8.4)
2030	($5.9)	0.6%	2.1%	($3.3)	($12.6)
Total				**($11.0)**	**($27.1)**

Step 4: Effect of MSSP risk score on federal MSSP and MA expenditures

Step 4 combines the projected increase in MSSP expenditures in Step 1 and decrease in MA expenditure in Step 3. The results are summarized below.

FIGURE 9: COMBINED EFFECT ON FFS MEDICARE AND MA EXPENDITURES (IN $ BILLIONS)

SCENARIO 1

CY / PY	CHANGE IN MA	CHANGE IN MSSP	OVERALL CHANGE
2025	$0.0	$0.3	$0.3
2026	$0.0	$0.3	$0.3
2027	($1.6)	$0.3	($1.3)
2028	($2.7)	$0.4	($2.3)
2029	($3.4)	$0.4	($3.0)
2030	($3.3)	$0.4	($2.9)
Total	**($11.0)**	**$2.1**	**($8.9)**

SCENARIO 2

CY / PY	CHANGE IN MA	CHANGE IN MSSP	OVERALL CHANGE
2025	$0.0	$0.3	$0.3
2026	$0.0	$0.7	$0.7
2027	($1.6)	$1.0	($0.6)
2028	($4.5)	$1.3	($3.2)
2029	($8.4)	$1.7	($6.7)
2030	($12.6)	$2.0	($10.6)
Total	**($27.1)**	**$7.0**	**($20.1)**

In both scenarios, the decrease in MA expenditures exceeds the increase in MSSP expenditures. We project a decrease in total expenditures from 2025 to 2030 of $8.9 billion in Scenario 1 and $20.1 billion in Scenario 2, representing approximately a 0.2% decrease and a 0.5% decrease in total Medicare expenditures, respectively.

KEY ASSUMPTIONS

In addition to the data points listed in Figure 3, key assumptions in this study include:

- We assume the regression methodology for CY 2026 MA normalization factor in the 2026 MA Advance Notice applies to future years as well.

  This methodology could change in the future. If CMS continues to use a projection method based on a regression on past FFS risk scores, MSSP risk score increases will still cause normalization factor increases, but the effect could be larger or smaller than our estimates herein.

  Per the CY 2026 Advance Notice, "CMS has been working on calibrating the risk adjustment model using MA encounter data, and CMS may be able to start phasing in an MA encounter data-based model as early as CY 2027." CMS has not released details, but these changes could potentially materially change the conclusions in this paper. Such changes are out of scope for this paper.
- We assume no change to current MSSP methodology and regulations, relating to risk score cap, benchmark calculation, and shared savings calculation.
- We assume that the plans' bids and benefits remain unchanged when risk score and benchmark decrease, and that decrease in rebate is fully offset by an increase in member premium. In practice, many plans try to absorb a benchmark decrease by holding member premium constant and reducing the profit margin. If so, the plan's bid will decrease, further decreasing total MA expenditures, resulting in greater federal government savings than the current estimates.
- We assume no change to the MA coding pattern adjustment, which is currently set to the statutory minimum.
- We estimate future MSSP benchmarks from 2025 to 2030 by applying USPCC trends to 2022 aggregate benchmarks as reported in 2022 PUF. Our technical approach also implicitly assumes the average ACO sharing rate remain unchanged from 2022. In reality, trends will deviate from our projections and the average sharing rate will change because ACOs with different sharing rate will enter or exit the program.

LIMITATIONS

- In this paper, we assume the risk score increase only applies to the MSSP assigned population in order to isolate the impact of MSSP risk score on Medicare funding. In practice, a change in coding patterns for MSSP assigned beneficiaries may have a "spillover" effect into MA and other Medicare beneficiaries who are not assigned to MSSP ACOs. The spillover would cause an increase in MA raw risk scores and a delayed increase in MA normalization factors.
- This analysis excludes beneficiaries with ESRD. Beneficiaries with ESRD have their own risk score model and rate book in MA, but go through a similar process for MA normalization and MSSP renormalization, so the same general dynamic (i.e., an increase in MSSP expenditures coupled with a much larger decrease in MA expenditures) applies to them as well, although the leveraging impact would vary as ESRD members have slightly lower MA participation rates.
- Our analysis extrapolates relationships between MSSP risk score increase and shared saving increase from the 2022 PUF and apply it to other years. In particular, the impact of risk score cap, average sharing rate, and the impact of the hypothetical risk score increase are all based on 2022 data. Different ACO mix and benchmark rebasing in future years may change these relationships.

DATA SOURCES

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Caveats and qualifications

The information in this paper is intended to estimate the financial impact of changes in MSSP risk score on federal funding across MSSP and MA. It may not be appropriate, and should not be used, for other purposes.

The material in this paper represents the opinion of the authors and is not representative of the views of Milliman. As such, Milliman is not advocating for, or endorsing, any specific policy changes to the Medicare Shared Savings Program or Medicare Advantage regulations in this report.

In preparing this paper, we relied on data provided by CMS. We accepted this data without audit but reviewed the information for general reasonableness to the extent it was possible. Our results and conclusions may not be appropriate if this information is not accurate.

The information in this paper is based upon the CMS's MSSP and MA rules and reports as of the time this paper was written. The paper will need to be updated if the program rules change.

Milliman has developed certain models to estimate the values included in this paper. The intent of the models is to estimate how changes in MSSP raw risk score would impact MSSP shared savings and MA payment to plans. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice (ASOP).

Differences between various projected parameters in our analysis (i.e., MA normalization, MA benchmark, MSSP risk score, MSSP benchmark, MSSP gross and shared savings) and the corresponding actual values depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. Actual amounts will differ from estimated amounts to the extent that actual experience deviates from expected experience.

Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. The authors of this paper are members of the American Academy of Actuaries, and they meet the Qualification Standards to perform this analysis

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