Quality Payment
PROGRAM

2024 Summary of Cost Measures

December 2023

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1.0 Introduction

This document provides a summary of cost measures in relation to the Merit-based Incentive Payment System (MIPS), one of the tracks of the Quality Payment Program (QPP). As required by Section 51003(a)(2) of the Bipartisan Budget Act of 2018, this document includes information on: resource use (or cost) measures currently in use in MIPS, cost measures under development and the time-frame for such development, potential future cost measure topics, expert input and public engagement activities, and the percent of expenditures under Medicare Parts A and B that are covered by cost measures.[1] This section of the Bipartisan Budget Act of 2018 amended Section 1848(r)(2) of the Social Security Act and required that this information be provided on the website of the Centers for Medicare & Medicaid Services (CMS) no later than December 31st each year.

The Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA) required CMS to collaborate with clinician experts and other interested parties to develop measures for potential implementation in the cost performance category of MIPS. CMS has contracted with Acumen, LLC (hereafter, "Acumen") to develop methodology for analyzing cost, as appropriate, through consideration of patient condition groups and care episode groups.

As defined in the MACRA statute, care episode groups consider the "patient's clinical problems at the time items and services are furnished during an episode of care, such as the clinical conditions or diagnoses, whether or not inpatient hospitalization occurs, and the principal procedures or services furnished." Patient condition groups consider the "patient's clinical history at the time of a medical visit, such as the patient's combination of chronic conditions, current health status, and recent significant history." Both care episode groups and patient condition groups can consider other factors determined appropriate by the Secretary.

As a result, CMS and Acumen have developed episode-based cost measures (EBCMs), which are designed to inform clinicians of the cost of their beneficiary's care for which they are responsible during a specified time frame.

Throughout this document, the term "cost" generally means the Medicare allowed amount, which includes both Medicare payments and any applicable patient deductible and coinsurance amounts on traditional, fee-for-service claims. Medicare allowed amounts are adjusted through payment standardization, which is the process of adjusting the allowed charge for a Medicare service to account for differences in regional health care clinician expenses and delivery choices. Payment standardized costs remove the effect of differences in Medicare payment among health care providers that are the result of differences in regional health care provider expenses measured by hospital wage indexes and geographic price cost indexes, or other payment adjustments, such as those for teaching hospitals.[2]

The rest of this document provides details on cost measures. Section 2 shares information on cost measures used in MIPS. Section 3 provides information on cost measures under development and plans for future development. Section 4 presents estimates on the percentage for Medicare Parts A and B expenditures and clinicians covered by measures in MIPS. Section 5 describes the avenues through which Acumen has gathered expert input during measure development and reevaluation and other public engagement activities.

[1] Bipartisan Budget Act, Pub. L. 115-123 (2018). https://www.congress.gov/115/plaws/publ123/PLAW-115publ123.pdf
[2] CMS, "CMS Price (Payment) Standardization Overview" ResDAC page, https://resdac.org/articles/cms-price-payment-standardization-overview.

2.0 Cost Measures in MIPS

The MIPS cost performance category has 29 cost measures in the 2024 MIPS performance period. Section 2.1 lists these measures. Section 2.2 describes the EBCMs in MIPS which are based on a range of procedures, care settings, inpatient conditions, and chronic conditions. Finally, Section 2.3 provides detail on population-based cost measures in MIPS which are focused more broadly on primary and inpatient care.

2.1 List of Cost Measures in MIPS CY 2024

Table 1 provides information on cost measures currently used in MIPS. Listed alongside each measure is its type, case minimum, and first year of use. Note that the cost performance category was reweighted for the 2020 and 2021 performance periods due to COVID-19.[3]

Table 1. MIPS CY 2024 Cost Measures

ISO	Cost Measure	Type of Cost Measure	Case Minimum	First Year of Use
1	Total Per Capita Cost	Population-based (primary care)	20	2017; refined measure from 2020
2	Medicare Spending Per Beneficiary Clinician	Population-base (inpatient care)	35	2017; refined measure from 2020
3	Elective Outpatient Percutaneous Coronary Intervention (PCI)	Episode-based (procedural)	10	2019
4	Intracranial Hemorrhage or Cerebral Infarction	Episode-based (acute inpatient medical condition)	20	2019
5	Knee Arthroplasty	Episode-based (procedural)	10	2019
6	Revascularization for Lower Extremity Chronic Critical Limb Ischemia	Episode-based (procedural)	10	2019
7	Routine Cataract Removal with Intraocular Lens (IOL) Implantation	Episode-based (procedural)	10	2019
8	Screening/Surveillance Colonoscopy	Episode-based (procedural)	10	2019
9	ST-Elevation Myocardial Infarction (STEMI) with Percutaneous Coronary Intervention (PCI)	Episode-based (acute inpatient medical condition)	20	2019
10	Acute Kidney Injury Requiring New Inpatient Dialysis	Episode-based (procedural)	10	2020
11	Elective Primary Hip Arthroplasty	Episode-based (procedural)	10	2020
12	Femoral or Inguinal Hernia Repair	Episode-based (procedural)	10	2020

[3] CMS, "2021 MIPS Performance Feedback Patient-Level Data Reports Supplement," https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2036/2021%20MIPS%20Performance%20Feedback%20Patient-Level%20Data%20Reports%20Supplement.pdf.

ISO	Cost Measure	Type of Cost Measure	Case Minimum	First Year of Use
13	Hemodialysis Access Creation	Episode-based (procedural)	10	2020
14	Inpatient Chronic Obstructive Pulmonary Disease (COPD) Exacerbation	Episode-based (acute inpatient medical condition)	20	2020
15	Lower Gastrointestinal Hemorrhage (at group level only)	Episode-based (acute inpatient medical condition)	20	2020
16	Lumbar Spine Fusion for Degenerative Disease, 1-3 Levels	Episode-based (procedural)	10	2020
17	Lumpectomy, Partial Mastectomy, Simple Mastectomy	Episode-based (procedural)	10	2020
18	Non-Emergent Coronary Artery Bypass Graft (CABG)	Episode-based (procedural)	10	2020
19	Renal or Ureteral Stone Surgical Treatment	Episode-based (procedural)	10	2020
20	Asthma/Chronic Obstructive Pulmonary Disease (COPD)	Episode-based (chronic condition)	20	2022
21	Colon and Rectal Resection	Episode-based (procedural)	20	2022
22	Diabetes	Episode-based (chronic condition)	20	2022
23	Melanoma Resection	Episode-based (procedural)	10	2022
24	Sepsis	Episode-based (acute inpatient medical condition)	20	2022
25	Depression	Episode-based (chronic condition)	20	2024
26	Emergency Medicine	Episode-based (care setting)	20	2024
27	Heart Failure	Episode-based (chronic condition)	20	2024
28	Low Back Pain	Episode-based (chronic condition)	20	2024
29	Psychoses and Related Conditions	Episode-based (acute inpatient medical condition)	20	2024

These measures share certain common features. They are risk-adjusted measures, which means that they account for variation in clinician costs (e.g., accounting for patient age, comorbidities, and other factors) so that only the costs that clinicians can reasonably influence are included. These measures also use a clear attribution methodology by utilizing information in administrative claims data to identify a care relationship between a clinician and patient. Additionally, these measures include clinically related services and apply certain exclusions to ensure only appropriate, relevant costs are measured. Measure specifications are available on the QPP Resource Library.[4]

[4] Quality Payment Program, Resource Library, https://qpp.cms.gov/about/resource-library.

Note that the Simple Pneumonia with Hospitalization episode-based measure was removed from the cost performance category of MIPS in the CY 2024 Physician Fee Schedule (PFS) rule[5] and is no longer evaluated.

2.2 Episode-Based Cost Measures

Section 1848(r) of the Social Security Act, as added by section 101(f) of MACRA, requires the development of EBCMs that take into consideration patient condition groups and care episode groups ("episode groups"), which are units of comparison that represent a clinically coherent set of medical services rendered to treat a given medical condition.

EBCMs represent the cost to Medicare for the items and services furnished to a patient during an episode of care ("episode"). They can be used to inform clinicians on the costs related to the role of the attributed clinician in providing a particular type of care during a defined period.

The episode-based measures in MIPS in 2024 represent various types of care episode and patient condition groups. Specifically, they cover:

- Patient condition groups, defined by:
    - Chronic conditions requiring ongoing management of a long-term health condition.
- Care episode groups, defined by:
    - Procedures of a defined purpose or type. These can be performed in different settings depending on the specific measure's intended focus (e.g., outpatient, inpatient).
    - Acute inpatient medical conditions requiring a hospital stay. These can represent treatment for a self-limited acute illness or treatment for a flare-up or exacerbation of a condition.
- Care setting groups, defined by:
    - Treatment received in a specific setting (e.g., emergency department).

2.3 Population-Based Cost Measures

The MIPS 2024 cost performance category includes 2 population-based measures: Medicare Spending Per Beneficiary (MSPB) Clinician and Total Per Capita Cost (TPCC).

The MSPB Clinician measure focuses on inpatient care. It assesses the cost of Medicare for Parts A and B services provided to a patient during an episode which comprises the period immediately prior to, during, and following a hospital stay. Specifically, an episode includes Medicare Part A and Part B claims with a start date between 3 days prior to a hospital admission through 30 days after hospital discharge, excluding a defined list of services that are unlikely to be influenced by the clinician's care decisions and are, thus, considered unrelated to the hospital admission.

The TPCC measure focuses on primary care and evaluates the overall cost of care delivered to a patient. The TPCC measure is an average of per capita costs across all attributed patients and includes all Medicare Parts A and B costs for one year following the identification of a primary care relationship.

These measures have been in MIPS since 2020. They were updated through a reevaluation process, so are different from the earlier versions of the measures that had been in MIPS from 2017 to 2019.

[5] CY 2024 PFS Final Rule (88 FR 78818 – 80047).

3.0 Future Cost Measures for MIPS

Acumen continues to develop EBCMs for potential use in MIPS. Section 3.1 outlines the measures that are on the 2023 Measures Under Consideration List. Section 3.2 outlines the progress of measures currently under development. Section 3.3 discusses future plans for cost measure development. Section 3.4 discusses the measures that are going through maintenance and reevaluation.

3.1 Measures Considered for Future Use

CMS is considering the following eight episode-based measures for use in MIPS as detailed in the 2023 Measures Under Consideration (MUC) List.[6] The measures, listed in Table 2, span a range of types of care, including chronic conditions, acute inpatient medical conditions, and procedures.

Table 2. 2023 MUC List Cost Measures

ISO	Cost Measure	Type of EBCM	Development/ Re-evaluation Cycle
1	Chronic Kidney Disease (CKD) *MUC2023-203*	Chronic condition	Newly developed during Wave 5 development cycle (2022-2023)
2	End-Stage Renal Disease (ESRD) *MUC2023-204*	Chronic condition	
3	Kidney Transplant Management *MUC2023-206*	Chronic condition	
4	Prostate Cancer *MUC2023-207*	Chronic condition	
5	Rheumatoid Arthritis *MUC2023-209*	Chronic condition	
6	Cataract Removal with Intraocular Lens (IOL) Implantation *MUC2023-201*	Procedural	Re-evaluated versions of Wave 1 measures, used in MIPS since 2019
7	Inpatient (IP) Percutaneous Coronary Intervention (PCI) *MUC2023-205*	Acute inpatient medical condition	
8	Respiratory Infection Hospitalization *MUC2023-208*	Acute inpatient medical condition	

Measures included on the MUC list are part of CMS's pre-rulemaking process.[7] For more information on the development and re-evaluation of these measures see Section 3.4 and Section 5.0.

3.2 Measures Currently Under Development

CMS is currently developing two EBCMs for potential future use in the MIPS cost performance category:

[6] CMS, "Measures Under Consideration List for 2023," https://mmshub.cms.gov/sites/default/files/2023-MUC-List.xlsx.
[7] CMS, "Measure Implementation," https://mmshub.cms.gov/measure-lifecycle/measure-implementation/pre-rulemaking/overview.

- Movement Disorders: Parkinson's and Related Conditions, Multiple Sclerosis (MS), and Amyotrophic Lateral Sclerosis (ALS)
- Non-Pressure Ulcers

These measures are being developed with extensive input from the clinician community as part of Wave 6 of EBCM development. To obtain input on episode group prioritization and the composition of measure-specific workgroups, Acumen considered feedback from Technical Expert Panel (TEP) meetings, interested parties in previous public comment periods, and MVP inventory and discussions. In addition, Acumen reviewed analyses on estimated cost coverage for potential measure concepts, specialty coverage of existing measures, and frequently billed services and diagnoses by specialty. With this input, Acumen identified Movement Disorders and Non-Pressure Ulcers as the strongest measure candidates for Wave 6. Clinician Expert Workgroups for the two measures convened in June and October 2023 to provide detailed input on the measure specifications.

These measures are slated to begin national field testing in early 2024. During this time, clinicians with the minimum number of episodes for any of the measures will be able to access a feedback report. All interested parties can provide input on the measure specifications. After field testing, the workgroups will convene to consider field testing feedback to refine the measures. These measures are scheduled to finish development by mid-2024. CMS will consider a range of input before considering the potential use of any EBCMs in MIPS, including any recommendations from the Pre-rulemaking Measure Review (PRMR) process and feedback from interested parties. CMS also anticipates that any developed measures would be submitted to a consensus-based entity (CBE) for endorsement.

3.3 Future Plans for Cost Measure Development

CMS recognizes the interests from clinicians and the public in the development of new EBCMs that focus on specific procedures and conditions. Any future development will consider prioritization criteria developed by our TEP, including clinical coherence, impact and importance, the opportunity for cost performance improvement, and alignment with quality indicators to assess clinician value. For consistency within MIPS, new measures will share the features also required of developed cost measures established through rulemaking.

Newly developed cost measures could potentially be used in future, applicable MIPS Value Pathways (MVPs) if they are finalized for use in MIPS. MVPs are a participation option available for MIPS from 2023 onwards that align and connect measures and activities across the quality, cost, improvement activities, and promoting interoperability performance categories of MIPS.

3.4 Measure Reevaluation

Measures undergo maintenance and reevaluation after their development and implementation to ensure that they continue to function as intended. Comprehensive reevaluation is conducted every three years, following the processes described in the CMS Measures Management System Blueprint, and is an opportunity to consider any public feedback.[8]

[8] CMS, "Measure Use, Continuing Evaluation & Maintenance," https://mmshub.cms.gov/measure-lifecycle/measure-use/overview.

Acumen is currently conducting comprehensive reevaluation of the Total Per Capita Cost (TPCC) measure, of which the original version was in MIPS since 2017, until the reevaluated version was introduced in 2020.

The reevaluation process for measures in use since 2020 began with a public comment period in June and July of 2023. This gathered input on whether any of the measures may need to be changed. With this feedback, Acumen determined TPCC should be reevaluated again, and discussed this with the TEP in September, 2023. Acumen convened the standing Technical Expert Panel (TEP) to consider specific updates. If the revised specifications of this measure are substantively changed, TPCC will go through the notice-and-comment rulemaking process before it can replace the current version. The remaining measures in use will undergo routine annual maintenance.

4.0 Metrics for Cost Measure Coverage

This section provides measure coverage metrics for the episode-based and population-based cost measures. Specifically, Section 4.1 provides estimated cost coverage metrics, while Section 4.2 provides estimated clinician coverage metrics.[9]

4.1 Cost Coverage

This section presents the estimated cost coverage for MIPS 2024 cost measures and for measures on the 2023 MUC List. All figures in this section are estimates for reference only and do not reflect cost coverage for the measures as implemented in MIPS.[10]

Costs for each measure are calculated by summing the cost of services included in the measure. The cost coverage figures are estimates assuming that all clinicians meeting the attribution criteria for cost measures are MIPS participants (e.g., APM participants are not removed from the estimate), and that all MIPS participants are participating as a group. More details on the costs counted for the denominators and the numerators of these coverage estimates are provided in the tables. Any percentages representing the union of groups of cost measures (e.g., "Episode-Based Cost Measures") do not count claims more than once if they are included in multiple measures.

Additional analyses for these measures are available in the 2017, 2018, 2020, and 2022 National Summary Data Reports.[11, 12, 13, 14]

Table 3 presents the estimated cost coverage for population-based measures and Waves 1, 2, 3, and 4 measures using the MIPS case minima noted in Table 1.

Table 3. Cost Coverage at the Group Level for MIPS CY 2024 Cost Measures[15]

Cost Measure	% of Total Spending Covered w/ No Case Minimum[16]	% of Total Spending Covered w/ Case Minimum[17]
Population-Based Measures	-	-

[9] The cost metrics listed within this document only include Parts A and B Medicare claims data, not Part D claims data. As a note, Medicare Part D data is used in the Asthma/COPD, Diabetes, Sepsis, CKD, ESRD, Rheumatoid Arthritis, Prostate Cancer, and Kidney Transplant Management EBCM specifications.
[10] The percentage figures provided in this posting are only estimates, and do not reflect the coverage of these measures as used in MIPS. Performance data on the measures in the MIPS 2024 performance period would not be available until after the end of the performance period. These analyses use CY 2021 performance period data for all measures except TPCC. TPCC coverage estimates use CY 2019 performance period data.
[11] CMS, "2017 Field Testing materials," Cost Measures Information Page, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2017-field-test-materials.zip.
[12] CMS, "2018 National Summary Data Report," Cost Measures Information Page, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2018-national-summary-data-report.zip.
[13] CMS, "2020 National Summary Data Report," Cost Measures Information Page, https://www.cms.gov/files/zip/2020-national-summary-data-report.zip.
[14] CMS, "National Summary Data Report on 5 Episode Based Cost Measures", Cost Measures Information Page, https://www.cms.gov/files/document/national-summary-data-report-macra.pdf.
[15] The denominator for all metrics in this table is the sum of positive payment standardized allowed amounts for all inpatient, outpatient, Part B Physician/Supplier, home health, skilled nursing facility (SNF), durable medical equipment, prosthetics, orthotics and supplies (DMEPOS), and hospice claims billed during the study period. The denominator is $391,539,741,497 for all measures except TPCC. The denominator for TPCC is $411,123,570,021.
[16] Share of Total Medicare Parts A and B spending for all Medicare clinicians billing a claim during the study period with no case minimum applied. The numerator includes costs for clinicians with at least one episode or patient for the given measure.
[17] Share of Total Medicare Parts A and B spending for all Medicare clinicians billing a claim during the study period with case minima applied. The numerator includes costs for only clinicians who meet the case minimum for a given measure.

Cost Measure	% of Total Spending Covered w/ No Case Minimum[16]	% of Total Spending Covered w/ Case Minimum[17]
Medicare Spending Per Beneficiary (MSPB)	23.5%	22.9%
Total Per Capita Cost (TPCC)	75.4%	75.4%
All Wave 1, 2, 3, & 4 Episode-Based Cost Measures	**31.4%**	**30.4%**
All Wave 1 Episode-Based Cost Measures	**3.2%**	**3.0%**
Elective Outpatient Percutaneous Coronary Intervention (PCI)	0.3%	0.3%
Intracranial Hemorrhage or Cerebral Infarction	0.7%	0.6%
Knee Arthroplasty	0.9%	0.9%
Revascularization for Lower Extremity Chronic Critical Limb Ischemia	0.5%	0.5%
Routine Cataract Removal with Intraocular Lens (IOL) Implantation	0.4%	0.4%
ST-Elevation Myocardial Infarction (STEMI) with Percutaneous Coronary Intervention (PCI)	0.1%	0.1%
Screening/Surveillance Colonoscopy	0.2%	0.2%
Simple Pneumonia with Hospitalization*	0.2%	0.1%
All Wave 2 Episode-Based Cost Measures	**2.4%**	**2.2%**
Acute Kidney Injury Requiring New Inpatient Dialysis	0.1%	0.1%
Elective Primary Hip Arthroplasty	0.5%	0.5%
Femoral or Inguinal Hernia Repair	0.1%	0.1%
Hemodialysis Access Creation	0.1%	0.1%
Inpatient Chronic Obstructive Pulmonary Disease (COPD) Exacerbation	0.3%	0.3%
Lower Gastrointestinal Hemorrhage	0.2%	0.1%
Lumbar Spine Fusion for Degenerative Disease, 1-3 Levels	0.5%	0.4%
Lumpectomy, Partial Mastectomy, Simple Mastectomy	0.1%	0.1%
Non-Emergent Coronary Artery Bypass Graft (CABG)	0.4%	0.4%
Renal or Ureteral Stone Surgical Treatment	0.1%	0.1%
All Wave 3 Episode-Based Cost Measures	**8.4%**	**7.9%**
Asthma/Chronic Obstructive Pulmonary Disease (COPD)	1.7%	1.5%
Colon and Rectal Resection	0.3%	0.2%
Diabetes	4.8%	4.6%
Melanoma Resection	0.0%	0.0%
Sepsis	2.1%	2.0%
All Wave 4 Episode-Based Cost Measures	**22.1%**	**21.6%**
Depression	0.6%	0.5%
Emergency Medicine	16.5%	16.5%
Heart Failure	3.4%	3.1%

Cost Measure	% of Total Spending Covered w/ No Case Minimum[16]	% of Total Spending Covered w/ Case Minimum[17]
Low Back Pain	2.3%	2.2%
Psychoses and Related Conditions	0.4%	0.4%

*Simple Pneumonia with Hospitalization was removed from the cost performance category of MIPS in the CY 2024 Physician Fee Schedule (PFS) rule and is no longer evaluated.

Table 4 presents the estimated cost coverage for the cost measures on the 2023 MUC List. These measures used a 20-episode testing volume threshold for the purposes of this estimate: if the measures are finalized for MIPS, a case minimum would be established through rulemaking.

Table 4. Cost Coverage at the Group Level for Cost Measures on the 2023 MUC List

Cost Measure	% of Total Spending Covered w/ No Testing Volume Threshold[18]	% of Total Spending Covered w/ Testing Volume Threshold[19]
Inpatient (IP) Percutaneous Coronary Intervention (PCI)*	0.4%	0.3%
Respiratory Infection Hospitalization*	1.5%	1.4%
Cataract Removal with Intraocular Lens (IOL) Implantation*	0.6%	0.6%
Chronic Kidney Disease (CKD)	0.5%	0.4%
End-Stage Renal Disease (ESRD)	2.7%	2.4%
Rheumatoid Arthritis	0.9%	0.8%
Prostate Cancer	0.8%	0.8%
Kidney Transplant Management	0.3%	0.2%

* These measures are reevaluated Wave 1 measures that have been in MIPS since 2019.

4.2 Clinician Coverage

This section presents the estimated clinician coverage for MIPS 2024 cost measures and for measures on the 2023 MUC List.[20] Clinician groups are identified by a Taxpayer Identification Number (TIN) and clinicians are identified by a TIN and National Provider Identifier combination (TIN-NPI). The following tables provide a range of coverage metrics for groups and individuals:

- % TINs Meeting Case Min: The share of TINs meeting the MIPS case minimum.

[18] Share of Total Medicare Parts A and B spending for all Medicare clinicians billing a claim during the study period with no case minimum applied. The numerator includes costs for clinicians with at least one episode or patient for the given measure.
[19] Share of Total Medicare Parts A and B spending for all Medicare clinicians billing a claim during the study period with case minima applied. The numerator includes costs for only clinicians who meet the case minimum for a given measure.
[20] The percentage figures provided in this posting are only estimates, and do not reflect the coverage of these measures as used in MIPS. Performance data on the measures in the MIPS 2024 performance period would not be available until after the end of the performance period. These analyses use CY 2021 performance period data for all measures except TPCC. TPCC coverage estimates use CY 2019 performance period data.

- % TIN-NPIs Attributed 1+ Episode under TIN: The share of clinicians under a clinician group that are attributed one episode. This metric indicates the share of clinicians who are involved in the type of care that the measure is assessing under group reporting.
- % TIN-NPIs Billing Positive Claim under TIN: The share of TIN-NPIs billing a positive claim amount during the measurement period or attributed at least one episode under a TIN that meets the case minimum. This metric approximates the share of clinicians who may receive a cost measure score if they were reporting as part of a clinician group. The estimates assume that if a clinician meets the attribution criteria for cost measure, they are a MIPS participant who also report part of a clinician group.

The percentages representing the union of groups of cost measures do not count clinicians more than once if they are attributed under multiple measures.

Table 5 presents the estimated clinician coverage for population-based measures and Waves 1, 2, 3, and 4 measures using the MIPS case minima noted in Table 1.

Table 5. Clinician Coverage at the Group Level for MIPS CY 2024 Cost Measures

Cost Measure(s)	% TINs Meeting Case Min	TIN-NPIs under TINs Meeting Case Min	
		% TIN-NPIs Attributed 1+ Episode	% TIN-NPIs Billing Positive Claim
Population-Based Measures	-	-	-
Medicare Spending Per Beneficiary (MSPB)	5.2%	21.6%	48.8%
Total Per Capita Cost (TPCC)	26.6%	31.6%	63.4%
All Wave 1 Episode-Based Cost Measures	**4.3%**	**9.0%**	**43.6%**
Elective Outpatient Percutaneous Coronary Intervention (PCI)	0.6%	0.4%	25.3%
Intracranial Hemorrhage Or Cerebral Infarction	0.6%	4.7%	31.0%
Knee Arthroplasty	1.0%	1.0%	27.8%
Revascularization for Lower Extremity Chronic Critical Limb Ischemia	0.7%	0.4%	24.4%
Routine Cataract Removal with Intraocular Lens (IOL) Implantation	1.5%	0.6%	18.3%
ST-Elevation Myocardial Infarction (STEMI) with Percutaneous Coronary Intervention (PCI)	0.1%	0.7%	12.3%
Screening/Surveillance Colonoscopy	1.4%	1.1%	32.0%
Simple Pneumonia with Hospitalization*	0.4%	2.9%	23.4%
All Wave 2 Episode-Based Cost Measures	**2.5%**	**8.7%**	**40.8%**
Acute Kidney Injury Requiring New Inpatient Dialysis	0.3%	0.4%	15.3%
Elective Primary Hip Arthroplasty	0.7%	0.7%	25.0%
Femoral or Inguinal Hernia Repair	0.7%	0.7%	28.7%
Hemodialysis Access Creation	0.4%	0.2%	22.3%
Inpatient Chronic Obstructive Pulmonary Disease (COPD) Exacerbation	0.6%	4.4%	29.5%

Cost Measure(s)	% TINs Meeting Case Min	TIN-NPIs under TINs Meeting Case Min	
		% TIN-NPIs Attributed 1+ Episode	% TIN-NPIs Billing Positive Claim
Lower Gastrointestinal Hemorrhage	0.4%	3.4%	25.7%
Lumbar Spine Fusion for Degenerative Disease, 1-3 Levels	0.5%	0.5%	21.2%
Non-Emergent Coronary Artery Bypass Graft (CABG)	0.3%	0.3%	21.0%
Lumpectomy, Partial Mastectomy, Simple Mastectomy	0.4%	0.3%	26.4%
Renal or Ureteral Stone Surgical Treatment	0.6%	0.4%	25.7%
All Wave 3 Episode-Based Cost Measures	**14.9%**	**22.0%**	**54.0%**
Asthma/Chronic Obstructive Pulmonary Disease (COPD)	6.1%	8.3%	44.1%
Colon and Rectal Resection	0.3%	0.4%	20.7%
Diabetes	13.0%	11.2%	49.5%
Melanoma Resection	0.7%	0.5%	20.9%
Sepsis	1.3%	10.3%	37.3%
All Wave 4 Episode-Based Cost Measures	**20.2%**	**30.4%**	**63.1%**
Depression	5.9%	10.3%	44.5%
Emergency Medicine	1.5%	8.4%	37.0%
Heart Failure	3.6%	7.6%	41.5%
Low Back Pain	13.2%	12.7%	48.0%
Psychoses and Related Conditions	0.6%	1.5%	20.9%

* Simple Pneumonia with Hospitalization was removed from the cost performance category of MIPS in the CY 2024 Physician Fee Schedule (PFS) rule and is no longer evaluated.

Table 6 presents the estimated clinician coverage for the measures that are currently on the 2023 MUC List, using a testing volume threshold of 20 episodes.

Table 6. Clinician Coverage at the Group Level for Cost Measures on the 2023 MUC List

Cost Measure	% TINs Meeting Testing Volume Threshold	TIN-NPIs under TINs Meeting Testing Volume Threshold	
		% TIN-NPIs Attributed 1+ Episode	% TIN-NPIs Billing Positive Claim
Inpatient (IP) Percutaneous Coronary Intervention (PCI)*	0.5%	3.5%	28.2%
Respiratory Infection Hospitalization*	1.3%	8.1%	36.4%
Cataract Removal with Intraocular Lens (IOL) Implantation*	1.6%	0.6%	18.9%
Chronic Kidney Disease (CKD)	0.9%	2.4%	32.3%
End-Stage Renal Disease (ESRD)	1.0%	1.6%	31.7%
Rheumatoid Arthritis	1.3%	0.9%	36.1%

Cost Measure	% TINs Meeting Testing Volume Threshold	TIN-NPIs under TINs Meeting Testing Volume Threshold	
		% TIN-NPIs Attributed 1+ Episode	% TIN-NPIs Billing Positive Claim
Prostate Cancer	1.4%	2.4%	35.8%
Kidney Transplant Management	0.3%	0.7%	22.7%

* These measures are reevaluated Wave 1 measures that have been in MIPS since 2019.

5.0 Expert Input and Public Engagement

EBCMs are developed and re-evaluated through a systematic process that combines empirical data with expert and community input. This input is critical to the development of robust, meaningful, and actionable EBCMs. Section 5.1 provides a summary of the TEPs convened to date. Section 5.2 discuses broad clinical engagement in measure prioritization. Section 5.3 discusses the Clinician Expert Workgroups that provide input to build out measure specifications. Section 5.4 discusses the role of Person and Family Engagement (PFE). Section 5.5 details national field testing processes. Finally, Section 5.6 describes education and outreach activities conducted to inform the public of the measure development and reevaluation processes.

5.1 Technical Expert Panel

Acumen convenes a TEP to gather high-level guidance on topics across the cost measure project. This is a standing TEP, meaning that it retains the same composition over multiple meetings. Acumen held public calls for nominations in 2016 and 2019 and our current TEP has 20 members.[21] It is composed of members from different clinical areas, academia, health care and hospital administration, and patient and family representatives.

To date, Acumen has held 12 TEP meetings (in August 2016, December 2016, March 2017, August 2017, May 2018, November 2018, December 2018, February 2020, July 2021, two in August 2022, and September 2023). Each meeting covers overarching topics related to cost measures, such as on the development of a framework to assess the costs of care in a novel area (e.g., chronic conditions) or principles to guide the measure lifecycle (e.g., how to prioritize clinical areas for future development or prioritize existing measures for reevaluation).

5.2 Broad Clinical Engagement

Acumen gathers feedback from a broad range of societies and clinicians on measure concepts as part of prioritizing which measures to develop or reevaluate. Gathering input from a variety of interested parties provides many perspectives on topics such as the opportunities for cost improvement within a clinical area and technical challenges and how to address them.

For Waves 1, 2, and 3 of measure development, Acumen sought this input by convening Clinical Subcommittees, each focused on a clinical area (e.g., cardiovascular disease management). These Clinical Subcommittees were intended to be large panels with diverse member experience in types of care within that clinical area (e.g., heart failure, cardiothoracic surgery, acute myocardial infarction). They met at one meeting to discuss measure concepts and reach consensus on the measures that they believed to be the most promising for development. Table 7 provides information on the Clinical Subcommittees that have been convened for Waves 1, 2, and 3.

[21] CMS, “Updates to Established TEPs” CMS Measures Management System, https://mmshub.cms.gov/get-involved/technical-expert-panel/updates.

Table 7. Clinical Subcommittees Convened for Episode-Based Cost Measure Development

Development Cycle	Date	# Measures Approved for Development	Clinical Subcommittees		
			#	Members	Affiliated Professional Societies
Wave 1	May 2017	8	7	148	98
Wave 2	April 2018	11	10	267	120
Wave 3	May/June 2019	5	4	142	100

In Waves 4 and 5, Acumen obtained input on measure prioritization through public comment periods. This approach involved posting a call for public comment, which included a list of candidate measure concepts, targeted questions, and preliminary codes that could be used to define the patient cohort. A public comment period allowed Acumen to seek feedback across a greater variety of measure concepts, rather than being limited to measure concepts within specific clinical areas. It also enabled interested parties to suggest additional measure concepts for consideration.

In Wave 6, Acumen acquired input on measure prioritization through TEP meetings, interested parties in previous public comment periods, and MVP inventory and discussions. Additional input was gathered from analyses on estimated cost coverage for potential measure concepts, specialty coverage of existing measures, and frequently billed services and diagnoses by specialty. These approaches allowed Acumen to revisit feedback received from stakeholders over many years and complete Wave 6 measure development in a shortened timeline.

For Waves 1 and 2 reevaluations, Acumen engaged in similar activities. Both waves included a public comment period to gather feedback on existing measures. Workgroups were also reconvened to advise on updates to the existing Wave 1 measures.

5.3 Clinician Expert Workgroups

Acumen convenes Clinician Expert Workgroups to provide detailed input on each component of the EBCM specifications. Workgroups are composed of around 15 members with expertise in care for a particular condition or procedure, including both clinicians who would be attributed the measure and other members of the care team who provide care throughout the patient's care journey. The Workgroups meet around 3 times per Wave to provide clinical input and advice on measure development or reevaluation as well as specifications through an iterative process. They provide input on topics such as trigger codes, sub-groups to compare like patients, service assignment, risk adjustment variables, and measure exclusion criteria. Their input is guided not only by their clinical expertise, but also by empirical data. The Workgroups' input is recorded through a structured voting process using a >60% consensus threshold.

Table 7 provides information on the workgroups that have been convened during each cycle of measure development. In Wave 1, the same panel fulfilled the functions of both Clinical Subcommittee and Clinician Expert Workgroup by both providing input on prioritization and building out detailed specifications. Over the 6 Waves of measure development, Acumen has worked with 511 unique members of Clinical Subcommittees and Clinician Expert Workgroups practicing in 68 unique specialties, who are affiliated with 184 professional societies. Table 8 provides information on workgroups that have been convened across all measure development cycles.

Table 8: Workgroups Convened for Episode-Based Cost Measure Development

Development Cycle	Date	# Measures Approved for Development	Clinician Expert Workgroups		
			#	Members	Affiliated Professional Societies
Wave 1	2017-2018	8	7	148	98
Wave 2	2018	11	11	138	79
Wave 3	2019-2020	5	5	85	73
Wave 4	2021-2022	5	5	86	66
Wave 5	2022-2023	5	4	57	40
Wave 6	2023-2024	2	2	34	35

For the Wave 1 reevaluation cycle, Acumen reevaluated three existing cost measures. Acumen convened three Clinician Expert Workgroups and worked with 21 unique members practicing in 12 unique specialties, who are affiliated with 22 professional societies. For TPCC reevaluations, Acumen utilized the existing TEP to provide input on measure refinements.

5.4 Person and Family Engagement

Acumen integrates person and family perspectives into the measure development and reevaluation processes to ensure that the measure incorporates relevant experiences from patients and caregivers. Acumen's approach to gather and include this feedback has evolved across the Waves of development and reevaluation.

During Waves 1 through 3, Acumen convened a Person and Family Committee (PFC) comprised of Medicare patients and caregivers/family members of Medicare patients. Over 100 interviews were conducted with the PFC members. The PFC provided input on many topics, including their views on what quality and value means to them, what types of clinicians were part of their care team, what aspects of their care experience could have been improved, and what was the most useful in aiding recovery or avoiding complications. This feedback was relayed to Clinical Subcommittees and Workgroups so that they could also consider the patient and family perspective when making their respective recommendations.

Beginning with the February 2020 TEP and for Wave 4 of measure development, Acumen transitioned to incorporate PFE into expert panels. The TEP includes 2 members who are individuals with lived experience as patients or caregivers. For each Clinician Expert Workgroup, there are approximately 5 Person and Family Partners (PFPs): individuals with lived experiences of the condition or procedure for which a measure is being developed or reevaluated. Their input is collected via structured focus groups, interviews, or surveys which is then summarized and are presented to the Clinician Expert Workgroup, typically by 1-2 PFPs, at each workgroup meeting, allowing for opportunities for bidirectional conversations between workgroup members and PFPs. This approach to PFE continues through Wave 6 of development and TPCC reevaluation. For more information on how PFP's input is used in measure development and reevaluation, please see the Cost Measures Information Page.[22, 23]

[22] CMS, "Person and Family Committee Guiding Principles," https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2019-pfc-guiding-principles.pdf.
[23] CMS, Cost Measures Information Page, https://www.cms.gov/medicare/quality/value-based-programs/cost-measures. Please refer to PFE and PFE input summaries of Wave 2-3 and workgroup meeting summaries of Wave 2-5 to see PFP input.

5.5 Field Testing

Acumen conducts field testing to provide clinicians an opportunity to gain experience with and provide feedback on cost measures under development. Clinicians and clinician groups who met the minimum number of cases for each measure are able to access a field test report via a CMS portal which details how they would have performed on the draft measure. The reports contain aggregated information like their average spending for categories of services (e.g., inpatient hospitalizations) compared to their peers, as well as episode-level details (e.g., the breakdown of costs by each setting for each episode). Table 9 shows the number of field test reports generated in each field testing period.

Table 9. Number of Field Test Reports for Each Field Testing Period

Field Testing Period	Number of Field Test Reports		
	TIN Reports	TIN-NPI Reports	Total
Wave 1: October - November 2017	17,557	48,263	65,820
Wave 2: October - November 2018	155,355	638,487	793,842
Wave 3: August - September 2020	46,546	168,046	214,592
Wave 4: January - March 2022	83,965	198,169	282,134
Wave 5: January - February 2023	12,459	15,033	27,492
Wave 6: February 2024	TBD	TBD	TBD

The general public is invited to provide feedback on the draft measure specifications by reviewing the field test reports, testing results, and other materials. This input is then considered by the Clinician Expert Workgroups as part of refining and finalizing the measure specifications. To date, Acumen has conducted field testing in Waves 1, 2, 3, 4, and 5 of measure development. Field testing feedback summary reports are publicly available on the Cost Measures Information Page.[24]

5.6 Education and Outreach

CMS and Acumen conduct education and outreach activities to inform the public and increase transparency around cost measures and the development and reevaluation processes. These activities include informational webinars, office hours, producing educational materials and other activities that are conducted throughout the measure lifecycle. If there are additional questions, CMS and Acumen address any inquiries about the cost measures via the QPP Helpdesk.

Acumen presents webinars during key measure development or reevaluation activities and supports CMS's MIPS webinars.

- During field testing, Acumen hosts webinars that outline the draft measure specifications, explain what is contained in field test reports, and provide details on how to participate.
- There are various MIPS webinars that include information about cost measures that Acumen supports. These include webinars surrounding proposed and final rules, MVPs, and an annual cost category webinar. This provides an overview of the cost performance

[24] CMS, "2023 Field Testing Feedback Summary Report," Cost Measures Information Page, https://www.cms.gov/files/document/field-testing-feedback-summary-report-23-wave-5.pdf.

category, including a review of new or reevaluated measures and new policies effective for the specific performance period. Slides, recordings, and transcripts from these webinars, including the most recent 2023 MIPS Quality and Cost Performance Categories webinar are available in the QPP Webinar Library.

Acumen holds office hours to provide occasional updates on the expert input gathered in measure development or reevaluation.

- Office hours for nomination periods across Waves publicize the opportunity for input on the prioritization of candidate episode groups and participation in expert panels during measure development or reevaluation.
- Public office hours sessions are held to share updates with individuals and specialty societies and organizations alike, as well as to provide a channel to answer questions from the public. Office hours contain a short informational presentation to address frequently asked questions. They also dedicate a portion of the event to an open-ended question-and-answer format that allows attendees to ask questions. Office hours events are held across multiple stages of the measure development or reevaluation processes.
- Specialty society office hours are held during field testing for targeted specialty societies who represent specialties that are likely to be attributed the measures undergoing testing. These sessions provide information about Field Test Reports and how they can be accessed, how to submit comments, and how to access additional information about the measures. They provide opportunities for bidirectional question-and-answer to improve the public's understanding. Specialty office hours were held for the 5 field testing periods that have been conducted.
- Office hours have been held to provide occasional updates on the input gathered in measure development or reevaluation.

Interested parties can access a wide range of materials on the Cost Measures Information Page.[25] This includes field testing documents, such as a frequently asked questions document, mock field test report(s), draft measure specifications documents, a description of the measure development and reevaluation processes, and documents with measure testing results and summary statistics. Other materials include descriptions of the cost measure framework and key features, such as shared data across episodes.

Acumen also shares information about workgroup meetings through a public dial-in line to workgroup meetings in listen-only mode and posting meeting summaries. This allows all interested parties the opportunity to observe workgroup discussions and considerations that inform the preliminary measure specifications. Members of the public are also able to sign-up for email updates via listservs to receive regular updates on measure development and reevaluation.

[25] CMS, Cost Measures Information Page, https://www.cms.gov/medicare/quality/value-based-programs/cost-measures.