Quality Payment
PROGRAM

2022 Summary of Cost Measures

December 2021

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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, stakeholder 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) not later than December 31st each year.[2]

The Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act (MACRA) of 2015 required CMS to collaborate with clinician and other stakeholder communities to develop measures for potential implementation in the cost performance category of MIPS. CMS has contracted with Acumen, LLC ("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.

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.[3] Medicare allowed amounts undergo payment standardization, which is the process of adjusting the allowed charge for a Medicare service to facilitate comparisons of resource use across geographic areas. The process ensures that the allowed amounts, which can vary to accommodate local wages or policy goals, are comparable for the same services provided by different providers or in different settings.[4]

The rest of this document provides details on cost measures. Section 2 provides information on cost measures used in MIPS. Section 3 describes the avenues through which Acumen has gathered stakeholder input during measure development. Section 4 provides information on episode-based cost measures under development and plans for future development. Section 5 provides estimates on the percentage for Medicare Parts A and B expenditures and clinicians covered by measures in MIPS.

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[1] Bipartisan Budget Act, Pub. L. 115-123 (2018). https://www.congress.gov/bill/115th-congress/house-bill/1892/text

[2] Social Security Act, Sec.1848(r)(2)(I)

[3] The results presented in this document only include Medicare Parts A and B costs. The Sepsis acute inpatient medical condition measure and the Asthma/COPD and Diabetes chronic condition measure specifications also include Parts D claims data, in addition to the Medicare Parts A and B.

[4] 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 25 cost measures in the 2022 MIPS performance period. Section 2.1 lists these measures. Section 2.2 describes the episode-based cost measures in MIPS which are based on a range of procedures, 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 2022

Table 1 provides information on the cost measures currently used in MIPS, and for each measure includes its type and the first year of use in MIPS.

Table 1. Current MIPS Cost Measures

ISO	Cost Measure	Type of Cost Measure	First Year of Use
1	Total Per Capita Cost	Population-Based (primary care)	2017; refined measure from 2020
2	Medicare Spending Per Beneficiary Clinician	Population-Based (inpatient care)	2017; refined measure from 2020
3	Elective Outpatient Percutaneous Coronary Intervention (PCI)	Episode-based (procedural)	2019
4	Knee Arthroplasty	Episode-based (procedural)	2019
5	Revascularization for Lower Extremity Chronic Critical Limb Ischemia	Episode-based (procedural)	2019
6	Routine Cataract Removal with Intraocular Lens (IOL) Implantation	Episode-based (procedural)	2019
7	Screening/Surveillance Colonoscopy	Episode-based (procedural)	2019
8	Intracranial Hemorrhage or Cerebral Infarction	Episode-based (acute inpatient medical condition)	2019
9	Simple Pneumonia with Hospitalization	Episode-based (acute inpatient medical condition)	2019
10	ST-Elevation Myocardial Infarction (STEMI) with Percutaneous Coronary Intervention (PCI)	Episode-based (acute inpatient medical condition)	2019
11	Acute Kidney Injury Requiring New Inpatient Dialysis	Episode-based (procedural)	2020
12	Elective Primary Hip Arthroplasty	Episode-based (procedural)	2020
13	Femoral or Inguinal Hernia Repair	Episode-based (procedural)	2020
14	Hemodialysis Access Creation	Episode-based (procedural)	2020
15	Inpatient Chronic Obstructive Pulmonary Disease (COPD) Exacerbation	Episode-based (acute inpatient medical condition)	2020
16	Lower Gastrointestinal Hemorrhage (at group level only)	Episode-based (acute inpatient medical condition)	2020
17	Lumbar Spine Fusion for Degenerative Disease, 1-3 Levels	Episode-based (procedural)	2020
18	Lumpectomy, Partial Mastectomy, Simple Mastectomy	Episode-based (procedural)	2020
19	Non-Emergent Coronary Artery Bypass Graft (CABG)	Episode-based (procedural)	2020
20	Renal or Ureteral Stone Surgical Treatment	Episode-based (procedural)	2020
21	Melanoma Resection	Episode-based (procedural)	2022

ISO	Cost Measure	Type of Cost Measure	First Year of Use
22	Colon and Rectal Resection	Episode-based (procedural)	2022
23	Sepsis	Episode-based (acute inpatient medical condition)	2022
24	Asthma/Chronic Obstructive Pulmonary Disease (COPD)	Episode-based (chronic condition)	2022
25	Diabetes	Episode-based (chronic condition)	2022

Measure specifications are available on the QPP Resource Library.[5] These measures were developed with extensive stakeholder input through an iterative process, described in Section 3.

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. They also use a clear attribution methodology based on service and diagnosis information in administrative claims data to identify the start of a care relationship between a clinician and patient. Additionally, they only include clinically related services and apply certain exclusions to ensure only appropriate, relevant costs are measured.

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 episode-based cost measures 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.

Episode-based cost measures represent the cost to Medicare for the items and services furnished to a patient during an episode of care ("episode") and inform clinicians on the costs related to the management of a certain condition that occurred during a defined period.

The episode-based measures in MIPS in 2022 represent various types of care episode and patient condition groups. Specifically, they cover:

- 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 an exacerbation of a condition.
- Patient condition groups, defined by:
    - Chronic conditions requiring ongoing management of a long-term health condition.

These episodes only include items and services that are related to the episode for a clinical condition or procedure (as defined by service and diagnosis codes), rather than including all services that are provided to a patient over a given timeframe.

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

2.3 Population-Based Cost Measures

The MIPS 2022 performance period includes 2 population-based measures: Medicare Spending Per Beneficiary (MSPB) Clinician and Total Per Capita Cost (TPCC). Earlier versions of these measures were in use in 2017-2019. The measures underwent re-evaluation and were finalized for the 2020 MIPS performance period onwards. Re-evaluation is the formal review of a measure every three years to ensure that it continues to perform as intended and to address any stakeholder feedback, as described in the CMS Measures Management System Blueprint (Blueprint v 17.0)[6]. Measure specification documentation for MSPB Clinician and TPCC measures are available on the QPP Resource Library.[7]

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 start of a primary care relationship.

[6] CMS, "CMS Measures Management System Blueprint (Blueprint v 17.0)", Measures Management System, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/Downloads/Blueprint.pdf

[7] CMS, "2021 Cost Measure Information Forms and Measure Codes Lists," QPP Resource Library, https://qpp.cms.gov/about/resource-library

3.0 Stakeholder Engagement

CMS relies on a comprehensive and systematic process for creating episode-based cost measures that uses data-driven stakeholder input to ensure clinical face validity and actionability of constructed episode-based cost measures. Stakeholder input is critical to the development of robust, meaningful, and actionable episode-based cost measures. Section 3.1 provides a summary of the Technical Expert Panels (TEP) convened to date. Section 3.2 discusses the use of Clinical Subcommittees or public comment and Clinician Expert Workgroups in the measure development process. Section 3.3 outlines the person and family engagement and Section 3.4 discusses field testing of the cost measures. Finally, Section 3.5 discusses education and outreach activities conducted to inform stakeholders of the measure development process.

3.1 Technical Expert Panel

Acumen convenes a technical expert panel (TEP) to gather high-level guidance on topics across the cost measure project. The TEP is a standing TEP, meaning that it retains the same composition over multiple meetings. Acumen has held 2 public calls for nominations in 2016 and 2019.[8] Our current TEP has 20 members.[9] It's composed of members from different clinical areas, academia, health care and hospital administration, and patient and family representatives.

To date, Acumen has held 9 TEP meetings (in August 2016, December 2016, March 2017, August 2017, May 2018, November 2018, December 2018, February 2020, and July 2021). 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).

3.2 Clinical Subcommittees and Clinician Expert Workgroups

For Waves 1, 2, and 3 of measure development, Acumen convened Clinical Subcommittees, each focused on a clinical area, to select episode groups for development and to provide input on the cost measures' specifications. Members of Clinical Subcommittees are nominated through a Call for Clinical Subcommittees Nominations.

The work of the Clinical Subcommittees builds on the previous work of the Clinical Committee convened from August to September 2016. This Committee included more than 70 clinicians from over 50 professional societies who provided expert input on identifying a draft list of episode groups for cost measure development and determining the billing codes that trigger each episode group. The clinical review and recommendations obtained from the Clinical Committee were used to inform CMS's December 2016 posting of a Draft List of MACRA Episode Groups and Trigger Codes and an accompanying document on episode-based cost

[8] CMS, "Technical Expert Panels" CMS Measures Management System, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/TEP-Currently-Accepting-Nominations.html

[9] CMS, "Technical Expert Panels: TEP Current Panels" CMS Measures Management System, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/TEP-Current-Panel

measure development for the Quality Payment Program.[10,11] This draft list of episode groups and episode trigger codes served as a starting point for measure development. To date, 3 sets of Clinical Subcommittees have been convened, with a total of 11 unique Clinical Subcommittees. Some Clinical Subcommittees were re-convened for multiple cycles of measure development when developing measures within the same clinical areas.

In Wave 4, Acumen obtained stakeholder input on candidate episode groups through an extended public comment period from December 2020 to February 2021 instead of convening Clinical Subcommittees.[12] This approach addressed stakeholder feedback expressing interest in more flexible participation options for specialty societies, professional associations, and clinicians during the COVID-19 pandemic. The public comment period also widened the range of stakeholders who could contribute feedback. This approach will be revisited for future waves of development.

Acumen also convenes measure-specific Clinician Expert Workgroups, which are smaller groups that provide detailed input on each component of the episode-based cost measures throughout the measure development cycle. These workgroups were introduced following feedback from members of the Wave 1 Clinical Subcommittees. Acumen works with CMS to compose balanced workgroups reflecting public comment or Clinical Subcommittees' suggestions of the specialties and types of expertise and experience that would be most relevant to the selected episode group and the clinicians who would be attributed the measure. Workgroup composition has drawn from the Clinical Subcommittees or by recruiting clinicians and other members of the healthcare community with relevant expertise through outreach and/or from a standing pool of nominees.

Table 2 provides information on the Clinical Subcommittees and workgroups that have been convened during each cycle of measure development. Since the process was refined after the Wave 1 development cycle, no workgroups were convened during Wave 1. As previously noted, no Clinical Subcommittees were convened for the Wave 4 development cycle. Additionally, Acumen is re-specifying the Chronic Kidney Disease (CKD) and End-Stage Renal Disease (ESRD) measures and convened a Workgroup to inform their development, which is also included in the table. Over the 4 waves of measure development and the re-specification of CKD and ESRD measures, Acumen has worked with 457 unique members affiliated with 173 professional societies.

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[10] CMS, "Draft list of episode groups and trigger codes," MACRA Feedback Page, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Draft-list-of-episode-groups-and-trigger-codes-December-2016.zip

[11] CMS, "Episode-Based Cost Measure Development for the Quality Payment Program", MACRA Feedback Page (December 2016), https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Draft-list-of-episode-groups-and-trigger-codes-December-2016.zip.

[12] CMS, "Wave 4 Public Comment Summary", MACRA Feedback Page, https://www.cms.gov/files/document/wave-4-public-comment-summary.pdf.

Table 2. Clinical Subcommittees and Workgroups Convened for Episode-Based Cost Measure Development

Development Cycle	Clinical Subcommittees			Workgroups		
	#	Members	Affiliated Professional Societies	#	Members	Affiliated Professional Societies
Wave 1 (2017 – 2018)	7	148	98	-	-	-
Wave 2 (2018)	10	267	120	11	138	79
Wave 3 (2019 – 2020)	4	142	100	5	85	73
Wave 4 (2021-2022)	-	-	-	4	73	63
CKD/ESRD (2021-2023)	-	-	-	1	16	10

3.3 Person and Family Engagement

Acumen incorporates person and family perspectives into the measure development process to ensure that the measure incorporates relevant experiences from patients and caregivers. Acumen's approach to gather and incorporate this feedback has changes across the waves of development.

During Waves 1 through 3, Acumen convened a Person and Family Committee (PFC) comprised of Medicare patients and caregiver/family members of Medicare patients who had experience with health care and/or patient advocacy, health care delivery, concepts of value, and outcomes that are important to patients across delivery/disease/episodes of care. Throughout the measure development process, over 100 interviews were conducted with the PFC members. The PFC provided different levels of input, including broad concepts of health care quality and value, patient and caregiver perspectives on the types of episodes that should be prioritized for development, and measure specifications (e.g., services perceived as aiding recovery or helping to avoid unnecessary costs and complications).This feedback was relayed to the appropriate Clinical Subcommittee or 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 a Person and Family Engagement (PFE) process where patients and caregivers provide direct input in the clinician expert discussions. The TEP includes 2 patients who provide high-level guidance on topics, such as measure conceptualization and prioritization. The Clinician Expert Workgroups also include approximately 5 individuals with applicable lived experiences for the selected measure concepts, known as Person and Family Partners (PFPs), who can offer direct, integrated input during the workgroup meetings and structured interviews. Through PFE representation in the TEP for high-level guidance and PFPs involvement at each touchpoint with the Workgroups during measure specification, PFE is present throughout the measure development process.

3.4 Field Testing

Acumen conducts field testing to provide clinicians an opportunity to gain experience with and review their performance on cost measures under development. Extensive field testing outreach activities aim to ensure that clinicians will understand the episode-based measures and what actions they could take to improve their performance on the measures, before the measures are implemented into a future MIPS performance period. During field testing, clinicians and other

stakeholders are invited to provide feedback on the draft measure specifications, the field test reports, and publicly posted supplemental materials such as testing results. Field test reports aim to illustrate the clinician's performance on a cost measure and provide more detailed information to help clinicians understand their score, including the types of services that comprise a large or small share of episode costs.

To date, Acumen has conducted field testing in Waves 1, 2, and 3 of measure development.[13,14,15] Clinicians and clinician groups who met the minimum number of cases for each measure during the measurement period had the opportunity to view a field test report with information about their cost measure performance. Clinicians and other stakeholders were encouraged to view their field test reports or a publicly posted mock field test report and provide feedback through an online feedback survey. Acumen analyzed the measure-specific field testing feedback and provided summary reports to the Clinical Subcommittees and workgroups to inform additional refinements. Field testing feedback summary reports are publicly available.[16,17,18] CMS intends to field test measures currently under development in January and February of 2022 and feedback from field testing may inform potential refinements to the draft measure specifications.

3.5 Education and Outreach

CMS and Acumen conduct education and outreach activities to inform stakeholders and increase transparency around cost measures and the development process. These activities are conducted throughout the measure lifecycle: during development, field testing, and once they're incorporated into MIPS.

During the development of cost measures, Acumen engages with stakeholders to increase awareness of the measure development process and improve familiarity with the measures.

- Public office hours sessions are held to share updates with individual stakeholders and specialty societies and organizations alike, as well as to provide a channel to answer stakeholder questions. 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 process.

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[13] CMS, "2017 Field Testing materials," MACRA Feedback page, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2017-field-test-materials.zip

[14] CMS, "2018 Field Testing materials" MACRA Feedback page, https://www.cms.gov/files/zip/macra-2018-field-testing-materials.zip

[15] CMS, "2020 Field Testing materials" MACRA Feedback page, https://www.cms.gov/files/zip/2020-field-testing-materials.zip

[16] CMS, "Field Testing Feedback Summary Report for Eight MACRA Episode-Based Cost Measures," MACRA Feedback Page, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2018-field-testing-feedback-summary-report.pdf

[17] CMS, "October-November 2018 Field Testing Feedback Summary Report for MACRA Cost Measures," MACRA Feedback Page, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2019-ft-feedback-summary-report.pdf

[18] CMS, "2020 Field Testing Feedback Summary Report for 5 Episode-Based Cost Measures," MACRA Feedback Page, https://www.cms.gov/files/document/macra-2020-ft-feedback-summary-report.pdf

- Office hours for nomination periods across Waves and for the public comment period in Wave 4 publicize the opportunity for input on the prioritization of candidate episode groups and participation in expert stakeholder panels during measure development.
- Office hours have been held to provide occasional updates on the stakeholder input gathered in measure development and refinements to measure specifications.

- Beginning in Wave 3 in response to stakeholder feedback regarding transparency in the measure development process, Acumen also provides the opportunity for members of the public who aren't workgroup members to dial into workgroup meetings in listen-only mode. This allows all stakeholders the opportunity to observe workgroup discussions and considerations that inform the preliminary measure specifications. Following Clinical Subcommittee and workgroup meetings, public meeting summaries are also posted on the MACRA Feedback Page[19] for stakeholder reference.
- National informational webinars help to provide a large range of stakeholders with updates on the cost measures under development. For example, Acumen hosted an informational webinar in March 2019 to provide an update on final refinements that were made to measure specifications following field testing feedback and the subsequent workgroup meeting. The transcript, recording, and slides from the webinar are available in the QPP Webinar Library.[20]

During field testing, Acumen conducts substantial outreach activities including informational webinars and office hours, in addition to posting educational materials on the cost measures undergoing testing.

- National field testing webinars inform the public of details regarding the field testing process and the draft measure specifications for measures undergoing field testing. They also provide stakeholders the opportunity to ask about any of the materials distributed for field testing. Two field testing webinars were held during the fall 2017 field testing, one webinar was held during the fall 2018 field testing, and a recorded webinar was posted during the summer 2020 field testing.[21]
- 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 stakeholder understanding. Specialty office hours were held for the 3 field testing periods that have been conducted.
- Acumen prepares a set of materials to inform stakeholders on the measure specifications and how clinicians may interpret cost performance information provided in the Field Test Reports, including a frequently asked questions document, mock field test report(s), measure specifications documents, a description of the measure development process, and documents with measure testing results and summary statistics.

[19] CMS, MACRA Feedback Page, https://www.cms.gov/Medicare/Quality-Payment-Program/Quality-Payment-Program/Give-Feedback
[20] CMS, "MACRA Cost Measures Post Field Testing," Quality Payment Program Webinar and Events, https://qpp.cms.gov/about/webinars
[21] CMS "MACRA Cost Measures Field Testing Webinar," Quality Payment Program Webinar and Events, https://qpp.cms.gov/about/webinars

- To increase engagement with the wider stakeholder community and specialty societies and organizations during measure development, CMS and Acumen will implement additional activities during field testing for Wave 4 of measure development in 2022:
    - An additional early-notice email to targeted specialty societies for clinical specialties likely to receive Field Test Reports, in order to build engagement around the field testing period.
    - More frequent emails to Acumen's contacts from clinician and healthcare provider organizations gathered over the course of measure development work.
    - An additional Specialty Societies office hours touchpoint during the field testing period, in addition to retaining the pre-field testing office hours session before field testing to help stakeholders prepare, which will provide a Q&A opportunity during field testing itself.

More broadly, CMS will continue to host education and outreach activities to increase clinician familiarity with the cost measures in use in MIPS and to provide meaningful and actionable information to clinicians so that they can provide high-quality, cost-efficient care to their patients.

- CMS has national webinars and listening sessions that discuss the MIPS cost performance category to allow stakeholders to remain informed about the measures.
    - The annual cost category webinars provide an overview of the cost performance category, including a review of new measures and new policies effective for the specific performance period. Slides, recordings, and transcripts from these webinars, including the most recent 2021 MIPS Quality and Cost Performance Categories webinar are available in the QPP Webinar Library.[22]
- As needed, Acumen posts materials to help clarify concepts related to cost measures, such as a poster outlining the chronic measure methodology[23] or an infographic addressing stakeholder concerns of the use of shared data across cost measures.[24]
- Acumen provides information on the various opportunities for stakeholder participation, which can be found in the Stakeholder Input Opportunities document available on the MACRA Feedback page.[25]
- CMS and Acumen address any stakeholder inquiries about the cost measure specifications and their use in MIPS via that QPP Helpdesk.

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[22] CMS, "Cost Performance Category Overview," Quality Payment Program Webinar and Events, https://qpp.cms.gov/about/webinars

[23] CMS, "Chronic Condition Cost Measure Framework poster," MACRA Feedback Page, https://www.cms.gov/files/document/chronic-condition-cost-measure-framework-poster.pdf

[24] CMS, "Shared Data Across Cost Measurements," MACRA Feedback Page, https://www.cms.gov/files/document/shared-data-across-cost-measurements-3-13-20.pdf

[25] CMS, "Stakeholder Input Opportunities," MACRA Feedback Page, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2019-stakeholder-input-opportunities.pdf

4.0 Future Cost Measures for MIPS

Acumen continues to develop episode-based cost measures for potential use in MIPS. Section 4.1 outlines the progress of measures currently under development and Section 4.2 discusses future plans for cost measure development.

4.1 Measures Currently Under Development

Acumen is currently developing the following 7 measures:

- Emergency Medicine
- Heart Failure
- Low Back Pain
- Major Depressive Disorder
- Chronic Kidney Disease (CKD)
- End-Stage Renal Disease (ESRD)
- Psychoses/Related Conditions

These measures are being developed with stakeholder input. From December 2020 to February 2021, Acumen held a public comment period to obtain input on episode group prioritization and the composition of measure-specific workgroups for Wave 4 and CMS approved the development of 4 episode groups. This approach provided flexibility for a wider range of stakeholders to participate than the typical Clinical Subcommittee process. Acumen is also re-specifying CKD and ESRD measures for use in MIPS from the Kidney Care First option of the Kidney Care Choices Alternative Payment Model (APM). Acumen convened workgroups to obtain detailed input on specifications for each measure. For more information on the development process for these measures, please visit the MACRA Feedback Page.[26]

Additionally, Acumen is refining the Psychoses/Related Conditions measure which had originally been developed as part of Wave 2 in 2018 along with 10 other episode-based cost measures. It had been considered for use in MIPS but was ultimately not implemented due to stakeholder concerns about the scope of the measure. Acumen has been refining the measure since then with more input and testing. Specifically, the Psychoses/Related Conditions measure workgroup was reconvened to make adjustments responding to feedback received from the Measure Applications Partnership (MAP), stakeholders, and the Request for Information in the CY 2020 Physician Fee Schedule proposed rule.

Emergency Medicine, Heart Failure, Low Back Pain, Major Depressive Disorder, and Psychoses/Related Condition measures are scheduled to finish development in 2022. The CKD and ESRD measures may finish development in 2023. CMS will consider a range of input before considering the potential use of any episode-based cost measures in MIPS, including any recommendations from the MAP and stakeholder feedback. CMS also anticipates that any developed measures would be submitted to National Quality Forum (NQF) for endorsement.

[26] CMS, "MACRA cost measure development," MACRA Feedback Page, https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/value-based-programs/macra-mips-and-apms/macra-feedback.html.

4.2 Future Plans for Cost Measure Development

Wave 5 of measure development will begin in 2022 for 4 new measures. The measure topics will consider prioritization criteria developed by our TEP, including clinical coherence, impact and importance to MIPS, the opportunity for cost performance improvement, and alignment with quality indicators to assess clinician value. Potential measure topics have been discussed in the Wave 4 public comment period[27] and the TEP in the February 2020 and July 2021 meetings.[28]

The newly developed cost measures could potentially be used in future, applicable MIPS Value Pathways (MVPs) if they're finalized for use in MIPS. CMS is currently developing the MVP framework to align and connect measures and activities across the quality, cost, improvement activities, and Promoting Interoperability performance categories of MIPS. The framework also aims to reduce reporting burden and incorporate a foundation of population health priorities.

Additionally, CMS will conduct a comprehensive re-evaluation of the 8 Wave 1 measures, which have been in MIPS since January 2019. Beginning in January of 2022, this process will include a public comment period, workgroups for select measures, and submission of measures with substantive changes to the MUC List. CMS will aim to address stakeholder feedback as well as improve consistency across all cost measures in MIPS.

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[27] CMS, "Wave 4 Public Comment Summary," MACRA Feedback Page, https://www.cms.gov/files/document/wave-4-public-comment-summary.pdf

[28] CMS, "Physician Cost Measures and Patient Relationship Codes (PCMP) Technical Expert Panel Summary Report: July 20, 2021," TEP Current Panels, https://www.cms.gov/files/document/physician-cost-measures-and-patient-relationship-codes-pcmp-technical-expert-panel-summary-report.pdf

5.0 Cost Measure Coverage Metrics

This section provides cost measure coverage metrics for the episode-based and population-based cost measures finalized for use in MIPS. Specifically, Section 5.1 provides estimated cost coverage metrics, while Section 5.2 provides estimated clinician coverage metrics.[29]

5.1 Cost Coverage

This section presents estimated cost coverage for the measures that will be in use in the MIPS 2022 performance period, calculated on a study period of January 1 to December 31, 2019.[30] All figures in this section are estimates for reference only and don't reflect cost coverage for the measures as implemented in MIPS.

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 aren't 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 certain groups of cost measures (e.g., "Episode-Based Cost Measures") don't count claims more than once if included in multiple measures.

Table 3 includes 2 estimates for the population-based, Wave 1, Wave 2, and Wave 3 measures based on the application of the following MIPS case minimums:

- 10 episodes for procedural episode-based cost measures, except for the Colon and Rectal Resection cost measure, which has a 20-episode case minimum,
- 20 episodes for acute inpatient medical condition episode-based cost measures,
- 20 episodes for chronic condition episode-based cost measures,
- 35 episodes for the MSPB Clinician measure, and
- 20 patients for the TPCC measure.

Additional analyses for these measures are available in the 2017, 2018, and 2020 National Summary Data Reports.[31,32,33]

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[29] 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, and Sepsis episode-based cost measures specifications.

[30] The percentage figures provided in this posting are only estimates, and don't reflect the coverage of these measures as used in MIPS. Performance data on the measures in the MIPS 2022 performance period wouldn't be available until after the end of the performance period. CY 2019 performance period data was used for the analyses to avoid using data affected by rapid and unprecedented changes to healthcare services due to the COVID-19 pandemic.

[31] CMS, "2017 Field Testing materials," MACRA Feedback Page, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2017-field-test-materials.zip

[32] CMS, "2018 National Summary Data Report," MACRA Feedback Page, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2018-national-summary-data-report.zip

[33] CMS, "2020 National Summary Data Report," MACRA Feedback Page, https://www.cms.gov/files/zip/2020-national-summary-data-report.zip

Table 3. Cost Coverage at the Group Level for MIPS 2022 Cost Measures*

Cost Measures	% of Total Medicare Parts A and B Spending w/ No Case Min Applied†	% of Total Medicare Parts A and B Spending w/ Case Min Applied‡
Population-Based Cost Measures	-	-
Medicare Spending Per Beneficiary Clinician	26.6%	26.0%
Total Per Capita Cost	75.5%	75.4%
Episode-Based Cost Measures	**14.2%**	**13.3%**
Wave 1 Episode-Based Cost Measures	**3.7%**	**3.5%**
Elective Outpatient Percutaneous Coronary Intervention	0.3%	0.3%
Intracranial Hemorrhage Or Cerebral Infarction	0.7%	0.6%
Knee Arthroplasty	1.1%	1.1%
Revascularization for Lower Extremity Chronic Critical Limb Ischemia	0.5%	0.5%
Routine Cataract Removal with Intraocular Lens Implantation	0.4%	0.4%
ST-Elevation Myocardial Infarction with Percutaneous Coronary Intervention	0.1%	0.1%
Screening/Surveillance Colonoscopy	0.2%	0.2%
Simple Pneumonia with Hospitalization	0.4%	0.3%
Wave 2 Episode-Based Cost Measures	**2.8%**	**2.6%**
Acute Kidney Injury Requiring New Inpatient Dialysis	0.1%	0.1%
Elective Primary Hip Arthroplasty	0.6%	0.5%
Femoral or Inguinal Hernia Repair	0.1%	0.1%
Hemodialysis Access Creation	0.1%	0.1%
Inpatient Chronic Obstructive Pulmonary Disease Exacerbation	0.7%	0.6%
Lower Gastrointestinal Hemorrhage	0.2%	0.1%
Lumbar Spine Fusion for Degenerative Disease, 1-3 Levels	0.5%	0.5%
Lumpectomy, Partial Mastectomy, Simple Mastectomy	0.1%	0.1%
Non-Emergent Coronary Artery Bypass Graft	0.4%	0.4%
Renal or Ureteral Stone Surgical Treatment	0.1%	0.1%
Wave 3 Episode-Based Cost Measures	**8.3%**	**7.8%**
Asthma/Chronic Obstructive Pulmonary Disease (COPD)	1.8%	1.7%
Colon and Rectal Resection	0.3%	0.2%
Diabetes	4.5%	4.3%
Melanoma Resection	0.03%	0.02%
Sepsis	2.2%	2.1%

* The denominator ($410,871,960,809) 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.

† 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.

‡ 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.

5.2 Clinician Coverage

This section presents estimated clinician coverage for the measures that will be in use in the MIPS 2022 performance period, calculated using the study period of January 1 to December 31, 2019. All figures in this table are for reference only and don't reflect clinician coverage for the measures as implemented in MIPS.

The section includes the share of clinician groups that meet the case minimums and 2 ways of estimating individual clinician coverage for group reporting:

1. The share of clinicians under a clinician group that billed at least one trigger claim, to approximate clinicians with some involvement in the type of care that the measure is assessing, and
2. The share of clinicians who could potentially receive a cost measure score assuming they were reporting as part of a clinician group.

Clinician groups are identified by a Taxpayer Identification Number (TIN) and clinicians are identified by a TIN and National Provider Identifier combination (TIN-NPI). Estimates assume that all clinicians meeting the attribution criteria for cost measures are MIPS participants and that all MIPS participants report as part of a clinician group. The percentages representing the union of the cost measures don't count clinicians more than once if they're attributed by multiple measures.

Table 4 presents the estimated clinician coverage for the population-based, Wave 1, Wave 2, and Wave 3 measures using the MIPS case minimums applied to Table 3 in Section 4.1.

Table 4. Clinician Coverage at the Group Level for MIPS 2022 Cost Measures*

Cost Measures	Coverage for TINs Meeting Case Minimums		
	% TINs†	% TIN-NPIs that Billed At Least 1 Trigger Claim‡	% TIN-NPIs Billing Any Paid Part B Claim Under the TIN§
Population-Based Measures	-	-	-
Medicare Spending Per Beneficiary Clinician	6.7%	21.9%	49.2%
Total Per Capita Cost	26.6%	33.3%	63.3%
Episode-Based Cost Measures	**18.3%**	**31.2%**	**57.0%**
Wave 1 Measures	**4.8%**	**10.3%**	**43.7%**
Elective Outpatient Percutaneous Coronary Intervention	0.6%	0.4%	25.1%
Intracranial Hemorrhage Or Cerebral Infarction	0.6%	5.0%	30.7%
Knee Arthroplasty	1.0%	1.0%	27.3%
Revascularization for Lower Extremity Chronic Critical Limb Ischemia	0.7%	0.5%	25.2%
Routine Cataract Removal with Intraocular Lens Implantation	1.6%	0.6%	18.2%
ST-Elevation Myocardial Infarction with Percutaneous Coronary Intervention	0.1%	0.8%	13.8%
Screening/Surveillance Colonoscopy	1.5%	1.1%	31.5%
Simple Pneumonia with Hospitalization	0.7%	4.7%	29.6%
Wave 2 Measures	**3.1%**	**10.2%**	**41.3%**
Acute Kidney Injury Requiring New Inpatient Dialysis	0.3%	0.4%	14.2%

Cost Measures	Coverage for TINs Meeting Case Minimums		
	% TINs†	% TIN-NPIs that Billed At Least 1 Trigger Claim‡	% TIN-NPIs Billing Any Paid Part B Claim Under the TIN§
Elective Primary Hip Arthroplasty	0.7%	0.8%	24.9%
Femoral or Inguinal Hernia Repair	0.8%	0.7%	27.7%
Hemodialysis Access Creation	0.4%	0.3%	22.2%
Inpatient Chronic Obstructive Pulmonary Disease Exacerbation	1.1%	6.1%	33.7%
Lower Gastrointestinal Hemorrhage	0.4%	3.8%	26.5%
Lumbar Spine Fusion for Degenerative Disease, 1-3 Levels	0.5%	0.5%	19.8%
Lumpectomy, Partial Mastectomy, Simple Mastectomy	0.4%	0.3%	25.4%
Non-Emergent Coronary Artery Bypass Graft	0.3%	0.3%	19.9%
Renal or Ureteral Stone Surgical Treatment	0.6%	0.5%	23.9%
Wave 3 Episode-Based Cost Measures	**14.2%**	**26.6%**	**51.7%**
Asthma/Chronic Obstructive Pulmonary Disease (COPD)	7.0%	12.2%	44.0%
Colon and Rectal Resection	0.3%	0.5%	20.0%
Diabetes	12.0%	16.5%	46.4%
Melanoma Resection	0.7%	0.5%	20.1%
Sepsis	1.6%	10.3%	37.0%

* The denominators for all metrics in the table are as follows: For the % TIN metrics, the denominator is the number of TINs with at least one eligible NPI who billed a positive claim amount or were attributed an episode during the study period. For CY2019, this total number of TINs is 266,888. For the % TIN-NPI metrics, the denominator is the number of eligible TIN-NPIs who billed a positive claim amount during the study period or were attributed an episode for one of the measures. For CY2019 the total number of TIN-NPIs is 1,660,148.

† The numerator for this metric includes only TINs that meet the case minimums for the measure. No other MIPS eligibility criteria are applied.

‡ The numerator for this metric includes only TIN-NPIs billing under a MIPS eligible clinician specialty who bill at least one trigger claim for an episode under a TIN that meets the case minimum for the measure. No other MIPS eligibility criteria are applied.

§ The numerator for this metric represents a broader clinician population and includes TIN-NPIs with a MIPS eligible clinician specialty billing a paid Medicare Part B Physician/Supplier (Carrier) claim during the study period under a TIN that meets the case minimum as well as TIN-NPIs under the TIN who are attributed at least one episode during the study period. No other MIPS eligibility criteria are applied.