Quality Payment
PROGRAM

MIPS: Summary of Cost Measures

December 2018

Table of Contents

List of Tables and Figures

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. 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, a description of stakeholder engagement, 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 (beginning with 2018).

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 (hereafter, "Acumen") to develop methodology for analyzing cost, as appropriate, through consideration of patient condition groups and care episode groups. As a result, CMS and Acumen have developed episode-based cost measures, which are designed to inform clinicians on the cost of their beneficiary's care for which they are responsible during a specified timeframe.

Throughout this document, the term "cost" generally means the Medicare allowed amount, which includes both Medicare payments and any applicable beneficiary deductible and coinsurance amounts on traditional, fee-for-service claims. Medicare allowed amounts are adjusted through payment standardization to facilitate cost comparisons and limit observed differences in costs to those that may result from health care 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 (GPCIs) or other payment adjustments such as those for teaching hospitals.

The rest of this document provides details on cost measures. Section 2 provides details on the cost measures in use for the 2018 and 2019 MIPS performance periods, including estimates on the percentage of Medicare Parts A and B expenditures that are covered by the cost measures. Section 3 provides information on measures under development for potential use in MIPS and plans for future development. Section 4 describes the avenues through which CMS has gathered stakeholder input on each aspect of episode-based cost measures within the measure development framework.

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

2.0 MIPS Cost Measures

2.1 2018 MIPS Performance Period (for the 2020 MIPS Payment Year)

Two cost measures were included in the cost performance category of MIPS for the 2018 performance period:

(i) Medicare Spending Per Beneficiary (MSPB); and
(ii) Total Per Capita Costs for All Attributed Beneficiaries (TPCC)

These measures have been part of the MIPS cost performance category since the 2017 MIPS performance period. Prior to their use in MIPS, CMS used a version of the measures in the Value Modifier Program and reported them in the annual Quality and Resource Use Reports (QRURs) until the Value Modifier Program ended. As required by MACRA, components of the Value Modifier program were incorporated into MIPS.

The MSPB measure in use for the 2018 MIPS performance period assesses total Medicare Parts A and B costs incurred by a single beneficiary immediately prior to, during, and 30 days following a qualifying inpatient hospital stay and compares these observed costs to expected costs. Specifically, an MSPB episode includes all Medicare Part A and Part B claims falling in the "episode window," including claims with a start date between 3 days prior to a hospital admission (also known as the "index admission" for the episode) through 30 days after hospital discharge. The TPCC measure in use for the 2018 MIPS performance period is a payment-standardized, risk-adjusted, and specialty-adjusted cost measure focused on clinicians and clinician groups performing primary care services. Specifically, the measure is an average of per capita costs across all attributed beneficiaries and includes all Medicare Parts A and B costs across all attributed beneficiaries.

The MSPB and TPCC measures used in the 2018 MIPS performance period will be used to calculate the cost performance category score that will impact the payment adjustment for MIPS eligible clinicians in 2020. Additional information about these two measures used in the 2018 MIPS performance period are in documents called Measure Information Forms, which are available in the Quality Payment Program Resource Library.[2]

Table 1 below provides an estimate of the percentage of expenditures of Medicare Parts A and B covered by the 2018 MIPS cost measures, using a measurement period of January 1, 2017 to December 31, 2017.[3] The table uses the MIPS case minimums finalized for these measures for the 2018 MIPS performance period: 35 episodes for the MSPB measure and 20 beneficiaries for the TPCC measure.

The denominator used in the calculation is the Total Medicare Parts A and B spending, which is the sum of positive payment-standardized allowed amounts for all inpatient, outpatient, Part B

[2] CMS, "Cost Measures," *2018 Resources,* https://www.cms.gov/Medicare/Quality-Payment-Program/Resource-Library/2018-Cost-Measures.zip

[3] The percentage of expenditures presented in this posting are only estimates. The actual coverage is not available since the performance data is not currently available, as the 2018 performance period is still underway and the 2019 performance period has not yet begun. A measurement period looking at the calendar year 2017 (January 1, 2017 – December 31, 2017) is used to determine estimates of the percentage of expenditures covered by the 2018 and 2019 MIPS performance period cost measures.

physician/supplier, home health, skilled nursing facility, durable medical equipment, prosthetics, orthotics and supplies (DMEPOS), and hospice claims billed during the measurement period. This total spending includes spending from all Medicare clinicians, and is not limited to only MIPS eligible clinicians. Spending for the MSPB and TPCC cost measures is calculated by summing the total cost of care provided during the measurement period. The Total Medicare Parts A and B spending for the cost coverage figures provided in the table below is: $380,669,061,324.

MIPS eligible clinicians have the option to participate in MIPS as an individual or as part of a group. The cost coverage percentage provided in Table 1 assumes that all MIPS participants report as part of a clinician group, meaning that the clinician group must meet the case minimum for reporting purposes.

As a note, the union of the MSPB and TPCC coverage below (i.e., the "All 2018 MIPS Cost Measures" row) de-duplicates costs for claims included in both measures.

Table 1. Cost Coverage at the Group Level for 2018 MIPS Performance Period Measures

Cost Measures	Percentage of Total Medicare Parts A and B Spending
All 2018 MIPS Cost Measures	**93.35%**
Medicare Spending Per Beneficiary (MSPB)	28.88%
Total Per Capita Cost for All Attributed Beneficiaries (TPCC)	87.64%

2.2 2019 MIPS Performance Period (for the 2021 MIPS Payment Year)

The cost performance category of MIPS for the 2019 performance period will include ten measures:

(i) MSPB;
(ii) TPCC; and
(iii) Eight episode-based cost measures.

The same versions of the MSPB and TPCC measures in use for the 2018 MIPS performance period will be used for the 2019 performance period.

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. Care episode groups consider the patient's clinical history at the time items and services are furnished during an episode of care and are used to define episode groups for procedures and acute inpatient medical conditions through service and/or diagnosis codes on claims. Patient condition groups consider the patient's clinical history at the time of a medical visit as well as their current health status. Patient condition groups define episode groups for chronic conditions through diagnosis codes on claims.

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 cost of their beneficiary's care for which they are responsible during an episode's timeframe. They differ from the TPCC and MSPB measures because they only include items and services that are related to the episode for a clinical condition or procedure (as defined by procedure and diagnosis codes), as opposed to including all services that are provided to a patient over a given timeframe.

Three types of episode groups serve as the basis for the episode-based cost measures: procedural, acute inpatient medical condition, or chronic condition. Procedural episode groups focus on procedures of a defined purpose or type. Acute inpatient medical condition episode groups represent treatment for a self-limited acute illness or treatment for a flare-up or an exacerbation of a condition that requires a hospital stay. Chronic condition episode groups represent ongoing management of a long-term health condition.

Below, Table 2 lists the episode-based cost measures in use for the 2019 MIPS performance period. These eight episode-based cost measures include procedural and acute inpatient medical condition episode groups and were developed with extensive input from clinician experts as described in Section 4 of this document. No chronic condition episode groups have been developed, to date. The Measure Information Forms for these cost measures will be available in the QPP Resource Library.[4] These measures are expected to be submitted for National Quality Forum (NQF) endorsement in the Spring 2019 cycle.

Table 2. Episode-Based Cost Measures for 2019 MIPS Performance Period

Cost Measure	Episode Group Type
Elective Outpatient Percutaneous Coronary Intervention (PCI)	Procedural
Intracranial Hemorrhage or Cerebral Infarction	Acute Inpatient Medical Condition
Knee Arthroplasty	Procedural
Revascularization for Lower Extremity Chronic Critical Limb Ischemia	Procedural
Routine Cataract Removal with Intraocular Lens (IOL) Implantation	Procedural
Screening/Surveillance Colonoscopy	Procedural
Simple Pneumonia with Hospitalization	Acute Inpatient Medical Condition
ST-Elevation Myocardial Infarction (STEMI) with PCI	Acute Inpatient Medical Condition

The estimated cost coverage percentages of the eight episode-based cost measures and the MSPB and TPCC measures are provided in Table 3, below. Similar to Table 1, Table 3 uses the MIPS case minimums finalized for these measures for the 2019 MIPS performance period: 10 episodes for the procedural measures, 20 episodes for the acute inpatient medical condition measures, 35 episodes for the MSPB measure and 20 beneficiaries for the TPCC measure. The total Medicare Parts A and B spending is calculated in the same way as described for Table 1 with the same measurement period (January 1, 2017 to December 31, 2017). Spending for each episode-based cost measure is calculated by summing the cost of services assigned to the measure, as determined through clinical input.

The cost coverage percentage provided in Table 3 assumes that all MIPS participants report as part of a clinician group, meaning the clinician group must meet the case minimum for reporting

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

purposes. For additional analyses into the episode-based cost measures, please see the *National Summary Data Report (July 2018).*[5]

Similar to Table 1, the percentages representing the union of the cost measures (i.e., the "All 2019 MIPS Cost Measures," "MIPS Episode-Based Cost Measures," and "MSPB and TPCC Measures" rows) de-duplicate costs for claims captured across multiple measures.

Table 3. Cost Coverage at the Group Level for 2019 MIPS Performance Period Measures

Cost Measures	Percentage of Total Medicare Parts A and B Spending
All 2019 MIPS Cost Measures	**94.06%**
MIPS Episode-Based Cost Measures	**3.70%**
Elective Outpatient Percutaneous Coronary Intervention (PCI)	0.28%
Intracranial Hemorrhage Or Cerebral Infarction	0.71%
Knee Arthroplasty	1.22%
Revascularization for Lower Extremity Chronic Critical Limb Ischemia	0.49%
Routine Cataract Removal with Intraocular Lens (IOL) Implantation	0.43%
Screening/Surveillance Colonoscopy	0.21%
Simple Pneumonia with Hospitalization	0.30%
ST-Elevation Myocardial Infarction (STEMI) with Percutaneous Coronary Intervention (PCI)	0.06%
MSPB and TPCC Measures	**93.35%**
Medicare Spending Per Beneficiary (MSPB)	28.88%
Total Per Capita Cost for All Attributed Beneficiaries (TPCC)	87.64%

[5] 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

3.0 Cost Measures for Potential Future Use in MIPS

3.1 Measures Under Development

CMS developed 11 episode-based cost measures for potential use in the MIPS cost performance category in a future year, as listed below in Table 4. These measures were developed with extensive stakeholder and clinician input, discussed further in Section 4. The measures underwent field testing in October 2018[6] and were refined based on field testing feedback provided by stakeholders. For more information about these measures, including preliminary specifications, please visit the MACRA feedback page.[7]

CMS will consider input received throughout the measure development process, including recommendations from the Measure Applications Partnership, before considering the potential use of these 11 episode-based cost measures in MIPS. Before the measures can be used in MIPS, they would be proposed for use in the program through the notice-and-comment rulemaking process. CMS also plans to submit these measures in a future NQF endorsement cycle.

Table 4. Episode-Based Cost Measures under Development for Potential Use in MIPS[8]

Cost Measure	Episode Group Type
Acute Kidney Injury Requiring New Inpatient Dialysis	Procedural
Elective Primary Hip Arthroplasty	Procedural
Femoral or Inguinal Hernia Repair	Procedural
Hemodialysis Access Creation	Procedural
Inpatient Chronic Obstructive Pulmonary Disease (COPD) Exacerbation	Acute Inpatient Medical Condition
Lower Gastrointestinal Hemorrhage	Acute Inpatient Medical Condition
Lumbar Spine Fusion for Degenerative Disease, 1-3 Levels	Procedural
Lumpectomy, Partial Mastectomy, Simple Mastectomy	Procedural
Non-Emergent Coronary Artery Bypass Graft (CABG)	Procedural

[6] CMS, "What is cost measures field testing?" *MACRA Feedback*, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-Feedback.html

[7] CMS, "Episode-Based Cost Measures zip file," *MACRA Feedback*, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/2018-episode-based-cost-measures-zip-file.zip

[8] The estimated percentage of Parts A and B expenditures covered by these cost measures under development for potential use in MIPS is 3.7 percent at the clinician group level when using the same case minimums for acute inpatient medical condition and procedural measures as used in the MIPS 2019 performance period. As these measures have not been finalized, this coverage percentage is preliminary and is subject to change. As a note, this coverage should be considered separate from the coverage percentage provided in Table 3 for the episode-based cost measures in use for 2019 MIPS, as costs for claims captured across multiple measures have not been de-duplicated.

Cost Measure	Episode Group Type
Psychoses/Related Conditions	Acute Inpatient Medical Condition
Renal or Ureteral Stone Surgical Treatment	Procedural

3.2 Future Plans for Cost Measure Development

CMS plans to continue developing episode-based cost measures and to continue gathering input from the clinician community through the development process. New episode-based cost measures may include procedural, acute inpatient medical condition, and chronic condition episode groups from existing or new clinical areas. Potential clinical areas for development may be drawn from the episode groups included in the Draft List of Episode Groups and Trigger Codes,[9] which is a starting point for measure development. Examples of potential clinical areas could include Infectious Disease Management, Endocrine Disease Management, and Pain Management. CMS also intends to consider future avenues for the alignment of quality and cost measures in the MIPS program.

As further described below in Section 4 on Stakeholder Engagement, in 2017 and 2018, Acumen convened Clinical Subcommittees focused on different clinical areas. To date, 11 Subcommittees have been convened to select episode groups for development and to provide input on the cost measures' specifications. The first set of 7 Subcommittees included members from more than 98 professional societies, and the second set of 10 Subcommittees included members from more than 120 professional societies. The second set of Subcommittees included six Subcommittees reconvened from the first year of measure development, and four newly convened Subcommittees. In 2019, Acumen intends to convene additional Clinical Subcommittees for development of new measures, some of which would be chronic condition episode-based measures.

Additional information about the work of the Subcommittees is provided in the next section.

[9] CMS, "Draft list of episode groups and trigger codes," *MACRA Feedback*, 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

4.0 Stakeholder Engagement

CMS relies on a comprehensive framework and systematic process for creating episode-based cost measures that account for the roles and responsibilities of individual clinicians in the care of individual patients experiencing specific health conditions. This framework includes a data driven stakeholder input process for acquiring and implementing clinical input that ensures 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. This section provides a summary of the stakeholder engagement activities convened by Acumen, including Clinical Subcommittees, measure-specific workgroups, a Technical Expert Panel (TEP), a Person and Family Committee (PFC), and field testing. Acumen also hosts education and outreach activities to inform stakeholders on the measure development process.

4.1 Clinical Subcommittees

Acumen convenes 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. Future Clinical Subcommittees under this project, including Subcommittees focused on chronic condition episode group development, will be convened through separate nomination periods.

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 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, Acumen has convened two sets of Clinical Subcommittees. From May 2017 to January 2018, Acumen convened seven Clinical Subcommittees to provide structured clinical input on the components of episode-based cost measures, including refinements to the episode groups and episode trigger codes included in the December 2016 posting. These seven Clinical Subcommittees, which comprised 148 members affiliated with 98 professional societies, selected and provided detailed clinical input on the eight episode-based cost measures described in Table 2.

From April 2018 to December 2018, Acumen convened ten Clinical Subcommittees. These ten Clinical Subcommittees, which included 267 members affiliated with more than 120 professional

[10] CMS, "Draft List of MACRA Episode Groups and Trigger Codes", *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-care-episode-and-patient-condition-groups-and-codes.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/Episode-Based-Cost-Measure-Development-for-the-Quality-Payment-Program.pdf.

societies, selected the 11 episode-based cost measures listed in Table 4, and provided input on the composition of measure-specific workgroups, described in Section 4.1.1. For more information regarding the Clinical Subcommittees convened, refer to Appendix A.

4.1.1 Measure-Specific Workgroups

Prior to convening the ten Clinical Subcommittees from April 2018 to December 2018, Acumen refined the Clinical Subcommittee process, based on feedback from members of the first set of Clinical Subcommittees. Acumen created smaller, measure-specific workgroups within each Clinical Subcommittee, whose role was to provide detailed input into each component of the cost measure selected by the Clinical Subcommittee for development. These workgroups were made smaller to facilitate focused discussions for providing detailed input on each component of the episode-based cost measures.

Acumen worked with CMS to compose balanced workgroups reflecting the 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 membership was composed by drawing from Clinical Subcommittee membership, and supplemented by additional clinicians, with additional outreach and from a standing pool of nominees.

Eleven measure-specific workgroups were convened to provide detailed clinical input on the episode-based cost measures listed in Table 4. These measure-specific workgroups comprised clinicians with expertise directly relevant to the selected episode groups and included clinicians who would most likely be attributed the measure. The 11 measure-specific workgroups included 138 members affiliated with 79 professional societies.

4.2 Technical Expert Panel

In support of the measure development process, Acumen also convenes TEP meetings to gather high-level guidance on the measure development process from expert stakeholders. The advisory panel, which consists of 19 expert stakeholders representing specialty societies, academia, health care administration, and patient and family member organizations, was selected following a public call for nominations.[12] To date, Acumen has convened seven TEP meetings in August 2016, December 2016, March 2017, August 2017, May 2018, November 2018, and December 2018, each centered on particular topics to gather comprehensive feedback that could be operationalized throughout the development process.[13]

4.3 Person and Family Committee

Acumen and its subcontractor, Westat, have convened a Person and Family Committee (PFC) since spring 2017 to gather actionable input from patients and caregivers for the cost measure development process. The PFC comprises Medicare beneficiaries and caregiver/family members of Medicare beneficiaries who have experience with health care and/or patient

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

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

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, the PFC has provided different levels of input. Initial conversations with the PFC in June 2017 involved 15 members and focused on the broad concepts of health care quality and value. Subsequent discussions in March 2018 focused on patient and caregiver perspectives on the types of episodes that should be prioritized for development. This feedback was summarized and provided to the Clinical Subcommittees for their consideration when selecting episode groups for the second cycle of measure development.

The PFC has also provided detailed input on pre- and post-trigger periods, inclusion of services and costs for attributed clinicians, and services perceived as aiding recovery or helping to avoid unnecessary costs and complications. This feedback is specific to the type of care represented by the episode group under development; for example, the PFC provided input on acute hospitalizations which the Inpatient COPD Exacerbation and Lower Gastrointestinal Hemorrhage measure-specific workgroups considered in the June 2018 in-person meetings.

During the most recent round of discussions with the PFC that began in September 2018, Westat conducted in-depth interviews with 68 PFC members to gather patient perspectives for the measure-specific workgroups to consider during the November 2018 post-field testing webinars. Future PFC meetings are planned to inform future cost measure development.

4.4 Field Testing

CMS conducted field testing of the episode-based cost measures to provide clinicians an opportunity to gain experience with and review their performance on the new cost measures, prior to the measures' potential use in MIPS. The extensive field testing activities conducted in combination with additional education and outreach aim to ensure that clinicians will understand the episode-based measures and what actions they could take to improve their performance on the measures while continuing to provide high quality, cost-efficient care, before the measures are implemented into a future MIPS year.

Field testing is a voluntary opportunity for clinicians and other stakeholders to provide feedback on the draft measure specifications for the episode-based cost measures, the field test report format, and publicly posted supplemental documentation. Field test reports aim to illustrate the types of services that comprise a large or small share of episode costs and show the variation in clinician cost measure performance across different types of services or Medicare settings.

To date, CMS has conducted field testing twice; once for each cycle of measure development. From October to November 2017, CMS conducted field testing for the eight episode-based cost measures developed with input from the Clinical Subcommittees.[14] 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 on the CMS Enterprise Portal 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

[14] 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

feedback through an online feedback survey. Acumen analyzed the measure-specific field testing feedback and provided summary reports to the Clinical Subcommittees to inform post-field testing measure refinements. A field testing feedback summary report is also publicly available.[15]

From October to November 2018, CMS conducted field testing for the 11 episode-based cost measures developed with input from the Clinical Subcommittees and the measure-specific workgroups, as well as the versions of the TPCC and MSPB measures that underwent re-evaluation as part of the standard measure maintenance process described in the CMS Measures Management System Blueprint.[16,17] Similarly, field test reports were available on the CMS Enterprise Portal for clinicians and clinician groups who met the minimum number of cases for each measure during the measurement period. Mock field test reports were publicly posted for the three measure types (episode-based cost measures, re-evaluated TPCC and re-evaluated MSPB) for stakeholders to view if they did not have a field test report. Feedback received during field testing was considered by the measure-specific workgroups for the episode-based measures and by the TEP and expert workgroups for the re-evaluated measures to inform measure refinements. A field testing feedback summary report will be publicly posted in early 2019.

4.5 Education and Outreach

CMS has conducted education and outreach activities to inform stakeholders about MIPS, the measures, how they can operationalize cost performance information provided on the measures, and the measure development process. These activities include extensive email outreach, field testing, and various education and outreach events.

Education and outreach events have included informational webinars, such as the 2018 Cost Performance Category webinar and the April 2017 Listening Session, which was part of broad stakeholder outreach related to the December 2016 posting of the Draft List of MACRA Episode Groups and Trigger Codes, and pre-field testing office hours, which were held to inform specialty societies about field testing.[18] These office hours consisted of a short presentation on the upcoming field testing period, followed by an open question and answer session where attendees had the opportunity to ask any questions about field testing and provide recommendations for outreach efforts. The April 2017 Listening Session included a presentation of the components of an episode-based cost measure, an overview of the measure development process, and a feedback session where attendees were able to ask questions or provide comments.

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[15] 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

[16] CMS, "What is cost measures field testing?" *MACRA Feedback*, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-Feedback.html

[17] CMS, "CMS Measures Management System Blueprint (Blueprint v 14.0)", https://www.cms.gov/Medicare/Quality-Initiatives-Patient-AssessmentInstruments/MMS/Downloads/BlueprintVer14.pdf.

[18] CMS, "Merit-based Incentive Payment System (MIPS)," *Webinars & Events*, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Quality-Payment-Program-Events.html

For field testing, CMS prepared a set of materials aimed to provide both high-level and in-depth understanding of the measures' specifications and inform how clinicians may operationalize cost performance information provided in the field test reports. Field testing materials included a fact sheet, a frequently asked questions document, mock field test report(s), measure specifications documents, a description of the measure development process, and a national summary data report that provides national summary statistics on the measures. As part of education and outreach for field testing, office hours with specialty societies and field testing webinars were hosted to engage stakeholders and provide information on the measures undergoing field testing. Two field testing webinars were held during the fall 2017 field testing, and one webinar was held during the fall 2018 field testing. The slides, transcript, and recording of the fall 2018 webinar are available on the CMS website.[19,20, 21]

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

[19] Slides, "MACRA Cost Measures Field Testing webinar," Quality Payment Program Webinar and Events, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-Cost-Measures-Field-Testing-Webinar-Slides.pdf

[20] Transcript, "MACRA Cost Measures Field Testing webinar," Quality Payment Program Webinar and Event, https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-Cost-Measures-Field-Testing-Webinar-Transcript.pdf

[21] Recording, "MACRA Cost Measures Field Testing webinar," Quality Payment Program Webinar and Event, https://youtu.be/M8EuPYhTuOI

Appendix A: List of Clinical Subcommittees and Episode-Based Cost Measures

Table A-1 presents the Clinical Subcommittees convened throughout the measure development process and the corresponding cost measures developed with extensive input from each Clinical Subcommittee. Information on the current status of the measures are also provided.

Table A-1. List of Clinical Subcommittees and Episode-Based Cost Measures

Clinical Subcommittee	Episode Based Cost Measure	Measure Status
Cardiovascular Disease Management	Elective Outpatient Percutaneous Coronary Intervention (PCI)	Used in 2019 MIPS
	Non-Emergent Coronary Artery Bypass Graft (CABG)	Under Development
	ST-Elevation Myocardial Infarction (STEMI) with Percutaneous Coronary Intervention (PCI)	Used in 2019 MIPS
Gastrointestinal Disease Management - Medical and Surgical	Femoral or Inguinal Hernia Repair	Under Development
	Lower Gastrointestinal Hemorrhage	Under Development
	Screening/Surveillance Colonoscopy	Used in 2019 MIPS
Musculoskeletal Disease Management - Non-Spine	Elective Primary Hip Arthroplasty	Under Development
	Knee Arthroplasty	Used in 2019 MIPS
Musculoskeletal Disease Management – Spine*	Lumbar Spine Fusion for Degenerative Disease, 1-3 Levels	Under Development
Neuropsychiatric Disease Management	Intracranial Hemorrhage Or Cerebral Infarction	Used in 2019 MIPS
	Psychoses/Related Conditions	Under Development
Oncologic Disease Management - Medical, Radiation, and Surgical*	Lumpectomy, Partial Mastectomy, Simple Mastectomy	Under Development
Ophthalmologic Disease Management[+]	Routine Cataract Removal with Intraocular Lens (IOL) Implantation	Used in 2019 MIPS
Peripheral Vascular Disease Management	Hemodialysis Access Creation	Under Development
	Revascularization for Lower Extremity Chronic Limb Ischemia	Used in 2019 MIPS
Pulmonary Disease Management	Inpatient Chronic Obstructive Pulmonary Disease (COPD) Exacerbation	Under Development
	Simple Pneumonia with Hospitalization	Used in 2019 MIPS
Renal Disease Management*	Acute Kidney Injury Requiring New Inpatient Dialysis	Under Development
Urologic Disease Management*	Renal or Ureteral Stone Surgical Treatment	Under Development

* Subcommittees convened for the first time during the second year of measure development.
[+] Subcommittee did not reconvene during the second year of measure development.