Inpatient Percutaneous Coronary Intervention (IP-PCI) Comprehensive Reevaluation Workgroup Input Summary

MACRA Episode-Based Cost Measures: Clinician Expert Workgroups
Reevaluation Workgroup Input May 2023
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Contents

Project Overview

The Centers for Medicare & Medicaid Services (CMS) has contracted with Acumen, LLC to develop and maintain episode-based cost measures for potential use in the Merit-based Incentive Payment System (MIPS) to meet the requirements of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). Acumen's measure development approach involves convening clinician expert panels ("workgroups") to provide input in cycles of development ("Waves"). As needed, workgroups are reconvened to provide input on measure maintenance.

Eight episode-based cost measures were added to the MIPS cost performance category in the 2019 performance year and are now being considered for comprehensive reevaluation as they've been in MIPS for 3 years. The purpose of comprehensive reevaluation is to ensure that measures continue to meet criteria for importance, scientific acceptability, and usability in line with the Measures Management System (MMS) Blueprint. In this process, we holistically review the measure, seek public comment, and consider whether any changes need to be made to measure specifications.

The following Wave 1 episode-based cost measures were selected for comprehensive reevaluation based on information gathering, public comments,[1] and discussions with CMS:

(i) Routine Cataract Removal with IOL Implantation
(ii) Simple Pneumonia with Hospitalization
(iii) ST-Elevation Myocardial Infarction with Percutaneous Coronary Intervention (STEMI-PCI)

[1] Refer to the Wave 1 Comprehensive Reevaluation Public Comment Summary Report (PDF). (https://www.cms.gov/files/document/wave-one-public-comment-summary-report.pdf)

We held a nomination period for workgroup members between August 19, 2022, and September 9, 2022. The workgroups are composed of clinicians with expertise directly relevant to the selected episode-based cost measures. Workgroups provided detailed input on potential updates to the selected episode-based cost measures groups during their webinars from October 6 to 12, 2022.[2] The workgroup provided and an additional round of input via poll in May 2023. Between rounds of input, Acumen also hosted a public comment period on the updated specifications.[3] For Wave 1 Comprehensive Reevaluation, all workgroup meetings were held virtually. The workgroup input informed updates to the measure specifications to be considered for future use in MIPS.

Inpatient PCI Comprehensive Reevaluation Workgroup Input, May 2023

This summary document outlines the purpose, considerations, and recommendations from the Comprehensive Reevaluation workgroup for Inpatient PCI (the name of the drafted revised measure). Section 1 provides an overview of the goals and process of this second round of input. Section 2 summarizes the guidance and recommendations from the workgroup. Section 3 is an appendix that describes the materials and information provided to workgroup members during this input process as preparation for their review of the detailed measure specifications.

1. Overview

The goals of the Inpatient PCI Comprehensive Reevaluation workgroup poll in May 2023, were the following:

(i) Consider findings from information gathering conducted since the first webinar meeting (e.g., empirical analyses, public comments).

(ii) Provide input on defining the patient cohort, including how to define episodes, account for sub-populations to ensure that the measure allows for meaningful clinical comparisons, and determine categories of services to assign to the episode.

The Inpatient PCI Comprehensive Reevaluation workgroup chair was William Van Decker. The MACRA Episode-Based Cost Measure Workgroup Composition List will contain the full list of members, including names, professional roles, employers, and clinical specialties; it will be posted on the MACRA Feedback Page.[4]

Prior to the poll, workgroup members were provided with information and materials to inform their recommendations, including a slide deck. Also, workgroup members received the investigations described in Table 1 below. Acumen performed empirical analysis on sub-grouping, showing that differences exist in mean observed episode costs for PCI sub-groups, but that risk adjustment helps neutralize these differences.

[2] Refer to the Summary of Wave 1 Comprehensive Reevaluation Workgroup meetings (ZIP). (https://www.cms.gov/files/zip/summary-wave-1-comprehensive-reevaluation-workgroup-meetings.zip)
[3] Refer to the 2023 Revised Cost Measure Feedback Period Summary Report (PDF). (https://www.cms.gov/files/document/2023-revised-cost-measure-feedback-period-summary-report.pdf)
[4] Refer to the Wave 1 Measure-Specific Workgroup Composition List (PDF) on the Prior Cost Measure Development and Input Page (https://www.cms.gov/medicare/quality/value-based-programs/cost-measures/prior).

Table 1: Workgroup Investigations

Investigation	Description
Sub-Population Analysis	• Provides data on the frequency and cost associated with a set of sub-populations informed by public comments received, prior workgroup discussions, and deliberations among the Acumen clinical team • Useful for considerations regarding accounting for patient heterogeneity
Service Utilization over Time Analysis	• Provides data on the top 200 most frequent services for each claim setting across episodes for the draft version of the measure along with various metrics regarding those services (e.g., share of episodes with that service, average cost of the service per episode, share of attributed clinicians who furnished the service) • Useful for considerations regarding identifying clinically relevant services

After reviewing the slide deck and investigations, workgroup members were polled on their preferences to ensure the measures were developed based on well-documented input. Based on similar practices, the threshold for support was >60% consensus among poll responses. This document summarizes the workgroup members' input from the polls.

This poll was facilitated by Acumen as part of the measure maintenance process to gather expert clinical input; as such, these are preliminary recommendations and materials, which don't represent any final decisions about the measure specifications or MIPS.

2. Summary of Poll Results

This section is organized based on workgroup polls and describes workgroup members' considerations and recommendations. Section 2.1 describes workgroup member recommendations on defining the patient cohort. Section 2.2 outlines workgroup members' recommendations about methods to account for heterogeneity. Section 2.3 summarized recommendations related to assigning clinically related services. Section 2.4 provides an overview of the next steps for the measure comprehensive reevaluation process.

2.1 Defining the Episode

Acumen reviewed the methodology for constructing an episode-based cost measure, including the steps for defining an episode of care. Cost measures for chronic conditions aim to identify a longitudinal patient-clinician relationship (i.e., trigger an episode of care for that condition) using the presence of related service and diagnosis codes on claims billed by the same clinician group (as identified by their Tax Identification Number [TIN]). The workgroup considered these categories of service and diagnosis codes in the context of what patient and clinician populations they would capture and to what degree they would reliably indicate an ongoing care relationship.

Within the current draft revised measure specifications, the workgroup voted to expand the measure to include PCI regardless of diagnosis to increase the impact and coverage of the measure. Episodes are now divided into the following mutually exclusive and exhaustive sub-groups: PCI with ST-Elevation Myocardial Infarction (STEMI) diagnosis, PCI with Non-ST-Elevation Myocardial Infarction (NSTEMI) diagnosis, PCI without STEMI or NSTEMI (non-MI) diagnosis.

During the public comment period for the draft revised measure, commenters reviewed the Current and Draft Revised Measure Analysis, which showed that the draft revised measure increases clinician and beneficiary coverage while maintaining reliability. Public commenters supported the draft revised measure.

Key Takeaways from Polls for Defining the Episode:
The measure continues to include PCI episodes with STEMI, NSTEMI, and neither STEMI nor NSTEMI diagnoses.

2.2 Accounting for Patient Heterogeneity

Members engaged in a detailed poll about how to account for patient heterogeneity among various sub-populations within the Inpatient PCI episode group. Sub-populations refer to patient cohorts as defined by their pre-existing conditions and other patient characteristics. Acumen described the methods for accounting for patient heterogeneity, and those are described in Table 2 below.

Table 2: Methods for Accounting for Patient Heterogeneity

Method	Description
Sub-Group	• If applicable, we may stratify the patient population into mutually exclusive and exhaustive sub-groups to define more homogenous patient cohorts. • Sub-grouping is a method that's intended for when we would want to compare episodes only with other similar episodes within the same sub-group. • This approach is used when sub-groups are very different from one another, and each sub-group requires its own risk adjustment model. • Since each sub-group will have its own risk adjustment model, the size of each sub-group should be sufficiently large.
Risk-Adjust	• We may define covariates in the risk adjustment model for the measure. • Risk adjusting is a method to account for the case-mix of patients and other non-clinical characteristics that influence complexity. It's meant to be used for sub-populations that make a large share of patients who have a characteristic that's outside of the attributed clinician's reasonable influence. • Risk-adjusted cost measures adjust observed episode spending to an expected episode spending (predicted by a risk adjustment model).
Exclude	• We may identify certain measure exclusions. • Excluding is a method in which we exclude certain patients or episodes to address issues with patient heterogeneity. This approach should be used when the sub-population affects a small, unique set of patients in which risk adjustment wouldn't be sufficient to account for their differences in expected cost.
Monitor for Further Testing	• We may monitor certain sub-populations for further testing. • Monitoring for further testing is an option for flagging certain sub-populations that the workgroup may revisit later during measure development upon review of further data. This approach is best used when the workgroup requests additional data or information on a sub-population to discuss the appropriate method for meaningful clinical comparison.

Workgroup members considered the patient sub-populations and their preferences for how to address them, including public comments on the updated measure specifications.

Public commenters noted differences exist within PCI sub-groups that could lead to cost differences between sub-groups. Acumen presented the Sub-Population Analysis, which showed differences in mean observed episode costs for PCI sub-groups, but that risk adjustment helped neutralize these differences. Commenters generally supported the approaches used to account for patient heterogeneity and agreed that PCI for STEMI, NSTEMI, and non-MI should not be compared against each other directly. Commenters suggested also accounting for patients who undergo PCI due to cardiac arrest. Workgroup members voted on this suggestion through a poll.

With this context, commenters suggested adding the following to account for patient heterogeneity:

- Exclusions for out-of-hospital cardiac arrest and temporary mechanical support

- Risk adjustment for prior smoking/tobacco use

Workgroup members filled out a poll and provided input on these suggestions, specifically:

- If the measure accounts for patients with cardiac arrest, should the measure exclude these episodes from scoring altogether or keep these cases but apply risk adjustment for them?
- Should the measure account for patients who have a history of tobacco use/smoking?

Key Takeaways from Polls for Accounting for Patient Heterogeneity:

- The workgroup recommended excluding episodes in which a patient is undergoing PCI due to cardiac arrest.
- The workgroup recommended risk adjusting for history of tobacco use/smoking.

2.3 Identifying Clinically Related Services

Acumen described the purpose of service assignment so that members could recommend which services associated with the attributed clinician's role in managing the patient's care should be included in the cost measure. These assigned services should be inclusive enough to identify a measurable performance difference between clinicians but also not introduce excessive noise. Episode-based cost measures aim to only include clinically relevant costs whose occurrence, intensity, and/or frequency are within the reasonable influence of the attributed clinician. Service assignment can be an effective form of adjusting for patient risk by omitting unrelated costs not furnished for Inpatient PCI. During the public comment period, commenters cautioned against assigning the costs of additional PCI procedures during the post-trigger period, as these could be reflective of staged procedures rather than complications or consequences of the initial PCI.

Workgroup members provided input on this suggestion through the following poll questions:

- Should the costs of PCI procedures during the post-trigger period be assigned to the episode?
- If changes are made to service assignment rules for PCI procedures, should the measure continue to assign inpatient PCIs to the episode if they occur during the post-trigger period (i.e., inpatient PCIs after the trigger Inpatient PCI)?
- If changes are made to service assignment rules for PCI procedures, should outpatient PCIs during the post-trigger period continue to be assigned to the episode?

Key Takeaways from Polls for Identifying Clinically Related Services:

Workgroup members recommended continuing to assign the cost of PCI procedures during the post-trigger period.

2.4 Next Steps

In the last session, Acumen provided an overview of the next steps. After the meeting, Acumen distributed the Comprehensive Reevaluation Webinar Poll to gather input from members on the discussions held during the webinar. Acumen will operationalize input for the measure specifications based on workgroup webinar discussion and poll results.