

Field Testing Feedback Summary Report for Eight MACRA Episode-Based Cost Measures:

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

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Executive Summary

The Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act (MACRA) of 2015 introduced a new approach to clinician payment called the Quality Payment Program. This program rewards the delivery of high-quality patient care through Advanced Alternative Payment Models (Advanced APMs) and the Merit-based Incentive Payment System (MIPS). Under the MIPS program, clinicians will be measured through four performance categories – quality, improvement activities, advancing care information, and cost. From October to November 2017, the Centers for Medicare & Medicaid Services (CMS) conducted a field test of the eight episode-based cost measures that were developed with extensive input from Clinical Subcommittees, a Technical Expert Panel, and public comment. Through field testing, clinicians and other stakeholders had an opportunity to provide feedback on the measure specifications and the field test report template. Field testing also served as an opportunity for clinicians to learn about episode-based cost measures and gain experience with the episode based cost measures reports before their potential use in the Quality Payment Program.

The eight episode-based cost measures that underwent field testing were the following:

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

Acumen, LLC, the measure development contractor, received 219 survey comments from stakeholders during the field testing feedback period, including 53 comment letters. CMS hosted two National Provider Calls, each with the same content, on October 30, 2017 and November 2, 2017, to broadly engage with the stakeholder community about the field test of the measures. The two webinars, both covering the same content, consisted of an hour-long presentation, outlining (i) the cost measure development activities, (ii) how to access the confidential field test reports, and (iii) the contents of the reports. The presentation was followed by a 30-minute feedback session where attendees could ask questions or provide comments. In total, approximately 1,000 people attended the webinar and around 120 comments and questions were received during the feedback sessions.

The following list synthesizes some of the key points that were raised through the field testing feedback period:

- *Stakeholder engagement and involvement is an important aspect of the measure development process.* Stakeholders expressed appreciation for the opportunity to provide feedback during field testing and for CMS' continued effort to involve

stakeholders in the measure development process, such as convening Clinical Subcommittees to seek an extensive amount of clinical input in constructing these measures. Commenters urged CMS to continue to work closely with specialty societies and other involved stakeholders.

- *Provide additional time for stakeholders to review materials and provide feedback during field testing.* According to some stakeholders, the October to November 2017 field testing feedback period was too short given the large amount of new information that was presented and suggested that the period be extended or be kept open.
- *Accessing the confidential field test reports from the CMS Enterprise Portal presented many challenges.* Some stakeholders noted that they faced difficulties creating accounts and downloading their confidential field test reports from the portal that may have had a negative impact on the number of clinicians who took part in field testing.
- *While some stakeholders believed the field test report presented useful information for understanding clinician cost measure performance, they also highlighted areas for improvement in regard to providing actionable information.* Stakeholders praised the navigability and the inclusion of useful information in the report. However, some stakeholders also expressed concerns with the comprehensibility of the report and its usefulness in terms of providing actionable information for clinicians.
- *Stakeholder feedback received on the supplemental field testing materials was mixed, with some stakeholders finding them helpful and informative and others believing the materials were too complex.* Some stakeholders found the supplemental field testing materials informative, providing helpful information on field testing and the specifications of the cost measures. Some stakeholders believed that the materials were not detailed enough. However, many noted that the materials were comprehensive but too lengthy and complex, and they believed the amount of information was overwhelming to absorb within the field testing feedback period.

1.0 Overview

The Medicare Access and Children’s Health Insurance Program (CHIP) Reauthorization Act (MACRA) of 2015 repealed the Medicare Sustainable Growth Rate (SGR) methodology for updates to the Physician Fee Schedule and replaced it with a new approach to payment. This new program, called the Quality Payment Program, rewards the delivery of high-quality patient care through two avenues: Advanced Alternative Payment Models (Advanced APMs) and the Merit-based Incentive Payment System (MIPS) for eligible clinicians or groups. Clinician performance will be assessed under MIPS in four performance categories – quality, clinical practice improvement activities (referred to as “improvement activities”), meaningful use of certified electronic health record technology (referred to as “advancing care information”), and resource use (referred to as “cost”). MACRA requires that cost measures implemented in MIPS include consideration of care episode groups and patient condition groups (referred to as “episode groups”). The Centers for Medicare & Medicaid Services (CMS) has contracted with Acumen, LLC to develop episode groups and cost measures for the MIPS cost performance category through the *MACRA Episode Groups and Cost Measures* contract (HHSM-500-2013-13002I/HHSM-500-T0002).

Acumen has implemented a measure development process that relies upon input from clinician and stakeholders affiliated with a broad range of professional societies to develop clinically valid and transparent measures that provide actionable information to clinicians. Using a “wave” approach, wherein sets of Clinical Subcommittees, each focused on a particular clinical area, convene 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.

The first wave of development included seven Clinical Subcommittees with almost 150 members affiliated with nearly 100 specialty societies. Acumen convened the first wave of Clinical Subcommittees in May 2017 – January 2018 to select episode groups to develop into cost measures and to provide input on measure specifications. To date, these seven Clinical Subcommittees contributed to the development of eight episode-based cost measures, as illustrated in Table 1 below.

Table 1. Wave 1 Clinical Subcommittees and Cost Measures Developed

Wave 1 Clinical Subcommittee	Episode-Based Cost Measure
Cardiovascular Disease Management	Elective Outpatient Percutaneous Coronary Intervention (PCI)
	ST-Elevation Myocardial Infarction (STEMI) with PCI
Musculoskeletal Disease Management – Non-Spine	Knee Arthroplasty
Peripheral Vascular Disease Management	Revascularization for Lower Extremity Chronic Critical Limb Ischemia
Ophthalmologic Disease Management	Routine Cataract Removal with Intraocular Lens (IOL) Implantation
Gastrointestinal Disease Management – Medical and Surgical	Screening/Surveillance Colonoscopy
Neuropsychiatric Disease Management	Intracranial Hemorrhage or Cerebral Infarction
Pulmonary Disease Management	Simple Pneumonia with Hospitalization

Acumen and CMS conducted a field test for the eight episode-based cost measures from October 16 to November 20, 2017.¹ During this time, clinicians and clinician groups who were attributed 10 or more episodes associated with the eight cost measures during the measurement period (June 1, 2016 to May 31, 2017) had the opportunity to view a confidential report with information about their performance. Attributed clinicians and clinician groups included those performing the procedures or managing the hospitalizations for medical conditions, with episodes ending during the measurement period. Cost data on these episodes were provided in the confidential reports available for download on the CMS Enterprise Portal.² Those who did not receive a confidential report had the opportunity to view a mock field test report that was posted on the CMS website, alongside other publicly available field test supplemental documents that included: a Draft Cost Measure Methodology file for each measure, a Draft Measure Codes List file for each measure, a Frequently Asked Questions document, and a Fact Sheet.³

The purpose of field testing was to provide a voluntary opportunity for clinicians and other stakeholders to provide feedback on: (i) the draft measure specifications, (ii) the field test report template, and (iii) all accompanying documentation. Stakeholders were invited to provide feedback through an online survey for the duration of field testing, where they also had the option to attach a PDF or word document version of their comments.⁴ In total, Acumen received 219 survey responses, including 53 comment letters. The list of stakeholders who submitted a comment is provided in Appendix A.

Additionally, Acumen and CMS hosted two National Provider Calls on October 30, 2017 and November 2, 2017 to engage clinicians and other stakeholders during field testing. The two webinars, both covering the same content, consisted of an hour-long presentation, outlining (i)

¹ The original deadline was November 15, 2017.

² CMS Enterprise Portal, <https://portal.cms.gov/wps/portal/unauthportal/home/>

³ CMS, MACRA Episode-Based Cost Measures, *MACRA Page*, <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Episode-based-cost-measures-field-test-files.zip>

⁴ The survey was previously available online at this link: <https://www.surveymonkey.com/r/macra-cost-measures-field-testing>.

the cost measure development activities, (ii) how to access the confidential field test reports, and (iii) the contents of the reports. The presentation was followed by a 30-minute feedback session where attendees could ask questions or provide comments. In total, approximately 1,000 people attended both webinars and around 120 comments and questions were received during the feedback sessions.

The purpose of this report is to summarize the feedback received via the feedback survey in response to the field testing of the measures. Section 2 summarizes the cross-cutting field testing feedback, which applies to the measure development process, the supplemental documentation, and the field test report template. Section 3 focuses on the measure-specific feedback, organized by measure.

2.0 Field Testing Feedback

The following sections summarize the cross-cutting written feedback received from stakeholders during the field testing feedback period, organized by general themes. “Cross-cutting feedback” refers to feedback received on the measure development process as a whole, the supplemental documentation, and the field test report template. This section does not include a summary of the measure-specific feedback, which is discussed in Section 3 below. This report also does not include a summary of the multiple choice question responses.

First, Section 2.1 discusses thematic comments on the five components of measure development: defining the episode group, attributing the episode group to clinicians, assigning costs to the episode group, risk adjusting the episode group, and aligning cost with quality. Section 2.2 focuses on feedback received on the measure development approach. Section 2.3 discusses comments on accessing the field test report. Section 2.4 summarizes the feedback received on the publicly posted supplemental field testing documentation. Section 2.5 contains program-level feedback. Section 2.6 summarizes feedback received on the field test report template. Section 3 summarizes the measure-specific feedback received on the eight cost measures during the field testing period. Finally, Section 4 includes Acumen response to the comments received and next steps Acumen has implemented to date and plans to take in direct response to the feedback summarized in this report.

2.1 Thematic Comments on the Five Components of Measure Development

2.1.1 Defining the Episode Group

- One commenter stated that there should be opportunities to narrow the scope of already selected episode groups to provide clearer ways in which clinicians from their specialty society can participate, both in terms of the development process as well as attribution.
- One commenter expressed strong support for the creation of episode groups focused on management of acute conditions in the outpatient setting, as these would appropriately consider the cost savings associated with the outpatient treatment of an acute condition.

2.1.2 Attributing the Episode Group to Clinicians

- Four commenters discussed the approaches for attribution, with one commenter noting the importance of ensuring that the attribution process accurately reflects the group practice and physician-led multidisciplinary team approaches to patient care. One commenter suggested attributing procedural episodes to the most relevant specialty that performed the trigger procedure to prevent clinicians from being attributed episodes that they cannot control. One commenter stated their concerns about how costs will be attributed to providers in chronic condition measures once those are developed.
- Three commenters stated that the attribution process needs to be completely clear to clinicians. Two of these commenters further stated that the clarity should extend to situations where patients are receiving care from multiple providers.

- One commenter encouraged CMS to offer a separate comment period associated with the application of patient relationship categories for the purposes of episode-based measure attribution once data are available. One additional commenter requested more information about how the implementation of the patient relationship categories, which will be voluntarily reported for CY 2018, will impact the overall attribution of health care costs, as these categories were not included in the current field testing.

2.1.3 Assigning Costs to the Episode Group

- Three commenters requested clarification for how anesthesia services are incorporated into the cost measures, with one commenter recommended that anesthesia be assigned during the surgery rather than in the post-operative period.
- One commenter expressed the need to provide clinicians the rationale behind the services included and excluded from the episode group.
- One commenter questioned how CMS applies payment standardization principles to episode costs since many of the higher cost service categories or clinical themes⁵ in their field test reports were linked to services directly related to training clinicians.
- One commenter recommended excluding procedures typically done as outpatients when the patient had an inpatient hospitalization at the same time.

2.1.4 Risk Adjusting Episode Groups

Note: Measure-specific feedback on risk adjustment was summarized and presented to the Clinical Subcommittees following the completion of field testing to inform the refinement of the episode-based cost measures. The comments summarized here are related to general feedback received about the risk adjustment process.

- Three commenters highlighted the limitations of using claims data in risk adjustment. One commenter stated that adequate risk adjustment is not possible without additional information not currently included on claims. One commenter recommended that durable medical equipment (DME) and patient cognition and functional status data should be used to supplement the claims data for risk adjustment. One commenter recommended expanding risk adjustment to include hospital and physician claims data to gather more information about patients with chronic illnesses.
- Two commenters highlighted their concerns about being penalized for accepting more new patients, with one commenter expressing concern that they are being compared to practices seeing fewer new patients and using different technology.
- One commenter expressed concern that the episode-based cost measures do not capture the full context of health care delivery and therefore could potentially penalize clinicians who are high-cost for medically necessary reasons.

⁵ Clinical themes are categorizations of the services assigned to episode costs during the episode window intended to help readers understand the frequency and cost of different categories of clinical services that are clinically relevant for an episode group.

- One commenter noted that it would be helpful to understand the factors impacting patient complexity and the risk model, how each factor is weighted, and which factors are being applied to each patient in their episode of care. This would assist organizations in validating the reports and better understanding the potential interventions they could pursue to improve cost performance. Another commenter also noted that it was unclear how the level of complexity involved in a given episode with bundled surgical operations impacted the risk adjustment model.

2.1.5 Aligning Cost with Quality

- Five commenters expressed support for CMS' effort to align cost with quality to improve patient outcomes. One of these commenters suggested utilizing the data collected via electronic health records or qualified registries to reach this goal. Another commenter noted the importance of including alignment with quality measures when approaching the clinical themes included in field testing reports as a source of actionable feedback for clinicians.

Action Steps for Sections 2.1.1-2.1.5: We appreciate the support for the measure development process employed in the first wave of measure development and the interest expressed by stakeholders in remaining engaged going forward, through activities such as the TEP, Clinical Subcommittees, field testing, and public comment periods. The specific suggestions we received for the five components of measure development will be shared with the Clinical Subcommittee and TEP members, who provided extensive input into the development of these episode-based cost measures and will be used to inform future waves of measure development and field testing. The feedback summarized here will also be shared with CMS, the steward of the measures.

2.2 Measure Development Approach

2.2.1 General Feedback on the Measure Development Approach

- One commenter expressed support of CMS' strategy of creating better care, smarter spending, and better health outcomes.
- One commenter expressed that the Clinical Subcommittee process needs to be improved by ensuring that participating stakeholder organizations have equal influence over the measure development decision-making process. Another commenter suggested introducing sub-specialty expert panels during the measure development process to provide support to the Clinical Subcommittees which may not have the specialized clinical knowledge required to make complicated measure development decisions.
- One commenter recommended that the measures have the ability to be broken down by services and categories for providers to furnish actionable information.
- One commenter recommended making episode-based cost measure data available at the Accountable Care Organization (ACO) level for eligible clinicians participating in the Medicare Shared Savings Program (MSSP) to help participants understand areas of improvement and to be able to hold them accountable.

- One commenter urged CMS to also develop appropriate use measures in related cost areas as an adjunct to cost analysis.

2.2.2 Field Testing Feedback Period

- Eleven commenters stated their appreciation for the opportunity to review and provide feedback on the field testing and measure development processes. Two of these commenters noted that clinician engagement was greatly improved through the inclusion of the Clinical Subcommittees in the development process. One additional commenter appreciated the great effort that has gone into ensuring more clinical input is solicited and included in the refinement of the episode-based cost measures. One commenter also noted that the field test process has been inclusive and allowed for clinicians to be involved in the development of the episode-based cost measures.
- Three commenters stated that the field testing feedback survey was cumbersome and required too much time to complete, making it difficult for busy clinicians to participate.
- Five commenters stated that the field testing feedback period was too short given the large amount of new information that was presented. Of these commenters, one noted that small practices were especially affected since they were either unwilling or unable to go through the complex process of retrieving a report, so the responses gathered may reflect primarily the views of clinician groups with more sophisticated infrastructure. Two commenters requested that more time be allotted to provide adequate feedback on the cost measures.
- One commenter expressed frustration with the field testing process and urged CMS to provide additional time for the measures to be reviewed by the Clinical Subcommittees. The commenter suggested that providing additional time for review and the implementation of recommended changes in the field testing timeline is preferable. This commenter additionally expressed concern that participants might be confused if the measures require revisions at a later date.
- One commenter noted their appreciation of receiving individual support by addressing their field-testing-related questions to Acumen.

2.2.3 Ongoing Stakeholder Engagement and Outreach

- Four commenters expressed their commitment to continuing to work with CMS on developing episode-based cost measures. Two additional commenters noted the importance of incorporating stakeholder feedback into the measure development process and urged CMS to continue to work closely with specialty societies and other involved stakeholders.
- Two commenters addressed the topic of NQF endorsement, with one commenter suggesting that CMS work rapidly to include these measures in the NQF endorsement process. On the other hand, a commenter urged CMS not to rush finalizing these eight measures and to provide further opportunities for discussion and to receive additional feedback such as webinars or other avenues.

- One commenter suggested having more options for field testing webinars, possibly breaking the webinars up into separate sessions covering discrete topics, and providing stakeholders with webinar recordings and lists of questions raised.
- One commenter stated that outreach emails sent to stakeholders contained an overwhelming amount of background information and the sheer density of the text made actionable items difficult to discern. The commenter recommended communicating via shorter emails with more tailored information and providing links to additional background information.

Action Steps for Sections 2.2.1-2.2.3: We appreciate the support for the measure development approach and the suggestions for general improvement, measure field testing, and ongoing stakeholder engagement. We believe the extensive clinician input on these measures is an improvement over earlier episode-based cost measures and the specific suggestions summarized here will be shared with the Clinical Subcommittees for their consideration as subsequent waves of measure development are undertaken. Feedback on improving the field testing process and reporting will be taken into account by our team and will be shared with CMS, the TEP, and the Clinical Subcommittees to ensure that future field testing efforts convey meaningful and accessible information to clinicians.

2.3 Accessing the Field Test Report

2.3.1 Availability of Report

- Four commenters stated their desire that reports be made more widely available, with two of these commenters requesting that field test reports be made available to all National Provider Identifiers (NPIs) under a Tax Identification Number (TIN), potentially including those that do not meet the TIN-NPI case minimums. One commenter suggested providing reports to every clinician whose services are captured in an episode even if they are not primarily responsible for the episode. Another commenter suggested making reports available to clinicians or group practices that had at least one attributed episode of care.

2.3.2 CMS Enterprise Portal

- Twenty-four commenters noted challenges in creating accounts and accessing field test reports via the CMS Enterprise Portal, including difficulties faced by individuals affiliated with large group practices and those trying to access reports for multiple practitioners. Ten of these commenters mentioned that they experienced significant issues trying to access the report from the portal. A commenter further noted that addressing these challenges is imperative to ensure as many clinicians as possible will participate. On the other hand, one commenter noted that it was no easier or harder to download reports from other websites where they are required to download multiple files.
- Two commenters raised issues with the portal, with one commenter noting that the portal was incorrectly capturing their input on the fields and that the process of navigating to the correct drop-down menu to download reports was confusing. Another commenter stated that wait times for assistance through the telephone help desk were at least an hour.

- Two commenters provided suggestions on improving the portal, with one commenter suggesting the creation of an indicator in the EIDM portal for group practices that do not receive a report and providing an explanation for why no report was received. One commenter suggested the creation of one physician portal with a single set of criteria for delegating surrogate users access for purposes of reporting MIPS information, reviewing CMS feedback about the MIPS information, previewing any information that may be publicly reported, and any other administrative tasks.

Action Steps for Sections 2.3.1-2.3.2: We appreciate the suggestions and feedback provided regarding the process of accessing the field test reports and navigating the CMS Enterprise Portal. We are currently exploring options to simplify and streamline access to field testing information and reports. Furthermore, we share commenters' interest in having the field test reports be widely available to ensure that stakeholders can learn about the measures. However, we must also consider resource limitations in processing and preparing reports when selecting a case minimum for field test reporting. This input will be shared with CMS and considered when making decisions about how best to proceed in future waves of measure development and field testing.

2.4 Supplemental Documentation

2.4.1 Draft Measure Codes List Files

- Four commenters expressed concern over the presentation of the codes lists as an Excel file, noting that it was too cumbersome and included too much information. One of these commenters did note that despite its complexity, it was comprehensive. Another commenter noted that there were not enough codes listed for interventional care nor cardiology.

2.4.2 Fact Sheet

- Seven commenters discussed the Fact Sheet, with two commenters stating that the Fact Sheet was a helpful summary, while five commenters noting that it was complicated and confusing.
- Six commenters provided recommendations for improving the Fact Sheet, such as providing a 1-page fact sheet for each measure, including additional information on each measure's episode window lengths and triggers, more detailed description of the cost breakdowns, and adding information describing how attribution worked for specialists.

2.4.3 FAQ Document

- Three commenters stated the FAQ document provided a helpful summary of many relevant questions.
- Four commenters stated that the FAQ document was too long, cumbersome, and too broad to be helpful.
- Six commenters provided recommendations for questions and topics to include in the FAQ document, such as information about episode window length, episode trigger

examples with codes, and a better explanation of risk stratification. Two commenters also recommended including terminology definitions and examples of calculations. One commenter recommended including easier to locate information about who to talk to for assistance.

2.4.4 Draft Cost Measure Methodology Documents

- Nine commenters remarked on the helpfulness of the methodology documents, with two commenters stating that the methodology documents were helpful and appreciated. One of these commenters suggested developing an abbreviated version for clinicians that contains the basic information they need to know about the cost measures that includes triggers, costs, attribution information, and services. Seven commenters, however, reported that the methodology documents were confusing, contained too much information, and were too complicated.
- Ten commenters recommended that the methodology documents provide more details, such as clearly explaining how episodes are assigned to sub-groups and clearly indicating whether facility costs are included. One of these commenters stated that the materials provided do not contain enough detail to identify clinical episodes in the cost measure. Another commenter recommended including examples to explain the computational methodologies. Relatedly, three of these commenters suggested including more information about the risk adjustment methodology including the exact principles and algorithms, examples of how the risk percentile is calculated, and details of disease-specific risk adjustments. Two of these commenters also recommended that the methodology documents contain information about how CMS calculates and applies the payment standardization methodology including detailed definitions and an outline of the methodology logic. One commenter suggested the sections within the documents be broken down further.
- One commenter suggested that the methodology documents use layouts from existing models such as the Physician Quality Reporting System (PQRS), Value-Based Modifier (VM), or Meaningful Use, to present measure specifications.

2.4.5 General Feedback on Supplemental Documentation

- Seven commenters noted issues with the hyperlinks in the supplemental documents. Five commenters reporting that the links provided did not redirect them to the codes list as intended, but instead to the Quality Payment Program landing page. Furthermore, some hyperlinks within the supplemental materials did not take them to the correct document. Several commenters also noted that the use of linked zip files, rather than direct links to each document, made access to the supplemental documentation more difficult as it added several additional steps to reaching the desired information.

Action Steps for Sections 2.4.1-2.4.5: We agree with the importance of providing informative materials on field testing, to ensure that stakeholders understand the purpose of field testing and the specifications of the measures. We appreciate the feedback from stakeholders about what level and type of information would be useful in field testing documents, with some requesting more detailed information, while others preferring abbreviated documentation containing high-level summaries. We will consider these input when designing and disseminating revised materials for future waves of measure development and field testing, and aim to strike a balance between providing details for those who are interested, while also higher-level information to serve as a summary. Relatedly, we will work to ensure that materials are easily accessible and contain accurate information, especially in regards to the hyperlinks included in the documents and the posting location of the documents.

2.5 Program-Level Feedback

- Two commenters stated their concern about the decision to weight cost as 10% of a clinician's or group's final MIPS score in CY 2018 and raised questions about how the cost category will expand in the future to include episode-based cost measures.
- One commenter stated their desire for more information about how performance on the episode-based cost measures will translate to scoring under MIPS.
- One commenter noted the lack of chronic condition episode groups developed to date and suggested that the limited number of measures could unfairly disadvantage clinicians, whose MIPS score will include 30% performance on resource use measures in the 2019 performance year, if they treat patients not included in the episode-based cost measures developed to date.
- One commenter stated their preference for measure data to be produced and provided at least quarterly in order to be more actionable for providers.

Action Steps for Section 2.5: We appreciate the program-level feedback provided by stakeholders and will share it with CMS in our ongoing discussion with them about how best to develop, document, test, and maintain episode groups and associated episode-based cost measures for potential use in the Merit-based Incentive Payment System (MIPS) cost performance category of the Quality Payment Program.

2.6 Field Test Report Template

2.6.1 General Feedback

Overall Presentation and Content of the Report

- Twenty-three commenters provided praise for the reports, noting the reports' easy navigability and the presentation of useful information through graphics and charts in the reports.
- Five commenters stated that these reports were an improvement from the Quality and Resource Use Reports (QRURs).

- Two commenters appreciated the inclusion of the clinical themes.
- Seven commenters stated that the layout of the reports was cumbersome to navigate, particularly on certain types of devices (e.g., phones, tablets).
- Two commenters expressed that they had issues trying to print the report and recommended that the layout be more printer-friendly.

Adequacy of Information

- Fifty-eight commenters indicated that there are questions or topics that are not answered by the field test report.
- Twenty-four commenters requested that information from the supplemental documentation be included in the field test report (e.g., methodology, process used to develop and specify the measures, and the measure specifications).
- Sixteen commenters requested more detailed explanations or walkthroughs of the information presented throughout the report.
- Nine commenters requested more information and explanation regarding the approach for the risk adjustment model.
- Nine commenters suggested the reports provide more clarity on the clinical themes and their specifications.
- One commenter suggested a clearer description of how the data and information from the report is connected to the goals of the Quality Payment Program.

Actionability of Information

- Twenty-four commenters indicated that the actionability of the data presented in the report could be further improved to enable them to identify ways in which they, or their practice, could change their behavior to improve their performance.

Recommendations for Improvement

- Thirteen commenters recommended a more granular breakdown of the data within the reports.
 - Four commenters requested a breakdown of which providers furnish which types of assigned services for the TIN's or TIN-NPI's episodes.
 - Two commenters suggested a more granular breakdown of costs by Medicare setting and payment system.
 - One commenter requested a breakdown according to the pre-trigger period, post-trigger period, and trigger event/stay.
 - One commenter recommended inclusion of an analysis of aligned quality measures as well as more detailed analyses of costs for the episode sub-groups.

- One commenter requested a breakdown of the acute inpatient medical condition episodes in which the TIN or TIN-NPI does not meet the attribution threshold (i.e., billing 30% or more of E&M claims for triggering inpatient stay).
- One commenter suggested a breakdown by site of service.
- One commenter recommended a breakdown to indicate the risk adjustment variables that impact the episodes.
- Seven commenters recommended including hyperlinks in the report that navigate to the definition and/or explanation of the report's metrics and other items.
- Six commenters suggested the use of more educational tools for guidance on the use of the field test reports, with some indicating that more high-level summaries and tutorial videos or webinars would be helpful.
- Six commenters made suggestions related to the layout or format of the reports.
- Two commenters recommended that each report be tailored to the individual cost measure.
- One commenter suggested web-based reports (instead of a downloadable Excel file).
- One commenter requested more informative names for the tabs in the workbook.
- One commenter recommended that clinicians be asked whether they prefer to receive a tables-only or graphs-only version of the report.
- One commenter recommended clearly identifying episodes where a clinician has been attributed costs versus contributed to the costs of an episode that has been attributed to another clinician.
- One commenter requested the addition of certain dimensions of data that appear to be missing (i.e., surgeon skill, patient population, and medical facility resources).

Other

- One commenter recommended that the Medicare Spending per Beneficiary (MSPB) and Total Per Capita Cost (TPCC) data be embedded into this type of report to ensure all of the data is within one single report.
- One commenter suggested that the format of this report be applied to the QRURs.

2.6.2 Overview Tab

User-Friendliness

- Twelve commenters discussed the user-friendliness of the Overview tab, with five commenters finding this tab helpful because it was clear, easy to read, and easily navigable due to the hyperlinks. On the other hand, seven commenters found it

unhelpful, noting that the layout was too busy, the colors too overwhelming, and the information difficult to interpret. One commenter found the Overview Tab confusing and overwhelming, especially for frontline staff.

- Four commenters discussed the hyperlinks in the Overview Tab, with two noting that they were not useful or necessary. One commenter was confused as to why the “Cost Measure Methodology” and “Frequently Asked Questions” buttons were both hyperlinked to the same CMS webpage. One commenter used the tabs, rather than the hyperlinks on the Overview Tab, to navigate within the report. One commenter recommended moving the hyperlink to the methodology documents up higher on the Overview Tab.
- One commenter noted that it was not immediately apparent on the Overview Tab whether the report was for an individual clinician or a clinician group as a whole.

Adequacy of Information

- No comments related to this theme were provided for the Overview tab.

Actionability of Information

- Seven commenters noted the Overview Tab’s limitations, including that it lacks specific and actionable information, especially since it does not contain any metrics and serves more as a table of contents.

Recommendations for Improvement

- Two commenters provided recommendations on the Overview Tab, including highlighting the measurement period and eliminating this tab altogether. One commenter recommended linking to the Results Tab(s) from the Summary Tab instead.

2.6.3 Summary Tab

User-Friendliness

- Ten commenters provided praise for this section of the report, some indicating that it was easy to understand, presented actionable information, included a useful comparison against the national average, and provided clean and organized information in both table and chart formats.

Adequacy of Information

- One commenter expressed confusion regarding the connection of the episode risk score percentile and the comparison of their cost measure score with the national average.

Actionability of Information

- Seven commenters suggested that the data in this section of the report be more actionable.

Recommendations for Improvement

- Nine commenters requested that more detail be provided in this section of the report. Some requested greater detail in general, while others sought more instructive or explanatory text. One commenter asked for a description of how a clinician achieves a certain percentile for the comparison against the national average.
- Four commenters requested definitions that more clearly define the concepts in this section of the report, with three commenters specifically requesting a clearer definition for risk score.
- Three commenters suggested that there should be a local/regional or state comparison added to this section of the report.
- Two commenters requested drill-down information on patient cases, with one commenter requesting information on patient severity risk scores, complexity scores, and demographics at the episode-level.
- One commenters recommended using the average ratio of observed to expected costs (instead of multiplying this value with the national average) as the measure score.
- One commenter requested the addition of total cost to Medicare for all procedures in each measure compared to the same number performed at an average cost.
- One commenter suggested the use of “grades” for the performance on the measures.
- One commenter suggested a clearer labeling of how the cost measure is risk-adjusted.
- One commenter requested that the information in this section be broken out into multiple tabs within the report.

2.6.4 Results Tabs

“Breakdown of Utilization and Cost by Selected Clinical Theme”

- Seven commenters recommended greater detail and description of the clinical themes, how they were constructed, and the services that fall under each theme.
- Three commenters recommended expanding the number of clinical themes, and two of them recommended using ten clinical themes.
- Two commenters suggested that the data presented on the clinical themes be more actionable, and two commenters recommended that the clinical themes be grouped into common services and complications.
- One commenter mentioned that the relationship of the clinical themes to the performance was unclear.
- One commenter praised the presentation of the data and information in this section of the report.

“Breakdown of Part B Physician/Supplier Episode Cost by Your TIN vs. Other TINs”

- Four commenters noted that the significance and the implications for the data presented in this table needs to be made clearer, with some indicating that the data are not actionable.
- Two commenters recommended the inclusion of dollar amounts (i.e., not just the share) for this section.
- One commenter mentioned that the information in this table (and charts) should be risk-adjusted.
- One commenter recommended the inclusion of a comparison against TINs in the same risk bracket for this section.
- One commenter requested more detailed information on the type and specialty of the providers contributing to the cost.

“Breakdown of Cost Measure Score by Episode Sub-Group”

- One commenter requested a rationale for the selected sub-groups, and one commenter recommended a local/regional comparison for the sub-groups.
- One commenter mentioned that they received cases for a sub-group that they do not perform (i.e., bilateral cases for cataract surgery).

User-Friendliness

- Ten commenters expressed concerns about the user-friendliness of the report, with four commenters stating the layout for this tab was cumbersome and that the information presented in this tab was difficult to understand. Two commenters mentioned that they perceived some of the data to be inaccurate or misleading, and one commenter stated that the terminology used in this section of the report was difficult to follow.
- Four commenters provided praise for the information presented in this section of the report, including the clarity of the information and the use of risk-adjusted scores.

Adequacy of Information

- No comments related to this theme were provided for the Results tabs.

Actionability of Information

- Eleven commenters mentioned that the contents of this section of the report should provide more actionable information.

Recommendations for Improvement

- Ten commenters requested more detail for this section of the report, some recommending more detailed instruction and guidance.

- One commenter suggested including hyperlinks that navigate to the list of services in which the TIN or TIN-NPI was costlier.
- One commenter recommended including cost information for drugs and implantable medical devices for a procedure.
- One commenter requested a list of all providers that contribute to the cost of their episodes.
- One commenter suggested the inclusion of Resource Use/Utilization Index and Price Index Scores.
- One commenter recommended including Hierarchical Condition Category (HCC) scores for their TIN, TINs in their risk bracket, and the national average.

2.6.5 Appendix A: Breakdown of Utilization and Cost by Medicare Setting and Service Category

User-Friendliness

- Three commenters discussed the user-friendliness of this tab, with one commenter expressing appreciation that categories with higher than average costs are bolded and in red font. On the other hand, a commenter found this tab overwhelming. One commenter also noted that the hyperlinks in Appendix A did not work or the information had been moved.

Adequacy of Information

- Five commenters questioned the accuracy of data presented in Appendix A in the confidential reports, either noting that they believe the data are incorrect or that no information is provided to verify that the data are correct.
- Four commenters appreciated the comparisons included in Appendix A. Two commenters noted that Appendix A clearly defines the areas where a TIN/TIN-NPI is more or less costly than the comparison group. One commenter noted that the comparisons are useful for identifying the sources of cost differences, particularly for inpatient and Part B services.
- Two commenters were unsure why codes/services they did not bill appeared to contribute to their episode costs.
- Two commenters requested an explanation about the Current Procedural Terminology (CPT) codes and sought clarification on how the Medicare Physician Fee Schedule reimbursement for CPT codes affects their cost measure score.
- One commenter stated that the discussion of endovascular procedures erroneously leads the clinician to believe that patients who have such a procedure during the trigger admission are included in the analysis.

- One commenter noted that Appendix A does not help clinicians identify where services fall in terms of clinical themes.
- One commenter found it unclear how costs for outpatient procedures could vary if Medicare reimbursements are the same.
- One commenter noted that Appendix A is helpful in identifying service categories that could be outliers to national averages.

Actionability of Information

- Seven commenters found the high level of detail provided in Appendix A helpful in identifying actionable areas for service and cost reduction. Two commenters noted that Appendix A allows for quick identification of key cost drivers in general. One commenter appreciated the breakdown by setting and service category.
- Three commenters noted that the data provided is not actionable. One commenter noted that the information was not completely clear and that it is difficult to understand how the information compares nationally. One commenter noted that the categories are too general and therefore fall short of providing actionable information.
- One commenter noted that the information can be actionable for clinicians that have some control over the referral or provision of services in a particular setting.
- One commenter noted that Appendix A is less immediately actionable than the Results Tab.
- One commenter suggested that CMS take into consideration what actions clinicians can realistically take to lower costs, balancing cost reduction with providing medically necessary services.

Recommendations for Improvement

- Eleven commenters recommended including more granular data to help in identifying areas for cost reduction.
- Four commenters requested itemized information about which services go into each Medicare setting and service category. One commenter noted that it would be helpful to include definitions and examples of the charges that would fall under each setting and service category.
- Two commenters stated that it would be helpful to be able to click on a service and see the clinicians and patients involved.
- Two commenters recommended drilling down to CPT or revenue center codes.
- Two commenters requested a breakdown of the percentage of cost from facility fees vs. clinician fees.
- One commenter recommended a breakdown of data by place of service, e.g. ambulatory surgical center (ASC) vs. hospital outpatient department (HOPD).

- One commenter noted that it would be helpful to drill down on cases within each service code.
- One commenter noted that the table lacks detail on services provided and reasons why they were provided.
- One commenter recommended that certain line items in the Breakdown of Utilization and Cost by Medicare Setting and Service Category table be subdivided further.
- Five commenters recommended including information about variation. Two commenters recommended adding visuals to demonstrate the variability of cost performance, rather than just the averages. One commenter noted that it would be helpful to know how much variance is based on the number of patients that use the service (as compared to the national average) vs. the number of units of the service is used per patient. One commenter recommended using one standard deviation from the mean to illustrate the distribution of cost measure scores. A commenter was also concerned that the data could be misleading because it does not distinguish between warranted and unwarranted variation, and recommended including an explanation about how clinicians can use this data to parse out warranted and unwarranted variation.
- Five commenters recommended including detailed explanations of specific metrics, such as the Average Cost of Service per Episode and the Share of Episodes with Certain Service, to make the underlying calculations clear.
- One commenter recommended making apparent the connections between the Average Cost of Service per Episode and the Share of Episodes with Certain Service and detailing the implications of one being higher than the other and vice versa.
- One commenter recommended listing the Average Cost of Service per Episode before the Share of Episodes with Certain Service.
- One commenter noted that the national Average Cost of Service per Episode does not match Medicare reimbursement rates.
- Five commenters recommended providing instructions along with this tab. One commenter recommended providing hyperlinks for each section title, definitions, and additional information. Three commenters noted that Appendix A would benefit from a better explanation of the episode parameters and attribution methodology. One commenter recommended adding a pop-up box for each episode detailing this information.
- Three commenters made recommendations about the use of bold and red text in Appendix A. One commenter recommended using bold and red text for statistically significant differences only. One commenter recommended that categories with lower than average costs also be distinguished to help clinicians identify areas where their performance is strong and their cost containment and quality improvement efforts are successful. One commenter recommended including a key to indicate what the bold, red numbers represent.

- Three commenters recommended eliminating extraneous information and highlighting certain costs better by only including settings and service categories clinically relevant to the measure.
- Two commenters recommended including the difference between their TIN/TIN-NPI and the national averages for these figures.
- One commenter requested clarification about the risk bracket and recommended that the risk bracket comparison be provided throughout the entire report.
- One commenter recommended providing a longer list of codes than just the top five.
- One commenter recommended including skilled nursing facility (SNF) cost comparisons.
- One commenter recommended including information on hospital outpatient costs.
- One commenter recommended providing a HIPAA-compliant crosswalk to help clinicians match beneficiaries to episodes.

2.6.6 Appendix B: Episode-Level Table for All Episodes Attributed to Your TIN/TIN-NPI

User-Friendliness

- One commenter found the column headings appropriate.

Adequacy of Information

- Seven commenters had concerns about the data reported. For example, one commenter disagreed that the list of patients supported the data represented in the summary tabs, while another found that the range of episode dates did not cover the entire measurement period of 6/1/2016 - 5/31/2017. A commenter also noted that the calculations did not appear accurate or that the table might be missing fields of information. One commenter found that the risk score calculation may not be adequate after reviewing their patients' medical records. One commenter noted that one patient was included twice although both of the patient's procedures happened within three weeks of each other. One commenter recommended providing analyzed data rather than raw data to make Appendix B more useful.
- Two commenters provided feedback on the size and structure of the table, noting that Appendix B is the heart of the report, yet a great deal of data manipulation must be done via pivot table and the table is not set up well to allow this. One commenter noted that given the size of the dataset, it will take some time to figure out how to use it.
- One commenter noted that Appendix B data offered a snapshot of the episodes but did not allow for easy understanding of whether an episode had been appropriately identified and attributed.
- One commenter noted that they do not understand all the information and how it compares nationally.

- One commenter noted that there is not enough info to see if the cost is correlated to HOPD or ASC, and noted that without site of service data in Appendix B, there is no actionable information.
- One commenter noted that it appears the cost data is being derived from the amount billed but not the actual standard Medicare reimbursement.
- One commenter questioned whether the Non-Risk-Adjusted Cost represents actual cash payments.

Actionability of Information

- Five commenters appreciated the episode-level detail, noting that Appendix B is an excellent source for clinicians to improve their understanding of the episode-based cost measures. One commenter appreciated having the breakdown by spending inside and outside of a TIN.
- Four commenters found Appendix B useful in determining cost reduction activities and identifying outliers. One commenter noted that the Appendix B data combined with the other tabs helps clinicians identify which cases were more costly so they can make improvements in the future.
- Two commenters noted that Appendix B did not provide actionable information.
- One commenter stated that the clinicians who are contributing costs in the episode are not clearly identified to assist the attributed clinician with better care coordination and health care decision-making.

Recommendations for Improvement

- Seven commenters recommended further granularity of detail in Appendix B.
- Two commenters recommended line item data for the costs of every episode because there is not currently a way for clinicians to determine where their high costs are originating.
- One commenter recommended drilling down to the trigger CPT code level to allow for more granular visibility of data and make data more actionable.
- One commenter noted that Appendix B could be helpful if TINs/TIN-NPIs could separate the data by individual event.
- One commenter recommended a breakdown of payments by facility and for anesthesiologists.
- One commenter noted that the ability to peel back the data to see how and what was coded on the same date of service would be helpful.
- Six commenters recommended including information about clinicians that contributed costs to their episodes to inform action steps, such as changing referral patterns. Three commenters recommended listing the providers rendering care during the episode in

more detail, including their CMS Certification Number (CCN) and facility type (e.g., inpatient rehab facility (IRF), long-term care hospital (LTCH), SNF, home health agency (HHA). Two commenters recommended including the contributing clinicians' TINs/NPIs, and one commenter recommended including their names.

- Six commenters recommended including additional patient-level data in Appendix B to enhance understanding of the reports, help clinicians check the reports against their records, and make the reports more actionable. One commenter recommended the inclusion of all fields from the QRURs. One commenter expressed that having the individual cases is essential for checking outliers and recommended including patient names if possible without privacy/HIPAA issues.
- Three commenters expressed that the report would be much more helpful if the service categories in Appendix A were included as columns in Appendix B to show cost breakdowns for each episode by setting or service category. One commenter recommended including the spending for each episode by service category and the units of each service used by each patient by setting.
- Three commenters recommended providing definitions and interpretation guidance for the Episode Costs columns, and one recommended this for the terminology # of TIN-NPIs within Your TIN and # of TIN-NPIs Outside of Your TIN. One commenter recommended differentiating “cost” from “billed”.
- Two commenters recommended providing additional explanation for the Other Providers Rendering Care Within the Episode. One commenter recommended providing explanations on how episodes could be attributed to them if they were not listed as the Hospital that Provided Care Earliest in Episode or Hospital that Provided Care Second in Episode.
- Two commenters recommended showing the cost calculations for a few episodes and the risk score calculation for an individual beneficiary. One commenter questioned why the risk score for the same episode is different on the TIN report and the TIN-NPI report.
- Two commenters recommended adding a field for Length of Stay; one commenter recommended including this field in the Other Providers Rendering Care within the Episode category, particularly for post-acute care and SNF.
- Two commenters recommended including the episode end date in addition to the start date in this tab. One commenter recommended including the episode lengths.
- Two commenters recommended including columns for the clinical themes applicable to each episode.
- Two commenters recommended including information about the trigger event (trigger code, principal diagnosis, and care setting) in Appendix B to limit the amount of manual chart review that clinicians must do to verify/understand their reports.
- Two commenters noted that many clinicians in their organization and thousands of patients that seem to fit the field testing criteria are not represented in the Appendix B table. They recommend that CMS provide the names of the excluded providers and some information as to why they were excluded.

- One commenter recommended showing the distribution of cost between different payment systems (Inpatient Prospective Payment System, Outpatient Prospective Payment System) and the Physician Fee Schedule to aid clinicians in understanding episode costs.
- One commenter recommended adding the national average or risk bracket to Appendix B to facilitate comparison of providers.
- One commenter recommended including the patient's diagnosis-related group (DRG) in the Appendix B table because it is currently unclear how the DRG complexity impacted the risk model.
- One commenter recommended providing an explanation and interpretation guidance about how an episode can have multiple attributed clinicians.
- One commenter recommended including a column for the sub-group in which an episode falls.

2.6.7 Appendix C: How to Interpret this Report

User-Friendliness

- Two commenters noted that Appendix C was an essential part because the field testing process is confusing and the reports are complex.
- Two commenters appreciated having interpretation guidance in the report itself. One commenter appreciated not having to go to the CMS website for answers.
- One commenter stated that it was unclear if Appendix C should be there.

Adequacy of Information

- Three commenters thought Appendix C provided good information on how to use the report. One commenter stated that Appendix C provided clarification of the more confusing fields and terminology.
- One commenter appreciated that Appendix C contained answers to many common questions, although it took a lot of scrolling and digging to find those answers. Nonetheless, they prefer Appendix C as is as opposed to shorter explanatory tabs for each tab of the report.

Actionability of Information

- Three commenters noted that Appendix C was of very little help. One commenter stated that Appendix C provides no information on how to glean actionable information from the report. One commenter noted that this is because it gives a lot of information but not a detailed description about how each measure is achieved.

Recommendations for Improvement

- Five commenters made recommendations about the hyperlinks. Two commenters recommended including hyperlinks to Appendix C from tabs other than the Summary Tab. Two commenters recommended including hyperlinks from Appendix C to the supplemental documentation. One commenter recommended having the titles of columns throughout the report linked to their specific definitions in Appendix C.
- Four commenters recommended including brief methodologies in Appendix C. Three commenters recommended including an explanation of how episodes are attributed, and one commenter recommended including a brief explanation of the risk adjustment methodology and how CMS determined the case minimum for assessing performance during field testing.
- Three commenters expressed that Appendix C contained too much jargon and overly complicated terminology. Two commenters recommended including a clinical example to help explain.
- Two commenters recommended that Appendix C be listed as the first tab of the report. One commenter recommended including it before Appendix A.
- Two commenters recommended including more explanations of terms and calculations. One commenter requested explanations of the non-risk-adjusted cost vs. the risk-adjusted cost and the risk score.
- One commenter recommended that Appendix C be broken down into steps and include screenshots for reference.
- One commenter recommended making Appendix C measure-specific and providing examples along with the explanations.
- One commenter recommended providing additional information, as the reports are confusing and overwhelming, especially for clinicians' front line staff.

2.6.8 Appendix D: High-Level Summary Results for Your TIN-NPI's TIN

User-Friendliness

- One commenter noted that there should be additional information provided on each tab to make them less confusing and overwhelming. One commenter noted that there is a lot of information on the tab such that their eye does not know where to focus, and that the tab should be simplified.
- One commenter noted that not all of the hyperlinks worked – they received the “reference is not valid” error message.

Adequacy of Information

- Two commenters noted that Appendix D provides great information for administrators to get an overall picture of their organization's performance on the cost measures. One commenter thought that Appendix D provides a good summary for the entire practice.
- One commenter noted that they do not understand all the information, how it compares nationally, and what it represents to their practice in terms of quality of care. One commenter noted that the terminology and representation is overly complicated.
- One commenter thought Appendix D was exactly the same as the Summary Tab.
- One commenter noted that it does not help them understand what costs are being attributed to the TIN-NPI.
- One commenter noted that there are slight differences in the same figures reported on the Summary Tab and on Appendix D, and that these differences do not instill confidence in the calculations. One commenter questioned how they can verify this information in order to improve.
- One commenter noted that Appendix D was missing from their TIN-NPI-level report.

Actionability of Information

- One commenter noted that Appendix D is not useful to them as an individual.

Recommendations for Improvement

- One commenter recommended showing calculations for the risk-adjusted costs and showing the distribution of cost measure scores.
- One commenter recommended making the fields in the graph clickable.

Action Steps for Sections 2.6.1-2.6.8: We appreciate the feedback from clinicians and stakeholders on the Field Test Report template, including comments on the overall presentation and content of the report and tab-specific comments, and the recommendations for improvement. The feedback and recommendations summarized in this report will be used to inform revisions to the reports for future waves of measure development and field testing. Specifically, we will continue to ensure the report is user-friendly, navigable, and contains accurate and actionable information that clinicians may use to learn about their performance on episode-based cost measures.

3.0 Measure-Specific Field Testing Feedback

The following sections summarize the measure-specific feedback received on the eight cost measures during the field testing period. Responses to these measure-specific feedback are not included in this report. However these feedback were shared with the Clinical Subcommittees prior to the measure refinement webinars in December 2017 to ensure these comments were considered and incorporated into each measure's specifications.

- Section 3.1 discusses the feedback received on the Elective Outpatient Percutaneous Coronary Intervention (PCI) cost measure.
- Section 3.2 contains the feedback on the Knee Arthroplasty cost measure.
- Section 3.3 presents the feedback on the Revascularization for Lower Extremity Chronic Critical Limb Ischemia.
- Section 3.4 discusses the feedback on the Routine Cataract Removal with Intraocular Lens (IOL) Implantation cost measure.
- Section 3.5 summarizes the feedback on the Screening/Surveillance Colonoscopy cost measure.
- Section 3.6 presents the feedback on the Intracranial Hemorrhage or Cerebral Infarction cost measure.
- Section 3.7 contains the feedback on the Simple Pneumonia with Hospitalization cost measure.
- Section 3.8 summarizes the feedback on the ST-Elevation Myocardial Infarction (STEMI) with PCI cost measure.

3.1 Elective Outpatient Percutaneous Coronary Intervention (PCI)

3.1.1 Definition of an Episode Group

Episode Triggers

- There was support for the draft trigger codes selected for this episode group identify a homogeneous patient cohort and accurately represent the episode group.
- One commenter expressed explicit support for the trigger codes for this cost measure.

Episode Sub-groups

- Though this cost measure does not have sub-groups, a few commenters supported the use of sub-grouping to ensure that patients being compared are as alike as possible.
- A commenter recommended incorporating a sub-group based on the triggering procedure code since the episode cost varies depending on the CPT code that triggered

the episode. For example, a clinician with a higher volume of CPT 92933 will have a higher cost per episode.

- A stakeholder commented that some of the episode groups are still heterogeneous, and emphasized the importance of relying on homogenous populations in cost measurement.

Other

- One commenter noted that episode groups in general should be able to take into account alternative and preventive treatments.

3.1.2 Attribution of the Episode Group to Clinicians

- A few commenters commented on the attribution process, with some of these commenters highlighting concerns about care coordination and process for attributing episodes when there are multiple providers involved in a patient's care.
- Some commenters suggested attributing procedure episodes to the most relevant specialty who performed the trigger procedure.
- One commenter expressed explicit support for the attribution methodology for the procedural cost measures.
- Several stakeholders expressed support for the use of patient relationship categories and codes in the cost measure attribution methodology.
- Several commenters noted that they would like to better understand how the implementation of the patient relationship categories will impact the overall attribution of cost of care, as these categories were not included in the current field testing, and how this will impact assigning clinician responsibility to a patient's care when multiple clinicians are involved.
- One commenter recommended including the Medicare "QY" billing modifier (anesthesiologist medical direction of 1 CRNA) under attribution.
- A stakeholder requested clarification on the eligible clinician codes included in the codes used in attribution for specialists who would never render a trigger service for the procedure. For example, code C5 is labeled as Dentist, a specialty which would likely never trigger a service for this procedure.
- One commenter recommended that episodes should only be assigned to the lead surgeon who is ultimately responsible for conducting and managing the episode.
- A commenter supported the use of co-management categories for procedural episode groups and updating the current attribution methods to include proceduralists and providers involved in post-procedural care.

- A stakeholder suggested that spending from a clinician providing services during the episode (but not triggering the episode) should also have their costs measured once they become involved to a level where they meet an attribution threshold.

3.1.3 Assignment of Costs to the Episode Group

Pre-Trigger Episode Window (0 Days)

- Of the 6 stakeholders who answered this multiple-choice question in the online survey, 4 stakeholders believed that the pre-trigger episode window length was just right.
- One commenter expressed concern that the pre-trigger episode window length is too long (Acumen note: the pre-trigger window is actually 0 days).

Post-Trigger Episode Window (30 Days)

- Of the 6 stakeholders who answered this multiple-choice question in the online survey, 3 stakeholders believed that the post-trigger episode window length was too long and 3 stakeholders believed that it was just right.
- One commenter supported the 30-day post-trigger episode window length.
- A commenter suggested that the current post-trigger windows for episode groups in general do not capture longer-term savings and improved outcomes resulting from post-acute care services provided and overseen by psychiatrists

Pre-Trigger Assigned Services

- In the field-testing measure specifications, no pre-trigger services are assigned to the Elective Outpatient PCI episode group.

Post-Trigger Assigned Services

Table 2. Summary of Feedback on Post-Trigger Assigned Services Codes

Code	Code Description	No. of Commenters	Add, Remove, or Modify	Comments
MS-DRG 242	Permanent Cardiac Pacemaker Implant	1	Remove	Diagnosis costs listed within this code, such as I25, I44, I45, I47, I48, I49, and I50, are only considered secondary diagnoses and not the main reason for pacemaker implantation
MS-DRG 245	Aicd Generator Procedures	1	Remove	Medical necessity for this procedure is independent of the PCI procedure and should be removed to preserve clinical cohesiveness of this episode group

- A few stakeholders commented on the anesthesia services included for this cost measure, with one commenter noting that the anesthesia CPT codes that are assigned to the procedural cost measures are too broadly defined. Furthermore, another commenter highlighted the importance of including anesthesia costs, as they are a major determinant of cost.

- One commenter recommends incorporating Part D spending into the measures because not doing so would penalize physicians who choose to use a Part B service rather than a medication paid for under Part D to treat a condition, even if this choice is less expensive than the Part D medication.
- One commenter suggested the use of CCS categories 2126, 2137, and 2158 in relation to the assigned occupational therapy services for the episode-based cost measures under review, stating that they include critical occupational therapy services that may be provided during the relevant episode of care.

Other

- One respondent noted that the accountability for hospital and post-acute care costs should be considered in payment updates, but not as a significant determinant of the clinician's performance
- Another commenter noted, with respect to the measures generally, that VTED and bleeding may be out of a surgeon's control depending on the prophylactic regimen chosen, and that preoperative cost depends on decisions of medical staff other than the surgeon (Note from Acumen: This was a general comment across all measures).

3.1.4 Risk Adjustment

Variables

- Many stakeholders had some concerns with whether the draft risk adjustment variables account for major factors outside of the clinician's control.
- One stakeholder recommends expanding the scope of data used for risk adjustment to include data on cognition and functional status, which can be obtained from post-acute care quality reporting.
- A stakeholder recommended consideration for facilities' technology availability in risk adjustment.
- A few commenters expressed concern over the use of the HCC risk adjustment in these measures because it is a poor predictor of costs.
- Some commenters recommended the inclusion of sociodemographic factors and behavioral predictors in risk adjustment.
- Several commenters recommended risk-adjusting costs for clinicians practicing in academic medical centers, as their total costs for services include services that do not apply to non-academic settings.

⁶ CCS category 212 is labeled as "Diagnostic physical therapy."

⁷ CCS category 213 is labeled as "Physical therapy exercises, manipulation, and other procedures."

⁸ CCS category 215 is labeled as "Other physical therapy and rehabilitation."

Exclusions

- A commenter expressed support for the exclusion of rare, high-cost services from the cost measure.
- One commenter recommended the following exclusions:
 - (i) patients with surgeries <30 days prior to the trigger,
 - (ii) patients with invasive thoracic or abdominal surgeries <90 days prior to the trigger,
 - (iii) patients with history of ICH,
 - (iv) patients with history of stroke <90 days prior to the trigger, and
 - (v) patients being evaluated for solid organ transplantation.

Other

- A few stakeholders expressed concerns that a 120-day lookback period would not adequately capture information on all applicable risk adjustors. One respondent recommended a minimum historical period of one year to more accurately reflect the HCCs that the patient has documented.
- A stakeholder suggested aligning the risk adjustment model for this measure to mirror the National Cardiovascular Data Registry risk model.
- A commenter recommended that all hospital and physician claims data be used in identifying all the patient's risk factors to allow for a complete understanding of the patient's risk-adjusted costs (Acumen note: We currently use all of a patient's Medicare Part A & B claims – including all service settings – in the 120 days prior to the episode window to identify patient's risk adjustment information).

3.1.5 Alignment of Cost with Quality

- One stakeholder recommended that CMS include adequate monitoring and oversight to ensure that clinicians and providers provide appropriate care to patients as needed, rather than selectively treating only those patients who are likely to be the healthiest and least costly.
- One respondent requested direct specification of any links between cost measure performance and quality measures.
- A few commenters recommended performing thorough analyses of quality alignment with cost, that has consideration of how best to integrate costs and outcomes together to represent value more broadly.

3.1.6 Relevant Considerations Related to Future Reporting

Clinical Themes

- A commenter noted that the clinical themes for this cost measure do not correlate to the overall performance on the measure, adding an example where a practice appeared to

have low cost on the clinical theme, but actually had high costs based on the cost measure score.

- One stakeholder recommended adding more information on the purpose of the clinical themes and defining it in terms of clinical quality and utilization costs for providers.
- A stakeholder recommended the removal of chronic care codes.
- One commenter highlighted that many of the episode services are not assigned to any clinical theme.

3.2 Knee Arthroplasty

3.2.1 Definition of an Episode Group

Episode Triggers

- There was support for the current list of trigger codes, with stakeholders agreeing that the trigger codes identify a homogenous patient cohort and are clinically accurate.

Episode Sub-groups

- A few commenters expressed support for the existing sub-groups as currently specified.
- One commenter suggested removing bilateral from sub-group criteria, limiting the Knee Arthroplasty sub-groups to simply total versus partial.
- One commenter noted that identifying laterality reliably may be challenging, suggesting that laterality is not well captured in the coding data.

Other

- One commenter noted that identifying laterality reliably may be challenging, suggesting that laterality is not well captured in the coding data

3.2.2 Attribution of the Episode Group to Clinicians

- A few commenters agreed that the attribution methodology is strong in its ability to identify the orthopedists involved in the episode.
- Several stakeholders expressed support for the use of patient relationship categories and codes in the cost measure attribution methodology.
- Several commenters noted that they would like to better understand how the implementation of the patient relationship categories will impact the overall attribution of cost of care, as these categories were not included in the current field testing, and how this will impact assigning clinician responsibility to a patient's care when multiple clinicians are involved.
- One commenter stated that attribution for Knee Arthroplasty is very broad.

- One commenter suggested the creation of sub-groups to attribute episodes to other specialties involved in an episode, which would evaluate other involved specialists who may have a strong impact on costs and outcomes.
- One commenter suggested limiting procedure-based episodes to only those specialties for which that specialty provides the procedure.
- One commenter noted that episodes should only be attributed to the lead surgeon who is ultimately responsible for conducting and managing the case.
- One commenter supported attribution to multiple clinicians for a given episode to facilitate care coordination and the group practice model of care.
- One commenter recommended including the Medicare “QY” billing modifier (anesthesiologist medical direction of 1 CRNA) under attribution.
- One commenter noted that this episode group does not sub-group co-management categories, though the provider performing the procedure may not participate in the patient’s care before or after the episode.

3.2.3 Assignment of Costs to the Episode Group

Pre-Trigger Episode Window (30 Days)

- Of the 10 stakeholders who answered this multiple-choice question in the online survey, 7 stakeholders believed that the pre-trigger episode window length was just right.
- Several commenters indicated that the pre-trigger window is too long.
- Of these stakeholders, some commenters suggested aligning with other existing window lengths.
- One commenter suggested 10 days, noting its use in other global surgery packages.
- A few commenters suggested zero or three days, noting their use in bundled payment models.

Post-Trigger Episode Window (90 Days)

- Of the 10 stakeholders who answered this multiple-choice question in the online survey, 8 stakeholders believed that the post-trigger episode window length was just right.
- A few commenters expressed their support for the current 90-day post-trigger window because of its alignment with windows used in bundled payment models and hospital quality measures.
- One commenter suggested that the current post-trigger windows for episode groups in general do not capture longer-term savings and improved outcomes resulting from post-acute care services provided and overseen by psychiatrists.

Pre-Trigger Assigned Services

- Some stakeholders suggested revisions to the list of pre-trigger assigned services codes, as summarized in Table 3 below.

Table 3. Summary of Feedback on Pre-Trigger Assigned Services Codes

Code	Description	No. of Commenters	Add, Remove, or Modify	Comments
CCS 212	Diagnostic physical therapy	2	Add	Adding CCS 212 and 215 in the pre-trigger window in addition to the already-included CCS 213 (Physical therapy exercises, manipulation, and other procedures) will help to fully capture pre-trigger rehab services
CCS 215	Other physical therapy and rehabilitation			

- One commenter noted the list of pre-trigger services was appropriate but for a shorter (i.e., 10-day) pre-trigger period.
- One commenter noted opposition to inclusion of all costs during the pre-trigger window rather than only costs directly ordered by the surgeon.

Post-Trigger Assigned Services

- Some stakeholders suggested revisions to the list of post-trigger assigned services codes, as summarized in Table 4 below.

Table 4. Summary of Feedback on Post-Trigger Assigned Services Codes

Code	Description	No. of Commenters	Add, Remove, or Modify	Comments
CPT 97001	Physical therapy evaluation	2	Remove/Modify	Commenters noted these CPT codes underestimate true costs in the Outpatient (OP) Facility and Clinician Services service category and should be replaced with 212, 213, and 215.
CPT 97110	Therapeutic procedure, 1 or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility			

Code	Description	No. of Commenters	Add, Remove, or Modify	Comments
CPT 97140	Manual therapy techniques (eg, mobilization/ manipulation, manual lymphatic drainage, manual traction), 1 or more regions, each 15 minutes			
CPT 97530	Therapeutic activities, direct (one-on-one) patient contact (use of dynamic activities to improve functional performance), each 15 minutes			
CPT 97545	Work hardening/ conditioning; initial 2 hours			
ICD-10 CM long diagnosis code N390	Urinary Tract Infection, site not specified	1	Modify	Commenter recommended the window should be changed from <30 days from trigger to <15 days from trigger for the OP Facility and Clinician Services service category to match the same <15 days window for the LTCH-Medical service category.
ICD-10 CM long diagnosis code F11.23	Opioid dependence with withdrawal	1	Modify	Commenter recommended changing the service assignment window from <30 days from trigger to <90 days from trigger for all service categories.

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- One commenter noted that procedural episode groups should have narrowed definitions for the anesthesia CPT codes used in the post-trigger window.
- One commenter recommended that anesthesia costs should be included in most episodes.
- One commenter recommended incorporating Part D spending into the measures because not doing so would penalize clinicians who choose to use a Part B service rather than a medication paid for under Part D to treat a condition, even if this choice is less expensive than the Part D medication.

Other

- One commenter noted that the accountability for hospital and post-acute care costs should be considered in payment updates, but not as a significant determinant of the clinician’s performance.
- One commenter noted, with respect to all cost measures generally, that VTED and bleeding may be out of a surgeon’s control depending on the prophylactic regimen chosen, and that preoperative cost depends on decisions of medical staff other than the surgeon.

3.2.4 Risk Adjustment

Variables

- Many commenters expressed concern that claims-based data is insufficient on its own for risk adjustment and recommended including risk adjustors based on additional data sources:
- Many commenters recommended that social determinants of health be included in the risk adjustment model.
- One commenter emphasized including data such as cognition and functional status in risk adjustment methodology.
- One commenter recommended inclusion of clinical scales and variables collected to stratify disease severity in MACRA quality measures (using the example of the NIHSS for stroke severity).
- A few commenters expressed support for the current risk adjustment methodology pending analysis on measure reliability and validity.
- A few commenters noted that HCC-based risk adjustment may be inadequate to capture clinical severity:
- A few commenters requested analyses demonstrating the amount of variance explained by the current risk adjustment model.
- One commenter recommended that additional risk adjustors be specified by the CS, beyond relying solely on ICD-10 codes/HCCs.
- A few commenters suggested taking into consideration whether clinicians practice within an academic medical center or teaching hospital either in risk adjustment or by comparing those clinicians against each other separately from all clinicians.
- A couple of commenters suggested that the long-term care indicator should be removed from risk adjustment and should instead be used as an exclusion, noting that the incidence of knee arthroplasty in patients from long-term care facilities is rare with a unique cost curve.

Exclusions

- Many commenters expressed support for the current exclusion criteria pending analysis on measure reliability and validity.
- One commenter suggested revisions to the list of exclusions, as summarized in Table 5 below.

Table 5. Summary of Feedback on Exclusions Codes

Code	Description	No. of Commenters	Add, Remove, or Modify	Comments
ICD-10 PCS 0SRC*	Knee Joint, Right	1	Add	Commenters recommended adding additional ICD-10 PCS codes to expand the specification of the “reinsertion/reimplantation of prosthetic knee after infection or spacer” exclusion to better account for the transition from ICD-9 to ICD-10
ICD-10 PCS 0SRD*	Knee Joint, Left			
ICD-10 PCS 0SPC*	Knee Joint, Right			
ICD-10 PCS 0SPD*	Knee Joint, Left			

*Asterisks are used to denote codes for which the commenter recommended codes *beginning* with the listed digits (encompassing all other codes under that parent code).

Other

- Several commenters expressed concerns that a 120-day lookback period would not adequately capture information on all applicable risk adjustors.
- One commenter recommended a minimum historical period of one year to more accurately reflect the HCCs that the patient has documented.

3.2.5 Alignment of Cost with Quality

- Many commenters highlighted the lack of quality measure with which to align the cost measure.
- A few commenters noted that alignment is difficult at the surgeon-level given that many current quality measures evaluate at the TIN-level.
- A few commenters recommended that CMS develop companion quality measures that evaluate providers on the same episodes as the cost measures to truly align cost and quality.
- A few commenters recommended thorough analyses of quality alignment with cost with the consideration of how to best integrate costs and outcomes together to represent value more broadly.
- One respondent requested direct specification of any links between cost measure performance and quality measures.

3.2.6 Relevant Considerations Related to Future Reporting

Clinical Themes

- Some commenters expressed a desire for more information regarding how clinical themes are defined and which services do or do not fall into each clinical theme.

- A few commenters supported the first round of clinical themes and noted that the breakdown was useful but encouraged that revisions be made while working closely with the orthopedic community.
- A few commenters noted that the current number and categories of clinical themes may result in significant episode costs coming from uncategorized services, suggesting more themes be added.
- A few commenters suggested including groupings of cost based on infection or venous thromboembolism as clinical themes for Knee Arthroplasty.

3.3 Revascularization for Lower Extremity Chronic Critical Limb Ischemia

3.3.1 Definition of an Episode Group

Episode Triggers

- A few stakeholders suggested adding and providing detail for the current trigger codes, as summarized in Table 6 below.

Table 6. Summary of Feedback on Trigger Codes

Code	Code Description	No. of Commenters	Add, Remove, or Modify	Comments
HCPCS/CPT 35355	Thromboendarterectomy, including patch graft, if performed; iliofemoral	2	Add	
HCPCS/CPT 35540	Bypass graft, with vein; aortobifemoral	1	Add	For aortic cases
HCPCS/CPT 35646	Bypass graft, with other than vein; aortobifemoral	1	Add	
HCPCS/CPT 35647	Bypass graft, with other than vein; aortofemoral	1	Add	
HCPCS/CPT 35623	Bypass graft, with other than vein; axillary-popliteal or -tibial	1	Add	
HCPCS/CPT 35654	Bypass graft, with other than vein; axillary-femoral-femoral	1	Add	
HCPCS/CPT 35621	Bypass graft, with other than vein; axillary-femoral	1	Add	

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- A few respondents suggested requiring specific ICD-10 codes be associated with CPT codes, as the measure currently does not contain specific enough criteria to exclude non-critical cases.
- One respondent suggested using the DRG/diagnosis on the physician claim rather than the hospital claim.

Episode Sub-groups

- A few respondents stated that CLI is too broad; one respondent suggest that CLI be stratified into tissue loss and rest pain.
- One respondent recommended creating sub-groups for unilateral above and below the knee, as well as bilateral above and below the knee, for open and endovascular procedures.
- One respondent suggested limiting the sub-groups to only open or percutaneous.
- One respondent requested a sub-group based on trigger place of service.
- One respondent suggested including a sub-group for revascularization between heart and hip (not just lower limb).

Other

- One respondent noted that several of the underlying conditions can frequently be managed without procedures or hospitalizations, and no measures of spending have been proposed for patients who receive alternative treatments.
- One respondent recommended a minimum of 30 episodes per hospital and episode group combination to increase credibility and reliability due to high and low outliers through trimmed through Winsorization.

3.3.2 Attribution of the Episode Group to Clinicians

- One respondent recommend applying a tiered threshold approach based on size of physician groups to more accurately attribute patients to the physician group that provides the majority of care.
- One respondent noted that episodes should only be attributed to the lead surgeon who is ultimately responsible for conducting and managing the case.
- One respondent agreed with the proposed attribution methodology identified for procedure-based episodes.
- One commenter recommended including the Medicare “QY” billing modifier (anesthesiologist medical direction of 1 CRNA) under attribution
- One respondent noted that this episode group does not sub-group co-management categories, though the provider performing the procedure may not participate in the patient’s care before or after the episode.

3.3.3 Assignment of Costs to the Episode Group

Pre-Trigger Episode Window (30 Days)

- Of the 8 stakeholders who answered this multiple-choice question in the online survey, 7 stakeholders believed that the pre-trigger episode window length was just right.
- One respondent emphasized that preoperative costs are out of control of the surgeon.
- One respondent suggested a 0-day pre-trigger episode window instead of 30 days used in the field test.
- One respondent requested that only costs incurred during the admission be included, not any costs prior to the admission given that these costs are often outside of the attributed clinician's control.

Post-Trigger Episode Window (90 Days)

- Of the 8 stakeholders who answered this multiple-choice question in the online survey, 4 stakeholders believed that the post-trigger episode window length was just right.
- One respondent noted that the post-trigger episode window length should be shortened or prosthetic devices be excluded.
- One respondent noted that the post-trigger window should capture the patency of outcomes related to the procedure; most interventions are viewed as a 6 month to 1-year patency due to prolonged care and wound management, which the post-trigger window should capture.
- One respondent considered 30 days an acceptable timeframe for determination of the episode.
- Another commenter suggested that the current post-trigger windows for episode groups in general do not capture longer-term savings and improved outcomes resulting from post-acute care services provided and overseen by physiatrists.
- One respondent recommended removing prosthetic devices as assigned service or reducing the post-trigger window in order to reduce incentive of delaying prosthetic device fitting and delivery.

Pre-Trigger Assigned Services

- One respondent requested inclusion of CTA of abdomen and pelvis with diagnosis rule.
- One respondent opposed including the cost of transportation in episodes attributed to clinicians.
- One respondent emphasized that preoperative costs are out of control of the surgeon.

Post-Trigger Assigned Services

- A few stakeholders suggested revisions to the list of post-trigger assigned services codes, as summarized in Table 7 below.

Table 7. Summary of Feedback on Post-Trigger Assigned Services Codes

Code	Code Description	No. of Commenters	Add, Remove, or Modify	Comments
HCPCS/CPT 37225	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(s), unilateral; with atherectomy, includes angioplasty within the same vessel, when performed	1	Add	Include appropriate modifiers for laterality
HCPCS/CPT 37226	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(s), unilateral; with transluminal stent placement(s), includes angioplasty within the same vessel, when performed	1	Add	Include appropriate modifiers for laterality
HCPCS/CPT 37227	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(s), unilateral; with transluminal stent placement(s) and atherectomy, includes angioplasty within the same vessel, when performed	1	Add	Include appropriate modifiers for laterality
HCPCS/CPT 37228	Revascularization, endovascular, open or percutaneous, tibial, peroneal artery, unilateral, initial vessel; with transluminal angioplasty	1	Add	Include appropriate modifiers for laterality
CCS 045	Percutaneous transluminal coronary angioplasty	1	Modify	Should not be assigned automatically
CCS 047	Diagnostic cardiac catheterization, coronary angioplasty	1	Modify	Should not be assigned automatically

Code	Code Description	No. of Commenters	Add, Remove, or Modify	Comments
HCPCS/CPT 88307	Level V - Surgical pathology, gross and microscopic examination Adrenal, resection Bone - biopsy/curettings Bone fragment(s), pathologic fracture Brain, biopsy Brain/meninges, tumor resection Breast, excision of lesion, requiring microscopic evaluation of surgical margins Breast, mastectomy - partial/simple Cervix, conization Colon, segmental resection, other than for tumor Extremity, amputation, non-traumatic Eye, enucleation Kidney, partial/total nephrectomy Larynx, partial/total resection Liver, biopsy - needle/wedge Liver, partial resection Lung, wedge biopsy Lymph nodes, regional resection Mediastinum, mass Myocardium, biopsy Odontogenic tumor Ovary with or without tube, neoplastic Pancreas, biopsy Placenta, third trimester Prostate, except radical resection Salivary gland Sentinel lymph node Small intestine, resection, other than for tumor Soft tissue mass (except lipoma) - biopsy/simple excision Stomach - subtotal/total resection, other than for tumor Testis, biopsy Thymus, tumor Thyroid, total/lobe Ureter, resection Urinary bladder, TUR Uterus, with or without tubes and ovaries, other than neoplastic/prolapse	1	Remove	

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- One respondent recommended, in the ER service category, changing the service assignment window for ICD-10 CM 3-Digit Diagnosis codes N30 (Cystitis) and R33 (Retention of Urine) from <30 days from trigger event to <7 days from trigger event.
- One respondent recommended the same change (<30 days from trigger event to <7 days from trigger event) for the list of post-trigger services assigned to the episode group for outpatient (OP) facility and clinician services service categories.
- One respondent requested that prosthetic devices be excluded from this episode.
- One commenter recommends incorporating Part D spending into the measures because not doing so would penalize physicians who choose to use a Part B service rather than a medication paid for under Part D to treat a condition, even if this choice is less expensive than the Part D medication.
- One respondent asked for narrower definitions for the anesthesia CPT codes used in the post-trigger services.
- One respondent request that high quality post-acute care services be addressed, as they can contribute to longer-term savings and improved outcomes.
- One respondent note that anesthesia CPT codes are too broadly defined.

- One respondent suggested adding procedure codes associated with caring for diabetic foot infections.
- One respondent noted that VTED and bleeding may be out of the control surgeon depending on prophylactic regimen chosen.
- One commenter highlighted the importance of including anesthesia costs, as they are a major determinant of cost.

Other

- One respondent noted that the accountability for hospital and post-acute care costs should be considered in payment updates, but not as a significant determinant of the clinician's performance.
- One commenter suggested the use of CCS categories 212, 213 and 215 in relation to the assigned occupational therapy services for the episode-based cost measures under review, stating that they include critical occupational therapy services that may be provided during the relevant episode of care.

3.3.4 Risk Adjustment

Variables

- **Suggestions for Additional Patient Data in Risk Adjustment Methodology**
 - One respondent emphasized including data such as cognition and functional status in risk adjustment methodology; data on DME usage has been found to predict functional status.
 - One respondent asked for inclusion of previous amputation not due to a traumatic event.
 - One respondent noted that there needs to be risk adjustment for lesion morphology, length of disease, and number of segments because the costs associated with endovascular treatment vary considerably.
 - One respondent requested appropriate risk adjustment on CLI patients with comorbid conditions such as coronary artery disease, heart failure, diabetes, and obesity.
 - A few respondents suggested inclusion of social and behavioral predictors.
 - One respondent recommended inclusion of clinical scales and variables collected to stratify disease severity in MACRA quality measures, such as NIHSS for stroke severity.
 - One respondent noted that there are three anatomic levels of disease in vascular arteries that can cause CLI (iliac, infrainguinal, and below the knee), each of which requires risk adjustment. There should also be risk adjustment for lesion morphology, length of disease, and number of segments. Risk adjustment for this

measure needs to account for the diverse range of CLI treatment goals (i.e., amputation prevention, conversion, pain relief, etc.).

- One respondent suggested accounting for transferred patients in risk adjustment.
- **Suggestions for Additional Provider Data in Risk Adjustment Methodology**
 - One respondent requested that higher costs of academic medical centers be reflected in risk adjustment.
 - One respondent noted that AMCs and teaching hospitals should not be held to the same standards as other hospitals, as their total costs for episodes include services and caveats that do not apply to non-academic settings.
 - One respondent suggested adjusting for increased costs related to residency programs within teaching hospitals.

Exclusions

- One respondent noted that MS-DRGs 252 (Other Vascular Procedures W MCC), 253 (Other Vascular Procedures W CC), and 254 (Other Vascular Procedures W/O CC/MCC), as well as timing (chronic) and contralateral limb, should not be exclusions.
- One respondent requested including Medicare Advantage patients in the measure because of the high percentage of Medicare beneficiaries enrolled in this plan; including them will “level” the playing field between geographic areas with differences in enrollment.

Other

- Several respondents expressed concerns that a 120-day lookback period would not adequately capture information on all applicable risk adjustors. One respondent recommend a minimum historical period of one year to more accurately reflect the HCCs that the patient has documented.
- One respondent recommended analyzing the impact of other risk adjustment methodologies, such as the one-year Elixhauser index versus using 1 year of diagnosis codes under the HCC hierarchy, and further recommended that all claims data be used to gather all patient risk factors (specifically, using Medicare Advantage data).

3.3.5 Alignment of Cost with Quality

- One respondent highlighted the need for much more granular data on individualized costs for services across the episode to give clinicians clear action items for improvement and follow-up.
- One respondent requested direct specification of any links between cost measure performance and quality measures.

- A few respondents expressed concern for aligning cost and quality. One respondent particularly recommended an environmental scan of quality measures that would exist for the same patient cohort and episode window.

3.3.6 Relevant Considerations Related to Future Reporting

Clinical Themes

- One respondent asked for the clinical themes to be defined according to clinical quality.

3.4 Routine Cataract Removal with Intraocular Lens (IOL) Implantation

3.4.1 Definition of an Episode Group

Episode Triggers

- Some commenters expressed support for the trigger code of CPT 66984.
- One commenter proposed that academic medical centers (AMCs) have a separate category for ophthalmology trainees.
- One stakeholder commented that any cataract removal that involves other diagnostic codes almost always entails additional time and evaluation spent with a patient and should not be considered "Routine Cataract Removal." Examples of such diagnostic codes are those for Macular Degeneration, Macular Pucker, Macular Cyst, Hole or Pseudohole, Vein or Artery Occlusion, Retinal Hemorrhage, (many of the H3X.XXX) codes, Cornea codes (H1X.XXX), or a prior history of another eye surgery (the same year or any prior year). (Note from Acumen: This comment may suggest that the existing PQRS-based exclusions are not clear, because these diagnostic codes are already excluded.)

Episode Sub-groups

- N/A

Other

- A stakeholder recommended focusing on episodes that have less concentrated costs for guiding improvement work.
- One commenter noted that episode groups in general should be able to take into account alternative and preventive treatments.

3.4.2 Attribution of the Episode Group to Clinicians

- Several commenters noted that they would like to better understand how the implementation of the patient relationship categories will impact the overall attribution of cost of care, as these categories were not included in the current field testing, and how this will impact assigning clinician responsibility to a patient's care when multiple clinicians are involved.

- Several stakeholders expressed support for the use of patient relationship categories and codes in the cost measure attribution methodology.
- A commenter suggested attributing procedure episodes to the most relevant specialty that will be performing the trigger procedure.
- One commenter recommended including the Medicare “QY” billing modifier (anesthesiologist medical direction of 1 CRNA) under attribution.

3.4.3 Assignment of Costs to the Episode Group

Pre-Trigger Episode Window (60 Days)

- Of the 11 stakeholders who answered this multiple-choice question in the online survey, 5 stakeholders believed that the pre-trigger episode window length was just right.
- Some commenters suggested that a 60-day pre-trigger window is too long, and recommended that it be closer to 14 days.
- One commenter suggested that the pre-trigger window is too short, and has too few cases.
- One stakeholder agreed with the 60-day pre-trigger window.

Post-Trigger Episode Window (90 Days)

- Of the 10 stakeholders who answered this multiple-choice question in the online survey, 6 stakeholders believed that the post-trigger episode window length was just right.
- One commenter suggested that most post-operative cataract complications occur within 2 weeks of the procedure, and that any testing outside of that timeframe is likely for the management of other comorbidities.
- A commenter supported the current post-trigger window of 90 days as it is in alignment with the global surgery period.
- Another commenter suggested that the current post-trigger windows for episode groups in general do not capture longer-term savings and improved outcomes resulting from post-acute care services provided and overseen by physiatrists.

Pre-Trigger Assigned Services

- Some commenters recommended excluding the costs of all ambulance services.
- Some commenters suggested that the measure developer account for the difference in payment for new versus established patient E&M codes. The commenter noted that because they are primarily a referral practice for more complicated cases, they mainly treat new patients and this will disproportionately penalize them because new patients are more expensive.

- A commenter expressed concern that some pre-trigger services might not be assigned to the cataract episode if they are only assigned when cataract is the primary diagnosis. If billing the cataract codes as any diagnosis triggers an episode, then there is a possibility that unrelated costs (admission for heart failure) will be attributed if cataract just happens to be billed by an excessively complete coder.
- One stakeholder agreed with the decision to not include any services in the ER service category during the pre-trigger period of the episode window. The cataract episode group is focused on routine cataract removal with intraocular lens. Because the focus is on routine episodes, to attribute any emergency room visits to the cataract episode group prior to the performance of the surgery would be inappropriate.
- A commenter stated their support for both the Pre-Trigger and Post-Trigger services assigned to the episode group for Outpatient Facility (OP) and Clinician Services service categories.
- Some stakeholders suggested revisions to the list of pre-trigger assigned services codes, as summarized in Table 8 below.

Table 8. Summary of Feedback on Pre-Trigger Assigned Services Codes

Code	Description	No. of Commenters	Add, Remove, or Modify	Comments
CPT 92225	Examination of eye by ophthalmoscope with retinal drawing (initial)	2	Add	A commenter recommended considering the inclusion of CPT 92225 (Ophthalmoscopy, extended, with retinal drawing (e.g., for retinal detachment, melanoma), with interpretation and report, initial)) and CPT 92226 (subsequent). They commented that the list as proposed strikes a balance between the services that would typically be performed with the surgery and those that may have increased in over-utilization in recent years.
CPT 92226	Examination of eye by ophthalmoscope with retinal drawing (subsequent)			
CPT 92020	Examination of cornea and iris using lens device and slit lamp	1	Add	One stakeholder recommended including Gonioscopy as an assigned service, since it is an important evaluation for patients prior to cataract surgery because it may detect higher-risk cases.
CPT 0356T	Insertion of drug delivery implant into tear ducts	1	Remove, Conditionally	Some stakeholders recommended removing services for OCT, Punctal Plugs, Pachymetry, Fundus, and External Photos unless they are coded with cataract codes.
CPT 76514	Ultrasound of corneal structure and measurement			
CPT G8397	Dilated macular or fundus exam performed, including documentation of the presence or absence of macular edema and level of severity of retinopathy			

Code	Description	No. of Commenters	Add, Remove, or Modify	Comments
CPT 92136	Measurement of curvature of both corneas with contact lens fitting	1	Modify	One stakeholder noted that for A-Scans, clinicians use CPT 92136, but they are being compared to CPT 76519. Because this might create unequal comparisons, codes should only be compared to like codes so that comparison across stakeholders is fair and equal.

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Post-Trigger Assigned Services

- A stakeholder commented that the anesthesia cost is assigned to the episode attributed to the cataract surgeon, but this service is billed by a separate physician. They believe that the anesthesia cost should not be assigned to the episode group, because the cataract surgeon cannot reasonably control this cost.
- Some stakeholders recommended narrowing the definitions for the anesthesia CPT codes.
- Some commenters suggested excluding anesthesia costs as assigned services while one stakeholder recommended including anesthesia costs as assigned services.
- One commenter recommends incorporating Part D spending into the measures because not doing so would penalize physicians who choose to use a Part B service rather than a medication paid for under Part D to treat a condition, even if this choice is less expensive than the Part D medication.
- A commenter suggested excluding facility fees from assigned services.
- Some stakeholders suggested revisions to the list of post-trigger assigned services codes, as summarized in Table 9 below.

Table 9. Summary of Feedback on Post-Trigger Assigned Services Codes

Code	Description	No. of Commenters	Add, Remove, or Modify	Comments
CCS 212	Diagnostic physical therapy	1	Add	One commenter suggested the use of CCS categories 212, 213, and 215 in relation to the assigned occupational therapy services for the episode-based cost measures under review, stating that they include critical occupational therapy services that may be provided during the relevant episode of care.
CCS 213	Physical therapy exercises, manipulation, and other procedures			
CCS 215	Other physical therapy and rehabilitation			

Code	Description	No. of Commenters	Add, Remove, or Modify	Comments
CPT 88307	Pathology examination of tissue using a microscope, moderately high complexity	1	Remove	One commenter recommended excluding CPT 88307 (Pathology examination of tissue using a microscope, moderately high complexity) from the cost measure. (Note from Acumen: this code is currently not included in the cost measure.)
CPT 66984	Removal of cataract with insertion of lens	1	Modify/Clarify	One commenter suggested there be a clearer separation between minor and major outpatient procedures. They provided the example that costs billed with CPT 66984 (Removal of cataract with insertion of lens) appear to be lumped into minor procedure costs when CPT 66984 is indicative of a major procedure.

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Other

- One commenter recommended resident-proctored cases in academic settings be eliminated from the denominator, since they take more time than typical cases which results in higher anesthesia costs, and they are not representative of the surgeon's costs.

3.4.4 Risk Adjustment

Variables

- One commenter suggested risk adjusting for medications that increase a patient's risk, like Eliquis, Coumadin, Flomax, and steroids. (Note from Acumen: Current measure calculation does not include Part D data)
- A commenter recommended adding care setting and variables like nursing home care, travel restrictions, unhealthy primary caregiver, and inability to afford post-operative medications as risk adjustment variables.
- One stakeholder suggested adding the cost of lens implants as a risk adjustment variable.
- A commenter recommended expanding the scope of data used for risk adjustment to include data on cognition and functional status, which can be obtained from post-acute care quality reporting.
- Several commenters recommended risk adjusting for sociodemographic risk factors and social determinants of health.

- One commenter recommended not using the HCC risk adjustment variables, because they are not relevant to cataract, except for the HCC for diabetes.

Exclusions

- One commenter recommended excluding patients with significant ocular co-morbidities. (Note from Acumen: Current exclusions are based on PQRS diagnosis exclusions for ocular co-morbidities.)
- A commenter expressed support for the exclusion of any episodes that are not performed either in an ambulatory surgical center or an outpatient hospital, as more research and analysis on the feasibility of reimbursing office based cataract surgery is needed.
- One commenter noted that the PQRS-related exclusions are appropriate.

Other

- Some respondents expressed concern that a 120-day lookback period would not adequately capture information on all applicable risk adjustors, and that the period should be increased. One respondent recommended a minimum historical period of one year to more accurately reflect the HCCs that the patient has documented.
- Some commenters recommended risk-adjusting costs for providers practicing in an academic medical center and/or providing cost and utilization comparison data that benchmarks academic medical groups against one another.

3.4.5 Alignment of Cost with Quality

- One stakeholder recommended that CMS include adequate monitoring and oversight to ensure that clinicians and providers provide appropriate care to patients as needed, rather than selectively treating only those patients who are likely to be the healthiest and least costly.
- One respondent requested direct specification of any links between cost measure performance and quality measures.
- A few commenters recommended performing thorough analyses of quality alignment with cost, that has consideration of how best to integrate costs and outcomes together to represent value more broadly.

3.4.6 Relevant Considerations Related to Future Reporting

Clinical Themes

- N/A

3.5 Screening/Surveillance Colonoscopy

3.5.1 Definition of an Episode Group

Episode Triggers

- Many stakeholders suggested modifying the current trigger codes by including an additional diagnosis code or modifier code checks, as summarized in Table 10 below. Acumen and the Gastrointestinal Subcommittee co-chairs also put together a list of potential diagnoses to use for the purposes of ensuring episodes triggered are for Screening/Surveillance Colonoscopy as opposed to a Diagnostic Colonoscopy. Please refer to this potential list in Table B1 in Appendix B.

Table 10. Summary of Feedback on Trigger Codes

Code	Code Description	No. of Commenters	Add, Remove, or Modify	Comments
HCPCS/ CPT 45378	Diagnostic examination of large bowel using an endoscope	1	Modify	Include only combinations of CPT code 45378 and the following diagnosis codes: Z1210, Z1211, Z1212, Z1509, Z800, Z8371
		1	Modify	Include only combinations of CPT code 45378 and the following diagnosis codes: Z1210, Z1211, Z1212, Z1509
		3	Modify	Replace diagnosis check with a modifier check for code PT
HCPCS/ CPT 45380	Biopsy of large bowel using an endoscope	3	Modify	Replace diagnosis check with a modifier check for code PT
HCPCS/ CPT 45381	Injections of large bowel using an endoscope	3	Modify	Replace diagnosis check with a modifier check for code PT
HCPCS/ CPT 45384	Removal of polyps or growths in large bowel using an endoscope	3	Modify	Replace diagnosis check with a modifier check for code PT
HCPCS/ CPT 45385	Removal of polyps or growths of large bowel using an endoscope	3	Modify	Replace diagnosis check with a modifier check for code PT
HCPCS/ CPT 45378	Diagnostic examination of large bowel using an endoscope	2	Modify	Replace the diagnosis check with a modifier check for the PT logic code
HCPCS/ CPT 45380	Biopsy of large bowel using an endoscope	2	Modify	Replace the diagnosis check with a modifier check for the PT logic code
HCPCS/ CPT 45381	Injections of large bowel using an endoscope	2	Modify	Replace the diagnosis check with a modifier check for the PT logic code
HCPCS/ CPT 45384	Removal of polyps or growths in large bowel using an endoscope	2	Modify	Replace the diagnosis check with a modifier check for the PT logic code
HCPCS/ CPT 45385	Removal of polyps or growths of large bowel using an endoscope	2	Modify	Replace the diagnosis check with a modifier check for the PT logic code

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- One commenter suggested requiring that colonoscopy procedure codes be accompanied by one of the following screening ICD-10 codes: Z12.11, Z83.71, or Z86.010.
- Some stakeholders suggested that acute care and other inpatient settings be excluded and one additionally suggested that only the following outpatient settings be included: ASC, ambulatory/office-based care, and HOPD.
- A few stakeholders commented that the trigger codes for this cost measure are accurate but that the logic needs to be refined to ensure that only screening/surveillance colonoscopies are captured.
- A commenter noted certain ICD-10 diagnosis codes should be eliminated from the logic to trigger events because when they are the primary codes, colonoscopies are never screening/surveillance.
- A stakeholder noted that there are currently no exclusions for the Screening/Surveillance Colonoscopy measure and that trigger CPT codes may capture patients receiving more complex care than a screening colonoscopy.
- One stakeholder recommended limiting trigger codes to only include colonoscopies for patients without other associated risk factors.
- A stakeholder noted the trigger code list seemed narrow and vague and questioned why only the 7 triggers were selected.
- One respondent suggested using the DRG/diagnosis on the physician claim rather than the hospital claim.
- A few stakeholders noted the trigger codes were appropriate and one mentioned specifically that that G0105 and G0121 were appropriate to identify screening colonoscopy.

Episode Sub-groups

- Some stakeholders wanted the episode group divided into sub-groups to create clinically comparable cohorts of patients.
- One stakeholder suggested incorporating sub-groups based on place of service (POS) codes that triggered the episode.
- A few commenters noted that there were no sub-groups in this cost measure and one suggested that sub-groups be developed to both capture and to compare screening and surveillance colonoscopies.
- A stakeholder suggested removing inpatient procedures or creating a sub-group.

Other

- One commenter noted that episode groups in general should be able to take into account alternative and preventive treatments.

3.5.2 Attribution of the Episode Group to Clinicians

- One stakeholder commented that the current attribution will attribute episodes to assistant surgeons but that they should only be assigned to the lead surgeon.
- A commenter noted that they would like to better understand how the implementation of the patient relationship categories will impact the overall attribution of cost of care, as these categories were not included in the current field testing, and how this will impact assigning clinician responsibility to a patient's care when multiple clinicians are involved.
- A stakeholder suggested including Medicare "QY" (medical direction of 1 CRNA) billing modifier for all procedural measures.

3.5.3 Assignment of Costs to the Episode Group

Pre-Trigger Episode Window (0 Days)

- Of the 16 stakeholders who answered this multiple-choice question in the online survey, 13 believed that the pre-trigger episode window length was just right
- A few stakeholders commented that a 30 day pre-trigger window is too long and that assignment of services should start with the procedure and include related complications only.
- Some stakeholders recommended a zero-day pre-trigger episode window.

Post-Trigger Episode Window (14 Days)

- Of the 17 stakeholders who answered this multiple-choice question in the online survey, 12 believed that the post-trigger episode window length was just right.
- One commenter noted that the post-trigger window was parsed reasonably for different types of complications, though some unrelated services may be included though no obvious systematic bias is present as currently proposed.
- Some stakeholders recommended the service assignment window be shortened for the assigned ICD-10 codes listed in table C1 in Appendix C.
- Another commenter suggested that the current post-trigger windows for episode groups in general do not capture longer-term savings and improved outcomes resulting from post-acute care services provided and overseen by physiatrists.

Pre-Trigger Assigned Services

- One commenter noted that there is variability between providers/groups regarding use of pre-operative visits for screening/surveillance colonoscopies and suggested that pre-operative visits should be included in a pre-trigger episode window to fully account for any pre-operative costs.

Post-Trigger Assigned Services

- Some stakeholders suggested revisions to the list of post-trigger assigned services codes, as summarized in Table 11 below.

Table 11. Summary of Feedback on Post-Trigger Assigned Services Codes

Code	Code Description	No. of Commenters	Add, Remove, or Modify	Comments
HCPCS/ CPT 88307	Pathology examination of tissue using a microscope, moderately high complexity	2	Remove	Remove from list of assigned services for the OP Facility and Clinician Services category
HCPCS/ CPT 88309	Pathology examination of tissue using a microscope, high complexity	2	Remove	Remove from list of assigned services for the OP Facility and Clinician Services category
HCPCS/ CPT 45100	Biopsy of rectum	2	Remove	Remove from list of assigned services for the OP Facility and Clinician Services category
ICD-10 J06	Acute upper respiratory infection, unspecified	1	Modify	Change the post-trigger services for ER and IP service categories from less than 7 days to less than 3 days
ICD-10 J20	Acute bronchitis	1	Modify	Change the post-trigger services for ER and IP service categories from less than 7 days to less than 3 days
ICD-10 J40	Bronchitis, not specified as acute or chronic	1	Modify	Change the post-trigger services for ER and IP service categories from less than 7 days to less than 3 days
ICD-10 R05	Cough	1	Modify	Change the post-trigger services for ER and IP service categories from less than 7 days to less than 3 days

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- One stakeholder agreed with the current post-trigger services and suggested assigning them if they occurred within 7 days and were directly due to a procedure.
- A commenter that the services are appropriate.
- One stakeholder recommended that all costs for anesthesia be included in the episode.

- A few commenters suggested logic that indicates that LTCH and IRF medical and surgical services may only be included in the episode, if the precipitating event occurs in the assigned window.
- One commenter noted that as a physician they are not in control of all the costs assigned to their episodes, including hospital charges, mandated testing, and other tests ordered by other healthcare providers (e.g., anesthesia).
- One stakeholder commented that costs should only be assigned if they are directly due to the procedure/trigger episode.
- A few stakeholders suggested only including CPT codes for diagnostic colonoscopy, proctosigmoidoscopy, and sigmoidoscopy as limited by diagnosis and not for unrelated diagnoses, such as cancer.
- A stakeholder commented that they strongly suggest excluding procedures typically done as outpatients, while the patient was an inpatient. One commenter recommends incorporating Part D spending into the measures because not doing so would penalize physicians who choose to use a Part B service rather than a medication paid for under Part D to treat a condition, even if this choice is less expensive than the Part D medication.
- One commenter suggested the use of CCS categories 212, 213 and 215 in relation to the assigned occupational therapy services for the episode-based cost measures under review, stating that they include critical occupational therapy services that may be provided during the relevant episode of care.

Other

- Some stakeholders commented that clinicians should only be responsible for services occurring at any time during the episode window if they represent complications.
- Another commenter noted, with respect to the measures generally, that VTED and bleeding may be out of a surgeon's control depending on the prophylactic regimen chosen, and that preoperative cost depends on decisions of medical staff other than the surgeon.
- One respondent noted that the accountability for hospital and post-acute care costs should be considered in payment updates, but not as a significant determinant of the clinician's performance.

3.5.4 Risk Adjustment

Variables

- A few stakeholders suggested adding the following HCCs as standard risk adjustors: 8, 9, 18, 21, 28, 33, 40, 70-76, 78, 87, 88, 110, 111, 135, and 137.
- One commenter including the following in risk adjustment if not already captured: genetic diseases such as Ehlers-Danlos, diseases that cause bleeding diathesis, small bowel

obstruction or partial obstruction, abdominal surgery, abdominal adhesions, electrolyte disorders (e.g., hypocalcemia, hypercalcemia, hyponatremia), portal hypertension, esophageal varices, gastroparesis, bariatric surgery, Whipple surgery, esophagectomy with gastric pull up, ileostomy and amyloidosis.

- A commenter noted that the measure does not appear to take into consideration age and comorbidities, clinical complexity, and procedural complexity.
- One stakeholder recommended that the social determinants of health be included in the risk adjustment model.
- One stakeholder commented that they weren't sure the list was all-inclusive.

Exclusions

- One stakeholder wrote that they were concerned that the measure captured colonoscopy procedures that were performed with a diagnostic or therapeutic upper endoscopy and recommend that double procedures be excluded since assigning costs at the site of service may be difficult.

Other

- One stakeholder recommended the use of a longer lookback period to improve accuracy, and noted that a period of even twelve months may be insufficient due to the time required for claims to move through the adjudication process.
- Several respondents expressed concerns that a 120-day lookback period would not adequately capture information on all applicable risk adjustors. One respondent recommended a minimum historical period of one year to more accurately reflect the HCCs that the patient has documented.

3.5.5 Alignment of Cost with Quality

- A stakeholder noted that cost does not reflect quality and that quality measures are needed for colonoscopy performance. Costs should be attributed only if cost is consequence of procedure complications and re-hospitalizations and should not be attributed for actions of other health care providers and health care entities.
- Some stakeholders noted that higher adenoma detection rates (ADR) through pathology use may increase episode costs since more polyps may be detected and removed however this may be a surrogate for quality and may ultimately offer costs savings since the risk of interval cancer and death from colorectal cancer is reduced.
- A few commenters recommended performing thorough analyses of quality alignment with cost, that has consideration of how best to integrate costs and outcomes together to represent value more broadly.
- One respondent requested direct specification of any links between cost measure performance and quality measures.

- A commenter noted that clinicians need a better explanation for how to reduce costs without impairing quality.

3.5.6 Considerations Related to Future Reporting

Clinical Themes

- A few stakeholders noted that the themes need to be clarified while one stakeholder commented that the clinical themes are beneficial.
- One stakeholder commented that it was puzzling that the utilization of pathology was considered negative since high polyp detection is otherwise considered positive in this environment.

3.6 Intracranial Hemorrhage or Cerebral Infarction

3.6.1 Definition of an Episode Group

Episode Triggers

- One respondent suggested that for acute inpatient medical condition cost measures like this one, clinician-reported ICD-10 diagnosis codes (coupled with inpatient E&M services billed by the clinicians) should be used to trigger an episode if these codes are within the same category as the MS-DRG reported by the hospital on the inpatient claim.
- One commenter noted that hospitals often use billing software that picks the highest available DRG (due to reimbursement incentives) even when a case involved minor neurological/neurosurgical input.
- One respondent suggested using the DRG/diagnosis on the physician claim rather than the hospital claim.
- One stakeholder expressed that a translation from MS-DRG to ICD would be helpful for clinicians because of their greater familiarity with ICD.

Episode Sub-groups

- Some stakeholders recommended a sub-group based on the triggering MS-DRG because the MS-DRG 064 on the trigger claim will lead to an intrinsically higher-cost episode.
- One commenter suggested adding sub-groups for rehabilitation and occupational therapy.
- One stakeholder recommended sub-grouping based on cause of stroke because caring for traumatic and spontaneous hemorrhagic stroke vary dramatically, and they do not want trauma centers to be unfairly penalized on these measures.
- One stakeholder expressed concern about sub-group definitions and recommended a subarachnoid hemorrhage sub-group.

Other

- One commenter noted that episode groups in general should be able to take into account alternative and preventive treatments.

3.6.2 Attribution of the Episode Group to Clinicians

- Several commenters expressed concerns about the proposed attribution method.
- One recommended considering the ICD-10 diagnosis code coupled with the inpatient E&M code to attribute episodes more accurately.
- Several commenters noted that they would like to better understand how the implementation of the patient relationship categories will impact the overall attribution of cost of care, as these categories were not included in the current field testing, and how this will impact assigning clinician responsibility to a patient's care when multiple clinicians are involved.
- Several stakeholders expressed support for the use of patient relationship categories and codes in the cost measure attribution methodology.
- One commenter recommended assigning specialty codes or provider taxonomy codes to episodes to ensure only certain specialties can be attributed episodes.
- One commenter noted that the attribution methodology does not account for high-cost decisions or poor outpatient care by clinicians other than the attributed clinician.
- One commenter recommended that the attribution methodology take into consideration when a clinician first begins to care for a patient and reward physicians for keeping patients healthy, and not only when an episode trigger occurs.
- One commenter expressed concern that the current attribution methodology undermines care coordination and the group practice model of care because it assigns the episode to a single provider or practice.

3.6.3 Assignment of Costs to the Episode Group

Pre-Trigger Episode Window (0 Days)

- Of the 5 stakeholders who answered this multiple-choice question in the online survey, 3 believed that the pre-trigger episode window length was just right.

Post-Trigger Episode Window (90 Days)

- Of the 5 stakeholders who answered this multiple-choice question in the online survey, 4 believed that the post-trigger episode window length was too long.
- One commenter believed that clinicians have little to no control over the care of a stroke after the patient leaves the hospital. Another stated that clinicians not involved in SNF care have no control over SNF services or length of stay.

- One commenter suggested that the current post-trigger windows for episode groups in general do not capture longer-term savings and improved outcomes resulting from post-acute care services provided and overseen by psychiatrists.
- One commenter expressed that clinical research has not yet elucidated whether clinician cost comparisons are more reliable after 30 days, 90 days, 180 days, or some other timeframe after the trigger event. This commenter questioned whether 90 days was appropriate for this measure.

Pre-Trigger Assigned Services

- In the field-testing measure specifications, there are no pre-trigger assigned services for the Intracranial Hemorrhage or Cerebral Infarction episode group.

Post-Trigger Assigned Services

- A few commenters emphasized that the ambulance services are out of the clinician's control and opposed the inclusion of transportation costs.
- One commenter suggested the use of CCS categories 2129, 21310, and 21511 in relation to the assigned occupational therapy services for the episode-based cost measures under review, stating that they include critical occupational therapy services that may be provided during the relevant episode of care.
- One respondent noted that the accountability for hospital and post-acute care costs should be considered in payment updates, but not as a significant determinant of the clinician's performance.
- One commenter recommends incorporating Part D spending into the measures because not doing so would penalize physicians who choose to use a Part B service rather than a medication paid for under Part D to treat a condition, even if this choice is less expensive than the Part D medication.

Other

- Another commenter noted, with respect to measures generally, that VTED and bleeding may be out of a clinician's control depending on the prophylactic regimen chosen, and that preoperative cost depends on decisions of medical staff other than the surgeon.

3.6.4 Risk Adjustment

Variables

- Several commenters noted that claims-based information does not sufficiently capture the range of patient characteristics that affect cost, such as severity of disease, stage of

⁹ CCS category 212 is labeled as "Diagnostic physical therapy."

¹⁰ CCS category 213 is labeled as "Physical therapy exercises, manipulation, and other procedures."

¹¹ CCS category 215 is labeled as "Other physical therapy and rehabilitation."

cancer, patient cognition, and functional status. A few commenters recommended including data such as cognition and functional status in risk adjustment methodology.

- A few stakeholders recommended including risk adjustment variables that account for the costs associated with academic medical centers.
- A few stakeholders recommended that the social determinants of health be included in the risk adjustment model.
- One commenter recommended that CMS develop patient condition groups and classification codes for use in risk-adjustment in episode-based cost measures.
- One commenter noted clinical research has yet to elucidate, adequately, how to accurately risk adjust for patient characteristics, complications of stroke, and social factors.
- One commenter noted that if MS-DRGs are used to risk adjust for severity, they need to be weighted more heavily than risk adjustment alone would allow.
- One commenter expressed that primary care clinicians and groups should not be penalized for seeing high-risk patients or for keeping patients out of the hospital.

Exclusions

- One commenter supported the approach of removing rare, high-cost services that might skew results from the cost measure calculation.

Other

- Several respondents expressed concerns that a 120-day lookback period would not adequately capture information on all applicable risk adjustors. One respondent recommended a minimum historical period of one year to more accurately reflect the HCCs that the patient has documented.

3.6.5 Alignment of Cost with Quality

- One respondent requested direct specification of any links between cost measure performance and quality measures.
- A few commenters recommended performing thorough analyses of quality alignment with cost, that has consideration of how best to integrate costs and outcomes together to represent value more broadly.
- One commenter noted that by focusing on a specific window of care to assess cost of care, the measures do not account for the specialist care provided over time and the resultant improvement in patient health over time.

3.6.6 Relevant Considerations Related to Future Reporting

Clinical Themes

- One stakeholder found the clinical themes useful and recommended expanding from 5 rows to 10.
- One commenter recommended the inclusion of “Complications from Bleeding” as a separate clinical theme to increase the specificity and, therefore, utility of the feedback received.
- One stakeholder recommended including hemiparesis treatment under the “Physical Therapy, Occupational Therapy, Speech-Language Pathology” clinical theme.
- One commenter requested a more robust breakdown of hospital spending by drugs, post-acute care, imaging, and intensive care days vs. standard hospital days.

3.7 Simple Pneumonia with Hospitalization

3.7.1 Definition of an Episode Group

Episode Triggers

- There was positive support for the trigger codes, with stakeholders agreeing that the trigger codes accurately represent the episode group.
- One respondent suggested that for acute inpatient medical condition cost measures like this one, clinician-reported ICD-10 diagnosis codes (coupled with inpatient E&M services billed by the clinicians) should be used to trigger an episode if these codes are within the same category as the MS-DRG reported by the hospital on the inpatient claim.
- One respondent suggested using the DRG/diagnosis on the physician claim rather than the hospital claim.

Episode Sub-groups

- One respondent stated that the episode sub-group without a complication or comorbidity (CC) or a major complication or comorbidity (MCC) is practically an empty set because for their practice, almost all simple pneumonia cases were treated in the outpatient setting where all patients have comorbidities.

Other

- One respondent noted how conditions like pneumonia can frequently be managed without hospitalization and there are no cost measures for patients who receive these alternative treatments (e.g., prevention or early identification and treatment of pneumonia).
- One commenter noted that episode groups in general should be able to take into account alternative and preventive treatments.

3.7.2 Attribution of the Episode Group to Clinicians

- Several commenters expressed concern with how this cost measure was attributed to clinicians who have provided very limited care and/or are not the clinician managing the patient's care during the hospitalization (e.g., cardiologists attributed to this cost measure); the commenters noted how this is a result of the attribution rule in which clinicians who bill to more than 30% of the inpatient E&M claims for a triggering inpatient stay are attributed the episode.
- Several commenters noted that they would like to better understand how the implementation of the patient relationship categories will impact the overall attribution of cost of care, as these categories were not included in the current field testing, and how this will impact assigning clinician responsibility to a patient's care when multiple clinicians are involved.
- Several stakeholders expressed support for the use of patient relationship categories and codes in the cost measure attribution methodology.
- One commenter noted that it did not seem reasonable for their practice to be attributed this cost measure with only 10 cases due to its large size (i.e., over 30 physicians).

3.7.3 Assignment of Costs to the Episode Group

Pre-Trigger Episode Window (0 Days)

- Of the 6 stakeholders who answered this multiple-choice question in the online survey, all stakeholders believed that having no pre-trigger window was just right.

Post-Trigger Episode Window (30 Days)

- Of the 6 stakeholders who answered this multiple-choice question in the online survey, all stakeholders believed that the post-trigger episode window length was just right.
- One respondent stated that 30 days (i.e., the current post-trigger episode window) is an acceptable timeframe.
- Another commenter suggested that the current post-trigger windows for episode groups in general do not capture longer-term savings and improved outcomes resulting from post-acute care services provided and overseen by physiatrists.

Pre-Trigger Assigned Services

- This measure does not have a pre-trigger window, and thus, no pre-trigger services are assigned.

Post-Trigger Assigned Services

- There were no comments specific to pneumonia on this topic, though some commenters had general comments for all measures.

- One commenter suggested the use of CCS categories 21212, 21313, and 21514 in relation to the assigned occupational therapy services for the episode-based cost measures under review, stating that they include critical occupational therapy services that may be provided during the relevant episode of care.
- One commenter recommends incorporating Part D spending into the measures because not doing so would penalize physicians who choose to use a Part B service rather than a medication paid for under Part D to treat a condition, even if this choice is less expensive than the Part D medication.

Other

- One commenter noted that the accountability for hospital and post-acute care costs should be considered in payment updates, but not as a significant determinant of the clinician's performance.
- Another commenter noted, with respect to the measures generally, that VTED and bleeding may be out of a surgeon's control depending on the prophylactic regimen chosen, and that preoperative cost depends on decisions of medical staff other than the surgeon.

3.7.4 Risk Adjustment

Variables

- There was positive support for the risk adjustment variables, with stakeholders agreeing that the risk adjustment variables account for major factors outside of the clinicians' control.
- One respondent recommended including social determinants of health in determining the risk score.

Exclusions

- There were no measure-specific comments on this topic.

Other

- Several respondents expressed concerns that a 120-day lookback period would not adequately capture information on all applicable risk adjustors. One respondent recommends a minimum historical period of one year to more accurately reflect the HCCs that the patient has documented.

3.7.5 Alignment of Cost with Quality

¹² CCS category 212 is labeled as "Diagnostic physical therapy."

¹³ CCS category 213 is labeled as "Physical therapy exercises, manipulation, and other procedures."

¹⁴ CCS category 215 is labeled as "Other physical therapy and rehabilitation."

- A few respondents expressed concern for aligning cost and quality. One respondent particularly recommended an environmental scan of quality measures that would exist for the same patient cohort and episode window.
- A few commenters recommended performing thorough analyses of quality alignment with cost, that has consideration of how best to integrate costs and outcomes together to represent value more broadly.
- One respondent requested direct specification of any links between cost measure performance and quality measures.

3.7.6 Relevant Considerations Related to Future Reporting

Clinical Themes

- One respondent recommended a Cardiopulmonary Complications clinical theme to provide greater clarity the Comorbidity Complications clinical theme.
- One respondent asked for the clinical themes to be defined according to clinical quality.

3.8 ST-Elevation Myocardial Infarction (STEMI) with PCI

3.8.1 Definition of an Episode Group

Episode Triggers

- There was support for the draft trigger codes selected for this episode group.
- One respondent suggested that for acute inpatient medical condition cost measures like this one, clinician-reported ICD-10 diagnosis codes (coupled with inpatient E&M services billed by the clinicians) should be used to trigger an episode if these codes are within the same category as the MS-DRG reported by the hospital on the inpatient claim.
- One respondent suggested using the DRG/diagnosis on the physician claim rather than the hospital claim.

Episode Sub-groups

- One commenter suggested using sub-groups based on triggering DRG, noting that patients with DRG 246 (percutaneous cardiovascular procedures with drug-eluting stent with MCC or 4+ vessels or stents) in particular tend to have higher cost per episode.

Other

- One commenter noted that episode groups in general should be able to take into account alternative and preventive treatments.

3.8.2 Attribution of the Episode Group to Clinicians

- One commenter stated that the STEMI PCI cost measure's use of the 30% threshold for inpatient E&M services for attribution could result in attribution to a clinician who was not

managing a patient's care during hospitalization, nor made the decisions with the biggest impact on spending.

- One commenter notes that a particular clinical group which provides STEMIs should have had more physicians receiving a report, and wonders why the group report underestimates the volume of STEMI across the relevant time period. Several commenters noted that they would like to better understand how the implementation of the patient relationship categories will impact the overall attribution of cost of care, as these categories were not included in the current field testing, and how this will impact assigning clinician responsibility to a patient's care when multiple clinicians are involved.
- Several stakeholders expressed support for the use of patient relationship categories and codes in the cost measure attribution methodology.

3.8.3 Assignment of Costs to the Episode Group

Pre-Trigger Episode Window (0 Days)

- This measure does not have a pre-trigger window, and thus, no pre-trigger services are assigned.
- Of the stakeholders who answered this multiple-choice question in the online survey, all five respondents believed that the pre-trigger episode window length was just right.

Post-Trigger Episode Window (30 Days)

- Of the five stakeholders who answered this multiple-choice question in the online survey, four stakeholders believed that the post-trigger episode window length was just right.
- One commenter noted that 30 days would be an acceptable timeframe.
- Another commenter suggested that the current post-trigger windows for episode groups in general do not capture longer-term savings and improved outcomes resulting from post-acute care services provided and overseen by physiatrists.

Pre-Trigger Assigned Services

- In the field-testing measure specifications, there are no pre-trigger assigned services for the ST-Elevation Myocardial Infarction with PCI episode group.

Post-Trigger Assigned Services

Table 12. Summary of Feedback on Post-Trigger Assigned Services Codes

Code	Code Description	No. of Commenters	Add, Remove, or Modify	Comments
MS-DRG 242	Permanent Cardiac Pacemaker Implant	1	Remove	Diagnosis costs listed within this code, such as I25, I44, I45, I47, I48, I49, and I50, are only considered secondary diagnoses and not the main reason for pacemaker implantation
MS-DRG 245	Aicd Generator Procedures	1	Remove	Medical necessity for this procedure is independent of the PCI procedure and should be removed to preserve clinical cohesiveness of this episode group

- One commenter suggested that the service assignment window for ICD-10 diagnosis code A04.7 (Enterocolitis due to Clostridium Difficile), which is currently less than seven days after the trigger event, should be extended.
- One commenter recommends incorporating Part D spending into the measures because not doing so would penalize physicians who choose to use a Part B service rather than a medication paid for under Part D to treat a condition, even if this choice is less expensive than the Part D medication.
- Another commenter advocates for the inclusion of anesthesia costs and believes that these are not included in the majority of episodes.
- One commenter suggested the use of CCS categories 21215, 21316, and 21517 in relation to the assigned occupational therapy services for the episode-based cost measures under review, stating that they include critical occupational therapy services that may be provided during the relevant episode of care.

Other

- Another commenter noted, with respect to the episode-based cost measures under review generally, that VTED and bleeding may be out of a surgeon’s control depending on the prophylactic regimen chosen, and that preoperative cost depends on decisions of medical staff other than the surgeon (Note from Acumen: this was a comment across all measures).
- One commenter advocated, with respect to the episode-based cost measures under review generally, for the removal from “episodes for physician services” of costs for transportation, given that the likelihood of ambulance use varies by geographic location,

¹⁵ CCS category 212 is labeled as “Diagnostic physical therapy.”

¹⁶ CCS category 213 is labeled as “Physical therapy exercises, manipulation, and other procedures.”

¹⁷ CCS category 215 is labeled as “Other physical therapy and rehabilitation.”

family support, and patient frailty. Including these costs could discourage treatment of Medicare's frailest patients.

- One respondent noted, again with respect to the episode-based cost measures under review generally, that the accountability for hospital and post-acute care costs should be considered in payment updates, but not as a significant determinant of the clinician's performance.

3.8.4 Risk Adjustment

Variables

- One commenter recommended the inclusion of social determinants of health in calculating the risk score of each episode.
- One stakeholder recommended adjusting the risk adjustment model so that it mirrors the NCDR risk model.

Exclusions

- One commenter suggested that patients with surgeries occurring less than 30 days prior to the trigger should be excluded and patients with invasive thoracic or abdominal surgeries less than 90 days prior to the trigger should be excluded. Additionally, the commenter recommends that patients with a history of ICH, patients presenting with shock or out of hospital cardiac arrest, or patients with a history of stroke less than 90 days prior to the trigger, should all be excluded.

Other

- Several respondents expressed concerns, with respect to the episode-based cost measures under review generally, that a 120-day lookback period would not adequately capture information on all applicable risk adjusters. One respondent recommended a minimum historical period of one year to more accurately reflect the HCCs that the patient has documented.

3.8.5 Alignment of Cost with Quality

- One respondent requested direct specification of any links between cost measure performance and quality measures.
- A few commenters recommended performing thorough analyses of quality alignment with cost, that has consideration of how best to integrate costs and outcomes together to represent value more broadly.

3.8.6 Relevant Considerations Related to Future Reporting

Clinical Themes

- N/A

4.0 Acumen Response and Next Steps

We appreciate the engagement of stakeholders with the measure development process in the first wave of measure development and will continue to take into consideration the feedback received during field testing. We also appreciate the interest expressed by stakeholders in remaining engaged as we move forward with future measure development, such as through activities including the TEP, Clinical Subcommittees, field testing, and public comment periods. Stakeholder input and engagement is key to our approach to measure development, and we believe the extensive clinician and stakeholder input on these measures will help ensure that these measures provide meaningful information to clinicians about their cost performance. As part of considering the feedback summarized in this report, we will share the relevant feedback with the Clinical Subcommittees and the TEP for their consideration on operationalizing this field testing input. The rest of this section includes a summary of the key next steps we have outlined in Section 2 of this report in response to the stakeholder feedback we received.

Thematic Comments on the Five Components of Measure Development

- We will share the feedback provided for the five components of measure development with the Clinical Subcommittee, TEP members, and CMS, the steward of the measures, to inform future measure development.

Measure Development Approach

- We will take into account the feedback on improving the field testing process and reporting during future measure development to ensure that future field testing efforts convey meaningful and accessible information to clinicians.

Accessing the Field Test Reports

- We are currently exploring options to simplify and streamline access to field testing information and reports, while providing reports to as many stakeholder clinicians as possible with the resources allocated for field testing.

Supplemental Documentation

- We will consider the stakeholder input collected during field testing when designing and disseminating revised materials for future waves of measure development and field testing, and aim to strike a balance between providing details for those who are interested, while also higher-level information to serve as a summary.
- We will work to ensure that materials are easily accessible and contain accurate information, especially in regards to the hyperlinks included in the documents and the posting location of the documents.

Program-Level Feedback

- We will share the program-level feedback collected during field testing with CMS as we continue to develop episode groups and associated episode-based cost measures for potential use in the Quality Payment Program.

Field Test Report Format

- We will continue to ensure the report is user-friendly, navigable, and contains accurate and actionable information that clinicians may use to learn about their performance on episode-based cost measures.

Appendix A: List of Commenters

This appendix provides an index of the stakeholders who submitted a comment during the Field Testing Feedback Period. Commenters who provided feedback but did not include their name or organization are not included in these tables, but their input has been included in this document. The stakeholders listed in Table A1 below provided cross-cutting, non-measure specific feedback. The stakeholders listed in Tables A1-A9 provided feedback on the referenced measure during field testing.

Table A1. Stakeholders Providing Non-Measure Specific Feedback

Number	Name	Individual or Representative	Organization
1	Adolph J. Yates, Jr., MD	Individual	
2	Alex Limanni	Representative	American College of Rheumatology
3	Allison Madson	Representative	American Society of Cataract and Refractive Surgery
4	Amanda Irene Napoles	Representative	American Academy of Neurology
5	Amanda Kozinczak	Representative	Jewett Orthopaedic Clinic
6	Anabelle Stephens	Representative	American College of Cardiology
7	Andrea Azul	Representative	
8	Andrew Danyluk MD	Individual	
9	Anita McCoy	Individual	
10	Azhil Durairaj	Individual	
11	Becky Bryant	Individual	
12	Benito Pedraza, M.D.	Individual	
13	Brad Klein	Individual	Abington Neurological Associates
14	Brian Vamstad	Representative	Gundersen Health System
15	Carla Parker	Individual	
16	Carol Coates	Representative	Montrose Memorial Hospital
17	Carol Sado	Representative	American Academy of Ophthalmology
18	Carol Wittmer	Representative	
19	Carolyn Winter-Rosenberg	Representative	American Academy of Physical Medicine and Rehabilitation
20	Catherine Comeno-Stamato	Representative	Campbell County Medical Group

Number	Name	Individual or Representative	Organization
21	Cathryn Johnson	Individual	
22	Cathy Cordova	Representative	Lawrence Memorial Hospital
23	Chad Ellimoottil	Individual	
24	Christal R Sakrison	Individual	
25	Christine Cummins	Representative	Douglas G. Cummins MD PA
26	Christine Jackson	Representative	Medtronic
27	Cindy Kosh	Representative	Yale University
28	Cris Lazo	Individual	
29	Cynthia Allen	Representative	Dr. Zueika M. Ghodsi MD, PC
30	Cynthia Mattox	Other (please specify)	American Academy of Ophthalmology
31	Danielle Morrison	Individual	
32	David Collins	Representative	MCV Associated Physicians
33	David Glasser	Other (please specify)	American Academy of Ophthalmology
34	Deborah Masters	Representative	Halifax Health
35	Deborah Young	Individual	Signature Medical Group
36	Deepak Kumar	Other (please specify)	Dayton Colon Rectal center
37	Dena McDonough	Representative	American Academy of Orthopaedic Surgeons
38	Denise Bender	Representative	UW Medicine Valley Medical Center
39	Denise Lee	Representative	American Academy of Ophthalmology
40	Donald L. Budenz	Individual	
41	Drew Burnett	Individual	
42	Dyana Roll	Representative	Susquehanna Orthopaedic Associates
43	Elizabeth Mabry MD	Individual	
44	Ellen Adams	Representative	Ophthalmic Consultants of Boston
45	Eric Cheng	Other (please specify)	
46	Erin Solis	Representative	American Academy of Family Physicians
47	Ewen Nicol	Representative	AMDA - The Society for Post-Acute and Long-Term Care Medicine

Number	Name	Individual or Representative	Organization
48	Francesco Aiello	Individual	Society of Vascular Surgery
49	Frank Brown	Individual	
50	Gail M. Reese	Representative	American Podiatric Medical Association
51	Gary Hoffman MD	Individual	
52	Gayle Lee	Representative	Association of American Medical Colleges
53	Glenn Littenberg MD	Individual	
54	Haley Bolton	Representative	
55	Harold D. Miller	Representative	Center for Healthcare Quality and Payment Reform
56	Heather Bindel	Representative	Rapid City Medical Center
57	Heather Smith	Representative	American Physical Therapy Association
58	James Naessens	Individual	Mayo Clinic
59	Janie Whitehead	Representative	
60	Jason Schmeisser	Representative	The University of Texas MD Anderson Cancer Center
61	Jason Shropshire	Representative	University of North Carolina Health Care System
62	Jeff Edelstein	Individual	
63	Jeffrey Carr	Representative	Outpatient Endovascular and Interventional Society
64	Jeffrey Sams MD	Individual	
65	Jennifer McLaughlin		MGMA
66	Jennifer Meeks	Representative	Spectrum Health
67	Jeremy Furniss	Individual	
68	Jessica Facella	Representative	Neuroscience And Spine Associates
69	Jessica Roth	Representative	American Gastroenterological Association
70	Jill Brody	Individual	
71	Jill Rathbun	Representative	Society for Vascular Surgery
72	John Benefield	Individual	
73	John Khoury	Individual	
75	John R. Saltzman	Individual	

Number	Name	Individual or Representative	Organization
76	Jose E. Pena	Individual	American Petroleum Institute (API)
77	Joyce Nurenberg	Representative	Medical College of Wisconsin
78	Julie Schwent	Individual	
79	Kara Webb	Representative	American Optometric Association
80	Karen Leisman	Representative	LO Eye Care
81	Katherine Ast	Representative	American Academy of Hospice and Palliative Medicine
82	Kathleen A Lamping	Individual	
83	Kathy DiClemente	Individual	Infectious Diseases Society of America and Independence Physician Management
84	Kathy Eldridge	Other (please specify)	
85	Katrina Heath	Individual	
86	Kay J. Moyer	Representative	Infectious Diseases Society of America
87	Keely Macmillan	Other (please specify)	Archway Health
88	Kermit Richiez	Individual	
89	Kevin Burris	Representative	Premier Surgical Associates, PLLC
90	Kimberly Greck	Representative	Medical Imaging of Lehigh Valley, P.C.
91	Kimberly Morton	Individual	
92	Kristina Kew	Representative	University of Cincinnati Physicians, Inc
93	Lakitia Mayo	Representative	ACG, AGA, ASGE
94	Laura Singleton	Individual	
95	Laurie Mays	Representative	Carolina Sports Medicine & Orthopaedic Specialists
96	Lisa Gangarosa	Individual	
97	Liz Wheeler	Individual	
98	Marjorie DeBenedictis	Individual	
99	Mark Domyahn	Representative	Cardiology Advocacy Alliance
100	Mark I. Froimson	Representative	American Association of Hip and Knee Surgeons

Number	Name	Individual or Representative	Organization
101	Mark Ramirez	Representative	Stanford Health Care
102	Marlene Galizi	Individual	
103	Marsha Buchanan	Individual	
104	Mary Kathryn Jenkins Bumgarner	Representative	NC Heart and Vascular and Rex Vascular Surgical Specialists (UNC-REX Hospital)
105	Megan Reyna	Representative	Advocate Physician Partners
106	Michael Banks	Individual	
107	Michael H. Power, M.D.	Representative	Ophthalmic Associates of Billings, LLC
108	Michael Weisinger	Representative	John T. Mather Memorial Hospital
109	Mustafa Kathawala	Individual	
110	Nancy Bowman	Representative	Texas Colon and Rectal Surgeons.LLP
111	Narayanachar Murali	Individual	
112	Nasir Abbas	Representative	Centers for Advanced Orthopaedics
113	Nathan Massey	Individual	
114	Neil Eriksen	Representative	Michigan Medicine
115	Patrick Toomey	Representative	Virginia Cardiovascular Specialists
116	Paul A. Gaudio	Individual	
117	Paul Lazar	Individual	
118	Peter Purcell	Individual	
119	Peter Rahko	Representative	American Society of Echocardiography
120	Rachel Groman	Representative	American Association of Neurological Surgeons and the Congress of Neurological Surgeons
121	Rachele Conboy-Halliday	Individual	
122	Ralph Kohl	Representative	American Association of Nurse Anesthetists
123	Rebecca Kurzon	Individual	
124	Rhonda Smith	Representative	Novant Health Medical Group
125	Richard Iorio	Individual	

Number	Name	Individual or Representative	Organization
126	Richard Marc Davis	Individual	
127	Robert A Sable	Individual	
128	Robert Eidus	Individual	
129	Ronald Grousky	Individual	Mayo Clinic
130	Russ Juno	Individual	Academy of Nutrition & Dietetics
131	Sabrena Mccarley	Individual	OTAC
132	Sharmila Sandhu	Representative	American Occupational Therapy Association
133	Sharon McIlrath	Representative	American Medical Association
134	Somosree Dutt	Representative	University of Illinois Chicago Physicians Group
135	Steph Schreiner	Other (please specify)	
136	Stephen Loehr	Individual	
137	Susan Sprau	Individual	
138	Teresa C. Ellis	Individual	
139	Thomas E. Scherdin	Representative	SSM Health
140	Trina D. Williams & Isaac Williams Jr.	Representative	Heart Failure Society of America and Long Cancer
141	Udayini Kodali	Individual	
142	Vera Rigolin	Representative	American Society of Echocardiography
143	Victoria Elkins	Representative	Huron Ophthalmology PC
144	Vinita Ollapally	Representative	ACS
145	Yazan Duwayri	Representative	Society of Vascular Surgery

Table A2. Stakeholders Providing Feedback on the Intracranial Hemorrhage or Cerebral Infarction Cost Measure

Number	Name	Individual or Representative	Organization
1	Deborah Masters	Representative	Halifax Health
2	Rhonda Smith	Individual	
3	Thomas E. Scherdin	Individual	
4	Eric Cheng	Individual	
5	Amanda Irene Napoles	Representative	American Academy of Neurology

Number	Name	Individual or Representative	Organization
6	Brad Klein	Individual	
7	Sharmila Sandhu	Representative	The American Occupational Therapy Association
8	John Khoury	Individual	
9	Erica Saito	Representative	Northwestern Medical Group
10	David Collins	Representative	MCV Associated Physicians
11	Harold D. Miller	Representative	Center for Healthcare Quality and Payment Reform
12	Katherine Ast	Representative	American Academy of Hospice and Palliative Medicine
13	Kay J. Moyer	Representative	Infectious Diseases Society of America

Table A3. Stakeholders Providing Feedback on the Knee Arthroplasty Cost Measure

Number	Name	Individual or Representative	Organization
1	Adolph J. Yates, Jr., MD	Individual	
2	Alex Limanni, MD	Representative	American College of Rheumatology
3	Carla Parker, MSN, RN, NE, BC, CIC	Individual	
4	Christine Jackson	Representative	Medtronic
5	Deborah Young, MBA, PMP, CPHIMS	Individual	Signature Medical Group
6	Dena McDonough, PA-C, MHCDS	Representative	American Academy of Orthopaedic Surgeons
7	Erica Saito	Representative	Northwestern Medical Group
8	Harold D. Miller	Representative	Center for Healthcare Quality and Payment Reform
9	Jeremy Furniss, OTD, OTR/L, BCG, CDP	Individual	
10	Mark I Froimson, MD, MBA	Representative	American Association of Hip and Knee Surgeons
11	Michael Banks, MD	Individual	
12	Nasir Abbas	Representative	Centers for Advanced Orthopaedics
13	Neil Eriksen	Representative	Michigan Medicine
14	Rhonda Smith	Representative	Novant Health Medical Group
15	Ronald Grousky	Individual	

Number	Name	Individual or Representative	Organization
16	Sharmila Sandhu, JD	Representative	American Occupational Therapy Association

Table A4. Stakeholders Providing Feedback on the Elective Outpatient PCI Cost Measure

Number	Name	Individual or Representative	Organization
1	Amanda Melendez	Individual	
2	Azhil Durairaj	Individual	
3	Christine Jackson	Representative	Medtronic
4	Erica Saito	Representative	Northwestern Medical Group
5	Mary Kathryn Jenkins Bumgarner	Representative	NC Heart and Vascular and Rex Vascular Surgical Specialists (UNC-REX Hospital)
6	Patrick Toomey	Representative	Virginia Cardiovascular Specialists
7	Rhonda Smith	Representative	Novant Health Medical Group
8	Ronald Grousky	Individual	Mayo Clinic
9	Thomas E. Scherdin	Representative	SSM Health

Table A5. Stakeholders Providing Feedback on the Simple Pneumonia with Hospitalization Cost Measure

Number	Name	Individual or Representative	Organization
1	Harold D. Miller	Representative	Center for Healthcare Quality and Payment Reform
2	Mark Domyahn	Representative	Cardiology Advocacy Alliance
3	Rhonda Smith	Representative	Novant Health Medical Group
4	Sharmila Sandhu	Representative	American Occupational Therapy Association

Table A6. Stakeholders Providing Feedback on the Revascularization for Lower Extremity Chronic Critical Limb Ischemia Cost Measure

Number	Name	Individual or Representative	Organization
1	Christine Jackson	Representative	Medtronic
2	Erica Saito	Representative	Northwestern Medical Group
3	Francesco Aiello	Individual	Society of Vascular Surgery
4	Gail M. Reese	Representative	American Podiatric Medical Association

Number	Name	Individual or Representative	Organization
5	Harold D. Miller	Representative	Center for Healthcare Quality and Payment Reform
6	Jeffrey Carr	Representative	Outpatient Endovascular and Interventional Society
7	Jill Rathbun		Society for Vascular Surgery
8	Katherine Ast	Representative	American Academy of Hospice and Palliative Medicine
9	Kevin Burris	Representative	Premier Surgical Associates, PLLC
10	Mark Domyahn	Representative	Cardiology Advocacy Alliance
11	Mary Kathryn Jenkins Bumgarner		
12	Rhonda Smith		
13	Susan Sprau	Individual	
14	Thomas E. Scherdin		
15	Thomas Scherdin		SSM Health
16	Yazan Duwayri	Representative	Society of Vascular Surgery

Table A7. Stakeholders Providing Feedback on the Screening/Surveillance Colonoscopy Cost Measure

Number	Name	Individual or Representative	Organization
1	Cathy Cordova	Representative	Lawrence Memorial Hospital
2	Erica Saito	Representative	Northwestern Medical Group
3	Geoff Cox	Individual	
4	Glenn Littenberg MD	Individual	
5	Jason Schmeisser	Representative	The University of Texas MD Anderson Cancer Center
6	Jessica Roth		American Gastroenterological Association
7	Jose E. Pena	Individual	
8	Lakitia Mayo	Representative	ACG, AGA, ASGE
9	Lisa Gangarosa	Individual	
10	Nancy Bowman	Representative	Texas Colon and Rectal Surgeons. LLP
11	Narayanachar Murali	Individual	
12	Rhonda Smith		
13	Robert A Sable	Individual	

Number	Name	Individual or Representative	Organization
14	Russ Juno	Individual	Academy of Nutrition & Dietetics
15	Somosree Dutt	Representative	University of Illinois Chicago Physicians Group
16	Thomas E. Scherdin	Representative	SSM Health
17	udayini kodali	Individual	
18	Vinita Ollapally		ACS
19	Walter Park	Individual	
20	Ronald Grousky	Individual	
21	Neil Eriksen	Representative	Michigan Medicine

Table A8. Stakeholders Providing Feedback on the STEMI with PCI Cost Measure

Number	Name	Individual or Representative	Organization
1	Thomas Scherdin		SSM Health
2	Harold D. Miller	Representative	Center for Healthcare Quality and Payment Reform
3	Christine Jackson	Representative	Medtronic
4	Rhonda Smith		
5	Mary Kathryn Jenkins Bumgarner		
6	Erica Saito	Representative	Northwestern Medical Group

Table A9. Stakeholders Providing Feedback on the Routine Cataract Removal with IOL Implantation Cost Measure

Number	Name	Individual or Representative	Organization
1	Adam Sise	Individual	
2	Allison Madson	Representative	ASCRS
3	Andrew Danyluk, MD	Individual	
4	Ann Warner	Representative	Wooster Ophthalmologists
5	Becky Bryant	Individual	
6	Carol Sado	Individual	
7	Cynthia Mattox	Representative	AAO
8	David Glasser	Individual	
9	Donald L Budenz	Individual	

Number	Name	Individual or Representative	Organization
10	Ellen Adams	Individual	
11	Erica Saito	Representative	Northwestern Medical Group
12	Janie Whitehead	Individual	
13	Jeff Edelstein	Individual	
14	Kara Webb	Representative	AOA
15	Michael H. Power, M.D.	Individual	
16	Rebecca Kurzon	Individual	
17	Richard Marc Davis	Individual	
18	Ronald Grousky	Individual	

Appendix B: Potential Diagnoses for Screening/Surveillance Colonoscopy

Acumen and the Gastrointestinal Subcommittee co-chairs put together a list of potential diagnoses to use for the purposes of ensuring episodes triggered are for Screening/Surveillance Colonoscopy as opposed to a Diagnostic Colonoscopy, shown below in Table B1.

Table B1. List of Potential Diagnoses to Narrow Episode Group Definition

ICD-10 Code	Description
Malignancy ICD-10 Codes	
C18	Malignant neoplasm of colon
C19	Malignant neoplasm of rectosigmoid junction
C20	Malignant neoplasm of rectum
Benign and Polyp ICD-10 Codes	
D12	Benign neoplasm of colon, rectum, anus, and anal canal
K62.0	Anal Polyp
K62.1	Rectal Polyp
K63.5	Polyp of Colon
Screening Encounter ICD-10 Codes	
Z00.00	Encounter for General Adult Medical Examination without abnormal findings
Z00.01	Encounter for General Adult Medical Examination with abnormal findings
Z00.8	Encounter for other General Examination
Z08	Encounter for Follow-up Examination after Completed Treatment for Malignant Neoplasm
Z12.11	Encounter for screening for malignant neoplasm of colon
Z12.12	Encounter for screening for malignant neoplasm of rectum
Family History ICD-10 Codes	
Z80.0	Family history of malignant neoplasm of digestive organs
Z83.71	Family history of colonic polyps
Personal History ICD-10 Codes	
Z85.030	Personal history of malignant carcinoid tumor of large intestine
Z85.038	Personal history of other malignant neoplasm of large intestine
Z85.040	Personal history of malignant carcinoid tumor or rectum
Z85.048	Personal history of malignant neoplasm of rectum, rectosigmoid junction, and anus
Z86.010	Personal history of colonic polyps