Episode-Based Cost Measure Development for the Quality Payment Program

Centers for Medicare & Medicaid Services

12-23-2016

EXECUTIVE SUMMARY

Introduction

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) repealed the Medicare sustainable growth rate (SGR) methodology for updates to the Physician Fee Schedule and replaced it with a new approach to payment.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, which has been named 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.

The Quality Payment Program aims to improve health outcomes, promote smarter spending, minimize burden of participation, and provide fairness and transparency in operations. These aims are centered on improving beneficiary outcomes and engaging patients through patient-centered policies, and enhancing clinician experience through flexible and transparent program design and interactions with easy-to-use program tools.

Based on extensive stakeholder engagement and more than 4,000 comments received, certain aspects of existing CMS programs that apply to clinicians are being thoughtfully consolidated into the MIPS program. There are four connected pillars under which clinicians' performance will be assessed under MIPS – 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"). These four components of MIPS work together to provide useful feedback to clinicians in order to lead toward high-quality, patient-centered care.

Our goal for developing cost measures is to provide information that is useful to clinicians and, together with the other components of the MIPS program, drives lowered costs and cost growth as well as improved patient outcomes. By presenting information on resource use to clinicians, we seek to provide clinicians with actionable information to reduce healthcare spending and promote the delivery of high-value care. In the first year of MIPS in 2019, the cost category is weighted at zero percent of the MIPS final score in order to give clinicians experience with receiving and understanding feedback based on cost measures. Moving forward, the cost category will be weighted at 10 percent of the MIPS final score in year two, and 30 percent of the MIPS final score in year three of the program.

As the Centers for Medicare & Medicaid Services (CMS) begins implementing the Quality Payment Program, we are continuing to collect stakeholder feedback, and we are now asking for comment on care episode and patient condition groups and codes (referred to as "episode groups") posted at the MACRA feedback page. In keeping with the goals of the Quality

Payment Program, to incentivize high quality and efficient care, CMS has developed these groups based on the posting of groups in October 2015.[1] At that time, we asked for input on existing episode groups, as required by section 101(f) of MACRA. CMS received many comments on the posting that ranged from the overall grouping system design to very specific comments on code sets. This posting is based on that work and focuses on an important part of an episode construct, the codes that start the episode ("trigger codes"), as well as the overall concept of MIPS cost measure development. Future postings and stakeholder outreach will be used to solicit feedback on additional aspects of cost measure development, such as clinician attribution for care episodes.

What are cost measures?

Generally stated, a cost measure represents the Medicare payments (for example, payments under the Physician Fee Schedule, IPPS, etc.) for the items and services furnished to a beneficiary during an episode of care. The episode of care is the basis for identifying items and services through claims that are furnished to address a condition within a specified timeframe. Our goal is that cost measures should also be aligned with quality of care assessment so that patient outcomes and smarter spending can be pursued together.

Building cost measures involves five essential components: (1) defining an episode group; (2) assigning costs to the episode group; (3) attributing the episode group to one or more responsible clinicians; (4) risk adjusting episode group resources or defining episodes to compare like beneficiaries; and (5) to the extent possible, aligning episode groups with indicators of quality. Before cost measures can be fully developed, episode groups should be built and interpreted in the context of the quality of clinician care. Events such as hospitalizations, readmissions, and certain complications can be identified through claims analysis and can inform on the quality of care furnished during an episode. Because these events can be captured using claims analysis, no additional data submission is required. Other strategies for aligning cost measures with quality of care include pairing episode group costs with quality measures that share similar characteristics, as well as considering indicators of patient outcomes, such as functional status, that can be interpreted side by side with cost.

Purpose of this Posting

The subject of this posting is to share and request input on a draft list of care episode and patient condition groups and codes (referred to as "episode groups") as required by section 101(f) of MACRA, which is the first component of cost measures. Care episode groups take into

[1] See https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Episode-groups-summary.pdf

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

We have divided the episode groups into three general types: (1) chronic condition episode groups, (2) acute inpatient medical condition episode groups, and (3) procedural episode groups. We describe each type of episode group in this Episode-Based Cost Measures for the Quality Payment Program Report. The draft list of episode groups and trigger codes included in this posting is considered a starting point for the future development of episode-based cost measures. CMS welcomes comment on these draft episode groups and trigger codes, as well as on the cost measure framework described in this document. We are committed to working closely with stakeholders to develop a robust and meaningful set of cost measures. We are also soliciting public comments on a number of questions and we welcome stakeholder feedback that will help us improve and refine the cost measure development process going forward.

The draft list of episodes and the associated trigger codes as well as the Episode-Based Cost Measures for the Quality Payment Program Report are available for review at the MACRA feedback page. Please submit comments to macra-episode-based-cost-measures-info@acumenllc.com by Monday April 24, 2017.

EPISODE-BASED COST MEASURE DEVELOPMENT FOR THE QUALITY PAYMENT PROGRAM[2]

Introduction

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) replaced three existing CMS programs with a system in which eligible clinicians have the opportunity to be paid more for providing high value care. MACRA ended the sustainable growth rate formula for the Medicare Physician Fee Schedule and replaced it with the Merit-based Incentive Payment System (MIPS) and incentive payments for participation in Advanced Alternative Payment Models (Advanced APMs), which we refer to collectively as the Quality Payment Program. This program, which is expected to affect Medicare payments for more than 600,000 clinicians across the country is a major step in improving care across the entire health care delivery system. Clinicians may choose how they want to participate in the Quality Payment Program based on their practice size, specialty, location, or patient population.

There are two paths to participate in the Quality Payment Program[3]: through MIPS and through Advanced APMs. Based on extensive stakeholder engagement and more than 4,000 comments received, certain aspects of three existing CMS programs are being thoughtfully consolidated into the MIPS program. There are four connected pillars on which payment adjustments will be based under MIPS – 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"). At its core, the Quality Payment Program is about improving the quality of patient care and patient outcomes. Indeed, the bedrock of the Quality Payment Program is high-quality, patient-centered care followed by useful feedback, in a continuous cycle of improvement.

Through rulemaking for the Quality Payment Program, we relabeled two of the MIPS performance categories: meaningful use of certified electronic health record technology as "advancing care information" and resource use as "cost." The relabeling was based on feedback we received from clinicians. In particular, clinicians felt that the term "cost" better captured their understanding of expenditures on services and items involved with treating beneficiaries for various conditions than did the term "resource use." In this posting, we use the term "cost" throughout instead of the term "resource use" as used in section 101(f) of MACRA.

We are soliciting public comments on a number of questions (pages 17 to 20) and we welcome stakeholder feedback that will help us improve and refine the cost measure

[2] Developed with Input by Acumen, LLC

[3] www.qpp.cms.gov

development process going forward. Additional supplemental materials, including the full list of episode groups for comment with the associated trigger codes, are available for review at MACRA feedback page. Please submit comments to macra-episode-based-cost-measures-info@acumenllc.com by Monday April 24, 2017.

Purpose of this Posting

In keeping with the goals of the Quality Payment Program, CMS seeks to incentivize clinicians to provide high quality and cost efficient care by developing episode-based cost measures that are focused on the patient and meaningful to the clinician. CMS is soliciting comment on a draft list of care episode and patient condition groups and codes (referred to as "episode groups"), as required by section 101(f) of MACRA. Care episode groups take into account a patient's clinical problems at the time items and services are furnished during an episode of care. Care episode groups are used to define episode groups for procedures and acute inpatient medical conditions through service and/or diagnosis codes on claims. Patient condition groups take into account the patient's clinical history at the time of a medical visit as well as their current health status. Patient condition groups define episode groups for chronic conditions through codes for evaluation & management combined with International Classification of Diseases (ICD-10) diagnostic information on claims. Accounting for patient complexity through patients' clinical history (e.g., the presence of chronic conditions) is essential for ensuring that cost measures are valid. Care episode and patient condition groups are discussed further in the "Components of a Cost Measure: 1) *Defining an Episode Group"* section below.

The purpose of this document is to outline the development of cost measures based on these episode groups. This document is accompanying the posting of the draft list of episode groups being considered for further development and potential future use. The draft list of episode groups and trigger codes is posted at the MACRA feedback page. This document does not relate to the cost measures included in the Quality Payment Program final rule with comment period, released in October 2016. Instead, we exclusively refer to the future development of episode groups to be considered as building blocks in developing the cost measures for potential future use in the Quality Payment Program.

The Role of Cost Measures in the Quality Payment Program

Although an estimated 80 percent of overall health care costs are attributable to the decisions made by clinicians,[4] these same clinicians are often not aware of how their care decisions influence the overall costs of care. The cost category of MIPS provides an opportunity for informing clinicians on the costs for which they are directly responsible, as well as the total

[4] http://www.healthpolcom.com/blog/2009/01/15/health-spending-health-reform-and-physicians/

costs of their patients' care. The cost category is one of the four weighted categories of MIPS, in addition to quality, improvement activities, and advancing care information, that make up the MIPS final score. We intend for the information on cost to be actionable by clinicians in targeting areas for improving the delivery of high-value care and resulting in smarter spending and improved patient outcomes and experience. In the first year of MIPS, the cost category is weighted at zero percent of the MIPS final score in order to give clinicians experience with receiving and understanding feedback based on cost measures. Moving forward, the cost category will be weighted at 10 percent of the MIPS final score in year two, and 30 percent of the MIPS final score in year three of the program. In addition, because cost measures will be calculated using claims analysis, no additional data submission is required.

Stakeholder Feedback on Cost Measures and Approach to Episode Group Development

CMS has sought stakeholder feedback on episode groups in recent years following the annual release of the Supplemental Quality and Resource Use Reports (SQRURs), as well as in response to CMS Episode Groups Postings as required by section 101(f) of MACRA.[5,6] In addition to the public comments received on the October 2015 and April 2016[7] postings, the contractor that we used to assist with the development of these episode-based cost measures (Acumen, LLC) has also received stakeholder feedback through a technical expert panel and the work of a clinical committee. The technical expert panel included 14 stakeholders from 9 specialty societies, academia, healthcare administration, and a patient advocate. This panel provided guidance to Acumen, LLC on the overall direction of developing episode-based cost measures for the Quality Payment Program.

The clinical committee was comprised of over 70 clinical experts from over 50 professional societies plus academia and the clinician community. The clinical committee provided expert input on the clinical validity of the episode groups and contributed to developing the list of service codes that initiate each episode group. These codes are referred to as trigger codes. The clinical committee also provided feedback on the role of episode groups in the broader context of cost measures.

[5] CMS, "CMS Episode Groups Posting" (comments due by February 15, 2016) https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Episode-groups-summary.pdf

[6] CMS, "Supplemental CMS Episode Groups Posting" (comments due by August 25, 2016) https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Supplemental-CMS-Episode-Groups-Posting.pdf

[7] https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-Feedback.html

One of the most consistent comments we have received from stakeholders on the development of episode-based cost measures is the importance of stakeholder involvement in the development process. In addition, stakeholder feedback has emphasized several key aspects of cost measure development. Most notably, stakeholders have stated:

- The alignment of episode groups with quality measures is essential in developing cost measures.
- Patient outcomes should be at the center of cost measures.
- Attribution of episode groups to clinicians should be clear and credible.
- The information provided by cost measures should be actionable and timely.
- Cost measures should account for patient complexity and the challenge of addressing overlapping chronic conditions.
- The potential for unintended consequences must be mitigated; a concern that further highlights the need to develop a strategy for aligning episode groups with quality measures.

What is a Cost Measure?

Generally stated, a cost measure represents the Medicare payments (for example, payments under the Physician Fee Schedule, IPPS, etc.) for the items and services furnished to a patient during an episode of care. The episode of care is the basis for identifying items and services through claims that are furnished to address a condition within a specified timeframe. It is desirable that cost measures should also be aligned with quality of care assessment so that patient outcomes and smarter spending can be pursued together.

Before cost measures can be fully developed, episode groups need to be built and interpreted in the context of the quality of care provided by clinicians. CMS continues to seek stakeholder comments on how to best approach developing episode groups and cost measures, as described in this document.

Components of a Cost Measure

The cost performance category within MIPS includes cost measures, some of which may be based on episode groups that identify items and services that are furnished in addressing a condition. Episode groups must be broad enough to identify the full range of items and services furnished to accomplish the clinical intent. For instance, procedural episodes, that are surgical in nature, could include pre-operative services, the procedure, anesthesia, post-acute care, and other related services. However, they would not include care or treatment in the postoperative period

for an unrelated condition or event that is not clinically relevant to the procedural episode group. An example of an unrelated condition could be treatment of chronic hypertension by a primary care clinician that happens to occur in the window of time for an orthopedic procedure.

Cost measures have five essential components: (1) defining an episode group; (2) assigning costs to the episode group; (3) attributing the episode group, in whole or in part, to the responsible clinician(s); (4) risk adjusting episode group costs, and (5) aligning episode group costs with quality. Each of these components of cost measure development are summarized below. A detailed description of the process of episode group construction is presented in the section, "Detailed Development of Episode Groups."

Components of a Cost Measure: *1) Defining an Episode Group*

The first, and fundamental, component of a cost measure is the episode group, which is based on the items and services furnished to address a patient's need for health care and serves as a unit of comparison. Episode groups focus on clinical conditions requiring treatment, considering either the condition itself or procedures furnished in treating the condition. Episode groups may take into account clinical conditions or diagnoses as well as items and services furnished.

We have divided episode groups into three general types: acute inpatient medical condition episode groups; procedural episode groups; and chronic condition episode groups. Acute inpatient medical condition episode groups and procedural episode groups are care episode groups, which account for a patient's clinical problems at the time items and services are furnished. An acute inpatient medical condition episode group might be for the treatment of an exacerbation of a condition requiring hospitalization, such as admission for heart failure. A procedural episode group focuses on procedures of a defined purpose or type. Chronic condition episode groups are patient condition groups, which account for the patient's clinical history at the time of a medical visit as well as their current health status. An example of a chronic condition episode group is the ongoing management of a disease, such as diabetes, triggered using codes for evaluation & management combined with ICD-10 diagnostic information on claims.

The selection of episode groups is based on criteria that include an episode group's share of Medicare spending, opportunity for improvement in the quality and/or the spending of the care furnished, and clinical comparability. Episode groups are a starting point for the construction of cost measures. They can be assigned expenditures, attributed to clinicians, risk adjusted, and aligned with quality metrics. A more detailed discussion of episode group construction and selection criteria is included below in the section titled "Detailed Development of Episode Groups."

Episode groups can vary in terms of scope. A procedural episode group with narrow scope, for example, might be cataract removal with insertion of an intraocular lens prosthesis. For this procedure, the episode group is a single comparison grouping that includes pre-operative services, the procedure, anesthesia, post-procedural care, and complications. A more complex procedural example is an episode group for axial decompression. To enable meaningful comparison, the axial decompression episode group might be divided into sub-groups by clinical indication, method (e.g., laminectomy), anatomic location, scope of procedure (e.g., number of levels), and other clinical perspectives to recognize differences in complexity, cost, and outcome. The decision to divide episodes into sub-groups is based on the goal of having episode groups offer a meaningful clinical comparison. However, while sub-groups can offer greater clinical specificity, this must be balanced against the need to have an adequate number of cases that can be attributed to a given clinician. The clinical committee will focus on this question moving forward, and CMS additionally seeks public comment on where sub-groups could be created in the draft list of episode groups referenced in this posting.

CMS and its contractor (Acumen, LLC) continually seek input from stakeholders, including specialty societies, clinicians, and other interested parties, regarding the development of episode groups that align with the work and responsibilities of clinicians and on their future use in the development of cost measures.

Components of a Cost Measure: *2) Assigning Items and Services and their Respective Expenditures to Episode Groups*

The second component of a cost measure is the assignment of items and services and their respective expenditures to the episode group. These expenditures may include items and services furnished prior to identification of the episode group itself, such as pre-operative services or clinical evaluation prior to definitive diagnosis. The expenditures that are assigned to the episode group include those directly addressing the clinical condition plus ancillary care, e.g., anesthesia for a surgical procedure, as well as post-operative and other related services. Services furnished as a consequence of care, such as complications, readmissions, and unplanned care, i.e., emergency department visits, are also included. However, the episode group would not include unrelated services, such as care for a chronic condition that occurs in the same timeframe as an episode group for a procedure, but is not related to the clinical management of the patient relative to the procedure. Defining the timeframe for different types of episodes is an area where we will seek stakeholder feedback. However, expenditures alone cannot fully describe the care provided by a clinician, as additional consideration must be given to attribution, risk adjustment, and quality.

Components of a Cost Measure: 3) *Attributing Episode Groups to Clinicians*

The third component of a cost measure is attribution, which is the assignment of responsibility for cost. Episode groups can be attributed to a principal (or managing) clinician who is held responsible for the overall costs and care during the timeframe of the episode (acute or chronic). Other clinicians might be considered responsible for a defined component of the care, such as that occurring in a particular site (e.g., skilled nursing facility or emergency department) or a defined health need (i.e., a specific disease or clinical service). Acumen, LLC is soliciting expert clinical input from clinical committees regarding how to use information from claims to inform the attribution of services to clinicians, in addition to further public comment. We are also considering additional information that could be used to clarify the relationship between the patient and the clinician.

Attribution will be benefited by the development of patient relationship categories and codes. In April 2016 we posted a draft list of patient relationship categories for public comment.[8] On December 1, we published a revised list of patient relationship categories based on public comments we received, and we are soliciting additional feedback on this list by January 6, 2017. We intend to post an operational list of patient relationship categories and codes in April 2017 as required by section 101(f) of MACRA. We will consider how to incorporate these patient relationship categories and codes into our cost measure methodology as clinicians gain experience with them. In keeping with the spirit of transparency and engagement that we have adhered to throughout this process, we will consider stakeholder perspectives throughout the development of the attribution method.

As an example of the complex nature of attribution, consider a patient with the chronic condition of heart failure managed by their primary care clinician who also manages all other conditions during long-term outpatient care. The outpatient management of the heart failure is shared with a consulting cardiologist. If the patient has an acute exacerbation of their heart failure and is admitted to the hospital, their inpatient managing clinician may be a hospitalist or perhaps the same cardiologist who manages the outpatient heart failure. Finally, should the patient go to a rehabilitation facility for two weeks, the managing clinician may be a physiatrist. This example provides several overlapping episodes that can be concurrently attributed based on the relationship between each clinician and the patient.

Expenditures for the chronic episode for heart failure, which would begin before the hospitalization and would continue past the rehabilitation stay, could be attributed to the primary care clinician as a continuous and broad relationship with the patient. The primary care clinician

[8] https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Patient-Relationship-Categories-and-Codes.pdf

could also be attributed expenditures for all other conditions being managed for this patient at the same time. The outpatient consulting cardiologist could be attributed a joint share of the care for the heart failure, but not for other services, such as routine preventive services, being furnished by the primary care clinician. The inpatient care could be attributed to the hospitalist or cardiologist based on a focused scope of care and a narrow episodic timeframe. The rehabilitation stay could be attributed to the physiatrist as an episode grouping with a broad scope but a site- and time-limited window.

Components of a Cost Measure: 4) *Risk Adjusting Episode Groups*

The fourth component of a cost measure is to adjust for factors outside the clinician's control that can influence expenditures. Each patient with a given need for health care will differ in the severity of their illness, function, age, comorbidities, and a host of other factors. These factors are the basis for risk adjustment.

As emphasized by the technical expert panel, accounting for patient complexity and health status, including chronic conditions, is integral to ensuring that cost measures are valid and do not penalize clinicians who treat particularly unhealthy or complex patients. In the past, per capita and other episode-based costs have been risk adjusted based on Hierarchical Condition Categories (HCCs)[9]. While the method of using HCCs may be appropriate for adjusting total expenditures for care for a population, specific conditions may confer higher or lower risk for certain episode groups. An alternative approach to reduce heterogeneity within an episode is to apply the episode to comparison of like patients, for example, diabetics with heart disease, with end stage renal disease, with chronic obstructive pulmonary disorder, rather than to all diabetics. The selection of risk adjustment method will be informed by analyses, technical expert panels, clinical committees, and public comment. The risk adjustment method could include factors under consideration such as chronic conditions, illness severity, and demographic factors. CMS seeks comment on appropriate methods for risk adjustment, as noted in the Questions for Public Comment section of this posting.

Components of a Cost Measure: 5) *Aligning Cost with Quality*

A critical component of cost measures, and one of the most challenging to implement, is aligning episode group costs with measures of quality of care. Such quality measures include outcomes of care, processes of care, functional status of the patient, and patient experience. These measures of quality need to be considered along with measures of cost in order to avoid the unintended consequence of incentivizing stinting of care. Capturing costs can offer important information about the consequences of care, such as additional care for complications or

[9] https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html

readmissions. However, cost measures must also be aligned with additional indicators of quality that inform on patient outcomes, patient experience, and indicators of low-value care in order to provide incentives for high-value, patient-centered care.

Cost measures seek to provide accurate, clinically valid, and actionable information that is aligned with patient outcomes, so that clinicians can better understand how their cost is related to the overall quality of care delivered to patients. While the goal of aligning episodes with quality measures is important for determining the value of care provided, there is no standard for achieving this alignment.

The stakeholder community, including the technical expert panel, has emphasized that the goal is to align episode group costs with quality measures, especially alignment with patient outcomes. Pairing episode group costs with quality measures that share similar characteristics would allow for patient outcomes such as functional status and mortality to be interpreted side by side with cost. An example of pairing episode group costs and quality measures would be taking the episode group costs for carpal tunnel surgery and using the similar or potentially aligned cohorts, risk adjustment methods, and evaluation timeframes for a patient reported outcome measure that could evaluate functional status after the surgery. This would allow for cost and quality to be compared directly for this procedure. CMS seeks public comment on strategies for aligning cost measures with quality.

Detailed Development of Episode Groups

As discussed above, cost measures are constructed based on episode groups, with the additional requirements of cost assignment, attribution, risk adjustment, and alignment with quality measurement. This section will describe the steps in developing the episode groups considered for use in the construction of cost measures. This process is built upon previous episode group postings[10] and describes the development of the draft list of episode groups and trigger codes that are included in this posting. We have solicited public comment on the elements of an episode of care in these past postings. We value continued comment to ensure that we develop episode groups with robust stakeholder input.

Elements of an Episode Group: Episode Trigger, Grouping Services, and Episode Window

After the claims for a patient are arrayed in chronological order, episodes are constructed in three steps using a combination of logic rules and medical billing codes specific to each episode. These three steps use claims data to identify services that meet

[10] See https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Episode-groups-summary.pdf for a more detailed explanation.

the specifications for defining the episode. Episode construction rules are typically based on the service and/or diagnosis codes present on Medicare claims but can also be based on temporal associations, such as time from the trigger event.

Episode Trigger

Episodes are opened, or triggered, based on the occurrence of a trigger event. A trigger event is identified by certain procedure or diagnosis codes for specific service types, such as an inpatient stay or an office visit. The specific medical codes that identify a trigger event, also known as "trigger codes," are codes on certain types of claims which indicate a beneficiary having a particular condition or treatment.

Grouping services

Once an episode is opened, the grouping algorithms identify and aggregate the related services provided for the management, treatment, or evaluation of the medical condition during the episode window specific to the episode type. Grouping rules identify relevant service, procedural, or diagnostic codes on claims starting during the episode in certain claim settings (e.g., an inpatient hospital) and aggregate those claims to the related open episode. Grouped services may occur before, during, or after the trigger event. Examples of grouped services that occur before the trigger include diagnostic testing and visits with the surgeon before a procedural episode.

Episode window

The final step in episode construction is ending the episode. The grouping algorithms can utilize a fixed window of time after a trigger event to group claims to an episode, or can potentially use multiple end points which may offer more information about a clinician's performance. This time window, or episode length, is based on the typical course of medical care provided for that episode type, and will be determined through clinician input.

Three Types of Episode Groups

Clinicians interact with patients in a wide variety of ways and settings, ranging from discrete procedures furnished to patients to management of hospitalized patients to the longer term care of patients with chronic diseases. To this end, we are currently working with three distinct types of episode groups.

Acute inpatient medical condition episodes: These episodes are triggered by the occurrence of an ICD-10 diagnosis code, such as those for an evaluation and management (E&M) service, or a Medicare Severity Diagnosis Related Group

(MS-DRG) code on an inpatient facility claim. Some condition episodes have additional logic, such as the requirement of two separate occurrences of the trigger code to improve the likelihood that the patient has the medical condition, since one diagnostic code could be used for evaluating whether a patient has a medical condition, whereas two claims with the same diagnosis code make it more likely that the patient actually has the condition. These episode groups focus on disease exacerbations, injuries or illnesses that are expected to resolve within a defined period of time, usually 90 days.

Procedural episodes: These episodes relate to the performance of medical or surgical procedures for either diagnostic or treatment purposes. They begin by the occurrence of the procedure, identified by the presence of one or more procedure codes, such as Common Procedural Terminology (CPT) codes, ICD procedure codes, Healthcare Common Procedure Coding System (HCPCS) codes, or MS-DRG codes.

Chronic condition episodes: Treatment furnished in these episode groups is related to the longer-term management of patients with chronic disease. The trigger codes for chronic condition episodes include evaluation & management codes combined with ICD-10 diagnostic information. Chronic condition episode groups can be described as not having an end to the provision of care, as the chronic condition may continue to be treated. Consequently, the end date is defined administratively, typically 12 months, to be useful for analytic purposes. We seek comment on the length of time for analysis for chronic conditions.

Criteria for Selecting Episode Groups

The following criteria were developed based on feedback from the technical expert panel and clinical committee to select the episode groups pursued for inclusion in this posting:

- *Medicare expenditure share*: Episode groups that constitute a larger share of Medicare Parts A and B expenditures received a higher priority for development. We are also working with our technical expert panel and clinical committees to consider how to include Part D expenditures in future development. We welcome public comment on this issue.

- *Opportunity for improvement*: Episode groups that are most promising for providing clinicians with ways to improve the quality of care furnished and/or the expenditures associated with that care were prioritized for development.

- *Clinician coverage*: Episode groups were selected to encompass the clinical activities of as broad as possible sets of clinicians who care for Medicare patients.

- *Alignment with quality measures*: Consideration was given to the potential availability of quality measures in MIPS to align with episode groups. We wish to develop a holistic assessment of the performance of clinicians in managing patient care during each episode.

Draft List of Episode Groups and Trigger Codes

A preliminary list of episode groups and trigger codes was informed by stakeholder comments submitted following the October 2015 public posting of the episode groups[11] that were used in prior CMS programs, such as the SQRURs. In addition, a technical expert panel advised on overall program goals and direction. Detailed clinical review and recommendations were obtained from a clinical committee comprised of a more than 70 clinical experts from over 50 professional societies. Of note, this preliminary list is part of the future development of episode groups and does not refer to the cost measures included in the Quality Payment Program final rule with comment period, released in October 2016.

The members of the clinical committee provided clinical input related to defining the episode groups and was encouraged to suggest additional episode groups. After reconciling clinical committee member input into a recommended list of episode group names, the committee members were asked to review and recommend the billing codes that should trigger each group. In the process of creating the draft list of episode groups, the clinical committee provided feedback for critical decisions such as determining how specific triggers should be in order to have valid clinical comparability.

Consideration was additionally given to potential sub-grouping of episode groups. A sub-group is intended to achieve greater clinical comparability. It is a grouping of patients within the episode group that share a common clinical approach or a common set of services expected to be utilized in the care of the clinical condition or performance of the procedure, but who differ in expected risk for clinical outcome or use of resources. An example is an episode group for spine surgery with sub-grouping for number of levels and anatomic location.

The draft list of episode groups and trigger codes is considered a starting point for refinement during the future development of episode-based cost measures. CMS welcomes comment on the episode groups and trigger codes that accompany this posting, as well as the

[11] CMS, "CMS Episode Groups Posting" (comments due by February 15, 2016) https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Episode-groups-summary.pdf

process to be used to develop cost measures from the episode groups, as described in this document. We are committed to working with stakeholders to develop a robust and meaningful set of cost measures.

QUESTIONS FOR PUBLIC COMMENT

This posting seeks input on the accompanying episode groups recommended for development and their associated episode triggers. We also request comment regarding the approach to developing cost measures that are based on episode groups. Subsequent postings and stakeholder outreach will be used to solicit feedback on additional aspects of cost measure development, such as clinician attribution for care episodes. The following section presents some specific questions as examples of the topics on which we seek stakeholder input. CMS welcomes a wide range of public comments. These specific questions are included to highlight some of the pertinent issues and are not designed to restrict or limit commentary.

Additional supplemental materials are available for review at the MACRA feedback page. Please submit comments to macra-episode-based-cost-measures-info@acumenllc.com by Monday April 24, 2017.

Episode Group Selection

- In selecting the episode groups to be considered for development, CMS used criteria including an episode's share of Medicare expenditures, clinician coverage, and the opportunity for improvement in acute, chronic, and procedural care settings. We welcome comment on these episode groups and potential additional episode groups that should be considered for development.

Episode Group Definition

- The episode groups that accompany this posting are defined by the listed trigger events and codes (CPT/HCPCS for procedural episode triggers, evaluation & management codes combined with ICD-10 diagnostic information for chronic episode triggers, etc.). CMS solicits comment on the inclusion or exclusion of specific service codes used to identify each episode group.

Acute Inpatient Medical Condition Episode Groups

- The acute inpatient medical condition episode groups that accompany this posting include only inpatient events. CMS seeks comment on outpatient events that could be considered candidates for development as acute condition episode groups, which could include chronic condition exacerbations that require acute care but not inpatient hospitalization.

- Acute episodes of care might occur on either an inpatient or outpatient basis and may or may not include surgery. CMS is considering a single Acute Episode Group type that

does not distinguish the place of service or the performance of a procedure and welcomes comment on this approach.

Chronic Condition Episode Groups

- CMS is aware of many challenges in constructing episode groups for chronic conditions. These include coding habits that may obscure some chronic conditions and over-emphasize others. In addition, it may be difficult to assign a given treatment to a single condition for patients with multiple comorbidities. For example, are the resources for treatment to reduce cholesterol for a patient with diabetes, hypertension, and coronary artery disease to be assigned to only one of those diagnoses, to all of them in proportion, or should we develop a chronic condition episode specific to the management of patients with diabetes, hypertension and coronary artery disease, i.e., a patient condition group to better compare cost to treat like patients? An extension of this approach might be a single episode group for outpatient chronic care with adjustment for comorbidities and demographics of the population served by the clinician. We welcome comment on these and any other options for constructing episode groups for chronic conditions.

- Certain specific conditions, such as cancer, present other challenges. The costs of caring for patients at different stages of disease are likely to vary. For instance, a single episode for a type of cancer is likely to differ in a predictable manner depending on the stage of the cancer. Information on disease staging is not easily or predictably available from claims. CMS welcomes comment on methods to incorporate disease severity or staging information to improve meaningful comparison of cost and quality of care furnished to patients, both generally and for specific clinical conditions. For example, how could a disease staging code be reported on claims to facilitate comparison of episodes for patients at like stages of cancer?

Procedural Episode Groups

- We solicit comment on the procedural episode groups that accompany this posting, including the service and diagnosis codes used to identify the existence of the procedural episode groups. We also welcome comment on additional procedural episode groups to consider for future development.

Cost Measure Development

- Cost measures are being considered for development from episode groups after adding additional context, such as expenditure assignment, attribution, risk adjustment, and consideration of quality. We welcome comment on each of these elements and whether

there are additional elements to consider in developing cost measures from episode groups.

- As described above, the degree of responsibility of attributed services might be considered separately. Those services furnished by the attributed clinician for the clinical purpose of the episode group might be differentiated from the services provided by others for the same clinical purpose. The services furnished by the attributed clinician might be considered directly attributable services. These could be correlated with the services delivered by others for the same clinical purpose, which might be considered indirectly attributed services. The consideration of both directly and indirectly attributed services might be weighed in reporting both the provision and the coordination of care within the episode group relative to each clinician contributing to the care. An alternative approach would be to obtain recommendations from multi-specialty panels about percentages of the resources for an episode that could be attributed to physicians serving in different roles. We welcome comment on these concepts of differential attribution or alternative methods to align attribution with the clinical activities of clinicians.
- The Medicare Advantage program uses the CMS-HCC Risk Adjustment Model[12] to determine rates. We seek comment on the use of this model or an alternative for risk adjusting episode groups in the construction of cost measures. In addition, should concurrent or prospective risk adjustment be used, and should a full year of data or more targeted data from before the episode be used to adjust?

- The draft list does not currently include specifications for episode sub-groups (a sub-group is intended to achieve greater clinical comparability and is a subdivision of an episode group that further refines the specifications of episode trigger codes and grouping rules to yield more clinically homogenous cohorts of patients with similar expected cost). An example is an episode group for spine surgery with sub-grouping for number of levels and anatomic location. CMS solicits public comment on these draft episode groups and potential sub-groups.

- CMS is especially interested in comments regarding methods to align quality of care with cost measures and welcomes recommendations and suggestions. Considerations for aligning episode groups with quality measurement are described in this document, but are not intended to be an exhaustive list of options. We welcome comment on these methods, as well as any other strategies that could be used to align quality of care considerations with cost measures.

[12] https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html

- CMS wishes to avoid any unintended consequences of using cost measures in MIPS, and seeks comment on issues of concern in this regard, such as taking steps to avoid disadvantaging clinicians who assume the care of complex patients such as by applying episodes for comparison of complex patients (i.e., comparison of like-patients of different clinicians).

- CMS acknowledges that prescription drug costs are a large driver of the cost of medical care for Medicare beneficiaries. What would be the best way to incorporate Part D costs into the episode group development?

Appendix A- Episode Groups for Public Comment

Table 1: Episode Group Names for Public Comment

Episode Group Name
Acute Inpatient Medical Condition Episode Groups
Acute Ischemic Stroke With Use Of Thrombolytic Agent
Acute Myocardial Infarction, Discharged Alive
Acute Myocardial Infarction, Expired
Allergic Reactions
Bronchitis & Asthma
Cardiac Arrhythmia & Conduction Disorders
Cellulitis
Chest Pain
Chronic Obstructive Pulmonary Disease
Cirrhosis & Alcoholic Hepatitis
Connective Tissue Disorders
Diabetes
Disorders Of The Biliary Tract
Endocrine Disorders
Esophagitis, Gastroenteritis & Miscellaneous Digestive Disorders
Fractures Of Hip & Pelvis
Gastrointestinal Hemorrhage
Gastrointestinal Obstruction
Heart Failure & Shock
Intracranial Hemorrhage Or Cerebral Infarction
Kidney & Urinary Tract Infections
Major Gastrointestinal Disorders & Peritoneal Infections
Osteomyelitis
Other Kidney & Urinary Tract Diagnoses

Episode Group Name
Peripheral Vascular Disorders
Pleural Effusion
Poisoning & Toxic Effects Of Drugs
Psychoses
Pulmonary Edema & Respiratory Failure
Pulmonary Embolism
Renal Failure
Respiratory Infections & Inflammations
Respiratory System Diagnosis With Ventilator Support <96 Hours
Respiratory System Diagnosis With Ventilator Support >96 Hours
Seizures
Septicemia Or Severe Sepsis With Mechanical Ventilation >96 Hours
Simple Pneumonia & Pleurisy
Syncope & Collapse
Transient Ischemia
Chronic Episode Groups
Asthma/Chronic Obstructive Pulmonary Disease (COPD)
Atrial Fibrillation
Benign Prostatic Hyperplasia
Chronic Kidney Disease
Chronic Liver Disease
Coronary Artery Disease
Diabetes
Gastroesophageal Reflux Disease
Heart Failure
Inflammatory Bowel Disease
Major Depressive Disorder

Episode Group Name
Migraine
Parkinsons Disease
Rheumatoid Arthritis
Systemic Lupus Erythematosus
Lower Extremity Deep Vein Thrombosis (DVT) requiring anticoagulation
Procedural Episode Groups
Abdominal Aortic Aneurysm Repair
Ankle Fracture (No Dislocation)
Aortic Valve Procedure
Axial Decompression (Including Laminectomy)
Bunionectomy
Colonic Resection
Coronary Artery Bypass Graft (CABG)
Coronary Thrombectomy
Diagnostic Colonoscopy
Dialysis Access
Femur Fracture Repair
Fibroid Treatment
Foot Fracture Or Dislocation
Hand Fracture Or Dislocation
Hernia Repair (Femoral Or Inguinal)
Hernia Repair (Incisional Or Ventral)
Hiatal Hernia Repair
Hip Arthroplasty
Humerus Fracture Repair
Implantable Cardiac Defibrillator (ICD) Implantation
Inferior Vena Cava Filter Placement

Episode Group Name
Injection For Low Back Pain
Kidney Stone Removal or Destruction
Knee Ligament Repair/Reconstruction
Laryngectomy
Left Heart Catheterization
Lower Extremity Peripheral Vascular Disease Treatment
Lumpectomy or Partial Mastectomy
Melanoma Destruction/Excision
Meniscus Repair
Mitral Valve Procedure
Nephrectomy
Pacemaker Implantation
Pancreatic Resection Excluding Pancreatic Cancer
Pelvic Fracture Repair/Treatment
Percutaneous Coronary Intervention (PCI)
Procedure for Benign Prostatic Hyperplasia
Procedure for Carotid Stenosis
Prostate Cancer Treatment
Radical Cystectomy
Rectal Resection
Repair Of Arm Muscle Tendons (Not Including Rotator Cuff)
Repair Of Foot Tendon/Ligament
Repair Of Hand Tendon/Ligament
Right Heart Catheterization
Rotator Cuff Repair
Routine Cataract Removal with Intraocular Lens (IOL) Implantation
Screening/Surveillance Colonoscopy
Simple or Modified Radical Mastectomy

Episode Group Name
Spinal Fusion
Subcutaneous Mastectomy
Supraventricular Tachycardia (SVT) Ablation
Surgical Procedure for Gall Bladder Disease
Thoracic Aortic Aneurysm Repair
Thyroidectomy Partial Or Complete
Tibia Or Fibula Fracture Repair / Treatment
Toe Repair
Total Knee Replacement
Treatment Of Shoulder Joint Or Clavicle Fracture/Dislocation
Treatment of Hip Fracture/Dislocation
Treatment of Spinal Fracture or Deformity
Ventricular Tachycardia (VT) Ablation
Vertebroplasty
Wrist Fracture Treatment / Repair