MACRA Episode-Based Cost Measures Technical Expert Panel August 15, 2016

Summary Report

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TABLE OF CONTENTS

Executive Summary **3**
1 Overview **5**
1.1 Project Context 6
1.2 Technical Expert Panel Members 6
1.3 MACRA Episode-Based Cost Measure Development Team 7
2 Preliminary Activities **9**
2.1 Environmental Scan 9
2.2 TEP Charter 9
3 TEP Feedback: In-Person Meeting **10**
3.1 Introductions and Goals for this TEP 10
3.2 Goals and Features of Cost Measures in MIPS 10
3.2.1 TEP Feedback 11
3.3 Approaches for Aligning Cost Measures with Other QMs 16
3.3.1 TEP Feedback 17
3.4 Criteria for Prioritizing Development of Cost Measure Concepts 21
3.4.1 TEP Feedback 22
3.5 Relationships between Cost Measures and Episode Groups 24
3.5.1 TEP Feedback 25
3.6 General Discussion 27
4 Follow-Up **29**
5 Next Steps **30**
Appendix A : Framework For Assessing Measurement Gaps **33**
A. Existing Episode-Based Cost Measures for Clinicians‡ 33
Appendix B : Proposed Criteria for Prioritizing New Episode-Based Cost Measures **36**

EXECUTIVE SUMMARY

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) repealed the Medicare sustainable growth rate (SGR) methodology for updates to the Physician Fee Schedule and replaced it with a new approach to payment.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

Acumen, LLC, as measure development contractor for the episode-based cost measures for use in the Quality Payment Program, convened an in-person technical expert panel (TEP) in Washington, D.C. on August 15, 2016. The TEP was composed of 14 members, including representatives from clinician specialty societies, academia, health administration, and a patient advocacy organization.

The purpose of the TEP was to gather input from stakeholders and experts on the concepts of episode-based cost measurement, the alignment of cost measures and quality measures (QMs), and the prioritization of measures for development. This document summarizes the feedback from the TEP during the in-person meeting, along with accompanying Acumen and/or CMS responses where appropriate to provide context and accurately reflect the flow of the discussion.

In the TEP, panelists provided their feedback on the concepts presented in the meeting and findings from the environmental scan. The following list synthesizes some of the key points that the TEP panelists made in discussions throughout the meeting:

- *Stakeholder engagement and involvement is crucial throughout the measure development and implementation process*: Stakeholder groups should contribute in meaningful ways to the creation and construction of the episode-based cost measures. Stakeholders can also help identify additional areas for potential cost measure development, such as conditions and procedures treated by particular clinical specialties.
- *Attribution of claims and episodes to eligible clinicians (ECs) needs to be clear at the time of the service*: Assignment of claims to cost measure episodes needs to be readily understandable by ECs and known at the time of attribution, particularly where multiple ECs are providing care to a patient. ECs can appropriately be held responsible for outcomes they can reasonably be expected to influence.
- *Information provided by the cost measures needs to be timely and actionable:* Episode-based cost measures need to provide information that can guide ECs to improve patient care, including the coordination of services with other ECs for the management of complex patients.
- *Accounting for patient complexity and the long-term treatment of chronic conditions is challenging and warrants further consideration*: Cost measure development needs to

account for the treatment of clinically complex patients, such as those with multiple diseases or ongoing chronic conditions that might present as acute exacerbations. Episode construction, such as the length of the episode window, and risk adjustment are examples of elements of the cost measures where this issue should be considered.

- *Alignment between cost measures and QMs is an important feature to pursue in measure development:* Alignment between cost measures and QMs, such as through harmonized specifications, could improve health outcomes. QMs addressing overuse are strong candidate measures for alignment efforts.
- *Mitigating the potential for unintended consequences:* Implementing cost measures could potentially have the unintended consequence of reducing access to care or harm the provision of care in other ways. Methods, including appropriate risk adjustment, episode group construction, and exclusion criteria to protect specific patient populations were discussed as ways to mitigate this potential problem. Incorporating SES factors into risk adjustment models for the cost measures was highlighted as a possible way to address the potential for unintended consequences.
- *Further evaluation is necessary before including Part D spending in the cost measures*: Complexity associated with variable drug pricing and lack of clinician control over the price of prescription drugs were highlighted as particular challenges in the potential inclusion of Part D spending in cost measures.
- *Educational and outreach efforts* It is important for CMS to engage in extensive outreach and education efforts to familiarize stakeholders with the cost measures prior to their implementation so that the EC community understands how MIPS and MACRA might affect them.

1 OVERVIEW

The Medicare Access and 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, the Quality Payment Program, reward 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 resource use performance category through the *MACRA Episode Groups and Cost Measures* contract (HHSM-500-2013-13002I/HHSM-500-T0002).

As part of the measure development process, Acumen convened an in-person technical expert panel (TEP) in Washington, D.C. on August 15, 2016. The August TEP used the terminology "resource use measures"; this document uses the term "cost measures" to reflect the terminology of the Quality Payment Program final rule with comment period, released in October 2016. The purpose of the TEP was to gather input from stakeholders and experts on the concepts of episode-based cost measurement, the alignment of cost measures and quality measures (QMs), and the prioritization of measures for development. In preparation for the meeting, Acumen presented TEP members with a two-part environmental scan containing the results of a literature review. The TEP was composed of 14 stakeholders with diverse experience and perspectives, including representatives from clinician specialty societies, academia, health administration, and a patient advocacy organization. Additional stakeholder feedback on the project is being collected through Clinical Committees, the first of which was convened in August – September 2016, after the conclusion of this TEP.

The purpose of this report is to provide a summary of the feedback shared by panelists during the TEP meeting. Section 1 provides an overview of the TEP within the context of the overall project: Section 1.1 contains a high-level summary of the project and Sections 1.2 and 1.3 list the TEP members and introduce the Acumen MACRA episode-based cost measure development team, respectively. Section 2 outlines the preliminary activities undertaken prior to the in-person meeting. Section 3 details the feedback provided by the TEP members during the meeting along with accompanying Acumen and/or CMS responses, where necessary to accurately reflect the discussions throughout the day. Section 4 discusses TEP follow-up, and

Section 5 outlines the next steps in this project, including a concrete summary of ways that TEP input has been taken into account in project activities.

1.1 Project Context

The purpose of this project is to develop care episode groups and patient condition groups and risk-adjusted episode-based cost measures that are suitable for use in MIPS. The development of these measures is guided by the statutory requirements of MACRA and by the processes detailed in the "Blueprint for the CMS Measures Management System*"* (Blueprint).[1] Stakeholders will be consulted and input will be integrated throughout the measure development process, as discussed further in Sections 4 and 5.

The project is in the initial stages of the measure development, which involve the conceptualization and initial specification of the measures. During the current stage, the focus is on developing the evidence base for the measure concepts and the basic elements of the measures. On August 15, 2016, Acumen convened the first TEP, building on the stakeholder input received by CMS through the CMS Episode Groups Posting and Supplemental CMS Episode Groups Posting.[2,3] The TEP focused on the goals and features of cost measures, alignment of cost measures and QMs, prioritization of measure development, and the relationship between cost measures and episode groups. Following the conclusion of the first TEP, a Clinical Committee was convened to provide detailed input on the episode groups and trigger codes for use in cost measures. As measure development progresses, further TEPs and Clinical Committees will be held to provide input on key components of episode groups and cost measures.

1.2 Technical Expert Panel Members

A Call for TEP nominations was posted on the "Quality Measures Call for Technical Expert Panel Members" website and the nomination period closed on July 5, 2016.[4] A panel of stakeholders with a diversity of perspectives and areas of expertise was selected to participate on the TEP, as listed in Table 1, below.

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[1] CMS. "Blueprint for the CMS Measures management System Version 12.0" (May 2016) https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/Downloads/Blueprint-120.pdf

[2] 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

[3] 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

[4] CMS, "Quality Measures Call for Technical Expert Panel Members" https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/TechnicalExpertPanels.html

Table 1. TEP Composition

Name, Credentials, and Professional Role	Organizational Affiliation	City, State
Kathleen Blake, MD, MPH Vice President, Healthcare Quality	American Medical Association	Washington, D.C.
John Bulger, DO, MBA, FACOI, FACP Chief Medical Officer	Geisinger Health System and American Osteopathic Association	Danville, PA
Chandy Ellimoottil, MD, MS Assistant Professor and Director of Analytics	University of Michigan and American Urological Association	Ann Arbor, MI
Anupam Jena, MD, PhD Associate Professor	Harvard Medical School	Boston, MA
Kata Kertesz, JD Policy Attorney	Center for Medicare Advocacy	Washington, D.C.
Caroll Koscheski, MD, FACG ACG Board of Trustees	American College of Gastroenterology	Charlotte, NC
Edison Machado, Jr, MD, MBA Chief Quality Officer & VP, Strategic Planning	IPRO and the American Health Quality Association	Lake Success, NY
James Naessens, ScD, MPH Professor of Health Services Research and Scientific Director, Center for Science of Healthcare Delivery in Mayo Clinic Florida	Mayo Clinic	Rochester, MN
Shelly Nash, DO, FACOOG Chief Medical Information Officer, Physician Enterprise	Adventist Health System	Altamonte Springs, FL
Parag Parekh, MD, MPA Ophthalmologist	American Society of Cataract and Refractive Surgery	DuBois, PA
Sophie Shen, PhD Director, Health Care Quality, Immunology/Oncology	Johnson and Johnson Health Care Systems, Inc.	Washington, D.C.
Alvia Siddiqi, MD, FAAFP Medical Director	Advocate Physician Partners and American Academy of Family Physicians	Inverness, IL
Michael Wasserman, MD Executive Director, Care Continuum, QIN-QIO	Health Services Advisory Group and the American Geriatrics Society	Woodland Hills, CA
A.J. Yates, Jr, MD Associate Professor and Vice Chair for Quality Management	University of Pittsburgh and American Academy of Orthopedic Surgeons	Pittsburgh, PA

1.3 MACRA Episode-Based Cost Measure Development Team

The Acumen measure development team is multidisciplinary and includes individuals with knowledge and expertise in the areas of cost measure development, clinician payment policy, health economics, clinical practice, pay-for-performance, and value-based purchasing and quality improvement. The following ten individuals from the Acumen team attended the TEP:

- Tom MaCurdy, PhD
- Sri Nagavarapu, PhD

- Rose Do, MD
- Jay Bhattacharya, PhD, MD
- Fiona Adams, BA
- Martha Kelly, MSPH
- Rachel Liu, MSPH
- Vaikath Job, MA
- Joyce Lam, MPP
- Kyle Buika, PhD

2 PRELIMINARY ACTIVITIES

This section outlines the preliminary activities that Acumen undertook in preparation for the TEP meeting on August 15, 2016. Section 2.1 is an overview of the environmental scan and Section 2.2 summarizes the approval of the TEP Charter by the TEP.

2.1 Environmental Scan

Acumen presented the TEP members and CMS with a two-part environmental scan. The purpose of the environmental scan was to provide background information to TEP members to prepare for discussions at the in-person meeting. Part One of the environmental scan discussed existing cost measures and episode grouping algorithms and Part Two of the environmental scan discussed approaches for aligning cost measures and QMs. The environmental scan surveyed a wide range of sources, including academic and policy literature, measures databases and inventories, as well as payment and measure reporting programs.

Part One of the environmental scan discussed existing cost measures and episode grouping algorithms. Specifically, the document (i) compiled existing cost measures and episode grouping algorithms; (ii) categorized them into distinct approaches; (iii) evaluated them for their applicability to MIPS; and (iv) assessed measurement gaps. The environmental scan considered cost measures endorsed by the National Quality Forum (NQF) and cost measures currently in use or proposed for use in Medicare value-based purchasing and quality reporting programs, for a total of 55 cost measures.

Part Two of the environmental scan discussed the alignment of cost measures and QMs. The document provided background information on the role of QMs and episode-based cost measures in MIPS, summarized the literature, and identified three approaches to alignment. Part Two also provided examples of how to apply these approaches to alignment using existing episode-based cost measures and QMs.

2.2 TEP Charter

Prior to the TEP, *The MACRA Episode-Based Cost Measures TEP Charter* was distributed to the TEP members for review; the Charter was approved by the fourteen members of the TEP at the in-person meeting.

3 TEP FEEDBACK: IN-PERSON MEETING

This section presents a summary of the feedback shared by the members of the MACRA episode groups and cost measures TEP during the in-person meeting on August 15, 2016. The meeting was structured into six sessions. Each subsection within this section corresponds to a session. Within each subsection, the discussion questions posed to the TEP in the session are listed in italics, with TEP members' feedback aggregated below. In certain instances where TEP members discussed issues requiring clarification, a summary of the response from Acumen and/or CMS is included in sub-bullets below the relevant question where necessary to provide context and accurately reflect the flow and tenor of the discussion.

The summary of TEP member discussion and feedback below is organized into six subsections. Section 3.1 describes the first session of the meeting to introduce members and the goals of the TEP. Section 3.2 contains panelist responses to the goals and features of cost measures in MIPS. Section 3.3 summarizes the discussion on the approaches for aligning cost measures and QMs. Section 3.4 discusses member input on the criteria for prioritizing development of measure concepts for cost measures. Section 3.5 contains member feedback on the relationship between cost measures and episode groups. Finally, Section 3.6 summarizes the comments from TEP members shared during the open discussion session.

3.1 Introductions and Goals for this TEP

During this first session, TEP attendees introduced themselves and Acumen briefly outlined the goals for the TEP within the context of the overall project.

3.2 Goals and Features of Cost Measures in MIPS

Acumen reviewed the goals and proposed features of cost measures in MIPS. Cost measures are intended to capture Medicare spending both for treatment that is directly delivered or managed by the attributed clinician, and for services delivered by other clinicians for health events that are clinically related to the treatment. The four basic building blocks of cost measures are: defining an episode of care (whether a specific health condition or multiple conditions, a specific type of care or multiple types), specifying clinically based episode grouping algorithms (assigning claims to episodes), developing clinically based attribution algorithms (attributing patients' episodes of care to clinicians), and risk adjustment and payment standardization (accounting for differences in case mix and geography). Acumen outlined several considerations for the development of episode-based cost measures included in MIPS: the intended use of the measures, the role of a clinician or group of clinicians in care delivery and their ability to influence on outcomes, the cost efficiency of EC services, and the extent of clinical review by affected specialties to validate their scientific acceptability.

Acumen sought input from the TEP on important features that episode-based cost measures should possess specifically for use in MIPS. Presented as "Proposed Essential Features of cost measures," these five features were developed in consideration of the NQF measure evaluation criteria and were presented according to each criterion:

1) Usability
    (a) Clear attribution to identifiable clinician providers
    (b) Transparency and comprehensibility
    (c) Actionable by providers
    (d) Utility for provider reporting
2) Scientific Acceptability of the Measure Properties
    (a) Clinical fidelity, including clinical logic for constructing episodes and measuring cost that faithfully reflects clinical input, and demonstration of reliability and validity, including appropriate risk adjustment strategies
3) Importance to Measure and Report
    (a) Covers sufficiently large share of Medicare costs/services
4) Harmonization
    (a) Pair with other clinical quality measures
    (b) Align with other provider resource use and quality measures
5) Feasibility
    (a) Consistent with Medicare's payment system
    (b) Process agility[5]

The following discussion questions were posed to the TEP:

(1) What attributes of cost measures are important for them to be actionable by clinician providers?

(2) Which of the proposed features of cost measures are the most important for consideration in cost measure development?

(3) Are there any important features of cost measures missing in the "Proposed Essential Features" slides?

(4) In Clinical Committees, what representation of affected eligible clinicians (ECs) is needed for created cost measures to be acceptable for use in MIPs?

3.2.1 TEP Feedback

In this session, TEP panelists emphasized actionability as a critical feature of episode-based cost measures for MIPS. Participants also expressed their support for the features of

[5] National Quality Forum, "Measure Evaluation Criteria" (August 2016), http://www.qualityforum.org/Measuring_Performance/Endorsed_Performance_Measures_Maintenance.aspx

harmonization and process agility, and recommended additional clinician input in the development of cost measures.

TEP panelists highlighted the need for cost measures for MIPS to provide clinicians with actionable, timely, and accessible information.

- Panelists expressed concern that current cost measures do not result in timely and actionable information. They felt that the following factors make it difficult to take action based on the data: the year lag time for the Quality and Resource Use Reports (QRURs), the twice-yearly reporting cycle, and the lack of patient-level details. For the Supplemental QRURs, the most significant problems are the time lag between the date of services and the report, and that most clinicians do not access them. Panelists recommended that QRURs provide actionable, patient-level information that reflect case-mix differences across specialties and the different clinicians involved; that is, individual clinicians need to be able to understand the larger picture and their role in it. Another panelist recommended providing a pie chart to show a breakdown of their patients' Medicare costs and how their resource use compares to that of other clinicians, giving clinicians the opportunity to see where they were attributed with secondary costs after triggering an episode.
    - Acumen clarified that a goal of cost measure development is to build-in attribution such that the ECs would understand attribution at the time of service, which is key to ensuring the actionability of episode-based cost measures. Patient relationship codes (also required by MACRA) could be used in conjunction with cost measures for the purposes of attribution.
- Members indicated the difficulty of accessing and understanding the QRURs; employed clinicians do not have access to them and independent clinicians find that it takes time and effort to access them. A panelist suggested that CMS track which clinicians and specialties are accessing the information over time.
    - Acumen acknowledged stakeholders' concerns regarding the QRURs and added that the Supplemental QRURs, which report current episode-based cost measures developed by CMS, contain additional detail.

Participants commented that the approach for clear clinician attribution could incentivize well-coordinated care that effectively and efficiently prevents high-cost interventions.

- Panelists suggested that symptom-based episode triggers, in addition to procedural and event codes, could be used to attribute clinical decisions to clinicians.
    - Acumen clarified that episode triggers can be based on prior history of a condition. Allowing for overlapping episodes could provide patient-centric information by capturing each clinician's role in managing a patient across their trajectory of care.
- A panelist noted that an approach that incorporates overlapping episodes would incentivize clinicians to minimize the incidence of acute exacerbations and costly procedural interventions. Furthermore, if such events do occur, it also incentivizes both the clinician(s) managing the patient in the outpatient setting (e.g., for Coronary Artery Disease), as well as the clinician(s) managing the patient during the acute care phase

(e.g., for a Percutaneous Coronary Intervention), to provide high-quality, well-coordinated, and efficient care.

Panelists commented on the scientific acceptability and inclusion of certain factors in the risk adjustment models for the episode-based cost measures. Recommendations included indicators of socioeconomic status (SES), looking beyond medical diagnosis and procedure codes, and examples of measures considered to have high clinical acceptability.

- Panelists discussed risk adjustment approaches for cost measures. As one aspect of risk adjustment, they suggested taking into account SES factors, while acknowledging that there are currently studies and trials examining this issue, including by the NQF. Members noted that it is not conclusive how to adjust for SES or how effective this would be. A panelist commented that clinicians will selectively treat patients based on their perception of whether their patient's SES will adversely impact their measure score. Panelists suggested the following possibilities: (i) accounting for systematic variation among clinicians, (ii) determining whether the better outcomes are the result of better treatment and/or social supports, and (iii) equalizing care among patients regardless of SES since care improvement is the goal of any measure.
    - Acumen clarified that there are research efforts underway to investigate risk adjustors for SES, including those by the Office of the Assistant Secretary for Planning and Evaluation (ASPE).
- A participant noted that in some CMS models, there is a 12-month lookback at different codes to indicate patient complexity and suggested considering a 12-month lookback at the cost to Medicare of that patient. A lookback period focused only on medical diagnosis and/or procedure codes may not adequately reflect regional differences, difficulties at home, prior hospitalizations, or the intermediate experience with a patient. Another panelist was generally concerned about the limited availability of tools for appropriate risk adjustment.
    - Acumen clarified the importance of defining episodes to accurately reflect what is under the clinician's control, to count only those claims that are credibly influenced by the clinician, and not rely on risk adjustment alone to make that distinction.
- A participant commented that there is an appropriately risk adjusted measure being collected for total joint arthroplasty (TJA) and that it might be easier to risk adjust across the continuum of costs than trying to risk adjust for isolated events.

Members supported the harmonization of episode-based cost measures and QMs, while noting the challenges and opportunities of such alignment.

- Several participants expressed the importance of harmonization with QMs, not only because of a recent shift from process measures to outcome measures, but because the objective of QMs is to improve care and promote patient choice.
    - Acumen suggested that one approach to harmonization would be prioritizing the development of cost measures that could be more readily matched with QMs.

- A member expressed concern that QMs may be different for the exact same episode of care since some clinicians report through qualified clinical data registries (QCDRs), others through electronic reporting platforms or claims.
- A panelist recommended that CMS urge the Clinical Committees to look at the strength of the evidence behind QMs while trying to match them to cost measures, that is, determine the strength of the evidence behind promoting a practice associated with an improved outcome. Although it would not be practical to do an exhaustive review for each QM, harmonization could focus on QMs or clinical areas with strong evidence.

Panelists agreed that the process of development for cost measures must be agile, in that it can readily incorporate frequent clinical updates.

- Members noted the importance of process agility, given the speed and frequency of changes in clinical information.
    - Acumen clarified that process agility means that the cost measures are revisable and CMS has the discretion to implement adjustments based on stakeholder input.

Participants emphasized that involving clinician stakeholders in the development of episode-based cost measures is critical to the face validity of the measures and to clinician buy-in.

- Referring to the proposed essential feature of transparency and comprehensibility, panelists were concerned about a lack of face validity and buy-in, given the short timeline for MIPS. A panelist noted the importance of familiarizing the clinician community with the cost measures and suggested a process where frontline clinicians develop the cost measures themselves.
    - Acumen clarified that the Clinical Committees convened under this project will create avenues for more people in medical societies to engage with the process by collecting input from a broad range of clinicians.
    - CMS clarified that MIPS data collection is currently slated to begin on January 1, 2017 and program implementation and payment adjustments are planned for 2019.
- A member recommended the inclusion of geriatricians and post-acute long-term care doctors in the Clinical Committees for input on the care of frail older adults.
    - Acumen noted that the project would welcome as many geriatricians and post-acute long-term care clinicians as would like to participate, and added that cost measures will be constructed using objective, well-structured criteria based on the notion that clinicians do not have to be defined solely by their designated specialties, but by the care they actually provide.

A few panelists indicated concerns about possible unintended consequences of the episode-based cost measures, including potential obstacles for access to high-quality care.

- Two panelists were concerned that attribution at the time of service could lead to clinicians viewing patients in terms of their potential costliness to treat, rather than their need for care.

- While expressing concern for the possibility of clinicians not accepting high-risk patients or some patients losing access because of the cost of care, a panelist suggested a sixth essential feature of cost measures: minimization of unintended consequences.
    - Acumen clarified that the five proposed essential features, which include both harmonization and effective risk adjustment, are aimed at reducing unintended consequences.
- A panelist expressed concern about contracting issues that could prevent a patient from choosing the same quality of care but at a lower cost. For example, a supplemental plan might require a patient to see a clinician who is linked up with a number of required specialties, even though a different clinician has lower costs and better quality metrics.

Several TEP panelists asked clarifying questions during this session.

- Panelists asked for clarification on testing and field testing of cost measures.
    - Acumen responded that each measure that is developed will be assessed for reliability and validity by stakeholders, including the TEPs and the Clinical Committees. Information on the performance of the measures will be shared as part of the TEP and Clinical Committee sessions where risk adjustment and measure calculation are discussed. Testing will be done between sessions whenever possible. Acumen will consider the input of the TEP and Clinical Committees throughout the measure development process.
    - CMS noted that these are claims-based cost measures, so field testing is not applicable. Field testing refers to a type of testing typically performed for electronic health record (EHR) or registry-based measures. Any new episode groups and cost measures will go through the rulemaking process.
- Panelists asked whether attribution would be to individual clinicians or to groups of clinicians.
    - Acumen stated that this has not been decided. The MIPS Proposed Rule considers alternatives for attribution to National Provider Identifier (NPI) versus the tax identification number (TIN). For some cost measures, attribution to a TIN may make more sense than attribution to an individual clinician.
- One member requested clarification on the term "cost efficiency" versus "cost effectiveness."
    - Acumen clarified that cost measures take into account the quality of care in conjunction with the cost, rather than just looking at the cost of care in isolation. The construction of cost measures balances the tradeoffs between treatments now versus saving costs on treatment later, for example to avoid complications such as re-hospitalizations. There is currently no plan to use formal cost-effectiveness measures, such as incremental cost-effectiveness ratios (ICERs).
- A participant asked for confirmation that the mandate for cost measures for MIPS affects Medicare Parts A and B.
    - Acumen confirmed this and added that CMS is also investigating the inclusion of Part D, as directed by MACRA.

- A participant asked whether the cost measures being developed for this project are focused on clinicians.
    - Acumen clarified that MIPS is focused on cost measures for ECs, even though many existing cost measures were developed for hospitals.

3.3 Approaches for Aligning Cost Measures with Other QMs

Acumen presented three main existing approaches to cost measure and QM alignment that were identified through the environmental scan shared with the TEP. The three approaches of alignment include: (i) designing cost measures in such a way that they are directly embedded with aspects of quality, (ii) pairing cost measures with other QMs through harmonizing measure specifications, and (iii) aligning cost measures and QMs at a program level through weighing different QM and cost measure performance categories. These three approaches are not mutually exclusive and may be employed alongside one another. References to QMs in this section refer to the list of proposed QMs in the MIPS proposed rule (of which ECs are proposed to select a certain number for reporting), which includes a majority of QMs previously implemented under the Physician Quality Reporting System (PQRS). To keep within the scope of this particular project, the TEP's discussion for this section focused mainly on the first two approaches rather than program-level alignment.

The first approach entails the design of episode-based cost measures that include only the cost of care of clinically relevant services, which allows the cost measures to capture certain quality signals. As such, episode-based cost measures could provide similar information as existing PQRS QMs, for example, certain overuse measures and patient safety QMs, as well as readmissions measures. However, there are still key aspects of quality which cannot be identified using allowed charges on claims data and therefore cannot be accounted for by the first approach, such as mortality outcomes and quality-of-life outcomes.

The second approach of pairing cost measures and existing QMs through harmonizing the two types of measures addresses these issues. Literature reviewed for the environmental scan and shared with the TEP suggests that cost measures and QMs can be harmonized on all or some of the following dimensions: patient cohorts, care episodes, time frame of the episode window, and risk adjustment. One consideration for the second approach is that aligned measures can provide more information if the cost measures and QMs are complementary, rather than substitutes.

As part of the discussion of measurement alignment during the TEP meeting, Acumen was interested in the panelists' input on the available options for aligning cost measures with QMs. Acumen posed the following questions to the TEP:

(1) What approaches other than embedding and pairing with harmonization are available for aligning cost measures and QMs for use in MIPS?

(2) *What aspects of quality are not embedded in cost measures and therefore require another approach to alignment?*

(3) *If a quality measure (e.g. rate of inpatient admissions) is already embedded in a cost measure, should cost measure development prioritize alignment with that quality measure or with other quality measures?*

(4) *How extensively should CMS pursue aligning MIPS cost measures with related QMs?*

(5) *Which QMs in existence should be aligned with cost measures for them to be acceptable?*

(6) *To what extent can one prioritize alignment of cost measures and QMs by patient population, time frame, risk adjustment, and specificity of health condition/medical treatment?*

3.3.1 TEP Feedback

In this session, TEP panelists expressed general support for the two alignment approaches presented – the embedding of quality signals when designing new cost measures and the pairing of cost measures with existing QMs – and provided feedback on the specifics of harmonization, reporting, episode construction, and attribution of cost measures. TEP members discussed how the episode window could be defined to capture patient complexity, such as multiple chronic conditions in an older population. Panelists suggested specific scenarios within the context of cost measurement that should be considered, such as cases involving mortality and medical innovation.

Participants expressed general support for aligning cost measures with QMs and discussed issues with approaches for alignment: embedding quality signals in cost measures and pairing cost measures with existing QMs through harmonization.

- Many members supported the pairing of measures through the harmonization of specifications.
- Two of these members expressly supported both pairing and embedding of measures.
- Several panelists expressed the need to avoid duplicating a QM that is already embedded in a cost measure. These members believe that this could be achieved through careful harmonization.
- Many members advocated for connecting existing overuse measures with resource use, such as to reward the reporting of PQRS overuse measures in the MIPS setting. One of these members stated that a major task would be prioritizing the overuse measures in PQRS reporting.
- One participant pointed out that when pairing cost measures with QMs, it is important to consider whether it is best to use PQRS measures for the population aged 85 and above, who often have the highest level of use of Medicare resources.

Many panelists made suggestions on how to operationalize the harmonization and pairing of QMs and cost measures, including (i) prioritizing specific conditions for

measure development and (ii) harmonizing measures on a broader basis than only the precise specifications.

- Several panelists discussed the different prioritization methods for operationalizing the harmonization approach of alignment. One panelist suggested having different prioritization strategies for the different conditions considered for alignment. One of these panelists suggested a phased approach to aligning cost measures and QMs, recommending overuse as a starting point for harmonization to allow clinician buy-in and for face validity.
- One panelist suggested that it would be more feasible to align QMs and cost measures based on any shared component, since aligning specifications would be extremely difficult given the short time frame.

A few participants discussed whether and how the episode window could be constructed to capture patient complexity, such as long-term complications that occur outside the episode window.

- One panelist argued that a complication may develop later in a patient's life, outside of the normal episode window. This member argued that the episode window needs to consider major outcomes that may occur later down the road, even if the cost of care within the active episode window does not account for these outcomes.
    - Acumen suggested that the length of an episode window can vary depending on clinically associated services. Acumen will seek stakeholder input, including through Clinical Committees, on the length of episode windows for the episode groups to be developed under this project.

Several panelists highlighted mortality as an issue for consideration, suggesting that there needs to be additional considerations for cases related to terminal illnesses or for emergency care settings.

- Several members deliberated on the use of cost measures to evaluate the care of terminally ill patients. One member stated that death is not always an outcome indicating poor quality care, giving the example of palliative care. Another member mentioned cases where a terminal patient's quality of life is improved due to services that result in improved vision or mobility. Two panelists noted the importance of ensuring that clinicians who are willing to provide care to terminally ill patients are not disadvantaged under these cost measures. One member suggested the use of exclusion criteria to address these and similar cases.
- One panelist discussed the potential tradeoffs in settings such as emergency department care, where the variation across a clinician's decision to hospitalize patients correlates with mortality in 30 days.
    - Acumen noted that there are currently no episode-based cost measures specific to the emergency department setting. Acumen indicated that it would be possible to align an episode-based cost measure with a mortality QM.
- One participant suggested that even though mortality is not captured in coding or Medicare spending, it can nonetheless be captured by CMS.

A few members suggested the episode grouping algorithm take into account cases where new Medicare supplies or services have resulted from new medical innovation or technology.

- One of these members suggested that the cost measures need to be able to quickly account for the cost of a medical innovation or of the adoption of a new technology.
- One of these members commented that the learning curve associated to adapting a new method or technology may result in higher costs being attributed to a clinician. This member provided the example of issue of device-related complications where certain negative outcomes may have been unknown to, and thus would be unfairly attributed to, a clinician in the early learning stages of using new technology.

Many participants commented on CMS's intended use of the information gathered through cost measures and inquired into the way in which the episode-based cost measures would be reported to clinicians.

- Many members supported the notion of cost measures as tools for providing information to clinicians on how they perform compared to other clinicians.
- One participant stated that there is general concern of how CMS intends to use the information once it is collected, and that the issue of how it will be used requires careful deliberation in order to achieve face validity.
- One member expressly advocated for making the information of how a particular QM aligns with a particular cost measure available to clinicians and for allowing clinicians to form their own understanding of how the two types of measures align.
- One member discussed the issue of service utilization, stating that the clinicians who are over-utilizers of consultations and of facility care need to be informed of their status if cost measures are to align with QMs. This member further suggested that to prevent "gaming," information relating to overutilization needs to be included in the performance report.

One member emphasized the need to consider the potential impacts that cost measurement may have on clinicians, as well as the unintended consequences when measuring resource use.

- One participant expressed concern that if attribution is involved, cost measurement may be an issue for clinicians who happen to treat mostly high cost patients.
    - Acumen clarified that risk adjustment will be utilized in the measurement and benchmarking of clinicians against other peer groups for resource use.
- One participant suggested focusing on QMs that address potential unintended consequences of cost measures, such as appropriateness measures and patient satisfaction measures.

A few panelists recommended specific specialties and treatment options for consideration in QM and cost measure alignment.

- One member suggested looking into opioid use as an area of the quality measurement for cost measures.

- One member stated that there tends to be a lack of cost measures for certain specialties including rheumatology, endocrinology, and plastic surgery, which is an issue to be considered when embedding cost measures and QMs.

Several members asked clarifying questions during this session.

- Two participants raised questions regarding the concept of complementary versus substitute measures introduced by Acumen. One participant requested clarification on what role the concept of complementary versus substitute, in the context of measure alignment, would play in attributing the total cost of care. The other member suggested a scenario where a particular QM is aligned with a cost measure for a specific condition, and asked whether a clinician would then be accountable for the total cost of care for a patient with that condition. This member then asked if the clinician would be considered only for the component that is overused if the clinician is not accountable for the total cost in this case.
    - Acumen explained that, in terms of cost measure design, the operationalization would be investigating ways in which the cost measure could focus on similar circumstances as the PQRS measures. Acumen further clarified that the cost of the overuse is partially accounted for in the cost measures.
- One member asked, in terms of reporting, whether a clinician would be considered as being less or more costly based on how many standard deviations below or above he or she is from the expected cost range.
    - Acumen stated that, for the reporting of certain existing cost measures, clinicians are classified into percentiles and are not compared using standard deviations. For other existing cost measures, continuous measures are reported in a manner similar to that described by the member. Furthermore, clinician's resource use is compared relative to a well-defined benchmark, such as the national median clinician.
- One participant asked whether cost measures would not be meaningful at the individual clinician level and questioned what the most useful level would be. Other levels suggested include groups of 10 or 15 clinicians, or any other statistically meaningful level.
    - Acumen suggested that it is useful to have information on a clinician's resource use, even if there are not enough cases to establish statistically significant information for comparison with peer groups. Acumen differentiates between the aspect of cost measures that may generate useful statistical information for peer-group comparison and the aspect of cost measures that allows a clinician to understand and distinguish the events that are contributing to his or her overall measure.
- One panelist asked what would happen if clinicians did not report on the QMs that are aligned with cost measures, since the choice of measures reported in PQRS reporting is voluntary.
    - CMS clarified that potential issues related to scoring methodology, such as the one that this member has stated, is a program-level issue and is beyond the scope of this project.

3.4 Criteria for Prioritizing Development of Cost Measure Concepts

Acumen presented key considerations for prioritizing new episode-based cost measures in specific clinical areas. These considerations include ensuring that cost measures adequately cover the continuum of care across a wide variety of ECs and specialties, identifying cost measures for areas where there are substantial gains to be made from better clinical practice, as well as meeting the MACRA requirement that cost measures account for 50 percent of Medicare Parts A and B spending.

Though cost measure development includes the maintenance and revision of existing measures, the current gaps in existing episode-based cost measures suggests many opportunities for new cost measure development. Acumen provided the table in Appendix A, which classifies existing episode-based cost measures for clinicians by health system function and by clinician specialty group. Empty table cells indicate the current measurement gaps, where no cost measures exist for a particular combination of health system function and specialty group. These include the clinician specialty groups (rows) that do not list any cost measures (e.g., allergy/immunology/rheumatology) and all post-acute care (i.e., the "Transitional Care (Post-Acute)" health system function column). These measurement gaps also occur when existing episode-based cost measures do not satisfy the evaluation criteria.

Acumen also presented the table of measure prioritization criteria in Appendix B to guide the review of individual candidate cost measures for their impact on Medicare spending, the share of beneficiaries covered, and the percentage of ECs with cost measures. Candidate cost measures would also be reviewed for their potential to improve resource use, and their harmonization or alignment with QMs. Acumen then sought the TEP panelists' assistance with identifying priorities for the development of new episode-based cost measures for MIPS based on these considerations. The following questions were posed to the TEP:

(1) *What are the clinical topics/areas recommended for further development? Given the measurement gaps, what balance should there be between the maintenance/revision of existing measures and developing new measures? What should we focus on in the short- and medium-term?*

(2) *What role should coverage of the continuum of care play in prioritizing development of MIPS cost measures?*

(3) *What is the prioritization balance between developing procedural and acute condition cost measures versus chronic condition cost measures?*

(4) *In what ways should an absence of a proposed feature of a cost measure (listed in Session 2) determine its prioritization for development or maintenance?*

(5) *Should cost measures be reported for multiple or individual episode groups (i.e., multiple health conditions in one cost measure or an individual health condition in one cost measure)?*

(6) In what ways might all-cost cost measures be used in MIPS?

(7) To what extent should the development of MIPS cost measures be prioritized to cover a large share of eligible clinicians versus the different EC specialties?

3.4.1 TEP Feedback

In this session, TEP members provided input on the clinical areas to prioritize for the development of cost measures. Panelists showed stronger support for prioritizing chronic conditions over developing acute episode, suggesting oncology and Alzheimer's disease as candidates for cost measure development. Members offered suggestions of specific sources of information that Acumen could draw upon in the discussion of prioritization, such as resources and initiatives developed by clinicians and special societies and certain payment models, as well as Clinical Committee input.

In identifying clinical areas for the further development of cost measures, several participants expressed support for prioritizing chronic conditions that can be conservatively managed over a long period of time before developing into acute episodes requiring costly treatment.

- Panelists expressed support for prioritizing chronic conditions that may present as acute exacerbations and readily evolve into episodic conditions with high cost diagnostics and variable resource utilization rates in different geographic areas. Cost measures based on these chronic conditions could cover a large share of providers. Participants also noted that the cost measures should reflect the proportion of patients who are both treated conservatively and are high cost. Examples of these conditions include knee osteoarthritis (OA), benign prostatic hyperplasia (BPH), degenerative joint disease (DJD), and other musculoskeletal conditions like spinal stenosis, hip arthritis, and rotator cuff.
- Participants suggested that cost measures consider the timing and context of when costly treatment for an acute episode takes place, which could involve looking at many years of a patient's medical history preceding a trigger event. For instance, a patient with OA who receives conservative treatment for many years and avoids surgery may at some stage require a knee replacement. The cost measure could take into account whether such acute treatment is occurring after conservative options have been explored, or at the outset of OA treatment. Members expressed concern for the reliability of data and coding to reflect when more costly treatment for an acute episode follows a long period of conservative chronic condition management.

Participants indicated sources for identifying additional clinical areas for prioritization.

- When prioritizing clinical areas, participants recommended considering *Choosing Wisely*, an initiative that helps physicians and patients engage in conversations aimed at reducing unnecessary tests and procedures. Specialty societies have already specified overused testing and diagnostics, while taking United States Preventive Services Task Force (USPSTF) and other guidance into consideration. Although there is no unifying database for *Choosing Wisely*, all of the recommendations are evidence-based, with some EHR vendors beginning to build them into their systems.

- A panelist suggested considering conditions included in certain payment models (e.g., bundled payment, capitation) for prioritization. The participant suggested that conditions identified as potentially well-suited for such models may be a good starting point for truly patient-centered care, giving the example of the conditions in the Brookings Institute's environmental scans with the MITRE Corporation as part of the Specialty Payment Models Opportunities and Design Initiative in 2014.
- A member suggested asking the Clinical Committee for the top five conditions being treated within their specialty area to inform the clinical topics and areas recommended for further development.

Some members named specific clinical areas for the further development of cost measures for MIPS.

- One participant expressed support for developing cost measures for oncology because they would affect a large group of beneficiaries. However, oncology cost measures may not be a short-term consideration because of a lack of necessary information on claims data, despite the promise of the Surveillance, Epidemiology, and End Results (SEER) database.
- One participant advised developing an episode-based cost measure for Alzheimer's disease, despite the complexity of doing so, because it is underdiagnosed and data indicate that patients with this disease represent a high-cost and high-utilizing population.

Individual panelists provided considerations for how episodes should be constructed, highlighting specific care settings that should be represented in an episode's grouped services, the complexity of certain care settings, and the concerns regarding all-cost cost measures.

- A panelist highlighted the need to find the best way to incorporate preventative care into an episode, as episodes are currently focused on individuals who present with a particular health condition.
- One member highlighted the complexity of chronic care, especially for the older population, which can involve a person with five or six diseases. It would be infeasible for a clinician to look at separate guidelines for each condition.
- A panelist expressed concern about considering all-cost cost measures due to their unintended consequences and offered the example of their health system's clinical integration program's metrics development process. For one year before basing reimbursement on the metrics, the measures were nonscorable.

Several panelists offered comments on the prioritization of episode-based cost measures for development, reacting more specifically to the "Framework for Assessing Measurement Gaps" table (Appendix A) and the "Proposed Criteria For Prioritizing New Episode-Based Cost Measures" table (Appendix B) that Acumen presented in the TEP.

- One member stated that, although the general practice/family medicine and pediatrics rows of the "Framework for Assessing Measurement Gaps" table in Appendix A are empty, indicating an absence of existing cost measures, the internal medicine measures apply.

- Acumen clarified that a large number of the measures are defined around an acute inpatient stay, but several measures could have analogs in the outpatient setting for family medicine.

- To promote buy-in, a participant recommended applying the proposed criteria presented in Appendix A to conditions/procedures reflected within existing cost measures, as well as to new measures. Being able to say that cost measures are being incorporated because of their impact on total cost of care would establish buy-in among clinicians in specialty societies.
- One participant suggested adding three boxes to the "Proposed Criteria for Prioritizing New Episode-Based Cost Measures" table in Appendix B to better harmonize with QMs. These boxes would be: (i) whether data from the new cost measure could enhance QMs; (ii) whether QMs can enhance the cost measure because new information would be coming from each; and (iii) whether there is already a potential outcomes reporting metric that could be tied into the cost measure, which would provide clinicians with incentive to use it.

Several TEP panelists asked clarifying questions during this session.

- A member asked if there was a way to have variation serve as a type of trigger, for example, to identify individual clinicians who are potentially responsible for the overuse of post-acute care.
  - Acumen responded that this would not be in the form of a trigger. However, Acumen noted that episodes provide a means to analyze the services and what share of cost grouped to each episode (clinically associated services) are the responsibility of particular providers.
- Participants asked whether the 50 percent coverage target refers to percentage of cost, beneficiaries, or care; and what would be the percentage of ECs affected by the 70 or so high-cost episode groups that would likely cover around 40 percent of Medicare Parts A and B spending.
  - Acumen responded that the 50 percent refers to a target of 50 percent of Medicare Parts A and B spending, acknowledging that this would likely represent far less than 50 percent of beneficiaries. The percentage of ECs that would be affected by the high-cost episode groups could be an interesting investigation to pursue.

3.5 Relationships between Cost Measures and Episode Groups

Acumen explained the potential for episode grouping rules and logic to inform the development of cost measures in MIPS. Episode grouping rules specify what services and clinical content comprise a cost measure. Generally, episode construction consists of identifying the episode trigger, specifying the episode window, and determining the grouping algorithm. Acumen addressed three main approaches to episode grouping. The first is an all-cost approach, which includes all costs and services occurring in an episode window and is the most widely used in Medicare. The second is a patient-centric (i.e., illness-progression) approach, which selects claims of a single patient across all clinicians and settings associated with treating a

particular health condition defined by the trigger event. The third type is a provider-centric (i.e., "provider-role," or "clinician-role" approach), and it selects claims of a single patient clinically related to the care delivered by an attributed clinician.

Acumen discussed the advantages and disadvantages of each approach. The all-cost model is the simplest of the three, and is transparent by including all services. Measures constructed using this model tend to have lower reliability scores as all services over an episode window will be included whether or not they are clinically associated with the service or condition that triggered the episode. The illness-progression (i.e., patient-centric) category assigns episodes to a clinician after the episode is completed. This presents an "attribution problem," as a clinician who provides services for the patient toward the end of the episode might be assigned the entire episode of care, even though that clinician played no role in patient management decisions that led the patient to require the clinician's services. By contrast, under the clinician-role approach, the clinician who performs a service that triggers an episode will automatically be attributed the episode from the moment it is billed. This approach's primary purpose is to profile resource use of individual clinicians. In contrast to the illness-progression approach, appropriate attribution to clinicians is the focus in the assignment of claims and construction of episodes with the provider-role approach. Acumen sought input from the TEP on several considerations related to cost measures and episode grouping and posed the following questions:

(1) Can a single episode construction be used to calculate cost measures for all clinicians potentially attributed to an episode? Do you need multiple constructions?

(2) How important is it to develop separate cost measures to recognize the distinct roles of different specialties or is there a way to combine it so that you do not have to do as many? How many types do you need to worry about?

(3) Are there potentially useful episode grouping algorithms not included among the three approaches discussed in this session?

(4) What challenges will be encountered in developing episode-based cost measures for chronic conditions?

(5) Should Part D spending and claims be added to MIPS cost measures?

3.5.1 TEP Feedback

In this session, TEP panelists discussed the relationship between cost measures and episode groups. Panelists addressed matters like provider attribution across specialties and costs and attribution across different care settings. Panelists also discussed potential unintended consequences from the MACRA provisions including reporting discrepancies, transparency of these data, and impact on rural clinicians. There was no clear consensus amongst panelists on whether or not Part D claims spending should be included in cost measures developed for MIPS.

Panelists expressed concern about the attribution of groups to clinicians, specifically in terms of clinician specialty, comparisons across clinical specialties, and transitions of beneficiaries across care settings.

- Several panelists expressed concern about the comparison of clinicians across specialties when treating the same episode or performing the same service, and the objectivity of comparing clinicians in this way. They also addressed the question of provider attribution when treating a patient with multiple diseases or ongoing chronic conditions.
    - Acumen explained that the comparison methodology has not yet been determined. Acumen clarified that if the attributed clinician provides the same sequence of services that trigger a particular episode group, they are assigned that episode regardless of their specialty.
- TEP participants expressed concern regarding the accountability for costs and attribution of services when considering the setting of care. For example, a patient could be treated by their primary care physician, who refers them to an orthopedic surgeon for an inpatient procedure, then is transferred to a Skilled Nursing Facility (SNF) where they experience a complication and is readmitted to hospital. In such a scenario, one participant suggested that it is not clear which clinicians should be attributed the cost of services throughout this care experience. Participants also discussed impacts on primary care clinicians who do rounds on their own patients in the inpatient setting, and their decision to continue with this practice or refer to specialists. One panelist recommended consolidating episodes on a procedural level so that the episode would include the services the patient received in the hospital and in the SNF. This panelist suggested that by defining episodes this way, it could incentivize clinicians to coordinate and better integrate care.
    - Acumen explained in the example of a hospital stay followed by a SNF stay, currently CMS would trigger these episodes individually and group services that are clinically related to each individual episodes. As such, if a patient who has a hip replacement and is discharged from the hospital to a SNF develops bedsores as a result of care delivered in the SNF, the costs related to treating those bedsores would not be grouped to the surgeon performing the hip replacement as that would be clinically unrelated to the surgery. These overlapping episodes provide an overarching approach that follows a patient throughout their care continuum and also takes into account the role of each provider in caring for the patient. Acumen clarified that combining these episodes by procedure would make it difficult to accurately attribute services to individual clinicians, and ensure that they are responsible for the services they performed.
- One participant expressed concern about being double counted for cost measures in MIPS and an Alternative Payment Model (APM), and that there needs to be harmonization between cost measures developed for MIPS and APMs.
    - Acumen stated that CMS has not yet made decisions regarding harmonization of cost measures in MIPS with APMs.

Panelists expressed concern about unintended consequences resulting from MIPS implementation.

- Panelists discussed the potential for unintended consequences through possible reporting discrepancies when comparing clinicians who perform most or all services versus those who refer immediately, and the transparency of these data.
- One panelist pointed out that, for example, the choice of local specialists to whom a clinician can refer their patients may be limited, affecting the clinician's ability to control costs associated with specialist referrals. There might be a disproportionate impact on rural clinicians or clinicians who do not have established relationships with specialists regarding the effort they would need to put into researching referrals to avoid cost in MIPS.

Panelists discussed factors in support of and against the possible inclusion of Part D claims spending in cost measures for use in MIPS.

- Some panelists noted the importance of the role of the pharmaceutical industry, generic medication prescribing, and the inclusion of generic prescribing as part of a clinician integration metric in pay-for-performance. One panelist stated that adding Part D would be difficult to implement, but necessary.
- Several panelists had reservations about including Part D spending. Some of these panelists argued against including Part D claims spending because clinicians have no control over how much drug companies will charge for certain drugs, and that there is no standardized pricing for generic versus brand. Furthermore, generic drugs are no longer associated with lower costs.

3.6 General Discussion

This section includes a summary of general points of discussion that were raised during the "Open Discussion" session of the TEP. Panelists were each given the opportunity to provide concluding thoughts on the day's discussion.

Panelists largely favored a provider-role approach for episode-based cost measures, and attribution rules in which episodes are attributed to the clinician at the time of service. Panelists also emphasized that the actionability of the cost measures and provider feedback reports is important for clinicians to be able to influence patient outcomes.

- Panelists favored a provider-role approach and ex-ante attribution, highlighting various problems with the way episodes are currently attributed. One panelist strongly supported the provider-role approach, since the provider is the unit of measure, and said that in other approaches there is inappropriate attribution for clinicians that have a very small contribution. Several panelists supported ex-ante attribution by describing how it would help doctors, from an actionability perspective, to understand the implications of their decisions moving forward at the initial point of service.
- TEP participants agreed that feedback reports containing cost measures need to be accessible and understandable for both clinicians and patients. There was a high degree of consensus among panelists that cost measures need to be clear and transparent to clinicians. Actionability was highlighted as a guiding principle for feedback reports.

TEP members highlighted the need to incorporate stakeholder input in the development of the cost measures, such as through collaboration with representatives from medical societies. Panelists further emphasized the development of cost measures in alignment with existing QMs.

- Panelists emphasized the importance of collaboration with medical societies during measure development, as well as outreach and education efforts during measure implementation. As part these collaborative efforts, a panelist suggested that a practice manager could aid communication and education surrounding implementation of MIPS and cost measures. Another panelist stressed the role of the measure developer in helping with provider education.
- Many panelists suggested that the alignment of cost measures with existing QMs is a way to address the potential that patient expectations and preferences for services and treatment could otherwise encourage clinicians to overuse tests or other services.

Several panelists reiterated the need to consider the potential for unintended consequences and the importance of risk adjustment in mitigating them.

- Several panelists suggested diligent case monitoring or aligning with QMs to offset the potential for unintended consequences, such as shedding of risk and clinician abandonment with MACRA-related changes.
- Several participants noted the importance of risk adjustment in the creation of cost measures. Geographic variation and socioeconomic factors were highlighted as important issues for discussion.

Some members rearticulated their support for or against the potential inclusion of Part D claims spending in the cost measures.

- Several TEP panelists revisited the question of whether Part D claims spending should be included in the cost measures. There was no consensus reached, as panelists cited implementation complexities as a reason against inclusion, and the large cost burden of medication prescription as a reason in support of including Part D.

4 FOLLOW-UP

Acumen provided a draft of this TEP Summary Report to members on December 9, 2016. Members were asked to provide any feedback that they wished to share by January 6, 2017. Acumen received five comments from TEP members. Two comments suggested specific changes to clarify the discussion summary and otherwise believed that the report reflected the meeting; these points have been incorporated into this document. Two members did not suggest any edits and expressed their support for the draft report. One comment expressed serious concerns about the timeline for developing and implementing episode groups that would form the basis of cost measures. The TEP member requested consideration of a two year assessment period for the cost measures to allow time to evaluate the episode groups and make any necessary adjustments. During this two year period, the TEP member requested that there should be no financial impact on clinician scoring. This feedback and the comments from the other TEP members have been conveyed to CMS.

Acumen followed up with panelists when convening a second TEP in December 2016. This second TEP built on the measure concepts discussed at the August 2016 TEP, focusing on topics related to episode construction for procedural and acute inpatient medical condition episode groups. To leverage the experience of existing TEP members, Acumen contacted the members of the August 2016 TEP to ascertain whether they would be interested and available to participate. Twelve of the 14 members confirmed their attendance at the in-person meeting and the two members unable to travel for the meeting were given dial-in information to attend remotely as observers. To increase the diversity of perspectives represented on the TEP, a call for TEP nominations was publicly posted in October 2016. The respective societies of the two members who were unable to travel for the TEP were encouraged to submit nominations in response to the public posting to ensure their continued involvement in the measure development process. The December 2016 TEP meeting will be summarized in a separate TEP Summary Report that will be publicly posted.

5 NEXT STEPS

The TEP provided valuable input that confirmed prior feedback from stakeholders on cost measure development and that will be incorporated into the measure development process. The TEP highlighted the importance of the following key issues: stakeholder engagement and involvement, clear attribution at the time of service delivery, timely and actionable information, and alignment of cost measures with QMs. The TEP also identified several areas for further consideration, such as accounting for patient complexity and chronic conditions, guarding against the potential for unintended consequences, and the potential inclusion of Part D spending.

The TEP's feedback will be incorporated throughout the measure development process. A Clinical Committee was convened after the conclusion of the TEP and was composed of 73 members with a wide range of clinical backgrounds, including representatives from over 50 specialty societies. In addition, several TEP members participated in the Clinical Committee. The Clinical Committee's work incorporated key points of TEP feedback, particularly the incorporation of meaningful stakeholder input in the measure development process. When describing the process for selecting episode groups for development, orientation materials for the Clinical Committee members stressed prioritization criteria discussed in the TEP. For example, stakeholders were encouraged to provide feedback on the candidate conditions and procedures that are important to their practice and where there is opportunity for improvement. The orientation materials also stressed the importance of actionability, as the TEP suggested. For instance, the Clinical Committee provided input on the codes to serve as episode triggers, while being cognizant of the link between the start of an episode and the role of the attributed EC; in this way, the episode-based cost measures that use these episode groups will provide actionable information to guide attributed ECs to improve patient care.

The August-September 2016 Clinical Committee complemented and built upon the TEP's work by providing input on (i) identifying the names of episode groups for development, and (ii) determining the trigger codes on claims for opening these episode groups. This work contributed to the CMS posting in December 2016 of a "Draft List of MACRA Episode Groups and Trigger Codes."[6] This draft list was accompanied by a document titled "Episode-Based Cost Measure Development for the Quality Payment Program" which included specific questions for public comment.[7] The public comment period closes on April 24, 2017. The draft list is subject

[6] CMS, "Draft List of MACRA Episode Groups and Trigger Codes", *MACRA Feedback Website,* https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/draft-list-of-care-episode-and-patient-condition-groups-and-codes.zip

[7] CMS, "Episode-Based Cost Measure Development for the Quality Payment Program", *MACRA Feedback Website,* https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-

to modification based on public comment, and will be revised over time based on this and other feedback received. Future episode-based cost measures will be developed from a subset of episode groups from this draft list. In addition, CMS intends to continue to add new episode groups to meet the requirements of MACRA.

As discussed in Section 4, a second TEP was held in December 2016 that built on the discussion of the measure concepts that took place during the August 2016 meeting. The December 2016 TEP discussed topics related to episode construction for procedural and acute inpatient medical condition episode groups. In particular, the TEP focused on three components of cost measures: (i) defining an episode group, (ii) assigning items and services and their respective expenditures to episode groups, and (iii) attributing episode groups to clinicians. Part of the background materials shared with the TEP in preparation for the meeting included empirical analyses based on the preliminary list of episode groups and trigger codes that the Clinical Committee provided input on.

Extensive stakeholder input, especially from the clinician community, will be sought to inform the determination of these components of cost measures. In particular, the December 2016 TEP was shown a proposed process for gathering stakeholder input on exactly which claims should be assigned to any given episode group. This structured process for information gathering, revised according to TEP input, will be used to acquire input on claims assignment rules from the Clinical Committee. The Clinical Committee will also revisit the draft list of episode triggers for potential refinement, a collaborative process that will also consider whether certain draft episode groups should be divided into sub-groups or aggregated into broader episode groups. The Clinical Committee, which will be expanded with further recruitment of stakeholders with a diversity of experience, expertise, and perspectives, will be guided by the principles and strategic vision discussed by the TEPs.

Complete episode-based cost measures will be constructed using the episode groups that are developed with extensive stakeholder input. This will include another component of cost measures: risk adjusting episode groups. Concrete ideas regarding risk adjustment from the August and December 2016 TEPs, as well as other stakeholder input gathering activities such as public comment periods, will be incorporated into this component of cost measures. Future TEP and Clinical Committee activities will involve provision of additional, detailed input on risk adjustment and measure calculation. The measure development process will consider the fifth and final component of cost measures: aligning cost with quality. While capturing costs can offer important information about the consequences of care, such as additional care for complications or admissions, cost measures must also be aligned with additional indicators of

Programs/MACRA-MIPS-and-APMs/Episode-Based-Cost-Measure-Development-for-the-Quality-Payment-Program.pdf

quality. Such quality measures include outcomes of care, processes of care, functional status of the patient, and patient experience. Cost measures seek to provide accurate, clinically valid, and actionable information that is aligned with indicators of quality, so that clinicians can better understand how their cost is related to the overall quality of care delivered to patients. Strategies on aligning cost measures with quality will be sought from stakeholders, and will be considered with feedback from the August and December TEPs.

APPENDIX A: FRAMEWORK FOR ASSESSING MEASUREMENT GAPS

A. Existing Episode-Based Cost Measures for Clinicians‡

The following table classifies existing episode-based cost measures for clinicians by health system function and by clinician specialty group. An existing cost measure may be listed more than once if it applies to more than one specialty group. The table only includes episode-based cost measures that apply clinical logic for creating episodes, so does not include all-cost measures.

Blank cells in this table indicate that no cost measures exist for that combination of health system function and specialty group. These measurement gaps also occur when existing episode-based cost measures that do not satisfy the evaluation criteria shown in Appendix B.

Areas of opportunity for the development of new episode-based cost measures include the clinician specialty groups (rows) that do not list any cost measures (e.g., allergy/ immunology/rheumatology), all of post-acute care (i.e., the "Transitional Care (Post-Acute)" health system function column), and many chronic condition episode groups (e.g., gastroenterology).

Clinician Specialty	Health System Function		
	Initial Recognition and Management of Acute Event / Surgery	**Transitional Care (Post-Acute)**	**Initial Recognition and Management of Chronic Disease / Sustaining Health Status**
Allergy/Immunology/ Rheumatology	-	-	-
Anesthesiology	-	-	-
Cardiology	AMI (1) Afib/Flutter (1) CABG (1) Heart Failure (1) PCI (1)	-	Afib/Flutter (1)* Heart Failure (1)* Ischemic Heart Disease (1)*
Cardiology - Electrophysiology Cardiac Specialist	Pacemaker (1)	-	-
Dermatology	-	-	-
Emergency Medicine	-	-	-
Gastroenterology	Colonoscopy (1) Diverticulitis of Colon (1)* GI Hemorrhage (1)	-	-
General Practice/Family Medicine	-	-	-

Clinician Specialty	Health System Function		
	Initial Recognition and Management of Acute Event / Surgery	**Transitional Care (Post-Acute)**	**Initial Recognition and Management of Chronic Disease / Sustaining Health Status**
Internal Medicine	AMI (1) Afib/Flutter (1) CABG (1) *C. difficile* colitis (1)* Diverticulitis of Colon (1)* Cellulitis (1) GI Hemorrhage (1) Heart Failure (1) Ischemic Stroke (1) Kidney and UTI (2)* Asthma/COPD, Acute (1) Pneumonia (2)* Pulmonary Embolism (1)* URI (1)* DVT (1)*	-	Afib/Flutter (1)* Asthma/COPD (1)* Heart Failure (1)* Ischemic Heart Disease (1)* Osteoporosis (1)* Parkinson Disease (1)* Pneumonia, Outpatient (1)* Rheumatoid Arthritis (1)*
Mental/Behavioral Health	-	-	-
Neurology	Ischemic Stroke (1) Spinal Fusion (2)*	-	Parkinson's Disease (1)*
Obstetrics/ Gynecology	-	-	-
Ophthalmology	Lens and Cataract Procedures (1)	-	-
Orthopedic Surgery	Hip/Femur Fracture/Dislocation (1) Hip Replacement/Repair (3)* Knee Arthroplasty (2)* Knee Joint Repair (1) Spinal Fusion (2)*	-	-
Otolaryngology	-	-	-
Pathology	-	-	-
Pediatrics	-	-	-
Physical Medicine and Rehabilitation	-	-	-
Plastic Surgery	-	-	-
Preventive Medicine	-	-	-
Radiology - Diagnostic Radiology	-	-	-
Radiology - Interventional Radiology	-	-	-
Radiology - Radiation Oncology	-	-	-
Surgery - General Surgery	Cholecystitis (1)* Cholecystectomy and Common Duct Exploration (1) Mastectomy for Breast Cancer (1)	-	-
Surgery - Vascular Surgery	Abdominal Aortic Aneurysm (1)* Aortic Aneurysm Procedure (1) Thoracic Aortic Aneurysm (1)* Carotid Endarterectomy (1)	-	-
Thoracic Surgery	Aortic/Mitral Valve Surgery (1)	-	-

Clinician Specialty	Health System Function		
	Initial Recognition and Management of Acute Event / Surgery	**Transitional Care (Post-Acute)**	**Initial Recognition and Management of Chronic Disease / Sustaining Health Status**
Urology	Prostatectomy for Prostate Cancer (1) TURP for BPH (1)	-	-

‡All measures are Method A or Method B measures, except for two ETG-based measures (Hip/Knee replacement and Pneumonia) maintained by Optum

*Denotes that at least one of the measures is constructed Method A and was listed in the October 2015 episode group posting and referenced in the MIPS Proposed Rule, but were not used in the Supplemental QRURs. These measures are not included because they are not NQF endorsed and are not used in current or proposed CMS programs (excepting the MIPS Proposed Rule).

APPENDIX B: PROPOSED CRITERIA FOR PRIORITIZING NEW EPISODE-BASED COST MEASURES

The following table of measure prioritization criteria guides the review of individual candidate cost measures for their impact on Medicare spending, the share of beneficiaries covered, and the percentage of ECs with cost measures. Candidate cost measures would also be reviewed for their potential to improve resource use, and their harmonization or alignment with QMs.

Candidate Cost Measure	Episode Group Type(s)	Measure Prioritization Criteria					
		Impact			Opportunity for Improvement		Alignment with QMs
		% Medicare spending	# Medicare beneficiaries	% ECs with Cost Measures	Medicare spending variation	Variation in treatment options and/or sites of service	Existing Quality Measures