



ACUMEN

**Physician Cost Measures and Patient
Relationship Codes (PCMP) Technical Expert
Panel**

March 13, 2024

Summary Report

July 2024

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1 INTRODUCTION

The Centers for Medicare & Medicaid Services (CMS) has contracted with Acumen, LLC (referred to as “Acumen”) to develop, maintain, and re-evaluate cost measures for use in the MIPS cost performance category through the *Physician Cost Measures and Patient Relationship Codes (PCMP)* contract (75FCMC18D0015/Task Order 75FCMC19F0004). Acumen also maintains the Medicare Spending Per Beneficiary (MSPB) Hospital measure used in the Hospital Value-Based Purchasing (VBP) program. The PCMP project continues a previous contract, *MACRA Episode Groups and Cost Measures* (2016 to 2019).

As part of this work, we convene a standing Technical Expert Panel (TEP) to provide input on overarching issues across all activities. This report summarizes the TEP meeting on March 13, 2024. Section 1 outlines the structure and composition of the panel. Section 2 summarizes each session’s presentation, member discussion, and key findings. The discussion summaries presented do not represent consensus but consolidate related feedback. Finally, Section 3 outlines the next steps for this project.

1.1 Project Context

The Medicare Access and Children’s Health Insurance Program (CHIP) Reauthorization Act (MACRA) of 2015 established the Quality Payment Program (QPP), which rewards the delivery of high-quality patient care through Advanced Alternative Payment Models (Advanced APMs) or the Merit-based Incentive Payment System (MIPS). MIPS assesses eligible clinicians in four performance categories – quality, promoting interoperability, improvement activities, and cost. MACRA requires that cost measures implemented in MIPS include consideration of care episode groups and patient condition groups (referred to as “episode groups”). Acumen constructs clinically valid cost measures for MIPS using extensive engagement, including a TEP, measure-specific panels of clinician experts (Clinical Expert Workgroups), person and family engagement (PFE) representatives, and the general public via field testing and public comment periods.

1.2 Standing TEP

The PCMP TEP comprises 20 members with diverse perspectives and areas of expertise. The panel includes:

- Experts in health care, payment policy, payment models, and performance measurement;
- Clinicians across many specialties; and
- Patient advisors who share their perspectives from lived experiences.

Please see Appendix A for the complete list of TEP members or the TEP Composition List posted alongside this report. Table 1 below lists the TEP meetings and their discussion topics.

Table 1. PCMP TEP Meetings

Meeting Date	Location	Topics
February 5-6, 2020	Washington, DC (with virtual option)	<ul style="list-style-type: none"> • Chronic episode-based cost measure framework • Patient Relationship Categories (PRC) and Codes reporting limitations • Measure maintenance and re-evaluation • Medicare Spending Per Beneficiary (MSPB) Hospital measure re-evaluation • Alignment of cost and quality • Measure prioritization and conceptualization for future development
July 20, 2021	Virtual	<ul style="list-style-type: none"> • Refining service assignment • Cost measurement gaps • Approach to cost measure calculation
August 29, 2022	Virtual	<ul style="list-style-type: none"> • Risk adjustment and social risk factors • Cost measurement gaps
August 30, 2022	Virtual	<ul style="list-style-type: none"> • Accounting for mortality in cost measures • Comprehensive re-evaluation
September 7, 2023	Virtual	<ul style="list-style-type: none"> • Total Per Capita Cost (TPCC) re-evaluation • Field testing report refinement
March 13, 2024	Virtual	<ul style="list-style-type: none"> • TPCC re-evaluation • Assessing the re-evaluated MSPB Hospital measure • Using cost measures to assess value • Public reporting cost performance data

Most recently, the TEP met via webinar on March 13, 2024. On this day, 14 of the 20 members attended from 11:00 am to 3:00 pm ET. In preparation for the meeting, Acumen provided TEP members with an agenda and presentation slides. The *PCMP TEP Charter* was also distributed to the members for review and was ratified by all members who were in attendance at the onset of the meeting (13 of 14 attendees).

The TEP meeting began with an introductory session to provide an update about project activities since the previous TEP sessions in September 2023. The rest of the meeting consisted of 4 sessions focusing on different aspects of the project:

- Re-evaluating the TPCC measure;
- Assessing the re-evaluated MSPB Hospital measure;
- Using cost measures to assess value; and
- Identifying actionable refinement areas for public reporting cost performance data.

A moderator from Acumen presented the discussion questions for the panel.

2 DISCUSSION SUMMARY

This section summarizes TEP member discussions and recommendations, and each subsection focuses on a meeting session. Subsections 2.1, 2.2, 2.3, and 2.4 summarize the presentations, member discussions and key takeaways on the comprehensive re-evaluation of the TPCC measure, assessing MSPB Hospital, using cost measures to assess value, and public reporting cost performance data, respectively.

2.1 TPCC Re-evaluation

During this session, Acumen provided a brief recap of the 2023 TEP discussion on re-evaluating the TPCC measure. Acumen also proposed some approaches to refining the measure's attribution methodology based on past TEP guidance and presented questions to facilitate discussion. Section 2.1.1 summarizes Acumen's presentation, Section 2.1.2 outlines the TEP members' discussion, and Section 2.1.3 contains key takeaways.

2.1.1 Summary of Presentation

Acumen discussed the following topics for comprehensive re-evaluation of the TPCC measure: (i) the attribution of specialty clinician groups (TINs) based on the billing patterns of advanced care practitioners (i.e., nurse practitioners [NP], physician assistants [PA], and certified nurse specialists [CNS]) and (ii) candidate event methodology).

The TPCC measure evaluates the overall cost of care provided to a patient with a focus on clinicians who provide primary care services. The measure complements episode-based cost measures by assessing global costs for a large share of the patient population and ensuring comprehensive coverage across specialties. The TPCC measure was originally used in the legacy Physician Value-Based Payment Modifier (VM) Program and was adopted for MIPS in performance year 2017.

Acumen comprehensively re-evaluates the TPCC measure every three years to review and revise measures with considerations for findings from measure monitoring, stakeholder feedback and/or changes to the clinical landscape. The TPCC measure initially underwent comprehensive re-evaluation in 2017-2018 using input from the 2018 Medicare Access and CHIP Reauthorization Act Episode-Based Cost Measures TEP to identify clinicians' primary care responsibility and to account for shared responsibility across clinicians. CMS added the current version of the TPCC to MIPS in 2020 as a population-based measure to capture a broad range of primary care. The consensus-based entity (CBE) endorsed the TPCC measure in 2020. The TPCC measure has since been integrated into certain MIPS Value Pathways (MVPs), such as the Promoting Wellness MVP, beginning in performance year 2023. The measure is now undergoing comprehensive re-evaluation again.

During this TEP meeting, Acumen reviewed feedback on the current efforts to comprehensively re-evaluate the TPCC measure from the first public comment period in July 2023 and the TEP input gathered during the 2023 meeting. During the 2023 PCMP TEP meeting, TEP members recognized the importance of specialty exclusions and recommended refining attribution criteria to prevent the attribution of highly specialized TINs due to the billing patterns

of advanced care providers. Acumen then provided a brief overview of the TPCC attribution methodology¹ before presenting two re-evaluation topics.

Adjusting Attribution Rules

Acumen described how advanced care practitioners play a critical role in primary care. Advanced care practitioners can provide care within the scope of TPCC (e.g., preventative care screenings, coordinate care with other clinicians) and/or specialty care. However, given the lack of specialty codes to identify sub-specialties, advanced care practitioners may be attributed to TPCC even when they provide specialized care. This re-evaluation period is an opportunity to address these concerns by further refining attribution to prevent the attribution of advanced care practitioners in specialty groups.

Acumen also reviewed testing findings from the 2018-2019 comprehensive re-evaluation cycle; Acumen extensively tested whether attribution achieved the goal of capturing primary care. These results showed strong clinician-patient relationships, with attributed clinicians (TIN-NPIs) and TINs billing a large share of beneficiaries’ evaluation and management (E/M) claims (an average of 52.8% for TINs and 45.0% for TIN-NPIs). CMS considered this testing and stakeholder feedback in finalizing the measure to broadly include advanced care practitioners who meet TPCC attribution requirements.

Acumen presented methods to better identify advanced care practitioners in TINs that provide specialized care as part of the current re-evaluation period. The analysis looked at TIN composition by TIN-NPIs’ reported Health Care Finance Administration (HCFA) specialty codes, from which Acumen identified six types of TIN composition, as shown in Table 1 below.² Acumen proposed excluding NP/PA/CNS if the rest of the TIN is composed of only excluded specialties (TIN Type D). Empirical numbers show that such TINs billed the lowest frequency of E/M and primary care services (PCS) compared to other TINs

Table 1. TIN’s Part B Services by TIN’s composition

Type of TIN Composition	# TIN Meet Case Minimum	% TIN	Mean # of Services Per Beneficiary	
			E/M Services	PCS Services
A. NP/PA/CNS only	4,961	7.6%	3.75	0.67
B. Included specialties only	32,160	49.3%	4.21	2.52
C. NP/PA/CNS and included specialties	10,377	15.9%	4.27	3.10
D. NP/PA/CNS and excluded specialties	6,559	10.1%	1.92	1.38
E. Included and excluded specialties	2,188	3.4%	2.85	2.24
F. NP/PA/CNS, included and excluded specialties	9,032	13.8%	3.30	2.98

Note: To identify TIN composition for this analysis, NP/PA/CNS were not considered included specialties.

¹ More information on this methodology is available in the TPCC Measure Information Form, available for download from this zip file: <https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2654/2024-cost-measure-information-forms.zip>

² The list of included and excluded specialty codes is available in the TPCC Measure Codes List. The TPCC Codes List, which details the codes used to construct the measure, is available for download from this zip file: <https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2653/2024-cost-measure-codes-lists.zip>

This approach directly addresses stakeholder concerns by identifying the advanced care practitioners that could result in specialty TINs being attributed the TPCC measure. Implementing this refinement would remove 10.1% of TINs from the measure at the reporting case minimum, while only removing 0.8% of beneficiaries (as shown in Table 2). Using HCFA specialty designations can be less precise than using billed services in identifying clinician responsibility; however, the testing results showed consistent evidence in billing patterns with the TIN specialty compositions (as shown in Table 1).

Table 2. Impact of Excluding TINs Composed of Only NP/PA/CNS and Excluded Specialties

TPCC Measure Specification	# Beneficiaries	% Difference	# Beneficiary -Month	% Difference	# TINs Meet Case Minimum	% Difference
Current TPCC	21,907,728	-	252,897,408	-	65,277	-
Excluding TINs with NP/PA/CNS and excluded specialties only	21,741,161	(0.8%)	250,510,568	(0.9%)	58,718	(10.1%)

Acumen presented the following questions for discussion:

- *Does the proposed refinement to specialty exclusions comprehensively address stakeholder concerns? Are there scenarios where this refinement would not?*
- *Is the proposed refinement too restrictive? Would this remove primary care type relationships?*
- *Are there additional approaches to refining attribution that take into account the different types of care that a clinician can furnish? E.g., clinicians who provide both specialty care and primary care*

Adjusting Candidate Event Logic

Acumen also discussed options to simplify candidate event logic. Candidate events identify clinician-patient relationships and are composed of an initial E/M “primary care” service and a second service. The second service can be either:

- **From any TIN within +/- 3 days:** Another PCS
- **From the same TIN within +90 days:** A second E/M “primary care” service OR another PCS

The intention is that the second service in a candidate event can be a PCS other than an E/M “primary care” service, representing a broader scope of care that is not restricted by specialty. The goal of this confirming event is to capture primary care relationships involving care not directly provided by a primary care practitioner. As part of the re-evaluation, Acumen asked the TEP to consider whether these rules can be simplified while still maintaining the intent of the measure to capture primary care-type relationships.

As demonstrated in Table 3, Acumen’s empirical analysis shows that restricting confirming claims has little impact on coverage. Few TINs and beneficiaries will be excluded from the

measure if we implement the following refinements: (i) remove “+/- 3 Days, Any TIN Rule” from candidate event logic and (ii) add an included specialty check on the confirming claim.³

Table 3. TPCC Measure TIN and Beneficiary Coverage

TPCC Measure Specification	# Beneficiaries	% Difference	# TINs Meeting Case Minimum	% Difference
Current TPCC	21,907,728	-	65,277	-
Removing “+/- 3 Days, Any TIN” Rule	21,544,224	(1.7%)	65,267	(0.02%)
Removing “+/- 3 Days, Any TIN” Rule AND adding specialty check on confirming claim	21,328,351	(2.6%)	65,248	(0.04%)

Acumen presented the following questions for discussion:

- *To what extent should we prioritize simplifying measure specifications? How should we determine whether the benefits of simplifying specifications outweigh other considerations?*
- *Should the measure remove the “+/- 3 days, Any TIN” rule from the triggering algorithm, and only allow the services from the same TIN within 90 days to confirm the relationship?*
- *Should the measure add a specialty check on the confirming services and/or restrict to a narrower set of confirming services?*
- *What types of care might be left out under these refinements? Would there be other unintended consequences?*

2.1.2 TEP Member Discussion

TEP members acknowledged that identifying advanced care practitioners in specialty practices is difficult given their diverse roles and responsibilities. One TEP member shared an example of this, highlighting advanced care practitioners who manage chronic diseases in endocrinology and gastroenterology and do provide primary care type services despite being in a “specialty practice”. Acumen clarified that the specialties mentioned during the session are included specialties. The TPCC measure includes specialties beyond primary care clinicians for situations such as this, where specialists are providing ongoing chronic care management. However, this example shows that on one hand, it is appropriate to classify advanced care practitioners based on other clinicians in their TIN, but on the other, this method could inadvertently exclude advanced care practitioners in specialty groups who do provide care within the intent of TPCC.

Several TEP members suggested exploring HCPCS add-on code G2211 to help better identify primary care.⁴ This code describes visit complexity inherent to outpatient E/M visits associated with medical care services that serve as the continuing focal point for all needed health care services and/or medical care services that are part of ongoing care related to a

³ This specialty check uses the same list of included specialties in attribution, as outlined in the TPCC Measure codes list, which is available for download from this zip file: <https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2653/2024-cost-measure-codes-lists.zip>

⁴ [AMA CPT Code Description Licensing](#). Codes and descriptions included are from the Current Procedural Terminology (CPT®) Copyright 2020 American Medical Association. All rights reserved.

patient’s single, serious condition or a complex condition. They mentioned that clinicians who bill this code declare that they have a primary care-type relationship with their patient and would likely be attributable under TPCC. Some TEP members felt that overall, adding the G code in addition to the existing attribution criteria would be beneficial because the use of the code signals a willingness to participate and be responsible for ongoing care of a patient. This code went into effect performance year 2024, so Acumen confirmed they will continue to monitor use of this code for potential future use. Similarly, several TEP members also asked about the use of patient relationship codes (PRCs) for TPCC attribution. Acumen noted these codes are rarely used and therefore cannot be consistently applied for TPCC attribution, though Acumen will continue to monitor future PRC use.

The TEP responded to the proposed refinements to candidate event logic (i.e., removing the “+/- 3 Days, Any TIN” rule and requiring a specialty check on the confirming claim of the candidate event), noting that there may be some unintended consequences. One TEP member explained that patients, including those that are healthy, may not see their primary care provider twice within 90 days, but may still receive other primary care-type services from other specialties or receive asynchronous services that don’t appear in claims (e.g., follow-up via patient portal). They expressed concern that simplifying the candidate event logic could result in care for these patients not being assessed under TPCC.

Lastly, some TEP members recommended further exploration of attribution-related metrics. One TEP member asked Acumen whether more NP/PAs provided care in areas experiencing physician shortages. Another TEP member asked Acumen about the location of service delivery to better estimate care types. Acumen confirmed that this input will be considered along with the other feedback received.

2.1.3 Key Takeaways

- TEP members agreed with refining TPCC attribution methodology to address the attribution of specialty groups based on the billing patterns of other clinicians within advanced care practitioners’ TINs. TEP members also acknowledged that identifying advanced care practitioners in specialty groups while maintaining the intent of the measure is difficult to balance.
- TEP members expressed concerns over unintended consequences of the proposed refinements to candidate event logic (i.e., removing the “+/- 3 Days, Any TIN” rule and requiring a specialty check on the confirming claim of the candidate event), particularly that certain primary care relationship may not be identified.

2.2 Assessing MSPB Hospital

This session focused on assessing the re-evaluated MSPB Hospital measure that is currently adopted in the Hospital Inpatient Quality Reporting (IQR) Program. Acumen presented updated testing information showing trends over time to evaluate the performance of the measure and provided questions to facilitate TEP discussion. Section 2.2.1 outlines Acumen’s presentation, Section 2.2.2 summarizes the TEP members’ discussion, and Section 2.2.3 contains key takeaways.

2.2.1 Summary of Presentation

This session discussed the scope, use, and reporting of the MSPB Hospital measure and discussed the maintained performance of the measure after refinements were made as part of a comprehensive re-evaluation in 2020.

The MSPB Hospital measure assesses costs to Medicare for services performed by hospitals and other healthcare providers during an episode of care (“episode”), comprising of the periods immediately before, during, and following a patient’s acute care hospital stay. The measure adjusts for patient comorbidities, events prior to hospitalization, and diagnostic related grouping, and covers acute hospitalizations for over 3 million patients and more than 3,000 hospitals. During the webinar, Acumen provided an overview of the steps used for constructing the MSPB Hospital measure as detailed in the Measure Information Form.⁵

The MSPB Hospital measure was originally introduced as a new claims-based measure and reported for surveillance in the Hospital IQR Program for the FY 2014 payment determination and was later finalized for inclusion in the Hospital Value-Based Purchasing (VBP) Program beginning with the FY 2015 payment determination under the Efficiency and Cost Reduction Domain. In 2020, the MSPB Hospital measure was comprehensively re-evaluated and considered prior public comment periods, research literature, and feedback from the TEP. Ultimately, three refinements were made to the measure to ensure a more comprehensive and consistent reflection of hospital performance by capturing more episodes and adjusting the measure calculation. The refinements to the measure include:

- Allow readmissions occurring in the 30-day post-discharge window to initiate a new episode, increasing the number of episodes for which a provider can be scored;
- Add a new indicator variable in the risk adjustment model for readmissions to account for differences in expected costs for episodes that are triggered by readmissions to ensure hospitals are not unfairly penalized;
- Change the measure score calculation methodology slightly to use an average episode ratio of observed costs divided by expected costs across the population of attributed episodes.

The re-evaluated MSPB Hospital measure was then adopted in the Hospital IQR Program for reporting and surveillance purposes beginning with the FY 2024 payment determination. CMS then finalized removing the re-evaluated MSPB Hospital measure from the Hospital IQR Program and adopting it in the Hospital VBP Program beginning with the FY 2028 payment determination and subsequent years.

The refinements to the measure resulted in an approximately 16% increase in the episode population included in the measure while results remained stable with an average scoring change of less than 0.004. At the 25-episode volume threshold, the MSPB Hospital measure is highly reliable at 0.89, excluding approximately 2.3% of hospitals and 0.02% of patient episodes. In addition to maintaining high reliability, the cost measure’s risk-adjustment model continues to

⁵ The Measure Information Form for the version of the MSPB Hospital measure currently in the Hospital VBP Program can be accessed from [this Hospital VBP QualityNet webpage](#); the Measure Information Form for the re-evaluated version of the measure that is in the Hospital IQR Program can be accessed from [this Hospital IQR QualityNet webpage](#).

perform well for low-cost episodes, high-cost episodes, and those in between. Further, the measure continues to demonstrate comparable score distributions across hospital by their characteristics, such as geography and safety-net status. Overall, testing demonstrates that the measure refinements from 2020 continue to have their intended impacts.

The MSPB Hospital measure is currently reported to hospitals as six tables, which include beneficiary, claims, and episode-level data and stratify costs by service type and major diagnostic category at the hospital, state, and national levels.

Acumen presented the following questions for discussion:

- *Do you have any feedback or concerns about maintaining the re-evaluated measure as is, given the data on measure performance?*
- *What data should CMS consider to incorporate meaningful health equity insights into confidential reports? Do you have suggestions on how this data should be displayed, if added?*

2.2.2 TEP Member Discussion

During the discussion, members of the TEP posed several questions about the MSPB Hospital measure's specifications and current reporting, including how observation stays that become index admissions are accounted for in the measure. Acumen clarified that the cost of services initiated in the 3-day window prior to index admission are captured by the measure.

Panelists also asked whether measure results compare specific diagnosis related groups (DRGs) to each other or to all DRGs, and whether case minimums are applied at the DRG level. Acumen clarified that all inpatient DRGs for episodes included in the measure are combined in the measure construction at the Major Diagnostic Category level and that case minimum is at the hospital level, not DRG level.

In soliciting any concerns about maintaining the re-evaluated MSPB Hospital measure as is, feedback focused on areas for future monitoring of the measure. Panelists raised the issue of how changes to Medicare's inpatient-only procedure list are causing shifts from admissions to observation stays that are impacting costs. Specifically, in cases where a procedure can now be performed as an outpatient (e.g., hip and knee arthroplasty), is there a shift to observation stays rather than admissions that might be blunting increases in cost or increasing the acuity of admitted patients? Acumen agreed that this issue of cost shifting would be interesting to monitor.

One panelist said it would be appropriate to continue looking at how index admissions and readmissions are identified to avoid double counting and make the distinction between what counts as an admission versus a readmission in the measure clearer. In the FY 2023 IPPS/LTCH final rule, CMS noted that the costs where two episodes (one triggered by an index admission and one triggered by a readmission that occurred within the 30-day post-discharge period of the index admission) overlap would be counted towards each episode, and that services being assigned to these episodes would only be counted once per episode – in other words, costs would not be double counted. Panelists also raised the issue of incorporating Medicare Advantage data into the measure in the future, and examining how the measure might need to change when that data is added. Acumen agreed that the assumptions included in the measure must be revisited if

the Medicare Advantage data, and the population using such services, were considered by the measure.

The panel had several suggestions for meaningful ways to stratify the measure results to address equity issues. One panelist suggested using data on avoidable hospitalizations or ambulatory sensitive conditions. Another panelist agreed that it would be a good idea to provide data that separates out components of episodes, and using distributions of these components to identify care that has potentially been avoided.

TEP discussion around presenting equity data focused on the issue of how missingness in equity data results in small numbers in individual strata and impacts the ability to draw conclusions from this data. One panelist agreed with looking at stratification on race and disability status, but recommended providing information on how complete the data is. They recommended erring on the side of providing data in confidential reports with caveats regarding missing data and how that may impact that the ability to draw conclusions from the data presented. This panelist also suggested developing criteria for how much data is required to stratify results.

2.2.3 Key Takeaways

- The TEP suggested monitoring the ways that changes in policy, such as updates to the inpatient-only procedure list, impact the measure.
- The TEP expressed support for providing stratification using equity data in confidential reporting but raised issues with data completeness and interpretation of results.

2.3 Using Cost Measures to Assess Value

During this session, Acumen provided a brief recap of previous TEP guidance on assessing mortality in cost measures and an overview of other areas not covered by cost measures. Acumen presented a case study of a companion mortality measure to illustrate how the episode-based cost measure (EBCM) framework could be used to build paired outcome measures in filling these measurement gaps. Acumen then discussed with the TEP potential applications of such companion metrics and their use in improving patient experience. Section 2.3.1 outlines Acumen's presentation, Section 2.3.2 summarizes the TEP members' discussion, and Section 2.3.3 contains key takeaways.

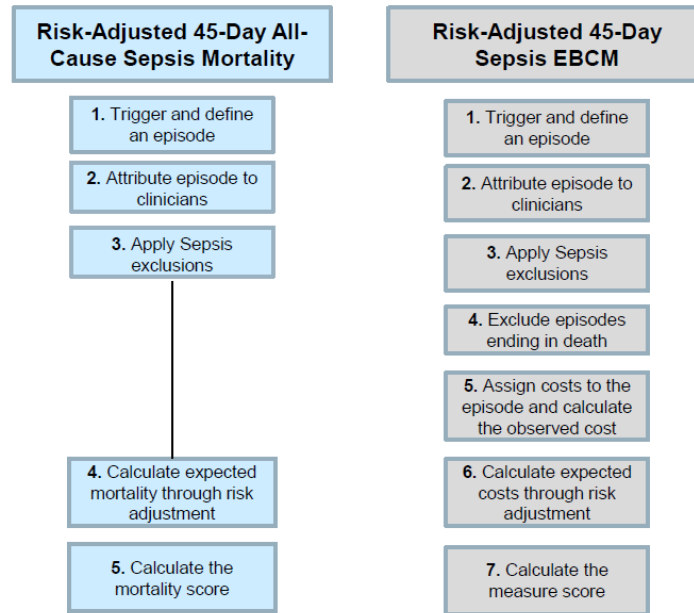
2.3.1 Summary of Presentation

Acumen has been interested in exploring options for assessing mortality because it is one of several aspects of care that are not currently directly captured in EBCMs. Acumen began this session by reviewing aspects of care that are included in episode-based cost measures (i.e., clinically related services furnished within the episode window) and aspects that are not, such as mortality or functional status.

By definition, episodes ending in death are excluded from EBCM construction because the relationship between cost and mortality is not straightforward and not all mortality-associated costs may be captured by the measure. Still, the TEP previously recognized that mortality is an important outcome to capture and recommended exploring episodes ending in death through a separate quality measure to pair with EBCMs. Acumen also observed that mortality is not commonly assessed or reported in MIPS; as such, a claims-based assessment of mortality could be another opportunity to more consistently measure such outcomes.

Acumen expanded on this idea and presented a development concept where a cost measure and a companion quality measure could be developed together. As proof of concept, Acumen presented a case study in which a sepsis mortality measure could be developed using almost the same specifications of the Sepsis EBCM, as depicted in Figure 1. Acumen emphasized that sepsis mortality was chosen as an example to illustrate the development of paired outcome measures alongside cost measures due to high mortality rates associated with sepsis. However, the intent of the discussion was not limited to the clinical topic of sepsis.

Figure 1. Steps to Calculate Mortality Metric Using EBCM Specifications



The results show that the companion mortality measure performs well, even when constructed using the specifications of the EBCM with minimal changes. Specifically, at the 20-episode case minimum, reliability is 0.79 at the TIN level and 0.53 at the TIN-NPI level, both estimates above the minimum 0.4 threshold established by CMS. The risk adjustment is well-calibrated across the full range of mortality risk, with the differences between expected mortality rate and observed mortality rate across each quintile of expected mortality varying between -0.05 and 0.02. Acumen also tested an alternative risk adjustment model using the Charlson Comorbidity Index (CCI), which was designed to predict a patient’s 10-year mortality. This exercise showed that an EBCM’s standard risk adjustment model, which uses the CMS Hierarchical Condition Category (HCC) model, performs similar to a mortality-specific risk adjustment model. Therefore, the simple approach of using almost the same EBCM specifications showed encouraging results in building a reliable paired measure.

The results also indicate that it could be appropriate to have a separate companion quality measure in the sepsis example because providers who perform well on cost are not immediately good performers on quality, and vice versa, as shown in Table 4. The low correlation between cost and quality also reaffirms that measuring cost is important because cost efficiency can be achieved without sacrificing quality.

Table 4. Comparison of Performance Rank on Sepsis Episode-based Cost Measure and Constructed Risk-Adjusted 45-Day Sepsis Mortality Metric (CY 2022 study period)

Cost Scores	Mortality Scores							
	TIN				TIN-NPI			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Q1	6.3%	5.7%	6.1%	6.9%	6.2%	6.1%	6.4%	6.3%
Q2	4.9%	7.6%	6.3%	6.2%	6.2%	6.3%	6.4%	6.1%
Q3	5.9%	5.7%	7.2%	6.2%	6.1%	6.4%	6.2%	6.3%
Q4	7.9%	6.0%	5.5%	5.7%	6.4%	6.2%	6.0%	6.4%

In exploring operationalization of this work beyond mortality and sepsis, Acumen sought the TEP’s input on (i) additional ways to identify claims-based outcomes not captured by cost measures, (ii) considerations to align EBCM specifications in constructing companion measures, and (iii) the use of these metrics to clinicians and patients. The TEP was asked to consider the following for each discussion topic:

Table 5. Considerations for Constructing and Implementing a Companion Metric

Discussion Topic	Proposed Strategies and Considerations
Approach for identifying and prioritizing claims-based outcomes	<ul style="list-style-type: none"> For each area of care, review the clinical guidelines/fellowship curriculum for gaps around cost measures. For instance, cost measures do not currently cover episodes ending in death or condition-specific patient cohorts (e.g., lung transplant patients within the Asthma/COPD cost measure). Identify measurement opportunities of outcomes that fall outside of the episode window. EBCM attribution windows aim to align with MIPS performance periods and thus do not include services whose care outcomes may only be captured in the long term. For example, the Heart Failure EBCM excludes left ventricular assist device (LVAD) patients, as its outcomes may only be observed years after insertion.
Aligning EBCM specifications with outcome metrics	<ul style="list-style-type: none"> The EBCM scope may limit companion measures to only the areas it covers (e.g., the Sepsis episode-based cost measure captures inpatient medical treatment but not surgical treatment). A companion metric may also need to focus on specifications that are not included in a given EBCM’s patient cohort. For instance, the non-emergent CABG EBCM limits assessment of outcomes after emergent or acute CABG where there may be a bigger performance gap in quality. The risk adjustment model used in companion metrics may vary depending on the outcome being measured.
Use of companion metric to improve patient care	<ul style="list-style-type: none"> Performance on paired outcomes could be used for informational purposes (e.g., clinicians would be able to review their performance on mortality in their MIPS feedback reports). If performance on a companion metric were to be part of a group or clinician’s score, there are potential scoring methods, such as: <ul style="list-style-type: none"> Companion metric is scored in tandem with EBCMs, with equal weighting Companion metric and EBCM are scored with a quality frontier, where providers with highest mortality are deemed “worst”, irrespective of cost

Based on the topics in Table 5, Acumen presented the following questions for discussion:

- *What are other approaches identifying and prioritizing claims-based outcomes for measure development?*
- *How closely aligned should a mortality and cost metric be to assess value?*
- *How useful would it be for clinicians to receive mortality information alongside cost?*

2.3.2 TEP Member Discussion

The TEP agreed that mortality is an important outcome to measure, but recommended caution in exploring this topic alongside cost. One panelist did not see mortality as an outcome that needs to be tied into cost, and believed that the quality measure “Hybrid Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality”, available for use in the Hospital Inpatient Quality Reporting (IQR) Program starting in FY 2027, would be more appropriate to capture this outcome globally in hospital performance.

One panelist was curious about the choice of sepsis as a high-mortality condition for this case study, given the robust number of quality measures that have been created to assess care in the area. The TEP member was concerned that the rate of mortality for sepsis patients has not decreased historically. While Acumen does not have data on how sepsis mortality has shifted since the implementation of sepsis quality measures, the predominant trend of higher sepsis mortality may suggest that there is room for further measurement in this area.

The TEP was also interested in exploring measures that improve care and reduce cost. One panelist pointed to the National Quality Forum’s paper “Efficiency and Value in Healthcare: Linking Cost and Quality Measures” as a useful resource for further considerations of how to best consider pairing cost and quality measures.⁶ The paper highlights that a quality measure must fundamentally be aligned with a cost measure. Another panelist was interested in analyzing the impact of both quality and cost measures over time to assess the shifts in value of care. The TEP member was interested in this assessment to identify interventions that effectively benefit patients as areas of prioritization.

Finally, the TEP expressed support for displaying information of clinician performance on paired outcome metrics in MIPS Feedback Reports, but was not in favor of implementing through scoring. They were concerned that assessing cost alongside mortality would potentially create disincentives for clinicians to save patients. Clinicians may also have different abilities to influence death based on their practice and availability of resources. Acumen clarified that both EBCMs and companion metrics use risk adjustment to account for difficulty of the case and patient complexity (i.e., how easy or hard it is to achieve an outcome that is different than expected). Finally, Acumen encouraged the TEP to provide further feedback on potential ways to assess value related to cost measures, beyond mortality or sepsis.

2.3.3 Key Takeaways

- The TEP agreed that mortality is an important outcome to measure, but recommended caution in doing so along cost.
- The TEP emphasized the need for alignment between cost and quality measures to more completely assess value of care.

⁶ National Quality Forum’s “*Efficiency and Value in Healthcare: Linking Cost and Quality Measures*” is available for download: https://www.qualityforum.org/Projects/i-m/Linking_Cost_and_Quality_Measures/Final_Paper.aspx

- The TEP expressed support for displaying performance on companion outcome metrics alongside cost in MIPS Feedback Reports for informational purposes.

2.4 Public Reporting Cost Performance Data

This session focused on actionable refinement areas for public reporting cost performance data. It also included a group user testing session where members of the panel reviewed the latest version of the display mock-up of Doctors and Clinicians (DAC) profile pages and provided feedback on ways they can be improved. Section 2.4.1 outlines Acumen's presentation, Section 2.4.2 summarizes the TEP members' discussion, and Section 2.4.3 contains key takeaways.

Acumen began its presentation with an overview of the Medicare.gov site⁷, which reports MIPS performance data and demographic data in the profile pages for clinicians and groups. One of the fundamental goals of Medicare.gov is to empower beneficiary and caregiver decision-making and support clinician referrals. The public reporting standards require that performance data displayed on the site all be statistically valid, reliable, accurate, comparable across collection types, and relevant to website users. Acumen currently reports performance data from all MIPS categories except cost.

Acumen discussed the value of publicly reporting cost measures on Medicare.gov doctor and clinician profile pages. Early consumer testing indicates that consumers have an interest in viewing cost information. Adding cost measure information to doctor and clinician profile pages, alongside quality measures, would provide consumers with information on the value of care provided by clinicians and groups. This could further empower decision-making regarding care selection or referrals.

Finally, Acumen discussed the potential obstacles and ways to surmount them. Findings from early consumers have shown that some consumers associate higher costs with more attentive care or extensive treatments and testing. However, high costs are often driven by complications, while lower costs are often driven by fewer adverse outcomes and subsequent associated care. In order to make cost performance useful in consumer decision making additional information, such as quality measure performance, must be presented alongside cost measures to provide consumers contextualizing information to correct this misconception. Another approach for consideration is publicly reporting the components of the cost measure. Cost components are clearly tied to distinct dimensions of quality, and can provide information on the use of specific services and clinically related complications. Cost components could be consistently reported and may allow patients to understand what is driving costs.

Acumen shared consumer testing mock display profile pages to provide the TEP with an idea of how this information might be displayed on doctor and clinicians profile pages. Acumen presented the following discussion questions on identifying potential refinements or enhancements for public reporting cost performance data on profile pages:

- *Is there value in increasing consistency of published information, specifically cost measure performance, available to consumers?*

⁷ <https://www.medicare.gov/>

- *Is there value in showing meaningful contextualizing information alongside cost measures, specifically component costs?*
- *How would you want your own cost measure performance represented?*
- *How would you want to see other clinicians' cost measure performance for the purpose of referring one of your established patients?*
- *How would you explain to a patient why cost measures are: Important? Useful?*
- *How would you relate or differentiate the costs to Medicare represented in these measures to a patient's out-of-pocket costs?*

2.4.1 TEP Member Discussion

TEP members provided feedback on the types of information presented on the Care Compare site. A TEP member commented on the importance of grouping surgeons by region, in order to account for regional differences between costs. The inflated costs that hospitals present to patients could be higher than what the Care Compare site would display as average costs; and they advised that this mismatch would confuse patients if not accounted for. Acumen noted that detailed descriptions are provided alongside each episode-based or global cost measure, to aid consumer understanding. Additionally, one panelist asked whether the Care Compare site would demonstrate or explain conditions that would make a certain physician's cost higher, such as participating in particular program that could drive up their costs beyond their control. Another member also raised the importance of accounting for the difference between rural and urban geographic location. Acumen noted that cost measure scores are standardized to account for such conditions.

Additionally, one TEP members raised concerns about the granularity of the statistics used to report cost measure information and how to align cost components to quality measures. They noted that if the data used to calculate cost measure scores and quality measure scores do not use similar components, such as the same providers, the same services, the same time period, then alignment may not exist. They also raised concerns that specialty providers are leaving the workforce, which subsequently impacts costs and the availability of quality care.

Some TEP members were supportive of tracking the demographics of Care Compare site visitors and the number of visits they make. While Acumen does not have those statistics, but we could start tracking them. One member suggested that the likely audience for the Care Compare site includes navigators/caregivers and people who are afflicted with some kind of condition. Furthermore, they indicated that this audience likely did not search for the Care Compare site directly, but rather was directed to the site by other channels. Identifying those channels would aid Acumen's work with the Care Compare site. Finally, they stressed the importance of distinguishing between traditional Medicare and Medicare Advantage (MA) in order to not confuse the many beneficiaries of MA who might go to the Care Compare site for information (since the Care Compare site only handles traditional Medicare).

Finally, TEP members were interested in how Acumen approached user testing for the Care Compare site. Specifically, they asked whether Acumen tests clinicians in addition to caregivers. Acumen clarified that we do have clinician workgroups providing feedback and that this TEP meeting itself includes clinician feedback.

2.4.2 Key Takeaways

- The TEP suggested that Acumen consider presenting cost measure information to consumers so that Part A and Part B costs are kept separate, and clarify that cost information represents costs to Medicare for covered services and not consumer out of pocket costs.
- The TEP suggested to account for regional differences between costs.
- The TEP recommended distinguishing between traditional Medicare and Medicare Advantage, reminding consumers that cost measure information publicly reported applies only to traditional Medicare.

3 NEXT STEPS

The input provided by this TEP will help inform future measure development and measure maintenance activities. After the meetings, Acumen followed up with TEP members on their feedback and recommendations, gathering targeted input through a post-meeting survey. Based on the guidance received during the meetings and the survey responses, Acumen will carefully consider the next steps below. CMS will also consider all input it receives, from this TEP and other public input opportunities, regarding the MIPS cost performance category's policies and measures for future policymaking. CMS may consider any proposals to adopt or modify MIPS policies or measures for future rulemaking.

- **TPCC Re-evaluation:** Acumen will continue to consider potential revisions to the TPCC candidate event and risk adjustment methodology based on TEP member feedback and additional public feedback.
- **Assessing MSPB Hospital:** We will continue monitoring the re-evaluated MSPB Hospital measure and explore the considerations that the TEP's suggested (e.g., the shift from inpatient stays towards observation stays and how this may impact costs) as well as clinical considerations for stratification to provide hospitals with actionable information (e.g., equity data).
- **Using Cost Measures to Assess Value:** We will use the TEP's input to consider a framework for identifying outcomes to be paired with cost measures. We will also continue exploring the concept of value based on the TEP's recommendations to more closely align cost and quality assessments and provide additional information on clinician performance.
- **Public Reporting Cost Performance:** Acumen will utilize feedback and input from the TEP to inform future rounds of cost measure testing prior to considering the measures for public reporting on doctor and clinician profile pages on Medicare.gov. Specifically, we will continue to explore plain language and cost measure contextualizing information to ensure that consumers can utilize cost performance, alongside other information such as quality performance, to make informed healthcare decisions.

4 APPENDIX A: TEP MEMBER COMPOSITION

The table below includes the full list of TEP members, their professional roles, and their affiliated professional organizations.

Table A1. PCMP TEP Composition

Name, Credentials	Professional Role	Organizational Affiliation, City, State
Anita Bemis-Dougherty, PT, DPT, MAS	Vice President, Clinical Practice, APTA	American Physical Therapy Association, Alexandria, VA
Akinluwa (Akin) Demehin, MPH	Senior Director of Quality and Patient Safety	American Hospital Association, Washington, DC
Kurtis Hoppe, MD	Physical Medicine and Rehabilitation Physician	American Academy of Physical Medicine and Rehabilitation, Rochester, MN
Caroll Koscheski, MD, FACG*	Gastroenterologist	American College of Gastroenterology, Hickory, NC
Alan Lazaroff, MD	Geriatrician	American Geriatrics Society, Centennial, CO
Shirley Levenson, PhD, FNP-BC, PMHNP-BC*	Psychiatric Mental Health Nurse Practitioner	American Academy of Nurse Practitioners, Caldwell, TX
Robert Leviton, MD, MPH, FACEP, FAMIA	Physician Advisor	American Medical Informatics Association, Mamaroneck, NY
Edison Machado, MD, MBA*	Chief Strategy Officer and Senior Vice President, IPRO	American Health Quality Association, Lake Success, NY
James Naessens, MPH, ScD	Emeritus Professor of Health Services Research	Mayo Clinic, Rochester, MN
Shelly Nash, DO, FACOOG*	Senior Vice President, Global Chief Medical Information Officer	Fresenius Medical Care, Altamonte Waltham, MA
Parag Parekh, MD, MPA*	Ophthalmologist	American Society of Cataract and Refractive, Surgery Dubois, PA
David Seidenwurm, MD, FACR	Neuroradiologist, Network Medical Director, Quality and Safety Medical Director, Sutter Medical Group	American College of Radiology, Sacramento, CA
Mary Fran Tracy, PhD, RN, APRN, CNS, FCNS, FAAN	Associate Professor, Assistant Dean, and Director of Graduate Studies, University of Minnesota	National Association of Clinical Nurse Specialists, Minneapolis, MN
Janice Tufte*	Patient Advisor	Society for Participatory Medicine, Seattle, WA
Ugochukwu (Ugo) Uwaoma, MD, MBA, MPH, FACP	CEO of Resolute Care	Trinity Health of New England, Hartford, CT
Danny van Leeuwen, RN, MPH	Patient Advisor	Health Hats, Arlington, MA
Michael Wasserman, MD, CMD	Geriatrician	California Association of Long Term Care Medicine, Newbury Park, CA
Gregory Wozniak, PhD	Vice President, Health Outcome Analytics, Health Outcomes Group	American Medical Association, Washington, DC
Adolph Yates, Jr., MD	Academic Orthopedic Surgeon	American Association of Hip and Knee Surgeons, Pittsburgh, PA
Johnnie Sue Wijewardane, PhD, FNP-BC, FAANP	Vice President of Professional Practice	American Association of Nurse Practitioners

*Denotes members unable to attend the meeting.

5 APPENDIX B: PCMP COST MEASURE PROJECT TEAM

The multidisciplinary Acumen measure development team includes individuals with knowledge and expertise in cost measure development, clinical practice, healthcare policy and financing, pay-for-performance and value-based purchasing, and quality improvement. The following 24 individuals from the project team contributed to and attended the TEP:

- David Moore, Moderator
- Sri Nagavarapu, Co-Project Director
- Joyce Lam, Co-Project Director
- Allie Newsom, Co-Project Manager
- Sam Bounds, Co-Project Manager
- Heather Litvinoff, Senior Clinical Researcher
- Tyffany Chen, Senior Clinical Researcher
- Laurie Feinberg, Senior Clinical Researcher
- Ken Tran, Senior Researcher
- Binglie Luo, Senior Statistician
- Lucy Wu, Senior Researcher
- Elizabeth Peters, Policy Lead
- Sarah Sabbagh, Policy Associate
- Duy Pham, Policy Associate, Statistical Programming
- Joel Papke, Analyst, Statistical Programming
- Kai Kargbo, Analyst, TEP Coordinator
- Maria Figueiredo, Analyst
- Hanna Hassan, Analyst
- John Hunt, Analyst, Statistical Programming
- Shawn Ho, Analyst, Statistical Programming
- Bilaal Azeer, Analyst, Statistical Programming
- Erin Mundy, Analyst
- Tina Rodriguez, Researcher, Statistical Programming
- Yi-Ching Lin (Millie), Analyst, Statistical Programming