2019 Medicare Quality Payment Program FAQs: Cost Category

This document is a supplement to the AMA’s 2019 MIPS Action Plan and provides additional information about the Cost category of the 2019 Merit-Based Incentive Payment System (MIPS) under the Quality Payment Program (QPP).

Relationship between the Cost Category and other MIPS Components

Q1. What is the Cost category?
A. The Cost category will compare the cost of services provided to patients attributed to a MIPS-eligible clinician to a national benchmark. The Cost category differs from the other components (Quality, Improvement Activities, Advancing Care Information) upon which a MIPS-eligible clinician’s overall MIPS score is based because it is calculated by CMS using only administrative claims data, rather than performance data reported by you. It is therefore important to understand how CMS will be using claims data to calculate your performance in this category.

Q2. How will I be evaluated under the Cost category if I work for a hospital?
A. Starting in 2019 (for the 2021 MIPS payment year), CMS will score hospital-based clinicians based on the facility in which they provide most of their services. An eligible clinician is facility-based if he or she furnishes 75 percent or more of his or her covered professional services in inpatient hospital or emergency room settings, based on a claims year claims for a period prior to the performance period as specified by CMS. A facility-based group is a group in which 75 percent or more of its eligible clinician NPIs billing under the group’s Taxpayer Identification Number (TIN) meet the facility-based individual determination. If an individual or group is facility-based, then it does not need to report data on Quality or Cost. Instead, CMS will calculate a score for the individual or group using the Total Performance Score methodology adopted for the Hospital Value Based Purchasing (VBP) Program, for the fiscal year for which payment begins during the applicable MIPS performance period. If a facility-based clinician provides services in multiple locations, he or she is attributed to the hospital at which they treat the most Medicare patients, and a facility-based group is attributed to the hospital at which a plurality of its facility-based clinicians are attributed. If there are an equal number of Medicare beneficiaries treated at more than one facility, the VBP score for the highest scoring facility is used.

Q3. What kinds of clinicians are “MIPS-eligible clinicians” in 2019?
A. Previously, MIPS-eligible clinicians included physicians, physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists, and groups that included such professionals. For 2019, CMS expanded the list to include the following additional clinician types: physical therapist, occupational therapist, qualified speech language pathologist, qualified audiologist, clinical psychologist, registered dietician or nutrition professional, and a group that includes such clinicians.
You can choose to report and be scored under MIPS as either an individual eligible clinician or a group. The term “MIPS-eligible clinician” is defined as an individual physician, a physician assistant, a nurse practitioner, a clinical nurse specialist, a certified registered nurse anesthetist, a physician therapist or occupational therapist, a qualified speech-language pathologist, a qualified audiologist, a clinical psychologist, a registered dietician or a nutrition professional, in each case as identified by a unique TIN and NPI combination; the term “group” refers to a single TIN with two or more eligible clinicians who have reassigned their right to bill Medicare to the group.

Q4. How much does the Cost category factor into my overall MIPS score?
A. For those with enough applicable cases to calculate a Cost score, this category will account for 15 percent of a MIPS-eligible clinician’s or group’s overall MIPS score in 2019. The other three components make up the remainder of the MIPS score as follows: Quality – 45 percent; Promoting Interoperability (PI) – 25 percent; and Improvement Activities (IA) – 15 percent. If an eligible clinician or group does not have the sufficient cases required for the Cost category, the remaining three categories will be reweighted so Quality accounts for 60 percent of the final score; Cost – 0 percent; PI – 25 percent; and IA – 15 percent. Additionally, clinicians and groups participating in a MIPS APM will have their scores reweighted so cost accounts for 0 percent of their final MIPS score.

Q5. What are the components of the Cost category?
A. In 2019, the Cost category is comprised of ten measures:

1. **Medicare Spending Per Beneficiary (MSPB)**. This measure includes Medicare Part A and Part B claims submitted for services from three days prior to 30 days after an inpatient hospitalization and attributes all of these costs to the physician with the most (plurality of) Part B charges during the period from the patient’s inpatient admission to discharge date. The minimum number of eligible cases for the MSPB Cost category is thirty-five (35).

2. **Total Per Capita Cost (TPCC)**. The TPCC measures all Medicare Part A and Part B costs for patients attributed to the individual primary care clinician with the most allowed charges for primary care services during the 2019 performance period. The minimum number of eligible cases for the TPCC category is twenty (20). If a beneficiary did not receive a primary care service from a primary care clinician, he or she may be attributed to a specialist physician who provided the plurality of primary care services to the beneficiary.

3. **Eight Episode-Based Measures**. Episode-based measures are calculated using Medicare Parts A and B fee-for-service claims data and are based on episode groups that represent a clinically cohesive set of medical services rendered to treat a given medical condition. CMS aggregates the cost of all items and services provided for a defined patient cohort to assess the total cost of care. The eight episode-based measures used for the Cost category for 2019 are:

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Measure Type</th>
<th>Case Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective Outpatient Percutaneous Coronary Intervention (PCI)</td>
<td>Procedural</td>
<td>10</td>
</tr>
<tr>
<td>Knee Arthroplasty</td>
<td>Procedural</td>
<td>10</td>
</tr>
<tr>
<td>Revascularization for Lower Extremity Chronic Critical Limb Ischemia</td>
<td>Procedural</td>
<td>10</td>
</tr>
<tr>
<td>Routine Cataract Removal with Intraocular Lens (IOL) Implantation</td>
<td>Procedural</td>
<td>10</td>
</tr>
<tr>
<td>Screening/Surveillance Colonoscopy</td>
<td>Procedural</td>
<td>10</td>
</tr>
<tr>
<td>Intracranial Hemorrhage or Cerebral Infarction</td>
<td>Acute inpatient medical condition</td>
<td>20</td>
</tr>
<tr>
<td>Simple Pneumonia with Hospitalization</td>
<td>Acute inpatient medical condition</td>
<td>20</td>
</tr>
<tr>
<td>ST-Elevation Myocardial Infarction (STEMI) with Percutaneous Coronary Intervention (PCI)</td>
<td>Acute inpatient medical condition</td>
<td>20</td>
</tr>
</tbody>
</table>
Q6. What does it mean if we do not satisfy the case minimum threshold for a measure?
A. CMS will calculate a Cost score based on a combination of all the Cost measures for which you (or your group) qualify. However, CMS will not calculate a score in the Cost category if you (or your group) do not meet the case minimum for at least one of the measures.

Q7. What happens if none of the cost measures are available to me?
A. If you do not meet the case minimum threshold for at least one of the Cost measures – or you are otherwise ineligible for any of the Cost measures - you will not be scored on costs and the 15 percent Cost category weight will be transferred to the Quality category, raising the percentage of your score from 45 percent to 60 percent.

Q8. How are these measures converted to a score?
A. Each measure is worth up to 10 points but a measure is only used in the score if the physician or group met the measure's minimum case threshold. Performance on each measure is compared to a benchmark that is determined annually based on performance year data. Therefore, although the methodology of each measure is published in advance, the actual cost benchmarks for each eligible clinician or group are not published in advance. A score for the category (expressed as a percentage) is then calculated by dividing the total points that were achieved to the total points available for the attributed measures.

Q9. What is the improvement score?
A. The law that created the QPP required CMS to begin rewarding physicians for cost improvements starting in the second year of the program. However, the Bipartisan Budget Act of 2018 delayed implementation of the improvement score and CMS finalized in rulemaking that it will not calculate a cost improvement score until 2024. Thus, CMS will not calculate a cost improvement score in 2019.

Q10. Is the Cost category new to MIPS in 2019?
A. No. However, the Cost category will be calculated and weighted differently in 2019 than in prior years. During the 2018 MIPS performance period (2020 Medicare Part B reimbursement year), CMS calculated the Cost performance category score based on the MSPB and TPCC measures only and weighted the category at 10 percent when calculating a MIPS score. The addition of the eight episode-based measures to calculate the Cost performance category score and weighting the category at 15 percent represent changes to MIPS in 2019.

Q11. How Do MIPS Eligible Clinicians Report Under the Cost category?
A. Clinicians and groups do not need to submit information for the Cost category as each MIPS eligible clinician’s or group’s performance will be calculated using Medicare administrative claims data that has already been submitted for billing purposes.

Q12. What data does CMS use to determine performance in the Cost category?
A. The data source for all 10 measures is all Medicare Parts A and B final action claims during the 2019 performance period. These include inpatient hospital, outpatient, skilled nursing facility, home health, hospice, durable medical equipment, prosthetics, orthotics, and supplies, and Medicare Part B (non-institutional Physician/Supplier) claims.

Q13. What costs does CMS review in its analysis of the “Cost” category?
A. The MSPB measure assesses total Medicare Parts A & B costs incurred by a single beneficiary immediately prior to, during, and 30 days following a qualifying inpatient hospital stay and compares these observed costs to expected costs.

The TPCC measure assesses total Medicare Parts A & B costs for a beneficiary during the performance period by calculating the risk-adjusted, per capita costs for beneficiaries attributed to an individual clinician or group of clinicians.

The episode based measures assess Medicare Parts A & B costs based on episode groups.

Under the Bipartisan Budget Act of 2018, CMS will only consider Medicare Part B costs if they relate to “covered professional services.” Therefore, reimbursement for Medicare-covered “items” such as drugs, may not be included. CMS may issue additional rules or guidance in the future to help providers understand whether or not specific codes billable under Medicare Part B will be included in the Cost calculation.

Q14. How are the cost measure benchmarks established?
A. CMS establishes a single price-standardized national benchmark for each of the TPCC, MSPB, and episode measures each year, based on the current performance period. This means that the measure benchmarks reflect the same payment rate for a particular service regardless of the region in which it is provided. Because the benchmarks are tied to the current year, rather than
Medicare Spending Per Beneficiary Measure

Q15. What is the Medicare Spending Per Beneficiary (MSPB) measure?
A. The MSPB measure includes the cost of all Part A and Part B services for covered professional services, performed immediately prior to, during, and following a patient’s inpatient hospital stay.

Q16. When does a MSPB episode begin and end?
A. A MSPB episode begins 3 days prior to the index hospital admission and ends 30 days after hospital discharge, and is risk adjusted for patient’s age and severity of illness.

Q17. Which patients’ costs are excluded from the MSPB measure calculations?
A. Generally, the costs for all attributed patients that are Medicare beneficiaries are included in the MSPB measure calculation, unless:

1. The patient was not continuously enrolled in both Medicare Parts A and B from 93 days prior to the index admission through 30 days after discharge;
2. The patient dies during the MSPB episode;
3. The patient is enrolled in a Medicare Advantage plan or Medicare is the secondary payer at any time during the MSPB episode or 90 day look back period;
4. The index admission did not occur in a hospital paid under the Inpatient Prospective Payment System (IPPS) or an acute hospital in the state of Maryland;
5. The discharge from the index admission occurred in the last 30 days of the 2019 performance period;
6. The index admission ends in a hospital transfer or begins because of a hospital transfer;
7. The index admission occurs within 30 days of another MSPB episode; or
8. The index admission inpatient claim results in a Medicare actual or standardized payment of $0.

Q18. How is the MSPB measure calculated?
A. The MSPB measure compares observed and expected episode costs. Specifically, CMS performs the calculation in five steps:

1. Identify patient population of index admissions.
2. Calculate the standardized cost of each MSPB episode by summing all standardized Medicare claims payments made during the MSPB episode. Payment-standardization adjusts for payments unrelated to provision of care, such as add-on payments for medical education and geographic variation in Medicare reimbursement rates. It does not include an adjustment for site of service—e.g., hospital outpatient versus physician office.
3. Calculate expected episode costs using a model based on comorbidities included in the CMS Hierarchical Condition Categories (CMS-HCCs). CMS also risk adjusts for patient age.
4. Exclude statistical outliers to mitigate the effect of high- and low-cost episodes on the MIPS eligible clinician’s score on the measure.
5. Attribute the MSPB episode to the Medicare Taxpayer Identification Number/National Provider Identifier (TIN-NPI) responsible for the plurality of Part B Physician/Supplier services during the index admission.

Q19. How does CMS determine attribution for purposes of the MSPB measure?
A. Costs under the MSPB measure are attributed to the individual clinician (as identified by his or her TIN-NPI) who billed the plurality of Part B allowed charges during the index hospitalization and thus who will be attributed the episode, CMS considers those Medicare Part B services billed by MIPS-eligible clinicians that occurred:

1. Three days prior to the admission date in an inpatient, outpatient, or emergency room setting;
2. During the index hospital stay, regardless of place of service; and
3. On the discharge date with place of service restricted to inpatient hospital.

Q20. How does CMS determine MSPB attribution in cases where more than one clinician provides services related to an inpatient admission?
A. CMS will first attribute the MSPB episode to the eligible clinician responsible for the plurality of allowed charges, as described in the previous question. If multiple eligible clinicians tie for the plurality of allowed charges, CMS will attribute the MSPB episode to the eligible clinician who is responsible for billing the largest number of distinct services during the index hospitalization. If multiple eligible clinicians tie on this basis as well, CMS will randomly assign the episode to an eligible clinician.
Q21. How does CMS calculate the MSPB measure for each TIN-NPI or TIN?
A. CMS calculates the MSPB measure for the eligible clinician or group by calculating the ratio of standardized observed costs over the entire episode including the 3 days prior to the admission and 30 days following it divided by the expected episode costs over the same period. CMS then multiplies that ratio by the national average cost of all MSPB episodes, and divides the resulting amount by the number of episodes attributed to that eligible clinician or group. This means that the MSPB measure is an average of cost ratios for all MSPB episodes for each eligible clinician or group (depending on whether the MIPS-eligible clinician is reporting as an individual or group).

Q22. How is the MSPB measure converted to a part of the MIPS score?
A. Once CMS calculates the MSPB score for a MIPS-eligible clinician, it compares the MSPB score against a measure benchmark. Based on the benchmark comparison, the MIPS-eligible clinician is assigned between 1 and 10 measure points, which are then combined with any of the nine other cost measures that apply to determine a score for the Cost category. CMS then divides the total assigned points by the total possible points to arrive at the Cost category score. For instance, if a clinician is only scored on the MSPB measure and receives 7 out of 10 points, his or her Cost category score would be 70%.

Total Per Capita Cost Measure
Q23. What is the Total Per Capita Cost (TPCC) measure?
A. The TPCC measure is a payment-standardized, annualized, risk-adjusted, and specialty-adjusted measure that evaluates the overall cost of Parts A and B care provided to patients attributed to clinicians, as identified by a TIN-NPI.

Q24. How is TPCC measure calculated?
A. The TPCC measure calculates risk-adjusted per capita costs for patients at the individual physician level (TIN-NPI), using Medicare Part A and Part B claims, with certain exclusions. The results are then applied at the TIN-NPI or TIN level, depending on the QPP reporting option (TIN-NPI or TIN level) chosen.

Q25. Which patient costs are included in the TPCC measure calculations?
A. The TPCC measure assesses the total cost of care for services to attributed patients by any provider, including services that occurred before and after the patient was treated by the physician to whom the TPCC episode may be attributed. Generally, the costs for all Medicare beneficiaries are included in the TPCC measure calculation, unless the patient meets one of the following conditions:

1. The patient was not enrolled in both Medicare Part A and Part B for every month during the performance period, unless part year enrollment was the result of new enrollment or death;
2. The patient was enrolled in a private Medicare health plan (for example, a Medicare Advantage HMO/PPO or a Medicare private FFS plan) for any month during the performance period; or
3. The patient resided outside the United States, its territories, and its possessions during any month of the performance period.

Q26. How does CMS determine attribution for the TPCC measure?
A. CMS attributes patients to a single TIN-NPI by looking at allowed charges for specific primary care services under Part A and covered professional services under Part B, as well as the specialties of clinicians who performed these services.

Only patients who received a primary care service during the MIPS performance period are attributed for purposes of the TPCC measure. Primary care services include outpatient evaluation and management services, as well as initial Medicare visits, annual wellness visits, and transitional care, chronic care and complex chronic care management. Evaluation and management care associated with skilled nursing facility patients is not included, but visits to patients receiving lower level nursing facility care are included.

If a patient received a primary care service during the MIPS performance period, the total Parts A and B costs will be attributed to the primary care provider (primary care physician, nurse practitioner, physician assistant, or clinical nurse specialist) from whom the patient received the largest share of primary care services (as measured by Medicare allowed charges during the performance period). If none of the designated services to that patient were delivered by a primary care provider, then
the patient would be attributed to the non-primary care clinician with the most allowed charges for the designated services.

If two TIN-NPIs tie for the largest share of a patient’s primary care services, the patient will be attributed to the TIN-NPI that provided primary care services most recently.

Q27. Does CMS standardize payments when calculating the TPCC measure?
A. Yes. CMS calculates payment-standardized per capita costs to adjust for payments unrelated to provision of care, such as add-on payments for medical education and geographic variation in Medicare reimbursement rates. There is no adjustment for payment differences associated with whether a patient was treated in a physician's office or a hospital outpatient department.

CMS also annualizes costs to account for Medicare patients who were enrolled in Medicare Parts A and B for only part of the year, as these patients may be attributed to a TIN-NPI if the reason for their partial year enrollment was either that they were new enrollees in Medicare at some time other than the start of the calendar year, or they died during the calendar year.

Q28. Does CMS adjust the TPCC measure for patient mix or specialty care?
A. Yes. CMS will risk-adjust costs to account for certain beneficiary-level risk factors that can affect medical costs, regardless of the care provided. To estimate the expected per capita cost for each beneficiary, the TPCC methodology risk adjusts for two measures of beneficiary risk: (1) the beneficiary’s CMS-HCC risk score; and (2) End Stage Renal Disease (ESRD) status. Note that the CMS-HCC risk score captures dual eligible status and age.

Unlike the MSPB, the TPCC will also be adjusted to compare the TIN’s or TIN-NPI’s costs to an expected cost that is reflective of the specialty or specialties of physicians in the practice. CMS makes this adjustment by calculating a national average per capita cost for each billing specialty, which is the weighted average of each TIN’s or TIN-NPI’s risk-adjusted costs. For a MIPS-eligible clinician reporting as a multi-specialty group, the group’s expected specialty-adjusted costs will be weighted based on the Medicare Part B payment share of each TIN-NPI specialty within the group.

Q29. How will the score for the TPCC measure be calculated?
A. CMS will calculate the TPCC measure for the eligible clinician or group by summing the risk-adjusted, specialty-adjusted total per capita cost across all attributed patients for an eligible clinician or group (depending on the level of reporting), divided by the number of attributed patients for the eligible clinician or group.

Episode-Based Measures

Q30. How are the acute inpatient and procedural episode-based measures attributed?
A. For acute inpatient medical condition measures, episodes are attributed to each MIPS-eligible clinician who bills inpatient evaluation and management (E&M) claim lines during a trigger inpatient hospitalization under a TIN that renders at least 30 percent of the inpatient E&M claim lines for that patient’s inpatient hospitalization. For example, a TIN which includes three MIPS-eligible clinicians bills 50% of total inpatient E&M claim lines during an inpatient hospitalization. Two of the clinicians each bill three inpatient E&M claim lines under the TIN, and a third bills none under the TIN. If MIPS-eligible clinicians under this TIN are scored as individual TIN/NPIs, this episode would be attributed to the clinicians who billed the three claim lines, but not the clinician who billed no claim lines. The episode would also be used to calculate measure scores and count toward the individual 20 episode case minimums for the clinicians who billed claim lines. If this TIN is instead scored as a group, the episode would be included in the calculation of the TIN’s measure score because it has exceeded the 30 percent inpatient E&M threshold. This episode would count towards the TIN’s 20 episode case minimum.

For procedural measures, episodes are attributed to each MIPS-eligible clinician who renders a trigger service, as identified by HCPCS/CPT procedure codes.

Q31. How are episode-based cost measure scores calculated?
A. To calculate the measures, CMS performs the following steps using all episodes in an episode group that are attributed to a clinician or group: (1) Calculate observed costs for each episode by aggregating Part A and Part B standardized allowed amounts for services related to a given condition or procedure that occur within the episode window; (2) Determine expected costs for each episode through risk adjustment by accounting for factors that are included in the CMS-HCC, as well as additional risk adjustors recommended
by clinical subcommittees for each episode group; and
(3) Sum the ratio of observed to expected payment-
standardized cost to Medicare for all episodes attributed
to a provider and divide that sum by the total number of
episodes attributed to the provider. This figure is then
multiplied by the national average observed episode
cost to generate the risk-adjusted average episode costs,
which represents the cost measure score.

Q32. How are episode-based cost measures scores
applied?
A. The measure score for an individual clinician (TIN/
NPI) is based on all of the episodes attributed to the
individual. The measure score for a group (TIN) is based
on all of the episodes attributed to a TIN/NPI in the given
TIN. If a single episode is attributed to multiple TIN/NPIs
in a single TIN, the episode is only counted once in the
TIN’s measure score.

Overall Cost Category Scoring
Q33. How is the overall Cost category scored?
A. A MIPS-eligible clinician receives 1 to 10 points for
each measure, based on performance compared to
the measure benchmark. Applicable measures are
weighted equally in determining a Cost category score.
If a MIPS-eligible clinician has the case minimum for only
1 measure, then the Cost score will be based only on
the 10 points available from that measure. If the MIPS-
eligible clinician does not have the case minimum for
any measure no score is assigned for the Cost category,
and the Cost category will be re-weighted at 0 percent
and the Quality category will be re-weighted at
60 percent.

The score for the Cost category is then calculated in
three steps:

1. The measure achievement points earned for
each measure is determined by comparing the
cost of services to the measure benchmark, and
the measure achievement points for applicable
measures are added to get a measure achievement
point total.
2. The measure achievement point total is divided
by the total possible measure achievement points
available from the applicable measures to calculate
a percentage score on the Cost category.
3. The Cost category score is calculated by multiplying
the percentage score (i.e. percent of possible points
that was actually achieved) by the weight of the
Cost category (15 percent) to determine the number
of Cost category points in the final MIPS score.

The table below provides an example in which a MIPS-
eligible clinician earned 6.4 measure points in the MSPB
measure, 8.2 points in the TPCC measure, and 9.1 points
in the Simple Pneumonia with Hospitalization measure:

<table>
<thead>
<tr>
<th>Measure</th>
<th>Measure achievement points earned</th>
<th>Total possible measure achievement points</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSPB Measure</td>
<td>6.4</td>
<td>10</td>
</tr>
<tr>
<td>TPCC Measure</td>
<td>8.2</td>
<td>10</td>
</tr>
<tr>
<td>Simple Pneumo</td>
<td>9.1</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>23.7</td>
<td>30</td>
</tr>
</tbody>
</table>

To calculate the number of Cost category points for this
MIPS-eligible clinician, apply the following four steps:

1. Add measure points together:
   \(6.4 + 8.2 + 9.1 = 23.7\)
2. Divide measure achievement point total by the total
   possible measure achievement points:
   \(
   \frac{23.7}{30} = 79.0\%
   \)
3. Calculate the total Cost category points by multiplying
   percent score by the Cost category weight for 2019
   (i.e., 15%):
   \(79.0 \times 15\% = 11.85\) points

Result = This MIPS-eligible clinician would receive
11.85 points in the Cost category, which would be
added to the scores in the three other categories to
tally the total MIPS score.

Q34. How is the Cost category calculated for Non-
Patient Facing Clinicians?
A. CMS will calculate a Cost score for non-patient facing
eligible clinicians in the same manner as for other
eligible clinicians; it did not create any new or unique
measures for these clinicians. However, because a non-
patient facing clinician necessarily has fewer patient
encounters than other clinicians, he or she may find it
more difficult to achieve the case minimums necessary
to receive a score. As such, CMS anticipates that some
non-patient facing clinicians may not have sufficient
cost measures available to them and, therefore, may
not be scored on the Cost category under MIPS. In this
scenario, the Cost category will be re-weighted at 0
percent and the Quality category will be reweighted at
60 percent.
Q35. Will the Cost category count in future years?
A. Yes. The Medicare Access & CHIP Reauthorization Act (MACRA) required CMS to weigh the Cost category at 30 percent of the MIPS score starting in 2019. However, the Bipartisan Budget Act of 2018 modified this requirement so that for the next three years, CMS is required only to set the Cost score at no less than 10 percent. Given that the weight of the Cost category increased by 5 percent in 2019 over the prior year, clinicians should anticipate that the cost of services furnished to Medicare beneficiaries will continue to play a role in the calculation of MIPS payment adjustments going forward.

Q36. Where can I find more information about the Cost category?
A. The CMS QPP Resource Library offers additional information for the MSPB, TPCC, and episode-based measures.