Clinical Episode Reconciliation Specifications
Model Year 6

Center for Medicare & Medicaid Services (CMS)
Center for Medicare & Medicaid Innovation (Innovation Center)

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1 INPUTS

Table 1: Clinical Episode Reconciliation Inputs

#	Name	Description
1	BPCI Advanced National and Participant Performance Period Clinical Episodes	The national and Participant sets of Clinical Episodes and associated spending amounts in the Performance Period.
2	Final Target Prices	Prices finalized at the time of Reconciliation by replacing the preliminary Patient Case Mix Adjustment (PCMA) with the realized value, the preliminary Relative Case Mix with the updated Relative Case Mix,[1] and updating the prices using the retrospective trends capped at 5% (a.k.a the capped PGT Factor Adjustment) in the Performance Period.[2,3]
3	Quality Measures Data	Individual Quality Measure scores used to calculate Composite Quality Score (CQS) for each Episode Initiator.
4	Master Data Management (MDM)	These data are used as an input to identify beneficiaries aligned to Accountable Care Organizations (ACOs) and other CMMI models to be excluded from BPCI Advanced.

[1] Please note that only the numerator in the Relative Case Mix term is updated during the Performance Period.
[2] In Model Year 6, the PGT Factor Adjustment will be capped at 5% so that the maximum difference between the prospective peer group trend and the realized peer group trend is 5%. The capped PGT Factor Adjustment can take a minimum value of 0.95 and a maximum value of 1.05.
[3] A CMS Discount Factor of 2% for medical Clinical Episode Categories and 3% for surgical Clinical Episode Categories is applied to calculate the Target Prices.

2 OUTPUTS

Table 2: Clinical Episode Reconciliation Outputs

#	Name	Description
1	Net Payment Reconciliation Amount (NPRA)	The amount paid to the Participant by CMS after Reconciliation.
2	Repayment Amount	The amount paid by the Participant to CMS after Reconciliation.
3	Excess Spending Amount	The amount paid by the Participant to CMS after Post-Episode Spending calculations.

3 CLINICAL EPISODE CONSTRUCTION OVERVIEW

The following document describes the specifications used for semi-annual Reconciliation calculations and Post-Episode Spending calculations for the Bundled Payments for Care Improvement Advanced (BPCI Advanced) model. This document is based on the methodology and outputs from the previous steps of the model that are discussed in the Clinical Episode Construction[4] and Target Price[5] Specifications documents. To refer to specific steps from the Clinical Episode Construction and Target Price Specifications, this document uses **CE-Step** and **TP-Step**, respectively.

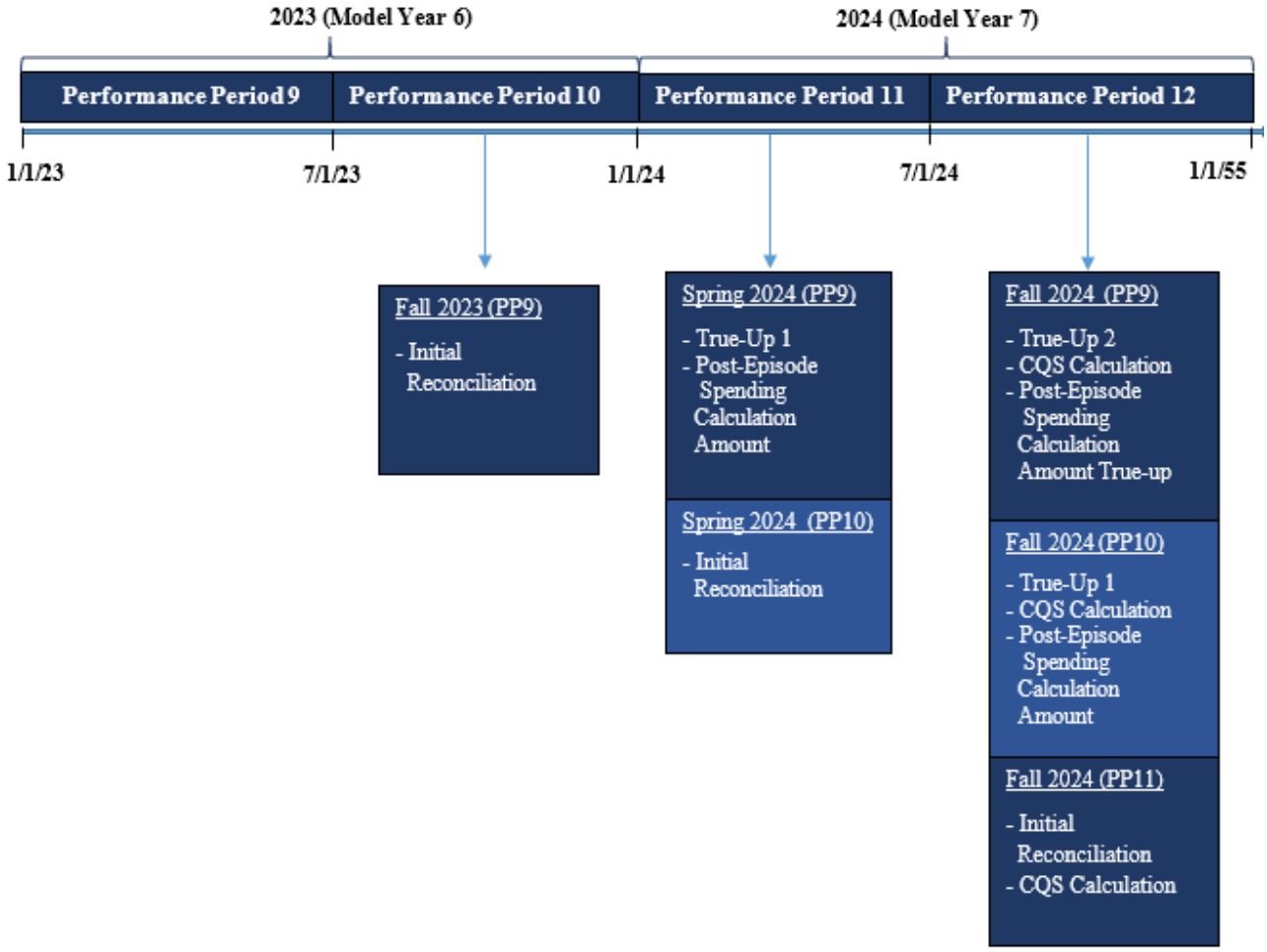
As part of the Reconciliation process, for each Participant (both Convener Participants and Non-Convener Participants) CMS compares the Medicare Fee-For-Service (Medicare FFS) allowed amounts from the Episode Initiator's Clinical Episodes against final Target Prices and identifies payments above or below the final Target Price by the defined amount. After applying payment adjustments and capping amounts to limit risk exposure, defined amounts are represented by either the *Net Payment Reconciliation Amount* (*NPRA)* (the amount paid to the Participant by CMS) or the *Repayment Amount* (the amount paid by the Participant to CMS). In addition to calculating Reconciliation amounts, CMS performs True-Up calculations to update initial Reconciliation amounts and prior True-Ups using claims processed as of a later date, and quality adjustments, where applicable. Finally, for each Participant, CMS performs a Post-Episode Spending calculation that determines whether aggregate Medicare FFS spending on items and services furnished to BPCI Advanced Beneficiaries during the Post-Episode Spending Monitoring Period exceeds a calculated threshold in order to prevent excess spending in the days following the Clinical Episode period.

Figure 1 contains the timeline for the sequential stages of the Reconciliation process for Performance Periods 9, 10, and 11.[6] For example, for Participants with Clinical Episodes ending between January 1, 2023 and June 30, 2023 (Performance Period 9), CMS will conduct the initial Reconciliation in Fall 2023, and first and second True-Up calculations in Spring 2024 and Fall 2024, respectively. Additionally, Model Year 6 (MY6) Clinical Episodes that end in CY2024 will be reconciled and "Trued-Up" on the same schedule as the first Reconciliation in Model Year 7 (Performance Period 11). Target Price assignment is determined using Anchor Stay discharge or Anchor Procedure completion date, and Performance Period is determined using Clinical Episode end date. Quality adjustments based on the Composite Quality Score (CQS) will be first applied during the second True-Up calculations for Performance Period 9, the first True-Up calculations for Performance Period 10 and the initial Reconciliation calculation for Performance Period 11 (Fall 2024). Post-Episode Spending calculations will initially occur

[4] Please refer to the MY6 Clinical Episode Construction Specifications on the Participant Portal: https://app.innovation.cms.gov/bpciadv/IDMLogin
[5] Please refer to the MY6 Target Price Specifications on the Participant Portal: https://app.innovation.cms.gov/bpciadv/IDMLogin
[6] Refer to Table 3 for date ranges of each Performance Period in Model Year 6.

during the first True-Up calculation of each Performance Period and will be recalculated during the second True-Up.

Figure 1. Reconciliation Timeline



The next 7 sections contain detailed descriptions of the sequential stages of the Reconciliation process.

- **Section 4** provides the methodology for calculating Performance Period Clinical Episode payments in real dollars.
- **Section 5** discusses the methodology for calculating final Target Prices using the updated PCMA, the updated Relative Case Mix, and the capped PGT Factor Adjustment.
- **Section 6** provides the methodology for calculating Total Performance Period Target Amounts for each Episode Initiator.

- **Section 7** describes quality measures and provides detailed methodology for the calculation and implementation of CQS.
- **Section 8** describes the step-by-step calculation of Reconciliation amounts.
- **Section 9** walks through semi-annual True-Up calculations.
- **Section 10** introduces BPCI Advanced Post-Episode Spending calculations.

4 CALCULATE PERFORMANCE PERIOD CLINICAL EPISODE PAYMENTS

This section describes steps to calculate Performance Period Clinical Episode payments for each Episode Initiator (EI) and Clinical Episode Category, using the Performance Period Clinical Episodes with the date ranges detailed in Table 3.

Table 3: Model Year 6 Clinical Episode Date Ranges

Performance Periods	Date Range
Performance Period 9	Clinical Episodes with a Clinical Episode end date between 1/1/2023 and 6/30/2023 and an Anchor Stay discharge date or Anchor Procedure completion date on or after 1/1/2023.[7,8]
Performance Period 10	Clinical Episodes with a Clinical Episode end date between 7/1/2023 and 12/31/2023.[9]
Performance Period 11	Clinical Episodes with a Clinical Episode end date on or after 1/1/2024, but an Anchor Stay discharge date or Anchor Procedure completion date on or before 12/31/2023.[10,11]

- **Step 1. Aggregate Performance Period Clinical Episode payments at the Episode Initiator-Clinical Episode Category level**: Use the BPCI Advanced Participant Clinical Episodes ending in the applicable Performance Period to calculate each Episode

[7] When a Participant terminates participation in the Model, the Participant will be accountable for Clinical Episodes if the Anchor Stay/Anchor Procedure discharge/completion date is prior to the effective date of the termination. Performance Period assignment will be based on Clinical Episode end date.
[8] Clinical Episodes with an Anchor Stay discharge date or Anchor Procedure completion date during Calendar Year (CY) 2022 and Clinical Episode end dates during CY2023 will be considered MY5 Clinical Episodes. If a Participant is active in the Clinical Episode Category for the first time in MY6 as a result of a change in the baseline period and reaching an eligible episode volume threshold, then in the Performance Period, the Participant will not be attributed any MY6 Clinical Episodes that had Clinical Episode start dates prior to the start of MY6.
[9] Refer to footnote 7.
[10] For purposes of Target Price and Clinical Episode construction, Clinical Episodes with a Clinical Episode end date on or after 1/1/2024 and an Anchor Stay discharge date or Anchor Procedure completion date on or after 1/1/2024 are not identified as MY6 Clinical Episodes and are identified as MY7 Clinical Episodes.
[11] When a Participant lets their MY6 Participation Agreement expire, meaning they do not sign the 2024 BPCI Advanced Amended and Restated Participation Agreement and their 2023 BPCI Advanced Amended and Restated Participation Agreement was not terminated early by the Participant or CMS pursuant to Article 21, the Participant will not be held accountable for Clinical Episodes that end after the last date of the Agreement Performance Period (i.e., will not be held accountable for Clinical Episodes that end after 12/31/2023).

Initiator's total spending for a particular Clinical Episode Category.[12] Specifically, for each Episode Initiator, sum the standardized allowed amounts across all the Clinical Episodes in that Clinical Episode Category. If the Episode Initiator is an Acute Care Hospital (ACH), aggregate spending for all Clinical Episodes initiated and attributed to the ACH. If the Episode Initiator is a Physician Group Practice (PGP), aggregate spending for all attributed Clinical Episodes based upon initiating claims billed under the PGP's TIN, as described in the Clinical Episode Construction Specifications.[13]

- **Step 2. Convert Performance Period Clinical Episode payments to real dollars to obtain final Performance Period Clinical Episode payments:** Convert the Performance Period Clinical Episode payments to real dollars using the following steps:
    - **Step 2a.** Create a ratio of real dollars to standardized dollars by dividing the sum of real Clinical Episode payments by the sum of standardized Clinical Episode payments in the Performance Period for each Episode Initiator and Clinical Episode Category.
    - **Step 2b.** Multiply the Performance Period Clinical Episode payments (**Step 1**) by the ratio of real dollars to standardized dollars calculated in **Step 2a**.

[12] COVID-19 adjuvants will be excluded from Performance Period Clinical Episode payments that meet the following criteria: (i) drug HCPCS codes that correspond to COVID-19 adjuvants that are used to treat COVID-19 but were already on the market prior to COVID-19 and are clinically reviewed, (ii) drug HCPCS codes that correspond to drugs and/or vaccines approved solely for COVID-19 and are clinically reviewed, and (iii) drug HCPCS code K1034 for COVID-19 over the counter tests starting from April 4, 2022. Note that the third exclusion criterion is only applicable through the end of the COVID-19 Public Health Emergency (5/11/2023). Starting 5/12/2023, Medicare no longer covers or pays for over the counter COVID-19 test for those with Medicare Part B benefits. CMS will publish the list of excluded COVID-19 HCPCS ahead of each Reconciliation cycle.

[13] $Performance\ Period\ Clinical\ Episode\ Payments_{m,ce,t}=\sum_{h\epsilon H}\sum_{i\epsilon T(m,h,ce,t)}Y_{i,m,t}$

where:
i is the specific Clinical Episode
h is the ACH at which the Clinical Episode is initiated
t is the applicable Performance Period
m is the Episode Initiator which can be either an ACH or PGP
ce is the specific Clinical Episode Category
$Y_{i,m,t}$ is the standardized Clinical Episode allowed amount
The value $i\epsilon T(m,h,ce,t)$ refers to a Clinical Episode i from the set of Clinical Episodes initiated by an Episode Initiator m at ACH h at time t. $T(m,h,\text{ce},t)$ will be empty for all $h\epsilon H$ at which the Episode Initiator is not assigned a Clinical Episode.

5 CALCULATE FINAL TARGET PRICE

This section explains how to calculate the final Target Price. The final Target Price methodology updates the preliminary Target Price at the time of Reconciliation by using realized Performance Period data to calculate the updated PCMA and the updated Relative Case Mix. This practice ensures that final Target Prices accurately reflect the case mix of the patients treated during a given Performance Period. The Standardized Baseline Spending (SBS), Peer Group Historical Adjustment (PGHA), and Peer Group Trend (PGT) Factor remain constant from the preliminary Target Price calculation.[14] The final Target Price methodology also includes the capped PGT Factor Adjustment to ensure the maximum difference between the prospective and realized peer group trend is 5%. Thus, for ACHs, the updated Hospital Benchmark Price (HBP) is calculated by updating the PCMA term and incorporating the PGT Factor Adjustment, using the following equation:

$$HBP_h^u = SBS_h * PCMA_h^u * PGHA_h * PGT_h * PGT\_Adj_g$$

where,

h is the ACH to which the Clinical Episode is attributed;

u denotes that the term is the updated version;

g is the peer group.

For PGP Episode Initiators, the updated PGP-ACH Benchmark Price is calculated by updating the Relative Case Mix term so that it compares the Performance Period case mix of the PGP's Clinical Episodes at the ACH, to the baseline period case-mix of the ACH's episodes.[15] The final PGP-ACH Benchmark Price is calculated using the following equation:

$$PGP\ ACH\ Benchmark\ Price_{p,h}^u = HBP_h^i * PGT\_Adj_g * Relative\ Case\ Mix_{p,h}^u$$

where,

p is the PGP to which the Clinical Episode is attributed;

h is the ACH at which the Clinical Episode is initiated;

i denotes that the term is the preliminary version;

u denotes that the term is the updated version;

g is the peer group.

[14] Though the Medicare payment rate updates will impact the SBS, PGHA, and PGT, any resulting changes to the Target Price will be delivered to Participants prospectively and therefore will be a part of the Preliminary Target Price.

[15] The Relative Case Mix and updated PCMA is calculated using episodes from the relevant Performance Period and sub-period.

The formulas above use components of preliminary Target Prices that are updated each Model Year to account for the most recently available Medicare payment rates. Specifically, the preliminary Target Prices for Model Year 6 are updated two times to align with updates to Medicare FFS payment rates. The preliminary Target Prices distributed in October 2022 were based upon the FY2022 and CY2022 Final Rules. The preliminary Target Prices distributed in March 2023 reflect FY2023 and CY2023 payment rate updates and are applicable to episodes with anchor end dates in 2023Q1-Q3. The preliminary Target Prices distributed in December 2023 will reflect FY2024 and CY2023 payment rate updates and are applicable to episodes with anchor end dates in 2023Q4. The goal of these updates is to maintain an accurate benchmark against which the model compares Aggregate FFS Payments (AFP). While the group of baseline period Clinical Episodes remains the same, the revised payment rates are used to inflate the spending amounts of these baseline period Clinical Episodes to current Medicare payment rates. Risk adjustment is rerun under specifications identical to the initial preliminary Target Prices. This results in updated coefficients and, ultimately, updated preliminary Target Prices. The changes to pricing only reflect changes to the relevant prices finalized in the Final Rules. Since, on average, rates increase, it is anticipated that these updates will on average increase preliminary Target Prices. These new preliminary Target Prices are provided to Participants as soon as feasible following publication of the applicable Final Rules in the Federal Register. Refer to Table 4 below for dates and payment rate periods pertaining to the updates.

Table 4: Preliminary Target Price Updates

Preliminary Target Price Estimated Release Date	Preliminary Target Price Effective Date	Applicable FFS Payment Rate Period[16]
October 2022	N/A	FY2022 and CY2022[17]
March 2023	January 1, 2023	FY2023 and CY2023
December 2023	October 1, 2023	FY2024 and CY2023

These preliminary Target Prices, adjusted for the new Medicare payment rates, will be converted to final Target Prices using the steps described below.

- **Step 3. Determine updated HBP:** To ensure that Target Prices accurately reflect the case mix of the patients treated during a given Performance Period, update the preliminary HBP (**TP-Step 13**) to account for the realized case mix of the Performance

[16] Fiscal year payment rate updates will incorporate changes in the Inpatient Prospective Payment System (IPPS), Inpatient Rehabilitation Facility (IRF) and Skilled Nursing Facility (SNF) Final Rules. Calendar year update will incorporate changes in the Outpatient Prospective Payment System (OPPS), Physician Fee Schedule (PFS) and Home Health Agency (HHA) Final Rules. The calendar year updates will also incorporate Medicare Economic Index (MEI).

[17] Initial preliminary Target Prices are based on the 2022 payment rates due to availability at the time of workbook distribution.

Period that has now ended for each ACH and Clinical Episode Category.[18] This requires recalculating the Clinical Episode level patient case mix adjustment amount that comes from the predicted values of the first stage of the risk adjustment model and adjusting the PCMA term and the HBP to account for the updates.[19] This step does not involve rerunning the risk adjustment models.

- **Step 3a.** For an ACH, apply the beneficiary-level coefficient values from **TP-Step 2** to the Clinical Episodes in the Performance Period. Specifically, rerun **TP-Step 3** using the Performance Period Clinical Episodes to calculate the Clinical Episode-level patient case mix adjustment amount.
- **Step 3b.** Rerun **TP-Step 10** to calculate the updated PCMA for the ACH and Clinical Episode Category by taking the average Clinical Episode-level patient case mix adjustment amount (**Step 3a**) and dividing by the Average Observed Clinical Episode Spending (**TP-Step 7**). The Average Observed Clinical Episode Spending is a normalizing factor that is used to interpret the SBS in dollars and the PCMA terms as ratios relative to national baseline case mix. It is calculated by taking the average spending for all Clinical Episodes in the national set of Clinical Episodes for a Clinical Episode Category, and it remains unchanged from preliminary Target Price construction.
- **Step 3c.** The PGT Factor Adjustment will be calculated based on the national set of Clinical Episodes. Calculate the capped PGT Factor Adjustment (**TP-Step 19**) by creating a modified version of the updated PCMA term that accounts for the patient case mix among all final Performance Period Clinical Episodes initiated at the ACH,[20] rather than among Performance Period Clinical Episodes attributed to the ACH. Multiply the modified updated PCMA with the ACH's PGHA, PGT, SBS, and count of Performance Period Clinical Episodes in the national set after overlap resolution, that were initiated at the ACH.[21] Take the sum of this product over all ACHs in the peer group. Divide the total Performance Period Clinical Episode spending summed across all Clinical Episodes in the national set after overlap

[18] References to **TP-Steps** are based on the steps to calculate Target Prices which are listed in the MY6 Target Price Specifications. The MY6 Target Price Specifications document is available in the Participant Portal.
[19] The updated PCMA term will also include the COVID-19 infection rate. The COVID-19 infection rate is calculated as the ratio of all COVID-19 positive beneficiaries to the total number of Medicare beneficiaries aged 65 years and older in the anchor provider's census tract and its neighboring tracts. The COVID-19 infection rate will be measured for the week of the Clinical Episode start date and based on the hospital's census tract where the beneficiary initiated an episode. The PCMA term will be updated using the COVID-19 infection rate in the Performance Period and the coefficient estimate for the third time period (Clinical Episodes with start dates on or after March 1, 2021).
[20] Final Performance Period Clinical Episodes initiated at the ACH refers to the Clinical Episodes remaining after all BPCI Advanced specific exclusions are applied (including overlap resolution).
[21] The Relative Case Mix and updated PCMA is calculated using episodes from the relevant Performance Period and sub-period.

resolution initiated at eligible ACHs within each peer group by the summed value above. This ratio is the PGT Factor Adjustment. Cap the PGT Factor Adjustment at 5% so that the maximum difference between the prospective peer group trend and realized peer group trend is 5%. This is the capped PGT Factor Adjustment. Clinical Episode Category-Peer Groups with inadequate volume receive a modified PGT Factor Adjustment that effectively replaces the participating ACH's retrospective peer group trend with the national retrospective trend for that Clinical Episode Category.[22]

- **Step 3d.** Rerun **TP-Step 13** by multiplying the five components that make up the updated HBP: the SBS (**TP-Step 9**), the updated PCMA, the PGHA (**TP-Step 11**), the PGT Factor (**TP-Step 12**), and the capped PGT Factor Adjustment (**Step 3c**) for each ACH and Clinical Episode Category.

- **Step 4. Determine updated PGP-ACH Benchmark Price:** Calculate the updated PGP-ACH Benchmark Price for each Clinical Episode Category by accounting for the PGP's realized case mix at the ACH during the Performance Period that has now ended.
  - **Step 4a.** Rerun **TP-Step 14** to calculate the updated Relative Case Mix using Performance Period Clinical Episodes. Calculate the updated PCMA at the PGP-ACH level by taking the average Clinical Episode-level patient case mix adjustment amount (**Step 3a**) for each PGP-ACH[23] combination and dividing by the Average Observed Clinical Episode Spending (**TP-Step 7**). Calculate updated Relative Case Mix as the ratio of the final PCMA for each PGP-ACH pair over the preliminary PCMA for the applicable ACH (**TP-Step 10**).
  - **Step 4b.** Calculate the updated PGP-ACH Benchmark Price as the product of the preliminary HBP (**TP-Step 13**), capped PGT Factor Adjustment (**Step 3c**), and the updated Relative Case Mix (**Step 4a**).

- **Step 5. Determine final Target Prices:** Calculate the final Target Prices by applying the CMS Discount Factor and converting the price from standardized to real dollars.
  - **Step 5a.** Apply a CMS Discount Factor (**TP-Step 16**) (i.e. 2% for medical Clinical Episode Categories and 3% for surgical Clinical Episode Categories) to updated HBPs and updated PGP-ACH Benchmark Prices to calculate the updated Target Prices in standardized dollars for ACHs and PGPs, respectively.[24]

[22] Inadequate volume is defined as a peer group only having 1 ACH or less than or equal to 10 Clinical Episodes during the Performance Period. More information regarding the National Retrospective Trend calculation can be found in Appendix B of the MY6 Target Price Specifications document, which is available in the Participant Portal.
[23] Limited to ACHs at which the PGP initiates Clinical Episodes that are assigned to it. Only those ACHs which have at least 41 Clinical Episodes for that Clinical Episode Category in the baseline period are considered.
[24] The Model Year 6 Clinical Episode List containing the medical and surgical classifications for each Clinical Episode Category can be found on the CMS BPCI Advanced website.

- **Step 5b.** Calculate final Target Prices by converting the updated Target Prices (**Step 5a**) into real dollars. Multiply the updated Target Prices by a ratio of real dollars to standardized dollars (**Step 2b**) for each Episode Initiator and Clinical Episode Category.

6 CALCULATE TOTAL PERFORMANCE PERIOD TARGET AMOUNT

This section describes how to calculate the Total Performance Period Target Amount based upon the final Target Prices for each of the Episode Initiator's Clinical Episode Categories. For ACHs and PGPs practicing at a single ACH, the Total Performance Period Target Amount for each Clinical Episode Category is the category volume in the Performance Period sub-period level multiplied by the Target Price. For PGPs that trigger Clinical Episodes at more than one ACH, the calculation accounts for the volume distribution of Clinical Episodes across ACHs at which they are initiated. To apply the PGP-ACH Target Prices to the overall Clinical Episode Category, the PGP's Target Prices are volume-weighted to account for the number of Performance Period sub-period level Clinical Episodes occurring at each ACH for each Clinical Episode Category.

- **Step 6. Determine Total Performance Period Target Amount:** Multiply final Target Prices by Performance Period Clinical Episode volume for each Episode Initiator and Clinical Episode Category.[25]
    - **Step 6a.** Count the number of Clinical Episodes attributed to an Episode Initiator for a specific Clinical Episode Category in the Performance Period. For a PGP that practices across multiple ACHs, count the number of Clinical Episodes at each ACH separately.
    - **Step 6b.** For each Episode Initiator and Clinical Episode Category, multiply the final Target Prices (**Step 5**) by the number of Clinical Episodes in the Performance Period (**Step 6a**). For ACHs or PGPs that initiate Clinical Episodes at a single ACH for the applicable category, the result is the Total Performance Period Target Amount. For PGP Episode Initiators, calculate the Clinical Episode volume-weighted sum of the Target Prices of all the ACHs where the PGP Episode Initiator is attributed Clinical Episodes. The weights are the number of Performance Period Clinical Episodes in a given Clinical Episode Category initiated at each ACH during the Performance Period.

Table 5 provides a sample calculation with fabricated data of Total Performance Period Target Amounts for two ACH (H1000 and H2000) and one PGP (P000) Episode Initiators. The PGP, P000, is attributed Clinical Episodes at only one ACH (H1000) for Clinical Episode

[25] The mathematical expression for the Total Performance Period Target Amount is:
$Total\ Performance\ Period\ Target\ Amount_{m,ce,t} = \sum_{h \in H} Final\ Target\ Price_{m,h,ce,t} * Number\ of\ Clinical\ Episodes_{m,h,ce,t.}$
where:
Number of Clinical Episodes$_{m,h,ce,t}$ = the sum of all Clinical Episodes in time period T for the given m, h, ce, and t.
T(m,h,ce,t) will be empty for all *h*ϵ*H* at which the Episode Initiator is not attributed a Clinical Episode.

Category CE1 while it is attributed Clinical Episodes across two ACHs (H1000 and H2000) for Clinical Episode Category CE2.

Table 5: Total Performance Period Target Amount Sample Calculation

Episode Initiator	PGP/ ACH	ACH CCN Associated with Initiating Claim	Clinical Episode Category	Performance Period Clinical Episode Count	Step 2a	Step 5		Step 6
					Ratio of Real Dollars to Standardized Dollars	Target Price (Standardized Dollars)	Final Target Price (Real Dollars)	Total Performance Period Target Amount (Real Dollars)
H1000	ACH		CE1	34	1.01	$24,290	$24,533	$834,122
H1000	ACH		CE2	15	1.04	$18,112	$18,836	$282,540
H1000	ACH		CE3	28	0.99	$53,248	$52,716	$1,476,048
H1000	ACH		CE4	45	0.89	$33,039	$29,405	$1,323,225
H1000	ACH		CE5	52	1.11	$24,722	$27,441	$1,426,932
H2000	ACH		CE1	12	1.02	$20,099	$20,501	$246,012
H2000	ACH		CE2	1	1.01	$37,190	$37,562	$37,562
H2000	ACH		CE3	14	0.86	$17,574	$15,114	$211,596
H2000	ACH		CE4	150	0.93	$21,157	$19,676	$2,951,400
P000	PGP	H1000	CE1	15	1.01	$31,434	$31,748	$476,220
P000	PGP	H1000	CE2	7	1.05	$31,898	$33,493	$545,231
P000	PGP	H2000	CE2	10	1.05	$29,598	$31,078	$545,231

Note: Examples are not associated with the fabricated data used in other BPCI Advanced specifications documents.
All dollar values are rounded to the nearest dollar and ratios are rounded to two decimal places.
For PGPs that initiate Clinical Episodes in the same category across multiple ACHs, Total Performance Period Target Amounts are rolled up to the PGP level. Refer to PGP P000 CE2 for an example.

7 CALCULATE COMPOSITE QUALITY SCORE

An important feature of BPCI Advanced is the use of quality performance data to adjust Reconciliation amounts for Participants. By tying payment to performance on quality measures, CMS aims to incentivize providers to improve quality of care while improving efficiency. In MY6, Participants can select either the Administrative Quality Measure Set or the Alternate Quality Measure Set for each Clinical Episode Category they are participating in. For each Clinical Episode Category and Episode Initiator, quality measures based on Participant selections are weighted to calculate the Composite Quality Score (CQS) and CQS Adjustment Amount, which is then applied to the Negative/Positive Total Reconciliation Amounts during True-Up calculations to calculate the Adjusted Negative/Positive Total Reconciliation Amount for each Episode Initiator. Using the quality measurement data that are calculated once per year, the CQS Adjustment Amount for Model Year 6 will be applied in the Fall 2024 True-Up and continue to be incorporated in any subsequent True-Ups for a given Performance Period. The following subsections introduce the BPCI Advanced quality measures and provide the step-by-step methodology for calculating the CQS and CQS Adjustment Amount. Data shown throughout this section are fabricated to illustrate CQS calculations.[26]

7.1 Quality Measures

CMS selected Administrative and Alternate Quality Measure sets to ensure quality performance can be assessed across the full range of Clinical Episode Categories offered under the BPCI Advanced model. The Administrative Quality Measure set for MY6 contains the same claims-based measures as those used in MY1&2, MY3, MY4, and MY5 with the exception of the Perioperative Care quality measure (NQF #0268) which has been discontinued. The Alternate Quality Measure set includes claims-based and registry-based quality measures tailored to align with each of the specialty-specific Clinical Episodes in the model.[27] Table 6 lists quality measures that have been selected to calculate Episode Initiator level CQS for Model Year 6. CMS may update the list of quality measures for future Model Years.

[26] Fabricated data used in this section are not associated with other fabricated data used throughout the rest of this document or in other BPCI Advanced specifications documents.

[27] The Tobacco Screening Claims Based Alternate Quality Measures (NQF #0028) have been discontinued in Model Year 6.

Table 6: BPCI Advanced Quality Measures

Quality Measure	Quality Measure Category Abbreviation	Guiding NQF / PSI/QPP #[28]	Hospital/ Episode Initiator Based[29]	MIPS (Y/N)	Applicable Clinical Episode Categories	Applicable Quality Measure
All-cause Hospital Readmission Measure	All-Cause Readmissions	NQF #1789	Hospital Based	Y	• All Inpatient and Outpatient Clinical Episode Categories	Administrative and Alternate
Advance Care Plan	ACP	NQF #0326	Episode Initiator Based	Y	• All Inpatient and Outpatient Clinical Episode Categories	Administrative and Alternate
Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty	RSCR Following THA/TKA	NQF #1550	Hospital Based	N	• DJRLE • MJRLE (Multi-setting)	Administrative and Alternate
Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Coronary Artery Bypass Graft Surgery	RSMR Following CABG	NQF #2558	Hospital Based	N	• CABG	Administrative
Excess Days in Acute Care after Hospitalization for Acute Myocardial Infarction (AMI)	EDAC After AMI	NQF #2881	Hospital Based	N	• AMI	Administrative
CMS Patient Safety Indicators – 90 v.10.0	CMS PSI - 90	NQF #0531/PSI #90	Hospital Based	N	• All Inpatient Clinical Episode Categories[30]	Administrative

[28] Please note that several measures were adapted from NQF-endorsed measures; some of the measure specifications were changed for use in the BPCI Advanced model. NQF has not reviewed or approved the revised measure specifications. Any deviations from these measure specifications will be noted.
[29] This column refers to the level at which the NQF/ PSI measure is calculated. All measures will be applied to all participating Episode Initiators. Where the endorsed measure is hospital-based, the measure is adjusted to apply to the PGP. Note that this represents a deviation from the NQF/PSI specifications.
[30] Only MS-MJRLE Clinical Episodes triggered by MS-DRGs can have this measure applied.

Quality Measure	Quality Measure Category Abbreviation	Guiding NQF / PSI/QPP #[28]	Hospital/ Episode Initiator Based[29]	MIPS (Y/N)	Applicable Clinical Episode Categories	Applicable Quality Measure
In-Person Evaluation Following Implantation of a Cardiovascular Implantable Electronic Device	In-Person Eval Following CIED Implantation	NQF #2461	Episode Initiator Based	N	• Pacemaker	Alternate
Patient-Centered Surgical Risk Assessment and Communication	Patient-Centered SRAC	QPP #358	Episode Initiator Based	Y	• Back and Neck Except Spinal Fusion (Inpatient and Outpatient) • Spinal Fusion	Alternate
Patient-Centered Surgical Risk Assessment and Communication	Patient-Centered SRAC	QPP #358	Hospital Based	Y	• Bariatric Surgery • DJRLE • Fractures of the Femur and Hip or Pelvis • Hip and Femur Procedures Except Major Joint • Lower Extremity and Humerus Procedure Except Hip, Foot, Femur • MJRLE (Multi-setting) • Major Joint Replacement of the Upper Extremity (Multi-setting)	Alternate
Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	Tobacco Screening	NQF #0028	Hospital Based	Y	• Stroke	Alternate

Quality Measure	Quality Measure Category Abbreviation	Guiding NQF / PSI/QPP #[28]	Hospital/ Episode Initiator Based[29]	MIPS (Y/N)	Applicable Clinical Episode Categories	Applicable Quality Measure
3-Item Care Transition Measure	CTM-3	NQF #0228	Hospital Based	N	• AMI • Back and Neck Except Spinal Fusion (Inpatient) • Cardiac Arrhythmia • Cardiac Defibrillator (Inpatient) • Cellulitis • COPD, bronchitis, asthma • Disorders of the liver excluding malignancy, cirrhosis, alcoholic hepatitis • Fractures of the Femur and Hip or Pelvis • Gastrointestinal hemorrhage • Gastrointestinal obstruction • Hip and Femur Procedures Except Major Joint • Inflammatory Bowel Disease • Lower Extremity and Humerus Procedure Except Hip, Foot, Femur • Major Bowel Procedure • Major Joint Replacement of the Upper Extremity (Multi-setting) • Pacemaker • Renal failure • Sepsis • Seizures • Simple pneumonia and respiratory infections • Spinal Fusion • Transcatheter Aortic Valve Replacement (TAVR) • Urinary Tract Infection	Alternate
Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy	Chronic Anticoagulation for AF	NQF #1525	Hospital Based	Y	• Cardiac Arrhythmia	Alternate
Bariatric Surgery Standards for Successful Programs Measure	Bariatric Surgery Standards	N/A	Hospital Based	N	• Bariatric Surgery	Alternate

Quality Measure	Quality Measure Category Abbreviation	Guiding NQF / PSI/QPP #[28]	Hospital/ Episode Initiator Based[29]	MIPS (Y/N)	Applicable Clinical Episode Categories	Applicable Quality Measure
Cardiac Rehabilitation Patient Referral from an Inpatient Setting	CR Referral from IP	NQF #0642	Hospital Based	N	• CABG • Percutaneous Coronary Intervention (PCI) (Inpatient and Outpatient)	Alternate
Defect Free Care for Myocardial Infarction (AMI)	Defect Free Care – AMI	NQF #2377	Hospital Based	N	• AMI	Alternate
Discharge Medications (Angiotensin-Converting Enzyme / Angiotensin Receptor Blocker and Beta Blockers) in Eligible Implantable Cardiac Defibrillator/Cardiac Resynchronization Therapy Defibrillators Implant Patients	Discharge Medications in eligible ICD/CRT-D Implant Patients	NQF #0965	Hospital Based	N	• Cardiac Defibrillator (Inpatient and Outpatient)	Alternate
Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) or Angiotensin receptor-neprilysin inhibitor (ARNI) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	HF: ACE Inhibitor or ARB or ARNI Therapy for LVSD	NQF #0081	Hospital Based	Y	• Congestive Heart Failure	Alternate
Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	HF: Beta Blocker Therapy for LVSD	NQF #0083	Hospital Based	Y	• Congestive Heart Failure	Alternate

Quality Measure	Quality Measure Category Abbreviation	Guiding NQF / PSI/QPP #[28]	Hospital/ Episode Initiator Based[29]	MIPS (Y/N)	Applicable Clinical Episode Categories	Applicable Quality Measure
Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Pneumonia Hospitalization	RSMR Following Pneumonia	NQF #0468	Hospital Based	N	• Simple pneumonia and respiratory infections	Alternate
Hospital Risk-Standardized Complication Rate following Implantation of Implantable Cardioverter-Defibrillator (ICD)	Risk-Standardized Complication Rate: ICD	N/A	Hospital Based	N	• Cardiac Defibrillator (Inpatient and Outpatient)	Alternate
Risk Standardized Bleeding for Patients Undergoing Percutaneous Coronary Intervention (PCI)	Risk Standardized Bleeding for Patients Undergoing PCI	NQF #2459	Hospital Based	N	• PCI (Inpatient and Outpatient)	Alternate
Severe Sepsis and Septic Shock: Management Bundle Measure	Septic Shock Management	NQF #0500	Hospital Based	N	• Sepsis	Alternate
STK-06: Discharged on Statin Medication	Stroke – Discharged on Statin	NQF #0439	Hospital Based	N	• Stroke	Alternate
STS Coronary Artery Bypass Graft Composite Score	CABG Composite Score	NQF #0696	Hospital Based	N	• CABG	Alternate

Quality Measure	Quality Measure Category Abbreviation	Guiding NQF / PSI/QPP #[28]	Hospital/ Episode Initiator Based[29]	MIPS (Y/N)	Applicable Clinical Episode Categories	Applicable Quality Measure
Substance Use Screening and Intervention Composite	SU Screening and Intervention	NQF #2597	Hospital Based	N	• Bariatric Surgery • Cardiac Valve • CABG • Double Joint Replacement of the Lower Extremity • Fractures of the Femur and Hip or Pelvis • Hip and Femur Procedures Except Major Joint • Lower Extremity and Humerus Procedure Except Hip, Foot, Femur • MJRLE (Multi-setting) • Major Joint Replacement of the Upper Extremity (Multi-setting)	Alternate
Therapy with Aspirin, $P2Y_{12}$ Inhibitor, and Statin at Discharge Following Percutaneous Coronary Intervention in Eligible Patients	Therapy following PCI	NQF #0964	Hospital Based	N	• PCI (Inpatient and Outpatient)	Alternate
Time to Intravenous Thrombolytic Therapy	Time To ITT	NQF #1952	Hospital Based	N	• Stroke	Alternate
Volume Weighted Aortic Valve Replacement and Aortic Valve Replacement + Coronary Artery Bypass Graft Composite Measures	AVR and AVR + CABG Composite	NQF #2561 & #2563	Hospital Based	N	• Cardiac Valve	Alternate
Volume Weighted Mitral Valve Repair and Replacement and Mitral Valve Repair and Replacement + Coronary Artery Bypass Graft Composite Measures	MVRR and MVRR + CABG	NQF #3031 & #3032	Hospital Based	N	• Cardiac Valve	Alternate

7.2 CQS Calculation

For each Episode Initiator, performance on multiple quality measures is combined to calculate the CQS and CQS Adjustment Amount that is applied during True-Up calculations to the Negative and Positive Total Reconciliation Amounts.

The Patient Centered Surgical Risk Assessment (Patient-Centered SRAC) quality measure has both claims-based and registry-based submissions applicable to different Clinical Episode Categories. Each version of the Patient-Centered SRAC measure will be considered one individual component for the CQS calculation and will be weighted based on the number of the Episode Initiator's Clinical Episodes for which the version is relevant. For example, claims which are deemed to qualify for the Patient-Centered SRAC quality measure will appear as two different quality measure components for Participants who have selected the Alternate Quality Measure for both Bariatric Surgery and Spinal Fusion Clinical Episode Categories. In addition, there are certain scenarios in which quality measures can be submitted to different registries based on the applicable Clinical Episode Category. In these scenarios, each Clinical Episode Category-registry combination per quality measure should be treated as a separate quality measure component when calculating an Episode Initiator's CQS.[31]

Below is a step-by-step methodology for calculating the CQS:

- **Step 7. Convert Raw Quality Measures into Scaled Scores:** For each quality measure and Episode Initiator, scale the raw score by comparing it to the distribution of raw scores among the cohort in the baseline period for that measure. All ACHs will be referred to as Episode Initiators in the text below, regardless of whether or not they are participating in the BPCI Advanced model.
    - For the hospital-based quality measure categories that were introduced in MY3 and prior, the cohort is the national set of ACHs and the baseline period is CY2018 for Participants that joined the model in MY1&2, and CY2019 for Participants that joined the model in MY3.
    - For the hospital-based quality measure categories introduced in MY4, the cohort is the national set of ACHs and the baseline period is CY2020 for all Participants, regardless of MY entry.[32]

[31] Defect Free Care – AMI can have quality measure raw scores for IP-Acute Myocardial Infarction episodes sent to both ACC and AHA registries. For Participants that delivered quality measures to both registries, two scaled scores will be calculated for each registry. The higher of the two scaled scores will be used when calculating the Participant's CQS.

[32] The following quality measures are exceptions: Patient Centered Surgical Risk Assessment and Communications, Substance Use Screening and Intervention Composite, and Bariatric Surgery Standards for Successful Programs Measure. These quality measures have a baseline period of CY2021.

- For the Advanced Care Plan quality measure, which is Episode Initiator-based, the cohort is the set of Episode Initiators (ACHs and PGPs) that are participating in BPCI Advanced. The baseline period for Participants that joined the model in MY1&2 includes all Clinical Episodes that have Anchor Stay discharge dates or Anchor Procedure completion dates in the second half of CY2019. The baseline period for Participants that joined the model in MY3 includes Clinical Episodes that have Anchor Stay discharge dates or Anchor Procedure completion dates in CY2020.
- There are two EI-based quality measures that began in MY4: In-Person Eval Following CIED Implantation and Patient-Centered SRAC. The baseline period for all Participants, regardless of MY entry, includes all Clinical Episodes that have Anchor Stay discharge dates or Anchor Procedure completion dates in CY2021.

- **Step 7a.** Assign the Episode Initiator a scaled score equal to the percentile to which the Episode Initiator's raw score would have belonged in the baseline period. If the raw score could have belonged to either of two percentiles, assign the higher one. If an Episode Initiator has a raw score greater than the maximum of the raw scores for the cohort in the baseline period, assign it a scaled score of 100, if an Episode Initiator has a raw score less than the minimum of the raw scores for the baseline period, assign it a scaled score of 0. If an Episode Initiator has no raw quality score, do not assign them a scaled quality score.[33] If the measure has fewer than 100 entities within the baseline, use the higher value between the raw score and percentile. Please refer to Tables 7a and 7b for an example of scaled quality score determination. Please refer to Table 7c for an example of scaled quality score determination when the entity has fewer than 100 entities in the baseline.

[33] Episode Initiators that do not meet the minimum observation threshold for the quality measure will be treated as having a missing raw quality score.

Table 7a: Example of Scaling Raw Quality Measure Scores, Distribution of Raw Quality Measure Scores of the Cohort in the Baseline

Percentile	Raw scores (Score is Higher for Better Performance)	
	Lower bound	Upper bound
1	28	32
…	…	…
71	49	49
72	50	53
73	53	58
…	…	…
100	87	90

Table 7b: Example of Scaling Raw Quality Measure Scores, Performance Period Scores

Episode Initiator	Raw Quality Score	Scaled Quality Score
0012	52	72
1139	53	73
5212	56	73
4132	49	71
1528	23	0
3412	95	100
2336	-	-

Table 7c: Example of Scaling Raw Quality Measure Scores, Performance Period Scores, for Quality Measures with <100 Episode Initiators in the Baseline

Episode Initiator	Raw Quality Score	Initial Scaled Quality Score	Final Scaled Quality Score
0012	52	72	72
1139	53	73	73
3243	30	15	30
5212	56	73	73
4132	49	71	71
1528	23	0	23
3412	95	100	100
2336	-	-	-

- **Step 8. Calculate the Total Attributed Clinical Episodes for which the Quality Measure is Applicable, at the Episode Initiator-Clinical Episode Category-Quality Measure Level:** For every Episode Initiator and all their active Clinical Episode Categories, determine which quality measures are applicable. A quality measure is applicable to a Clinical Episode Category for an Episode Initiator if two conditions are met:
  (i) The quality measure is in the measure set that the Episode Initiator chose for the Clinical Episode Category; and
  (ii) The quality measure is specified as relevant to the Clinical Episode Category in the quality measure fact sheet.

In Table 8a, we give an illustrative example for a PGP that is active in the Neurological Care Clinical Episode Service Line Group, which contains two Clinical Episode Categories: IP-Seizures and IP-Stroke. The example PGP has opted into the Alternate measure set for IP-Seizures and IP-Stroke. All-cause readmission and ACP are in both measure sets and are relevant for all Clinical Episode Categories so they are both applicable for all active Clinical Episode Categories for all Episode Initiators. 3-Item Care Transition Measure (CTM-3) is a quality measure included in the Alternate measure set, which is relevant to the IP-Seizures Clinical Episodes. Tobacco Use Screening and Cessation Intervention (Tobacco Screening-Registry), Stroke: Discharged on Statin (STK-06) and Time to ITT are all in the Alternate measure set and are all relevant for the IP-Stroke Clinical Episode Category.

Table 8a: Determining Quality Measures (QMs) Applicable to Clinical Episode Categories for an Example PGP

Quality Measure	QM Contained in Quality Measure Set Chosen for the Clinical Episode Category?		QM Relevant to the Clinical Episode Category		QM Applicable to the Clinical Episode Category for PGP?	
			IP-Seizures	IP-Stroke	IP-Seizures	IP-Stroke
Chosen Quality Measure Set	Admin.	Alternate				
All-Cause Readmission	Y	Y	Y	Y	Y	Y
ACP	Y	Y	Y	Y	Y	Y
CTM-3	N	Y	Y	N	Y	N
Tobacco Screening-Registry	N	Y	N	Y	N	Y
Stroke: Discharged on Statin	N	Y	N	Y	N	Y
Time to ITT	N	Y	N	Y	N	Y

Note: Alternate measure set quality measures are not included in the table unless they are relevant for at least one of the example PGP's Clinical Episode Categories.

- **Step 8a.** For each Episode Initiator-quality measure combination, calculate the total number of attributed Clinical Episodes for which the quality measure is applicable.

  Table 8b continues the example begun in Table 8a.

Table 8b: Calculating the Total Number of Clinical Episodes for which each QM is Applicable for an Example PGP

Quality Measure	QM Applicable to Clinical Episode Category for PGP?		Count of Attributed Performance Period CEs for which the QM is Applicable		
	IP-Seizures	IP-Stroke	IP-Seizures	IP-Stroke	**Total**
Attributed CEs			200	200	**400**
CEs for which QM is Applicable					
All-Cause Readmission	Y	Y	200	200	**400**
ACP	Y	Y	200	200	**400**
CTM-3	Y	N	200	0	**200**
Tobacco Screening - Registry	N	Y	0	200	**200**
Stroke: Discharged on Statin	N	Y	0	200	**200**
Time to ITT	N	Y	0	200	**200**

Note: Alternate measure set quality measures are only included in the table if they are relevant for at least one of the example PGP's Clinical Episode Categories.

- **Step 8b.** For PGP Episode Initiators, split out their attributed Clinical Episodes in each Clinical Episode Category by the ACH at which the Clinical Episodes were initiated.

  Table 8c continues the example begun in Table 8a.

Table 8c: ACH breakdown of Example PGP's Attributed Clinical Episodes

ACHs at which Clinical Episodes were Initiated	PGP's Attributed Clinical Episodes	
	IP-Seizures	IP-Stroke
ACH-A	100	50
ACH-B	100	150
Total	**200**	**200**

- **Step 8c.** For each of the PGP's hospital-based quality measures, repeat **Step 8a** separately for each ACH at which their attributed Clinical Episodes were initiated.
- **Step 8d.** For each combination of PGP and hospital-based quality measure category, calculate the scaled quality measure score as the average of the non-missing scaled quality measure scores of the ACHs at which the PGP initiates Clinical Episodes, weighted by the number of the PGP's attributed Performance Period Clinical Episodes initiated at the ACH during the Performance Period for which the quality measure is applicable to the Clinical Episode Category. [34]

[34] In MY6, applicable Clinical Episode Categories for a quality measure are those that are both listed in the denominator for the quality measure, and also had the quality measure selected for the Clinical Episode Category.

Table 8d: Example of Calculating PGP Scores in Hospital-Based Quality Measures

Quality Measure	ACH-A		ACH-B		PGP Scaled Quality Score
	Count of Performance Period Clinical Episodes Attributed to the PGP, Initiated at ACH A, and for which the QM is Applicable	ACH Scaled Quality Measure	Count of Performance Period Clinical Episodes Attributed to the PGP, Initiated at ACH B, and for which the QM is Applicable	ACH Scaled Quality Measure	
All-Cause Readmissions	150	68	250	92	83
CTM-3	100	22	100	87	54.50
Tobacco Screening - Registry	50	71	150	-	71
STK-06	50	52	150	27	33.25
Time to ITT[35]	50	60	200	-	60

Notes:

- Alternate measure set quality measures are not included in the table unless they are relevant for at least one of the example PGP's Clinical Episode Categories.
- Missing values are denoted with -.
- PGP Scaled Quality Scores are rounded to the nearest hundredth in this table. In the CQS calculation the additional decimal places will be retained until the final step.

- **Step 9. Compute the Composite Quality Score:** Calculate each Episode Initiator's Composite Quality Score as the average of their non-missing scaled quality scores, weighted by the count of the Episode Initiator's attributed Performance Period Clinical Episodes for which the quality measure is applicable.

  Table 9 continues the example begun in Table 8a. The scaled quality scores for the hospital-based measures come from Table 8d, the scaled quality scores for measures such as ACP are calculated directly at the Episode Initiator level and scaled as described in **Step 7**.

[35] ACH B did not receive a scaled score for Time to ITT due to an insufficient Clinical Episode count at the ACH-level. Therefore, PGP1 will receive a scaled score for Time to ITT only based on ACH A.

Table 9: Calculating the CQS

Quality Measure	Scaled Quality Score	Count of Performance Period Clinical Episodes Attributed to the EI, and for which the QM is Applicable	Normalized Weight
All-Cause Readmission	83.00	400	0.250
ACP	79.00	400	0.250
CTM-3	54.50	200	0.125
Tobacco Screening Registry	71.00	200	0.125
STK-06	33.25	200	0.125
Time to ITT	60.00	200	0.125
CQS	**67.84**		

Notes:

- Alternate measure set quality measures are not included in the table unless they are relevant for at least one of the example PGP's Clinical Episode Categories.
- Missing values are denoted with -.
- Scaled quality scores displayed in the table above are rounded to the nearest hundredth. The CQS calculation uses the unrounded figures.

8 CALCULATE RECONCILIATION AMOUNTS

This section describes how to calculate unadjusted Reconciliation amounts that will be disseminated to Participants during the initial Reconciliation. The initial Reconciliation amount does not adjust for the Episode Initiator's performance on quality measures.[36] This step includes applying the stop-loss/stop-gain provision and calculating the NPRA/Repayment Amount. To illustrate how to calculate Reconciliation amounts, this section uses fabricated data, presented in Tables 10 through 12. Table 10 shows how to calculate Reconciliation amounts at the Episode Initiator-Clinical Episode Category level. Tables 11 and 12 show how to aggregate these Reconciliation amounts to the Episode Initiator and Convener Participant levels respectively.

To calculate Reconciliation amounts for Model Year 6, take the following steps:

- **Step 10. Calculate the Positive Reconciliation Amount and Negative Reconciliation Amount at the Clinical Episode Category level**: For each Episode Initiator and Clinical Episode Category, calculate the Reconciliation amount as the difference between the Total Performance Period Target Amount (**Step 6**) and final Performance Period Clinical Episode payments (**Step 2**).[37] If the Total Performance Period Target Amount for an Episode Initiator exceeds final Performance Period Clinical Episode payments during the Performance Period, it results in a Positive Reconciliation Amount. If the Total Performance Period Target Amount is less than the final Performance Period Clinical Episode payments, the result is a Negative Reconciliation Amount.

[36] Please note that quality adjustments will be applied to Reconciliation amounts by incorporating the CQS in True-Up calculations. For all initial Reconciliations and initial True-Ups occurring in Spring Reconciliation cycles, when the CQS is not yet available, the temporary CQS will be a 0 out of 100 for all Episode Initiators, pending replacement. The actual CQS for MY6 will first be applied during the Fall 2024 Reconciliation cycle.

[37] Represented mathematically as $Positive/Negative\ Reconciliation\ Amount_{m,ce,t} = Total\ Performance\ Period\ Target\ Amount_{m,ce,t} - Final\ Performance\ Period\ Clinical\ Episode\ Payment_{m,ce,t}$

Table 10: Calculate the Positive/Negative Reconciliation Amount in Real Dollars

Episode Initiator	PGP/ ACH	Clinical Episode Category	Number of Performance Period Clinical Episodes	Step 2a	Final Performance Period Clinical Episode Payments		Total Performance Period Target Amount	Step 10
				Ratio of Real Dollars to Standardized Dollars	Step 1	Step 2b	Step 6	Positive/Negative Reconciliation Amount in Real Dollars
					Standardized Dollars	Real Dollars	Real Dollars	
H1000	ACH	CE1	34	1.01	$945,744	$955,201	$834,122	-$121,079
H1000	ACH	CE2	15	1.04	$378,315	$393,448	$282,540	-$110,908
H1000	ACH	CE3	28	0.99	$1,452,500	$1,437,975	$1,476,048	$38,073
H1000	ACH	CE4	45	0.89	$2,422,260	$2,155,811	$1,323,225	-$832,586
H1000	ACH	CE5	52	1.11	$1,540,812	$1,710,301	$1,426,932	-$283,369
H2000	ACH	CE1	12	1.02	$215,328	$219,635	$246,012	$26,377
H2000	ACH	CE2	1	1.01	$20,798	$21,006	$37,562	$16,556
H2000	ACH	CE3	14	0.86	$215,166	$185,043	$211,596	$26,553
H2000	ACH	CE4	150	0.93	$3,198,300	$2,974,419	$2,951,400	-$23,019
P000	PGP	CE1	15	1.01	$238,218	$240,600	$476,220	$235,620
P000	PGP	CE2	17	1.05	$231,963	$243,561	$545,231	$301,670

Note: Examples are not associated with the fabricated data used in other BPCI Advanced specifications documents. All dollar values are rounded to the nearest dollar and ratios are rounded to two decimal places.

- **Step 11. Calculate the Positive Total Reconciliation Amount and Negative Total Reconciliation Amount at the Episode Initiator level:** For an Episode Initiator, aggregate Positive Reconciliation Amounts and Negative Reconciliation Amounts (**Step 10**) across all Clinical Episode Categories to obtain either the Positive Total Reconciliation Amount or Negative Total Reconciliation Amount.
- **Step 12. Calculate the Adjusted Positive Total Reconciliation Amount and Adjusted Negative Total Reconciliation Amount at the Episode Initiator Level:** For the initial Reconciliation, calculate the Adjusted Positive Total Reconciliation Amount and the Adjusted Negative Total Reconciliation Amount by temporarily withholding the potential CQS Adjustment Amount at risk (i.e., 10% for Model Year 6) to the Positive Total Reconciliation Amount and the Negative Total Reconciliation Amount. Specifically, at the Episode Initiator level, the Adjusted Positive Total Reconciliation Amount will equal 90% of the Positive Total Reconciliation Amount, while the Adjusted Negative Total Reconciliation Amount will equal the Negative Total Reconciliation Amount.[38] This is

[38] If $Total\ Reconciliation\ Amount_{m,t} > 0$ then $Adjusted\ Total\ Reconciliation\ Amount_{m,t} = Total\ Reconciliation\ Amount_{m,t} * 0.9$. If $Total\ Reconciliation\ Amount_{m,t} < 0$ then $Adjusted\ Total\ Reconciliation\ Amount_{m,t} = Total\ Reconciliation\ Amount_{m,t}$. Where Total Reconciliation Amount is represented mathematically as $Total\ Reconciliation\ Amount_{m,t} = \sum_{ce \in CE} * Reconciliation\ Amount_{m,ce,t}$

the equivalent of a CQS of zero and ensures that Participants will only receive increases (or no change) in their Adjusted Total Reconciliation Amount associated with their CQS during True-Up calculations.[39] During the True-Up Reconciliations occurring in the Fall Reconciliation cycle each calendar year, as applicable, apply the CQS Adjustment Amount to the Positive Total Reconciliation Amount and Negative Total Reconciliation Amount to revise the Adjusted Positive Total Reconciliation Amount and Adjusted Negative Total Reconciliation Amount respectively from earlier Reconciliation calculations when the CQS was not available (Refer to **Step 18** for more details.)

- **Step 13. Apply the 20% stop-loss/stop-gain provision:** As shown in Table 11, if the Episode Initiator's Adjusted Positive Total Reconciliation Amount (**Step 12**) is greater than 20% of the Total Performance Period Target Amount (**Step 6**) or if the absolute value of its Adjusted Negative Total Reconciliation Amount is greater than 20% of the Total Performance Period Target Amount, then apply the 20% stop-loss/stop-gain provision.[40] The Adjusted Positive/Negative Total Reconciliation Amount that incorporates 20% stop-loss/stop-gain where applicable is the capped Adjusted Positive/Negative Total Reconciliation Amount.

Table 11: Calculate the Adjusted Positive/Negative Reconciliation Amount at the Episode Initiator Level

Episode Initiator	Step 11	Step 12	Step 6	Step 13	Step 13
	Positive/Negative Total Reconciliation Amount	Adjusted Positive/Negative Total Reconciliation Amount	20% of Total Performance Period Target Amount	Apply Stop-Loss/Stop-Gain	Capped Adjusted Positive/ Negative Total Reconciliation Amount
H1000	-$1,309,869	-$1,309,869	$1,068,573	Yes	-$1,068,573
H2000	$46,467	$41,820	$689,314	No	$41,820
P000	$537,290	$483,561	$204,290	Yes	$204,290

Note: Examples are not associated with the fabricated data used in other BPCI Advanced specifications documents. All dollar values are rounded to the nearest dollar.

- **Step 14. Calculate NPRAs and Repayment Amounts:** As shown in Table 12, for each Participant, aggregate the capped Adjusted Positive/Negative Total Reconciliation Amount (**Step 13**) across all applicable Episode Initiators to obtain either the NPRA or

[39] In subsequent True-Up calculations when an updated CQS is available, the application of a CQS adjustment will result in either no change to, in the case of a CQS of zero, or a positive adjustment to, either the Adjusted Positive Total Reconciliation Amount or Adjusted Negative Total Reconciliation Amount, in the case of a CQS which exceeds 0.

[40] Represented as:
If Adj Positive Total Reconciliation Amount, then min(Adj Positive Total Reconciliation Amount, 20% of Total Performance Period Target Amount),
If Adj Negative Total Reconciliation Amount, then min(abs(Adj Negative Total Reconciliation Amount), 20% of Total Performance Period Target Amount)

Repayment Amount. Skip this step if the Episode Initiator is a Non-Convener Participant.[41]

Table 12: Calculate NPRAs/Repayment Amounts at the Convener Participant Level

Episode Initiator	Step 13	Step 14
	Capped Adjusted Positive/ Negative Total Reconciliation Amount	Convener-Level NPRA/ Repayment Amount
H1000	-$1,068,573	-$822,463
H2000	$41,820	
P000	$204,290	

Note: This table assumes H1000, H2000, and P000 from Table 12 are now the complete list of Episode Initiators under the Convener Participant. Examples are not associated with the fabricated data used in other BPCI Advanced specifications documents. All dollar values are rounded to the nearest dollar.

[41] For a Non-Convener Participant, the capped Adjusted Positive/Negative Total Reconciliation amount in **Step 13** is the NPRA/Repayment Amount, respectively.

9 CALCULATE TRUE-UP AMOUNTS

This section describes how to perform True-Up calculations to update initial Reconciliation amounts and prior True-Ups using claims processed as of a later date as well as quality measure data. True-Up calculations are conducted approximately six months and one year after initial Reconciliation occurs. Both True-Up calculations will factor in newly processed claims. Quality measurement data that is calculated once per year, will be first incorporated in the Fall Reconciliation True-Up and continue to be incorporated in any subsequent True-Ups for a given Performance Period.[42] To illustrate True-Up calculations, this section uses fabricated data.[43]

- **Step 15. Recalculate Performance Period Clinical Episode Payments:** Using the set of newly processed claims data, follow **Steps 1-2** to calculate final Performance Period Clinical Episode payments.
- **Step 16. Recalculate Final Target Prices and Total Performance Period Target Amounts:** Using the new set of claims data, follow **Steps 3-6** to calculate final Target Prices and Total Performance Period Target Amounts. Note that the updated set of claims data will only reflect changes in Target Price components that use realized Performance Period data, i.e., updated PCMA, updated Relative Case Mix, capped PGT Factor Adjustment and realized ratio of real to standardized dollars.
- **Step 17. Recalculate Reconciliation Amounts:** Follow **Steps 10-11** to recalculate the Positive and Negative Total Reconciliation Amounts at the Episode Initiator level.
- **Step 18. Incorporate CQS into the Positive/Negative Total Reconciliation Amount:** Apply the CQS Adjustment Amount to the Positive Total Reconciliation Amount and Negative Total Reconciliation Amount using the following steps. Table 13 below shows how this calculation is implemented using the example from **Section 8**.
    - **Step 18a.** Calculate the CQS Adjustment Amount, which reflects the amount by which the Total Reconciliation Amount will be adjusted as a result of the Episode Initiator's performance on the CQS. First, calculate the CQS Adjustment Percent. For Model Year 6, the maximum percent at risk is 10%; thus, an Episode Initiator may have the magnitude of its Total Reconciliation Amount reduced by 0 to 10%. For Positive Total Reconciliation Amounts, the CQS Adjustment Percent is inversely proportional to the CQS and scaled to 10% (i.e., CQSs of 0 and 100 have CQS

[42] For Performance Period 9, CQS will be applied for the first time to the second True-Up; while for Performance Period 10, CQS will be applied for the first time to the first True-Up and carried through to the second and for Performance Period 11, CQS will be applied for the first time during the initial Reconciliation cycle and carried through to the first and second True-Ups.

[43] Fabricated data used in this section are not associated with fabricated data used in other BPCI Advanced specifications documents.

Adjustment Percentages of 10% and 0%, respectively). For Negative Total Reconciliation Amounts, the CQS Adjustment Percent is proportional to the CQS and scaled to 10% (i.e., CQSs of 0 and 100 have CQS Adjustment Percentages of 0% and 10%, respectively). Please refer to the equation in the footnote for the exact calculation.[44] Next, multiply the CQS Adjustment Percent by the Episode Initiator-level Total Reconciliation Amount to get the CQS Adjustment Amount, which will be positive for Positive Total Reconciliation Amounts and negative for Negative Total Reconciliation Amounts.

- **Step 18b.** Subtract the CQS Adjustment Amount from the Episode-Initiator level Total Reconciliation Amount (**Step 17**) to get the Adjusted Total Reconciliation Amount for each Episode Initiator. For Negative Total Reconciliation Amounts this corresponds to a reduction in the amount owed to CMS (provided the CQS was greater than 0), and for Positive Total Reconciliation Amounts this corresponds to a decrease in the amount CMS owes the Participant (provided the CQS was less than 100).
- **Step 18c.** Repeat **Step 13** to apply the 20% stop-loss/stop-gain provision to get the capped Adjusted Positive/Negative Total Reconciliation Amount for each Episode Initiator.
- **Step 18d.** For Convener Participants, sum all their Episode Initiators' capped Adjusted Positive Total Reconciliation Amounts and Adjusted Negative Total Reconciliation Amounts to obtain the NPRA/Repayment Amount.

Table 13: Calculate the NPRA/Repayment Amount with CQS Payment Adjustment at the Convener Participant Level

Episode Initiator	Step 17	Step 9	Step 18a		Step 18b	Step 18c	Step 18c	Step 18c	Step 18d
	Positive/ Negative Total Reconciliation Amount	CQS	CQS Adjustment Percent	CQS Adjustment Amount	Adjusted Positive/Negative Total Reconciliation Amount	20% of Volume Weighted Target Price	Stop-Loss/ Stop-Gain	Capped Adjusted Positive/ Negative Total Reconciliation Amount	Convener-Level NPRA/ Repayment Amount
H1000	-$1,309,869	50	5%	-$65,493	-$1,244,376	$1,068,573	Yes	-$1,068,573	-$819,675
H2000	$46,467	65	4%	$1,859	$44,608	$689,314	No	$44,608	
P000	$537,290	77	2%	$10,746	$526,544	$204,290	Yes	$204,290	

[44] Represented mathematically as *CQS Adjustment Amount*$_{m,t}$ = *CQS Adjustment Percent*$_{m,t}$ * *Total Reconciliation Amount*$_{m,t}$ where:

$$\textbf{CQS Adjustment Percent}_{m,t} = \begin{cases} \textit{if Total Reconciliation Amount}_{m,t} > 0 \textit{ then}, \left(10\% - 10\% * \frac{\textbf{CQS}_{m,t}}{100}\right) \\ \textit{if Total Reconciliation Amount}_{m,t} < 0 \textit{ then}, 10\% * \frac{\textbf{CQS}_{m,t}}{100} \end{cases}$$

Note: Data shown are from the initial Reconciliation calculation examples. In practice, True-Up calculations will use newly processed claims data. Examples are not associated with the fabricated data used in other BPCI Advanced specifications documents. All dollar values are rounded to the nearest dollar.

- **Step 19. Calculate the True-Up amount:** Once the NPRA/Repayment Amounts are calculated for the True-Up cycle, calculate the True-Up amount for each Participant by comparing the new amount with the previous amount. For a Participant, the True-Up amount will be the difference between the NPRA/Repayment Amount in the current True-Up period and NPRA/Repayment Amount in the previous period.[45]

Table 14: Calculate the True-Up Amount at the Convener Participant Level

Step 18d	Step 14	Step 19
Recalculated NPRA/Repayment Amount	NPRA/Repayment Amount from Previous Calculation	True-Up Amount
-$819,675	-$822,463	$2,788

Note: The True-Up amount is always calculated as the difference between the NPRA/Repayment Amount calculated for the current True-Up period and the most recent previous NPRA/Repayment Amount calculation.

[45] Represented mathematically as $\textit{True-Up Amount}_{P,t} = \textit{NPRA Amount/Repayment Amount}_{P,t} - \textit{NPRA Amount/Repayment Amount}_{P,(t-1)}$, where,
P is the Participant
t is the applicable Performance Period
(t-1) is the previous Performance Period

10 CALCULATE EXCESS SPENDING AMOUNTS

To reduce Participants' incentives to withhold or delay medically-necessary care until after a BPCI Advanced Clinical Episode ends, BPCI Advanced Participants are responsible for statistically implausible increases in Post-Episode Spending during the Post-Episode Spending Monitoring Period (days 91 to 120 after the Anchor Stay discharge date or Anchor Procedure completion date). The Post-Episode Spending calculations for a Performance Period will occur at the same time as the first True-Up calculations and will be recalculated during the second True-Up to account for newly processed claims. For example, Participants with Clinical Episodes ending between January 2023 and June 2023 will receive their first Post-Episode Spending calculations in Spring 2024.

- **Step 20. Attribute services and payments to the Post-Episode Spending Monitoring Period:** Considering all baseline period and Performance Period Clinical Episodes, attribute Parts A and B claims with a standardized payment amount greater than zero that overlap with the Post-Episode Spending Monitoring Period.
- **Step 21. Apply payment aggregation logic for the Post-Episode Spending Monitoring Period:** For baseline period and Performance Period Clinical Episodes, follow **CE-Steps 14-18** to:[46]
    - Apply BPCI Advanced exclusions criteria,
    - Prorate claims that extend before or after the Post-Episode Spending Monitoring Period, and
    - Calculate overall Post-Episode Spending payment amounts.
- **Step 22. Apply setting-specific price update factor associated with the preceding Clinical Episode:** For constructing baseline period Post-Episode Spending, follow **CE-Steps 19-21** to update payments occurring in the Post-Episode Spending Monitoring Period to Performance Period dollars. Assign Post-Episode Spending to baseline years using the Anchor Stay or Anchor Procedure end date of the preceding Clinical Episode.
- **Step 23. For each Clinical Episode Category and Model Year sub-period, estimate a Clinical Episode-level risk adjustment model for Post-Episode Spending using the final set of baseline Clinical Episodes at eligible ACHs**: Run a two-stage risk adjustment model to estimate baseline Post-Episode Spending similarly to **TP-Steps 1-4**.[47] Run a separate risk-adjustment model for each sub-period of Model Year 6 with Post-Episode Spending updated to the appropriate calendar and fiscal year (CY2023/FY2023, CY2023/FY2024), and for each Clinical Episode Category.

[46] "**CE-Steps**" refer to the step numbers in the MY6 Clinical Episode Construction Specifications.
[47] "**TP-Steps**" refer to the step numbers in the MY6 Target Price Specifications.

- **Step 23a.** Drop episodes where the beneficiary died during the Clinical Episode window. (Note that Clinical Episodes where the beneficiary dies during the Post-Episode Spending Monitoring Period are retained.)
- **Step 23b.** Estimate a compound log-normal risk adjustment model for the Post-Episode Spending. The Post-Episode Spending risk adjustment model differs from the compound log-normal risk adjustment model (**TP-Step 2**) in two main ways:
  - For Post-Episode Spending the compound-log normal model includes a zero node, to accommodate Clinical Episodes with no Post-Episode Spending.
  - For Post-Episode Spending, the peer group characteristics are not included in the model.[48]
- **Step 23c.** Calculate the Clinical Episode level patient case-mix adjustment amount, as the predicted Clinical Episode level Post-Episode Spending conditional on the compound log-normal model and the patient characteristics.
- **Step 23d.** Capture coefficients for national trends using the procedure outlined in **TP-Step 4**, but exclude the peer group interactions from the regression.

- **Step 24. For each ACH and PGP in each Clinical Episode Category, calculate the Post-Episode Spending penalty threshold as the upper bound of the 99.5% confidence interval for the Post-Episode Spending Target Amount**: The structure of the Post-Episode Spending Benchmark Prices and Target Amounts follow the same structure as the in-Episode Spending Target Amounts with a few exceptions:
  - Clinical Episodes where the beneficiary died during the episode window are not included in the Benchmark Prices or the Target Amounts.
  - Rather than a peer group historical adjustment and peer adjusted trend factor adjustment, there is a national historical adjustment and national trend factor adjustment.[49]
  - The Post-Episode Spending Target Amount does not factor in a 2% (for medical CECs) or 3% (for surgical CECs) CMS discount.

  To determine the upper bounds of the 99.5% confidence intervals of the Post-Episode Spending Target Amounts, conduct a Krinsky and Robb simulation with a sufficiently high number of iterations. For each Episode Initiator and Clinical Episode Category take the 99.75th percentile of the Post-Episode Spending Target Amounts across the iterations.

[48] This prevents EIs from being advantaged/disadvantaged by the size of their peer group, since otherwise the volume of EIs in the peer group affects the size of the confidence intervals for the Post-Episode Spending Amounts.
[49] In MY6, the trend factor adjustment re-centers the benchmark prices around realized spending in the Performance Period. The trend factor adjustment will be capped so that the maximum difference between the prospective national trend and realized national trend is 5%.

- **Step 25. Calculate Performance Period Post-Episode Spending:** For all reconciled Performance Period Clinical Episodes, aggregate Performance Period Post-Episode Spending amounts to the Clinical Episode Category level following the methodology in **Step 1**.
- **Step 26. Convert Post-Episode Spending penalty threshold and Performance Period Post-Episode Spending to real dollars:** Convert the Post-Episode Spending penalty threshold and Performance Period Post-Episode Spending to real dollars by multiplying each amount by a ratio of the sum of real Post-Episode Spending to sum of standardized Post-Episode Spending in the Performance Period for each Episode Initiator and Clinical Episode Category.
- **Step 27. Reconcile the Post-Episode Spending penalty threshold against realized Performance Period Post-Episode Spending:** If Performance Period Post-Episode Spending minus the Post-Episode penalty threshold is greater than zero, this amount represents the Excess Spending Amount owed to Medicare. If Performance Period Post-Episode Spending minus the Post-Episode penalty threshold is less than or equal to zero, the Episode Initiator is not liable for an Excess Spending Amount in the Clinical Episode Category.
- **Step 28. Calculate Excess Spending Amounts at the Convener Participant level:** For all Episode-Initiators under a Convener Participant, aggregate the Episode Initiator-Clinical Episode Category-level Excess Spending Amounts to the Convener Participant level.
- **Step 29. Recalculate Excess Spending Amount:** During the second True-Up calculation for each Performance Period, repeat **Steps 20-28** using newly processed claims.
- **Step 30. Calculate Excess Spending True-Up Amount:** Once the new amounts are calculated for the True-Up cycle, calculate True-Up amount for each Participant by comparing the new amount with the previous amount.