



Bundled Payments
for Care Improvement
Advanced | *BPCI*
Advanced

Clinical Episode Reconciliation Specifications Model Years 1 and 2

**Center for Medicare and Medicaid Services (CMS)
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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 set 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 in the Performance Period.
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 determine ACO alignment for ACO recoupment calculations.

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 the reconciliation.
2	Repayment Amount	The amount paid by the Participant to CMS after the reconciliation.
3	Post-Episode Spending Repayment Amount	The amount paid by the Participant to CMS after Post-Episode Spending Calculations.

3 CLINICAL EPISODE RECONCILIATION 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 construction¹ and Target Price construction² specifications documents. To refer to specific steps from the Clinical Episode construction and Target Price construction specifications, this document uses **CE-Step** and **TP-Step**, respectively.

As part of the reconciliation process, for each Participant (both Convener Participant and Non-Convener Participant) CMS compares the fee-for-service allowed amounts from the Episode Initiator's Clinical Episodes against a final Target Price 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, quality adjustments, and ACO recoupments, where applicable. Finally, for each Participant, CMS calculates and monitors Post-Episode spending between days 91 and 120 of the post-anchor period, referred to as the Post-Episode Monitoring Period, to prevent excess spending in the days following the Clinical Episode period.

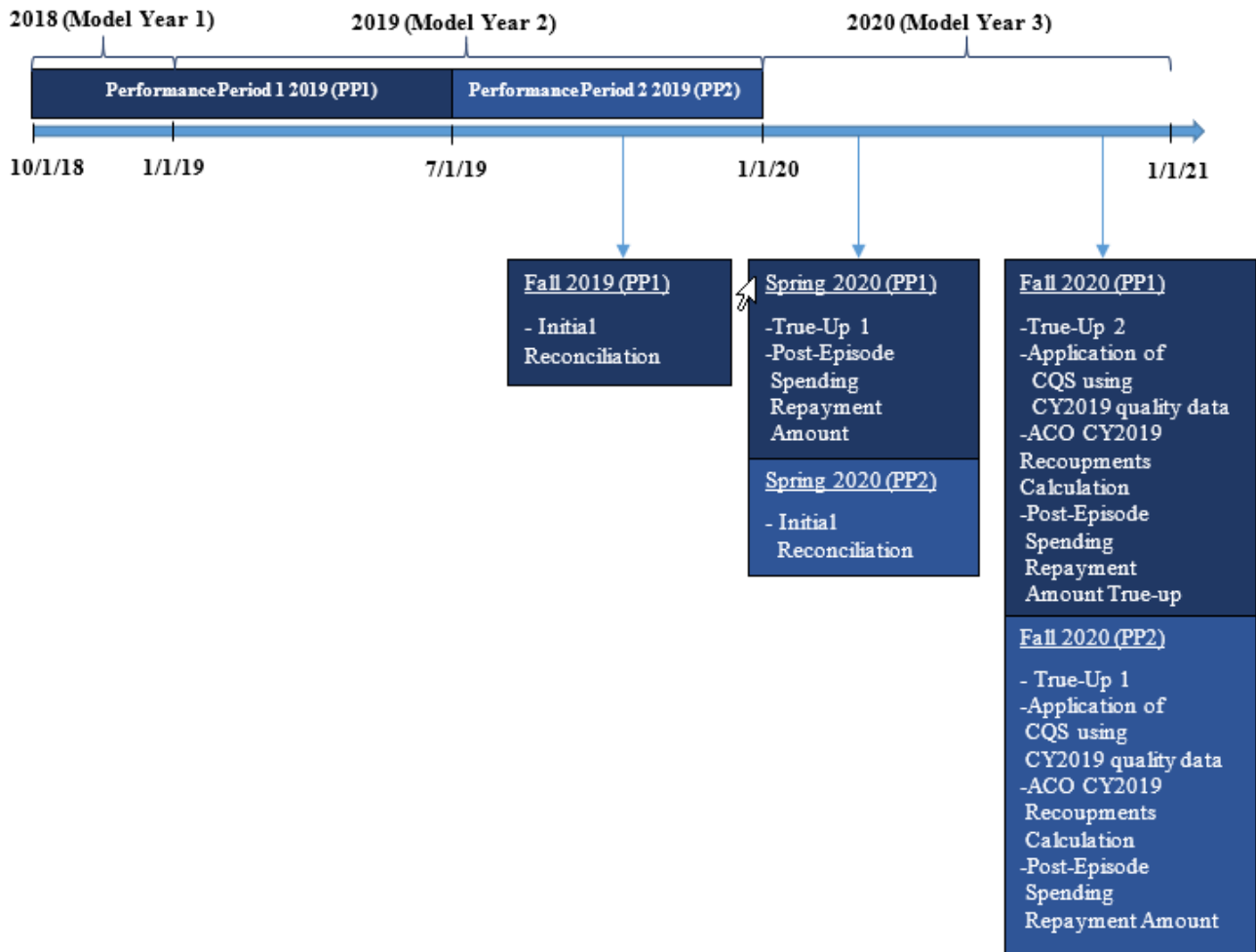
Figure 1 contains the timeline for the sequential stages of the reconciliation process for Performance Period 1 2019 and Performance Period 2 2019.³ For example, for Participants with Clinical Episodes ending between October 1, 2018 and June 30, 2019 (Performance Period 1 2019), CMS will conduct the initial reconciliation in Fall 2019, and first and second true-up calculations in Spring 2020 and Fall 2020, respectively. Quality adjustments based on the Composite Quality Score (CQS) and ACO recoupments will be first applied during the second true-up calculations for Performance Period 1 2019 and the first true-up calculations for Performance Period 2 2019 (Fall 2020). Post-Episode Spending Calculations will initially occur during the first true-up calculation of each Performance Period and will be recalculated during the second true-up.

¹ "Clinical Episode Construction Specifications Model Years 1 and 2": <https://innovation.cms.gov/Files/x/bpciadvanced-episodereconciliationspecs-yr1-2.pdf>

² "BPCI-Advanced-Target-Price-Specifications-Model-Years-1-2": <https://innovation.cms.gov/Files/x/bpciadvanced-targetprice-my1-2.pdf>

³ See Table 3 for date ranges of each Performance Period in Model Years 1 and 2

Figure 1. Reconciliation Timeline



The next 8 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 and updated Relative Case Mix.
- **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** describes the methodology for calculating ACO recoupments.
- **Section 11** 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 and Clinical Episode category, using the Performance Period Clinical Episodes with the date ranges detailed in Table 3.

Table 3: Model Years 1 and 2 Clinical Episode Date Ranges

Performance Periods	Date Range
Performance Period 1 2019 (Model Years 1-2)	Clinical Episodes with a Clinical Episode end date between 10/1/18 and 6/30/19 ^{4,5}
Performance Period 2 2019 (Model Year 2)	Clinical Episodes with a Clinical Episode end date between 7/1/19 and 12/31/19 ⁶

- 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 Initiator's total spending for a particular Clinical Episode category. 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 attributed Clinical Episodes initiated at 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.⁷

⁴ When a participation agreement is set to terminate off cycle (prior to the start of the new Model Year), a Clinical Episode will be eligible for payment and reconciliation under the model if the Anchor Stay/Anchor Procedure discharge date is prior to the participation agreement's termination effective date. When an agreement is set to expire at the beginning of the new Model year, a Clinical Episode will be eligible for payment and reconciliation under the model if the Clinical Episode start date is prior to the expiration date. Performance Period attribution will be based on Clinical Episode end date.

⁵ Participants will not be assigned Clinical Episodes that begin before the model goes live on 10/1/18.

⁶ See footnote 4.

⁷ *Performance Period Clinical Episode Payments* $S_{m,ce,t} = \sum_{h \in H} \sum_{i \in T(m,h,ce,t)} Y_{i,m,t}$ 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

$i \in T(m,h,ce,t)$ refers to a Clinical Episode i from the set of Clinical Episodes initiated by an Episode Initiator m at ACH h at time t . $T(m,h,ce,t)$ will be empty for all $h \in H$ at which the Episode Initiator is not assigned a Clinical Episode.

- **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**.

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) and Peer Adjusted Trend (PAT) Factor remain constant from the preliminary Target Price calculation.⁸ Thus, for ACHs, the updated Hospital Benchmark Price (HBP) is calculated by updating the PCMA term, using the following equation:

$$HBP_{h,t} = SBS_h * PCMA_{h,t} * PAT Factor_{h,t} \text{ where:}$$

h is the ACH at which the Clinical Episode is initiated, and

t is the applicable Performance Period.

For PGP Episode Initiators, the updated PGP-ACH Benchmark Price is calculated by updating the HBP and Relative Case Mix terms, using the following equation:

$$PGP\text{-}ACH \text{ Benchmark Price}_{p,h,t} = HBP_{h,t} * PGP \text{ Offset}_{p,h} * Relative \text{ Case Mix}_{p,h,t} \text{ where:}$$

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

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

t is the applicable Performance Period.

The formulas above use components of preliminary Target Prices that are updated during the Model Years to account for the most recently available Medicare payment rates. Specifically, the preliminary Target Prices for Model Years 1 and 2 will be updated up to three times to align with updates to CMS fee-for-service payment rates. The preliminary Target Prices distributed in May 2018 will be based upon the FY 2018 and CY 2018 Final Rules. To maintain an accurate benchmark against which the model compares aggregate fee-for-service payments (AFP), the preliminary Target Prices will be updated once before the October 1, 2018 start date to adjust for the FY 2019 rates finalized in August 2018. While the group of baseline period Clinical Episodes will remain the same, the revised payment rates will be used to inflate the spending amounts of these baseline period Clinical Episodes to current Medicare payment rates. Risk adjustment will be rerun under specifications identical to the first preliminary Target Prices. This will result in updated coefficients and, ultimately, updated preliminary Target Prices. The changes to pricing will only reflect changes to the relevant prices finalized in the FY 2019 Final Rules. Since, on

⁸ Though the Medicare payment rate updates will impact the SBS and PAT factor terms, any resulting changes to the Target Price will be delivered to Participants prospectively and therefore will be a part of the Preliminary Target Price.

average, rates increase, it is anticipated that these updates will on average increase preliminary Target Prices. These new preliminary Target Prices will be provided to Participants as soon as feasible following publication of the applicable Final Rules in the Federal Register. The second update to preliminary Target Prices will be effective January 1, 2019 for CY 2019 payment rates using the same method with which the new FY 2019 rates were incorporated. And, finally, the third preliminary Target Price update during Model Years 1 and 2 will use the finalized FY 2020 payment rates, which will be applied to Clinical Episodes with an Anchor Stay discharge or Anchor Procedure completion date in 2019Q4. See 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 ⁹
May 2018	N/A	FY 2018 and CY 2018 ¹⁰
September 2018	October 1, 2018	FY 2019
December 2018	January 1, 2019	CY 2019
September 2019	October 1, 2019	FY 2020

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 12**) to take into account the realized case mix of the Performance Period that has now ended for each ACH and Clinical Episode category. This requires recalculating the Clinical Episode level patient case mix adjustment 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. This step does not involve a rerun of the risk adjustment models.
 - **Step 3a.** For an ACH, apply the beneficiary-level coefficient values from **TP-Step 1** to the Clinical Episodes in the Performance Period. Specifically, rerun **TP-Step 3** using the Performance Period Clinical Episodes to calculate the patient case mix adjustment as the predicted Clinical Episode spending from **TP-Step 1**.
 - **Step 3b.** Rerun **TP-Step 10** to calculate the updated PCMA for the ACH and Clinical Episode category by taking the average patient case mix adjusted Clinical Episode

⁹ 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).

¹⁰ Initial preliminary Target Prices are based on the 2018 payment rates due to availability at the time of workbook distribution

- spending (**Step 3a**) and dividing by the Dollar Amount (**TP-Step 7**). The Dollar Amount is a normalizing factor that is used interpret the SBS in dollars and the PCMA terms as ratios relative to national baseline case mix. It is calculated by taking the average predicted spending for all Clinical Episodes in a Clinical Episode category across ACHs, and it remains unchanged from preliminary Target Price construction.
- **Step 3c.** Rerun **TP-Step 12** by multiplying the three components that make up the updated HBP: the SBS (**TP-Step 9**), the updated PCMA (**Step 3b**) and the PAT factor (**TP-Step 11**) 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 taking into account the PGP's realized case mix at the ACH during the Performance Period that has now ended.
 - **Step 4a.** Rerun **TP-Step 15** to calculate the updated Relative Case Mix using Performance Period Clinical Episodes. Calculate average updated PCMA at the PGP-ACH level by taking the average patient case mix adjusted Clinical Episode spending (**Step 3a**) for each PGP-ACH¹¹ combination and dividing by the Dollar Amount (**TP-Step 7**). Calculate updated Relative Case Mix as the ratio of the updated PCMA for each PGP-ACH pair over the updated PCMA for the applicable ACH (**Step 3b**).
 - **Step 4b.** Calculate the updated PGP-ACH Benchmark Price as the product of updated HBP (**Step 3c**), PGP Offsets with Adjustment (**TP-Step 14b**), and the updated Relative Case Mix (**Step 4a**). Note that for PGPs that did not have more than 40 Clinical Episodes for a specific Clinical Episode category in the baseline period, no PGP Offset is calculated. In other words, the PGP Offset is set to 1.
 - **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 3% CMS Discount Factor to updated HBPs and updated PGP-ACH Benchmark Prices to calculate the updated Target Prices in standardized dollars for ACHs and PGPs, respectively.
 - **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.

¹¹ Limited to ACHs at which the PGP initiates Clinical Episodes that are assigned to it. Only those ACHs which have more than 40 Clinical Episodes for that Clinical Episode category in the baseline period are considered.

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 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 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.¹²
 - **Step 6a.** Count the number of Clinical Episodes assigned 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 assigned 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 assigned Clinical Episodes at only one ACH (H1000) for Clinical Episode category CE1 while it is assigned Clinical Episodes across two ACHs (H1000 and H2000) for Clinical Episode category CE2.

¹² The mathematical expression for the Total Performance Period Target Amount is: *Total Performance Period Target Amount*_{m,ce,t} = $\sum_{h \in H} \text{Final Target Price}_{m,h,ce,t} * \text{Number of Clinical Episodes}_{m,h,ce,t}$ where:

Number of Clinical Episodes_{m,h,ce,t} = $\sum_{i \in T(m,h,ce,t)}$

T(m,h,ce,t) will be empty for all *h* ∈ *H* at which the Episode Initiator is not assigned a Clinical Episode.

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. See 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 payments made to Participants. By tying payment to performance on quality measures, CMS aims to incentivize providers to improve quality of care while improving efficiency. For each Clinical Episode category and Episode Initiator, up to seven quality measures are weighted to calculate the Composite Quality Score (CQS), 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, CQS will be first incorporated in the Fall 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. Data shown throughout this section are fabricated to illustrate CQS calculations.¹³

7.1 Quality Measures

CMS selected seven quality measures to ensure quality performance can be assessed across the full range of Clinical Episode categories offered under the BPCI Advanced model. Table 6 lists quality measures that have been selected to calculate Episode Initiator level CQS for Model Years 1 and 2. CMS may update the list of quality measures for future Model Years.

¹³ 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.

Table 6: BPCI Advanced Quality Measures

Quality Measure	Guiding NQF / PSI # ¹⁴	Hospital/ Physician Based ¹⁵	MIPS (Y/N)	Applicable Clinical Episode Categories
All-cause Hospital Readmission Measure	NQF #1789	Hospital Based	Y	All Inpatient and Outpatient Clinical Episodes
Advance Care Plan ¹⁶	NQF #0326	Physician Based	Y	All Inpatient and Outpatient Clinical Episodes
Perioperative Care: Selection of Prophylactic Antibiotic: First or Second Generation Cephalosporin	NQF #0268	Physician Based	Y	Back and Neck Except Spinal Fusion (Inpatient and Outpatient) ¹⁷ Cervical Spinal Fusion Combined Anterior Posterior Spinal Fusion Coronary Artery Bypass Graft (CABG) Double Joint Replacement of the Lower Extremity Hip and Femur Procedures Except Major Joint Lower Extremity and Humerus Procedure Except Hip, Foot, Femur Major Bowel Procedure Major Joint Replacement of the Lower Extremity Major Joint Replacement of the Upper Extremity Cardiac Valve
Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)	NQF #1550	Hospital Based	N	Double Joint Replacement of the Lower Extremity Major Joint Replacement of the Lower Extremity
Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft Surgery (CABG)	NQF #2558	Hospital Based	N	CABG
Excess Days in Acute Care after Hospitalization for Acute Myocardial Infarction (AMI)	NQF #2881	Hospital Based	N	AMI
AHRQ Patient Safety Indicators	PSI #90	Hospital Based	N	All Inpatient Clinical Episodes

¹⁴ Please note that several measures were adapted from NQF-endorsed measures; the measure specifications were changed for use in the Bundled Payment for Care Improvement Advanced Model. NQF has not reviewed or approved the revised measure specifications. Any deviations from these measure specifications will be noted.

¹⁵ This column refers to the level at which the NQF/ PSI measure is calculated. All measures will be applied to all Episode Initiators. Where the endorsed measure is hospital-based, the measure is adjusted to apply to the PGP. The NQF-endorsed Peri-operative Care measure is physician-based, but it will be adjusted to apply to the hospital. The Advanced Care Plan measure is under review. Note that these represent deviations from NQF/PSI specifications.

¹⁶ CMS is considering options for adapting the Advance Care Plan measure to the beneficiary level and to apply specifically to BPCI Advanced Episode Initiators. Therefore, the exact specifications for the Advance Care Plan quality measure are in development.

7.2 CQS Calculation

For each Episode Initiator, performance on multiple quality measures is combined into a CQS that is applied during true-up calculations to the Negative and Positive Total Reconciliation Amounts. Below is a step-by-step methodology for calculating the CQS.

- **Step 7. Convert raw hospital-level quality measure data into scaled scores:** For each hospital-level quality measure, calculate the scaled quality score at the Episode Initiator-Clinical Episode category level using the steps below.
 - **Step 7a.** For each ACH, convert the quality measure into the scaled score based on the BPCI Advanced cohort.¹⁸ The scaling methodology will use the designated cohort grouping Episode Initiator performance by decile so that each Episode Initiator receives a Clinical Episode category-specific score between 0 and 10. An example calculation is provided in Table 7. This scaled score will be applied to the ACH at the Clinical Episode category level. Note that scaled quality score of an ACH is identical for all applicable Clinical Episode categories.

Table 7: ACH Scaled Quality Measure Example

Raw Quality Score	Cohort Minimum	Cohort Maximum	Scaled Quality Score
65	29	87	6.21

Note: The numbers in this table are rounded to the nearest one hundredth. In the actual calculation, only the CQS will be rounded.

- **Step 7b.** For PGPs, calculate the scaled score as the average of scaled scores of the ACHs at which they initiate their Clinical Episodes, weighted by the volume of the PGPs Clinical Episodes at those ACHs for a given Clinical Episode category.¹⁹ Example calculations are provided in Table 8.

¹⁷ Because perioperative antibiotics are not prescribed for all Back and Neck except Spinal Fusion procedures in the outpatient Clinical Episode category, only applicable HCPCS will be used in the measure cohort. This is consistent with NQF specifications.

¹⁸ ACH scaled quality score can be represented mathematically as

$$\text{Scaled Quality Score}_{q,h,y} = \frac{\text{Raw Quality Score}_{q,h,y} - \text{Cohort Minimum}_{q,y}}{\text{Cohort Maximum}_{q,y} - \text{Cohort Minimum}_{q,y}} * 10 \quad \text{where:}$$

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

q is the quality measure.

y is the given time period of quality measure.

¹⁹ PGP scaled quality score can be represented mathematically as

$$\text{Scaled Quality Score}_{q,p,ce,y} = \frac{\sum_{h \in H} \sum_{i \in I(p,h,ce,y)} \text{Scaled Quality Score}_{q,h,y}}{\sum_{h \in H} \text{Number of Clinical Episodes}_{p,h,ce,y}} \quad \text{where:}$$

$$\text{Number of Clinical Episodes}_{p,h,ce,y} = \sum_{i \in I(p,h,ce,y)}$$

As shown in Table 8 below, PGP scaled quality score for a single quality measure may differ by Clinical Episode category depending on the distribution of Clinical Episodes across ACHs at which they are initiated. For example, the scaled score for Quality Measure 1 is 7.01 for CE1 while it is 7.10 for CE2, since different numbers of Clinical Episodes initiated at ACHs A and B are assigned to the PGP for each Clinical Episode category.

Table 8: PGP Scaled Quality Measure Example

Clinical Episode Category	Quality Measure	ACH A		ACH B		PGP Scaled Quality Scores
		Performance Period Clinical Episode Count	ACH Scaled Quality Scores	Performance Period Clinical Episode Count	ACH Scaled Quality Scores	
CE1	1	500	6.50	200	8.30	7.01
CE2	1	100	6.50	50	8.30	7.10
CE1	2	500	4.25	200	9.45	5.74
CE2	2	100	4.25	50	9.45	5.98

Note: The scaled scores in this table are rounded to the nearest one hundredth. In the actual calculation, only the CQS will be rounded.

- **Step 8. Convert the raw physician (NPI)-level quality measure data into scaled scores:** For the physician-level quality measure, Perioperative Care: Selection of Prophylactic Antibiotic: First or Second Generation Cephalosporin, calculate the scaled quality score at the Episode Initiator-Clinical Episode category level using the steps below. These steps will only apply to the Clinical Episodes in which the underlying MS-DRGs are classified as “surgical” in the current MS-DRG definitions manual.
 - **Step 8a.** First, identify the applicable NPI for each Performance Period surgical Clinical Episode. For the Clinical Episodes assigned to a PGP, the relevant NPI is either the attending NPI or the operating NPI on the initiating inpatient/outpatient claim that was determined to have a billing relationship with the participating PGP (See **CE-Step 25** for assignment rules). For the Clinical Episodes assigned to an ACH, the applicable NPI is the operating NPI on the initiating inpatient/outpatient claim.
 - **Step 8b.** Convert the quality measure for each applicable NPI into a scaled score based on the BPCI Advanced cohort. The scaling methodology will use the designated cohort grouping NPI performance by decile so that each

$i \in T(p, h, ce, y)$ = a Clinical Episode i from the set of Clinical Episodes initiated by PGP p at ACH h for a Clinical Episode category ce during time period y . $T(p, h, ce, y)$ will be empty for all $h \in H$ at which the PGP is not assigned a Clinical Episode.

physician receives a score between 0 and 10. An example calculation is provided in Table 9.

Table 9: NPI-Based Scaled Quality Measure Example

Raw Quality Score	Cohort Minimum	Cohort Maximum	NPI Scaled Quality Score
73	30	91	7.05

Note: The numbers in this table are rounded to the nearest one hundredth. In the actual calculation, only the CQS will be rounded.

- **Step 8c.** For each ACH/PGP and Clinical Episode category, calculate the average of scaled NPI quality scores applicable to their Clinical Episodes. An example calculation is provided in Table 10 for an ACH (H1000) and PGP (P000) for two Clinical Episode categories (CE1 and CE2).

Table 10: Convert Scaled NPI-Based Measures to ACH and PGP Measures

Episode Initiator (EI)	Clinical Episode Category	NPI A		NPI B		EI Scaled Quality Score
		Performance Period Clinical Episode Count	Scaled Quality Score	Performance Period Clinical Episode Count	Scaled Quality Score	
H1000	CE1	500	6.25	200	8.10	6.78
H1000	CE2	100	6.25	50	8.10	6.87
P000	CE1	75	6.25	100	8.10	7.31
P000	CE2	150	6.25	55	8.10	6.75

Note: Example assumes that H1000 and P000 only have Clinical Episodes associated with two NPIs, NPI A and NPI B. The numbers in this table are rounded to the nearest one hundredth. In the actual calculation, only the CQS will be rounded.

- **Step 9. Calculate the Clinical Episode category level quality scores:** For each Episode Initiator, calculate the Clinical Episode category level quality score as the average of all the scaled quality scores for that category (**Steps 7-8**), multiplied by 10.²⁰ Table 11 shows the quality scores for an Episode Initiator that has the same number of quality measures for each Clinical Episode category, while Table 12 shows the quality scores for an Episode Initiator that has a different number of quality measures for each Clinical Episode category.

²⁰ Clinical Episode category level quality score can be expressed mathematically as

$$Quality\ Score_{m,ce,y} = \frac{\sum_{q \in ce} Scaled\ Quality\ Score_{q,m,ce,y}}{Number\ of\ q_{ce,y}} * 10 \quad \text{where:}$$

q is the quality measure in the Clinical Episode category.

$q \in ce$ refers to all the quality measures applicable to the Clinical Episode category.

$Number\ of\ q_{ce,y}$ is the number of quality measures applicable to the Clinical Episode category in the given time period of the quality measure.

Table 11: Clinical Episode Category Level Quality Scores for Clinical Episode Categories with the Same Numbers of Quality Measures

ACH/PGP	Clinical Episode Category	Scaled Quality Score		Average Scaled Quality Score	Clinical Episode Category Level Quality Score
		Quality Measure #1	Quality Measure #2		
ACH 1	CE1	5.53	4.48	5.01	50.10
ACH 1	CE2	5.53	4.48	5.01	50.10
PGP 1	CE	6.57	5.43	6.00	60.00
PGP 1	CE2	6.67	5.67	6.20	62.00

Note: The numbers in this table are rounded to the nearest one hundredth. In the actual calculation, only the CQS will be rounded.

Table 12: Clinical Episode Category Level Quality Scores for Clinical Episode Categories with Different Numbers of Quality Measures

ACH/PGP	Clinical Episode Category	Scaled Quality Score			Average Scaled Quality Score	Clinical Episode Category Level Quality Score
		Quality Measure #1	Quality Measure #2	Quality Measure #3		
ACH 1	CE3	5.53	4.47	-	5.00	50.00
ACH 2	CE4	5.53	4.47	6.20	5.40	54.00
PGP 1	CE3	5.67	6.67	-	6.17	61.70
PGP 2	CE4	6.57	5.43	5.66	5.89	58.87

Note: The numbers in this table are rounded to the nearest one hundredth. In the actual calculation, only the CQS will be rounded.

- Step 10. Calculate the Episode Initiator Composite Quality Score:** For each Episode Initiator, calculate the Composite Quality Score (CQS) as the volume-weighted average of Clinical Episode category level quality scores (**Step 9**), where volume is the number of Clinical Episodes assigned to it.²¹ The CQS will range between 0 and 100 and will be rounded to the nearest tenth. An example calculation can be found in Table 13 for an Episode Initiator with two Clinical Episode categories.

²¹CQS can be expressed mathematically as

$$CQS_{m,y} = \frac{\sum_{ce \in CE} \text{Quality Score}_{m,ce,y} * \text{Number of Clinical Episodes}_{m,ce,y}}{\text{Number of Clinical Episodes}_{m,y}} \quad \text{where:}$$

$$\text{Number of Clinical Episodes}_{m,y} = \sum_{ce \in CE} \text{Number of Clinical Episodes}_{m,ce,y}$$

Table 13: CQS Example

Clinical Episode Category 1		Clinical Episode Category 2		CQS
Performance Period Clinical Episode Count	Quality Score	Performance Period Clinical Episode Count	Quality Score	
400	46	600	50	48.4

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. This step includes applying the stop-loss/stop-gain provision and calculating NPRA/Repayment Amount.²² To illustrate how to calculate reconciliation amounts, this section uses fabricated data, presented in Tables 14 through 16. Table 14 shows how to calculate reconciliation payments at the Episode Initiator-Clinical Episode category level. Tables 15 and 16 show how to aggregate these reconciliation amounts to the Episode Initiator and Convener Participant levels respectively.

To calculate reconciliation amounts for Model Years 1 and 2, take the following steps:

- Step 11. Calculate Positive Reconciliation Amount and Negative Reconciliation Amount at the Clinical Episode category level:** For each Episode Initiator and Clinical Episode category, calculate reconciliation amount as the difference between the Total Performance Period Target Amount (**Step 6**) and final Performance Period Clinical Episode payments (**Step 2**).²³ 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.

²² Note that quality adjustments will be applied to reconciliation amounts in the true-up calculations through the CQS. For all initial reconciliations and initial true-ups occurring in Spring, when the CQS is not yet available, the temporary CQS will be a 0 out of 100 for all Episode Initiators, pending replacement.

²³ 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 14: Calculate Positive/Negative Reconciliation Amount in Real Dollars

					Final Performance Period Clinical Episode Payments		Total Performance Period Target Amount		
				Step 2a	Step 1	Step 2b	Step 6	Step 11	
Episode Initiator	PGP/ACH	Clinical Episode Category	Number of Performance Period Clinical Episodes	Ratio of Real Dollars to Standardized Dollars	Standardized Dollars	Real Dollars	Real Dollars	Positive/Negative Reconciliation Amount in 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 12. Calculate 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 11**) across all Clinical Episode categories to obtain either Positive Total Reconciliation Amount or Negative Total Reconciliation Amount.
- Step 13. Calculate 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 outlay at risk (i.e., 10% for Model Years 1 and 2) 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.²⁴ This is the equivalent of CQS of zero and ensures that Participants will only receive increases (or

²⁴ 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 $Total\ Reconciliation\ Amount_{m,t} = \sum_{ce \in CE} * Reconciliation\ Amount_{m,ce,t}$

no change) in their Adjusted Total Reconciliation Amount associated with their CQS during true-up calculations.²⁵ During the true-up reconciliations occurring in Fall each 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 (see **Step 19** for more details.)

- **Step 14. Apply the 20% stop-loss/stop-gain provision:** As shown in Table 15, if the Episode Initiator’s Adjusted Positive Total Reconciliation Amount (**Step 13**) 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.²⁶ 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 15: Calculate Adjusted Positive/ Negative Reconciliation Amount at the Episode Initiator Level

	Step 12	Step 13	Step 6	Step 14	Step 14
Episode Initiator	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 15. Calculate NPRAs and Repayment Amounts:** As shown in Table 16, for each Participant, aggregate the capped Adjusted Positive/ Negative Total Reconciliation

²⁵In 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.

²⁶ Represented as:

If Adj Positive Total Reconciliation Amount, then $\min(\text{Adj Positive Total Reconciliation Amount}, 20\% \text{ of Total Performance Period Target Amount})$,

If Adj Negative Total Reconciliation Amount, then $\min(\text{abs}(\text{Adj Negative Total Reconciliation Amount}), 20\% \text{ of Total Performance Period Target Amount})$

Amount (**Step 14**) across all applicable Episode Initiators to obtain either NPRA or Repayment Amount. Skip this step if the Episode Initiator is a Single Participant.²⁷

Table 16: Calculate NPRAs/ Repayment Amounts at the Convener Participant Level

		Step 14	Step 15
Episode Initiator	Capped Adjusted Positive/ Negative Total Reconciliation Amount		Convener-Level NPRA/ Repayment Amount
H1000	-\$1,068,573		-\$784,488
H2000	\$41,820		
P000	\$204,290		

Note: This table assumes H1000, H2000, and P000 from Table 15 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.

²⁷ For Single Participant, the capped Adjusted Positive/Negative Total Reconciliation amount in Step 14 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-ups are conducted 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 true-up and continue to be incorporated in any subsequent true-ups for a given Performance Period.²⁸ ACO recoupments (described in the following section), however, will only be incorporated for each Performance Period once per year during the Fall true-up. To illustrate true-up calculations, this section uses fabricated data.²⁹

- **Step 16. 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 17. 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, and realized ratio of real to standardized dollars.
- **Step 18. Recalculate Reconciliations Amounts:** Follow **Steps 11-12** to recalculate Positive and Negative Total Reconciliation Amounts at the Episode Initiator level.
- **Step 19. Incorporate CQS into 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 17 below shows how this calculation is implemented using the example from Section 8.
 - **Step 19a.** Calculate CQS Adjustment Amount to reflect the percent of the Positive/Negative Total Reconciliation Amount that will be adjusted. For Model Years 1 and 2, the maximum percent at risk is 10%; thus depending on its CQS, an Episode Initiator may gain up to 10% of its Positive Total Reconciliation Amount or have its Negative Total Reconciliation Amount reduced by at most 10%. First, calculate the percent adjustment based on the CQS and then apply it to the Episode Initiator level Positive/Negative Total Reconciliation Amount to get the CQS

²⁸ For Performance Period 1 2019, CQS will be applied for the first time to the second true-up; while for Performance Period 2 2019, CQS will be applied for the first time to the first true-up and carried through to the second.

²⁹ Fabricated data used in this section are not associated with fabricated data used in other BPCI Advanced specifications documents.

Adjustment Amount. Specifically, for an Episode Initiator multiply CQS by 10%. If the Episode Initiator has a Positive Total Reconciliation Amount, deduct it from 10%. Apply this percentage to Positive/Negative Total Reconciliation Amount. This is the amount by which Positive/Negative Total Reconciliation Amount will be reduced.³⁰

- **Step 19b.** Apply corresponding CQS Adjustment Amount to the Episode-Initiator level Positive Total Reconciliation Amount and Negative Total Reconciliation Amount (**Step 12**) to get the Adjusted Positive Total Reconciliation Amount and Adjusted Negative Total Reconciliation Amount respectively for each Episode Initiator.³¹
- **Step 19c.** Repeat **Step 14** to apply the 20% stop-loss/stop-gain provision to get the capped Adjusted Positive/Negative Total Reconciliation Amount for each Episode Initiator.
- **Step 19d** For Convener Participants, sum all their Episode Initiators' capped Adjusted Positive Total Reconciliation Amounts and Adjusted Negative Total Reconciliation Amounts to obtain NPRA/Repayment Amount. Skip this step for single Participants.³²

Table 17: Calculate NPRA/Repayment Amount with CQS Payment Adjustment at the Convener Participant Level

	Step 12	Step 10	Step 19a		Step 19b	Step 19c	Step 19c	Step 19c	Step 19d
Episode Initiator	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	

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 20. Calculate True-Up amount:** Once the NPRA/Repayment Amounts are calculated for the true-up cycle, calculate true-up amount for each Participant by comparing the new amount with the previous amount. For a Participant, the true-up

³⁰ Represented mathematically as $CQS\ Adjustment\ Amount_{m,t} = CQS\ Adjustment\ Percent_{m,t} * Total\ Reconciliation\ Amount_{m,t}$ where:

$$CQS\ Adjustment\ Percent_{m,t} = \begin{cases} \text{if } Total\ Reconciliation\ Amount_{m,t} > 0 \text{ then, } \left(10\% - 10\% * \frac{CQS_{m,t}}{100}\right) \\ \text{if } Total\ Reconciliation\ Amount_{m,t} < 0 \text{ then, } 10\% * \frac{CQS_{m,t}}{100} \end{cases}$$

³¹ Represented mathematically as $Adjusted\ Total\ Reconciliation\ Amount_{m,t} = Total\ Reconciliation\ Amount_{m,t} - CQS\ Adjustment\ Amount_{m,t}$

³² For Single Participants, this amount will be same as their Episode Initiator level adjusted amount.

amount will be the difference between the NPRA/Repayment Amount in the current true-up period and NPRA/Repayment Amount in the previous period.³³

Table 18: Calculate True-Up Amount at the Convener Participant Level

Step 17	Step 14	Step 19
Recalculated NPRA/Repayment Amount	NPRA/Repayment Amount from Previous Calculation	True-Up Amount
\$819,675	-\$784,488	\$1,604,163

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.

³³ Represented mathematically as $True-Up Amount_{P,t} = NPRA Amount/Repayment Amount_{P,t} - NPRA Amount/Repayment Amount_{P,(t-1)}$, where,
P is the Participant
t is the applicable Performance Period
(t-1) is the previous Performance Period

10 RECONCILE ACO OVERLAP

BPCI Advanced Participants aligned with an Accountable Care Organization (ACO), including the Medicare Shared Savings Program 1, 1+, and 2, will have the portion of the BPCI Advanced discount paid out as the ACO's shared savings payment recouped. This step prevents duplicate payment from overlapping savings achieved for the same beneficiary's care. Recoupment calculations occur after the completion of the shared savings calculation under the relevant ACO initiative and will first occur during the second true-up calculations for Performance Period 1 2019 (includes Clinical Episodes ending in 2018, if any) and the first true-up calculations for Performance Period 2 2019 (during the Fall 2020 Reconciliation).

- **Step 21. Identify Participants aligned with an ACO:** An Episode Initiator is considered a participant in an ACO if it:
 - Has or bills through a TIN that appears on a Shared Savings Program ACO's certified list of ACO participants;
 - Has a CCN included on an ACO's participating provider list;
 - Or has a TIN/NPI combination included on an ACO's participating provider list.
- **Step 22. Check if the ACO achieved savings:** Using information from the MDM, check if an ACO achieved savings. If an ACO achieved savings, proceed to **Step 23**, otherwise skip the remaining steps in this section.
- **Step 23. Calculate BPCI Advanced Discount Amount:** The BPCI Advanced Discount Amount equals the dollar amount of the CMS Discount Factor (i.e., 3%). For instance, if a Participant's Benchmark Price is \$30,000, the BPCI Advanced Discount Amount is \$900 (3% of the Benchmark Price.)
- **Step 24. Determine the Shared Savings Percentage:** Using MDM data, determine the savings rate achieved by the ACO after completion of its Performance Period.
- **Step 25. Calculate the Scaling factor:** Use the components below to calculate the scaling factor:
 - **Step 25a.** Calculate ACO spending as the aggregate Parts A and B expenditures for beneficiaries aligned with that ACO. Using the BPCI Advanced Discount (**Step 23**), calculate the BPCI Advanced Discount Amount as a percent of ACO spending.
 - **Step 25b.** Calculate national spending as the aggregate Parts A and B expenditures for the national population. Using the BPCI Advanced Discount Amount (**Step 23**), calculate the BPCI Advanced Discount Amount as a percent of national spending.

- **Step 25c.** The Scaling factor is equal to one minus the BPCI Discount as a percent of national spending (**Step 25b**) divided by the BPCI Discount as a percent of ACO spending (**Step 25c**).³⁴
- **Step 26. Calculate the BPCI Advanced recoupment amount:** The BPCI Advanced recoupment amount is equal to the product of the BPCI Advanced Discount Amount (**Step 23**), the Shared Savings Percentage (**Step 24**), and the Scaling Factor (**Step 25**).³⁵

³⁴ Represented mathematically as:
$$\text{Scaling Factor} = 1 - \frac{\text{BPCI Discount as percent of national spending}}{\text{BPCI Discount as percent of ACO spending}}$$

³⁵ Represented mathematically as $\text{BPCI Advanced Recoupment Amount} = \text{BPCI Advanced Discount Amount} * \text{Shared Savings Percentage} * \text{Scaling Factor}$

11 CALCULATE POST-EPISODE REPAYMENT 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 between days 91 and 120 of the post-anchor period. This time period will henceforth be referred to as the Post-Episode Monitoring Period. 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 October 2018 and July 2019 will receive their first Post-Episode Spending Calculations in Spring 2020.

- **Step 27. Attribute services and payments to the Post-Episode 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 days 91-120 of the post-anchor period.
- **Step 28. Apply payment aggregation logic for the Post-Episode Monitoring Period:** For baseline period and Performance Period Clinical Episodes, follow **CE-Steps 14-18** to:
 - Apply BPCI Advanced exclusions criteria,
 - Prorate claims that extend before or after the Post-Episode Monitoring Period, and
 - Calculate overall Post-Episode Spending payment amounts.³⁶
- **Step 29. Apply Setting-Specific Price Update Factor:** For constructing baseline period Post-Episode Spending, follow **Steps 19-21** of the Clinical Episode Construction Specifications to update payments occurring in the Post-Episode Monitoring Period to Performance Period dollars.
- **Step 30. Calculate Post-Episode Spending Benchmark:** Run the two-stage risk adjustment model to estimate baseline Clinical Episode spending for the Post-Episode Monitoring period following **TP-Steps 1-16**. Obtain ACH and PGP-ACH benchmarks for Post-Episode monitoring period.
- **Step 31. Calculate Performance Period Post-Episode spending:** For all attributed Performance Period Clinical Episodes, aggregate Performance Period post-episode spending amounts to the Clinical Episode category level following the methodology in **Step 2**.

³⁶ Note that because the Post-Episode Spending Calculations are aimed at deterring providers from shifting costs to the Post-Episode Monitoring Period; Post-Episode Spending payments are not winsorized.

- **Step 32. Convert Post-Episode Spending Benchmark and Performance Period Post-Episode spending to real dollars:** Convert the post-episode spending benchmark 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 33. Calculate Total Performance Period Post-Episode Benchmark Amount:** For each Episode Initiator and Clinical Episode category, multiply the final post-episode spending benchmark by the number of Clinical Episodes in the Performance Period (See **Step 6a**).
- **Step 34. Reconcile upper bound of Total Performance Period Post-Episode Benchmark Amount against realized Performance Period Post-Episode Spending:** If Performance Period Post-Episode spending minus the upper bound of the 99.5% confidence interval of the predicted Total Post-Episode Benchmark Amount is greater than zero, this amount represents Post-Episode Spending Repayment Amount owed to Medicare.
- **Step 35. Calculate Post-Episode Spending Repayment Amounts at the Convener level:** For all Episode-Initiators under a Convener that exceed the risk threshold for post-episode spending, sum the Post-Episode Spending Repayment Amounts at the Convener level.
- **Step 36. Recalculate Post-Episode Spending Repayment Amount:** During the second true-up calculation for each Performance Period, repeat **Steps 27-35** using newly processed claims.
- **Step 37. Calculate Post-Episode Spending Repayment 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.