



# Clinical Episode Construction Specifications Model Year 3

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

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# 1 INPUTS

**Table 1 – Clinical Episode and Setting-Specific Price Update Factor Inputs**

| # | Name | Source | Description |
|---|---|---|---|
| **Clinical Episode Construction Datasets** | | | |
| 1 | Common Working File (CWF) | CMS | BPCI Advanced National Clinical Episodes are constructed using all Part A and B claims (Inpatient, Carrier, Outpatient, Home Health Agency Services, Skilled Nursing Facility, Durable Medical Equipment, and Hospice) with a service date in the given baseline period or Performance Period. |
| 2 | BPCI Advanced Participant Profile[1] | CMS | The Participant List identifies the Convener and Non-Convener Participants and the Clinical Episode categories they have selected to participate in for the BPCI Advanced model. |
| 3 | Medicare Enrollment Database (EDB) and Common Medicare Enrollment (CME) files | CMS | The EDB and CME files are used to determine beneficiaries' eligibility. |
| 4 | Official CMS Standardized Allowed Amounts | CMS | Payments from the claims taken from the CWF are standardized using the official CMS payment standardization algorithm. |
| 5 | Provider Specific Files (PSF) | https://www.cms.gov/Medicare/Medicare-Fee-For-Service-Payment/ProspMedicareFeeSvcPmtGen/psf_SAS.html | The file contains information about the facts specific to the provider that affects computations for Prospective Payment Systems. |
| 6 | Geometric Mean Length of Stay (GMLOS) data | https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html Refer to Final Rule and Correction Notice Tables | The GMLOS data are used to prorate non-outlier payments for the Inpatient Prospective Payment System (IPPS), Inpatient Rehabilitation Facility (IRF), and Long-Term Care Hospital settings. |
| 7 | Blood clotting factors HCPCS codes list | https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Part-B-Drugs/McrPartBDrugAvgSalesPrice/index.html | List of HCPCS codes to identify blood clotting factors to control bleeding for hemophilia patients. https://innovation.cms.gov/initiatives/bpci-advanced/participant-resources.html |

[1]The initial Target Prices that will be delivered in fall 2019 will use the Applicant List.

| # | Name | Source | Description |
|---|---|---|---|
| Setting-Specific Price Update Datasets | | | |
| 8 | IPPS Base Rates and MS-DRG Weights | https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/IPPS-Regulations-and-Notices.html | Used to update historical prices for the IPPS setting. |
| 9 | Geographic Practice Cost Index (GPCI), Relative Value Units (RVU), County/Locality Crosswalk, and Physician and Anesthesia Conversion Factors (CF) | GPCI : https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Federal-Regulation-Notices.html Refer to Final Rule Addenda RVU/Physician CF: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Relative-Value-Files.html Anesthesia CF: https://www.cms.gov/Center/Provider-Type/Anesthesiologists-Center.html | Used to update historical prices for the Physician Fee Schedule (PFS) setting. |
| 10 | IRF Conversion Factor (most recent only) | https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/InpatientRehabFacPPS/IRF-Rules-and-Related-Files.html | Used to update historical prices for the IRF setting. |
| 11 | Medicare Economic Index (MEI) (most recent only) | https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareProgramRatesStats/MarketBasketData.html | Used to update historical prices for the "Other" setting, which includes non-initiating OPPS claims. |
| 12 | Skilled Nursing Facility (SNF) Resource Utilization Groups (RUG) and Patient-Driven Payment Model (PDPM) weights and rates | https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/List-of-SNF-Federal-Regulations.html | These inputs are used to update historical prices for the SNF setting from the previously used RUG-IV payment model to the new PDPM model as per the most recent SNF Final Rule available on this page. |
| 13 | Home Health Resource Group (HHRG) and Patient-Driven Groupings Model (PDGM) base rates and weights | https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HomeHealthPPS/Home-Health-Prospective-Payment-System-Regulations-and-Notices.html HH PPS base rates: https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/ HHRG weights: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PCPricer/HH.html | These inputs are used to update historical prices for the HHA setting from the previously used HHRG payment model to the new PDGM model as per the most recent HH Final Rule available on this page. |
| 14 | Addendum B and J from the Outpatient Prospective Payment System (OPPS) Final Rule | https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Hospital-Outpatient-Regulations-and-Notices.html | Used to update historical prices for initiating claims in the OPPS setting. |

# 2 OUTPUTS

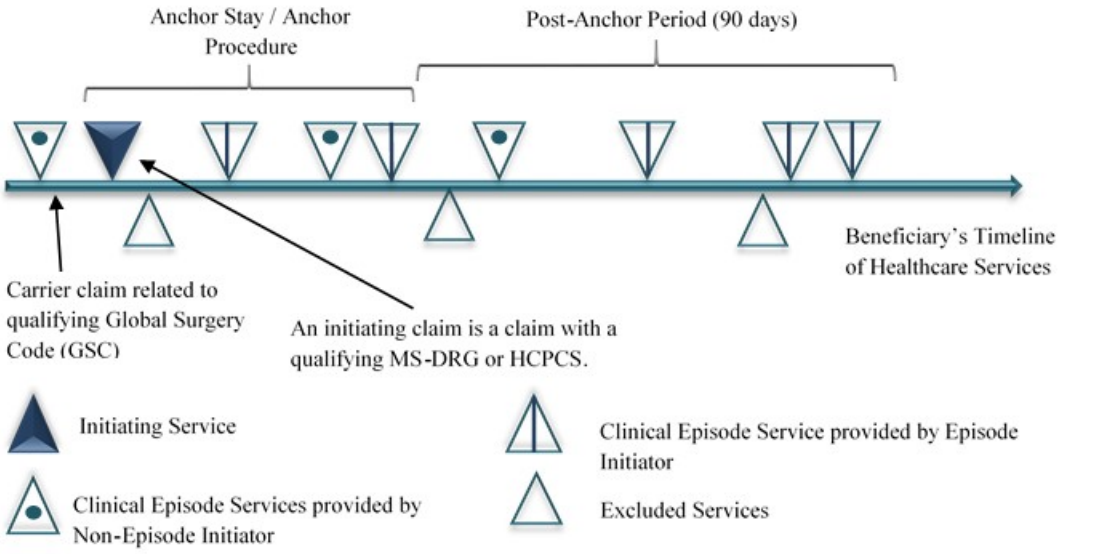
**Table 2 – Clinical Episode Outputs**

| # | Name | Description |
|---|---|---|
| 1 | BPCI Advanced National and Participant Baseline Period Clinical Episodes | The National and Participant set of Clinical Episodes used to construct preliminary Target Prices for the BPCI Advanced model. |
| 2 | BPCI Advanced National and Participant Performance Period Clinical Episodes | The National and Participant set of Clinical Episodes used to construct final Target Prices and determine reconciliation and repayment amounts for the BPCI Advanced model. |

# 3 CLINICAL EPISODE CONSTRUCTION OVERVIEW

The following document describes the specifications used to construct Clinical Episodes for the Bundled Payments for Care Improvement Advanced (BPCI Advanced) model in Model Year 3[2]. Clinical Episodes are constructed using all the inputs in Table 1. The main components of Clinical Episodes are Parts A and B claims from the Common Working File (CWF). Figure 1 below outlines the basic principles of a Clinical Episode.[3]

**Figure 1 – Clinical Episode Window and Services**




Notes: 1) Triangles above the Beneficiary's Timeline of Healthcare Services represent services included in the Clinical Episode.
2) The Clinical Episode includes payments from up to one day prior to the Anchor Stay /Anchor Procedure to capture Emergency Department (ED) claims and Global Surgery Codes (GSC).

[2] This document will be updated for Model Year 4.
[3] All terms used in Figure 1 are defined in **Section 5**.

The thirty inpatient, three outpatient and one multi-setting[4] BPCI Advanced Clinical Episode categories are "triggered" by an admission to the inpatient setting with specific Medicare Severity Diagnosis Related Groups (MS-DRGs) or by a procedure performed in an outpatient setting with specific Healthcare Common Procedure Coding Systems (HCPCSs) code.[5] Clinical Episodes are constructed to include all services that overlap with the Clinical Episode window, with some exceptions for services and supplies provided for certain readmissions, which are defined by MS-DRG or Major Diagnostic Categories (MDCs); for some Part B drugs, which are defined by HCPCS codes; and for Cardiac Rehabilitation spending, which is identified by HCPCS code and place of service.[6] Clinical Episode-level payments are created by summing official CMS standardized allowed amounts for all non-excluded services.[7] These *standardized payments* reflect the cost of services after removing variation in spending arising from geographical adjustment of reimbursement in CMS payment systems (e.g. hospital wage index and geographic practice cost index (GPCI)) and from policy-driven adjustments (e.g. indirect medical education (IME) adjustments). This process produces spending for each Clinical Episode; henceforth, all references to spending are assumed to be in standardized allowed amounts.

After Clinical Episodes are constructed, standardized payments for each Clinical Episode in the baseline period are updated to Model Year dollars using MS-DRG-specific price update factors for initiating inpatient stays, HCPCS-specific price update factors for initiating outpatient procedures, and setting-specific price update factors for non-initiating claims. This allows the model to update the standardized allowed amount that providers and suppliers would receive based on how inputs have changed in the various Medicare payment systems while holding constant the mix of services in the baseline period. This approach is referred to as index-price trending.

These index-price trended historical Clinical Episodes represent the basis for comparing Episode Initiator performance in subsequent periods.[8] Other changes in Clinical Episode

[4] Major Joint Replacement of the Lower Extremity (MJRLE) has been added as a new multi-setting Clinical Episode category in Model Year 3. Clinical Episodes in this category are triggered in both inpatient and outpatient settings, where the same Target Price will apply to Clinical Episodes triggered in both settings.

[5] A complete list of the MS-DRGs and HCPCS that trigger a BPCI Advanced Clinical Episode can be found in the "Episode Definitions – Model Year 3" xls file. The following link will take you to the CMS BPCI Advanced website.

[6] A complete list of Clinical Episode exclusions can be found on the CMS BPCI Advanced website.

[7] "CMS Standardization Methodology for Allowed Amount, Version 9." Centers for Medicare & Medicaid Services (CMS), Acumen, LLC, April 2019. Available at: https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228777481863

[8] The price update factors will be updated to reflect the changes in Medicare payment systems as more recent fee schedules become available during the Model Year.

spending, due to efficiency gains, peer group trends, or changes in patient case-mix, are discussed in the Target Price specifications methodology document.[9]

The specifications are divided into six sections that correspond to detailed descriptions of the sequential stages of the Clinical Episode construction process. This document contains specifications for constructing Clinical Episodes in both the baseline period and applicable Performance Periods of a Model Year. The steps in **Section 5** and **Section 6** discuss general specifications used in the construction of baseline period and Performance Period Clinical Episodes. The steps in **Section 4, Section 7** and **Section 8** are applied to construct baseline period Clinical Episodes, which are the inputs used to construct preliminary Target Prices. The steps in **Section 9** are applied to construct Performance Period Clinical Episodes, which are inputs used to construct final Target Prices and Performance Period Clinical Episode spending.

- **Section 4** describes the mapping of MS-DRG and APC changes over time
- **Section 5** describes defining Clinical Episode shells
- **Section 6** describes assigning payments and services to Clinical Episodes
- **Section 7** describes updating historical payments from the baseline period to the Model Year
- **Section 8** describes finalizing baseline period Clinical Episodes
- **Section 9** describes finalizing Performance Period Clinical Episodes

[9] Target Price Specifications for Model Year 3 can be found in the "BPCI Advanced Target Price Specifications - Model Year 3" PDF file on https://innovation.cms.gov/initiatives/bpci-advanced/participant-resources.html.

**Table 3** below contains the baseline period and the Performance Periods for Model Year 3.

**Table 3 – Model Year 3 Clinical Episode Period Date Ranges**

| Clinical Episode Period | Date Range |
|---|---|
| Baseline Period | Clinical Episodes that have an Anchor Stay with a discharge date or an Anchor Procedure with a procedure completion date between 10/01/2014 and 09/30/2018.[10] In other words, the Model Year 3 baseline period includes Clinical Episodes with anchor end dates between FY 2015 and FY 2018. |
| Performance Period 3 | Clinical Episodes with a Clinical Episode end date between 1/1/2020 and 6/30/2020 and an Anchor Stay discharge date or Anchor Procedure completion date on or after 01/01/2020.[11, 12] |
| Performance Period 4 | Clinical Episodes with a Clinical Episode end date between 7/1/2020 and 12/31/2020. |
| Performance Period 5 | Clinical Episodes with a Clinical Episode end date on or after 01/01/2021 but an Anchor Stay discharge date or Anchor Procedure completion date on or prior to 12/31/2020.[13] |

[10] Procedure completion date for Anchor Procedures is indicated by the revenue center date.
[11] Clinical Episodes with an Anchor Stay discharge date or Anchor Procedure completion date during Calendar Year (CY) 2019 and Clinical Episode end dates during CY2020 will be considered MY1&2 Clinical Episodes. If a Participant joined BPCI Advanced for the first time in MY3, or is active in the Clinical Episode category for the first time in MY3, then in the Performance Period, the Participant will not be attributed any MY3 Clinical Episodes that had Clinical Episode start dates prior to the start of MY3.
[12] 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.
[13] For purposes of Target Price and Clinical Episode construction, Clinical Episodes with a Clinical Episode end date on or after 01/01/2021 and an Anchor Stay discharge date or Anchor Procedure completion date on or after 01/01/2021 are not identified as MY3 Clinical Episodes and may be identified as MY4 Clinical Episodes .

# 4 MAP MS-DRG AND APC CHANGES OVER TIME

When an MS-DRG or Ambulatory Payment Classification (APC)[14] changes in an annual update, comparing Clinical Episode spending between different time periods requires mapping between existing codes and new codes. Such a mapping ensures that comparisons of Clinical Episode spending across different time periods represent the same clinical content. This mapping aids in the consistent construction of Clinical Episodes between historical baseline periods and subsequent Performance Periods.

As the model progresses, mappings for MS-DRG and APC will be incorporated in accordance with the most recent IPPS/OPPS Final Rules. These steps are applicable to baseline period Clinical Episodes to ensure consistency with the Performance Period Clinical Episodes. Specifically, for Model Year 3, the Clinical Episodes in the baseline period will be mapped two times (the first update will be for FY 2020 and CY 2020 payment rates, and the second one will be for FY 2021 rates) to align with updates to Medicare fee-for-services payment rates.

**Table 4 – Section 4 Inputs and Outputs**

| **Inputs** |
|---|
| • IPPS Final Rules (Fiscal Year 2015 – Fiscal Year 2021) |
| • OPPS Final Rule Addendums B and J (Calendar Year 2014- Calendar Year 2020) |
| • Inpatient and Outpatient CWF claims |
| **Outputs** |
| • Inpatient and Outpatient CWF claims with applicable mapped MS-DRGs and APCs |

- **Step 1. Map MS-DRG and APC changes over time:**
  - **Step 1a.** For all MS-DRGs in the baseline period, map the changes in MS-DRG between the baseline year and the appropriate Fiscal Year (in the Model Year) using annual addendums to IPPS Final Rules.[15] Specifically, update the mapping using FY 2020 and FY 2021 IPPS final rules, for 2020Q1-2020Q3 and 2020Q4 respectively.

[14] Effective January 1, 2015, CMS established Comprehensive-APC (C-APCs) to provide all-inclusive payments for certain procedures. All sections of this document use APCs to refer to both APCs and C-APCs.

[15] For a complete description of MS-DRG mapping specifications, refer to "Appendix_A_BPCI_Advanced_MS_DRG_Mapping_Model_Years_1_2.docx." A new mapping MS-DRG document will be available once FY2020 mapping is finalized. An updated document will be made available once FY2021 mapping is finalized as well.

i. Assign each inpatient stay the mapped MS-DRGs[16] for Model Year.

- **Step 1b.** For all HCPCS codes, map all APC changes using the OPPS Final Rules.[17]
  i. Assigns each outpatient claim the mapped APC, if any, for the Model Year.
  ii. If the combination of HCPCS codes on the baseline claim would be complexity adjusted under the Model Year OPPS Final Rules, then the claim is mapped to the complexity adjusted APC. Otherwise it is not.

[16] If there are no changes in the MS-DRG between the years, assign the original MS-DRG as the mapped MS-DRG for the relevant year.
[17] The HCPCS-APC mapping also takes into account APCs that undergo complexity adjustments, if any.

# 5 DEFINE CLINICAL EPISODE SHELLS

This section describes the specifications to define national inpatient and outpatient Clinical Episodes shells. **Section 5** and **Section 6** use the following key terms for Clinical Episode shells, which may differ from similar Participation Agreement defined terms:

- **Anchor Stay:** an inpatient stay at an Acute Care Hospital (ACH) with a qualifying MS-DRG, which in turn initiates a Clinical Episode shell. Anchor Stays start on admission to the ACH and end upon discharge.
- **Anchor Procedure:** an outpatient procedure performed at an ACH with a qualifying HCPCS code, which in turn initiates a Clinical Episode shell. Anchor Procedures start and end on the revenue center date of the qualifying procedure.
- **Post-Anchor period:** starts on the day the Anchor StayAnchor Procedure ends and is 90 days long. It encompasses all the relevant spending incurred for that beneficiary during that period.

Clinical Episode shells start with the admission to an inpatient Anchor Stay or the revenue center date of an outpatient Anchor Procedure and end 90 days after the end of the Anchor Stay/Anchor Procedure, including the day on which Anchor Stay/Anchor Procedure ends. The Clinical Episode shells define the period for which services can be included in the Clinical Episode spending and are comprised of Anchor Stay/Anchor Procedure and Post-Anchor Period. There is a 90-day lookback period before the start of the Clinical Episode shell. This period will include risk adjustors defined by beneficiary clinical history as observed in claims in the 90-day period prior to the start of the Clinical Episode shell, and will be used solely for risk adjusting Target Prices.

- **Section 5.1** explains the methodology to identify potential national Anchor Stays for inpatient Clinical Episodes shells.
- **Section 5.2** describes the methodology to identify potential national Anchor Procedures for outpatient Clinical Episodes shells.
- **Section 5.3** describes the process of creating the Clinical Episode shell Post-Anchor period.
- **Section 5.4** describes the Clinical Episode-level exclusions.

These steps of constructing Clinical Episodes shells are identical for the baseline period and all Performance Periods for Model Year 3. For Model Year 3, the baseline period includes all Anchor Stays/Anchor Procedures ending between October 1, 2014, and September 30, 2018. Clinical Episodes initiated in Model Year 3 may be reconciled in one of three Performance Periods, as defined in Table 3. Performance Period 3 Reconciliation will include Clinical Episodes that end between 1/1/20 and 6/30/20. Episode Initiators that are newly active in a Clinical Episode category in Model Year 3 will not be attributed Clinical Episodes that

commenced prior to 1/1/20 for that Clinical Episode category. Performance Period 4 Reconciliation will include Clinical Episodes that end between 7/1/20 and 12/31/20. Performance Period 5 Reconciliation will include Clinical Episodes that end between 1/1/21 and 6/30/21.

**Table 5 – Section 5 Inputs and Outputs**

| Inputs |
| --- |
| • BPCI Advanced MS-DRGs and HCPCS Codes |
| • Inpatient and Outpatient CWF claims with applicable mapped MS-DRGs and APCs |
| • Beneficiary Enrollment Datasets (EDB and CME) |
| **Outputs** |
| • Clinical Episode shells |

## 5.1 Identify Potential National Anchor Stays for Inpatient Clinical Episodes Shells

The following steps are used to identify potential national Anchor Stays from the universe of CWF inpatient claims. National Anchor Stays include all potential inpatient Clinical Episodes, and not just those initiated by BPCI Advanced Participants. Anchor Stays initiate inpatient Clinical Episodes.

- **Step 2. Limit to inpatient stays with positive standardized allowed amounts.**
- **Step 3. Apply transfer logic:** Define an acute-to-acute transfer as consecutive inpatient stays for a beneficiary where the admission date of the latter stay is the same as the discharge date of the previous stay for different short-term hospitals. Acute-to-acute transfers are treated as one continuous hospitalization and are assigned the admission date and health care provider from the first leg of the transfer and the MS-DRG and discharge date from the last leg.[18,19]

[18] If any of the legs in a chain of inpatient transfers occur at a Cancer Hospital or Critical Access Hospital, exclude the Clinical Episode.
[19] Payments from both inpatient stays will be considered when services and associated payments are assigned in **Section 6.**

- **Step 4. Construct Anchor Stays:** Restrict to inpatient stays at an ACH[20] that are initiated by a qualifying MS-DRG[21] for Clinical Episode categories. The start and end dates of the Anchor Stay are the admission date and discharge date respectively.

## 5.2 Identify Potential National Anchor Procedures for Outpatient Clinical Episodes Shells

The following steps are used to identify potential National Anchor Procedures from the universe of CWF outpatient claims. National Anchor Procedures include all potential outpatient Clinical Episodes, and not just those initiated by BPCI Advanced Participants. Anchor Procedures initiate outpatient Clinical Episodes.

- **Step 5. Limit to outpatient lines with positive standardized allowed amounts.**
- **Step 6. Apply same day, tie-breaking precedence rules:** For cases where multiple potential Anchor Procedures are possible on the same day for the same beneficiary, apply the following steps in the order listed until the ties are broken.
    - **Step 6a.** Select the outpatient line with the higher standardized line allowed amount.
    - **Step 6b.** Select the outpatient line with the later processing date.
    - **Step 6c.** Select the outpatient line with the higher charge amount.
    - **Step 6d.** Select the outpatient line with the smaller claim identifier number.
    - **Step 6e.** Select the outpatient line with the smaller line item number.
- **Step 7. Construct Anchor Procedures:** Take all outpatient lines at an ACH that are initiated by HCPCS code for the three outpatient Clinical Episode categories. Set the start and end of the Anchor Procedure equal to the revenue center date.

## 5.3 Construct Clinical Episode Shell Post-Anchor Period

The following steps are used to define the second component of the Clinical Episode shell, the Post-Anchor period.

[20] ACH provider numbers include those with the last four digits of the CCN in 0001-0879, or the whole ACH provider number between 450880 and 450894, excluding PPS-Exempt Cancer Hospitals (05-0146, 05-0660, 10-0079 , 10-0271, 22-016, 33-0154, 33-0354, 36-0242, 39-0196, 45-0076, and 50-0138), Critical Access Hospitals (the last four digits of the CCN in 1300-1399) and hospitals in Maryland (CCN begins with "21" or "80"). Additionally for the Performance Period, exclude hospitals participating in the Rural Community Hospital (RCH) demonstration and all Participant Rural Hospitals in the Pennsylvania Rural Health Model. These RCH and PA Rural hospitals are identified by CMS Participation list.

[21] Uses MS-DRGs mapped to applicable fiscal year in the Performance Period as described in **Section 4**.

- **Step 8. Define Post-Anchor period:** Inpatient and outpatient Clinical Episodes' Post-Anchor periods begin on the day Anchor Stays (**Step 4**) and Anchor Procedures (**Step 7**) end, respectively and extend for 90 days.[22]
- **Step 9. Truncate Clinical Episode shells where a beneficiary dies during the Post-Anchor period**: For Clinical Episode shells where a beneficiary dies during the Post-Anchor period, truncate the end date of the Post-Anchor period to match the beneficiary death date.[23]

## 5.4 Exclude Clinical Episode Shells

Implement the following exclusions for Clinical Episode shells.

- **Step 10. Enact Clinical Episode-level exclusions:** Exclude Clinical Episode shells where:
    - The Clinical Episode shell is not in the relevant baseline period or Performance Period.
        - **i.** In the baseline period exclude inpatient Clinical Episodes with an Anchor Stay discharge date before 10/1/2014 or after 9/30/2018, and outpatient Clinical Episodes with an Anchor Procedure completion date before 10/1/2014 or after 9/30/2018.
        - **ii.** In Model Year 3, exclude Clinical Episodes that have Anchor Stay discharge dates or Anchor Procedure completion dates outside of CY2020 for Clinical Episode construction purposes.[24]
    - The beneficiary is not continuously enrolled in Medicare Part A and Part B during the Clinical Episode period or the 90-day lookback period.
    - The beneficiary is covered through managed care plans (such as Medicare Advantage) during the Clinical Episode period or the 90-day lookback period.
    - The beneficiary is receiving services for End-Stage Renal Disease (ESRD) during the Clinical Episode period or the 90-day lookback period. Specifically, a beneficiary is considered to be receiving ESRD services for any of the following conditions:
        - **i.** The start date and end date of Medicare ESRD coverage or dialysis in the EDB overlap any time with the Clinical Episode period or the 90-day lookback period or;

[22] The discharge date and the procedure completion date are both day one of the Post-Anchor period.
[23] Beneficiary death date is taken from the EDB.
[24] Refer to Footnotes 11, 12 and 13.

**ii.** Any portion of the Clinical Episode period or the 90-day lookback period overlaps the period defined by the 36 months following the transplant start date in the EDB.

- The beneficiary has a primary payer other than Medicare during the Clinical Episode period or the 90-day lookback period.[25]
- The beneficiary dies during the Anchor Stay or Anchor Procedure.
- The Anchor Stay lasts 60 days or more (such that the total duration of the Clinical Episode shell lasts 150 days or more).
- The Anchor Procedures initiated by outpatient lines do not have the highest ranking J1[26] status indicator on the claim.
- Beneficiaries are aligned or assigned to: (1) a Next Generation ACO; (2) a Vermont Medicare ACO Initiative, which follows the Next Generation ACO Model design; or (3) an ESRD Seamless Care Organization in tracks with two-sided financial risk from initiating a BPCI Advanced Clinical Episode. This exclusion is only applicable to Clinical Episodes in the relevant Performance Period for Model Year 3.

[25] As a result of this restriction, Clinical Episodes where beneficiary is covered through United Mine Workers of America Health and Retirement Funds are excluded.
[26] J1 indicates Hospital Part B services paid through C-APC.

# 6 ASSIGN SERVICES AND ASSOCIATED PAYMENTS TO CLINICAL EPISODES

This section describes the process of determining which items and services are included in Clinical Episodes. It is intended to provide a general understanding of the payment aggregation methodology for BPCI Advanced.

- **Section 6.1** describes the general rules for payment aggregation.
- **Section 6.2** discusses payments that are excluded from Clinical Episodes.
- **Section 6.3** describes the process for prorating payments from claims.
- **Section 6.4** discusses calculating the total Clinical Episode spending.

All steps in this Section are the same for construction of both baseline period and Performance Period Clinical Episodes.

**Table 6 – Section 6 Inputs and Outputs**

| Inputs |
|---|
| • Clinical Episode shells |
| • All Part A and B claims and related standardized payments for the following: Inpatient, Carrier, Outpatient, Home Health Agency Services, Skilled Nursing Facility, Durable Medical Equipment, and Hospice from the CWF |
| • GMLOS data |
| • PFS |
| • Quarterly Average Sales Price (ASP) Drug Pricing Files |
| • BPCI Advanced exclusion lists (Refer to Step 14 below) |
| **Outputs** |
| • National set of Clinical Episodes |

## 6.1 General Rules for Payment Aggregation

This section describes the methodology to determine which items and services are included in the Clinical Episode and how payments from those services are allocated to the Clinical Episode. The methodology identifies all qualifying items and services occurring concurrent to at least one day of a Clinical Episode to determine if all payments, or a subset of

payments, are grouped to the Clinical Episode. Regardless of setting, all non-excluded payments are assigned if they occur during the Clinical Episode.

- **Step 11. Consider Parts A and B claims for payment aggregation:** Consider payments from claims from all Medicare Part A and B care settings, including inpatient, Carrier, outpatient, Home Health Agency Services, Skilled Nursing Facility, Durable Medical Equipment, and Hospice.
- **Step 12. Limit to eligible claims:** Restrict to claims that satisfy the following criteria:
  - Have a standardized payment amount greater than zero, and
  - The claim's service start dates overlap at least one day of the Clinical Episode or one day prior to the Clinical Episode.
- **Step 13. Assign claims as occurring during the Clinical Episode:** Assign all claims that have service dates during the Clinical Episode and all payments from the initiating Anchor Stay or Anchor Procedure. Additionally, include claims with Global Surgery Code (GSC) line items or involving an Emergency Department (ED) in the one day prior to the Anchor Stay/Anchor Procedure to capture all associated payments.[27]
  - **Step 13a.** Identify Carrier claims related to a qualifying GSC as all Carrier claims with global surgery indicators of 000, 010, 090 and YYY.[28] Assign all Carrier claims related to a qualifying GSC on the start date or one day prior to the Clinical Episode.
  - **Step 13b.** Identify ED claims as outpatient claims with revenue center codes starting with 0450, 0451, 0452, 0456, 0459, 0981 or Carrier claims with a place of service (POS) equal to 23 (Emergency Department) occurring on the same day as an ED outpatient claim. Assign all these ED claims that occur on the start date or one day prior to the Clinical Episode.

## 6.2 Excluded Payments

Although the BPCI Advanced model operates under a total-cost-of-care concept, in which all Medicare Fee-For-Service (FFS) payments for services furnished during the Clinical Episode are generally included, payments from the following claims are removed from Clinical Episodes.

- **Step 14. Apply BPCI Advanced exclusions logic:** Remove payments for the following BPCI Advanced specific exclusions:

[27]Participants will be responsible for all Clinical Episode costs, including costs from the one-day prior.
[28]Global surgery indicators are modifiers on procedure codes that indicate the presence of surgical procedures and the length of the post-operative period.

- Part B payments for high-cost drugs, low-volume drugs[29] and blood clotting factors for hemophilia patients billed on outpatient, Carrier, and Durable Medical Equipment claims. Specifically in the baseline period, this list includes:
    i. Drug HCPCS codes that are billed in fewer than 41 Clinical Episodes in the national set of baseline period Clinical Episodes;
    ii. Drug HCPCS codes that are billed in at least 41 Clinical Episodes in the baseline period, have a mean cost of greater than $25,000 per Clinical Episode in the baseline period, and are flagged for exclusion after clinical review; and
    iii. HCPCS codes corresponding to clotting factors for hemophilia patients, identified in quarterly ASP file as HCPCS codes with clotting factor=1, and other HCPCS codes identified as hemophilia by clinicians.

    In the Performance Period, beginning with Clinical Episodes with an Anchor Stay discharge date or Anchor Procedure completion date on or after 01/01/2020 and on or before 12/31/2020, the exclusion list will be broadened to include:

    - Drug HCPCS codes that were not in the baseline period, and appear in fewer than or equal to 10 Clinical Episodes per annum in the Performance Period;
    - Drugs HCPCS codes that were not in the baseline period, appear in more than 10 Clinical Episodes per annum in the Performance Period, have a mean cost of greater than $25,000 per Clinical Episode in the Performance Period, and are clinically reviewed;
    - Drugs HCPCS codes that were not in the baseline period, appear in more than 10 Clinical Episodes per annum in the Performance Period, have a mean cost <=$25,000 per episode, and correspond to a drug that appears on the baseline period list but was assigned a new HCPCS code between the baseline and Performance Period;
    - HCPCS codes for new hemophilia clotting factors not in the baseline period;
    - 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;
    - Drug HCPCS codes that correspond to drugs and/or vaccines approved solely for COVID-19 and are clinically reviewed; and

[29] To determine if a drug HCPCS meets the cost or volume thresholds for exclusion, the Clinical Episodes are pooled across all Clinical Episode categories.

- Any drug HCPCS codes that were added to the exclusion list during a previous Performance Period for the same Model Year.

- New technology add-ons, identified through value code 77 on IPPS hospital claims.[30]
- All Part A and B payments that occur during an inpatient readmission based on the following excluded MDC list:
  i. MDC 02 (Diseases and Disorders of the Eye)
  ii. MDC 14 (Pregnancy, Childbirth, and Puerperium)
  iii. MDC 15 (Newborns)
  iv. MDC 25 (Human Immunodeficiency Virus).
- All Part A and B payments that occur during an inpatient readmission based on the excluded readmission MS-DRGs list.
- Pass-through payments for medical devices on OPPS hospital outpatient claims, identified through OPPS status indicator H.
- Claims that represent per-beneficiary-per-month (PBPM) payments from Carrier and Hospice claims. Specifically,
  **i.** Remove Carrier claims for an Oncology Care Model PBPM payment as defined by HCPCS code G9678.
  **ii.** Remove Hospice claims for a Medicare Care Choices Model PBPM payment as defined by Demo Code = 73 and Type of Bill = 81x or 82x.
- Carrier claims for Cardiac Rehabilitation (CR)/Intensive Cardiac Rehabilitation (ICR). Specifically,
  **i.** Exclude carrier claims with CR/ICR HCPCS codes and place of service (POS) equals 11 (Office) or 22 (On Campus-Outpatient Hospital), and
  **ii.** Exclude outpatient claims with CR/ICR HCPCS codes.

The above exclusions apply to all Clinical Episode categories. Starting with Model Year 3, there are certain Clinical Episode category specific exclusions, which are listed below.

- Part B payments for Inflammatory Bowel Disease (IBD) related drug HCPCS codes. Specifically remove Carrier, outpatient, and Durable Medical Equipment claims with certain IBD related medication HCPCS codes. Exclusions apply to the IBD Clinical Episode category only.
- Part A and B spending during Transcatheter Aortic Valve Replacement (TAVR) inpatient stays that occur in the post-Anchor period of the Percutaneous Coronary

[30] This exclusion is applied during the payment standardization process.

Intervention (PCI) Clinical Episodes. Exclusions apply to the PCI Clinical Episode category only.

## 6.3 Prorate Claims

This section describes the methodology used to prorate claims and payments that span beyond the Clinical Episode so as to appropriately allocate the payments to the Clinical Episode. Table 7 lists all claim and payment types and their respective proration methodologies. For a full description of the various proration methodologies, refer to **Steps 15 – 17**.

**Table 7 – Proration Methodology by Claim and Payment Type**

| Claim Type | Proration Methodology |
|---|---|
| Carrier | Never Prorate |
| Critical Access Hospitals | Per Diem |
| Durable Medical Equipment | Never Prorate |
| Home Health Agency | Per Diem |
| Hospice | Per Diem |
| Inpatient Psychiatric Facility | Per Diem |
| Inpatient Rehabilitation Facility (Non-Outlier Payments) | GMLOS Method[31] |
| Inpatient Rehabilitation Facility (Outlier Payments) | Per Diem |
| IPPS (Non- Outlier Payments) | GMLOS Method |
| IPPS (Outlier Payments) | Per Diem |
| Long-Term Care Hospital (Non-Outlier Payments) | GMLOS Method |
| Long-Term Care Hospital (Outlier Payments) | Per Diem |
| OPPS | Never Prorate |
| Skilled Nursing Facility | Per Diem |

[31] Step 17b explains the GMLOS methodology.

- **Step 15. Identify claims to prorate:** Identify all claims that overlap with the Clinical Episode but end after the Clinical Episode to determine if all or a subset of payments are assignable to the Clinical Episode.
    - Never prorate OPPS, Carrier and Durable Medical Equipment claims. Assign them to the Clinical Episode.
- **Step 16. Identify and prorate applicable claims based upon a per-diem rate:** To prorate on a per diem basis, assign payments to the Clinical Episodes based on the number of days in the claim that occur during the Clinical Episode. Prorate the following types of claims on a per diem basis.
    - Critical Access Hospitals
    - Home Health Agency[32]
    - Hospice
    - Inpatient Psychiatric Facilities
    - Skilled Nursing Facility
- **Step 17. Identify and prorate remaining claims:** For the remaining claim types, Inpatient Rehabilitation Facility, Long-Term Care Hospital, and IPPS prorate outlier and non-outlier payment amount separately.
    - **Step 17a.** Prorate outlier payments. Prorate outlier payments on a per-diem basis using the methodology described in **Step 16**.
    - **Step 17b.** Prorate non-outlier payments. For non-outlier payments, compare the number of days of the inpatient stay (that needs to be prorated) overlapping the Post-Anchor period with the GMLOS by MS-DRG and the fiscal year of the discharge date.
        - **i.** If the number of days overlapping the Post-Anchor period is greater than or equal to the GMLOS-1, assign the full non-outlier payment amount to the Post-Anchor period.
        - **ii.** Otherwise, prorate on a per diem basis, giving double weight to the first day of the overlap.

## 6.4 Calculate Total Clinical Episode Spending

After assigning payment amounts to Clinical Episodes for all non-excluded claim payments across all settings, sum payment amounts at the Clinical Episode level.

[32] For Low Utilization Payment Adjustment (LUPA) Home Health Agency claims, only consider the visits that occur within the Clinical Episode window since these claims are paid on a per visit basis.

- **Step 18. Calculate the overall Clinical Episode spending:** Sum all payments assigned to the Clinical Episode to calculate total Clinical Episode spending.

For the baseline period, the Clinical Episode dataset created at the end of **Step 18** is inflated to Model Year dollars as described in **Section 7** and then used as an input in **Section 8** to create the final set of baseline period Clinical Episodes. For the Performance Period, the Clinical Episodes from **Step 18** are used as an input in **Section 9** to create a final National and Participant set of Clinical Episodes.

# 7 UPDATE PRICES FROM BASELINE TO MODEL YEAR DOLLARS

This section describes the process of updating historical prices from the baseline period to the Model Year. Prior to estimating the Clinical Episode spending based on data from the baseline period, the standardized payments of each Clinical Episode are inflated to Model Year dollars using MS-DRG-specific price update factors for initiating inpatient stays, HCPCS-specific price update factors for initiating outpatient procedures, and setting-specific price update factors for non-initiating items. These price update factors ensure that Clinical Episodes in the baseline period are comparable to Performance Period Clinical Episodes, by accounting for changes to payment rates.

Use the most recently available inputs during preliminary Target Price construction to calculate price update factors. Since preliminary Target Prices are provided in advance of the Model Year, the inputs to calculate update factors for the Model Year may not be available at the time of calculation. In such cases, incorporate newly published payment rates into the price update methodology while the model is active to ensure that all prices in the baseline period reflect the most updated set of official rates for all settings.

**Table 8 – Section 7 Inputs and Outputs**

| **Inputs** |
|---|
| • National set of Clinical Episodes |
| • Setting-Specific Price Update Datasets (Refer to Table 1) |
| **Outputs** |
| • National set of Clinical Episodes with updated prices |

- **Step 19. Update payments from the initiating inpatient stay during the Anchor Stay:** For payments from the inpatient stay that initiates the Anchor Stay, the update factor is calculated as a ratio of MS-DRG rates, calculated as the product of the IPPS base rate and MS-DRG weight in the Performance Period to the baseline period.[33]
    - The following example adjusts forward an Anchor Stay with MS-DRG 483 from Fiscal Year 2015 in the baseline period. To update the payments from this stay to Fiscal Year 2020, use the following equation:

[33] MS-DRGs in the baseline period are mapped forward to the Model Year using the methodology described in Section 4.

i. (2020 IPPS Base Rate * 2020 MS-DRG Weight 483)/(2015 IPPS Base Rate * 2015 MS-DRG Weight 483)

- Multiply payments from the initiating institutional claim for the Anchor Stay by the MS-DRG update factor.

- **Step 20. Update payments from the initiating outpatient claim during the Anchor Procedure:** For payments from the initiating outpatient claim during the Anchor Procedure, use a separate approach depending on whether the C-APCs had been adopted or not in the baseline year.
  - **Step 20a.** Update HCPCS payments for the Anchor Procedure in the baseline year after adoption of C-APCs. For Anchor Procedure HCPCS codes that are paid after the adoption of C-APCs in both periods:
    - **i.** Calculate the numerator of the update factor as the payment rate of the APC that the Anchor Procedure's HCPCS code maps to in the Performance Period.[34,35]
    - **ii.** Calculate the denominator as the payment rate of the APC the Anchor Procedure HCPCS code maps to in the baseline year.
    - **iii.** Once the update factor is calculated, multiply the Anchor Procedure outpatient line amount by the update factor.
  - **Step 20b.** Update HCPCS payments for the Anchor Procedure in the baseline year before adoption of C-APCs. For these Anchor Procedure HCPCS codes where the baseline year was before the adoption of C-APC and the Performance Period was after the adoption of C-APC:
    - **i.** Calculate the numerator of the update factor as the payment rate of the APC the Anchor Procedure's HCPCS code maps to in the Performance Period.
    - **ii.** Calculate the denominator as the average of line payments of the Anchor Procedure's HCPCS code and other eligible services on the same claim across all the Clinical Episodes in that Clinical Episode category in that baseline year using the following steps:
      - Calculate outpatient Anchor Procedure payments as the sum of line payments from the Anchor Procedure's HCPCS code and line payments for the following services on the same claim to mimic the OPPS modeling of C-APC payments:

[34] APCs in the baseline period are mapped forward to the Model Year using the methodology described in **Section 4**.

[35] The APC payment rates can be found from OPPS Final Rule Addendums B and J. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Hospital-Outpatient-Regulations-and-Notices.html.

- Packaged or conditionally packaged procedure codes, indicated by claim-reported status indicators N, Q1, or Q2;
- Major separately paid OPPS procedure codes, indicated by claim-reported status indicators P, S, T, or V;
- Major separately paid OPPS procedure codes that may qualify for composite, indicated by claim-reported status indicator Q3;
- Non-pass-through drugs and biologicals, indicated by claim-reported status indicator K;
- Blood products, indicated by claim-reported status indicator R.
- *Exceptions:* Do not include payments for services that are explicitly excluded from comprehensive packaging:
  - ambulance services (status indicator A);
  - mammography services (status indicator A);
  - pass-through drugs and devices (status indicators G and H);
  - brachytherapy services (status indicator U);
  - preventive services; corneal tissue, CRNA services, hepatitis B vaccine (status indicator F); and
  - influenza and pneumococcal pneumonia vaccines (status indicator L).
  - Additionally, exclude BPCI Advanced specific exclusions as mentioned in **Step 14**.

- Calculate the average of outpatient Anchor Payments from all the Clinical Episodes in the baseline year for that Anchor Procedure HCPCS code and mapped APC. The mapped APC will have already taken into account the presence of complexity adjustment (if any), based on the combination of HCPCS codes on the claim, and the performance period complexity adjustment rules.

**iii.** After calculating the factors for each HCPCS code (taking into account complexity adjustment if any) for each year of the baseline period, multiply the relevant outpatient Anchor Payments by the relevant update factor.

**Table 9 – Price Update Schedule for Standardized Clinical Episode Spending**

| Clinical Episode Spending | Update Schedule | Calendar Year (CY)/Fiscal Year (FY) Update |
|---|---|---|
| IPPS | IPPS average yearly MS-DRG weights and base rates | FY |
| PFS | GPCI, RVU and anesthesia conversion factors | CY |
| IRF | IRF conversion factors | FY |
| SNF | SNF RUG weights through FY 2019, SNF PDPM for FY 2020 | FY |
| HHA | HHRG and HH base rates through CY 2019, Home Health PDGM for CY 2020 | CY |
| OPPS (outpatient triggers only) | Addendum B and J from the OPPS Final Rule | CY |
| Other | MEI | CY |

- **Step 21. Update payment for non-initiating claims during the Anchor Stay/Anchor Procedure, Post-Anchor Period/post-Anchor Procedure period, and Post-Episode Spending Monitoring Period:** For non-initiating claims during the Anchor Stay/Anchor Procedure[36], Post-Anchor, and Post-Episode period, split payments[37] into six categories: IPPS (non-initiating), PFS, IRF, SNF, HHA, and Other, as illustrated in Table 9 above. Non-initiating OPPS claims will be included in Other. Each *setting-specific update factor* captures the change in the price level and payment model (if any) for that setting between a particular baseline year and a particular sub-period of the Model Year for a given ACH and Clinical Episode category. Model Year 3 is broken into two sub-periods, to which Clinical Episodes are assigned based on their Anchor Procedure/Anchor Stay end dates: CY 2020Q1-Q3, in which price levels are based on FY 2020 and CY 2020 payment rules; and CY 2020Q4, in which price levels are based on FY 2021 and CY 2020 payment rules.
- Calculate the update factors for non-initiating IPPS claims, SNFs, and HHAs. For these settings, the setting-specific update factors are based on taking baseline year claims that belong to the respective setting and are grouped to Clinical Episodes, pricing those claims under both Model Year sub-period rates and baseline year rates, and then taking the ratio of per unit spending under the Model Year sub-period rates to per unit spending under the baseline year rates.[38] In addition to the Model Year sub-period, setting-specific update factors for non-initiating IPPS claims, SNF, and HHA are specific to the ACH, and Clinical Episode category to which the claims are grouped.

[36] Also includes non-eligible payments from the initiating institutional outpatient claim for the Anchor Procedure.
[37] The post-episode period spending is not included in the calculation of setting-specific update factors.
[38] Since HH is updated on a calendar year basis, but baseline years are fiscal years, the payment rates used for the baseline year are a weighted average of the payment rates from the two calendar years overlapping with the baseline year, with 0.25 weight on the previous calendar year that overlaps one quarter of the baseline year and 0.75 weight on the calendar year that overlaps three quarters of the baseline year.

- The SNF update factor accounts for the transition from the RUG payment model to the Patient-Driven Payment Model (PDPM), starting in FY 2020
- The Home Health update factor accounts for the transition from the Home Health Resource Group (HHRG) payment model to the Patient-Driven Groupings Model (PDGM), starting in CY 2020
- Calculations for both the above update factors contain two components: one that follows the standard methodology to update payments from the baseline year dollars to "reference period" dollars,[39] and another that both, updates the payments from the old payment system to the new payment system, and updates payment rates from reference period dollars to Model Year sub-period dollars.

- Calculate the PFS update factor. It is the weighted average of anesthesia and physician update factors, where the weights are the payment for anesthesia and physician carrier claims respectively in the baseline year, and are grouped to the Clinical Episodes. The PFS is also specific to the ACH and Clinical Episode category at which the Clinical Episodes were initiated.[40]
- Calculate the IRF update factor. It is the ratio of the Model Year conversion factor to the baseline year conversion factor.
- Calculate the Other update factor[41] as the chained Medicare Economic Index (MEI) between the baseline year and the Model Year.
- Calculate the overall update factor using the following equation. Specifically, calculate the payment ratio as the ratio of the ACH's non-initiating Clinical Episode spending for each setting, baseline year and Clinical Episode category to its total non-initiating Clinical Episode spending for the same year and Clinical Episode category. The sum of these payment ratios for each ACH baseline year and Clinical Episode category across the six settings is 1. Then, take the summation of the update factor for each category weighted by the specific payment ratio.

[39] For SNF updates to FY2020, the reference period is FY2018. For HH updates to CY2020, the reference period is CY2018Q1-3. The reference periods were chosen so that they cover a portion of the baseline period when information for both payment systems were available.

[40] Since PFS is updated on a calendar year basis, but baseline years are fiscal years, the conversion rate used for the baseline year is a weighted average of the conversion rates from the two calendar years overlapping with the baseline year, with 0.25 weight on the previous calendar year that overlaps one quarter of the baseline year and 0.75 weight on the calendar year that overlaps three quarters of the baseline year.

[41] Let b denote the number corresponding to the baseline year (e.g. for FY2015, b=2015), and m denote the number corresponding to the Model Year.

$$UF_{FYb,CYm} = (1 + MEI_{CYb})^{0.25}\left[\prod_{i=b+1}^{m}(1 + MEI_{CYi})\right]$$

$$\textbf{\textit{Overall UF}} = \sum_{s \in \{\textbf{IPPS,PFS,IRF,SNF,HHA,Other}\}} \textbf{\textit{UF}}_s * \textbf{\textit{Payment Ratio}}_s$$

**i.** Where **$UF_s$** is the setting-specific update factor and **Payment Ratio$_s$** is the ratio of total service payments in that category to total non-initiating Clinical Episode spending, such that:

$$\sum_{s \in \{\textbf{IPPS,PFS,IRF,SNF,HHA,Other}\}} \textbf{\textit{Payment Ratio}}_s = \mathbf{1}$$

- For each ACH, baseline year and Clinical Episode category, multiply the non-initiating payment by the overall update factor calculated above.

At the end of **Step 21,** the Clinical Episode dataset in the baseline period will have payments inflated to Model Year dollars, or as close to Model Year dollars as it is possible to get using the most recently available fee schedules. This dataset will be used as an input to **Section 8** to finalize baseline period Clinical Episodes.

# 8 FINALIZE BASELINE PERIOD CLINICAL EPISODES

This section describes the methodology to create a final set of inpatient and outpatient Clinical Episodes for National and Participant populations in the baseline period. The first steps are to winsorize Clinical Episode spending on the upper and lower bounds and to attribute Clinical Episodes to Participant(s). This final set of Clinical Episodes are the inputs to the risk adjustment model used to construct the preliminary Target Prices.

**Table 10 – Section 8 Inputs and Outputs**

| **Inputs** |
|---|
| • National set of Clinical Episodes with updated Target Prices |
| • BPCI Advanced Participant Profile |
| **Outputs** |
| • Final National set of Clinical Episodes with winsorized prices, indicating whether it was attributed to any Participant |

- **Step 22. Winsorize Clinical Episode spending**: To limit extreme values, winsorize Clinical Episode spending at the 1st and 99th percentile at the Clinical Episode category level, within each MS-DRG (for inpatient Clinical Episode categories) or APC (for outpatient Clinical Episode categories) for each baseline fiscal year.[42]
  - Set all values below the 1st percentile to the 1st percentile.
  - Set all values above the 99th percentile to the 99th percentile.
- **Step 23. Identify Clinical Episodes eligible for attribution to a PGP:** To be eligible for attribution to a PGP, consider Clinical Episodes with at least one concurrent Carrier claim that has positive standardized payment and is billed by a participating PGP during the Anchor Stay/Anchor Procedure. A Carrier claim is concurrent with an Anchor Stay or Anchor Procedure if: (1) it is for the same beneficiary; and (2) the expense date on the Carrier claim falls within the Anchor Stay/Anchor Procedure of the Clinical Episode, including the one day prior.
  - **Step 23a.** For each Clinical Episode, identify all the concurrent Carrier claims.
  - **Step 23b.** Limit to Clinical Episodes that have at least one concurrent Carrier claim billed by a participating PGP (**Step 23a**). Only these Clinical Episodes are eligible for attribution to a PGP.

[42] For the multi-setting MJRLE Clinical Episodes, treat outpatient Clinical Episodes as having MS-DRG 470. Winsorization will be done at the MS-DRG level and not the APC level.

- **Step 24. Create a list of PGP-NPI combinations:** For Clinical Episodes identified in **Step 23**, create a list of PGP-NPI combinations using the participating PGPs on the concurrent Carrier claims first with an attending NPI (on the Anchor Stay/Anchor Procedure) and then with an operating NPI[43] (on the Anchor Stay/Anchor Procedure). For example, if a Clinical Episode has two participating PGPs that bill concurrent Carrier claims and the attending and operating NPIs on the Anchor Stay are different, then the PGP-NPI list will include four pairs. Each participating PGP in this example will be paired first with the attending NPI and then with the operating NPI.
- **Step 25. Attribute Clinical Episodes to participating PGPs:** For Clinical Episodes identified in **Step 23**, apply the following steps to identify all PGP-NPI combinations (**Step 24**) that can be attributed the Clinical Episode: [44]
    - **Step 25a.** Pull all the Carrier claims[45] occurring during the Anchor Stay/Anchor Procedure, including the one day prior, for any beneficiary.
    - **Step 25b.** For each Clinical Episode, check whether the performing NPI and TIN on the Carrier claims (**Step 25a**) match any of the PGP-NPI combinations (**Step 24**). Attribute the Clinical Episode to all the participating PGPs that are matched.
- **Step 26. Attribute Clinical Episodes to participating ACHs:** If the Clinical Episode is initiated by a participating ACH, attribute it to that ACH.

[43] Assumes that the attending NPI and operating NPI are different.
[44] Including the one day prior to the Anchor Stay/Anchor Procedure.
[45] Only consider Carrier claims with positive standardized allowed amount.

# 9 FINALIZE PERFORMANCE PERIOD CLINICAL EPISODES

This section describes the methodology to create the final set of inpatient and outpatient Clinical Episodes both for the National and Participant populations for each Performance Period during the Model Year. First, Clinical Episode spending is winsorized on its upper and lower bounds. Next, Clinical Episodes are initially attributed to Participants. Then, only one Clinical Episode for an individual beneficiary is allowed to occur at a given time. That is, if a beneficiary has multiple Clinical Episodes with overlapping dates, only one of these Clinical Episodes is retained. Finally, Clinical Episodes are subset to only those that can be attributed to Participants.

**Table 11 – Section 9 Inputs and Outputs**

| **Inputs** |
|---|
| • National set of Clinical Episodes |
| • BPCI Advanced Participant Profile |
| **Outputs** |
| • Final National set of Clinical Episodes with winsorized prices |
| • Participants Clinical Episodes |

- **Step 27. Winsorize Clinical Episode spending:** To limit extreme values, winsorize Clinical Episode spending at the 1st and 99th percentile at the Clinical Episode category level within each MS-DRG (for inpatient Clinical Episode categories) or APC (for outpatient Clinical Episode categories) for each fiscal year in the Performance Period.[46]
  - Set all values below the 1st percentile to the 1st percentile.
  - Set all values above the 99th percentile to the 99th percentile.
- **Step 28. Identify Clinical Episodes eligible for PGP attribution:** A Clinical Episode is said to be eligible for PGP attribution if the attending NPI or operating NPI had a billing relationship with a participating PGP during the Anchor Stay/Anchor Procedure.[47] Apply the following steps to identify Clinical Episodes that may be eligible for PGP attribution:

[46] For the multi-setting MJRLE clinical episode, treat outpatient Clinical Episodes as having MS-DRG 470. Winsorization will be done at the MS-DRG level and not the APC level.
[47] Includes one day prior.

- **Step 28a.** For each Clinical Episode, consider all the concurrent Carrier claims with a positive standardized allowed amount (i.e. Carrier claims for that beneficiary occurring during the Anchor Stay/Anchor Procedure, including the one day prior.)
- **Step 28b.** Limit to Clinical Episodes with at least one concurrent Carrier claim billed by a participating PGP.[48] These are the Clinical Episodes that are eligible for attribution to a participating PGP.

- **Step 29. Create PGP-NPI lists:** For the Clinical Episodes that are eligible for attribution to a participating PGP, create a list of PGP-attending NPI combinations, where participating PGPs are the TINs on the concurrent Carrier claims and attending NPIs are those on the Anchor Stay/Anchor Procedure. Create another list of PGP-operating NPI combinations using the operating NPI[49] on the Anchor Stay/Anchor Procedure.
- **Step 30. Attribute Clinical Episodes to participating PGPs:** For Clinical Episodes that are eligible for attribution to a participating PGP as identified in **Step 28**, apply the following steps:
  - **Step 30a.** Pull all the Carrier claims[50] occurring during the Anchor Stay/Anchor Procedure, including the one day prior, for any beneficiary.
  - **Step 30b.** For each Clinical Episode, check whether the performing NPI and TIN on the Carrier claims (**Step 30a**) match any of the PGP-attending NPI combinations (**Step 29**).
    - **i.** If there is exactly one PGP-attending NPI combination that is a match, attribute the Clinical Episode to that participating PGP.
    - **ii.** If the TIN and performing NPI on Carrier claims during the Anchor Stay/Anchor Procedure match multiple PGP-attending NPI combinations, use the following hierarchy to attribute the Clinical Episode:
      - Check whether the TIN and performing NPI on Carrier claims during the Anchor Stay/ Anchor Procedure are for the same beneficiary as the Clinical Episode. If so attribute the Clinical Episode to that PGP.
      - If the application of the hierarchy still results in more than one PGP-NPI combination, do not attribute that Clinical Episode to a PGP.
  - For the remaining Clinical Episodes not attributed to a participating PGP through a billing relationship with the attending NPI, repeat the above steps to determine

[48] The Participants that joined BPCI Advanced in 2020 or Participants that selected new Clinical Episodes in 2020 will not be considered for attribution of the Model Year 3 Clinical Episodes that started in CY2019.
[49] Assumes that the attending NPI and operating NPI are different.
[50] Only consider Carrier claims with positive standardized allowed amount.

whether there are Carrier Claims during the Anchor Stay/ Anchor Procedure with a TIN and performing NPI that match a PGP-operating NPI[51] combination (**Step 29**).

- **Step 31. Attribute remaining Clinical Episodes to participating ACHs:** If the Clinical Episode was initiated at a participating ACH and is not assigned to a PGP per **Step 30**, then assign it to that participating ACH's CCN.
    - By the end of this step, all Clinical Episodes attributable to the Performance Period are identified. As described above, the hierarchy applied is as follows: a) assign first to the PGP that has an attending NPI for the Anchor Stay/Anchor Procedure, b) assign second to the PGP that has operating NPI for the Anchor Stay/Anchor Procedure, c) assign third to the ACH that initiates the Anchor Stay/Anchor Procedure.
- **Step 32. Exclude Clinical Episodes that overlap with CJR initiatives:** Apply the following exclusions to the Clinical Episodes:
    - Exclude Clinical Episodes that overlap with episodes from the Comprehensive Care for Joint Replacement (CJR) model.
        - **i.** Specifically, identify CJR episodes as MJRLE Clinical Episodes[52] initiated by ACHs participating in the CJR model. Exclude the CJR episodes and any other Clinical Episodes overlapping with the CJR episodes initiated by inpatient triggers.
- **Step 33. Allow no more than one Clinical Episode to occur at a given time for a beneficiary:** For all the Clinical Episodes (excluding those removed in Step 32) for the same beneficiary where the start date of a second, newly initiated Clinical Episode occurs between the start and end date (inclusive) of the initial Clinical Episode, select which Clinical Episode to retain using the following logic:
    - For Clinical Episodes that overlap more than one other Clinical Episode, apply the overlap logic in a sequential pairwise fashion. Reconcile overlap between the initial Clinical Episode and the immediately subsequent Clinical Episode. Then, reconcile the retained Clinical Episode with the next subsequent Clinical Episode. Repeat this logic until the retained Clinical Episode no longer overlaps with another Clinical Episode.
    - If at least one of the initial Clinical Episode and the immediately subsequent Clinical Episode is a non-MJRLE, then retain the initial Clinical Episode, unless the initial Clinical Episode was a non-participant Clinical Episode and the subsequent Clinical

[51] Assumes that the attending NPI and operating NPI are different.
[52] MJRLE Clinical Episodes will include both inpatient and outpatient triggers.

Episode was a participant Clincial Episode, in which case, retain the subsequent Clinical Episode. This logic is illustrated in Table 12.

**i.** Two Clinical Episodes for the same beneficiary can be initiated on the same day only if one is in the OP setting and one is in the IP setting. In cases such as this, treat the IP Clinical Episode as the initial Clinical Episode and the OP Clinical Episode as the subsequent Clinical Episode, and follow the logic illustrated in Table 12.

- If both the initial Clinical Episode and the immediately subsequent Clinical Episode are MJRLEs, then retain the subsequent Clinical Episode regardless of the ownership of the Clinical Episodes. This logic is illustrated in Table 13.

**Table 12 – Clinical Episode Selection Logic**

| Initial Clinical Episode | Subsequent Clinical Episode[53] | Retained Clinical Episode |
|---|---|---|
| Participant | Non-Participant | Initial |
| Participant | Participant | Initial |
| Non-Participant | Non-Participant | Initial |
| Non-Participant | Participant | Subsequent |

**Table 13 – MJRLE Clinical Episode Selection Logic**

| Initial Clinical Episode | Subsequent[54] | Retained Clinical Episode |
|---|---|---|
| Participant | Non-Participant | Subsequent |
| Participant | Participant | Subsequent |
| Non-Participant | Non-Participant | Subsequent |
| Non-Participant | Participant | Subsequent |

- If the initial Clinical Episode is a PCI and the subsequent Clinical Episode is a TAVR or if a PCI and a TAVR Clinical Episode start on the same day, retain the TAVR Clinical Episode regardless of the ownership of the Clinical Episodes.

[53] Subsequent Clinical Episode starts between the start date and end date (inclusive) of the initial Clinical Episode. It is either treated as a readmission of the initial Clinical Episode or a new Clinical Episode canceling the initial one.
[54] Refer to Footnote 53.

- For cases of overlaps between MY1&2 Clinical Episodes and MY3 Clinical Episodes, make no distinction between Clinical Episodes belonging to different Model Years, and apply the overlap logic as if the overlapping Clinical Episodes were all in Model Year 3.[55]

- **Step 34. Subset Clinical Episodes to Participants:** Subset the Clinical Episodes remaining after **Step 33** to only those attributed to a Participant.

- **Step 35. Exclude COVID-19 Clinical Episodes:** Exclude Clinical Episodes from the dataset at the end of **Step 34** where the beneficiary has a COVID-19 diagnosis at any time during the Clinical Episode window for Clinical Episodes that initiate on or after January 1, 2020 and end on or before June 30, 2021, and are reconciled during Performance Periods 3, 4, and 5.[56] For Participants who received an executed BPCI Advanced Amended and Restated Participation Agreement 2020-3 Amendment or an executed BPCI Advanced Participation Agreement 2020-3 Amendment, exclude COVID-19 Clinical Episodes from the dataset at the end of **Step 34** that initiate in CY2020 and end on or before June 30, 2021, and are reconciled during Performance Period 5.[57]

  Beneficiaries will be flagged as having a COVID-19 Clinical Episode if the following International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10 CM) diagnosis codes are present on a claim in any diagnosis code fields:

  i. B97.29 (Other coronavirus as the cause of diseases classified elsewhere) for claims after January 27, 2020.
  ii. U07.1 (COVID-19) for claims on or after April 1, 2020.

  The Clinical Episode dataset at the end of **Step 35** is used to update patient case mix for the final Target Price and to calculate Performance Period spending for Reconciliation purposes.

[55] An implication of this is that a MY1&2 PCI Clinical Episode that overlaps with a MY3 TAVR Clinical Episode will be deleted during overlap resolution.
[56] The exclusion will only apply to Participants with an executed BPCI Advanced Amended and Restated Participation Agreement 2020-2 Amendment or an executed BPCI Advanced Participation Agreement 2020-2 Amendment.
[57] This exclusion will only apply to Participants with an executed BPCI Advanced Amended and Restated Participation Agreement 2020-1 Amendment or an executed BPCI Advanced Participation Agreement 2020-1 Amendment, and Participants who did not sign either COVID-19 Amendment.