# States Advancing All-Payer Health Equity Approaches and Development (AHEAD) Model

# Financial Specifications for the CMS-Designed Medicare FFS Hospital Global Budget Methodology

## *Version 2.0*

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# 1. Introduction

This document provides a detailed description of the financial methodology and operational payment features of Medicare Fee-For-Service (FFS) Hospital Global Budget (HGB) under the States Advancing All-Payer Health Equity Approaches and Development Model (AHEAD or the Model). It aims to provide eligible applicants, providers, and interested parties with the necessary details to understand the financial aspects of the AHEAD Model

## 1.1 Updates to Technical Specifications

This document is the second version of the HGB specifications and includes the following updates to the methodology in response to stakeholder feedback. Specifications now include more formulas and documentation of data sources to improve transparency in calculations such as the APA. These updates improve predictability of HGB revenue thereby reducing risk for hospitals considering participation. Centers for Medicare & Medicaid Services (CMS) encourages stakeholders to continue to offer recommendations to refine the methodology. Suggestions or other questions about the AHEAD model can be submitted to AHEAD@cms.hhs.gov.

- **Revised Part B Drug Carveout:** Cancer drugs, which represent a significant and highly variable portion of hospital spending, are excluded from HGB thereby reducing risk for hospitals. All other Part B drugs, which display substantially less volatility, will be included in the HGB, and volume changes will be handled through market shift adjustments and service line changes. This update results in more revenue under the HGB while handling high-cost, high-variable drugs outside the HGB.
- **Demographic Adjustment (DA):** Revised to longer apply a retrospective adjustment after the Performance Year (PY), improving predictability in revenue for hospitals. The DA uses Hierarchical Condition Category (HCC) scores to adjust HGBs for the demographic and clinical risk of beneficiaries in the counties served by the hospital, weighted by the share of revenue a hospital derives from the county. The county risk profile of beneficiaries tends to change slowly over time, further contributing to payment stability.
- **Annual Payment Adjustment (APA) Higher of Uncompensated Care (UCC)/Disproportionate Share Hospital (DSH):** The APA calculates the change in CMS prices from one year to the next and now uses the higher of UCC and DSH payment factors from the Inpatient Prospective Payment System (IPPS) Final Rule across both years included in the calculation. UCC/DSH can vary from year to year and the higher of logic ensures that HGBs will not be lower as a result, improving payment stability for hospitals.
- **Annual Payment Adjustment (APA) IPPS Timing Update:** Updated IPPS pricing factors (e.g., wage indexes, base) become effective October 1st with the annual release of the Final Rule. The HGB methodology now includes an adjustment to account for updated prices applicable between October 1st and the end of the PY. This ensures that hospitals are appropriately reimbursed for all the same factors as in IPPS.
- **Updated HGB Baseline Time Periods:** The HGB baseline is shifted forward by 6 months and includes a completion factor. The use of more recent baseline data improves the accuracy of global budgets in Performance Year 1, ensuring that hospitals are paid appropriately.

- **Social Risk Adjustment (SRA) and Total Cost of Care (TCOC) Geography:** The SRA and TCOC adjustments now use the same geographic definitions as the Market Shift Adjustment (MSA), helping to align aspects of methodology. This provides a more consistent definition of the populations for which hospitals are accountable and improves the ability to manage population health.
- **Market Shift Adjustment (MSA) Out-of-Area Logic:** Added a 120-mile distance threshold to exclude long distance outliers, such as snowbirds, from the calculation, improving accuracy.
- **Standardized Area Deprivation Index (ADI):** CMS is using a standardized ADI to reduce rural-urban differences due to prices, improving equity.
- **Payment Floor for CAHs:** The payment floor ensures that HGB payments for CAHs are no lower than current Medicare FFS reimbursement at 101% of costs (before sequestration). The floor is calculated such that if the HGB payments for the performance year are less than what would have been paid by Medicare FFS had the CAH not participated in the HGB, CMS will make an additional payment to the CAH equal to the difference.

CMS plans to make additional updates in version 3.0, including:

- **Increased Alignment of Quality Measures:** CMS is considering how to increase conceptual alignment of measures across HGB adjustments and the disparity risk stratifications included in the Health Equity Improvement Bonus (HEIB).
- **Total Cost of Care (TCOC) Adjustment Benchmark and Geography:** CMS is assessing methods for refining the benchmark to ensure that it provides an appropriate counterfactual for spending in the absence of the AHEAD model.
- **Continued Refinement of MSA:** CMS continues to evaluate the performance of the MSA to ensure HGBs appropriately account for changes in volume related to patient preference.

CMS intends to share Version 3.0 in early 2025 as hospitals consider participation in the first PY of the Model. Specifications will be updated prior to each subsequent PY to account for changes to CMS policy or other circumstances.

## 1.2 Model Overview

The AHEAD Model is a voluntary, state-based alternative payment and service delivery model designed to curb health care cost growth, improve population health, and advance health equity by reducing disparities in health outcomes. The AHEAD Model tests a flexible framework that includes statewide or sub-state[1] accountability targets for all-payer, Medicare FFS cost growth, primary care investment, and equity and population health outcomes. The Model includes specific components to help each award recipient achieve these goals, including Medicare HGB and Medicaid HGB for Participant Hospitals and a primary care program for Participant Primary Care Practices.

[1] A sub-state region is defined as a group or groups of zip codes within a state that do not encompass an entire state and may or may not be close in location (i.e., do not need to share a common border). If a state elects and is accepted to participate in the AHEAD Model via a sub-state region, assessment of the state's performance will be based on its participation at the sub-state region-level. States may not apply to participate in the AHEAD Model through multiple, separate sub-state regions.

Current statewide and regional care transformation and payment reforms, along with early implementation of transformation activities will be key to building a sustainable approach to care transformation under the AHEAD Model. The Model is intended to integrate seamlessly into ongoing state health reform work—especially in those states that have already invested considerable time and resources in restructuring local delivery systems—to galvanize action within participating states to enhance innovation while meeting Model goals. With Medicare serving as an invested payer in these innovations, AHEAD provides a framework to use Medicare FFS, Medicaid, and commercial payer alignment to catalyze greater transformation within states and across regions. The Model relies on a state-led, all-payer strategy to increase investments in primary care and integrate behavioral health and health-related social needs across the delivery system, while constraining TCOC growth through improved preventive care and population health, HGBs, and all-payer and Medicare FFS growth targets.

## 1.3 Hospital Global Budgets

HGBs are a method of financing health care services that shift economic incentives away from volume and toward value. This key component of the AHEAD Model aims to change care delivery, improve quality and advance health equity, reduce unnecessary services, and generate revenue needed to invest in population health priorities. HGBs are a prospectively set fixed amount of revenue a hospital receives for the treatment of a specific patient population or program. Hospital FFS payments encourage providers to increase the volume of services to generate revenue, which may incentivize the overuse of services, duplication of complex services, or over-investment in sophisticated capital and technology. In comparison, global budgets provide hospitals, including rural and urban safety net hospitals, with financial stability and flexibility, and incentivize reductions in unnecessary utilization. Unlike FFS, hospitals participating in global budgets are able to retain revenue that would otherwise be lost from eliminating unnecessary utilization like readmissions or avoidable emergency department visits. Global budgets also provide hospitals with the incentives for and flexibility to join with other health care providers and public health agencies to improve the health of the populations they serve.

In the AHEAD Model[2] Medicare HGB payment amounts are calculated based on Medicare payments in previous years, and updates are made to reflect inflation as well as changes in populations served, and services provided. Because revenue is separated from actual volume, the incentive in HGB to focus on increasing volume is eliminated and instead rewards population health improvement. Through global budgets, hospitals can reduce the costs of care, improve their financial performance, and refocus investments to improve the care of their patient population.

Under AHEAD, HGBs replace payments for inpatient and outpatient facility services, but not for professional services. However, hospitals must engage and work with the providers furnishing care to hospital patients, as well as non-hospital providers and facilities furnishing care to Medicare beneficiaries who may or may not seek hospital care, to succeed in this type of arrangement. Additionally, CMS will make certain Waivers available to allow Participant Hospitals to formalize arrangements with these non-hospital providers and to provide additional flexibilities to Participant Hospitals. These Waivers will be described in greater detail in the State and Hospital Participation Agreements.

[2] States Advancing All-Payer Health Equity Approaches and Development (AHEAD) Model Hospital Global Budget Factsheet, https://www.cms.gov/files/document/ahead-hgb-fs.pdf

By participating in HGBs and shifting away from FFS incentives, hospitals can realize financial savings from reduced avoidable utilization (e.g., avoidable admissions and emergency visits) and moving care to lower acuity settings, when appropriate. Hospitals also derive value from stable and predictable funding, the ability to reorient activities to population health management, and the opportunity to deploy innovative strategies that improve beneficiary care quality and reinvigorate clinician engagement.

## 1.4 Timeline

The AHEAD Model will operate for 11 years (2024 – 2034), and includes a Pre-Implementation Period, an Implementation Period, followed by up to two Transition Years. CMS will select states for participation in the Cohort in which states applied. Cohort participation impacts the length of the Pre-Implementation Period (which can range between 18 – 30 months) and the number of PYs in the Implementation Period (8 or 9 years). During the Pre-Implementation Period, AHEAD States will recruit Participant Hospitals, recruit Primary Care Practices for Primary Care AHEAD, initiate Medicaid alignment, develop a Model Governance Structure, and engage private payers. **Exhibit 1** provides a visual representation of the Model implementation timeline for Cohorts 1 – 3. Medicare HGB payments and Primary Care AHEAD do not begin until the Implementation Period (PY1 and beyond) for AHEAD States.

**Exhibit 1: Cohort Implementation Timeline**

| Cohort | 2024 Q3 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | Pre-Imp. | Pre-Imp. | PY1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 | PY9 |
| **2** | Pre-Imp. | Pre-Imp. | Pre-Imp. | PY1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 |
| **3** | NOFO | Pre-Imp. | Pre-Imp. | PY1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 |

Abbreviations: NOFO = Notice of Funding Opportunity, Pre-Imp. = Pre-Implementation Period

## 1.5 Eligible Hospitals

Acute Care Hospitals and Critical Access Hospitals (CAHs) are eligible to participate in Medicare HGBs under the Model. Eligible Hospitals will also include Rural Emergency Hospitals (REH)—a new Medicare provider type offering outpatient, observation, emergency, and certain other services in AHEAD States that enact enabling legislation prior to or during the Model Implementation Period. Eligible Hospitals must be a Medicare-enrolled facility in good standing[3] with CMS and located in a participating AHEAD State or sub-state region to be eligible to participate. Hospital and CAH participation in AHEAD is voluntary and will be subject to state-level coordination and oversight. **Exhibit 2** outlines the hospital types eligible and ineligible for participation in the AHEAD Medicare FFS HGB.

**Exhibit 2: Provider Types Eligible and Ineligible from Participation in Medicare HGBs**

| Hospital Type | Eligible/Ineligible |
|---|---|
| Acute Care Hospitals | Eligible |
| Critical Access Hospital | Eligible |

[3] Medicare-enrolled providers must meet all requirements set forth by CMS to be considered in good standing. More information on Medicare enrollment and requirements for provider is available at: https://www.cms.gov/medicare/enrollment-renewal/providers-suppliers.

| Hospital Type | Eligible/Ineligible |
|---|---|
| Medicare-Dependent Hospital | Eligible |
| REH | Eligible |
| Rural Referral Center (RRC) Program | Eligible |
| Sole Community Hospital (SCH) | Eligible |
| Tribal Hospital | Eligible |
| Indian Health Service (IHS) Hospitals | Eligible |
| Cancer Hospitals | Ineligible |
| Children's Hospitals | Ineligible |
| Long-Term Care Facilities | Ineligible |
| Psychiatric Hospitals (free standing and distinct part units) | Ineligible |
| Rehabilitation Hospitals (free standing and distinct part units) | Ineligible |
| Transplant Hospitals | Ineligible |
| Veterans' Hospitals | Ineligible |

**Exhibit 3** lists payment policies for different types of hospitals that precede participation in AHEAD and details specific considerations for how they will be addressed when developing the baseline and subsequent HGBs for each Participant Hospital. Hospitals that voluntarily agree to participate under a HGB will sign Hospital Participation Agreements with CMS that enumerate their participation requirements and expectations. These Participation Agreements will be provided to interested hospitals during the Pre-Implementation Period and will need to be signed in advance of a hospital participating in HGBs for the upcoming PY.

**Exhibit 3: Hospital Types Included Under the AHEAD Hospital Global Budget Methodology**

| Hospital Type | Payments & Policies Prior to AHEAD Model | Basis for HGB Development |
|---|---|---|
| **Critical Access Hospital (CAH)** | CAHs are paid for most inpatient and outpatient services to patients at 101 percent of reasonable costs. | Medicare FFS payments and cost report settlements including swing beds that reflect total payments are used to construct a CAH's baseline HGB. Under the AHEAD Model, CAHs will no longer be reconciled back to 101 percent of reasonable costs as part of their cost reporting. A payment floor will also be applied to CAHs participating in AHEAD (**Section 2.1.5**). |
| **Medicare-Dependent Hospital (MDH)** | MDHs receive operating payments based on the higher of the federal rate or the federal rate plus 75% of the difference between the federal rate and the hospital-specific rate. An MDH's capital payments are solely based on the capital base rate. MDHs may also qualify for a payment adjustment if the hospital experiences a significant volume decrease. | Medicare FFS payments that reflect unique payment methodologies for MDHs are used to construct the baseline. |

| Hospital Type | Payments & Policies Prior to AHEAD Model | Basis for HGB Development |
|---|---|---|
| **Rural Emergency Hospital (REH)** | Medicare provider type effective 01/01/23. CAHs can voluntarily convert to an emergency hospital that does not maintain inpatient beds. REHs will receive the same Medicare payment rates as other Emergency Departments (ED) paid under Outpatient Prospective Payment System (OPPS), plus an additional payment to assist with capital costs. Note that methodology may be updated depending on final IPPS/OPPS rule. | Medicare FFS payments that reflect unique payment methodologies for REH will be used to construct the baseline. Participating Hospitals that convert to REH during Model PYs will have the HGB reconstructed on a case-by-case basis. CMS will continue to develop a REH-specific HGB methodology for inclusions of additional considerations. |
| **Rural Referral Center (RRC) Program** | RRCs support high-volume rural hospitals and are paid based upon the urban, rather than rural, prospective payment rates as adjusted by the applicable Diagnosis Related Group (DRG) weighting factor and the rural area index. | Medicare FFS payments that reflect unique payment methodologies for RRCs will be used to construct the baseline. |
| **Sole Community Hospital (SCH)** | SCHs can receive operating payments based on the higher of their hospital-specific payment rate or the federal rate, while capital payments are solely based on the capital base rate (like all other Acute Care Hospitals). | Medicare FFS payments that reflect unique payment methodologies for SCHs will be used to construct the baseline. |
| **Indian Health Service (IHS) Hospitals** | The IHS is the principal federal health care provider and health advocate for American Indian/Alaska Native (AI/AN) peoples, and its goal is to raise their health status to the highest possible level. The IHS provides a comprehensive health service delivery system for AI/ANs.[4] | Medicare FFS payments that reflect unique payment methodologies for IHS Hospitals will be used to construct the baseline. |
| **Tribal Hospitals** | Hospitals that are owned and/or operated by Tribes or Tribal organizations that contract with IHS to plan, conduct, or administer one or more individual programs, functions, services or activities under Public Law (P.L.) 93-638, or portions thereof, including construction programs that the IHS would otherwise provide for AI/ANs because of their status as AI/ANs.[5] | Medicare FFS payment that reflect unique payment methodology paid to Tribal Hospitals in lieu of IHS Hospitals will be used to construct the baseline. |

## 1.6 Key Terms

**Exhibit 4** and **Exhibit 5** introduce key terms and explanations for current programs and payments administered by CMS that intersect with HGBs, as well as new AHEAD terms for elements of the HGB methodology.[6]

[4] See *Indian Health Service Agency Overview,* https://www.ihs.gov/aboutihs/overview.

[5] See *Title 1, Indian Health Service*, https://www.ihs.gov/odsct/title1.

[6] Key terms are always capitalized to indicate the term's defined purpose in the payment calculation. In some cases, the same or similar words appear in lower case for the purpose of introducing a concept.

## Exhibit 4: Overview of CMS Programs and Payments

| Term | Description |
|---|---|
| **Acute Care Hospital** | A hospital that provides inpatient medical care and other related services for surgery, acute medical conditions, or injuries (usually for a short-term illness or condition) (defined as a "subsection (d) hospital" in Section 1886(d)(1)(B) of the Social Security Act) and traditionally paid through the IPPS and OPPS. |
| Alternative Payment Model (APM) | A payment approach that provides added incentive payments for high quality and cost-efficient care. APMs can apply to a specific clinical condition, a care episode, or a population. For purposes of the Quality Payment Program, APM is codified in 42 CFR 414.1305. |
| Critical Access Hospital (CAH) | A state that has established a Medicare Rural Hospital Flexibility Program (Flex) may designate certain facilities as CAHs. CMS will certify a state-designated facility as a CAH if the facility meets certain requirements. CAHs receive cost-based reimbursement for most Medicare Part A and Part B services. Eligible hospitals must, among other requirements, meet the following conditions to obtain CAH designation:<br>1) Have 25 or fewer acute care inpatient beds.<br>2) Be located more than 35 miles from another hospital or CAH, or 15 miles if mountainous terrain with only secondary roads (some exceptions apply).<br>3) Maintain an annual average length of stay of 96 hours or less for acute care patients.<br>4) Provide 24/7 emergency care services.<br>Conditions of Participation for CAHs are defined in 42 CFR 485 subpart F.[7] |
| **Hierarchical Condition Categories (HCC)** | HCC scores use International Classification of Diseases (ICD)-10 codes to assign risk scores to patients. Within the AHEAD Model, CMS HCC risk scores are used to account for differences in beneficiary demographics and health conditions. HCC is incorporated in both the Demographic and TCOC Adjustments. |
| Hospital-Acquired Condition Reduction Program (HACRP) | HACRP is an IPPS Value-Based Purchasing (VBP) program that ties Medicare payments for hospitals based on their performance on measures of hospital-acquired conditions (HAC). Hospitals ranked in the lowest-performing quartile (highest frequency of conditions) among all hospitals nationwide are subject to a 1 percent reduction in payment rates. This 1% HACRP reduction adjustment is expressed as a 0.99 factor that is applied to the hospital's payment rate after adjustments are made under the Hospital VBP program and the Hospital. Hospitals that rank above the lowest quartile are assigned a HACRP payment factor of 1.0 to be applied to their payment rates. |
| Hospital Readmissions Reduction Program (HRRP) | HRRP is another IPPS Medicare VBP. HRRP incentivizes improved communication and care coordination for patients receiving hospital care. Hospital payments are adjusted based on a measure of excess readmissions. The reduction is based on the dollar value of each hospital's percentage of potentially preventable Medicare readmissions for specific designated conditions. The penalty is collected from the hospitals through a percentage reduction in their base Medicare inpatient claims payments, up to a cap of 3 percent. |
| Hospital Value-Based Purchasing Program (VBP) | The Hospital VBP adjusts Acute Care Hospital payments based on the quality of care delivered to hospital patients and patient experiences. The program adjusts payments to hospitals under IPPS. |
| Indirect Medical Education (IME) | Medicare Acute Care Hospitals that have licensed medical staff enrolled in an approved Graduate Medical Education (GME) program receive an additional payment from Medicare, known as the IME adjustment, to reflect the higher patient care costs of teaching hospitals relative to non-teaching hospitals. The hospital receives a percentage add-on payment. This percentage varies and is calculated using a hospital's ratio of staff enrolled in GME to beds and a multiplier, which is set by the United States Congress. |

[7] See Critical Access Hospitals, https://www.cms.gov/files/document/ahead-hgb-fs.pdf and https://www.cms.gov/medicare/health-safety-standards/certification-compliance/critical-access-hospitals.

| Term | Description |
|---|---|
| Graduate Medical Education (GME) | Payments to hospitals for the costs of approved GME programs. The GME methodology includes a hospital-specific, base-period per resident amount (PRA) that is calculated by dividing a hospital's allowable costs of GME for a base period by its number of residents during the base period. Medicare-direct GME payments are calculated by multiplying the PRA by the weighted number of full-time equivalent (FTE) residents working in all areas of the hospital (and non-hospital sites, when applicable), and the hospital's Medicare share of total inpatient days. In contrast to IME, teaching hospitals' Medicare-direct GME costs are excluded from the IPPS and continue to be paid separately. |
| Healthcare Provider Cost Reporting Information System (HCRIS) | Facility based Medicare providers are required to submit annual cost reports to the Medicare Administrative Contractor (MAC) containing utilization data, costs and charges by cost center and financial data. In the AHEAD model, cost report data is used to collect settlement payments made to Critical Access Hospitals (CAHs) that reconcile interim payments to 101% of cost. |
| Integrated Data Repository (IDR) | All data used for the AHEAD Model financial calculations are housed within the IDR. The IDR contains the following data sources:<br>• **Claims Data**: Contains person-level Medicare FFS Claims data submitted by Medicare providers for payment for services provided to Medicare beneficiaries. This data is sourced from the National Claims History (NCH) and is updated on a weekly basis.<br>• **Eligibility Data**: Contains beneficiary eligibility data, including Medicare Advantage (Medicare Part C) and Prescription Drug Program (Medicare Part D) plan enrollment data. This data is sourced from the CMS Common Medicare Environment (CME) and is updated daily.<br>• **Provider Data:** Contains information about providers that is sourced from both the Provider Enrollment, Chain, and Ownership System (PECOS) and the National Plan and Provider Enumeration System (NPPES). |
| Low-Volume Adjustment | CMS provides an additional payment to a qualifying hospital for the higher incremental costs associated with a low volume of discharges. |
| Master Data Management (MDM) System | The MDM contains APM program overlap data, including beneficiary and provider-level data. |
| Medicare Administrative Contractor (MAC) | The MAC is a CMS contractor awarded a geographic jurisdiction to process Medicare Part A and Part B (A/B) medical claims or Durable Medical Equipment (DME) claims for Medicare FFS beneficiaries. |
| Medicare Disproportionate Share Hospital (DSH) | DSHs serve a significantly disproportionate number of low-income patients and receive payments from CMS to cover the cost of providing care to uninsured patients. This adjustment is authorized under Section 1886(d)(5)(F) of the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985. The primary method for determining payments is for a hospital to qualify based on a statutory formula that results in the DSH patient percentage. The DSH patient percentage is equal to the sum of the percentage of Medicare inpatient days attributed to patients eligible for both Medicare Part A and Supplemental Security Income (SSI), and the percentage of total impatient days attributed to patients eligible for Medicaid but not Medicare Part A. The alternate special exception method is for large urban hospitals that can demonstrate that more than 30 percent of their total net inpatient care revenues come from State and local governments for indigent care (other than Medicare or Medicaid). |
| **Medicare Fee-For-Service (FFS) Claims** | Medicare FFS claims are requests submitted by medical providers for FFS payment by Medicare for services rendered to Medicare Part A or Part B eligible beneficiaries. These claims are processed by specific MACs. Throughout this document Medicare FFS claim payments refer to the dollars paid by Medicare for the rendered services and not utilization. |

| Term | Description |
|---|---|
| Medicare Hospital Inpatient Quality Reporting Program (IQR) | IQR is a pay-for-reporting program for Acute Care Hospitals. Acute Care Hospital payments are adjusted based on whether hospitals do or do not successfully report the designated quality measures. Data collected under IQR informs HACRP, HRRP, and VBP. |
| Medicare Hospital Outpatient Quality Reporting Program (OQR) | OQR is a pay for reporting program which collects quality measure data for Acute Care Hospitals. OPPS payments for hospitals that do, or do not, meet administrative, data collection and submission, validation, and publication requirements. |
| Medicare Promoting Interoperability Program | CMS program that provides financial incentives to providers to demonstrate meaningful use of Electronic Health Record (EHR) systems and meeting certain interoperability and functionality criteria and improving patient access to health care information. |
| Outlier Payments | In Medicare FFS, in some cases, individual payments on claims are adjusted for the excess costs related to a specific patient's condition (so called "outlier" costs). This additional payment known as an "Outlier" is designed to protect the hospital from large financial losses due to unusually expensive cases. |
| Rural Emergency Hospital (REH) | REHs are facilities converted from either a CAH or a rural hospital (or one treated as such under Section 1886(d)(8)(E) of the Social Security Act) with less than 50 beds, and that do not provide acute care inpatient services with the exception of skilled nursing facility services furnished in a distinct part unit. |
| Uncompensated Care (UCC) | In Medicare FFS, DSH hospitals are also eligible to receive a new additional payment for UCC that is a pro rata share of dollars in a UCC pool. This pool is distributed to qualifying hospitals in proportion to their share of bed days attributed to low-income, uninsured patients. Hospitals receive interim payments per discharge which is then reconciled and settled in the cost report. |
| Wage Index | As part of the methodology for determining IPPS payments to hospitals, CMS adjusts the standardized amounts for geographic differences in cost of labor for hospitals in different labor markets by a factor reflecting the relative hospital wage level in the market compared to the national average hospital wage level. This ratio is the Wage Index. |

### Exhibit 5: Overview of AHEAD Model Financial Terms

| Term | Description |
|---|---|
| **AHEAD State** | States that voluntarily apply and accept to participate in the AHEAD Model either statewide or in a specified sub-state region. CMS will execute a Cooperative Agreement and a State Agreement with each AHEAD State. |
| **Annual Payment Adjustment (APA)** | The baseline and subsequent HGBs will be trended forward using an APA based on various factors. See **Section 2.2.1** for more information. |
| **Baseline** | The 3-year time period used to develop HGBs, based on Eligible Hospital Services. Given the need for Claims Runout, there will be a 6-month Gap Period between the Baseline and the Participant Hospital's first PY. |
| **Claims Runout** | The time between the provision of medical services and the processing of claims by the MACs and the availability of claims data in Medicare databases such as the IDR. |
| **Demographic Adjustment (DA)** | Adjustment to HGBs on an annual basis to reflect changes in the status of the population (population size, age, Medicare status, medical risk, etc.) served by the hospitals in a specific geographic region. See **Section 2.2.6** for more information. |

| Term | Description |
|---|---|
| **Effectiveness Adjustment (EA)** | Adjustment to HGBs based on a portion of a Participant Hospital's calculated Potentially Avoidable Utilization (PAU). See **Section 2.3.3** for more information. |
| **Eligible Beneficiaries** | All Medicare FFS beneficiaries enrolled in Medicare Part A and/or B receiving services at a Participant Hospital used to develop the HGB. |
| **Eligible Hospital** | Hospitals eligible to participate in HGBs under the AHEAD Model include Acute Care Hospitals, CAHs, and REHs (pending state-enabling legislation) located within a Participating State or Sub-State region. |
| **Eligible Hospital Services** | Medicare Part A and outpatient facility services covered under Part B furnished by Participant Hospitals that are included in HGBs are those with type of bill 11X, 12X, 13X, 14X, 85X, or 18X and where Medicare is the primary payer. Outpatient cancer drugs, professional services rendered in a hospital setting, and payments listed in **Appendix D** are excluded. See **Section 2.1** for more information. |
| **Gap Period** | The 6-month period between the end of the 3-year Baseline and PY1. The Gap Period provides the necessary time for Claims Runout and HGB calculations. |
| **Gap Year** | The 12-month period ending prior to PY1. In Version 1.0, this was the year between the baseline and first PY. In Version 2.0, this is no longer used for the baseline but is used for the Effectiveness Adjustment and Social Risk Adjustment. |
| **Health Equity Improvement Bonus (HEIB)** | HGBs may receive an annual upward adjustment based on hospital performance on select disparities-sensitive quality measures. |
| **Hospital Global Budgets (HGBs)** | A fixed, prospectively set amount of annual revenue to a hospital for selected Medicare Part A and outpatient facility services covered under Part B. Under AHEAD, HGB amounts will be paid by Medicare to Participant Hospitals in the form of prospective, bi-weekly payments in place of traditional Medicare FFS claims. Professional services rendered in a hospital setting are excluded. |
| **Hospital Health Equity Plan** | Participant Hospitals are required to develop and implement specific initiatives documented in a Hospital Health Equity Plan that further the goals of the Statewide Health Equity Plan and address the needs in their specific communities. |
| **Hospital Participation Agreement** | The agreement between the Participant Hospital, the AHEAD State, and CMS outlining key terms for hospital participation in the AHEAD Model. Each Participant Hospital is required to execute a Hospital Participation Agreement. |
| **Market Shift Adjustment (MSA)** | Adjustments to HGBs based on material shifts in volume for services between hospitals in such a way that covers hospitals' variable costs. |
| **Model Governance Structure** | A multi-sector stakeholder workgroup convened by an AHEAD State to develop and oversee the implementation of the Statewide Health Equity Plan, assist with the review of Hospital Health Equity Plans, and potentially assist with the development or implementation of other elements of the Model. |
| **Non-Participant Hospital** | A hospital that does not have a signed Hospital Participation Agreement with CMS to participate in AHEAD. A Non-Participant Hospital will continue to be reimbursed as normal. These may be located inside or outside of the state or sub-state region. |

| Term | Description |
|---|---|
| **No-Pay Claims** | Medicare claims for providers participating in APMs that are processed by the MAC, but not paid because the provider is paid using a method specific to the APM. All standard data elements that are found on Medicare claims are populated on these claims, including the paid amount field, which will display what the claim would have paid under FFS. Claim value codes will be used to identify that the claim was not paid FFS because it was submitted by a Participant Hospital for Eligible Hospital Services. |
| **Outlier Adjustment** | An adjustment to update the HGBs based on changes in Outlier Payments is incorporated into the APA (**Section 2.2.1**). In addition, carveouts applied to the baseline for cancer drugs (**Sections 2.1.3 and 2.1.4**) protect the hospital from large financial losses due to unusually expensive cases. |
| **Participant Hospital** | An ACH, REH, or CAH, as identified by its CMS Certification Number (CCN), that:<br>1) Is physically located within the AHEAD State or sub-state region; and<br>2) Has signed a Hospital Participation Agreement with CMS to participate in AHEAD. |
| **Performance Year (PY) - (Hospital)** | For the AHEAD Model, each Hospital PY is the 12-month period when HGBs for Participant Hospitals replace Medicare FFS payments for included services or CAH cost-based reimbursement. Hospitals may sign up to participate throughout the AHEAD Implementation Period by signing a Hospital Participation Agreement in advance of their first PY. |
| **PY of the Applicable Cohort** | AHEAD States will elect to participate in one of three Cohorts. The first year in which HGBs are available to Eligible Hospitals in that state determines the first PY of the Applicable Cohort:<br>• Cohort 1 includes nine PYs, beginning January 1, 2026, through December 31, 2034.<br>• Cohorts 2 and 3 include eight PYs, beginning January 1, 2027, through December 31, 2034. |
| **Potentially Avoidable Utilization (PAU)** | Although CMS is re-evaluating measures, for now PAU is calculated for each Participant Hospital as part of the Effectiveness Adjustment. PAU will include readmissions, avoidable admissions (calculated by the AHRQ Prevention Quality Indicators [PQI]-90), avoidable ED visits (calculated by the New York University Emergency Department algorithm), and low-value care (as defined by The Medicare Payment Advisory Commission - MedPAC). There may be other sources of PAU in which hospitals can reduce and see savings under HGBs, however this definition is used for the Effectiveness Adjustment. |
| **Quality Adjustment – Prospective Payment System (PPS) Hospitals** | Quality adjustments to HGBs allow quality measures to align with existing CMS programs for PPS hospitals. Including HRRP, VBP, HACRP, IQR, Medicare Promoting Interoperability, and OQR. Participant Hospitals will continue to report to these programs under the AHEAD Model. |
| **Quality Adjustment – Critical Access Hospitals (CAHs)** | CAHs will have a new upside-only Quality Adjustment designed under AHEAD that will incentivize performance on specific rural-relevant quality measures. |
| **Primary Care AHEAD** | Primary Care AHEAD is a voluntary program within the Model for Participant Primary Care Practices. Participant Primary Care Practices may include Federally Qualified Health Centers (FQHCs) including Health Centers and Health Center Look-Alikes[8], Rural Health Clinics (RHCs), and practices with primary care specialties as defined by CMS. |

[8] For more information on Health Center Look-Alikes, see https://bphc.hrsa.gov/funding/funding-opportunities/health-center-program-look-alikes.

| Term | Description |
|---|---|
| **Safety Net Hospital (SNH)** | Safety Net Hospitals include:<br>1) Short-term hospitals that serve above a baseline threshold of beneficiaries with dual eligibility for Medicare and Medicaid or Part D Low-Income Subsidy (LIS). Facilities are identified as a safety net hospital when their patient-mix of beneficiaries with dual eligibility or Part D LIS exceeds the 75th percentile threshold for all congruent facilities who bill Medicare.<br>2) Community Access Hospitals.<br>**Sections 2.1.5, 2.2.4.3, 2.2.5, 2.3.1.1, and 2.3.3.1** in the methodology described below include adjustments that account for the unique context of SNHs. Often, the policies for CAHs and other SNHs align; however, there are areas where these policies may differ (as indicated within this document). |
| **Service Line Adjustment (SLA)** | SLAs made to HGBs account for service line additions, expansions, eliminations, or contractions. SLAs reflect a hospital's pre-planned and approved intent to add or expand a new service, or to eliminate or contract out an existing service. |
| **Social Risk Adjustment (SRA)** | Adjustments to HGBs based on a combination of the ADI and proportion of Medicare-Medicaid dually eligible and/or Part D LIS beneficiaries in the Participant Hospital's service area. |
| **State Agreement** | The legal agreement executed between the AHEAD State and CMS during the Pre-Implementation Period and prior to the start of the first PY. This is a requirement for the state to participate in AHEAD and for CMS to allow the Implementation Period/PYs to begin. |
| **Total Cost of Care (TCOC) Performance Adjustment** | An upward or downward adjustment to the HGB based on hospital performance relative to a TCOC target for the hospital's attributed population. |
| **Transformation Incentive Adjustment (TIA)** | An upward adjustment applied to each Participant Hospital's HGB in the first two PYs of the Applicable Cohort to facilitate investment by hospitals in care management and transformation activities. The TIA will need to be repaid if a Participant Hospital exits the Model before the sixth PY for its respective Cohort. |
| **Transition Year** | After the final PY of the AHEAD Model, CMS will offer two Transition Years to Participant Hospitals to allow for transition to another value-based care model, back to FFS, or to a cost-based reimbursement depending on the type of hospital. |
| **Unplanned Volume Adjustment (UVA)** | Adjustment to HGBs applied after the MSA and DA that limits volume increases/decreases above a threshold to protect both CMS and hospitals from unanticipated changes in volume. |
| **Waivers** | CMS may waive certain Medicare program rules and fraud and abuse laws for the purposes of testing payment and service delivery models developed by the CMS Center for Medicare and Medicaid Innovation (the Innovation Center). CMS will include these Waiver offerings and any potential beneficiary engagement incentives as part of the Hospital Participation Agreement. |

## 2. Hospital Global Budget Construction

Eligible Hospitals that voluntarily sign Hospital Participation Agreements with CMS will receive a fixed HGB payment for Medicare FFS inpatient and outpatient hospital services in the form of prospective, bi-weekly payments from Medicare in place of payments for FFS claims.

To construct the Medicare HGBs for Participant Hospitals, CMS will first calculate a Participant Hospital's global budget baseline by combining the hospital's historical revenue from FFS

payments from the three most recent years preceding the year in which the hospital joins the Model. CMS will weight historical revenue, with the most recent years weighted more heavily (i.e., Base Year [BY] 1: 10%; BY2: 30% and BY3: 60%). Historical revenue paid by CMS outside the FFS framework will be excluded from the baseline. Similarly, Medicare payments to hospitals currently paid outside the FFS framework will continue to be paid as they are currently and outside of the HGB. See **Appendix D** for a detailed list of payments excluded from HGBs. Professional services rendered in a hospital setting are not included in the HGB and will continue to be paid FFS.

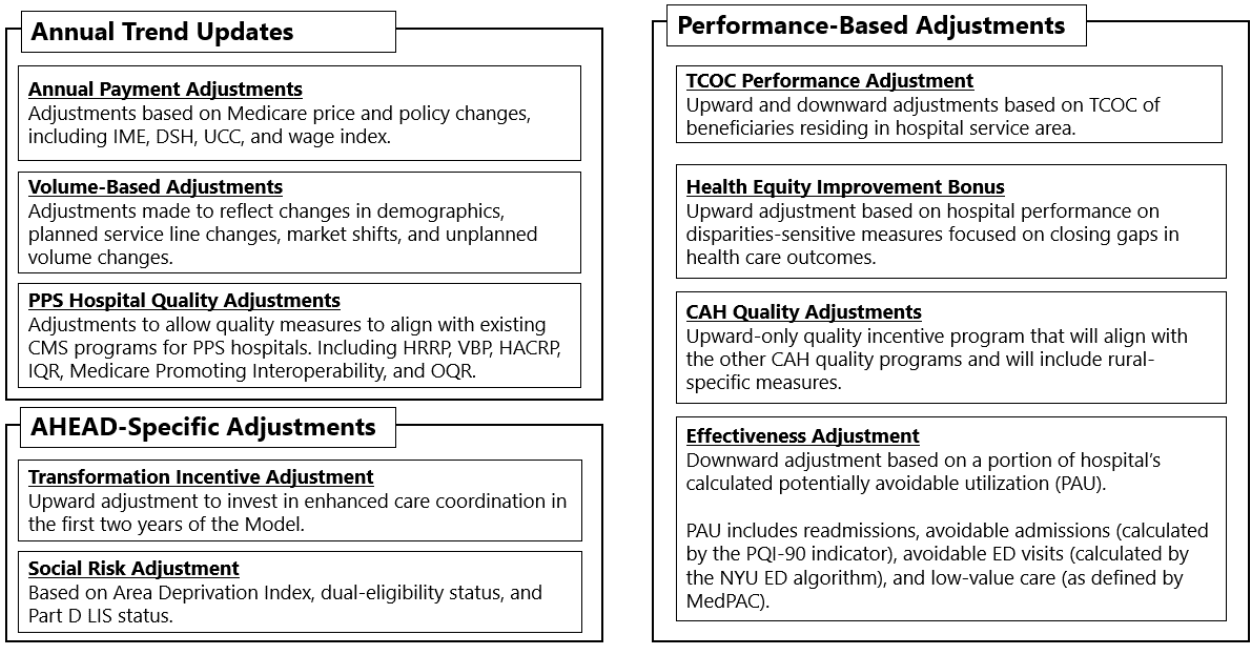
CMS will then apply annual trend updates to reflect changes in inflation, demographic changes, market shifts and service line changes. CMS will also apply AHEAD-specific adjustments, including the TIA and the SRA. See **Section 2.2** for additional information on annual trend updates and AHEAD-specific adjustments.

CMS will also apply Performance-Based Adjustments to HGBs for each PY based on financial and quality performance standards. Performance-based adjustments to HGBs will include adjustments for performance on CMS national quality programs, health equity improvement, effectiveness on PAU targets, and performance on TCOC targets. See **Section 2.3** for more information on Performance-Based Adjustments. CAHs (**Sections 2.3.1**) will have separate quality and TCOC (**Section 2.3.4**) performance adjustments.

After adjusting each Participant Hospital's global budget, each hospital will receive a prospective, bi-weekly payment for Eligible Hospital Services in lieu of traditional FFS claims or cost-based reimbursement. Hospitals will continue to submit Medicare FFS inpatient and outpatient claims and Medicare Hospital Cost Reports to CMS.

**Exhibit 6** is a visual representation of the process for calculating the Medicare FFS HGB.

### Exhibit 6: General Steps for Calculating the AHEAD Medicare FFS HGB




## 2.1 Baseline Calculation

The HGB Baseline Amount is the starting point for determining PY1 payment for a Participant Hospital. To calculate the Baseline Amount, CMS will utilize historical Medicare FFS revenue data from three BYs. The BYs are the most recent three calendar years, which are weighted together, beginning 6 months prior to the hospital joining the Model.

CMS calculates Historical Medicare FFS revenue by summing the Medicare FFS claim payments for Eligible Hospital Services during the BYs. All factors used in Medicare FFS claim payment are incorporated to ensure that HGB baselines fully account for Medicare FFS revenue that will be replaced by HGBs. This includes all the same pricing components used to calculate the paid amount on a claim including, DRG base payment rates, adjustments for market conditions, complexity of service (DRG-Weights), policy adjustments, and quality adjustments. Beneficiary out-of-pocket payments are excluded from historical Medicare FFS revenue for purposes of calculating the global budget, because these payments are unaffected by the global budget. Payment reductions from sequestration during the BYs are added back to historical Medicare FFS revenue so that sequestration can be appropriately re-applied to PY global budget payments.

Payments that are excluded from the HGB and continue to be paid separately under existing methodologies include:

- Payments made outside the Medicare FFS claims payment mechanisms (e.g., non-claims-based payments, such as shared savings).
- Payments made to specialty hospitals and distinct part units (e.g., rehab units inside acute care hospitals).
- Inpatient services paid separately from the Medicare Severity Diagnosis Related Groups (MS-DRG) including new technology and organ acquisition costs.
- Antineoplastics or cancer drugs.

- New Technology Add-On Payments.

More information on HGB payment exclusions can be found in **Appendix D: Payment Exclusions.**

For CAHs, settlements made through cost reports to reconcile to 101% of costs are incorporated in historical Medicare FFS revenue to ensure that HGBs fully account for Medicare revenue that will be replaced by HGBs. Payments to CAHs for professional services are excluded from historical Medicare FFS revenue.

For hospitals paid through other special status designations, (e.g., SCHs), these payment methodologies are also incorporated into the baseline (**Exhibit 3**). In these methodologies, the paid amount incorporates additional payments such as the Hospital Specific Rate used to pay SCHs.

Services provided to beneficiaries covered by Medicare Advantage are excluded from the Medicare FFS HGB. Claims for these beneficiaries will continue to be paid by Medicare Advantage plans as they are today. Changes in Medicare FFS enrollment, including those due to Medicare Advantage are captured through the DA.

### 2.1.1 Hospital Global Budget: Performance Year 1 Calculation

Inpatient and Outpatient Medicare FFS Revenue for each of the three BYs is combined to obtain weighted Baseline Inpatient and Baseline Outpatient Amounts. As discussed above, the oldest BY (BY1) is assigned a 10% weight, the middle (BY2) a 30% weight, and the most recent (BY3) a 60% weight. The most recent BY ends 6 months prior to the first PY and begins 18 months prior to the BY. CMS will apply completion factors to account for any claims that have been incurred but not yet paid by CMS. Using more recent data with completion factors helps to ensure that the baseline is more representative of anticipated PY1 claims, which helps to reduce risk for hospitals. **Exhibit 7** below illustrates the weighting applied to historical revenue.

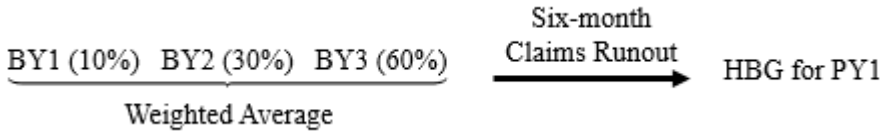
**Exhibit 7: Weighting Applied to Historical Revenue (PY1 only)**

| Year | Description | Percentage Weighting |
|---|---|---|
| **BY1** | Begins 3.5 years prior to Hospital PY1 begin date. | 10% |
| **BY2** | Begins 2.5 years prior to Hospital PY1 begin date. | 30% |
| **BY3** | Begins 1.5 years prior to Hospital PY1 begin date. | 60% |

As an example, for a Participant Hospital in the first Model Cohort that starts participating in HGBs in 2026, BY1 includes dates of service between 2022 Q3 and 2023 Q2, BY2 includes 2023 Q3 to 2024 Q2, and BY3 includes 2024 Q3 to 2025 Q2. The gap between the baseline and first PY is due to the time needed for Claims Runout (i.e., 2024 data will not be available until mid-2025).[9] **Exhibit 8** below illustrates the BY weighting for PY1.

[9] Gap period data is used in the APA calculation that adjusts the HGB Baseline Amount to obtain the Final Adjusted HGB Baseline Amount for PY1.

**Exhibit 8: Illustration of Base Year Weighting & First Hospital Global Budget Performance Year**




**(Eq.1) Weighted Inpatient Baseline Payment**
= (0.1 * Inpatient Baseline Paid Amounts for BY 1) + (0.3 * Inpatient Baseline Paid Amounts for BY 2) + (0.6 * Inpatient Baseline Paid Amounts for BY 3)

**(Eq.2) Weighted Outpatient Baseline Payment**
= (0.1 * Outpatient Baseline Paid Amounts for BY 1) + (0.3 * Outpatient Baseline Paid Amounts for BY 2) + (0.6 * Outpatient Baseline Paid Amounts for BY 3)

### 2.1.2 Hospital Global Budget: Inpatient and Outpatient Baseline Paid Amounts

For each BY, Medicare FFS claim payments for Eligible Hospital Services are summed to calculate a total Inpatient and Outpatient Baseline Paid Amount. Claim payments incorporate all factors included in the calculation of FFS payments made on claims, including applicable adjustments (e.g., DSH, UCC). Dollars removed from claims payments due to sequestration are added back in so that sequestration can be appropriately re-applied to PY global budget payments.

For CAHs, interim payments made via claims, settlements made through cost reports, Medicare Covered Swing Bed interim payments made via claims (skilled nursing facility [SNF] payments), and SNF settlements made through cost reports are incorporated into the revenue calculation. Payments made for professional services are excluded from the payment amount.

Payments that are made outside the Medicare FFS claims payment mechanisms continue to be paid separately under existing methodologies and are not included in the HGB. Examples include Medicare bad debt, Direct Graduate Medical Education (DGME), nurse and allied health education, and organ acquisition costs.

Medicare expenditures in specialty hospitals and distinct part units are also not included in HGBs. This exclusion is because one of the goals of HGBs is to reduce avoidable utilization and may not be appropriate for specialized services provided in hospital-distinct part units or specialty hospitals, such as psychiatric, rehabilitation, cancer, and long-term care services. See **Section 1.5** for a complete list of hospital types that are ineligible to participate in HGBs through the AHEAD Model.

Exclusions specific to IPPS and OPPS FFS payments are included in **Sections 2.1.3 and 2.1.4.**

### 2.1.3 Inpatient Baseline Paid Amount

For Acute Care Hospitals currently paid under IPPS, the Inpatient Baseline Paid Amount includes all hospital Medicare FFS payments for services paid under the IPPS. Eligible Hospital Services in the baseline include inpatient hospitalizations covered under Part A with bill type 11X or 12X. Inpatient services which are currently paid separately from the MS-DRG payment, such as new technology and organ acquisition costs, continue to be paid separately under existing methodologies and are not included in the HGB.

FFS payments for services under the IPPS are based on the following factors. More information on these factors is available in **Exhibit 9** and **Appendix C: IPPS and OPPS Payment Components**.

**Exhibit 9: FFS Payment Factors Under IPPS Included in Baseline Calculation**

| Factor | Description |
|---|---|
| **Base IPPS Payments Rates** | • Labor & Non-Labor Standardized Base Operating Payment Rates<br>• Capital Base Payment Rate |
| **Location Specific Market Condition Adjustments** | • Wage Index<br>• Cost of Living Adjustment (COLA) |
| **Complexity of Service/Case Mix** | • DRG Weight |
| **Claims Based Policy Adjustments** | • IME Adjustments for Operating & Capital<br>• DSH Adjustments for Operating & Capital<br>• Low Volume Adjustment<br>• UCC Adjustment<br>• Outlier Adjustment |
| **Quality Adjustments** | • HRRP<br>• VBP Program<br>• HACRP<br>• Medicare Hospital IQR<br>• Meaningful EHR User |

The Inpatient Baseline Paid Amount includes only claims for which Medicare is the primary payer. The CMS IDR is used to pull all relevant claims and claim payment amounts. The Inpatient Baseline Paid Amount is adjusted for the reduction in FFS payment amounts due to sequestration by adding back in the reduction applicable as of the date of service.

For CAHs, the Inpatient Baseline Payment Amount is the sum of interim payments made through claims, Cost Report Settlements, Skilled Nursing Facility Swing Bed (Swing Bed) interim payments made through claims, and Swing Bed Settlements made through cost reports. Settlement amounts (CAH and CAH Swing Bed) are obtained from cost report data in the Healthcare Provider Cost Reporting Information System (HCRIS), and Swing Bed interim claim payment amounts are obtained through the CMS IDR.

For hospitals paid using special status designations, (e.g., Medicare Dependent Hospitals, **Exhibit 3**), the baseline paid amount includes payments specific to these unique payment methodologies. For these hospitals and Acute Care Hospitals, the Inpatient Baseline Paid Amounts are calculated as,

**(Eq.3) Inpatient Baseline Paid Amount for Non CAH Hospitals**
= Paid Amounts on FFS Claims + Sequestration

For CAHs, Inpatient Baseline Paid Amounts are calculated as,

**(Eq.4) Inpatient Baseline Paid Amount for CAH Hospitals**
= Paid Amount on Interim Inpatient Claims
+ Paid Amount on Interim Swing Bed Claims
+ Settlement to 101% on Cost Reports + Sequestration

**Where,**

**Paid Amounts on FFS or Interim Claims:** The sum of the total Medicare Paid Amount on claims for all Eligible Hospital Services from the CMS IDR.

**Sequestration Amounts:** Statutorily required reduction to Medicare payments.

**Settlement to 101% on Cost Reports:** For CAHs only Part A settlement payments from Worksheet E-1. If more than one cost report overlaps a baseline year, settlement payments from both cost reports are weighted together based on the number of months that the cost report overlaps the baseline year.

**Exhibit 10** includes specific parameters for claim inclusion.

**Exhibit 10: Parameters for Claim Inclusion Under IPPS**

| Parameter | Description |
|---|---|
| **Medicare as a Primary Payer** | Only claims for which Medicare is the primary payer are included. |
| **Type of Bill** | Eligible Hospital Services include claims with bill types 11X or 12X. |
| **Claim Date** | Claims for Eligible Hospital Services are included if the inpatient date of service 'from date' is within the applicable BY. |

### *2.1.4 Outpatient Baseline Paid Amount*

For Acute Care Hospitals currently paid under OPPS, the Outpatient Baseline Amount includes all FFS payments for Eligible Hospital Services. For CAHs, the Outpatient Baseline Amount includes interim payments and settlement data from cost reports for outpatient services. Eligible Hospital Services in the baseline include outpatient services covered under Part B that are billed on facility claims (e.g., Bill Types, 13X, 14X, 85X, or 18X).

Cancer drugs[10] are excluded from HGBs and would continue to be paid through the normal claims process. This approach is designed to explicitly recognize the volatility of high-cost drugs, which can pose substantial risks to hospitals under HGBs. Carve-outs for these items treat Participant Hospitals in the same manner as hospitals remaining under FFS reimbursement, minimizing risk for oncology services. In addition, APC New Technology payments are excluded from the HGB calculation. More information can be found on Outpatient exclusions can be found in **Appendix D: Payment Exclusions.**

FFS payments for services under the OPPS are based on the following factors, which are included in the calculation of the HGB. More information on these factors is available in **Exhibit 11** and in **Appendix C: IPPS and OPPS Payment Components**.

**Exhibit 11: FFS Payment Factors Under OPPS**

| Parameter | Description |
|---|---|
| **Base OPPS Payment Rates** | • OPPS Conversion Factor |

[10] Identified by therapeutic class of antineoplastics, less vaccines and saline. Version 3.0 will include more information about how these services are incorporated into the APA and MSA.

| Parameter | Description |
|---|---|
| **Geographic Factors** | • Hospital Wage Index (Labor Portion of Conversion Factor is Adjusted – 60%)<br>• Non-Labor Portion of Conversion Factor is Not Adjusted |
| **Complexity of Services** | • APC Relative Weight |
| **Claims Based Policy Adjustments** | • Sole-Community Hospitals (SCH) Add-On<br>• High-Cost Outlier Adjustment |
| **Outpatient Drug Carveout** | • Cancer Drugs, Identified by Therapeutic Class |

These components, and all pass-through payments, will continue to be paid based on current payment policies (e.g., FFS, cost-based reimbursement, etc.).

The Total Outpatient Baseline Payment amount is calculated by summing the total OPPS FFS payment amounts across all claims for which Medicare is the primary payer. The CMS IDR is used to pull all relevant claims and claim payment amounts. The Outpatient Baseline Payment Amount adds back in the reduction in FFS payment amounts due to sequestration so that it can be appropriately reapplied to the global budget payment made during the PY. For CAHs, the baseline payment amount includes interim payments made on claims, settlement payments paid via cost reports and excludes payments for professional services (CAH Method II billing revenue codes 0960-0989).

For hospitals paid using specials status designations, (e.g., SCHs, **Exhibit 3**), the baseline paid amount includes payments made under these unique payment methodologies. For these hospitals and Acute Care Hospitals, Outpatient Baseline Paid Amounts are calculated as,

**(Eq.5) Outpatient Baseline Paid Amount for Non CAH Hospitals**
= Paid Amounts on FFS Claims + Sequestration

For CAHs, Outpatient Baseline Paid Amounts are calculated as,

**(Eq.6) Outpatient Baseline Paid Amount for CAH Hospitals**
= Paid Amount on Interim Outpatient Claims
+ Settlement to 101% on Cost Reports + Sequestration

**Where,**

**Paid Amounts on FFS or Interim Claims:** A sum of the total Medicare Paid Amount for all hospital claims using the CMS IDR.

**Sequestration Amounts:** An additional payment to account for the 2% sequestration reduction made to Medicare claims payments.

**Settlement to 101% on Cost Reports:** For CAHs only Part A settlement payments from Worksheet E-1. If more than one cost report overlaps a baseline year, settlement payments from both cost reports are weighted together based on the number of months that the cost report overlaps the baseline year.

**Exhibit 12** provides details on the parameters for Claim Inclusion and Exclusion.

**Exhibit 12: Parameters for Claim Inclusion and Exclusion Under OPPS**

| | Parameter | Description |
|---|---|---|
| **Parameters for Claim Inclusion** | **Medicare as Primary Payer** | Only claims for which Medicare is the primary payer are included. |
| | **Type of Bill** | Eligible Hospital Services include claims with bill types 13X, 14X, 85X, or 18X. |
| | **Claim Date** | Claims are included if the claim from date is within the BY. |
| **Parameters for Claim Exclusion** | **Outpatient Cancer Drug Carve Out Amounts** | Drugs in the Antineoplastic Therapeutic class, except for saline and vaccines. |
| | **Outpatient New Technology Carve Out Amounts** | A sum of the line-level claim payments with an APC designation as "New Technology" using the CMS published annual Addendum A files. |
| | **Professional Payments on CAH Hospital Claims** | The sum of all professional payments as reported in the CMS IDR where the Revenue Center Code on the claim line has a code of 096, 097, or 098. |

### *2.1.5 Payment Floor for Critical Access Hospitals*

The AHEAD Model will include a payment floor to ensure HGB for CAHs are no lower than current Medicare FFS reimbursement at 101% of costs (before sequestration). The floor is calculated such that if the HGB payments for the PY are less than what would have been paid by Medicare FFS had the CAH not participated in HGBs, CMS will make an additional payment to the CAH equal to the difference. The difference will be incorporated into subsequent HGB payments.

Due to the time needed to process hospital cost reports, this payment will occur after the PY once cost report or reports that overlap the PY are available in HCRIS. If more than one cost report overlaps the PY, Medicare revenue will be weighted using the number of months that overlap the PY. For example, if a hospital files a cost report that corresponds to the first 3 months of the PY and a subsequent report that corresponds to the remaining 9 months, revenue from the first cost report will be weighted at 25% and 75% from the subsequent cost report. This calculation will be made only after both cost reports are available.

## 2.2 Annual Trend Updates

### *2.2.1 Annual Payment Adjustment*

The APA is used to adjust the HGB Baseline Inpatient and Outpatient Amounts and annually adjust PY global budget payments to account for changes in Medicare FFS prices. These changes include updates to hospital payments for legislative or administrative productivity policy changes and adjustments. Other adjustments in the global budget account for acuity (e.g., demographic) and volume (e.g., market shift). The APA reflects the specific FFS payment factors (e.g., wage indexes) for each Participant Hospital and adjusts baseline and PY amounts accordingly.

To calculate the Inpatient APA an annual Case Adjusted Rate (CAR) is calculated for each Participant Hospital. The CAR is equivalent to total Medicare Payments divided by the Case Mix Index (average DRG-Weight) divided by volume. It can be interpreted as the average Inpatient Medicare payment per unit at a Participant Hospital adjusted by the hospital's average DRG-weight. The APA is designed to adjust for price and policy changes only, and therefore the CAR excludes changes made due to DRG-Weights and volume. The Wage Adjusted APC Conversion Factor (WAACF) serves as the basis for the Annual Outpatient Adjustment.

In the CAR calculation, total revenue for a Participant Hospital's accounts for the same location specific price adjustments (e.g., wage index, COLA) and policy & quality adjustments (e.g., IME, DSH, UCC, HRRP) made in IPPS and OPPS payment rates. Unlike the baseline payment, the APA is calculated using end of year summary data for each hospital, including data from the CMS IPPS and OPPS Final Rule.

The APA is the percentage change in the Participant Hospital's CAR/WAACF between years. The percentage change is multiplied by either baseline payment amounts (e.g., BY1, BY2, BY3) or prior global budget amounts (e.g., PY2 HGB to set PY3 HGB) to adjust for changes in prices over time. For example, to set the baseline for PY1 HGBs, the APA is multiplied each BY. The APA for each BY is the percentage change in CAR between that BY and PY1. The APA adjusted Baseline Amount is then weighted (as noted **in Section 2.1**) at 10% for BY1, 30% for BY2, and 60% for BY3.

Reimbursement for CAHs is based on reasonable costs instead of IPPS and OPPS, therefore the IPPS Hospital Market Basket[11] will serve as the basis to price adjust baseline payments to PY1 dollars. CMS uses the IPPS Hospital Market Basket to update payment rates for IPPS hospitals annually and to account for changes in the prices of goods and services used by these hospitals in treating Medicare patients, as well as for other factors.

Other special designation hospitals (e.g., SCHs, REHs) in FFS include those detailed in **Exhibit 3**. These hospitals are paid using methods that differ from standard IPPS/OPPS. For example, SCHs are paid a Hospital Specific Payment (HSP) Rate that does not use the same IPPS and OPPS payment factors. For these hospitals, the change in HSP is used to adjust prices in AHEAD.

#### *2.2.1.1 Inpatient Annual Payment Adjustment: Overview*

**Payment Factors Included:** The inpatient portion of the HGB is adjusted based on the change in the hospital specific IPPS payment factors listed below and published annually in the IPPS Final Rule. Please see **Exhibit 13** and **Appendix B: Data Sources** for more information about where each data source can be found.

**Exhibit 13: FFS Payment Factors Under IPPS Included in Annual Payment Adjustment**

| Factor | Description |
|---|---|
| **Base IPPS Payments Rates** | • Labor & Non-Labor Standardized Base Operating Payment Rates<br>• Capital Base Payment Rate |
| **Location Specific Market Condition Adjustments** | • Wage Index<br>• Cost of Living Adjustment (COLA) |
| **Complexity of Service/Case Mix** | • DRG Weight |
| **Claims Based Policy Adjustments** | • IME Adjustments for Operating & Capital<br>• DSH Adjustments for Operating & Capital<br>• Low Volume Adjustment<br>• UCC Adjustment<br>• Outlier Adjustment |

[11]The IPPS Hospital Market Basket refers to the input price index used to measure changes in the costs of providing hospital services under IPPS. See CMS' website on Market Basket Data for more information on updates to and forecasts regarding the Market Basket.

| Factor | Description |
|---|---|
| **Quality Adjustments** | • HRRP<br>• VBP Program<br>• HACRP<br>• Medicare Hospital IQR<br>• Meaningful EHR User |

**APA Calculation:** For the APA, the AHEAD CAR is calculated for each Participant Hospital's BY or PY. The percentage change in the CAR between years is multiplied by either baseline payments or prior global budget amounts to adjust for changes in prices over time.

To determine the APA factor for the inpatient portion of the HGB, calculate the percentage change in the CAR for each BY to PY or from PY to PY.

$$(\boldsymbol{Eq.1})\ \boldsymbol{Inpatient\ APA} = \frac{PY1\ CAR - BY\ CAR}{BY\ CAR}$$

### *a. AHEAD Case Adjusted Rate*

The CAR represents a Participant Hospital's average case mix adjusted payment per discharge and is calculated by estimating total Medicare payments for a hospital (Medicare allowed amounts for a hospital minus sequestrations and deductibles), including all operating and capital amounts and policy adjustments. Total Medicare payments are then normalized for patient mix by dividing by the Case Mix Index, which is the Participant Hospital's average DRG weight per inpatient discharge. The average case mix adjusted Medicare payment is calculated by dividing by total Medicare discharges to normalize for volume differences between years.

$$(\boldsymbol{Eq.2})\ \boldsymbol{AHEAD\ Case\ Adjusted\ Rate\ (CAR)} = \frac{\frac{Estimated\ Medicare\ Payments}{Case\ Mix\ Index}}{Total\ Number\ Medicare\ Discharges}$$

The data elements required to calculate the CAR; (1) Estimated Medicare Payments, (2) Case Mix Index, and (3) Total Medicare Discharges are defined in **Sections 2.1.1.b, 2.1.1.c, and 2.1.1.d**.

### *b. Estimated Medicare Payments*

For the CAR, Estimated Medicare Payments are calculated by multiplying operating and capital rates by the number of discharges reported in the CMS Impact File for a Participant Hospital minus deductibles and sequestration. Total Medicare Payments are estimated by first calculating the total operating and capital payment amounts, and then adjusting that total by the Low Volume Adjustment factor and the HACRP Adjustment factor.

**(Eq.3) Estimated Medicare Payments**
= (Operating Amount + Capital Amount)
* (1 + Low Volume Adjustment Factor) * (HACRP Adjustment Factor)
- Estimated Deductibles * (1- Sequestration Percentage)

**Where,**

**Operating Amount:** The operating amount is calculated by following the same steps used to price FFS claims, but at an aggregate level. A location adjusted operating rate is first calculated by multiplying the Medicare Wage Index and COLA by the base labor and non-labor operating base

rates respectively. The location adjusted operating rate is then multiplied by the Participant Hospital's total number of Medicare discharges and hospital case mix (average DRG-weights) to obtain total base estimated operating payments. To obtain a final estimated operating amount, policy and quality adjustments are added or subtracted to the total. An example of the specific adjustments applied is provided in **Exhibit 14** and the calculated amounts are detailed in **Appendix A: Formulas and Calculations**.

$$(\boldsymbol{Eq.4})\ \boldsymbol{Operating\ Amount} = (((National\ Operating\ Labor\ Base\ Rate * Medicare\ Wage\ Index) + (National\ Operating\ Non\ Labor\ Base\ Rate * Operating\ COLA)) * Medicare\ Discharges * Hospital\ Case\ Mix) \pm Operating\ Policy\ \&\ Quality\ Adjustments$$

**Operating Policy & Quality Adjustments:** Includes IME, DSH, Low Volume, UCC, Outlier, HRRP, VBP, HACRP and IQR adjustments (see **Appendix C: IPPS and OPPS Payment Components**).

In the APA, two years of IPPS Impact File data are reviewed (the PY and one year prior), and the higher values for the DSH Operating Adjustment Factor and UCC Per Claim Amount are used. This helps to create payment stability and reduce year-to-year variability.

For SCHs the Operating Amount is equal to the higher of their hospital-specific payment rate multiplied by total discharges and the hospital case mix or the operating amount calculated in Eq. 4 that uses the national operating base rates. If the hospital-specific payment rate is utilized, policy and quality adjustments are excluded.

$$(\boldsymbol{Eq.4a})\ \boldsymbol{Operating\ Amount\ For\ SCH} = (Hospital\ Specific\ Operating\ Labor\ Base\ Rate * Medicare\ Discharges * Hospital\ Case\ Mix)\ IF\ greater\ than\ Operating\ Amount\ calculated\ in\ Eq.4$$

**Capital Amount:** Similar to the Operating Amount, the Capital Amount is estimated by following the same steps as would be for FFS claims, but at an aggregate level.

$$(\boldsymbol{Eq.5})\ \boldsymbol{Capital\ Amount} = ((National\ Capital\ Base\ Rate * Geographic\ Adjustment\ Factor\ for\ Capital * Capital\ COLA) * Medicare\ Discharges * Hospital\ Case\ Mix) \pm Capital\ Policy\ \&\ Quality\ Adjustments$$

**Capital Policy & Quality Adjustments:** Includes IME, DSH, and Low Volume adjustments. (See **Appendix C: IPPS and OPPS Payment Components**)

Similar to the DSH Operating Adjustment the higher of value is use for the DSH Capital Adjustment. For the APA, two years of IPPS Impact File data are reviewed (the PY and one year prior), and the higher value for the DSH Capital Adjustment Factor is utilized.

**Low Volume Adjustment Factor**: The Low Volume Adjustment Factor provides an additional payment to qualifying hospitals with a low volume of discharges and is applied to the sum of the operating and capital amount.

**HACRP:** The HACRP reduces overall payments by up to 1 percent for Participant Hospitals with the worst-performing quartile of risk-adjusted quality measures for reasonably preventable HACs. To account for this adjustment, reduction to the summed operating and capital payments amount (adjusted for the Low Volume Adjustment Factor) is applied for Participant Hospitals.

**Estimated Deductibles:** Estimated deductibles are removed in the estimation of total Medicare payments (adjusted for the Low Volume Adjustment Factor and HACRP). These costs are paid by beneficiaries and not Medicare and are unaffected by participation in Medicare FFS HGBs. As a result, they are excluded from both baseline and the APA. The estimated the total annual deductible amount for a Participant Hospital is calculated by multiplying the Medicare Annual Inpatient Deductible Amount by the total number of Medicare Discharges.

$$(Eq.\,6)\ Estimated\ Deductibles = Medicare\ Annual\ Inpatient\ Deductible\ Amount * Total\ Number\ of\ Medicare\ Discharges$$

**Sequestration Percentage:** "Sequestration is the automatic reduction (i.e., cancellation) of certain federal spending, generally by a uniform percentage."[12] The sequestration reduction percentage is applied to the total operating and capital payments amount after accounting for the Low Volume Factor, HAC Adjustment, and Estimated Deductibles.

### *c. Case Mix Index*

The Case Mix Index is the average DRG weight for a hospital inpatient discharge. Dividing the total Estimated Medicare Payments by the Case Mix Index for a Participant Hospital, normalizes for changes in patient mix allowing the CAR and thus the APA to measure only price and policy changes.

### *d. Total Number of Medicare Discharges*

The total number of Medicare Discharges is the sum of all Medicare cases for a Participant Hospital in a given Fiscal Year, from the Medicare Provider Analysis and Review (MEDPAR) claims file from the update, as reported in the Impact File. It does not account for transfer adjustments. Dividing the case mix adjusted Estimated Medicare Payments by the total number of Medicare Discharges removes the impact of volume on the CAR and thus allows the APA to account for changes in price and policy alone.

**Exhibit 14** provides an example for how to calculate the Annual Inpatient Adjustment CAR.

**Exhibit 14: Annual Payment Adjustment: Case Adjusted Rate Example Calculation**

| Item | Factor | Operating Labor Related | Operating Non-Labor Related | Operating Total | Capital | BY Total |
|---|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) | (5) |
| **A** | National Base Rate | $3,856.27 | $1,789.81 | | $459.41 | |
| **B** | Wage Index / Geographic Adjustment | 1.0634 | | | 1.0430 | |
| **C** | Wage Adjusted Base Rate | = (A1 * B1) = $4,100.76 | | | | |
| **D** | Operating COLA | | 1.0000 | | 1.0000 | |

[12] Congressional Research Service: Medicare and Budget Sequestration

| Item | Factor | Operating Labor Related | Operating Non-Labor Related | Operating Total | Capital | BY Total |
|---|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) | (5) |
| **E** | COLA Adjusted Base Rate | | = (A2 * D2) = $1,789.81 | | | |
| **F** | Medicare Discharges | | | 2,245 | 2,245 | 2,245 |
| **G** | Case Mix Index | | | 1.6642 | 1.6642 | 1.6642 |
| **H** | Location Adjusted Operating/Capital Amount | | | = (C1 + E2) * F3 * G3 = $22,007,929 | = (A4 * B4 * D4) * F4 * G4 = $1,790,221 | |
| **I** | Readmission Adjustment | | | = (H3 * (1-.9992) = ($17,606) | | |
| **J** | VBP Adjustment Factor | | | 1.0108 | | |
| **K** | VBP Amount Redistributed (with 2%) | | | = ((J3 – 1) + 0.02) * H3 = $677,844 | | |
| **L** | VBP 2% Withhold | | | = H3 * -2% = ($440,159) | | |
| **M** | VBP Adjustment | | | = K3 + L3 = $237,686 | | |
| **N** | IME Adjustment | | | = (H3 * 0.0909) = $2,000,521 | = (H4 * 0.1194) = $213,752 | |
| **O** | DSH Adjustment | | | = (H3 * 0.0429) = $944,140 | = (H4 * 0.3389) = $606,706 | |
| **P** | UCC Per Claim Amount | | | $250.00 | | |
| **Q** | UCC Adjustment | | | = P3 * F3 = $561,250 | | |
| **R** | Outlier Adjustment | | | = (H3 + N3 + O3 + Q3) * 0.0657) = $1,676,259 | = (H4 + N4 + O4) * 0.0574 = $149,853 | |
| **S** | Policy & Quality Adjustment Total | | | = (I3 + M3 + N3 + O3 + Q3 + R3) = $5,402,250 | =N4 + O4 + R4 = $970,311 | |

| Item | Factor | Operating Labor Related | Operating Non-Labor Related | Operating Total | Capital | BY Total |
|---|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) | (5) |
| **T** | Total Operating/ Capital Amount | | | = (H3 + S3) = $27,410,179 | = H4 + S4 = $2,760,532 | = T3 +T4 = $30,170,711 |
| **U** | Low Volume Adjustment Factor | | | | | 1.0 |
| **V** | HACRP Adjustment | | | | | 0 |
| **W** | Medicare Annual Inpatient Deductible Amount | | | | | $1,364 |
| **X** | Estimated Total Deductibles | | | | | =W5 * F5 = $3,062,180 |
| **Y** | Sequestration Percentage | | | | | -2% |
| **Z** | Estimated Medicare Payments (With Sequestration & Deductibles Removed) | | | | | = (((T5 * U5) + V5) – X5) * (1-Y5) = $26,566,360 |
| **AA** | Case Adjusted Rate (CAR) | | | | | = Z5 / G5 / F5 = $7,111 |

### *e. Applying the Inpatient Annual Payment Adjustment for PY1*

The Inpatient APA is multiplied by the total paid amount from eligible claims (See **Section 2.1.1**) during the three baseline years to calculate PY1 global budget amounts prior to applying adjustments for volume and demographics. Total paid amounts for each baseline year are weighted 10% for BY1, 30% for BY2, and 60% for BY3.

$$(\boldsymbol{Eq.7})\ \boldsymbol{PY\ 1\ Inpatient\ Annual\ Payment\ Adjustment\ Application}$$
$$= BY1\ Baseline\ Paid\ Amounts * 0.1 * (1 + Annual\ Inpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY1) + BY2\ Baseline\ Paid\ Amounts * 0.3 * (1 + Annual\ Inpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY2) + BY3\ Baseline\ Paid\ Amounts * 0.6 * (1 + Annual\ Inpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY3)$$

#### 2.2.1.2 Outpatient Annual Payment Adjustment: Calculation Overview

The outpatient portion of the HGB is adjusted based on the change in the hospital-specific APC payment amounts, which is effective January 1 of each year as part of the OPPS Final Rule. Similar to the inpatient calculation, the Annual Outpatient Adjustment incorporates geographic area differences in hospital wages (e.g., Wage Index) and updates for factors such as policy shifts and price changes (e.g., OPPS APC conversion factor). This creates the Wage Adjusted APC Conversion Factor (WAACF), which is the basis for the Annual Outpatient Adjustment. The OPPS APC conversation factor is calculated by CMS and made publicly available through the Impact file (see **Appendix B: Data Sources**).

To determine the Annual Outpatient Adjustment, calculate the percentage change in the Wage Adjusted APC Conversation Factor for each BY to PY or from PY to PY.

$$(\boldsymbol{Eq.8})\ \boldsymbol{Annual\ Outpatient\ Adjustment} = \frac{PY\ 1\ \text{WAACF} - BY\ \text{WAACF}}{BY\ \text{WAACF}}$$

##### *a. Wage Adjusted APC Conversion Factor (WAACF)*

The WAACF is calculated in two steps. First, the OPPS APC Conversion Factor is multiplied by the hospital specific wage index. This total accounts for 60% of the WAACF. The other 40% is determined by multiplying the OPPS APC Conversation Factor by 40%. The sum total is equivalent to the WAACF.

$$(\boldsymbol{Eq.9})\ \boldsymbol{WAACF} = ((OPPS\ APC\ Conversion\ Factor * 0.6 * Hospital\ Specific\ Wage\ Index) + (OPPS\ APC\ Conversion\ Factor * 0.4)$$

##### *b. Applying the Outpatient Annual Payment Adjustment for PY1*

To apply the Outpatient APA to the PY1 HGB, the Outpatient APA for each BY is applied on a weighted basis. The three BY budgets are multiplied by the Annual Outpatient Adjustment (Equation 10) and the weighted amount; 10% for BY1, 30% for BY2, and 60% for BY3.

$$(\boldsymbol{Eq.10})\ \boldsymbol{PY\ 1\ Outpatient\ Annual\ Payment\ Adjustment} = BY1\ Baseline\ Paid\ Amounts * 0.1 * (1 + Annual\ Outpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY\ 1) + BY2\ Baseline\ Paid\ Amounts * 0.3 * (1 + Annual\ Outpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY\ 2) + BY3\ Baseline\ Paid\ Amounts * 0.6 * (1 + Annual\ Outpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY\ 3)$$

##### *c. Applying the Annual Payment Adjustment: Basis and Timing*

The APA will be applied to calculate the initial HGB for PY1 (see **Eq. 7** and **Eq. 10**). The APA will be applied to subsequent PYs based on the same approach; however, each subsequent PY will be compared to the previous PY, as outlined below in **Exhibit 15.**

**Exhibit 15: Basis for Annual Payment Adjustments**

| Performance Year | Inpatient | Outpatient |
|---|---|---|
| **PY2 = HGB PY1 * (1 + PY2 APA)** | (PY2 IP CAR – PY1 IP CAR) ÷ PY1 IP CAR | (PY2 OP WAACF – PY1 OP WAACF) ÷ PY1 OP WAACF |

| Performance Year | Inpatient | Outpatient |
|---|---|---|
| **PY3 = HGB PY2 * (1 + PY3 APA)** | (PY3 IP CAR – PY2 IP CAR) ÷ PY2 IP CAR | (PY3 OP WAACF – PY2 OP WAACF) ÷ PY2 OP WAACF |
| **PY4 = HGB PY3 * (1 + PY4 APA)** | (PY4 IP CAR – PY3 IP CAR) ÷ PY3 IP CAR | (PY4 OP WAACF – PY3 OP WAACF) ÷ PY3 OP WAACF |
| **PY5 = HGB PY4 * (1 + PY5 APA)** | (PY5 IP CAR – PY4 IP CAR) ÷ PY4 IP CAR | (PY5 OP WAACF – PY4 OP WAACF) ÷ PY4 OP WAACF |
| **PY6 = HGB PY5 * (1 + PY6 APA)** | (PY6 IP CAR – PY5 IP CAR) ÷ PY5 IP CAR | (PY6 OP WAACF – PY5 OP WAACF) ÷ PY5 OP WAACF |
| **PY7 = HGB PY6 * (1 + PY7 APA)** | (PY7 IP CAR – PY6 IP CAR) ÷ PY6 IP CAR | (PY7 OP WAACF – PY6 OP WAACF) ÷ PY6 OP WAACF |
| **PY8 = HGB PY7 * (1 + PY8 APA)** | (PY8 IP CAR – PY7 IP CAR) ÷ PY7 IP CAR | (PY8 OP WAACF – PY7 OP WAACF) ÷ PY7 OP WAACF |

The HGB will be calculated on an annual basis, using the IPPS Hospital Market Basket update effective on October 1 to update the inpatient portion of the HGB effective January 1 of PY. In approximately August of the PY, CMS will publish the next IPPS Hospital Market Basket update. This update will be used to calculate the next PY's HGB and to calculate an adjustment to the current PY's HGB to account for updated prices applicable between October and January of the current PY. CMS will make a one-time payment at the beginning of the next PY to account for updated prices.

For the outpatient services, the OPPS Final Rule and Market Basket Update are released in November prior to becoming effective January 1 for FFS payments. These updates will be incorporated into HGBs effective January 1.

**Exhibit 16** below details the timing of the PY Market Basket update based on CMS' updates to the DRG and APC base rates based on IPPS and OPPS Final rules.

**Exhibit 16: Timing of the Inpatient Prospective Payment System and Outpatient Prospective Payment System Updates for Inpatient and Outpatient Services During the AHEAD Model**

| | Pre-AHEAD | AHEAD | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Oct 2025 – Dec 2025 | PY1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 |
| **IPPS** | Oct 2025 | Oct 2025 | Oct 2026 | Oct 2027 | Oct 2028 | Oct 2029 | Oct 2030 | Oct 2031 | Oct 2032 |
| **OPPS** | Jan 2025 | Jan 2026 | Jan 2027 | Jan 2028 | Jan 2029 | Jan 2030 | Jan 2031 | Jan 2032 | Jan 2033 |

The APA will be applied to calculate the initial HGB for PY1, as well as each subsequent PY. It will be subject to changes in the IPPS Hospital Market Basket and other payment adjustments as detailed earlier in this section.

### *2.2.2 Volume-Based Adjustments*

Volume-Based Adjustments update the Baseline Amount (adjusted by the APA) to reflect changes in demographics, market shifts, and unplanned volume changes. Because annual revenues from the

HGB are fixed, Participant Hospitals are incentivized to reduce avoidable hospital use, improve beneficiaries' health, and shift care to lower-acuity settings, where appropriate, to maximize net income. Volume-based adjustments facilitate predictable HGB payments and provide incentives for growth in retained revenue or savings that accrue to hospitals from the difference between fixed historical revenue and costs from lower utilization during the PYs[13]. Calculation of these adjustments consider Medicare FFS payments for all Eligible Hospital Services to all Eligible Hospitals in the state or sub-state region, regardless of individual hospital participation in the AHEAD Model. Medicare payments to ineligible hospital types (as defined in **Section 1.5**) or for excluded hospital services (as defined in **Appendix D**) are not included in the calculation of volume-based adjustments. HGBs will provide market shift, service line, and unplanned volume adjustments to account for how service volume might change over time.

1. **Market Shift**: Adjusts funding to reflect shifts in volume due to patient choice and movement, healthcare policies, advancements in medical technology. This adjustment accounts for the variable cost of the new volume without providing incentives for unnecessary volume growth.
2. **Service Line**: Adjusts funding to account for service line modifications, including additions, expansions, or elimination of specific service lines. Of note, Participant Hospitals can retain a portion of the revenue associated with the volume of a removed service line to invest in population health activities.
3. **Unplanned Volume**: Adjusts funding in cases where service line additions, expansions, eliminations, or contractions account for a 5 percent or greater volume-change and are not pre-approved for inclusion in service line adjustments.

### 2.2.3 Market Shift Adjustment

MSAs reflect revenue changes when patient volumes realign or shift between hospitals within a given hospital market and service category. Within that market, the MSA provides revenue to hospitals to cover the costs associated with shifts in patient volume from one hospital to another. This adjustment is also intended to account for patient movement between Participating Hospitals and non-participating hospitals within the same healthcare market. The MSA involves three primary steps:

1. Assign inpatient and outpatient claims to service categories and hospital market segment.
2. Summarize volume (as measured by MS-DRG/APC weights) by service category and hospital market segment and calculate maximum permitted shift in volume.
3. Calculate dollar value of volume shift and summarize results by hospital.

#### *2.2.3.1 MSA Hospital Markets and Market Segments*

The MSA summarizes volume change between years across the hospital market, then applies logic to ensure that increases in utilization are offset by reductions in utilization elsewhere. The hospital market is determined by the State and CMMI during the pre-implementation phase and could include the entire State, or defined regions within the State. All hospitals that are in that defined area are initially included in the hospital market definition. In addition, hospitals from counties in states bordering AHEAD states or regions are assessed annually and included if they are in a

[13] See Evaluation of the Maryland Total Cost of Care Model: Progress Report, April 2024

county that is within 120 miles and represent at least 1% of out-of-state inpatient and outpatient spending.

Within the larger hospital market, smaller units of geography called hospital market segments are used to aggregate the volume of services provided by each hospital. Depending on the number of cases in a service category (defined in the next section), hospital market segments are defined by ZIP code, combination of ZIP codes, or a county. Because the characteristics of AHEAD States or sub-state regions may differ in the volume of services offered as well as the density of population in the area, the MSA may require adjustment for each AHEAD State. If an AHEAD State defines hospital market segments by ZIP code, some market segments will need to be aggregated to the county-level to accommodate for small hospital market segments under the following conditions: 1) an inpatient service category has less than 5,000 cases, 2) if the ZIP code exists outside of the AHEAD State or sub-state region, or 3) a ZIP code within the AHEAD State or sub-state region has fewer than 300 inpatient cases.

#### *2.2.3.2 MSA Service Categories*

To measure shifts between hospitals, the MSA classifies inpatient discharges and outpatient visits into specific service categories within a hospital market segment.

For purposes of calculating the MSA, discharges are grouped primarily by Major Diagnostic Categories (MDCs), with modifications to: (1) consolidate similar services when volumes were low, (2) separate inpatient and outpatient services for better comparability based on the unit of service measurement used in Medicare payment methods (MS-DRGs and APCs weights), and (3) split out inpatient medical and surgical service lines where relevant from both a volume and hospital service category perspective. The goal of the modifications is to reduce volatility in the MSA and consistently categorize volume across Participant Hospitals within service categories. MS-DRGs are mapped to 25 inpatient service categories, while outpatient visits are classified into a hierarchy of seven service lines based on the reason(s) for the patient services. Because multiple APCs may apply to an outpatient visit, each visit is assigned to a service category based on the hierarchy.

**Exhibit 17** lists the inpatient and outpatient service categories. **Appendix E** details the MS-DRG mapping to AHEAD inpatient market shift service category mapping to MS-DRGs and classification into medical and surgical categories. **Appendix F** describes the outpatient service category assignment, hierarchy and weighting methodology.

**Exhibit 17: Service Categories by Type**

| Type of Service | List of Specific Categories |
|---|---|
| **Inpatient DRG** | • Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders<br>• Circulatory – Medical<br>• Circulatory – Surgical<br>• Digestive and Hepatobiliary System & Pancreas – Medical<br>• ECMO and Trach<br>• Endocrine, Nutritional and Metabolic – Medical<br>• Eye and ENT<br>• General and Other Surgery<br>• Hematology and Oncology<br>• Infectious, Parasitic Diseases and HIV<br>• Kidney and Urinary Tract – Medical<br>• Kidney, Urinary, Male Reproductive Surgery<br>• Mental Diseases & Disorders<br>• Musculoskeletal System & Connective – Medical<br>• Musculoskeletal System & Connective – Surgical<br>• Nervous System – Medical<br>• Nervous System – Surgical<br>• Newborns and Other Neonates<br>• Obstetrics and Gynecology<br>• Other<br>• Rehabilitation<br>• Respiratory – Medical<br>• Respiratory – Surgical<br>• Skin, Subcutaneous Tissue and Breast<br>• Transplant, Trauma, and Burns |
| **Outpatient** | • Emergency Room (ER)<br>• Oncology<br>• Cardiovascular Surgery<br>• Medical<br>• Other Services<br>• Unassigned |

#### *2.2.3.3 Calculating the MSA*

After assigning service categories and hospital market segments, the MSA assigns a shift in volume that is limited to total volume growth or decline at other hospitals within the same service category and hospital market segment. Total increases in the volume of services in each service category are capped at the lesser of volume gain or decline in the specific hospital market segment. The total volume change permitted by the cap is then pro-rated to all hospitals providing services within a service category and hospital market segment. This approach is designed to separate market shifts from collective changes in volume (e.g., service decreases or use rate growth) and to remove incentives for increasing volume.

As described above, the MSA is the allowed shift in weighted volume for each Participant Hospital and is converted to dollars by multiplying by average payment per unit of case weight and the marginal funding factor. The following calculations will demonstrate how to calculate the MSA for a given hospital. The MSA calculates inpatient and outpatient adjustments separately. However, the same calculations apply to both inpatient and outpatient services.

### *a. Market Shift Adjustment*

Each Participant Hospital's MSA is the sum product of 1) the hospital's change in weighted service volume, 2) the BY average case mix and inflation adjusted payment, and 3) the marginal funding factor across all service categories.

$$(Eq.1)\ Hospital\ MSA = \sum_{j=1}^{j=n} Shift\ in\ Wtg.Volume * Avg.Adj.Payments * Marginal\ Funding\ Factor$$

**Where,**

**n** = Number of service categories (up to 25 inpatient and 7 outpatient categories for each hospital (**Exhibit 17**)) and hospital market segments *j* served by an individual hospital.

### *b. Shift in Weighted Volume*

Each Participant Hospital's shift in volume within a service category and hospital market segment is the product of the hospital's own change in weighted volume between years and the allowed shift for the service category and hospital market segment. For inpatient services, discharges are weighted by the MS-DRG weight assigned when the claim was paid. For outpatient services, claims are weighted by the APC weight assigned when the claim was paid. See **Appendix F** for more information on outpatient weighting methodology. The allowed shift is the lessor of the increases or decreases in the change in weights for a given service category and hospital market segment. This limits any gains or losses in volume and helps to ensure stability in global budget payments.

$$(Eq.2)\ Shift\ in\ Weighted\ Volume_j = Hospital\ Proportion\ of\ Change\ in\ Weights_j * Allowed\ Shift_j$$

### *c. Hospital Proportional Change in Weights*

For each Participant Hospital's market segment and service category, *j*, the proportion of either the increase or decrease in APC or MS-DRG weights between two time periods (**Exhibit 17**) compared to the total increase or decrease in APC or MS-DRG weights among hospitals. The hospital change in weights is the difference in APC or MS-DRG weights between two time periods within a service category provided to beneficiaries living in a hospital market segment. For example, in PY4, this would be calculated as the PY2 MS-DRG weights minus PY1 MS-DRG weights on claims within a service category provided to beneficiaries living in a hospital market segment (either zip code or county, depending on total number of cases). The change in weights is then calculated as a proportion of the total change in weights among hospitals with increasing weight or decreasing weight.

For hospitals with an increase in volume between years in a hospital market segment and service category *j*, the proportional change in weights is calculated as,

$$(Eq.3a)\ Hospital\ Proportion\ of\ Change\ in\ Weights_j = \frac{Hospital\ Change\ in\ Weights_j}{Weight\ Increases_j}$$

For hospitals with a decrease in volume between years in a hospital market segment and service category *j*, the proportional change in weights is calculated as,

$$(Eq.3b)\ \textbf{Hospital Proportion of Change in Weights}_j = \frac{Hospital\ Change\ in\ Weights_j}{Weight\ Decrease_j}$$

Weight increases and decreases are calculated by separately summarizing the total change in weights across all hospitals with an increase or decrease within a service category and hospital market segment, *j*.

$$(Eq.4a)\ \textbf{Weight Increases}_j = \left(\sum_{i=1}^{i=h} Change\ in\ Weights\ Hospitals\ w/Increase\right)$$

$$(Eq.4b)\ \textbf{Weight Decreases}_j = \left(\sum_{i=1}^{i=h} Change\ in\ Weights\ Hospitals\ w/Decrease\right)$$

**Where,**

**h =** Number of hospitals with claims in a service category and market segment, *j*.

### *d. Allowed Shifts*

For each Participant Hospital's service category and market segment, *j*, the Allowed Shift is the maximum permitted increase or decrease in volume. For hospitals and service lines with increasing volume, the market segment and service category's allowed increase – the maximum amount of volume increase funded by the MSA – is determined by the lessor of the absolute value of aggregate weighted volume of hospitals with decreases or the aggregate of weighted volume for hospitals with increases, while the allowed decrease is the inverse of the allowed increase.

The Allowed Shift is calculated for each hospital's service category and hospital market segment *j* as a hospital's proportion of the lessor of the change in weighted volume calculated across all hospitals in the service category and market segment, *k*.

$$(Eq.5)\ \textbf{Allowed Shift}_j = Min\begin{pmatrix} Weight\ Increases_k, \\ Absolute\ Value\ (Weight\ Decreases_k) \end{pmatrix} * D_j$$

**Where,**

***D*** = Set to -1 for hospitals with a decrease in weights within the service category and market segment, 1 otherwise.

### *e. Average Adjusted Payments*

The average adjusted payment for a hospital and service category during the first year included in the MSA (e.g., PY1 if calculating the MSA for PY4) trended forward by a Market Inflation Adjustment.

$$(Eq.6)\ \textbf{Avg Adj Payments} = Avg\ Payment\ per\ Unit\ of\ Wgt * Market\ Inflation\ Adj$$

**Where,**

**Average Payment per Unit of Weight** = Hospital payments for all claims included in a service category divided the respective MS-DRG or APC weights for those services. Claims and payment amounts included are the same as those used to construct the global budget

baseline (**Section 2.1**). During the PY when hospitals are paid via global budgets, no-pay claims are used instead.

**Market Inflation Adjustment** = CMS IPPS/OPPS Update Factor (see **Appendix B**/Data Sources for details).

#### *f. Marginal Funding Factor*

The MSA's marginal funding factor is set at 50 percent to cover the incremental cost of the volume shift between hospitals and provides half of the Medicare FFS revenue that would otherwise be associated with the volume change[14]. Participant Hospitals with increasing volume receive additional funding in their HGBs to cover the marginal costs of the new cases, while declining Participant Hospitals have reductions to their HGBs to reflect the lower costs as patients shift between facilities.

See **Appendix A** for a complete list of calculations related to the MSA.

#### *2.2.3.4 Market Shift Adjustment Example*

**Exhibit 18** provides an example of the Market Shift calculation. County-level detail was used for illustrative purposes; however, the general procedure holds for any unit of geography. County A has Hospitals 1-11 with volume growth totaling 108.3 weighted cases for the "General and Other Surgery" service line in the county, using MS-DRG case mix weighted volume. Hospitals 12-17 experienced declines in volume in the same service line during that time, totaling 26.6 weighted discharges. The recognized market shift is therefore 26.6 cases—that is, the lesser of the volume gained by growth hospitals in the market (108.3) or the losses of declining hospitals (26.6). Note that the net growth of 81.7 weighted cases (108.3 from growth hospitals less 26.6 from declining hospitals) represents increased use rates for these services, which will not be funded by the MSA. These additional cases may be funded if they are the result of an approved SLA. They may be partially funded through the UVA if they surpass the required threshold. See UVA in **Section 2.2.5** for further discussion.

[14] The Innovation Center conducted an analysis by service line to determine the variability in incremental cost. Based on CMMI's analysis, variability above or below 50% was minimal.

### Exhibit 18: AHEAD MSA Example for a Single Service Category and Market Segment

| Example of Market Shift Calculation or Service Line 'General and Other Surgery' in County A | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Hospital Number | Year 1 Weight | Year 2 Weight | Weight Change | Hosp Prop of Change in Weight | Wgtd. Volume Shift | Avg Adj Payment | Marginal Funding Factor | Market Adj. Amount |
| | A | B | C = B-A | D =C/ (Sum of C) | E =D* Allowed Shift | F | G | H =E*F*G |
| **Providers with Increases in Weight Change** | | | | | | | | |
| 1 | 206.891 | 269.012 | 62.121 | 57.4% | 15.246 | $7,082 | 50% | $53,985 |
| 2 | 90.73 | 106.259 | 15.529 | 14.3% | 3.811 | $10,935 | 50% | $20,837 |
| 3 | 42.941 | 52.369 | 9.428 | 8.7% | 2.314 | $6,370 | 50% | $7,370 |
| 4 | 46.038 | 50.146 | 4.109 | 3.8% | 1.008 | $6,547 | 50% | $3,301 |
| 5 | 0 | 3.976 | 3.976 | 3.7% | 0.976 | $6,750 | 50% | $3,293 |
| 6 | 7.253 | 10.601 | 3.348 | 3.1% | 0.822 | $7,330 | 50% | $3,011 |
| 7 | 0 | 2.484 | 2.484 | 2.3% | 0.610 | $9,446 | 50% | $2,879 |
| 8 | 0 | 2.423 | 2.423 | 2.2% | 0.595 | $7,155 | 50% | $2,127 |
| 9 | 1.835 | 4.063 | 2.227 | 2.1% | 0.547 | $8,057 | 50% | $2,202 |
| 10 | 2.523 | 4.216 | 1.693 | 1.6% | 0.415 | $7,514 | 50% | $1,561 |
| 11 | 0 | 0.95 | 0.95 | 0.9% | 0.233 | $13,428 | 50% | $1,565 |
| **Total** | **398.21** | **506.5** | **108.29** | **100%** | **26.576** | | | **$102,132** |
| **Providers with Decreases in Weight Change** | | | | | | | | |
| 12 | 530.719 | 529.078 | -1.641 | 6.2% | -1.641 | $8,121 | 50% | ($6,663) |
| 13 | 1.676 | 0 | -1.676 | 6.3% | -1.676 | $7,457 | 50% | ($6,249) |
| 14 | 2.391 | 0 | -2.391 | 9.0% | -2.391 | $5,083 | 50% | ($6,077) |
| 15 | 4.094 | 0 | -4.094 | 15.4% | -4.094 | $8,222 | 50% | ($16,830) |
| 16 | 9.052 | 3.333 | -5.719 | 21.5% | -5.719 | $8,410 | 50% | ($24,048) |
| 17 | 17.005 | 5.95 | -11.055 | 41.6% | -11.055 | $8,613 | 50% | ($47,608) |
| **Total** | **564.94** | **538.36** | **-26.576** | **100%** | **-26.576** | | | **($107,476)** |
| **Allowed Shift (min. column C)** | | | **26.576** | | | | | |

To preserve the predictability of revenue for Participant Hospitals, the MSA will be calculated prospectively. The MSA will be applied to the HGB in the first year after data for the adjustment becomes available and will exclude payments or services excluded in the baseline. If HGBs were in place for PY1, for example, data to calculate a MSA for the hospital's performance in that year would not be available until PY2. The earliest a market shift experienced in PY1 would be applied to a HGB payment, therefore, would be PY3. **Exhibit 19** provides an example of the timeline for MSAs for initial years of the Model.

**Exhibit 19: Timeline for Market Shift Adjustments**

| | PY1 | PY2 | PY3 | PY4 |
|---|---|---|---|---|
| **Measurement Period** | No adjustment | Gap Period growth/(decline) compared to BY3 | PY1 growth/(decline) compared to Gap Period | PY2 growth/(decline) compared to PY1 |
| **MSA** | | MSA1 | MSA2 | MSA3 |

### 2.2.4 Service Line Adjustment

SLAs reflect changes in a Participant Hospital's Global Budget based on pre-planned additions, eliminations, expansions, or contractions of service lines within a given market. SLAs reflect a hospital's pre-planned intent to add or expand a new service or eliminate or contract an existing service. SLAs are different than the MSAs (see **Section 2.2.3**) in that SLAs are pre-planned and approved changes in service lines, while MSA adjustments provide a revenue-neutral shift from one hospital to another based on a patient choice in site of service.

As will be outlined in the Hospital Participation Agreement, all SLAs contemplated by the Participant Hospital under a HGB need to receive approval before any adjustments to the HGB are considered. The AHEAD State will have a defined process to review and recommend or not recommend to CMS such requests. Accordingly, a Participant Hospital must notify the AHEAD State of the following circumstances, in advance of the PY in which the adjustment is to be applied:

- A pre-planned service line addition or expansion that addresses an unmet need in the community.
- A pre-planned service line elimination or contraction.

If the AHEAD State recommends the SLA, it will notify CMS to request review and approval, as CMS reserves the right to approve or deny a proposed SLA. In making determinations on whether to approve or deny a proposed SLA, CMS will consider alignment with the statewide Health Equity Plan and population health goals, the potential to achieve savings or budget neutrality for Medicare, impact on beneficiary access to care, and fulfillment of existing obligations under Medicare and Medicaid.

DRGs, HCPCS, or revenue codes must be supplied by the Participant Hospital requesting an SLA for analysis and, if approved, calculations needed to add or subtract monies from the HGB. SLAs may be considered and applied to a Participant Hospital's Global Budget in subsequent PYs.

#### *2.2.4.1 Service Line Addition or Expansion*

While CMS will prospectively add revenue to the HGBs to account for new or expanded service lines, any Service Line Addition or Expansion will be reconciled back to the FFS costs for the first two years of its implementation, as utilization may increase over time, and it can be difficult to accurately predict the expected utilization in advance. After this two-year period however, the Service Line Addition or Expansion will become part of the HGBs where it will not be reconciled back to FFS outside of the MSA.

- **Step 1:** Participant Hospital notifies AHEAD State of the request to add or expand a specific service line, including forecasting the financial impact of the added service line.

- **Step 2:** AHEAD State reviews the request and determines whether to recommend a HGB adjustment to CMS. If recommended, the AHEAD State passes on recommended service line addition to CMS.
- **Step 3:** CMS approves or denies the recommendation from the AHEAD State for a change in the HGB consistent with the service line change. If approved, CMS reviews and approves the forecasted revenue associated with the SLA and prospectively adds the amount to the Participant Hospital's Global Budget.
- **Step 4:** If approved, the forecasted revenue is added to the HGB, which then is paid through the bi-weekly payments. The Participant Hospital submits claims for the new service line for two PYs. Like other claims for HGBs, these will be no-pay.
- **Step 5:** Following Claims Runout for each of the two PYs, CMS performs a full reconciliation for the two PYs and reconciles to the exact amount of FFS volume for that PY. For the first PY, the reconciliation will occur mid-year of the second PY to allow for sufficient Claims Runout. Any reconciliation amount will be applied to and spread over the remaining bi-weekly payments for the second PY. For the second PY, the reconciliation will occur mid-year of the third PY. The reconciliation amount will be spread over the forthcoming bi-weekly payments for the rest of that third PY.
- **Step 6:** After two full PYs, the Service Line Addition or Expansion will not be reconciled. The mid-year update for PY3 (which includes PY2 reconciliation) will ensure that the added revenue is equal to the utilization observed in PY2. While no additional reconciliation adjustments will be made for volume, the new service line will be subject to the MSA (**Section 2.2.3**) in future PYs.

SLAs that are implemented in the Gap Period will be billed as FFS during the Gap Period. Participant Hospitals with a Gap Period SLA will submit their information to the AHEAD State like other SLAs and the process would follow the previously outlined steps.

**Exhibit 20** shows an example of an approved service line addition for a new gastroenterology service line (inpatient and outpatient services) in PY1. In this example, the hospital estimates the annual revenue associated with the new service line is roughly $1M and is approved for inclusion in the HGB for two PYs.

**Exhibit 20: Example Service Line Addition**

| Time | Step for Service Line Addition |
|---|---|
| **Before PY1** | Annual Forecasted Revenue Submitted to CMS and is approved by the AHEAD State and CMS. |
| **PY1** | CMS adds $1M to the HGB for PY1; which is then included in the bi-weekly payments. |
| **PY2** | There is insufficient time for Claims Runout from PY1 to update SLA amount to set initial PY2 HGB. CMS includes $1M in PY2 HGB for SLA. |
| **Mid-PY2** | CMS performs reconciliation of PY1 by adjusting the remaining bi-weekly payments for PY2. Determining reconciliation amount:<br>• In PY1, the utilization of the SLA was $750,000, compared to the $1M added to the PY1 HGB prospectively.<br>• Therefore, Participant Hospital must return $250,000 to CMS. |
| **PY3** | CMS includes $1M in initial PY3 HGB for SLA (still waiting on PY2 Claims Runout). |

| Time | Step for Service Line Addition |
|---|---|
| **Mid-PY3** | CMS performs reconciliation for PY2 and updates to PY3 SLA amount. Determining reconciliation amount:<br>• In PY2, utilization was $1,100,000, compared to the $1M added to the PY1 HGB prospectively.<br>• Therefore, the Participant Hospital will receive an additional $100,000 for PY2 reconciliation.<br>• Since the Service Line Addition for PY3 should be not reconciled, but based at the PY2 observed amount, CMS needs to add an additional $100,000 to make the Participant Hospital whole for the PY3 HGB SLA.<br>• Therefore, the Participant Hospital receives a combined $200,000 spread over the remaining bi-weekly payments.<br>• Note: PY3 is subject to MSA, including this Service Line Addition. |
| **PY4+** | Participant Hospital has $1,100,000 in its HGB without reconciliation. It is subject to MSA. |

#### *2.2.4.2 Service Line Contraction or Elimination*

Participant Hospitals will also need to inform their AHEAD State and CMS of any planned service line contractions or eliminations. In addition, Participant Hospitals may request to retain a portion (up to 50%, except for CAHs, see **Section 2.2.4.3** below) of their HGB associated with the eliminated or reduced service line. Any retained funds are meant to provide a financial transition for the Participant Hospital and allow for approved reinvestments in population health and care coordination activities, consistent with its Hospital Health Equity Plan, which is aligned with the State Health Equity Plan, or other approved purposes. Participant Hospitals will be required to report and confirm how the retained revenue is used in alignment with these purposes. Participating Hospitals must notify CMS for all anticipated service line contractions that will happen during the Gap Period as well. This allows so CMS to accurately adjust the PY1 HGB.

- **Step 1:** Participant Hospital notifies the AHEAD State of its plan to contract or eliminate a specific service line. The Participant Hospital may also request to retain a percentage of the revenue in the HGB associated with the contracted or eliminated services and propose a defined purpose for utilizing it consistent with the goals of the Model.
- **Step 2:** The AHEAD State reviews the request to retain a percentage of the revenue in the HGB associated with the service line contraction and submits a recommendation to CMS.
- **Step 4:** CMS approves or denies the recommendation from the AHEAD State for a change in the HGB consistent with the service line change. Note: CMS approval of HGB adjustments for this change does not indicate approval or bypass other federal, state, or other legal requirements that may apply to service line contractions or eliminations. Participant Hospitals will need to work through those processes with any relevant approval bodies.
- **Step 5:** If approved, the Participant Hospital contracts or eliminates services during the following PY and retains up to 50% of revenues associated with the service line.

**Exhibit 21**: Example Service Line Elimination summarizes the revenue impact of the elimination of a service line by a Participant Hospital. In this example, the total revenue associated with the service line in the Participant Hospital's Global Budget is $500,000. Due to the service line being eliminated, the Participant Hospital requests and is approved to retain $250,000 (50%) of the

revenue for care coordination and population health activities with the remaining revenue being eliminated.

**Exhibit 21: Example Service Line Elimination**

| Service Line | Total Service Line Revenue | Retained Revenue for Reinvestment | Reduction to the HGB |
|---|---|---|---|
| **Service Line G** | $500,000 | $250,000 | $250,000 |

#### *2.2.4.3 Service Line Adjustments for Critical Access Hospitals*

CAHs provide vital services in medically underserved areas. However, they may need to reassess service lines while maintaining access to care. Upon receiving approval from CMS for a service line reduction or elimination, CAHs will be able to request retention of up to the entire revenue associated with the reduced or eliminated service line if it is used to specifically target the goals of their Hospital Health Equity Plan, statewide Health Equity Plan, or for another approved purpose (e.g., care management and transition planning).

### *2.2.5 Unplanned Volume Adjustment*

Other changes in the volume of services that are not captured by pre-planned service line changes or the MSA are accounted for in the Unplanned Volume Adjustment (UVA). A reduction in the volume of necessary services that are prospectively funded in the HGB represents a risk to the Medicare program and potential overpayment to Participant Hospitals. Such reductions may result from changes in site of service as technology and clinical practice change over time or moving hospital-based services to alternative settings. A prominent example is a shift in hospital-based surgeries to ambulatory surgery centers. Other reductions could occur due to changes in the number of physicians affiliated with a hospital. Some of those patient services may be captured by the MSA, but some may not.

Under global budgets, Participant Hospitals may also be at risk from unexpected volume increases as clinical practices change and access to health care services from other hospitals and non-hospital providers within the market change over time. To protect both the Medicare program and Participant Hospitals from these unplanned shifts in services, the UVA will be implemented for material changes in inpatient and outpatient volume and will be calculated at the same time as the MSA (**Exhibit 19**). For inpatient or outpatient utilization increases or decreases greater than 5 percent over the previous year, after adjusting for market shift and projected demographic changes as described below, any revenue (what would have been paid under FFS) associated with the change in volume beyond the 5 percent would be adjusted as follows:

- For volume decreases greater than 5 percent of case mix adjusted discharges (for inpatient services) or visits (for outpatient), additional revenue would be removed from the HGB going forward.
- For CAHs, 50% of the revenue beyond the 5 percent threshold would be removed.
- For volume increases in excess of 5 percent, the Participant Hospital's HGB would be increased by 50% of the revenue above the threshold going forward, as long as the Participant Hospital achieved the targeted TCOC benchmark as part of the TCOC Performance Adjustment.

### 2.2.5.1 Calculating the Unplanned Volume Adjustment

#### a. Unplanned Volume Dollar Adjustment

The UVA is a prospective adjustment to a Participant Hospital's inpatient and outpatient HGB that accounts for unplanned volume changes over the previous year net of growth from the Market Shift Adjustment (MSA) and Demographic Adjustment (DA). Unplanned volume change is the percentage change in weights from the MSA above/below a +/- 5% threshold (less percentage from MSA and DA) multiplied by the base year payments (e.g., PY1 if calculating the UVA for PY4) trended forward by an inflation adjustment and a factor to account for the shift in variable costs. In PYs where hospitals are paid via HGBs, no-pay claims are used instead to calculate payments.

$$(\boldsymbol{Eq.1})\ \boldsymbol{Unplanned\ Volume\ Dollar\ Adjustment} = Prior\ Year\ Payments * Market\ Inflation\ Adjustment * Unfunded\ Volume\ Adj\ \%$$

**Where,**

**Prior Year Payments** = FFS paid amounts (or equivalent for no-pay claims) for Eligible Hospital services in the historical base period used to calculate the MSA (**Exhibit 40**).

**Market Inflation Adjustment** = The IPPS Hospital Market Basket or OPPS Hospital Market Basket update.

#### b. Unfunded Volume Adjustment Percentage

The Unfunded Volume Adjustment percentage is the amount of volume change unfunded by the MSA and DA that remains either above the upper threshold or below the lower threshold. See **Section 2.2.6** for details on how to calculate the DA. If the unfunded volume is beyond the upper threshold, that growth is funded at 50%. If unfunded volume is below the lower threshold, that reduction in volume is funded at 100% for short-term acute care hospitals and 50% for CAHs:

$$(\boldsymbol{Eq.2})\ \boldsymbol{Unfunded\ Volume\ Adj}\ \% = Unfunded\ Volume\ Beyond\ Threshold\ \% * Threshold\ Adjustment\ Amount$$

**Where,**

**Threshold Adjustment Amount** = 50% for growth beyond upper threshold, 100% for shrinkage beyond lower threshold for ACHs, and 50% for shrinkage beyond lower threshold for CAHs.

#### c. Unfunded Volume Beyond Threshold Percentage

The Unfunded Volume Beyond the Threshold is the amount of volume unfunded by the MSA or DA beyond either the upper or lower threshold. If the unfunded volume less DA does not exceed the upper or lower threshold (e.g., unfunded volume less DA is between -5 and +5 percent) then Unfunded Volume Beyond Threshold is zero. Use Equation 3a if unfunded volume less DA is greater than 5 percent and Equation 3b if unfunded volume less DA is less than -5 percent.

$$(\boldsymbol{Eq.3a})\ \boldsymbol{Unfunded\ Volume\ Beyond\ Threshold}\ \% = (MSA\ unfunded\ volume\ \% - Demographic\ Adjustment) - Upper\ Threshold$$

$$(\boldsymbol{Eq.3b})\ \boldsymbol{Unfunded\ Volume\ Beyond\ Threshold}\ \% = (MSA\ unfunded\ volume\ \% - Demographic\ Adjustment) - Lower\ Threshold$$

**Where,**

**Upper Threshold** = 5% and **Lower Threshold** = -5%.

#### *d. Percentage of Unfunded Volume*

The percentage of unfunded volume is the total amount of unfunded weighted volume growth or decline as a percentage of total prior year volume across all service categories. Because the UVA only examines unplanned volume changes – excluding volume accounted for in the MSA – the unfunded volume growth or decline in weights is the variance in weights subtracted by each hospital's market shift in weights as calculated in the MSA. See **Section 2.2.3** for more details.

$$(\boldsymbol{Eq.4})\ \boldsymbol{MSA\ Unfunded\ Volume}\ \% = \frac{Unfunded\ Volume\ in\ Weights}{Prior\ Year\ Weights}$$

**Where,**

**Unfunded Volume in Weights** = Sum of the change in weights across all service categories between the two time periods (e.g., PY1 vs PY2 if calculating the MSA for PY4. See **Exhibit 40**) included in the MSA less the change in weights allowed by the MSA across all service lines. Weights are assigned based on DRG and APC service category as described in **Section 2.2.3.2**.

**Prior Year Weights =** Total weights across all service categories in the first time period included in the MSA (e.g., PY1 if calculating the MSA for PY4. See **Exhibit 40**).

### *2.2.5.2 Unplanned Volume Adjustment Example*

**Exhibit 22** provides an example calculation of the revenue impact of unplanned service line reductions.

**Exhibit 22: Revenue Impact of Unplanned Service Reductions for an Acute Care Hospital (Example of Increase/Decreased Utilization)**

| Row | Feature | Formula | Hospital Decrease in Volume | Hospital Increase in Volume |
|---|---|---|---|---|
| **A** | MSA Unfunded Volume Percent | Eq. 4 | (3.0%) | 10.0% |
| **B** | Demographic Adjustment | Section 2.2.6 | 3.0% | 3.0% |
| **C** | % Change in Weights Less Demographic and MSA | C = A – B | (6.0%) | 7.0% |
| **D** | Threshold | NA | (5.0%) | 5.0% |
| **E** | Unfunded Volume Beyond Lower Threshold | If C < -5%, E = C + abs(D) | (1.0%) | |
| **F** | Unfunded Volume Beyond Upper Threshold | If C > 5%, F = C – D | | 2.0% |
| **G** | Unfunded Volume Adj Decrease % | G = E * 100% for volume decline outside threshold | (1.0%) | |
| **H** | Unfunded Volume Adj Increase % | H = F * 50% for volume growth beyond threshold | | 1.0% |
| **I** | Prior Year Payments Inflated with Market Basket Increase | NA | $60,000,000 | $40,000,000 |
| **J** | UVA in $ (Decrease in Volume) | J = I * G | ($600,000) | |
| **K** | UVA in $ (Increase in Volume) | K = I * H | | $400,000 |

### 2.2.6 Demographic Adjustment

The Demographic Adjustment (DA) is designed to adjust HGBs to reflect changes in both the size and medical risk of the population served by each Participant Hospital. As the size and risk profile of the population changes, the utilization of services will also change. In many cases, the DA will account for a more medically complex population as the population ages, new beneficiaries qualify for Medicare coverage, and existing beneficiaries' care becomes more medically complex. The DA will also account for shifts in enrollment from Medicare FFS to Medicare Advantage by adjusting Medicare FFS HGBs downward, however this would be offset by increased revenue from Medicare Advantage plans that is paid outside of Medicare FFS HGBs.

For the DA, beneficiary Hierarchical Condition Category (HCC) scores are used to assess changes in beneficiary clinical and demographic risk. CMS has historically used HCC scores to estimate future healthcare costs for an individual and to account for differences in patient complexity.

The DA is the average percentage change in total HCC scores across all counties served by each hospital weighted by the percentage of revenue its residents accounted for at the Participant Hospital. For example, if a hospital generates $1 million in total Medicare FFS revenue and residents from County A accounted for $100k of that revenue, the County A weight for that hospital is 10%.

The total HCC accounts for both population shifts and clinical and demographic risk changes in the areas served by the hospital. Each beneficiary in a county is assigned an HCC score, with a value of 1.0 representing the average risk of a Medicare beneficiary. If additional beneficiaries move into a county or if residents of a county become sicker, the total HCC increases proportionally.

The DA is applied annually at the beginning of each PY and uses claims data to calculate HCC scores and the share of FFS payments from the year ending 6 months prior to each PY (Y1) and the year ending 18 months prior to each PY (Y2). The share of FFS payments and number of counties served is calculated using data from the more recent time period (Y1) and is updated annually. The change in Total HCC is calculated using the change between Y2 and Y1 and is updated each time the DA is calculated.

#### 2.2.6.1 Demographic Adjustment Calculation

The DA adjusts HGBs by the weighted average percentage change in total HCC scores across counties served by the Participant Hospital. The change in total HCC scores is applied proportional to the share of Medicare FFS claim payments for Eligible Inpatient and Outpatient Hospital Services generated from each county for the Participant Hospital.

$$(\boldsymbol{Eq.1})\ \boldsymbol{DA_i} = \sum_{j=1}^{j=n} s_j * \Delta\, Total\ HCC$$

**Where,**

**n = Number of Counties Served by the Hospital** is the number of counties with at least one resident with an FFS claim (or no-pay equivalent) for Eligible Inpatient or Outpatient Hospital Services at the Participating Hospital. Counties can be located in- or out-of-state so that the demographic adjustment fully aligns with total hospital Medicare FFS revenue.

**s = Share of FFS Payments** is equivalent to revenue generated for the Participant Hospital from each county *j* served by the hospital divided by total revenue generated for the Participant Hospital across all counties. Revenue is the sum of Medicare FFS claim payments for Eligible Inpatient and Outpatient Hospital Services using the same inclusion/exclusion logic as in the Baseline Calculation (**Section 2.1**). All factors used to calculate Medicare FFS claim payments are incorporated including base payment rates, adjustments for market conditions, complexity of service (DRG-Weights), policy adjustments, and quality adjustments.

**Δ Total HCC** = Percentage change in the county sum of HCC scores. The county sum of HCC scores is calculated by summing the HCC score for every Medicare beneficiary that resides in the county. HCC scores are calculated for all Medicare beneficiaries and are summed to better represent the entire distribution of acuity, rather than a single measure of central tendency, such as the mean or median.

HCC scores incorporate data on beneficiary health condition(s) using the ICD-10 codes and demographic factors (e.g., age, gender). Each beneficiary receives a single score that covers a 12-month lookback period. The CMS HCC Model Software for ICD-10 Mappings is used to determine the HCC scores for each beneficiary[15].

#### *2.2.6.2 Demographic Adjustment Example*

**Exhibit 23** provides an example of how the PY1 DA is calculated for a hospital that served beneficiaries from 3 counties.

**Exhibit 23: Example Demographic Adjustment Calculation for Participant Hospital**

| Item | County | County Sum of HCC Scores (Y2) | Total Revenue from County (Y1) | County Sum of HCC Scores (Y1) | Share of FFS Claims (Y1) | Percentage Δ Total HCC | County Adjustment |
|---|---|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) | (5) | (6) |
| **A** | County A | 72.5 | $110k | 74.5 | = A2 / D2 = | = (A3 – A1) / A1 = | = A4 x A5 = |
| | | | | | 35.48% | 2.76% | 0.98% |
| **B** | County B | 68.5 | $40k | 62.5 | =B2 / D2 = | = (B3 – B1) / B1 = | = B4 x B5 = |
| | | | | | 12.90% | -8.76% | 1.13% |
| **C** | County C | 70 | $160k | 77.5 | =C2 / D2 = | = (C3 – C1) / C1 = | = C4 x C5 = |
| | | | | | 51.61% | 10.71% | 5.53% |
| **D** | Total | - | = A2 + B2 + C2 = | - | - | - | = A6 + B6 + C6 = |
| | | | $310k | | | | 5.38% |

### *2.2.7 AHEAD Specific Adjustments*

#### *2.2.7.1 Social Risk Adjustment*

AHEAD applies an upside-only Social Risk Adjustment (SRA) to HGBs that accounts for hospital-to-hospital differences in social risk for their beneficiary populations. The intention of this adjustment is to provide additional resources for hospitals that are treating higher adversity

[15] Medicare Advantage Rates and Statistics: Risk Adjustment

patient populations. The SRA amount is based on a calculated Social Risk Score (SRS) using the ADI and a combination of dual-eligibility and Part D LIS. The ADI is a factor-based index that uses US Census indicators – including poverty, education, housing, and employment factors – to characterize census block social risk correlated with health outcomes.[16] CMS calculates a custom version of the ADI that standardizes ADI values by dividing by mean values in the American Community Survey. This process helps to account differences in housing prices that can mask disparities. An ADI is assigned based on the census block group in which the beneficiary resided on their first day of eligibility with the PY. ADI scores are then averaged for each geographic area included in the MSA calculation, then weighted together for each Participating Hospital based on the share of revenue received by the hospital from that geographic area. Participant Hospitals with an SRS above the AHEAD State's median SRS will receive an SRA based on linear scaling up to 2 percent of their HGB. Linear scaling from the median ensures that Participating Hospitals receive a positive adjustment proportional to their performance relative to the 95$^{th}$ percentile of Eligible Hospitals in the state. The SRA is calculated annually prior to each PY using the most recent baseline year for PY1 and the prior PY thereafter.

To calculate the SRA for each Participant Hospital's eligible beneficiaries, CMS will use the steps below:

1) **Calculate the beneficiary-level SRS**. The beneficiary SRS *b* is calculated using the National Standardized ADI, the State Standardized ADI, and a combination of dual-eligibility and Part D Low-Income Status. SRS can range from 0 to 150. Note that a beneficiary might not have an SRS (e.g., SRS = 0) if there was no ADI assigned.

$$(\boldsymbol{Eq.1})\ \boldsymbol{SRS_b} = 0.5 * (\text{National ADI}) + 0.5 * (10 * (\text{State ADI})) + (50 * \text{LIM})$$

**Where,**

**National ADI** = National Standardized ADI which is expressed as a percentile with a range of 1 to 100, is assigned for each eligible beneficiary and multiplied by 0.20. Points for National ADI will range from 1 to 20.

**State ADI** = State Standardized ADI which is multiplied by 10 because State ADI is expressed in decile, is assigned for each eligible beneficiary and multiplied by 0.80. Points for State ADI will range from 1 to 80.

**Low-Income Marker (LIM)** = Set to 1 if a beneficiary is either dual-eligible (full or partial dual) or deemed eligible for Part D LIS at any point in the rolling 12-month period immediately preceding the calculation. If a beneficiary is not dual-eligible and is not eligible for Part D LIS, LIM equals 0.

2) **Aggregate beneficiary scores to MSA geographic area**. Beneficiary scores are summed and averaged across all beneficiaries that year for the geographic area included in the MSA (**Section 2.2.3**, either a ZIP code, combination of zip codes, or county).

$$(\boldsymbol{Eq.2})\ \boldsymbol{SRS_g} = \left(\sum_{j=1}^{j=n} SRS_b\right) \div n$$

**Where,**

[16] Integrating Social Determinants of Health With Treatment and Prevention: A New Tool to Assess Local Area Deprivation (cdc.gov)

**n** = Number of beneficiaries in the geographic area defined as the county or zip included in MSA served by the hospital.

3) **Calculate the Participant Hospital's SRS**. Hospital-level scores are developed by computing a weighted score based on the geographic area's proportion of hospital payments multiplied by the geographic area SRS. This SRS can be calculated for each hospital *h* as:

$$(Eq.3)\ SRS_h = \sum_{j=1}^{j=n} (SRS_g * \frac{P_g}{P_h})$$

**Where,**

**n** = Number of geographic areas included in the hospital's MSA

**h** = Participant Hospital

**g** = Geographic area defined as county or zip included in MSA

**P** = Payments or the sum of Medicare FFS claim payments (or no-pay claims during the PY) for Eligible Inpatient and Outpatient Hospital Services using the same inclusion/exclusion logic as in the Baseline Calculation (**Section 2.1**)

An example of how to calculate a Participant Hospital's SRS is shown in **Exhibit 24** below:

**Exhibit 24: Example Social Risk Score Calculation for Participant Hospital**

| Defined Geographic Area | SRS | Proportion of Hospital Payments |
|---|---|---|
| **County A** | 97 | 50% |
| **County B** | 87 | 30% |
| **County C** | 80 | 20% |
| **Hospital SRS** | **90.6** | |

4) **Calculate the Participant Hospital's SRA**. If a Participant Hospital's SRS is above the entire AHEAD State's median SRS score, the Participant Hospital will be eligible to receive an upward adjustment scaled between 0 and 2 percent of their HGB. A Participant Hospital will receive the full 2 percent adjustment if their SRS is above the 95$^{th}$ percentile. For Participant Hospital *h* with an SRS between the median and the 95$^{th}$ percentile, the SRA amount is determined by the following:

$$(Eq.4)\ SRA_h = .02 * \left(1 - \frac{T_{SRS} - SRS_h}{T_{SRS} - M_{SRS}}\right)$$

**Where,**

**T** = 95$^{th}$ percentile of the AHEAD State's Eligible Hospital SRS scores

**M** = Median of the AHEAD State's Eligible Hospital SRS scores

**Exhibit 25** is an example of the SRA calculation, after the hospital SRS is established in Steps 1-3 above.

**Exhibit 25: Example Calculation of Social Risk Adjustment**

| Calculation Step | PY1 SRA | Formula |
|---|---|---|
| **Hospital HGB** | $ 53,939,6935 | A |
| **Hospital's SRS (from Step 3)** | 61 | B |
| **State Mean SRS** | 51 | C |
| **95th Percentile of State SRS** | 76 | D |
| **SRA Percentage** | **0.81%** | **E = .02 * (1 – ((D - B) ÷ (D - C)))** |

#### *2.2.7.2 Transformation Incentive Adjustment*

Robust hospital participation will be important for realizing care transformation and sustainable savings under the Model. In addition to expectations for states to use regulatory levers to incentivize or otherwise encourage hospital participation, CMS will also include a 1% upward TIA to each Participant Hospital's global budget in the first two PYs of the Applicable Cohort. The 1% adjustment will be applied after all annual trend updates have been completed and are one-time payments. The TIA serves as both an incentive for early participation and provides additional revenue that hospitals may invest in care management and transformation activities that will generate medium- and long-term savings under the Model, including infrastructure, staffing, technology, or other resources needed to succeed under a HGB construct. The TIA will need to be repaid in full if the Participant Hospital exits the Model before the sixth PY. If the Participant Hospital remains in the Model through PY6 or longer, no repayment is necessary.

#### *2.2.7.3 Adjustments to Hospital Global Budgets Given State Performance on Medicare Fee-for-Service Total Cost of Care Targets*

As noted in the AHEAD NOFO, Appendix XI, CMS may take corrective action if the AHEAD State is unable to meet annual targets. This corrective action may include submission of a corrective action plan, modification of CMS-designed HGB methodology, and/or other modifications to Primary Care AHEAD. A potential modification to the CMS-designed HGB may include an additional adjustment that may reduce all or some HGBs in the AHEAD State or sub-state region. CMS will consider the magnitude of the missed target, the State's plan to improve performance, individual hospital performance, among other factors in determining any such methodology, and will consult with the AHEAD State as part of this decision.

### *2.2.8 Logistical Order of Operations for Annual Trend Updates and AHEAD Specific Adjustments*

**Exhibit 26** illustrates the order of operations when applying annual trend updates and AHEAD specific adjustments to the HGB.

**Exhibit 26: Example Calculation of HGB Annual Trend Updates & AHEAD-Specific Adjustments**

| Item | Adjustment | Adjustment Amount | Financial Specifications Section |
|---|---|---|---|
| **A** | Current HGB | $200,000,000 | 2.1 |
| **B** | MSA | $200,000 | 2.2.3 |
| **C** | SLA | ($20,000) | 2.2.4 |
| **D** | UVA | $50,000 | 2.2.5 |
| **E = A + B + C + D** | HGB Adjusted for Volume | $200,230,000 | |
| **F** | APA | 3.0% | 2.2.1 |
| **G = D * (1 + F)** | HGB with APA | $206,236,900 | |
| **H** | DA | 2.0% | 2.2.6 |
| **I** | SRA | 0.5% | 2.2.7.1 |
| **J** | TIA (PY1 and PY2 only) | 1.0% | 2.2.7.2 |
| **K = G + (G * H) + (G * I) + (G * J)** | HGB after Annual Trend Updates | $213,455,192 | |

## 2.3 Performance-Based Adjustments

The following section details the performance-based adjustments that will be applied to a Participant Hospital's HGB. In addition to the quality related adjustments described below, HGBs for Acute Care Hospitals are also adjusted for existing CMS national quality programs incorporated into FFS (IQR, OQR, HRRP, HACRP and VBP) as part of the Annual Payment Adjustment (**Section 2.2.1**). An example of this adjustment is displayed in **Exhibit 14**.

### *2.3.1 Quality Adjustments*

#### *2.3.1.1 Critical Access Hospital Quality Adjustment*

CAHs are not required to participate in the CMS national hospital quality programs (IQR, OQR, HRRP, HACRP and VBP). In AHEAD, CAHs will participate in an upside-only quality incentive program that will align with the other quality programs and will include rural-specific measures. **Exhibit 27** includes a sample set of CAH Quality Program Measures below and is subject to modification due to CMS' annual measure update process. The program will begin as pay-for-reporting and advance to pay-for-performance over the Model lifecycle to support CAHs in this process. CMS will monitor improvement in measure outcomes from baseline of Model participation, which can potentially inform any future national quality efforts targeted to CAHs.

### Exhibit 27: AHEAD Critical Access Hospital Quality Program Measures

| Domain | Measure | Identifier | Steward | CMS Program Alignment | Data Sources |
|---|---|---|---|---|---|
| **Health Care Quality and Utilization** | CMS Hybrid Hospital-Wide Readmission (Hybrid HWR) | NQF 2879<br>CMIT 529 | CMS | IQR | Claims; Electronic Health Data; Administrative Data |
| **Health Care Quality and Utilization** | Emergency Transfer Communication Measure | NQF 0291<br>CMIT N/A | University of Minnesota | N/A (MBQIP) | Claims, Electronic Health Data, Paper Medical Records |
| **Health Care Quality and Utilization** | Outpatient ED Arrival to Discharge (OP-18b) | CMIT 427 | CMS | OQR | Electronic Health Data |
| **Health Care Quality and Utilization** | OPI-01 Safe Use of Opioids - Concurrent Prescribing | NQF 3316e<br>CMIT 506 | CMS | IQR; Promoting Interoperability Program | Electronic Health Data |
| **Patient Safety** | National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital onset Clostridium difficile Infection (CDI) | NQF 1717<br>CMIT 462 | CDC | HACRP<br>HIQR<br>HVBP | Electronic Health Data, Other, Paper Medical Records |
| **Patient Safety** | VTE-1 Venous Thromboembolism Prophylaxis | NQF 0371<br>CMIT 758 | Joint Commission | IQR; Promoting Interoperability Program | Electronic Health Data |
| **Patient Safety** | Sepsis Bundle (SEP-1) | CMIT 678 | CMS | IQR; VBP | Electronic Health Data |
| **Patient Safety** | Severe Obstetrics Complications (PC-07) | NQF N/A<br>CMIT 1028 | The Joint Commission | Promoting Interoperability Program | Electronic Health Data |
| **Patient Experience** | HCAHPS - Hospital Consumer Assessment of Healthcare Providers and Systems (multiple measures) | NQF 0166<br>CMIT 338 | CMS | IQR; HVBP | Instrument-Based Data |

A CAH's performance will be measured on an annual basis and scored for attainment (compared to a measure threshold and benchmark) and improvement (compared to baseline performance). Patient experience measures will also be scored separately for consistency. Quality measure data periods vary by quality measure. The performance period is the most recent complete year of data prior to the PY, and the base period is the year prior (which can be more than 2 years prior to the PY).

**Exhibit 28** details the definitions of measure constructs, measure thresholds and benchmark performance standards that drive the sample hospital calculation. **Exhibit 29** shows an example of AHEAD CAH quality domains, measures, and thresholds and benchmarks performance standards.

## Exhibit 28: AHEAD Critical Access Hospital Quality Measure Construct Definitions

| CAH Quality Construct Element | Definition |
|---|---|
| **Measure Threshold** | Median measure score of CAHs nationally in the Baseline Period |
| **Measure Benchmark** | Mean of top decile score of CAHs nationally in the Baseline Period |
| **National Measure Floor** | Lowest measure score of CAHs nationally in the Baseline Period |
| **Hospital Measure Baseline** | Hospital performance in the Baseline Period |
| **Improvement Points** | Hospital performance compared to its Baseline Period performance and the national benchmark between 0-9. |
| **Attainment Points** | Hospital's performance compared to the national threshold and benchmark between 0-10. |
| **HCAHPS Consistency Points** | Compares hospital's lowest scoring HCAHPS dimension to the threshold and awards Consistency Points based on that dimension's score vs. the national measure floor. Consistency Points range from 0 – 20 points. |
| **Achievement Points** | Better of Improvement or Attainment Points |
| **Total Performance Score** | Sum of all measure achievement points, weighted by domain and divided by total possible achievement points |
| **Domain Weights** | Each of the following domains will be weighted equally and measures within each domain as follows:<br>- Healthcare Quality and Utilization: 34%<br>- Patient Safety: 33%<br>- Patient Experience: 33% |

## Exhibit 29: AHEAD Critical Access Hospital Sample Quality Performance Standards for Select Measures (Thresholds and Benchmarks)[17]

| Domain | Measure | Improvement Indicator | Threshold | Benchmark |
|---|---|---|---|---|
| **Healthcare Quality and Utilization** | Hospital Wide Readmission *(proxy for Hybrid eHWR)* | Lower is Better | 15.4 | 14.5 |
| **Health Care Quality and Utilization** | Emergency Transfer Communication Measure | Higher is Better | N/A | N/A |
| **Healthcare Quality and Utilization** | OP ED Arrival to Discharge - Very High Volume | Lower is Better | 173 | 120 |
| **Healthcare Quality and Utilization** | OP ED Arrival to Discharge - High Volume | Lower is Better | 166 | 117 |

[17] Data Source: HHS Care Compare, January – December 2019 (except Hospital Wide Readmissions July 2019 – December 2019 and eCQMs January – December 2021). This table includes results for both CAHs and Acute Care Hospitals due to data availability for demonstration purposes, however CMS may develop CAH-specific thresholds and targets for this adjustment.

| Domain | Measure | Improvement Indicator | Threshold | Benchmark |
|---|---|---|---|---|
| **Healthcare Quality and Utilization** | OP ED Arrival to Discharge - Medium Volume | Lower is Better | 146 | 104.2 |
| **Healthcare Quality and Utilization** | OP ED Arrival to Discharge - Low Volume | Lower is Better | 112 | 76 |
| **Healthcare Quality and Utilization** | OPI-01 - Safe Use of Opioids | Lower is Better | 17 | 8 |
| **Patient Safety** | NSHN Clostridium Difficile | Lower is Better | 0.523 | 0.000 |
| **Patient Safety** | SEP-1<br>Sepsis Bundle | Higher is Better | 60 | 86 |
| **Patient Safety** | VTE-1 Venous Thromboembolism Prophylaxis | Higher is Better | 91 | 100 |
| **Patient Experience** | HCAHPS - Communication with Nurses | Higher is Better | 80 | 88 |
| **Patient Experience** | HCAHPS - Communication with Doctors | Higher is Better | 80 | 89 |
| **Patient Experience** | HCAHPS - Responsiveness of Hospital Staff | Higher is Better | 67 | 82 |
| **Patient Experience** | HCAHPS - Communication About Medicines | Higher is Better | 64 | 74 |
| **Patient Experience** | HCAHPS - Discharge Information | Higher is Better | 88 | 92 |
| **Patient Experience** | HCAHPS - Care Transition Measure | Higher is Better | 52 | 63 |
| **Patient Experience** | HCAHPS – Overall Hospital Rating | Higher is Better | 72 | 86 |
| **Patient Experience** | HCAHPS – Cleanliness and Quietness | Higher is Better | 66.5 | 80.5 |

Note: Data was not available at the time of publication for Emergency Transfer measure.

#### *2.3.1.1.1 Critical Access Hospital Quality Adjustment – Pay for Reporting*

A hospital qualifies for the full upside-only pay-to-report reward if it reports at least one quality measure in a minimum of two domains. Hospitals that do to meet this reporting threshold are not eligible for the pay-to-report reward.

#### 2.3.1.1.2 Critical Access Hospital Quality Adjustment – Pay for Performance

The calculation of CAH's Quality Total Performance Score (TPS) is detailed below. The TPS is used to calculate the CAH reward percentage:

- **Step 1:** Calculate Measure Thresholds and Benchmarks using national data for Acute Care Hospitals and CAHs for each measure.
  - Threshold – Calculate median (50$^{th}$ percentile) performance of all national hospitals with valid measure results for each measure.
  - Benchmark – Calculate mean of top decile of performance of all national hospitals with valid measure results for each measure.
- **Step 2:** Calculate hospital performance in each measure for applicable base period and performance period.
- **Step 3:** Use hospital performance to determine Attainment, Improvement and Consistency (HCAHPS only) Points.
  - **Step 3a:** Attainment Points – compares hospital's result during the performance period to the national threshold and benchmark during the base period as detailed below:
    - Hospital result at or better than the benchmark = 10 Attainment Points
    - Hospital result worse than the threshold = 0 Attainment Points
    - Hospital result equal to or better than the threshold but less than the benchmark = 1–9 Attainment Points using the formula below:

$$(Eq.1)\ Attainment\ Points_h = \left(9 * \frac{Perf.Period\ Result - Threshold}{Benchmark - Threshold}\right) + 0.5$$

  - **Step 3b:** Improvement Points – compares hospital's result during the performance period to their own result during the base period as detailed below:
    - Hospital result at or better than the benchmark = 9 Improvement Points
    - Hospital result at or worse than its base period result = 0 improvement points
    - Hospital result better than the base period result but worse than the benchmark = 0–9 Improvement Points using the formula below:

$$(Eq.2)\ Improvement\ Points_h = \left(10 * \frac{Perf.Period\ Result - Base\ Period\ Result}{Benchmark - Base\ Period\ Result}\right) - 0.5$$

  - **Step 3c**: HCAHPS Consistency Points – compares hospital's lowest scoring HCAHPS dimension to the threshold and awards Consistency Points based on that dimension's score versus the national measure floor. Consistency Points will be considered Achievement Points and incorporated into the calculation of the Patient Experience domain score. (see Step 4). Consistency Points range from 0 – 20 points and the calculations are detailed below:
    - All dimension scores are greater than or equal to the national thresholds = 20 points

- Any dimension score is less than or equal to the worst national dimension score in the base period = 0 points
- The lowest dimension score is greater than the worst national dimension score but less than the national threshold = 0-20 Consistency Points using the formula below:

$$(\boldsymbol{Eq.3})\ \boldsymbol{HCAHPS\ Consistency\ Points_h} = \left(20 * \frac{Perf.Period\ Score - National\ Floor}{Threshold - National\ Floor}\right) - 0.5$$

- **Step 4:** Calculate Achievement Points for each CAH hospital, *h*, by taking higher of Attainment or Improvement Points.

$$(\boldsymbol{Eq.4})\ \boldsymbol{Achievement\ Points_h} = \max\left(Attainment\ Points_h, Improvement\ Points_h\right)$$

- **Step 5:** Calculate Domain Score by summing total Achievement points divided by total possible points (10 points per included measure, 20 for HCAHPS Consistency Points) in each domain.
- **Step 6:** Calculate Total Performance Score (TPS) by equally weighting each domain score. A minimum of 2 domains is required to calculate a TPS score.

If a CAH's TPS is greater than the national 25th percentile, they are eligible to receive a reward scaled between 0.00% and 2.0% of their HGB. A CAH will receive the full 2.0% reward if their TPS is greater than the 90th percentile. For CAH *h* with a TPS between the 25th and 90th percentiles, the CAH reward is determined by the following:

$$(\boldsymbol{Eq.5})\ \boldsymbol{CAH\ Reward_h} = .02 - (B_{TPS} - TPS_h) * \frac{.02}{B_{TPS} - T_{TPS}}$$

**Where,**

**T** = 25th percentile of national TPS scores

**B** = 90th percentile of national TPS scores

**Exhibit 30** provides an example of how to calculate a CAH's quality adjustment:

## Exhibit 30: Sample Calculation for AHEAD CAH Quality Measure Performance & Calculation of Total Performance Score

| Domain | Measure Name | Base Period Score | Perf Period Score | Thresh-hold | Bench-mark | Attain Pts | Improve Pts | Achieved Pts (Max) | Pts Possible | Domain Score |
|---|---|---|---|---|---|---|---|---|---|---|
| **Healthcare Quality & Utilization** | Hospital-Wide Readmissions *(proxy for Hybrid HWR)* | 15.8 | 14.8 | 15.4 | 14.5 | 6 | 7 | 7 | **10** | 0.35 |
| | Emergency Transfer Communication Measure | N/A | N/A | N/A | N/A | N/A | N/A | 5 | **10** | |
| | ED Arrival Time to Departure Time for Discharged Patients | 134 | 127 | 112 | 76 | 0 | 1 | 1 | **10** | |
| | Safe Use of Opioids – Concurrent Prescribing | 17 | 17 | 17 | 8 | 1 | 0 | 1 | **10** | |
| **Patient Experience** | Communication with Nurses | 87 | 84 | 80 | 88 | 5 | 0 | 5 | **10** | 0.55 |
| | Communication with Doctors | 87 | 82 | 80 | 89 | 3 | 0 | 3 | **10** | |
| | Responsive-ness of Hospital Staff | 79 | 66 | 67 | 82 | 0 | 0 | 0 | **10** | |
| | Communication about Medicines | 76 | 73 | 64 | 74 | 9 | 0 | 9 | **10** | |
| | Discharge Information | 92 | 90 | 88 | 92 | 5 | 0 | 5 | **10** | |
| | Care Transition Measure | 61 | 59 | 52 | 63 | 6 | 0 | 6 | **10** | |
| | Overall Rating of this Hospital | 83 | 75 | 72 | 86 | 2 | 0 | 2 | **10** | |
| | Cleanliness and Quietness of Hospital Env | 78.5 | 75.5 | 66.5 | 80.5 | 6 | 0 | 6 | **10** | |
| | Consistency Points | | | | | | | 19 | **20** | |
| **Patient Safety** | C. Diff | 0.76 | 0 | 0.52 | 0 | 10 | 9 | 10 | **10** | 0.45 |

| Domain | Measure Name | Base Period Score | Perf Period Score | Thresh-hold | Bench-mark | Attain Pts | Improve Pts | Achieved Pts (Max) | Pts Possible | Domain Score |
|---|---|---|---|---|---|---|---|---|---|---|
| | Sepsis Bundle | 31 | 38 | 60 | 86 | 0 | 1 | 1 | **10** | |
| | Venous Thrombo-embolism Prophylaxis | 92 | 92 | 91 | 100 | 2 | 0 | 2 | **10** | |
| | Severe Obstetrics Complications | N/A | N/A | N/A | N/A | N/A | N/A | 5 | **10** | |
| **Overall Total Performance Score (TPS)** | | | | | | | | | | 0.45 |
| **Incentive Reward %** | | | | | | | | | | 0.67% |

Note: Emergency Transfer Communication and Severe Obstetrics Complications are shown as a placeholder. Data not yet available.

This CAH Quality upside reward will begin as a pay-for-reporting in PY3 and progress to a pay-for-performance in PY5 as indicated in **Exhibit 31.** During the transition from fully pay-to-report to fully pay-to-perform, the value of the pay-to-perform CAH quality reward will be weighted by the progression outlined in **Exhibit 31.** For example, if a hospital receives a CAH pay-to-perform reward of 1% in 2031 (e.g., qualifies for half of the maximum possible adjustment), their total CAH quality reward is 1.5% (1% pay-to-report, 0.5% pay-to-perform).

**Exhibit 31: Critical Access Hospital Quality Upside Reward**

| Example Year | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|---|---|---|---|---|---|---|---|---|
| | **PY1** | **PY2** | **PY3** | **PY4** | **PY5** | **PY6** | **PY7** | **PY8** |
| **Pay-for-Reporting** | | | 2% | 2% | 1.5% | 1% | 0.5% | 0% |
| **Pay-for-Performance** | | | | | 0.5% Based on Perf. Period 1 | 1% Based on Perf. Period 2 | 1.5% Based on Perf. Period 3 | 2% Based on Perf. Period 4 |
| **CAH Quality Base Period** | CAH Quality Base Period 1 | CAH Quality Base Period 2 | CAH Quality Base Period 3 | CAH Quality Base Period 4 | CAH Quality Base Period 5 | CAH Quality Base Period 6 | CAH Quality Base Period 7 | CAH Quality Base Period 8 |
| **CAH Quality Performance Period** | | | CAH Quality Perf. Period 1 | CAH Quality Perf. Period 2 | CAH Quality Perf. Period 3 | CAH Quality Perf. Period 4 | CAH Quality Perf. Period 5 | CAH Quality Perf. Period 6 |

### 2.3.2 Hospital Health Equity Improvement Bonus

The AHEAD HGB methodology includes a Health Equity Improvement Bonus (HEIB), which is an upside reward of up to 0.5% to a HGB based on hospital performance on select health equity-focused measures. This 0.50% will be a percentage of the total HGB and will be separate from the SRA, TCOC Adjustment, and Effectiveness Adjustment.

As currently envisioned, the HEIB for a Participant Hospital will be based on measuring improvement based on their historic performance over a fixed-base period for readmissions using the Hybrid Hospital Wide Readmission measure and PQI-92 in the High Adversity cohort (a hospital's 75$^{th}$ percentile of Social Risk Score (SRS)).

The 0.5% upside reward is split between a maximum 0.25% reward for improvement in readmissions in the High Adversity cohort, and a maximum 0.25% for improvement in PQI-92 in the High Adversity cohort. Performance on readmissions and PQI-92 are calculated, scaled, and rewarded separately. Hospitals must have overall improvement in total readmissions to be eligible for the HEIB Readmission reward portion and must have overall improvement in PQI-92 to be eligible for the HEIB PQI reward portion. The improvement percentage in each of readmissions and PQI-92 will be mapped to a reward scale of 0-0.25% increase of each hospital's HGB after Annual Trend Updates are applied. The readmissions and PQI-92 rewards results will be added together for a maximum total reward of 0.50%. Improvement targets will increase as the Model progresses to continue to drive a decrease in health care disparities and inequity.

The HEIB will first be applied to HGBs in PY4 using the year ending 6 months prior to PY1 as the fixed-base period and PY2 as the performance measurement period. Participant Hospital performance on those measures will determine the degree of an upward adjustment that will be applied to the HGB in a future PY (e.g., PY2 performance will be reflected in the Participant Hospital's PY4 HGB; PY3 performance will be reflected in the Participant Hospital's PY5 HGB; etc.).

Measures will be disparity-risk-stratified using the beneficiary-level SRS used in the AHEAD SRA (**Section 2.2.7.1**) to identify those beneficiaries with higher adversity and potential disparities. Participant Hospital scores for SRS will range from 1 to 150. CMS is considering adjustments to this methodology to account for small sample sizes that may impact stratifying these measures for small or rural hospitals.

For the HEIB adjustment, ADI is based on the census block group in which the beneficiary resided on their first day of eligibility and applied to all eligible beneficiaries with an inpatient admission or observation stay > 23 hours at each hospital (known as treated beneficiaries).

Participant Hospitals will receive a HEIB reward for improvement among beneficiaries in the highest SRS group (75$^{th}$ percentile) in the potential Healthcare Quality and Utilization measures, as detailed in **Exhibit 32**.

The HEIB adjustment calculation is as follows:

- **Step 1:** Calculate the SRS for each treated beneficiary and identify beneficiaries that are at or above the Participant Hospital's 75$^{th}$ percentile.
- **Step 2:** Calculate a) readmission rate and b) PQI-92 admission rate for the base period (e.g., PY1 for initial PY4 HEIB) and the performance measurement period (e.g., PY2 for initial PY4 HEIB).
- **Step 3:** Calculate measure rates for the High Adversity Cohort (SRS >= Participant Hospital's 75$^{th}$ percentile) and overall.
- **Step 4:** Calculate improvement between the performance measurement period ($p$) the over the fixed-base period ($b$) in readmission and PQI-92 rates for both the High Adversity Cohort and overall as,

  $(\boldsymbol{Eq.\,1})$ $\boldsymbol{PQI\ Admission\ Rate\ Improvement}$

  $$= \frac{PQI\ Admit\ Rate_p - PQI\ Admit\ Rate_b}{PQI\ Admit\ Rate_b}$$

  $(\boldsymbol{Eq.\,2})$ $\boldsymbol{Readmission\ Rate\ Improvement}$

  $$= \frac{Readmit\ Rate_p - Readmit\ Rate_b}{Readmit\ Rate_b}$$

- **Step 5:** Calculate the HEIB reward based on improvement percentage for readmissions and PQI-92. The Participant Hospital is eligible for a HEIB reward for Readmissions or PQI respectively if improvement rates (Eq. 1 and 2 above) are > 0%. Rewards for each of up to 0.25% are scaled using **Exhibit 33 and 34.**

### Exhibit 32: Health Equity Improvement Bonus Measures (Measures Subject to Change)

| Domain | Measure | Cohort |
|---|---|---|
| **Health Care Quality and Utilization** | CMS Hybrid Hospital-Wide Readmission (Hybrid eHWR) | Inpatient |
| **Health Care Quality and Utilization** | PQI-92 Chronic Conditions Composite (see details below table) | Inpatient and Observation > 23 hours |

**PQI Admission Rate:** Calculated as the portion of inpatient hospitalizations and observation stays that satisfy numerator criteria for the PQI-92 Chronic Conditions Composite. It is calculated as,

$$(\boldsymbol{Eq.3})\ \boldsymbol{PQI-92\ Admission\ Rate} = \frac{(PQI-92\ compliant\ inpatient\ or\ observation\ stays > 23\ hours}{(Total\ inpatient\ or\ observation\ stays > 23\ hours)}$$

**PQI-92 Chronic Conditions Composite:** AHRQ measures encounters that are potentially avoidable due to access and quality of ambulatory care.[18] Encounters include both inpatients and observation cases greater than 23 hours in a set of specific chronic condition categories:

- PQI #1 Diabetes Short-Term Complications Admission Rate
- PQI #3 Diabetes Long-Term Complications Admission Rate
- PQI #5 Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate
- PQI #7 Hypertension Admission Rate
- PQI #8 Heart Failure Admission Rate
- PQI #14 Uncontrolled Diabetes Admission Rate
- PQI #15 Asthma in Younger Adults Admission Rate
- PQI #16 Lower-Extremity Amputation among Patients with Diabetes Rate

The below tables summarize the scaling of the HEIB based on achieving relative improvement in each of readmissions (**Exhibit 33**) and PQI-92 measures (**Exhibit 34**), 2.5% – 10% improvement targets, increasing every year: below summarizes the scaling of the HEIB based on achieving relative improvement in each of readmissions and PQI-92 measures, 2.5% – 10% improvement targets, increasing every year.

### Exhibit 33: HEIB Reward to Readmission Improvement Target Scale for PY4-PY8 (based on PY2-PY6 Performance)

| | Readmissions Improvement Target | | | | |
|---|---|---|---|---|---|
| **HEIB Reward** | **PY4** | **PY5** | **PY6** | **PY7** | **PY8** |
| **0.00%** | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| **0.03%** | 0.25% | 0.50% | 0.75% | 1.00% | 1.00% |

[18] See AHRQ Quality Indicator User Guide: Prevention Quality Indicators (PQI) Composite Measures, v2023

| HEIB Reward | Readmissions Improvement Target | | | | |
|---|---|---|---|---|---|
| | PY4 | PY5 | PY6 | PY7 | PY8 |
| **0.05%** | 0.50% | 1.00% | 1.50% | 2.00% | 2.00% |
| **0.08%** | 0.75% | 1.50% | 2.25% | 3.00% | 3.00% |
| **0.10%** | 1.00% | 2.00% | 3.00% | 4.00% | 4.00% |
| **0.13%** | 1.25% | 2.50% | 3.75% | 5.00% | 5.00% |
| **0.15%** | 1.50% | 3.00% | 4.50% | 6.00% | 6.00% |
| **0.18%** | 1.75% | 3.50% | 5.25% | 7.00% | 7.00% |
| **0.20%** | 2.00% | 4.00% | 6.00% | 8.00% | 8.00% |
| **0.23%** | 2.25% | 4.50% | 6.75% | 9.00% | 9.00% |
| **0.25%** | 2.50% | 5.00% | 7.50% | 10.00% | 10.00% |

**Exhibit 34: HEIB Reward to PQI-92 Improvement Target Scale for PY4-PY8 (based on PY2-PY6)**

| HEIB Reward | PQI-92 Improvement Target | | | | |
|---|---|---|---|---|---|
| | PY4 | PY5 | PY6 | PY7 | PY8 |
| **0.00%** | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| **0.03%** | 0.25% | 0.50% | 0.75% | 1.00% | 1.00% |
| **0.05%** | 0.50% | 1.00% | 1.50% | 2.00% | 2.00% |
| **0.08%** | 0.75% | 1.50% | 2.25% | 3.00% | 3.00% |
| **0.10%** | 1.00% | 2.00% | 3.00% | 4.00% | 4.00% |
| **0.13%** | 1.25% | 2.50% | 3.75% | 5.00% | 5.00% |
| **0.15%** | 1.50% | 3.00% | 4.50% | 6.00% | 6.00% |
| **0.18%** | 1.75% | 3.50% | 5.25% | 7.00% | 7.00% |
| **0.20%** | 2.00% | 4.00% | 6.00% | 8.00% | 8.00% |
| **0.23%** | 2.25% | 4.50% | 6.75% | 9.00% | 9.00% |
| **0.25%** | 2.50% | 5.00% | 7.50% | 10.00% | 10.00% |

**Exhibit 35** demonstrates a sample hospital HEIB calculation of improvement in readmissions and PQI-92. The improvement rates are then mapped to the reward scaling in **Exhibit 33** and **Exhibit 34** and applied to the sample HGB to demonstrate the resulting positive adjustment to the Participant Hospital's HGB.

**Exhibit 35: Sample Health Equity Improvement Bonus Calculation**

| | Calculation Step | Base Performance | Measurement Period Performance (PY2) | Improvement |
|---|---|---|---|---|
| HEIB Readmission Calculation | **Hospital PY4 HGB (A)** | | | **$ 41,091,536** |
| | **High Adversity Cohort Readmission Rate (B)** | 19.83% | 14.02% | -29.28% |
| | **Overall Readmission Rate Improvement (C) (>0% for HEIB reward)** | 14.08% | 13.30% | -5.55% |
| | **Readmissions HEIB Scaling % (D = B > Target in Ex. 26)** | | | 0.25% |
| | **Readmissions HEIB Reward (E = A * D)** | | | **$102,729** |
| HEIB PQI-92 Calculation | **High Adversity Cohort PQI-92 Admission Rate (F)** | 15.66% | 9.60% | -38.71% |
| | **Overall PQI-92 Admission Rate Improvement (G) (>0% for HEIB reward)** | 12.03% | 9.42% | -21.71% |
| | **PQI-92 HEIB Scaling % (H = F > Target in Ex. 27)** | | | 0.25% |
| | **PQI-92 HEIB Scaling Reward (I = A * H)** | | | **$102,729** |
| | **Total HEIB Reward Applied to PY4 HGB (E + I)** | | | **$205,458** |

### 2.3.3 Effectiveness Adjustment

The Effectiveness Adjustment (EA) applies a downward adjustment based on a Participant Hospital's Medicare FFS PAU performance relative to all other Eligible Hospitals in the state. The EA is designed to incentivize Participant Hospitals to implement interventions that reduce unnecessary or avoidable care. The EA encourages hospitals to develop strategies such as transitional care programs, better integration with primary care providers to co-manage patients with chronic disease, and engagement with community-based organizations focused on addressing the social drivers of health. Hospitals that effectively reduce PAU relative to other hospitals in the state retain HGB funding to reinvest in clinical and social services that continue to promote the hospital's success under the Model.

Starting in PY2, Acute Care Hospital (ACH) Global Budgets will receive a downward adjustment based on the Participant Hospital's PAU Percent (revenue from PAU encounters out of total revenue) relative to the other ACHs in the state. Hospitals with a PAU Percent below the 20$^{th}$ percentile of all ACHs in the State will receive no reduction at all. The EA reduction for hospitals in the 20$^{th}$ to 100$^{th}$ percentile is tiered based on the percentile ranges found in **Exhibit 36**.

Special consideration will be made for Safety Net Hospitals (SNHs, **Section 1.6**) to recognize the unique circumstances associated with their statuses providing care to underserved populations; SNHs will be compared relative to each other, separate from ACHs. In addition, the EA for SNHs will begin in PY3, one year later than ACHs.

The maximum EA reduction amount and the reduction for hospitals falling between the 20$^{th}$ and 100$^{th}$ percentile will increase over time. For the first year of the reduction (PY2 for ACHs and PY3 for SNHs) the maximum downward adjustment will be 0.5%, eventually increasing to a maximum of 2%. The gradual increase will provide hospitals time to gain additional experience with

implementing processes to control PAU and form partnerships with primary care providers, post-acute care providers, and community-based organizations that can address social drivers of health.

PAU is an inpatient hospitalization or outpatient encounter that satisfies numerator criteria for one of the following measures.

1. Readmissions
2. Avoidable Admissions (calculated by the AHRQ PQI-90 indicator)[19]
3. Avoidable Emergency Department (ED) visits (calculated by the New York University Emergency Department algorithm (NYU EDA))[20]
4. Low-Value Care (as defined by MedPAC)[21].

CMS continues to evaluate the quality measures listed and will incorporate stakeholder feedback in the final methodology that will be shared during AHEAD's Pre-Implementation Period as hospitals consider participation in the Model.

PAU Payments are the paid amounts from claims that are part of a PAU inpatient hospitalization or outpatient encounter and are counted only once if the event satisfies criteria for more than one measure. See 'Identification of PAU' below for measure definitions. The PAU Percent is the percentage of total FFS payments (or no-pay claims during PYs) for Eligible Hospital Services that is attributable to PAU.

#### *2.3.3.1 Effectiveness Adjustment Calculation*

To calculate the EA for a Participant Hospital, each hospital in the state is ranked in ascending order based on their PAU Percent. If the Participant Hospital's PAU percent is within the 20th percentile or lower (lower PAU Percent is better) the Participant Hospital is designated as a "top performer" and does not receive an EA reduction. Hospitals that fall above the 20$^{th}$ percentile will receive a reduction determined based on the hospital's position within the distribution of hospitals in the state (State PAU Percentile). The EA is tiered so that hospitals with a higher PAU Percent receive a greater reduction and depending on hospital type (ACH vs SNH). The EA is calculated separately for ACHs and SNHs using values in **Exhibit 36**.

$$(\mathbf{Eq.\ 1})\ \mathbf{Effectiveness\ Adjustment}\ (\mathbf{EA}) = \text{EA Percentile range lookup in Exhibit 36}$$

**Where,**

**EA Percentile:** The State PAU Percentile is calculated across all hospitals in the state, sorting in ascending order based on their PAU Percent and ranked into percentiles. For hospitals below the 20$^{th}$ percentile of the State PAU Percentile, the EA is zero. For all other hospitals **Exhibit 36** provides the EA Adjustment for each PY that is based on ranges or tiers of the EA Percentile.

[19] See AHRQ PQI-90 Overall Composite Technical Specifications

[20] See the Emergency Department Visit Classification Using the NYU Algorithm

[21] More information on low-value care as defined by MedPAC is available in the MedPAC Databook.

**Exhibit 36: Effectiveness Adjustment by Performance Year and Hospital Type**

| Data for PUA Percent and PUA Percentile | Payment Adjustments PY | ACH EA Percentile 20-49 | ACH EA Percentile 50-79 | ACH EA Percentile 80-100 | SNH EA Percentile 20-49 | SNH EA Percentile 50-79 | SNH EA Percentile 80-100 |
|---|---|---|---|---|---|---|---|
| **Year ending 6 mo. prior to PY1** | PY2 | -0.25% | -0.38% | -0.50% | 0.00% | 0.00% | 0.00% |
| **PY1** | PY3 | -0.38% | -0.57% | -0.75% | -0.25% | -0.38% | -0.50% |
| **PY2** | PY4 | -0.50% | -0.76% | -1.00% | -0.38% | -0.57% | -0.75% |
| **PY3** | PY5 | -0.63% | -0.95% | -1.25% | -0.50% | -0.76% | -1.00% |
| **PY4** | PY6 | -0.75% | -1.14% | -1.50% | -0.63% | -0.95% | -1.25% |
| **PY5** | PY7 | -1.00% | -1.52% | -2.00% | -0.75% | -1.14% | -1.50% |
| **PY6** | PY8 | -1.00% | -1.52% | -2.00% | -1.00% | -1.52% | -2.00% |
| **PY7** | PY9 (or Transition Period Year) | -1.00% | -1.52% | -2.00% | -1.00% | -1.52% | -2.00% |

#### 2.3.3.2 PAU Percent Calculation

The PAU Percent for a hospital is calculated by dividing PAU Payments by Total Inpatient and Outpatient revenue (or no-pay claims during the PY) for Eligible Hospital Services.

$$(\boldsymbol{Eq.2})\ \boldsymbol{Hospital\ PAU\ Percent} = \frac{PAU\ Payments}{Total\ Inpatient\ and\ Outpatient\ Revenue}$$

#### 2.3.3.3 Identification of PAU

As noted, there are four measures for identifying whether an inpatient hospitalization or outpatient encounter is considered PAU. Payments on claims for these events are counted only once if the hospitalization or outpatient encounter satisfies criteria for more than one measure.

**Preventable Admissions**

Hospitalizations considered as PAU include inpatient admissions and outpatient observation stays with >23-hour visits that satisfy AHRQ PQI-90 or readmission measure criteria. Observation stays are defined by revenue codes 0760 (Treatment or observation room - general classification), 0761 (Treatment or observation room - treatment room), 0762 (Treatment or observation room – observation room), and 0769 Treatment or observation room – other). Inpatient admissions are defined by type of bill 1X and in some cases, can incorporate more than one claim (e.g., split periods of an inpatient stay).

The AHRQ PQI-90 Composite includes the following types of hospitalizations:

- PQI 01 - Diabetes, short-term complications admission rate
- PQI 03 - Diabetes, long-term complications admission rate
- PQI 05 - Chronic obstructive pulmonary disease (COPD) or asthma in older adults admission rate
- PQI 07 - Hypertension admission rate

- PQI 08 - Heart failure admission rate
- PQI 11- Bacterial pneumonia admission rate
- PQI 12 - Urinary tract infections admission rate
- PQI 14 - Uncontrolled diabetes admission rate
- PQI 15 -Asthma in younger adults admission rate
- PQI 16 - Lower extremity amputations among patients with diabetes admission rate

**Readmissions**

Hospitalizations within 30 days of an initial inpatient stay discharge or outpatient observation visit greater than 23-hours will be counted as PAU. In cases where the initial hospitalization took place at a hospital different from the subsequent hospitalization, the PAU is counted for hospital with the initial hospitalization. Planned readmissions for procedures and treatments are excluded and not counted as PAU. Planned readmissions are identified based on the CMS readmission algorithm developed by the Yale New Haven Health Services Corporation - Center for Outcomes Research and Evaluation (YNHHSC/CORE).

**Avoidable Emergency Department (ED) Visits**

Avoidable ED visits are counted as PAU and are identified using the NYU ED algorithm (NYU EDA). The NYU EDA classifies the ED visit into one of six categories based on the diagnosis in the first position on the claim. The categories considered PAU are listed below:

- Considered PAU
  - Emergent ED Care Needed Preventable/avoidable
  - Emergent Primary Care Treatable
  - Non-emergent
- Not Considered PAU
  - Emergent ED Care Needed not preventable/avoidable
  - Exclusion: mental health, alcohol, substance abuse, injury
  - Unclassified

**Low-Value Care**

Outpatient encounters identified as “low-value care” are counted as PAU. MedPAC low-value care indicators are used to classify hospital outpatient tests and procedures in six categories: cancer screening, diagnostic and preventive testing, preoperative testing, imaging, cardiovascular testing and procedures, and other low-value surgical procedures. AHEAD will use the specific (narrower) definition of the Low-Value Care measures and will consider the following indicators from this set as PAU:

1. Back Imaging for Patients with Non-Specific Low Back Pain
2. Screening for Carotid Artery Disease in Asymptomatic Patients
3. Total or Free T3-level Testing for Patients with Hypothyroidism
4. Head Imaging for Uncomplicated Headache

5. Prostate-specific Antigen (PSA) Testing for Men over Age 75

#### 2.3.3.3 Effectiveness Adjustment Example (PY1 ACH)

**Exhibit 37** provides an example of how the EA is calculated for an ACH.

**Exhibit 37: Effectiveness Adjustment Calculation Example**

| Calculation Step | Gap Period | Calculation |
|---|---|---|
| **Encounters Identified as (1) Readmissions Encounters or (2) Avoidable Admissions Encounters or (3) Avoidable ED Encounters, or (4) Low-Value Care Encounters** | $15,000,000 | A |
| **Total Hospital Revenue** | $40,000,000 | B |
| **PAU Percent** | 37.5% | C=A÷B |
| **ACH PAU Percent State Percentile (for the purposes of this example, assume 70th Percentile)** | 70th Percentile | D |
| **Hospital EA** | -0.38% | E<br>Exhibit 36. 70th Percentile for Year ending 6 mo. prior to PY1 |
| **Hospital HGB** | $40,000,000 | F |
| **Reduction in HGB due to EA** | -$152,000 | G = E * F |

### 2.3.4 Total Cost of Care Performance Adjustment

Participant Hospitals can earn additional incentives for managing TCOC in the geographies they serve. Beginning in PY3 the TCOC Adjustment is upside only, then becomes bi-directional in PY4 so that if the change in attributed TCOC is below/above the established growth target, the hospital will be rewarded/penalized with up to 2 percent adjustment to HGBs. This aligns hospital incentives with those of the Model overall, which are to reduce TCOC while improving population health. Participant Hospitals will have shared accountability for the TCOC of beneficiaries residing in the geographies they serve.

For Acute Care Hospitals, attributed TCOC will be based on spending two PYs previously to allow time for Claims Runout. For example, the TCOC Performance Adjustment made in PY3 will be based on PY2 performance.

#### 2.3.4.1 TCOC Performance Adjustment Attribution Approach

TCOC is attributed to Participant Hospitals based on the share of inpatient and outpatient services the hospital provides to each geographic area it serves and can be described below. The geographic areas used in the TCOC adjustment are the same as those used in the Market Shift Adjustment (MSA).

$$(Eq.1)\ Participant\ Hospital\ Attributed\ TCOC = \left(\left(\sum_{c=1}^{c=n} Geographic\ Area\ Bene\ TCOC_c * IPOPShare_c\right) \div \left(\sum_{c=1}^{c=n} Geographic\ Area\ Months_c * IPOPShare_c\right)\right) \div Weighted\ Average\ HCC\ Score$$

**Where,**

- **Geographic Area Bene TCOC** = Part A or Part B TCOC for beneficiaries in each geographic area, *c*, served by the hospital. Geographic areas are the counties or zips included in the MSA.
- **Geographic Area Bene Months** = Total Part A or B beneficiary months in each geographic area, *c*, served by the hospital. Geographic areas are the counties or zips included in the MSA.
- **IP-OP Share =** Hospital's portion of total county inpatient and outpatient spending for each geographic area, *c*, served by the hospital. Geographic areas are the counties or zips included in the MSA.
- **Weighted Average HCC Score =** Average HCC score for beneficiaries in geographic areas served by the hospital, weighted by IP-OP Share.

For consistency with statewide TCOC target calculations, attributed TCOC is calculated separately for Part A and for Part B, then summed to create overall Attributed TCOC. TCOC also will include non-claims-based payments, such as capitated payments and Accountable Care Organization (ACO) shared savings or losses.

#### 2.3.4.2 TCOC Performance Benchmark

Attributed TCOC growth is compared to a growth in Benchmark TCOC, calculated by case-matching beneficiaries in an AHEAD participating state or sub-state region to similar non-participating beneficiaries. The Benchmark TCOC is calculated as,

$$(Eq.2)\ Benchmark\ TCOC = \frac{Case - Matched\ TCOC}{Case - Matched\ Bene\ Months} \div (Case - Matched\ Average\ HCC\ Score)$$

**Where,**

- **Case-Matched Bene TCOC** = Part A or Part B TCOC for beneficiaries not in an AHEAD state or sub-state region case matched to beneficiaries who are in an AHEAD state or sub-state region.

- **Case-Matched Months** = Total Part A or B beneficiary months for beneficiaries not in an AHEAD state or sub-state region case matched to beneficiaries who are in an AHEAD state or sub-state region.
- **Case-Matched Average HCC Score =** Mean HCC score for beneficiaries not in an AHEAD state or sub-state region case matched to beneficiaries who are in an AHEAD state or sub-state region.

Case matched beneficiaries are Medicare FFS beneficiaries who have the same characteristics (e.g., age, gender, comorbidities) as beneficiaries in an AHEAD state or sub-state region but do not reside in an AHEAD state or sub-state region. The purpose of the case matching process is to create a benchmark that represents what spending for a similar population would have been in the absence of the AHEAD Model. CMS is working to refine the exact matching variables/process for version 3.0 of the financial specifications and welcomes input on the approach.

#### *2.3.4.3 TCOC Performance Adjustment Calculation*

For each Participant Hospital, the TCOC Adjustment is up to 2% of the percentage difference in the growth of Attributed TCOC, relative to Benchmark TCOC growth,

$$(Eq.3)\ TCOC\ Adjustment = \left(\frac{(\%\ \Delta\ Attributed\ TCOC - \%\ \Delta\ Benchmark\ TCOC)}{\%\ \Delta\ Benchmark\ TCOC}\right) * -2\%$$

The maximum amount of reward/penalty applied to HGBs in PY4 is limited to between 0% and 2% in PY4 or -2% and +2% thereafter.

**Exhibit 38** shows a sample TCOC adjustment calculation. Four of five hospitals had TCOC growth less than the benchmark and received an upward adjustment to their HGB. Hospital E had TCOC growth exceeding the benchmark and would receive no adjustment in PY3. After PY3, this hospital would receive a downward adjustment of $157,000 (TCOC Adjustment % * 2%).

## Exhibit 38: Sample Total Cost of Care Adjustment Calculation

| | Calculation | Variable | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E |
|---|---|---|---|---|---|---|---|
| BY3 | Weighted County TCOC | A | $27,000,000 | $75,000,000 | $240,000,000 | $19,000,000 | $105,000,000 |
| | Weighted County Bene Months | B | 30,000 | 104,000 | 295,000 | 25,000 | 130,000 |
| | Attributed TCOC PBPM | A ÷ B = C | $900 | $721 | $814 | $760 | $808 |
| | Weighted Avg County Risk Score | D | 1.05 | 0.8 | 1.03 | 0.9 | 0.97 |
| | Attributed TCOC Risk Adjusted | D/C | $857 | $901 | $790 | $844 | $833 |
| PY3 | Weighted County TCOC | E | $29,000,000 | $75,000,000 | $250,000,000 | $19,500,000 | $110,000,000 |
| | Weighted County Bene Months | F | 32,000 | 105,000 | 295,000 | 25,000 | 130,000 |
| | Attributed TCOC PBPM | E ÷ F = G | $906 | $714 | $847 | $780 | $846 |
| | Weighted Avg County Risk Score | H | 1.06 | 0.78 | 1.05 | 0.9 | 0.97 |
| | Attributed TCOC Risk Adjusted | G÷H | $855 | $915 | $807 | $867 | $872 |
| | Change in TCOC | I | -0.30% | 1.60% | 2.10% | 2.60% | 4.70% |
| | HGB After Annual Adjustments | L | $22,000,000 | $41,000,000 | $141,500,000 | $12,100,000 | $65,400,000 |
| | Actual Growth | I | -0.30% | 1.60% | 2.10% | 2.60% | 4.70% |
| | TCOC Growth Benchmark | M | 4.20% | 4.20% | 4.20% | 4.20% | 4.20% |
| | At Risk % | R | 2.00% | 2.00% | 2.00% | 2.00% | 2.00% |
| | TCOC Adjustment % | J = ((I - M) ÷ M)*R | 2.10% | 1.30% | 1.00% | 0.70% | -0.20% |
| | TCOC Adjustment | K = L * J | $440,000 | $513,801 | $1,433,818 | $90,371 | $0.00 |

### 2.3.5 Logistical Order of Operations for Performance-Based Adjustments

**Exhibit 39** illustrates the order of operations when applying performance-based adjustments to the HGB in the PY6 when the EA, CAH Quality Adjustment, HEIB, and TCOC Adjustment are applied. Note that sequestration will be applied to final HGB payments in keeping with current law.

**Exhibit 39: Logistical Order of Operations for Performance-Based Adjustments to the HGB**

| Calculation | Feature | Percentage | Amount | Financial Specification Section |
|---|---|---|---|---|
| **A** | HGB after Annual Trend Updates and AHEAD Specific Adjustments | | $213,455,192 | |
| **B** | EA | (0.3%) | | 2.3.3 |
| **C** | Quality Adjustment (CAH only) | 2.0% | | 2.3.1 |
| **D** | HEIB | 0.5% | | 2.3.2 |
| **E** | TCOC | 2.0% | | 2.3.4 |
| **F = A + (A * B) + (A * C) + (A * D) + (A * E)** | HGB with Performance Adjustments | | $222,420,310 | |
| **G** | Sequestration | 2.0% | | |
| **H = F – (F * G)** | Final HGB (After Sequestration) | | $217,971,904 | |

## 2.4 Timing and Application of Annual Trend Update and Performance-Based Adjustments to the Hospital Global Budget

**Exhibits 40-42** illustrates the timing and application of annual trend updates, AHEAD-specific adjustments, and performance-based adjustments to the HGB for Participant Hospitals over the course of the Model.

## Exhibit 40: Timing and Application of Annual and Performance-Based Adjustments to the Hospital Global Budget for Acute Care Hospital

| Item | Adjustment | PY 1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 |
|---|---|---|---|---|---|---|---|---|---|
| **A** | Current HGB | Base HGB | PY1 HGB w. Annual & DA (Row H) | PY2 HGB w. Annual & DA (Row H) | PY3 HGB w. Annual & DA (Row H) | PY4 HGB w. Annual & DA (Row H) | PY5 HGB w. Annual & DA (Row H) | PY6 HGB w. Annual & DA (Row H) | PY7 HGB w. Annual & DA (Row H) |
| **B** | Service Line Adjustment (SLA) | $ Planned Service Line Changes Gap Period or PY1 | $ Planned Service Line Changes PY2 | $ Planned Service Line Changes PY3 | $ Planned Service Line Changes PY4 | $ Planned Service Line Changes PY5 | $ Planned Service Line Changes PY6 | $ Planned Service Line Changes PY7 | $ Planned Service Line Changes PY8 |
| **C** | Market Shift Adjustment (MSA) | NA | Gap Period-BY3 | PY1-Gap Period | PY2-PY1 | PY3-PY2 | PY4-PY3 | PY5-PY4 | PY6-PY5 |
| **D** | Unplanned Volume Adjustment (UVA) | NA | Gap Period-BY3 | PY1-Gap Period | PY2-PY1 | PY3-PY2 | PY4-PY3 | PY5-PY4 | PY6-PY5 |
| **E = A + B + C + D** | HGB Adjusted for Volume | PY1 HGB Adj for Volume | PY2 HGB Adj for Volume | PY3 HGB Adj for Volume | PY4 HGB Adj for Volume | PY5 HGB Adj for Volume | PY6 HGB Adj for Volume | PY7 HGB Adj for Volume | PY8 HGB Adj for Volume |
| **F** | Annual Payment Adjustment (APA) | PY1/ BY3 | PY2/PY1 | PY3/PY2 | PY4/PY3 | PY5/PY4 | PY6/PY5 | PY7/PY6 | PY8/PY7 |
| **G** | Demographic Adjustment (DA) | BY3/ BY2 | PY2/PY1 | PY3/PY2 | PY4/PY3 | PY5/PY4 | PY6/PY5 | PY7/PY6 | PY8/PY7 |
| **H = E * (1 + F) *(1 + G)** | HGB with APA & DA | PY1 HGB w/ Annual & DA | PY2 HGB w/ Annual & DA | PY3 HGB w/ Annual & DA | PY4 HGB w/ Annual & DA | PY5 HGB w/ Annual & DA | PY6 HGB w/ Annual & DA | PY7 HGB w/ Annual & DA | PY8 HGB w/ Annual & DA |
| **I** | Social Risk Adjustment (SRA) | Up to 2.0% Based on BY3 | Up to 2.0% Based on PY1 | Up to 2.0% Based on PY2 | Up to 2.0% Based on PY3 | Up to 2.0% Based on PY4 | Up to 2.0% Based on PY5 | Up to 2.0% Based on PY6 | Up to 2.0% Based on PY7 |
| **J = H + (H * I)** | HGB after Annual Updates | PY1 HGB after Annual Updates | PY2 HGB after Annual Updates | PY3 HGB after Annual Updates | PY4 HGB after Annual Updates | PY5 HGB after Annual Updates | PY6 HGB after Annual Updates | PY7 HGB after Annual Updates | PY8 HGB after Annual Updates |
| **K** | Effectiveness Adjustment (EA) | NA | Up to (0.25%) Based on Gap Year | Up to (0.50%) Based on PY1 | Up to (0.75%) Based on PY2 | Up to (1.0%) Based on PY3 | Up to (1.33%) Based on PY4 | Up to (1.66%) Based on PY5 | Up to (2.00%) Based on PY6 |
| **L** | Health Equity Improvement Bonus (HEIB) | NA | NA | NA | Up to 0.50% Based on PY2 | Up to 0.50% Based on PY3 | Up to 0.50% Based on PY4 | Up to 0.50% Based on PY5 | Up to 0.50% Based on PY6 |
| **M** | Total Cost of Care Adjustment (TCOC) | NA | NA | NA | Up to 2.0% PY2/PY1 | Up to +/-2.0% PY3/PY2 | Up to +/-2.0% PY4/PY3 | Up to +/-2.0% PY5/PY4 | Up to +/-2.0% PY6/PY5 |
| **N** | TIA | 1.0% | 1.0% | NA | NA | NA | NA | NA | NA |

| Item | Adjustment | PY 1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 |
|---|---|---|---|---|---|---|---|---|---|
| **O = J + ( * K) + (J * L) + (J * M) + (J * N)** | HGB with Annual and Performance Adjustments | PY1 HGB w/ Perf. Adj. | PY2 HGB w/ Perf. Adj. | PY3 HGB w/ Perf. Adj. | PY4 HGB w/ Perf. Adj. | PY5 HGB w/ Perf. Adj. | PY6 HGB w/ Perf. Adj. | PY7 HGB w/ Perf. Adj. | PY 8 HGB w/ Perf. Adj. |
| **P** | Sequestration | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% |
| **Q = O – (O * P)** | Final HGB | Final PY1 HGB | Final PY2 HGB | Final PY3 HGB | Final PY4 HGB | Final PY5 HGB | Final PY6 HGB | Final PY7 HGB | Final PY8 HGB |
| **R** | Mid-Year Reconciliation | NA | Reconciliation for Service Line Based on PY1 Utilization | Reconciliation for Service Line Based on PY2 Utilization and PY3 Update | NA | NA | NA | NA | NA |

## Exhibit 41: Critical Access Hospital: Timing and Application of Annual and Performance-Based Adjustments to the Hospital Global Budget

| Item | Adjustment | PY 1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 |
|---|---|---|---|---|---|---|---|---|---|
| **A** | Current HGB | Base HGB | PY1 HGB w. Annual & DA (Row H) | PY2 HGB w. Annual & DA (Row H) | PY3 HGB w. Annual & DA (Row H) | PY4 HGB w. Annual & DA (Row H) | PY5 HGB w. Annual & DA (Row H) | PY6 HGB w. Annual & DA (Row H) | PY7 HGB w. Annual & DA (Row H) |
| **B** | Service Line Adjustments (SLA) | $ Planned Service Line Changes Gap Period or PY1 | $ Planned Service Line Changes PY2 | $ Planned Service Line Changes PY3 | $ Planned Service Line Changes PY4 | $ Planned Service Line Changes PY5 | $ Planned Service Line Changes PY6 | $ Planned Service Line Changes PY7 | $ Planned Service Line Changes PY8 |
| **C** | Market Shift Adjustment (MSA) | NA | Gap Period – BY3 | PY1-Gap Period | PY2-PY1 | PY3-PY2 | PY4-PY3 | PY5-PY4 | PY6-PY5 |
| **D** | Unplanned Volume Adjustment (UVA) | NA | Gap Period – BY3 | PY1-Gap Period | PY2-PY1 | PY3-PY2 | PY4-PY3 | PY5-PY4 | PY6-PY5 |
| **E = A + B + C + D** | HGB Adjusted for Volume | PY1 HGB Adj for Volume | PY2 HGB Adj for Volume | PY3 HGB Adj for Volume | PY4 HGB Adj for Volume | PY5 HGB Adj for Volume | PY6 HGB Adj for Volume | PY7 HGB Adj for Volume | PY8 HGB Adj for Volume |
| **F** | Annual Payment Adjustment (APA) | PY1/ BY3 | PY2/PY1 | PY3/PY2 | PY4/ PY3 | PY5/PY4 | PY6/PY5 | PY7/PY6 | PY8/PY7 |
| **G** | Demographic Adjustment (DA) | PY1/ BY3 | PY2/PY1 | PY3/PY2 | PY4/ PY3 | PY5/PY4 | PY6/PY5 | PY7/PY6 | PY8/PY7 |
| **H = E * (1 + F) * (1 + G)** | HGB with Annual & DA | PY1 HGB w/ Annual & DA | PY2 HGB w/ Annual & DA | PY3 HGB w/ Annual & DA | PY4 HGB w/ Annual & DA | PY5 HGB w/ Annual & DA | PY6 HGB w/ Annual & DA | PY7 HGB w/ Annual & DA | PY8 HGB w/ Annual & DA |
| **I** | Social Risk Adjustment (SRA) | Up to +2.0% Based on BY3 | Up to +2.0% Based on PY1 | Up to +2.0% Based on PY2 | Up to +2.0% Based on PY3 | Up to +2.0% Based on PY4 | Up to +2.0% Based on PY5 | Up to +2.0% Based on PY6 | Up to +2.0% Based on PY7 |
| **J = H + (H * I)** | HGB after Annual Updates | PY1 HGB after Ann Updates | PY2 HGB after Ann Updates | PY3 HGB after Ann Updates | PY4 HGB after Ann Updates | PY5 HGB after Ann Updates | PY6 HGB after Ann Updates | PY7 HGB after Ann Updates | PY8 HGB after Ann Updates |
| **K** | Effectiveness Adjustment (EA) | NA | NA | Up to (0.25%) Based on PY1 | Up to (0.50%) Based on PY2 | Up to (0.75%) Based on PY3 | Up to (1.00%) Based on PY4 | Up to (1.33%) Based on PY5 | Up to (1.67%) Based on PY6 |

| Item | Adjustment | PY 1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 |
|---|---|---|---|---|---|---|---|---|---|
| **L** | CAH Quality Adjustment | NA | NA | 2.0% Pay to Report Based on PY1 | 2.0% Pay to Report Based on PY2 | 1.5% Pay to Report 0.5% P4P Based on PY3 | 1.0% Pay to Report 1.0% P4P Based on PY4 | 0.5% Pay to Report 1.5% P4P Based on PY5 | 0.0% Pay to Report 2.0% P4P Based on PY6 |
| **M** | Health Equity Improvement Bonus (HEIB) | NA | NA | NA | Up to 0.50% Based on PY2 | Up to 0.50% Based on PY3 | Up to 0.50% Based on PY4 | Up to 0.50% Based on PY5 | Up to 0.50% Based on PY6 |
| **N** | Total Cost of Care (TCOC) | NA | NA | NA | Up to 2.0% | Up to 2.0% | Up to +/-2.0% | Up to +/-2.0% | Up to +/-2.0% |
| **O** | Transformation Incentive Adjustment (TIA) | 1.0% | 1.0% | NA | NA | NA | NA | NA | NA |
| **P= J + (J * K) + (J * L) + (J * M) + (J * N)+ (J * O)** | HGB with Annual and Performance Adjustments | PY1 HGB w/ Perf. Adj. | PY2 HGB w/ Perf. Adj. | PY3 HGB w/ Perf. Adj. | PY4 HGB w/ Perf. Adj. | PY5 HGB w/ Perf. Adj. | PY6 HGB w/ Perf. Adj. | PY7 HGB w/ Perf. Adj. | PY 8 HGB w/ Perf. Adj. |
| **Q** | Sequestration | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% |
| **R = P – (P * Q)** | Final HGB | Final PY1 HGB | Final PY2 HGB | Final PY3 HGB | Final PY4 HGB | Final PY5 HGB | Final PY6 HGB | Final PY7 HGB | Final PY8 HGB |
| **S** | Mid-Year Reconciliation | NA | Reconciliation for Service Line Based on PY1 Utilization | Reconciliation for Service Line Based on PY2 Utilization and PY3 Update | NA | NA | NA | NA | NA |

## Exhibit 42: Safety Net Hospital: Timing and Application of Annual and Performance-Based Adjustments to the Hospital Global Budget

| Item | Adjustment | PY 1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 |
|---|---|---|---|---|---|---|---|---|---|
| **A** | Current HGB | Base HGB | PY1 HGB w. Annual & DA (Row H) | PY2 HGB w. Annual & DA (Row H) | PY3 HGB w. Annual & DA (Row H) | PY4 HGB w. Annual & DA (Row H) | PY5 HGB w. Annual & DA (Row H) | PY6 HGB w. Annual & DA (Row H) | PY7 HGB w. Annual & DA (Row H) |
| **B** | Service Line Adjustment (SLA) | $ Planned Service Line Changes Gap Period or PY1 | $ Planned Service Line Changes PY2 | $ Planned Service Line Changes PY3 | $ Planned Service Line Changes PY4 | $ Planned Service Line Changes PY5 | $ Planned Service Line Changes PY6 | $ Planned Service Line Changes PY7 | $ Planned Service Line Changes PY8 |
| **C** | Market Shift Adjustment (MSA) | NA | Gap Period – BY3 | PY1-Gap Period | PY2-PY1 | PY3-PY2 | PY4-PY3 | PY5-PY4 | PY6-PY5 |
| **D** | Unplanned Volume Adjustment (UVA) | NA | Gap Period – BY3 | PY1-Gap Period | PY2-PY1 | PY3-PY2 | PY4-PY3 | PY5-PY4 | PY6-PY5 |
| **E = A + B + C + D** | HGB Adjusted for Volume | PY1 HGB Adj for Volume | PY2 HGB Adj for Volume | PY3 HGB Adj for Volume | PY4 HGB Adj for Volume | PY5 HGB Adj for Volume | PY6 HGB Adj for Volume | PY7 HGB Adj for Volume | PY8 HGB Adj for Volume |
| **F** | Annual Payment Adjustment (APA) | PY1/BY3 | PY2/PY1 | PY3/PY2 | PY4/PY3 | PY5/PY4 | PY6/PY5 | PY7/PY6 | PY8/PY7 |
| **G** | Demographic Adjustment (DA) | PY1/BY3 | PY2/PY1 | PY3/PY2 | PY4/PY3 | PY5/PY4 | PY6/PY5 | PY7/PY6 | PY8/PY7 |
| **H = E * (1+F) * (1+G)** | HGB with Annual & DA | PY1 HGB w/ Annual & DA | PY2 HGB w/ Annual & DA | PY3 HGB w/ Annual & DA | PY4 HGB w/ Annual & DA | PY5 HGB w/ Annual & DA | PY6 HGB w/ Annual & DA | PY7 HGB w/ Annual & DA | PY8 HGB w/ Annual & DA |
| **I** | Social Risk Adjustment (SRA) | Up to +2.0% Based on BY | Up to +2.0% Based on PY1 | Up to +2.0% Based on PY2 | Up to +2.0% Based on PY3 | Up to +2.0% Based on PY4 | Up to +2.0% Based on PY5 | Up to +2.0% Based on PY6 | Up to +2.0% Based on PY7 |
| **J = H + (H * I)** | HGB after Annual Updates | PY1 HGB after Ann Updates | PY2 HGB after Ann Updates | PY3 HGB after Ann Updates | PY4 HGB after Ann Updates | PY5 HGB after Ann Updates | PY6 HGB after Ann Updates | PY7 HGB after Ann Updates | PY8 HGB after Ann Updates |
| **K** | Effectiveness Adjustment (EA) | NA | NA | Up to (0.25%) Based on PY1 | Up to (0.50%) Based on PY2 | Up to (0.75%) Based on PY3 | Up to (1.00%) Based on PY4 | Up to (1.33%) Based on PY5 | Up to (1.67%) Based on PY6 |
| **L** | Health Equity Improvement Bonus (HEIB) | NA | NA | NA | Up to 0.50% Based on PY2 | Up to 0.50% Based on PY3 | Up to 0.50% Based on PY4 | Up to 0.50% Based on PY5 | Up to 0.50% Based on PY6 |

| Item | Adjustment | PY 1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 |
|---|---|---|---|---|---|---|---|---|---|
| **M** | Total Cost of Care (TCOC) | NA | NA | NA | Up to 2.0% | Up to 2.0% | Up to +/-2.0% | Up to +/-2.0% | Up to +/-2.0% |
| **N** | Transformation Incentive Adjustment (TIA) | 1.0% | 1.0% | NA | NA | NA | NA | NA | NA |
| **O = J + (J * K) + (J * L) + (J * M) + (J * N)** | HGB with Annual and Performance Adjustments | PY1 HGB w/ Perf. Adj. | PY2 HGB w/ Perf. Adj. | PY3 HGB w/ Perf. Adj. | PY4 HGB w/ Perf. Adj. | PY5 HGB w/ Perf. Adj. | PY6 HGB w/ Perf. Adj. | PY7 HGB w/ Perf. Adj. | PY 8 HGB w/ Perf. Adj. |
| **P** | Sequestration | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% | -2.0% |
| **Q = O – (O * P)** | Final HGB | Final PY1 HGB | Final PY2 HGB | Final PY3 HGB | Final PY4 HGB | Final PY5 HGB | Final PY6 HGB | Final PY7 HGB | Final PY8 HGB |
| **R** | Mid-Year Reconciliation | NA | Reconciliation for Service Line Based on PY1 Utilization | Reconciliation for Service Line Based on PY2 Utilization and PY3 Update | NA | NA | NA | NA | NA |

## 3. Operational

The following section details the roles and responsibilities of each party, state-specific flexibility, the Model Governance Structure that will aid the AHEAD State and CMS in overseeing the development of HGBs, the operational timeline, payments to participating hospitals, and cost-reporting requirements.

### 3.1 Roles and Responsibilities

**Exhibit 43** describes the roles and responsibilities of each party in setting, monitoring, adjusting, and administering the HGB.

**Exhibit 43: Roles and Responsibilities**

| Organization | Role |
|---|---|
| **CMS** | Lead Federal government agency administering the AHEAD Model. Responsible for Model policy, payment methodology, and making payments to hospitals on a bi-weekly basis. CMS works with the MACs and other contractors to update payment processes and issue payments for the HGBs. |
| **State** | States apply to participate in AHEAD Model; recruit hospitals, primary care providers, and commercial insurers to participate in the Model; develop state health equity plans; set up the Model Governance Structure; and administer cooperative agreement funding as needed. Responsible for achieving all-payer and Medicare FFS TCOC and primary care investment targets and population health and health equity outcomes. Also responsible for reviewing and approving service line additions and contractions via the Model Governance Structure or other bodies. |
| **Participant Hospital** | Eligible Hospitals may voluntarily opt to participate in a HGB that sets a prospective budget for Medicare FFS, and other payers as appropriate. |
| **Medicare Administrative Contractor (MAC)** | Participant Hospitals will not be paid FFS for Eligible Hospital Services furnished to attributed beneficiaries. The MACs will use files supplied by CMS to process, but not pay, claims submitted by Participant Hospitals. |

### 3.2 Waivers

Participant Hospitals may request certain Medicare payment or fraud and abuse waivers that will enable participants to develop innovative care transformation strategies to advance the goals of the Model. Those waivers related to concurrent care for hospice beneficiaries, cost sharing support, telehealth, care management home visits, home health homebound waiver, nurse practitioner and physician assistant services, and CAH 96-hour certification. AHEAD Medicare HGBs will include additional elements that hospitals will be able to use to innovate and advance goals of the Model.

Additionally, CMS may issue Medicare payment waivers for the purposes of administering and testing the AHEAD Model. CMS will clarify these provisions and reserves the right to make changes or withdraw the waivers in the State Agreement and Hospital Participation Agreement, as applicable. Additional details will be available in Hospital Participation Agreements made between CMS and Participant Hospitals.

### 3.3 Additional Model Requirements

As part of the Model's focus on multi-payer alignment, CMS requires states that participate in AHEAD to offer HGBs to eligible hospitals via their state Medicaid agencies. States participating

in the Model must also recruit at least one commercial payer to offer HGBs by PY2. Participating states will develop an aligned methodology for Medicaid. More information on Medicaid alignment expectations is available in the AHEAD Notice of Funding Opportunity.

In addition, states with existing statewide hospital rate setting or hospital budget setting authority and prior experience with population-based payments or global budgets may develop their own HGB methodology, including for Medicare FFS, subject to CMS approval.[22] This document outlines the technical financial specifications for the CMS-designed HGB methodology, which will be offered in states or sub-state regions who are eligible and do not develop their own methodology.

## 3.4 Issuing Payments to Participant Hospitals

CMS will make bi-weekly lump-sum payments to Participant Hospitals under the approved, prospective HGBs. To determine the specific payments, the Medicare FFS global budget for that PY will be divided into 26 bi-weekly payments. While Participant Hospitals will receive these bi-weekly payments, they will continue to submit claims to CMS during the year, but these will become no-pay claims.

## 3.5 Cost Reporting

Participant Hospitals will continue to submit Medicare Hospital Cost Reports. The Medicare Hospital Cost Reports will be amended to include information on the Medicare Part A and B global budget payment amounts made to the Participant Hospitals. Additionally, the Medicare Hospital Cost Reports will also show the amounts that would have been paid had the hospitals been paid under Medicare FFS for monitoring purposes. Additional guidance will be provided in the Hospital Participation Agreement on cost reporting for all Participant Hospitals, including guidance specific to CAHs.

[22] Notice of Funding Opportunity, States Advancing All-Payer Health Equity Approaches and Development (AHEAD) Model Funding Opportunity, U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services, November 29, 2023.

# Appendix A: Formulas and Calculations

The following provides a summary of all formulas included in this document. The tables provide more details about the calculations in each section.

## Baseline Payment Amount Formulas

### Exhibit A.1: Baseline Payment Amount Table of Formulas

| Equation | Formula |
|---|---|
| **(Eq. 1) Weighted Inpatient Baseline Payment** | $$\textbf{\textit{Weighted Inpatient Baseline Payment}} = (0.1 * \textit{Inpatient Baseline Paid Amounts for BY1}) + (0.3 * \textit{Inpatient Baseline Paid Amounts for BY2}) + (0.6 * \textit{Inpatient Baseline Paid Amounts for BY3})$$ |
| **(Eq. 2) Weighted Outpatient Baseline Payment** | $$\textbf{\textit{Weighted Outpatient Baseline Payment}} = (0.1 * \textit{Outpatient Baseline Paid Amounts for BY1}) + (0.3 * \textit{Outpatient Baseline Paid Amounts for BY2}) + (0.6 * \textit{Outpatient Baseline Paid Amounts for BY3})$$ |
| **(Eq. 3) Inpatient Baseline Paid Amount for Non-CAH Hospitals** | $$\textbf{\textit{Inpatient Baseline Paid Amount for Non CAH Hospitals}} = \textit{Paid Amounts on FFS Claims} + \textit{Sequestration}$$ |
| **(Eq. 4) Inpatient Baseline Paid Amount for CAH Hospitals** | $$\textbf{\textit{Inpatient Baseline Paid Amount for CAH Hospitals}} = \textit{Paid Amount on Interim Inpatient Claims} + \textit{Paid Amount on Interim Swing Bed Claims} + \textit{Settlement to } 101\% \textit{ on Cost Reports} + \textit{Sequestration}$$ |
| **(Eq. 5) Outpatient Baseline Paid Amount for Non-CAH Hospitals** | $$\textbf{\textit{Outpatient Baseline Paid Amount for Non CAH Hospitals}} = \textit{Paid Amounts on FFS Claims} + \textit{Sequestration}$$ |
| **(Eq. 6) Outpatient Baseline Paid Amount for CAH Hospitals** | $$\textbf{\textit{Outpatient Baseline Paid Amount for CAH Hospitals}} = \textit{Paid Amount on Interim Outpatient Claims} + \textit{Settlement to } 101\% \textit{ on Cost Reports} + \textit{Sequestration}$$ |

## Annual Payment Adjustment Formulas

### Exhibit A.2: Annual Payment Adjustment Table of Formulas

| Equation | Formula |
|---|---|
| **(Eq. 1) Annual Inpatient Adjustment** | $$\textbf{\textit{Annual Inpatient Adjustment}} = \frac{PY1\ CAR - BY\ CAR}{BY\ CAR}$$ |
| **(Eq. 2) AHEAD CAR** | $$\textbf{\textit{AHEAD CAR}} = \frac{\frac{Estimated\ Medicare\ Payments}{Case\ Mix\ Index}}{Total\ Number\ Medicare\ Discharges}$$ |
| **(Eq. 3) Estimated Medicare Payments** | **Estimated Medicare Payments** = (Operating Amount + Capital Amount) * (1+ Low Volume Adjustment Factor) * (HACRP Adjustment Factor)-Estimated Deductibles) * (1- Sequestration Percentage) |
| **(Eq. 4) Operating Amount** | $$\textbf{\textit{Operating Amount}} = ((National\ Operating\ Labor\ Base\ Rate * Medicare\ Wage\ Index) + (Operating\ Non - National\ Labor\ Base\ Rate * Operating\ COLA)) * Medicare\ Discharges * Hospital\ Case\ Mix) \pm Operating\ Policy\ \&\ Quality\ Adjustments$$ *Details for the Operating Policy & Quality Adjustments are below* |
| **(Eq. 4a) Operating Amount for SCH** | $$\textbf{\textit{Operating Amount For Sole Community Hospitals}} = (Hospital\ Specific\ Operating\ Labor\ Base\ Rate * Medicare\ Discharges * Hospital\ Case\ Mix)\ IF\ greater\ than\ Operating\ Amount\ calculated\ in\ Eq.4$$ |
| **(Eq. 4 Detail) Operating Policy & Quality Adjustments** | $$\textbf{\textit{Operating Policy}}\ \&\ \textbf{\textit{Quality Adjustments}} = Readmission\ Adjustment + Value\ Based\ Payment\ Net\ Amount + IME\ Operating\ Adjustment\ Amount + DSH\ Operating\ Adjustment\ Amount + UCC\ Total\ Adjustment\ Amount + Operating\ Outlier\ Adjustment + Hospital\ Specific\ Adjustment\ in\ Excess\ of\ Federal\ Rate$$ |
| **(Eq. 4 Detail) Readmission Adjustment to Operating Payment** | $$\textbf{\textit{Readmission Adjustment to Operating Payment}} = Readmissions\ Adjustment\ Factor * Location\ Adjusted\ Operating\ Amount$$ |
| **(Eq. 4 Detail) Value Based Payment Net Amount** | $$\textbf{\textit{Value Based Payment Net Amount}} = VBP\ Amount\ Redistributed\ (with\ 2\%) + VBP\ 2\%\ Withhold$$ **Where,** $$\textbf{\textit{VBP Amount Redisributed}}\ (\textbf{with}\ 2\%) = ((Actual\ Hospital\ VBP\ Adjustment\ Factor - 1) + 0.02) * Location\ Adjusted\ Operating\ Amount$$ $$\textbf{\textit{VBP}}\ 2\%\ \textbf{\textit{Withhold}} = Location\ Adjusted\ Operating\ Amount * -0.02$$ |
| **(Eq. 4 Detail) IME Adjustment Amount** | $$\textbf{\textit{IME Operating Adjustment Amount}} = IME\ operating\ adjustment\ factor * Location\ Adjusted\ Operating\ Amount$$ |

| Equation | Formula |
|---|---|
| **(Eq.4 Detail) DSH Operating Adjustment Amount** | $$\textbf{\textit{DSH Operating Adjustment Amount}} = DSH\ operating\ adjustment\ factor * Location\ Adjusted\ Operating\ Amount$$ **Note**: For DSH operating, two years of IPPS data from the IPPS Impact File are reviewed (the PY and the prior PY), and the higher value for the DSH Operating Adjustment Factor is utilized. |
| **(Eq. 4 Detail) UCC Adjustment Amount** | $$\textbf{\textit{UCC Operating Adjustment Amount}} = UCC\ Per\ Claim\ Amount * \#\ Medicare\ Discharges$$ **Note**: For UCC, two years of IPPS data IPPS data from the IPPS Impact File are reviewed (the PY and the prior PY), and the higher value for the UCC Per Claim Amount is utilized. |
| **(Eq. 4 Detail) Outlier Adjustment Amount** | $$\textbf{\textit{Outlier Operating Adjustment Amount}} = Estimated\ Operating\ Outlier\ \% * (Location\ Adjusted\ Operating\ Amount + IME\ Oper\ Adj\ Amount + DSH\ Oper\ Adj\ Amount + UCC\ Total\ Adj\ Amount$$ |
| **(Eq. 5) Capital Amount** | $$\textbf{\textit{Capital Amount}} = ((National\ Capital\ Base\ Rate * Geographic\ Adjustment\ Factor\ for\ Capital * Capital\ COLA) * Medicare\ Discharges * Hospital\ Case\ Mix) \pm Capital\ Policy\ \&\ Quality\ Adjustments$$ *Details for the Capital Policy & Quality Adjustments are below* |
| **(Eq. 5 Detail) Capital Policy & Quality Adjustments** | $$\textbf{\textit{Capital Policy}}\ \&\ \textbf{\textit{Quality Adjustments}} = IME\ Capital\ Adjustment\ Amount + DSH\ Capital\ Adjustment\ Amount + Capital\ Outlier\ Adjustment$$ |
| **(Eq. 5 Detail) IME Capital Adjustment Amount** | $$\textbf{\textit{IME Capital Adjustment Amount}} = IME\ Capital\ Adjustment\ Factor * Location\ Adjusted\ Capital\ Amount$$ |
| **(Eq. 5 Detail) DSH Capital Adjustment Amount** | $$\textbf{\textit{DSH Capital Adjustment Amount}} = DSH\ Capital\ Adjustment\ Factor * Location\ Adjusted\ Operating\ Amount$$ **Note**: For DSH capital, two years of IPPS data IPPS data from the IPPS Impact File are reviewed (the PY and the prior PY), and the higher value for the DSH Capital Adjustment Factor is utilized. |
| **(Eq. 5 Detail) Capital Outlier Amount** | $$\textbf{\textit{Capital Outlier Adjustment Amount}} = Estimated\ Capital\ Outlier\ \% * (Location\ Adjusted\ Capital\ Amount + IME\ Capital\ Adjustment\ Amount + DSH\ Capital\ Adjustment\ Amount)$$ |
| **(Eq. 6) Estimated Deductibles** | $$\textbf{\textit{Estimated Deductibles}} = Medicare\ Annual\ Inpatient\ Deductible\ Amount * Total\ Number\ of\ Medicare\ Discharges$$ |

| Equation | Formula |
|---|---|
| **(Eq. 7) PY1 Inpatient APA Application** | $$\boldsymbol{PY\ 1\ Inpatient\ APA\ Application} = BY1\ Baseline\ Paid\ Amounts * 0.1 * (1 + Annual\ Inpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY1) + BY2\ Baseline\ Paid\ Amounts * 0.3 * (1 + Annual\ Inpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY2) + BY3\ Baseline\ Paid\ Amounts * 0.6 * (1 + Annual\ Inpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY3)$$ |
| **(Eq. 8) Annual Outpatient Adjustment** | $$\boldsymbol{Annual\ Outpatient\ Adjustment} = \frac{PY\ 1\ \text{WAACF} - BY\ \text{WAACF}}{BY\ \text{WAACF}}$$ |
| **(Eq. 9) Wage Adjusted APC Conversation Factor** | $$\boldsymbol{WAACF} = ((OPPS\ APC\ Conversion\ Factor * 0.6 * Hospital\ Specific\ Wage\ Index) + (OPPS\ APC\ Conversion\ Factor * 0.4)$$ |
| **(Eq. 10) PY1 Outpatient APA** | $$\boldsymbol{PY1\ Outpatient\ APA} = BY1\ Baseline\ Paid\ Amounts * 0.1 * (1 + Annual\ Outpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY1) + BY2\ Baseline\ Paid\ Amounts * 0.3 * (1 + Annual\ Outpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY2) + BY3\ Baseline\ Paid\ Amounts * 0.6 * (1 + Annual\ Outpatient\ Adjustment\ (\text{see Eq 1})\ for\ BY3)$$ |

## Market Shift Adjustment Formulas

### Exhibit A.3: Market Shift Adjustment Table of Formulas

| Equation | Formula |
|---|---|
| **(Eq. 1) MSA** | $$\boldsymbol{Hospital\ MSA} = \sum_{j=1}^{j=n} Shift\ in\ Wtg.Volume * Avg.Adj.Payments * Marginal\ Funding\ Factor$$ **Where,** **n** = Number of service categories (up to 25 inpatient and 7 outpatient for each hospital (**Table 2**)) and hospital market segments *j* served by an individual hospital. |
| **(Eq. 2) Shift in Weighted Volume** | $$\boldsymbol{Shift\ in\ Weighted\ Volume_j} = Hospital\ Proportion\ of\ Change\ in\ Weights_j * Allowed\ Shift_j$$ |

| Equation | Formula |
|---|---|
| **(Eq. 3a and 3b) Hospital Proportion of Change in Weights** | For hospitals with an increase in volume between years in a hospital market segment and service category *j*, the proportional change in weights is calculated as,<br>$$\textbf{Hospital Proportion of Change in Weights}_j = \frac{Hospital\ Change\ in\ Weights_j}{Weight\ Increases_j}$$<br>For hospitals with a decrease in volume between years in a hospital market segment and service category *j*, the proportional change in weights is calculated as,<br>$$\textbf{Hospital Proportion of Change in Weights}_j = \frac{Hospital\ Change\ in\ Weights_j}{Weight\ Decreases_j}$$ |
| **(Eq. 4a and 4b) Weight Increases and Decreases** | $$\textbf{Weight Increases}_j = \sum_{i=1}^{i=h} Change\ in\ Weights\ Hospitals\ w/Increase$$<br>$$\textbf{Weight Decreases}_j = \sum_{i=1}^{i=h} Change\ in\ Weights\ Hospitals\ w/Decrease$$<br>**Where**,<br>**h** = Number of hospitals with claims in a service category and market segment, *j*. |
| **(Eq. 5) Allowed Shift** | $$\textbf{Allowed Shift}_j = Min\left(Weight\ Increases_k, Absolute\ Value\ (Weight\ Decrease_k)\right)D_j$$<br>**Where,**<br>***D*** = Set to -1 for hospitals with a decrease in weights within the service category and market segment, 1 otherwise. |
| **(Eq. 6) Average Case-Mix Adjusted Payments** | $$\textbf{Avg Case Mix Adj Payments} = Avg\ Payment\ per\ Unit\ of\ Wgt * Market\ Inflation\ Adj$$<br>**Where,**<br>**Average Payment per Unit of Weight** = Hospital payments for all claims included in a service category divided by the respective MS-DRG or APC weights for those services. Claims and payment amounts included are the same as those used to construct the global budget baseline (**Section 2.1**). During the PY when hospitals are paid via global budgets, no-pay claims are used instead.<br>**Market Inflation Adjustment** = CMS IPPS/OPPS Update Factor (see **Appendix C** for details). |

## Unplanned Volume Adjustment Formulas

### Exhibit A.4: Unplanned Volume Adjustment Table of

| Line | Formula |
|---|---|
| **(Eq. 1) UVA Dollar Adjustment** | $$\textbf{UVA Dollar Adjustment} = Prior\ Year\ Payments * Market\ Inflation\ Adjustment * Unfunded\ Volume\ Adj\ \%$$ |
| **(Eq. 2) UVA** | $$\textbf{Unfunded Volume Adj}\ \% = Unfunded\ Volume\ Beyond\ Threshold\ \% * Threshold\ Adjustment\ Amount$$ |

| Line | Formula |
|---|---|
| **(Eq. 3a and 3b) Unfunded Volume Beyond Threshold %** | $\boldsymbol{Unfunded\ Volume\ Beyond\ Threshold}\ \% = (MSA\ unfunded\ volume\ \% - Demographic\ Adjustment) - Upper\ Threshold$<br>$\boldsymbol{Unfunded\ Volume\ Beyond\ Threshold}\ \% = (MSA\ unfunded\ volume\ \% - Demographic\ Adjustment) - Lower\ Threshold$<br>**Where,**<br>**Upper Threshold** = 5% and **Lower Threshold** = -5%. |
| **(Eq. 4) MSA Unfunded Volume %** | $\boldsymbol{MSA\ Unfunded\ Volume}\ \% = \frac{Unfunded\ Volume\ in\ Weights}{Prior\ Year\ Weights}$<br>**Unfunded Volume in Weights** = Sum of the change in weights across all service categories between the two time periods (e.g., PY1 vs PY2 if calculating the MSA for PY4. See **Exhibit 40**) included in the MSA less the change in weights allowed by the MSA across all service lines. Weights are assigned based on DRG and APC service category as described in **Section 2.2.3.2**.<br>**Prior Year Weights =** Total weights across all service categories in the first time period included in the MSA (e.g., PY1 if calculating the MSA for PY4. See **Exhibit 40**). |

## Demographic Adjustment Formulas

### Exhibit A.5: Demographic Adjustment Table of Formulas

| Line | Formula |
|---|---|
| **(Eq. 1) DA** | $\boldsymbol{DA_i} = \sum_{j=1}^{j=n} s_j * \Delta\ Total\ HCC$<br>**Where,**<br>**N =** Number of Counties Served by the Hospital<br>**S =** Share of FFS payments<br>**Δ Total HCC** = Percentage change in county sum of HCC scores between the two years prior to the PY. |
| **(Eq. 2) County Share of FFS Claims or No-Pay Claims** | **County Share of FFS Claims or No − Pay Claims** = (Inpatient Baseline Paid Amount + Outpatient Baseline Paid Amount) for County $j$ ÷ ((Inpatient Baseline Paid Amount + Outpatient Baseline Paid Amount) $for\ all\ Counties\ Served\ by\ Hospital$ |

## Social Risk Adjustment Formulas

### Exhibit A.6: Social Risk Adjustment Table of Formulas

| Line | Formula |
|---|---|
| **(Eq. 1) Social Risk Score (Beneficiary)** | $\boldsymbol{SRS_b} = 0.5 * (National\ ADI) + 0.5 * (10 * (State\ ADI)) + (50 * LIM)$<br>**Where,**<br>**National ADI** = National Standardized ADI which is expressed as a percentile with a range of 1 to 100, is assigned for each eligible beneficiary and multiplied by 0.20. Points for National ADI will range from 1 to 20.<br>**State ADI** = State Standardized ADI which is multiplied by 10 because State ADI is expressed in decile, is assigned for each eligible beneficiary and multiplied by 0.80. Points for State ADI will range from 1 to 80.<br>**Low-Income Marker (LIM)** = Set to 1 if a beneficiary is either dual-eligible (full or partial dual) or deemed eligible for Part D LIS at any point in the rolling 12-month period immediately preceding the calculation. If a beneficiary is not dual-eligible and is not eligible for Part D LIS, LIM equals 0. |
| **(Eq. 2) Social Risk Score (Geographic Area)** | $\boldsymbol{SRS_g} = (\sum_{j=1}^{j=n} SRS_b) \div n$<br>**Where,**<br>**n** = Number of beneficiaries in the geographic area served by the hospital |
| **(Eq. 3) Social Risk Score (Hospital)** | $\boldsymbol{SRS_h} = \sum_{j=1}^{j=n} SRS_g * \frac{P_g}{P_h}$<br>**Where,**<br>**n** = Number of geographic areas included in the hospital's MSA<br>**h** = Hospital<br>**g** = Geographic area (county or zip included in MSA)<br>**P** = Payments or the sum of Medicare FFS claim payments (or no-pay claims during the PY) for Eligible Inpatient and Outpatient Hospital Services using the same inclusion/exclusion logic as in the Baseline Calculation (**Section 2.1**) |
| **(Eq. 4) SRA (Hospital)** | $\boldsymbol{SRA_h} = .02 * \left(1 - \frac{T_{SRS} - SRS_h}{T_{SRS} - M_{SRS}}\right)$<br>**Where,**<br>**T** = 95th percentile of the AHEAD State's Participant Hospital SRS scores<br>**M** = Median of the AHEAD State's Participant Hospital SRS scores |

## Critical Access Hospital Quality Adjustment Formulas

### Exhibit A.7: Critical Access Hospital Quality Adjustment Table of Formulas

| Line | Formula |
|---|---|
| **(Eq. 1) Attainment Points** | $\boldsymbol{Attainment\ Points_h} = \left(9 * \frac{Perf.Period\ Result - Threshold}{Benchmark - Threshold}\right) + 0.5$ |

| Line | Formula |
|---|---|
| **(Eq. 2) Improvement Points** | $$\boldsymbol{Improvement\ Points_h} = \left(10 * \frac{Perf.Period\ Result - Base\ Period\ Result}{Benchmark - Base\ Period\ Result}\right) - 0.5$$ |
| **(Eq. 3) HCAHPS Consistency Points** | $$\boldsymbol{HCAHPS\ Consistency\ Points_h} = \left(20 * \frac{Perf.Period\ Score - National\ Floor}{Threshold - National\ Floor}\right) - 0.5$$ |
| **(Eq. 4) Achievement Points** | $\boldsymbol{Achievement\ Points_h} = \max\left(Attainment\ Points_h, Improvement\ Points_h\right)$ |
| **(Eq. 5) CAH Reward** | $\boldsymbol{CAH\ Reward_h} = .02 - (B_{TPS} - TPS_h) * \frac{.02}{B_{TPS} - T_{TPS}}$ |

## Effectiveness Adjustment Formulas

### Exhibit A.8: Effectiveness Adjustment Table of Formulas

| Line | Formula |
|---|---|
| **(Eq. 1) EA** | **EA** = EA Percentile range lookup in Exhibit 36<br>**Where,**<br>**EA Percentile:** For hospitals below the 20th percentile of the State PAU Percentile, the Scaled EA Percentile, and the EA are zero. For all other hospitals the hospital's State PAU Percentile is cross walked to EA adjustment values in Exhibit 36 based on ranges of percentiles. |
| **(Eq. 2) Hospital PAU Percent** | $$\boldsymbol{Hospital\ PAU\ Percent} = \frac{PAU\ Payments}{Total\ Inpatient\ and\ Outpatient\ Revenue}$$ |

## Health Equity Improvement Bonus Adjustment Formulas

### Exhibit A.9: Health Equity Improvement Bonus Table of Formulas

| Line | Formula |
|---|---|
| **(Eq. 1) PQI-92 Admission Rate Improvement** | $$\boldsymbol{PQI - 92\ Admission\ Improvement} = \frac{PQI\ Admit\ Rate_p - PQI\ Admit\ Rate_b}{PQI\ Admit\ Rate_b}$$<br>**Where,**<br>*b* = fixed base period and *p* = performance measurement period. |
| **(Eq. 2) Readmission Rate Improvement** | $$\boldsymbol{Readmission\ Rate\ Improvement} = \frac{Readmit\ Rate_p - Readmit\ Rate_b}{Readmit\ Rate_b}$$<br>**Where,**<br>*b* = fixed base period and *p* = performance measurement period. |

| Line | Formula |
|---|---|
| **(Eq. 3) PQI-92 Admission Rate** | $$\boldsymbol{PQI-92\ Admission\ Rate} = \frac{PQI-92\ compliant\ inpatient\ or\ observation\ stays > 23\ hours}{Total\ inpatient\ or\ observation\ stays > 23\ hours}$$ See **Section 2.3.2** for more information about how PQI-92 is specified. |

## Total Cost of Care Performance Adjustment Formulas

### Exhibit A.10: Total Cost of Care Performance Adjustment Table of Formulas

| Line | Formula |
|---|---|
| **(Eq. 1) Participant Hospital Attributed TCOC** | $$\boldsymbol{Participant\ Hospital\ Attributed\ TCOC} = \left(\left(\sum_{c=1}^{c=n} County\ Bene\ TCOC_c * IPOPShare_c\right) \div \left(\sum_{c=1}^{c=n} County\ Bene\ Months_c * IPOPShare_c\right)\right) \div Weighted\ Average\ HCC\ Score$$ **Where,** **County Bene TCOC** = Part A or Part B TCOC for beneficiaries in each county *c*, served by the hospital. **County Bene Months** = Total Part A or B beneficiary months in each county, *c*, served by the hospital. **IP-OP Share =** Hospital's portion of total county inpatient and outpatient spending for each county, *c*, served by the hospital. **Weighted Average HCC Score =** Average HCC score for beneficiaries in counties served by the hospital, weighted by IP-OP Share. |
| **(Eq. 2) Benchmark TCOC** | $$\boldsymbol{Benchmark\ TCOC} = \frac{Case-Matched\ TCOC}{Case-Matched\ Bene\ Months} \div (Case-Matched\ Average\ HCC\ Score)$$ **Where,** **Case-Matched Bene TCOC** = Part A or Part B TCOC for beneficiaries not in an AHEAD state or sub-state region case matched to beneficiaries who are in an AHEAD state or sub-state region. **Case-Matched Months** = Total Part A or B beneficiary months for beneficiaries not in an AHEAD state or sub-state region case matched to beneficiaries who are in an AHEAD state or sub-state region. **Case-Matched Average HCC Score =** Mean HCC score for beneficiaries not in an AHEAD state or sub-state region case matched to beneficiaries who are in an AHEAD state or sub-state region. |
| **(Eq. 3) TCOC Adjustment** | $$\boldsymbol{TCOC\ Adjustment} = \frac{\%\ \Delta\ Attributed\ TCOC - \%\ \Delta\ Benchmark\ TCOC}{\%\ \Delta\ Benchmark\ TCOC} * -0.2$$ The maximum amount of reward/penalty applied to HGBs in PY4 is limited to between 0% and 2% in PY4 or -2% and +2% thereafter. |

# Appendix B: Data Sources

The following provides a summary and description of the data source(s) for all data points included within the formulas in **Appendix A: Formulas and Calculations**. The noted sections provide additional details and, where necessary, any additional formulas used to obtain the data point.

## Baseline Payment Amount Data Sources

### Exhibit B.1: Baseline Payment Amount Data Sources

| Data Element | Source |
|---|---|
| **Paid Amounts on IPPS FFS Claims** | IDR Inpatient Claims (claim type 60) |
| **CAH Inpatient Cost Settlements** | HCRIS Full Cost Report Files |
| **Paid Amounts on Inpatient Swing Bed Claims** | IDR SNF Claims (claim type 30) |
| **CAH Inpatient Swing Bed Settlements** | HCRIS Full Cost Report Files |
| **Paid Amounts on OPPS FFS Payment Claims** | IDR Outpatient Claims (claim type 40) |
| **Outpatient Drug Supply Carve Out Amounts** | CMS published annual Addendum A/B files |
| **Outpatient New Technology Carve Out Amounts** | CMS published annual Addendum A file |
| **Cost Settlements on Outpatient CAH Hospital Claims** | HCRIS Full Cost Report Files |

## Annual Payment Adjustment Data Sources

### Exhibit B.2: Annual Payment Adjustment Data Sources

| Data Element | Source |
|---|---|
| **National Operating Labor Base Rate** | CMS Final Rule IPPS CN Table 1a or 1b (National base rates) |
| **Hospital Specific Wage Index** | CMS Final Rule IPPS CN Table 2, Col. 3 Wage Index |
| **National Operating Non-Labor Base Rate** | CMS Final Rule IPPS CN Table 1a or 1b (National base rates) |
| **Hospital Specific COLA** | CMS Final Rule IPPS CN Impact File (only HI and Alaska hospitals receive this) |
| **Readmission Adjustment Factor** | CMS Final Rule IPPS Table 15 - Final Readmission Adjustment Factor |
| **Hospital VBP Adjustment Factor** | CMS Final Rule IPPS Table 16B - Final VBP Adjustment Factor |
| **IME Operating Adjustment Factor** | CMS Final Rule IPPS CN Impact File (IME Operating Adj Factor) |
| **DSH Operating Adjustment Factor** | CMS Final Rule IPPS CN Impact File (Operating Disproportionate Share Adjustment Factor) |
| **UCC Per Claim Amount** | CMS Final Rule IPPS CN Impact File (UCC) |

| Data Element | Source |
|---|---|
| **Estimated Operating Outlier %** | CMS Final Rule IPPS CN Impact File (outlier operating percentages) |
| **National Capital Base Rate** | CMS Final Rule IPPS CN Table 1d (National base rates) |
| **Capital Wage Index (GAF)** | CMS Final Rule IPPS CN Impact File, GAF |
| **Low Volume Adjustment Factor** | CMS Final Rule IPPS CN Impact File or if not populated CMS IPPS Supplemental Table 14 (FY18) - lookup from tab '13- Low Vol Adj' |
| **Capital COLA** | CMS Final Rule IPPS CN Impact File |
| **IME Capital Adjustment Factor** | CMS Final Rule IPPS CN Impact File, IME Adjustment Factor for Capital |
| **DSH Capital Adjustment Factor** | CMS Final Rule IPPS CN Impact File, Disproportionate Share Adjustment Factor for Capital |
| **Estimated Capital Outlier %** | CMS Final Rule IPPS CN Impact File (outlier capital percentages) |
| **HACRP Adjustment** | Hospital-Acquired Condition (HAC) Reduction Program \| Provider Data Catalog (cms.gov) Hospital-Acquired Condition (HAC) Reduction Program Dataset, lookup from tab '9- HACRP' |
| **Medicare Annual Inpatient Deductible Amount** | CMS 20XX Medicare Parts A & B Premiums and Deductibles Fact Sheet |
| **Hospital Case Mix Index** | CMS Final Rule IPPS CN Table 2, Col. 2 CMI |
| **Total Number Medicare Bills** | CMS Final Rule IPPS CN Impact File, BILLS |
| **OPPS APC Conversion Factor** | Calculated from the final CMS OPPS Addendum B Tables |
| **Outpatient Location Specific Wage Index** | Same as Wage Index used for IPPS. CMS Final Rule IPPS CN Table 2, Col. 3 Wage Index |

## Market Shift Adjustment Data Sources

### Exhibit B.3: Market Shift Adjustment Data Sources

| Data Element | Source |
|---|---|
| **Cases (unique claims/discharges)** | Claims data, count of distinct claim IDs |
| **Case Weights** | Inpatient: DRG Weights<br>Outpatient: See **Appendix F** |
| **Case Payments without Sequestrations or Deductions** | Claims data. Case Payments = Payment amount / 0.98 (adds back in sequestration/deduction amount) |
| **Market Inflation Adjustment** | CMS IPPS and OPPS Update Factor.<br>Inpatient Inflation Adjustment = Market adjustment – productivity – ACA reduction + legislation adjustments for documentation and coding<br>Outpatient Inflation Adjustment = Market adjustment – productivity – ACA reduction |
| **HGB Hospitals – Names, IDs, Locations** | Determined by State and CMMI in pre-implementation phase. |

## Demographic Adjustment Data Sources

### Exhibit B.4: Demographic Adjustment Data Sources

| Data Element | Source |
|---|---|
| **HCC Score** | CMS-HCC Model Software/ICD-10 Mappings |

## Social Risk Adjustment Data Sources

### Exhibit B.5: Social Risk Adjustment Data Sources

| Data Element | Source |
|---|---|
| **Beneficiary count, FIPS code, dual eligibility status, Part D low-income subsidy data** | CMS IDR eligibility data |
| **National and State ADI scores** | CMS standardized geographic-based Indices of Health file |

# Appendix C: Inpatient Prospective Payment System and Outpatient Prospective Payment System Payment Components

## Exhibit C.1: Inpatient Prospective Payment System Fee-for-Service Payment Components and Inclusion in the Baseline Payment Amount

| Inpatient Prospective Payment System Fee-For-Service Payment Factor | Application to Inpatient Prospective Payment System Operating and Capital Amount |
|---|---|
| **Operating Base Payment Rate** | The national base operating rate, split between labor and non-labor costs, serves as the baseline amount for the operating payment. |
| **Capital Base Payment Rate** | The national base capital rate serves as the baseline amount for the capital payment. |
| **Wage Index** | The operating base rate labor related operating amount is adjusted by the location-specific Medicare Wage Index. |
| **Geographic Adjustment Factor for Capital (GAF)** | The capital base rate is adjusted by the location-specific GAF to reflect location specific labor costs |
| **Cost of Living Adjustment (COLA)** | The operating base rate non-labor related amount is adjusted by the location-specific operating cost-of-living adjustment.<br>The capital base rate is adjusted by the location-specific capital cost-of-living adjustment to reflect non-labor capital costs. |
| **DRG Weight** | The operating and capital base payment amounts are multiplied by the MS-DRG relative weight. *Used in the APA to normalize prices for changes in acuity.* |
| **Indirect Medical Education (IME) Adjustment** | If applicable, a hospital specific operating and capital IME adjustment factor is applied. |
| **DSH Adjustments** | If applicable, a hospital specific operating and capital DSH adjustment factor is applied. |
| **Low Volume Adjustment** | If applicable, a hospital specific low volume adjustment factor is applied to the total operating and capital amount. |
| **Uncompensated Care (UCC) Adjustment** | If applicable, a UCC adjustment is added on a per discharge basis to the operating amount. |
| **Outlier Adjustment** | If applicable, a hospital specific operating and capital outlier adjustment factor is applied. |
| **New Technology Adjustment** | Not Applicable |
| **Hospital Readmissions Reduction Program (HRRP)** | If applicable, a hospital specific HRRP adjustment factor is applied to the operating amount. The reduction is capped at 3%. |
| **Value-Based Purchasing (VBP) Program** | If applicable, a hospital specific VBP adjustment factor is applied to the operating amount. |
| **Hospital-Acquired Condition Reduction Program (HACRP)** | If applicable, reduces overall operating and capital payments by 1 percent. |
| **Medicare Hospital Inpatient Quality Reporting (IQR)** | Impacts operating and capital base rates. |

## Exhibit C.2: Outpatient Prospective Payment System Fee-For-Service Payment Components and Inclusion in the Baseline Payment Amount

| Outpatient Prospective Payment System Fee-For-Service Payment Factor | Application To Outpatient Prospective Payment System Payment Amount |
|---|---|
| **OPPS Conversion Factor** | The national base payment amount, prior to adjustments made for wages and the APC relative weight. |
| **Hospital Wage Index** | The labor portion of the conversion factor (accounting for 60% of the OPPS conversion factor) is adjusted by the location-specific Medicare Wage Index. The non-labor Portion of the conversion factor is not adjusted. *Note: The OPPS Conversion Factor and Hospital Wage Index are used to develop the Wage Adjusted APC Conversion Factor (WAACF). This is the primary unit of analysis for the Outpatient APA calculation.* |
| **APC Relative Weight** | The wage adjusted conversation factor is adjusted by the APC relative weight which is based on the resource requires of the service. APC Weight is not incorporated into the APA but is included as the baseline amount. |
| **Sole-Community Hospitals (SCH) Add-On** | A payment increase (currently 7.1%) is added for SCHs. |
| **Hold Harmless Payments for Cancer Centers and Children's Hospitals** | If applicable, applied for Cancer Centers and Children's Hospitals |
| **High-Cost Outlier Adjustment** | If applicable, a hospital specific outlier adjustment factor is applied. |
| **Outpatient Drug Supply** | Not Applicable for specific carve outs noted in **Appendix D: Payment Exclusions** |
| **Outpatient New Technology** | Not Applicable |
| **Professional Payment on CAH Hospital Claims** | Not Applicable |

# Appendix D: Payment Exclusions

## Exhibit D.1: Payment Exclusions from the Hospital Global Budget

| | Adjustment | Background on Payment Types | Hospital Global Budget Exclusion Rationale |
|---|---|---|---|
| **Claim payments; included in paid amount on FFS claims** | New Technology Adjustment Payments (NTAP) | Technologies eligible for these add-on payments are identified based on the applicable codes from the International Classification of Diseases, Clinical Modification (ICD-10)[23]. Claims submitted with an ICD procedure code that indicates the involvement of a new technology in the treatment of the patient is then eligible for add-on payments. | Excluded: NTAPs are available for a limited time and are, by definition, specific to certain services and are paid separately from the HGB. |
| | CAH Method II Billing | Typically, CAHs may elect to bill for both facility and professional outpatient services on a hospital claim. This is only permitted if the submitting physician has reassigned their billing right to the CAH. These payments can be identified based on UB-04 revenue codes in the range of 0960-0989. | Excluded: These amounts for the professional services will be excluded from the HGB and will continue to be paid under established methodologies. |
| **Pass-through payments** | Bad Debt | Bad debts are amounts considered to be uncollectible from accounts and notes receivable that were created or acquired in providing services. Acute Care Hospitals are reimbursed for 70 percent of bad debts resulting from Medicare deductible and coinsurance amounts, which are uncollectible from Medicare beneficiaries after a reasonable effort has been made to collect the unpaid amounts. Pass-through payments for bad debt, reported on cost report form S-10, are not included in claims. | Excluded: In Medicare FFS, pass-through payments are made by the MAC outside of the FFS claims processing systems. These payments will be excluded from the HGB and will continue to be paid under established methodologies. |
| | DGME | Payments to hospitals for the costs of approved GME programs. The methodology includes a hospital-specific, base-period PRA that is calculated by dividing a hospital's allowable costs of GME for a base period by its number of residents during the base period. Medicare DGME payments are calculated by multiplying the PRA by the weighted number of FTE residents working in all areas of the hospital (and non-hospital sites, when applicable), and the hospital's Medicare share of total inpatient days. | Excluded: In Medicare FFS, pass-through payments are made by the MAC outside of the FFS claims processing systems. These payments will be excluded from the HGB and will continue to be paid under established methodologies. |
| | IME for Medicare Advantage Beneficiaries | When a beneficiary is enrolled in a Medicare Advantage plan and is an inpatient at an approved teaching hospital, the facility receives a percentage add-on payment for each case. Hospitals submit Medicare FFS claims for these beneficiaries to receive payment for IME or DGME and submit claims to the Medicare Advantage plan for the remainder of the services provided. | Excluded: In Medicare FFS, pass-through payments are made by the MAC outside of the FFS claims processing systems. These payments will be excluded from the HGB and will continue to be paid under established methodologies. |

[23] https://www.cdc.gov/nchs/icd/index.htm.

| | Adjustment | Background on Payment Types | Hospital Global Budget Exclusion Rationale |
|---|---|---|---|
| **Pass-through payments (cont.)** | Nurse and Allied Health Education (NAHE) | Payments to hospitals for the costs of nursing and allied health education activities. Payment for a provider's net cost of nursing and allied health education activities is determined on a reasonable cost basis, subject to certain conditions and limitations. | Excluded: In Medicare FFS, pass-through payments are made by the MAC outside of the FFS claims processing systems. These payments will be excluded from the HGB and will continue to be paid under established methodologies. |
| | Organ Acquisition Costs | There are two payment components for organ transplantation. Approved transplant centers are paid a PPS rate based on a MS-DRG for the actual organ transplant. They are also reimbursed for the reasonable and necessary costs associated with acquiring the organ (i.e., organ acquisition costs). Organ acquisition costs for heart, kidney, liver, lung, pancreas, and intestinal/multi-visceral transplantations incurred by approved transplant centers are treated as an adjustment (pass through payment) to the hospital's IPPS payment. | Excluded: In Medicare FFS, pass-through payments are made by the MAC outside of the FFS claims processing systems. These payments will be excluded from the HGB and will continue to be paid under established methodologies. |
| **Other** | Medicare Secondary Payer (MSP) | When another entity is responsible for paying a claim before Medicare. | Excluded: Beneficiaries are only included in the AHEAD Model if Medicare is the primary payer; thus, any payments for services will be excluded. |

## Appendix E: Inpatient Market Shift Service Category Mapping

Discharges are grouped primarily by body system as defined by Major Diagnostic Categories (MDCs), with appropriate consolidation to facilitate stable measurement of inter-hospital volume movements. MDCs were modified to (1) consolidate similar services when volumes were low, (2) separate inpatient and outpatient services for better comparability based on the unit of service measurement used in Medicare payment methods (MS-DRGs versus APCs) and (3) split out inpatient medical versus surgical service categories where relevant and meaningful from both a volume perspective and a hospital service line perspective. The resulting inpatient service categories be directionally appropriate and provide the necessary categorization to identify market shifts in hospitalization of similar types of patients. **Exhibit E.1.** shows the AHEAD Inpatient Service Category mapped to the individual MS-DRG.

### Exhibit E.1: Inpatient Market Shift Service Category Mapping

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders | 894 | ALCOHOL/DRUG ABUSE OR DEPENDENCE, LEFT AMA | MED |
| Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders | 895 | ALCOHOL/DRUG ABUSE OR DEPENDENCE W REHABILITATION THERAPY | MED |
| Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders | 896 | ALCOHOL/DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W MCC | MED |
| Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders | 897 | ALCOHOL/DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W/O MCC | MED |
| Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders | 917 | POISONING & TOXIC EFFECTS OF DRUGS W MCC | MED |
| Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders | 918 | POISONING & TOXIC EFFECTS OF DRUGS W/O MCC | MED |
| Circulatory - Medical | 280 | ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W MCC | MED |
| Circulatory - Medical | 281 | ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W CC | MED |
| Circulatory - Medical | 282 | ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W/O CC/MCC | MED |
| Circulatory - Medical | 283 | ACUTE MYOCARDIAL INFARCTION, EXPIRED W MCC | MED |
| Circulatory - Medical | 284 | ACUTE MYOCARDIAL INFARCTION, EXPIRED W CC | MED |
| Circulatory - Medical | 285 | ACUTE MYOCARDIAL INFARCTION, EXPIRED W/O CC/MCC | MED |
| Circulatory - Medical | 286 | CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Circulatory - Medical | 287 | CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O MCC | MED |
| Circulatory - Medical | 288 | ACUTE & SUBACUTE ENDOCARDITIS W MCC | MED |
| Circulatory - Medical | 289 | ACUTE & SUBACUTE ENDOCARDITIS W CC | MED |
| Circulatory - Medical | 290 | ACUTE & SUBACUTE ENDOCARDITIS W/O CC/MCC | MED |
| Circulatory - Medical | 291 | HEART FAILURE & SHOCK W MCC | MED |
| Circulatory - Medical | 292 | HEART FAILURE & SHOCK W CC | MED |
| Circulatory - Medical | 293 | HEART FAILURE & SHOCK W/O CC/MCC | MED |
| Circulatory - Medical | 294 | DEEP VEIN THROMBOPHLEBITIS W CC/MCC | MED |
| Circulatory - Medical | 295 | DEEP VEIN THROMBOPHLEBITIS W/O CC/MCC | MED |
| Circulatory - Medical | 296 | CARDIAC ARREST, UNEXPLAINED W MCC | MED |
| Circulatory - Medical | 297 | CARDIAC ARREST, UNEXPLAINED W CC | MED |
| Circulatory - Medical | 298 | CARDIAC ARREST, UNEXPLAINED W/O CC/MCC | MED |
| Circulatory - Medical | 299 | PERIPHERAL VASCULAR DISORDERS W MCC | MED |
| Circulatory - Medical | 300 | PERIPHERAL VASCULAR DISORDERS W CC | MED |
| Circulatory - Medical | 301 | PERIPHERAL VASCULAR DISORDERS W/O CC/MCC | MED |
| Circulatory - Medical | 302 | ATHEROSCLEROSIS W MCC | MED |
| Circulatory - Medical | 303 | ATHEROSCLEROSIS W/O MCC | MED |
| Circulatory - Medical | 304 | HYPERTENSION W MCC | MED |
| Circulatory - Medical | 305 | HYPERTENSION W/O MCC | MED |
| Circulatory - Medical | 306 | CARDIAC CONGENITAL & VALVULAR DISORDERS W MCC | MED |
| Circulatory - Medical | 307 | CARDIAC CONGENITAL & VALVULAR DISORDERS W/O MCC | MED |
| Circulatory - Medical | 308 | CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W MCC | MED |
| Circulatory - Medical | 309 | CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W CC | MED |
| Circulatory - Medical | 310 | CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W/O CC/MCC | MED |
| Circulatory - Medical | 311 | ANGINA PECTORIS | MED |
| Circulatory - Medical | 312 | SYNCOPE & COLLAPSE | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Circulatory - Medical | 313 | CHEST PAIN | MED |
| Circulatory - Medical | 314 | OTHER CIRCULATORY SYSTEM DIAGNOSES W MCC | MED |
| Circulatory - Medical | 315 | OTHER CIRCULATORY SYSTEM DIAGNOSES W CC | MED |
| Circulatory - Medical | 316 | OTHER CIRCULATORY SYSTEM DIAGNOSES W/O CC/MCC | MED |
| Circulatory - Surgical | 215 | OTHER HEART ASSIST SYSTEM IMPLANT | SURG |
| Circulatory - Surgical | 216 | CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W CARD CATH W MCC | SURG |
| Circulatory - Surgical | 217 | CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W CARD CATH W CC | SURG |
| Circulatory - Surgical | 218 | CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W CARD CATH W/O CC/MCC | SURG |
| Circulatory - Surgical | 219 | CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W/O CARD CATH W MCC | SURG |
| Circulatory - Surgical | 220 | CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W/O CARD CATH W CC | SURG |
| Circulatory - Surgical | 221 | CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W/O CARD CATH W/O CC/MCC | SURG |
| Circulatory - Surgical | 222 | CARDIAC DEFIB IMPLANT W CARDIAC CATH W AMI/HF/SHOCK W MCC | SURG |
| Circulatory - Surgical | 223 | CARDIAC DEFIB IMPLANT W CARDIAC CATH W AMI/HF/SHOCK W/O MCC | SURG |
| Circulatory - Surgical | 224 | CARDIAC DEFIB IMPLANT W CARDIAC CATH W/O AMI/HF/SHOCK W MCC | SURG |
| Circulatory - Surgical | 225 | CARDIAC DEFIB IMPLANT W CARDIAC CATH W/O AMI/HF/SHOCK W/O MCC | SURG |
| Circulatory - Surgical | 226 | CARDIAC DEFIBRILLATOR IMPLANT W/O CARDIAC CATH W MCC | SURG |
| Circulatory - Surgical | 227 | CARDIAC DEFIBRILLATOR IMPLANT W/O CARDIAC CATH W/O MCC | SURG |
| Circulatory - Surgical | 228 | OTHER CARDIOTHORACIC PROCEDURES W MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Circulatory - Surgical | 229 | OTHER CARDIOTHORACIC PROCEDURES W CC | SURG |
| Circulatory - Surgical | 230 | OTHER CARDIOTHORACIC PROCEDURES W/O CC/MCC | SURG |
| Circulatory - Surgical | 231 | CORONARY BYPASS W PTCA W MCC | SURG |
| Circulatory - Surgical | 232 | CORONARY BYPASS W PTCA W/O MCC | SURG |
| Circulatory - Surgical | 233 | CORONARY BYPASS W CARDIAC CATH W MCC | SURG |
| Circulatory - Surgical | 234 | CORONARY BYPASS W CARDIAC CATH W/O MCC | SURG |
| Circulatory - Surgical | 235 | CORONARY BYPASS W/O CARDIAC CATH W MCC | SURG |
| Circulatory - Surgical | 236 | CORONARY BYPASS W/O CARDIAC CATH W/O MCC | SURG |
| Circulatory - Surgical | 239 | AMPUTATION FOR CIRC SYS DISORDERS EXC UPPER LIMB & TOE W MCC | SURG |
| Circulatory - Surgical | 240 | AMPUTATION FOR CIRC SYS DISORDERS EXC UPPER LIMB & TOE W CC | SURG |
| Circulatory - Surgical | 241 | AMPUTATION FOR CIRC SYS DISORDERS EXC UPPER LIMB & TOE W/O CC/MCC | SURG |
| Circulatory - Surgical | 242 | PERMANENT CARDIAC PACEMAKER IMPLANT W MCC | SURG |
| Circulatory - Surgical | 243 | PERMANENT CARDIAC PACEMAKER IMPLANT W CC | SURG |
| Circulatory - Surgical | 244 | PERMANENT CARDIAC PACEMAKER IMPLANT W/O CC/MCC | SURG |
| Circulatory - Surgical | 245 | AICD GENERATOR PROCEDURES | SURG |
| Circulatory - Surgical | 246 | PERC CARDIOVASC PROC W DRUG-ELUTING STENT W MCC OR 4+ VESSELS/STENTS | SURG |
| Circulatory - Surgical | 247 | PERC CARDIOVASC PROC W DRUG-ELUTING STENT W/O MCC | SURG |
| Circulatory - Surgical | 248 | PERC CARDIOVASC PROC W NON-DRUG-ELUTING STENT W MCC OR 4+ VES/STENTS | SURG |
| Circulatory - Surgical | 249 | PERC CARDIOVASC PROC W NON-DRUG-ELUTING STENT W/O MCC | SURG |
| Circulatory - Surgical | 250 | PERC CARDIOVASC PROC W/O CORONARY ARTERY STENT W MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Circulatory - Surgical | 251 | PERC CARDIOVASC PROC W/O CORONARY ARTERY STENT W/O MCC | SURG |
| Circulatory - Surgical | 252 | OTHER VASCULAR PROCEDURES W MCC | SURG |
| Circulatory - Surgical | 253 | OTHER VASCULAR PROCEDURES W CC | SURG |
| Circulatory - Surgical | 254 | OTHER VASCULAR PROCEDURES W/O CC/MCC | SURG |
| Circulatory - Surgical | 255 | UPPER LIMB & TOE AMPUTATION FOR CIRC SYSTEM DISORDERS W MCC | SURG |
| Circulatory - Surgical | 256 | UPPER LIMB & TOE AMPUTATION FOR CIRC SYSTEM DISORDERS W CC | SURG |
| Circulatory - Surgical | 257 | UPPER LIMB & TOE AMPUTATION FOR CIRC SYSTEM DISORDERS W/O CC/MCC | SURG |
| Circulatory - Surgical | 258 | CARDIAC PACEMAKER DEVICE REPLACEMENT W MCC | SURG |
| Circulatory - Surgical | 259 | CARDIAC PACEMAKER DEVICE REPLACEMENT W/O MCC | SURG |
| Circulatory - Surgical | 260 | CARDIAC PACEMAKER REVISION EXCEPT DEVICE REPLACEMENT W MCC | SURG |
| Circulatory - Surgical | 261 | CARDIAC PACEMAKER REVISION EXCEPT DEVICE REPLACEMENT W CC | SURG |
| Circulatory - Surgical | 262 | CARDIAC PACEMAKER REVISION EXCEPT DEVICE REPLACEMENT W/O CC/MCC | SURG |
| Circulatory - Surgical | 263 | VEIN LIGATION & STRIPPING | SURG |
| Circulatory - Surgical | 264 | OTHER CIRCULATORY SYSTEM O.R. PROCEDURES | SURG |
| Circulatory - Surgical | 265 | AICD LEAD PROCEDURES | SURG |
| Circulatory - Surgical | 266 | ENDOVASCULAR CARDIAC VALVE REPLACEMENT W MCC | SURG |
| Circulatory - Surgical | 267 | ENDOVASCULAR CARDIAC VALVE REPLACEMENT W/O MCC | SURG |
| Circulatory - Surgical | 268 | AORTIC AND HEART ASSIST PROCEDURES EXCEPT PULSATION BALLOON W MCC | SURG |
| Circulatory - Surgical | 269 | AORTIC AND HEART ASSIST PROCEDURES EXCEPT PULSATION BALLOON W/O MCC | SURG |
| Circulatory - Surgical | 270 | OTHER MAJOR CARDIOVASCULAR PROCEDURES W MCC | SURG |
| Circulatory - Surgical | 271 | OTHER MAJOR CARDIOVASCULAR PROCEDURES W CC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Circulatory - Surgical | 272 | OTHER MAJOR CARDIOVASCULAR PROCEDURES W/O CC/MCC | SURG |
| Circulatory - Surgical | 273 | PERCUTANEOUS INTRACARDIAC PROCEDURES W MCC | SURG |
| Circulatory - Surgical | 274 | PERCUTANEOUS INTRACARDIAC PROCEDURES W/O MCC | SURG |
| Circulatory - Surgical | 319 | OTHER ENDOVASCULAR CARDIAC VALVE PROCEDURES W MCC | SURG |
| Circulatory - Surgical | 320 | OTHER ENDOVASCULAR CARDIAC VALVE PROCEDURES W/O MCC | SURG |
| Digestive, Hepatobiliary System and Pancreas- Medical | 368 | MAJOR ESOPHAGEAL DISORDERS W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 369 | MAJOR ESOPHAGEAL DISORDERS W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 370 | MAJOR ESOPHAGEAL DISORDERS W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 371 | MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 372 | MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 373 | MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 377 | G.I. HEMORRHAGE W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 378 | G.I. HEMORRHAGE W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 379 | G.I. HEMORRHAGE W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 380 | COMPLICATED PEPTIC ULCER W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 381 | COMPLICATED PEPTIC ULCER W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 382 | COMPLICATED PEPTIC ULCER W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 383 | UNCOMPLICATED PEPTIC ULCER W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 384 | UNCOMPLICATED PEPTIC ULCER W/O MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Digestive, Hepatobiliary System and Pancreas- Medical | 385 | INFLAMMATORY BOWEL DISEASE W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 386 | INFLAMMATORY BOWEL DISEASE W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 387 | INFLAMMATORY BOWEL DISEASE W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 388 | G.I. OBSTRUCTION W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 389 | G.I. OBSTRUCTION W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 390 | G.I. OBSTRUCTION W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 391 | ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 392 | ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W/O MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 393 | OTHER DIGESTIVE SYSTEM DIAGNOSES W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 394 | OTHER DIGESTIVE SYSTEM DIAGNOSES W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 395 | OTHER DIGESTIVE SYSTEM DIAGNOSES W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 432 | CIRRHOSIS & ALCOHOLIC HEPATITIS W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 433 | CIRRHOSIS & ALCOHOLIC HEPATITIS W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 434 | CIRRHOSIS & ALCOHOLIC HEPATITIS W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 438 | DISORDERS OF PANCREAS EXCEPT MALIGNANCY W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 439 | DISORDERS OF PANCREAS EXCEPT MALIGNANCY W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 440 | DISORDERS OF PANCREAS EXCEPT MALIGNANCY W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 441 | DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 442 | DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W CC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Digestive, Hepatobiliary System and Pancreas- Medical | 443 | DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W/O CC/MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 444 | DISORDERS OF THE BILIARY TRACT W MCC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 445 | DISORDERS OF THE BILIARY TRACT W CC | MED |
| Digestive, Hepatobiliary System and Pancreas- Medical | 446 | DISORDERS OF THE BILIARY TRACT W/O CC/MCC | MED |
| ECMO and Trach | 3 | ECMO OR TRACH W MV >96 HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R. | SURG |
| ECMO and Trach | 4 | TRACH W MV >96 HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R. | SURG |
| ECMO and Trach | 11 | TRACHEOSTOMY FOR FACE, MOUTH & NECK DIAGNOSES W MCC | SURG |
| ECMO and Trach | 12 | TRACHEOSTOMY FOR FACE, MOUTH & NECK DIAGNOSES W CC | SURG |
| ECMO and Trach | 13 | TRACHEOSTOMY FOR FACE, MOUTH & NECK DIAGNOSES W/O CC/MCC | SURG |
| Endocrine, Nutritional & Metabolic - Medical | 637 | DIABETES W MCC | MED |
| Endocrine, Nutritional & Metabolic - Medical | 638 | DIABETES W CC | MED |
| Endocrine, Nutritional & Metabolic - Medical | 639 | DIABETES W/O CC/MCC | MED |
| Endocrine, Nutritional & Metabolic - Medical | 640 | MISC DISORDERS OF NUTRITION,METABOLISM,FLUIDS/ELECTROLYTES W MCC | MED |
| Endocrine, Nutritional & Metabolic - Medical | 641 | MISC DISORDERS OF NUTRITION, METABOLISM, FLUIDS/ ELECTROLYTES W/O MCC | MED |
| Endocrine, Nutritional & Metabolic - Medical | 642 | INBORN AND OTHER DISORDERS OF METABOLISM | MED |
| Endocrine, Nutritional & Metabolic - Medical | 643 | ENDOCRINE DISORDERS W MCC | MED |
| Endocrine, Nutritional & Metabolic - Medical | 644 | ENDOCRINE DISORDERS W CC | MED |
| Endocrine, Nutritional & Metabolic - Medical | 645 | ENDOCRINE DISORDERS W/O CC/MCC | MED |
| Eye and ENT | 113 | ORBITAL PROCEDURES W CC/MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Eye and ENT | 114 | ORBITAL PROCEDURES W/O CC/MCC | SURG |
| Eye and ENT | 115 | EXTRAOCULAR PROCEDURES EXCEPT ORBIT | SURG |
| Eye and ENT | 116 | INTRAOCULAR PROCEDURES W CC/MCC | SURG |
| Eye and ENT | 117 | INTRAOCULAR PROCEDURES W/O CC/MCC | SURG |
| Eye and ENT | 121 | ACUTE MAJOR EYE INFECTIONS W CC/MCC | MED |
| Eye and ENT | 122 | ACUTE MAJOR EYE INFECTIONS W/O CC/MCC | MED |
| Eye and ENT | 123 | NEUROLOGICAL EYE DISORDERS | MED |
| Eye and ENT | 124 | OTHER DISORDERS OF THE EYE W MCC | MED |
| Eye and ENT | 125 | OTHER DISORDERS OF THE EYE W/O MCC | MED |
| Eye and ENT | 129 | MAJOR HEAD & NECK PROCEDURES W CC/MCC OR MAJOR DEVICE | SURG |
| Eye and ENT | 130 | MAJOR HEAD & NECK PROCEDURES W/O CC/MCC | SURG |
| Eye and ENT | 131 | CRANIAL/FACIAL PROCEDURES W CC/MCC | SURG |
| Eye and ENT | 132 | CRANIAL/FACIAL PROCEDURES W/O CC/MCC | SURG |
| Eye and ENT | 133 | OTHER EAR, NOSE, MOUTH & THROAT O.R. PROCEDURES W CC/MCC | SURG |
| Eye and ENT | 134 | OTHER EAR, NOSE, MOUTH & THROAT O.R. PROCEDURES W/O CC/MCC | SURG |
| Eye and ENT | 135 | SINUS & MASTOID PROCEDURES W CC/MCC | SURG |
| Eye and ENT | 136 | SINUS & MASTOID PROCEDURES W/O CC/MCC | SURG |
| Eye and ENT | 137 | MOUTH PROCEDURES W CC/MCC | SURG |
| Eye and ENT | 138 | MOUTH PROCEDURES W/O CC/MCC | SURG |
| Eye and ENT | 139 | SALIVARY GLAND PROCEDURES | SURG |
| Eye and ENT | 140 | MAJOR HEAD AND NECK PROCEDURES WITH MCC | SURG |
| Eye and ENT | 141 | MAJOR HEAD AND NECK PROCEDURES WITH CC | SURG |
| Eye and ENT | 142 | MAJOR HEAD AND NECK PROCEDURES WITHOUT CC/MCC | SURG |
| Eye and ENT | 143 | OTHER EAR, NOSE, MOUTH AND THROAT O.R. PROCEDURES WITH MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Eye and ENT | 144 | OTHER EAR, NOSE, MOUTH AND THROAT O.R. PROCEDURES WITH CC | SURG |
| Eye and ENT | 145 | OTHER EAR, NOSE, MOUTH AND THROAT O.R. PROCEDURES WITHOUT CC/MCC | SURG |
| Eye and ENT | 149 | DYSEQUILIBRIUM | MED |
| Eye and ENT | 150 | EPISTAXIS W MCC | MED |
| Eye and ENT | 151 | EPISTAXIS W/O MCC | MED |
| Eye and ENT | 152 | OTITIS MEDIA & URI W MCC | MED |
| Eye and ENT | 153 | OTITIS MEDIA & URI W/O MCC | MED |
| Eye and ENT | 154 | OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES W MCC | MED |
| Eye and ENT | 155 | OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES W CC | MED |
| Eye and ENT | 156 | OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES W/O CC/MCC | MED |
| Eye and ENT | 157 | DENTAL & ORAL DISEASES W MCC | MED |
| Eye and ENT | 158 | DENTAL & ORAL DISEASES W CC | MED |
| Eye and ENT | 159 | DENTAL & ORAL DISEASES W/O CC/MCC | MED |
| General and Other Surgery | 326 | STOMACH, ESOPHAGEAL & DUODENAL PROC W MCC | SURG |
| General and Other Surgery | 327 | STOMACH, ESOPHAGEAL & DUODENAL PROC W CC | SURG |
| General and Other Surgery | 328 | STOMACH, ESOPHAGEAL & DUODENAL PROC W/O CC/MCC | SURG |
| General and Other Surgery | 329 | MAJOR SMALL & LARGE BOWEL PROCEDURES W MCC | SURG |
| General and Other Surgery | 330 | MAJOR SMALL & LARGE BOWEL PROCEDURES W CC | SURG |
| General and Other Surgery | 331 | MAJOR SMALL & LARGE BOWEL PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 332 | RECTAL RESECTION W MCC | SURG |
| General and Other Surgery | 333 | RECTAL RESECTION W CC | SURG |
| General and Other Surgery | 334 | RECTAL RESECTION W/O CC/MCC | SURG |
| General and Other Surgery | 335 | PERITONEAL ADHESIOLYSIS W MCC | SURG |
| General and Other Surgery | 336 | PERITONEAL ADHESIOLYSIS W CC | SURG |
| General and Other Surgery | 337 | PERITONEAL ADHESIOLYSIS W/O CC/MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| General and Other Surgery | 338 | APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W MCC | SURG |
| General and Other Surgery | 339 | APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W CC | SURG |
| General and Other Surgery | 340 | APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W/O CC/MCC | SURG |
| General and Other Surgery | 341 | APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG W MCC | SURG |
| General and Other Surgery | 342 | APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG W CC | SURG |
| General and Other Surgery | 343 | APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG W/O CC/MCC | SURG |
| General and Other Surgery | 344 | MINOR SMALL & LARGE BOWEL PROCEDURES W MCC | SURG |
| General and Other Surgery | 345 | MINOR SMALL & LARGE BOWEL PROCEDURES W CC | SURG |
| General and Other Surgery | 346 | MINOR SMALL & LARGE BOWEL PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 347 | ANAL & STOMAL PROCEDURES W MCC | SURG |
| General and Other Surgery | 348 | ANAL & STOMAL PROCEDURES W CC | SURG |
| General and Other Surgery | 349 | ANAL & STOMAL PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 350 | INGUINAL & FEMORAL HERNIA PROCEDURES W MCC | SURG |
| General and Other Surgery | 351 | INGUINAL & FEMORAL HERNIA PROCEDURES W CC | SURG |
| General and Other Surgery | 352 | INGUINAL & FEMORAL HERNIA PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 353 | HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL W MCC | SURG |
| General and Other Surgery | 354 | HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL W CC | SURG |
| General and Other Surgery | 355 | HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL W/O CC/MCC | SURG |
| General and Other Surgery | 356 | OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W MCC | SURG |
| General and Other Surgery | 357 | OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W CC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| General and Other Surgery | 358 | OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 405 | PANCREAS, LIVER & SHUNT PROCEDURES W MCC | SURG |
| General and Other Surgery | 406 | PANCREAS, LIVER & SHUNT PROCEDURES W CC | SURG |
| General and Other Surgery | 407 | PANCREAS, LIVER & SHUNT PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 408 | BILIARY TRACT PROC EXCEPT ONLY CHOLECYST W OR W/O C.D.E. W MCC | SURG |
| General and Other Surgery | 409 | BILIARY TRACT PROC EXCEPT ONLY CHOLECYST W OR W/O C.D.E. W CC | SURG |
| General and Other Surgery | 410 | BILIARY TRACT PROC EXCEPT ONLY CHOLECYST W OR W/O C.D.E. W/O CC/MCC | SURG |
| General and Other Surgery | 411 | CHOLECYSTECTOMY W C.D.E. W MCC | SURG |
| General and Other Surgery | 412 | CHOLECYSTECTOMY W C.D.E. W CC | SURG |
| General and Other Surgery | 413 | CHOLECYSTECTOMY W C.D.E. W/O CC/MCC | SURG |
| General and Other Surgery | 414 | CHOLECYSTECTOMY EXCEPT BY LAPAROSCOPE W/O C.D.E. W MCC | SURG |
| General and Other Surgery | 415 | CHOLECYSTECTOMY EXCEPT BY LAPAROSCOPE W/O C.D.E. W CC | SURG |
| General and Other Surgery | 416 | CHOLECYSTECTOMY EXCEPT BY LAPAROSCOPE W/O C.D.E. W/O CC/MCC | SURG |
| General and Other Surgery | 417 | LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W MCC | SURG |
| General and Other Surgery | 418 | LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W CC | SURG |
| General and Other Surgery | 419 | LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W/O CC/MCC | SURG |
| General and Other Surgery | 420 | HEPATOBILIARY DIAGNOSTIC PROCEDURES W MCC | SURG |
| General and Other Surgery | 421 | HEPATOBILIARY DIAGNOSTIC PROCEDURES W CC | SURG |
| General and Other Surgery | 422 | HEPATOBILIARY DIAGNOSTIC PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 423 | OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES W MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| General and Other Surgery | 424 | OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES W CC | SURG |
| General and Other Surgery | 425 | OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 614 | ADRENAL & PITUITARY PROCEDURES W CC/MCC | SURG |
| General and Other Surgery | 615 | ADRENAL & PITUITARY PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 616 | AMPUTAT OF LOWER LIMB FOR ENDOCRINE, NUTRIT, & METABOL DIS W MCC | SURG |
| General and Other Surgery | 617 | AMPUTAT OF LOWER LIMB FOR ENDOCRINE, NUTRIT, & METABOL DIS W CC | SURG |
| General and Other Surgery | 618 | AMPUTAT OF LOWER LIMB FOR ENDOCRINE, NUTRIT,& METABOL DIS W/O CC/MCC | SURG |
| General and Other Surgery | 619 | O.R. PROCEDURES FOR OBESITY W MCC | SURG |
| General and Other Surgery | 620 | O.R. PROCEDURES FOR OBESITY W CC | SURG |
| General and Other Surgery | 621 | O.R. PROCEDURES FOR OBESITY W/O CC/MCC | SURG |
| General and Other Surgery | 625 | THYROID, PARATHYROID & THYROGLOSSAL PROCEDURES W MCC | SURG |
| General and Other Surgery | 626 | THYROID, PARATHYROID & THYROGLOSSAL PROCEDURES W CC | SURG |
| General and Other Surgery | 627 | THYROID, PARATHYROID & THYROGLOSSAL PROCEDURES W/O CC/MCC | SURG |
| General and Other Surgery | 628 | OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W MCC | SURG |
| General and Other Surgery | 629 | OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W CC | SURG |
| General and Other Surgery | 630 | OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W/O CC/MCC | SURG |
| General and Other Surgery | 799 | SPLENECTOMY W MCC | SURG |
| General and Other Surgery | 800 | SPLENECTOMY W CC | SURG |
| General and Other Surgery | 801 | SPLENECTOMY W/O CC/MCC | SURG |
| General and Other Surgery | 901 | WOUND DEBRIDEMENTS FOR INJURIES W MCC | SURG |
| General and Other Surgery | 902 | WOUND DEBRIDEMENTS FOR INJURIES W CC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| General and Other Surgery | 903 | WOUND DEBRIDEMENTS FOR INJURIES W/O CC/MCC | SURG |
| General and Other Surgery | 907 | OTHER O.R. PROCEDURES FOR INJURIES W MCC | SURG |
| General and Other Surgery | 908 | OTHER O.R. PROCEDURES FOR INJURIES W CC | SURG |
| General and Other Surgery | 909 | OTHER O.R. PROCEDURES FOR INJURIES W/O CC/MCC | SURG |
| General and Other Surgery | 981 | EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W MCC | SURG |
| General and Other Surgery | 982 | EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W CC | SURG |
| General and Other Surgery | 983 | EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W/O CC/MCC | SURG |
| General and Other Surgery | 987 | NON-EXTENSIVE O.R. PROC UNRELATED TO PRINCIPAL DIAGNOSIS W MCC | SURG |
| General and Other Surgery | 988 | NON-EXTENSIVE O.R. PROC UNRELATED TO PRINCIPAL DIAGNOSIS W CC | SURG |
| General and Other Surgery | 989 | NON-EXTENSIVE O.R. PROC UNRELATED TO PRINCIPAL DIAGNOSIS W/O CC/MCC | SURG |
| Hematology and Oncology | 18 | CHIMERIC ANTIGEN RECEPTOR (CAR) T-CELL IMMUNOTHERAPY | MED |
| Hematology and Oncology | 54 | NERVOUS SYSTEM NEOPLASMS W MCC | MED |
| Hematology and Oncology | 55 | NERVOUS SYSTEM NEOPLASMS W/O MCC | MED |
| Hematology and Oncology | 146 | EAR, NOSE, MOUTH & THROAT MALIGNANCY W MCC | MED |
| Hematology and Oncology | 147 | EAR, NOSE, MOUTH & THROAT MALIGNANCY W CC | MED |
| Hematology and Oncology | 148 | EAR, NOSE, MOUTH & THROAT MALIGNANCY W/O CC/MCC | MED |
| Hematology and Oncology | 180 | RESPIRATORY NEOPLASMS W MCC | MED |
| Hematology and Oncology | 181 | RESPIRATORY NEOPLASMS W CC | MED |
| Hematology and Oncology | 182 | RESPIRATORY NEOPLASMS W/O CC/MCC | MED |
| Hematology and Oncology | 374 | DIGESTIVE MALIGNANCY W MCC | MED |
| Hematology and Oncology | 375 | DIGESTIVE MALIGNANCY W CC | MED |
| Hematology and Oncology | 376 | DIGESTIVE MALIGNANCY W/O CC/MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Hematology and Oncology | 435 | MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W MCC | MED |
| Hematology and Oncology | 436 | MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W CC | MED |
| Hematology and Oncology | 437 | MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W/O CC/MCC | MED |
| Hematology and Oncology | 542 | PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W MCC | MED |
| Hematology and Oncology | 543 | PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W CC | MED |
| Hematology and Oncology | 544 | PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W/O CC/MCC | MED |
| Hematology and Oncology | 582 | MASTECTOMY FOR MALIGNANCY W CC/MCC | SURG |
| Hematology and Oncology | 583 | MASTECTOMY FOR MALIGNANCY W/O CC/MCC | SURG |
| Hematology and Oncology | 597 | MALIGNANT BREAST DISORDERS W MCC | MED |
| Hematology and Oncology | 598 | MALIGNANT BREAST DISORDERS W CC | MED |
| Hematology and Oncology | 599 | MALIGNANT BREAST DISORDERS W/O CC/MCC | MED |
| Hematology and Oncology | 656 | KIDNEY & URETER PROCEDURES FOR NEOPLASM W MCC | SURG |
| Hematology and Oncology | 657 | KIDNEY & URETER PROCEDURES FOR NEOPLASM W CC | SURG |
| Hematology and Oncology | 658 | KIDNEY & URETER PROCEDURES FOR NEOPLASM W/O CC/MCC | SURG |
| Hematology and Oncology | 686 | KIDNEY & URINARY TRACT NEOPLASMS W MCC | MED |
| Hematology and Oncology | 687 | KIDNEY & URINARY TRACT NEOPLASMS W CC | MED |
| Hematology and Oncology | 688 | KIDNEY & URINARY TRACT NEOPLASMS W/O CC/MCC | MED |
| Hematology and Oncology | 715 | OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC FOR MALIGNANCY W CC/MCC | SURG |
| Hematology and Oncology | 716 | OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC FOR MALIGNANCY W/O CC/MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Hematology and Oncology | 722 | MALIGNANCY, MALE REPRODUCTIVE SYSTEM W MCC | MED |
| Hematology and Oncology | 723 | MALIGNANCY, MALE REPRODUCTIVE SYSTEM W CC | MED |
| Hematology and Oncology | 724 | MALIGNANCY, MALE REPRODUCTIVE SYSTEM W/O CC/MCC | MED |
| Hematology and Oncology | 736 | UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIGNANCY W MCC | SURG |
| Hematology and Oncology | 737 | UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIGNANCY W CC | SURG |
| Hematology and Oncology | 738 | UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIGNANCY W/O CC/MCC | SURG |
| Hematology and Oncology | 739 | UTERINE, ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W MCC | SURG |
| Hematology and Oncology | 740 | UTERINE, ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W CC | SURG |
| Hematology and Oncology | 741 | UTERINE, ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W/O CC/MCC | SURG |
| Hematology and Oncology | 754 | MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W MCC | MED |
| Hematology and Oncology | 755 | MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W CC | MED |
| Hematology and Oncology | 756 | MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W/O CC/MCC | MED |
| Hematology and Oncology | 802 | OTHER O.R. PROC OF THE BLOOD & BLOOD FORMING ORGANS W MCC | SURG |
| Hematology and Oncology | 803 | OTHER O.R. PROC OF THE BLOOD & BLOOD FORMING ORGANS W CC | SURG |
| Hematology and Oncology | 804 | OTHER O.R. PROC OF THE BLOOD & BLOOD FORMING ORGANS W/O CC/MCC | SURG |
| Hematology and Oncology | 808 | MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W MCC | MED |
| Hematology and Oncology | 809 | MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W CC | MED |
| Hematology and Oncology | 810 | MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W/O CC/MCC | MED |
| Hematology and Oncology | 811 | RED BLOOD CELL DISORDERS W MCC | MED |
| Hematology and Oncology | 812 | RED BLOOD CELL DISORDERS W/O MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Hematology and Oncology | 813 | COAGULATION DISORDERS | MED |
| Hematology and Oncology | 814 | RETICULOENDOTHELIAL & IMMUNITY DISORDERS W MCC | MED |
| Hematology and Oncology | 815 | RETICULOENDOTHELIAL & IMMUNITY DISORDERS W CC | MED |
| Hematology and Oncology | 816 | RETICULOENDOTHELIAL & IMMUNITY DISORDERS W/O CC/MCC | MED |
| Hematology and Oncology | 820 | LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCEDURE W MCC | SURG |
| Hematology and Oncology | 821 | LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCEDURE W CC | SURG |
| Hematology and Oncology | 822 | LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCEDURE W/O CC/MCC | SURG |
| Hematology and Oncology | 823 | LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC W MCC | SURG |
| Hematology and Oncology | 824 | LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC W CC | SURG |
| Hematology and Oncology | 825 | LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC W/O CC/MCC | SURG |
| Hematology and Oncology | 826 | MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W MCC | SURG |
| Hematology and Oncology | 827 | MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W CC | SURG |
| Hematology and Oncology | 828 | MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W/O CC/MCC | SURG |
| Hematology and Oncology | 829 | MYELOPROLIF DISORD OR POORLY DIFF NEOPL W OTHER O.R. PROC W CC/MCC | SURG |
| Hematology and Oncology | 830 | MYELOPROLIF DISORD OR POORLY DIFF NEOPL W OTHER O.R. PROC W/O CC/MCC | SURG |
| Hematology and Oncology | 834 | ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W MCC | MED |
| Hematology and Oncology | 835 | ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W CC | MED |
| Hematology and Oncology | 836 | ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W/O CC/MCC | MED |
| Hematology and Oncology | 837 | CHEMO W ACUTE LEUKEMIA AS SDX OR W HIGH DOSE CHEMO AGENT W MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Hematology and Oncology | 838 | CHEMO W ACUTE LEUKEMIA AS SDX W CC OR HIGH DOSE CHEMO AGENT | MED |
| Hematology and Oncology | 839 | CHEMO W ACUTE LEUKEMIA AS SDX W/O CC/MCC | MED |
| Hematology and Oncology | 840 | LYMPHOMA & NON-ACUTE LEUKEMIA W MCC | MED |
| Hematology and Oncology | 841 | LYMPHOMA & NON-ACUTE LEUKEMIA W CC | MED |
| Hematology and Oncology | 842 | LYMPHOMA & NON-ACUTE LEUKEMIA W/O CC/MCC | MED |
| Hematology and Oncology | 843 | OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W MCC | MED |
| Hematology and Oncology | 844 | OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W CC | MED |
| Hematology and Oncology | 845 | OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W/O CC/MCC | MED |
| Hematology and Oncology | 846 | CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W MCC | MED |
| Hematology and Oncology | 847 | CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W CC | MED |
| Hematology and Oncology | 848 | CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W/O CC/MCC | MED |
| Hematology and Oncology | 849 | RADIOTHERAPY | MED |
| Infectious, Parasitic Diseases and HIV | 853 | INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W MCC | SURG |
| Infectious, Parasitic Diseases and HIV | 854 | INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W CC | SURG |
| Infectious, Parasitic Diseases and HIV | 855 | INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W/O CC/MCC | SURG |
| Infectious, Parasitic Diseases and HIV | 856 | POSTOPERATIVE OR POST-TRAUMATIC INFECTIONS W O.R. PROC W MCC | SURG |
| Infectious, Parasitic Diseases and HIV | 857 | POSTOPERATIVE OR POST-TRAUMATIC INFECTIONS W O.R. PROC W CC | SURG |
| Infectious, Parasitic Diseases and HIV | 858 | POSTOPERATIVE OR POST-TRAUMATIC INFECTIONS W O.R. PROC W/O CC/MCC | SURG |
| Infectious, Parasitic Diseases and HIV | 862 | POSTOPERATIVE & POST-TRAUMATIC INFECTIONS W MCC | MED |
| Infectious, Parasitic Diseases and HIV | 863 | POSTOPERATIVE & POST-TRAUMATIC INFECTIONS W/O MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Infectious, Parasitic Diseases and HIV | 864 | FEVER | MED |
| Infectious, Parasitic Diseases and HIV | 865 | VIRAL ILLNESS W MCC | MED |
| Infectious, Parasitic Diseases and HIV | 866 | VIRAL ILLNESS W/O MCC | MED |
| Infectious, Parasitic Diseases and HIV | 867 | OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W MCC | MED |
| Infectious, Parasitic Diseases and HIV | 868 | OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W CC | MED |
| Infectious, Parasitic Diseases and HIV | 869 | OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W/O CC/MCC | MED |
| Infectious, Parasitic Diseases and HIV | 870 | SEPTICEMIA OR SEVERE SEPSIS W MV >96 HOURS | MED |
| Infectious, Parasitic Diseases and HIV | 871 | SEPTICEMIA OR SEVERE SEPSIS W/O MV >96 HOURS W MCC | MED |
| Infectious, Parasitic Diseases and HIV | 872 | SEPTICEMIA OR SEVERE SEPSIS W/O MV >96 HOURS W/O MCC | MED |
| Infectious, Parasitic Diseases and HIV | 969 | HIV W EXTENSIVE O.R. PROCEDURE W MCC | SURG |
| Infectious, Parasitic Diseases and HIV | 970 | HIV W EXTENSIVE O.R. PROCEDURE W/O MCC | SURG |
| Infectious, Parasitic Diseases and HIV | 974 | HIV W MAJOR RELATED CONDITION W MCC | MED |
| Infectious, Parasitic Diseases and HIV | 975 | HIV W MAJOR RELATED CONDITION W CC | MED |
| Infectious, Parasitic Diseases and HIV | 976 | HIV W MAJOR RELATED CONDITION W/O CC/MCC | MED |
| Infectious, Parasitic Diseases and HIV | 977 | HIV W OR W/O OTHER RELATED CONDITION | MED |
| Kidney and Urinary Tract - Medical | 682 | RENAL FAILURE W MCC | MED |
| Kidney and Urinary Tract - Medical | 683 | RENAL FAILURE W CC | MED |
| Kidney and Urinary Tract - Medical | 684 | RENAL FAILURE W/O CC/MCC | MED |
| Kidney and Urinary Tract - Medical | 685 | ADMIT FOR RENAL DIALYSIS | MED |
| Kidney and Urinary Tract - Medical | 689 | KIDNEY & URINARY TRACT INFECTIONS W MCC | MED |
| Kidney and Urinary Tract - Medical | 690 | KIDNEY & URINARY TRACT INFECTIONS W/O MCC | MED |
| Kidney and Urinary Tract - Medical | 691 | URINARY STONES W ESW LITHOTRIPSY W CC/MCC | MED |
| Kidney and Urinary Tract - Medical | 692 | URINARY STONES W ESW LITHOTRIPSY W/O CC/MCC | MED |
| Kidney and Urinary Tract - Medical | 693 | URINARY STONES W/O ESW LITHOTRIPSY W MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Kidney and Urinary Tract - Medical | 694 | URINARY STONES W/O ESW LITHOTRIPSY W/O MCC | MED |
| Kidney and Urinary Tract - Medical | 695 | KIDNEY & URINARY TRACT SIGNS & SYMPTOMS W MCC | MED |
| Kidney and Urinary Tract - Medical | 696 | KIDNEY & URINARY TRACT SIGNS & SYMPTOMS W/O MCC | MED |
| Kidney and Urinary Tract - Medical | 697 | URETHRAL STRICTURE | MED |
| Kidney and Urinary Tract - Medical | 698 | OTHER KIDNEY & URINARY TRACT DIAGNOSES W MCC | MED |
| Kidney and Urinary Tract - Medical | 699 | OTHER KIDNEY & URINARY TRACT DIAGNOSES W CC | MED |
| Kidney and Urinary Tract - Medical | 700 | OTHER KIDNEY & URINARY TRACT DIAGNOSES W/O CC/MCC | MED |
| Kidney, Urinary, Male Reproductive Surgery | 653 | MAJOR BLADDER PROCEDURES W MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 654 | MAJOR BLADDER PROCEDURES W CC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 655 | MAJOR BLADDER PROCEDURES W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 659 | KIDNEY & URETER PROCEDURES FOR NON-NEOPLASM W MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 660 | KIDNEY & URETER PROCEDURES FOR NON-NEOPLASM W CC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 661 | KIDNEY & URETER PROCEDURES FOR NON-NEOPLASM W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 662 | MINOR BLADDER PROCEDURES W MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 663 | MINOR BLADDER PROCEDURES W CC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 664 | MINOR BLADDER PROCEDURES W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 665 | PROSTATECTOMY W MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 666 | PROSTATECTOMY W CC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 667 | PROSTATECTOMY W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 668 | TRANSURETHRAL PROCEDURES W MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Kidney, Urinary, Male Reproductive Surgery | 669 | TRANSURETHRAL PROCEDURES W CC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 670 | TRANSURETHRAL PROCEDURES W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 671 | URETHRAL PROCEDURES W CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 672 | URETHRAL PROCEDURES W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 673 | OTHER KIDNEY & URINARY TRACT PROCEDURES W MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 674 | OTHER KIDNEY & URINARY TRACT PROCEDURES W CC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 675 | OTHER KIDNEY & URINARY TRACT PROCEDURES W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 707 | MAJOR MALE PELVIC PROCEDURES W CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 708 | MAJOR MALE PELVIC PROCEDURES W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 709 | PENIS PROCEDURES W CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 710 | PENIS PROCEDURES W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 711 | TESTES PROCEDURES W CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 712 | TESTES PROCEDURES W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 713 | TRANSURETHRAL PROSTATECTOMY W CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 714 | TRANSURETHRAL PROSTATECTOMY W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 717 | OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXC MALIGNANCY W CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 718 | OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXC MALIGNANCY W/O CC/MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 725 | BENIGN PROSTATIC HYPERTROPHY W MCC | MED |
| Kidney, Urinary, Male Reproductive Surgery | 726 | BENIGN PROSTATIC HYPERTROPHY W/O MCC | MED |
| Kidney, Urinary, Male Reproductive Surgery | 727 | INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM W MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Kidney, Urinary, Male Reproductive Surgery | 728 | INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM W/O MCC | MED |
| Kidney, Urinary, Male Reproductive Surgery | 729 | OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES W CC/MCC | MED |
| Kidney, Urinary, Male Reproductive Surgery | 730 | OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES W/O CC/MCC | MED |
| Kidney, Urinary, Male Reproductive Surgery | 984 | PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W MCC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 985 | PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W CC | SURG |
| Kidney, Urinary, Male Reproductive Surgery | 986 | PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W/O CC/MCC | SURG |
| Mental Diseases and Disorders | 876 | O.R. PROCEDURE W PRINCIPAL DIAGNOSES OF MENTAL ILLNESS | SURG |
| Mental Diseases and Disorders | 880 | ACUTE ADJUSTMENT REACTION & PSYCHOSOCIAL DYSFUNCTION | MED |
| Mental Diseases and Disorders | 881 | DEPRESSIVE NEUROSES | MED |
| Mental Diseases and Disorders | 882 | NEUROSES EXCEPT DEPRESSIVE | MED |
| Mental Diseases and Disorders | 883 | DISORDERS OF PERSONALITY & IMPULSE CONTROL | MED |
| Mental Diseases and Disorders | 884 | ORGANIC DISTURBANCES & MENTAL RETARDATION | MED |
| Mental Diseases and Disorders | 885 | PSYCHOSES | MED |
| Mental Diseases and Disorders | 886 | BEHAVIORAL & DEVELOPMENTAL DISORDERS | MED |
| Mental Diseases and Disorders | 887 | OTHER MENTAL DISORDER DIAGNOSES | MED |
| Musculoskeletal System and Connective - Medical | 533 | FRACTURES OF FEMUR W MCC | MED |
| Musculoskeletal System and Connective - Medical | 534 | FRACTURES OF FEMUR W/O MCC | MED |
| Musculoskeletal System and Connective - Medical | 535 | FRACTURES OF HIP & PELVIS W MCC | MED |
| Musculoskeletal System and Connective - Medical | 536 | FRACTURES OF HIP & PELVIS W/O MCC | MED |
| Musculoskeletal System and Connective - Medical | 537 | SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH W CC/MCC | MED |
| Musculoskeletal System and Connective - Medical | 538 | SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH W/O CC/MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Musculoskeletal System and Connective - Medical | 539 | OSTEOMYELITIS W MCC | MED |
| Musculoskeletal System and Connective - Medical | 540 | OSTEOMYELITIS W CC | MED |
| Musculoskeletal System and Connective - Medical | 541 | OSTEOMYELITIS W/O CC/MCC | MED |
| Musculoskeletal System and Connective - Medical | 545 | CONNECTIVE TISSUE DISORDERS W MCC | MED |
| Musculoskeletal System and Connective - Medical | 546 | CONNECTIVE TISSUE DISORDERS W CC | MED |
| Musculoskeletal System and Connective - Medical | 547 | CONNECTIVE TISSUE DISORDERS W/O CC/MCC | MED |
| Musculoskeletal System and Connective - Medical | 548 | SEPTIC ARTHRITIS W MCC | MED |
| Musculoskeletal System and Connective - Medical | 549 | SEPTIC ARTHRITIS W CC | MED |
| Musculoskeletal System and Connective - Medical | 550 | SEPTIC ARTHRITIS W/O CC/MCC | MED |
| Musculoskeletal System and Connective - Medical | 551 | MEDICAL BACK PROBLEMS W MCC | MED |
| Musculoskeletal System and Connective - Medical | 552 | MEDICAL BACK PROBLEMS W/O MCC | MED |
| Musculoskeletal System and Connective - Medical | 553 | BONE DISEASES & ARTHROPATHIES W MCC | MED |
| Musculoskeletal System and Connective - Medical | 554 | BONE DISEASES & ARTHROPATHIES W/O MCC | MED |
| Musculoskeletal System and Connective - Medical | 555 | SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE W MCC | MED |
| Musculoskeletal System and Connective - Medical | 556 | SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE W/O MCC | MED |
| Musculoskeletal System and Connective - Medical | 557 | TENDONITIS, MYOSITIS & BURSITIS W MCC | MED |
| Musculoskeletal System and Connective - Medical | 558 | TENDONITIS, MYOSITIS & BURSITIS W/O MCC | MED |
| Musculoskeletal System and Connective - Medical | 559 | AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Musculoskeletal System and Connective - Medical | 560 | AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W CC | MED |
| Musculoskeletal System and Connective - Medical | 561 | AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W/O CC/MCC | MED |
| Musculoskeletal System and Connective - Medical | 562 | FX, SPRN, STRN & DISL EXCEPT FEMUR, HIP, PELVIS & THIGH W MCC | MED |
| Musculoskeletal System and Connective - Medical | 563 | FX, SPRN, STRN & DISL EXCEPT FEMUR, HIP, PELVIS & THIGH W/O MCC | MED |
| Musculoskeletal System and Connective - Medical | 564 | OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W MCC | MED |
| Musculoskeletal System and Connective - Medical | 565 | OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W CC | MED |
| Musculoskeletal System and Connective - Medical | 566 | OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W/O CC/MCC | MED |
| Musculoskeletal System and Connective - Surgical | 453 | COMBINED ANTERIOR/POSTERIOR SPINAL FUSION W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 454 | COMBINED ANTERIOR/POSTERIOR SPINAL FUSION W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 455 | COMBINED ANTERIOR/POSTERIOR SPINAL FUSION W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 456 | SPINAL FUS EXC CERV W SPINAL CURV/MALIG/INFEC OR EXT FUS W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 457 | SPINAL FUS EXC CERV W SPINAL CURV/MALIG/INFEC OR EXT FUS W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 458 | SPINAL FUS EXC CERV W SPINAL CURV/MALIG/INFEC OR EXT FUS W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 459 | SPINAL FUSION EXCEPT CERVICAL W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 460 | SPINAL FUSION EXCEPT CERVICAL W/O MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 461 | BILATERAL OR MULTIPLE MAJOR JOINT PROCS OF LOWER EXTREMITY W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 462 | BILATERAL OR MULTIPLE MAJOR JOINT PROCS OF LOWER EXTREMITY W/O MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 463 | WND DEBRID & SKN GRFT EXC HAND, FOR MUSCULO-CONN TISS DIS W MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Musculoskeletal System and Connective - Surgical | 464 | WND DEBRID & SKN GRFT EXC HAND, FOR MUSCULO-CONN TISS DIS W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 465 | WND DEBRID & SKN GRFT EXC HAND, FOR MUSCULO-CONN TISS DIS W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 466 | REVISION OF HIP OR KNEE REPLACEMENT W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 467 | REVISION OF HIP OR KNEE REPLACEMENT W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 468 | REVISION OF HIP OR KNEE REPLACEMENT W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 469 | MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 470 | MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY W/O MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 471 | CERVICAL SPINAL FUSION W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 472 | CERVICAL SPINAL FUSION W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 473 | CERVICAL SPINAL FUSION W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 474 | AMPUTATION FOR MUSCULOSKELETAL SYS & CONN TISSUE DIS W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 475 | AMPUTATION FOR MUSCULOSKELETAL SYS & CONN TISSUE DIS W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 476 | AMPUTATION FOR MUSCULOSKELETAL SYS & CONN TISSUE DIS W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 477 | BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 478 | BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 479 | BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 480 | HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 481 | HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W CC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Musculoskeletal System and Connective - Surgical | 482 | HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 483 | MAJOR JOINT/LIMB REATTACHMENT PROCEDURE OF UPPER EXTREMITIES | SURG |
| Musculoskeletal System and Connective - Surgical | 485 | KNEE PROCEDURES W PDX OF INFECTION W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 486 | KNEE PROCEDURES W PDX OF INFECTION W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 487 | KNEE PROCEDURES W PDX OF INFECTION W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 488 | KNEE PROCEDURES W/O PDX OF INFECTION W CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 489 | KNEE PROCEDURES W/O PDX OF INFECTION W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 492 | LOWER EXTREM & HUMER PROC EXCEPT HIP, FOOT, FEMUR W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 493 | LOWER EXTREM & HUMER PROC EXCEPT HIP, FOOT, FEMUR W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 494 | LOWER EXTREM & HUMER PROC EXCEPT HIP, FOOT, FEMUR W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 495 | LOCAL EXCISION & REMOVAL INT FIX DEVICES EXC HIP & FEMUR W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 496 | LOCAL EXCISION & REMOVAL INT FIX DEVICES EXC HIP & FEMUR W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 497 | LOCAL EXCISION & REMOVAL INT FIX DEVICES EXC HIP & FEMUR W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 498 | LOCAL EXCISION & REMOVAL INT FIX DEVICES OF HIP & FEMUR W CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 499 | LOCAL EXCISION & REMOVAL INT FIX DEVICES OF HIP & FEMUR W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 500 | SOFT TISSUE PROCEDURES W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 501 | SOFT TISSUE PROCEDURES W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 502 | SOFT TISSUE PROCEDURES W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 503 | FOOT PROCEDURES W MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Musculoskeletal System and Connective - Surgical | 504 | FOOT PROCEDURES W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 505 | FOOT PROCEDURES W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 506 | MAJOR THUMB OR JOINT PROCEDURES | SURG |
| Musculoskeletal System and Connective - Surgical | 507 | MAJOR SHOULDER OR ELBOW JOINT PROCEDURES W CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 508 | MAJOR SHOULDER OR ELBOW JOINT PROCEDURES W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 509 | ARTHROSCOPY | SURG |
| Musculoskeletal System and Connective - Surgical | 510 | SHOULDER, ELBOW OR FOREARM PROC, EXC MAJOR JOINT PROC W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 511 | SHOULDER, ELBOW OR FOREARM PROC, EXC MAJOR JOINT PROC W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 512 | SHOULDER, ELBOW OR FOREARM PROC, EXC MAJOR JOINT PROC W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 513 | HAND OR WRIST PROC, EXCEPT MAJOR THUMB OR JOINT PROC W CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 514 | HAND OR WRIST PROC, EXCEPT MAJOR THUMB OR JOINT PROC W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 515 | OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 516 | OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 517 | OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 518 | BACK & NECK PROC EXC SPINAL FUSION W MCC OR DISC DEVICE/NEUROSTIM | SURG |
| Musculoskeletal System and Connective - Surgical | 519 | BACK & NECK PROC EXC SPINAL FUSION W CC | SURG |
| Musculoskeletal System and Connective - Surgical | 520 | BACK & NECK PROC EXC SPINAL FUSION W/O CC/MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 521 | HIP REPLACEMENT WITH PRINCIPAL DIAGNOSIS OF HIP FRACTURE WITH MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Musculoskeletal System and Connective - Surgical | 522 | HIP REPLACEMENT WITH PRINCIPAL DIAGNOSIS OF HIP FRACTURE WITHOUT MCC | SURG |
| Musculoskeletal System and Connective - Surgical | 906 | HAND PROCEDURES FOR INJURIES | SURG |
| Nervous System - Medical | 52 | SPINAL DISORDERS & INJURIES W CC/MCC | MED |
| Nervous System - Medical | 53 | SPINAL DISORDERS & INJURIES W/O CC/MCC | MED |
| Nervous System - Medical | 56 | DEGENERATIVE NERVOUS SYSTEM DISORDERS W MCC | MED |
| Nervous System - Medical | 57 | DEGENERATIVE NERVOUS SYSTEM DISORDERS W/O MCC | MED |
| Nervous System - Medical | 58 | MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W MCC | MED |
| Nervous System - Medical | 59 | MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W CC | MED |
| Nervous System - Medical | 60 | MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W/O CC/MCC | MED |
| Nervous System - Medical | 61 | ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W MCC | MED |
| Nervous System - Medical | 62 | ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W CC | MED |
| Nervous System - Medical | 63 | ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W/O CC/MCC | MED |
| Nervous System - Medical | 64 | INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W MCC | MED |
| Nervous System - Medical | 65 | INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W CC OR TPA IN 24 HRS | MED |
| Nervous System - Medical | 66 | INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W/O CC/MCC | MED |
| Nervous System - Medical | 67 | NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT W MCC | MED |
| Nervous System - Medical | 68 | NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT W/O MCC | MED |
| Nervous System - Medical | 69 | TRANSIENT ISCHEMIA | MED |
| Nervous System - Medical | 70 | NONSPECIFIC CEREBROVASCULAR DISORDERS W MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Nervous System - Medical | 71 | NONSPECIFIC CEREBROVASCULAR DISORDERS W CC | MED |
| Nervous System - Medical | 72 | NONSPECIFIC CEREBROVASCULAR DISORDERS W/O CC/MCC | MED |
| Nervous System - Medical | 73 | CRANIAL & PERIPHERAL NERVE DISORDERS W MCC | MED |
| Nervous System - Medical | 74 | CRANIAL & PERIPHERAL NERVE DISORDERS W/O MCC | MED |
| Nervous System - Medical | 75 | VIRAL MENINGITIS W CC/MCC | MED |
| Nervous System - Medical | 76 | VIRAL MENINGITIS W/O CC/MCC | MED |
| Nervous System - Medical | 77 | HYPERTENSIVE ENCEPHALOPATHY W MCC | MED |
| Nervous System - Medical | 78 | HYPERTENSIVE ENCEPHALOPATHY W CC | MED |
| Nervous System - Medical | 79 | HYPERTENSIVE ENCEPHALOPATHY W/O CC/MCC | MED |
| Nervous System - Medical | 80 | NONTRAUMATIC STUPOR & COMA W MCC | MED |
| Nervous System - Medical | 81 | NONTRAUMATIC STUPOR & COMA W/O MCC | MED |
| Nervous System - Medical | 82 | TRAUMATIC STUPOR & COMA, COMA >1 HR W MCC | MED |
| Nervous System - Medical | 83 | TRAUMATIC STUPOR & COMA, COMA >1 HR W CC | MED |
| Nervous System - Medical | 84 | TRAUMATIC STUPOR & COMA, COMA >1 HR W/O CC/MCC | MED |
| Nervous System - Medical | 85 | TRAUMATIC STUPOR & COMA, COMA <1 HR W MCC | MED |
| Nervous System - Medical | 86 | TRAUMATIC STUPOR & COMA, COMA <1 HR W CC | MED |
| Nervous System - Medical | 87 | TRAUMATIC STUPOR & COMA, COMA <1 HR W/O CC/MCC | MED |
| Nervous System - Medical | 88 | CONCUSSION W MCC | MED |
| Nervous System - Medical | 89 | CONCUSSION W CC | MED |
| Nervous System - Medical | 90 | CONCUSSION W/O CC/MCC | MED |
| Nervous System - Medical | 91 | OTHER DISORDERS OF NERVOUS SYSTEM W MCC | MED |
| Nervous System - Medical | 92 | OTHER DISORDERS OF NERVOUS SYSTEM W CC | MED |
| Nervous System - Medical | 93 | OTHER DISORDERS OF NERVOUS SYSTEM W/O CC/MCC | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Nervous System - Medical | 94 | BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W MCC | MED |
| Nervous System - Medical | 95 | BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W CC | MED |
| Nervous System - Medical | 96 | BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W/O CC/MCC | MED |
| Nervous System - Medical | 97 | NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W MCC | MED |
| Nervous System - Medical | 98 | NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W CC | MED |
| Nervous System - Medical | 99 | NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W/O CC/MCC | MED |
| Nervous System - Medical | 100 | SEIZURES W MCC | MED |
| Nervous System - Medical | 101 | SEIZURES W/O MCC | MED |
| Nervous System - Medical | 102 | HEADACHES W MCC | MED |
| Nervous System - Medical | 103 | HEADACHES W/O MCC | MED |
| Nervous System - Surgical | 20 | INTRACRANIAL VASCULAR PROCEDURES W PDX HEMORRHAGE W MCC | SURG |
| Nervous System - Surgical | 21 | INTRACRANIAL VASCULAR PROCEDURES W PDX HEMORRHAGE W CC | SURG |
| Nervous System - Surgical | 22 | INTRACRANIAL VASCULAR PROCEDURES W PDX HEMORRHAGE W/O CC/MCC | SURG |
| Nervous System - Surgical | 23 | CRANIO W MAJOR DEV IMPL/ACUTE COMPLEX CNS PDX W MCC OR CHEMO IMPLANT | SURG |
| Nervous System - Surgical | 24 | CRANIO W MAJOR DEV IMPL/ACUTE COMPLEX CNS PDX W/O MCC | SURG |
| Nervous System - Surgical | 25 | CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W MCC | SURG |
| Nervous System - Surgical | 26 | CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W CC | SURG |
| Nervous System - Surgical | 27 | CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W/O CC/MCC | SURG |
| Nervous System - Surgical | 28 | SPINAL PROCEDURES W MCC | SURG |
| Nervous System - Surgical | 29 | SPINAL PROCEDURES W CC OR SPINAL NEUROSTIMULATORS | SURG |
| Nervous System - Surgical | 30 | SPINAL PROCEDURES W/O CC/MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Nervous System - Surgical | 31 | VENTRICULAR SHUNT PROCEDURES W MCC | SURG |
| Nervous System - Surgical | 32 | VENTRICULAR SHUNT PROCEDURES W CC | SURG |
| Nervous System - Surgical | 33 | VENTRICULAR SHUNT PROCEDURES W/O CC/MCC | SURG |
| Nervous System - Surgical | 34 | CAROTID ARTERY STENT PROCEDURE W MCC | SURG |
| Nervous System - Surgical | 35 | CAROTID ARTERY STENT PROCEDURE W CC | SURG |
| Nervous System - Surgical | 36 | CAROTID ARTERY STENT PROCEDURE W/O CC/MCC | SURG |
| Nervous System - Surgical | 37 | EXTRACRANIAL PROCEDURES W MCC | SURG |
| Nervous System - Surgical | 38 | EXTRACRANIAL PROCEDURES W CC | SURG |
| Nervous System - Surgical | 39 | EXTRACRANIAL PROCEDURES W/O CC/MCC | SURG |
| Nervous System - Surgical | 40 | PERIPH/CRANIAL NERVE & OTHER NERV SYST PROC W MCC | SURG |
| Nervous System - Surgical | 41 | PERIPH/CRANIAL NERVE & OTHER NERV SYST PROC W CC OR PERIPH NEUROSTIM | SURG |
| Nervous System - Surgical | 42 | PERIPH/CRANIAL NERVE & OTHER NERV SYST PROC W/O CC/MCC | SURG |
| Newborns and Other Neonates | 789 | NEONATES, DIED OR TRANSFERRED TO ANOTHER ACUTE CARE FACILITY | MED |
| Newborns and Other Neonates | 790 | EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE | MED |
| Newborns and Other Neonates | 791 | PREMATURITY W MAJOR PROBLEMS | MED |
| Newborns and Other Neonates | 792 | PREMATURITY W/O MAJOR PROBLEMS | MED |
| Newborns and Other Neonates | 793 | FULL TERM NEONATE W MAJOR PROBLEMS | MED |
| Newborns and Other Neonates | 794 | NEONATE W OTHER SIGNIFICANT PROBLEMS | MED |
| Newborns and Other Neonates | 795 | NORMAL NEWBORN | MED |
| Obstetrics and Gynecology | 734 | PELVIC EVISCERATION, RAD HYSTERECTOMY & RAD VULVECTOMY W CC/MCC | SURG |
| Obstetrics and Gynecology | 735 | PELVIC EVISCERATION, RAD HYSTERECTOMY & RAD VULVECTOMY W/O CC/MCC | SURG |
| Obstetrics and Gynecology | 742 | UTERINE & ADNEXA PROC FOR NON-MALIGNANCY W CC/MCC | SURG |
| Obstetrics and Gynecology | 743 | UTERINE & ADNEXA PROC FOR NON-MALIGNANCY W/O CC/MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Obstetrics and Gynecology | 744 | D&C, CONIZATION, LAPAROSCOPY & TUBAL INTERRUPTION W CC/MCC | SURG |
| Obstetrics and Gynecology | 745 | D&C, CONIZATION, LAPAROSCOPY & TUBAL INTERRUPTION W/O CC/MCC | SURG |
| Obstetrics and Gynecology | 746 | VAGINA, CERVIX & VULVA PROCEDURES W CC/MCC | SURG |
| Obstetrics and Gynecology | 747 | VAGINA, CERVIX & VULVA PROCEDURES W/O CC/MCC | SURG |
| Obstetrics and Gynecology | 748 | FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES | SURG |
| Obstetrics and Gynecology | 749 | OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES W CC/MCC | SURG |
| Obstetrics and Gynecology | 750 | OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES W/O CC/MCC | SURG |
| Obstetrics and Gynecology | 757 | INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W MCC | MED |
| Obstetrics and Gynecology | 758 | INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W CC | MED |
| Obstetrics and Gynecology | 759 | INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W/O CC/MCC | MED |
| Obstetrics and Gynecology | 760 | MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS W CC/MCC | MED |
| Obstetrics and Gynecology | 761 | MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS W/O CC/MCC | MED |
| Obstetrics and Gynecology | 765 | CESAREAN SECTION W CC/MCC | SURG |
| Obstetrics and Gynecology | 766 | CESAREAN SECTION W/O CC/MCC | SURG |
| Obstetrics and Gynecology | 767 | VAGINAL DELIVERY W STERILIZATION &/OR D&C | SURG |
| Obstetrics and Gynecology | 768 | VAGINAL DELIVERY W O.R. PROC EXCEPT STERIL &/OR D&C | SURG |
| Obstetrics and Gynecology | 769 | POSTPARTUM & POST ABORTION DIAGNOSES W O.R. PROCEDURE | SURG |
| Obstetrics and Gynecology | 770 | ABORTION W D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY | SURG |
| Obstetrics and Gynecology | 774 | VAGINAL DELIVERY W COMPLICATING DIAGNOSES | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Obstetrics and Gynecology | 775 | VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES | MED |
| Obstetrics and Gynecology | 776 | POSTPARTUM & POST ABORTION DIAGNOSES W/O O.R. PROCEDURE | MED |
| Obstetrics and Gynecology | 777 | ECTOPIC PREGNANCY | MED |
| Obstetrics and Gynecology | 778 | THREATENED ABORTION | MED |
| Obstetrics and Gynecology | 779 | ABORTION W/O D&C | MED |
| Obstetrics and Gynecology | 780 | FALSE LABOR | MED |
| Obstetrics and Gynecology | 781 | OTHER ANTEPARTUM DIAGNOSES W MEDICAL COMPLICATIONS | MED |
| Obstetrics and Gynecology | 782 | OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS | MED |
| Obstetrics and Gynecology | 783 | CESAREAN SECTION WITH STERILIZATION WITH MCC | SURG |
| Obstetrics and Gynecology | 784 | CESAREAN SECTION WITH STERILIZATION WITH CC | SURG |
| Obstetrics and Gynecology | 785 | CESAREAN SECTION WITH STERILIZATION WITHOUT CC/MCC | SURG |
| Obstetrics and Gynecology | 786 | CESAREAN SECTION WITHOUT STERILIZATION WITH MCC | SURG |
| Obstetrics and Gynecology | 787 | CESAREAN SECTION WITHOUT STERILIZATION WITH CC | SURG |
| Obstetrics and Gynecology | 788 | CESAREAN SECTION WITHOUT STERILIZATION WITHOUT CC/MCC | SURG |
| Obstetrics and Gynecology | 796 | VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C WITH MCC | SURG |
| Obstetrics and Gynecology | 797 | VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C WITH CC | SURG |
| Obstetrics and Gynecology | 798 | VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C WITHOUT CC/MCC | SURG |
| Obstetrics and Gynecology | 805 | VAGINAL DELIVERY WITHOUT STERILIZATION OR D&C WITH MCC | MED |
| Obstetrics and Gynecology | 806 | VAGINAL DELIVERY WITHOUT STERILIZATION OR D&C WITH CC | MED |
| Obstetrics and Gynecology | 807 | VAGINAL DELIVERY WITHOUT STERILIZATION OR D&C WITHOUT CC/MCC | MED |
| Obstetrics and Gynecology | 817 | OTHER ANTEPARTUM DIAGNOSES WITH O.R. PROCEDURES WITH MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Obstetrics and Gynecology | 818 | OTHER ANTEPARTUM DIAGNOSES WITH O.R. PROCEDURES WITH CC | SURG |
| Obstetrics and Gynecology | 819 | OTHER ANTEPARTUM DIAGNOSES WITH O.R. PROCEDURES WITHOUT CC/MCC | SURG |
| Obstetrics and Gynecology | 831 | OTHER ANTEPARTUM DIAGNOSES WITHOUT O.R. PROCEDURES WITH MCC | MED |
| Obstetrics and Gynecology | 832 | OTHER ANTEPARTUM DIAGNOSES WITHOUT O.R. PROCEDURES WITH CC | MED |
| Obstetrics and Gynecology | 833 | OTHER ANTEPARTUM DIAGNOSES WITHOUT O.R. PROCEDURES WITHOUT CC/MCC | MED |
| Other | 913 | TRAUMATIC INJURY W MCC | MED |
| Other | 914 | TRAUMATIC INJURY W/O MCC | MED |
| Other | 915 | ALLERGIC REACTIONS W MCC | MED |
| Other | 916 | ALLERGIC REACTIONS W/O MCC | MED |
| Other | 919 | COMPLICATIONS OF TREATMENT W MCC | MED |
| Other | 920 | COMPLICATIONS OF TREATMENT W CC | MED |
| Other | 921 | COMPLICATIONS OF TREATMENT W/O CC/MCC | MED |
| Other | 922 | OTHER INJURY, POISONING & TOXIC EFFECT DIAG W MCC | MED |
| Other | 923 | OTHER INJURY, POISONING & TOXIC EFFECT DIAG W/O MCC | MED |
| Rehabilitation | 939 | O.R. PROC W DIAGNOSES OF OTHER CONTACT W HEALTH SERVICES W MCC | SURG |
| Rehabilitation | 940 | O.R. PROC W DIAGNOSES OF OTHER CONTACT W HEALTH SERVICES W CC | SURG |
| Rehabilitation | 941 | O.R. PROC W DIAGNOSES OF OTHER CONTACT W HEALTH SERVICES W/O CC/MCC | SURG |
| Rehabilitation | 945 | REHABILITATION W CC/MCC | MED |
| Rehabilitation | 946 | REHABILITATION W/O CC/MCC | MED |
| Rehabilitation | 947 | SIGNS & SYMPTOMS W MCC | MED |
| Rehabilitation | 948 | SIGNS & SYMPTOMS W/O MCC | MED |
| Rehabilitation | 949 | AFTERCARE W CC/MCC | MED |
| Rehabilitation | 950 | AFTERCARE W/O CC/MCC | MED |
| Rehabilitation | 951 | OTHER FACTORS INFLUENCING HEALTH STATUS | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Respiratory - Medical | 175 | PULMONARY EMBOLISM W MCC | MED |
| Respiratory - Medical | 176 | PULMONARY EMBOLISM W/O MCC | MED |
| Respiratory - Medical | 177 | RESPIRATORY INFECTIONS & INFLAMMATIONS W MCC | MED |
| Respiratory - Medical | 178 | RESPIRATORY INFECTIONS & INFLAMMATIONS W CC | MED |
| Respiratory - Medical | 179 | RESPIRATORY INFECTIONS & INFLAMMATIONS W/O CC/MCC | MED |
| Respiratory - Medical | 183 | MAJOR CHEST TRAUMA W MCC | MED |
| Respiratory - Medical | 184 | MAJOR CHEST TRAUMA W CC | MED |
| Respiratory - Medical | 185 | MAJOR CHEST TRAUMA W/O CC/MCC | MED |
| Respiratory - Medical | 186 | PLEURAL EFFUSION W MCC | MED |
| Respiratory - Medical | 187 | PLEURAL EFFUSION W CC | MED |
| Respiratory - Medical | 188 | PLEURAL EFFUSION W/O CC/MCC | MED |
| Respiratory - Medical | 189 | PULMONARY EDEMA & RESPIRATORY FAILURE | MED |
| Respiratory - Medical | 190 | CHRONIC OBSTRUCTIVE PULMONARY DISEASE W MCC | MED |
| Respiratory - Medical | 191 | CHRONIC OBSTRUCTIVE PULMONARY DISEASE W CC | MED |
| Respiratory - Medical | 192 | CHRONIC OBSTRUCTIVE PULMONARY DISEASE W/O CC/MCC | MED |
| Respiratory - Medical | 193 | SIMPLE PNEUMONIA & PLEURISY W MCC | MED |
| Respiratory - Medical | 194 | SIMPLE PNEUMONIA & PLEURISY W CC | MED |
| Respiratory - Medical | 195 | SIMPLE PNEUMONIA & PLEURISY W/O CC/MCC | MED |
| Respiratory - Medical | 196 | INTERSTITIAL LUNG DISEASE W MCC | MED |
| Respiratory - Medical | 197 | INTERSTITIAL LUNG DISEASE W CC | MED |
| Respiratory - Medical | 198 | INTERSTITIAL LUNG DISEASE W/O CC/MCC | MED |
| Respiratory - Medical | 199 | PNEUMOTHORAX W MCC | MED |
| Respiratory - Medical | 200 | PNEUMOTHORAX W CC | MED |
| Respiratory - Medical | 201 | PNEUMOTHORAX W/O CC/MCC | MED |
| Respiratory - Medical | 202 | BRONCHITIS & ASTHMA W CC/MCC | MED |
| Respiratory - Medical | 203 | BRONCHITIS & ASTHMA W/O CC/MCC | MED |
| Respiratory - Medical | 204 | RESPIRATORY SIGNS & SYMPTOMS | MED |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Respiratory - Medical | 205 | OTHER RESPIRATORY SYSTEM DIAGNOSES W MCC | MED |
| Respiratory - Medical | 206 | OTHER RESPIRATORY SYSTEM DIAGNOSES W/O MCC | MED |
| Respiratory - Medical | 207 | RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT >96 HOURS | MED |
| Respiratory - Medical | 208 | RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT <96 HOURS | MED |
| Respiratory - Surgical | 163 | MAJOR CHEST PROCEDURES W MCC | SURG |
| Respiratory - Surgical | 164 | MAJOR CHEST PROCEDURES W CC | SURG |
| Respiratory - Surgical | 165 | MAJOR CHEST PROCEDURES W/O CC/MCC | SURG |
| Respiratory - Surgical | 166 | OTHER RESP SYSTEM O.R. PROCEDURES W MCC | SURG |
| Respiratory - Surgical | 167 | OTHER RESP SYSTEM O.R. PROCEDURES W CC | SURG |
| Respiratory - Surgical | 168 | OTHER RESP SYSTEM O.R. PROCEDURES W/O CC/MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 570 | SKIN DEBRIDEMENT W MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 571 | SKIN DEBRIDEMENT W CC | SURG |
| Skin, Subcutaneous Tissue and Breast | 572 | SKIN DEBRIDEMENT W/O CC/MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 573 | SKIN GRAFT FOR SKIN ULCER OR CELLULITIS W MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 574 | SKIN GRAFT FOR SKIN ULCER OR CELLULITIS W CC | SURG |
| Skin, Subcutaneous Tissue and Breast | 575 | SKIN GRAFT FOR SKIN ULCER OR CELLULITIS W/O CC/MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 576 | SKIN GRAFT EXC FOR SKIN ULCER OR CELLULITIS W MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 577 | SKIN GRAFT EXC FOR SKIN ULCER OR CELLULITIS W CC | SURG |
| Skin, Subcutaneous Tissue and Breast | 578 | SKIN GRAFT EXC FOR SKIN ULCER OR CELLULITIS W/O CC/MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 579 | OTHER SKIN, SUBCUT TISS & BREAST PROC W MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 580 | OTHER SKIN, SUBCUT TISS & BREAST PROC W CC | SURG |
| Skin, Subcutaneous Tissue and Breast | 581 | OTHER SKIN, SUBCUT TISS & BREAST PROC W/O CC/MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Skin, Subcutaneous Tissue and Breast | 584 | BREAST BIOPSY, LOCAL EXCISION & OTHER BREAST PROCEDURES W CC/MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 585 | BREAST BIOPSY, LOCAL EXCISION & OTHER BREAST PROCEDURES W/O CC/MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 592 | SKIN ULCERS W MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 593 | SKIN ULCERS W CC | MED |
| Skin, Subcutaneous Tissue and Breast | 594 | SKIN ULCERS W/O CC/MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 595 | MAJOR SKIN DISORDERS W MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 596 | MAJOR SKIN DISORDERS W/O MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 600 | NON-MALIGNANT BREAST DISORDERS W CC/MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 601 | NON-MALIGNANT BREAST DISORDERS W/O CC/MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 602 | CELLULITIS W MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 603 | CELLULITIS W/O MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 604 | TRAUMA TO THE SKIN, SUBCUT TISS & BREAST W MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 605 | TRAUMA TO THE SKIN, SUBCUT TISS & BREAST W/O MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 606 | MINOR SKIN DISORDERS W MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 607 | MINOR SKIN DISORDERS W/O MCC | MED |
| Skin, Subcutaneous Tissue and Breast | 622 | SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT & METAB DIS W MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 623 | SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT & METAB DIS W CC | SURG |
| Skin, Subcutaneous Tissue and Breast | 624 | SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT & METAB DIS W/O CC/MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 904 | SKIN GRAFTS FOR INJURIES W CC/MCC | SURG |
| Skin, Subcutaneous Tissue and Breast | 905 | SKIN GRAFTS FOR INJURIES W/O CC/MCC | SURG |
| Transplant, Trauma, and Burns | 1 | HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC | SURG |
| Transplant, Trauma, and Burns | 2 | HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W/O MCC | SURG |
| Transplant, Trauma, and Burns | 5 | LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT | SURG |
| Transplant, Trauma, and Burns | 6 | LIVER TRANSPLANT W/O MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Transplant, Trauma, and Burns | 7 | LUNG TRANSPLANT | SURG |
| Transplant, Trauma, and Burns | 8 | SIMULTANEOUS PANCREAS/KIDNEY TRANSPLANT | SURG |
| Transplant, Trauma, and Burns | 10 | PANCREAS TRANSPLANT | SURG |
| Transplant, Trauma, and Burns | 14 | ALLOGENEIC BONE MARROW TRANSPLANT | MED |
| Transplant, Trauma, and Burns | 16 | AUTOLOGOUS BONE MARROW TRANSPLANT W CC/MCC | MED |
| Transplant, Trauma, and Burns | 17 | AUTOLOGOUS BONE MARROW TRANSPLANT W/O CC/MCC | MED |
| Transplant, Trauma, and Burns | 19 | SIMULTANEOUS PANCREAS AND KIDNEY TRANSPLANT WITH HEMODIALYSIS | SURG |
| Transplant, Trauma, and Burns | 650 | KIDNEY TRANSPLANT WITH HEMODIALYSIS WITH MCC | SURG |
| Transplant, Trauma, and Burns | 651 | KIDNEY TRANSPLANT WITH HEMODIALYSIS WITHOUT MCC | SURG |
| Transplant, Trauma, and Burns | 652 | KIDNEY TRANSPLANT | SURG |
| Transplant, Trauma, and Burns | 927 | EXTENSIVE BURNS OR FULL THICKNESS BURNS W MV >96 HRS W SKIN GRAFT | SURG |
| Transplant, Trauma, and Burns | 928 | FULL THICKNESS BURN W SKIN GRAFT OR INHAL INJ W CC/MCC | SURG |
| Transplant, Trauma, and Burns | 929 | FULL THICKNESS BURN W SKIN GRAFT OR INHAL INJ W/O CC/MCC | SURG |
| Transplant, Trauma, and Burns | 933 | EXTENSIVE BURNS OR FULL THICKNESS BURNS W MV >96 HRS W/O SKIN GRAFT | MED |
| Transplant, Trauma, and Burns | 934 | FULL THICKNESS BURN W/O SKIN GRFT OR INHAL INJ | MED |
| Transplant, Trauma, and Burns | 935 | NON-EXTENSIVE BURNS | MED |
| Transplant, Trauma, and Burns | 955 | CRANIOTOMY FOR MULTIPLE SIGNIFICANT TRAUMA | SURG |
| Transplant, Trauma, and Burns | 956 | LIMB REATTACHMENT, HIP & FEMUR PROC FOR MULTIPLE SIGNIFICANT TRAUMA | SURG |
| Transplant, Trauma, and Burns | 957 | OTHER O.R. PROCEDURES FOR MULTIPLE SIGNIFICANT TRAUMA W MCC | SURG |
| Transplant, Trauma, and Burns | 958 | OTHER O.R. PROCEDURES FOR MULTIPLE SIGNIFICANT TRAUMA W CC | SURG |
| Transplant, Trauma, and Burns | 959 | OTHER O.R. PROCEDURES FOR MULTIPLE SIGNIFICANT TRAUMA W/O CC/MCC | SURG |

| AHEAD Inpatient Service Category | MS-DRG Num | MS-DRG Name | Med v Surg |
|---|---|---|---|
| Transplant, Trauma, and Burns | 963 | OTHER MULTIPLE SIGNIFICANT TRAUMA W MCC | MED |
| Transplant, Trauma, and Burns | 964 | OTHER MULTIPLE SIGNIFICANT TRAUMA W CC | MED |
| Transplant, Trauma, and Burns | 965 | OTHER MULTIPLE SIGNIFICANT TRAUMA W/O CC/MCC | MED |
| Ungroupable | 998 | PRINCIPAL DIAGNOSIS INVALID AS DISCHARGE DIAGNOSIS | ** |
| Ungroupable | 999 | UNGROUPABLE | ** |

## Appendix F: Outpatient Market Shift Service Category Assignment and Weighting Methodology

*Overview*. In addition to the inpatient MSA, the outpatient MSA is designed to adjust for volume changes between hospitals. Net volume changes will be neutral by only awarding positive market gains that are offset by declines at other hospitals. The two main steps of the outpatient market shift are to first assign a service category to the claim and secondly to assign case mix weights to the claim. Weights are used to quantify the case-mix adjusted volume to shift from one hospital to another and used in the calculation to determine the amount of dollars to adjust in the HGB.

*APC Information*. APCs assign outpatient services that are paid under OPPS. Certain services are excluded from OPPS and are paid under a different methodology (such as the CMS Physician Fee Schedule, CMS National Lab Fee Schedule, ASP Drug and Vaccine Payment Limit). CMS will develop an index to put these services on the same basis as services paid via APCs. These services are identified by a status indicator in the HCPCS/CPT table as published annually (OPPS Addendum B).

*Service Category Assignment.* Most services for Acute Care Hospitals are paid under the APC methodology which will serve as primary basis to assign a service category. For the services not paid under APCs, a HCPCS/CPT mapping table is utilized. Proposed service lines are assigned to the CMS OPPS Addendum A (APC table) and Addendum B (HCPCS/CPT table).

Once the claim lines have service categories assigned then a hierarchy number should be matched to the service line as outlined in **Exhibit F.1.** The lowest number for the claim would be the service category assignment for the entire claim. Note that for certain claims there may be multiple dates of service and the weighting mechanism will account for that, but in terms of service category assignment the entire claim will be assigned to one service category.

### Exhibit F.1: Outpatient Service Category

| Outpatient Service Category | Hierarchy Order |
|---|---|
| **ED** | 1 |
| **Oncology & Medical Infusions** | 2 |
| **Cardiovascular Surgery** | 3 |
| **Surgery** | 4 |
| **Medical** | 5 |
| **Other Service** | 6 |
| **Unassigned** | 7 |

Brief descriptions of the service categories are below, based on mapping of APCs and HCPCS/CPT codes:

1) Emergency Department (ED) – includes ED type A (open 24 hours) and B (not open 24 hours) visits, trauma, critical care, and observation APCs.
2) Oncology and Medical Infusions – includes radiation therapy services, blood transfusions, levels 3 and 4 drug administration procedure codes.

3) Cardiovascular Surgery – a claim that includes an APC that is specific to cardiac or vascular procedure. It does not include minor diagnostic cardiac testing.

4) Surgery – any APC with a surgery procedure but excludes minor procedures. Minor procedure APCs include multiple diagnostic tests and therefore those APCs are grouped in All Other Services.

5) Medical – APC for clinic visit which also includes eye examinations.

6) All Other Services – anything not already classified which includes referred radiology, lab, diagnostic testing, rehab, mental health services, nutrition visits, minor procedures, and miscellaneous services included on outpatient hospital claims (ambulance, orthotics, etc.)

*Case Mix Weights.* Once service lines are mapped based on APC and HCPCS codes, claim weights are adjusted based on the claim's corresponding revenue discount indicator. **Exhibit F.2** shows the final weight calculation for each revenue discount indicator.

**Exhibit F.2: Outpatient Weighted Volume Calculations for Short-Term Acute Care Hospitals**

| Revenue Discount Indicator | Weighting formula |
|---|---|
| **0** | Final weight = APC weight |
| **1** | Final weight = APC weight * Service unit quantity |
| **2** | Final weight = APC weight * ((1 + .5*(Service unit quantity - 1)) / Service unit quantity) |
| **3** | Final weight = APC weight * (.5 / Service unit quantity) |
| **4** | Final weight = APC weight * (1.5 / Service unit quantity) |
| **5** | Final weight = APC weight * (.5 * Service unit quantity) |
| **6** | Final weight = APC weight * (.25 / Service unit quantity) |
| **7** | Final weight = APC weight * (.75 / Service unit quantity) |
| **Other** | Final weight = APC weight * (2 / Service unit quantity) |

Currently CAHs are not paid under the APC methodology but are reimbursed 101% of allowable costs. CAH claims data will be processed through the APC grouper, which will allow for comparable data between Acute Care Hospitals and CAHs.