
# Medicare Fee-For-Service Home Health Agency Utilization & Payment Public Use File: A Methodological Overview

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# 1. Background

The Home Health Agency Utilization and Payment Public Use File (herein referred to as "Home Health Agency PUF") presents information on services provided to Medicare beneficiaries by home health agencies. The Home Health Agency PUF contains information on utilization, payment (Medicare payment and standardized payment), submitted charges, and demographic and chronic condition indicators organized by CMS Certification Number (6-digit provider identification number), Home Health Resource Group (HHRG), and the state where the provider of service is located. This PUF is based on information from CMS's Chronic Conditions Data Warehouse (CCW) data files. The data in the Home Health Agency PUF covers calendar years 2013-2016 and contains 100% final-action (i.e., all claim adjustments have been resolved) home health agency institutional claims for the Medicare fee-for-service (FFS) population.

# 2. Key Data Sources

The primary data source for these data is CMS's Chronic Conditions Data Warehouse (CCW). The CCW contains Medicare enrollment and eligibility information for all beneficiaries (whether they are in the fee-for-service program or a Medicare Advantage plan, and whether or not they have a chronic condition), complete data for Part A and Part B claims, and complete data for Part D prescription drug events, among other data. The CCW Part A and Part B data files contain 100 percent of Medicare final action claims for beneficiaries who are enrolled in the FFS program. The CCW Part A institutional claims file, restricted to claims where the claim type code was "10" indicating that the claim was a Home Health Agency claim, was used to create the Home Health Agency PUF. Beneficiary and service counts, provider charges, and Medicare payments were summarized from this file.

Provider demographics are also incorporated in the Home Health Agency PUF including name and complete address from the CMS Provider of Services (POS) file. This file is created annually and contains dozens of variables that describe the characteristics of institutional Medicare providers. Additional information regarding the POS file is available on the CMS website at: https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Provider-of-Services/index.html.

# 3. New for This Year

Several changes were made to the underlying CCW data files that were used to create this version of the Home Health Agency PUF. The changes, which are explained below, apply to all years of data in the PUF:

a) Timing of data release - Previous versions of the Home Health Agency PUF relied on data files that were produced after 24 months of maturity; that is, after a full 12 months of runout after the end of each calendar year. The new version of the HH PUF is based on data files that are produced after 18 months of maturity (i.e., six months after the end of the calendar year).

b) Enrollment data source conversion - Historically, the Enrollment Database (EDB) has been the source for enrollment and demographic information in the Master Beneficiary Summary File (MBSF), which forms the basis for the Home Health Agency PUF enrollment data. However, as the Medicare benefit has become increasingly complex, the Medicare enrollment applications and data systems have evolved. CMS has designated the Common Medicare Environment (CME) database as the single, enterprise-wide authoritative source for Medicare beneficiary enrollment and demographic data. We have transitioned the source for enrollment and demographic information in the MBSF from the EDB to the CME database.

More information on these changes can be found on the CCW website at:
https://www.ccwdata.org/web/guest/ccw-medicare-data-white-papers

## 4. Population

The Home Health Agency PUF includes data for providers that had a valid identification number and submitted at least one Medicare Part A institutional claim during the calendar year. To protect the privacy of Medicare beneficiaries, any aggregated records which are derived from 10 or fewer beneficiaries are excluded from the Home Health Agency PUF. Please note that each table is suppressed separately, meaning that there are more suppressed rows in the "Provider by HHRG Table" than the "Provider Table," and more suppressed rows in the "HHRG by State Table" than in the "HHRG Table," as the cell sizes in the more detailed tables are smaller.

## 5. Aggregation

The spending and utilization data in the Home Health Agency PUF are aggregated to the following:

c) the identification number for the agency, and
d) the Home Health Resource Group (HHRG).

Part A institutional claims require providers to include their CMS Certification Number. The first two characters of this 6-digit identification number indicate the state where the provider is located, using the Social Security Administration's state codes; the middle two characters represent the type of provider; and the last two digits are used as a counter for the providers within a given provider type.

Generally, Medicare makes payment under the home health prospective payment system on the basis of a national standardized 60-day episode payment rate that is adjusted for the applicable case-mix and wage index. The national standardized 60-day episode rate includes the six home health disciplines (skilled nursing, home health aide, physical therapy, speech-language pathology, occupational therapy, and medical social services).

To adjust for case-mix, patients are assigned to one of 153 HHRGs. The clinical severity level, functional severity level, and service utilization are used to place the patient in a particular HHRG. Each HHRG has an associated case-mix weight which is used in calculating the payment for an episode. For additional

information on HHRG's, visit https://www.cms.gov/medicare/medicare-fee-for-service-payment/homehealthpps/index.html.

For episodes with four or fewer visits, Medicare pays national per-visit rates based on the discipline(s) providing the services. An episode consisting of four or fewer visits within a 60-day period receives what is referred to as a low utilization payment adjustment (LUPA). For certain cases that exceed a specific cost threshold, an outlier adjustment may also be available.

## 6. Data Tables

The Home Health Agency PUF contains four tables: 1) aggregated information by provider, 2) aggregated information by provider and HHRG, 3) aggregated information by HHRG, and 4) aggregated information by HHRG by state.

**Provider Aggregate Table**

The "Provider Aggregate Table" contains information on utilization, payment (provider charges, Medicare payment, and standard payment), demographic information and chronic condition indicators organized by home health agency. The variables in this table are divided into non-LUPA and LUPA episodes (LUPAs are episodes with 4 or fewer visits). This table also contains average outlier payments as a percent of Medicare payment amounts for non-LUPA episodes only.

LUPA episode information is only included in this table as LUPAs are not paid under HHRGs, and therefore cannot be categorized in the other tables. Outlier episode payments are only included in this table as the outlier payment cap is applied on an agency basis, and not on an HHRG basis.

**Provider by HHRG Aggregate Table**

The "Provider by HHRG Aggregate Table" contains information on utilization and payment (provider charges, Medicare payment, and standard payment), organized by home health agency and HHRG.

**HHRG and HHRG/State Aggregate Table**

The "HHRG Aggregate Table" and "HHRG by State Aggregate Table" contain information on utilization, Medicare payment, and submitted charges organized by HHRG and HHRG by state respectively.

## 7. Data Contents

The "Provider by HHRG Table," "HHRG Aggregate Table," and "HHRG by State Aggregate Table" include the following variables, as appropriate:

***Provider ID*** – The CMS Certification Number for the home health agency on the claim.

***Agency name*** – The home health agency name, as reported in the POS file.

***Street address*** – The home health agency address, as reported in the POS file.

***City*** – The city where the home health agency is located, as reported in the POS file.

***State*** – The state where the home health agency is located, as reported in POS file. The fifty U.S. states and the District of Columbia are reported by the state postal abbreviation.

***Zip*** – The home health agency's zip code, as reported in the POS file.

***HHRG*** – HHRG category code.

***HHRG description*** – Description of the HHRG category.

***Total episodes*** – Total count of episodes provided by a specific home health agency or in a unique HHRG category in the calendar year.

***Distinct beneficiaries*** – Number of distinct Medicare beneficiaries receiving at least one home health episode in the calendar year. Beneficiaries may receive multiple home health episodes per year but are only counted once in this field.

***Total HHA Charge Amount -*** Total charges that the home health agency submitted for non-LUPA episodes.

***Average HHA charge amount**** – Average of the charges that the home health agency submitted for non-LUPA episodes.

***Average HHA Medicare Payment Amount**** – Average amount that Medicare paid for non-LUPA episodes. Home health services do not have any cost-sharing requirements and the Medicare payment amount will equal the allowed amount.

***Total HHA Medicare Payment Amount -*** Total amount that Medicare paid for non-LUPA episodes. Home health services do not have any cost-sharing requirements and the Medicare payment amount will equal the allowed amount.

***Average HHA Medicare Standard Payment Amount**** – Average amount that Medicare paid for non-LUPA episodes adjusted for geographic differences in payment rates.

In addition to the provider ID, name, and address as discussed above, the "Provider Aggregate Table" includes the following variables:

***Total episodes (non-LUPA)*** – Total count of non-LUPA episodes provided by a specific home health agency or in a unique HHRG category in the calendar year.

***Distinct beneficiaries (non-LUPA)*** – Number of distinct Medicare beneficiaries receiving at least one non-LUPA home health episode in the calendar year. Beneficiaries may receive multiple home health episodes per year but are only counted once in this field.

***Average Number of Total Visits Per Episode (non-LUPA) -*** Average number of total visits provided by the home health agency during a non-LUPA episode.**

***Average Number of Skilled Nursing Visits Per Episode (non-LUPA) -*** Average number of skilled nursing visits provided by the home health agency during a non-LUPA episode. **

***Average Number of PT Visits Per Episode (non-LUPA) -*** Average number of physical therapy visits provided by the home health agency during a non-LUPA episode. **

***Average Number of OT Visits Per Episode (non-LUPA) -*** Average number of occupational therapy visits provided by the home health agency during a non-LUPA episode. **

***Average Number of ST Visits Per Episode (non-LUPA) -*** Average number of speech therapy visits provided by the home health agency during a non-LUPA episode. **

***Average Number of Home Health Aide Visits Per Episode (non-LUPA) -*** Average number of home health aide visits provided by the home health agency during a non-LUPA episode. **

***Average Number of Medical-Social Visits Per Episode (non-LUPA) -*** Average number of medical-social visits provided by the home health agency during a non-LUPA episode. **

***Total HHA Charge Amount (non-LUPA) -*** Total charges that the home health agency submitted for non-LUPA episodes.

***Total HHA Medicare Payment Amount (non-LUPA) -*** Total amount that Medicare paid for non-LUPA episodes. Home health services do not have any cost-sharing requirements and the Medicare payment amount will equal the allowed amount.

***Total HHA Medicare Standard Payment Amount (non-LUPA) -*** Total amount that Medicare paid for non-LUPA episodes adjusted for geographic differences in payment rates.

***Outlier Payments as a Percent of Medicare Payment Amount (non-LUPA)*** – The percent of total Medicare payments for non-LUPA episodes paid to an HHA for outlier episodes.

***Total LUPA Episodes –*** Total count of low utilization payment amount episodes provided by a specific home health agency in the calendar year.

***Total HHA Medicare Payment Amount for LUPAs*** – Total amount that Medicare paid for LUPA episodes provided by a specific home health agency in the calendar year.

***Average Age –*** Average age of beneficiaries. Beneficiary age is calculated at the end of the calendar year or at the time of death.

***Male Beneficiaries –*** Number of male beneficiaries.

***Female Beneficiaries –*** Number of female beneficiaries.

***Nondual Beneficiaries –*** Number of Medicare beneficiaries only qualified to receive Medicare benefits. Beneficiaries are classified as Medicare only entitlement if they received zero months of any Medicaid benefits (full or partial) in the given calendar year.

***Dual Beneficiaries –*** Number of Medicare beneficiaries qualified to receive both Medicare and Medicaid benefits. Beneficiaries are classified as dual qualified for Medicare and Medicaid if in any month in the given calendar year they were receiving full or partial Medicaid benefits in addition to being enrolled in Medicare.

***White Beneficiaries –*** Number of non-Hispanic white beneficiaries.

***Black Beneficiaries –*** Number of non-Hispanic black or African American beneficiaries.

***Asian Pacific Islander Beneficiaries –*** Number of Asian Pacific Islander beneficiaries.

***Hispanic Beneficiaries –*** Number of Hispanic beneficiaries.

***American Indian or Alaska Native Beneficiaries –*** Number of American Indian or Alaska Native beneficiaries.

***Other/ Unknown Beneficiaries –*** Number of beneficiaries with race not elsewhere classified.

***Average HCC Score –*** Average Hierarchical Condition Category (HCC) risk score of beneficiaries. Please refer to the "Additional Information" section of this document for more details on HCC risk scores.

***Percent of Beneficiaries with Atrial Fibrillation[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for atrial fibrillation.

***Percent of Beneficiaries with Alzheimer's[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for Alzheimer's, related disorders, or dementia.

***Percent of Beneficiaries with Asthma[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for Asthma.

***Percent of Beneficiaries with Cancer[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithms for cancer. Includes breast cancer, colorectal cancer, lung cancer and prostate cancer.

***Percent of Beneficiaries with CHF[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for heart failure.

***Percent of Beneficiaries with Chronic Kidney Disease[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for chronic kidney disease.

***Percent of Beneficiaries with COPD[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for chronic obstructive pulmonary disease.

[1] To protect the privacy of Medicare beneficiaries, the percent of beneficiaries between 75% and 100% have been top-coded at 75%. Information on source data is available from the CMS Chronic Conditions Warehouse (CCW), https://www.ccwdata.org/web/guest/condition-categories.

***Percent of Beneficiaries with Depression[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for depression.

***Percent of Beneficiaries with Diabetes[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for diabetes.

***Percent of Beneficiaries with Hyperlipidemia[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for hyperlipidemia.

***Percent of Beneficiaries with Hypertension[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for hypertension.

***Percent of Beneficiaries with IHD[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for ischemic heart disease.

***Percent of Beneficiaries with Osteoperosis[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for osteoporosis.

***Percent of Beneficiaries with RA/OA[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for rheumatoid arthritis/osteoarthritis.

***Percent of Beneficiaries with Schizophrenia[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for schizophrenia and other psychotic disorders.

***Percent of Beneficiaries with Stroke[1] –*** Percent of beneficiaries meeting the CCW chronic condition algorithm for stroke.

** Please note – all payment variables included in all tables do not include LUPA episodes unless specifically noted.*

*** These variables are also included on the provider by HHRG table.*

## 8. Data Limitations and Notations

Although the Home Health Agency PUF has a wealth of payment and utilization information about home health utilization and payment, the dataset also has a number of limitations that are worth noting.

We do not include allowed amounts in these files, since home health services do not have any deductibles or coinsurance and therefore allowed amounts will always equal Medicare payments. In addition, please note that provider charges may sometimes be lower Medicare payments for non-LUPA episodes. This is due to the nature of the home health prospective payment system. For home health, payment is determined for each 60-day episode based on an assessment of the patient. Medicare will pay the full payment for this episode, even if charges in the 60-day period are less than the payment. The prospective payment system works to save Medicare money for a whole group of services over a

fiscal year, not by getting savings from an individual provider or home health agency, or in the case of each patient. Therefore, home health agencies will have some episodes for which their charges may be less than Medicare's payment, but they may also have some episodes in which their charges are greater than Medicare's payment. Such payment gives the home health agency an incentive to be efficient in their delivery of services, and saves Medicare money by keeping all payments-- with very few exceptions-- within the previously set episode rates.

There are two main utilization metrics included in these tables – total episodes and distinct beneficiaries. Counts of "total episodes" are unique counts per provider or per HHRG, and can be summed across providers or HHRGs to calculate a provider, state or national total. However, "distinct beneficiaries" counts are only unique for each row (provider or HHRG), but may be listed in more than one row per table. Therefore, "distinct beneficiaries" cannot be summed across rows in a given table as one beneficiary may be listed twice.

The Home Health Agency PUF does not have any information on patients who are not covered by Medicare, such as those with coverage from other federal programs (like the Federal Employees Health Benefits Program or Tricare), those with private health insurance (such as an individual policy or employer-sponsored coverage), or those who are uninsured. Even within Medicare, the Home Health Agency PUF does not include information for patients who are enrolled in any form of Medicare Advantage plan.

The information presented in this file also does not indicate the quality of care provided by individual home health agencies. The file only contains cost and utilization information. Additionally, the data are not risk adjusted and thus do not account for difference in the underlying severity of disease of patient populations treated by providers.

## 9. Additional Information

**Medicare Standardized Spending:** Users can find more information on Medicare payment standardization by referring to the "Geographic Variation Public Use File: Technical Supplement on Standardization" available within the "Related Links" section of the following web page: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareGeographic-Variation/GV_PUF.html

**HCCs (hierarchical condition categories):** CMS developed a risk-adjustment model that uses HCCs (hierarchical condition categories) to assign risk scores. Those scores estimate how beneficiaries' FFS spending will compare to the overall average for the entire Medicare population. The average risk score is set at 1.08; beneficiaries with scores greater than that are expected to have above-average spending, and vice versa. Risk scores are based on a beneficiary's age and sex; whether the beneficiary is eligible for Medicaid, first qualified for Medicare on the basis of disability, or lives in an institution (usually a nursing home); and the beneficiary's diagnoses from the previous year.

The HCC model was designed for risk adjustment on larger populations, such as the enrollees in an MA plan, and generates more accurate results when used to compare groups of beneficiaries rather than individuals. For more information on the HCC risk score, see: https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html