Medicare Fee-For-Service Post-Acute Care and Hospice Provider Utilization and Payment Public Use Files: Methodological Overview

November 2020

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1. Background

The Post-Acute Care and Hospice Provider Utilization and Payment Public Use Files (herein referred to as "PAC PUF") present information on services provided to Medicare beneficiaries by home health agencies, hospices, skilled nursing facilities (SNFs), inpatient rehabilitation facilities (IRFs), and long-term care hospitals (LTCHs). The PAC PUF reports data for home health agencies, SNFs, IRFs, and LTCHs to align with the data standardization and cross-setting measures outlined in the 2014 Improving Medicare Post-Acute Transformation Act (IMPACT Act). While not included as part of the IMPACT Act, hospice provider information is included in the PAC PUF data file for ease of use.

The PAC PUF contains information on demographic and clinical characteristics of beneficiaries served, professional and paraprofessional service utilization, submitted charges, and payments at the provider, state, and national levels. Additionally, payment information is reported at the payment system level for home health agencies, SNFs, and IRFs. The PAC PUF is derived from information in CMS's Chronic Conditions Data Warehouse (CCW) data files, and is based on 100 percent final-action (i.e., all claim adjustments have been resolved) Part A institutional claims.

2. New for This Year

To support trend analyses, the PAC PUF now covers calendar years 2013 to 2018. The PAC PUF has been refreshed to include new data showing volume of therapy services for Hospice. In addition, the methodology for calculating unique beneficiary counts at the state and national level has changed from previous iterations. For each type of service, the new methodology only counts a beneficiary once nationally even if they have received services in more than one state. Similarly, a beneficiary is only counted once at the state level even if they received services from multiple providers. The sum of distinct beneficiaries among all providers within a given service type will not sum to the total count of distinct beneficiaries at the state and national aggregate levels. In addition, metric names and definitions may have changed slightly to allow for more consistent calculations across settings. Therefore, caution should be used when comparing metrics reported in previous stand-alone PUFs with the current iteration of the PAC PUF. Please refer to the "Data Sources", "Data Contents", and "Appendix A" sections for more detailed information.

3. Data Sources

The primary source for these data is CMS's Chronic Conditions Data Warehouse (CCW). The CCW contains Medicare enrollment and eligibility information for all beneficiaries, 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's fee-for-service final-action claims.

Provider of Services

Provider information was incorporated into the PAC PUF and includes the provider's name and address from the CMS Provider of Services (POS) file. This file is created annually and contains dozens of

variables that describe the characteristics of 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

Spending & Payment System Groupings

Charges and payments for this PUF were restricted to Part A institutional claims with claim types "10" (home health), "20" or "30" (SNF), "50" (hospice), and "60" or "61" (IRF and LTCH). Claims with actual payments less than or equal to $0 were excluded.

Hospice Care Groups

The hospice benefit is a holistic, comprehensive benefit that covers all services necessary for the palliation and management of the patient's terminal illness and related conditions. Medicare pays hospice providers a daily wage-index adjusted rate for each day that a patient is under a hospice election. There are four levels of care in hospice: routine home care (RHC), continuous home care (CHC), inpatient respite care (IRC), and general inpatient care (GIC). The daily rate differs by level of hospice care; RHC is typical care, CHC is care provided during periods of patient crisis, IRC is inpatient care for short intervals to provide respite for the primary caregiver, and GIC is inpatient care to manage symptoms that cannot be managed in another care setting.

Home Health Resource Groups (HHRGs)

Generally, Medicare makes payments under the home health prospective payment system (PPS) on the basis of a national, standardized 60-day episode payment rate that is adjusted for case-mix and differences in area wages (i.e., wage index adjustment). The national, standardized 60-day episode rate includes services delivered under six home health disciplines: skilled nursing, home health aide, physical therapy, speech-language pathology, occupational therapy, and medical social services; as well as medical supplies.

To adjust for case-mix, patients are assigned to one of 153 home health resource groups (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 HHRGs, visit https://www.cms.gov/medicare/medicare-fee-for-service-payment/homehealthpps/index

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 receives what is referred to as a low utilization payment adjustment (LUPA). For episodes with unusually large costs due to patient home health care needs, Medicare allows for outlier payments to be made to home health agencies, in addition to regular 60-day case-mix and wage-adjusted episode payments.

Skilled Nursing Resource Utilization Groups (RUGs)

Medicare covers services provided in a SNF for qualifying patients for up to 100 days per benefit period (also called spell of illness). Generally, Medicare makes payment under the SNF PPS for the 100 days on a per diem basis that is adjusted for case-mix and wage index. These payments cover all routine, ancillary

and capital-related costs related to providing benefits and services. Beneficiaries who receive SNF services for longer than 20 days are required to pay a daily copayment for the remainder of their stay.

To adjust for case-mix, patients are assigned to one of 66 resource utilization groups (RUGs). Certain characteristics such as therapy and service use are used to place the patient in a particular RUG, and each RUG has associated weights which are applied to the base per diem rates. For additional information on RUGs, visit https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/index

The PAC PUF includes detailed information on the amount of therapy provided to patients in Very-High Rehabilitation (RV) and Ultra-High Rehabilitation (RU) RUGs, aggregated by provider number. In order to qualify for an RV RUG, a resident must receive at least 500 minutes of therapy each week, among other criteria. In the case of the RU RUGs, the resident must receive at least 720 minutes of therapy each week.

Inpatient Rehabilitation Facility Case-Mix Groups (CMGs)

Medicare makes payments under the IRF PPS per beneficiary discharge on a case-mix, wage-index adjusted rate. Beneficiaries transferred to an IRF from an acute care hospital do not pay any additional deductible; beneficiaries admitted from the community are responsible for a deductible for the first spell of illness. Additionally, beneficiaries are responsible for a per diem copayment for days 61 to 90 of their IRF stay.

To adjust for case-mix, patients are assigned to one of 88 case-mix groups (CMGs). Clinical characteristics and expected resource needs are used to place the patient in a particular CMG, and each CMG has associated weights which are applied to the payment rates. For additional information on CMGs, visit https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/InpatientRehabFacPPS/index

Demographic Information

Medicare enrollment data, Medicaid eligibility status, and demographic information including age, sex, race, and ethnicity were derived from the Master Beneficiary Summary File (MBSF). Additional data from the MBSF used in the calculation of secondary metrics includes the beneficiary's ZIP code (where the beneficiary received Medicare correspondence) and the beneficiary's date of death, validated by the Social Security Administration (SSA). Rural location was derived from the beneficiary ZIP code using the Rural-Urban Commuting Area Codes (RUCA) developed by the United States Department of Agriculture (USDA); for additional information visit: https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes.aspx. Primary RUCA codes 4 through 10 were designated as rural for the purposes of this PUF. The validated date of death was used to calculate the volume of services delivered in the seven days prior to death for hospice beneficiaries, and to confirm a discharge status of "death" on a claim.

Chronic Conditions

Chronic conditions indicators in the CCW are based on fee-for-service claims algorithms which indicate that treatment for a condition appears to have taken place; therefore, they cannot be used to determine whether Medicare Advantage (MA) enrollees have been treated for the condition(s) of interest. To a lesser extent, this limitation also applies to newly-eligible Medicare beneficiaries who may have only a partial

year of FFS coverage, or Medicare Advantage Cost Plan beneficiaries, who have both fee-for-service and Medicare Advantage encounter claims. More information about these algorithms, including the literature references and exact codes and claim types used to identify each condition, is available on the CCW website https://www2.ccwdata.org/web/guest/condition-categories

Primary Diagnosis

The primary diagnosis on the first claim in the calendar year that a beneficiary had with the given provider was used to organize beneficiaries into 15 primary diagnosis categories. The categories were developed using the Clinical Classifications Software (CCS) for ICD-10-CM/PCS (Beta version)[1] from the Healthcare Cost and Utilization Project (HCUP), sponsored by the Agency for Healthcare Research and Quality (AHRQ). The ICD-9-CM crosswalk was used for 2013 through 2015 (Oct 1, 2015) PAC PUFs. More information is available at: https://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp

CCS diagnosis categories were combined into the following categories:

1. Cancer (CCS categories 11-47)
2. Chronic obstructive pulmonary disease (CCS category 127)
3. Respiratory failure (CCS category 131)
4. Dementia (CCS category 653)
5. Stroke (CCS categories 109-113)
6. Congestive heart failure (CCS category 108)
7. Hypertension (CCS categories 98-99)
8. Other circulatory/heart conditions (CCS categories 96-97, 100-107, 114-121)
9. Infection (CCS categories 1-9, 76-78, 122-126, 135, 139, 159, 197)
10. Musculoskeletal and connective tissue disorders (CCS categories 201-212)
11. Injury (CCS categories 225-239)
12. Motor neural disorders (CCS categories 79-83, 85, 95)
13. Diabetes (CCS categories 49-50)
14. Skin ulcer/burns (CCS categories 198-200, 240)
15. Aftercare (CCS categories 254-258)

Professional & Paraprofessional Service Utilization

The PAC PUF also includes information on the volume of services delivered by each provider. Professional and paraprofessional services for home health and hospice were obtained from the revenue center files and included revenue center codes 0420-0429 (physical therapy), 0430-0439 (occupational therapy), 0440-0449 (speech language pathology), 0550-0559 (nursing), 0560-0569 (social work), 0570-0579 (home health aide), and 0657 (physician services).

The intensity of therapy services delivered in SNFs and IRFs were obtained from the Long-Term Care Minimum Data Set 3.0 (MDS) and Inpatient Rehabilitation Facility Patient Assessment Instrument (IRF-PAI), respectively.

[1] Please note that the Beta version of the tool is undergoing periodic updates as ICD-10-CM/PCS codes come into greater use; more information on the transition of this tool from ICD-9 to ICD-10 can be found at https://www.hcup-us.ahrq.gov/datainnovations/icd10_resources.jsp.

The MDS is a standardized, primary screening and assessment tool of health status which forms the foundation of the comprehensive assessment for all residents of nursing homes certified to participate in Medicare or Medicaid. The MDS contains items that measure physical, clinical, psychological, psycho-social functioning, and life care wishes. The MDS is used for payment determination and as part of the skilled nursing facility quality reporting program (SNF QRP). Question O0400 on the MDS reports the total minutes of therapy delivered by discipline type during the previous seven days, and is used to calculate the volume of therapy services delivered. The PAC PUF adjusts the reported therapy intensity if the therapy was delivered concurrently or in a group setting; the individual treatment minute count is not adjusted (1x modifier). The concurrent treatment minute count is adjusted using a 0.5x modifier and the group treatment minute count is adjusted using a 0.25x modifier.

The IRF-PAI is the assessment instrument IRFs use to collect clinical and demographic information for payment determination and quality measure calculations in accordance with the inpatient rehabilitation facility quality reporting program (IRF QRP). Completion of the IRF-PAI is required for each Medicare fee-for-service and Medicare Advantage patient discharged from an IRF. Questions O0401 and O0402 report the total minutes of therapy delivered by discipline type during the first two weeks of care, and are used to calculate the volume of therapy services delivered. The PAC PUF adjusts the reported therapy intensity if the therapy was delivered concurrently or in a group setting; the individual treatment minute count and the co-treatment minute counts are not adjusted (1x modifier). The concurrent treatment minute count is adjusted using a 0.5x modifier and the group treatment minute count is adjusted using a 0.25x modifier. Please note that for 2013-2014 PAC PUFs, there will be missing data for volume of therapy services delivered for IRF, as these variables were not active in the IRF-PAI assessment until October 1, 2015. As a result, 2015 PAC PUF will also show small volumes of therapy services delivered, as a whole year's worth of data was not available.

Site of Service

The site of service in which home health and hospice beneficiaries received care were assigned as a proportion of the total days served. Healthcare Common Procedure Coding System (HCPCS) codes Q5001-Q5010 were used to determine sites of service. The PAC PUF reports six sites of service; please note that not every site of service is reported for every care setting. See the Appendix A for more detail.

1. Home (Q5001)
2. Assisted living facilities (Q5002)
3. Nursing long term care facilities and non-skilled nursing facilities (Q5003)
4. Skilled nursing facilities (Q5004)
5. Inpatient hospitals (Q5005)
6. Inpatient hospice facilities (Q5006)

Discharge Status

The discharge status for each beneficiary was obtained from the discharge status record on each claim. IRF and LTCH stays have only one claim per stay, and therefore one discharge status per stay. Hospice stays and SNF stays may have multiple claims per spell of illness, however, only the last discharge status is reported for each spell of illness (i.e. a discharge status code other than "30 – still a patient"). Home

health discharges are reported as a percentage of all episodes. Please note that beneficiaries with multiple spells of illness from the same provider may have more than one valid discharge. Additionally, a spell of illness may cross calendar years, in which case no valid discharge status may be available for the current reporting year. The PAC PUF reports nine discharge status types; please note that not every discharge type is reported for every care setting. See the Appendix A for more detail.

1. Community/self-care (status code “01”)
2. Inpatient hospital (status code “02” , “05” , “43” , “63” , “65” and “66”)
3. Home health (status code “06”)
4. Skilled nursing facility (status code “03” and “64”)
5. Inpatient rehabilitation facility (status code “62”)
6. Hospice (status code “50” and “51”)
7. Death (status code “40” , “41” and “42” and an SSA validated death date)
8. Unknown discharge status (the spell of illness only contains status codes of “30” and no paid claims in the following calendar year exist)
9. Hospice live discharge (any discharge status code other than death or “30”)

4. Population

The PAC PUF is a suite of provider-level files that includes data for providers that had a valid identification number and submitted a Medicare 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 PAC PUF, indicated with an asterisk (*). Cells are also suppressed where greater than 75% of beneficiaries have a given chronic condition or primary diagnosis, indicated using a double asterisk (**). Cells with an “NA” indicate that the metric is not reported for that service setting, and cells with an “M” indicate there was insufficient MDS or IRF-PAI assessment data to report a figure. Please note that each table is suppressed separately; as the cell sizes in the more detailed tables are smaller, there are more suppressed rows in the HHRG, RUG, and CMG tables than in the Provider Table, therefore counts in the detail tables will not sum to the Provider Table.

5. Aggregation

The spending and utilization data in the PAC PUF are aggregated to the following:

a) The identification number for the provider, herein referred to as the Provider Table
b) The identification number for the provider and the payment system grouping, herein referred to as the Provider by HHRG, Provider by RUG, and Provider by CMG Tables

Institutional claims require providers to include their 6-digit identification number. The first two characters indicate the state where the provider is located, using the SSA’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.

6. Data Tables

The PAC PUF contains four tables:

Provider Table

The "Provider Table" contains payment (provider charges, allowed amount, Medicare payment, and standardized payment) and utilization information, as well as demographic and clinical characteristics of beneficiaries, summarized by provider, state and nation.

Provider by HHRG Table

The "Provider by HHRG Table" contains information on payment (provider charges, Medicare payment, and standardized payment), organized by home health agency and HHRG; data are summarized by provider, state and nation. Note, we do not report episodes that were LUPAs in this table.

Provider by RUG Table

The "Provider by RUG Table" contains information on payment (provider charges, allowed amount, Medicare payment, and standardized payment), organized by SNF and RUG; data are summarized by provider, state and nation.

Provider by CMG Table

The "Provider by CMG Table" contains information on payment (provider charges, allowed amount, Medicare payment, and standardized payment), organized by IRF and CMG; data are summarized by provider, state and nation.

7. Data Contents

Facility Information

Prvdr_ID: The 6-digit identification number for the provider.

Prvdr_Name: The provider name, as reported in the POS file.

Prvdr_City: The city where the provider is located, as reported in the POS file.

State: The state where the provider is located, as reported in POS file. The fifty U.S. states, the District of Columbia, and Puerto Rico are reported by the postal abbreviation.

Prvdr_ZIP: The provider's ZIP code, as reported in the POS file.

Beneficiaries Served & Length of Service

Bene_Dstnct_Cnt: Number of distinct Medicare beneficiaries with at least one paid claim in the calendar year.

Tot_Epsd_Stay_Cnt: Total count of episodes (home health) or the total count of stays (hospice, SNF, IRF, and LTCH) provided in the calendar year.

***Tot_Srvc_Days*:** Total count of covered days delivered by a provider in the calendar year.

***Bene_LE_7_Srvc_Days_Pct*:** Percent of Medicare beneficiaries with seven or fewer service days in the calendar year. Excludes beneficiaries whose care continued from a previous calendar year or into the next calendar year; days may not necessarily be contiguous.

***Bene_LE_30_Srvc_Days_Pct*:** Percent of Medicare beneficiaries with 30 or fewer service days in the calendar year. Excludes beneficiaries whose care continued from a previous calendar year or into the next calendar year; days may not necessarily be contiguous.

Bene_GE_60_Srvc_Days_Pct: Percent of Medicare beneficiaries with 60 or more total service days in the calendar year; days may not necessarily be contiguous.

Bene_GE_180_Srvc_Days_Pct: Percent of Medicare beneficiaries with 180 or more total service days in the calendar year; days may not necessarily be contiguous.

Spending

Tot_Chrg_Amt: Total charges submitted by the provider.

Tot_Mdcr_Stdzd_Pymt_Amt: Total amount that Medicare paid adjusted for geographic differences in payment rates.

Tot_Mdcr_Pymt_Amt: Total amount that Medicare paid after deductible and coinsurance amounts have been deducted.

Tot_Outlier_Pymt_Amt: Total amount that Medicare paid for episodes or stays that were extraordinarily costly to the provider. This applies only to the home health, IRF, and LTCH settings.

Tot_Alowd_Amt: Total of the Medicare allowed amount; this figure is the sum of the amount Medicare pays, the deductible and coinsurance amounts that the beneficiary is responsible for paying, and any amounts that a third party is responsible for paying. This applies only to the SNF, IRF, and LTCH settings.

Tot_Coinsrnc_Amt: Total of the Medicare coinsurance amount; this figure is the sum of the coinsurance amounts that the beneficiary is responsible for paying. This applies only to SNF, IRF, and LTCH settings.

Demographic Information

Bene_MA_Pct: Percent of Medicare beneficiaries enrolled in Medicare Advantage (MA) with at least one fee-for-service paid claim while enrolled in an MA plan. This metric is particularly relevant to hospice, as all hospice care is provided under Original Medicare when beneficiaries are under a hospice election. This

metric also applies to Medicare Advantage Cost Plan beneficiaries who access home health, SNF, IRF, and LTCH services through Original Medicare.

***Bene_Dual_Pct*:** Percent of Medicare beneficiaries qualified to receive Medicare and Medicaid benefits. Beneficiaries are classified as Medicare and Medicaid entitlement if in any month in the given calendar year they were receiving full or partial Medicaid benefits.

Bene_Rrl_Pct: Percent of Medicare beneficiaries who receive their Medicare correspondence in a ZIP designated as rural.

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

Bene_Male_Pct: Percent of beneficiaries who are male.

Bene_Feml_Pct: Percent of beneficiaries who are female.

Bene_Race_Wht_Pct: Percent of beneficiaries who are non-Hispanic white.

Bene_Race_Black_Pct: Percent of beneficiaries who are non-Hispanic black or African American.

Bene_Race_API_Pct: Percent of beneficiaries who are Asian Pacific Islander.

Bene_Race_Hspnc_Pct: Percent of beneficiaries who are Hispanic.

Bene_Race_Natind_Pct: Percent of beneficiaries who are American Indian or Alaska Native.

Bene_Race_Othr_Pct: Percent of beneficiaries with race not elsewhere classified.

Diagnoses & Clinical Severity

Bene_Avg_Risk_Scre: 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.

Bene_Avg_CC_Cnt: Average number of chronic conditions as determined by the 16 CCW chronic conditions: atrial fibrillation, Alzheimer's, asthma, cancer (Includes breast cancer, colorectal cancer, lung cancer and prostate cancer), CHF, chronic kidney disease, COPD, depression, diabetes, hyperlipidemia, hypertension, IHD, osteoporosis, RA/OA, schizophrenia, and stroke.

Bene_CC_AF_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for atrial fibrillation.

Bene_CC_Alzhmr_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for Alzheimer's, related disorders, or dementia.

Bene_CC_Asthma_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for Asthma.

Bene_CC_Cncr_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithms for cancer. Includes breast cancer, colorectal cancer, lung cancer and prostate cancer.

Bene_CC_CHF_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for congestive heart failure.

Bene_CC_CKD_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for chronic kidney disease.

Bene_CC_COPD_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for chronic obstructive pulmonary disease.

Bene_CC_Dprssn_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for depression.

Bene_CC_Dbts_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for diabetes.

Bene_CC_Hyplpdma_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for hyperlipidemia.

Bene_CC_Hyprtnsn_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for hypertension.

Bene_CC_IHD_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for ischemic heart disease.

Bene_CC_Opo_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for osteoporosis.

Bene_CC_RAOA_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for rheumatoid arthritis/osteoarthritis.

Bene_CC_Sz_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for schizophrenia and other psychotic disorders.

Bene_CC_Strok_Pct: Percent of beneficiaries meeting the CCW chronic condition algorithm for stroke.

Bene_Prmry_Dx_Cncr_Pct: Percent of beneficiaries with a CCS primary diagnosis of cancer (CCS 11-47). Includes the following categories: cancer of head and neck, esophagus, stomach, colon, rectum and anus, liver and intrahepatic bile duct, pancreas, other GI organs, peritoneum, bronchus, lung, other respiratory and intra-thoracic cancer, bone and connective tissue, melanomas of skin, other non-epithelial cancer of skin, breast, uterus, cervix, ovary, other female genital organs, prostate, testis, other male genital organs, bladder, kidney and renal pelvis, other urinary organs, brain and nervous system, thyroid, Hodgkin's disease, Non-Hodgkin's lymphoma, leukemia, multiple myeloma, other malignant and non-malignant neoplasms without specification of site or uncertain nature, and diagnoses including maintenance chemotherapy and radiotherapy.

Bene_Prmry_Dx_COPD_Pct: Percent of beneficiaries with a CCS primary diagnosis of chronic obstructive pulmonary disease (CCS 127).

Bene_Prmry_Dx_Rsprtryfailr_Pct: Percent of beneficiaries with a CCS primary diagnosis of respiratory failure (CCS 131).

Bene_Prmry_Dx_Dmnt_Pct: Percent of beneficiaries with a CCS primary diagnosis of dementia (CCS 653).

Bene_Prmry_Dx_Strok_Pct: Percent of beneficiaries with a CCS primary diagnosis of stroke (CCS 109-113). Includes the following categories: acute cerebrovascular disease, occlusion or stenosis of pre-cerebral arteries, other and ill-defined cerebrovascular disease, transient cerebral ischemia, and late effects of cerebrovascular disease.

Bene_Prmry_Dx_CHF_Pct: Percent of beneficiaries with a CCS primary diagnosis of congestive heart failure (CCS 108).

Bene_Prmry_Dx_Hyprtnsn_Pct: Percent of beneficiaries with a CCS primary diagnosis of hypertension (CCS 98-99). Includes the following categories: essential hypertension, hypertension with complications and secondary hypertension.

Bene_Prmry_Dx_Othrcrdvsclr_Pct: Percent of beneficiaries with a CCS primary diagnosis of circulatory or heart conditions other than stroke, CHF or hypertension (CCS 96-97, 100-107, 114-121). Includes the following categories: heart valve disorders, pericarditis, endocarditis, and myocarditis, cardiomyopathy (except that caused by tuberculosis or sexually transmitted disease), acute myocardial infarction, coronary atherosclerosis and other heart disease, nonspecific chest pain, pulmonary heart disease, other and ill-defined heart disease, conduction disorders, cardiac dysrhythmias, cardiac arrest and ventricular fibrillation, peripheral and visceral atherosclerosis, aortic, peripheral and visceral artery aneurysms, aortic and peripheral arterial embolism or thrombosis, other circulatory disease, phlebitis, thrombophlebitis and thromboembolism, varicose veins of lower extremity, hemorrhoids, other diseases of veins and lymphatic system.

Bene_Prmry_Dx_Infctn_Pct: Percent of beneficiaries with a CCS primary diagnosis of infection (CCS 1-9, 76-78, 122-126, 135, 139, 159, 197). Includes the following categories: tuberculosis, septicemia (except in labor), bacterial infection, mycoses, HIV infection, hepatitis, viral infection, other infections including parasitic infection, sexually transmitted infections, pneumonia, influenza, acute and chronic tonsillitis, acute bronchitis, other upper respiratory infections, meningitis, encephalitis, other central nervous system infection and poliomyelitis, intestinal infection, urinary tract infections, and skin and subcutaneous tissue infections.

Bene_Prmry_Dx_Ortho_Pct: Percent of beneficiaries with a CCS primary diagnosis of musculoskeletal and connective tissue disorders (CCS 201-212). Includes the following categories: infective arthritis and osteomyelitis (except that caused by tuberculosis or sexually transmitted disease), rheumatoid arthritis and related disease, osteoarthritis, other non-traumatic joint disorders, spondylitis, intervertebral disc disorders, other back problems, osteoporosis, pathological fracture, acquired foot deformities, other acquired deformities, systemic lupus erythematosus and connective tissue disorders, other connective tissue disease, other bone disease and musculoskeletal deformities.

Bene_Prmry_Dx_Injury_Pct: Percent of beneficiaries with a CCS primary diagnosis of injury (CCS 225-239). Includes the following categories: joint disorders and dislocations, fracture of neck of femur (hip), spinal cord injury, skull and face fractures, fracture of upper limb, fracture of lower limb, other fractures, sprains and strains, intracranial injury, crushing injury or internal injury, open wounds of head, neck and trunk, open wounds of extremities, complication of device, implant or graft, complications of surgical procedures or medical care, superficial injury, contusion.

Bene_Prmry_Dx_Mtr_Nrl_Pct: Percent of beneficiaries with a CCS primary diagnosis of motor neural disease (CCS 79-83, 85, 95). Includes the following categories: Parkinson's disease, multiple sclerosis, other hereditary and degenerative nervous system conditions, paralysis, epilepsy, convulsions, coma, stupor, brain damage, and other nervous system disorders.

Bene_Prmry_Dx_Dbts_Pct: Percent of beneficiaries with a CCS primary diagnosis of diabetes (CCS 49-50). Includes the following categories: diabetes mellitus without complication, diabetes mellitus with complications.

Bene_Prmry_Dx_Skn_Pct: Percent of beneficiaries with a CCS primary diagnosis of skin ulcer or burn (CCS 198-200, 240). Includes the following categories: chronic ulcer of skin, other inflammatory condition of skin, other skin disorders, and burns.

Bene_Prmry_Dx_Aftrcre_Pct: Percent of beneficiaries with a CCS primary diagnosis of aftercare (CCS 254-258).

Service Utilization

Nrsng_Visits_Cnt: Number of skilled nursing visits provided by the home health agency or hospice; visits identified using revenue codes 0550 to 0559.

PT_Visits_Cnt: Number of physical therapy visits provided by the home health agency; visits identified using revenue codes 0420 to 0429.

OT_Visits_Cnt: Number of occupational therapy visits provided by the home health agency; visits identified using revenue codes 0430 to 0439.

SLP_Visits_Cnt: Number of speech language pathology visits provided by the home health agency; visits identified using revenue codes 0440 to 0449.

MSW_Visits_Cnt: Number of social work visits provided by the home health agency or hospice; visits identified using revenue codes 0560 to 0569.

Aide_Visits_Cnt: Number of home health aide visits provided by the home health agency or hospice; visits identified using revenue codes 0570 to 0579.

Physn_Visits_Cnt: Number of physician visits provided by the hospice; visits identified using revenue code 0657.

Tot_Nrsng_Mnts: Total minutes of skilled nursing in home health and hospice provided per week; minutes identified using revenue codes 0550 to 0559.

Tot_PT_Mnts: Total minutes of physical therapy in home health, SNF and IRF provided per week. Physical therapy minutes identified using revenue codes 0420 to 0429 for home health, question O0400 in the MDS, and questions O0401 and O0402 in the IRF-PAI.

Tot_OT_Mnts: Total minutes of occupational therapy in home health, SNF and IRF provided per week. Occupational therapy minutes identified using revenue codes 0430 to 0439 for home health, question O0400 in the MDS, and questions O0401 and O0402 in the IRF-PAI.

Tot_SLP_Mnts: Total minutes of speech-language pathology in home health, SNF and IRF provided per week. Speech-language pathology minutes identified using revenue codes 0440 to 0449 for home health, question O0400 in the MDS, and questions O0401 and O0402 in the IRF-PAI.

Tot_MSW_Mnts: Total minutes of social work in home health and hospice provided per week; minutes identified using revenue codes 0560 to 0569.

Tot_Aide_Mnts: Total minutes of home health aide services in home health and hospice provided per week; minutes identified using revenue codes 0570 to 0579.

Nrsng_Mnts_Avg_7_Day_Prior_Death: Average minutes of skilled nursing hospice provided during the seven days prior to death; minutes identified using revenue codes 0550 to 0559.

MSW_Mnts_Avg_7_Day_Prior_Death: Average minutes of social work services hospice provided during the seven days prior to death; minutes identified using revenue codes 0560 to 0569.

Aide_Mnts_Avg_7_Day_Prior_Death: Average minutes of home health aide services hospice provided during the seven days prior to death; minutes identified using revenue codes 0570 to 0579.

Tot_Asmt_Cnt: Total number of MDS or IRF-PAI assessments recorded; this metric is used to calculate therapy minutes for SNF and IRF. Note that each IRF-PAI assessment includes up to two weeks of therapy delivered.

Asmt_10_Mnts_RV_Thrshld_Pct: Percent of skilled nursing facility “RV” assessments with total therapy minutes in the 500-510 range. "Total therapy minutes" includes speech, OT and PT types and all individual, half of concurrent, and one fourth of group minutes.

Asmt_10_Mnts_RU_Thrshld_Pct: Percent of skilled nursing facility “RU” assessments with total therapy minutes in the 720-730 range. “Total therapy minutes" includes speech, OT and PT types and all individual, half of concurrent, and one fourth of group minutes.

Srvc_Site_Days_Home_Pct: Percent of home care or hospice days where care was delivered in the home. HCPCS code Q5001 indicates care provided in a private residence.

Srvc_Site_Days_Astd_Lvg_Fac_Pct: Percent of home care or hospice days where care was delivered in an assisted living facility. HCPCS code Q5002 indicates care provided in an assisted living facility.

Srvc_Site_Days_LTCF_Pct: Percent of hospice days where care was delivered in a long-term care facility, non-skilled nursing facility. HCPCS code Q5003 indicates care provided in a long-term care facility, non-skilled nursing facility.

Srvc_Site_Days_SNF_Pct: Percent of hospice days where care was delivered in a skilled nursing facility. HCPCS code Q5004 indicates care provided in a skilled nursing facility.

Srvc_Site_Days_IP_Pct: Percent of hospice days where care was delivered in an inpatient hospital setting. HCPCS code Q5005 indicates care provided in an inpatient hospital setting.

Srvc_Site_Days_IP_Hospc_Pct: Percent of hospice days where care was delivered in an inpatient hospice setting. HCPCS code Q5006 indicates care provided in an inpatient hospice setting.

Discharge Status

Dschrg_Cmnty_Slfcr_Pct: The percent of stays or episodes that were discharged to the community for self-care. These are the proportion of IRF and LTCH claims with a discharge status of "01" or the proportion of SNF stays or home health episodes with discharge status of "01."

Dschrg_IP_Pct: The percent of stays or episodes that were discharged to an inpatient hospital. These are the proportion of IRF and LTCH claims with a discharge status of "02", "05", "43", "63", "65", or "66" or the proportion of SNF stays or home health episodes with discharge status of "02", "05", "43", "63", "65", or "66."

Dschrg_HH_Pct: The percent of episodes that were discharged to a home health agency. These are the proportion of IRF and LTCH claims with a discharge status of "06" or the proportion of SNF stays with discharge status of "06."

Dschrg_SNF_Pct: The percent of stays that were discharged to a SNF. These are the proportion of IRF and LTCH claims with a discharge status of "03" or "64."

Dschrg_IRF_Pct: The percent of stays that were discharged to an IRF. These are the proportion of LTCH claims with a discharge status of "62."

Dschrg_Hospc_Pct: The percent of stays or episodes that were discharged to hospice. These are the proportion of IRF and LTCH claims with a discharge status of "50" or "51" or the proportion of SNF stays or home health episodes with discharge status of "50" or "51."

Dschrg_Death_Pct: The percent of stays or episodes where the beneficiary died during care. These are beneficiaries with a discharge status code of "40", "41" or "42" and an SSA validated death date.

Dschrg_Unk_Pct: The percent of SNF and home health stays or episodes for which there are only discharge status does of "30" and where there are no paid claims in the following calendar year.

Dschrg_Hospc_Lv_Pct: The percent of hospice stays with live discharge from hospice care. A hospice beneficiary was considered to have a live discharge if the beneficiary had any discharge status code other than a confirmed death or other than still receiving services from the hospice provider through the next

year. Includes live discharges for any reason including revocation. Beneficiaries are only counted once in a calendar year (e.g. multiple revocations are not counted multiple times), and any revocations followed by a death within the calendar year are not counted, as the death supersedes the revocation.

Payment System Information

Hospc_RHC_Days_Pct: Percent of total hospice days that were routine home care (RHC) days. RHC days were identified using revenue code 0651.

Tot_HH_LUPA_Epsds_Cnt: Total count of low utilization payment amount episodes (LUPA) provided in the calendar year. LUPA episodes are those in which four or fewer home health visits were delivered.

HHRG_Low_Thrpy_Erly_Epsd_Day_Pct: Percent of total days of service which were in a low therapy, early episode. This includes HHRG codes that begin with a "1" in any of the clinical, functional, or service severity levels. Early episodes are the first and second episodes in an illness. Low therapy episodes are those which have fewer than 14 therapy visits delivered within the 60-day episode.

HHRG_Mdm_Thrpy_Erly_Epsd_Day_Pct: Percent of total days of service which were in a medium therapy, early episode. This includes HHRG codes that begin with a "2" in any of the clinical, functional, or service severity levels. Early episodes are the first and second episodes in an illness. Medium therapy episodes are those which have between 14 and 19 therapy visits delivered within the 60-day episode.

HHRG_Low_Thrpy_Lte_Epsd_Day_Pct: Percent of total days of service which were in a low therapy, late episode. This includes HHRG codes that begin with a "3" in any of the clinical, functional, or service severity levels. Late episodes are any episode after the second episode in an illness. Low therapy episodes are those which have fewer than 14 therapy visits delivered within the 60-day episode.

HHRG_Mdm_Thrpy_Lte_Epsd_Day_Pct: Percent of total days of service which were in a medium therapy, late episode. This includes HHRG codes that begin with a "4" in any of the clinical, functional, or service severity levels. Late episodes are any episode after the second episode in an illness. Medium therapy episodes are those which have between 14 and 19 therapy visits delivered within the 60-day episode.

HHRG_High_Thrpy_Epsd_Day_Pct: Percent of total days of service which were in a high therapy episode. This includes HHRG codes that begin with a "5" in any of the clinical, functional, or service severity levels. High therapy episodes are those in which 20 or more therapy visits were delivered within the 60-day episode.

RUG_AAA_Days_Pct: The percent of total paid Medicare days which were delivered under the AAA RUG. The AAA RUG is the default RUG rate, it is generally used when the SNF does not submit the MDS assessment in accordance with the prescribed assessment schedule.

RUG_Rehab_Days_Pct: The percent of total paid Medicare days which were delivered under low, medium or high rehabilitation RUGs. This includes RUG codes RLA, RLB, RMA, RMB, RMC, RHA, RHB, and RHC. Residents in RL, RM, and RH RUGs meet therapy thresholds of 45, 150, and 325 minutes per week, respectively.

RUG_Very_High_Rehab_Days_Pct: The percent of total paid Medicare days which were delivered under very-high rehabilitation RUGs. This includes RUG codes RVA, RVB, and RVC. Residents in RV RUGs meet a therapy threshold of 500 minutes per week.

RUG_Ultra_High_Rehab_Days_Pct: The percent of total paid Medicare days which were delivered under ultra-high rehabilitation RUGs. This includes RUG codes RUA, RUB, and RUC. Residents in RU RUGs meet a therapy threshold of 720 minutes per week.

RUG_Clncl_Cmplx_Days_Pct: The percent of total paid Medicare days which were delivered under Clinically Complex RUGs. This includes RUG codes CA1, CA1, CB1, CB2, CC1, and CC2. Residents in clinically complex RUGs may generally include those with burns, coma, septicemia, pneumonia, foot/wounds, internal bleeding, dehydration, tube feeding, oxygen, transfusions, hemiplegia, chemotherapy, dialysis, those with higher numbers of physician visits and order changes, and those with diabetes, 7 day injection, and higher numbers of order changes.

RUG_Rdcd_Phys_Fnctng_Days_Pct: The percent of total paid Medicare days which were delivered under Reduced Physical Functioning RUGs. This includes RUG codes PA1, PA2, PB1, PB2, PC1, PC2, PD1, PD2, PE1, and PE2. Residents in reduced physical functioning RUGs may generally require nursing rehabilitation activities at least six days a week, including passive or active ROM, amputation care, splint care, or training in dressing or grooming, eating or swallowing, transfer, bed mobility or walking, communication, scheduled toileting program or bladder retraining.

RUG_Spcl_High_Care_Days_Pct: The percent of total paid Medicare days which were delivered under Special High Care RUGs. This includes RUG codes SSA, SSB, and SSC. Residents in special high care RUGs are generally those with high number of limitations in their activities of daily living (ADLs) and multiple sclerosis, quadriplegia or cerebral palsy, seven days of respiratory therapy, a stage 3 or 4 pressure ulcer or multiple pressure ulcers of any stage, surgical wounds or open lesions, radiation, tube feeding and aphasia, fever with dehydration, pneumonia, vomiting, weight loss, or tube feeding.

RUG_Bhvrl_Symtm_Days_Pct: The percent of total paid Medicare days which were delivered under behavioral symptom RUGs. This includes RUG codes BA1, BA2, BB1, and BB2. Residents in behavioral symptom RUGs are generally those who exhibit wandering, physical or verbal abuse, inappropriate behavior or resisting care, or hallucinations or delusions four or more day a week.

RUG_Extnsv_Srvc_Days_Pct: The percent of total paid Medicare days which were delivered under extensive service RUGs. This includes RUG codes SE1, SE2, and SE3. Residents in extensive service RUGs are generally those with some (but not high) limitations in the number of activities of daily living (ADLs) and in need of the following services: intravenous feeding or medications, suctioning, tracheostomy care, or ventilator/respirator use.

CMG_Strok_Days_Pct: The percent of total service days delivered in a stroke CMG. This includes CMG codes beginning with “01” at any age or level of motor or cognitive impairment; the principle diagnosis in this category is stroke.

CMG_Injury_Trma_Days_Pct: The percent of total service days delivered in a traumatic/non-traumatic brain, spinal cord injury & major multiple trauma CMG. This includes CMG codes beginning with "02", "03", "04", "05", "17", or "18" at any level of motor or cognitive impairment; the principle diagnoses in this category includes traumatic brain injury, non-traumatic brain injury, traumatic spinal cord injury, non-traumatic spinal cord injury, major multiple trauma without brain or spinal cord injury, and major multiple trauma with brain or spinal cord injury.

CMG_Ortho_Days_Pct: The percent of total service days delivered in an orthopedic CMG. This includes CMG codes beginning with "07", "08", or "09" at any age or level of motor impairment; the principle diagnoses in this category are fracture of lower extremity, replacement of lower extremity joint, or other orthopedic diagnosis.

CMG_Arthts_Days_Pct: The percent of total service days delivered in an arthritis CMG. This includes CMG codes beginning with "12" or "13" at any level of motor impairment; the principle diagnoses in this category include osteoarthritis, rheumatoid arthritis, or other arthritis.

CMG_Crdvsclr_Plmnry_Days_Pct: The percent of total service days delivered in a cardiac or pulmonary CMG. This includes CMG codes beginning with "14" or "15" at any level of motor impairment; the principle diagnoses in this category include cardiac and pulmonary diagnoses.

CMG_Nrlgcl_Days_Pct: The percent of total service days delivered in a neurological; CMG. This includes CMG codes beginning with "06" at any level of motor impairment; the principle diagnoses in this category include neurological disorders (e.g. multiple sclerosis, Parkinson's disease).

CMG_Othr_Days_Pct: The percent of total service days delivered in a CMG other than a in a category described above. This includes CMG codes beginning with "10", "11", "16", "19", "20", "21" or "50" at any age or level of motor or cognitive impairment; the principle diagnoses in this category are amputation of the lower extremity, amputation of a non-lower extremity, pain syndrome, Guillian Barre, burns, and miscellaneous. Please note that the majority of days among the "Other CMG" category consists of miscellaneous.

Additional Variables for Supplemental Files:

Home Health (HH) Provider by HHRG, Skilled Nursing Facility (SNF) Provider by RUG, Inpatient Rehabilitation Facility (IRF) Provider by CMG

Grpng: The ordered collection of elements and or other groups

Grpng_Desc: The description of the ordered collection of elements and or other groups

Avg_Chrg_Per_Bene: Average of the Total Charge Amount per beneficiary. The Total Charge Amount is the total charges submitted by the provider.

Avg_Alowd_Amt_Per_Bene: Average of the Medicare Allowed Amount per beneficiary. The Medicare Allowed Amount is the sum of the amount Medicare pays, the deductible and coinsurance amounts that the beneficiary is responsible for paying, and any amounts that a third party is responsible for paying. This applies only to SNF Provider by RUG and IRF Provider by CMG supplemental files.

Avg_Pymt_Amt_Per_Bene: Average of the Total Medicare Payment Amount per beneficiary. The Total Medicare Payment Amount is the total amount that Medicare paid after deductible and coinsurance amounts have been deducted.

Avg_Stdzd_Pymt_Amt_Per_Bene: Average of the Total Medicare Standardized Payment Amount per beneficiary. The Medicare Standardized Payment Amount is the total amount that Medicare paid adjusted for geographic differences in payment rates.

Avg_Chrg_Per_Stay: Average of the Total Charge Amount per Stay. The Total Charge Amount is the total charges submitted by the provider. This applies only to SNF Provider by RUG and IRF Provider by CMG supplemental files.

Avg_Alowd_Amt_Per_Stay: Average of the Medicare Allowed Amount per Stay. The Medicare Allowed Amount is the sum of the amount Medicare pays, the deductible and coinsurance amounts that the beneficiary is responsible for paying, and any amounts that a third party is responsible for paying. This applies only to SNF Provider by RUG and IRF Provider by CMG supplemental files.

Avg_Pymt_Amt_Per_Stay: Average of the Total Medicare Payment Amount per Stay. The Total Medicare Payment Amount is the total amount that Medicare paid after deductible and coinsurance amounts have been deducted. This applies only to SNF Provider by RUG and IRF Provider by CMG supplemental files.

Avg_Stdzd_Pymt_Amt_Per_Stay: Average of the Total Medicare Standardized Payment Amount per Stay. The Medicare Standardized Payment Amount is the total amount that Medicare paid adjusted for geographic differences in payment rates. This applies only to SNF Provider by RUG and IRF Provider by CMG supplemental files.

Avg_Chrg_Per_Day: Average of the Total Charge Amount per Day. The Total Charge Amount is the total charges submitted by the provider.

Avg_Alowd_Amt_Per_Day: Average of the Medicare Allowed Amount per Day. The Medicare Allowed Amount is the sum of the amount Medicare pays, the deductible and coinsurance amounts that the beneficiary is responsible for paying, and any amounts that a third party is responsible for paying. This applies only to SNF Provider by RUG and IRF Provider by CMG supplemental files.

Avg_Pymt_Amt_Per_Day: Average of the Total Medicare Payment Amount per Day. The Total Medicare Payment Amount is the total amount that Medicare paid after deductible and coinsurance amounts have been deducted.

Avg_Stdzd_Pymt_Amt_Per_Day: Average of the Total Medicare Standardized Payment Amount per Day. The Medicare Standardized Payment Amount is the total amount that Medicare paid adjusted for geographic differences in payment rates.

Avg_Chrg_Per_Epsd: Average of the Total Charge Amount per Episode. The Total Charge Amount is the total charges submitted by the provider. This only applies to the HH Provider by HHRG supplemental file.

Avg_Pymt_Amt_Per_Epsd: Average of the Total Medicare Payment Amount per Episode. The Total Medicare Payment Amount is the total amount that Medicare paid after deductible and coinsurance amounts have been deducted. This only applies to the HH Provider by HHRG supplemental file.

Avg_Stdzd_Pymt_Amt_Per_Epsd: Average of the Total Medicare Standardized Payment Amount per Episode. The Medicare Standardized Payment Amount is the total amount that Medicare paid adjusted for geographic differences in payment rates. This only applies to the HH Provider by HHRG supplemental file.

8. Data Limitations and Notations

Although the PAC PUF has a wealth of payment and utilization information, the dataset also has a number of limitations that are worth noting.

The PAC 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 PAC PUF does not include claim information for Medicare Advantage.

The PAC PUF does not include a calculation on average length of service, but rather the total number of Medicare covered days provided in the calendar year. Medicare covered days less than or equal to zero are excluded. Beneficiaries with very long stays may be in care for several years making it difficult to attribute long stays to a single calendar year; this is relevant to the home health, hospice, and SNF settings which may have multiple claims per spell of illness.

There are three main utilization metrics included in these tables: 1) distinct beneficiaries, 2) total episodes or stays, and 3) days of service. Beneficiaries may have more than one episode or stay per year with a given provider but are only counted once per row as a unique beneficiary. Beneficiaries may be counted more than once (i.e. in a different row) if the beneficiary received services from more than one provider, therefore the sum of distinct beneficiaries among all providers will not sum to the total count of distinct beneficiaries at the state and national aggregate levels. Episodes/stays and days of service are additive at different levels of aggregation, however, please note that cell suppression may result in the sum of the parts not to equal the total.

The information presented in this file does not indicate the quality of care provided by individual providers. 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.

Home Health

We do not include allowed amounts for home health 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 than Medicare payments for non-LUPA episodes. This is due to the nature of the home health PPS. For home health, payment is determined

for each episode based on an assessment of the patient using the Outcome Assessment and Information Set (OASIS). Medicare will pay the full payment for this episode, even if charges are less than the payment. The PPS works to save Medicare money for a whole group of services over a fiscal year, not by getting savings from an individual provider or individual 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.

Based on data collected from the OASIS, the plurality of episodes delivered in the home health PPS are 60 days in length. However, many episodes are shorter than 60 days, particularly LUPA episodes. In this file, we estimate the actual days of service for episodes as the time between the first day of service and the last date the service was provided from data in the revenue center files. Note, we do not report LUPA episodes in the Provider by HHRG table.

Hospice

We do not include allowed amounts for hospice since hospice services do not typically have any deductibles or coinsurance and therefore allowed amounts will always equal Medicare payments. In addition, please note that hospice does not have any outlier payments.

Nationally, about one-third of beneficiaries receiving hospice were enrolled in a Medicare Advantage plan. Sufficient diagnosis information is not available for these beneficiaries at this time, therefore we cannot calculate the percent of beneficiaries with chronic conditions that are otherwise reported for the other care settings in this version of the PAC PUF. Relatedly, please also note that the Average HCC score is calculated for both MA and FFS beneficiaries as a single metric and caution should be used when comparing across providers as the ratio of FFS to MA beneficiaries may vary. Please refer to the "Additional Information" section of this document for more details on HCC risk scores.

Utilization metrics are not included for hospice claims submitted under GIC at an inpatient hospice facility (revenue center 0656 & HCPCS Q5006), as visits are not reported in quarter hour increments. Additionally, we do not report physical therapy, occupational therapy, or speech-language pathology services delivered in hospice, as these are too low in volume to report.

Over 98 percent of hospice care days are RHC days. The PAC PUF only reports the percent of all hospice care days that were RHC; no further detail is provided on CHC, IRC, or GIC as the number of days in these categories is too low to report.

Skilled Nursing Facilities

We do not include claims from critical access hospitals (CAHs) that are considered "swing bed" facilities, as they are not paid under the SNF PPS. We do include non-CAH swing bed facilities, as they are paid under the SNF PPS.

Patients may be classified into multiple RUGs over the course of their SNF stay if their medical needs change. When claims are submitted by a SNF for a beneficiary's stay, the claim includes information on how many total days the patient received care in the SNF and which RUGs they were classified into for how many days. Total payment is then calculated by one of the Medicare Administrative Contractors

(MACs). However, total payment information is only available on the claim at the stay level, and is not delineated by RUG. In order to include spending data at the RUG level for SNFs, we needed to attribute total spending to each RUG in a stay. We used the RUG codes, units of service (days), and the revenue center payment amounts from the revenue center files to allocate total spending across each RUG. As coinsurance details are also only included at the stay level, and not the RUG level, we were unable to determine which RUG the coinsurance would apply to. We assumed an even split across all RUGs in a stay, regardless of the amount of coinsurance. Please note that SNFs do not receive outlier payments.

Since the SNF Medicare Part A benefit only covers the first 100 days per spell of illness, we do not include a calculation of the percent of beneficiaries with 180 days of services or greater; although beneficiaries who have multiple spells of illness may have more than 100 covered days of SNF care over the course of the year, this count is too low to report.

There are two different measures of therapy utilization for SNF, both derived from data in the MDS assessment. The first is the number of MDS assessments that meet a specific minute threshold; the denominator for these metrics is the number of assessments (i.e. there may be more than one assessment for each claim), and only applies to claims delivered under RU or RV RUGs. The second set of therapy utilization metrics are reported as the number of therapy minutes delivered by each provider. It is important to note that the therapy minute metric is not made for any specific RUG category. Rehabilitation RUGs typically see more MDS assessments as they are required at the start of therapy, when a change in therapy is indicated, or an end of therapy occurs in addition to the standard reporting windows for all RUG types.

Inpatient Rehabilitation Facilities

In order to receive payment under the IRF PPS, an IRF must deliver intensive rehabilitation services to no less than 60 percent of its population (known as the “60 percent rule”). This file does not attempt to document adherence to this rule. CMGs were combined into larger categories, and selected to try to maintain clinical similarities, where possible, in order to reduce the number of cells suppressed.

While submission of the IRF-PAI is a requirement as part of the IRF QRP, in this file, approximately 4 percent of IRF claims had no corresponding IRF-PAI assessment. This may be due to assessments that fell outside of our claim-assessment matching algorithm, or in some cases where a facility did not submit a timely assessment. As such, the report of therapy minutes delivered by an IRF provider excludes any minute count if no assessment was found.

Long-Term Care Hospitals

Generally, less information from LTCHs is available in this PUF compared to the other care settings. LTCHs use a modified version of the acute inpatient PPS for payment. There are over seven hundred Medicare severity long-term care diagnosis related groups (MS-LTC-DRGs) and we have grouped them into major diagnostic categories (MDCs) at this time. Additionally, utilization information is not currently available in either the revenue center files or the LTCH Continuity Assessment Record and Evaluation (CARE) Data Set.

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/Medicare-Geographic-Variation/GV_PUF

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' spending will compare to the entire Medicare population. Risk scores are based on a beneficiary's age and sex; whether the beneficiary is newly eligible for Medicare, dually eligible for Medicaid, first qualified for Medicare on the basis of disability, or lives in an institution (usually a nursing home); and a hierarchical rank of the beneficiary's diagnoses from the previous year. Scores are adjusted for MA coding intensity (i.e. an intensity modifier is applied to account for the higher levels of coding in MA), and blended (i.e. a mix of MA encounter data and RAPS data) as required under the 21st Century Cures Act. Finally, risk scores are normalized, where the average score among the entire population is set to 1.0; beneficiaries with scores greater than 1.0 are expected to have above-average spending, and vice versa.

The HCC model was designed for capitated payment risk adjustment on larger populations 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

10.Glossary

Case-mix – refers to an adjustment made for payment which is based on the clinical and functional severity of the beneficiary.

Case-mix groups (CMGs) – 88 case-mix adjusted groups that constitute part of the IRF PPS.

Concurrent treatment – therapy treatment where care is delivered in a setting that includes one professional and two patients who have different goals or plans of care.

Co-treatment – therapy treatment where care is delivered in a setting that includes more than one professional and one patient.

Covered days – the amount of time which Medicare FFS paid for services to be delivered; this may not necessarily be the same as the total days a beneficiary received services from the provider, as it excludes days which a beneficiary received services, but which Medicare did not pay.

Episode – a term unique to home health that refers to a period of time (usually 60-days) for which a given payment applies.

Group treatment – therapy treatment where care is delivered in a setting that includes one professional and two to four patients working on a common skill or functional treatment.

Healthcare Common Procedure Coding System (HCPCS) – part of a uniform coding system that is used to identify medical services and procedures furnished by physicians and other health care professionals.

Home health resources groups (HHRGs) – 153 case-mix adjusted groups that constitute part of the home health PPS.

Individual treatment – therapy treatment where care is delivered in a setting that includes one professional and one patient.

Inpatient Rehabilitation Facility Patient Assessment Instrument (IRF-PAI) – assessment used by providers as part of the IRF PPS and QRP.

Institutional claims – standard format health care claim used by hospitals, facilities and other institutions for outpatient and inpatient services.

Minimum Data Set (MDS) – assessment used by providers as part of the SNF PPS and QRP.

Outcome and Assessment Information Set (OASIS) – assessment used by providers as part of the home health PPS and QRP.

Paraprofessional – care disciplines that do not require a license in order to practice; this includes home health aides.

Primary diagnosis – the most serious or resource intensive diagnosis that brought on the encounter with the provider.

Professional – care disciplines that require a license in order to practice; this includes nursing, physical therapy, occupational therapy, speech language pathology, social work, and physician services.

Prospective payment system (PPS) – is a method of reimbursement in which Medicare payment is made based on a predetermined, fixed amount.

Quality Reporting Program (QRP) – statutorily mandated Medicare reporting system unique to each service setting that is used to measure health care quality.

Resource utilization groups (RUGs) – 66 case-mix adjusted groups that constitute part of the SNF PPS.

Revenue center codes – part of a uniform coding system that specifies an accommodation, ancillary service, or billing calculation.

Spell of illness – there are two uses for this term in this document: 1) refers to the benefit period for SNFs, however this definition is not used to construct any metric in the PUF; this PUF uses the definition more broadly across all service types as 2) the continuous, uninterrupted service delivery period.

Stay – a term for all PAC settings, excluding home health, that refers to the period of continuous, uninterrupted service delivered to a beneficiary.

Wage index – is an adjustment factor based on CBSA labor market areas and derived by Medicare Cost Reports, the Hospital Wage Index Occupational Mix Survey, and other wage-related documents.

11. Appendix A

Comparison to Legacy PUFs

In order to provide a uniform set of reporting metrics, the PAC PUF replaces previously released Home Health, Hospice, and SNF stand-alone PUFs. The PAC PUF also reports data for the IRF and LTCH service settings. A number of metrics have been added to the PAC PUFs that were not included in the stand-alone PUFs. Table 1 below shows the complete list of metrics for each of the service settings in the PAC PUF. Caution should be used when comparing metrics reported in the stand-alone PUFs with the current iteration of the PAC PUF, as metric names and definitions may have changed slightly to allow for consistent calculations across settings.

Table 1: Public Use File Provider-Level Metrics, by Service Setting[2]

Number	Facility Information	Hospice	HH	SNF	IRF	LTCH
1	Prvdr_ID	Y	Y	Y	Y	Y
2	Prvdr_Name	Y	Y	Y	Y	Y
3	Prvdr_City	Y	Y	Y	Y	Y
4	State	Y	Y	Y	Y	Y
5	Prvdr_ZIP	Y	Y	Y	Y	Y
Number	**Beneficiaries Served & LOS**	**Hospice**	**HH**	**SNF**	**IRF**	**LTCH**
6	Bene_Dstnct_Cnt	Y	Y	Y	Y	Y
7	Tot_Epsd_Stay_Cnt	Y	Y	Y	Y	Y
8	Tot_Srvc_Days	Y	Y	Y	Y	Y
9	Bene_LE_7_Srvc_Days_Pct	Y	Y	Y	Y	Y
10	Bene_LE_30_Srvc_Days_Pct	Y	Y	Y	Y	Y
11	Bene_GE_60_Srvc_Days_Pct	Y	Y	Y	NA	Y
12	Bene_GE_180_Srvc_Days_Pct	Y	Y	NA	NA	NA
Number	**Spending**	**Hospice**	**HH**	**SNF**	**IRF**	**LTCH**
13	Tot_Chrg_Amt	Y	Y	Y	Y	Y
14	Tot_Mdcr_Stdzd_Pymt_Amt	Y	Y	Y	Y	Y
15	Tot_Mdcr_Pymt_Amt	Y	Y	Y	Y	Y
16	Tot_Outlier_Pymt_Amt	NA	Y	NA	Y	Y
17	Tot_Alowd_Amt	NA	NA	Y	Y	Y
18	Tot_Coinsrnc_Amt	NA	NA	Y	Y	Y
Number	**Demographic Information**	**Hospice**	**HH**	**SNF**	**IRF**	**LTCH**
19	Bene_MA_Pct	Y	Y	Y	Y	Y

20	Bene_Dual_Pct	Y	Y	Y	Y	Y
21	Bene_Rrl_Pct	Y	Y	Y	Y	Y
22	Bene_Avg_Age	Y	Y	Y	Y	Y
23	Bene_Male_Pct	Y	Y	Y	Y	Y
24	Bene_Feml_Pct	Y	Y	Y	Y	Y
25	Bene_Race_Wht_Pct	Y	Y	Y	Y	Y
26	Bene_Race_Black_Pct	Y	Y	Y	Y	Y
27	Bene_Race_API_Pct	Y	Y	Y	Y	Y
28	Bene_Race_Hspnc_Pct	Y	Y	Y	Y	Y
29	Bene_Race_Natind_Pct	Y	Y	Y	Y	Y
30	Bene_Race_Othr_Pct	Y	Y	Y	Y	Y
Number	**Diagnoses & Clinical Severity**	**Hospice**	**HH**	**SNF**	**IRF**	**LTCH**
31	Bene_Avg_Risk_Scre	Y	Y	Y	Y	Y
32	Bene_Avg_CC _Cnt	NA	Y	Y	Y	Y
33	Bene_CC_AF_Pct	NA	Y	Y	Y	Y
34	Bene_CC_Alzhmr_Pct	NA	Y	Y	Y	Y
35	Bene_CC_Asthma_Pct	NA	Y	Y	Y	Y
36	Bene_CC_Cncr_Pct	NA	Y	Y	Y	Y
37	Bene_CC_CHF_Pct	NA	Y	Y	Y	Y
38	Bene_CC_CKD_Pct	NA	Y	Y	Y	Y
39	Bene_CC_COPD_Pct	NA	Y	Y	Y	Y
40	Bene_CC_Dprssn_Pct	NA	Y	Y	Y	Y
41	Bene_CC_Dbts_Pct	NA	Y	Y	Y	Y
42	Bene_CC_Hyplpdma_Pct	NA	Y	Y	Y	Y
43	Bene_CC_Hyprtnsn_Pct	NA	Y	Y	Y	Y
44	Bene_CC_IHD_Pct	NA	Y	Y	Y	Y
45	Bene_CC_Opo_Pct	NA	Y	Y	Y	Y
46	Bene_CC_RAOA_Pct	NA	Y	Y	Y	Y
47	Bene_CC_Sz_Pct	NA	Y	Y	Y	Y
48	Bene_CC_Strok_Pct	NA	Y	Y	Y	Y
49	Bene_Prmry_Dx_Cncr_Pct	Y	Y	Y	Y	Y
50	Bene_Prmry_Dx_COPD_Pct	Y	Y	Y	Y	Y
51	Bene_Prmry_Dx_Rsprtryfailr_Pct	Y	Y	Y	Y	Y
52	Bene_Prmry_Dx_Dmnt_Pct	Y	Y	Y	Y	Y
53	Bene_Prmry_Dx_Strok_Pct	Y	Y	Y	Y	Y
54	Bene_Prmry_Dx_CHF_Pct	Y	Y	Y	Y	Y
55	Bene_Prmry_Dx_Hyprtnsn_Pct	Y	Y	Y	Y	Y
56	Bene_Prmry_Dx_Othrcrdvsclr_Pct	Y	Y	Y	Y	Y
57	Bene_Prmry_Dx_Infctn_Pct	Y	Y	Y	Y	Y
58	Bene_Prmry_Dx_Ortho_Pct	Y	Y	Y	Y	Y
59	Bene_Prmry_Dx_Injury_Pct	Y	Y	Y	Y	Y

60	Bene_Prmry_Dx_Mtr_Nrl_Pct	Y	Y	Y	Y	Y
61	Bene_Prmry_Dx_Dbts_Pct	Y	Y	Y	Y	Y
62	Bene_Prmry_Dx_Skn_Pct	Y	Y	Y	Y	Y
63	Bene_Prmry_Dx_Aftrcr_Pct	Y	Y	Y	Y	Y
Number	**Service Utilization Information**	**Hospice**	**HH**	**SNF**	**IRF**	**LTCH**
64	Nrsng_Visits_Cnt	Y	Y	NA	NA	NA
65	PT_Visits_Cnt	NA	Y	NA	NA	NA
66	OT_Visits_Cnt	NA	Y	NA	NA	NA
67	SLP_Visits_Cnt	NA	Y	NA	NA	NA
68	MSW_Visits_Cnt	Y	Y	NA	NA	NA
69	Aide_Visits_Cnt	Y	Y	NA	NA	NA
70	Physn_Visits_Cnt	Y	NA	NA	NA	NA
71	Tot_Nrsng_Mnts	Y	Y	NA	NA	NA
72	Tot_PT_Mnts	NA	Y	Y	Y	NA
73	Tot_OT_Mnts	NA	Y	Y	Y	NA
74	Tot_SLP_Mnts	NA	Y	Y	Y	NA
75	Tot_MSW_Mnts	Y	Y	NA	NA	NA
76	Tot_Aide_Mnts	Y	Y	NA	NA	NA
77	Nrsng_Mnts_Avg_7_Day_Prior_Death	Y	NA	NA	NA	NA
78	MSW_Mnts_Avg_7_Day_Prior_Death	Y	NA	NA	NA	NA
79	Aide_Mnts_Avg_7_Day_Prior_Death	Y	NA	NA	NA	NA
80	Tot_Asmt_Cnt	NA	NA	Y	Y	NA
81	Asmt_10_Mnts_RV_Thrshld_Pct	NA	NA	Y	NA	NA
82	Asmt_10_Mnts_RU_Thrshld_Pct	NA	NA	Y	NA	NA
83	Srvc_Site_Days_Home_Pct	Y	Y	NA	NA	NA
84	Srvc_Site_Days_Astd_Lvg_Fac_Pct	Y	Y	NA	NA	NA
85	Srvc_Site_Days_LTCF_Pct	Y	NA	NA	NA	NA
86	Srvc_Site_Days_SNF_Pct	Y	NA	NA	NA	NA
87	Srvc_Site_Days_IP_Pct	Y	NA	NA	NA	NA
88	Srvc_Site_Days_IP_Hospc_Pct	Y	NA	NA	NA	NA
Number	**Discharge Status**	**Hospice**	**HH**	**SNF**	**IRF**	**LTCH**
89	Dschrg_Cmnty_Slfcr_Pct	NA	Y	Y	Y	Y
90	Dschrg_IP_Pct	NA	Y	Y	Y	Y
91	Dschrg_HH_Pct	NA	NA	Y	Y	Y
92	Dschrg_SNF_Pct	NA	NA	NA	Y	Y
93	Dschrg_IRF_Pct	NA	NA	NA	NA	Y
94	Dschrg_Hospc_Pct	NA	Y	Y	Y	Y
95	Dschrg_Death_Pct	Y	Y	Y	Y	Y
96	Dschrg_Unk_Pct	NA	Y	Y	NA	NA
97	Dschrg_Hospc_Lv_Pct	Y	NA	NA	NA	NA
Number	**Aggregated Case-Mix Information**	**Hospice**	**HH**	**SNF**	**IRF**	**LTCH**
98	Hospc_RHC_Days_Pct	Y	NA	NA	NA	NA

99	Tot_HH_LUPA_Epsds_Cnt	NA	Y	NA	NA	NA
100	HHRG_Low_Thrpy_Erly_Epsd_Day_Pct	NA	Y	NA	NA	NA
101	HHRG_Mdm_Thrpy_Erly_Epsd_Day_Pct	NA	Y	NA	NA	NA
102	HHRG_Low_Thrpy_Lte_Epsd_Day_Pct	NA	Y	NA	NA	NA
103	HHRG_Mdm_Thrpy_Lte_Epsd_Day_Pct	NA	Y	NA	NA	NA
104	HHRG_High_Thrpy_Epsd_Day_Pct	NA	Y	NA	NA	NA
105	RUG_AAA_Days_Pct	NA	NA	Y	NA	NA
106	RUG_Rehab_Days_Pct	NA	NA	Y	NA	NA
107	RUG_Very_High_Rehab_Days_Pct	NA	NA	Y	NA	NA
108	RUG_Ultra_High_Rehab_Days_Pct	NA	NA	Y	NA	NA
109	RUG_Clncl_Cmplx_Days_Pct	NA	NA	Y	NA	NA
110	RUG_Rdcd_Phys_Fnctng_Days_Pct	NA	NA	Y	NA	NA
111	RUG_Spcl_High_Care_Days_Pct	NA	NA	Y	NA	NA
112	RUG_Bhvrl_Symtm_Days_Pct	NA	NA	Y	NA	NA
113	RUG_Extnsv_Srvc_Days_Pct	NA	NA	Y	NA	NA
114	CMG_Strok_Days_Pct	NA	NA	NA	Y	NA
115	CMG_Injury_Trma_Days_Pct	NA	NA	NA	Y	NA
116	CMG_Ortho_Days_Pct	NA	NA	NA	Y	NA
117	CMG_Arthts_Days_Pct	NA	NA	NA	Y	NA
118	CMG_Crdvsclr_Plmnry_Days_Pct	NA	NA	NA	Y	NA
119	CMG_Nrlgcl_Days_Pct	NA	NA	NA	Y	NA
120	CMG_Othr_Days_Pct	NA	NA	NA	Y	NA
Number	**Additional Variables for Supplemental Files: Provider by HHRG, Provider by RUG, Provider by CMG**	**Hospice**	**HH**	**SNF**	**IRF**	**LTCH**
121	Grpng	NA	Y	Y	Y	NA
122	Grpng_Desc	NA	Y	Y	Y	NA
123	Avg_Chrg_Per_Bene	NA	Y	Y	Y	NA
124	Avg_Alowd_Amt_Per_Bene	NA	NA	Y	Y	NA
125	Avg_Pymt_Amt_Per_Bene	NA	Y	Y	Y	NA
126	Avg_Stdzd_Pymt_Amt_Per_Bene	NA	Y	Y	Y	NA
127	Avg_Chrg_Per_Stay	NA	NA	Y	Y	NA
128	Avg_Alowd_Amt_Per_Stay	NA	NA	Y	Y	NA
129	Avg_Pymt_Amt_Per_Stay	NA	NA	Y	Y	NA
130	Avg_Stdzd_Pymt_Amt_Per_Stay	NA	NA	Y	Y	NA
131	Avg_Chrg_Per_Day	NA	Y	Y	Y	NA
132	Avg_Alowd_Amt_Per_Day	NA	NA	Y	Y	NA
133	Avg_Pymt_Amt_Per_Day	NA	Y	Y	Y	NA
134	Avg_Stdzd_Pymt_Amt_Per_Day	NA	Y	Y	Y	NA
135	Avg_Chrg_Per_Epsd	NA	Y	NA	NA	NA
136	Avg_Pymt_Amt_Per_Epsd	NA	Y	NA	NA	NA
137	Avg_Stdzd_Pymt_Amt_Per_Epsd	NA	Y	NA	NA	NA

[2] “Y” indicates a reported metric and “NA” indicates the metric is not reported.