Medicare Fee-For-Service Provider Utilization & Payment Data Physician and Other Supplier Public Use File: A Methodological Overview

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1. Background

The Provider Utilization and Payment Data Physician and Other Supplier Public Use File (herein referred to as "Physician and Other Supplier PUF") provides information on services and procedures provided to Medicare beneficiaries by physicians and other healthcare professionals. The Physician and Other Supplier PUF contains information on utilization, payment (allowed amount and Medicare payment), and submitted charges organized by National Provider Identifier (NPI), Healthcare Common Procedure Coding System (HCPCS) code, and place of service. The data in the Physician and Other Supplier PUF cover calendar years 2012 through 2014 and contain 100% final-action (i.e., all claim adjustments have been resolved) physician/supplier Part B non-institutional line items for the Medicare fee-for-service (FFS) population. Claims processed by Durable Medical Equipment, Prosthetic, Orthotics and Supplies (DMEPOS) Medicare Administrative Contractor (MAC) are not included in the Physician and Other Supplier PUF.

2. Key Data Sources

The data for the Physician and Other Supplier PUF are based upon CMS administrative claims data for Medicare beneficiaries enrolled in the fee-for-service program. The 2014 data are available from the CMS Chronic Condition Data Warehouse (CCW), a database with 100% of Medicare enrollment and fee-for-service claims data. Service counts, beneficiary counts, provider charges, Medicare allowed amounts and payments and the place of service indicator are summarized from Part B non-institutional claims processed through Medicare Administrative Contractor (MAC) Jurisdictions (NCH Claim Type Codes '71', '72'). For additional information on the CCW, visit www.ccwdata.org. The prior years of the Physician and Other Supplier PUF (CY2012/CY2013) are based upon data from the National Claims History (NCH) Standard Analytic Files (SAFs), which are similar administrative data of 100% of Medicare final action claims for beneficiaries who are enrolled in the FFS program. We compared the two data sources for CY2013 and found that across all summary datasets the overall difference was .01% or less.

For all Physician and Other Supplier PUF data years, provider demographics (name, credentials, gender, complete address and entity type) are included from the National Plan & Provider Enumeration System (NPPES). CMS developed the NPPES to assign unique identifiers, known as National Provider Identifiers (NPIs), to health care providers. The health care provider's demographic information is collected at the time of enrollment and updated periodically. The demographics information provided in the 2014 Physician and Other Supplier PUF was extracted from NPPES at the end of calendar year 2015. Prior years of the Physician and Other Supplier PUF (CY2012/CY2013) are based upon information extracted from NPPES at the end of calendar year 2014. For additional information on NPPES, please visit https://nppes.cms.hhs.gov/NPPES/Welcome.do.

3. Population

The Physician and Other Supplier PUF includes data for providers that had a valid NPI and submitted Medicare Part B non-institutional claims (excluding DMEPOS) during the 2012 through 2014 calendar years. To protect the privacy of Medicare beneficiaries, any aggregated records which are derived from 10 or fewer beneficiaries are excluded from the Physician and Other Supplier PUF.

4. Aggregation

The spending and utilization data in the Physician and Other Supplier PUF are aggregated to the following:

a) the NPI for the performing provider,
b) the Healthcare Common Procedure Coding System (HCPCS) code, and
c) the place of service (either facility or non-facility).

There can be multiple records for a given NPI based on the number of distinct HCPCS codes that were billed and where the services were provided. Data have been aggregated based on the place of service because separate fee schedules apply depending on whether the place of service submitted on the claim is facility or non-facility.

5. Data Contents

Detailed Data File

The following variables are included in the detailed Physician and Other Supplier data file:

npi – National Provider Identifier (NPI) for the performing provider on the claim. The provider NPI is the numeric identifier registered in NPPES.

nppes_provider_last_org_name – When the provider is registered in NPPES as an individual (entity type code='I'), this is the provider's last name. When the provider is registered as an organization (entity type code = 'O'), this is the organization name.

nppes_provider_first_name – When the provider is registered in NPPES as an individual (entity type code='I'), this is the provider's first name. When the provider is registered as an organization (entity type code = 'O'), this will be blank.

nppes_provider_mi – When the provider is registered in NPPES as an individual (entity type code='I'), this is the provider's middle initial. When the provider is registered as an organization (entity type code = 'O'), this will be blank.

nppes_credentials – When the provider is registered in NPPES as an individual (entity type code='I'), these are the provider's credentials. When the provider is registered as an organization (entity type code = 'O'), this will be blank.

nppes_provider_gender – When the provider is registered in NPPES as an individual (entity type code='I'), this is the provider's gender. When the provider is registered as an organization (entity type code = 'O'), this will be blank.

nppes_entity_code – Type of entity reported in NPPES. An entity code of 'I' identifies providers registered as individuals and an entity type code of 'O' identifies providers registered as organizations.

nppes_provider_street1 – The first line of the provider's street address, as reported in NPPES.

nppes_provider_street2 – The second line of the provider's street address, as reported in NPPES.

nppes_provider_city – The city where the provider is located, as reported in NPPES.

nppes_provider_zip – The provider's zip code, as reported in NPPES.

nppes_provider_state – The state where the provider is located, as reported in NPPES. The fifty U.S. states and the District of Columbia are reported by the state postal abbreviation. The following values are used for all other areas:

'XX' = 'Unknown'
'AA' = 'Armed Forces Central/South America'
'AE' = 'Armed Forces Europe'
'AP' = 'Armed Forces Pacific'
'AS' = 'American Samoa'
'GU' = 'Guam'
'MP' = 'North Mariana Islands'
'PR' = 'Puerto Rico'
'VI' = 'Virgin Islands'
'ZZ' = 'Foreign Country'

nppes_provider_country – The country where the provider is located, as reported in NPPES. The country code will be 'US' for any state or U.S. possession. For foreign countries (i.e., state values of 'ZZ'), the provider country values include the following:

AE=United Arab Emirates	IS= Iceland
AG=Antigua	IT=Italy
AR=Argentina	JP=Japan
AU=Australia	KR=Korea
BO=Bolivia	KW=Kuwait
BR=Brazil	KY=Cayman Islands
CA=Canada	LB=Lebanon
CH=Switzerland	MX=Mexico
CN=China	NL=Netherlands
CO=Colombia	NO=Norway
DE= Germany	NZ=New Zealand
ES= Spain	PA=Panama
FR=France	PK=Pakistan
GB=Great Britain	RW=Rwanda

GR=Greece
HU= Hungary
IL= Israel
IN=India
SA=Saudi Arabia
SY=Syria
TH=Thailand
TR=Turkey
VE=Venezuela

provider_type – Derived from the provider specialty code reported on the claim. For providers that reported more than one specialty code on their claims, this is the specialty code associated with the largest number of services.

medicare_participation_indicator – Identifies whether the provider participates in Medicare and/or accepts assignment of Medicare allowed amounts. The value will be 'Y' for any provider that had at least one claim identifying the provider as participating in Medicare or accepting assignment of Medicare allowed amounts within HCPCS code and place of service. A non-participating provider may elect to accept Medicare allowed amounts for some services and not accept Medicare allowed amounts for other services.

place_of_service – Identifies whether the place of service submitted on the claims is a facility (value of 'F') or non-facility (value of 'O'). Non-facility is generally an office setting; however other entities are included in non-facility. See "Appendix B – Place of Service Descriptions" for the types of entities included in facility and non-facility.

hcpcs_code – HCPCS code used to identify the specific medical service furnished by the provider. HCPCS codes include two levels. Level I codes are the Current Procedural Terminology (CPT) codes that are maintained by the American Medical Association and Level II codes are created by CMS to identify products, supplies and services not covered by the CPT codes (such as ambulance services). CPT codes, descriptions and other data only are copyright 2014 American Medical Association. All rights reserved. CPT is a registered trademark of the American Medical Association (AMA). Please review the complete CMS AMA CPT License agreement which is presented to users when accessing the data. For additional information on HCPCS codes, visit http://www.cms.gov/Medicare/Coding/MedHCPCSGenInfo/index.html?redirect=/MedHCPCSGeninfo/.

hcpcs_description – Description of the HCPCS code for the specific medical service furnished by the provider. HCPCS descriptions associated with CPT codes are consumer friendly descriptions provided by the AMA. All other descriptions are CMS Level II descriptions provided in long form. Due to variable length restrictions, the CMS Level II descriptions have been truncated to 256 bytes. As a result, the same HCPCS description can be associated with more than one HCPCS code. For complete CMS Level II descriptions, visit http://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/Alpha-Numeric-HCPCS.html.

hcpcs_drug_indicator –Identifies whether the HCPCS code for the specific service furnished by the provider is a HCPCS listed on the Medicare Part B Drug Average Sales Price (ASP) File. For additional information on the ASP drug pricing, visit http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Part-B-Drugs/McrPartBDrugAvgSalesPrice/index.html.

line_srvc_cnt – Number of services provided; note that the metrics used to count the number provided can vary from service to service.

bene_unique_cnt – Number of distinct Medicare beneficiaries receiving the service.

bene_day_srvc_cnt – Number of distinct Medicare beneficiary/per day services. Since a given beneficiary may receive multiple services of the same type (e.g., single vs. multiple cardiac stents) on a single day, this metric removes double-counting from the line service count to identify whether a unique service occurred.

average_Medicare_allowed_amt – Average of the Medicare allowed amount for the service; 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.

stdev_Medicare_allowed_amt – Standard deviation of the Medicare allowed amounts. The standard deviation indicates the amount of variation from the average Medicare allowed amount that exists within a single provider, HCPCS service, and place of service. **Note:** This variable has been removed beginning with calendar year 2014 data.

average_submitted_chrg_amt – Average of the charges that the provider submitted for the service.

stdev_submitted_chrg_amt – Standard deviation of the charge amounts submitted by the provider. The standard deviation indicates the amount of variation from the average submitted charge amount that exists within a single provider, HCPCS service, and place of service. **Note**: This variable has been removed beginning with calendar year 2014 data.

average_Medicare_payment_amt – Average amount that Medicare paid after deductible and coinsurance amounts have been deducted for the line item service. **Note:** In general, Medicare FFS claims with dates-of-service or dates-of-discharge on or after April 1, 2013, incurred a 2 percent reduction in Medicare payment. This is in response to mandatory across-the-board reductions in Federal spending, also known as sequestration. For additional information, visit http://www.cms.gov/Outreach-and-Education/Outreach/FFSProvPartProg/Downloads/2013-03-08-standalone.pdf

stdev_Medicare_payment_amt – Standard deviation of the Medicare payment amount. The standard deviation indicates the amount of variation from the average Medicare payment amount that exists within a single provider, HCPCS service, and place of service. **Note:** This variable has been removed beginning with calendar year 2014 data.

average_Medicare_standardized_amt – Average amount that Medicare paid after beneficiary deductible and coinsurance amounts have been deducted for the line item service and after standardization of the Medicare payment has been applied. Standardization removes geographic differences in payment rates for individual services, such as those that account for local wages or input prices and makes Medicare payments across geographic areas comparable, so that differences reflect variation in factors such as physicians' practice patterns and beneficiaries' ability and willingness to obtain care. Note: This variable is available starting with the calendar year 2014 data. Please refer to the

"Additional Information" section of this document for more details on the standardization of Medicare payments.

Summary Tables

Two summary type tables have been created to supplement the information reported in the Physician and Other Supplier PUF: 1) aggregated information by physician or other supplier (NPI) and 2) aggregated information by State/National and HCPCS code. The aggregated reports are not restricted to the redacted data reported in the Physician and Other Supplier PUF but are aggregated based on all Medicare Part B non-institutional claims (excluding DMEPOS).

Medicare Physician and Other Supplier Aggregate Table

The "Medicare Physician and Other Supplier Aggregate Table" contains information on utilization, payments (Medicare allowed amount, Medicare payment, and standardized Medicare payment), and submitted charges organized by NPI. Sub-totals for medical type services and drug type services are included as well as overall utilization, payment and charges. In addition, beneficiary demographic and health characteristics are provided which include age, sex, race, Medicare and Medicaid entitlement, chronic conditions and risk scores.

The following variables correspond to the same variables reported in the detailed Physician and Other Supplier PUF. See "Section 5. Data Contents "above for descriptions:

npi
nppes_provider_last_org_name
nppes_provider_first_name
nppes_provider_mi
nppes_credentials
nppes_provider_gender
nppes_entity_code
nppes_provider_street1
nppes_provider_street2
nppes_provider_city
nppes_provider_zip
nppes_provider_state
nppes_provider_country
provider_type
medicare_participation_indicator

The following variables are specific to the "Medicare Physician and Other Supplier Aggregate Table":

number_of_hcpcs – Total number of unique HCPCS codes.

total_services– Total provider services.

total_unique_benes – Total Medicare beneficiaries receiving the provider services. The beneficiary counts reported in the demographic sub-groups (i.e., age, sex, race and entitlement) may not aggregate to the 'Number of Unique Beneficiaries' due to the suppression of beneficiaries fewer than 11 within the demographic sub-groups. In addition, a small percentage of beneficiaries are reflected in the "Number of Unique Beneficiaries" but are not reflected in the beneficiary demographic information due to the lack of demographic information available at the time of reporting.

total_submitted_chrg_amt – The total charges that the provider submitted for all services.

total_medicare_allowed_amt – The Medicare allowed amount for all provider services. 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.

total_medicare_payment_amt – Total amount that Medicare paid after deductible and coinsurance amounts have been deducted for all the provider's line item services.

total_medicare_stnd_amt – Total amount that Medicare paid after deductible and coinsurance amounts have been deducted for the line item service and after standardization of the Medicare payment has been applied. Standardization removes geographic differences in payment rates for individual services, such as those that account for local wages or input prices and makes Medicare payments across geographic areas comparable, so that differences reflect variation in factors such as physicians' practice patterns and beneficiaries' ability and willingness to obtain care.

drug_suppress_indicator – Identifies whether the utilization, cost and payment information associated with HCPCS codes for drug services as listed on the Medicare Part B Drug Average Sales Price (ASP) list have been suppressed. An '*' identifies that the suppressed information is based on fewer than 11 beneficiaries and a '#' identifies that the information has been counter suppressed to prevent the re-calculation of information suppressed due to fewer than 11 beneficiaries. For example, if the information associated with Drug services has been suppressed because fewer than 11 beneficiaries received these services from a provider, then the information associated with Medical services must also be suppressed so that the information associated with Drug services cannot be recalculated by subtracting the Medical values from the provider's overall values.

number_of_drug_hcpcs – Total number of HCPCS codes for drug services, as defined from the Medicare Part B Drug ASP File.

total_drug_services – Total drug services, as defined from the Medicare Part B Drug ASP File.

total_drug_unique_benes – Total Medicare beneficiaries receiving drug services, as defined from the Medicare Part B Drug ASP File.

total_drug_submitted_chrg_amt – The total charges that the provider submitted for drug services, as defined from the Medicare Part B Drug ASP File.

total_drug_medicare_allowed_amt – The Medicare allowed amount for drug services, as defined from the Medicare Part B Drug ASP File. 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.

total_drug_medicare_payment_amt – Total amount that Medicare paid after deductible and coinsurance amounts have been deducted for all the provider's line item drug services, as defined from the Medicare Part B Drug ASP File.

total_drug_medicare_stnd_amt – Total amount that Medicare paid after deductible and coinsurance amounts have been deducted for the line item drug service, as defined from the Medicare Part B Drug ASP File and after standardization of the Medicare payment has been applied. Standardization removes geographic differences in payment rates for individual services, such as those that account for local wages or input prices and makes Medicare payments across geographic areas comparable, so that differences reflect variation in factors such as physicians' practice patterns and beneficiaries' ability and willingness to obtain care.

med_suppress_indicator – Identifies whether the utilization, cost and payment information associated with HCPCS codes for Medical (non-ASP) services have been suppressed. An '*' identifies that the suppressed information is based on fewer than 11 beneficiaries and a '#' identifies that the information has been counter suppressed to prevent the re-calculation of information suppressed due to fewer than 11 beneficiaries. For example, if the information associated with Medical (non-ASP) services has been suppressed because fewer than 11 beneficiaries received these services from a provider, then the information associated with Drug services must also be suppressed so that the information associated with Medical services cannot be recalculated by subtracting the Drug values from the provider's overall values.

number_of_med_hcpcs – Total number of HCPCS codes associated with medical (non-ASP) services.

total_med_services – Total medical (non-ASP) services.

total_med_unique_benes – Total Medicare beneficiaries receiving medical (non-ASP) services.

total_med_submitted_chrg_amt – The total charges that the provider submitted for medical (non-ASP) services.

total_med_medicare_allowed_amt – The Medicare allowed amount for medical (non-ASP) services. 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.

total_med_medicare_payment_amt – Total amount that Medicare paid after deductible and coinsurance amounts have been deducted for all of the provider's line item medical (non-ASP) services.

total_med_medicare_stnd_amt – Total amount that Medicare paid after deductible and coinsurance amounts have been deducted for the line item medical (non-ASP) service, as defined from the Medicare Part B Drug ASP File and after standardization of the Medicare payment has been applied. Standardization removes geographic differences in payment rates for individual services, such as those that account for local wages or input prices and makes Medicare payments across geographic areas

comparable, so that differences reflect variation in factors such as physicians' practice patterns and beneficiaries' ability and willingness to obtain care.

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

beneficiary_age_less_65_count – Number of beneficiaries under the age of 65. Beneficiary age is calculated at the end of the calendar year or at the time of death.

beneficiary_age_65_74_count – Number of beneficiaries between the ages of 65 and 74. Beneficiary age is calculated at the end of the calendar year or at the time of death.

beneficiary_age_75_84_count– Number of beneficiaries between the ages of 75 and 84. Beneficiary age is calculated at the end of the calendar year or at the time of death.

beneficiary_age_greater_84_count – Number of beneficiaries over the age of 84. Beneficiary age is calculated at the end of the calendar year or at the time of death.

beneficiary_female_count – Number of female beneficiaries.

beneficiary_male_count – Number of male beneficiaries.

beneficiary_race_white_count[1] – Number of non-Hispanic white beneficiaries.

beneficiary_race_black_count[1] – Number of non-Hispanic black or African American beneficiaries.

beneficiary_race_api_count[1] – Number of Asian Pacific Islander beneficiaries.

beneficiary_race_hispanic_count[1] – Number of Hispanic beneficiaries.

beneficiary_race_natind_count[1] – Number of American Indian or Alaska Native beneficiaries.

beneficiary_race_other_count[1] – Number of beneficiaries with race not elsewhere classified.

beneficiary_nondual_count – Number of Medicare beneficiaries qualified to receive Medicare only 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.

beneficiary_dual_count – Number 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.

[1] Race/ethnicity information is based on the variable RTI_RACE_CD from the CMS CCW enrollment database. The RTI_RACE_CD variable is based upon a validated algorithm that uses Census surname lists and geography to improve the accuracy of race/ethnicity classification, particularly for those who are Hispanic or Asian/Pacific Islanders.

beneficiary_cc_afib_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for atrial fibrillation.

beneficiary_cc_alzrdsd_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for Alzheimer's, related disorders, or dementia.

beneficiary_cc_asthma_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for Asthma.

beneficiary_cc_cancer_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithms for cancer. Includes breast cancer, colorectal cancer, lung cancer and prostate cancer.

beneficiary_cc_chf_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for heart failure.

beneficiary_cc_ckd_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for chronic kidney disease.

beneficiary_cc_copd_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for chronic obstructive pulmonary disease.

beneficiary_cc_depr_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for depression.

beneficiary_cc_diab_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for diabetes.

beneficiary_cc_hyperl_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for hyperlipidemia.

beneficiary_cc_hypert_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for hypertension.

beneficiary_cc_ihd_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for ischemic heart disease.

beneficiary_cc_ost_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for osteoporosis.

beneficiary_cc_raoa_percent[2] – Percent of beneficiaries meeting the CCW chronic condition algorithm for rheumatoid arthritis/osteoarthritis.

[2] To protect the privacy of Medicare beneficiaries, the number of beneficiaries fewer than 11 have been suppressed and 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), http://ccwdata.org/index.php.

***beneficiary_cc_schiot_percent*[2]** – Percent of beneficiaries meeting the CCW chronic condition algorithm for schizophrenia and other psychotic disorders.

***beneficiary_cc_strk_percent*[2]** – Percent of beneficiaries meeting the CCW chronic condition algorithm for stroke.

Beneficiary_Average_Risk_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.

Medicare State/National HCPCS Aggregate Tables

The "Medicare State/National Aggregate Tables" contains information on utilization, payment (allowed amount and Medicare payment), and submitted charges organized by HCPCS and place of service in the national table and organized by provider state, HCPCS and place of service in the state table. The national and state tables also include a HCPCS drug indicator to identify whether the HCPCS product/service is a drug as defined from the Medicare Part B Drug ASP list.

More detailed information on the Medicare Physician and Other Supplier Aggregate Table and the Medicare State/National Aggregate tables are provided in the Methodology and Documentation tabs of each data file.

6. Data Limitations:

Although the Physician and Other Supplier PUF has a wealth of payment and utilization information about many Medicare Part B services, the dataset also has a number of limitations that are worth noting.

First, the data in the Physician and Other Supplier PUF may not be representative of a physician's entire practice. The data in the file only have information for Medicare beneficiaries with Part B FFS coverage, but physicians typically treat many other patients who do not have that form of coverage. The Physician and Other Supplier 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 Physician and Other Supplier 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 physicians. The file only contains cost and utilization information, and for the reasons described in the preceding paragraph, the volume of procedures presented may not be fully inclusive of all procedures performed by the provider.

Medicare allowed amounts and Medicare payments for a given HCPCS code/place of service can vary based on a number of factors, including modifiers, geography, and other services performed during the same day/visit. For example, modifiers (two-character designators that signal a change in how the HCPCS code for the procedure or service should be applied) may be included on the claim line when the service intensity was increased or decreased, when an additional physician administered services, or when the service provided differs from the procedure definition. In some cases, modifiers impact allowed amounts and payments. In addition, allowed amounts and payments vary geographically because Medicare makes adjustments for most services based on an area's cost of living. Allowed amounts and payments can also be adjusted when a physician renders multiple services to a beneficiary on the same day, which is referred to as a multiple procedure payment reduction. For standard payment and allowed amount rates by CPT/HCPCS code, please go to http://www.cms.gov/apps/physician-fee-schedule/overview.aspx.

In general, when a provider administers drugs to a patient, the provider purchases the drug and Medicare pays the provider 106% of the average sales price (ASP) for the drug. Although the ASP list was used in these datasets to define drug services, the drugs listed on the ASP fee schedule are not a complete listing of drugs paid under part B, but the ASP fee schedule represents the majority of drugs that are used in the office. For more information on payments for drugs covered under Part B, please visit http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Part-B-Drugs/McrPartBDrugAvgSalesPrice/index.html.

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. However, we have provided average beneficiary risk scores in the "Medicare Physician and Other Supplier Aggregate Table" (i.e., one record per NPI) to provide information on the health status of the beneficiaries the providers serve. Also, since the data presented are summarized from actual claims received from providers and no attempts were made to modify any data (i.e., no statistical outliers were removed or truncated), in rare instances the average submitted charge amount may reflect errors included on claims submitted by providers.

As noted earlier, the file does not include data for services that were performed on 10 or fewer beneficiaries, so users should be aware that summing the data in the file may underestimate the true Part B FFS totals. In addition, some providers bill under both an individual NPI and an organizational NPI. In this case, users cannot determine a provider's actual total because there is no way to identify the individual's portion when billed under their organization.

Medicare pays differently when services are provided in a facility setting versus a freestanding physicians' office (or other non-facility setting). When services are delivered in a facility setting, Medicare makes two payments, one for the physician's professional fee and one for the facility. For services delivered in a facility (place_of_Service ="F"), the data in the Physician and Other Supplier PUF only represents the physician's professional fee and does not include the facility payment. On the other hand, for services delivered in a non-facility setting, such as a physician's office (place_of_Service ="O"), the Physician and Other Supplier PUF represents the complete payment for the service.

If users try to link data from this file to other public datasets, please be aware of the particular Medicare populations included and timeframes used in each file that will be merged. For example, efforts to link the Physician and Other Supplier PUF data to Part D prescription drug data would need to account for the fact that some beneficiaries who have FFS Part B coverage (and are thus included in the Physician and Other Supplier PUF) do not have Part D drug coverage (and thus not represented in Part D data files). At the same time, some beneficiaries that have Part D coverage (and are thus included in the Part D data) do not have FFS Part B coverage (and thus not included in the Physician and Other Supplier PUF). Another example would be linking to data constructed from different or non-aligning time periods, such as publically available data on physician referral patterns, which is based on an 18-month period.

Finally, users should be aware that payments from some CMS demonstration programs are included in the Physician and Other Supplier PUF. Since some CMS demonstration programs utilize the Medicare claims submission process, payments for services under these demonstrations are included in the data file and may be grouped under specific demonstration HCPCS codes or aggregated under non-demonstration specific HCPCS codes. Demonstration programs that are paid outside of the Medicare claims submission process are not included in the Physician and Other Supplier PUF.

7. Additional Information

Other Data Sources: CMS also releases the "Medicare Fee-For-Service Public Provider Enrollment Data" that include provider name and address information from the Provider Enrollment and Chain Ownership System (PECOS). These data are updated on a quarterly basis and are available at data.cms.gov.

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.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.

8. Updates:

May 2016 Updates

We have updated the Physician and Other Supplier PUF and the supplemental summary tables including the "Medicare Physician and Other Supplier Aggregate Table" (i.e., one record per NPI) and the "Medicare State/National HCPCS Aggregate Tables", to include Medicare standardized payment amounts that allow for comparisons of the Medicare payment amount across geographic areas. Standardization removes geographic differences in payment rates for individual services, such as those that account for local wages or input prices and makes Medicare payments across geographic areas comparable.

We have also removed the minimum, maximum, and standard deviation amounts associated with payments and charges from the Physician and Other Supplier PUF and from the "Medicare State/National HCPCS Aggregate Tables".

These updates begin with calendar year 2014 data. Previous year's data have not been re-published to include standardized Medicare payments amounts or to remove minimum, maximum, and standard deviation amounts from payments and charges.

September 2015 Updates

We have updated the summary file, "Medicare Physician and Other Supplier Aggregate Table", to include demographic and health information associated with the provider's beneficiary panel. This provider-level summary (i.e., one record per NPI) now includes aggregated information on beneficiary age, sex, race, Medicare and Medicaid entitlement, sixteen (16) chronic conditions and risk scores. More detailed information on each variable added to this summary file is provided in the Documentation tab of the data file.

The 2012 and 2013 data are re-published to reflect all updates.

June 2015 Updates

We have updated the Physician and Other Supplier PUF to include a new variable (*hcpcs_drug_indicator*) to identify whether the HCPCS product/service is a drug as defined from the Medicare Part B Drug ASP list. In addition, HCPCS descriptions have been expanded to include consumer friendly descriptions provided by the AMA for CPT codes (numeric HCPCS codes) and long form descriptions for the CMS Level II codes (alpha-numeric HCPCS codes).

The two types of summary files, the "Medicare Physician and Other Supplier Aggregate Table" (i.e., one record per NPI) and the Medicare State/National HCPCS Aggregate Tables have also been updated. These summary files are now individually summarized from the Medicare Part B non-institutional claims (excluding DMEPOS) and are no longer based on redacted data from the Physician and Other Supplier PUF. Also, the distinction between drug and medical services is incorporated in the two types of summary files. The "Medicare Physician and Other Supplier Aggregate Table" includes separate totals

for medical services and drug services as well as the totals for all services. The “Medicare State/National HCPCS Aggregate Tables” include the new variable (*HCPCS Drug Indicator*) to identify whether the HCPCS product/service is a drug as defined from the Medicare Part B Drug ASP list.

The 2012 data are re-published to reflect all updates.

APPENDIX A – Physician and Other Supplier PUF File Attributes

Variable	Format	Length	Label	Data Year Begin Date
npi	Char	10	National Provider Identifier	2012
nppes_provider_last_org_name	Char	70	Last Name/Organization Name of the Provider	2012
nppes_provider_first_name	Char	20	First Name of the Provider	2012
nppes_provider_mi	Char	1	Middle Initial of the Provider	2012
nppes_credentials	Char	20	Credentials of the Provider	2012
nppes_provider_gender	Char	1	Gender of the Provider	2012
nppes_entity_code	Char	1	Entity Type of the Provider	2012
nppes_provider_street1	Char	55	Street Address 1 of the Provider	2012
nppes_provider_street2	Char	55	Street Address 2 of the Provider	2012
nppes_provider_city	Char	40	City of the Provider	2012
nppes_provider_zip	Char	20	Zip Code of the Provider	2012
nppes_provider_state	Char	2	State Code of the Provider	2012
nppes_provider_country	Char	2	Country Code of the Provider	2012
provider_type	Char	43	Provider Type of the Provider	2012
medicare_participation_indicator	Char	1	Medicare Participation Indicator	2012
place_of_Service	Char	1	Place of Service	2012
hcpcs_code	Char	5	HCPCS Code	2012
hcpcs_description	Char	256	HCPCS Description	2012
hcpcs_drug_indicator	Char	1	Identifies HCPCS As Drug Included in the ASP Drug List	2012
line_srvc_cnt	Num	8	Number of Services	2012
bene_unique_cnt	Num	8	Number of Medicare Beneficiaries	2012
bene_day_srvc_cnt	Num	8	Number of Distinct Medicare Beneficiary/Per Day Services	2012
average_Medicare_allowed_amt	Num	8	Average Medicare Allowed Amount	2012
stdev_Medicare_allowed_amt[1]	Num	8	Standard Deviation Medicare Allowed Amount	2012
average_submitted_chrg_amt	Num	8	Average Submitted Charge Amount	2012
stdev_submitted_chrg_amt[1]	Num	8	Standard Deviation Submitted Charge Amount	2012
average_Medicare_payment_amt	Num	8	Average Medicare Payment Amount	2012
stdev_Medicare_payment_amt[1]	Num	8	Standard Deviation Medicare Payment Amount	2012
average_Medicare_standard_amt	Num	8	Average Medicare Standardized Payment Amount	2014

[1]Standard deviation of payments and charges were removed in calendar year 2014.

APPENDIX B – Medicare Physician and Other Supplier Aggregate (NPI) File Attributes

Variable	Format	Length	Label	Data Year Begin Date
npi	Char	10	National Provider Identifier	2012
nppes_provider_last_org_name	Char	70	Last Name/Organization Name of the Provider	2012
nppes_provider_first_name	Char	20	First Name of the Provider	2012
nppes_provider_mi	Char	1	Middle Initial of the Provider	2012
nppes_credentials	Char	20	Credentials of the Provider	2012
nppes_provider_gender	Char	1	Gender of the Provider	2012
nppes_entity_code	Char	1	Entity Type of the Provider	2012
nppes_provider_street1	Char	55	Street Address 1 of the Provider	2012
nppes_provider_street2	Char	55	Street Address 2 of the Provider	2012
nppes_provider_city	Char	40	City of the Provider	2012
nppes_provider_zip	Char	20	Zip Code of the Provider	2012
nppes_provider_state	Char	2	State Code of the Provider	2012
nppes_provider_country	Char	2	Country Code of the Provider	2012
provider_type	Char	43	Provider Type of the Provider	2012
medicare_participation_indicator	Char	1	Medicare Participation Indicator	2012
number_of_hcpcs	Num	8	Number of HCPCS	2012
total_services	Num	8	Number of Services	2012
total_unique_benes	Num	8	Number of Medicare Beneficiaries	2012
total_submitted_chrg_amt	Num	8	Total Submitted Charge Amount	2012
total_medicare_allowed_amt	Num	8	Total Medicare Allowed Amount	2012
total_medicare_payment_amt	Num	8	Total Medicare Payment Amount	2012
total_medicare_stnd_amt	Num	8	Total Medicare Standardized Payment Amount	2014
drug_suppress_indicator	Char	1	Drug Suppress Indicator	2012
number_of_drug_hcpcs	Num	8	Number of HCPCS Associated With Drug Services	2012
total_drug_services	Num	8	Number of Drug Services	2012
total_drug_unique_benes	Num	8	Number of Medicare Beneficiaries With Drug Services	2012
total_drug_submitted_chrg_amt	Num	8	Total Drug Submitted Charge Amount	2012
total_drug_medicare_allowed_amt	Num	8	Total Drug Medicare Allowed Amount	2012
total_drug_medicare_payment_amt	Num	8	Total Drug Medicare Payment Amount	2012
total_drug_medicare_stnd_amt	Num	8	Total Drug Medicare Standardized Payment Amount	2014

Variable	Format	Length	Label	Data Year Begin Date
med_suppress_indicator	Char	1	Medical Suppress Indicator	2012
number_of_med_hcpcs	Num	8	Number of HCPCS Associated With Medical Services	2012
total_med_services	Num	8	Number of Medical Services	2012
total_med_unique_benes	Num	8	Number of Medicare Beneficiaries With Medical Services	2012
total_med_submitted_chrg_amt	Num	8	Total Medical Submitted Charge Amount	2012
total_med_medicare_allowed_amt	Num	8	Total Medical Medicare Allowed Amount	2012
total_med_medicare_payment_amt	Num	8	Total Medical Medicare Payment Amount	2012
total_med_medicare_stnd_amt	Num	8	Total Medical Medicare Standardized Payment Amount	2014
beneficiary_average_age	Num	8	Average Age of Beneficiaries	2012
beneficiary_age_less_65_count	Num	8	Number of Beneficiaries Age Less 65	2012
beneficiary_age_65_74_count	Num	8	Number of Beneficiaries Age 65 to 74	2012
beneficiary_age_75_84_count	Num	8	Number of Beneficiaries Age 75 to 84	2012
beneficiary_age_greater_84_count	Num	8	Number of Beneficiaries Age Greater 84	2012
beneficiary_female_count	Num	8	Number of Female Beneficiaries	2012
beneficiary_male_count	Num	8	Number of Male Beneficiaries	2012
beneficiary_race_white_count	Num	8	Number of Non-Hispanic White Beneficiaries	2012
beneficiary_race_black_count	Num	8	Number of Black or African American Beneficiaries	2012
beneficiary_race_api_count	Num	8	Number of Asian Pacific Islander Beneficiaries	2012
beneficiary_race_hispanic_count	Num	8	Number of Hispanic Beneficiaries	2012
beneficiary_race_natind_count	Num	8	Number of American Indian/Alaska Native Beneficiaries	2012
beneficiary_race_other_count	Num	8	Number of Beneficiaries With Race Not Elsewhere Classified	2012
beneficiary_nondual_count	Num	8	Number of Beneficiaries With Medicare Only Entitlement	2012
beneficiary_dual_count	Num	8	Number of Beneficiaries With Medicare & Medicaid Entitlement	2012

Variable	Format	Length	Label	Data Year Begin Date
beneficiary_cc_afib_percent	Num	8	Percent (%) of Beneficiaries Identified With Atrial Fibrillation	2012
beneficiary_cc_alzrdsd_percent	Num	8	Percent (%) of Beneficiaries Identified With Alzheimer's Disease or Dementia	2012
beneficiary_cc_asthma_percent	Num	8	Percent (%) of Beneficiaries Identified With Asthma	2012
beneficiary_cc_cancer_percent	Num	8	Percent (%) of Beneficiaries Identified With Cancer	2012
beneficiary_cc_chf_percent	Num	8	Percent (%) of Beneficiaries Identified With Heart Failure	2012
beneficiary_cc_ckd_percent	Num	8	Percent (%) of Beneficiaries Identified With Chronic Kidney Disease	2012
beneficiary_cc_copd_percent	Num	8	Percent (%) of Beneficiaries Identified With Chronic Obstructive Pulmonary Disease	2012
beneficiary_cc_depr_percent	Num	8	Percent (%) of Beneficiaries Identified With Depression	2012
beneficiary_cc_diab_percent	Num	8	Percent (%) of Beneficiaries Identified With Diabetes	2012
beneficiary_cc_hyperl_percent	Num	8	Percent (%) of Beneficiaries Identified With Hyperlipidemia	2012
beneficiary_cc_hypert_percent	Num	8	Percent (%) of Beneficiaries Identified With Hypertension	2012
beneficiary_cc_ihd_percent	Num	8	Percent (%) of Beneficiaries Identified With Ischemic Heart Disease	2012
beneficiary_cc_ost_percent	Num	8	Percent (%) of Beneficiaries Identified With Osteoporosis	2012
beneficiary_cc_raoa_percent	Num	8	Percent (%) of Beneficiaries Identified With Rheumatoid Arthritis / Osteoarthritis	2012
beneficiary_cc_schiot_percent	Num	8	Percent (%) of Beneficiaries Identified With Schizophrenia / Other Psychotic Disorders	2012
beneficiary_cc_strk_percent	Num	8	Percent (%) of Beneficiaries Identified With Stroke	2012
Beneficiary_Average_Risk_Score	Num	8	Average HCC Risk Score of Beneficiaries	2012

APPENDIX C – Place of Service Descriptions

Table C-1. Non-Facility Based Place of Service (place_of_Service ="O")

Place of Service Code	Non- Facility Place of Service Description
01	Pharmacy
03	School
04	Homeless Shelter
05	Indian Health Service Free-standing Facility
06	Indian Health Service Provider-based Facility
07	Tribal 638 Free-standing Facility
08	Tribal 638 Provider-based Facility
09	Prison/ Correctional Facility
11	Office
12	Home
13	Assisted Living Facility
14	Group Home
15	Mobile Unit
16	Temporary Lodging
17	Walk-in Retail Health Clinic
20	Urgent Care Facility
25	Birthing Center
32	Nursing Facility
33	Custodial Care Facility
49	Independent Clinic
50	Federally Qualified Health Center
54	Intermediate Care Facility/Mentally Retarded
55	Residential Substance Abuse Treatment Facility
60	Mass Immunization Center
57	Non-residential Substance Abuse Treatment Facility
62	Comprehensive Outpatient Rehabilitation Facility
65	End-Stage Renal Disease Treatment Facility
71	Public Health Clinic
72	Rural Health Clinic
81	Independent Laboratory
99	Other Place of Service

Table C-2. Facility Based Place of Service (place_of_Service ="F")

Place of Service Code	Facility Place of Service Description
21	Inpatient Hospital
22	Outpatient Hospital
23	Emergency Room – Hospital
24	Ambulatory Surgical Center
26	Military Treatment Facility
31	Skilled Nursing Facility
34	Hospice
41	Ambulance - Land
42	Ambulance – Air or Water
51	Inpatient Psychiatric Facility
52	Psychiatric Facility-Partial Hospitalization
53	Community Mental Health Center
56	Psychiatric Residential Treatment Center
61	Comprehensive Inpatient Rehabilitation Facility