

CMS 2008 Basic Stand Alone (BSA) Outpatient Procedures Public Use File (PUF) **Frequently Asked Questions (FAQ)**

1. What is the CMS 2008 BSA Outpatient Procedures PUF?

The *CMS 2008 BSA Outpatient Procedures PUF* is a free downloadable file containing a subset of the information contained in outpatient claims for the services provided by institutional outpatient providers to a 5% sample of 2008 Medicare beneficiaries. Each of the 31,701,499 records in the file pertains to one outpatient procedure. Each record includes:

1. Gender of the beneficiary;
2. Age of the beneficiary at the end of 2008, reported as (1) under 65 years of age; (2) 65 to 69; (3) 70 to 74; (4) 75 to 79; (5) 80 to 84; and (6) 85 and older;
3. International Classification of Diseases, Clinical Modification (ICD-9-CM) code for the procedure;
4. HCPCS code for the procedure;
5. Count of services associated with the procedure;
6. Rounded Medicare payment for the procedure.

2. How was this PUF created?

The *CMS 2008 BSA Outpatient Procedures PUF* originates from a disjoint 5% random sample of beneficiaries from the 100% Beneficiary Summary File for 2008. To exclude any overlap with the beneficiaries in the existing 5% CMS research sample,¹ the beneficiaries in that sample were excluded, and a 5-in-95 random draw was made of the remaining 95% of beneficiaries. All outpatient procedures for the selected 5% of beneficiaries were then included in the sample from which the *CMS 2008 BSA Outpatient Procedures PUF* was developed.

The selected outpatient procedures were subjected to a thorough de-identification process. The methods used to protect the identity of beneficiaries are described in the answer to the next question.

3. What has been done to protect the privacy of Medicare beneficiaries?

Of paramount importance in the release of the PUF is the protection of beneficiary confidentiality. To that end, all directly identifiable information has been removed in accordance with the HIPAA Privacy Rules.

Other important steps were taken:

¹ http://www.resdac.org/tools/TBs/TN-011_How5percentMedicarefilescreated_508.pdf

- Only a small subset of possible variables was selected for inclusion in the file. This reduced the possible information that could be used to identify the beneficiaries included in the new 5% sample.
- For the variables selected for inclusion, categorization was used to protect identities. For example, in place of date of birth or current age in years, the file was created with age categorized into six intervals: (1) under 65 years of age; (2) 65 to 69; (3) 70 to 74; (4) 75 to 79; (5) 80 to 84; and (6) 85 and older. This categorization allows researchers to differentiate patterns in other data (e.g., in the frequency of a particular procedure) between claims of younger and older beneficiaries but not to use age or date of birth as a highly identifying variable.
- No geographic information is provided.
- The final protection was provided by excluding some records from the final PUF, those for which the combination of values for all six variables in the file was extremely uncommon in the Medicare population. No combination that occurred for fewer than 11 beneficiaries in the full Medicare population was allowed into the final PUF. This criterion disproportionately excluded procedures with uncommon HCPCS codes or uncommon primary diagnosis codes. However, the criterion also assured that no record in the PUF could be linked to a particular beneficiary no matter how much information a user knew about any beneficiary.

4. How was provider confidentiality protected?

There is no risk of provider identification in the *CMS 2008 BSA Outpatient Procedures PUF* as the PUF does not contain any information about individual providers.

5. Why is this file a procedure-level file and not a claim-level or a beneficiary-level file?

It was determined that a claim-level or a beneficiary-level Outpatient PUF carries a high risk of re-identification for a significant number of beneficiaries. The *CMS 2008 BSA Outpatient Procedures PUF* reduces the risk by breaking the link between procedures for a given claim and beneficiary.

6. What does the 3-digit ICD-9-CM primary diagnosis code variable (OP_CLM_ICD9_DIAG_CD) mean?

OP_CLM_ICD9_DIAG_CD provides the first three digits of the ICD-9 CM primary diagnosis code on the Medicare outpatient claim (for V codes the first three alphanumeric characters and for E codes the first 4 alphanumeric characters are provided). The original ICD-9-CM diagnosis codes are composed of codes up to five characters. OP_CLM_ICD9_DIAG_CD provides information on the heading of a category, whereas the fourth and/or fifth digits (those to the right of the decimal point in the ICD-9-CM diagnosis codes) provide greater detail. *The CMS 2008 BSA*

Outpatient Procedures PUF SAS Data Users Guide provides the descriptions of these 3-digit ICD-9-CM primary diagnosis codes.

7. What does the HCPCS code variable (OP_HCPCS_CD) mean?

OP_HCPCS_CD provides the HCPCS codes that identify procedures in outpatient claims. The descriptions for Level II HCPCS codes are available on the CMS website.² The descriptions for Level I HCPCS codes are available from American Medical Association.³ To learn more about this variable, refer to ResDAC website.⁴

8. What does the service count variable (OP_HCPCS_UNIT_CNT) mean?

OP_HCPCS_UNIT_CNT provides the count of the total number of units/services of a particular procedure listed in the *CMS 2008 BSA Outpatient Procedures PUF*. To learn more about this variable, refer to the ResDAC website.⁵

9. How is Medicare payment amount represented in the *CMS 2008 BSA Outpatient Procedures PUF*?

Payments were rounded according to the following rules:

Value of Medicare Payment Amount (\$)	Rounding Rule
0 - 100	Round to the nearest multiple of 10
100 - 1,000	Round to the nearest multiple of 50
1,000 - 10,000	Round to the nearest multiple of 100
Greater than 10,000	Round to the nearest multiple of 1,000

10. What data cleaning steps were performed to obtain the initial 5% outpatient sample?

The 5% outpatient sample was cleaned by removing procedures with invalid HCPCS codes and denied procedures. Invalid ICD-9-CM codes were set to missing. De-identification procedures were then performed on the resulting initial 5% outpatient procedure sample (see FAQ #3 above).

11. Can I know which procedures belong to the same Medicare beneficiary?

The *CMS 2008 BSA Outpatient Procedures PUF* does not allow users to link multiple procedures on the file for those beneficiaries with more than one procedure in 2008. The record identification field on the PUF contains a new series of random numbers generated just for the

² <https://www.cms.gov/HCPCSReleaseCodeSets/ANHCPCS/list.asp>

³ <http://www.ama-assn.org>

⁴ http://www.resdac.org/ddvh/NewFiles/HCPCS_CD.htm

⁵ http://www.resdac.org/ddvh/NewFiles/REV_UNIT.htm

CMS 2008 BSA Outpatient Procedures PUF and used to sort procedures in a random order. Users wishing to work with a subsample of the procedures on the file can use the record identifier to draw a random subset of records.

12. Can I know which procedures belong to the same claim for a Medicare beneficiary?

An outpatient claim (for a beneficiary) might include more than one procedure. However, the *CMS 2008 BSA Outpatient Procedures PUF* does not allow users to link multiple procedures for a single claim. (Also, see FAQ #11 above).

13. How is the *CMS 2008 BSA Outpatient Procedures PUF* different from the 5% CMS standard research sample?

There is no overlap in terms of beneficiaries between the 5% CMS standard research sample and the *CMS 2008 BSA Outpatient Procedures PUF*. That is, these two 5% samples are disjoint.

14. What are the limitations of the *CMS 2008 BSA Outpatient Procedures PUF*?

The *CMS 2008 BSA Outpatient Procedures PUF* is intended to give researchers a convenient initial look at data drawn from CMS outpatient claims. The file contains measures of demographic characteristics of beneficiaries, primary diagnosis, procedure performed, number of units of service, and Medicare payment amount for the procedure. In order to preserve confidentiality, suppression criteria have been applied to variables and procedures in the initial file. Some variables are rounded or categorized. Researchers should read the General Documentation and the Data Dictionary and Codebook to determine the appropriateness of the PUF for addressing specific research questions.

15. How may I request additional data?

See the Files for Order section of the CMS Web site <http://www.cms.gov/home/rsds.asp>. This site lists available CMS data files, data file properties, information about data-use agreements, as well as ordering and payment information.

16. What is the plan for future data releases?

The *CMS 2008 BSA Inpatient Claims PUF* was released in February 2011. This release contains one BSA PUF for each remaining type of service: *Durable Medical Equipments, Prescription Drug Events, Hospice, Home Health Agency, Skilled Nursing Facility, Carrier, and Outpatient*. CMS intends to release additional PUFs in 2011-2012.

17. How may I provide feedback on the *CMS 2008 BSA Outpatient Procedures PUF*?

Questions and comments can be submitted to the Research Data Assistance Center (<http://www.resdac.org/>) via resdac@umn.edu or 1-888-9RESDAC.