



Health Insurance Exchange Public Use Files (Exchange PUFs) General Information

This document outlines important information about the Health Insurance Exchange Public Use Files (Exchange PUFs), including data source, file size, variables, key assumptions, analytic utility, and support information. A data dictionary is also available for each of the separate Exchange PUF files.

1. Overview of the PUFs

The Centers for Medicare & Medicaid Services (CMS) Center for Consumer Information & Insurance Oversight (CCIIO) publishes the Exchange PUFs in order to improve transparency and increase access to data on Qualified Health Plans (QHPs) and Stand-alone Dental Plans (SADPs) offered through the Exchanges in the individual and Small Business Health Options Program (SHOP) markets. The Exchange PUFs include data from Federally-facilitated Exchanges (FFE)¹, State Partnership Exchanges (SPE)², and State-based Exchanges that rely on the federal information technology platform for QHP eligibility and enrollment functionality (SBE-FPs).³

The Exchange PUFs exclude data from SBEs that do not rely on the federal platform for QHP eligibility and enrollment functionality.⁴ For data on SBE states, see the [State Based Health Insurance Exchange Public Use Files](#) (SBE PUF).

The PUFs are available for plan years 2014 through 2019 to support timely research and analysis of Health Insurance Exchange data. The 2019 Exchange PUFs will be updated regularly to reflect the plan data that consumers will see when shopping for a QHP or SADP.

Ten separate files comprise the Exchange PUFs: (1) Benefits and Cost Sharing PUF (BenCS-PUF), (2) Plan Attributes PUF (Plan-PUF), (3) Rate PUF (Rate-PUF), (4) Business Rules PUF (BR-PUF), (5) Service Area PUF (SA-PUF), (6) Network PUF (Ntwrk-PUF), (7) Plan ID Crosswalk PUF (CW-PUF), (8) Machine-readable URL PUF (MR-PUF), (9) Transparency in Coverage PUF (TC-PUF) and (10) Quality PUF (Qual-PUF).

¹ FFE states in PY2019 are Alabama, Alaska, Arizona, Florida, Georgia, Indiana, Louisiana, Mississippi, Missouri, North Carolina, North Dakota, Oklahoma, South Carolina, Tennessee, Texas, Wisconsin, and Wyoming.

² SPE states in PY2019 are Delaware, Hawaii (individual market), Illinois, Iowa, Kansas, Maine, Michigan, Montana, Nebraska, New Hampshire, New Jersey, Ohio, Pennsylvania, South Dakota, Utah, Virginia, and West Virginia.

³ SBE-FP states in PY2019 are Arkansas (individual market), Kentucky, Nevada, New Mexico (individual market), and Oregon (individual market).

⁴ SBE states in PY2019 are Arkansas (SHOP market), California, Colorado, Connecticut, District of Columbia, Hawaii (SHOP market), Idaho, Maryland, Massachusetts, Minnesota, New Mexico (SHOP market), New York, Oregon (SHOP market), Rhode Island, Vermont, and Washington.

2. Data Source of the PUFs

The Exchange PUFs contain data submitted by health insurance issuers during the QHP/SADP certification process. In accordance with 45 C.F.R. part 155 subpart K, CMS reviews QHP/SADP applications from issuers that are applying to offer plans in FFE and SPE states. SBE-FP states review QHP/SADP applications from issuers that are applying to offer plans in their states. The QHP/SADP application collects both issuer-level information and plan-level benefit and rate data, largely through standardized data templates.

Issuers in FFE states submit standardized QHP/SADP templates to CMS through the Health Insurance Oversight System (HIOS). Issuers in SPE and SBE-FP states submit standardized data templates through the System for Electronic Rate and Form Filing (SERFF). Issuers participating in the Multi-State Plan (MSP) Program submit templates through the U.S. Office of Personnel Management’s (OPM) online application portal. CMS aggregates data from the three submission systems (HIOS, SERFF, and OPM) to create the Exchange PUFs.

Issuers submit data to CMS separately from the QHP/SADP application for the following Exchange PUFs: Machine-readable URL, Transparency in Coverage, and Quality.

3. Description of the PUFs

An overview of the content, format, and size of each of the files that comprise the Exchange PUFs is outlined in the tables below.

Table 3.1: File Format Descriptions for 2019 Exchange PUFs

File Name	Type*	File Size**	Description
2019 Benefits and Cost Sharing PUF (BenCS-PUF)	CSV	0.2 GB	Plan variant-level data on essential health benefits, coverage limits, and cost sharing.
2019 Plan Attributes PUF (Plan-PUF)	CSV	21 MB	Plan variant-level data on maximum out of pocket payments, deductibles, health savings account (HSA) eligibility, formulary ID, and other plan attributes.
2019 Rate PUF (Rate-PUF)	CSV	0.4 GB	Plan-level data on individual rates based on an eligible subscriber’s age, tobacco use, and geographic location, and family-tier rates.

2019 Business Rules PUF (BR-PUF)	CSV	2 MB	Plan-level data on rating business rules, such as allowed relationships (e.g., spouse, dependents) and tobacco use
2019 Service Area PUF (SA-PUF)	CSV	1 MB	Issuer-level data on geographic service areas including state, county, and zip code.
2019 Network PUF (Ntwrk-PUF)	CSV	0.1 MB	Issuer-level data identifying provider network URLs.
2019 Plan ID Crosswalk PUF (CW-PUF)	CSV	11 MB	Plan-level data that maps plans offered in 2018 to plans offered in 2019.
2019 Machine-readable URL PUF (MR-PUF)	Excel	21 KB	Issuer-level URL locations for machine-readable plan network provider and formulary information.
2019 Transparency in Coverage PUF (TC-PUF)	Excel	175 KB	Issuer-level claims, appeals, and active URL data. This PUF contains data from PY2017 for issuers participating in the Exchange in PY2019.

*Comma separated values (CSV)

**Note: Approximate file size

Table 3.2: File Format Descriptions for 2018 Exchange PUFs

File Name	Type*	File Size**	Description
2018 Benefits and Cost Sharing PUF (BenCS-PUF)	CSV	0.2 GB	Plan variant-level data on essential health benefits, coverage limits, and cost sharing.
2018 Plan Attributes PUF (Plan-PUF)	CSV	21 MB	Plan variant-level data on maximum out of pocket payments, deductibles, health savings account (HSA) eligibility, formulary ID, and other plan attributes.

2018 Rate PUF (Rate-PUF)	CSV	0.4 GB	Plan-level data on individual rates based on an eligible subscriber's age, tobacco use, and geographic location, and family-tier rates.
2018 Business Rules PUF (BR-PUF)	CSV	2 MB	Plan-level data on rating business rules, such as allowed relationships (e.g., spouse, dependents) and tobacco use
2018 Service Area PUF (SA-PUF)	CSV	1 MB	Issuer-level data on geographic service areas including state, county, and zip code.
2018 Network PUF (Ntwrk-PUF)	CSV	0.1 MB	Issuer-level data identifying provider network URLs.
2018 Plan ID Crosswalk PUF (CW-PUF)	CSV	11 MB	Plan-level data that maps plans offered in 2017 to plans offered in 2018.
2018 Machine-readable URL PUF (MR-PUF)	Excel	21 KB	Issuer-level URL locations for machine-readable plan network provider and formulary information.
2018 Transparency in Coverage PUF (TC-PUF)	Excel	175 KB	Issuer-level claims, appeals, and active URL data. This PUF contains data from PY2016 for issuers participating in the Exchange in PY2018.
2018 Quality PUF (Qual-PUF)	Excel	36 KB	Plan-level data on quality ratings for plans in pilot states. This PUF is titled as "2017 Quality PUF" and posted at the CMS Quality Rating System website.

*Comma separated values (CSV)

**Note: Approximate file size

Table 3.3: File Format Descriptions for 2017 Exchange PUFs

File Name	Type*	File Size**	Description
2017 Benefits and Cost Sharing PUF (BenCS-PUF)	CSV	0.5 GB	Plan variant-level data on essential health benefits, coverage limits, and cost sharing.

2017 Plan Attributes PUF (Plan-PUF)	CSV	41 MB	Plan variant-level data on maximum out of pocket payments, deductibles, health savings account (HSA) eligibility, formulary ID, and other plan attributes.
2017 Rate PUF (Rate-PUF)	CSV	0.8 GB	Plan-level data on individual rates based on an eligible subscriber's age, tobacco use, and geographic location, and family-tier rates.
2017 Business Rules PUF (BR-PUF)	CSV	4 MB	Plan-level data on rating business rules, such as allowed relationships (e.g., spouse, dependents) and tobacco use.
2017 Service Area PUF (SA-PUF)	CSV	2 MB	Issuer-level data on geographic service areas including state, county, and zip code.
2017 Network PUF (Ntwrk-PUF)	CSV	0.3 MB	Issuer-level data identifying provider network URLs.
2017 Plan ID Crosswalk PUF (CW-PUF)	CSV	14 MB	Plan-level data that maps plans offered in 2016 to plans offered in 2017.
2017 Machine-readable URL PUF (MR-PUF)	Excel	34 KB	Issuer-level URL locations for machine-readable plan network provider and formulary information.
2017 Transparency in Coverage PUF (TC-PUF)	Excel	83 KB	Issuer-level claims, appeals, and active URL data. This PUF contains data from PY2015 for issuers participating in the Exchange in PY2017.
2017 Quality PUF (Qual-PUF)	Excel	51 KB	Plan-level data on quality ratings for plans in pilot states.

*Comma separated values (CSV)

**Note: Approximate file size

Table 3.4: File Format Descriptions for 2016 Exchange PUFs

File Name	Type*	File Size**	Description
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2016 Benefits and Cost Sharing PUF (BenCS-PUF)	CSV	0.5 GB	Plan variant-level data on essential health benefits, coverage limits, and cost sharing.
2016 Plan Attributes PUF (Plan-PUF)	CSV	41 MB	Plan variant-level data on maximum out of pocket payments, deductibles, health savings account (HSA) eligibility, formulary ID, and other plan attributes.
2016 Rate PUF (Rate-PUF)	CSV	0.8 GB	Plan-level data on individual rates based on an eligible subscriber's age, tobacco use, and geographic location, and family-tier rates.
2016 Business Rules PUF (BR-PUF)	CSV	4 MB	Plan-level data on rating business rules, such as allowed relationships (e.g., spouse, dependents) and tobacco use.
2016 Service Area PUF (SA-PUF)	CSV	2 MB	Issuer-level data on geographic service areas including state, county, and zip code.
2016 Network PUF (Ntwrk-PUF)	CSV	0.3 MB	Issuer-level data identifying provider network URLs.
2016 Plan ID Crosswalk PUF (CW-PUF)	CSV	16 MB	Plan-level data that maps plans offered in 2015 to plans offered in 2016.
2016 Machine Readable URL PUF (MR-PUF)	Excel	34 KB	Issuer-level URL locations for machine-readable plan network provider and formulary information.

*Comma separated values (CSV)

**Note: Approximate file sizes.

Table 3.5: File Format Descriptions for 2015 Exchange PUFs

File Name	Type*	File Size**	Description
2015 Benefits and Cost Sharing PUF (BenCS-PUF)	CSV	0.6 GB	Plan variant-level data on essential health benefits, coverage limits, and cost sharing.

2015 Plan Attributes PUF (Plan-PUF)	CSV	37 MB	Plan variant-level data on maximum out of pocket payments, deductibles, health savings account (HSA) eligibility, formulary ID, and other plan attributes.
2015 Rate PUF (Rate-PUF)	CSV	1 GB	Plan-level data on individual rates based on an eligible subscriber's age, tobacco use, and geographic location, and family-tier rates.
2015 Business Rules PUF (BR-PUF)	CSV	0.8 MB	Plan-level data on rating business rules, such as allowed relationships (e.g., spouse, dependents) and tobacco use.
2015 Service Area PUF (SA-PUF)	CSV	2 MB	Issuer-level data on geographic service areas including state, county, and zip code.
2015 Network PUF (Ntwrk-PUF)	CSV	0.2 MB	Issuer-level data identifying provider network URLs.
2015 Plan ID Crosswalk PUF (CW-PUF)	CSV	15 MB	Plan-level data that maps plans offered in 2014 to plans offered in 2015.

*Comma separated values (CSV)

**Note: Approximate file sizes.

Table 3.6: File Format Descriptions for 2014 Exchange PUFs

File Name	Type*	File Size**	Description
2014 Benefits and Cost Sharing PUF (BenCS-PUF)	CSV	0.3 GB	Plan variant-level data on essential health benefits, coverage limits, and cost sharing.
2014 Plan Attributes PUF (Plan-PUF)	CSV	20 MB	Plan variant-level data on maximum out of pocket payments, deductibles, health savings account (HSA) eligibility, formulary ID, and other plan attributes.

2014 Rate PUF (Rate-PUF)	CSV	0.7 GB	Plan-level data on individual rates based on an eligible subscriber's age, tobacco use, and geographic location, and family-tier rates.
2014 Business Rules PUF (BR-PUF)	CSV	0.7 MB	Plan-level data on rating business rules, such as allowed relationships (e.g., spouse, dependents) and tobacco use.
2014 Service Area PUF (SA-PUF)	CSV	1.2 MB	Issuer-level data on geographic service areas including state, county, and zip code.
2014 Network PUF (Ntwrk-PUF)	CSV	0.2 MB	Issuer-level data identifying provider network URLs.

4. Variables in the PUFs

Each file has a separate data dictionary that describes the construction, format, and values of each variable. Users are encouraged to review the data dictionary for each file prior to conducting analysis.

5. Methodology and Key Assumptions

The QHP/SADP application process ensures that plans meet specific QHP/SADP certification standards. To create the Exchange PUFs, CMS extracted and aggregated data from issuers' QHP/SADP applications including information on plan design, benefits, cost sharing, rates, and geographic coverage, as these areas represent the core elements of the QHP/SADP application. Data from plans that did not complete the certification process for display on HealthCare.gov or were withdrawn from the certification process are excluded from the Exchange PUFs.

Users should note that CMS certifies SADPs even if the issuer does not intend to offer them through HealthCare.gov; these plans are referred to as off-Exchange SADPs and are included in the Exchange PUFs. CMS does not certify medical plans that are only offered outside of HealthCare.gov. Therefore, the Exchange PUFs do not include data from off-exchange only QHPs. For additional information on the QHP/SADP application, review, and certification processes in the FFMs and SPMs, please see the Letter to Issuers in the Federally-facilitated Exchanges that CMS releases before each plan year. The Letter to issuers for the 2019 plan year can be found at <https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/2019-Letter-to-Issuers.pdf>. Users should review the Data Disclaimer-User Agreement for additional background on data accuracy, integrity, and privacy protection.

6. Support and Further Information

Users with questions about the Exchange PUFs, the Exchange data validation process, or QHP/SADP certification, should contact QHPinfo_data@cms.hhs.gov. Responses to PUF-related questions will be released regularly in a Frequently Asked Questions (FAQ) document posted to <http://www.cms.gov/CCIIO/Resources/Data-Resources/marketplace-puf.html>. CMS will only respond to questions related to the Exchange PUFs, and will not respond to questions about developer tools or other public use files. The Exchange PUFs will be updated regularly to incorporate approved data corrections from issuers including Small Business Health Options Program (SHOP) quarterly rate updates.