

AHRQ Social Determinants of Health (SDOH) Database

Data Source Documentation

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Data Use Agreement for AHRQ SDOH Database

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This Data Use Agreement ("Agreement") governs the disclosure and use of data in the Social Determinants of Health (SDOH) Database, which is maintained by the Agency for Healthcare Research and Quality (AHRQ). Section 944(c) of the Public Health Service Act (42 U.S.C. §299c-3(c)) ("the AHRQ Confidentiality Statute") requires that data collected by AHRQ that identify individuals or establishments be used only for the purpose for which they were supplied. By using these data you signify your agreement to comply with the below stated statutorily based requirements:

- I will not release or disclose any information that directly or indirectly identifies persons. This includes attempts to identify individuals through the use of vulnerability analysis or penetration testing.
- I will not publish or report, through any medium, data that could identify individual establishments directly or by inference.
- When the identities of establishments are not provided in the datasets, I will not attempt to use the dataset to learn the identity of any establishment.
- I will not use or disclose the dataset, or any part thereof, except for research, analysis, and aggregate statistical reporting, and only as permitted by this Agreement.
- I acknowledge and affirm that I am personally responsible for compliance with the terms of this Agreement, to the exclusion of any other party, regardless of such party's role in sponsoring or funding the research that is the subject of this Agreement.
- I acknowledge and affirm that interpretations, conclusions, and/or opinions that I reach as a result of my analyses of the datasets are my interpretations, conclusions, and/or opinions, and do not constitute the findings, policies, or recommendations of the U.S. Government, the U.S. Department of Health and Human Services, or AHRQ.
- I will acknowledge in all reports based on these data that the source of the data is the "AHRQ Social Determinants of Health (SDOH) Database."
- I will indemnify, defend, and hold harmless AHRQ and the data organizations that provide data to AHRQ for the SDOH Database from any or all claims and losses accruing to any person, organizations, or other legal entity as a result of violation of this Agreement. This provision applies only to the extent permitted by Federal and State law.
- I agree to report the violation or apparent violation of any term of this Agreement to AHRQ without unreasonable delay and in no case later than 30 calendar days of becoming aware of the violation or apparent violation.

Data Use License Agreement for AHRF

Data Use License Agreement for the use of the Area Health Resources Files (AHRF) data is issued by the National Center for Health Workforce Analysis, Bureau of Health Workforce, Health Resources and Services Administration.

The AHRF data are subject to the following terms and conditions:

1. The recipient will not distribute copies of the AHRF or make the DATA available to a third party. The recipient's Authorized Users may transmit to a third-party colleague in hard copy or electronically, minimal amounts of the AHRF data for scholarly, educational, or scientific research or professional use but in no case for sale. In addition, Authorized Users have the right to use, with appropriate credit, figures, tables and brief excerpts derived from the AHRF data in the Authorized User's own scientific, scholarly and educational works.
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5. The National Center for Health Workforce Analysis, Bureau of Health Workforce believes the data to be accurate, but will make no warranties or representation, express or implied, including, but not limited to, the implied warranty of merchantability and fitness to a particular purpose. In no event shall the National Center for Health Workforce Analysis have liability for any damage. Under no circumstances shall the National Center for Health Workforce Analysis, Bureau of Health Workforce be liable for incidental, consequential, special or exemplary damages of any kind.
6. Whenever the National Center for Health Workforce Analysis, Bureau of Health Workforce has knowledge or reason to believe that the recipient has failed to observe the terms and conditions of this Agreement, the National Center for Health Workforce Analysis, Bureau of Health Workforce will notify the recipient of the concerns. The recipient is required to provide adequate documentation or information to establish to the National Center for Health Workforce Analysis, Bureau of Health Workforce's satisfaction that the concerns are without merit, or to remedy the situation within 30 days or within a reasonable timeframe agreed to by both parties.
7. This Agreement supersedes all prior agreements and understandings of any nature whatsoever, oral or written, and constitutes the entire understanding between the parties hereto.
8. This Agreement may be modified or terminated at any time by mutual consent of the parties.
9. This Agreement is in no relation to any other Agreement between the National Center for Health Workforce Analysis, Bureau of Health Workforce and the recipient.

1. Introduction

The purpose of the AHRQ SDOH Database is to make it easier to access a range of well documented, readily linkable SDOH variables across domains without having to access multiple source files, facilitating SDOH research and analysis to improve health outcomes.

Variables in the files correspond to five key SDOH domains: social context (e.g., age, race/ethnicity, veteran status), economic context (e.g., income, unemployment rate), education, physical infrastructure (e.g., housing, crime, transportation), and healthcare context (e.g., health insurance). The files can be linked to other data by geography (county and zip code).

The data contained in the SDOH data files are drawn from multiple sources and variables may have differing availability, patterns of missing, and methodological considerations across sources, geographies, and years. Users should refer to the data source documentation and codebook files, as well as the original data sources, to help identify these patterns. If users have questions, suggestions, or identify any issues with the data please send feedback to SDOH@ahrq.hhs.gov. This work was supported by the Office of the Secretary Patient-Centered Outcomes Research Trust Fund Under Interagency Agreement 750119PE0K0036.

Purpose of this document. The *AHRQ SDOH Database Data Source Documentation* serves as a resource for data users to reference when first working with the SDOH Database. It provides descriptions of the SDOH Database and of each of the original data sources used to build the database, along with data-quality issues and data notes specific to each source. Users are expected to refer to this document along with codebooks.

In the next section we provide an overview of this documentation. In subsequent sections, we discuss how the SDOH Database was constructed and then provide descriptions for all the data sources that were used to build the SDOH Database.

2. SDOH Database Documentation Overview

This section provides an overview of the data source documentation and data codebooks that have been made available for users of the AHRQ SDOH Database.

I. SDOH Data Sources Documentation

This data documentation report contains information for researchers about the structure and contents of the SDOH Database as well as descriptions of each of the data sources used to populate the data files. Each data source description follows a standard format with the following fields:

- **Sponsor** (e.g., Health Resources and Services Administration [HRSA] for the Area Health Resources Files [AHRF])
- **Description** (brief, general description of source data)
- **Inclusion in the SDOH Database**
 - Identifies what years of data were sourced for the SDOH Database (between 2009 and 2020)
 - Lists the SDOH domains to which the data source has contributed variables
 - Includes additional information about the data source relevant to the SDOH Database
- **Resources** (links to original data source documentation, data download sites, and other relevant information)
- **Suggested Citation** (citation information and relevant quick-access links for users)
- **Data Set Notes**
 - **Reliability:** lists availability of margins of error.
 - **Geographic levels:** lists information about geographic levels at which the data set is available in the SDOH Database and the geographic level of the source files. Some SDOH Database variables required geographic conversions to transform the data into the geographies in the SDOH Database.
 - **Suppression rules:** If applicable, these contain the suppression rules used by the source data that inform which data will be missing in the SDOH Database.
 - **Variable notes:** Provides variable availability across years and variable definitions and specifications. In addition, provide notes that are relevant to specific variables, including variable-specific data quality, suppression rules, or limitations
 - SDOH variable availability across years (in tabular format)
 - Variable name
 - Variable label
 - SDOH variable definitions and specifications (in tabular format)
 - Variable name
 - Variable label

- Source table, if multiple data tables were available from the original data source
- Numerator (for derived variables)
- Denominator (for derived variables) or original variable (when renamed for the SDOH Database)
- **Other notes** Lists other notes about data sources for data users such as coverage of the data set or noted limitations
- **Term Definitions** (definitions for important terms that are relevant for a given data set's variables)

II. SDOH_Codebook_YYYY

Variable codebooks, which are available by year as Excel spreadsheets, were developed as companion resources to this data source documentation to provide users with descriptive statistics for each variable by year (from 2009 to 2020). Each codebook contains Readme, Introduction worksheets, and all variables list, along with worksheets describing the contents of each of the county, ZIP Code, and census tract files for the year of reference. Each worksheet contains the following:

- SDOH domain
- SDOH topic
- Variable name
- Variable label
- Data source
- Descriptive summary statistics for continuous variables
 - Number, mean, standard deviation, median, minimum, maximum and number of missing
- Descriptive summary statistics for categorical variables
 - Number, category value, category frequency, and category percentage

Variables in the SDOH Database were selected to correspond to five key domains. Variables are further classified into topic areas within each of the domains, as shown in Table 1. Please note that, for ease of use, only one topic area is assigned to each variable, although users may use these classifications at their discretion, as SDOH Database variables are often interrelated and cross-cutting.

Table 2.1. SDOH domains and topic areas represented in the SDOH Database

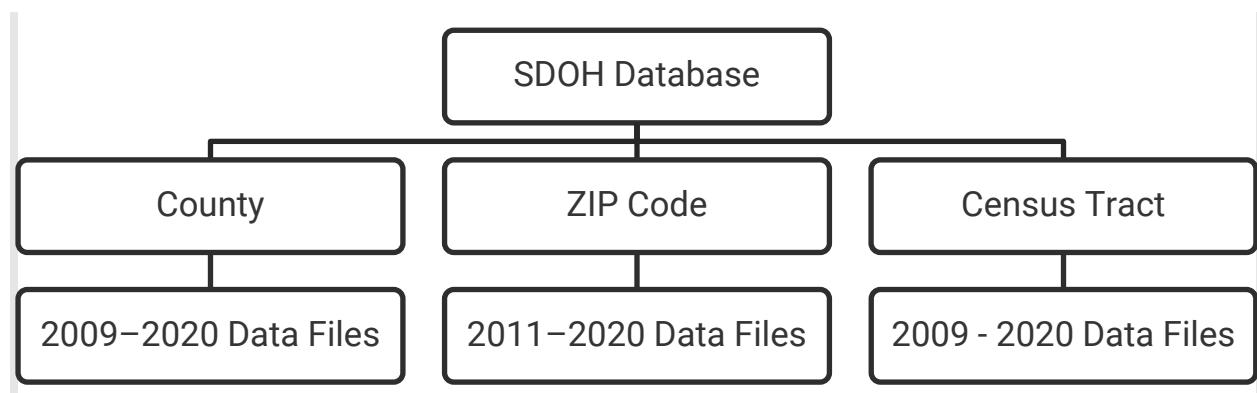
SDOH Domain	SDOH Topic Area
Social context	Demographics
	Living conditions
	Disability
	Immigration
	Socioeconomic disadvantage indices
	Segregation
Economic context	Income
	Employment
	Poverty
Education	Attainment
	School system
	Educational funding
	Literacy
	Numeracy
Physical infrastructure	Housing
	Transportation
	Migration
	Internet connectivity
	Environment
	Industry composition
	Social services
	Food access
	Access to exercise
	Crime
Healthcare context	Health insurance status
	Characteristics of health care providers
	Characteristics of health care facilities
	Distance to provider
	Utilization and costs
	Health behaviors
	Health outcomes
	Health care quality

3. Contents and Structure of the SDOH Database

Overview

The AHRQ SDOH Database comprises three sets of annual data files: one set of county-level data files, one set of data files at the ZIP Code level, and one set of data files at the census tract level. The county- and census tract-level files contain 12 data sets covering the 12-year period from 2009 to 2020, and the ZIP Code-level files contain 10 data sets spanning 2011 to 2020.¹ There are separate data sets for each data year. Figure 3.1 shows the structure of the SDOH Database.

Figure 3.1. Structure of the SDOH Database



Contents of the SDOH Database

The data presented in the SDOH Database were derived from 44 data sources. Table 3.1 lists all such data sources and whether they were used to create the county, ZIP Code, and/or census tract files. More detailed information about each data source is included in subsequent sections of this document.

¹ ZIP Code-level files for the years 2009 and 2010 are not included the SDOH Database because ACS did not release five-year Zip Code Tabulation Areas (ZCTA) files for 2009 or 2010. Only county-level and tract-level data files are available for those two years.

Table 3.1. Inclusion of data sources in county, ZIP Code, and/or census tract in the SDOH Database

Data Source Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
American Community Survey (ACS)	C, Z, T											
American Hospital Association (AHA)							C	C	C	C	C	C
Area Health Resource File (AHRF)	C	C	C	C	C	C	C	C	C	C	C	C
American Foundation for AIDS Research (amfAR)	C	C	C	C	C	C	C	C	C	C	C	C
County Adjacent File (CAF)	C	C	C	C	C	C	C	C	C	C	C	C
Census County Business Patterns (CCBP)	C, Z											
Common Core Data (CCD)	C	C	C	C	C	C	C	C	C	C	C	
CDC Atlas (CDCA)	C	C	C	C	C	C	C	C	C	C	C	
CDC Atlas Plus (CDCAP)	C	C	C	C	C	C	C	C	C	C	C	
CDC PLACES: Local Data for Better Health (from Behavioral Risk Factor Surveillance System) (CDCDP)									C, Z, T	C, Z, T	C, Z, T	
CDC Social Vulnerability Index (CDCSVI)		C, T				C, T		C, T		C, T		
CDC Wonder (CDCW)	C	C	C	C	C	C	C	C	C	C	C	C
County Health Rankings (CHR)		C	C	C	C	C	C	C	C	C	C	C
Civil Rights Data Collection (CRDC)						C		C		C		
Community Resilience Estimates (CRE)											C, T	
Environmental Protection Agency (EPAAG)	C	C	C	C	C	C	C	C	C	C	C	C
Environmental Protection Agency: National Walkability Index (EPAN)											C	
Economic Research Service (ERS)	Z, T											
Food Access Research Atlas (FARA)		T					T				T	
Food Environment Atlas (FEA)			C	C	C		C		C	C		
Home Health Compare (HHC)						C	C	C	C	C	C	C
Homeland Infrastructure Foundation Level Data (HIFLD)											C, Z, T	
Indian Health Service (IHS)												C
Long-term Care: Facts on Care in the U.S. (LTC Focus)	C	C	C	C	C	C	C	C	C	C	C	C
Medicare Geographic Variation Public Use File (MGV)	C	C	C	C	C	C	C	C	C	C	C	C
Minority Health Social Vulnerability Index (MHSVI)										C		

Social Determinants of Health (SDOH) Database

Data Source Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Mapping Medicare Disparities (MMD)											C	C
Medicare Advantage Penetration (MP)	C	C	C	C	C	C	C	C	C	C	C	C
HRSA Medically Underserved Area (MUA)	C, T											
National Center for Health Statistics (NCHS)	C	C	C	C	C	C	C	C	C	C	C	C
National Environmental Public Health Tracking Network (NEPTHN)	C	C	C	C	C	C	C	C	C	C	C	C
Nursing Home Compare (NHC)					C	C	C	C	C	C	C	C
National Oceanic and Atmospheric Administration Climate (NOAAC)	C	C	C	C	C	C	C	C	C	C	C	C
National Oceanic and Atmospheric Administration Storm (NOAAS)	C	C	C	C	C	C	C	C	C	C	C	C
Opportunity Atlas (OPP)		C, T					C, T					
Physician Compare (PC)						C	C	C	C	C	C	C
The Program for the International Assessment of Adult Competencies (PIAAC)									C			
Provider of Services (POS)	C, Z, T											
Small Area Health Insurance Estimates (SAHIE) Program	C	C	C	C	C	C	C	C	C	C	C	
Small Area Income and Poverty Estimates (SAIPE) Program	C	C	C	C	C	C	C	C	C	C	C	C
Stanford Education Data Archive (SEDA)	C	C	C	C	C	C	C	C	C	C		
U.S. Census Bureau, TIGERweb and COVID-19 Demographic and Economic Resources (TIGER CEN)	C, Z, T											
United States Cancer Statistics (USCS)							C	C	C	C		
Washington University Regional Estimates of Chemical Composition of Fine Particulate Matter using a Combined Geoscience-Statistical Method with Information from Satellites, Models, and Monitors (WUSTL)	C, T											

Notes: C = variables included in county-level data files; Z = variables included in ZIP Code-level data files; T = variables included in census tract-level data files.

Variable Creation

Variables in the SDOH Database were created from these 44 data sources in one of two ways:

Drawn directly from the original data source. When variables were available from the data source as needed, we renamed the original variables for clarity and consistency across years and to fit the naming conventions of the SDOH Database.

Derived using data from the original data source. For some variables, it was necessary to calculate percentages or rates for inclusion in the data files. The numerators and denominators for the variables and their data sources are shown following each data source description. For other variables, such as distance variables or the calculation of Herfindahl-Hirschman indices, the calculations were more involved. We describe the processes and decisions made in these constructions in their respective data source sections below. These measures were created for ease-of-use for users of the SDOH Database; however, they do not represent an endorsement from AHRQ for how the variables should be defined.

SDOH Database Conventions

The following conventions were followed in constructing the SDOH Database to provide researchers with a consistent and easy-to-use resource:

- **Variable assignment to annual data sets.** Variables appear in the annual datasets that correspond with either: 1) the single year represented by the original data source (e.g., Nursing Home Compare data for facilities in 2016 appears in the 2016 county data set), or 2) the last year in a period represented by the data (e.g., American Community Survey (ACS) data aggregated over 2012 to 2016 is in the 2016 data set).
- **Variable availability.** The availability of each variable changes across data years. Following each data source description in this documentation is a table showing the availability of each variable in the annual data sets.
- **Variable naming.** Except for the geographic ID variables, all variable names begin with a data source acronym followed by an underscore and a descriptive title (e.g., ACS_AVG_HH_SIZE, AHRF_HOSPS_RATE).
- **Missing values.** All data files use a blank to denote a missing value.

Geographic Considerations

Changes to County Federal Information Processing Standard (FIPS) Codes

Because the SDOH county data files span 12 years, it is important for users to consider geographic changes at the county level during this time. Many of the variables in the SDOH Database are based on multi-year averages, as is the case with ACS, cancer incidence, and mortality rates. As a result, counties in the original source may appear in data years before they were officially created or after they had been retired or changed, depending on how the original data source handled those counties.

When dealing with counties that have changed over time, users should take particular care to investigate how the original data handles these cases. The U.S. Census Bureau posts “Substantial Changes to Counties and County Equivalent Entities: 1970–Present” at <https://www.census.gov/programs-surveys/geography/technical-documentation/county-changes.2020.html>.

The SDOH Database county data files retain FIPS codes for all counties that existed in the specific file year for the 5-year ACS estimates.² Since some county names and boundaries change over time, some data sources may not use the FIPS codes specific to the relevant year. For counties that had name and FIPS code changes, but not changes to their geography, the SDOH county data files harmonize the source data to present only one record per year for that geography. For instance, the state of South Dakota changed the name of Shannon County (FIPS 46113) to Oglala Lakota County (FIPS 46102) in 2015. For Shannon County, South Dakota, the county is represented under FIPS 46113 prior to 2015 and then FIPS 46102 from 2015 onwards in the SDOH county data files. The original data sources, however, might have used one or the other of these two FIPS codes for that county in a given year.

For counties that merged, the variables are aggregated together to the new county boundaries (e.g., when Bedford City, VA merged with Bedford County, VA in 2013). If county boundary changes are more complex and make variables impossible to accurately aggregate, variables from the out-of-date FIPS codes are not included in the SDOH Database. Table 3 shows the counties that appear in only a subset of the county data files. Note, however, that counties included in each year of data may only have a subset of variables, depending as noted on how the original data source handled these counties.

Table 3.2. County variation by year in the SDOH Database

State-county FIPS code	State	County	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
02158a	Alaska	Kusilvak Census Area							X	X	X	X	X	X
02270a	Alaska	Wade Hampton Census Area	X	X	X	X	X	X						
46102b	South Dakota	Oglala Lake County							X	X	X	X	X	X
46113b	South Dakota	Shannon County	X	X	X	X	X	X						
51515c	Virginia	Bedford City	X	X	X	X	X	X						
02261d	Alaska	Valdez-Cordova Census Area	X	X	X	X	X	X	X	X	X	X	X	
02063d	Alaska	Chugach Census Area												X
02066d	Alaska	Copper River Census Area												X

^aWade Hampton Census Area (02-270) changed name and code to Kusilvak Census Area, Alaska (02-158) effective July 1, 2015.

^bShannon County, South Dakota (46-113) changed name and code to Oglala Lakota County (46-102) effective May 1, 2015. ^cBedford City, Virginia, (51-515) was added to Bedford County (51-019) effective July 1, 2013. ^dValdez-Cordova Census Area, Alaska (02-261) was split to form Chugach Census Area (02-063) and Copper River Census Area (02-066) effective January 02, 2019.

² Counties that were deleted prior to 2009 are not included in the SDOH Database.

Methodology for matching ZIP Codes to ZCTA

The SDOH Database includes ZIP Code-level files. ZIP Codes are commonly used in health policy research and can be used to link to addresses available in health survey and electronic health records microdata. Nonetheless, most of the SDOH Database variables are derived from the Decennial Census and ACS for ZIP Code Tabulation Areas (ZCTAs), which are geographic areas constructed by the U.S. Census as approximations of ZIP Codes.

There are multiple challenges with linking ZCTAs to ZIP Codes. ZIP codes are created based on postal routes. Because of this, ZIP Codes are not designed to hold population data and ZIP Code areal delineations change frequently. Additionally, besides standard “region” ZIP Codes that represent areas, “point” ZIP Codes are assigned to governmental agencies, hospitals, universities, businesses, or buildings which tend to receive extremely high volumes of mail and therefore require their own ZIP Code.

ZCTAs are geographic features made by the U.S. Census Bureau to approximate ZIP Codes. Although most ZIP Codes have a matched ZCTA Code (which have the same five digits as the ZIP Codes they represent), ZCTA boundaries are not exact representations of the United States Postal Service’s (USPS) ZIP Code delivery areas. Note also that ZCTAs do not cover large unpopulated areas and exclude point ZIP Codes.

To link ZIP Codes to ZCTA data in the SDOH Database, a full list of ZIP Codes in the United States was matched to ZCTAs. Five-digit ZIP Codes were first matched against five-digit ZCTAs using an exact string match. In cases where a ZIP Code did not match to a ZCTA (e.g., ZCTAs that include unique, single delivery point ZIP Codes), the ZIP Code was matched to a ZCTA based on its spatial location using a spatial join in geographic information system (GIS) software.³ Using this crosswalk, we conducted a full join between ZIP Code-level data and ZCTA-level variables. In order to distinguish point and region ZIP Codes, the SDOH Database ZIP Code files include a variable named “POINT_ZIP”.

The SDOH Database ZIP Code files include ZIP Code-level variables along with matched ZCTA data. Table 3.3 provides the number and percent of ZIP Codes by type and Table 3.4 demonstrates the ZIP Code to ZCTA match rate.

Table 3.3. Number and percent of ZIP Codes by type

ZIP Code Type	Number	Percent
Point ZIP Codes	9047	22.0%
Region ZIP Codes	32131	78.0%
Total	41178	100.0%

³ ZIP Code boundary data (June 2021 version) are taken from: https://docs.precisely.com/docs-gated/data/zip-code-boundaries-and-centroids/2021.01/en-us/pdf/zip_code_boundaries_and_centroids_v2021.01.0_product_guide.pdf

Table 3.4. ZIP Code to ZCTA match rate

	Point ZIP Codes	Region ZIP Codes	Overall ZIP Codes
5-digit match	0.00% (0)	97.85% (31441)	76.4% (31441)
Spatial join to ZCTA	99.71% (9021)	1.91% (614)	23.4% (9635)
No match	0.29% (26)	0.24% (76)	0.2% (102)

Caveats: Although most ZCTAs and ZIP Codes share the same five-digit code, they often do not cover the same area. The difference in areal coverage implies that statistical estimates at the ZIP Code-level cannot be assumed to correspond exactly to those of ZCTAs. Another issue is that ZIP Code shapes are not precisely defined because their boundaries frequently change as letter carrier routes are adjusted. In contrast, the shapes of ZCTAs delineated based on the location of addresses at the time of the decennial census and only changed once every 10 years. For the purposes of the SDOH Database, we link ZIP Codes to ZCTAs using ZIP Code geographic boundaries current as of June 2021.

We also note the following caveats specifically:

- As noted above, some ZIP Codes do not link to a ZCTA. A ZCTA identifier is included in the data set so that users can identify the ZCTA that was linked to a particular ZIP Code.
- Users are advised not to use ZIP Code-level variables to construct variables at other geographies (e.g., county, region, nation):
 - Because there can be multiple ZIP Codes in a single ZCTA, simply aggregating ZCTA-level variable from the ZIP Code-level data set will lead to incorrect calculations due to double counting.
 - Not all ZCTAs match to a ZIP Code, and ZCTAs that do not match to a ZIP Code are not included in the SDOH Database. Because of this, not all ZCTAs in the country are included in the SDOH and aggregations of ZCTA-level data will not produce correct aggregate estimates.
 - If users wish to construct aggregate statistics from the SDOH, the county and census tract-level files are better suited to this purpose and avoid the issues noted above.

Census Tracts

Census tracts are geographic units maintained by the U.S. Census Bureau designed to reflect areas with populations generally between 1,200 and 8,000 inhabitants. They are identified using an 11-digit FIPS code, the first five digits of which identify the county.⁴

The SDOH Database census tract-level data files contain data for census tracts that existed in a given year of the ACS. The SDOH Database 2009 file has census tracts based on the 2000 census tract boundaries. The SDOH Database for 2010-2019 SDOH files uses 2010 census tract boundaries, and the 2020 file uses 2020 census tract boundaries. Users should be aware that tract boundaries changing every ten years, and the total number of tracts in the United States

⁴ For further information on geographic identifiers and FIPS codes, refer to <https://www.census.gov/library/reference/code-lists/ansi.html>.

changes noticeably after each decennial census. In addition to these definitional changes of census tracts every ten years, a small number of tracts change over the course of the decade due to changes in legal definitions such as the county definition changes noted above.

Because census tracts are smaller geographic entities than either ZIP Codes or counties, many data sources suppress more information at the census tract level to protect the confidentiality of data subjects and to ensure that variables are sufficiently reliable. In addition, the smaller sample size can lead to more imprecision in estimates and users may observe greater year-to-year variability in census tract-level SDOH variables than for ZIP Code- or county-level variables.

Geocoding

We used geocoded addresses to construct some SDOH Database variables. For these variables, the geocoding used MapMarker Version 31.0.0., a commercial desktop software provided by Pitney Bowes, for the geocoding process. The software matches the full address (housing number, street name, unit number, city, state, ZIP Code) record provided in the source file against its Address Dictionary. The default Address Dictionary is based on TomTom Street data and USPS sources. The geocoding process corrects misspelled address information, and geocodes addresses down to the street level, or falls back to geocode addresses to ZIP Code or geographic centroids if a street level match is not possible. The output address fields are then cleaned and standardized, including street address, city, state, ZIP Code, ZIP4, Census FIPS Code as contained in the 15-digit Census Block ID, and a set of variables showing geocoding accuracy and address match type. Table 3.5 lists the files that were geocoded.

Table 3.5. Data sources that were geocoded for the SDOH Database

SDOH File Year	Data Source	Examples of SDOH variables
2009-2020	CMS Provider of Service Files	POS_DIST_MEDSURG_ICU_TRACT, POS_FQHC_RATE
2014-2020	CMS Physician Compare	PC_PCT_MEDICARE_APPRVD_FULL_AMT
2014-2020	CMS Home Health Compare	HHC_PCT_HHA_OCC_THERAPY
2020	IHS Data	IHS_HEALTH_FACILITY
2020	Homeland Infrastructure Data	HIFLD_DIST_UC_ZP, HIFLD_UC

Distance Calculations

Following geocoding, distance calculations for constructed distance variables based on CMS Provider of Services Data and Homeland Infrastructure Data were constructed using the great circle distance from a given address to geographic areas using population weighted centroids. For census tracts and counties, these centroids are produced by the US Census Bureau: <https://www.census.gov/geographies/reference-files/time-series/geo/centers-population.html>. For ZIP Code centroids, the SDOH Database uses centroids created by the US Department of Housing and Urban Development using USPS administrative data that population weights based on the number of residential addresses. For further information, see <https://data.lojic.org/datasets/HUD::zip-code-population-weighted-centroids/about>.

Urban/Rural Designations

While the majority of variables in each annual data set are specific to that data year (as described above), we also included urban/rural classification variables in each data file that were developed

in specific years. Table 3.6 lists the urban/rural classification variables contained in the SDOH Database and their descriptions.

Table 3.6. Description of urban/rural classifications in the SDOH Database

Variable name	Original data source & year	Description
AHRF_USDA_RUCC_2013	AHRF, extracted from U.S. Department of Agriculture (USDA); 2013	<p><i>Metropolitan Counties</i></p> <p>1 - Counties in metro areas of 1 million population or more 2 - Counties in metro areas of 250,000 to 1 million population 3 - Counties in metro areas of fewer than 250,000 population</p> <p><i>Nonmetropolitan Counties</i></p> <p>4 - Urban population of 20,000 or more, adjacent to a metro area 5 - Urban population of 20,000 or more, not adjacent to a metro area 6 - Urban population of 2,500 to 19,999, adjacent to a metro area 7 - Urban population of 2,500 to 19,999, not adjacent to a metro area 8 - Completely rural or less than 2,500 urban population, adjacent to a metro area 9 - Completely rural or less than 2,500 urban population, not adjacent to a metro area</p>
NCHS_URCS_2013 and NCHS_URCS_2006*	NCHS; 2013 and 2006	<p><i>Metropolitan Counties</i></p> <p>1 - Large Central Metropolitan 2 - Large Fringe Metropolitan 3 - Medium Metropolitan 4 - Small Metropolitan</p> <p><i>Nonmetropolitan Counties</i></p> <p>5 - Micropolitan 6 - Noncore</p>
ERS_RUCA1_2010 and ERS_RUCA2_2010†	ERS	<p>1 - Metropolitan area core: primary flow within an urbanized area (UA) †1.1 - Secondary flow 30% to 50% to a larger UA 2 - Metropolitan area high commuting: primary flow 30% or more to a UA †2.1 - Secondary flow 30% to 50% to a larger UA 3 - Metropolitan area low commuting: primary flow 10% to 30% to a UA 4 - Micropolitan area core: primary flow within an urban cluster (UC) of 10,000 to 49,999 (large UC) †4.1 - Secondary flow 30% to 50% to a UA 5 - Micropolitan high commuting: primary flow 30% or more to a large UC †5.1 - Secondary flow 30% to 50% to a UA 6 - Micropolitan low commuting: primary flow 10% to 30% to a large UC 7 - Small town core: primary flow within an urban cluster of 2,500 to 9,999 (small UC) †7.1 - Secondary flow 30% to 50% to a UA †7.2 - Secondary flow 30% to 50% to a large UC 8 - Small town high commuting: primary flow 30% or more to a small UC †8.1 - Secondary flow 30% to 50% to a UA †8.2 - Secondary flow 30% to 50% to a large UC 9 - Small town low commuting: primary flow 10% to 30% to a small UC 10 - Rural areas: primary flow to a tract outside a UA or UC †10.1 - Secondary flow 30% to 50% to a UA †10.2 - Secondary flow 30% to 50% to a large UC †10.3 - Secondary flow 30% to 50% to a small UC</p>

*The NCHS variables differ with regard to the definition of small metropolitan areas, a topic described further in the NCHS data source description section of this document. †ERS_RUCA2_2010 is a more detailed classification that includes secondary RUCA codes.

4. American Community Survey (ACS)

Sponsor

U.S. Department of Commerce, U.S. Census Bureau

Description

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses. Data are collected continuously throughout the year and pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time (such as in the decennial census, which provides population counts as of April 1 of the census year).

ACS 5-year estimates are available as 5-year aggregate files spanning 2005–2009 to 2016–2020 (as of April 24, 2022). The Census Bureau also produced ACS 3-year estimates, starting in 2008, but that series was discontinued in 2015. ACS 1-year estimates are available for the same timeframe, but these estimates have larger margins of error than 5-year estimates and, importantly, have less availability for smaller geographic areas and population groups. For these reasons, the SDOH Database uses ACS 5-year estimates.

For details, research implications, and examples, see "Understanding and Using ACS Single-Year and Multiyear Estimates" at
https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_general_handbook_2020_ch03.pdf.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2020
- ▶ **SDOH domain(s):**
 - Economic context
 - Education
 - Healthcare context
 - Physical infrastructure
 - Social context
- ▶ **SDOH variable naming convention:** ACS_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County, ZIP Code, and census tract

The SDOH Database county and census tract files contain ACS 5-year estimates for every year from 2009 to 2020. The ZIP Code data files contain ACS 5-year estimates from 2011 to 2020.⁵ For each data set, we selected variables from the 5-year data file whose range ended in that data year, e.g., the 2019 SDOH data files use variables from the 2015–2019 5-year file, the 2018 SDOH data files use the 2014–2018 5-year file, etc. Variables are drawn directly from ACS data tables but renamed for clarity and to fit the conventions of the SDOH Database.

Resources

We downloaded a majority of ACS input data using [tidycensus](#), an R package that allows users to interface with US Census Bureau's Application Programming Interfaces (APIs) and the US Census Bureau's geographic boundary files (see <https://cran.r-project.org/web/packages/tidycensus/index.html>). There were a small number of missing tables in the data pulled from tidycensus for the ACS 2005-2009 5-year estimates and we downloaded some data for these years from the National Historical Geographic Information System (NHGIS).

Errata notes (https://www.census.gov/programs-surveys/acs/technical-documentation/errata.2019.List_1891685388.html) for ACS 5-year tables detailing the errors and/or corrections related to the American Community Survey are published on the Census Bureau website. Changes impacting the American Community Survey, including design, collection, production, and data release are compiled in the form of user notes (https://www.census.gov/programs-surveys/acs/technical-documentation/user-notes.2018.List_661838230.html).

For more information on the ACS, please refer to the Census ACS website:
<https://www.census.gov/programs-surveys/acs>.

Suggested Citation

Kyle Walker and Matt Herman (2021). tidycensus: Load US Census Boundary and Attribute Data as 'tidyverse' and 'sf'-Ready Data Frames. R package version 0.11.4. <https://CRAN.R-project.org/package=tidycensus>.

Steven Manson, Jonathan Schroeder, David Van Riper, Tracy Kugler, and Steven Ruggles (2021). IPUMS National Historical Geographic Information System: Version 16.0 [dataset]. Minneapolis, MN: IPUMS. <http://doi.org/10.18128/D050.V16.0>.

Data Set Notes

Reliability

Because data are collected from a sample of the population in the United States rather than from the whole population, all ACS variables are estimates. To help interpret the reliability of these estimates, the Census Bureau publishes a margin of error (MOE) for every ACS estimate. The

⁵ ZIP Code-level files for the years 2009 and 2010 are not included in the SDOH Database because ACS did not release 5-year ZCTA files for 2009 or 2010. Only county-level and tract-level data files are available for those two years.

SDOH Database does not include MOEs. For more information regarding the ACS MOEs, review the details provided at <https://www.census.gov/programs-surveys/acs/guidance/training-presentations/acs-moe.html>.

Geographic Levels

The SDOH Database includes data at three geographic levels: county, ZIP Code, and census tract. ACS source variables are published at the ZCTA-level, which is linked to ZIP Codes using the methodology described above in the *Geographic Consideration* subsection under Section 3, *Contents and Structure of the SDOH Database*.

While most ACS variables are available for Puerto Rico in the county and ZIP Code SDOH files, ACS data are not available for any of the U.S. territories in the census tract files.

Variables regarding nativity and citizenship status are not provided for Puerto Rico in the county and ZIP Code SDOH files because they are not included in the ACS 5-year estimates. Users can access nativity and citizenship data for Puerto Rico through the Puerto Rico Community Survey. The ACS does not contain 5-year estimates for other U.S. territories such as American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands in the county, ZIP Code, or census tract files. Decennial census data are available for these territories at <https://www.census.gov/data/datasets.html>.

Suppression Rules

To be reported in ACS 5-year data, estimates must represent a geographic area with population size of at least 7,000 people. The Census Bureau Disclosure Review Board also sets additional rules to ensure confidentiality and protect respondent privacy. These rules pertain to a minimum number of cases required to publish a cell in a table, table cell restrictions, and table topic restrictions. For more information review the details provided here:
<https://www.census.gov/programs-surveys/acs/technical-documentation/data-suppression.html>.

Variable Notes

We identified the required variables and exported the ACS Detailed Tables listed in Table 4.2. ACS Detailed Tables that begin with the letter "B" in Table 4.2 indicate base tables and "C" indicate collapsed tables pulled from the Census Bureau API. The "collapsed" tables cover the same topics as the base table, but with fewer categories. Table 4.1 below provides information on the variable availability across years

Table 4.1. Variable availability across years, ACS

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_AVG_HH_SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_GINI_INDEX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MDN_GRNDPRNT_INC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MDN_GRNDPRNT_NO_PRNT_INC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MDN_OWNER_COST_MORTGAGE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MDN_OWNER_COST_NO_MORTG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN AGE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN AGE FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN AGE MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HH INC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HH INC AIAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HH INC ASIAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HH INC BLACK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HH INC HISP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HH INC MULTI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HH INC NHPI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HH INC OTHER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HH INC WHITE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN HOME VALUE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN INC F	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN INC M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN NONVET INC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN RENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN VET INC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_MEDIAN YEAR BUILT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_10UNITS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_1UP_OWNER_1ROOM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_1UP_PERS_1ROOM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_1UP_RENT_1ROOM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_ADMIN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE 0_17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE 0_4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_PCT AGE_10_14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE_15_17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE_18_29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE_18_44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE_30_44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE_45_64	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE_5_9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE_50_64	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE ABOVE65	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AGE ABOVE80	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AIAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AIAN_COMB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AIAN_FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AIAN_MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT AIAN_NONHISP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT API_LANG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT ARMED_FORCES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT ART	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT ASIAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT ASIAN_COMB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT ASIAN_FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT ASIAN_MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT ASIAN_NONHISP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT BACHELOR_DGR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT BLACK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT BLACK_COMB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT BLACK_FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT BLACK_MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT BLACK_NONHISP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT CHILD_1FAM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT CHILD_DISAB	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT CHILDREN_GRANDPARENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT COLLEGE_ASSOCIATE_DGR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT COMMT_15MIN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_PCT_COMM_29MIN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_COMM_59MIN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_COMM_60MINUP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_CONSTRUCT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_CTZ_ABOVE18	X		X										X	X	X
ACS_PCT_CTZ_NATURALIZED	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_CTZ_NONUS_BORN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_CTZ_US_BORN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_DIF_STATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_DISABLE	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_DIVORCED_F	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_DIVORCED_M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_DRIVE_2WORK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_EDUC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_EMPLOYED	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_ENGL_NOT_ALL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_ENGL_NOT_WELL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_ENGL VERY_WELL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_ENGL_WELL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_ENGLISH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_FINANCE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_FOREIGN_BORN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_GOV	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_GRADUATE_DGR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_GRANDP_NO_RESPS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_GRANDP_RESPS_NO_P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_GRANDP_RESPS_P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_GRP_QRT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_GULFWAR_1990_2001	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_GULFWAR_2001	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_GULFWAR_VIETNAM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HEALTH_INC_138_199	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_HEALTH_INC_200_399	X	X	X					X	X	X	X	X	X	X	X

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_PCT_HEALTH_INC_ABOVE400	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_HEALTH_INC_BELOW137	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_HH_1FAM_FOOD_STMP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_1PERS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_ABOVE65	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_ALONE_ABOVE65	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_BROADBAND	X	X	X									X	X	X	X
ACS_PCT_HH_BROADBAND_ANY	X	X	X									X	X	X	X
ACS_PCT_HH_BROADBAND_ONLY	X	X	X									X	X	X	X
ACS_PCT_HH_CELLULAR	X	X	X									X	X	X	X
ACS_PCT_HH_CELLULAR_ONLY	X	X	X									X	X	X	X
ACS_PCT_HH_DIAL_INTERNET_ONLY	X	X	X									X	X	X	X
ACS_PCT_HH_FOOD_STMP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_FOOD_STMP_BLW_POV	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_INC_10000	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_INC_100000	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_INC_14999	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_INC_24999	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_INC_49999	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_INC_99999	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_INTERNET	X	X	X									X	X	X	X
ACS_PCT_HH_INTERNET_NO_SUBS	X	X	X									X	X	X	X
ACS_PCT_HH_KID_1PRNT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_LIMIT_ENGLISH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_NO_COMP_DEV	X	X	X									X	X	X	X
ACS_PCT_HH_NO_FD_STMP_BLW_POV	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_NO_INTERNET	X	X	X									X	X	X	X
ACS_PCT_HH_OTHER_COMP	X	X	X									X	X	X	X
ACS_PCT_HH_OTHER_COMP_ONLY	X	X	X									X	X	X	X
ACS_PCT_HH_PC	X	X	X									X	X	X	X
ACS_PCT_HH_PC_ONLY	X	X	X									X	X	X	X
ACS_PCT_HH_PUB_ASSIST	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HH_SAT_INTERNET	X	X	X									X	X	X	X
ACS_PCT_HH_SMARTPHONE	X	X	X									X	X	X	X

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_PCT_HH_SMARTPHONE_ONLY	X	X	X									X	X	X	X
ACS_PCT_HH_TABLET	X	X	X									X	X	X	X
ACS_PCT_HH_TABLET_ONLY	X	X	X									X	X	X	X
ACS_PCT_HISP_FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HISP_MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HISPANIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HOUSEHOLDER_AIAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HOUSEHOLDER_ASIAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HOUSEHOLDER_BLACK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HOUSEHOLDER_MULT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HOUSEHOLDER_NHPI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HOUSEHOLDER_OTHER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HOUSEHOLDER_WHITE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HS_GRADUATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_BOT_TANK_LP_GAS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_BUILT_1979	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_COAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_ELEC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_KITCHEN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_MOBILE_HOME	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_NO_FUEL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_NO_VEH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_OIL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_OTHER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_PLUMBING	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_SOLAR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU.Utility_Gas	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_HU_WOOD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_IN COUNTY MOVE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_IN STATE MOVE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_INC50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_INC50 ABOVE65	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_INC50 BELOW17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_INFORM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_PCT_LT_HS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MANUFACT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MARRIED_SP_AB_F	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MARRIED_SP_AB_M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MARRIED_SP_PR_F	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MARRIED_SP_PR_M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MEDICAID_ANY	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_MEDICAID_ANY_BELOW64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_MEDICARE_ONLY	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_MULT_RACE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MULT_RACE_FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MULT_RACE_MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_MULT_RACE_NONHISP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NATURE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NHPI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NHPI_COMB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NHPI_FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NHPI_MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NHPI_NONHISP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NO_WORK_NO_SCHL_16_19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NON_CITIZEN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NONCTN_1990	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NONCTN_1999	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NONCTN_2000	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NONCTN_2010	X	X	X				X	X	X	X	X	X	X	X	X
ACS_PCT_NONVET_DISABLE_18_64	X	X	X				X	X	X	X	X	X	X	X	X
ACS_PCT_NONVET_POV_18_64	X	X	X				X	X	X	X	X	X	X	X	X
ACS_PCT_NOT_LABOR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NVR_MARRIED_F	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_NVR_MARRIED_M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OTH_EURP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OTH_LANG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OTHER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_PCT_OTHER_FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OTHER_INS	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_OTHER_MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OTHER_NONHISP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OTHER_RACE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OWNER_HU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OWNER_HU_CHILD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OWNER_HU_COST_30PCT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_OWNER_HU_COST_50PCT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PERSON_INC_100_124	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PERSON_INC_125_199	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PERSON_INC_ABOVE200	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PERSON_INC_BELOW99	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_POP_SAME_SEX_SPOUSE	X	X	X												X
ACS_PCT_POP_SAME_SEX_UNMRD_P	X	X	X												X
ACS_PCT_POSTHS_ED	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_POV_AIAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_POV_ASIAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_POV_BLACK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_POV_HISPANIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_POV_MULTI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_POV_NHPI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_POV_OTHER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_POV_WHITE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_ANY	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_ANY_BELOW64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_EMPL	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_EMPL_BELOW64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_MDCR	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_MDCR_35_64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_OTHER	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_OTHER_BELOW64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_SELF	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PRIVATE_SELF_BELOW64	X	X	X					X	X	X	X	X	X	X	X

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Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_PCT_PROFESS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PUB_COMMT_15MIN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PUB_COMMT_29MIN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PUB_COMMT_59MIN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PUB_COMMT_60MINUP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PUBL_TRANSIT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PUBLIC_ONLY	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PUBLIC_OTHER_BELOW64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PVT_EMPL_DRCT	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PVT_EMPL_DRCT_BELOW64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_PVT_NONPROFIT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_PVT_PROFIT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_RENTER_HU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_RENTER_HU_ABOVE65	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_RENTER_HU_CHILD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_RENTER_HU_COST_30PCT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_RENTER_HU_COST_50PCT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_RETAIL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_SAME_SEX_UNMRD_PRTNR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ACS_PCT_SELF_MDCR_ABOVE35	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_SPANISH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_TAXICAB_2WORK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_TRANSPORT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_TRICARE_VA	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_TRICARE_VA_BELOW64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_UNEMPLOY	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_UNINSURED	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_UNINSURED_BELOW64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_VACANT_HU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_VET	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_VET_BACHELOR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_VET_COLLEGE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_VET_DISABLE_18_64	X	X	X					X	X	X	X	X	X	X	X
ACS_PCT_VET_HS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_PCT_VET_LABOR_FORCE_18_64	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_VET_POV_18_64	X	X	X			X	X	X	X	X	X	X	X	X	X
ACS_PCT_VET_UNEMPL_18_64	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_VIETNAM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WALK_2WORK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WHITE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WHITE_COMB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WHITE_FEMALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WHITE_MALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WHITE_NONHISP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WHOLESALE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WIDOWED_F	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WIDOWED_M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WORK_NO_CAR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WORK_RES_F	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PCT_WORK_RES_M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_PER_CAPITA_INC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_CIVIL_EMPLOY_POP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_CIVIL_NONINST_POP	X	X	X				X	X	X	X	X	X	X	X	X
ACS_TOT_CIVIL_NONINST_POP_POV	X	X	X				X	X	X	X	X	X	X	X	X
ACS_TOT_CIVIL_POP_ABOVE18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_CIVIL_POP_POV	X	X	X				X	X	X	X	X	X	X	X	X
ACS_TOT_CIVIL_VET_POP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_CIVIL_VET_POP_ABOVE25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_GRANDCHILDREN_GP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_HH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_HU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_OWN_CHILD_BELOW17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_POP_16_19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_POP_ABOVE15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_POP_ABOVE16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_POP_ABOVE25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_POP_ABOVE5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_POP_POV	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ACS_TOT_POP_US_ABOVE1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_POP_WT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_WORKER_HH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACS_TOT_WORKER_NWFH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 4.2. Variable definitions and specifications, ACS

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_AVG_HH_SIZE	Average household size	B25010: Average Household Size of Occupied Housing Units by Tenure	Occupied Housing Units	B25010_001; Average Household Size of Occupied Housing Units; Total	n/a
ACS_GINI_INDEX	Gini index of income inequality	B19083: Gini Index of Income Inequality	Households	B19083_001; NCHGIS 2009 Numerator: R3FE001; Gini Index	n/a
ACS_MDN_GRNDPRNT_INC	Median income of grandparent householder and/or spouse responsible for grandchildren under 18 (dollars, inflation-adjusted to data file year)	B10010: Median Family Income for Families With Grandparent Householders And/or Spouses Living With Grandchildren by Responsibility for Own Grandchildren and Presence of Parent of Grandchildren	Families With Grandparent Householders And/or Spouses Living With Grandchildren	B10010_002; NCHGIS 2009 Numerator: RYUE002 ; Median family income in the past 12 months of grandparent householder and/or spouse responsible for grandchildren under 18 years and no parent present (dollars)	n/a
ACS_MDN_GRNDPRNT_NO_PRNT_INC	Median income of grandparent householder and/or spouse responsible for grandchildren under 18 and no parent present (dollars, inflation-adjusted to data file year)	B10010: Median Family Income for Families With Grandparent Householders And/or Spouses Living With Own Grandchildren by Responsibility for Own Grandchildren and Presence of Parent of Grandchildren	Families With Grandparent Householders And/or Spouses Living With Grandchildren	B10010_003; NCHGIS 2009 Numerator: RYUE003; Median family income in the past 12 months of grandparent householder and/or spouse responsible for grandchildren under 18 years (dollars)	n/a
ACS_MDN_OWNER_COST_MORTGAGE	Median selected monthly owner costs for houses with a mortgage (dollars)	B25088: Median Selected Monthly Owner Costs (Dollars) by Mortgage Status	Owner-occupied Housing Units	B25088_002; Median selected monthly owner costs for housing units with a mortgage	n/a
ACS_MDN_OWNER_COST_NO_MORTG	Median selected monthly owner costs for houses without a mortgage (dollars)	B25088: Median Selected Monthly Owner Costs (Dollars) by Mortgage Status	Owner-occupied Housing Units	B25088_003; Median selected monthly owner costs for housing units without a mortgage	n/a
ACS_MEDIAN_AGE	Median age of total population	B01002: Median Age by Sex	Total Population	B01002_001; Median age	n/a
ACS_MEDIAN_AGE_FEMALE	Median age of female population	B01002: Median Age by Sex	Total Population	B01002_003; Median age, Female	n/a

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_MEDIAN_AGE_MALE	Median age of male population	B01002: Median Age by Sex	Total Population	B01002_002; Median age, Male	n/a
ACS_MEDIAN_HH_INC	Median household income (dollars, inflation-adjusted to data file year)	B19013: Median Household Income in the Past 12 Months (in [data year] Inflation-Adjusted Dollars)	Households	B19013_001; Median household income in the past 12 months (in dollars, inflation-adjusted to file data year)	n/a
ACS_MEDIAN_HH_INC_AIAN	Median household income for households with an American Indian and Alaska Native alone householder (dollars, inflation-adjusted to data file year)	B19013C: Median Household Income (American Indian and Alaska Native Alone Householder)	Households With a Householder Who Is American Indian and Alaska Native Alone	B19013C_001; Median household income in the past 12 months, American Indian and Alaska Native	n/a
ACS_MEDIAN_HH_INC_ASIAN	Median household income for households with an Asian alone householder (dollars, inflation-adjusted to data file year)	B19013D: Median Household Income (Asian Alone Householder)	Households With a Householder Who Is Asian Alone	B19013D_001; Median household income in the past 12 months, Asian alone	n/a
ACS_MEDIAN_HH_INC_BLACK	Median household income for households with a Black or African American alone householder (dollars, inflation-adjusted to data file year)	B19013B: Median Household Income (Black or African American Alone Householder)	Households With a Householder Who Is Black or African American Alone	B19013B_001; Median household income in the past 12 months, Black or African American	n/a
ACS_MEDIAN_HH_INC_HISP	Median household income for households with a Hispanic or Latino householder (dollars, inflation-adjusted to data file year)	B19013I: Median Household Income (Hispanic or Latino Householder)	Households With a Householder Who Is Hispanic or Latino	B19013I_001; Median household income in the past 12 months, Hispanic or Latino	n/a
ACS_MEDIAN_HH_INC_MULTI	Median household income for households with a two or more races householder (dollars, inflation-adjusted to data file year)	B19013G: Median Household Income (Two or More Races Householder)	Households With a Householder Who Is Two or More Races	B19013G_001; Median household income in the past 12 months, Two or More Races	n/a
ACS_MEDIAN_HH_INC_NHPI	Median household income for households with a Native Hawaiian	B19013E: Median Household Income (Native Hawaiian and Other Pacific	Households With a Householder Who Is Native Hawaiian and Other Pacific Islander	B19013E_001; Median household income in the past 12 months, Native Hawaiian and Other Pacific Islander	n/a

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
	and other Pacific Islander alone householder (dollars, inflation-adjusted to data file year)	Islander Alone Householder)	Other Pacific Islander Alone		
ACS_MEDIAN_HH_INC_OTHER	Median household income for households with a some other race alone householder (dollars, inflation-adjusted to data file year)	B19013F: Median Household Income (Some Other Race Alone Householder)	Households With a Householder Who Is Some Other Race Alone	B19013F_001; Median household income in the past 12 months, Some other race	n/a
ACS_MEDIAN_HH_INC_WHITE	Median household income for households with a White alone, not Hispanic or Latino householder (dollars, inflation-adjusted to data file year)	B19013H: Median Household Income (White Alone, Not Hispanic or Latino Householder)	Households With a Householder Who Is White Alone, Not Hispanic or Latino	B19013H_001; Median household income in the past 12 months, White non-Hispanic	n/a
ACS_MEDIAN_HOME_VALUE	Median home value of owner-occupied housing units (dollars)	B25077: Median Value (Dollars)	Owner-occupied Housing Units	B25077_001; Median home value of owner-occupied housing units	n/a
ACS_MEDIAN_INC_F	Median income of female population (dollars, ages 15 and over with income in the past 12 months, inflation-adjusted to data file year)	B19326: Median Income by Sex by Work Experience With Income (in [data year] Inflation-Adjusted Dollars)	Population 15 Years and Over With Income in the Past 12 Months	B19326_005; Median income in the past 12 months: Female, Total	n/a
ACS_MEDIAN_INC_M	Median income of male population (dollars, ages 15 and over with income in the past 12 months, inflation-adjusted to data file year)	B19326: Median Income by Sex by Work Experience With Income (in [data year] Inflation-Adjusted Dollars)	Population 15 Years and Over With Income in the Past 12 Months	B19326_002; Median income in the past 12 months: Male, Total	n/a
ACS_MEDIAN_NONVET_INC	Median income of civilian nonveteran population (dollars, ages 18 and over, inflation-adjusted to data file year)	B21004: Median Income in the Past 12 Months (in [data year] Inflation-Adjusted Dollars) by Veteran Status by Sex for the Civilian Population 18 Years and Over with Income	Civilian Population 18 Years and Over With Income in the Past 12 Months	B21004_005; NCHGIS 2009 Numerator: R4WE005; Median income in the past 12 months (in [data year] inflation-adjusted dollars): Nonveteran	n/a

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_MEDIAN_RENT	Median gross rent (dollars)	B25064: Median Gross Rent (Dollars)	Renter-occupied Housing Units Paying Cash Rent	B25064_001; Median Gross Rent	n/a
ACS_MEDIAN_VET_INC	Median income of civilian veterans (dollars, ages 18 and over, inflation-adjusted to data file year)	B21004: Median Income in the Past 12 Months (in [data year] Inflation-Adjusted Dollars) by Veteran Status by Sex for the Civilian Population 18 Years and Over with Income	Civilian Population 18 Years and Over With Income in the Past 12 Months	B21004_002; NCHGIS 2009 Numerator: R4WE002; Civilian population 18 years and over with income in past 12 months; Veteran	n/a
ACS_MEDIAN_YEAR_BUILT	Median year structure built of housing units	B25035: Median Year Structure Built	Housing Units	B25035_001; Median year structure built	n/a
ACS_PCT_10UNITS	Percentage of housing in structures with 10 or more units	B25024: Units in Structure	Housing Units	B25024_007 + B25024_008 + B25024_009; 10 to 19 units and 20 to 49 units and 50 or more units	B25024_001; Housing units, Total
ACS_PCT_1UP_OWNER_1ROOM	Percentage of owner-occupied housing units with more than one occupant per room	B25014: Tenure by Occupants per Room	Occupied Housing Units	B25014_005 + B25014_006 + B25014_007; Owner occupied: 1.01 to 1.50 occupants per room and Owner occupied: 1.51 to 2.00 occupants per room and Owner occupied: 2.01 or more occupants per room	B25014_002; Owner occupied
ACS_PCT_1UP_PERS_1ROOM	Percentage of housing units with more than one occupant per room	B25014: Tenure by Occupants per Room	Occupied Housing Units	B25014_005 + B25014_006 + B25014_007 + B25014_011 + B25014_012 + B25014_013; Owner occupied: 1.01 to 1.50 occupants per room and Owner occupied: 1.51 to 2.00 occupants per room and Owner occupied: 2.01 or more occupants per room and Renter occupied: 1.01 to 1.50 occupants per room and Renter occupied: 1.51 to 2.00 occupants per room and Renter occupied: 2.01 or more occupants per room	B25014_001; Occupied housing units, Total
ACS_PCT_1UP_RENT_1ROOM	Percentage of renter-occupied housing units with more than one occupant per room	B25014: Tenure by Occupants per Room	Occupied Housing Units	B25014_011 + B25014_012 + B25014_011_13; Renter occupied: 1.01 to 1.50 occupants per room and Renter occupied: 1.51 to 2.00 occupants per room and Renter occupied: 2.01 or more occupants per room	B25014_008; Renter occupied

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_ADMIN	Percentage of civilian employed population working in public administration (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_028 + C24030_055; Male: Public administration and Female: Public administration	C24030_001; Total civilian employed population 16 years and over
ACS_PCT AGE_0_17	Percentage of population between ages 0-17	B01001: Sex by Age	Total Population	B01001_003 + B01001_004 + B01001_005 + B01001_006 + B01001_027 + B01001_028 + B01001_029 + B01001_30; Male: 0-17 years and Female 0-17 years	B01001_001; Total population
ACS_PCT AGE_0_4	Percentage of population between ages 0-4	B01001: Sex by Age	Total Population	B01001_003 + B01001_027; Male: Under 5 years and Female: Under 5 years	B01001_001; Total population
ACS_PCT AGE_10_14	Percentage of population between ages 10-14	B01001: Sex by Age	Total Population	B01001_005 + B01001_029; Male: 10-14 years and Female: 10-14 years	B01001_001; Total population
ACS_PCT AGE_15_17	Percentage of population between ages 15-17	B01001: Sex by Age	Total Population	B01001_006 + B01001_030; Male: 15-17 years and Female 15-17 years	B01001_001; Total population
ACS_PCT AGE_18_29	Percentage of population between ages 18-29	B01001: Sex by Age	Total Population	B01001_007 + B01001_008 + B01001_009 + B01001_010 + B01001_011 + B01001_031 + B01001_032 + B01001_033 + B01001_034 + B01001_035; Male: 18-29 years and Female 18-29 years	B01001_001; Total population
ACS_PCT AGE_18_44	Percentage of population between ages 18-44	B01001: Sex by Age	Total Population	B01001_007 + B01001_008 + B01001_009 + B01001_010 + B01001_011 + B01001_012 + B01001_013 + B01001_014 + B01001_031 + B01001_032 + B01001_033 + B01001_034 + B01001_035 + B01001_036 + B01001_037 + B01001_038; Male: 18-44 years and Female: 18-44 years	B01001_001; Total population
ACS_PCT AGE_30_44	Percentage of population between ages 30-44	B01001: Sex by Age	Total Population	B01001_012 + B01001_013 + B01001_014 + B01001_036 + B01001_037 + B01001_038; Male: 30-44 years and Female: 30-44 years	B01001_001; Total population
ACS_PCT AGE_45_64	Percentage of population between ages 45-64	B01001: Sex by Age	Total Population	B01001_015 + B01001_016 + B01001_017 + B01001_018 + B01001_019 + B01001_039 + B01001_040 + B01001_041 + B01001_042 + B01001_043; Male: 45-64 years and Female: 45-64 years	B01001_001; Total population
ACS_PCT AGE_5_9	Percentage of population between ages 5-9	B01001: Sex by Age	Total Population	B01001_004 + B01001_028; Male: 5-9 years and Female: 5-9 years	B01001_001; Total population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT AGE_50_64	Percentage of population between ages 50-64	B01001: Sex by Age	Total Population	B01001_016 + B01001_017 + B01001_018 + B01001_019 + B01001_040 + B01001_041 + B01001_042 + B01001_043; Male: 50-64 years and Female: 50-64 years	B01001_001; Total population
ACS_PCT AGE ABOVE65	Percentage of population ages 65 and over	B01001: Sex by Age	Total Population	B01001_020 + B01001_021 + B01001_022 + B01001_023 + B01001_024 + B01001_025 + B01001_044 + B01001_045 + B01001_046 + B01001_047 + B01001_048 + B01001_049; Male: 65 and over and Female 65 and over	B01001_001; Total population
ACS_PCT AGE ABOVE80	Percentage of population ages 80 and over	B01001: Sex by Age	Total Population	B01001_024 + B01001_025 + B01001_048 + B01001_049; Male: 80 and over and Female 80 and over	B01001_001; Total population
ACS_PCT_AIAN	Percentage of population reporting American Indian and Alaska Native race alone	B03002: Hispanic or Latino Origin by Race	Total Population	B03002_005 + B03002_015; American Indian and Alaska Native alone	B03002_001; Total population
ACS_PCT_AIAN_COMB	Percentage of population reporting American Indian and Alaska Native alone or in combination with one or more races	B02010: American Indian and Alaska Native Alone or in Combination With One or More Other Races	American Indian or Alaska Native Alone or in Combination With One or More Other Races	B02010_001; Total	ACS_TOT_POP_WT: Total population; Total population
ACS_PCT_AIAN_FEMALE	Percentage of American Indian and Alaska Native alone population reporting female	B01001C: Sex by Age (American Indian and Alaska Native Alone)	People Who Are American Indian and Alaska Native Alone	B01001C_017; People Who Are American Indian and Alaska Native Alone, Female	B01001C_001; People Who Are American Indian and Alaska Native Alone, Total
ACS_PCT_AIAN_MALE	Percentage of American Indian and Alaska Native alone population reporting male	B01001C: Sex by Age (American Indian and Alaska Native Alone)	People Who Are American Indian and Alaska Native Alone	B01001C_002; People Who Are American Indian and Alaska Native Alone, Female	B01001C_001; People Who Are American Indian and Alaska Native Alone, Total
ACS_PCT_AIAN_NONHISP	Percentage of non-Hispanic population reporting American Indian and Alaska Native race alone	B03002: Hispanic or Latino Origin by Race	Total Population	B03002_005; American Indian and Alaska Native alone	B03002_001; Total population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_API_LANG	Percentage of population that speaks Asian and Pacific Island languages (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over	Population 5 Years and Over	B16004_014 + B16004_036 + B16004_058 ; 5 to 17 years: Speak Asian and Pacific Island languages and 18 to 64 years: Speak Asian and Pacific Island languages and 65 years and over: Speak Asian and Pacific Island languages	B16004_001; Total Population 5 years and over
ACS_PCT_ARMED_FORCES	Percentage of population in armed forces (ages 16 and over)	B23025: Employment Status for the Population 16 Years and Over	Population 16 Years and Over	For 2011-2020: B23025_006; For 2009-2010: B23001_005 + B23001_012 + B23001_019 + B23001_026 + B23001_033 + B23001_040 + B23001_047 + B23001_054 + B23001_061 + B23001_068 + B23001_091 + B23001_098 + B23001_105 + B23001_112 + B23001_119 + B23001_126 + B23001_133 + B23001_140 + B23001_147 + B23001_154; In labor force: Armed Forces	For 2011-2020: B23025_001; For 2009-2010: B23001_001; Total population 16 years and over
ACS_PCT_ART	Percentage of employed working in arts, entertainment, recreation, and accommodation and food services (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_024 + C24030_051; Male: Arts, entertainment, and recreation, and accommodation and food services and Female: Arts, entertainment, and recreation, and accommodation and food services	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_ASIAN	Percentage of population reporting Asian race alone	B03002: Hispanic or Latino Origin by Race	Total Population	B03002_006 + B03002_016; Asian alone	B03002_001; Total population
ACS_PCT_ASIAN_COMB	Percentage of population reporting Asian alone or in combination with one or more races	B02011: Asian Alone or in Combination With One or More Other Races	Asian Alone or in Combination With One or More Other Races	B02011_001; Total	ACS_TOT_POP_WT: Total population; Total population
ACS_PCT_ASIAN_FEMALE	Percentage of Asian alone population reporting female	B01001D: Sex by Age (Asian Alone)	People Who Are Asian Alone	B01001D_017; People Who Are Asian Alone, Female	B01001D_001; People Who Are Asian Alone, Total
ACS_PCT_ASIAN_MALE	Percentage of Asian alone population reporting male	B01001D: Sex by Age (Asian Alone)	People Who Are Asian Alone	B01001D_002; People Who Are Asian Alone: Male	B01001D_001; People Who Are Asian Alone, Total
ACS_PCT_ASIAN_NONHISP	Percentage of non-Hispanic population reporting Asian race alone	B03002: Hispanic or Latino Origin by Race	Total population	B03002_006; Asian alone	B03002_001; Total population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_BACHELOR_DGR	Percentage of population with a bachelor's degree (ages 25 and over)	B15003: Educational Attainment for the Population 25 Years and Over	Population 25 Years and Over	For 2012-2020: B15003_022; For 2009-2011: B15002_015 + B15002_032;; Bachelor's degree	For 2012-2020: B15003_001; For 2009-2011: B15002_001; Total population age 25 and over
ACS_PCT_BLACK	Percentage of population reporting Black or African American race alone	B03002: Hispanic or Latino Origin by Race	Total population	B03002_004 + B03002_014; Black or African American alone	B03002_001; Total population
ACS_PCT_BLACK_COMB	Percentage of population reporting Black or African American alone or in combination with one or more races	B02009: Black or African American Alone or in Combination With One or More Other Races	Black or African American Alone or in Combination With One or More Other Races	B02009_001; Total	ACS_TOT_POP_WT: Total population; Total population
ACS_PCT_BLACK_FEMALE	Percentage of Black or African American alone population reporting female	B01001B: Sex by Age (Black or African American Alone)	People who are Black or African American Alone	B01001B_017; Black or African American Alone, Female	B01001B_001; Black or African American Alone, Total
ACS_PCT_BLACK_MALE	Percentage of Black or African American alone population reporting male	B01001B: Sex by Age (Black or African American Alone)	People who are Black or African American Alone	B01001B_002; Black or African American Alone, Male	B01001B_001; Black or African American Alone, Total
ACS_PCT_BLACK_NONHISP	Percentage of non-Hispanic population reporting Black or African American race alone	B03002: Hispanic or Latino Origin by Race	Total Population	B03002_004; Black or African American alone	B03002_001; Total population
ACS_PCT_CHILD_1FAM	Percentage of families with children that are single-parent families	B09002: Own Children Under 18 Years by Family Type and Age	Own Children Under 18 Years	B09002_009 + B09002_015; In other families (female or male householder, no spouse present)	B09002_001 ; Own children under 18 years; total
ACS_PCT_CHILD_DISAB	Percentage of children with a disability (ages 17 and below)	B18101: Sex by Age by Disability Status	Civilian Noninstitutionalized Population	B18101_004 + B18101_007 + B18101_023 + B18101_026; Children under age eighteen with a disability	B18101_003 + B18101_006 + B18101_022 + B18101_025; Children under age 18
ACS_PCT_CHILDREN_GRANDPARENT	Percentage of children living with a grandparent householder (ages 17 and below)	B10002: Grandchildren Under 18 Years Living with a Grandparent Householder by Grandparent	Grandchildren Under 18 Living With Grandparent Householder/ Total Population	B10002_001; NCHGIS 2009 Numerator: RYTE001; Total grandchildren under 18 living with grandparent householder	B01001_003 + B01001_004 + B01001_005 + B01001_006 + B01001_027 +

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_COLLEGE_ASSOCIATE_DGR	Percentage of population with some college or associate's degree (ages 25 and over)	Responsibility and Presence of Parent			B01001_028 + B01001_029 + B01001_30; Total Children Under 18
ACS_PCT_COMMT_15MIN	Percentage of workers with < 15-minute commute time (ages 16 and over)	B15003: Educational Attainment for the Population 25 Years and Over	Population 25 Years and Over	For 2012-2020: B15003_019 + B15003_020 + B15003_021; For 2009-2011: B15002_012 + B15002_013 + B15002_014 + B15002_029 + B15002_030 + B15002_031; Some college, less than 1 year and Some college, 1 or more years, no degree and Associate's degree	For 2012-2020: B15003_001; For 2009-2011: B15002_001; Total population age 25 and over
ACS_PCT_COMMT_29MIN	Percentage of workers with 15- to 29-minute commute time (ages 16 and over)	B08303: Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	B08303_002 + B08303_003 + B08303_004; Less than 5 minutes and 5 to 9 minutes and 10 to 14 minutes	B08303_001; Workers 16 years and over who did not work at home; Total
ACS_PCT_COMMT_59MIN	Percentage of workers with 30- to 59-minute commute time (ages 16 and over)	B08303: Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	B08303_005 + B08303_006 + B08303_007; 15 to 19 minutes and 20 to 24 minutes and 25 to 29 minutes	B08303_001; Workers 16 years and over who did not work at home; Total
ACS_PCT_COMMT_60MINUP	Percentage of workers with at least 60-minute commute time (ages 16 and over)	B08303: Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	B08303_008 + B08303_009 + B08303_010 + B08303_011; 30 to 34 minutes and 35 to 39 minutes and 40 to 44 minutes and 45 to 59 minutes	B08303_001; Workers 16 years and over who did not work at home; Total
ACS_PCT_CONSTRUCT	Percentage of employed working in construction (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_006 + C24030_033; Male: Construction and Female: Construction	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_C TZ_ABOVE18	Percentage of population who are citizens (ages 18 and over)	B29001: Citizen, Voting-age Population by Age	Citizens 18 Years and Over	B29001_001; U.S. Citizens, 18 years or over	B01003_001; Total Population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_C TZ_NATURALIZED	Percentage of population consisting of U.S. citizens by naturalization	B05001: Nativity and Citizenship Status in the United States	Total Population in the United States	B05001_005; U.S. citizen by naturalization	B05001_001; Total Population in the US
ACS_PCT_C TZ_NONUS_BORN	Percentage of population consisting of U.S. citizens born abroad of American parents or naturalized	B05001: Nativity and Citizenship Status in the United States	Total Population in the United States	B05001_004 + B05001_005; U.S. citizen, born abroad of American parent(s) or U.S. citizen by naturalization	B05001_001; Total population in the United States
ACS_PCT_C TZ_US_BORN	Percentage of population consisting of U.S. citizens born in United States, Puerto Rico, or U.S. Islands	B05001: Nativity and Citizenship Status in the United States	Total Population in the United States	B05001_002 + B05001_003; U.S. citizen, born in the United States or U.S. citizen, born in Puerto Rico or U.S. Island Areas	B05001_001; Total population in the United States
ACS_PCT_DIF_STATE	Percentage of population that moved from different state in the past year (age 1 and over)	B07003: Geographical Mobility in the Past Year by Sex for Current Residence in the United States	Population 1 Year and Over in the United States	B07003_013; Moved from different state	B07003_001; Population 1 Year and Over in the United States, Total
ACS_PCT_DISABLE	Percentage of population with a disability	B18101: Sex by Age by Disability Status	Civilian Noninstitutionalized Population	B18101_004 + B18101_007 + B18101_010 + B18101_013 + B18101_016 + B18101_019 + B18101_023 + B18101_026 + B18101_029 + B18101_032 + B18101_035 + B18101_038; Male & Female: Under 5 years: With a disability and Male & Female: 5 to 17 years: With a disability and Male and Female: 18 to 34 years: With a disability and Male and Female: 35 to 64 years: With a disability and Male and Female: 65 to 74 years: With a disability and Male and Female: 75 years and above: With a disability.	B18101_001 ; Total civilian noninstitutionalized population
ACS_PCT_DIVORCED_F	Percentage of female population divorced or separated (ages 15 and over)	B12001: Sex by Marital Status for the Population 15 Years and Over	Population 15 Years and Over	B12001_016 + B12001_019; Female, Divorced or Separated	B12001_011; Population 15 Years and Over, Female
ACS_PCT_DIVORCED_M	Percentage of male population divorced or separated (ages 15 and over)	B12001: Sex by Marital Status for the Population 15 Years and Over	Population 15 Years and Over	B12001_010 + B12001_007; Male, Divorced or Separated	B12001_002; Population 15 Years and Over, Male
ACS_PCT_DRIVE_2WORK	Percentage of workers taking a car, truck, or van	B08134: Means of Transportation to Work by Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	For 2011-2020: B08134_011; For 2009-2010: B08301_002; Car, truck, or van	For 2011-2020: B08134_001; For 2009-2011:

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
	to work (ages 16 and over)				B08301_001; Workers 16 years and over who did not work at home; Total
ACS_PCT_EDUC	Percentage of employed working in educational services, and healthcare and social assistance (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_021 + C24030_048; Male: Educational services, and healthcare and social assistance and Female: Educational services, and healthcare and social assistance	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_EMPLOYED	Percentage of population employed in civilian labor force (ages 16 and over)	B23025: Employment Status	Population 16 Years and Over	For 2011-2020: B23025_004; For 2009-2010: B23001_007 + B23001_014 + B23001_021 + B23001_028 + B23001_035 + B23001_042 + B23001_049 + B23001_056 + B23001_063 + B23001_070 + B23001_075 + B23001_080 + B23001_085 + B23001_093 + B23001_100 + B23001_107 + B23001_114 + B23001_121 + B23001_128 + B23001_135 + B23001_142 + B23001_149 + B23001_156 + B23001_161 + B23001_166 + B23001_171; In labor force: Civilian labor force: Employed	For 2011-2020: B23025_003; For 2009-2010: B23001_006 + B23001_013 + B23001_020 + B23001_027 + B23001_034 + B23001_041 + B23001_048 + B23001_055 + B23001_062 + B23001_069 + B23001_074 + B23001_079 + B23001_084 + B23001_092 + B23001_099 + B23001_106 + B23001_113 + B23001_120 + B23001_127 + B23001_134 + B23001_141 + B23001_148 + B23001_155 + B23001_160 + B23001_165 + B23001_170; Total population in civilian labor force

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_TOT_CIVILIAN_LABOR	Total population in the civilian labor force (ages 16 and over)	B23025: Employment Status	Population 16 Years and Over	For 2011-2020: B23025_003; For 2009-2010: B23001_006 + B23001_013 + B23001_020 + B23001_027 + B23001_034 + B23001_041 + B23001_048 + B23001_055 + B23001_062 + B23001_069 + B23001_074 + B23001_079 + B23001_084 + B23001_092 + B23001_099 + B23001_106 + B23001_113 + B23001_120 + B23001_127 + B23001_134 + B23001_141 + B23001_148 + B23001_155 + B23001_160 + B23001_165 + B23001_170; Total population in civilian labor force	n/a
ACS_PCT_ENGL_NOT_ALL	Percentage of population that speaks a language other than English that does not speak English at all (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over	Population 5 Years and Over	B16004_008 + B16004_013 + B16004_018 + B16004_023 + B16004_030 + B16004_035 + B16004_040 + B16004_045 + B16004_052 + B16004_057 + B16004_062 + B16004_067; 5 to 17 years: Speak Spanish: Speak English 'not at all' and 5 to 17 years: Speak other Indo-European languages: Speak English 'not at all' and 5 to 17 years: Speak Asian and Pacific Island languages: Speak English 'not at all' and 5 to 17 years: Speak other languages: Speak English 'not at all' and 18 to 64 years: Speak Spanish: Speak English 'not at all' and 18 to 64 years: Speak other Indo-European languages: Speak English 'not at all' and 18 to 64 years: Speak Asian and Pacific Island languages: Speak English 'not at all' and 18 to 64 years: Speak other languages: Speak English 'not at all' and 65 years and over: Speak Spanish: Speak English 'not at all' and 65 years and over: Speak other Indo-European languages: Speak English 'not at all' and 65 years and over: Speak Asian and Pacific Island languages: Speak English 'not at all' and 65 years and over: Speak other languages: Speak English 'not at all'	B16004_001; Total Population 5 years and over

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_ENGL_NOT_WELL	Percentage of population that speaks a language other than English that does not speak English well (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over	Population 5 Years and Over	B16004_007 + B16004_012 + B16004_017 + B16004_022 + B16004_029 + B16004_034 + B16004_039 + B16004_044 + B16004_051 + B16004_056 + B16004_061 + B16004_066; 5 to 17 years: Speak Spanish: Speak English 'not well' and 5 to 17 years: Speak other Indo-European languages: Speak English 'not well' and 5 to 17 years: Speak Asian and Pacific Island languages: Speak English 'not well' and 5 to 17 years: Speak other languages: Speak English 'not well' and 18 to 64 years: Speak Spanish: Speak English 'not well' and 18 to 64 years: Speak other Indo-European languages: Speak English 'not well' and 18 to 64 years: Speak Asian and Pacific Island languages: Speak English 'not well' and 18 to 64 years: Speak other languages: Speak English 'not well' and 65 years and over: Speak Spanish: Speak English 'not well' and 65 years and over: Speak other Indo-European languages: Speak English 'not well' and 65 years and over: Speak Asian and Pacific Island languages: Speak English 'not well' and 65 years and over: Speak other languages: Speak English 'not well'	B16004_001; Total Population 5 years and over
ACS_PCT_ENGL VERY_WELL	Percentage of population that speaks a language other than English that speaks English very well (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over	Population 5 Years and Over	B16004_005 + B16004_010 + B16004_015 + B16004_020 + B16004_027 + B16004_032 + B16004_037 + B16004_042 + B16004_049 + B16004_054 + B16004_059 + B16004_064; 5 to 17 years: Speak Spanish: Speak English 'very well' and 5 to 17 years: Speak other Indo-European languages: Speak English 'very well' and 5 to 17 years: Speak Asian and Pacific Island languages: Speak English 'very well' and 5 to 17 years: Speak other languages: Speak English 'very well' and 18 to 64 years: Speak Spanish: Speak English 'very well' and 18 to 64 years: Speak other Indo-European languages: Speak English 'very well'	B16004_001; Total Population 5 years and over

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_ENGL_WELL	Percentage of population that speaks a language other than English that speaks English well (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over	Population 5 Years and Over	'very well' and 18 to 64 years: Speak Asian and Pacific Island languages: Speak English 'very well' and 18 to 64 years: Speak other languages: Speak English 'very well' and 65 years and over: Speak Spanish: Speak English 'very well' and 65 years and over: Speak other Indo-European languages: Speak English 'very well' and 65 years and over: Speak Asian and Pacific Island languages: Speak English 'very well' and 65 years and over: Speak other languages: Speak English 'very well' B16004_006 + B16004_011 + B16004_016 + B16004_021 + B16004_028 + B16004_033 + B16004_038 + B16004_043 + B16004_050 + B16004_055 + B16004_060 + B16004_065; 5 to 17 years: Speak Spanish: Speak English 'well' and 5 to 17 years: Speak other Indo-European languages: Speak English 'well' and 5 to 17 years: Speak Asian and Pacific Island languages: Speak English 'well' and 5 to 17 years: Speak other languages: Speak English 'well' and 18 to 64 years: Speak Spanish: Speak English 'well' and 18 to 64 years: Speak other Indo-European languages: Speak English 'well' and 18 to 64 years: Speak Asian and Pacific Island languages: Speak English 'well' and 18 to 64 years: Speak other languages: Speak English 'well' and 65 years and over: Speak Spanish: Speak English 'well' and 65 years and over: Speak other Indo-European languages: Speak English 'well' and 65 years and over: Speak Asian and Pacific Island languages: Speak English 'well' and 65 years and over: Speak other languages: Speak English 'well'	B16004_001; Total Population 5 years and over
ACS_PCT_ENGLISH	Percentage of population that only speaks English (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the	Population 5 Years and Over	B16004_003 + B16004_025 + B16004_047; 5 to 17 years: Speak only English and 18 to 64 years: Speak only	B16004_001; Total Population 5 years and over

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
		Population 5 Years and Over		English and 65 years and over: Speak only English	
ACS_PCT_FEMALE	Percentage of population that is female	B01001: Sex by Age	Total population	B01001_026; Female	B01001_001; Total population
ACS_PCT_FINANCE	Percentage of employed working in finance and insurance, real estate, and rental and leasing (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_014 + C24030_041; Male: Finance and insurance, and real estate, and rental and leasing and Female: Finance and insurance, and real estate, and rental and leasing	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_FOREIGN_BORN	Percentage of population that is foreign-born	B05001: Citizenship Status in the United States	Total Population in the United States	B05001_004 + B05001_005 + B05001_006; U.S. citizen, born abroad of American parent(s) or U.S. citizen by naturalization or Not a U.S. Citizen	B05001_001; Total population
ACS_PCT_GOV'T	Percentage of civilian employed population who are government workers (ages 16 and over)	B24080: Sex by Class of Worker for the Civilian Population	Civilian Employed Population 16 Years and Over	B24080_007 + B24080_008 + B24080_009 + B24080_017 + B24080_018 + B24080_019; Male and Female Local government workers, State government workers, Federal government workers	B24080_001; Civilian Employed Population 16 Years and Over, Total
ACS_PCT_GRADUATE_DGR	Percentage of population with a master's or professional school degree or doctorate (ages 25 and over)	B15003: Educational Attainment for the Population 25 Years and Over	Population 25 Years and Over	For 2012-2020: B15003_023 + B15003_024 + B15003_025; For 2009-2011: B15002_016 + B15002_017 + B15002_018 + B15002_033 + B15002_034 + B15002_035;; Master's degree or Professional school degree or Doctorate degree	For 2012-2020: B15003_001; For 2009-2011: B15002_001; Total population age 25 and over
ACS_PCT_GRANDP_NO_RESPS	Percentage of children living with grandparent householder whose grandparent is not responsible for them	B10002: Grandchildren Under 18 Years Living with a Grandparent Householder by Grandparent Responsibility and Presence of Parent	Grandchildren Under 18 Living With Grandparent Householder	B10002_005; NHTS 2009 Numerator: RYTE005; Grandparent householder responsible for own grandchildren under 18 years: No parent present	B10002_001; NHTS 2009 Numerator: RYTE001; Grand children under 18 living with grandparent householder; total
ACS_PCT_GRANDP_RESPS_NO_P	Percentage of children living with grandparent householder whose grandparent is responsible for them: parent not present	B10002: Grandchildren Under 18 Years Living with a Grandparent Householder by Grandparent Responsibility and Presence of Parent	Grandchildren Under 18 Living With Grandparent Householder	B10002_004; NHTS 2009 Numerator: RYTE004; Grandparent householder responsible for own grandchildren under 18 years: Parent present	B10002_001; NHTS 2009 Numerator: RYTE001; Grand children under 18 living with grandparent

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_GRANDP_RESPS_P	Percentage of children living with grandparent householder whose grandparent is responsible for them: parent present	B10002: Grandchildren Under 18 Years Living with a Grandparent Householder by Grandparent Responsibility and Presence of Parent	Grandchildren Under 18 Living With Grandparent Householder	B10002_003; NHTS 2009 Numerator: RYTE003; Grandparent householder not responsible for own grandchildren under 18 years	householder; total
ACS_PCT_GRP_QRT	Percentage of persons in institutionalized group quarters	B26001: Group Quarters Population	Population in Group Quarters	B26001_001; Total population in group quarters	B01003_001; Total population
ACS_PCT_GULFWAR_1990_2001	Percentage of the civilian veteran population that served during the Gulf War period from August 1990 to August 2001 (ages 18 and over)	B21002: Period of Military Service for Civilian Veterans 18 Years and Over	Civilian Veterans 18 Years and Over	B21002_003 + B21002_004 + B21002_005 + B21002_006; Gulf War (9/2001 or later) and Gulf War (8/1990 to 8/2001), no Vietnam Era and Gulf War (9/2001 or later), and Gulf War (8/1990 to 8/2001), and Vietnam Era and Gulf War (8/1990 to 8/2001), no Vietnam Era and Gulf War (8/1990 to 8/2001) and Vietnam Era	B21002_001; Civilian veterans 18 years and over; Total
ACS_PCT_GULFWAR_2001	Percentage of the civilian veteran population that served during the Gulf War period from September 2001 or later (ages 18 and over)	B21002: Period of Military Service for Civilian Veterans 18 Years and Over	Civilian Veterans 18 Years and Over	B21002_002 + B21002_003 + B21002_004; Gulf War (9/2001 or later), no Gulf War (8/1990 to 8/2001), no Vietnam Era or Gulf War (9/2001 or later) and Gulf War (8/1990 to 8/2001), no Vietnam Era and Gulf War (9/2001 or later), and Gulf War (8/1990 to 8/2001), and Vietnam Era	B21002_001; Civilian veterans 18 years and over; Total
ACS_PCT_GULFWAR_VIETNAM	Percentage of the civilian veteran population that served between Gulf War and Vietnam era (ages 18 and over)	B21002: Period of Military Service for Civilian Veterans 18 Years and Over	Civilian Veterans 18 Years and Over	B21002_013; Between Gulf War and Vietnam Era only	B21002_001; Civilian veterans 18 years and over; Total
ACS_PCT_HEALTH_INC_138_199	Percentage of population between 1.38 and 1.99 of the poverty threshold (relevant for health insurance coverage)	C27016: Health Insurance Coverage Status by Ratio of Income to Poverty Level by Age	Civilian Noninstitutionalized Population for Whom Poverty Status Is Determined	For 2012-2016: C27016_012; For 2017-2020: C27016_022; 1.38 to 1.99 of poverty threshold	C27016_001; Total civilian noninstitutionalized population for whom poverty status is determined

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_HEALTH_INC_200_39	Percentage of population between 2.00 and 3.99 of the poverty threshold (relevant for health insurance coverage)	C27016: Health Insurance Coverage Status by Ratio of Income to Poverty Level by Age	Civilian Noninstitutionalized Population for Whom Poverty Status Is Determined	For 2012-2016: C27016_022; For 2017-2020: C27016_032; 2.00 to 3.99 of poverty threshold	C27016_001; Total civilian noninstitutionalized population for whom poverty status is determined
ACS_PCT_HEALTH_INC_ABOVE_400	Percentage of population over 4.00 of the poverty threshold (relevant for health insurance coverage)	C27016: Health Insurance Coverage Status by Ratio of Income to Poverty Level by Age	Civilian Noninstitutionalized Population for Whom Poverty Status Is Determined	For 2012-2016: C27016_032; For 2017-2020: C27016_042; 4.00 of poverty threshold and over	C27016_001; Total civilian noninstitutionalized population for whom poverty status is determined
ACS_PCT_HEALTH_INC_BELOW_137	Percentage of population under 1.37 of the poverty threshold (relevant for health insurance coverage)	C27016: Health Insurance Coverage Status by Ratio of Income to Poverty Level by Age	Civilian Noninstitutionalized Population for Whom Poverty Status Is Determined	For 2012 to 2016: C27016_002; For 2017-2020:C27016_002 +C27016_012; Under 1.37 of poverty threshold	C27016_001; Total civilian noninstitutionalized population for whom poverty status is determined
ACS_PCT_HH_1FAM_FOOD_STMP	Percentage of unmarried partner households that received food stamps/SNAP benefits	B22007: Receipt of Food Stamps/SNAP in the Past 12 Months by Family Type by Number of Workers in Family in the Past 12 Months	Families	B22007_012; NHCIS 2009 Numerator: R5AE012; Household received Food Stamps/SNAP in the past 12 months: Other family (female or male Householder, no spouse present)	B22007_012 + B22007_033; R5AE012 + R5AE033 (for 2009); Household received Food Stamps/SNAP in the past 12 months: Other family (female or male householder, no spouse present) and Household did not receive Food Stamps/SNAP in the past 12 months: Other family (female or male)

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_HH_1PERS	Percentage of households with only one occupant	B11016: Household Type by Household Size	Households	B11016_010 ; Nonfamily households: 1-person household	householder, no spouse present)
ACS_PCT_HH_ABOVE65	Percentage of households with one or more people 65 years and over	B11007: Households by Presence of People 65 Years and Over, Household Size and Household Type	Households	B11007_002; Households with one or more people 65 years and over	B11007_001; Total households
ACS_PCT_HH_ALONE_ABOVE65	Percentage of households with a person 65 years and over living alone	B11007: Households by Presence of People 65 Years and Over, Household Size and Household Type	Households	B11007_003; Households with one or more people 65 years and over	B11007_001; Total households
ACS_PCT_HH_BROADBAND	Percentage of households with broadband such as cable, fiber optic or DSL	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_007; Broadband such as cable, fiber optic or DSL	B28002_001; Total households
ACS_PCT_HH_BROADBAND_ANY	Percentage of households with broadband of any type	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_004; Broadband of any type	B28002_001; Total households
ACS_PCT_HH_BROADBAND_ONLY	Percentage of households with broadband such as cable, fiber optic or DSL with no other type of Internet subscription	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_008; Broadband such as cable, fiber optic or DSL with no other type of Internet subscription	B28002_001; Total households
ACS_PCT_HH_CELLULAR	Percentage of households with a cellular data plan	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_005; Cellular data plan	B28002_001; Total households
ACS_PCT_HH_CELLULAR_ONLY	Percentage of households with a cellular data plan with no other type of internet subscription	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_006; Cellular data plan with no other type of Internet subscription	B28002_001; Total households
ACS_PCT_HH_DIAL_INTERNET_ONLY	Percentage of households with dial up and no other type of internet subscription	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_003; Dial up and no other type of internet subscription	B28002_001; Total households

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_HH_FOOD_STMP	Percentage of households that received food stamps/SNAP, past 12 months	B22003: Receipt of Food Stamps/SNAP by Poverty Status for Households	Households	For 2012-2020:B22003_002; NCHGIS 2009 Numerator: R40E002; Household received food stamps/SNAP in the past 12 months	B22003_001; R40E001 (for 2009); Total households
ACS_PCT_HH_FOOD_STMP_BL_W_POV	Percentage of households receiving food stamps/SNAP with income below the poverty level	B22003: Receipt of Food Stamps/SNAP by Poverty Status for Households	Households	B22003_003; NCHGIS 2009 Numerator: R40E003; Household received Food Stamps/SNAP in the past 12 months: Income in the past 12 months below poverty level	B22003_001; R40E001 (for 2009); Total households
ACS_PCT_HH_INC_10000	Percentage of population with household income less than \$10,000	B19001: Household Income	Households	B19001_002; Less than \$10,000	B19001_001; Total households
ACS_PCT_HH_INC_100000	Percentage of population with household income greater than \$100,000	B19001: Household Income	Households	B19001_014 + B19001_015 + B19001_016 + B19001_017; \$100,000 or more	B19001_001; Total households
ACS_PCT_HH_INC_14999	Percentage of population with household income between \$10,000 and \$14,999	B19001: Household Income	Households	B19001_003; \$10,000 to \$14,999	B19001_001; Total households
ACS_PCT_HH_INC_24999	Percentage of population with household income between \$15,000 and \$24,999	B19001: Household Income	Households	B19001_004 + B19001_005; \$15,000 to \$24,999	B19001_001; Total households
ACS_PCT_HH_INC_49999	Percentage of population with household income between \$25,000 and \$49,999	B19001: Household Income	Households	B19001_006 + B19001_007 + B19001_008 + B19001_009 + B19001_010; \$25,000 to \$49,999	B19001_001; Total households
ACS_PCT_HH_INC_99999	Percentage of population with household income between \$50,000 and \$99,999	B19001: Household Income	Households	B19001_011 + B19001_012 + B19001_013; \$50,000 to \$99,999	B19001_001; Total households
ACS_PCT_HH_INTERNET	Percentage of households with any internet subscription	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_002; Households with any internet subscription	B28002_001; Total households
ACS_PCT_HH_INTERNET_NO_SUBS	Percentage of households with internet access without a subscription	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_012; Internet access without a subscription	B28002_002; Total households

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_HH_KID_1PRNT	Percentage of family households with female or male householder, no spouse present	B11001: Household Type (Including Living Alone)	Households	B11001_004 ; Family households: Other family (female or male householder, no spouse present)	B11001_001; Total households
ACS_PCT_HH_LIMIT_ENGLISH	Percentage of limited English speaking households	C16002 (2016-2020) / B16002 (2009 - 2015): Household Language by Household Limited English Speaking Status	Households	C16002_004 + C16002_007 + C16002_010 + C16002_013; B16002_004 + B16002_007 + B16002_010 + B16002_013 ; Spanish: Limited English speaking household and Other Indo-European languages: Limited English speaking household and Asian and Pacific Island languages: Limited English speaking and Other languages: Limited English speaking household	C16002_001; B16002_001; Total households
ACS_PCT_HH_NO_COMP_DEV	Percentage of households without a computing device	B28001: Types of Computers in Household	Households	B28001_011; Households with no computer	B28001_001; Total households
ACS_PCT_HH_NO_FD_STMP_BLW_POV	Percentage of households not receiving food stamps/SNAP with income below the poverty level	B22003: Receipt of Food Stamps/SNAP by Poverty Status for Households	Households	B22003_006; NHHGIS 2009 Numerator: R40E006; Household did not receive Food Stamps/SNAP in the past 12 months: Income in the past 12 months below poverty level	B22003_001; NHHGIS 2009 Numerator: R40E001; Total households
ACS_PCT_HH_NO_INTERNET	Percentage of households with no internet access	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_013; No Internet Access	B28002_001; Total households
ACS_PCT_HH_OTHER_COMP	Percentage of households with an other type of computer	B28001: Types of Computers in Household	Households	B28001_009; Households that have one or more computing devices: Other computer	B28001_001; Total households
ACS_PCT_HH_OTHER_COMP_ONLY	Percentage of households with an other type of computer with no other type of computing device	B28001: Types of Computers in Household	Households	B28001_010; Other computer with no other type of computing device	B28001_001; Total households
ACS_PCT_HH_PC	Percentage of households with a desktop or laptop	B28001: Types of Computers in Household	Households	B28001_003; Households that have one or more computing devices: Desktop or Laptop	B28001_001; Total households
ACS_PCT_HH_PC_ONLY	Percentage of households with a desktop or laptop with no other type of computing device	B28001: Types of Computers in Household	Households	B28001_004; Desktop or laptop alone	B28001_001; Total households

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_HH_PUB_ASSIST	Percentage of households with public assistance income or food stamps/SNAP	B19058: Public Assistance Income for Households	Households	B19058_002; NCHGIS 2009 Numerator: R3BE002; Households with Public Assistance Income	B19058_001; NCHGIS 2009 Numerator: R3BE001; Total households
ACS_PCT_HH_SAT_INTERNET	Percentage of households with satellite internet service	B28002: Presence and Types of Internet Subscriptions in Household	Households	B28002_009; Satellite Internet Service	B28002_001; Total Households
ACS_PCT_HH_SMARTPHONE	Percentage of households with a smartphone	B28001: Types of Computers in Household	Households	B28001_005; Households that have one or more computing devices: Smartphone	B28001_001; Total Households
ACS_PCT_HH_SMARTPHONE_O NLY	Percentage of households with a smartphone with no other type of computing device	B28001: Types of Computers in Household	Households	B28001_006; Smartphone with no other type of computing device	B28001_001; Total Households
ACS_PCT_HH_TABLET	Percentage of households with a tablet or other portable wireless computer	B28001: Types of Computers in Household	Households	B28001_007; Households that have one or more computing devices: Tablet or other portable wireless computer	B28001_001; Total Households
ACS_PCT_HH_TABLET_ONLY	Percentage of households with a tablet or other portable wireless computer with no other type of computing device	B28001: Types of Computers in Household	Households	B28001_008; Tablet or other portable wireless computer with no other type of computing device	B28001_001; Total Households
ACS_PCT_HISP_FEMALE	Percentage of Hispanic or Latino population reporting female	B01001: Sex by Age (Hispanic or Latino)	Hispanic or Latino Population	B01001I_017; Hispanic, Female	B01001I_001; Hispanic or Latino Population
ACS_PCT_HISP_MALE	Percentage of Hispanic or Latino population reporting male	B01001: Sex by Age (Hispanic or Latino)	Hispanic or Latino Population	B01001I_002; Hispanic, Male	B01001I_001; Hispanic or Latino Population
ACS_PCT_HISPANIC	Percentage of population reporting Hispanic ethnicity	B03002: Hispanic or Latino Origin by Race	Total population	B03002_012; Hispanic or Latino	B03002_001; Total population
ACS_PCT_HOUSEHOLDER_AIA N	Percentage of householders who are American Indian and Alaska Native alone	B25006: Race of Householder	Occupied Housing Units	B25006_004; Householder who is American Indian and Alaska Native alone	B25006_001; Total occupied housing units
ACS_PCT_HOUSEHOLDER_ASIA N	Percentage of householders who are Asian alone	B25006: Race of Householder	Occupied Housing Units	B25006_005; Householder who is Asian alone	B25006_001; Total occupied housing units

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_HOUSEHOLDER_BLA CK	Percentage of householders who are Black or African American alone	B25006: Race of Householder	Occupied Housing Units	B25006_003; Householder who is Black or African American alone	B25006_001; Total occupied housing units
ACS_PCT_HOUSEHOLDER_MUL T	Percentage of householders who are two or more races	B25006: Race of Householder	Occupied Housing Units	B25006_008; Householder who is Two or more races	B25006_001; Total occupied housing units
ACS_PCT_HOUSEHOLDER_NHP I	Percentage of householders who are Native Hawaiian and other Pacific Islander alone	B25006: Race of Householder	Occupied Housing Units	B25006_006; Householder who is Native Hawaiian and Other Pacific Islander alone	B25006_001; Total occupied housing units
ACS_PCT_HOUSEHOLDER_OTH ER	Percentage of householders who are some other race alone	B25006: Race of Householder	Occupied Housing Units	B25006_007; Householder who is Some other race alone	B25006_001; Total occupied housing units
ACS_PCT_HOUSEHOLDER_WHIT E	Percentage of householders who are White alone	B25006: Race of Householder	Occupied Housing Units	B25006_002; Householder who is White alone	B25006_001; Total occupied housing units
ACS_PCT_HS_GRADUATE	Percentage of population with only high school diploma (ages 25 and over)	B15003: Educational Attainment for the Population 25 Years and Over	Population 25 Years and Over	For 2012-2020: B15003_017 + B15003_018; For 2009-2011: B15002_011 + B15002_028;; Regular high school diploma and GED or alternative credential	For 2012-2020: B15003_001; For 2009-2011: B15002_001; Total population age 25 and over
ACS_PCT_HU_BOT_TANK_LP_G AS	Percentage of occupied housing units with bottled, tank, or LP gas	B25117: Tenure by House Heating Fuel	Occupied Housing Units	B25117_004 + B25117_014; Owner occupied: Bottled, tank, or LP gas and Renter occupied: Bottled, tank, or LP gas	B25117_001; Total occupied housing units
ACS_PCT_HU_BUILT_1979	Percentage of housing units built before 1979	B25036: Tenure by Year Structure Built	Occupied Housing Units	For 2020-2015: B25036_008 + B25036_009 + B25036_010 + B25036_011+ B25036_012 + B25036_019+ B25036_020 + B25036_021 + B25036_022 + B25036_023; For 2009-2014: B25036_007 + B25036_008 + B25036_009 + B25036_010+ B25036_011 + B25036_017+ B25036_018 + B25036_019 + B25036_020 + B25036_021;; Housing units built 1979 to 1939 or earlier	B25036_001; Total occupied housing units
ACS_PCT_HU_COAL	Percentage of occupied housing units with coal or coke heating	B25117: Tenure by House Heating Fuel	Occupied Housing Units	B25117_007 + B25117_017; Owner occupied: Coal or coke and Renter occupied: Coal or coke	B25117_001; Total occupied housing units

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_HU_ELEC	Percentage of occupied housing units with electricity heating	B25117: Tenure by House Heating Fuel	Occupied Housing Units	B25117_005 + B25117_015; Owner occupied: Electricity and Renter occupied: Electricity	B25117_001; Total occupied housing units
ACS_PCT_HU_KITCHEN	Percentage of housing units lacking complete kitchen facilities	B25051: Kitchen Facilities for All Housing Units	Housing Units	B25051_003; Lacking complete kitchen facilities	B25051_001; Total Housing units
ACS_PCT_HU_MOBILE_HOME	Percentage of housing units that are mobile homes	B25024: Units in Structure	Housing Units	B25024_010; Mobile home	B25024_001; Total Housing units
ACS_PCT_HU_NO_FUEL	Percentage of occupied housing units without fuel	B25117: Tenure by House Heating Fuel	Occupied Housing Units	B25117_011 + B25117_021; Owner- and renter-occupied housing units without fuel	B25117_001; Total occupied housing units
ACS_PCT_HU_NO_VEH	Percentage of housing units with no vehicle available	B25044: Tenure by Vehicles Available	Occupied Housing Units	B25044_003 + B25044_010; Owner occupied: No vehicle available and Renter occupied: No vehicle available	B25044_001; Total occupied housing units
ACS_PCT_HU_OIL	Percentage of occupied housing units with fuel oil heating	B25117: Tenure by House Heating Fuel	Occupied Housing Units	B25117_006 + B25117_016; Owner occupied: Fuel oil, kerosene etc. and Renter occupied: Fuel oil, kerosene etc.	B25117_001; Total occupied housing units
ACS_PCT_HU_OTHER	Percentage of occupied housing units with other heating fuel	B25117: Tenure by House Heating Fuel	Occupied Housing Units	B25117_010 + B25117_020; Owner occupied: Other fuel and Renter occupied: Other fuel	B25117_001; Total occupied housing units
ACS_PCT_HU_PLUMBING	Percentage of housing units lacking complete plumbing facilities	B25047: Plumbing Facilities for All Housing Units	Housing Units	B25047_003; Lacking complete plumbing facilities	B25047_001; Total Housing units
ACS_PCT_HU_SOLAR	Percentage of occupied housing units with solar energy	B25117: Tenure by House Heating Fuel	Occupied Housing Units	B25117_009 + B25117_019; Owner occupied: Solar and Renter occupied: Solar	B25117_001; Total occupied housing units
ACS_PCT_HU.Utility_Gas	Percentage of occupied housing units with utility gas heating	B25117: Tenure by House Heating Fuel	Occupied Housing Units	B25117_003 + B25117_013; Owner occupied: Utility Gas and Renter occupied: Utility gas	B25117_001; Total occupied housing units
ACS_PCT_HU_WOOD	Percentage of occupied housing units with wood heating	B25117: Tenure by House Heating Fuel	Occupied Housing Units	B25117_008 + B25117_018; Owner occupied: Wood and Renter occupied: Wood	B25117_001; Total occupied housing units
ACS_PCT_IN_COUNTY_MOVE	Percentage of population that moved within the same county in the past year (age 1 and over)	B07003: Geographical Mobility in the Past Year by Sex for Current Residence in the United States	Population 1 Year and Over in the United States	B07003_007; Moved within same county	B07003_001; Population 1 year and over in the United States, Total
ACS_PCT_IN_STATE_MOVE	Percentage of population that moved from different	B07003: Geographical Mobility in the Past Year by	Population 1 Year and Over in the United States	B07003_010; Moved from different county within same state	B07003_001; Population 1 year

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
	county within same state in the past year (age 1 and over)	Sex for Current Residence in the United States			and over in the United States, Total
ACS_PCT_INC50	Percentage of population with income to poverty ratio under 0.50	B17024: Age by Ratio of Income to Poverty Level	Population for Whom Poverty Status Is Determined	B17024_003 + B17024_016 +B17024_029 + B17024_042 + B17024_055 + B17024_068 +B17024_081 +B17024_094 + B17024_107 +B17024_120; Population under 0.50	B17024_001; Population for Whom Poverty Status Is Determined
ACS_PCT_INC50_ABOVE65	Percentage of population with income to poverty ratio under 0.50 (ages 65 and over)	B17024: Age by Ratio of Income to Poverty Level	Population for Whom Poverty Status Is Determined	B17024_107 + B17024_120; Persons above 65 under 0.5	B17024_106 + B17024_119; Population for whom poverty status is determined over 65
ACS_PCT_INC50_BELOW17	Percentage of children with income to poverty ratio under 0.50 (ages 17 and below)	B17024: Age by Ratio of Income to Poverty Level	Population for Whom Poverty Status Is Determined	B17024_003 + B17024_016 + B17024_029; Children under 0.5	B17024_002 + B17024_015 + B17024_028; Population for whom poverty status is determined
ACS_PCT_INFORM	Percentage of employed working in information services (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_013 + C24030_040 ; Information and Female: Information	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_LT_HS	Percentage of population with less than high school education (ages 25 and over)	B15003: Educational Attainment for the Population 25 Years and Over	Population 25 Years and Over	For 2012-2020: B15003_002 + B15003_003 + B15003_004 + B15003_005 + B15003_006 + B15003_007 + B15003_008 + B15003_009 + B15003_010 + B15003_011 + B15003_012 + B15003_013 + B15003_014 + B15003_015 + B15003_016: For 2009-2011: B15002_003 + B15002_004 + B15002_005 + B15002_006 + B15002_007 + B15002_008 + B15002_009 + B15002_010 + B15002_020 + B15002_021 + B15002_022 + B15002_023 + B15002_024 + B15002_025 + B15002_026 +	For 2012-2020: B15003_001; For 2009-2011: B15002_001; Total population age 25 and over

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_MALE	Percentage of population that is male	B01001: Sex by Age	Total Population	B15002_027; No schooling completed to 12th grade, no diploma (inclusive)	
ACS_PCT_MANUFACT	Percentage of employed working in manufacturing (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_007 + C24030_034; Male: Manufacturing and Female: Manufacturing	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_MARRIED_SP_AB_F	Percentage of female population now married and spouse absent (ages 15 and over)	B12001: Sex by Marital Status	Population 15 Years and Over	B12001_015; Female, Now Married Spouse Absent	B12001_011; Female Population 15 Years and Over
ACS_PCT_MARRIED_SP_AB_M	Percentage of male population now married and spouse absent (ages 15 and over)	B12001: Sex by Marital Status	Population 15 Years and Over	B12001_006; Male, Now Married Spouse Absent	B12001_002; Male Population 15 Years and Over
ACS_PCT_MARRIED_SP_PR_F	Percentage of female population now married and spouse present (ages 15 and over)	B12001: Sex by Marital Status	Population 15 Years and Over	B12001_014; Female, Now Married Spouse Present	B12001_011; Female Population 15 Years and Over
ACS_PCT_MARRIED_SP_PR_M	Percentage of male population now married and spouse present (ages 15 and over)	B12001: Sex by Marital Status	Population 15 Years and Over	B12001_005; Male, Now Married Spouse Present	B12001_002; Male Population 15 Years and Over
ACS_PCT_MEDICAID_ANY	Percentage of population with any Medicaid/means-tested public health insurance coverage	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_007 + B27010_013 + B27010_023 + B27010_029 + B27010_039 + B27010_046 + B27010_062; Under 19 years: With one type of health insurance coverage: With Medicaid/means-tested public coverage only and Under 19 years: With two or more types of health insurance coverage: With Medicare and Medicaid/means-tested public coverage and 19 to 34 years: With one type of health insurance coverage: With Medicaid/means-tested public coverage only and 19 to 34 years: With two or more types of health insurance coverage: With Medicare and Medicaid/means-tested public coverage and 35 to 64 years: With one type of health insurance coverage	B27010_001; Total Civilian noninstitutionalized population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_MEDICAID_ANY_BEL_OW64	Percentage of population with any Medicaid/means-tested public health insurance coverage (ages 64 and below)	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	insurance coverage: With Medicaid/means-tested public coverage only and 35 to 64 years: With two or more types of health insurance coverage: With Medicare and Medicaid/means-tested public coverage and 65 years and over: With two or more types of health insurance coverage: With Medicare and Medicaid/means-tested public coverage B27010_007 + B27010_013 + B27010_023 + B27010_029 + B27010_039 + B27010_046; Under 19 years: With one type of health insurance coverage: With Medicaid/means-tested public coverage only and Under 19 years: With two or more types of health insurance coverage: With Medicare and Medicaid/means-tested public coverage and 19 to 34 years: With one type of health insurance coverage: With Medicaid/means-tested public coverage only and 19 to 34 years: With two or more types of health insurance coverage: With Medicare and Medicaid/means-tested public coverage and 35 to 64 years: With one type of health insurance coverage: With Medicaid/means-tested public coverage only and 35 to 64 years: With two or more types of health insurance coverage: With Medicare and Medicaid/means-tested public coverage and 35 to 64 years: With one type of health insurance coverage: With Medicare/means-tested public coverage only and 35 to 64 years: With two or more types of health insurance coverage: With Medicare and Medicaid/means-tested public coverage	B27010_002 + B27010_018 +B27010_034; Under 19 years and 19 to 34 years and 35 to 64 years
ACS_PCT_MEDICARE_ONLY	Percentage of population with Medicare only	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_006 + B27010_022 + B27010_038 + B27010_055; Under 19 years: With one type of health insurance coverage: With Medicare coverage only and 19 to 34 years: With one type of health insurance coverage: With Medicare coverage only and 35 to 64 years: With one type of health insurance coverage: With Medicare coverage only and 65 years and over: With one type of health insurance coverage: With Medicare coverage only	B27010_001; Total Civilian noninstitutionalized population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_MULT_RACE	Percentage of population reporting multiple races	B03002: Hispanic or Latino Origin by Race	Total population	B03002_009 + B03002_019; Two or more races	B03002_001; Total population
ACS_PCT_MULT_RACE_FEMALE	Percentage of population reporting two or more races and female	B01001G: Sex by Age (Two or More Races)	People Who Are Two or More Races	B01001G_017; Multiple Race, Female	B01001G_001; People Who Are Two or More Races, Total
ACS_PCT_MULT_RACE_MALE	Percentage of population reporting two or more races and male	B01001G: Sex by Age (Two or More Races)	People Who Are Two or More Races	B01001G_002; Multiple Race, Male	B01001G_001; People Who Are Two or More Races, Total
ACS_PCT_MULT_RACE_NONHISP	Percentage of non-Hispanic population reporting multiple races	B03002: Hispanic or Latino Origin by Race	Total population	B03002_009; Two or more races	B03002_001; Total population
ACS_PCT_NATURE	Percentage of employed working in agriculture, forestry, fishing and hunting, and mining (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_003 + C24030_030; Male: Agriculture, forestry, fishing and hunting, and mining and Female: Agriculture, forestry, fishing and hunting, and mining	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_NHPI	Percentage of population reporting Native Hawaiian and Pacific Islander race alone	B03002: Hispanic or Latino Origin by Race	Total population	B03002_007 +B03002_017; Native Hawaiian and Other Pacific Islander alone	B03002_001 ; Total population
ACS_PCT_NHPI_COMB	Percentage of population reporting Native Hawaiian and other Pacific Islander alone or in combination with one or more races	B01001E: Sex by Age (Native Hawaiian and Other Pacific Islander Alone)	People Who Are Native Hawaiian and Other Pacific Islander Alone	B01001E_017; Native Hawaiian or Pacific Islander, Female	B01001E_001; People Who Are Native Hawaiian and Other Pacific Islander Alone, Total
ACS_PCT_NHPI_FEMALE	Percentage of Native Hawaiian and other Pacific Islander alone population reporting female	B01001E: Sex by Age (Native Hawaiian and Other Pacific Islander Alone)	People Who Are Native Hawaiian and Other Pacific Islander Alone	B01001E_002; Native Hawaiian or Pacific Islander, Male	B01001E_001; People Who Are Native Hawaiian and Other Pacific Islander Alone, Total
ACS_PCT_NHPI_MALE	Percentage of Native Hawaiian and other Pacific Islander alone population reporting male	B03002: Hispanic or Latino Origin by Race	Total population	B03002_007; Native Hawaiian and Other Pacific Islander alone	B03002_001 ; Total population
ACS_PCT_NHPI_NONHISP	Percentage of non-Hispanic population reporting Native Hawaiian	B02012: Native Hawaiian and Other Pacific Islander Alone or in Combination	Native Hawaiian and Other Pacific Islander Alone or in Combination	B02012_001; Total	ACS_TOT_POP_WT: Total

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
	and Pacific Islander race alone	With One or More Other Races	With One or More Other Races		population; Total population
ACS_PCT_NO_WORK_NO_SCHL_16_19	Percentage of teens and adults who are unemployed and not in school (between ages 16 and 19)	B14005: Sex by School Enrollment by Educational Attainment by Employment Status for the Population 16 to 19 Years	Population 16 to 19 Years	B14005_010 + B14005_014 + B14005_024 + B14005_028; Not enrolled in school and unemployed	B14005_001; Total
ACS_PCT_NON_CITIZEN	Percentage of population who are not U.S. citizens	B05001: Nativity and Citizenship Status in the United States	Population in the United States	B05001_006; Not a U.S. Citizen	B05001_001; Total population in the United States
ACS_PCT_NONCTN_1990	Percentage of population who are not U.S. citizens and entered U.S. before 1990	B05005: Period of Entry by Nativity and Citizenship Status in the United States	Population Born Outside the United States	2009-2011: B05005_016 + B05005_021; 2012-2020: B05005_021; Entered before 1990: Foreign Born, Not a U.S. Citizen	ACS_TOTAL_POP_WT; Total population
ACS_PCT_NONCTN_1999	Percentage of population who are not U.S. citizens and entered U.S. between 1990 and 1999	B05005: Period of Entry by Nativity and Citizenship Status in the United States	Population Born Outside the United States	2009-2011: B05005_011; 2012-2020: B05005_016; Entered 1990 to 1999: Foreign Born, Not a U.S. Citizen	ACS_TOTAL_POP_WT; Total population
ACS_PCT_NONCTN_2000	Percentage of population who are not U.S. citizens and entered U.S. between 2000 and 2009	B05005: Period of Entry by Nativity and Citizenship Status in the United States	Population Born Outside the United States	2009-2011: B05005_006; 2012-2020: B05005_011; Entered 2000 to 2009: Foreign Born, Not a U.S. Citizen	ACS_TOTAL_POP_WT; Total population
ACS_PCT_NONCTN_2010	Percentage of population who are not U.S. citizens and entered U.S. since 2010	B05005: Period of Entry by Nativity and Citizenship Status in the United States	Population Born Outside the United States	B05005_006; Entered after 2010: Foreign Born, Not a U.S. Citizen	ACS_TOTAL_POP_WT; Total population
ACS_PCT_NONVET_DISABLE_18_64	Percentage of nonveterans with a disability (between ages 18 and 64)	C21007: Age by Veteran Status by Poverty Status in the Past 12 Months by Disability Status for the Civilian	Civilian Population 18 Years and Over for Whom Poverty Status Is Determined	C21007_012 + C21007_015; 18 to 64 years: Nonveteran: Income in the past 12 months below poverty level: With a disability and 18 to 64 years: Nonveteran: Income in the past 12 months at or above poverty level: With a disability	C21007_010 ; Civilian population 18 years and over for whom poverty status is determined; 18 to 64 years: Nonveteran
ACS_PCT_NONVET_POV_18_64	Percentage of civilian nonveterans with income below the poverty level in the past 12 months (between ages 18 and 64)	C21007: Age by Veteran Status by Poverty Status in the Past 12 Months by Disability Status for the Civilian	Civilian Population 18 Years and Over for Whom Poverty Status Is Determined	C21007_011; 18 to 64 years: Nonveteran: Income in the past 12 months below poverty level	C21007_010; Civilian population 18 years and over for whom poverty status is determined; 18 to

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_NOT LABOR	Percentage of population not in labor force (ages 16 and over)	B23025: Employment Status	Population 16 Years and Over	For 2011-2020: B23025_007; For 2009-2010: B23001_009 + B23001_016 + B23001_023 + B23001_030 + B23001_037 + B23001_044 + B23001_051 + B23001_058 + B23001_065 + B23001_072 + B23001_077 + B23001_082 + B23001_087 + B23001_095 + B23001_102 + B23001_109 + B23001_116 + B23001_123 + B23001_130 + B23001_137 + B23001_144 + B23001_151 + B23001_158 + B23001_163 + B23001_168 + B23001_173; Not in labor force	64 years: Nonveteran For 2011-2020: B23025_001; For 2009-2010: B23001_001; Total population 16 years and over
ACS_PCT_NVR_MARRIED_F	Percentage of female population never married (ages 15 and over)	B12001: Sex by Marital Status for the population 15 years and over	Population 15 Years and Over	B12001_012; Female, Never Married	B12001_011; Total population, Female
ACS_PCT_NVR_MARRIED_M	Percentage of male population never married (ages 15 and over)	B12001: Sex by Marital Status for the population 15 years and over	Population 15 Years and Over	B12001_003; Male, Never Married	B12001_002; Total population, Male
ACS_PCT_OTH_EURP	Percentage of population who speak other Indo-European languages (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over	Population 5 years and over	B16004_009 + B16004_031 + B16004_053; 18 to 64 years: Speak other Indo-European languages and 65 years and over: Speak other Indo-European languages and 5 to 17 years: Speak other Indo-European languages	B16004_001; Total Population 5 years and over
ACS_PCT_OTH_LANG	Percentage of population who speak other languages (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over	Population 5 years and over	B16004_019 + B16004_041 + B16004_063; 5 to 17 years: Speak other languages and 18 to 64 years: Speak other languages and 65 years and over: Speak other languages	B16004_001; Total Population 5 years and over
ACS_PCT_OTHER	Percentage of employed working in other services, except public administration (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_027 + C24030_054; Male: Other services, except public administration and Female: Other services, except public administration	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_OTHER_FEMALE	Percentage of population reporting some other race alone and female	B01001F: Sex by Age (Some Other Race Alone)	People Who Are Some Other Race Alone	B01001F_017; Other Race, Female	B01001F_001; People who are some other race alone

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_OTHER_INS	Percentage of population with other health insurance coverage combinations	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_016 + B27010_032 + B27010_049 + B27010_065; Under 19 years: With two or more types of health insurance coverage: Other coverage combinations and 19 to 34 years: With two or more types of health insurance coverage: Other coverage combinations and 35 to 64 years: With two or more types of health insurance coverage: Other coverage combinations 65 years and over: With two or more types of health insurance coverage: Other coverage combinations	B27010_001; Total Civilian noninstitutionalized population
ACS_PCT_OTHER_MALE	Percentage of population reporting some other race alone and male	B01001F: Sex by Age (Some Other Race Alone)	People Who Are Some Other Race Alone	B01001F_002; Other Race, Male	B01001F_001; People Who Are Some Other Race Alone
ACS_PCT_OTHER_NONHISP	Percentage of non-Hispanic population reporting some other race alone	B03002: Hispanic or Latino Origin by Race	Total population	B03002_008; Some other race alone	B03002_001 ; Total population
ACS_PCT_OTHER_RACE	Percentage of population reporting some other race alone	B03002: Hispanic or Latino Origin by Race	Total population	B03002_008 +B03002_018; Some other race alone	B03002_001 ; Total population
ACS_PCT_OWNER_HU	Percentage of occupied housing units: owner-occupied	B25003: Tenure	Occupied Housing Units	B25003_002; Owner occupied	B25003_001; Total Occupied housing units
ACS_PCT_OWNER_HU_CHILD	Percentage of owner-occupied housing units with children	B25012: Tenure by Families and Presence of Own Children	Occupied Housing Units	B25012_003; NHGIS 2009 Numerator: R6RE003; Owner-occupied housing units with children under age 18	B25012_002; NHGIS 2009 Numerator: R6RE002; Total owner-occupied housing units
ACS_PCT_OWNER_HU_COST_30PCT	Percentage of owner-occupied housing units with selected monthly owner costs equal to 30 percent or more of household income	B25091: Mortgage Status by Selected Monthly Owner Costs as a Percentage of Household Income	Owner-occupied Housing Units	B25091_008 + B25091_009 + B25091_010 + B25091_011 + B25091_019 + B25091_020 + B25091_021 + B25091_022; 30.0 to 50.0 percent or more (B25091_002 - B25091_012) + (B25091_013 - B25091_023); Housing Units with a mortgage: Total minus Not computed	

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_OWNER_HU_COST_50PCT	Percentage of owner-occupied housing units with selected monthly owner costs equal to 50 percent or more of household income	B25091: Mortgage Status by Selected Monthly Owner Costs as a Percentage of Household Income	Owner-occupied Housing Units	B25091_011 + B25091_022; 50.0 percent or more	(B25091_002 - B25091_012) + (B25091_013 - B25091_023); Housing units with a mortgage
ACS_PCT_PERSON_INC_100_124	Percentage of population with an income to poverty ratio between 1.00 and 1.24	C17002: Ratio of Income to Poverty Level in the Past 12 Months	Population for Whom Poverty Status Is Determined	C17002_004; 1.00 to 1.24	C17002_001; Total Population for whom poverty status is determined
ACS_PCT_PERSON_INC_125_199	Percentage of population with an income to poverty ratio between 1.25 and 1.99	C17002: Ratio of Income to Poverty Level in the Past 12 Months	Population for Whom Poverty Status Is Determined	C17002_005 + C17002_006 +C17002_007; 1.25 to 1.49 and 1.85 to 1.99	C17002_001; Total Population for whom poverty status is determined
ACS_PCT_PERSON_INC_ABOVE_200	Percentage of population with an income to poverty ratio of 2.00 or higher	C17002: Ratio of Income to Poverty Level in the Past 12 Months	Population for Whom Poverty Status Is Determined	C17002_008; 2.00 and over	C17002_001; Total Population for whom poverty status is determined
ACS_PCT_PERSON_INC_BELOW_99	Percentage of population with an income to poverty ratio under 1.00	C17002: Ratio of Income to Poverty Level in the Past 12 Months	Population for Whom Poverty Status Is Determined	C17002_002 + C17002_003; Under .50 and .50 to .99	C17002_001; Total Population for whom poverty status is determined
ACS_PCT_POP_SAME_SEX_SPOUSE	Percentage of population with same-sex spouse	B09019: Household Type (Including Living Alone) by Relationship	Total Population	B09019_011; Same-Sex Spouse	B09019_001; Total Population
ACS_PCT_POP_SAME_SEX_UNMARRIED_P	Percentage of population with same-sex unmarried partner	B09019: Household Type (Including Living Alone) by Relationship	Total Population	B09019_013; Same-sex Unmarried Partner	B09019_001; Total Population
ACS_PCT_POSTHS_ED	Percentage of population with any postsecondary education (ages 25 and over)	B15003: Educational Attainment for the Population 25 Years and Over	Population 25 Years and Over	For 2012-2020: B15003_019 + B15003_020 + B15003_021 + B15003_022 + B15003_023 + B15003_024 + B15003_025; For 2009-2011: B15002_012 + B15002_013 + B15002_014 + B15002_015 + B15002_016+ B15002_017 + B15002_018 + B15002_029 + B15002_030 + B15002_031 + B15002_032 + B15002_033 + B15002_034 +	For 2012-2020: B15003_001; For 2009-2011: B15002_001; Total population age 25 and over

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_POV_AIAN	Percentage of American Indian or Alaska Native population below poverty level	B17001C: Poverty Status by Sex by Age (American Indian and Alaska Native Alone)	American Indian and Alaska Native Alone Population for Whom Poverty Status Is Determined	B15002_035; Some college to Doctorate degree (inclusive) B17001C_002; Income in the past 12 months below poverty level	B17001C_001; American Indian and Alaska Native Alone Civilian Noninstitutionalized Population
ACS_PCT_POV_ASIAN	Percentage of Asian population below poverty level	B17001D: Poverty Status by Sex by Age (Asian Alone)	Asian Alone Population for Whom Poverty Status Is Determined	B17001D_002; Income in the past 12 months below poverty level	B17001D_001; Asian Alone Civilian Noninstitutionalized Population
ACS_PCT_POV_BLACK	Percentage of Black or African American population below poverty level	B17001B: Poverty Status by Sex by Age (Black or African American Alone)	Black or African American Alone Population for Whom Poverty Status Is Determined	B17001B_002; Income in the past 12 months below poverty level	B17001B_001; Black or African American Alone Civilian Noninstitutionalized Population
ACS_PCT_POV_HISPANIC	Percentage of Hispanic or Latino population below poverty level	B17001I: Poverty Status by Sex by Age (Hispanic or Latino)	Hispanic or Latino Population for Whom Poverty Status Is Determined	B17001I_002; Income in the past 12 months below poverty level	B17001I_001; Hispanic or Latino Civilian Noninstitutionalized Population
ACS_PCT_POV_MULTI	Percentage of two or more races population below poverty level	B17001G: Poverty Status by Sex by Age (Two or More Races)	Two or More Races Population for Whom Poverty Status Is Determined	B17001G_002; Income in the past 12 months below poverty level	B17001G_001; Two or More Races Civilian Noninstitutionalized Population
ACS_PCT_POV_NHPI	Percentage of Native Hawaiian or Pacific Islander population below poverty level	B17001E: Poverty Status by Sex by Age (Native Hawaiian and Other Pacific Islander Alone)	Native Hawaiian and Other Pacific Islander Alone Population for Whom Poverty Status Is Determined	B17001E_002; Income in the past 12 months below poverty level	B17001E_001; Native Hawaiian and Other Pacific Islander Alone Civilian Noninstitutionalized Population
ACS_PCT_POV_OTHER	Percentage of some other race population below poverty level	B17001F: Poverty Status by Sex by Age (Some Other Race Alone)	Some Other Race Alone Population for Whom Poverty Status Is Determined	B17001F_002; Income in the past 12 months below poverty level	B17001F_001; Some Other Race Alone Civilian

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_POV_WHITE	Percentage of White, not Hispanic population below poverty level	B17001H: Poverty Status by Sex by Age (White Alone, Not Hispanic or Latino)	White Alone, Not Hispanic or Latino Population for Whom Poverty Status Is Determined	B17001H_002; Income in the past 12 months below poverty level	Noninstitutionalized Population B17001H_001; White Alone, Not Hispanic or Latino Civilian Noninstitutionalized Population
ACS_PCT_PRIVATE_ANY	Percentage of population with any private health insurance coverage	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	Sum of calculated variables: ACS_PCT_PRIVATE_EMPL, ACS_PCT_PRIVATE_SELF, ACS_PCT_PVT_EMPL_DRCT, ACS_PCT_PRIVATE_OTHER, ACS_PCT_PRIVATE_MDCR and ACS_PCT_SELF_MDCR_ABOVE35 ; Sum of calculated variables: ACS_PCT_PRIVATE_EMPL, ACS_PCT_PRIVATE_SELF, ACS_PCT_PVT_EMPL_DRCT, ACS_PCT_PRIVATE_OTHER, ACS_PCT_PRIVATE_MDCR and ACS_PCT_SELF_MDCR_ABOVE35	n/a
ACS_PCT_PRIVATE_ANY_BELOW64	Percentage of population with any private health insurance coverage (ages 64 and below)	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	Sum of calculated variables: ACS_PCT_PRIVATE_EMPL_BELOW64, ACS_PCT_PRIVATE_SELF_BELOW64, ACS_PCT_PVT_EMPL_DRCT_BELOW64, ACS_PCT_PRIVATE_OTHER_BELOW64, ACS_PCT_PRIVATE_MDCR_35_64; Sum of calculated variables: ACS_PCT_PRIVATE_EMPL_BELOW64, ACS_PCT_PRIVATE_SELF_BELOW64, ACS_PCT_PVT_EMPL_DRCT_BELOW64, ACS_PCT_PRIVATE_OTHER_BELOW64, ACS_PCT_PRIVATE_MDCR_35_64	n/a
ACS_PCT_PRIVATE_EMPL	Percentage of population with employer-based health insurance	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_004 + B27010_020 + B27010_036 + B27010_053; Under 19 years: With one type of health insurance coverage: With employer-based health insurance only and 19 to 34 years: With one type of health insurance coverage: With employer-based health insurance only and 35 to 64 years: With one type of health insurance coverage:	B27010_001; Total Civilian noninstitutionalized population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_PRIVATE_EMPL_BELOW64	Percentage of population with employer-based health insurance only (ages 64 and below)	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	With employer-based health insurance only and 65 years and over: With one type of health insurance coverage: With employer-based health insurance only and Under 19 years: With two or more types of health insurance coverage: With employer based and direct-purchase coverage and 19 to 34 years: With two or more types of health insurance coverage: With employer-based and direct-purchase coverage and 35 to 64 years: With two or more types of health insurance coverage: With employer-based and direct-purchase coverage and 65 years and over: With two or more types of health insurance coverage: With employer-based and direct-purchase coverage	
ACS_PCT_PRIVATE_MDCR	Percentage of population with employer-based and Medicare insurance coverage	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_004 + B27010_020 + B27010_036; Under 19 years: With one type of health insurance coverage: With employer-based health insurance only and 19 to 34 years: With one type of health insurance coverage: With employer-based health insurance only and 35 to 64 years: With one type of health insurance coverage: With employer-based health insurance only	B27010_002 + B27010_018 +B27010_034; Under 19 years and 19 to 34 years and 35 to 64 years
ACS_PCT_PRIVATE_MDCR_35_64	Percentage of population with direct-purchase and Medicare health	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_012 + B27010_028 + B27010_044 + B27010_060; Under 19 years: With two or more types of health insurance coverage: With employer-based and Medicare coverage and 19 to 34 years: With two or more types of health insurance coverage: With employer-based and Medicare coverage and 35 to 64 years: With two or more types of health insurance coverage: With employer-based and Medicare coverage and 65 years and over: With two or more types of health insurance coverage: With employer based and Medicare coverage	B27010_001; Total Civilian noninstitutionalized population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_PRIVATE_OTHER	insurance (between ages 35 and 64)	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	based and Medicare coverage and 19 to 34 years: With two or more types of health insurance coverage: With employer-based and Medicare coverage and 35 to 64 years: With two or more types of health insurance coverage: With employer-based and Medicare coverage	nder 19 years and 19 to 34 years and 35 to 64 years
ACS_PCT_PRIVATE_OTHER_BELOW64	Percentage of population with other private-only health insurance combinations (ages 64 and below)	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_014 + B27010_030 + B27010_047 + B27010_063; Under 19 years: With two or more types of health insurance coverage: Other private-only combinations and 19 to 34 years: With two or more types of health insurance coverage: Other private-only combinations and 35 to 64 years: With two or more types of health insurance coverage: Other private-only combinations and 65 years and over: With two or more types of health insurance coverage: Other private-only combinations	B27010_001; Total Civilian noninstitutionalized population
ACS_PCT_PRIVATE_SELF	Percentage of population with direct-purchase health insurance only	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_005 + B27010_021 + B27010_037 + B27010_054; Under 19 years: With one type of health insurance coverage: With direct-purchase health insurance only and 19 to 34 years: With one type of health insurance coverage: With direct-purchase health insurance only and 35 to 64 years: With one type of health insurance coverage: With direct-purchase health insurance only and 65 years and over: With one type of health insurance coverage: With direct-purchase health insurance only	B27010_001; Total Civilian noninstitutionalized population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_PRIVATE_SELF_BELOW_64	Percentage of population with direct-purchase health insurance only (ages 64 and below)	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_005 + B27010_021 + B27010_037; Under 19 years: With one type of health insurance coverage: With direct-purchase health insurance only and 19 to 34 years: With one type of health insurance coverage: With direct-purchase health insurance only and 35 to 64 years: With one type of health insurance coverage: With direct-purchase health insurance only and 65 years and over: With one type of health insurance coverage: With direct-purchase health insurance only	B27010_002 + B27010_018 +B27010_034; Under 19 years and 19 to 34 years and 35 to 64 years
ACS_PCT_PROFESS	Percentage of employed working in professional, scientific, management, administrative, and waste management services (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_017 + C24030_044; Total civilian employed population 16 years and over	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_PUB_COMMUTE_15MIN	Percentage of workers who use public transportation with < 15-minute commute time (ages 16 and over)	B08134: Means of Transportation to Work by Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	For 2011-2020: B08134_062 + B08134_063; For 2009-2010: C08134_032 + C08134_033; Less than 10 minutes; and 10-14 minutes	For 2011-2020: B08134_001; For 2009-2011: B08301_001; Public transportation (excluding taxicab)
ACS_PCT_PUB_COMMUTE_29MIN	Percentage of workers who use public transportation with 15- to 29-minute commute time (ages 16 and over)	B08134: Means of Transportation to Work by Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	For 2011-2020: B08134_064 + B08134_065 + B08134_066; For 2009-2010: C08134_034 + C08134_035 + C08134_036; 15-19 minutes, 20-24 minutes, and 25-29 minutes	For 2011-2020: B08134_001; For 2009-2011: B08301_001; Public transportation (excluding taxicab)
ACS_PCT_PUB_COMMUTE_59MIN	Percentage of workers who use public transportation with 30- to 59-minute commute time (ages 16 and over)	B08134: Means of Transportation to Work by Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	For 2011-2020: B08134_067 + B08134_068 + B08134_069; For 2009-2010: C08134_037 + C08134_038 + C08134_039; 30-34 minutes, 35-44 minutes, and 45-59 minutes	For 2011-2020: B08134_001; For 2009-2011: B08301_001; Public transportation

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_PUB_COMM_60MIN_UP	Percentage of workers who use public transportation with at least 60-minute commute time (ages 16 and over)	B08134: Means of Transportation to Work by Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	For 2011-2020: B08134_070; For 2009-2010: C08134_040; 60 or more minutes	(excluding taxicab)
ACS_PCT_PUBL_TRANSIT	Percentage of workers taking public transportation, excluding taxicab (ages 16 and over)	B08134: Means of Transportation to Work by Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	For 2011-2020: B08134_061; For 2009-2010: B08301_010; Public transportation (excluding taxicab)	For 2011-2020: B08134_001; For 2009-2011: B08301_001; Public transportation (excluding taxicab)
ACS_PCT_PUBLIC_OTHER	Percentage of population with other public-only health insurance combinations	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_015 + B27010_031 + B27010_048 + B27010_064; Under 19 years: With two or more types of health insurance coverage: Other public-only combinations and 19 to 34 years: With two or more types of health insurance coverage: Other public-only combinations and 35 to 64 years: With two or more types of health insurance coverage: Other public-only combinations and 65 years and over: With two or more types of health insurance coverage: Other public-only combinations	B27010_001; Total Civilian noninstitutionalized population
ACS_PCT_PUBLIC_ONLY	Percentage of population with Medicare, Medicaid, TRICARE/military, U.S. Department of Veterans Affairs (VA) coverage only and other public-only health insurance combinations	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	ACS_PCT_MEDICAID_ANY, ACS_PCT_MEDICARE_ONLY, ACS_PCT_TRICARE_VA, and ACS_PCT_PUBLIC_OTHER	n/a
ACS_PCT_PUBLIC_OTHER_BELOW64	Percentage of population with other public-only health insurance	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_015 + B27010_031 + B27010_048; Under 19 years: With two or more types of health insurance coverage: Other public-only combinations and 19 to 34 years: With	B27010_001; Total Civilian noninstitutionalized population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
	combinations (ages 64 and below)			two or more types of health insurance coverage: Other public-only combinations and 35 to 64 years: With two or more types of health insurance coverage: Other public-only combinations	
ACS_PCT_PVT_EMPL_DRCT	Percentage of population with employer-based and direct-purchase coverage	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_011 + B27010_027 + B27010_043 + B27010_059; Under 19 years: With two or more types of health insurance coverage: With employer-based and direct purchase coverage and 19 to 34 years: With two or more types of health insurance coverage: With employer-based and direct purchase coverage and 35 to 64 years: With two or more types of health insurance coverage: With employer-based and direct purchase coverage and 65 years and over: With two or more types of health insurance coverage: With employer-based and direct-purchase coverage	B27010_002; Total Civilian noninstitutionalized population
ACS_PCT_PVT_EMPL_DRCT_BELOW64	Percentage of population with employer-based and direct-purchase coverage (ages 64 and below)	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_011 + B27010_027 + B27010_043; Under 19 years: With two or more types of health insurance coverage: With employer-based and direct purchase coverage and 19 to 34 years: With two or more types of health insurance coverage: With employer-based and direct-purchase coverage and 35 to 64 years: With two or more types of health insurance coverage: With employer-based and direct purchase coverage	B27010_003; Total Civilian noninstitutionalized population
ACS_PCT_PVT_NONPROFIT	Percentage of population who are private not-for-profit wage and salary workers (ages 16 and over)	B24080: Sex by Class of Worker for the Civilian Population	Civilian Employed Population 16 Years and Over	B24080_006 + B24080_016; Male and Female Private not-for-profit wage and salary workers	B24080_001; Total Civilian Employed Population
ACS_PCT_PVT_PROFIT	Percentage of population who are private for-profit wage and salary workers (ages 16 and over)	B24080: Sex by Class of Worker for the Civilian Population	Civilian Employed Population 16 Years and Over	B24080_003 + B24080_013; Male and Female Private for-profit wage and salary workers	B24080_001; Civilian Employed Population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_RENTER_HU	Percentage of occupied housing units: rented	B25003: Tenure	Occupied Housing Units	B25003_003; Renter occupied	B25003_001; Total Occupied housing units
ACS_PCT_RENTER_HU_ABOVE65	Percentage of renter-occupied housing units occupied by householders aged 65 and above	B25007: Tenure by Age of Householder	Occupied Housing Units	B25007_019 + B25007_020 + B25007_021; Renter occupied: Householder 65 to 74 years and Renter occupied: Householder 75 to 84 years and Renter occupied: Householder 85 years and over	B25007_012; Renter occupied
ACS_PCT_RENTER_HU_CHILD	Percentage of renter-occupied housing units with children	B25012: Tenure by Families and Presence of Own Children	Occupied Housing Units	B25012_011; NCHGIS 2009 Numerator: R6RE011; Renter-occupied housing units with children under age 18	B25012_010; NCHGIS 2009 Numerator: R6RE010; Total renter-occupied housing units
ACS_PCT_RENTER_HU_COST_3OPCT	Percentage of renter-occupied housing units with rent equal to 30 percent or more of household income	B25070: Gross Rent as a Percentage of Household Income in the Past 12 Months	Renter-occupied Housing Units	B25070_007 + B25070_008 + B25070_009 + B25070_010; 30.0 to 34.9 percent to 50.0 percent or more (inclusive)	B25070_001 minus B25070_011; Renter-occupied housing units; Total minus Not computed
ACS_PCT_RENTER_HU_COST_5OPCT	Percentage of renter-occupied housing units with rent equal to 50 percent or more of household income	B25070: Gross Rent as a Percentage of Household Income	Renter-occupied Housing Units	B25070_010; Renter occupied housing units: 50.0 percent or more	B25070_001 minus B25070_011; Renter Occupied Housing Units: Total minus Not computed
ACS_PCT_RETAIL	Percentage of employed working in retail trade (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_009 + C24030_036; Male: Retail trade and Female: Retail trade	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_SAME_SEX_UNMRD_PRTNR	Percentage of households with same-sex unmarried partner	B11009: Coupled Households by Type	Total Households	B11009_003+B11009_005; Same-sex Unmarried Partner	B11009_001; Total Households
ACS_PCT_SELF_MDCR_ABOVE35	Percentage of population with direct-purchase and Medicare health	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_045 + B27010_061; 35 to 64 years: With two or more types of health insurance coverage: With direct-purchase and Medicare coverage and 65 years and	B27010_001; Total Civilian noninstitutionalized population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
	insurance (ages 35 and over)			over: With two or more types of health insurance coverage: With direct-purchase and Medicare coverage	
ACS_PCT_SPANISH	Percentage of population that speaks Spanish (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over	Population 5 years and over	B16004_004 + B16004_026 + B16004_048; 5 to 17 years: Speak Spanish and 18 to 64 years: Speak Spanish and 65 years and over: Speak Spanish	B16004_001; Total Population 5 years and over
ACS_PCT_TAXICAB_2WORK	Percentage of workers taking taxicab, motorcycle, bicycle, or other means to work (ages 16 and over)	B08134: Means of Transportation to Work by Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	For 2011-2020: B08134_111; For 2009-2010: B08301_016 + B08301_017 + B08301_018 + B08301_020; Taxicab, motorcycle, bicycle, or other means	For 2011-2020: B08134_001; For 2009-2011: B08301_001; Workers 16 years and over who did not work at home; Total
ACS_PCT_TRANSPORT	Percentage of employed working in transportation and warehousing, and in utilities (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_010 + C24030_037; Male: Transportation and warehousing, and utilities and Female: Transportation and warehousing, and utilities	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_TRICARE_VA	Percentage of population with TRICARE/military or VA health insurance coverage only	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_008 + B27010_009 + B27010_024 + B27010_025 + B27010_040 + B27010_041 + B27010_056 + B27010_057; Under 19 years: With one type of health insurance coverage: With TRICARE/military health coverage only and Under 19 years: With one type of health insurance coverage: With VA Health Care only and 19 to 34 years: With one type of health insurance coverage: With TRICARE/military health coverage only and 19 to 34 years: With one type of health insurance coverage: With VA Health Care only and 35 to 64 years: With one type of health insurance coverage: With TRICARE/military health coverage only and 35 to 64 years: With one type of health insurance coverage: With VA Health Care only and 65 years and over: With one type of health insurance coverage: With TRICARE/military health coverage only and	B27010_001; Total Civilian noninstitutionalized population

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_TRICARE_VA_BELOW_64	Percentage of population with TRICARE/military or VA coverage only (ages 64 and below)	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	65 years and over: With one type of health insurance coverage: With VA Health Care only B27010_008 + B27010_009 + B27010_024 + B27010_025 + B27010_040 + B27010_041; Under 19 years: With one type of health insurance coverage: With TRICARE/military health coverage only and 19 to 34 years: With one type of health insurance coverage: With TRICARE/military health coverage only and 35 to 64 years: With one type of health insurance coverage: With TRICARE/military health coverage only and Under 19 years: With one type of health insurance coverage: With VA Health Care only and 19 to 34 years: With one type of health insurance coverage: With VA Health Care only and 35 to 64 years: With one type of health insurance coverage: With VA Health Care only	B27010_002 + B27010_018 + B27010_034; Total Civilian noninstitutionalized population
ACS_PCT_UNEMPLOY	Percentage of population that is unemployed (ages 16 and over)	B23025: Employment Status for the Population 16 Years and Over	Population 16 Years and Over	For 2011-2020: B23025_005; For 2009-2010: B23001_008 + B23001_015 + B23001_022 + B23001_029 + B23001_036 + B23001_043 + B23001_050 + B23001_057 + B23001_064 + B23001_071 + B23001_076 + B23001_081 + B23001_086 + B23001_094 + B23001_101 + B23001_108 + B23001_115 + B23001_122 + B23001_129 + B23001_136 + B23001_143 + B23001_150 + B23001_157 + B23001_162 + B23001_167 + B23001_172; In labor force: Civilian labor force: Unemployed	For 2011-2020: B23025_003; For 2009-2010: B23001_006 + B23001_013 + B23001_020 + B23001_027 + B23001_034 + B23001_041 + B23001_048 + B23001_055 + B23001_062 + B23001_069 + B23001_074 + B23001_079 + B23001_084 + B23001_092 + B23001_099 + B23001_106 + B23001_113 + B23001_120 + B23001_127 +

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
					B23001_134 + B23001_141 + B23001_148 + B23001_155 + B23001_160 + B23001_165 + B23001_170; Total population in civilian labor force
ACS_PCT_UNINSURED	Percentage of population with no health insurance coverage	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_017 + B27010_033 + B27010_050 + B27010_066; Under 19 years: No health insurance coverage and 19 to 34 years: No health insurance coverage and 35 to 64 years: No health insurance coverage and 65 years and over: No health insurance coverage	B27010_001; Total Civilian noninstitutionalized population
ACS_PCT_UNINSURED_BELOW 64	Percentage of population with no health insurance (ages 64 and below)	B27010: Types of Health Insurance Coverage by Age	Civilian Noninstitutionalized Population	B27010_017 + B27010_033 + B27010_050; Under 19 years: No health insurance coverage and 19 to 34 years: No health insurance coverage and 35 to 64 years: No health insurance coverage	B27010_002 + B27010_018 +B27010_034; Under 19 years and 19 to 34 years and 35 to 64 years
ACS_PCT_VACANT_HU	Percentage of housing units vacant	B25002: Occupancy Status	Total Housing units	B25002_003; Vacant	B25002_001; Total Housing units
ACS_PCT_VET	Percentage of the civilian population consisting of veterans (ages 18 and over)	B21001: Sex by Age by Veteran Status for the Civilian Population 18 Years and Over	Civilian Population 18 Years and Over	2009: B21001_004 + B21001_007 + B21001_010 + B21001_013 + B21001_016 + B21001_020 + B21001_023 + B21001_026 + B21001_029 + B21001_032; 2010-2020: B21001_002; Civilian population 18 years and over; Veteran	B21001_001; Civilian population 18 years and over; Total
ACS_PCT_VET_BACHELOR	Percentage of civilian veterans that have a bachelor's degree or higher (ages 25 and over)	B21003: Veteran Status by Educational Attainment for the Civilian Population 25 Years and Over	Civilian Population 25 Years and Over	B21003_006; NHCIS 2009 Numerator: R4VE006; Veteran: Bachelor's degree or higher	B21003_002; NHCIS 2009 Numerator: R4VE002; Civilian population 25 years and over; Veteran

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_VET_COLLEGE	Percentage of civilian veterans that have some college education or an associate's degree (ages 25 and over)	B21003: Veteran Status by Educational Attainment for the Civilian Population 25 Years and Over	Civilian Population 25 Years and Over	B21003_005; NHTS 2009 Numerator: R4VE005; Veteran: Some college or associate's degree	B21003_002; NHTS 2009 Numerator: R4VE002; Civilian population 25 years and over; Veteran
ACS_PCT_VET_DISABLE_18_64	Percentage of civilian veterans with a disability (between ages 18 and 64)	C21007: Age by Veteran Status by Poverty Status in the Past 12 Months by Disability Status for the Civilian Population 18 to 64 Years	Civilian population 18 years and over for whom poverty status is determined	C21007_005 + C21007_008; 18 to 64 years: Veteran: Income in the past 12 months below poverty level: With a disability and 18 to 64 years: Veteran: Income in the past 12 months at or above poverty level: With a disability	C21007_003; Civilian population 18 years and over for whom poverty status is determined; 18 to 64 years: Veteran
ACS_PCT_VET_HS	Percentage of civilian veterans who are high school graduates or less than high school graduates (age 25 years and over)	B21003: Veteran Status by Educational Attainment for the Civilian Population 25 Years and Over	Civilian Population 25 Years and Over	B21003_003 + B21003_004; NHTS 2009 Numerator: R4VE003 + R4VE004; Veteran: Less than high school graduate and Veteran: High school graduate (includes equivalency)	B21003_002; NHTS 2009 Numerator: R4VE002; Civilian population 25 years and over; Veteran
ACS_PCT_VET_LABOR_FORCE_18_64	Percentage of civilian veterans in labor force (between ages 18 and 64)	B21005: Age by Veteran Status by Employment Status for the Civilian Population 18 to 64 Years	Civilian Population 18 to 64 Years	B21005_004 + B21005_015 + B21005_026; NHTS 2009 Numerator: R4XE004 + R4XE015 + R4XE026; 18 to 34 years: Veteran: In labor force and 35 to 54 years: Veteran: In labor force and 55 to 64 years: Veteran: In labor force	B21005_003+ B21005_014+B21005_025; 18 to 34 years: Veteran and 35 to 54 years: Veteran and 55 to 64 years: Veteran
ACS_PCT_VET_POV_18_64	Percentage of civilian veterans with income below the poverty level in past 12 months (between ages 18 and 64)	C21007: Age by Veteran Status by Poverty Status in the Past 12 Months by Disability Status for the Civilian Population 18 to 64 Years	Civilian population 18 years and over for whom poverty status is determined	C21007_004; 18 to 64 years: Veteran: Income in the past 12 months below poverty level	C21007_003; Civilian population 18 years and over for whom poverty status is determined; 18 to 64 years: Veteran
ACS_PCT_VET_UNEMPL_18_64	Percentage of civilian veterans that are	B21005: Age by Veteran Status by Employment	Civilian Population 18 to 64 Years	B21005_006 + B21005_017 + B21005_028; NHTS 2009 Numerator: R4XE006+ R4XE017 + R4XE028; 18 to 34 years:	B21005_004 + B21005_015 + B21005_026; 18

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
	unemployed (between ages 18 and 64)	Status for the Civilian Population 18 to 64 Years		Veteran: In labor force: Unemployed and 35 to 54 years: Veteran: In labor force: Unemployed and 55 to 64 years: Veteran: In labor force: Unemployed	to 34 years: Veteran: In labor force and 35 to 54 years: Veteran: In labor force and 55 to 64 years: Veteran: In labor force
ACS_PCT_VIETNAM	Percentage of the civilian veteran population that served in the Vietnam era (ages 18 and over)	B21002: Period of Military Service for Civilian Veterans 18 Years and Over	Civilian Veterans 18 Years and Over	B21002_004+B21002_006 + B21002_007 + B21002_008 + B21002_009; Gulf War (9/2001 or later), and Gulf War (8/1990 to 8/2001), and Vietnam Era; and Gulf War (8/1990 to 8/2001) and Vietnam Era; and Vietnam Era, no Korean War, no World War II; and Vietnam Era and Korean War, no World War II; and Vietnam Era and Korean War and World War II	B21002_001; Total Civilian Veterans 18 years and over
ACS_PCT_WALK_2WORK	Percentage of workers walking to work (ages 16 and over)	B08134: Means of Transportation to Work by Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	For 2011-2020: B08134_101; For 2009-2010: B08301_019; Walked	For 2011-2020: B08134_001; For 2009-2011: B08301_001; Workers 16 years and over who did not work at home; Total
ACS_PCT_WHITE	Percentage of population reporting White race alone	B03002: Hispanic or Latino Origin by Race	Total population	B03002_003 + B03002_013; White alone	B03002_001; Total population
ACS_PCT_WHITE_COMB	Percentage of population reporting White alone or in combination with one or more races	B02008: White Alone or in Combination With One or More Other Races	White Alone or in Combination With One or More Other Races	B02008_001; Total	ACS_TOT_POP_WT: Total population;
ACS_PCT_WHITE_FEMALE	Percentage of White non-Hispanic alone population reporting female	B01001H: Sex by Age (White Alone, Not Hispanic or Latino)	White Alone, Not Hispanic or Latino Population	B01001H_017; People Who Are American Indian and Alaska Native Alone, Female	B01001H_001; White Alone, Not Hispanic or Latino Population, Total
ACS_PCT_WHITE_MALE	Percentage of White non-Hispanic alone population reporting male	B01001H: Sex by Age (White Alone, Not Hispanic or Latino)	White Alone, Not Hispanic or Latino Population	B01001H_002; People Who Are American Indian and Alaska Native Alone, Male	B01001H_001; White Alone, Not Hispanic or

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_PCT_WHITE_NONHISP	Percentage of non-Hispanic population reporting White race alone	B03002: Hispanic or Latino Origin by Race	Total population	B03002_003; White alone, not Hispanic	Latino Population, Total B03002_001; Total population
ACS_PCT_WHOLESALE	Percentage of employed working in wholesale trade (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_008 + C24030_035; Male: Wholesale trade and Female: Wholesale trade	C24030_001; Total civilian employed population 16 years and over
ACS_PCT_WIDOWED_F	Percentage of female population now widowed (ages 15 and over)	B12001: Sex by Marital Status for the Population 15 Years and Over	Population 15 Years and Over	B12001_018; Female, Widowed	B12001_011; Female Population 15 Years and Over
ACS_PCT_WIDOWED_M	Percentage of male population now widowed (ages 15 and over)	B12001: Sex by Marital Status for the Population 15 Years and Over	Population 15 Years and Over	B12001_009; Male, Widowed	B12001_002; Male Population 15 Years and Over
ACS_PCT_WORK_NO_CAR	Percentage of workers in households with no vehicle available (ages 16 and over)	B08141: Means of Transportation to Work by Vehicles Available	Workers 16 Years and Over in Households	B08141_002; Workers 16 years and over in households with no vehicle	B08141_001; Workers 16 years and over in households
ACS_PCT_WORK_RES_F	Percentage of female population who worked in place of residence (ages 16 and over)	B08008: Sex of Workers by Place of Work--Place Level	Workers 16 Years and Over	B08008_013 ; Female: Living in a place, Worked in place of residence	B08008_011 ; Total Female Population of Workers 16 Years and Over
ACS_PCT_WORK_RES_M	Percentage of male population who worked in place of residence (ages 16 and over)	B08008: Sex of Workers by Place of Work--Place Level	Workers 16 Years and Over	B08008_008 ; Male: Living in a place, Worked in place of residence	B08008_006 ; Total Male Population of Workers 16 Years and Over
ACS_PER_CAPITA_INC	Per capita income (dollars, inflation-adjusted to data file year)	B19301: Per Capita Income in the Past 12 Months (in [data year] Inflation-Adjusted Dollars)	Total Population	B19301_001 ; Per capita income in the past 12 months (in [data year] inflation-adjusted dollars)	n/a
ACS_TOT_CIVIL_EMPLOY_POP	Total civilian employed population (ages 16 and over)	C24030: Sex by Industry for the Civilian Employed Population 16 Years and Over	Civilian Employed Population 16 Years and Over	C24030_001; Civilian Employed Population 16 Years and Over, Total	n/a

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_TOT_CIVIL_NONINST_POP	Total civilian noninstitutionalized population	B18101: Sex by Age by Disability Status	Civilian Noninstitutionalized Population	B18101_001; Civilian Noninstitutionalized Population, Total	n/a
ACS_TOT_CIVIL_NONINST_POP_POV	Total civilian noninstitutionalized population for whom poverty status is determined	C27016: Health Insurance Coverage Status by Ratio of Income to Poverty Level by Age	Civilian Noninstitutionalized Population for Whom Poverty Status Is Determined	C27016_001; Civilian Noninstitutionalized Population for Whom Poverty Status Is Determined, Total	n/a
ACS_TOT_CIVIL_POP_ABOVE18	Total civilian population (ages 18 and over)	B21001: Sex by Age by Veteran Status for the Civilian Population 18 Years and Over	Civilian Population 18 Years and Over	B21001_001; Civilian Population 18 Years and Over, Total	n/a
ACS_TOT_CIVIL_POP_POV	Total civilian population for whom poverty status is determined (ages 18 and over)	C21007: Age by Veteran Status by Poverty Status by Disability Status for the Civilian Population 18 Years and Over	Civilian population 18 years and over for whom poverty status is determined	C21007_001; Civilian Population 18 Years and Over for Whom Poverty Status Is Determined, Total	n/a
ACS_TOT_CIVIL_VET_POP	Total number of civilian veterans (ages 18 and over)	B21002: Period of Military Service for Civilian Veterans 18 Years and Over	Civilian Veterans 18 Years and Over	B21002_001; Civilian Veterans 18 Years and Over, Total	n/a
ACS_TOT_CIVIL_VET_POP_ABOVE25	Total civilian population who are veterans (ages 25 and over)	B21003: Veteran Status by Educational Attainment for the Civilian Population 25 Years and Over	Civilian Population 25 Years and Over	B21003_002; NHGIS 2009 Numerator: R4VE002 (for 2009); Civilian Population 25 Years and Over, Veteran	n/a
ACS_TOT_GRANDCHILDREN_PARENT	Total grandchildren under 18 living with grandparent householder	B10002: Grandchildren Under 18 Years Living with a Grandparent Householder by Grandparent Responsibility and Presence of Parent	Grandchildren Under 18 Living With Grandparent Householder	B10002_001; NHGIS 2009 Numerator: RYTE001 (for 2009); Grandchildren Under 18 Living With Grandparent Householder, Total	n/a
ACS_TOT_HH	Total number of households	B11001: Household Type (Including Living Alone)	Households	B11001_001; Households; Total	n/a
ACS_TOT_HU	Total housing units	B25002: Occupancy Status	Housing Units	B25002_001; Housing Units, Total	n/a
ACS_TOT_OWN_CHILD_BELOW17	Total own children (ages 17 and below)	B09002: Own Children by Family Type and Age	Own Children Under 18 Years	B09002_001; Own Children by Family Type and Age, Total	n/a
ACS_TOT_POP_16_19	Total population (between ages 16 and 19)	B14005: Sex by School Enrollment by Educational Attainment by Employment Status for the Population 16 to 19 Years	Population 16 to 19 Years	B14005_001; Total	n/a

Variable Name	Variable Label	Source Table	Table Universe	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
ACS_TOT_POP_ABOVE15	Total population (ages 15 and over)	B12001: Sex by Marital Status for the Population 15 Years and Over	Population 15 Years and Over	B12001_001; Total	n/a
ACS_TOT_POP_ABOVE16	Total population (ages 16 and over)	B23025: Employment Status for the Population 16 Years and Over	Population 16 Years and Over	For 2011-2020: B23025_001; For 2009-2010: B23001_001; Total	n/a
ACS_TOT_POP_ABOVE25	Total population (ages 25 and over)	B15003: Educational Attainment for the Population 25 Years and Over	Population 25 Years and Over	For 2012-2020: B15003_001; For 2009-2011: B15002_001; Total	n/a
ACS_TOT_POP_ABOVE5	Total population (ages 5 and over)	B16004: Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over	Population 5 years and over	B16004_001; Total	n/a
ACS_TOT_POP_POV	Total population for whom poverty status is determined	B17024: Age by Ratio of Income to Poverty Level	Population for Whom Poverty Status Is Determined	B17024_001; Total	n/a
ACS_TOT_POP_US ABOVE1	Total population in the U.S. (ages 1 and over)	B07003: Geographical Mobility in the Past Year by Sex for Current Residence in the United States	Population 1 Year and Over in the United States	B07003_001; Total	n/a
ACS_TOT_POP_WT	Total weighted population	B01003: Total population, weighted	Total Population	B01003_001; Total population	n/a
ACS_TOT_WORKER_HH	Total workers in households (ages 16 and over)	B08141: Means of Transportation to Work by Vehicles Available	Workers 16 Years and Over in Households	B08141_001; Total	n/a
ACS_TOT_WORKER_NWFH	Total workers who do not work from home (ages 16 and over)	B08303: Travel Time to Work	Workers 16 Years and Over Who Did Not Work From Home	B08303_001; Total	n/a

Table 4.3 provides important variable notes for users of the SDOH Database to consider when working with ACS variables.

Table 4.3. ACS variable notes

Variable Name	Description	Notes
ACS_PCT_GRP_QRT	Percentage of persons in institutionalized group quarters	When comparing ACS data with prior years, ACS_PCT_GRP_QRT should not be compared because the weighting for the group quarters (GQ) population is not controlled below the state level. Because of this, users may observe greater fluctuations in year-to-year ACS estimates of the GQ population at sub-state levels than at state levels. These fluctuations typically result from GQs that have closed or where the current population of the GQ is significantly different than the expected population as reflected on the sampling frame. Substantial changes in the ACS GQ estimates can affect ACS estimates of total population characteristics for areas where either the GQ population is a substantial proportion of the total population or where the GQ population may have very different characteristics than the area population as a whole.
ACS_MEDIAN_RENT	Median gross rent (dollars)	Data on gross rent should not be compared to Census 2000 gross rent data. For Census 2000, the Bureau did not release tables for total renter-occupied units. The universe in Census 2000 was "specified renter-occupied housing units" whereas the universe in the ACS is "renter occupied housing units." Thus, comparisons cannot be made between these two data sets.
ACS_AVG_HH_SIZE	Average household size	The estimates of household size differ from those obtained from the 2010 Census. For more information, see " Comparing 2010 American Community Survey 1-Year Estimates of Occupancy Status, Vacancy Status, and Household Size with the 2010 Census – Preliminary Results "
ACS_PCT_1UP_OWNER_1ROOM, ACS_PCT_1UP_PERS_1ROOM, ACS_PCT_1UP_RENT_1ROOM	Percentage of owner-occupied/renter-occupied/ all housing units with more than one occupant per room	Data on occupants per room should be compared with great caution to Census 2000 data due to: 1) differences in residence rules and the absence of population controls used to adjust for under coverage 2) differences in the reported number of rooms due to changes in the rooms question that occurred between the 2007 and 2008 ACS.
ACS_PCT_HU_PLUMBING	Percentage of housing units lacking complete plumbing facilities	Before 2016, a housing unit with complete plumbing had to have hot and cold piped (later changed to running) water, a flush toilet, and a bathtub or shower. In 2016, ACS no longer asked if the housing unit had a flush toilet.
ACS_PCT_HH_LIMIT_ENGLISH	Percentage of limited English speaking households	Methodological changes to data collection in 2013 may have affected language data. Users should be aware of these changes when comparing data from 2013 or after to data from before 2013, or when using multi-year ACS data containing data from before and after 2013. For more information on comparability of language data, please review the year-specific subject definition guides for ACS.

Variable Name	Description	Notes
ACS_PCT_NONCTN_2000	Percentage of population who are not U.S. citizens and entered U.S. between 2000 and 2009	A note of caution when comparing ACS and Census 2000 year of entry data: Census 2000 represents data collected as of April 1, 2000, and thus the "2000" year of entry category accounts only for the first quarter (Jan-Mar) in 2000. In comparison, the ACS represents data collected throughout the entire year and thus the "2000" year of entry category accounts for the entire year of 2000.
Applicable to all computer and internet variables in the SDOH Database	Computer and internet variables	Caution should be used when comparing pre-2016 estimates due to question revisions. Observed changes may be due to the revised wording used in the questions and improved measurement rather than a change in use. For more information, see https://www.census.gov/content/dam/Census/library/publications/2018/acs/ACS-39.pdf .
ACS_MEDIAN_YEAR_BUILT	Median year structure built of housing units	These questions are not asked for the group quarters population, so do not include data about people living in housing such as dorms, prisons, nursing homes, etc. In the course of developing the SDOH Database, an error was found in the "jam values" in the 2014-2018 and 2015-2019 ACS 5-year estimates. Based on some further investigation, it was identified that the value of zero (0) references counties where the median year that structures were built was 1939 or earlier. Additionally in the 2013-2017 ZCTA and Tract estimates the Jam Value is 2016 or later (2 ZCTAs and 1 Tract) but reverts to 2014 or later in subsequent years.

Notes on Trends and Comparisons Across Areas

In 2020, the COVID-19 pandemic affected ACS data collection. Consequently, the ACS collected only two-thirds of the responses it usually collects in a typical survey year. This caused an increase in the coefficients of variation (CV) by approximately 15-20% in relative terms (e.g., a CV of 0.25 would increase to 0.29-0.30), and similar relative increases in the published margins of error as well. For more information, please see: https://www2.census.gov/programs-surveys/acs/tech_docs/accuracy/MultiyearACSAccuracyofData2020.pdf. For further information on the adaptations the Census Bureau made during the pandemic, please see: <https://www.census.gov/newsroom/blogs/random-samplings/2021/05/adapting-the-acss-amid-covid-19.html>.

Methodological Change to 5-Year Dollar-Based Medians in 2015

Beginning in data year 2015, a new methodology was applied to the 5-year dollar-based medians that suppresses the table for the geographic area if the margin of error is larger than the estimate itself. In the SDOH Database this impacts the median variables related to income and housing. For more information on margins of error see https://www2.census.gov/programs-surveys/acs/tech_docs/accuracy/MultiyearACSAccuracyofData2015.pdf.

Jam Values

Some data values represent unique situations where the information to be conveyed is an open-ended distribution, such as “4000 or greater,” represented by 4001. These are called “jam values.” Table 4.4 lists the jam values for medians in the SDOH database.

Table 4.4 ACS jam values

SDOH Years	Jam Values	Actual Meaning	Use for Medians
2009-2020	0-115	1 or less-115 or more	Age
2009-2014	99-2001	100 or less-2000 or more	Rent
2015-2020	99-3501	100 or less-3500 or more	Rent
2009-2020	99-4001	100 or less-4000 or more	Selected Monthly Owner Costs (with mortgage)
2009-2014	99-1001	100 or less-1000 or more	Selected Monthly Owner Costs (no mortgage)
2015-2020	99-1501	100 or less-1501 or more	Selected Monthly Owner Costs (no mortgage)
2009-2011	1939-2005	1939 or earlier-2005 or later	Year Built
2012-2015	1939-2011	1939 or earlier-2011 or later	Year Built
2016-2020	1939-2014	1939 or earlier-2014 or later	Year Built ⁶
2009-2020	2499-250001	2,500 or less-250,000 or more	Income
2009-2014	9999-1000001	10,000 or less – 1,000,000 or more	Home Value
2015-2020	9999-2000001	10,000 or less – 2,000,000 or more	Home Value

Other Notes

Because ACS variables change over time, some areas and subjects must be compared with caution or not compared at all. The Census Bureau recommends comparing non-overlapping data sets (e.g., 2005-2009 and 2010-2014 ACS 5-year estimates), but not comparing overlapping data sets (e.g., 2005-2009 and 2006-2010 ACS 5-year estimates).

Because geographic boundaries for census tracts change after each decennial census, users should take note with comparing variables across years spanning different decennial censuses as the population totals and geographic areas represented by a given census tract may change.

Users can obtain national weighted totals from either county- or census tract-level files by aggregating individual measures across the country, weighting by the variable indicated in the “Universe” column in Table 4.2.

Variation in availability of ACS data across years:

Users will notice that some ACS variables are missing in certain years of the SDOH Database. Table 4.5 below provides the categories of variables that are available for a limited time range:

⁶ Please see variable note for ACS_MEDIAN_YEAR_BUILT – A modification was made in 2018. The Jam value was changed to 0 for 1939 or earlier and 2014 for 2014 or later.

Table 4.5 Categories of ACS available for a limited time range

Variable Category	Years Available	Number of Variables in SDOH files	Reason for Missing Data
Internet Connectivity	2017-2020	19	Internet and computer variables are provided in the ACS 5-year estimates for all geographies in 2017 and onwards.
Health insurance	2013-2020	28	Health insurance status and health insurance related federal poverty variables were first produced in the 5-year estimates for all geographies in 2013.
Disability Status	2012-2020	5	The first 5-year estimates on the disability status of individuals were produced for all geographies in 2012.
Veteran Poverty Status	2012-2020	3	The first 5-year estimates on the poverty status of veterans were produced for all geographies in 2012.
Citizenship and voting age	2018-2020	1	Beginning with the 2014-2018 ACS releases, a small number of new tables organizing information about the citizen voting-age population have been created based upon questions which were already in the survey.
Entry into the country after 2010	2012-2020	1	One variable tracking people who entered the country after 2010 was introduced starting with the 2007-2012 5-year estimates.
Same-sex spouses	2019-2020	1	The first 5-year estimates for same-sex spouses were produced for all geographies in 2019. In prior years, estimates for same-sex unmarried couples were provided and has been included in the SDOH Database.

Source Table Updates

Certain ACS source tables have been updated, modified, or discontinued between 2009 and 2020. Users may see different variable definitions for the numerator or the denominator in the source data documentation resulting from these changes. Table 4.6 provides the ACS source tables that have been updated or modified and the category of variables affected:

Table 4.6 ACS source table updates

ACS Source Table	Category	Update Year	Number of Variables in SDOH files	Reason
Table C27016	Health insurance related federal poverty variables	2017	4	An additional row was added to the table format in 2017 to account for population below 1.00 of the poverty threshold.
Table B5005	Nativity and citizenship	2012	5	An additional row was added in 2012 to account for people who entered the country after 2010.
Table B21001	Veteran population estimates	2010	1	The table format was updated in B21001.
Table B11009	Same Sex Unmarried Spouse	2019	1	The table format was updated in 2019.
Table B15002/ Table B15003	Education	2012	7	The table B15003 was first introduced in 2012.
Table B23025/Table B23001	Employment	2011	5	The table B23025 was introduced in 2011.
Table B08134/Table C08134/Table B08301	Transportation	2011	8	The table B08134 was introduced in 2011. Prior to 2011 tables B08301 and C08134 provide the same information.

Poverty Rates

The overall poverty rate for all individuals in a geographic area is available in ACS_PCT_PERSON_INC_BELOW99.

Categories for poverty rates used in ACS health insurance variables (ACS_PCT_HEALTH_INC_BELOW137, ACS_PCT_HEALTH_INC_138_199, ACS_PCT_HEALTH_INC_200_399,) correspond to HHS poverty guidelines that are relevant for programs such as Marketplace health insurance, and Medicaid and CHIP coverage. For further information, see <https://www.healthcare.gov/glossary/federal-poverty-level-fpl/>.

Categories for poverty rates used in other ACS poverty rate variables correspond to those used in ACS table C17002. For further information, see <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>.

In addition, measures of “extreme poverty” corresponding to less than 50% of the federal poverty line are included for individuals below 18 years of age and individuals above the age of 65, in order to provide additional measures of poverty for these particularly vulnerable age groups.

Term Definitions

Table 4.7 provides important term definitions for users of the SDOH Database to consider when working with ACS variables. For more information regarding specific definitions please review the ACS documentation regarding subject definitions. The 2020 Subject Definition document is available here: https://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2020_ACSSubjectDefinitions.pdf

Table 4.7. Term definitions, ACS

Term	Definition
American Indian or Alaska Native	A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment. This category includes people who indicate their race as "American Indian or Alaska Native" or report entries such as Navajo, Blackfeet, Inupiat, Yup'ik, or Central American Indian groups, or South American Indian groups.
Asian	A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. It includes people who indicate their race as "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," and "Other Asian" or provide other detailed Asian responses.
Black or African American	A person having origins in any of the Black racial groups of Africa. People who indicate their race as "Black or African American" or report entries such as African American, Kenyan, Nigerian, or Haitian.
Citizenship status	Respondents were asked to select one of five categories: (1) born in the United States, (2) born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas, (3) born abroad of U.S. citizen parent or parents, (4) U.S. citizen by naturalization, or (5) not a U.S. citizen. Respondents who indicated they were a U.S. citizen by naturalization were asked to include their year of naturalization. When no information on citizenship status was reported for a person, information for other household members, if available, was used to assign a citizenship status to the respondent. All cases of nonresponse that were not assigned a citizenship status based on information from other household members were allocated the citizenship status of another person with similar characteristics who provided complete information. In cases of conflicting responses, place of birth information was used to edit citizenship status.
Civilian labor force	People classified as employed or unemployed in accordance with the criteria described below for "Employed" and "Unemployed".
Disability	To identify individuals with disabilities, the ACS recognizes serious difficulty with four basic areas of functioning – hearing, vision, cognition, and ambulation as indicating disability. These functional limitations are supplemented by questions about difficulties with selected activities from the Katz Activities of Daily Living (ADL) and Lawton Instrumental Activities of Daily Living (IADL) scales, namely difficulty bathing and dressing, and difficulty performing errands such as shopping. Overall, the ACS attempts to capture six aspects of disability (hearing, cognitive, ambulatory, self-care, and independent living difficulties) which can be used together to create an overall disability variable, or independently to identify populations with six disability types. For more information, see https://www.census.gov/topics/health/disability/guidance/data-collection-acrs.html
Employed	This category includes all civilians 16 years old and over who either (1) were "at work," that is, those who did any work at all during the reference week as paid employees, worked in their own business or profession, worked on their own farm, or worked 15 hours or more as unpaid workers on a family farm or in a family business; or (2) were "with a job but not at work," that is, those who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Excluded from the employed are people whose only activity consisted of work around the house or unpaid volunteer work; also excluded are people who are institutionalized and people on active duty in the United States Armed Forces.

Term	Definition
Gini Index	The Gini Index is a measure of how much a distribution varies from a proportionate distribution. This variable is presented for household income. The Gini ranges from zero (perfect equality) to one (perfect inequality), and it is calculated by measuring the difference between a diagonal line (the purely proportionate distribution) and the distribution of actual values (a Lorenz curve).
Group quarters	A group quarter (GQ) is a place where people live or stay in a group living arrangement that is owned or managed by an entity or organization providing housing and/or services for the residents. GQs include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, workers' dormitories, and facilities for people experiencing homelessness.
Gross rent	Gross rent is the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else). Gross rent is included as a variable to eliminate differentials that result from varying practices of including utilities and fuels as part of the rental payment.
Household	A household includes all people who occupy a housing unit. People not living in households are classified as living in group quarters. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other people in the building, and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living arrangements.
Household size	This question is based on the count of people in occupied housing units. All people occupying the housing unit are counted, including the householder, occupants related to the householder, and roommates, and housemates.
Housing unit	A housing unit may be a house, an apartment, a mobile home, a group of rooms or a single room that is occupied (or, if vacant, intended for occupancy) as separate living quarters. Both occupied and vacant housing units are included in the housing unit inventory. Also excluded from the housing inventory are quarters being used entirely for nonresidential purposes, such as a store or an office, or quarters used for the storage of business supplies or inventory, machinery, or agricultural products.
Income	"Total income" is the sum of the amounts reported separately for wage or salary income; net self-employment income; interest, dividends, or net rental or royalty income or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental Security Income (SSI); public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income. Receipts from the following sources are not included as income: capital gains, money received from the sale of property (unless the recipient was engaged in the business of selling such property); the value of income "in kind" from food stamps, public housing subsidies, medical care, employer contributions for individuals, etc.; withdrawal of bank deposits; money borrowed; tax refunds; exchange of money between relatives living in the same household; gifts and lump-sum inheritances, insurance payments, and other types of lumpsum receipts
Kitchen facilities	A unit has complete kitchen facilities when it has all three of the following facilities: (c) a sink with a faucet, (d) a stove or range, and (e) a refrigerator. All kitchen facilities must be in the house, apartment, or mobile home, but they need not be in the same room. A housing unit having only a microwave or portable heating equipment such as a hot plate or camping stove should not be considered as having complete kitchen facilities. An icebox is not considered to be a refrigerator.
Labor force	All people classified in the civilian labor force plus members of the U.S. Armed Forces (people on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard).
Limited English speaking households	This variable identifies households that may need English-language assistance. A "Limited English-speaking household" is one in which no member 14 years old and over (1) speaks only English at home or (2) speaks a language other than English at home and speaks English "Very well." If all household members 14 and over speak a language other than English and speak English "Less than very well," the household may need English language assistance.

Term	Definition
Mobile home	Both occupied and vacant mobile homes to which no permanent rooms have been added are counted in this category. Towable recreational vehicles, such as travel trailers or fifth-wheel trailers, are considered mobile homes. Mobile homes used only for business purposes or for extra sleeping space and mobile homes for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.
Native Hawaiian or other Pacific Islander	A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicate their race as "Native Hawaiian," "Guamanian or Chamorro," "Samoa," and "Other Pacific Islander" or provide other detailed Pacific Islander responses.
No fuel used	Data on house heating fuel was asked at occupied housing units. The data show the type of fuel used most to heat the house, apartment, or mobile home. This category includes units that do not use any fuel or that do not have heating equipment.
Not in labor force	All people 16 years old and over who are not classified as members of the labor force. This category consists mainly of students, homemakers, retired workers, seasonal workers interviewed in an off season who were not looking for work, institutionalized people, and people doing only incidental unpaid family work (less than 15 hours during the reference week).
Occupants per room	Occupants per room is obtained by dividing the reported number of current residents in each occupied housing unit by the number of rooms in the unit. The figures show the number of occupied units having the specified ratio of current residents per room. Occupants per room is rounded to the nearest hundredth.
Occupied housing unit	A housing unit is classified as occupied if it is the current place of residence of the person or group of people living in it at the time of interview, or if the occupants are only temporarily absent from the residence for two months or less, that is, away on vacation or a business trip.
Own child	A never-married child under 18 years who is a son or daughter by birth, a stepchild, or an adopted child of the householder. In certain tabulations, own children are further classified as living with two parents or with one parent only. Own children of the householder living with two parents are by definition found only in married-couple families.
Owner-occupied housing unit	A housing unit is owner-occupied if the owner or co-owner lives in the unit, even if it is mortgaged or not fully paid for. The owner or co-owner must live in the unit and usually is Person 1 on the questionnaire. The unit is "Owned by you or someone in this household with a mortgage or loan" if it is being purchased with a mortgage or some other debt arrangement such as a deed of trust, trust deed, contract to purchase, land contract, or purchase agreement.
Plumbing facilities	Complete plumbing facilities include: (a) hot and cold running water and (b) a bathtub or shower. Both facilities must be located inside the house, apartment, or mobile home, but not necessarily in the same room. Housing units are classified as lacking complete plumbing facilities when either of the two facilities is not present.
Poverty status	To determine a person's poverty status, one compares the person's total family income in the last 12 months with the poverty threshold appropriate for that person's family size and composition. If the total income of that person's family is less than the threshold appropriate for that family, then the person is considered "below the poverty level," together with every member of his or her family. If a person is not living with anyone related by birth, marriage, or adoption, then the person's own income is compared with his or her poverty threshold. Poverty status was determined for all people except institutionalized people, people in military group quarters, people in college dormitories, and unrelated individuals under 15 years old. These groups were excluded from the numerator and denominator when calculating poverty rates. For more information on poverty measures, see https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html
Race alone	The concept "race alone" includes people who reported a single entry (e.g., Korean) and no other race, as well as people who reported two or more entries within the same major race group (e.g., Asian). For example, respondents who reported Korean and Vietnamese are part of the larger "Asian alone" race group.

Term	Definition
Race combination	The concept "race alone or in combination" includes people who reported a single race alone (e.g., Asian) and people who reported that race in combination with one or more of the other major race groups (e.g. White, Black or African American, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, and Some Other Race). The "race alone or in combination" concept, therefore, represents the maximum number of people who reported as that race group, either alone, or in combination with another race(s). The sum of the six individual race "alone or in combination" categories may add to more than the total population because people who reported more than one race were tallied in each race category.
Related child	Any child under 18 years old who is related to the householder by birth, marriage, or adoption. Related children of the householder include ever married as well as never-married children. Children, by definition, exclude persons under 18 years who maintain households or are spouses or unmarried partners of householders.
Renter-occupied housing unit	All occupied housing units which are not owner-occupied, whether they are rented or occupied without payment of rent, are classified as renter occupied. "No rent paid" units are separately identified in the rent tabulations. Such units are generally provided free by friends or relatives or in exchange for services such as resident manager, caretaker, minister, or tenant farmer. Housing units on military bases also are classified in the "No rent paid" category. "Rented" includes units in continuing care, sometimes called life care arrangements.
Rooms	For each unit, rooms include living rooms, dining rooms, kitchens, bedrooms, finished recreation rooms, enclosed porches suitable for year-round use, and lodger's rooms. Excluded are strip or pullman kitchens, bathrooms, open porches, balconies, halls or foyers, half-rooms, utility rooms, unfinished attics or basements, or other unfinished space used for storage. A partially divided room is a separate room only if there is a partition from floor to ceiling, but not if the partition consists solely of shelves or cabinets.
Selected monthly owner costs	Selected monthly owner costs are the sum of payments for mortgages, deeds of trust, contracts to purchase, or similar debts on the property (including payments for the first mortgage, second mortgages, home equity loans, and other junior mortgages); real estate taxes; fire, hazard, and flood insurance on the property; utilities (electricity, gas, and water and sewer); and fuels (oil, coal, kerosene, wood, etc.). It also includes, where appropriate, the monthly condominium fee for condominiums and mobile home costs (personal property taxes, site rent, registration fees, and license fees).
Some other race	Includes all other responses not included in the "White," "Black or African American," "American Indian or Alaska Native," "Asian," and "Native Hawaiian or Other Pacific Islander" race categories described above. Respondents reporting entries such as multiracial, mixed, interracial, or a Hispanic, Latino, or Spanish group (for example, Mexican, Puerto Rican, Cuban, or Spanish) in response to the race question are included in this category.
Two or more races	People may choose to provide two or more races either by checking two or more race response check boxes, by providing multiple responses, or by some combination of check boxes and other responses. For data product purposes, "Two or More Races" refers to combinations of two or more of the following race categories: 1. White, 2. Black or African American 3. American Indian or Alaska Native 4. Asian 5. Native Hawaiian or Other Pacific Islander 6. Some Other Race.
Unemployed	All civilians 16 years old and over are classified as unemployed if they (1) were neither "at work" nor "with a job but not at work" during the reference week, and (2) were actively looking for work during the last 4 weeks, and (3) were available to start a job. Also included as unemployed are civilians who did not work at all during the reference week, were waiting to be called back to a job from which they had been laid off and were available for work except for temporary illness.
Unmarried partner	An unmarried partner is a person who is in an intimate relationship with the householder, such as a boyfriend or girlfriend. An "unmarried partner" can be of the same sex or of the opposite sex as the householder.
Vacant housing unit	A housing unit is vacant if no one is living in it at the time of interview. Units occupied at the time of interview entirely by persons who are staying two months or less and who have a more permanent residence elsewhere are temporarily occupied and are classified as "vacant."

Term	Definition
Veteran status	Veteran status is used to identify people with active-duty military service and service in the military Reserves and the National Guard. Veterans are men and women who have served (even for a short time), but are not currently serving, on active duty in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast Guard, or who served in the U.S. Merchant Marine during World War II. People who served in the National Guard or Reserves are classified as veterans only if they were ever called or ordered to active duty, not counting the 4-6 months for initial training or yearly summer camps. All other civilians are classified as nonveterans.
White	A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian.
Worker	This term appears in connection with several subjects: employment status, journey-to-work questions, class of worker, weeks worked in the past 12 months, and number of workers in family in the past 12 months. The meaning varies and, therefore, should be determined in each case by referring to the definition of the subject in which it appears. When used in the concepts "workers in family" and "full-time, year-round workers," the term "worker" relates to the meaning of work defined for the "work experience" subject.
Year structure built	Year structure built refers to when the building was first constructed, not when it was remodeled, added to, or converted. Housing units under construction are included as vacant housing if they meet the housing unit definition, that is, all exterior windows, doors, and final usable floors are in place. For mobile homes, houseboats, RVs, etc., the manufacturer's model year was assumed to be the year built. The data relate to the number of units built during the specified periods that were still in existence at the time of interview.

* The definitions provided can be found in the ACS subject definitions. The 2019 ACS version is available here:
https://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2019_ACSSubjectDefinitions.pdf

5. American Hospital Association Annual Survey (AHA)

Sponsor

American Hospital Association (AHA)

Description

The AHA Annual Survey of hospitals in the United States is administered online to operating hospitals in the United States and territories. The survey is comprised of questions related to the following domains: organization structure (e.g., ownership status, services provision, and national identifiers); facilities and services provided (by institutions themselves, through contracts, by other partnering facilities); total facility beds, utilization, finances, and staffing (beds and length of stay, source of payment, revenues and expenses, assets, non-reimbursed care, information technology investment, staffing information); community benefits; and management diversity. The AHA survey data can be used independently or linked with other CMS and non-CMS data sets to report trends, performance, and quality indicators.

According to the AHA, the survey's overall response rate averages approximately 80% each year. For hospitals not responding to the survey in a given year, AHA reports estimates using statistical models based on historical data. For instance, in 2019, AHA reported data for 6,090 U.S. hospitals and 69 hospitals in U.S. territories. Of these 6,159 total hospitals, 1,989 failed to respond, and AHA provided previously reported AHA data for those hospitals.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2015 – 2019
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** AHA_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database county data files contain six variables of market concentration at the county and at the core-based statistical area (CBSA) level for 2015 – 2019.

Resources

Data from the AHA Annual Survey Database for years 2015 – 2019 was licensed for use on the SDOH Database. The variables that were created using the Licensed Data were permitted to be made publicly available by AHRQ. This license limits data at the hospital level from being released or shared publicly; however, the variables created using AHA data that were aggregated at the county level were allowed for release in the SDOH Database.

Suggested Citation

AHRQ SDOH Database (v1), from American Hospital Association Annual Survey Data,
<https://www.ahadata.com/>,

Data Set Notes

Reliability

AHA Annual Survey Data contains primarily self-reported data. For hospitals that do not respond to all or part of the survey, the AHA reports estimates for most fields using two major approaches. First, AHA generates estimates from regression models for nine key variables – (1) total admissions; (2) total births; (3) total inpatient days; (4) total expenses; (5) total full-time employees; (6) total surgical operations; (7) total outpatient visits; (8) total part-time employees; and (9) total revenue. The current year's missing value is predicted using the coefficients derived from the regression model based on the previous year's data.

AHA also fills in missing data for nonresponding hospitals with data from an internal AHA database. AHA uses this method for a number of fields including hospital identifiers and location information.

Variable Notes

The SDOH Database uses AHA Annual Survey Database to create Herfindahl-Hirschman Indices (HHIs) of hospital concentration. The HHI is a measure of market concentration that ranges from 0 to 10,000 and is calculated by summing the square of market shares across all hospitals. Low values indicate low concentration and high values indicate high concentration. In the extreme where there is only one hospital available the HHI would be 10,000.

The database includes six separate HHI variables for different definitions of market share and market area. All are constructed using short term acute care hospitals as the definition of hospital, with individual hospitals grouped into health systems where applicable. Separate HHI Indices were created using Medicare discharges, admissions, and length of stay as the measure of market share. For each of these market share definitions, two HHI indices were calculated using either the Core-Based Statistical Area (CBSA) or the county as the relevant market area.

For HHI to be defined, there must be a well-defined market area with at least one hospital in the area. Therefore, for county-level HHI variables, counties with zero hospitals will have missing values for HHI. For CBSA-level HHI variables, counties that do not fall into a CBSA will have missing values for HHI. Since counties are contained within CBSAs, each county in the same CBSA will have the same CBSA-level HHI value in the SDOH Database.

Table 5.1 below provides information on the variable availability across years. Table 5.2 provides more information on what numerator and denominator variables were drawn for AHA variables in the SDOH Database.

Table 5.1. Variable availability across years, AHA

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHA_HHI_SHRTTRM_ACUTE_ADMSN_CBSA	X									X	X	X	X	X	
AHA_HHI_SHRTTRM_ACUTE_ADMSN_CTY	X									X	X	X	X	X	
AHA_HHI_SHRTTRM_ACUTE_DSCHR_CBSA	X									X	X	X	X	X	
AHA_HHI_SHRTTRM_ACUTE_DSCHR_CTY	X									X	X	X	X	X	
AHA_HHI_SHRTTRM_ACUTE_LOS_CBSA	X									X	X	X	X	X	
AHA_HHI_SHRTTRM_ACUTE_LOS_CTY	X									X	X	X	X	X	

Table 5.2. Variable definitions and specifications, AHA

Variable Name	Variable Label	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHA_HHI_SHRT_TRM_ACUTE_DSCHR_CBSA	Herfindahl-Hirschman Index for short-term acute care hospitals (discharge, CBSA level)	1. Filter to CNTRL<40 and SERV=10 and LOS=1 2. Group hospitals by SYSID and create the HHI using MCRDCH at the MSA level (DIVNAME). Each county in the MSA will then have the same HHI.	n/a
AHA_HHI_SHRT_TRM_ACUTE_ADMSN_CBSA	Herfindahl-Hirschman Index for short-term acute care hospitals (admission, CBSA level)	1. Filter to CNTRL<40 and SERV=10 and LOS=1 2. Group hospitals by SYSID and create the HHI using TOTADM at the MSA level (DIVNAME). Each county in the MSA will then have the same HHI.	n/a
AHA_HHI_SHRT_TRM_ACUTE_LOS_CBSA	Herfindahl-Hirschman Index for short-term acute care hospitals (length of stay, CBSA level)	1. Filter to CNTRL<40 and SERV=10 and LOS=1 2. Group hospitals by SYSID and create the HHI using IPLOS at the MSA level (DIVNAME). Each county in the MSA will then have the same HHI.	n/a
AHA_HHI_SHRT_TRM_ACUTE_DSCHR_CTY	Herfindahl-Hirschman Index for short-term acute care hospitals (discharge, County level)	1. Filter to CNTRL<40 and SERV=10 and LOS=1 2. Group hospitals by SYSID and create the HHI using MCRDCH at the County level.	n/a
AHA_HHI_SHRT_TRM_ACUTE_ADMSN_CTY	Herfindahl-Hirschman Index for short-term acute care hospitals (admission, County level)	1. Filter to CNTRL<40 and SERV=10 and LOS=1 2. Group hospitals by SYSID and create the HHI using TOTADM at the County level.	n/a
AHA_HHI_SHRT_TRM_ACUTE_LOS_CTY	Herfindahl-Hirschman Index for short-term acute care hospitals (length of stay, County level)	1. Filter to CNTRL<40 and SERV=10 and LOS=1 2. Group hospitals by SYSID and create the HHI using IPLOS at the County level.	n/a

Term Definitions

Table 5.3 provides important term definitions for users of the SDOH Database to consider when working with AHA variables.

Table 5.3. Term definitions, AHA

Term	Definition
HHI	<p>The term “HHI” refers to the Herfindahl–Hirschman Index, a commonly accepted variable of market concentration. The HHI is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. The HHI takes into account the relative size distribution of the firms in a market. It approaches zero when a market is occupied by a large number of firms of relatively equal size and reaches its maximum of 10,000 points when a market is controlled by a single firm. The HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases.</p> <p>The following formula shows how to calculate HHI:</p> $HHI = 10,000 \left[\sum_{i=1}^n \left(\frac{s_i}{S} \right)^2 \right]$ <p>where, S is the total Medicare discharges, admissions, or lengths of stay across hospital-firms in the market area; s_i is the Medicare discharges, admissions, or lengths of stay for the i^{th} hospital-firm in the market area, and n is the unique number of hospital-firms in the market area. Hospitals in the same health system in a market area were treated as part of a single hospital-firm and had their Medicare discharges, admissions, or lengths of stay pooled for computing s_i.</p>

6. Area Health Resources Files (AHRF)

Sponsor

U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA)

Description

The AHRF is a compendium of data from more than 50 databases and other sources on healthcare professions, health facilities, population characteristics, economics, health professions training, hospital utilization, and hospital expenditures. It provides current as well as historical data for more than 6,000 variables for each county, as well as for state and national data. The basic file contains a variety of geographic descriptors and codes that enable aggregation of county level data into other geographic groupings and linking to other files.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2020
- ▶ **SDOH domain(s):**
 - Economic context
 - Geography
 - Healthcare context
 - Physical infrastructure
 - Social context
- ▶ **SDOH variable naming convention:** AHRF_[VARNAME]
- ▶ **SDOH geographic level(s):** County

We drew variables directly from the AHRF and renamed them for clarity and consistency with other SDOH Database variables. AHRF files are published annually, but each AHRF release year contains variables that pertain to multiple years. For example, the 2018 total number of colorectal surgeons (renamed as AHRF_TOT_COLON_SRG in the SDOH Database) that was derived from the AMA Physician Master File is found on the 2019-2020 AHRF file—2019 being the year when the AMA released this variable. The SDOH Database includes measures from AHRF based on the year for which the variable pertains and not based on the AHRF release year. Table 6.5 provides a crosswalk of the variable year and AHRF publication year for all variables that we included in the SDOH Database.

Below, we describe the source data sets for AHRF data that we have incorporated into the SDOH Database:

- a) Physician and provider data were obtained from the respective year's *American Medical Association (AMA) Physician Masterfiles*. AMA is the source for the raw physician data; statistics, tables or tabulations were prepared by the Health Resources & Services Administration / National Center for Health Workforce Analysis using AMA Masterfile data.

- b) All hospital data are from the *American Hospital Association (AHA) Annual Survey of Hospitals* reporting for a 12-month period. The AHA is the source for hospital related data; statistics, tables or tabulations were prepared by the Health Resources & Services Administration/National Center for Health Workforce Analysis using AHA Survey data. According to the AHA, the survey's overall response rate averages approximately 80% each year. As mentioned previously, for hospitals that did not respond to the survey in a particular year, AHA reports estimates based on historical data.
- c) Data regarding providers with a National Provider Identifier (NPI)⁷ are from the Centers from Medicare and Medicaid Services (CMS) *NPI Downloadable File*. These NPIs are used to create counts of providers by county that are included in the SDOH Database.
- d) National Health Service Corps data, Community Health center data, and Health Professional Shortage Area (HPSA) variables for Primary Medical Care, Dentists and Mental Health Professionals are from the Health Resources and Services Administration (HRSA) data warehouse. AHRF data include Health Professional Shortage Area (HPSA) variables indicating healthcare provider shortages in primary care, dental health, or mental health. These shortages may be based on geography, population groups, or facilities. HPSA scores are calculated based on discipline-specific methodology. The three scoring criteria common across all disciplines are population-to-provider ratio, percentage of population below 100 percent of the federal poverty level, and travel time to the nearest source of care outside the HPSA designation area. HPSA scoring methodology differentiated by discipline is available on the HRSA website (<https://bhw.hrsa.gov/shortage-designation/hpsa-criteria>).

Also included from the AHRF in SDOH county-level files are the 2013 USDA Rural-Urban Continuum Codes, or RUCC (AHRF_USDA_RUCC_2013). This variable has nine values as follows:

- Metropolitan counties
 - 1. Counties in metro areas of 1 million population or more
 - 2. Counties in metro areas of 250,000 to 1 million population
 - 3. Counties in metro areas of fewer than 250,000 population
 - Nonmetropolitan counties
 - Urban population of 20,000 or more, adjacent to a metro area
 - Urban population of 20,000 or more, not adjacent to a metro area
 - Urban population of 2,500 to 19,999, adjacent to a metro area
 - Urban population of 2,500 to 19,999, not adjacent to a metro area
 - Completely rural or less than 2,500 urban population, adjacent to a metro area
 - Completely rural or less than 2,500 urban population, not adjacent to a metro area
- e) The 2013 Rural/Urban Continuum Codes are from the U.S. Department of Agriculture's Economic Research Service (ERS) website: <http://www.ers.usda.gov/data-products/rural->

⁷ The NPI is a unique identifier developed by CMS.

[urban-continuum-codes.aspx](#). The codes form a classification scheme that distinguishes metropolitan (metro) counties by the population size of their metro area and nonmetropolitan (nonmetro) counties by degree of urbanization and adjacency to a metro area.

- f) The 2015 County Typology Codes are also from the U.S. Department of Agriculture's Economic Research Service (ERS) website, www.ers.usda.gov.
- g) Number of Prescription Drug Plan (PDP) Enrollees and Percent Prescription Drug Plan Penetration are from Centers for Medicare and Medicaid Service's State County Penetration Data for Prescription Drug Plan Files, as of December of each year of data included in the file.
- h) Data regarding Medicaid beneficiaries are available from the CMS' 2010 through 2012 Medicaid Analytic eXtract (MAX) Person-Summary Files.
- i) Local Area Unemployment Statistics (LAUS) estimates for the unemployment rate are included in the file.
- j) Data regarding the Medicare readmissions and Medicare Fee-For-Service (FFS) costs are included from the CMS' Geographic Variation Public Use File.
- k) The County-Level Marketplace Health Insurance Enrollment data are from the CMS.
- l) Veteran population estimates are from the Veteran Population Projection Model, Department of Veterans Affairs (VA). These estimates incorporate more recent survey data from the ACS and administrative data from the VA and the Department of Defense (DoD).
- m) Air quality data are from the Environmental Protection Agency (EPA), Air Data Air Quality Index Report. The Air Quality Index (AQI) is an indicator of overall air quality since it considers all air pollutants criteria that are measured within a geographic area. For additional information see <https://www.epa.gov/outdoor-air-quality-data>.
- n) Human Exposure Environmental Indicator data are from the EPA. The site-wide human exposure (HE) environmental indicator is designed to document long-term human health protection on a site-wide basis by measuring the incremental progress achieved in controlling unacceptable human exposures at a Superfund site. For details and definitions, see: <https://www.epa.gov/superfund/superfund-cercla-overview>.

Resources

The 2018-2020 data were downloaded from the HRSA website (last retrieved November, 2021): <https://data.hrsa.gov/data/download>.

Data for previous years were downloaded from archived versions of the HRSA website and the National Archives Catalog (<https://catalog.archives.gov/id/571544>).

Data Use License Agreement for the use of the Area Health Resources Files (AHRF) data is issued by the National Center for Health Workforce Analysis, Bureau of Health Workforce, Health Resources and Services Administration. The AHRF data are subject to the terms and conditions iterated. Please refer to the Data Use License Agreement included in the beginning pages of this documentation.

Suggested Citation

AHRQ SDOH Database (v1), from Health Resources and Services Administration. (2021, Nov 1). Area Health Resources Files [Database]. U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce.
<https://data.hrsa.gov/data/download>.

Data Set Notes

Reliability

Margins of error are not available for the estimates included in the AHRF file.

Geographic Levels

The AHRF includes one record for each county and independent city in the U.S. and one for each county equivalent in the U.S. territories of Guam, Puerto Rico, and the U.S. Virgin Islands for all sources except those mentioned below:

- Air quality data are reported for some counties in Puerto Rico in 2011 through 2020 and the US Virgin Islands in 2011 through 2013, 2015 through 2017 and 2020.
- Unemployment data are reported for all U.S counties and county equivalents in Puerto Rico.
- Colorado, Idaho, Kansas and Rhode Island were not reported on the 2012 CMS Medicaid MAX source file. Colorado was not reported on the 2011 CMS Medicaid MAX file.
- The County-Level Marketplace Health Insurance Enrollment data provide the total number of Qualified Health Plan (QHP) selections by county for the 38 states in 2020 and 2016, the 39 states in 2017 through 2019 and the 37 states in 2015 that used the HealthCare.gov platform for the Marketplace open enrollment period.
- Medicare Geographic Variation Public Use File Data are reported for the US Virgin Islands. Puerto Rico data were not carried on the AHRF.
- In 2010 and 2016-2020, CMS PDP data are reported in AHRF for the US Virgin Islands and Puerto Rico.
- Veteran Population Estimates are included on the AHRF for Guam. Puerto Rico and US Virgin Islands data are not reported in AHRF.
- Data are carried on the AHRF for Puerto Rico for the High Poverty Typology Code but not the Persistent Poverty Typology Code.

Suppression Rules

AHRF does not contain suppression rules that apply uniformly across the data set. However, some specific variables are subject to the suppression rules based on/or depending on underlying data source, as documented below:

- *Medicare Beneficiary FFS Hospital Readmissions:* Data are suppressed where the count of beneficiaries is less than 11. These are reported as missing on the AHRF and the SDOH Database.

- *Medicare Fee-For-Service Cost data:* Data are suppressed where the count of beneficiaries is less than 11. These are reported as missing on the AHRF and the SDOH Database.
- *Marketplace enrollment data:* Data for counties with 10 or fewer plan selections are suppressed to protect consumer privacy. This could include complimentary cell suppression (in addition to the primary suppression mentioned above) to ensure complete confidentiality. Suppressed data are reported as missing on the AHRF and SDOH Database.
- *Prescription drug plan penetration:* The privacy laws of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) have been interpreted to prohibit publishing enrollment data with values of 10 or less and are set to an asterisk on the source file. These instances are reported as missing on the AHRF and SDOH Database.

Variable Notes

Table 6.1 below provides information on the variable availability across years. Table 6.2 provides more information on what numerator and denominator variables were drawn for AHRF variables in the SDOH Database.

Table 6.1. Variable availability across years, AHRF

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_ADV_NURSES_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
AHRF_ALLERGY_IMM_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_ANESTH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_ARBRNE_ST_G_ISO_HOSPS_RATE	X			X	X	X	X	X	X		X	X	X	X	
AHRF_ARBRNE_ST_G_ISO_ROOMS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_ARBRNE_STNGLT_ISO_ROOM_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_CARDIAC_IC_BEDS_RATE	X			X	X	X	X	X	X		X	X	X	X	
AHRF_CARDIAC_IC_HOSP_RATE	X			X	X	X	X	X	X		X	X	X	X	
AHRF_CARDIOVAS_SPEC_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_CHLD_PSYCH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_CLIN_NURSE_SPEC_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
AHRF_COLON_SRG_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_COM_HEALTH_GRANT_RATE	X						X	X	X	X	X	X	X	X	
AHRF_DAYS_AIR_QLT	X				X	X	X	X	X	X	X	X	X	X	
AHRF_DENTISTS_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_DERMATOLOGY_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_DUAL_ELIG	X				X	X	X								
AHRF_ECO_DEP_USDA	X									X					
AHRF_ER_MED_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_FARM_DEP_USDA	X									X					
AHRF_GASTROENTEROLOGY_RATE	X					X	X	X	X	X	X	X	X	X	
AHRF_GEN_INTERNAL_MED_RATE	X					X	X	X	X	X	X	X	X	X	
AHRF_GEN_PREV_RATE	X					X	X	X	X	X	X	X	X	X	
AHRF_GENRL_SURG_RATE	X					X	X	X	X	X	X	X	X	X	
AHRF_GOV_DEP_USDA	X										X				
AHRF_HIGH_POV_USDA	X										X				
AHRF_HOSP_BED_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_HOSP_BEDS_LT_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_HOSP_MOBILE_RATE	X					X	X	X	X	X		X	X	X	
AHRF_HOSP_TEACHING	X					X	X	X	X	X		X	X	X	
AHRF_HOSP_TELE_ICU_RATE	X											X	X	X	
AHRF_HOSP_TELE_STROKE_RATE	X											X	X	X	

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_HOSPS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_HPSA_DENTIST	X				X	X	X	X		X	X	X	X	X	X
AHRF_HPSA_MENTAL	X				X	X	X	X		X	X	X	X	X	X
AHRF_HPSA_PRIM	X				X	X	X	X		X	X	X	X	X	X
AHRF_IP_DAY_NH_HOSP RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_IP_DAY_ST_G_HOSP RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_IP_DAY_STNG_LT RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_LOW_EDUC_USDA	X									X					
AHRF_LOW_EMP_USDA	X									X					
AHRF_LT_HOSP RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_MANF_DEP_USDA	X									X					
AHRF_MARKET_ENROL	X									X	X	X	X	X	X
AHRF_MARKET_ENROL_150	X									X	X	X	X	X	X
AHRF_MARKET_ENROL_200	X									X	X	X	X	X	X
AHRF_MARKET_ENROL_250	X									X	X	X	X	X	X
AHRF_MARKET_ENROL_300	X									X	X	X	X	X	X
AHRF_MARKET_ENROL_400	X									X	X	X	X	X	X
AHRF_MARKET_ENROL_ACTIVE	X									X	X	X	X	X	X
AHRF_MARKET_ENROL_AUTO	X									X	X	X	X	X	X
AHRF_MARKET_ENROL_NEW	X									X	X	X	X	X	X
AHRF_MARKET_ENROL_NO_ASST	X												X	X	X
AHRF_MARKET_ENROL_OTHER	X												X	X	X
AHRF_MCR_BN_READM RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_MDS RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_MED_SPEC RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_MEDICAID ELIG	X					X	X	X							
AHRF_MEDICAID_FEMALE ELIG	X					X	X	X							
AHRF_MEDICAID_MALE ELIG	X					X	X	X							
AHRF_MEDSURGIC_BEDS RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_MEDSURGIC_HOSP RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_MINE_DEP_USDA	X									X					
AHRF_NEONATALIC_BEDS RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_NEONATALIC_HOSP RATE	X				X	X	X	X	X	X	X	X	X	X	

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_NEUROLOGICAL_SURG_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_NH_BED_STNGH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_NHSC_ACTIVE_RATE	X									X	X	X	X	X	
AHRF_NHSC_FTE_PROV_RATE	X							X	X	X	X	X	X	X	
AHRF_NONSP_DEP_USDA	X									X					
AHRF_NURSE_ANESTH_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_NURSE_MIDWIVES_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_NURSE_PRACT_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_OB_GYN_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_OP_VST_LT_ER_OP_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_OP_VST_ST_G_ER_OP_RATE	X				X	X	X	X	X	X	X	X	X	X	X
AHRF_OP_VST_ST_G_OTH_R_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_OPHTHALMOLOGY_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_OPRT_ROOM_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_ORTH_SURG_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_OTHER_SPEC_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_OTOLARYNGOLOGY_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_PCT_GOOD_AQ	X					X	X	X	X	X	X	X	X	X	X
AHRF_PCT_PRESC_PEN	X				X	X	X	X	X	X	X	X	X	X	X
AHRF_PEDIATRICS_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_PER_CHLD_POV_USDA	X										X				
AHRF_PER_POV_USDA	X										X				
AHRF_PHYS_PRIMARY_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_PHYSICIAN_ASSIST_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_PLASTIC_SURG_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_POP_LOSS_USDA	X										X				
AHRF_PRESC_ENROLLMENT	X				X	X	X	X	X	X	X	X	X	X	X
AHRF_PREV_HOSP_RATE	X						X	X	X	X	X	X	X	X	
AHRF_PSYCH_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_PULMONARY_SPEC_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_RADI_RATE	X					X	X	X	X	X	X	X	X	X	X
AHRF_REC_USDA	X									X					
AHRF_RET_DEST_USDA	X									X					

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_RURL_REFRRL_CNT_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_ST_COMM_HOSP_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_ST_G_HOSP_BED_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_ST_G_HOSP_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_ST_N_G_HOSP_RATE	X				X	X	X	X	X	X	X	X	X	X	
AHRF_SURG_OPRN_IP_RATE	X					X	X	X	X	X	X	X	X	X	
AHRF_SURG_OPRN_OP_RATE	X					X	X	X	X	X	X	X	X	X	
AHRF_SURG_SPECS_RATE	X						X	X	X	X	X	X	X	X	
AHRF_THORACIC_SURG_RATE	X						X	X	X	X	X	X	X	X	
AHRF_TOT_ADV_NURSES	X							X	X	X	X	X	X	X	X
AHRF_TOT_ALLERGY_IMM	X							X	X	X	X	X	X	X	X
AHRF_TOT_ANESTH	X							X	X	X	X	X	X	X	X
AHRF_TOT_ARBRNE_ST_G_ISO_HOSPS	X							X	X	X	X	X	X	X	X
AHRF_TOT_ARBRNE_ST_G_ISO_ROOMS	X							X	X	X	X	X	X	X	X
AHRF_TOT_ARBRNE_STNGLT_ISO_ROOM	X							X	X	X	X	X	X	X	X
AHRF_TOT_CARDIAC_IC_BEDS	X							X	X	X	X	X	X	X	X
AHRF_TOT_CARDIAC_IC_HOSP	X							X	X	X	X	X	X	X	X
AHRF_TOT_CARDIOVAS_SPEC	X							X	X	X	X	X	X	X	X
AHRF_TOT_CHLD_PSYCH	X							X	X	X	X	X	X	X	X
AHRF_TOT_CLIN_NURSE_SPEC	X							X	X	X	X	X	X	X	X
AHRF_TOT_COLON_SRG	X							X	X	X	X	X	X	X	X
AHRF_TOT_COM_HEALTH_GRANT	X								X	X	X	X	X	X	X
AHRF_TOT_DENTISTS	X								X	X	X	X	X	X	X
AHRF_TOT_DERMATOLOGY	X								X	X	X	X	X	X	X
AHRF_TOT_ER_MED	X								X	X	X	X	X	X	X
AHRF_TOT_ER_VST_ST_G_HOSP	X				X	X	X	X	X	X	X	X	X	X	X
AHRF_TOT_GASTROENTEROLOGY	X							X	X	X	X	X	X	X	X
AHRF_TOT_GEN_INTERNAL_MED	X							X	X	X	X	X	X	X	X
AHRF_TOT_GEN_PREV	X							X	X	X	X	X	X	X	X
AHRF_TOT_GENRL_SURG	X							X	X	X	X	X	X	X	X
AHRF_TOT_HOSP_ADMISSESS	X				X	X	X	X	X	X	X	X	X	X	X
AHRF_TOT_HOSP_BED	X					X	X	X	X	X	X	X	X	X	X
AHRF_TOT_HOSP_BEDS_LT	X					X	X	X	X	X	X	X	X	X	

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_TOT_HOSP_MOBILE	X				X	X	X	X	X		X	X	X	X	
AHRF_TOT_HOSP_TELE_ICU	X											X	X	X	
AHRF_TOT_HOSP_TELE_STROKE	X											X	X	X	
AHRF_TOT_HOSPS	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_LT_HOSP	X				X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_MCR_BN_READM	X				X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_MCR_IP_DAY_ST_G	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_MDCD_IP_DAY_ST_G	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_MDCR_FFS_ACT_COST	X				X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_MDCR_FFS_STD_COST	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_MDS	X						X	X	X	X	X	X	X	X	
AHRF_TOT_MED_SPEC	X						X	X	X	X	X	X	X	X	
AHRF_TOT_MEDSURGIC_BEDS	X						X	X	X	X		X	X	X	
AHRF_TOT_MEDSURGIC_HOSP	X						X	X	X	X		X	X	X	
AHRF_TOT_N_ST_G_EXP	X						X	X	X	X	X	X	X	X	
AHRF_TOT_N_ST_G_EXP_1000	X						X	X	X	X	X	X	X	X	
AHRF_TOT_N_ST_G_PAYRLL	X						X	X	X	X	X	X	X	X	
AHRF_TOT_N_ST_G_PAYRLL_1000	X						X	X	X	X	X	X	X	X	
AHRF_TOT_NEONATALIC_BEDS	X						X	X	X	X		X	X	X	
AHRF_TOT_NEONATALIC_HOSP	X						X	X	X	X		X	X	X	
AHRF_TOT_NEUROLOGICAL_SURG	X						X	X	X	X	X	X	X	X	
AHRF_TOT_NH_BED_STNGH	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_NHSC_ACTIVE	X										X	X	X	X	
AHRF_TOT_NHSC_FTE_PROV	X								X	X	X	X	X	X	
AHRF_TOT_NURSE_ANESTH	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_NURSE_MIDWIVES	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_NURSE_PRACT	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_OB_GYN	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_OPTHALMOLOGY	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_OPRT_ROOM	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_ORTH_SURG	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_OTHER_SPEC	X				X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_OTOLARYNGOLOGY	X				X	X	X	X	X	X	X	X	X	X	

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_TOT_OUTPUT_VST_STNGH	X			X	X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_PEDIATRICS	X				X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_PHYS_PRIMARY	X				X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_PHYSICIAN_ASSIST	X				X	X	X	X	X	X	X	X	X	X	X
AHRF_TOT_PLASTIC_SURG	X				X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_PSYCH	X				X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_PULMONARY_SPEC	X				X	X	X	X	X	X	X	X	X	X	
AHRF_TOT_RADI	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_RURL_REFRRL_CNT	X					X	X	X	X	X		X	X	X	
AHRF_TOT_ST_COMM_HOSP	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_ST_COMM_HOSP_ADMS	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_ST_G_HOSP	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_ST_G_HOSP_ADMS	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_ST_G_HOSP_BED	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_ST_N_G_HOSP	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_STNG_LT_HOSP_ADMS	X					X	X	X	X	X	X	X	X	X	
AHRF_TOT_SURG_SPECS	X						X	X	X	X	X	X	X	X	
AHRF_TOT_THORACIC_SURG	X						X	X	X	X	X	X	X	X	
AHRF_TOT_UROL	X						X	X	X	X	X	X	X	X	
AHRF_TXC_SITE_CNTRL	X							X	X		X		X	X	X
AHRF_TXC_SITE_NO_CNTRL	X							X	X		X		X	X	X
AHRF_TXC_SITE_NO_DATA	X								X		X		X	X	X
AHRF_UNEMPLOYED_RATE	X				X	X	X	X	X	X	X	X	X	X	X
AHRF_UROL_RATE	X					X	X	X	X	X	X	X	X	X	
AHRF_USDA_RUCC_2013	X				X	X	X	X	X	X	X	X	X	X	
AHRF_VET	X					X	X	X	X	X	X	X	X	X	
AHRF_VET_FEMALE	X					X	X	X	X	X	X	X	X	X	
AHRF_VET_MALE	X					X	X	X	X	X	X	X	X	X	

Table 6.2. Variable definitions and specifications, AHRF

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_ADV_NURSES_RATE	Total number of advanced practice registered nurses with NPI per 1,000 population	CMS NPI FILE	F14646 ; Number of advance practice registered nurse with NPI	F11984 ; Census County Population Estimate
AHRF_ALLERGY_IMM_RATE	Total number of non-federal allergy and immunology specialists per 1,000 population	AMA Physician Master File	F11674 ; Number of non-federal allergy and immunology specialists	F11984 ; Census County Population Estimate
AHRF_ANESTH_RATE	Total number of non-federal anesthesiologists per 1,000 population	AMA Physician Master File	F04743 ; Number of non-federal anesthesiologists	F11984 ; Census County Population Estimate
AHRF_ARBRNE_ST_G_ISO_HOSPS RATE	Total number of short-term general hospitals with airborne infection isolation rooms per 1,000 population	AHA Survey Database	F13928 ; Number of short-term general hospitals with airborne infection isolation rooms	F11984 ; Census County Population Estimate
AHRF_ARBRNE_ST_G_ISO_ROOMS RATE	Total number of airborne infection isolation rooms in short-term general hospitals per 1,000 population	AHA Survey Database	F13929 ; Number of airborne infection isolation rooms in short-term general hospitals	F11984 ; Census County Population Estimate
AHRF_ARBRNE_STNGLT_ISO_ROOM RATE	Total number of airborne infection isolation rooms in short-term, non-general, and long-term hospitals per 1,000 population	AHA Survey Database	F13937 ; Number of airborne infection isolation rooms in short-term, non-general, and long-term hospitals	F11984 ; Census County Population Estimate
AHRF_CARDIAC_IC_BEDS_RATE	Total number of short-term general hospitalS cardiac intensive care beds per 1,000 population	AHA Survey Database	F09133 ; Number of short-term general hospital cardiac intensive care beds	F11984 ; Census County Population Estimate
AHRF_CARDIAC_IC_HOSP_RATE	Total number of short-term general hospitals with cardiac intensive care per 1,000 population	AHA Survey Database	F12566 ; Number of short-term general hospitals with cardiac intensive care	F11984 ; Census County Population Estimate
AHRF_CARDIOVAS_SPEC_RATE	Total number of cardiovascular disease specialists per 1,000 population	AMA Physician Master File	F04631 ; Number of cardiovascular disease specialists	F11984 ; Census County Population Estimate
AHRF_CHLD_PSYCH_RATE	Total number of non-federal child psychiatrists per 1,000 population	AMA Physician Master File	F04748 ; Number of non-federal child psychiatrists	F11984 ; Census County Population Estimate

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_CLIN_NURSE_SPEC_RATE	Total number of clinical nurse specialists with NPI per 1,000 population	CMS NPI FILE	F14643 ; Number of clinical nurse specialist with NPI	F11984 ; Census County Population Estimate
AHRF_COLON_SRG RATE	Total number of colorectal surgeons per 1,000 population	AMA Physician Master File	F04715 ; Number of colorectal surgeons	F11984 ; Census County Population Estimate
AHRF_COM_HEALTH_GRANT_RATE	Total number of community health centers, grantees only, per 1,000 population	HRSA Data Warehouse	F15253 ; Number of community health centers, grantees only	F11984 ; Census County Population Estimate
AHRF_DAYS_AIR_QLT	Total number of days air quality is measured	EPA Air Quality Index Rep	F15264 ; Number of days air quality is measured	n/a
AHRF_DENTISTS_RATE	Total number of dentists with NPI per 1,000 population	CMS NPI FILE	F14650 ; Number of dentists with National Provider Index (NPI)	F11984 ; Census County Population Estimate
AHRF_DERMATOLOGY_RATE	Total number of dermatology specialists per 1,000 population	AMA Physician Master File	F04636 ; Number of dermatology specialists	F11984 ; Census County Population Estimate
AHRF_DUAL_ELIG	Total number of Medicare/Medicaid dual eligible beneficiaries	CME Medicaid Max	F14206 ;Number of Medicare/Medicaid dual eligibles	n/a
AHRF_ECO_DEP_USDA	Economic-Dependent Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F13973-15 ;Economic-Dependent Typology Code	n/a
AHRF_ER_MED_RATE	Total number of non-federal emergency medicine physicians per 1,000 population	AMA Physician Master File	F09826 ; Number of non-federal emergency medicine physicians	F11984 ; Census County Population Estimate
AHRF_FARM_DEP_USDA	Farming-Dependent Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F12481-15 ;Farming-Dependent Typology Code	n/a
AHRF_GASTROENTROLOGY_RATE	Total number of gastroenterology specialists per 1,000 population	AMA Physician Master File	F04641 ; Number of gastroenterology specialists	F11984 ; Census County Population Estimate
AHRF_GEN_INTERNAL_MED_RATE	Total number of non-federal general internal medicine physicians per 1,000 population	AMA Physician Master File	F11208 ; Number of non-federal general internal medicine physicians	F11984 ; Census County Population Estimate

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_GEN_PREV RATE	Total number of non-federal general preventive medicine specialists per 1,000 population	AMA Physician Master File	F04788 ; Number of non-federal general preventive medicine specialists	F11984 ; Census County Population Estimate
AHRF_GENRL_SURG RATE	Total number of general surgeons per 1,000 population	AMA Physician Master File	F04680 ; Number of general surgeons	F11984 ; Census County Population Estimate
AHRF_GOV_DEP_USDA	Fed/St Govt-Dependent Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F12484-14 ;Fed/St Govt-Dependent Typology Code	n/a
AHRF_HIGH_POV_USDA	High Poverty Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F15334-14 ;High Poverty Typology Code	n/a
AHRF_HOSP_BED RATE	Total number of hospital beds per 1,000 population	AHA Survey Database	F08921 ; Number of hospital beds	F11984 ; Census County Population Estimate
AHRF_HOSP_BEDS_LT RATE	Total number of beds in long-term hospital per 1,000 population	AHA Survey Database	F08924 ; Number of beds in long-term hospital	F11984 ; Census County Population Estimate
AHRF_HOSP_MOBILE RATE	Total number of hospitals with mobile health services per 1,000 population	AHA Survey Database	F14101 ; Number of hospitals with mobile health services	F11984 ; Census County Population Estimate
AHRF_HOSP_TEACHING	Total number of teaching hospitals	AHA Survey Database	F08890+F08891+F08892+F08894 ;Number of teaching hospitals	n/a
AHRF_HOSP_TELE_ICU RATE	Total number of hospitals with telehealth eICU per 1,000 population	AHA Survey Database	F15576 ; Number of hospitals with telehealth eICU	F11984 ; Census County Population Estimate
AHRF_HOSP_TELE_STROKE RATE	Total number of hospitals with telehealth stroke care per 1,000 population	AHA Survey Database	F15577 ; Number of hospitals with telehealth stroke care	F11984 ; Census County Population Estimate
AHRF_HOSPS RATE	Total number of hospitals per 1,000 population	AHA Survey Database	F08868 ; Number of hospitals	F11984 ; Census County Population Estimate
AHRF_HPSA_DENTIST	Health Professional Shortage Area (HPSA) code-shortage of dentists	HRSA Data Warehouse / Bureau of Primary Health	F09792 ; HPSA code—shortage of dentists	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_HPSA_MENTAL	Health Professional Shortage Area (HPSA) code-shortage of mental healthcare providers	HRSA Data Warehouse / Bureau of Primary Health	F12492 ; HPSA code—shortage of mental healthcare providers	n/a
AHRF_HPSA_PRIM	Health Professional Shortage Area (HPSA) code-shortage of primary care physicians	HRSA Data Warehouse / Bureau of Primary Health	F09787 ; HPSA code—shortage of primary care physicians	n/a
AHRF_IP_DAY_NH_HOSP_RATE	Total number of hospital inpatient days including nursing homes per 1,000 population	AHA Survey Database	F09545 ; Number of hospital inpatient days including nursing homes per 1000 population	F11984 ; Census County Population Estimate
AHRF_IP_DAY_ST_G_HOSP_RATE	Total number of inpatient days in short-term general hospitals per 1,000 population	AHA Survey Database	F09546 ; Number of inpatient days in short-term general hospitals per 1000 population	F11984 ; Census County Population Estimate
AHRF_IP_DAY_STNG_LT_RATE	Total number of inpatient days in short-term, non-general, and long-term hospitals per 1,000 population	AHA Survey Database	F09547 ; Number of inpatient days in short-term, non-general, and long-term hospitals per 1000 population	F11984 ; Census County Population Estimate
AHRF_LOW_EDUC_USDA	Low Education Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F13975-15 ;Low Education Typology Code	n/a
AHRF_LOW_EMP_USDA	Low Employment Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F13976-15 ;Low Employment Typology Code	n/a
AHRF_LT_HOSP_RATE	Total number of long-term hospitals per 1,000 population	AHA Survey Database	F08871 ; Number of long-term hospitals	F11984 ; Census County Population Estimate
AHRF_MANF_DEP_USDA	Manufacturing-Dependent Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F12483-15 ;Manufacturing-Dependent Typology Code	n/a
AHRF_MARKET_ENROL	Total number of Health Insurance Marketplace enrollees	CMS Marketplace	F15449 ; Health Insurance Marketplace Enrollees	n/a
AHRF_MARKET_ENROL_150	Total number of Marketplace enrollees, household income 100% to 150% of FPL	CMS Marketplace	F15462 ; Marketplace Enrollees, HHld Inc 100% to 150% of FPL 2019	n/a
AHRF_MARKET_ENROL_200	Total number of Marketplace enrollees, household income >150% to 200% of FPL	CMS Marketplace	F15463 ; Marketplace Enrollees, HHld Inc>150% to 200% of FPL 2019	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_MARKET_ENROL_250	Total number of Marketplace enrollees, household income >200% to 250% of FPL	CMS Marketplace	F15464 ; Marketplace Enrollees, HHld Inc>200% to 250% of FPL 2019	n/a
AHRF_MARKET_ENROL_300	Total number of Marketplace enrollees, household income >250% to 300% of FPL	CMS Marketplace	F15465 ; Marketplace Enrollees, HHld Inc>250% to 300% of FPL 2019	n/a
AHRF_MARKET_ENROL_400	Total number of Marketplace enrollees, household income >300% to 400% of FPL	CMS Marketplace	F15466 ; Marketplace Enrollees, HHld Inc>300% to 400% of FPL 2019	n/a
AHRF_MARKET_ENROL_ACTIVE	Total number of Marketplace enrollees, active reenrollees	CMS Marketplace	F15459 ; Marketplace Enrollees, Active Reenrollees	n/a
AHRF_MARKET_ENROL_AUTO	Total number of Marketplace enrollees, automatic reenrollees	CMS Marketplace	F15460 ; Marketplace Enrollees, Automatic Reenrollees	n/a
AHRF_MARKET_ENROL_NEW	Total number of Marketplace enrollees, new consumers	CMS Marketplace	F15458 ; Marketplace Enrollees, New Consumers	n/a
AHRF_MARKET_ENROL_NO_ASST	Total number of Marketplace enrollees, no financial assistance requested	CMS Marketplace	F15567 ; Marketplace Enrollees, No Financial Assistance Requested 2019	n/a
AHRF_MARKET_ENROL_OTHER	Total number of Marketplace enrollees, other federal poverty level	CMS Marketplace	F15566 ; Marketplace Enrollees, Other Federal Poverty Level 2019	n/a
AHRF_MCR_BN_READM_RATE	Total number of Medicare beneficiary hospital readmission rate, fee for service	Medicare Geographic Variation - Public Use File	F15307 ; Medicare beneficiary hospital readmission rate, fee for service	n/a
AHRF_MDS_RATE	Total number of non-federal MDs per 1,000 population	AMA Physician Master File	F04602 ; Number of non-federal MDs	F11984 ; Census County Population Estimate
AHRF_MED_SPEC_RATE	Total number of medical specialists per 1,000 population	AMA Physician Master File	F04618 ; Number of medical specialists	F11984 ; Census County Population Estimate
AHRF_MEDICAID_ELIG	Total number of Medicaid eligible beneficiaries	CME Medicaid Max	F14196 ;Number of Medicaid eligibles	n/a
AHRF_MEDICAID_FEMALE_ELIG	Total number of female Medicaid eligible beneficiaries	CME Medicaid Max	F14198 ;Number of female Medicaid eligibles	n/a
AHRF_MEDICAID_MALE_ELIG	Total number of male Medicaid eligible beneficiaries	CME Medicaid Max	F14197 ;Number of male Medicaid eligibles	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_MEDSURGIC_BEDS_RATE	Total number of short-term general hospital intensive care beds per 1,000 population	AHA Survey Database	F09139 ; Number of short-term general hospital intensive care beds	F11984 ; Census County Population Estimate
AHRF_MEDSURGIC_HOSP_RATE	Total number of short-term general hospitals with medical surgical intensive care per 1,000 population	AHA Survey Database	F12565 ; Number of short-term general hospitals with medical surgical intensive care	F11984 ; Census County Population Estimate
AHRF_MINE_DEP_USDA	Mining-Dependent Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F12482-15 ;Mining-Dependent Typology Code	n/a
AHRF_NEONATALIC_BEDS_RATE	Total number of short-term general hospital neonatal intensive care beds per 1,000 population	AHA Survey Database	F09145 ; Number of short-term general hospital neonatal intensive care beds	F11984 ; Census County Population Estimate
AHRF_NEONATALIC_HOSP_RATE	Total number of short-term general hospitals with neonatal intensive care per 1,000 population	AHA Survey Database	F12567 ; Number of short-term general hospitals with neonatal intensive care	F11984 ; Census County Population Estimate
AHRF_NEUROLOGICAL_SURG_RATE	Total number of neurological surgeons per 1,000 population	AMA Physician Master File	F04685 ; Number of neurological surgeons	F11984 ; Census County Population Estimate
AHRF_NH_BED_STNGH_RATE	Total number of short-term non-general hospital nursing home beds per 1,000 population	AHA Survey Database	F14051 ; Number of nursing home beds, short-term non-general hospitals	F11984 ; Census County Population Estimate
AHRF_NHSC_ACTIVE_RATE	Total number of active NHSC sites per 1,000 population	HRSA Data Warehouse	F15445 ; Number of Active NHSC Sites	F11984 ; Census County Population Estimate
AHRF_NHSC_FTE_PROV_RATE	Total number of NHSC full time equivalent providers per 1,000 population	HRSA Data Warehouse	F15254 ; Number of NHSC Full Time Equivalent Providers	F11984 ; Census County Population Estimate
AHRF_NONSP_DEP_USDA	Nonspecialized-Dependent Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F12486-15 ;Nonspecialized-Dependent Typology Code	n/a
AHRF_NURSE_ANESTH_RATE	Total number of certified registered nurse anesthetists with NPI per 1,000 population	CMS NPI FILE	F14644 ; Number of Certified Registered Nurse Anesthetist with NPI	F11984 ; Census County Population Estimate
AHRF_NURSE_MIDWIVES_RATE	Total number of advanced practice nurse midwives with NPI per 1,000 population	CMS NPI FILE	F14645 ; Number of Advance Practice Nurse Midwives with NPI	F11984 ; Census County Population Estimate

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_NURSE_PRACT_RATE	Total number of nurse practitioners with NPI per 1,000 population	CMS NPI FILE	F14642 ; Nurse Practitioners with NPI	F11984 ; Census County Population Estimate
AHRF_OB_GYN_RATE	Total number of non-federal obstetric gynecologists per 1,000 population	AMA Physician Master File	F11684 ; Number of non-federal obstetric gynecologists	F11984 ; Census County Population Estimate
AHRF_OP_VST_LT_ER_OP_RATE	Total number of outpatient visits in long-term hospital emergency departments per 1,000 population	AHA Survey Database	F09568 ; Number of outpatient visits in long-term hospital emergency departments	F11984 ; Census County Population Estimate
AHRF_OP_VST_ST_G_ER_OP_RATE	Total number of outpatient visits in short-term general hospital emergency department and other outpatient visits per 1,000 population	AHA Survey Database	F09566 ; Number of outpatient visits in short-term general hospital emergency department and other outpatient visits	F11984 ; Census County Population Estimate
AHRF_OP_VST_ST_G_OTH_RATE	Total number of outpatient visits in other short-term general hospitals per 1,000 population	AHA Survey Database	F09575 ; Number of outpatient visits in other short-term general hospitals	F11984 ; Census County Population Estimate
AHRF_OPHTHALMOLOGY_RATE	Total number of ophthalmology specialists per 1,000 population	AMA Physician Master File	F04695 ; Number of ophthalmology specialists	F11984 ; Census County Population Estimate
AHRF_OPRT_ROOM_RATE	Total number of operating rooms in short-term general hospitals per 1,000 population	AHA Survey Database	F13318 ; Number of operating rooms in short-term general hospitals	F11984 ; Census County Population Estimate
AHRF_ORTH_SURG_RATE	Total number of non-federal orthopedic surgeons per 1,000 population	AMA Physician Master File	F04700 ; Number of non-federal orthopedic surgeons	F11984 ; Census County Population Estimate
AHRF_OTHER_SPEC_RATE	Total number of other specialists per 1,000 population	AMA Physician Master File	F04730 ; Number of other specialists	F11984 ; Census County Population Estimate
AHRF_OTOLARYNGOLOGY_RATE	Total number of otolaryngology specialists per 1,000 population	AMA Physician Master File	F04705 ; Number of otolaryngology specialists	F11984 ; Census County Population Estimate
AHRF_PCT_GOOD_AQ	Percentage of days with good air quality	EPA Air Quality Index Rep	F15266 ; Percentage of days with good air quality	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_PCT_PRESC_PEN	Percentage of Medicare eligible beneficiaries enrolled in a prescription drug plan per 100 population	CMS PDP Penetration	F14208 ; Percentage of Medicare Prescription Drug Plan Penetration	n/a
AHRF_PEDIATRICS_RATE	Total number of non-federal pediatric and general physicians per 1,000 population	AMA Physician Master File	F11704 ; Number of non-federal pediatric and general physicians	F11984 ; Census County Population Estimate
AHRF_PER_CHLD_POV_USDA	Persistent Child Poverty Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F15470-15 ;Persistent Child Poverty Typology Code	n/a
AHRF_PER_POV_USDA	Persistent Poverty Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F12490-14 ;Persistent Poverty Typology Code	n/a
AHRF_PHYS_PRIMARY_RATE	Total number of non-federal primary care physicians per 1,000 population	AMA Physician Master File	F14675 ; Number of non-federal primary care physicians	F11984 ; Census County Population Estimate
AHRF_PHYSICIAN_ASSIST_RATE	Total number of physician assistants with NPI per 1,000 population	CMS NPI FILE	F14641 ; Number of physician assistants with National Provider Index (NPI) Term General Hospitals	F11984 ; Census County Population Estimate
AHRF_PLASTIC_SURG_RATE	Total number of plastic surgeons per 1,000 population	AMA Physician Master File	F04710 ; Number of plastic surgeons	F11984 ; Census County Population Estimate
AHRF_POP_LOSS_USDA	Population Loss Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F13977-15 ;Population Loss Typology Code	n/a
AHRF_PRESC_ENROLLMENT	Total number of Medicare prescription drug plan enrollment	CMS PDP Penetration	F14207 ; Number of Medicare Prescription Drug Plan Enrollees	n/a
AHRF_PREV_HOSP_RATE	Preventable hospital stays rate	County Health Rankings	F15581 ; Number of preventable hospital stays	n/a
AHRF_PSYCH_RATE	Total number of non-federal psychiatrists per 1,000 population	AMA Physician Master File	F04773 ; Number of non-federal psychiatrists	F11984 ; Census County Population Estimate
AHRF_PULMONARY_SPEC_RATE	Total number of pulmonary disease specialists per 1,000 population	AMA Physician Master File	F04666 ; Number of pulmonary disease specialists	F11984 ; Census County Population Estimate

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_RADI_RATE	Total number of non-federal radiologists per 1,000 population	AMA Physician Master File	F09811 ; Number of non-federal radiologists	F11984 ; Census County Population Estimate
AHFR_REC_USDA	Recreation Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F15469-15 ;Recreation Typology Code	n/a
AHRF_RET_DEST_USDA	Retirement Destination Typology Code	USDA, ERS based on ACS 2008-2012 5- year average	F12487-15 ;Retirement Destination Typology Code	n/a
AHRF_RURL_REFRRL_CNT_RATE	Total number of rural referral centers per 1,000 population	AHA Survey Database	F14033 ; Number of rural referral centers	F11984 ; Census County Population Estimate
AHRF_ST_COMM_HOSP_RATE	Total number of short-term community hospitals per 1,000 population	AHA Survey Database	F08872 ; Number of short-term community hospitals	F11984 ; Census County Population Estimate
AHRF_ST_G_HOSP_BED_RATE	Total number of short-term general hospital beds per 1,000 population	AHA Survey Database	F08922 ; Number of short-term general hospital beds	F11984 ; Census County Population Estimate
AHRF_ST_G_HOSP_RATE	Total number of short-term general hospitals per 1,000 population	AHA Survey Database	F08869 ; Number of short-term general hospitals	F11984 ; Census County Population Estimate
AHRF_ST_N_G_HOSP_RATE	Total number of short-term non-general hospitals per 1,000 population	AHA Survey Database	F08870 ; Number of short-term non-general hospitals	F11984 ; Census County Population Estimate
AHRF_SURG_OPRN_IP RATE	Total number of inpatient surgical operations in short-term general hospitals per 1,000 population	AHA Survey Database	F09583 ; Number of inpatient surgical operations in short-term general hospitals	F11984 ; Census County Population Estimate
AHRF_SURG_OPRN_OP RATE	Total number of outpatient surgical operations in short-term general hospitals per 1,000 population	AHA Survey Database	F09707 ; Number of outpatient surgical operations in short-term general hospitals	F11984 ; Census County Population Estimate
AHRF_SURG_SPECS RATE	Total number of surgical specialists per 1,000 population	AMA Physician Master File	F04671 ; Number of surgical specialists	F11984 ; Census County Population Estimate
AHRF_THORACIC_SURG RATE	Total number of thoracic surgeons per 1,000 population	AMA Physician Master File	F04720 ; Number of thoracic surgeons	F11984 ; Census County Population Estimate

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_TOT_ADV_NURSES	Total number of advanced practice registered nurses with NPI	CMS NPI FILE	F14646 ; Number of Advance Practice Registered Nurse with NPI	n/a
AHRF_TOT_ALLERGY_IMM	Total number of non-federal allergy and immunology specialists	AMA Physician Master File	F11674 ; Number of non-federal allergy and immunology specialists	n/a
AHRF_TOT_ANESTH	Total number of non-federal anesthesiologists	AMA Physician Master File	F04743 ; Number of non-federal anesthesiologists	n/a
AHRF_TOT_ARBRNE_ST_G_ISO_HOS_PS	Total number of short-term general hospitals with airborne infection isolation rooms	AHA Survey Database	F13928 ; Number of short-term general hospitals with airborne infection isolation rooms	n/a
AHRF_TOT_ARBRNE_ST_G_ISO_ROOMS	Total number of airborne infection isolation rooms in short-term general hospitals	AHA Survey Database	F13929 ; Number of airborne infection isolation rooms in short-term general hospitals	n/a
AHRF_TOT_ARBRNE_STNGLT_ISO_R00M	Total number of airborne infection isolation rooms in short-term, non-general, and long-term hospitals	AHA Survey Database	F13937 ; Number of airborne infection isolation rooms in short-term, non-general, and long-term hospitals	n/a
AHRF_TOT_CARDIAC_IC_BEDS	Total number of short-term general hospital cardiac intensive care beds	AHA Survey Database	F09133 ; Number of short-term general hospital cardiac intensive care beds	n/a
AHRF_TOT_CARDIAC_IC_HOSP	Total number of short-term general hospitals with cardiac intensive care	AHA Survey Database	F12566 ; Number of short-term general hospitals with cardiac intensive care	n/a
AHRF_TOT_CARDIOVAS_SPEC	Total number of cardiovascular disease specialists	AMA Physician Master File	F04631 ; Number of cardiovascular disease specialists	n/a
AHRF_TOT_CHLD_PSYCH	Total number of non-federal child psychiatrists	AMA Physician Master File	F04748 ; Number of non-federal child psychiatrists	n/a
AHRF_TOT_CLIN_NURSE_SPEC	Total number of clinical nurse specialists with NPI	CMS NPI FILE	F14643 ; Number of Clinical Nurse Specialist with NPI	n/a
AHRF_TOT_COLON_SRG	Total number of colorectal surgeons	AMA Physician Master File	F04715 ; Number of colorectal surgeons	n/a
AHRF_TOT_COM_HEALTH_GRANT	Total number of community health centers, grantees only	HRSA Data Warehouse	F15253 ; Number of Community Health Centers, Grantees only	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_TOT_DENTISTS	Total number of dentists with NPI	CMS NPI FILE	F14650 ; Number of Dentists with National Provider Index (NPI)	n/a
AHRF_TOT_DERMATOLOGY	Total number of dermatology specialists	AMA Physician Master File	F04636 ; Number of dermatology specialists	n/a
AHRF_TOT_ER_MED	Total number of non-federal emergency medicine physicians	AMA Physician Master File	F09826 ; Number of non-federal emergency medicine physicians	n/a
AHRF_TOT_ER_VST_ST_G_HOSP	Total number of emergency department visits in short-term general hospitals	AHA Survey Database	F09572 ; Number of emergency department visits in short-term general hospitals	n/a
AHRF_TOT_GASTROENTEROLOGY	Total number of gastroenterology specialists	AMA Physician Master File	F04641 ; Number of gastroenterology specialists	n/a
AHRF_TOT_GEN_INTERNAL_MED	Total number of non-federal general internal medicine physicians	AMA Physician Master File	F11208 ; Number of non-federal general internal medicine physicians	n/a
AHRF_TOT_GEN_PREV	Total number of non-federal general preventive medicine specialists	AMA Physician Master File	F04788 ; Number of non-federal general preventive medicine specialists	n/a
AHRF_TOT_GENRL_SURG	Total number of general surgeons	AMA Physician Master File	F04680 ; Number of general surgeons	n/a
AHRF_TOT_HOSP_ADMISIONS	Total number of hospital admissions	AHA Survey Database	F08909 ; Number of hospital admissions	n/a
AHRF_TOT_HOSP_BED	Total number of hospital beds	AHA Survey Database	F08921 ; Number of hospital beds	n/a
AHRF_TOT_HOSP_BEDS_LT	Total number of beds in long-term hospital	AHA Survey Database	F08924 ; Number of beds in long-term hospital	n/a
AHRF_TOT_HOSP_MOBILE	Total number of hospitals with mobile health services	AHA Survey Database	F14101 ; Number of Hospitals with Mobile Health Services	n/a
AHRF_TOT_HOSP_TELE_ICU	Total number of hospitals with telehealth eICU	AHA Survey Database	F15576 ; Number of Hospitals with Telehealth eICU	n/a
AHRF_TOT_HOSP_TELE_STROKE	Total number of hospitals with telehealth stroke care	AHA Survey Database	F15577 ; Number of Hospitals with Telehealth Stroke Care	n/a
AHRF_TOT_HOSPS	Total number of hospitals	AHA Survey Database	F08868 ; Number of hospitals	n/a
AHRF_TOT_LT_HOSP	Total number of long-term hospitals	AHA Survey Database	F08871 ; Number of long-term hospitals	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_TOT_MCR_BN_READM	Total number of Medicare beneficiary acute hospital readmissions, fee for service	Medicare Geographic Variation - Public Use File	F15307 ; Number of Medicare beneficiary acute hospital readmissions, fee for service	n/a
AHRF_TOT_MCR_IP_DAY_ST_G	Total Medicare inpatient days, short-term general hospitals	AHA Survey Database	F09577 ; Medicare inpatient days, short-term general hospitals	n/a
AHRF_TOT_MD_CD_IP_DAY_ST_G	Total Medicaid inpatient days, short-term general hospitals	AHA Survey Database	F09706 ; Medicaid inpatient days, short-term general hospitals	n/a
AHRF_TOT_MDCR_FFS_ACT_COST	Total actual Medicare costs, fee for service (dollars)	Medicare Geographic Variation - Public Use File	F15294 ; Actual Medicare costs, fee for service	n/a
AHRF_TOT_MDCR_FFS_STD_COST	Total standardized Medicare costs, fee for service (dollars)	Medicare Geographic Variation - Public Use File	F15295 ; Standardized Medicare costs, fee for service	n/a
AHRF_TOT_MDS	Total number of non-federal MDs	AMA Physician Master File	F04602 ; Number of non-federal MDs	n/a
AHRF_TOT_MED_SPEC	Total number of medical specialists	AMA Physician Master File	F04618 ; Number of medical specialists	n/a
AHRF_TOT_MEDSURGIC_BEDS	Total number of short-term general hospital intensive care beds	AHA Survey Database	F09139 ; Number of short-term general hospital intensive care beds	n/a
AHRF_TOT_MEDSURGIC_HOSP	Total number of short-term general hospitals with medical surgical intensive care	AHA Survey Database	F12565 ; Number of short-term general hospitals with medical surgical intensive care	n/a
AHRF_TOT_N_ST_G_EXP	Total number of short-term general hospitals reporting expenses	AHA Survey Database	F09593 ; Number of short-term general hospitals reporting expenses	n/a
AHRF_TOT_N_ST_G_EXP_1000	Total expenses from short-term general hospitals reporting expenses (dollars in \$1,000s)	AHA Survey Database	F09592 ; Total expenses (in \$1000s) from short-term general hospitals reporting expenses	n/a
AHRF_TOT_N_ST_G_PAYRLL	Total number of short-term general hospitals reporting payroll expenses	AHA Survey Database	F09607 ; Number of short-term general hospitals reporting payroll expenses	n/a
AHRF_TOT_N_ST_G_PAYRLL_1000	Total payroll expenses from short-term general hospitals reporting payroll expenses (dollars in \$1,000s)	AHA Survey Database	F09609 ; Total payroll expenses (in \$1000s) from short-term general hospitals reporting payroll expenses	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_TOT_NEONATALIC_BEDS	Total number of short-term general hospital neonatal intensive care beds	AHA Survey Database	F09145 ; Number of short-term general hospital neonatal intensive care beds	n/a
AHRF_TOT_NEONATALIC_HOSP	Total number of short-term general hospitals with neonatal intensive care	AHA Survey Database	F12567 ; Number of short-term general hospitals with neonatal intensive care	n/a
AHRF_TOT_NEUROLOGICAL_SURG	Total number of neurological surgeons	AMA Physician Master File	F04685 ; Number of neurological surgeons	n/a
AHRF_TOT_NH_BED_STNGH	Total number of short-term non-general hospital nursing home beds	AHA Survey Database	F14051 ; Number of nursing home beds, short-term nongeneral hospitals	n/a
AHRF_TOT_NHSC_ACTIVE	Total number of active National Health Service Corps sites	HRSA Data Warehouse	F15445 ; Number of Active NHSC Sites	n/a
AHRF_TOT_NHSC_FTE_PROV	Total number of National Health Service Corps full time equivalent providers	HRSA Data Warehouse	F15254 ; Number of NHSC Full Time Equivalent Providers	n/a
AHRF_TOT_NURSE_ANESTH	Total number of certified registered nurse anesthetists with NPI	CMS NPI FILE	F14644 ; Number of Certified Registered Nurse Anesthetist with NPI	n/a
AHRF_TOT_NURSE_MIDWIVES	Total number of advanced practice nurse midwives with NPI	CMS NPI FILE	F14645 ; Number of Advance Practice Nurse Midwives with NPI	n/a
AHRF_TOT_NURSE_PRACT	Total number of nurse practitioners with NPI	CMS NPI FILE	F14642 ; Nurse Practitioners with NPI	n/a
AHRF_TOT_OB_GYN	Total number of non-federal obstetric gynecologists	AMA Physician Master File	F11684 ; Number of non-federal obstetric gynecologists	n/a
AHRF_TOT_OPHTHALMOLOGY	Total number of ophthalmology specialists	AMA Physician Master File	F04695 ; Number of ophthalmology specialists	n/a
AHRF_TOT_OPRT_ROOM	Total number of operating rooms in short-term general hospitals	AHA Survey Database	F13318 ; Number of operating rooms in short-term general hospitals	n/a
AHRF_TOT_ORTH_SURG	Total number of non-federal orthopedic surgeons	AMA Physician Master File	F04700 ; Number of non-federal orthopedic surgeons	n/a
AHRF_TOT_OTHER_SPEC	Total number of other specialists	AMA Physician Master File	F04730 ; Number of other specialists	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_TOT_OTOLARYNGOLOGY	Total number of otolaryngology specialists	AMA Physician Master File	F04705 ; Number of otolaryngology specialists	n/a
AHRF_TOT_OUTPAT_VST_STNGH	Total number of outpatient visits in short-term non-general hospital emergency department and other outpatient visits	AHA Survey Database	F09567 ; Number of outpatient visits in short-term non-general hospital emergency department and other outpatient visits	n/a
AHRF_TOT_PEDIATRICS	Total number of non-federal pediatric and general physicians	AMA Physician Master File	F11704 ; Number of non-federal pediatric and general physicians	n/a
AHRF_TOT_PHYS_PRIMARY	Total number of non-federal primary care physicians	AMA Physician Master File	F14675 ; Number of non-federal primary care physicians	n/a
AHRF_TOT_PHYSICIAN_ASSIST	Total number of physician assistants with NPI	CMS NPI FILE	F14641 ; Number of physician assistants with National Provider Index (NPI)Term General Hospitals	n/a
AHRF_TOT_PLASTIC_SURG	Total number of plastic surgeons	AMA Physician Master File	F04710 ; Number of plastic surgeons	n/a
AHRF_TOT_PSYCH	Total number of non-federal psychiatrists	AMA Physician Master File	F04773 ; Number of non-federal psychiatrists	n/a
AHRF_TOT_PULMONARY_SPEC	Total number of pulmonary disease specialists	AMA Physician Master File	F04666 ; Number of pulmonary disease specialists	n/a
AHRF_TOT_RADI	Total number of non-federal radiologists	AMA Physician Master File	F09811 ; Number of non-federal radiologists	n/a
AHRF_TOT_RURL_REFRRL_CNT	Total number of rural referral centers	AHA Survey Database	F14033 ; Number of rural referral centers	n/a
AHRF_TOT_ST_COMM_HOSP	Total number of short-term community hospitals	AHA Survey Database	F08872 ; Number of short-term community hospitals	n/a
AHRF_TOT_ST_COMM_HOSP_ADMS	Total number of short-term community hospital admissions	AHA Survey Database	F08912 ; Number of short-term community hospital admissions	n/a
AHRF_TOT_ST_G_HOSP	Total number of short-term general hospitals	AHA Survey Database	F08869 ; Number of short-term general hospitals	n/a
AHRF_TOT_ST_G_HOSP_ADMS	Total number of short-term general hospital admissions	AHA Survey Database	F08910 ; Number of short-term general hospital admissions	n/a
AHRF_TOT_ST_G_HOSP_BED	Total number of short-term general hospital beds	AHA Survey Database	F08922 ; Number of short-term general hospital beds	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AHRF_TOT_ST_N_G_HOSP	Total number of short-term non-general hospitals	AHA Survey Database	F08870 ; Number of short-term non-general hospitals	n/a
AHRF_TOT_STNG_LT_HOSP_ADMS	Total number of short-term, non-general, and long-term hospital admissions	AHA Survey Database	F08911 ; Number of short-term, non-general, and long-term hospital admissions	n/a
AHRF_TOT_SURG_SPECS	Total number of surgical specialists	AMA Physician Master File	F04671 ; Number of surgical specialists	n/a
AHRF_TOT_THORACIC_SURG	Total number of thoracic surgeons	AMA Physician Master File	F04720 ; Number of thoracic surgeons	n/a
AHRF_TOT_UROL	Total number of non-federal urologists	AMA Physician Master File	F04725 ; Number of non-federal urologists	n/a
AHRF_TXC_SITE_CNTRL	Total number of designated toxic sites under control	EPA Air Quality Index Rep	F14988 ; Number of designated toxic sites under control	n/a
AHRF_TXC_SITE_NO_CNTRL	Total number of designated toxic sites not under control	EPA Air Quality Index Rep	F14989 ; Number of designated toxic sites not under control	n/a
AHRF_TXC_SITE_NO_DATA	Total number of designated toxic sites with insufficient data	EPA Air Quality Index Rep	F15339 ; Number of designated toxic sites with insufficient data	n/a
AHRF_UNEMPLOYED_RATE	Unemployment rate per 100 population (ages 16 and over)	Bureau of Labor Stats	F06795 ; Percentage of unemployed, (ages 16 years and over)	n/a
AHRF_UROL_RATE	Total number of non-federal urologists per 1,000 population	AMA Physician Master File	F04725 ; Number of non-federal urologists	F11984 ; Census County Population Estimate
AHRF_USDA_RUCC_2013	2013 Rural-Urban Continuum Code	AMA Physician Master File	F0002013 ;Rural-Urban Continuum Code	n/a
AHRF_VET	Estimate of veteran population	Dept of Veterans Affairs	F11396 ; Veteran Population Estimate	n/a
AHRF_VET_FEMALE	Estimate of female veteran population	Dept of Veterans Affairs	F13595 ; Veteran Population Estimate, Male	n/a
AHRF_VET_MALE	Estimate of male veteran population	Dept of Veterans Affairs	F13594 ; Veteran Population Estimate, Female	n/a

Table 6.3 provides important variable notes for users of the SDOH Database to consider when working with AHRF variables.

Table 6.3. AHRF variable notes

Variable Name	Variable Label	Note
AHRF_TOT_PHYS_PRI_MARY	Total number of non-federal primary care physicians	<ul style="list-style-type: none"> Primary Care includes General Family Medicine, General Practice, General Internal Medicine and General Pediatrics. Subspecialties within these specialties are excluded. Fields are carried for Patient Care and Hospital Residents. Patient Care includes Office Based and Hospital Based (FT) Staff. Physicians aged 75 and over are excluded
All variables sourced from the CMS NPI File		<ul style="list-style-type: none"> The CMS NPI File was processed by AHRF using a ZIP to FIPS conversion file based on ZIP Codes from the US Postal Service. AHRF resolved invalid ZIP Codes with manual matches to city and state names.
AHRF_TOT_MCR_BN_READM	Total number of Medicare beneficiary acute hospital readmissions, fee for service	<ul style="list-style-type: none"> Data include Medicare beneficiaries who have no months of HMO enrollment and both Part A (hospital insurance) and Part B (medical insurance) for whatever portion of the year they are covered by FFS Medicare (i.e., they have no months of A-only or B-only coverage). Beneficiaries who died in the year are included.
AHRF_TOT_MDCR_FFS_ACT_COST, AHRF_TOT_MDCR_FFS_STD_COST	Total actual Medicare costs, fee for service (dollars), Total standardized Medicare costs, fee for service (dollars)	<ul style="list-style-type: none"> Cost is standardized to remove geographic differences in payment rates for individual services as a source of variation. To standardize cost, CMS examined Medicare's various FFS payment systems and identified the factors that lead to different payment rates for the same service. In general, those factors are adjustments that Medicare makes to account for local wages or input prices, and extra payments that Medicare makes to advance other program goals, such as compensating certain hospitals for the cost of training doctors.
AHRF_PRESC_ENROLLMENT	Total number of Medicare prescription drug plan enrollment	<ul style="list-style-type: none"> On the source file, the eligible data may contain some records that have not yet been associated with a specific state and county or a county within a state. These records have not been included in the AHRF. Pilot contracts were excluded from the source file.
AHRF_MARKET_ENROLL	Total number of Health Insurance Marketplace enrollees	<ul style="list-style-type: none"> Data reported on the file are for 38 states in 2016 and 2020, the 39 states in 2017 through 2019 and the 37 states in 2015 using the HealthCare.gov platform during the open enrollment period. State-based Marketplaces using their own Marketplace platforms are not included in these data. These are the District of Columbia and the following states: California, Colorado, Connecticut, Hawaii (in 2015 only), Idaho, Kentucky (in 2015 and 2016 only), Maryland, Massachusetts, Minnesota, Nevada (beginning in 2020), New York, Rhode Island, Vermont, and Washington. All counties in these states are carried as missing on the AHRF. Kentucky changed Marketplace eligibility and enrollment platforms in 2017. Hawaii changed Marketplace eligibility and enrollment platforms in 2016.
AHRF_VET_FEMALE	Estimate of female veteran population	<ul style="list-style-type: none"> The sum of female population may not equal total population due to rounding.

Variable Name	Variable Label	Note
AHRF_VET_MALE	Estimate of male veteran population	<ul style="list-style-type: none"> The sum of male population may not equal total population due to rounding.
AHRF_UNEMPLOYED_RATE	Unemployment rate per 100 population (ages 16 and over)	<ul style="list-style-type: none"> Labor Force data are from the Local Area Unemployment Statistics File, for each respective year, obtained from the Bureau of Labor Statistics. Data are for persons 16 years and older, and include the following: Civilian Labor Force, Number Employed, Number Unemployed and Unemployment Rate. The current Population Survey (CPS) estimates are a key input to the Local Area Unemployment Statistics. Unemployment Rate is carried as a percentage.
AHRF_DAYS_AIR_QLT	Total number of days air quality is measured	<ul style="list-style-type: none"> Data are not reported for approximately two-thirds of the counties due to lack of data availability.
AHRF_PCT_GOOD_AQ	Percentage of days with good air quality	<ul style="list-style-type: none"> Data are not reported for approximately two thirds of the counties due to lack of data availability.
AHRF_TXC_SITE_NO_DATA	Total number of designated toxic sites with insufficient data	<ul style="list-style-type: none"> A site has insufficient data when responses have not been initiated or response actions have been initiated but have not yet generated reliable information to make an evaluation for this indicator (i.e., there is insufficient information to determine whether there are any current, complete unacceptable human exposure pathways at the site, therefore no determination is possible). This field is included for 2013, 2015 and 2017-present.
Health Professional Shortage Area Variables	Health Professional Shortage Area Variables	The SDOH Database includes 2011-2013 HPSA data from the 2013-2014 file which is marked as being sourced from the Bureau of Primary Health. 2010, and 2015 through 2020 data are included from the 2019 and 2020 files and are marked in the AHRF files as being sourced from the HRSA Data Warehouse. 2011-2013 data were dropped from subsequent AHRF file years, and AHRF does not provide a reason for the same.

Notes on Trends and Comparisons Across Areas

Beginning with the 2013 - 2014 AHRF, data that are not reported on original data source files are set to missing on the AHRF files. Prior to the 2013-2014 AHRF, these instances were zero-filled on the AHRF. The SDOH Database follows AHRF current missing value convention for all the years covered in the SDOH Database. The user should be aware of missing values when interpreting data.

Variable definitions:

For more information regarding specific definitions please review term definitions in Table 6.6 or the AHRF documentation. The 2020-2021AHRF documentation is available here:
<https://data.hrsa.gov/data/download>

Variation in availability of AHRF data across years:

Users will notice that some AHRF variables are missing in certain years of the SDOH Database. Table 6.4 below provides the availability of data sources across years.

Table 6.4 Data source availability across years, AHRF

SDOH Database Year ⁸	Data Source	Number of SDOH Variables
2009-2019	AHA Annual Survey	67
2010-2019	AMA Physician Masterfile	57
2017-2020	CMS County-Level Marketplace Health Insurance Enrollment data	11
2009-2019	CMS Medicare Geographic Variation Public Use File	4
2010-2012	CMS Medicaid MAX Data files	4
2010-2020	CMS NPI Downloadable File	14
2009-2020	CMS Prescription Drug Plan (PDP) Data	2
2012-2018	RWJF County Health Rankings	1
2011-2020	EPA Air Data Air Quality Index Report	2
2012-2020	EPA Human Exposure Environmental Indicator Data	3
2009-2013; 2015-2020	HRSA Health Professional Shortage Area Data	3
2013-2019	HRSA NHSC and Community Health Center Data	6
2009-2020	U.S. Census Bureau and the U.S. Bureau of Labor Statistics (BLS) Unemployment Rate	1
2015	USDA ERS County Typology Codes	14
2013	USDA ERS Rural/Urban Continuum Codes	1
2009-2020	VA Veteran Population Projection Model	3

⁸ Variable availability within each source may vary.

Table 6.5. Data source reference years for variables, AHRF

SDOH-RD Variable Name	AHRF Variable	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_USDA_RUCC_2013	F0002013	Not Available	Not Available	Not Available	In 2019-2020 file	Not Available	Not Available						
AHRF_MDS_RATE	F04602	Not Available	In 2019-2020 file	In 2020-2021 file	Not Available								
AHRF_TOT_MDS	F04602	Not Available	In 2019-2020 file	In 2020-2021 file	Not Available								
AHRF_MED_SPEC_RATE	F04618	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_MED_SPEC	F04618	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_CARDIOVAS_SPEC_RATE	F04631	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_CARDIOVAS_SPEC	F04631	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_DERMATOLOGY_RATE	F04636	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_DERMATOLOGY	F04636	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_GASTROENTEROLGY_RATE	F04641	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_GASTROENTEROLGY	F04641	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_PULMONARY_SPEC_RATE	F04666	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_PULMONARY_SPEC	F04666	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_SURG_SPECS_RATE	F04671	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_SURG_SPECS	F04671	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_GENRL_SURG_RATE	F04680	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_GENRL_SURG	F04680	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_NEUROLOGICAL_SURG_RATE	F04685	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_NEUROLOGICAL_SURG	F04685	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available

Social Determinants of Health (SDOH) Database

SDOH-RD Variable Name	AHRF Variable	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_SURG_OPRN_IP_RATE	F09583	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_N_ST_G_EXP_1000	F09592	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_N_ST_G_EXP	F09593	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_N_ST_G_PAYRLL	F09607	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_N_ST_G_PAYRLL_1000	F09609	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_MDCD_IP_DAY_ST_G	F09706	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_SURG_OPRN_OP_RATE	F09707	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_HPSA_PRIM	F09787	Not Available	In 2020-2021 file	In 2013-2014 file	In 2013-2014 file	In 2013-2014 file	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file
AHRF_HPSA_DENTIST	F09792	Not Available	In 2020-2021 file	In 2013-2014 file	In 2013-2014 file	In 2013-2014 file	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file
AHRF_RADI_RATE	F09811	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_RADI	F09811	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_ER_MED_RATE	F09826	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_ER_MED	F09826	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_GEN_INTERNAL_MED_RATE	F11208	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_GEN_INTERNAL_MED	F11208	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_VET	F11396	In 2014-2015 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file								
AHRF_ALLERGY_IMM_RATE	F11674	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_ALLERGY_IMM	F11674	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_PEDIATRICS_RATE	F11704	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_PEDIATRICS	F11704	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available

SDOH-RD Variable Name	AHRF Variable	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_OB_GYN_RATE	F11684	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_OB_GYN	F11684	Not Available	In 2019-2020 file	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_FARM_DEP_USDA	F12481-15	Not Available	In 2019-2020 file	Not Available									
AHRF_MINE_DEP_USDA	F12482-15	Not Available	In 2019-2020 file	Not Available									
AHRF_MANF_DEP_USDA	F12483-15	Not Available	In 2019-2020 file	Not Available									
AHRF_GOV_DEP_USDA	F12484-14	Not Available	In 2019-2020 file	Not Available									
AHRF_NONSP_DEP_USDA	F12486-15	Not Available	In 2019-2020 file	Not Available									
AHRF_RET_DEST_USDA	F12487-15	Not Available	In 2019-2020 file	Not Available									
AHRF_PER_POV_USDA	F12490-14	Not Available	In 2019-2020 file	Not Available									
AHRF_HPSA_MENTAL	F12492	Not Available	In 2020-2021 file	In 2013-2014 file	In 2013-2014 file	In 2013-2014 file	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file
AHRF_MEDSURGIC_HOSP_RATE	F12565	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available	Not Available
AHRF_TOT_MEDSURGIC_HOSP	F12565	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_CARDIACIC_HOSP_RATE	F12566	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_CARDIACIC_HOSP	F12566	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_NEONATALIC_HOSP_RATE	F12567	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_NEONATALIC_HOSP	F12567	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_OPRT_ROOM	F13317	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_OPRT_ROOM_RATE	F13318	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_VET_MALE	F13594	In 2014-2015 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file								
AHRF_VET_FEMALE	F13595	In 2014-2015 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file								

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SDOH-RD Variable Name	AHRF Variable	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_ARBRNE_ST_G_ISO_HOSPS_RA TE	F13928	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_ARBRNE_ST_G_ISO_HOSP S	F13928	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_ARBRNE_ST_G_ISO_ROOMS_RA TE	F13929	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_ARBRNE_ST_G_ISO_ROOM S	F13929	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_ARBRNE_STNGLT_ISO_ROOM_ RATE	F13937	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_ARBRNE_STNGLT_ISO_RO OM	F13937	Not Available	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_ECO_DEP_USDA	F13973-15	Not Available	In 2019-2020 file	Not Available	Not Available	Not Available	Not Available						
AHRF_LOW_EDUC_USDA	F13975-15	Not Available	In 2019-2020 file	Not Available	Not Available	Not Available	Not Available						
AHRF_LOW_EMP_USDA	F13976-15	Not Available	In 2019-2020 file	Not Available	Not Available	Not Available	Not Available						
AHRF_POP_LOSS_USDA	F13977-15	Not Available	In 2019-2020 file	Not Available	Not Available	Not Available	Not Available						
AHRF_RURL_REFRRL_CNT_RATE	F14033	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_RURL_REFRRL_CNT	F14033	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_NH_BED_STNGH_RATE	F14051	In 2012-2013 file	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_NH_BED_STNGH	F14051	In 2012-2013 file	In 2019-2020 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	In 2019-2020 file	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_HOSP_MOBILE_RATE	F14101	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_TOT_HOSP_MOBILE	F14101	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available
AHRF_MEDICAID_ELIG	F14196	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	Not Available	Not Available						
AHRF_MEDICAID_MALE_ELIG	F14197	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	Not Available	Not Available						
AHRF_MEDICAID_FEMALE_ELIG	F14198	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	Not Available	Not Available						
AHRF_DUAL_ELIG	F14206	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	Not Available	Not Available						

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SDOH-RD Variable Name	AHRF Variable	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AHRF_COM_HEALTH_GRANT_RATE	F15253	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	In 2020-2021 file	Not Available					
AHRF_TOT_COM_HEALTH_GRANT	F15253	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	In 2020-2021 file	Not Available					
AHRF_NHSC_FTE_PROV_RATE	F15254	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	In 2020-2021 file	Not Available					
AHRF_TOT_NHSC_FTE_PROV	F15254	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	In 2020-2021 file	Not Available					
AHRF_DAYS_AIR_QLT	F15264	Not Available	Not Available	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file							
AHRF_PCT_GOOD_AQ	F15266	Not Available	Not Available	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file							
AHRF_TOT_MDCR_FFS_ACT_COST	F15294	In 2014-2015 file	In 2019-2020 file	In 2020-2021 file	Not Available								
AHRF_TOT_MDCR_FFS_STD_COST	F15295	In 2014-2015 file	In 2019-2020 file	In 2020-2021 file	Not Available								
AHRF_TOT_MCR_BN_READM	F15306	In 2014-2015 file	In 2019-2020 file	In 2020-2021 file	Not Available								
AHRF_MCR_BN_READM_RATE	F15307	In 2014-2015 file	In 2019-2020 file	In 2020-2021 file	Not Available								
AHRF_HIGH_POV_USDA	F15334-14	Not Available	In 2019-2020 file	Not Available									
AHRF_TXC_SITE_NO_DATA	F15339	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	Not Available	In 2019-2020 file	Not Available	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file
AHRF_NHSC_ACTIVE_RATE	F15445	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	Not Available					
AHRF_TOT_NHSC_ACTIVE	F15445	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	Not Available					
AHRF_MARKET_ENROL	F15449	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file					
AHRF_MARKET_ENROL_NEW	F15458	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file					
AHRF_MARKET_ENROL_ACTIVE	F15459	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file					
AHRF_MARKET_ENROL_AUTO	F15460	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file					
AHRF_MARKET_ENROL_150	F15462	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file					
AHRF_MARKET_ENROL_200	F15463	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file					

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SDOH-RD Variable Name	AHRF Variable	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
AHRF_MARKET_ENROL_250	F15464	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file	
AHRF_MARKET_ENROL_300	F15465	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file	
AHRF_MARKET_ENROL_400	F15466	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2019-2020 file	In 2020-2021 file	In 2020-2021 file	
AHRF_REC_USDA	F15469-15	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	Not Available					
AHRF_PER_CHLD_POV_USDA	F15470-15	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	Not Available					
AHRF_MARKET_ENROL_OTHER	F15566	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	In 2020-2021 file	Not Available	
AHRF_MARKET_ENROL_NO_ASST	F15567	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2019-2020 file	In 2020-2021 file	Not Available	
AHRF_HOSP_TELE_ICU_RATE	F15576	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	
AHRF_TOT_HOSP_TELE_ICU	F15576	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	
AHRF_HOSP_TELE_STROKE_RATE	F15577	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	
AHRF_TOT_HOSP_TELE_STROKE	F15577	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	
AHRF_PREV_HOSP_RATE	F15581	Not Available	Not Available	Not Available	In 2019-2020 file	In 2020-2021 file	Not Available	Not Available						
AHRF_HOSP_TEACHING	F08890+ F08891+ F08892+ F08894	Not Available	In 2012-2013 file	In 2013-2014 file	In 2014-2015 file	In 2015-2016 file	In 2016-2017 file	Not Available	In 2017-2018 file	In 2018-2019 file	In 2019-2020 file	In 2020-2021 file	Not Available	Not Available

Term Definitions

Table 6.6 provides important term definitions for users of the SDOH Database to consider when working with AHRF variables.

Table 6.6. Term definitions, AHRF

Term	Definition
Advanced practice midwife	Midwifery practice as conducted by certified nurse-midwives (CNMs) and certified midwives (CMs) for the independent management of women's health care, focusing particularly on pregnancy, childbirth, the post-partum period, care of the newborn, and the family planning and gynecologic needs of women. The CNM and CM practice within a health care system that provides for consultation, collaborative management, or referral, as indicated by the health status of the client. CNMs and CMs practice in accord with the Standards for the Practice of Midwifery, as defined by the American College of Nurse-Midwives (ACNM).
Advanced practice registered nurse	An advanced practice registered nurse (APRN) is a registered nurse having education beyond the basic nursing education and certified by a nationally recognized professional organization in a nursing specialty, or meeting other criteria established by a Board of Nursing. The Board of Nursing establishes rules specifying which professional nursing organization certifications can be recognized for advanced practice nurses and sets requirements of education, training, and experience. APRNs include advanced practice midwife, certified registered nurse anesthetist, clinical nurse specialist, and nurse practitioner.
Automatic Re-enrollees	Consumers who had a medical plan selection that was the result of automatic re-enrollment into the prior year's plan or automatic placement into a suggested alternate plan. Beginning with the 2017 data, this category includes individuals who did not make an active selection and were placed in a suggested alternate plan because they would not have a plan offered by their previous issuer.
Clinical nurse specialist	A clinical nurse specialist is a registered nurse who, through a graduate degree program in nursing, or through a formal post-basic education program or continuing education courses and clinical experience, is expert in a specialty area of nursing practice within one or more of the components of direct patient/client care, consultation, education, research, and administration.
Certified registered nurse anesthetist	A CRNA is a licensed registered nurse with advanced specialty education in anesthesia who, in collaboration with appropriate health care professionals, provides preoperative, intraoperative, and postoperative care to patients and assists in management and resuscitation of critical patients in intensive care, coronary care, and emergency situations. Nurse anesthetists are certified following successful completion of credentials and state licensure review and a national examination directed by the Council on Certification of Nurse Anesthetists.
Community Health Centers	Community Health Centers are Health Center Program grantees (health center applicant) that receive funding to target a general underserved community or population (as opposed to targeted funding to serve one of the statutorily defined special populations: migrant/seasonal farmworkers and their families, persons experiencing homelessness, and/or residents of public housing).
HPSA code-shortage of primary care physicians	Primary Care Practitioners include non-Federal doctors of medicine (M.D.) and doctors of osteopathy (D.O.) providing direct patient care who practice principally in one of the four primary care specialties-general or family practice, general internal medicine, pediatrics, and obstetrics and gynecology. Those physicians engaged solely in administration, research and teaching will be excluded. For additional information regarding HPSA Primary Care Designation Criteria, refer to the HRSA website: https://data.hrsa.gov/topics/health-workforce/shortage-areas
HPSA code-shortage of dentists	Dental practitioners include non-federal dentists providing patient care. Dentists not in general practice or pedodontics will be excluded. For additional information regarding HPSA Primary Care Designation Criteria, refer to the HRSA website: https://data.hrsa.gov/topics/health-workforce/shortage-areas

Term	Definition
HPSA code-shortage of mental healthcare providers	Professionals include those psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, and marriage and family therapists who meet the definitions set forth in the ruling. For additional information regarding HPSA Primary Care Designation Criteria, refer to the HRSA website: https://data.hrsa.gov/topics/health-workforce/shortage-areas
Inpatient days	Inpatient days are the number of adult and pediatric days of care, excluding newborn days of care, rendered during the entire reporting period. Neonatal and swing admissions are included.
Long Term Hospitals	Hospitals that are coded as follows by the AHA: Length of Stay = '2', Longterm. These hospitals may provide- either nonspecialized or specialized care and the majority of- their patients stay for 30 or more days.
Marketplace enrollment	Data represent cumulative data on the number of unique individuals who have selected or have been automatically reenrolled into; or beginning in 2017, been placed into a suggested alternate Marketplace medical plan for enrollment through the Marketplaces (with or without the first premium payment having been received directly by the issuer). This is also known as pre-effectuated enrollment because enrollment is not considered effectuated until the first premium payment is made, and these figures include plan selections for which enrollment has not yet been effectuated. Individuals who have cancelled or terminated their Marketplace plans are not included in the total number of plan selections. These data also do not include standalone dental plan selections. This variable includes only consumers with non-cancelled Qualified Health Plans.
National Health Service Corps	The NHSC programs provide scholarships and student loan repayment for health care professionals engaged in providing comprehensive primary care medical, dental and mental health care in areas across the country with a shortage of health care professionals. The NHSC participants fulfill their service requirements by working at NHSC-approved sites located in HPSAs, which are communities with limited access to care. NHSC health professionals can be assigned to one or more sites, therefore a count of individuals assigned to sites would over-count the actual number of providers. Each provider spends a certain amount of time at a site, and their involvement at a site is measured in full time equivalents (FTE).
New consumers	New consumers are those individuals who selected a plan through the Marketplace (with or without the first premium payment having been received directly by the issuer) and did not have coverage the prior year. These data do not include stand-alone dental plan selections. Additionally, individuals who have cancelled or terminated their Marketplace plans are not included in the total number of Marketplace plan selections.
Number of Days Air Quality is Measured	Number of days in the year having an AQI value. This is the number of days on which measurements from any monitoring site in the county were reported to the Air Quality System (AQS) database.
Nurse practitioner	A nurse practitioner is a registered nurse provider with a graduate degree in nursing prepared for advanced practice involving independent and interdependent decision making and direct accountability for clinical judgment across the health care continuum or in a certified specialty. Tasks performed by nurse practitioners vary with practice requirements mandated by geographic, political, economic, and social factors. Nurse practitioner specialists include, but are not limited to, family nurse practitioners, gerontological nurse practitioners, pediatric nurse practitioners, obstetric-gynecologic nurse practitioners, and school nurse practitioners.
Outpatient visit	An outpatient visit is defined as a visit by a patient not lodged in the hospital while receiving medical, dental, or other services. Each visit an outpatient makes to a discrete unit constitutes one visit regardless of the number of diagnostic and/or therapeutic treatments that the patient receives.
Percent Good Air Quality Days	Calculated as the (number of days in the year having an AQI value 0 through 50) * 100 / number of days air quality measured. Percent good air quality days has two implied decimal places.

Term	Definition
Physician assistant	A physician assistant is a person who has successfully completed an accredited education program for physician assistant, is licensed by the state and is practicing within the scope of that license. Physician assistants are formally trained to perform many of the routine, time-consuming tasks a physician can do. In some states, they may prescribe medications. They take medical histories, perform physical exams, order lab tests and x-rays, and give inoculations. Most states require that they work under the supervision of a physician.
Short Term Hospitals	Hospitals that are coded as follows by the AHA: Length of Stay = '1'. These hospitals may provide either non-specialized or specialized care, and the majority of their patients stay for fewer than 30 days.
Short Term General Hospitals	Hospitals that are coded as follows by the AHA: Length of Stay = '1', Short term; Type of Service = '10', General medical and surgical. These hospitals provide nonspecialized care, and the majority of their patients stay for fewer than 30 days.
Short Term Non-General Hospitals	Hospitals that are coded as follows by the AHA: Length of Stay = '1', Short term; Type of Service not equal '10', General medical and surgical. These hospitals provide specialized care, and the majority of their patients stay for fewer than 30 days.
Toxic site under control	A site is under control when assessments for human exposures indicate there are no unacceptable human exposure pathways and the Region has determined the site is under control for current conditions site wide.
Veteran	A person who served in the active military, naval, or air service, and who was discharged or released therefrom under conditions other than dishonorable. Active military, naval, or air service includes (1) active duty which represents full-time duty in the Armed Forces, other than active duty for training or (2) any period of active/inactive duty for training which the individual concern was disabled. "Veterans" excludes current service members (i.e., active duty personnel who have not yet separated), those dishonorably discharged, those whose active duty was training only, and those who have previously separated but are on active duty as of the estimation date. For more information go to: http://www.ssa.gov/OP_Home/comp2/D-USC-38.html

7. amfAR Opioid & Health Indicators Database (amfAR)

Sponsor

amfAR, The Foundation for AIDS Research

Description

The Opioid & Health Indicators Database provides statistics on new human immunodeficiency virus (HIV) and hepatitis C infections, opioid use and overdose death rates, and the availability of services like drug treatment programs and syringe exchange services. amfAR has published data annually from 2003 to 2019 to support advocates and policymakers in making informed decisions concerning the opioid epidemic, HIV, and hepatitis C in their communities. It provides a variety of statistics, ranging from local to national estimates, using data from sources such as the North American Syringe Exchange Network, the Substance Abuse and Mental Health Services Administration, and the Centers for Disease Control and Prevention.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2019
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** AMFAR_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

amfAR data spanning 2009–2019 are included in the county SDOH data files and are classified under the SDOH domain of healthcare context. Variables were drawn directly from the Opioid & Health Indicators Database and renamed for clarity and to fit the naming conventions in the SDOH Database.

SDOH variables from amfAR were originally extracted from the following data sets:

- a) The North American Syringe Exchange Network provides syringe services program locations and does not include programs that do not distribute syringes.
- b) The National Survey of Substance Abuse Treatment Services (N-SSATS) is an annual census of treatment facilities. Information is collected on the location, organization, structure, services, and utilization of substance abuse treatment facilities in the United States.
- c) The HRSA Data Warehouse lists medical providers within the Ryan White HIV/AIDS Program (RWHAP) who currently provide medical services for low-income people living with HIV (PLWH). The RWHAP provides a comprehensive system of HIV primary medical care, medications, and essential support services to low-income PLWH.

- d) The National Mental Health Services Survey (N-MHSS) is the only source of national- and state-level data on the mental health services delivery system reported by both publicly and privately operated specialty mental health treatment facilities. They include public and private psychiatric hospitals; nonfederal general hospitals with separate psychiatric units; U.S. Department of Veterans Affairs medical centers; residential treatment centers for children and adults; community mental health centers; outpatient, day treatment, or partial hospitalization mental health facilities; multi-setting (non-hospital) mental health facilities
- e) The National Survey on Drug Use and Health (NSDUH) provides up-to-date information on tobacco, alcohol, and drug use, mental health, and other health-related issues in the United States.
- f) The CDC U.S. Opioid Dispensing Rate Map shows the geographic distribution in the United States, at both state and county levels, of retail opioid prescriptions dispensed per 100 persons per year from 2006–2020.

Resources

We downloaded data from the Opioid & Health Indicators Database.

<https://opioid.amfar.org/about/download> (last retrieved March, 2022).

Data dictionary: The database at the link above has a downloadable data dictionary which details the indicators available for download from the amfAR Opioid and Health Indicator Database.

Suggested Citation

AHRQ SDOH Database (v1), from the Foundation for AIDS Research. Opioid & Health Indicators Database. <https://opioid.amfar.org/about/download>

Data Set Notes

Reliability

Margins of error are not available in the amfAR file.

Geographic Levels

amfAR includes one record for each county in the U.S. and one for each county equivalent in the U.S. territories of Guam, Puerto Rico, and the Virgin Islands.

Suppression Rules

amfAR does not contain suppression rules that apply uniformly across the data set. However, specific variables in the *amfAR* file are subject to suppression:

- *Drug-related deaths:* All sub-national data representing zero to nine (0-9) deaths are suppressed. Corresponding sub-national denominator population figures are also suppressed when the population represents fewer than 10 persons; county estimates may not sum to state value.

Variable Notes

AMFAR_TOT_RWFAC (Total number of Ryan White HIV medical providers) has identical values between 2018 and 2019 for all the 3,232 counties. This variable is a measure of the total number of Ryan White HIV medical providers—a variable that is not expected to vary substantially from year to year. The identical values reflect those found in the source data file, which has the exact same values for this variable in each county.

Table 7.1 below provides information on the variable availability across years. Table 7.2 provides more information on what numerator and denominator variables were drawn for **amfAR** variables in the SDOH Database.

Table 7.1. Variable availability across years, amfAR

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AMFAR_AMATFAC_RATE	X							X	X	X	X	X	X	X	X
AMFAR_AVG_DISTMAT	X											X			
AMFAR_AVG_DISTSSP	X												X		
AMFAR_HCVTFAC_RATE	X											X	X	X	X
AMFAR_HIVHCVTFAC_RATE	X											X	X	X	X
AMFAR_HIVTFAC_RATE	X											X	X	X	X
AMFAR_MEDAMATFAC_RATE	X								X	X	X	X	X	X	X
AMFAR_MEDHCVTFAC_RATE	X											X	X	X	X
AMFAR_MEDHIVHCVTFAC_RATE	X											X	X	X	X
AMFAR_MEDHIVTFAC_RATE	X											X	X	X	X
AMFAR_MEDMHFAC_RATE	X								X	X	X	X	X	X	X
AMFAR_MEDSAFAC_RATE	X					X	X	X	X	X	X	X	X	X	X
AMFAR_MHFAC_RATE	X									X	X	X	X	X	X
AMFAR_MME_PER_CAPITA	X						X					X			
AMFAR_OPIOIDRX_RATE	X					X	X	X	X	X	X	X	X		
AMFAR_PCT_DRUGDEP_ABOVE12	X										X				
AMFAR_PCT_NONMEDPAIN_ABOVE12	X										X				
AMFAR_RWFAC_RATE	X													X	X
AMFAR_SSP	X													X	X
AMFAR_SSP_RATE	X													X	X
AMFAR_TOT_AMATFAC	X									X	X	X	X	X	X
AMFAR_TOT_HCVTFAC	X											X	X	X	X
AMFAR_TOT_HIVHCVTFAC	X											X	X	X	X
AMFAR_TOT_HIVTFAC	X											X	X	X	X
AMFAR_TOT_MEDAMATFAC	X									X	X	X	X	X	X
AMFAR_TOT_MEDHCVTFAC	X											X	X	X	X
AMFAR_TOT_MEDHIVHCVTFAC	X											X	X	X	X
AMFAR_TOT_MEDHIVTFAC	X											X	X	X	X

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AMFAR_TOT_MEDMHFAC	X								X	X	X	X	X	X	X
AMFAR_TOT_MEDSAFAC	X			X	X	X	X	X	X	X	X	X	X	X	X
AMFAR_TOT_MHFAC	X								X	X	X	X	X	X	X
AMFAR_TOT_RWFAC	X												X	X	

Table 7.2. Variable definitions and specifications, amfAR

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AMFAR_AMATFAC_RATE	Total number of substance abuse treatment facilities with all three medication assisted treatment services per 1,000 population	National Survey of Substance Abuse Treatment Services (N-SSATS)	AMAT_fac ; Number of substance abuse treatment facilities offering all three MAT services (Buprenorphine, Methadone, Naltrexone)	F11984; AHRF Census County Population Estimate
AMFAR_AVG_DISTMAT	Average distance in miles to treatment facilities with at least one form of medication assisted treatment	AMFAR Analysis	dist_mat; Average distance (miles) to treatment facilities with at least one form of MAT	n/a
AMFAR_AVG_DISTSSP	Average distance in miles to a syringe services program	AMFAR Analysis	dist_SSP; Average miles to a syringe services program	n/a
AMFAR_HCVTFAC_RATE	Total number of substance abuse facilities offering hepatitis C screening per 1,000 population	National Survey of Substance Abuse Treatment Services (N-SSATS)	HCVT_FAC; Number of substance abuse facilities offering hepatitis C screening	F11984; AHRF Census County Population Estimate
AMFAR_HIVHCVTFAC_RATE	Total number of substance abuse facilities offering both HIV test and hepatitis C screening per 1,000 population	National Survey of Substance Abuse Treatment Services (N-SSATS)	HICVT_FAC; Number of substance abuse facilities offering both HIV testing and HCV screening	F11984; AHRF Census County Population Estimate
AMFAR_HIVTFAC_RATE	Total number of substance abuse facilities offering HIV testing per 1,000 population	National Survey of Substance Abuse Treatment Services (N-SSATS)	HIVT_FAC; Number of substance abuse facilities offering HIV testing	F11984; AHRF Census County Population Estimate
AMFAR_MEDAMATFAC_RATE	Total number of substance abuse treatment facilities offering all three medication assisted treatment services that accept Medicaid per 1,000 population	National Survey of Substance Abuse Treatment Services (N-SSATS)	MED_AMAT_FAC ; Number of substance abuse treatment facilities offering all three MAT services (Buprenorphine, Methadone, Naltrexone) and accept Medicaid	F11984; AHRF Census County Population Estimate
AMFAR_MEDHCVTFAC_RATE	Total number of substance abuse facilities offering hepatitis C screening and accept Medicaid per 1,000 population	National Survey of Substance Abuse Treatment Services (N-SSATS)	MED_HCVT_FAC; Number of substance abuse facilities offering hepatitis C screening that accept Medicaid	F11984; AHRF Census County Population Estimate
AMFAR_MEDHIVHCVTFAC_RATE	Total number of substance abuse facilities offering both HIV test and hepatitis C screening and accept Medicaid per 1,000 population	National Survey of Substance Abuse Treatment Services (N-SSATS)	MED_HICVT_FAC; Number of substance abuse facilities offering both HIV testing and HCV screening that accept Medicaid	F11984; AHRF Census County Population Estimate
AMFAR_MEDHIVTFAC_RATE	Total number of substance abuse facilities offering HIV testing and accept Medicaid per 1,000 population	National Survey of Substance Abuse Treatment Services (N-SSATS)	MED_HIVT_FAC; Number of substance abuse facilities offering HIV testing that accept Medicaid	F11984; AHRF Census County Population Estimate

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AMFAR_MEDMHFAC_RATE	Total number of facilities that provide mental health services and accept Medicaid per 1,000 population	The National Mental Health Services Survey (N-MHSS)	MED_MH_FAC; Number of facilities that provide mental health services and accept Medicaid	F11984; AHRF Census County Population Estimate
AMFAR_MEDSAFAC_RATE	Total number of substance abuse services facilities accepting Medicaid per 1,000 population	National Survey of Substance Abuse Treatment Services (N-SSATS)	Med_SA_fac; Total number of substance abuse services facilities accepting Medicaid per 1,000 population	F11984; AHRF Census County Population Estimate
AMFAR_MHFAC_RATE	Total number of facilities that provide mental health services per 1,000 population	The National Mental Health Services Survey (N-MHSS)	MH_FAC; Number of facilities that provide mental health services	F11984; AHRF Census County Population Estimate
AMFAR_MME_PER_CAPITA	Per capita opioids prescribed , in morphine milligram equivalents (MME)	This measure is from a recently published Centers for Disease Control and Prevention (CDC) report entitled "Vital Signs: Changes in Opioid Prescribing in the United States, 2006-2015" which uses retail prescription data from QuintilesIMS. County-level data were shared privately by CDC.	mme_percap; Opioids prescribed per capita, in morphine mg equivalents (MME)	n/a
AMFAR_OPIOIDRX_RATE	Total number of opioid prescriptions per 100 persons	This measure uses IQVIA data from pharmacies which dispense nearly 90% of all retail prescriptions in the US.	opioid_rxrate; Number of opioid prescriptions per 100 persons	n/a
AMFAR_PCT_DRUGDEP_ABOVE12	Percentage of people reporting drug dependence (ages 12 and over)	National Survey on Drug Use and Health (NSDUH)	drugdep; Percent of People 12+ Reporting Drug Dependence	n/a
AMFAR_PCT_NONMEDPAIN_ABOVE12	Percentage of people reporting nonmedical use of pain relievers (ages 12 and over)	National Survey on Drug Use and Health (NSDUH)	nonmedpain; Percent of Population 12 or Older Reporting Non-medical Use of Pain Relievers	n/a
AMFAR_RWFAC_RATE	Total number of Ryan White HIV medical providers per 1,000 population	HRSA Data Warehouse	RW_fac; Total number of Ryan White HIV Medical Providers	F11984; AHRF Census County Population Estimate
AMFAR_SSP	Total number of syringe exchange programs	North American Syringe Exchange Network	num_SSPs; Total number of Syringe Exchange Programs	n/a
AMFAR_SSP_RATE	Total number of syringe exchange programs per 1,000 population	North American Syringe Exchange Network	num_SSPs; Total number of Syringe Exchange Programs	F11984; AHRF Census County Population Estimate
AMFAR_TOT_AMATFAC	Total number of substance abuse treatment facilities with all three medication assisted treatment services	National Survey of Substance Abuse Treatment Services (N-SSATS)	AMAT_fac ; Number of substance abuse treatment facilities offering all three MAT services (Buprenorphine, Methadone, Naltrexone)	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
AMFAR_TOT_HCVTFAC	Total number of substance abuse facilities offering hepatitis C screening	National Survey of Substance Abuse Treatment Services (N-SSATS)	HCVT_FAC; Number of substance abuse facilities offering hepatitis C screening	n/a
AMFAR_TOT_HVHCVTFAC	Total number of substance abuse facilities offering both HIV test and hepatitis C screening	National Survey of Substance Abuse Treatment Services (N-SSATS)	HICVT_FAC; Number of substance abuse facilities offering both HIV testing and HCV screening	n/a
AMFAR_TOT_HIVTFAC	Total number of substance abuse facilities offering HIV testing	National Survey of Substance Abuse Treatment Services (N-SSATS)	HIVT_FAC; Number of substance abuse facilities offering HIV testing	n/a
AMFAR_TOT_MEDAMATFAC	Total number of substance abuse treatment facilities offering all three medication assisted treatment services that accept Medicaid	National Survey of Substance Abuse Treatment Services (N-SSATS)	MED_AMAT_FAC ; Number of substance abuse treatment facilities offering all three MAT services (Buprenorphine, Methadone, Naltrexone) and accept Medicaid	n/a
AMFAR_TOT_MEDHCVTFAC	Total number of substance abuse facilities offering hepatitis C screening and accept Medicaid	National Survey of Substance Abuse Treatment Services (N-SSATS)	MED_HCVT_FAC; Number of substance abuse facilities offering hepatitis C screening that accept Medicaid	n/a
AMFAR_TOT_MEDHIVHCVTFAC	Total number of substance abuse facilities offering both HIV test and hepatitis C screening and accept Medicaid	National Survey of Substance Abuse Treatment Services (N-SSATS)	MED_HICVT_FAC; Number of substance abuse facilities offering both HIV testing and HCV screening that accept Medicaid	n/a
AMFAR_TOT_MEDHIVTFAC	Total number of substance abuse facilities offering HIV testing and accept Medicaid	National Survey of Substance Abuse Treatment Services (N-SSATS)	MED_HIVT_FAC; Number of substance abuse facilities offering HIV testing that accept Medicaid	n/a
AMFAR_TOT_MEDMHFAC	Total number of facilities that provide mental health services and accept Medicaid	The National Mental Health Services Survey (N-MHSS)	MED_MH_FAC; Number of facilities that provide mental health services and accept Medicaid	n/a
AMFAR_TOT_MEDSAFAC	Total number of substance abuse services facilities accepting Medicaid	National Survey of Substance Abuse Treatment Services (N-SSATS)	Med_SA_fac; Total number of substance abuse services facilities accepting Medicaid	n/a
AMFAR_TOT_MHFAC	Total number of facilities that provide mental health services	The National Mental Health Services Survey (N-MHSS)	MH_FAC; Number of facilities that provide mental health services	n/a
AMFAR_TOT_RWFAC	Total number of Ryan White HIV medical providers	HRSA Data Warehouse	RW_fac; Total number of Ryan White HIV Medical Providers	n/a

Table 7.3 provides important variable notes for users of the SDOH Database to consider when working with amfAR variables.

Table 7.3. amfAR variable notes

Variable Name	Variable Label	Note
AMFAR_AVG_DISTSSP	Average distance in miles to a syringe services program	The geographic distance is calculated in miles using the Haversine equation between each ZIP Code tabulation area (ZCTA) without a facility and the nearest ZCTA containing such a facility. County estimates are averages of the ZCTAs contained in that county. Syringe services program locations are taken from the North American Syringe Exchange Network (NASEN) and only include programs that distribute syringes.
AMFAR_AVG_DISTMAT	Average distance in miles to treatment facilities with at least one form of MAT	The geographic distance is calculated in miles using the Haversine equation between each ZCTA without a facility and the nearest ZCTA containing such a facility. County estimates are averages of the ZCTAs contained in that county. Facility locations are taken from The National Survey of Substance Abuse Treatment Facilities (N-SSATS) and are limited to facilities that report providing at least one form of medication-assisted treatment.
AMFAR_DRUGDEATHS_RATE	Total number of drug-related deaths per 100,000 population	This includes both opioid and non-opioid drug poisonings, since the CDC reports that due to variable levels of completeness on death certificates only 28 states have high enough quality of data to report drug-specific poisoning data. Data are not available for Puerto Rico.
AMFAR_TOT_MHFAC	Total number of facilities that provide mental health services	Note that as of August 10, 2018, there has been a methodology change. Previously, data reflected the year of the N-MHSS Directory, which presents the results of the N-SSATS survey collected during the previous year. Data released after August 2018 reflect the year the N-SSATS survey was administered.
AMFAR_SSP	Total number of syringe exchange programs	The directory of syringe exchange programs is an aggregation of self-reports to the North American Syringe Exchange Network (NASEN) and is therefore unlikely to be a comprehensive and complete list of all syringe exchange programs. These data only include programs that distribute syringes.

Notes on Trends and Comparisons Across Areas

Variation in availability of amfAR data across years:

Users will notice that some amfAR variables are missing in certain years of the SDOH Database. The table below provides the availability of data sources across years. For more information about variable availability across years please review the amfAR's codebook and the data source documentation.

Table 7.4. Data source availability across years, amfAR

SDOH Database Year(s) ⁹	Data Source	Number of SDOH Variables
2013-2020	National Survey of Substance Abuse Treatment Services (N-SSATS)	67
2014-2020	The National Mental Health Services Survey (N-MHSS)	57
2010, 2015	CDC County Data regarding Opioid Prescribing	11
2009-2018	IQVIA Pharmacy Data	4
2014	National Survey on Drug Use and Health (NSDUH)	4
2019-2020	North American Syringe Exchange Network	14
2018-2019	HRSA Data Warehouse	6

Term Definitions

Table 7.5 provides important term definitions for users of the SDOH Database to consider when working with AmfAR variables.

⁹ Variable availability within each source may vary.

Table 7.5. Term definitions, amfAR

Term	Definition
Drug-related deaths	The total number of deaths from drug poisoning, including both illicit and prescription drugs. Drug poisoning data are from CDC's Detailed Cause of Death data and include ICD-10 codes X40-X44, X60-X64, X85, and Y10-Y14.
Facilities Providing Mental Health Services	The number of facilities that provide mental health services. Types of care include crisis intervention teams, psychiatric emergency walk-in services, or mental health treatment. Facilities include hospital inpatient, outpatient, residential, or partial hospitalization/day treatment.
Facilities Providing Substance Abuse Services	Types of care include substance abuse treatment, detoxification, transitional housing, or halfway houses, prescribing of buprenorphine and/or naltrexone, or SAMHSA-certified Opioid Treatment Programs. Facilities include hospital inpatient, residential, or outpatient.
Opioid prescriptions	The number of opioid prescriptions dispensed, per 100 U.S. residents. This variable uses IQVIA data from pharmacies which dispense nearly 90% of all retail prescriptions in the US. It includes prescriptions paid for by commercial insurance, Medicaid, Medicare, or cash or equivalent. Cough and cold formulations containing opioids and buprenorphine products typically used to treat opioid use disorder are excluded, and IQVIA data does not include methadone dispensed through methadone maintenance treatment programs.
Ryan White HIV Medical Providers	The Ryan White HIV/AIDS Program provides a comprehensive system of care that includes primary medical care and essential support services for people living with HIV who are uninsured or underinsured. The Program works with cities, states, and local community-based organizations to provide HIV care and treatment services to more than half a million people each year. HRSA maintains data on service providers actively seeing patients under the program.
Substance Abuse Facilities that Offer HCV Screening	Hepatitis C screening facilities are identified from key code SHC in the N-SSATS facilities catalog starting in 2016.
Substance Abuse Facilities that Offer HIV testing	HIV testing facilities are identified from key code HIVT in the N-SSATS facilities catalog starting in 2016.

8. U.S. Census Bureau County Adjacency File (CAF)

Sponsor

U.S. Department of Commerce, U.S. Census Bureau

Description

The Census Bureau's County Adjacency File (CAF) contains a record for each county or county equivalent in 2010 and indicates each neighboring county. The file includes counties for all 50 states, the District of Columbia, Puerto Rico, and the Island Areas (American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands). The CAF can be used by researchers to identify counties in close geographic proximity to one another, which may be useful in analyses that involve characteristics that may not be specific to a single county, such as air quality or pollution.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2010 – 2020
- ▶ **SDOH domain(s):**
 - Geography
- ▶ **SDOH variable naming convention:** CAF_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database county data files contain one record per county, and fields indicating the county name and the 5-digit FIPS code for each adjacent county, including the reference county. Variables were renamed from the source data and are included in each data file.

The maximum number of adjacent counties is 14. Therefore, the SDOH Database county-level files contain 14 variables, each indicating one county adjacent to the reference county (CAF_ADJ_COUNTY_1 through CAF_ADJ_COUNTY_14). We created variable values by extracting the five-digit state plus county FIPS code from the original variable (which included the county name).

The value for this set of variables is an adjacent county FIPS code or missing. If a county has, for example, four adjacent counties, then CAF_ADJ_COUNTY_1- CAF_ADJ_COUNTY_4 will contain one five-digit FIPS code value for each of the four adjacent county variables, and CAF_ADJ_COUNTY_5- CAF_ADJ_COUNTY_14 will have missing values.

Resources

Data can be downloaded from the following website:

<https://www.census.gov/geographies/reference-files/2010/geo/county-adjacency.html>.

Layout information from the CAF file is available here: <https://www.census.gov/programs-surveys/geography/technical-documentation/records-layout/county-adjacency-record-layout.html>.

Suggested Citation

AHRQ SDOH Database (v1), from United States Census Bureau. (n.d.). County Adjacency File [Data file]. <https://www.census.gov/geographies/reference-files/2010/geo/county-adjacency.html>.

Data Set Notes

Reliability

In some instances, the boundary between two counties may fall within a body of water, so it seems as if the two counties do not physically touch. But these counties are included on the list as neighbors. With the exception of island areas, every county has itself listed as a neighboring county.

Geographic Levels

The county adjacency file lists each county, or county equivalent, and which county or counties are neighboring.

Variable Notes

Table 8.1 below provides information on the variable availability across years. Table 8.2 provides more information on what numerator and denominator variables were drawn for CAF variables in the SDOH Database.

Table 8.1. Variable availability across years, CAF

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CAF_ADJ COUNTY_1	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_2	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_3	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_4	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_5	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_6	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_7	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_8	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_9	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_10	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_11	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_12	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_13	X			X	X	X	X	X	X	X	X	X	X	X	X
CAF_ADJ COUNTY_14	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 8.2. Variable definitions and specifications, CAF

Variable Name	Variable Label	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CAF_ADJ_COUNTY_1	Adjacent county 1 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_1 ; Adjacent county 1	n/a
CAF_ADJ_COUNTY_2	Adjacent county 2 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_2 ; Adjacent county 2	n/a
CAF_ADJ_COUNTY_3	Adjacent county 3 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_3 ; Adjacent county 3	n/a
CAF_ADJ_COUNTY_4	Adjacent county 4 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_4 ; Adjacent county 4	n/a
CAF_ADJ_COUNTY_5	Adjacent county 5 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_5 ; Adjacent county 5	n/a
CAF_ADJ_COUNTY_6	Adjacent county 6 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_6 ; Adjacent county 6	n/a
CAF_ADJ_COUNTY_7	Adjacent county 7 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_7 ; Adjacent county 7	n/a
CAF_ADJ_COUNTY_8	Adjacent county 8 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_8 ; Adjacent county 8	n/a
CAF_ADJ_COUNTY_9	Adjacent county 9 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_9 ; Adjacent county 9	n/a
CAF_ADJ_COUNTY_10	Adjacent county 10 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_10 ; Adjacent county 10	n/a
CAF_ADJ_COUNTY_11	Adjacent county 11 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_11 ; Adjacent county 11	n/a
CAF_ADJ_COUNTY_12	Adjacent county 12 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_12 ; Adjacent county 12	n/a
CAF_ADJ_COUNTY_13	Adjacent county 13 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_13 ; Adjacent county 13	n/a
CAF_ADJ_COUNTY_14	Adjacent county 14 FIPS Code (state and county)	CAS2010_ADJ_COUNTY_14 ; Adjacent county 14	n/a

Other notes

The source file for the CAF is a national, tab delimited text file. The list is sorted by County GEOID and then neighboring counties are sorted by Neighbor GEOID within each county. The Island Areas appear at the end of the list.

9. U.S. Census County Business Patterns (CCBP)

Sponsor

U.S. Department of Commerce, U.S. Census Bureau

Description

The Census County Business Patterns (CCBP) program is an annual data series that provides industry statistics on U.S. businesses with paid employees at subnational geographic levels. CCBP contains data with detailed information on the number of establishments, employment during the week of March 12, and first quarter and annual payroll at multiple geographic levels, including the national, state, county, metropolitan area, ZIP Code, and congressional district levels.

CCBP basic data items are constructed from the Business Register, a database of all known single- and multi-establishment employer companies maintained and updated by the Census Bureau. Establishments can be identified across nearly 1,200 industries defined by the current 2017 North American Industry Classification System (NAICS). NAICS code descriptions can be found at <https://www.naics.com/naics-code-description>.

The CCBP series was published annually: at the county-level since 1964 and ZIP Code-level since 1986.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2019
- ▶ **SDOH domain(s):**
 - Physical infrastructure
 - Social context
- ▶ **SDOH variable naming convention:** CCBP_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County and ZIP Code

The SDOH county and ZIP Code data files contain rates of business establishments per population for certain industries, covering the SDOH domain of physical infrastructure. Data for Puerto Rico and other U.S. territories are not available in the SDOH Database.

To calculate variables related to food access (e.g., restaurants, fast food, grocery, and convenience stores), we employed the same methodology as the USDA Food Environment Atlas (<https://www.ers.usda.gov/data-products/food-environment-atlas/documentation>). For the county-level files, we identified the relevant establishments by NAICS code and then calculated a rate by dividing the number of establishments by the total population for each county. For the remaining (non-food access) categories, we identified NAICS codes that were most relevant to other aspects of physical infrastructure and health (e.g., fitness centers and recreational sports

centers, physician offices) and employed the same methodology to calculate rates. ZIP Code-level files do not contain rate variables and only provide total numbers of establishments by ZIP Code.

Resources

Data are downloaded from the county- and ZIP Code-level files at:

<https://www.census.gov/programs-surveys/cbp/data/tables.html> (last retrieved November, 2021).

Methodology (<https://www.census.gov/programs-surveys/cbp/technical-documentation/methodology.html>): This section describes the methods used to collect and produce the Census County Business Patterns, including sampling, questions, collection, review, quality, and weighting.

Industry and Geography Reference (<https://www.census.gov/programs-surveys/cbp/technical-documentation/reference.html>): Industry reference is by NAICS code and description. The NAICS codes are 2- to 6-digits and date back to 1998. Prior to NAICS, industry reference is by SIC.

Geographic references date back to 1986 for states and counties, 1993 for MSAs, 1998 for Puerto Rico, 2008 for Island Areas, 2012 for Combined Report, and 2017 for CSAs.

Record Layouts (<https://www.census.gov/programs-surveys/cbp/technical-documentation/record-layouts.html>): The website contains the record layouts for the county, ZIP, CSA, MSA, State record layouts.

Suggested Citation

AHRQ SDOH Database (v1), from United States Census Bureau. County Business Patterns [Data series]. U.S. Department of Commerce, Bureau of the Census, Data User Services Division. <https://www.census.gov/programs-surveys/cbp/data/tables.html>.

Data Set Notes

Reliability

CCBP does not include margins of error.

More generally, CCBP covers most of the country's economic activity. The series excludes data on self-employed individuals, employees of private households, railroad employees, agricultural production employees, and most government employees. Businesses operating without an EIN, and businesses with an EIN but without employees, are excluded from the County Business Patterns universe.

The comparability of data over time may be affected by changes in industry classifications, definitions of establishments, establishment active status, and/or changes to geographic boundaries (actual or statistically defined areas).

Geographic Levels

CCBP data include the numbers of establishments for each industry operating in a geographic area. Statistics are available on establishments at the U.S. level and by state, county, Metropolitan/Micropolitan Statistical Area, Combined Statistical Area (CSA), ZIP Code, and congressional district levels. If a county or ZIP Code does not have any establishments reported for a given NAICS code, there is no record for that geography-NAICS combination in the data file.

Suppression Rules

CCBP does not include a suppression flag that would allow users to distinguish between fewer than three and zero, and therefore these observations are represented as missing in the SDOH for years 2017 and later.

Variable Notes

Table 9.1 below provides information on the variable availability across years. Table 9.2 provides more information on what numerator and denominator variables were drawn for CCBP variables in the SDOH Database.

Table 9.1. Variable availability across years, CCBP

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CCBP_ANNUAL_TOT_POP	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_BWLSTORES_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_CFS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_CHILD_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_CHS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_CS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_EORS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_FCRSC_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_FF_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_FSR_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_GAMBLING_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_HOME_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_LAB_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_LARGE_INDUSTRY	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_PCT_HEALTH_EMPLOYMENT	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_PHYS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_RET_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_SA_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_SFS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_SHELTERS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_SOGS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CCBP_TOT_BWLSTORES		X				X	X	X	X	X	X	X	X	X	
CCBP_TOT_CFS		X					X	X	X	X	X	X	X	X	
CCBP_TOT_CHILD		X					X	X	X	X	X	X	X	X	
CCBP_TOT_CHS		X					X	X	X	X	X	X	X	X	
CCBP_TOT_CS		X					X	X	X	X	X	X	X	X	
CCBP_TOT_EORS		X					X	X	X	X	X	X	X	X	
CCBP_TOT_FCRSC		X					X	X	X	X	X	X	X	X	
CCBP_TOT_FF		X					X	X	X	X	X	X	X	X	
CCBP_TOT_FSR		X					X	X	X	X	X	X	X	X	
CCBP_TOT_GAMBLING		X					X	X	X	X	X	X	X	X	

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CCBP_TOT_HOME		X				X	X	X	X	X	X	X	X	X	
CCBP_TOT_LAB		X				X	X	X	X	X	X	X	X	X	
CCBP_TOT_PHYS		X				X	X	X	X	X	X	X	X	X	
CCBP_TOT_RET		X				X	X	X	X	X	X	X	X	X	
CCBP_TOT_SA		X				X	X	X	X	X	X	X	X	X	
CCBP_TOT_SFS		X				X	X	X	X	X	X	X	X	X	
CCBP_TOT_SHelters		X				X	X	X	X	X	X	X	X	X	
CCBP_TOT_SOGS		X				X	X	X	X	X	X	X	X	X	

Table 9.2. Variable definitions and specifications, CCBP

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CCBP_ANNUAL_TOT_POP	Total Census County Population	Population Estimate	Population Estimate-2019	n/a	n/a
CCBP_LARGE_INDUSTRY	NAICS Code of largest industry in region by number of employees	Two Digit NAICS Code of Largest Industry by number of Employees	NAICS CODE	n/a	n/a
CCBP_PCT_HEALTH_EMPLOYMENT	Percentage of employment attributed to health care	emp when naics=62	emp associated with NAICS=62 (Same for 2011)	Total Employment	Emp when naics=NULL
CCBP_EORS_RATE	Total number of emergency and other relief services per 1,000 people	EST - Total number of establishments where NAICS Industry Code is 624230	Est number associated with NAICS=624230 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_CHS_RATE	Total number of community housing services per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 624229 [Other Community Housing Services]	Est number associated with NAICS=624229 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_CFS_RATE	Total number of community food services per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 624210 [Community Food Services]	Est number associated with NAICS=624210 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_SFS_RATE	Total number of specialized food stores per 1,000 people	EST - Total number of establishments, where NAICS - Industry Codes are 445210 [Meat Markets], 445220 [Fish and Seafood Markets], 445230 [Fruit and Vegetable Markets], 445291 [Baked Goods Stores], 445292 [Confectionery and Nut Stores], and 445299 [All Other Specialty Food Stores]	Est number associated with NAICS=445210 & 445220 & 445230 & 445291 & 445292 & 445299 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_BWLSTORES_RATE	Total number of beer, wine and liquor stores per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 445310 [Beer, Wine, and Liquor Stores]	Est number associated with NAICS=445310 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CCBP_FCRSC_RATE	Total number of fitness centers and recreational sports centers per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 713940 [Fitness and Recreational Sports Centers]	Est number associated with NAICS=713940 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_GAMBLING_RATE	Total number of gambling establishments per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 713290 [Other Gambling Industries]	Est number associated with NAICS=713290 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_SHELTERS_RATE	Total number of temporary shelters per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 624221 [Temporary Shelters]	Est number associated with NAICS=624221 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_CS_RATE	Total number of convenience stores per 1,000 people	EST - Total establishments, where NAICS - Industry Codes are 445120 [Convenience Stores] and 447110 [Gasoline Stations with Convenience Stores]	Est number associated with NAICS=445120 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_FF_RATE	Total number of limited service restaurants (fast food establishments) per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 722211 (2011 and earlier) or 722513 (2012 to present) [Limited-Service Restaurants]	Est number associated with NAICS=722211 (2011 and earlier) or 722513 (2012 to present)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_FSR_RATE	Total number of full service restaurants per 1,000 people	EST - Total number of business establishments, where NAICS - Industry Code is 722110 (2011 and earlier) or 722511 (2012 to present) [Full-Service Restaurants]	Est number associated with NAICS= 722110 (2011 and earlier) or 722511 (2012 to present)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_SOCS_RATE	Total number of supermarkets and other grocery (except convenience) stores per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 445110 [Supermarkets and Other Grocery (except Convenience) Stores]	Est number associated with NAICS= 445110 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CCBP_PHYS_RATE	Total number of physician offices per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 6211 (Offices of Physicians)	Est number associated with NAICS=6211 (Same for 2011, but use all NAICS codes beginning with 6211)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_LAB_RATE	Total number of medical and diagnostic laboratories per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 6215 (Medical and Diagnostic Laboratories)	Est number associated with NAICS=6215 (Same for 2011, but use all NAICS codes beginning with 6215)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_RET_RATE	Total number of continuing care retirement communities and assisted living facilities for the elderly per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 6233 (Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly)	Est number associated with NAICS=6233 (Same for 2011, but use all NAICS codes beginning with 6233)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_HOME_RATE	Total number of home health care services per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 6216 (Home Health Care Services)	Est number associated with NAICS=6216 (Same for 2011, but use all NAICS codes beginning with 6216)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_CHILD_RATE	Total number of child day care services per 1,000 people	EST - Total number of establishments, where NAICS - Industry Code is 6244 (Child Day Care Services)	Est number associated with NAICS=6244 (Same for 2011, but use all NAICS codes beginning with 6244)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CCBP_SA_RATE	Total number of social associations per 1,000 people	The numerator is the total number of membership associations in a county. The associations include membership organizations such as civic organizations, bowling centers, golf clubs, fitness centers, sports organizations, religious organizations, political organizations, labor organizations, business organizations, and professional organizations. These associations are identified by NAICS codes 813410, 713950, 713910, 713940, 711211, 813110, 813940, 813930, 813910 and 813920 (Same for 2011)	Est number associated with NAICS=813410, 713950, 713910, 713940, 711211, 813110, 813940, 813930, 813910 and 813920 (Same for 2011)	County - Resident Population/ ZCTA - Total Population Weighted	Population Estimate-2019
CCBP_TOT_EORS_ZC	Total number of emergency and other relief services	EST - Total number of establishments where NAICS Industry Code is 624230	Est number associated with NAICS=624230 (Same for 2011)	n/a	n/a
CCBP_TOT_CHS_ZC	Total number of community housing services	EST - Total number of establishments, where NAICS - Industry Code is 624229 [Other Community Housing Services]	Est number associated with NAICS=624229 (Same for 2011)	n/a	n/a
CCBP_TOT_CFS_ZC	Total number of community food services	EST - Total number of establishments, where NAICS - Industry Code is 624210 [Community Food Services]	Est number associated with NAICS=624210 (Same for 2011)	n/a	n/a

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CCBP_TOT_SFS_ZC	Total number of specialized food stores	EST - Total number of establishments, where NAICS - Industry Codes are 445210 [Meat Markets], 445220 [Fish and Seafood Markets], 445230 [Fruit and Vegetable Markets], 445291 [Baked Goods Stores], 445292 [Confectionery and Nut Stores], and 445299 [All Other Specialty Food Stores]	Est number associated with NAICS=445210 & 445220 & 445230 & 445291 & 445292 & 445299 (Same for 2011)	n/a	n/a
CCBP_TOT_BWLSTORES_ZC	Total number of beer, wine and liquor stores	EST - Total number of establishments, where NAICS - Industry Code is 445310 [Beer, Wine, and Liquor Stores]	Est number associated with NAICS=445310 (Same for 2011)	n/a	n/a
CCBP_TOT_FCRSC_ZC	Total number of fitness centers and recreational sports centers	EST - Total number of establishments, where NAICS - Industry Code is 713940 [Fitness and Recreational Sports Centers]	Est number associated with NAICS=713940 (Same for 2011)	n/a	n/a
CCBP_TOT_GAMBLING_ZC	Total number of gambling establishments	EST - Total number of establishments, where NAICS - Industry Code is 713290 [Other Gambling Industries]	Est number associated with NAICS=713290 (Same for 2011)	n/a	n/a
CCBP_TOT_SHELTERS_ZC	Total number of temporary shelters	EST - Total number of establishments, where NAICS - Industry Code is 624221 [Temporary Shelters]	Est number associated with NAICS=624221 (Same for 2011)	n/a	n/a
CCBP_TOT_CS_ZC	Total number of convenience stores	EST - Total establishments, where NAICS - Industry Codes are 445120 [Convenience Stores] and 447110 [Gasoline Stations with Convenience Stores]	Est number associated with NAICS=445120 (Same for 2011)	n/a	n/a

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CCBP_TOT_FF_ZC	Total number of limited service restaurants (fast food establishments)	EST - Total number of establishments, where NAICS - Industry Code is 722211 (2011 and earlier) or 722513 (2012 to present) [Limited-Service Restaurants]	Est number associated with NAICS=722211 (2011 and earlier) or 722513 (2012 to present)	n/a	n/a
CCBP_TOT_FSR_ZC	Total number of full service restaurants	EST - Total number of business establishments, where NAICS - Industry Code is 722110 (2011 and earlier) or 722511 (2012 to present) [Full-Service Restaurants]	Est number associated with NAICS= 722110 (2011 and earlier) or 722511 (2012 to present)	n/a	n/a
CCBP_TOT_SOCS_ZC	Total number of supermarkets and other grocery (except convenience) stores	EST - Total number of establishments, where NAICS - Industry Code is 445110 [Supermarkets and Other Grocery (except Convenience) Stores]	Est number associated with NAICS= 445110 (Same for 2011)	n/a	n/a
CCBP_TOT_PHYS_ZC	Total number of physician offices	EST - Total number of establishments, where NAICS - Industry Code is 6211 (Offices of Physicians)	Est number associated with NAICS=6211 (Same for 2011, but use all NAICS codes beginning with 6211)	n/a	n/a
CCBP_TOT_LABV_ZC	Total number of medical and diagnostic laboratories	EST - Total number of establishments, where NAICS - Industry Code is 6215 (Medical and Diagnostic Laboratories)	Est number associated with NAICS=6215 (Same for 2011, but use all NAICS codes beginning with 6215)	n/a	n/a
CCBP_TOT_RET_ZC	Total number of continuing care retirement communities and assisted living facilities for the elderly	EST - Total number of establishments, where NAICS - Industry Code is 6233 (Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly)	Est number associated with NAICS=6233 (Same for 2011, but use all NAICS codes beginning with 6233)	n/a	n/a

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CCBP_TOT_HOME_ZC	Total number of home health care services	EST - Total number of establishments, where NAICS - Industry Code is 6216 (Home Health Care Services)	Est number associated with NAICS=6216 (Same for 2011, but use all NAICS codes beginning with 6216)	n/a	n/a
CCBP_TOT_CHILD_ZC	Total number of child day care services	EST - Total number of establishments, where NAICS - Industry Code is 6244 (Child Day Care Services)	Est number associated with NAICS=6244 (Same for 2011, but use all NAICS codes beginning with 6244)	n/a	n/a
CCBP_TOT_SA_ZC	Total number of social associations	The numerator is the total number of membership associations in a county. The associations include membership organizations such as civic organizations, bowling centers, golf clubs, fitness centers, sports organizations, religious organizations, political organizations, labor organizations, business organizations, and professional organizations. These associations are identified by NAICS codes 813410, 713950, 713910, 713940, 711211, 813110, 813940, 813930, 813910 and 813920 (Same for 2011)	Est number associated with NAICS=813410, 713950, 713910, 713940, 711211, 813110, 813940, 813930, 813910 and 813920 (Same for 2011)	n/a	n/a

Table 9.3 provides important variable notes for users of the SDOH Database to consider when working with CCBP variables.

Table 9.3. CCBP variable notes

Variable Name	Variable Label	Note
CCBP_PCT_HEALTH_EMPLOYMENT.	Percentage of employment attributed to health care	The health care and social assistance sector is composed of establishments that provide health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. Excluded from this sector are aerobic classes in subsector 713, amusement, gambling, and recreation industries, and non-medical diet and weight reducing centers in subsector 812, personal and laundry services. Although these can be viewed as health services, these services are not typically delivered by health practitioners.
CCBP_CFHEORS_RATE	Total number of emergency and other relief services per 1,000 people	Total number of establishments where the NAICS industry code is 624230: This industry group includes establishments primarily engaged in one of the following: (1) collecting, preparing, and delivering food for the needy; (2) providing short-term emergency shelter, temporary residential shelter, transitional housing, volunteer construction or repair of low-cost housing, and/or repair of homes for individuals or families in need; or (3) providing food, shelter, clothing, medical relief, resettlement, and counseling to victims of domestic or international disasters or conflicts.
CCBP_CHS_RATE	Total number of community housing services per 1,000 people	Total number of establishments, where the NAICS industry code is 624229: This industry includes establishments primarily engaged in providing one or more of the following community housing services: (1) short-term emergency shelter for victims of domestic violence, sexual assault, or child abuse; (2) temporary residential shelter for the homeless, runaway youths, and patients and families caught in medical crises; (3) transitional housing for low-income individuals and families; (4) volunteer construction or repair of low-cost housing, in partnership with the homeowner who may assist in construction or repair work; and (5) repair of homes for elderly or disabled homeowners. These establishments may operate their own shelter, they may subsidize housing using existing homes, apartments, hotels, or motels, or they may require a low-cost mortgage or work (sweat) equity.
CCBP_CFS_RATE	Total number of community food services per 1,000 people	Total number of establishments, where the NAICS industry code is 624210: This industry includes of establishments primarily engaged in the collection, preparation, and delivery of food for the needy. Establishments in this industry may also distribute clothing and blankets to the poor. These establishments may prepare and deliver meals to people who by reason of age, disability, or illness are unable to prepare meals for themselves; collect and distribute salvageable or donated food; or prepare and provide meals at fixed or mobile locations. Food banks, meal delivery programs, and soup kitchens are included in this industry

Variable Name	Variable Label	Note
CCBP_SFS_RATE	Total number of specialized food stores per 1,000 people	Total number of establishments where the NAICS -industry code is 445210 [Meat Markets - This industry includes establishments primarily engaged in retailing fresh, frozen, or cured meats and poultry. Delicatessen-type establishments primarily engaged in retailing fresh meat are included in this industry], 445220 [Fish and Seafood Markets- This industry comprises establishments primarily engaged in retailing fresh, frozen, or cured fish and seafood products], 445230 [Fruit and Vegetable Markets - This industry includes establishments primarily engaged in retailing fresh fruits and vegetable], 445291 [Baked Goods Stores - This U.S. industry includes establishments primarily engaged in retailing baked goods not for immediate consumption and not made on the premises], 445292 [Confectionery and Nut Stores - This U.S. industry includes establishments primarily engaged in retailing candy and other confections, nuts, and popcorn not for immediate consumption and not made on the premises.], and 445299 [All Other Specialty Food Stores - This U.S. industry includes establishments primarily engaged in retailing miscellaneous specialty foods (except meat, fish, seafood, fruit and vegetables, confections, nuts, popcorn, and baked goods) not for immediate consumption and not made on the premises].
CCBP_BWLSTORES_RATE	Total number of beer, wine, and liquor stores per 1,000 people	Total number of establishments, where the NAICS industry code is 445310: This industry includes establishments primarily engaged in retailing packaged alcoholic beverages, such as ale, beer, wine, and liquor.
CCBP_FCRSC_RATE	Total number of fitness centers and recreational sports centers per 1,000 people	Total number of establishments, where the NAICS industry code is 713940: This industry includes establishments primarily engaged in operating fitness and recreational sports facilities featuring exercise and other active physical fitness conditioning or recreational sports activities, such as swimming, skating, or racquet sports.
CCBP_GAMBLING_RATE	Total number of gambling establishments per 1,000 people	Total number of establishments, where the NAICS industry code is 713290: This industry includes establishments primarily engaged in operating gambling facilities (except casinos or casino hotels) or providing gambling services.
CCBP_SHELTERS_RATE	Total number of temporary shelters per 1,000 people	Total number of establishments, where the NAICS -industry code is 624221: This industry includes establishments primarily engaged in providing (1) short-term emergency shelter for victims of domestic violence, sexual assault, or child abuse and/or (2) temporary residential shelter for homeless individuals or families, runaway youth, and patients and families caught in medical crises. These establishments may operate their own shelters or may subsidize housing using existing homes, apartments, hotels, or motels.
CCBP_CS_RATE	Total number of convenience stores per 1,000 people	Total number of establishments, where the NAICS industry code is 445120 [Convenience Stores]: This industry includes establishments known as convenience stores or food marts (except those with fuel pumps) primarily engaged in retailing a limited line of goods that generally includes milk, bread, soda, and snacks. .

Variable Name	Variable Label	Note
CCBP_FF_RATE	Total number of limited service restaurants (fast food establishments) per 1,000 people	Total number of establishments, where the NAICS industry code is 722211 (2011 and earlier) or 722513 (2012 to present): This industry includes establishments primarily engaged in providing food services (except snack and nonalcoholic beverage bars) where patrons generally order or select items and pay before eating. Food and drink may be consumed on premises, taken out, or delivered to the customer's location. Some establishments in this industry may provide these food services in combination with selling alcoholic beverages.
CCBP_FSR_RATE	Total number of full service restaurants per 1,000 people	Total number of establishments, where the NAICS industry code is 722110 (2011 and earlier) or 722511 (2012 to present): This industry includes establishments primarily engaged in providing food services to patrons who order and are served while seated and pay after eating. These establishments may provide this type of food service to patrons in combination with selling alcoholic beverages, providing carryout services, or presenting live nontheatrical entertainment.
CCBP_SOCS_RATE	Total number of supermarkets and other grocery (except convenience) stores per 1,000 people	Total number of establishments, where the NAICS industry code is 445110: This industry includes establishments generally known as supermarkets and grocery stores primarily engaged in retailing a general line of food, such as canned and frozen foods; fresh fruits and vegetables; and fresh and prepared meats, fish, and poultry. Included in this industry are delicatessen-type establishments primarily engaged in retailing a general line of food.
CCBP_PHYS_RATE	Total number of physician offices per 1,000 people	Total number of establishments, where the NAICS industry group code is 6211: This industry includes establishments of health practitioners having the degree of M.D. (Doctor of Medicine) or D.O. (Doctor of Osteopathy) primarily engaged in the independent practice of general or specialized medicine (e.g., anesthesiology, oncology, ophthalmology, psychiatry) or surgery. These practitioners operate private or group practices in their own offices (e.g., centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers.
CCBP_LAB_RATE	Total number of medical and diagnostic laboratories per 1,000 people	Total number of establishments, where the NAICS industry group code is 6215: This industry includes establishments known as medical and diagnostic laboratories primarily engaged in providing analytic or diagnostic services, including body fluid analysis and diagnostic imaging, generally to the medical profession or to the patient on referral from a health practitioner.
CCBP_RET_RATE	Total number of continuing care retirement communities and assisted living facilities for the elderly per 1,000 people	Total number of establishments, where the NAICS industry group code is 6233: This industry includes establishments primarily engaged in providing residential and personal care services for (1) the elderly and other persons who are unable to fully care for themselves and/or (2) the elderly and other persons who do not desire to live independently. The care typically includes room, board, supervision, and assistance in daily living, such as housekeeping services. In some instances, these establishments provide skilled nursing care for residents in separate on-site facilities.

Variable Name	Variable Label	Note
CCBP_HOME_RATE	Total number of home health care services per 1,000 people	Total number of establishments, where the NAICS industry group code is 6216: This industry comprises establishments primarily engaged in providing skilled nursing services in the home, along with a range of the following: personal care services; homemaker and companion services; physical therapy; medical social services; medications; medical equipment and supplies; counseling; 24-hour home care; occupation and vocational therapy; dietary and nutritional services; speech therapy; audiology; and high-tech care, such as intravenous therapy.
CCBP_CHILD_RATE	Total number of child day care services per 1,000 people	Total number of establishments, where the NAICS industry group code is 6244: This industry includes establishments primarily engaged in providing day care of infants or children. These establishments generally care for preschool children, but may care for older children when they are not in school and may also offer pre-kindergarten and/or kindergarten educational programs.
CCBP_SA_RATE	Total number of social associations per 1,000 people	The numerator is the total number of membership associations in a county. The associations include membership organizations such as civic organizations, bowling centers, golf clubs, fitness centers, sports organizations, religious organizations, political organizations, labor organizations, business organizations, and professional organizations. These associations are identified by NAICS codes 813410, 713950, 713910, 713940, 711211, 813110, 813940, 813930, 813910 and 813920.

Notes on Trends and Comparisons Across Areas

In 2017, Census began suppressing data for cases that had fewer than three establishments in a geographic area. For comparison, in 2012, 59 percent of ZIP Codes with any grocery stores had two or fewer establishments. These ZIP Codes would be excluded from the 2017 – 2019 data files.

Other notes

Users should consider the following when using CCBP rates:

- Because of changes to suppression rules starting in 2017, users will see more counties and ZIP Codes with missing data in the SDOH Database for 2017 and later.

Term Definitions

Table 9.4 provides important term definitions for users of the SDOH Database to consider when working with CCBP variables.

Table 9.4. Term definitions, CCBP

Term	Definition
Employment	Paid employment consists of full- and part-time employees, including salaried officers and executives of corporations, who are on the payroll in the pay period including March 12. Included are employees on paid sick leave, holidays, and vacations; not included are sole proprietors and partners of unincorporated businesses.
Establishment	An establishment is a single physical location at which business is conducted or services or industrial operations are performed. It is not necessarily identical with a company or enterprise, which may consist of one or more establishments. When two or more activities are carried on at a single location under a single ownership, all activities generally are grouped together as a single establishment. The entire establishment is classified on the basis of its major activity and all data are included in that classification.
North American Industry Classification System (NAICS)	The North American Industry Classification System (NAICS) is the standard used by federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. This system is used by the United States, Canada, and Mexico.

10. Common Core of Data (CCD)

Sponsor

Department of Education, National Center for Education Statistics (NCES), U.S. Census Bureau

Description

The Common Core of Data (CCD) is the Department of Education's primary database on public elementary and secondary education in the United States. The CCD is a comprehensive, annual, national database of all public elementary and secondary schools and school districts. The CCD School District Finance Survey (F-33) collects financial data for all local education agencies (LEAs) that provide free public elementary and secondary education in the United States. The F-33 survey aims to provide a comprehensive picture of financial activity associated with public elementary and secondary school systems. F-33 data include all financial transactions associated with revenues by source, expenditures by function and object, indebtedness, and assets.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2019 (The CCD School District Finance Survey (F-33) is collected for each fiscal year)
- ▶ **SDOH domain(s):**
 - Education
- ▶ **SDOH variable naming convention:** CCD_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

Variables were constructed from CCD's School District Finance Survey (F-33). Each revenue or expenditure variable is converted to a per-pupil amount using the student enrollment variable available in F-33. The enrollment variable (CCD_TOT_STUDENTS) is also included in SDOH Database so users who wish to obtain non-normalized variables can obtain them. Only LEAs with student enrollment greater than zero and those that match to the CCD LEA universe file¹⁰ were included for construction of variables in the SDOH Database. Each LEA completes F-33 for the entire LEA. For SDOH Database, LEA level variables are converted to county level variables. Details of the geographical conversion from LEA to the county is provided in the "Geographic Levels" section below.

¹⁰ The CCD Agency Nonfiscal File Match variable [CCDNF] available in the source file indicates whether or not a record on the F-33 file matches a record on the LEA universe file (<https://nces.ed.gov/ccd/pubagency.asp>). For details on the matching, refer to the Documentation for the NCES Common Core of Data School District Finance Survey (F-33), School Year 2018-19 (Fiscal Year 2019)

Resources

Data are available in both flat and SAS files. We downloaded data for each school year in SAS from <https://nces.ed.gov/ccd/files.asp#Fiscal:1,LevelId:5,Page:1>. Documentation is also available in the same link.

Further resources include the following:

- General information about CCD: <https://nces.ed.gov/ccd/aboutccd.asp>,
- CCD Data collection notes (https://nces.ed.gov/ccd/reference_library.asp): This page provides various documentation on CCD data collection.
- Local Education Agency (School District) Universe Survey Data (<https://nces.ed.gov/ccd/pubagency.asp>): A complete listing and basic information of all local education agencies in the United States responsible for providing free public elementary and secondary instruction or education support services.
- Education Demographic and Geographic Estimates (EDGE) in the National Center for Education Statistics (NCES): District Geographic Relationship Files (GRF), (<https://nces.ed.gov/programs/edge/Geographic/RelationshipFiles>): GRF files use geographic codes from Census Bureau's TIGER/Line database. Files are available from the 2011-12 school year to present.
- Education Demographic and Geographic Estimates (EDGE) School Locations & Geoassignments (<https://nces.ed.gov/programs/edge/Geographic/SchoolLocations>): The geographic codes used in EDGE's School Location files come from Census Bureau's TIGER/line database. Files are available from the 2015-16 school year.

Suggested Citation

AHRQ SDOH Database (v1), from Local Education Agency (School District) Finance Survey (F-33) Data, v.1a—Provisional Common Core of Data (CCD) - CCD Data Files (ed.gov). Retrieved March 2021 from <https://nces.ed.gov/ccd/files.asp#Fiscal:1,LevelId:5,Page:1>.

Data Set Notes

Reliability

The CCD does not include margins of error. Note that because the CCD is a mandatory data collection that applies to all LEAs, it is not subject to sampling error. The National Center for Education Statistics (NCES) requests that all states report fiscal data in the F-33 survey for all independent charter school districts and all regular school districts that include charter schools.

The Census Bureau distributes the F-33 survey instrument to all State Education Agencies (SEAs). Representatives from each SEA collect and edit data from their LEAs and submit data to the Census Bureau either in the F-33 survey format or in the individual state agency's financial accounting format. If SEAs submit their data using their own state agency's financial accounting format instead of the F-33 survey format, Census Bureau staff evaluate the SEA's chart of account and crosswalk the data to the appropriate F-33 survey variable.

The summation of school district-level data from F-33 data items to state-level totals may differ from state finance data available from the National Public Education Financial Survey (NPEFS), which collects total revenues and expenditures data at the state level (<https://nces.ed.gov/ccd/stfis.asp>). NPEFS includes expenditures operated by state and federal programs that are not reported at the school district level. The NPEFS is used to determine state funding allocations for a number of federal education programs, including those authorized by Title I of the Elementary and Secondary Education Act of 1965.

The timing of the F-33 collection is about one year after the LEA Universe Survey Data collection (<https://nces.ed.gov/ccd/pubagency.asp>). Therefore, F-33 student membership data [V33] may not match student enrollment from the LEA Universe Survey.

Geographic Levels

Most school districts in the United States are independent local governments with authority to determine their geographic boundaries. Those boundaries are not always consistent with boundaries of other types of legal or statistical areas, and generally are not nested within Census geographic hierarchies.

The School District Finance Survey (F-33) is collected at the school district level identified by NCES local education agency identification code (LEAID). Regular school districts, independent charter school districts, and other nontraditional LEAs (e.g., education service agencies that provide specialized education services for regular school districts) are included in F-33.

For the SDOH Database, we took the following steps to convert the constructed variables for each LEA to county-level variables.

- We matched each LEA from F-33 to a county using the District Geographic Relationship Files (GRF), published annually by the Education Demographic and Geographic Estimates (EDGE) program at the National Center for Education Statistics (NCES) (<https://nces.ed.gov/programs/edge/Geographic/RelationshipFiles>).
- The GRF, based on the Census Bureau's TIGER/Line database, provides a complete spatial association between school districts and other types of geographical areas, including counties. We used the LEAID available in both F-33 and GRF to map LEAs to counties.
- For LEAs that had boundary associations with more than one county we weighted each constructed variable by the overlapping land area shared between the LEA and county using the LANDAREA variable in the GRF file.
- Some independent charter school districts and other nontraditional LEAs in F-33 did not match in the GRF files. For these cases, we used the NCES EDGE school and agency location file to associate the LEA to a county using the location of the LEA's administrative office (see <https://nces.ed.gov/programs/edge/Geographic/SchoolLocations>).

Suppression Rules

Starting in Fiscal Year 2010, NCES suppressed any numerical data that did not meet NCES data quality standards.¹¹

- NCES used a value of “-3” in the source file to represent student membership values suppressed by NCES if reported LEA finances did not reflect the student membership count for the LEA.
- NCES also suppressed any numerical data that do not meet NCES data quality standards by reporting the data item as “-9” and data item flag as “A.”

Variable Notes

Table 10.1 below provides information on the variable availability across years. Table 10.2 provides more information on what numerator and denominator variables were drawn for CCD variables in the SDOH Database.

¹¹ Cornman, S.Q., Ampadu, O., Hanak, K.S. (2020). Documentation for the NCES School District Finance Survey (F-33), School Year 2017–18 (Fiscal Year 2018), Provisional File Version 1a (NCES 2020-309). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Retrieved May 2021 from <https://nces.ed.gov/pubsearch>.

Table 10.1. Variable availability across years, CCD

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CCD_FED_REVENUE_CNA	X			X	X	X	X	X	X	X	X	X	X	X	
CCD_LOCAL_REVENUE_LUNCH	X			X	X	X	X	X	X	X	X	X	X	X	
CCD_STATE_REVENUE_LUNCH	X			X	X	X	X	X	X	X	X	X	X	X	
CCD_TOT_EXPENDITURE	X			X	X	X	X	X	X	X	X	X	X	X	
CCD_TOT_FED_REVENUE	X			X	X	X	X	X	X	X	X	X	X	X	
CCD_TOT_LOCAL_REVENUE	X			X	X	X	X	X	X	X	X	X	X	X	
CCD_TOT_REVENUE	X			X	X	X	X	X	X	X	X	X	X	X	
CCD_TOT_STATE_REVENUE	X			X	X	X	X	X	X	X	X	X	X	X	
CCD_TOT_STUDENTS	X			X	X	X	X	X	X	X	X	X	X	X	

Table 10.2. Variable definitions and specifications, CCD

Variable Name	Variable Label	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CCD_FED_REVENUE_CNA	Federal revenue distributed by state through Child Nutrition Act (Dollars) per student	C25; Fed Rev - Thru State - Child Nutrition Act	V33; Fall membership
CCD_LOCAL_REVENUE_LUNCH	Local revenue from school lunch programs (Dollars) per student	A09; Local Rev - School Lunch	V33; Fall membership
CCD_STATE_REVENUE_LUNCH	State revenue from school lunch programs (Dollars) per student	C10; State Revenue- School Lunch Programs	V33; Fall membership
CCD_TOT_EXPENDITURE	Total expenditure (Dollars) per student	TOTALEXP; Total Expenditures (equals TCURELSC:TOTAL CURRENT EXPENDITURES FOR ELEMENTARY/SECONDARY EDUCATION + TNONELSE: TOTAL NON-ELEMENTARY/SECONDARY EXPENDITURES + TCAPOUT: TOTAL CAPITAL OUTLAY EXPENDITURES + L12: PAYMENTS TO STATE GOVERNMENTS + M12: PAYMENTS TO LOCAL GOVERNMENTS + Q11: PAYMENTS TO OTHER SCHOOL SYSTEMS + I86: INTEREST ON DEBT + V91: PAYMENTS TO PRIVATE SCHOOLS+ V92: PAYMENTS TO CHARTER SCHOOLS)	V33; Fall membership
CCD_TOT_FED_REVENUE	Total federal revenue (Dollars) per student	TFEDREV; Total Federal Revenue (equals C14:FEDERAL REVENUE-THRU STATE TITLE I + C15: FEDERAL REVENUE- INDIVIDUALS WITH DISABILITIES EDUCATION ACT (IDEA) + C16: FEDERAL REVENUE- THRU STATE- MATH, SCIENCE, and TEACHER QUALITY + C17: FEDERAL REVENUE- THRU STATE-SAFE AND DRUG FREE SCHOOLS + C19: FEDERAL REVENUE-THRU STATE- VOCATIONAL AND TECH EDUCATION + B11:FEDERAL REVENUE - THRU STATE - BILINGUAL EDUCATION + C20: FEDERAL REVENUE - THRU STATE - OTHER + C25:FEDERAL REVENUE - THRU STATE - CHILD NUTRITION ACT + C36:FEDERAL REVENUE - NONSPECIFIED + B10:FEDERAL REVENUE - DIRECT - IMPACT AID + B12: FEDERAL REVENUE - DIRECT - INDIAN EDUCATION + B13:FEDERAL REVENUE - DIRECT - OTHER)	V33; Fall membership

Variable Name	Variable Label	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CCD_TOT_LOCAL_REVENUE	Total local revenue (Dollars) per student	TLOCREV; Total local revenue (equals T02: LOCAL REVENUE-PARENT GOVERNMENT CONTRIBUTIONS (DEPENDENT SCHOOL SYSTEMS) + T06: LOCAL REVENUE: PROPERTY TAXES + T09: LOCAL REVENUE-GENERAL SALES TAXES+ T15: LOCAL REVENUE-PUBLIC UTILITY TAXES + T40: LOCAL REVENUE-INDIVIDUAL AND CORPORATE INCOME TAXES + T99:LOCAL REVENUE- ALL OTHER TAXES + D11: LOCAL REVENUE-FROM OTHER SCHOOL SYSTEMS + D23: LOCAL REVENUE-FROM CITIES AND COUNTIES + A07: LOCAL REVENUE-TUITION FEES FROM PUPILS AND PARENTS + A08: LOCAL REVENUE-TRANSPORTATION FEES FROM PUPILS AND PARENTS + A09: LOCAL REVENUE-SCHOOL LUNCH + A11: LOCAL REVENUE-TEXTBOOK SALES AND RENTALS + A13: LOCAL REVENUE-DISTRICT ACTIVITY RECEIPTS + A15: STUDENT FEEDS, NONSPECIFIED + A20: LOCAL REVENUES- OTHER SALES AND SERVICES + A40: LOCAL REVENUE-RENTS AND ROYALTIES + U11: LOCAL REVENUE- SALE OF PROPERTY + U22: LOCAL REVENUE-INTEREST EARNINGS + U30: LOCAL REVENUE-FINES AND FORFEITS + U50: LOCAL REVENUE-PRIVATE CONTRIBUTIONS + U97:MISCELLANEOUS + C24: NCES LOCAL RECENUE, CENSUS BUREAU STATE REVENUE)	V33; Fall membership
CCD_TOT_REVENU	Total revenue (Dollars) per student	TOTALREV; Total revenue (equals TFEDREV: TOTAL FEDERAL REVENUE + TSTREV :TOTAL STATE REVENUE+ TLOCREV: TOTAL LOCAL REENUE)	V33; Fall membership
CCD_TOT_STATE_REVENU	Total state revenue (Dollars) per student	TSTREV; Total state revenue (equals C01: STATE REVENUE- GENERAL FORMULA ASSISTANCE + C04: STATE REVENUE-STAFF IMPROVEMENT PROGRAMS + C05: STATE REVENUE-SPECIAL EDUCATION PROGRAMS + C06:STATE REVENUE-COMPENSATORY AND BASIC SKILLS PROGRAMS+ C07: STATE REVENUE-BILINGUAL EDUCATION PROGRAMS + C08: STATE REVENUE: GIFTED AND TALENTED PROGRAMS + C09: STATE REVENUE- VOCATIONAL EDUCATION PROGRAMS + C10: STATE REVENUE-SCHOOL LUNCH PROGRAMS + C11: STATE REVENUE- CAPITAL OUTLAY AND DEBT SERVICES+ C12: STATE REVENUE-TRANSPORTATION PROGRAMS + C13: STATE-REVENUE-OTHER PROGRAMS+ C35: STATE REVENUE- NONSPECIFIED + C38:STATE REVENUE ON BEHALF-EMPLOYEE BENEFITS + C39: STATE-REVENUE ON BEHALF-NOT EMPLOYEE BENEFITS)	V33; Fall membership
CCD_TOT_STUDENTS	Total enrollment	V33; Fall membership	n/a; n/a

Term Definitions

Table 10.4 provides important term definitions for users of the SDOH Database to consider when working with CCD variables.

Table 10.4. Term definitions, CCD

Term	Definition
Enrollment, Fall membership	Count of pupils on pupil rolls in the fall of the school system's fiscal year. Also called fall membership or student membership. Enrollment [V33] is the count of students served by the reporting LEA (generally as reported on the CCD Local Education Agency Universe Survey).
Fiscal year	The 12-month period to which the annual operating budget applies. At the end of the fiscal year, the agency determines its financial condition and the results of its operations.
Independent LEA	A local education agency that has both fiscal and administrative independence.
Local education agency (LEA)	The government agency at the local level whose primary responsibility is to operate public schools or to contract for public school services.

11. Centers for Disease Control and Prevention Interactive Atlas of Heart Disease and Stroke (CDCA)

Sponsor

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention

Description

The CDC Atlas is an interactive mapping tool that presents a variety of data at the state and county level related to heart disease and stroke. The Atlas includes data on mortality, hospitalizations, medication use, and healthcare costs, though the years of data availability vary greatly. Data on deaths from heart disease are drawn from the National Vital Statistics System and are available as 2-year estimates spanning 2009–2019.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2019
- ▶ **SDOH domain(s):**
 - Health outcomes
- ▶ **SDOH variable naming convention:** CDCA_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

Variables presented in the SDOH Database were extracted directly from the CDS Atlas but renamed for clarity.

The data included in the SDOH Database are sourced from:

- a) *Deaths National Vital Statistics System.* Bridged-Race Postcensal Population Estimates from National Center for Health Statistics
- b) *Hospitalizations and hospitalization discharge status.* Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review (MEDPAR) file, Part A.

Resources

Smoothed data was downloaded from the Interactive Atlas of Heart Disease and Stroke, a website developed by the Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention. <http://nccd.cdc.gov/DHDSPAtlas> (last retrieved September, 2021).

Documentation regarding data sources is available here:
<https://www.cdc.gov/dhdsp/maps/atlas/data-sources.html>.

Documentation regarding statistical methods is available here:
<https://www.cdc.gov/dhdsp/maps/atlas/statistical-methods.html>.

Suggested Citation

AHRQ SDOH Database (v1), from Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention, Interactive Atlas of Heart Disease and Stroke,
<http://nccd.cdc.gov/DHDSPAtlas>.

Data Set Notes

Reliability

CDC Atlas data do not include margins of error.

Geographic Levels

The SDOH Database contains county level data from the CDC Atlas.

Suppression Rules

Data for counties with small populations are not displayed when statistically reliable estimates could not be generated. These counties are represented in the SDOH data as missing values.

For spatially smoothed data, county-level rates were generated when the following criteria were met over a 3-year time period within each of the filters (e.g., age, race, and gender).

At least one of the following 3 criteria:

- At least 20 events occurred within the county and its adjacent neighbors.
- At least 16 events occurred within the county.
- At least 5,000 population years¹² within the county.

And all of the following three criteria:

- At least 6 population years for each age group used for age adjustment if that age group had 1 or more events.
- The number of population years in an age group was greater than the number of events.
- At least 100 population years within the county.

Variable Notes

Table 11.1 below provides information on the variable availability across years. Table 11.2 provides more information on what numerator and denominator variables were drawn for CDCA variables in the SDOH Database.

¹² Population years is the sum of population sizes covered across pooled multiple years of data.

Table 11.1. Variable availability across years, CDCA

VARIABLE NAME	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CDCA_BLOOD_HOSP_RATE_ABOVE65	X			X	X	X	X	X	X	X	X	X	X		
CDCA_HEART_DTH_RATE_ABOVE35	X			X	X	X	X	X	X	X	X	X	X	X	
CDCA_HEART_HOSP_RATE_ABOVE65	X			X	X	X	X	X	X	X	X	X	X	X	
CDCA_PREV_DTH_BLACK_RATE_BELOW74	X			X	X	X	X	X	X	X	X	X	X	X	X
CDCA_PREV_DTH_HISP_RATE_BELOW74	X			X	X	X	X	X	X	X	X	X	X	X	
CDCA_PREV_DTH_RATE_BELOW74	X			X	X	X	X	X	X	X	X	X	X	X	
CDCA_PREV_DTH_WHITE_RATE_BELOW74	X			X	X	X	X	X	X	X	X	X	X	X	
CDCA_STROKE_DTH_RATE_ABOVE35	X			X	X	X	X	X	X	X	X	X	X	X	
CDCA_STROKE_HOSP_RATE_ABOVE65	X			X	X	X	X	X	X	X	X	X	X	X	

Table 11.2. Variable definitions and specifications, CDCA

Variable Name	Variable Label	Source	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CDCA_BLOOD_HOSP_RATE_ABOVE65	Total high blood pressure hospitalizations per 1,000 Medicare beneficiaries (ages 65 and over)	Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review (MEDPAR) file, Part A.	Value	Total high blood pressure hospitalization age-standardized rate	n/a	n/a
CDCA_HEART_DTH RATE ABOVE35	Total cardiovascular disease deaths per 100,000 population (ages 35 and over)	Deaths National Vital Statistics System.	Value	Total cardiovascular disease death rate	n/a	n/a
CDCA_HEART_HOSP RATE ABOVE65	Total cardiovascular disease hospitalizations per 1,000 Medicare beneficiaries (ages 65 and over)	Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review (MEDPAR) file, Part A.	Value	Total cardiovascular disease hospitalization age-standardized rate	n/a	n/a
CDCA_PREV_DTH_BLACK RATE BELOW74	Total avoidable heart disease and stroke deaths per 100,000 Black non-Hispanic population (ages 74 and below)	Deaths National Vital Statistics System.	Value	Total avoidable heart disease and stroke death rate (Black Non-Hispanic)	n/a	n/a
CDCA_PREV_DTH_HISP RATE BELOW74	Total avoidable heart disease and stroke deaths per 100,000 Hispanic population (ages 74 and below)	Deaths National Vital Statistics System.	Value	Total avoidable heart disease and stroke death rate (Hispanic)	n/a	n/a
CDCA_PREV_DTH RATE BELOW74	Total avoidable heart disease and stroke deaths per 100,000 population (ages 74 and below)	Deaths National Vital Statistics System.	Value	Total avoidable heart disease and stroke death rate	n/a	n/a
CDCA_PREV_DTH_WHITE RATE BELOW74	Total avoidable heart disease and stroke deaths per 100,000 White non-Hispanic population (ages 74 and below)	Deaths National Vital Statistics System.	Value	Total avoidable heart disease and stroke death rate (White Non-Hispanic)	n/a	n/a
CDCA_STROKE_DTH RATE ABOVE35	Total stroke deaths per 100,000 population (ages 35 and over)	Deaths National Vital Statistics System.	Value	Total stroke death rate	n/a	n/a
CDCA_STROKE_HOSP RATE ABOVE65	Total stroke hospitalizations per 1,000 Medicare beneficiaries (ages 65 and over)	Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review (MEDPAR) file, Part A.	Value	Total stroke hospitalization age-standardized rate	n/a	n/a

Other Notes

The following is a list of inclusion criteria applied to the beneficiaries in the Master Beneficiary Summary File (MBSF) in relation to the variables included in the CDC Atlas. These inclusion criteria are used to determine what months an individual beneficiary could be eligible for inclusion. A beneficiary is considered eligible for any given month if he or she is eligible within that month for at least 1 day.

1. Non-Null and valid gender.
2. Non-Null and valid race/ethnicity.
3. Beneficiary who turns 65 on the extract year or who became 65 before January 1st of the extract year.
4. Beneficiary who is at least 65 years old and still living on January 1st of the extract year, or beneficiary who turns 65 and still living on their birthday during the extract year.

For the months of eligibility determined by elements above, the beneficiary satisfies the following:

- a) During required months, was enrolled in Part A Only, or enrolled in Part A in concert with other parts:
 - o Part B.
 - o State buy-in.
 - o Part B and state buy-in.
- b) Was enrolled as a fee-for-service beneficiary (including those enrolled in a case- or disease-management demonstration project).
- c) Was not a member of a Health Maintenance Organization (HMO).

Exception rule: If the beneficiary was eligible for all 12 months of the extraction year per items 1-4 above, then the beneficiary must fulfill requirements a-c for 11 of those 12 months to be included. If the beneficiary was eligible for less than 12 months of the extraction year per items 1-4 above, then the beneficiary must meet the criteria in a-c for the full period of his or her eligibility.

Term Definitions

Table 11.3 provides important term definitions for users of the SDOH Database to consider when working with CDCA variables.

Table 11.3. Term definitions, CDCA

Term	Definition
Cardiovascular disease deaths	International Classification of Diseases, 10th Revision (ICD-10) codes - Total Cardiovascular Disease: I00-I78; underlying cause of death.
Cardiovascular disease hospitalizations	Hospitalizations after 2015: International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) codes - Total Cardiovascular Disease: I00-I78; principle (i.e., first-listed) diagnosis. Hospitalizations before 2015: International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) codes - Total Cardiovascular Disease: 390-434, 436-448; principle (i.e., first-listed) diagnosis.
Stroke deaths	International Classification of Diseases, 10th Revision (ICD-10) codes - All Stroke: I60-I69; underlying cause of death.
Stroke hospitalizations	Hospitalizations after 2015: International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) codes - All Stroke: I60-I69; principle (i.e., first-listed) diagnosis. Hospitalizations before 2015: International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) codes - All Stroke: 430-434, 436-438; principle (i.e., first-listed) diagnosis.
Hypertension hospitalizations	Hospitalizations after 2015: International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) codes - All Stroke: I60-I69; principle (i.e., first-listed) diagnosis. Hospitalizations before 2015: International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) codes - Hypertension: 401-405; principle (i.e., first-listed) diagnosis.
Avoidable (preventable) deaths	The deaths are defined as those from ischemic heart disease, stroke, chronic rheumatic heart disease, and hypertensive disease in people under age 75, although changes in health habits and the health care system can reduce death among all ages.

12. The National Center for HIV, Viral Hepatitis, STD, and TB Prevention AtlasPlus (CDCAP)

Sponsor

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention

Description

The National Center for HIV, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) AtlasPlus is an interactive tool that gives users the ability to create customized tables, maps, and charts using nearly 20 years of CDC's surveillance data on human immunodeficiency virus (HIV), viral hepatitis, sexually transmitted disease (STD), and tuberculosis (TB). AtlasPlus also provides access to SDOH indicators, allowing users to view social and economic data in conjunction with surveillance data for each disease.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2019
- ▶ **SDOH domain(s):**
 - Health outcomes
- ▶ **SDOH variable naming convention:** CDCAP_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database annual county data files contain fifteen variables from CDC AtlasPlus that falls under the SDOH domain of healthcare context. The variable presented in the SDOH Database was extracted directly from the CDS AtlasPlus but renamed for clarity and to fit the conventions of the SDOH Database.

The data included come from various sources:

- a) CDC collects, analyzes, and disseminates surveillance data on diagnoses of HIV infection; these data are the nation's source of information on HIV in the United States. Numbers, rates, and percentages are presented for 12 of the 13 HIV-related indicators from cases that were reported and submitted to CDC from state/local HIV surveillance programs. For more information, see <http://medbox.iab.me/modules/en-cdc/www.cdc.gov/nchhstp/atlas/index.htm>.
- b) CDC collects, analyzes, and disseminates surveillance data on newly reported cases of TB disease in the United States. The AtlasPlus presents TB case report data submitted from all 50 states, the District of Columbia, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands for the years 2000 to 2019. For more information, see https://www.cdc.gov/tb/statistics/reports/2019/Tech_Notes.html.

- c) NNDSS STD data are compiled from electronic data received through the National Electronic Telecommunications System for Surveillance (NETSS) and via Health level 7 (HL7) messaging using National Electronic Disease Surveillance System (NEDSS) standards. Nationally notifiable STD surveillance data are collected and compiled from reports sent to CDC's Division of STD Prevention by the STD control programs and health departments in all 50 states, the District of Columbia, selected cities, U.S. dependencies and possessions. For more information, see <https://www.cdc.gov/std/statistics/2019/technical-notes.htm>.

Resources

Data were downloaded for each indicator from: <https://www.cdc.gov/nchhstp/atlas/index.htm> (last retrieved January, 2022).

Suggested Citation

AHRQ SDOH Database (v1), from Centers for Disease Control and Prevention. NCHHSTP AtlasPlus. Updated 2017. <https://www.cdc.gov/nchhstp/atlas/index.htm>.

Data Set Notes

Reliability

NCHHSTP AtlasPlus data do not include margins of error.

Geographic Levels

NCHHSTP AtlasPlus contains data at the national, state, and county level. STD data are from the 50 states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands. HIV and TB data are from the 50 states, the District of Columbia, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands.

Suppression Rules

In order to protect personal privacy, and to prevent revealing information that might identify specific individuals, small data values are not available in some circumstances. Suppression rules include the following:

- If the denominator population is less than 100 or total case count is 1–4, then data are suppressed.
- No AIDS classifications, HIV or AIDS deaths, AIDS prevalence data are displayed.
- Stratifications for transmission category do not display the “Other” category.
- No U.S. territories (except Puerto Rico) data displayed.
- No rates by race/ethnicity for Puerto Rico are displayed.

Data are additionally suppressed in accordance with the county-level data suppression requirements approved by each state under the data re-release agreements.

STD data presented in the AtlasPlus follows the 2017 Council of State and Territorial Epidemiologists (CSTE) data re-release rules. STD data are suppressed using two techniques at once: a denominator-rule of 100 and a numerator-to-denominator proportion-rule of 20%. Any denominator with cells of less than 100 and cells for which the ratio of the numerator-to-denominator is 0.20 or greater are suppressed.

Variable Notes

Table 12.1 below provides information on the variable availability across years. Table 12.2 provides more information on what numerator and denominator variables were drawn for CDCAP variables in the SDOH Database.

Table 12.1. Variable availability across years, CDCAP

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CDCAP_CHLAMYDIA_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_GONORRHEA_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIV_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG_AIAN_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG ASN RATE ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG_BLK_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG_F_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG_HIS_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG_M_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG_MTR_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG_NHPI_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_HIVDIAG_WHT_RATE_ABOVE13	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_SYPHILIS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
CDCAP_TUBERCULOSIS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	

Table 12.2. Variable definitions and specifications, CDCAP

Variable Name	Variable Label	Source	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CDCAP_HIV_RATE_ABOVE13	Total number of persons with HIV diagnosed during the year per 100,000 (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000	Indicator: HIV diagnoses	n/a	n/a
CDCAP_HIVDIAG_RATE_ABOVE13	Total number of people living with diagnosed HIV at the end of the year per 100,000 (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000	Indicator: HIV diagnoses	n/a	n/a
CDCAP_HIVDIAG_M_RATE_ABOVE13	Total number of males living with diagnosed HIV at the end of the year per 100,000 (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000 if Sex=Male	Indicator: HIV diagnoses	n/a	n/a
CDCAP_HIVDIAG_F_RATE_ABOVE13	Total number of females living with diagnosed HIV at the end of the year per 100,000 (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000 if Sex=Female	Indicator: HIV diagnoses	n/a	n/a
CDCAP_HIVDIAG_WHT_RATE_ABOVE13	Total number of people living with diagnosed HIV at the end of the year per 100,000, White non-Hispanic (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000 if Race/Ethnicity=White	Indicator: HIV diagnoses	n/a	n/a
CDCAP_HIVDIAG_BLK_RATE_ABOVE13	Total number of people living with diagnosed HIV at the end of the year per 100,000, Black non-Hispanic (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000 if Race/Ethnicity=Black/African American	Indicator: HIV diagnoses	n/a	n/a
CDCAP_HIVDIAG_HIS_RATE_ABOVE13	Total number of people living with diagnosed HIV at the end of the year per 100,000, Hispanic (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000 if Race/Ethnicity=Hispanic/Latino	Indicator: HIV diagnoses	n/a	n/a
CDCAP_HIVDIAG ASN RATE ABOVE13	Total number of people living with diagnosed HIV at the end of the year per 100,000, Asian (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000 if Race/Ethnicity=Asian	Indicator: HIV diagnoses	n/a	n/a

Variable Name	Variable Label	Source	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CDCAP_HIVDIAG_MTR_RATE_ABOVE13	Total number of people living with diagnosed HIV at the end of the year per 100,000, multiple races (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000 if Race/Ethnicity=Multiple Races	Indicator: HIV diagnoses	n/a	n/a
CDCAP_HIVDIAG_AIAN_RATE_ABOVE13	Total number of people living with diagnosed HIV at the end of the year per 100,000, American Indian/ Alaska Native (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000 if Race/Ethnicity=American Indian/Alaska Native	Indicator: HIV diagnoses	n/a	n/a
CDCAP_HIVDIAG_NHPI_RATE_ABOVE13	Total number of people living with diagnosed HIV at the end of the year per 100,000, Native Hawaiian/Other Pacific Islander (ages 13 and over)	CDC HIV Surveillance Reports	Rate per 100,000 if Race/Ethnicity=Native Hawaiian/Other Pacific Islander	Indicator: HIV diagnoses	n/a	n/a
CDCAP_CHLAMYDIA_RATE	Total number of confirmed chlamydia diagnoses per 100,000 population	CDC Sexually Transmitted Disease Surveillance	Rate per 100,000	Indicator: Chlamydia	n/a	n/a
CDCAP_GONORRHEA_RATE	Total number of confirmed gonorrhea diagnoses per 100,000 population	CDC Sexually Transmitted Disease Surveillance	Rate per 100,000	Indicator: Gonorrhea	n/a	n/a
CDCAP_SYPHILIS_RATE	Total number of confirmed primary and secondary syphilis diagnoses per 100,000 population	CDC Sexually Transmitted Disease Surveillance	Rate per 100,000	Indicator: Primary and secondary syphilis	n/a	n/a
CDCAP_TUBERCULOSIS_RATE	Total number of tuberculosis diagnoses per 100,000 population	CDC Sexually Transmitted Disease Surveillance	Rate per 100,000	Indicator: Tuberculosis	n/a	n/a

Table 12.3 provides important variable notes for users of the SDOH Database to consider when working with CDCAP variables.

Table 12.3. CDCAP variable notes

Variable Name	Variable Label	Notes
CDCAP_HIVDIAG_M_RA TE_ABOVE13	Total number of males living with diagnosed HIV at the end of the year per 100,000 (ages 13 and over)	For HIV data, sex is based on the person's sex at birth.
CDCAP_HIVDIAG_F_RAT E_ABOVE13	Total number of females living with diagnosed HIV at the end of the year per 100,000 (ages 13 and over)	For HIV data, sex is based on the person's sex at birth.

Term Definitions

Table 12.4 provides important term definitions for users of the SDOH Database to consider when working with CDCAP variables.

Table 12.4. Term definitions, CDCAP

Term	Definition
Cases	The number of cases refers to the number of new cases of disease in a defined population over a specific time period.
Population	The population size used to calculate a rate. The population denominators used to compute these rates were based on population data from the U.S. Census Bureau. Each rate was calculated by dividing the total number of cases (or deaths or prevalence) for the calendar year by the size of the population for that calendar year and then multiplying the number by 100,000.
Rates	The rates refer to the number of cases divided by a specified population. In the NCHHSTP AtlasPlus, rate always means per 100,000 selected population. Rates consider the size of the population, in order for comparisons to be made across different population groups. In other words, by using rates instead of cases (i.e., raw numbers), the occurrence of disease in one group or area can be fairly compared with another (e.g., HIV cases in New York and HIV cases in Maine – since New York has a much larger population, one would expect New York to have a much larger number of HIV cases than Maine). Rates may be more appropriate (than cases) to use with choropleth mapping because rates allow equal comparisons of disease burden between areas (i.e., population is considered).

Centers for Disease Control and Prevention. NCHHSTP AtlasPlus. Updated 2017. <https://www.cdc.gov/nchhstp/atlas/index.htm>
Glossary: <https://gis.cdc.gov/grasp/nchhstpatlas/Content/docs/AtlasPlusGlossary.pdf>

13. Centers for Disease Control and Prevention Population Level Analysis and Community Estimates: Local Data for Better Health (CDCP)

Sponsor

Centers for Disease Control and Prevention, Robert Wood Johnson Foundation, the CDC Foundation

Description

The Centers for Disease Control and Prevention Population Level Analysis and Community Estimates (CDCP) provides model-based community estimates to understand the geographic distribution of health-related outcomes in all counties, places (incorporated and census designated places), census tracts, and ZIP Code Tabulation Areas (ZCTAs) across the United States.¹³ The CDCP data extend the 500 Cities project to generate valid small area estimates. The work was funded by the Robert Wood Johnson Foundation in conjunction with CDC foundation.

CDCP estimates draw on data from the Behavioral Risk Factor Surveillance System (BRFSS), the 2010 Census, and the American Community Survey (ACS). The availability of variables varies from year to year because some BRFSS questions are only asked every other year. The release year of the CDCP data may differ from the year for which the variables are constructed. The SDOH Database includes CDCP variables for the latter variable-specific data year, which does not typically correspond to the CDCP release year. Data users can check which variables are available for a selected CDCP release year in the Variable Notes below.

CDCP does not include estimates for subpopulations by race/ethnicity. Subgroup estimates for some variables are available by gender or age.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH:** 2017, 2018 and 2019. Availability also varies by each variable.
- ▶ **SDOH domain(s):**
 - Health behaviors
 - Health outcomes
- ▶ **SDOH variable naming convention:** *CDCP_[VARNAME]*, *CDCP_[VARNAME_A]* for age-adjusted prevalence, *CDCP_[VARNAME_C]* for crude prevalence

¹³ Note that the SDOH Database uses the abbreviation CDCP to refer to variables from CDC PLACES data, but the CDC typically uses the PLACES acronym.

► **SDOH Database geographic level(s)**: County, ZIP Code, and census tract

The SDOH's county, ZIP Code and census tract files include variables pertaining to health risk behaviors, prevention, and health outcomes taken directly from CDCP. We renamed variables and labels for clarity and to fit the naming conventions in the SDOH. The source files from CDCP report variables that are at the county, ZCTA and census tract levels. For county-level files, CDCP reports both age-adjusted¹⁴ and crude prevalence¹⁵ for each variable. The SDOH Database includes both estimates so users can compare and select the variable that is most appropriate for them. For ZCTA and census tract variables, CDCP reports crude prevalence only. We remapped CDCP variables reported at the ZCTA level to ZIP and added a _ZC suffix to them to indicate that the original source variables were reported at the ZCTA level.

Resources

We downloaded data for three geographic levels (county, ZCTA and tract) from the 2020 and 2021 releases of CDCP at <https://chronicdata.cdc.gov/browse?q=PLACES%202021>. "1 measure per row" (opendata) data files were used.

Further resources include the following:

- *500 Cities Project* ([500 Cities Project: 2016 to 2019 | PLACES: Local Data for Better Health | CDC](#)): This page provides descriptions of the 500 Cities Project, which was replaced by the PLACES project in December 2020.
- *CDCP Methodology* ([Methodology | PLACES: Local Data for Better Health | CDC](#)): This page provides methodology used in CDCP.
- *CDCP Measure Definitions* ([Measure Definitions | PLACES: Local Data for Better Health | CDC](#)): This page provides detailed definitions of CDCP measures. Users are advised to read the Measure Definitions from the CDCP project.
- *CDCP One Page Fact Sheet*: [PLACES Local Data for Better Health \(cdc.gov\)](#).
- SAE Validation Studies:
 - [Multilevel Regression and Postratification for Small-Area Estimation of Population Health Outcomes: A Case Study of Chronic Obstructive Pulmonary Disease Prevalence Using the Behavioral Risk Factor Surveillance System.pdf icon \[PDF-5.53MB\] external icon](#)
 - [Validation of Multilevel Regression and Postratification Methodology for Small Area Estimation of Health Indicators from the Behavioral Risk Factor Surveillance System.external icon](#)
 - [Comparison of Methods for Estimating Prevalence of Chronic Diseases and Health Behaviors for Small Geographic Areas: Boston Validation Study, 2013](#)
 - [Using 3 Health Surveys to Compare Multilevel Models for Small Area Estimation for Chronic Diseases and Health Behaviors](#)

¹⁴ Age-adjusted prevalence adjusts for potential differences in the age distribution across geographic units.

¹⁵ Crude prevalence does not adjust for the differences in the underlying age distribution across geographic units.

Suggested Citation

AHRQ SDOH Database (v1), from PLACES: Local Data for Better Health. Center for Disease Control and Prevention (2020 and 2021 Release). Retrieved January 2022 from:
<https://chronicdata.cdc.gov/browse?category=500+Cities+%26+Places&sortBy=newest&utf8>.

Data Set Notes

Reliability

CDCP uses small area estimation (SAE) incorporating a multilevel regression and post stratification (MRP). More details are provided in the methodology page of the CDCP website: <https://www.cdc.gov/places/methodology/>.

CDC's internal and external validation studies support consistency between MRP model-based SAEs and direct estimates from BRFSS (see CDCP Resources for further information).

All variables from CDCP are provided with lower and upper limits of confidence intervals. These confidence intervals are not included in the SDOH Database but are available in the source file.

Geographic Levels

Variables from CDCP project cover the entire United States (50 states + DC) at the county (3,142), census tract (72,337 of 73,057 census tracts in the 50 states and Washington, DC that have a Census 2010 population of 50 or more people) and ZCTA (32,409 of 32,989 ZCTAs in the 50 states and Washington, DC with Census 2010 population of 50 or more people) levels.

- In the tract and county files, the identifier of one tract/county (Maui) in Hawaii was erroneously reported in the source file as 0003.200, and reassigned to 0032.00 in the SDOH Database.
- In the tract file, one tract in Los Angeles (06037 + 9304.01) was recoded to (06036+1370.00) because the deletion of Census 2000 Tract 1370.00 was corrected in 2012 and the tract was reinstated with its former boundaries. Former (2010) Census Tract 9304.01 was reinstated (2012) to tract 1370: <https://www.census.gov/programs-surveys/acs/technical-documentation/table-and-geography-changes/2012/geography-changes.html>.

Suppression Rules

CDCP estimates were calculated for all geographic units that had a population greater than or equal to 50 people.

Variable Notes

Table 13.1 below provides information on the variable availability across years. Table 13.2 provides more information on what numerator and denominator variables were drawn for CDCP variables in the SDOH Database.

Table 13.1. Variable availability across years, CDCP

VARIABLE NAME	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CDCP_ARTHRITIS_ADULT_A	X												X	X	
CDCP_ARTHRITIS_ADULT_C	X	X	X										X	X	
CDCP_ASTHMA_ADULT_A	X												X	X	
CDCP_ASTHMA_ADULT_C	X	X	X										X	X	
CDCP_BLOOD_MED_ADULT_A	X												X	X	
CDCP_BLOOD_MED_ADULT_C	X	X	X										X	X	
CDCP_CERVCAN_SCR_F21_65_A	X													X	
CDCP_CERVCAN_SCR_F21_65_C	X	X	X											X	
CDCP_CHOLES_ADULT_A	X												X	X	
CDCP_CHOLES_ADULT_C	X	X	X										X	X	
CDCP_CHOLES_SCR_ADULT_A	X												X	X	
CDCP_CHOLES_SCR_ADULT_C	X	X	X										X	X	
CDCP_DENTIST_VISIT_ADULT_A	X													X	
CDCP_DENTIST_VISIT_ADULT_C	X	X	X											X	
CDCP_DOCTOR_VISIT_ADULT_A	X													X	X
CDCP_DOCTOR_VISIT_ADULT_C	X	X	X											X	X
CDCP_FOBT_SIG_COL_50_75_A	X													X	
CDCP_FOBT_SIG_COL_50_75_C	X	X	X											X	
CDCP_KIDNEY_DISEASE_ADULT_A	X													X	X
CDCP_KIDNEY_DISEASE_ADULT_C	X	X	X											X	X
CDCP_MAMMO_SCR_F50_74_A	X													X	
CDCP_MAMMO_SCR_F50_74_C	X	X	X											X	
CDCP_NO_PHY_ACTV_ADULT_A	X													X	X
CDCP_NO_PHY_ACTV_ADULT_C	X	X	X											X	X
CDCP_NO_TEETH_65_ABOVE_A	X													X	
CDCP_NO_TEETH_65_ABOVE_C	X	X	X											X	
CDCP_PREV_SERV_F65_ABOVE_A	X													X	
CDCP_PREV_SERV_F65_ABOVE_C	X	X	X											X	
CDCP_PREV_SERV_M65_ABOVE_A	X													X	
CDCP_PREV_SERV_M65_ABOVE_C	X	X	X											X	
CDCP_PULMONARY_ADULT_A	X													X	X
CDCP_PULMONARY_ADULT_C	X	X	X											X	X
CDCP_SLEEP_LESS7HR_ADULT_A	X													X	
CDCP_SLEEP_LESS7HR_ADULT_C	X	X	X											X	

Table 13.2. Variable definitions and specifications, CDCP

Variable Name	Variable Label	Original Label
CDCP_ARTHRITIS_ADULT_A	Age-adjusted prevalence of arthritis among adults aged 18 years and older (%)	Measure=="Arthritis among adults aged >=18 years" & Data_Type=="Age-adjusted prevalence"
CDCP_ARTHRITIS_ADULT_C	Crude prevalence of arthritis among adults aged 18 years and older (%)	Measure=="Arthritis among adults aged >=18 years" & Data_Type=="Crude prevalence"
CDCP_ASTHMA_ADULT_A	Age-adjusted prevalence of current asthma among adults aged 18 years and older (%)	Measure=="Current asthma among adults aged >=18 years" & Data_Type=="Age-adjusted prevalence"
CDCP_ASTHMA_ADULT_C	Crude prevalence of current asthma among adults aged 18 years and older (%)	Measure=="Current asthma among adults aged >=18 years" & Data_Type=="Crude prevalence"
CDCP_BLOOD_MED_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older with high blood pressure taking medicine for high blood pressure control (%)	Measure=="Taking medicine for high blood pressure control among adults aged >=18 years with high blood pressure" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_BLOOD_MED_ADULT_C	Crude prevalence of adults aged 18 years and older with high blood pressure taking medicine for high blood pressure control (%)	Measure=="Taking medicine for high blood pressure control among adults aged >=18 years with high blood pressure" & Data_Value_Type=="Crude prevalence"
CDCP_CERVCAN_SCR_F21_65_A	Age-adjusted prevalence of females aged 21-65 years without a hysterectomy who report having had a recommended cervical cancer screening test (%)	Measure=="Cervical cancer screening among adult women aged 21-65 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_CERVCAN_SCR_F21_65_C	Crude prevalence of females aged 21-65 years without a hysterectomy who report having had a recommended cervical cancer screening test (%)	Measure=="Cervical cancer screening among adult women aged 21-65 years" & Data_Value_Type=="Crude prevalence"
CDCP_CHOLES_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report having been told by a doctor, nurse, or other health professional that they had high cholesterol (%)	Measure=="High cholesterol among adults aged >=18 years who have been screened in the past 5 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_CHOLES_ADULT_C	Crude prevalence of adults aged 18 years and older who report having been told by a doctor, nurse, or other health professional that they had high cholesterol (%)	Measure=="High cholesterol among adults aged >=18 years who have been screened in the past 5 years" & Data_Value_Type=="Crude prevalence"
CDCP_CHOLES_SCR_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report having their cholesterol checked within the previous 5 years (%)	Measure=="Cholesterol screening among adults aged >=18 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_CHOLES_SCR_ADULT_C	Crude prevalence of adults aged 18 years and older who report having their cholesterol checked within the previous 5 years (%)	Measure=="Cholesterol screening among adults aged >=18 years" & Data_Value_Type=="Crude prevalence"
CDCP_DENTIST_VISIT_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report having been to the dentist or dental clinic in the previous year (%)	Measure=="Visits to dentist or dental clinic among adults aged >=18 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_DENTIST_VISIT_ADULT_C	Crude prevalence of adults aged 18 years and older who report having been to the dentist or dental clinic in the previous year (%)	Measure=="Visits to dentist or dental clinic among adults aged >=18 years" & Data_Value_Type=="Crude prevalence"

Variable Name	Variable Label	Original Label
CDCP_DOCTOR_VISIT_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report having been to a doctor for a routine checkup (e.g., a general physical exam, not an exam for a specific injury, illness, condition) in the previous year (%)	Measure=="Visits to doctor for routine checkup within the past year among adults aged >=18 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_DOCTOR_VISIT_ADULT_C	Crude prevalence of adults aged 18 years and older who report having been to a doctor for a routine checkup (e.g., a general physical exam, not an exam for a specific injury, illness, condition) in the previous year (%)	Measure=="Visits to doctor for routine checkup within the past year among adults aged >=18 years" & Data_Value_Type=="Crude prevalence"
CDCP_FOBT_SIG_COL_50_75_A	Age-adjusted prevalence of adults aged 50–75 years who had 1) a fecal occult blood test (FOBT) within the past year, 2) a sigmoidoscopy within the past 5 years and a FOBT within the past year, or 3) a colonoscopy within the past 10 years (%)	Measure=="Fecal occult blood test, sigmoidoscopy, or colonoscopy among adults aged 50-75 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_FOBT_SIG_COL_50_75_C	Crude prevalence of adults aged 50–75 years who had 1) a fecal occult blood test (FOBT) within the past year, 2) a sigmoidoscopy within the past 5 years and a FOBT within the past year, or 3) a colonoscopy within the past 10 years (%)	Measure=="Fecal occult blood test, sigmoidoscopy, or colonoscopy among adults aged 50-75 years" & Data_Value_Type=="Crude prevalence"
CDCP_KIDNEY_DISEASE_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they have kidney disease (%)	Measure=="Chronic kidney disease among adults aged >=18 years" & Data_Type=="Age-adjusted prevalence"
CDCP_KIDNEY_DISEASE_ADULT_C	Crude prevalence of adults aged 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they have kidney disease (%)	Measure=="Chronic kidney disease among adults aged >=18 years" & Data_Type=="Crude prevalence"
CDCP_MAMMO_SCR_F50_74_A	Age-adjusted prevalence of females aged 50-74 years who reporting having had a mammogram within the previous 2 years (%)	Measure=="Mammography use among women aged 50-74 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_MAMMO_SCR_F50_74_C	Crude prevalence of females aged 50-74 years who reporting having had a mammogram within the previous 2 years (%)	Measure=="Mammography use among women aged 50-74 years" & Data_Value_Type=="Crude prevalence"
CDCP_NO_PHY_ACTV_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report not having participated in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise other than regular job (%)	Measure=="No leisure-time physical activity among adults aged >=18 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_NO_PHY_ACTV_ADULT_C	Crude prevalence of adults aged 18 years and older who report not having participated in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise other than regular job (%)	Measure=="No leisure-time physical activity among adults aged >=18 years" & Data_Value_Type=="Crude prevalence"
CDCP_NO_TEETH_65 ABOVE_A	Age-adjusted prevalence of adults aged 65 years and older who report having lost all of their natural teeth because of tooth decay or gum disease (%)	Measure=="All teeth lost among adults aged >=65 years" & Data_Type=="Age-adjusted prevalence"

Variable Name	Variable Label	Original Label
CDCP_NO_TEETH_65_ABOVE_C	Crude prevalence of adults aged 65 years and older who report having lost all of their natural teeth because of tooth decay or gum disease (%)	Measure=="All teeth lost among adults aged >=65 years" & Data_Type=="Crude prevalence"
CDCP_PREV_SERV_F65_ABOVE_A	Age-adjusted prevalence of females aged 65 years and older who are up to date on a core set of clinical preventive services (%)	Measure=="Older adult women aged >=65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening, and Mammogram past 2 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_PREV_SERV_F65_ABOVE_C	Crude prevalence of females aged 65 years and older who are up to date on a core set of clinical preventive services (%)	Measure=="Older adult women aged >=65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening, and Mammogram past 2 years" & Data_Value_Type=="Crude prevalence"
CDCP_PREV_SERV_M65_ABOVE_A	Age-adjusted prevalence of males aged 65 years and older who are up to date on a core set of clinical preventive services (%)	Measure=="Older adult men aged >=65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_PREV_SERV_M65_ABOVE_C	Crude prevalence of males aged 65 years and older who are up to date on a core set of clinical preventive services (%)	Measure=="Older adult men aged >=65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening" & Data_Value_Type=="Crude prevalence"
CDCP_PULMONARY_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis (%)	Measure=="Chronic obstructive pulmonary disease among adults aged >=18 years" & Data_Type=="Age-adjusted prevalence"
CDCP_PULMONARY_ADULT_C	Crude prevalence of adults aged 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis (%)	Measure=="Chronic obstructive pulmonary disease among adults aged >=18 years" & Data_Type=="Crude prevalence"
CDCP_SLEEP_LESS7HR_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report usually getting less than 7 hours of sleep (%)	Measure=="Sleeping less than 7 hours among adults aged >=18 years" & Data_Value_Type=="Age-adjusted prevalence"
CDCP_SLEEP_LESS7HR_ADULT_C	Crude prevalence of adults aged 18 years and older who report usually getting less than 7 hours of sleep (%)	Measure=="Sleeping less than 7 hours among adults aged >=18 years" & Data_Value_Type=="Crude prevalence"

Table 13.3 provides important variable notes for users of the SDOH Database to consider when working with CDCP variables.

Table 13.3. CDCP variable notes

Variable Name	Variable Label	Notes	Availability in 2020 CDCP release	Availability in 2021 CDCP release ¹⁶
CDCP_ARTHRITIS_ADULT_A	Age-adjusted prevalence of arthritis among adults aged 18 years and older (%)	Physician-diagnosed arthritis is self-reported in BRFSS and was not confirmed by a health-care provider or objective monitoring. However, such self-reports have been shown to be acceptable for surveillance purposes (despite minor changes made in 2011 to the case-finding question to include arthritis on the chronic conditions core).	2018 County	2019 County
CDCP_ARTHRITIS_ADULT_C	Crude prevalence of arthritis among adults aged 18 years and older (%)	Physician-diagnosed arthritis is self-reported in BRFSS and was not confirmed by a health-care provider or objective monitoring; however, such self-reports have been shown to be acceptable for surveillance purposes (despite minor changes made in 2011 to the case-finding question to include arthritis on the chronic conditions core).	2018 County, ZCTA, Census Tract	2019 County, ZCTA, Census tract
CDCP_ASTHMA_ADULT_A	Age-adjusted prevalence of current asthma among adults aged 18 years and older (%)	Asthma prevalence describes the size of a state's population with asthma as well as the overall asthma prevalence relative to other chronic conditions.	2018 County	2019 County
CDCP_ASTHMA_ADULT_C	Crude prevalence of current asthma among adults aged 18 years and older (%)	Asthma prevalence describes the size of a state's population with asthma as well as the overall asthma prevalence relative to other chronic conditions.	2018 County, ZCTA, Census tract	2019 County

¹⁶ Some CDCP estimates are released by CDCP in multiple release years. Unless otherwise noted, the value of the estimates is the same between CDCP release years. For the purposes of the SDOH Database, when the same estimate is provided in both 2020 and 2021 releases the estimate is taken from the 2020 release. Otherwise, the SDOH Database uses the most recent release.

Variable Name	Variable Label	Notes	Availability in 2020 CDCP release	Availability in 2021 CDCP release ¹⁶
CDCP_BLOOD_MED_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older with high blood pressure taking medicine for high blood pressure control (%)	Indicator does not measure the proportion of adults with diagnosed hypertension who have their blood pressure successfully controlled. In addition, the indicator does not include persons with hypertension who have their blood pressure successfully controlled through lifestyle changes and without medication. Indicator only measures those aware of being told they have high blood pressure and not those who have been told they have hypertension.	2017 County	2019 County
CDCP_BLOOD_MED_ADULT_C	Crude prevalence of adults aged 18 years and older with high blood pressure taking medicine for high blood pressure control (%)	Indicator does not measure the proportion of adults with diagnosed hypertension who have their blood pressure successfully controlled. In addition, the indicator does not include persons with hypertension who have their blood pressure successfully controlled through lifestyle changes and without medication. Indicator only measures those aware of being told they have high blood pressure and not those who have been told they have hypertension.	2017 County, ZCTA, Census Tract	2019 County, ZCTA, Census Tract
CDCP_CERVCAN_SCR_F21_65_A	Age-adjusted prevalence of females aged 21-65 years without a hysterectomy who report having had a recommended cervical cancer screening test (%)	Recommendations for screening frequency vary by risk factor and a 3-year interval might not be appropriate for some women.	2018 County	2018 County
CDCP_CERVCAN_SCR_F21_65_C	Crude prevalence of females aged 21-65 years without a hysterectomy who report having had a recommended cervical cancer screening test (%)	Recommendations for screening frequency vary by risk factor and a 3-year interval might not be appropriate for some women.	2018 County, ZCTA, Census tract	2018 County, ZCTA, Census tract
CDCP_CHOLES_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report having been told by a doctor, nurse, or other health professional that they had high cholesterol (%)	Validity and reliability of this indicator can be low because patients might not be aware of the specific tests conducted on their blood samples collected in clinical settings or patients cannot afford to go to see doctor to get cholesterol checked. Note that the definition of cholesterol screening changed in 2019 (for more information, see Data Set Notes above).	2017 County	2019 County

Variable Name	Variable Label	Notes	Availability in 2020 CDCP release	Availability in 2021 CDCP release ¹⁶
CDCP_CHOLES_ADULT_C	Crude prevalence of adults aged 18 years and older who report having been told by a doctor, nurse, or other health professional that they had high cholesterol (%)	Validity and reliability of this indicator can be low because patients might not be aware of the specific tests conducted on their blood samples collected in clinical settings or patients cannot afford to go to see doctor to get cholesterol checked.	2017 County, ZCTA, Census tract	2019 County, ZCTA, Census tract
CDCP_CHOLES_SCR_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report having their cholesterol checked within the previous 5 years (%)	Validity and reliability of this indicator can be low because patients might not be aware of the specific tests conducted on their blood samples collected in clinical settings.	2017 County	2019 County
CDCP_CHOLES_SCR_ADULT_C	Crude prevalence of adults aged 18 years and older who report having their cholesterol checked within the previous 5 years (%)	Validity and reliability of this indicator can be low because patients might not be aware of the specific tests conducted on their blood samples collected in clinical settings.	2017 County, ZCTA, Census tract	2019 County, ZCTA, Census tract
CDCP_DENTIST_VISIT_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report having been to the dentist or dental clinic in the previous year (%)	Indicator does not convey reason for visit or whether dental care was received.	2018 County	2018 County
CDCP_DENTIST_VISIT_ADULT_C	Crude prevalence of adults aged 18 years and older who report having been to the dentist or dental clinic in the previous year (%)	Indicator does not convey reason for visit or whether dental care was received.	2018 County, ZCTA, Census tract	2018 County, ZCTA, Census tract
CDCP_DOCTOR_VISIT_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report having been to a doctor for a routine checkup (e.g., a general physical exam, not an exam for a specific injury, illness, condition) in the previous year (%)	Accessing preventive healthcare services, such as getting routine physical checkups, receiving recommended vaccinations on appropriate schedules, and checking blood pressure and cholesterol and maintaining them at health levels, can reduce morbidity and mortality from chronic diseases.	2018 County	2019 County
CDCP_DOCTOR_VISIT_ADULT_C	Crude prevalence of adults aged 18 years and older who report having been to a doctor for a routine checkup (e.g., a general physical exam, not an exam for a specific injury, illness, condition) in the previous year (%)	Accessing preventive healthcare services, such as getting routine physical checkups, receiving recommended vaccinations on appropriate schedules, and checking blood pressure and cholesterol and maintaining them at health levels, can reduce morbidity and mortality from chronic diseases.	2018 County, ZCTA, Census tract	2019 County, ZCTA, Census tract

Variable Name	Variable Label	Notes	Availability in 2020 CDCP release	Availability in 2021 CDCP release ¹⁶
CDCP_FOBT_SIG_COL_50_75_A	Age-adjusted prevalence of adults aged 50–75 years who had 1) a fecal occult blood test (FOBT) within the past year, 2) a sigmoidoscopy within the past 5 years and a FOBT within the past year, or 3) a colonoscopy within the past 10 years (%)	National colorectal cancer screening guidelines vary regarding the choice of screening test, the appropriate screening interval, and the age at which screening should occur. The United States Preventative Services Taskforce (USPSTF) recommendations are updated in June 2016 and are currently under review as of September 2020. The current CRC screening module does not include questions for FIT-DNA (Cologuard) or virtual colonoscopy, so difference between the guaiac-based FOBT and the FIT cannot be differentiated. For the overall variable does not capture respondents who would have responded 'yes' to having a FIT-DNA (Cologuard) test or a virtual colonoscopy.	2018 County	2018-
CDCP_FOBT_SIG_COL_50_75_C	Crude prevalence of adults aged 50–75 years who had 1) a fecal occult blood test (FOBT) within the past year, 2) a sigmoidoscopy within the past 5 years and a FOBT within the past year, or 3) a colonoscopy within the past 10 years (%)	National colorectal cancer screening guidelines vary regarding the choice of screening test, the appropriate screening interval, and the age at which screening should occur. The USPSTF recommendations are updated in June 2016 and are currently under review as of September 2020. The current CRC screening module does not include questions for FIT-DNA (Cologuard) or virtual colonoscopy, so difference between the guaiac-based FOBT and the FIT cannot be differentiated. For the overall variable does not capture respondents who would have responded 'yes' to having a FIT-DNA (Cologuard) test or a virtual colonoscopy.	2018 County, ZCTA, Census tract	
CDCP_KIDNEY_DISEASE_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they have kidney disease (%)	Reducing the proportion of the U.S. population with chronic kidney disease (CKD) is likely to be difficult because of the growing prevalence of major risk factors such as diabetes, hypertension, and aging of the population. Many years may pass before declining trends are observed.	2018 County	2019 County

Variable Name	Variable Label	Notes	Availability in 2020 CDCP release	Availability in 2021 CDCP release ¹⁶
CDCP_KIDNEY_DISEASE_ADULT_C	Crude prevalence of adults aged 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they have kidney disease (%)	Reducing the proportion of the U.S. population with chronic kidney disease (CKD) is likely to be difficult because of the growing prevalence of major risk factors such as diabetes, hypertension, and aging of the population. Many years may pass before declining trends are observed.	2018 County, ZCTA, Census tract	2019 County, ZCTA, Census tract
CDCP_MAMMO_SCR_F50_74_A	Age-adjusted prevalence of females aged 50-74 years who reporting having had a mammogram within the previous 2 years (%)	Recommendations for mammography screening are not always consistent among national groups.	2018 County	-
CDCP_MAMMO_SCR_F50_74_C	Crude prevalence of females aged 50-74 years who reporting having had a mammogram within the previous 2 years (%)	Recommendations for mammography screening are not always consistent among national groups.	2018 County, ZCTA, Census tract	
CDCP_NO_PHY_ACTV_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report not having participated in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise other than regular job (%)	This indicator captures information about only nonoccupational physical activity.	2018 County	2019 County
CDCP_NO_PHY_ACTV_ADULT_C	Crude prevalence of adults aged 18 years and older who report not having participated in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise other than regular job (%)	This indicator captures information about only nonoccupational physical activity.	2018 County, ZCTA, Census tract	2019 County, ZCTA, Census tract
CDCP_NO_TEETH_65 ABOVE_A	Age-adjusted prevalence of adults aged 65 years and older who report having lost all of their natural teeth because of tooth decay or gum disease (%)	Health beliefs, societal attitudes, and history of dental treatment affect the levels of complete tooth loss. The indicator does not consider these questions.	2018 County	2018 County
CDCP_NO_TEETH_65 ABOVE_C	Crude prevalence of adults aged 65 years and older who report having lost all of their natural teeth because of tooth decay or gum disease (%)	Health beliefs, societal attitudes, and history of dental treatment affect the levels of complete tooth loss. The indicator does not consider these questions.	2018 County, ZCTA, Census tract	2018 County, ZCTA, Census tract

Variable Name	Variable Label	Notes	Availability in 2020 CDCP release	Availability in 2021 CDCP release ¹⁶
CDCP_PREV_SERV_F65_ABOVE_A	Age-adjusted prevalence of females aged 65 years and older who are up to date on a core set of clinical preventive services (%)	<p>The core set of clinical preventive services for women aged ≥65 years reporting having received all of the following: an influenza vaccination in the past year; a pneumococcal vaccination (PPV) ever; either a fecal occult blood test (FOBT) within the past year, a sigmoidoscopy within the past 5 years and a FOBT within the past 3 years, or a colonoscopy within the previous 10 years; and a mammogram in the past 2 years.</p> <p>This indicator is limited to a select set of clinical preventive services by age and sex for which data are available in the BRFSS. Data on all services in the core set are not available every year given the rotating core questions on BRFSS. The indicator should not be assumed to cover all recommended clinical preventives services for this age group.</p>	2018 County	2018 County
CDCP_PREV_SERV_F65_ABOVE_C	Crude prevalence of females aged 65 years and older who are up to date on a core set of clinical preventive services (%)	<p>The core set of clinical preventive services for women aged ≥65 years reporting having received all of the following: an influenza vaccination in the past year; a pneumococcal vaccination (PPV) ever; either a fecal occult blood test (FOBT) within the past year, a sigmoidoscopy within the past 5 years and a FOBT within the past 3 years, or a colonoscopy within the previous 10 years; and a mammogram in the past 2 years.</p> <p>This indicator is limited to a select set of clinical preventive services by age and sex for which data are available in the Behavioral Risk Factor Surveillance System (BRFSS). Data on all services in the core set are not available every year given the rotating core questions on BRFSS. The indicator should not be assumed to cover all recommended clinical preventives services for this age group.</p>	2018 County, ZCTA, Census tract	2018 County, ZCTA, Census tract

Variable Name	Variable Label	Notes	Availability in 2020 CDCP release	Availability in 2021 CDCP release ¹⁶
CDCP_PREV_SERV_M65_ABOVE_A	Age-adjusted prevalence of males aged 65 years and older who are up to date on a core set of clinical preventive services (%)	<p>The core set of clinical preventative services for men aged ≥65 years reporting having received all of the following: an influenza vaccination in the past year; a PPV ever; and either a fecal occult blood test (FOBT) within the past year, a sigmoidoscopy within the past 5 years and a FOBT within the past 3 years, or a colonoscopy within the past 10 years.</p> <p>This indicator is limited to a select set of clinical preventive services by age and sex for which data are available in the BRFSS. Data on all services in the core set are not available every year given the rotating core questions on BRFSS. The indicator should not be assumed to cover all recommended clinical preventives services for this age group.</p>	2018 County	2018 County
CDCP_PREV_SERV_M65_ABOVE_C	Crude prevalence of males aged 65 years and older who are up to date on a core set of clinical preventive services (%)	<p>The core set of clinical preventative services for men aged ≥65 years reporting having received all of the following: an influenza vaccination in the past year; a PPV ever; and either a fecal occult blood test (FOBT) within the past year, a sigmoidoscopy within the past 5 years and a FOBT within the past 3 years, or a colonoscopy within the past 10 years.</p> <p>This indicator is limited to a select set of clinical preventive services by age and sex for which data are available in the BRFSS. Data on all services in the core set are not available every year given the rotating core questions on BRFSS. The indicator should not be assumed to cover all recommended clinical preventives services for this age group.</p>	2018 County, ZCTA, Census tract	2018 County, ZCTA, Census tract
CDCP_PULMONARY_DISEASE_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis (%)	This indicator is based on being diagnosed by a physician and respondent recall of the diagnosis and might underestimate the true prevalence.	2018 County	2019 County

Variable Name	Variable Label	Notes	Availability in 2020 CDCP release	Availability in 2021 CDCP release ¹⁶
CDCP_PULMONARY_DISEASE_ADU_LT_C	Crude prevalence of adults aged 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis (%)	This indicator is based on being diagnosed by a physician and respondent recall of the diagnosis and might underestimate the true prevalence.	2018 County, ZCTA, Census tract	2019 County, ZCTA, Census tract
CDCP_SLEEP_LESS7HR_ADULT_A	Age-adjusted prevalence of adults aged 18 years and older who report usually getting less than 7 hours of sleep (%)	This indicator does not measure variations in sleep duration (e.g., weekday vs. weekend sleep) or quality of sleep. Both of these might affect the risk for chronic disease. It also does not identify specific sleep problems, such as sleep disordered breathing, which are associated with different chronic conditions.	2018 County	2018 County
CDCP_SLEEP_LESS7HR_ADULT_C	Crude prevalence of adults aged 18 years and older who report usually getting less than 7 hours of sleep (%)	This indicator does not measure variations in sleep duration (e.g., weekday vs. weekend sleep) or quality of sleep. Both of these might affect the risk for chronic disease. It also does not identify specific sleep problems, such as sleep disordered breathing, which are associated with different chronic conditions.	2018 County, ZCTA, Census tract	2018 County, ZCTA, Census tract

Table Notes: Included in the table are notes on significance and limitation of each indicator. PLACES provide detailed variable definitions in <https://www.cdc.gov/places/measure-definitions/index.html>

Notes on Trends and Comparisons Across Areas

It is advised that comparisons of point estimates across areas are interpreted with associated confidence intervals. Also, it is important to consider differences in population characteristics (e.g., age, race/ethnicity) of the geographic units being compared.

The modeling procedures used in CDCP do not support evaluation of local changes over time. This is because CDCP relies on 1) the survey responses in the given survey year; and 2) the detailed population distribution within the local area. More details are provided in FAQ page on Using the Data under the question, "Can I use the data to track changes at the local level over time?": <https://www.cdc.gov/places/faqs/using-data/index.html>.

CDCP does not provide a weighted composite score for the included counties, places, census tracts, or ZCTAs; therefore, the data should not be used to rank the overall health of a local area.

In the 2021 release, estimates for New Jersey are not available for variables based on the 2019 BRFSS because the state of New Jersey did not collect enough BRFSS data to meet the minimum requirements for inclusion in the 2019 annual aggregate data set.

In the 2021 release, estimates of cholesterol screening for 2017 (provided in the 2020 release) were revised for all geographic regions. Users are encouraged to refer to the data release notes: <https://www.cdc.gov/places/help/data-notes/index.html>.

14. Centers for Disease Control and Prevention Wide-ranging Online Data for Epidemiologic Research (CDCW)

Sponsor

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention

Description

CDC WONDER is an online repository that provides data on topics such as health, environment, population, birth, and mortality through a publicly available, ad hoc query system. CDC WONDER contains data spanning 1999–2019. Users can query data for a variety of geographies (e.g., region, state, county) and produce aggregated estimates over a period of years to output more reliable statistics.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2019
- ▶ **SDOH domain(s):**
 - Health outcomes
- ▶ **SDOH variable naming convention:** CDCW_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database contains county-level data for 2009–2019 from the CDC WONDER, under the SDOH domain of healthcare context. We extracted Data using the Multiple Cause of Death, 1999–2019 query tool. Variables presented in the SDOH Database are drawn directly from CDC WONDER. However, they have been renamed for clarity and to fit the conventions of the SDOH Database.

The Multiple Cause of Death data available on CDC WONDER are county-level national mortality and population data. Data are based on death certificates for U.S. residents. Each death certificate contains a single underlying cause of death (up to twenty additional multiple causes) and demographic data. The Division of Vital Statistics, National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), United States Department of Health and Human Services (US DHHS) produces the Multiple Cause of Death data. See [CDC Wonder's data source information](#).

The mortality data are based on information from all death certificates filed in the 50 states and the District of Columbia. This information is compiled from coded mortality data by states provided to NCHS through the Vital Statistics Cooperative Program, or in some cases is coded by NCHS using copies of the original death certificates state registration offices provide to NCHS.

For more information, see [Technical Appendix from Vital Statistics of United States: 1999 Mortality.](#)

The population estimates are U.S. Census Bureau estimates of U.S. national, state, and county resident populations. The 2000 and 2010 population estimates are April 1 modified census counts, with bridged race¹⁷ categories. The year 2011-2019 population estimates are bridged race postcensal estimates of the July 1 resident population. The 2001-2009 population estimates are bridged-race revised intercensal estimates of the July 1 resident population, based on the year 2000 and the year 2010 census counts (released by NCHS on 10/26/2012). The 2001-2009 archive population estimates are bridged-race postcensal estimates of the July 1 resident population. For more information, see [Population Data Sources](#).

Resources

We downloaded data from the Multiple Cause of Death (1999-2019) section of the CDC Wonder Online Database: <http://wonder.cdc.gov/mcd-icd10.html>.

Documentation: <https://wonder.cdc.gov/wonder/help/mcd.html#>

Suggested Citation

AHRQ SDOH Database (v1), from Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death, 1999–2019, in CDC WONDER Online Database. (2021). Data are from the Multiple Cause of Death Files, 1999–2019, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.
<http://wonder.cdc.gov/mcd-icd10.html>.

Data Set Notes

Reliability

The SDOH files do not include margins of error. However, the CDCW provides 95% confidence intervals and standard errors for rates. Deaths of nonresident aliens, nationals living abroad, and fetal deaths are excluded.

Geographic Levels

Data are available at the county level for the 50 states and District of Columbia. Deaths of residents of Puerto Rico, Guam, the Virgin Islands, and other territories of the U.S are excluded.

¹⁷ Race bridging is a method used to make multiple-race and single-race data collection systems sufficiently comparable to permit estimation and analysis of race-specific statistics (https://www.cdc.gov/nchs/nvss/bridged_race.htm).

Suppression Rules

- Rates are suppressed for sub-national data representing zero to nine (0-9) deaths. Corresponding sub-national denominator population figures are also suppressed when the population represents fewer than 10 persons¹⁸.
- Rates are marked as missing when the death count is less than 20. Rates are not shown for infant age groups when the death count is less than 20, since December 12, 2011.
- Rates are marked as missing when the population denominator figure is unavailable, such as persons of "not stated" or unknown age or Hispanic origin. Rates and populations are also not available for specific categories for place of death.

For more information on estimating county-level mortality rates using CDC Wonder data, please review "*Quick H. Estimating County-Level Mortality Rates Using Highly Censored Data*" from CDC WONDER. Prev Chronic Dis 2019;16:180441. DOI: <http://dx.doi.org/10.5888/pcd16.180441>.

¹⁸ For more information see Assurance of Confidentiality:
<https://wonder.cdc.gov/wonder/help/mcd.html#Assurance%20of%20Confidentiality>

Variable Notes

Table 14.1 below provides information on the variable availability across years. Table 14.2 provides more information on what numerator and denominator variables were drawn for CDCW variables in the SDOH Database.

Table 14.1. Variable availability across years, CDCW

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CDCW_ASSAULT_DTH_RATE				X	X	X	X	X	X	X	X	X	X	X	X
CDCW_DRUG_DTH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
CDCW_INJURY_DTH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
CDCW_MATERNAL_DTH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
CDCW_OPIOID_DTH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
CDCW_SELFHARM_DTH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
CDCW_TOT_POPULATION	X			X	X	X	X	X	X	X	X	X	X	X	X
CDCW_TRANSPORT_DTH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 14.2. Variable definitions and specifications, CDCW

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)	Denominator Label
CDCW_ASSAULT_DTH_RATE	Total number of deaths from assault per 100,000 population	Death	Deaths attributable to the following as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10 Codes) - X85-Y09 (Deaths due to assault)	Population	U. S. resident population based on most recent available Census (2000, 2010)
CDCW_INJURY_DTH_RATE	Total number of deaths from injury per 100,000 population	Death	Deaths attributable to the following as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10 Codes) - S00-S09 (Injuries to the head); S10-S19 (Injuries to the neck); S20-S29 (Injuries to the thorax); S30-S39 (Injuries to the abdomen, lower back, lumbar spine and pelvis); S40-S49 (Injuries to the shoulder and upper arm); S50-S59 (Injuries to the elbow and forearm); S60-S69 (Injuries to the wrist and hand); S70-S79 (Injuries to the hip and thigh); S80-S89 (Injuries to the knee and lower leg); S90-S99 (Injuries to the ankle and foot); T00-T07 (Injuries involving multiple body regions); T08-T14 (Injuries to unspecified part of trunk, limb or body region)	Population	U. S. resident population based on most recent available Census (2000, 2010)
CDCW_MATERNAL_DTH_RATE	Total number of maternal deaths per 100,000 population	Death	Deaths attributable to the following as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10 Codes) - O00-O99 (Deaths due to Pregnancy and Childbirth)	Population	U. S. resident population based on most recent available Census (2000, 2010)
CDCW_OPIOID_DTH_RATE	Total number of drug overdose deaths involving any opioid per 100,000 population	Death	Deaths attributable to the following ICD-10 Codes - Drug overdose deaths involving any opioid as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10) Codes - T40.0 (Opium); T40.1 (Heroin); T40.2 (Other opioids); T40.3 (Methadone); T40.4 (Other synthetic narcotics); and T40.6 (Other and unspecified narcotics)	Population	U. S. resident population based on most recent available Census (2000, 2010)
CDCW_DRUG_DTH_RATE	Total number of drug poisoning deaths per 100,000 population	Death	Deaths attributable to the following ICD-10 Codes - Drug overdose deaths involving any opioid as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10) Codes - T40.0 (Opium); T40.1 (Heroin); T40.2 (Other opioids); T40.3 (Methadone); T40.4 (Other synthetic narcotics); and T40.6 (Other and unspecified narcotics)	Population	U. S. resident population based on most recent available Census (2000, 2010)
CDCW_SELFHARM_DTH_RATE	Total number of deaths from intentional self harm per 100,000 population	Death	Deaths attributable to the following as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10 Codes) - X60-X84 (Intentional self-harm)	Population	U. S. resident population based on most recent available Census (2000, 2010)
CDCW_TOT_POPULATION	Total Population (CDC Wonder)	Population	U. S. resident population based on most recent available Census (2000, 2010)	n/a	n/a
CDCW_TRANSPORT_DTH_RATE	Total number of deaths from transport accidents per 100,000 population	Death	Deaths attributable to the following as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10 Codes) - V01-V99 (Transport accidents)	Population	U. S. resident population based on most recent available Census (2000, 2010)

Table 14.3 provides important variable notes for users of the SDOH Database to consider when working with CDCW variables.

Table 14.3. CDCW variable notes

Variable Name	Variable Label	Note
CDCW_MATERNAL_DTH_RATE	Total number of maternal deaths per 100,000 population	Beginning with the 2018 data, changes have been implemented that affect the counts for ICD-10 because of changes in the implementation of maternal mortality codes compared to previous practice. In addition, data for the cause of death codes O00-O99 for 2003 through 2017 reflect differences in information available to individual states and probable errors. Caution should be used in interpreting these data. More information can be found at: https://www.cdc.gov/nchs/maternal-mortality/evaluation.htm

Other notes

Deaths for Allen Parish, Louisiana (FIPS code 22003) in years 2006 through 2008 are underreported due to problems with registering the deaths with the Louisiana Vital Statistics Office.

Deaths and population estimates are shown separately from the adjacent counties for Carson City, Nevada (FIPS code 32510).

Deaths and population estimates are reported separately for Baltimore City (FIPS code 24510) and Baltimore County (FIPS code 24005).

Deaths and population estimates are reported separately for St. Louis City (FIPS code 29510) and county (FIPS code 29189).

Term Definitions

Table 14.4 provides important term definitions for users of the SDOH Database to consider when working with CDCW variables.

Table 14.4. Term definitions, CDCW

Term	Definition
Deaths from injuries	Injury-related deaths as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10) Codes: S00-S09 (Injuries to the head); S10-S19 (Injuries to the neck); S20-S29 (Injuries to the thorax); S30-S39 (Injuries to the abdomen, lower back, lumbar spine and pelvis); S40-S49 (Injuries to the shoulder and upper arm); S50-S59 (Injuries to the elbow and forearm); S60-S69 (Injuries to the wrist and hand); S70-S79 (Injuries to the hip and thigh); S80-S89 (Injuries to the knee and lower leg); S90-S99 (Injuries to the ankle and foot); T00-T07 (Injuries involving multiple body regions); T08-T14 (Injuries to unspecified part of trunk, limb or body region)
Deaths from transport accidents	Transport-related deaths as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10) Codes: V01-V99 (Transport accidents)
Deaths from intentional self-harm	Deaths from intentional self-harm as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10) Codes: X60-X84 (Intentional self-harm)

Term	Definition
Deaths from assault	Assault related deaths as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10) Codes: ICD Codes: X85-Y09 (Assault)
Drug overdose deaths	Drug overdose deaths involving any opioid as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10) Codes: T40.0 (Opium); T40.1 (Heroin); T40.2 (Other opioids); T40.3 (Methadone); T40.4 (Other synthetic narcotics); and T40.6 (Other and unspecified narcotics)
Maternal deaths	Maternal deaths as identified by Multiple Cause of Death – International Classification of Diseases, Tenth Revision (ICD-10) Codes: ICD Codes: 000-099 (Pregnancy, childbirth, and puerperium)

15. U.S. Census Bureau TIGERweb and COVID-19 Demographic and Economic Resources (CEN)

Sponsor

U.S. Department of Commerce, U.S. Census Bureau

Description

We used two U.S. Census Bureau sources for populating county, ZCTA, and census tract land area and for including limited population density data: TIGERweb and the COVID-19 Demographic and Economic Resources website.

The U.S. Census Bureau's TIGERweb is a Web-based system that allows users to visualize data in the Topologically Integrated Geographic Encoding and Referencing database (TIGER). The database contains legally defined geographic areas, including census regions and divisions, metropolitan and micropolitan statistical areas, public use microdata areas, urban areas, counties, ZCTA, and census tract tables.

The U.S. Census Bureau's COVID-19 Demographic and Economic Resources website is a publicly accessible resource for county-specific data relevant to COVID-19 policy and research, including land area and population estimates from the ACS.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2020
- ▶ **SDOH domain(s):**
 - Geography
- ▶ **SDOH variable naming convention:** CEN_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County, ZIP Code, and census tract

The ZCTA land area and variables came from the TIGERweb Decennial Nation Based ZIP Code Tabulation Areas. We calculate annual population density estimates using ACS population estimates (ACS_TOTAL_POP_WT) available in each file. We used the same estimates for the 2020 data file based on Census Bureau guidance: <https://www.census.gov/programs-surveys/acs/geography-acs/geography-boundaries-by-year.html>

County land area used for calculating population density for 2009-2019 came from the COVID-19 website. To calculate the population per square mile for each county, we converted land area from square kilometers to square miles and divided by the year-specific ACS population estimate. Due to changes to county boundaries in 2020, we used data files from TIGERweb to create 2020 county boundaries: <https://www2.census.gov/geo/tiger/TIGER2020/COUNTY>

Census tract land area variables came from the TIGERweb census tract files (<https://www2.census.gov/geo/tiger/>) for 2000, 2010, and 2020 respectively. For more information regarding the changes in census tracts, please review the *Geographic Consideration* subsection under section 3, *Contents and Structure of the SDOH Database*.

Resources

Data for years 2019 and after was downloaded from <https://www.census.gov/geographies/mapping-files/time-series/geo/cartographic-boundary.html>. Data prior to 2019 was downloaded from <https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.html>.

For further information on American Indian, Alaska Native, and Native Hawaiian Areas, refer to https://www.census.gov/programs-surveys/geography/about/glossary.html#par_textimage_1.

Suggested Citation

United States Census Bureau. Cartographic Boundary Files – Shapefile.
<https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.html>.

AHRQ SDOH Database (v1), from United States Census Bureau. TIGERweb Decennial Nation-Based Data Files. U.S. Department of Commerce, Bureau of the Census.
https://tigerweb.geo.census.gov/tigerwebmain/TIGERweb_nation_based_files.html.

AHRQ SDOH Database (v1), from United States Census Bureau (2020). Demographic and Economic Resources COVID19 HUB. <https://covid19.census.gov>.

Data Set Notes

Reliability

The source data do not include margins of error.

Variable Notes

CEN_AREALAND_SQM_COUNTY (Land area in square miles) has identical values for all years except 2020. The difference in land area in 2020 is caused by both new boundary changes and measurement errors caused by minor boundary misalignments in the shapefiles. We found several examples of significant county boundary changes, even though the county FIPS codes remain same, for example, county 51685, 22093, 02150. For counties that have very negligible % land area difference (i.e., less than 0.01%), we found that their boundaries remain almost the same, however, the majority have minor boundary misalignments (shapefile boundaries do not line up perfectly), which result in slight differences in area calculation.

Table 15.1 below provides information on the variable availability across years. Table 15.2 provides more information on what numerator and denominator variables were drawn for CEN variables in the SDOH Database.

Table 15.1. Variable availability across years, CEN

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CEN_AIAN_NH_IND	X	X	X		X			X	X	X	X	X	X	X	X
CEN_AREALAND_SQM		X				X	X	X	X	X	X	X	X	X	X
CEN_AREALAND_SQM_COUNTY	X			X	X	X	X	X	X	X	X	X	X	X	X
CEN_AREALAND_SQM_TRACT			X	X	X	X	X	X	X	X	X	X	X	X	X
CEN_POPDENSITY		X				X	X	X	X	X	X	X	X	X	X
CEN_POPDENSITY_COUNTY	X			X	X	X	X	X	X	X	X	X	X	X	X
CEN_POPDENSITY_TRACT			X	X	X	X	X	X	X	X	X	X	X	X	X

Table 15.2. Variable definitions and specifications, CEN

Variable Name	Variable Label	Numerator	Denominator (WHERE APPLICABLE)
CEN_AREALAND_SQM_TRACT	Land area in square miles	[ALAND (County), AREALAND (ZCTA), and ALAND10 (Tract) - Land area in Kilometers] * 0.0000003859	n/a
CEN_AREALAND_SQM_ZC	Land area in square miles	[ALAND (County), AREALAND (ZCTA), and ALAND10 (Tract) - Land area in Kilometers] * 0.0000003860	n/a
CEN_AREALAND_SQM_COUNTY	Land area in square miles	[ALAND (County), AREALAND (ZCTA), and ALAND10 (Tract) - Land area in Kilometers] * 0.0000003861	n/a
CEN_POPDENSITY COUNTY	Population density (County)	ACS_TOT_POP_WT	CEN_AREALAND_SQM_TRACT
CEN_POPDENSITY_ZC	Population density (ZCTA)	ACS_TOT_POP_WT	CEN_AREALAND_SQM_ZC
CEN_POPDENSITY_TRACT	Population density (Census Tract)	ACS_TOT_POP_WT	CEN_AREALAND_SQM_COUNTY
CEN_AIAN_NH_IND	American Indian/Alaska Native areas/Hawaiian home land indicator	Spatial intersection operation is conducted to determine if County/ZCTA/Tract boundaries cross any AIAN boundaries. 1 indicates that a county/ZCTA/Tract intersects with any AIAN areas, and 0 means that they don't intersect.	n/a

Table 15.3 provides important variable notes for users of the SDOH Database to consider when working with CEN variables.

Table 15.3. CEN variable notes

Variable Name	Variable Label	Notes
CEN_AIAN_NH_IND	American Indian/Alaska Native areas/Hawaiian home land indicator	<p>The indicator for presence of an American Indian/Alaska Native areas/Hawaiian home land (CEN_AIAN_NH_IND) is calculated by determining if a particular geography overlaps at least partially with an AIAN area or Hawaiian home land. Because AIAN areas and Hawaiian home lands do not nest in other Census Bureau geographies such as counties and tracts, this means that sometimes only a small portion of the tract or county will be contained in an AIAN area or Hawaiian home land. The indicator was created using 2010 Census Boundaries for Census Tracts, ZCTAs, and Counties.</p> <p>The indicator is not included in the SDOH files for the following years 2009, 2011, and 2012 because the Census Bureau has not released American Indian/Alaska Native areas/Hawaiian home land area files for these years.</p>

16. County Health Rankings (CHR)

Sponsor

Robert Wood Johnson Foundation

Description

Since 2010, the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation have produced the County Health Rankings (CHR) for U.S. counties.

The variables included in the SDOH Database provide information for how individuals in one county compare to individuals in other counties on a range of factors that determine health, unemployment, education, community safety, diet, and exercise.

The CHR includes variables on health outcomes such as mortality, as well as health factors of particular relevance to SDOH (e.g., economic factors and the physical environment, among other areas). Data sources include:

- a) National Center for Health Statistics - Mortality Files
- b) Behavioral Risk Factor Surveillance System
- c) United States Diabetes Surveillance System
- d) Fatality Analysis Reporting System
- e) National Center for Health Statistics - Natality files
- f) CMS, National Provider Identification
- g) Uniform Crime Reporting – FBI
- h) Map the Meal Gap
- i) American Community Survey, 5-year estimates

Inclusion in the SDOH Database

- **Years available in the SDOH Database:** 2010 – 2020
- **SDOH domain(s):**
 - Healthcare context
 - Physical infrastructure
 - Social context
- **SDOH variable naming convention:** CHR_[VARNAME]
We drew variables directly from CHR, renaming them for clarity and to fit SDOH naming conventions.
- **SDOH Database geographic level(s):** County

Resources

Data were downloaded for the most recent year from:

<https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation>.

Data for previous years were downloaded from: <https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation/national-data-documentation-2010-2019>.

Documentation (Variable changes and comparability across states):

<https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation>.

Table 16.4 below (“CHR variable availability across CHR annual files”) shows CHR availability across annual files.

Suggested Citation

AHRQ SDOH Database (v1), from Robert Wood Johnson Foundation, & University of Wisconsin Population Health Institute. (2020). County Health Rankings & Roadmaps.
<https://www.countyhealthrankings.org>.

Data Set Notes

Reliability

For most variables included in the CHR there are five associated variables: variable value (e.g., point estimate); numerator; denominator; lower bound of 95 percent confidence interval (CI); and upper bound of 95 percent CI. The SDOH Database includes only the variable values. CIs are available in the original data source files.

Suppression Rules

Suppression rules vary by variable:

- A missing value is reported for counties with fewer than 20 premature deaths in the time frame.
- A missing value is reported for counties with fewer than 10 homicide deaths in the time frame.
- A missing value is reported for counties with fewer than 10 drug poisoning deaths in the time frame.
- A missing value is reported for counties with population greater than 1,000 and 0 mental health providers.
- A missing value is reported for counties with fewer than 10 low birthweight births in the time frame.
- A missing value is reported for counties with fewer than 5,000 population-years-at-risk in the time frame.
- A missing value is reported for counties with fewer than 10 firearm fatalities in the time frame.
- A missing value is reported for the segregation index for counties with Black/non-White population less than 100 in the time frame.
- A missing value is reported for counties with fewer than 20 infant deaths in the time frame.

- A missing value is reported for counties with fewer than 10 child deaths in the time frame.
- A missing value is reported for counties with fewer than 10 teen births in the time frame.

Variable Notes

Table 16.1 below provides information on the variable availability across years. Table 16.2 provides more information on what numerator and denominator variables were drawn for CHR variables in the SDOH Database.

Table 16.1. Variable availability across years, CHR

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CHR_AVG_LIFE_EXPEC	X														
CHR_CHILD_DEATH_RATE	X														
CHR_FIREARM_DEATH_RATE	X														
CHR_INFANT_DEATH_RATE	X														
CHR_MENTAL_PROV_RATE	X									X	X	X	X	X	X
CHR_PCT_ADULT_OBESITY	X						X	X	X	X	X	X			
CHR_PCT_ALCOHOL_DRIV_DEATH	X							X	X	X	X	X	X	X	X
CHR_PCT_DIABETES	X							X	X	X	X	X	X	X	
CHR_PCT_EXCESS_DRINK	X								X	X	X	X	X	X	X
CHR_PCT_FOOD	X								X	X	X	X	X	X	X
CHR_PCT_LOW_BIRTH_WT	X							X	X	X	X	X	X	X	X
CHR_PCT_MENTAL_DISTRESS	X								X	X	X	X	X	X	X
CHR_PCT_PHYS_INACTIVITY	X						X	X	X	X	X	X	X	X	
CHR_PCT_PHYSICAL_DISTRESS	X								X	X	X	X	X	X	X
CHR_PCT_POOR_HEALTH	X								X	X	X	X	X	X	X
CHR_PCT_SMOKING	X								X	X	X	X	X	X	X
CHR_PREMAT_DEATH_RATE	X						X		X	X	X	X	X	X	X
CHR_SEGREG_BLACK	X									X	X	X	X	X	X
CHR_SEGREG_NON_WHITE	X									X	X	X	X	X	X
CHR_TEEN_BIRTH_RATE_15_19	X						X	X	X	X	X	X	X	X	X
CHR_TOT_MENTAL_PROV	X									X	X	X	X	X	X
CHR_TOT_POPULATION	X						X	X	X		X	X	X	X	X
CHR_VIOLENT_CRIME_RATE	X										X				

Table 16.2. Variable definitions and specifications, CHR

Variable Name	Variable Label	Source	Numerator Source Table; Label	Denominator (WHERE APPLICABLE)
CHR_AVG_LIFE_EXPEC	Average life expectancy in years	National Center for Health Statistics	v147_RAWVALUE; Life expectancy raw value	n/a
CHR_CHILD_DEATH_RATE	Total number of deaths among children per 100,000 population (ages 17 and below)	National Center for Health Statistics - Natality files	V128_RAWVALUE; Child mortality raw value	n/a
CHR_FIREARM_DEATH_RATE	Total number of deaths due to firearms per 100,000 population	National Center for Health Statistics - Mortality Files	V148_RAWVALUE; Number of deaths due to firearms per 100,000 population	n/a
CHR_INFANT_DEATH_RATE	Total number of all infant deaths per 1,000 live births (age 1 year and below)	National Center for Health Statistics - Natality files	V129_RAWVALUE; Infant mortality raw value	n/a
CHR_MENTAL_PROV_RATE	Total number of mental health care providers per 100,000 population	CMS NPI File	V062_RAWVALUE; Number of mental health care providers per 100,000 population	n/a
CHR_PCT_ADULT_OBESITY	Percentage of the adult population that is obese (ages 20 and over)	2009-2015 CDC Diabetes Interactive Atlas; 2016 U.S. Diabetes Surveillance System	V011_RAWVALUE*100; Percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m2	n/a
CHR_PCT_ALCOHOL_DRIV_DEATH	Percentage of driving deaths involving alcohol	Fatality Analysis Reporting System, 5-year estimates	V134_RAWVALUE*100; Percentage of driving deaths with alcohol involvement	n/a
CHR_PCT_DIABETES	Percentage of adults with diagnosed diabetes (ages 20 and over)	2009-2013, 2015 CDC Diabetes Interactive Atlas; 2016 U.S. Diabetes Surveillance System	V060_RAWVALUE*100; Percentage of adults aged 20 and above with diagnosed diabetes	n/a
CHR_PCT_EXCESS_DRINK	Percentage of adults reporting binge or heavy drinking	Behavioral Risk Factor Surveillance System	V049_RAWVALUE*100; Percentage of adults reporting binge or heavy drinking	n/a
CHR_PCT_FOOD	Percentage of population who lack adequate access to food	Map the Meal Gap	V139_RAWVALUE*100; Food insecurity raw value	n/a
CHR_PCT_LOW_BIRTH_WT	Percentage of live births with low birthweight (<2,500 grams)	National Center for Health Statistics - Natality files	V037_RAWVALUE*100; Low birthweight raw value	n/a
CHR_PCT_MENTAL_DISTRESS	Percentage of adults reporting 14 or more days of poor mental health per month	Behavioral Risk Factor Surveillance System	V145_RAWVALUE*100; Percentage of adults reporting 14 or more days of poor mental health per month	n/a
CHR_PCT_PHYS_INACTIVITY	Percentage of adults reporting no leisure-time physical activity (ages 20 and over)	Behavioral Risk Factor Surveillance System	V070_RAWVALUE*100; Percentage of adults age 20 and over reporting no leisure-time physical activity	n/a

Variable Name	Variable Label	Source	Numerator Source Table; Label	Denominator (WHERE APPLICABLE)
CHR_PCT_PHYSICAL_DISTRESS	Percentage of adults reporting 14 or more days of poor physical health per month	Behavioral Risk Factor Surveillance System	V144_RAWVALUE*100; Percentage of adults reporting 14 or more days of poor physical health per month	n/a
CHR_PCT_POOR_HEALTH	Percentage of adults reporting fair or poor health (age-adjusted)	Behavioral Risk Factor Surveillance System	V002_RAWVALUE*100; Percentage of adults reporting fair or poor health (age-adjusted)	n/a
CHR_PCT_SMOKING	Percentage of adults who are current smokers	Behavioral Risk Factor Surveillance System	V009_RAWVALUE*100; Percentage of adults who are current smokers	n/a
CHR_PREMAT_DEATH_RATE	Total number of premature deaths: age-adjusted per 100,000 population (ages 74 and below)	2010 - 2017 CDC WONDER Mortality Data, 3-year estimates; 2018 National Center for Health Statistics -Mortality Files, 3-year estimates	V127_RAWVALUE; Number of deaths among residents under age 75 per 100,000 population (age adjusted)	n/a
CHR_SEGREG_BLACK	Segregation Index (higher values indicate greater residential segregation between Black and White residents)	American Community Survey, 5-year estimates	V141_RAWVALUE; Index of dissimilarity where higher values indicate greater residential segregation between Black and White county residents	n/a
CHR_SEGREG_NON_WHITE	Segregation Index (higher values indicate greater residential segregation between non-White and White residents)	American Community Survey, 5-year estimates	V142_RAWVALUE; Index of dissimilarity where higher values indicate greater residential segregation between non-White and White county residents	n/a
CHR_TEEN_BIRTH_RATE_15_19	Total number of births per 1,000 females (ages 15-19)	2010-2011 National Center for Health Statistics, 7-year estimates; 2012-2018 National Center for Health Statistics – Natality Files, 7-year estimates	V014_RAWVALUE; Number of births per 1,000 female population ages 15-19	n/a
CHR_TOT_MENTAL_PROV	Total number of mental health care providers	CMS NPI File	V062_NUMERATOR; Mental health care providers numerator	n/a
CHR_TOT_POPULATION	Total county population (Denominator for provider rate)	Vintage Census Population Estimate	V062_DENOMINATOR; County Population Raw Value (Denominator for provider rates)	n/a

Table 16.3 provides important variable notes for users of the SDOH Database to consider when working with CHR variables.

Table 16.3. CHR variable notes

Variable Name	Variable Label	Notes
CHR_VIOLENT_CRIME_RATE	Total number of reported violent crime offenses per 100,000 population	Violent crime rates are dependent on the reporting practices of both residents and law enforcement offices in states and jurisdictions. These practices can vary by state and jurisdiction, so caution should always be observed when comparing crime rates.
CHR_PCT_PHYS_INACTIVITY	Percentage of adults reporting no leisure-time physical activity (ages 20 and over)	The model used to construct these estimates includes state-level effects that may limit comparability of estimates across counties in different states. BRFSS methodology changed in 2011 (which is used to construct the 2010 estimates). Analysts should be careful comparing data from 2011 and later to prior years.
CHR_PCT_FOOD	Percentage of population who lack adequate access to food	The food insecurity models include state-level effects that may overestimate differences in border counties.
CHR_PCT_ADULT_OBESITY	Percentage of the adult population that is obese (ages 20 and over)	The model used to construct these estimates includes state-level effects that may limit comparability of estimates across counties in different states. Data for Adult Obesity are provided by the CDC Interactive Diabetes Atlas which uses BRFSS data to provide county-level estimates. Beginning with the 2015 County Health Rankings, Adult Obesity estimates include both landline and cell phone users. Previously, only landline users were included in the data. CDC implemented this change to provide users with the most accurate estimates of health in their community as possible.
CHR_PCT_DIABETES_PREV	Percentage of adults with diagnosed diabetes (ages 20 and over)	The model used to construct these estimates includes state-level effects that may limit comparability of estimates across counties in different states. Data for Diabetes Prevalence are provided by the CDC Interactive Diabetes Atlas which uses BRFSS data to provide county-level estimates. Beginning with the 2015 County Health Rankings, Diabetes Prevalence survey estimates include both landline and cell phone users. Previously, only landline users were included in the data. CDC implemented this change to provide users with the most accurate estimates of health in their community as possible.
CHR_PREMAT_DEATH_RATE	Total number of premature deaths: age-adjusted per 100,000 population (ages 74 and below)	Premature death is a relatively rare event in most counties. Counties with smaller populations can see a lot of change in their rates of premature death data from year to year. Such changes are usually due to normal variation and are not necessarily caused by any actual change in the underlying risk of premature death in the county. To help determine if the premature death change in a county is due to normal variation or to real change, users are encouraged to examine the error margins that CHR provides.
CHR_TOT_MENTAL_PROVIDERS	Total number of mental health care providers	These data come from the National Provider Identification data file, which has some limitations. Providers who transmit electronic health records are required to obtain an identification number, but very small providers may not obtain a number. While providers have the option of deactivating their identification number, some mental health professionals included in this list may no longer be practicing or accepting new patients. This may result in an overestimate of active mental health professionals in some communities. It is also true that Mental Health Providers may be registered with an address in one county, while practicing in another county.

Other notes

When working with CHR variables, users are strongly encouraged to read the original Measures & Data Sources documentation (<https://www.countyhealthrankings.org/explore-health-rankings/measures-datasources>), particularly as it relates to missing values.

Deaths are counted in the county where the individual lived. So, even if a person dies elsewhere in the state, that death is attributed to his/her home county.

One limitation of variables sourced from the Behavioral Risk Factor Surveillance System (BRFSS) is that all variables are based on self-reported information, which cannot be validated with medical records. Another limitation is that these model-based estimates were created by borrowing information from the entire BRFSS, which may or may not accurately reflect those counties' local intervention experiences.

Prior to the 2016 County Health Rankings, the CDC's BRFSS provided the rankings with county-level estimates that were constructed from seven years of responses from participants who used a landline phone. Beginning with the 2016 rankings, the CDC provided single-year modeled county-level estimates that included both landline and cell phone users. These changes were implemented to provide users with the most accurate estimates of health in their community as possible.

For the 2021 Rankings, the CDC has updated their modeling procedure for producing small-area estimates. With the PLACES project, a multilevel statistical modeling framework using multilevel regression and poststratification (MRP) is performed for small-area estimation that links BRFSS data with high spatial resolution population demographic and socioeconomic data from the Census' American Community Survey (ACS). The CDC has performed internal and external validation studies, which confirm strong consistency between their model-based estimates and the direct BRFSS survey estimates at both the state and county levels. For more technical information on the PLACES modeling procedure, please see their website: <https://www.cdc.gov/places/methodology/index.html>.

The CHR is published annually; however, variables are not representative of the CHR year (instead they reflect most current data year available), and variable availability differs across years. The SDOH county data files use the variable-specific data year, which does not typically correspond to the CHR publication year. For example, the 2020 CHR contained estimates from the 2017 Behavioral Risk Factor Surveillance System for five variables: current smokers, binge or heavy alcohol use, health status, and physically and mentally unhealthy days. These variables are included in the 2017 SDDOH county data file. For a detailed listing please review Table 16.4.

Table 16.4. CHR variable availability across CHR annual files

Variable Name	2019 File	2018 File	2017 File	2016 File	2015 File	2014 File
CHR_SEGREG_BLACK	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	2017 Analytical File	2016 Analytical File
CHR_SEGREG_NON_WHITE	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	2017 Analytical File	2016 Analytical File
CHR_FIREARM_DEATH_RATE	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	2017 Analytical File	N/A
CHR_MENTAL_PROV	2020 analytical file	2019 Analytical File	2017 Analytical File	2016 Analytical File	2015 Analytical File	N/A
CHR_MENTAL_PROV_RATE	2020 analytical file	2019 Analytical File	2017 Analytical File	2016 Analytical File	2015 Analytical File	N/A
CHR_TOT_POPULATION	2019 analytical file	2018 Analytical File	2017 Analytical File	2016 Analytical File	2015 Analytical File	2014 Analytical File
CHR_PCT_ALCOHOL_DRIV_DEATH	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	2017 Analytical File	2016 Analytical File
CHR_DRUG_OVERDOSE_DEATH_RATE	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	2017 Analytical File	2016 Analytical File
CHR_PREMAT_DEATH_RATE	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	2017 Analytical File	N/A
CHR_PCT_ADULT_OBESITY	N/A	N/A	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File
CHR_PCT_DIABETES	N/A	N/A	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File
CHR_PCT_EXCESS_DRINK	N/A	2021 analytical file	2020 Analytical File	2019 Analytical File	2017 Analytical File	2016 Analytical File
CHR_HOMICIDES_RATE	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	2017 Analytical File	N/A
CHR_PCT_MENTAL_DISTRESS	N/A	2021 analytical file	2020 Analytical File	2019 Analytical File	2017 Analytical File	2016 Analytical File
CHR_PCT_PHYSICAL_DISTRESS	N/A	2021 analytical file	2020 Analytical File	2019 Analytical File	2017 Analytical File	2016 Analytical File
CHR_PCT_PHYS_INACTIVITY	N/A	N/A	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File
CHR_PCT_POOR_HEALTH	N/A	2021 analytical file	2020 Analytical File	2019 Analytical File	2017 Analytical File	2016 Analytical File
CHR_PCT_SMOKING	N/A	2021 analytical file	2020 Analytical File	2019 Analytical File	2017 Analytical File	2016 Analytical File
CHR_TEEN_BIRTH_RATE	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	N/A	2017 Analytical File
CHR_VIOLENT_CRIME_RATE	N/A	N/A	N/A	2021 analytical file	N/A	N/A
CHR_PCT_LOW_BIRTH_WT	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	N/A	2017 Analytical File
CHR_CHILD_DEATH_RATE	2021 analytical file	2020 Analytical File	2019 Analytical File	2018 Analytical File	2017 Analytical File	N/A
CHR_INFANT_DEATH_RATE	2021 analytical file	2020 Analytical File	2019 Analytical File	N/A	N/A	N/A
CHR_PCT_FOOD	N/A	2021 analytic file	2020 Analytical File	2019 Analytical File	2018 Analytical File	2017 Analytical File
CHR_AVG_LIFE_EXPEC	2021 analytical file	2020 Analytical File	2019 Analytical File	N/A	N/A	N/A

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Variable Name	2013 File	2012 File	2011 File	2010 File	2009 File
CHR_SEGREG_BLACK	N/A	N/A	N/A	N/A	N/A
CHR_SEGREG_NON_WHITE	N/A	N/A	N/A	N/A	N/A
CHR_FIREARM_DEATH_RATE	N/A	N/A	N/A	N/A	N/A
CHR_MENTAL_PROV	N/A	N/A	N/A	N/A	N/A
CHR_MENTAL_PROV_RATE	N/A	N/A	N/A	N/A	N/A
CHR_TOT_POPULATION	2013 Analytical File	2012 Analytical File	2011 Analytical File	N/A please use v001_denominator	N/A
CHR_PCT_ALCOHOL_DRIV_DEATH	2015 Analytical File	2014 Analytical File	N/A	N/A	N/A
CHR_DRUG_OVERDOSE_DEATH RATE	N/A	2015 Analytical File	N/A	2014 Analytical File	N/A
CHR_PREMAT_DEATH_RATE	2016 Analytical File	2015 Analytical File	N/A	2014 Analytical File	N/A
CHR_PCT_ADULT_OBESITY	2017 Analytical File	2016 Analytical File	2015 Analytical File	2014 Analytical File	N/A
CHR_PCT_DIABETES	2017 Analytical File	2016 Analytical File	2015 Analytical File	2014 Analytical File	N/A
CHR_PCT_EXCESS_DRINK	N/A	N/A	N/A	N/A	N/A
CHR_HOMICIDES_RATE	2016 Analytical File	2015 Analytical File	N/A	2014 Analytical File	N/A
CHR_PCT_MENTAL_DISTRESS	N/A	N/A	N/A	N/A	N/A
CHR_PCT_PHYSICAL_DISTRESS	N/A	N/A	N/A	N/A	N/A
CHR_PCT_PHYS_INACTIVITY	2017 Analytical File	2016 Analytical File	2015 Analytical File	2014 Analytical File	N/A
CHR_PCT_POOR_HEALTH	N/A	N/A	N/A	N/A	N/A
CHR_PCT_SMOKING	N/A	N/A	N/A	N/A	N/A
CHR_TEEN_BIRTH_RATE	2016 Analytical File	2015 Analytical File	2014 Analytical File	2013 Analytical File	N/A
CHR_VIOLENT_CRIME_RATE	N/A	2015 Analytical File	2014 Analytical File	2013 Analytical File	N/A
CHR_PCT_LOW_BIRTH_WT	2016 Analytical File	2015 Analytical File	2014 Analytical File	2013 Analytical File	N/A
CHR_CHILD_DEATH_RATE	2016 Analytical File	2015 Analytical File	N/A	2014 Analytical File	N/A
CHR_INFANT_DEATH_RATE	N/A	N/A	N/A	N/A	N/A
CHR_PCT_FOOD	2016 Analytical File	2015 Analytical File	2014 Analytical File	N/A	N/A
CHR_AVG_LIFE_EXPEC	N/A	N/A	N/A	N/A	N/A

Term Definitions

Table 16.5 provides important term definitions for users of the SDOH Database to consider when working with CHR variables.

Table 16.5. Term definitions, CHR

Term	Definition
Adult Obesity	Adult Obesity is defined as the percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m ² .
Deaths due to firearms	The number of deaths in a county due to firearms as defined by ICD-10 codes W32-W34, X72-X74, X93-X95, Y22-Y24, and Y35.0.
Driving deaths involving alcohol	Alcohol-impaired driving deaths is defined as the percentage of motor vehicle crash deaths with alcohol involvement.
Physical inactivity	Physical Inactivity is defined as the percentage of adults aged 20 and over reporting no leisure-time physical activity. Examples of physical activities provided include running, calisthenics, golf, gardening, or walking for exercise.
Mental health care providers	Mental health providers are defined as psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, and mental health providers that treat alcohol and other drug abuse, as well as advanced practice nurses specializing in mental health care.
Diabetes	Number of adults 20 years and older who responded "yes" to the question, "Has a doctor ever told you that you have diabetes?" Both Type 1 and Type 2 diabetes diagnoses are included. Women who indicated that they only had diabetes during pregnancy were not considered to have diabetes.
Drug poisoning deaths	Deaths from accidental, intentional, and undetermined drug poisoning by and exposure to the following: 1) nonopioid analgesics, antipyretics and antirheumatics, 2) antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified, 3) narcotics and psychodysleptics [hallucinogens], not elsewhere classified, 4) other drugs acting on the autonomic nervous system, and 5) other and unspecified drugs, medicaments and biological substances, over a 3-year period. ICD-10 codes used include X40-X44, X60-X64, X85, and Y10-Y14.
Binge or heavy drinking	Binge drinking is defined as a woman consuming more than four alcoholic drinks during a single occasion or a man consuming more than five alcoholic drinks during a single occasion. Heavy drinking is defined as a woman drinking more than one drink on average per day or a man drinking more than two drinks on average per day.
Homicide	The number of deaths in a county over a 7-year period due to homicide as defined by ICD-10 codes X85-Y09 (assault).
Poor or fair health	Respondents who answered, "In general, would you say that in general your health is Excellent/Very good/Good/Fair/Poor?" with fair or poor.
Poor mental health	Number of days respondents reported to the question "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"
Poor physical health	Number of days respondents reported to the question "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?"
Violent crime	Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery, and aggravated assault.

17. Civil Rights Data Collection (CRDC)

Sponsor

U.S. Department of Education

Description

Since 1968, the U.S. Department of Education (ED) has conducted the CRDC biennially to collect data on key education and civil rights issues in our nation's public schools. The collection was formerly administered as the Elementary and Secondary School Survey.

The CRDC collects a variety of information, including student enrollment and educational programs and services, most of which is disaggregated by race/ethnicity, sex, limited English proficiency, and disability. The CRDC is a longstanding and important aspect of the ED Office for Civil Rights' overall strategy for administering and enforcing the civil rights statutes for which it is responsible.

ED collected 2014 CRDC data in 2013 and 2014, 2016 CRDC data in 2015 and 2016, and 2018 CRDC data in 2017 and 2018.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH:** 2014, 2016, 2018
- ▶ **SDOH domain(s):**
 - Education
- ▶ **SDOH naming convention:** CRDC_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH county-level data files include constructed variables based on the CRDC's local education agency (LEA) and school data.

CRDC data are available for each LEA and each school. Because certain items are available only at the LEA or school level, we created aggregate county estimates using the appropriate data (Table 17.2). To construct county variables from the LEA variables for the SDOH Database county-level data sets, we used an LEA-to-county crosswalk file (<https://nces.ed.gov/programs/edge/Geographic/RelationshipFiles>). To construct county variables from the school variables for the SDOH Database county-level data sets, we used a school-to-county crosswalk file (<https://nces.ed.gov/programs/edge/Geographic/RelationshipFiles>).

Because districts and schools change from school year to school year, we used Common Core School Universe data (2013-14 and 2015-16) for the relevant school year to obtain the correct county FIPS codes.

Resources

Data was downloaded from <https://ocrdata.ed.gov>.

Data notes: <https://ocrdata.ed.gov/resources/datanotes>.

Data definitions: <https://ocrdata.ed.gov/resources/datadefinitions>.

Data file user manual: <https://ocrdata.ed.gov/resources/datafileusersmanual>.

Suggested Citation

AHRQ SDOH Database (v1), from U.S. Department of Education. (n.d.). Civil Rights Data Collection. Retrieved September 2021, from <https://ocrdata.ed.gov>.

Data Set Notes

Reliability

CRDC data sets do not include margins of error.

Geographic Levels

The SDOH Database employed the following steps to convert the constructed variables for each LEA to county level variables.

- We matched each LEA from CRDC to a county using the District Geographic Relationship Files (GRF), which is published annually by Education Demographic and Geographic Estimates (EDGE) in the National Center for Education Statistics (NCES) (<https://nces.ed.gov/programs/edge/Geographic/RelationshipFiles>).
- The GRF, which is based on the Census Bureau's TIGER/Line database provides complete spatial association between school districts and other types of geographical areas, including counties. We used the LEA Identification Number (LEAID) available in both CRDC and GRF to map LEAs to counties.
- For LEAs that had boundary associations with more than one county, we weighted each constructed variable by the overlapping land area shared between the LEA and county using the LANDAREA variable in the GRF file.

To construct county variables from the school variables for the SDOH Database county-level data sets, we used a school-to-county crosswalk file (<https://nces.ed.gov/programs/edge/Geographic/RelationshipFiles>).

Suppression Rules

Prior to its release, the public-use datafile for the CRDC undergoes data quality suppression (DQ Suppression), a standard methodology used to improve both the reliability and usability of data. This process includes data quality checks and verification from external data sources to identify data that appear to be of poor quality. Based on the results of DQ Suppression, some data in the

public-use file have been replaced with a special reserve code. Any data suppressed due to data quality has a -11 as the reserve code in the public-use data file, which appears in the SDOH Database as missing. For more information, see: <https://ocrdata.ed.gov/resources/datanotes>

Variable Notes

Table 17.1 below provides information on the variable availability across years. Table 17.2 provides more information on what numerator and denominator variables were drawn for CRDC variables in the SDOH Database.

Table 17.1. Variable availability across years, CRDC

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CRDC_PCT_APEXAM_ONEORMORE	X								X				X		
CRDC_PCT_COUNTY_ECE	X								X				X		
CRDC_PCT_COUNTY_PREK	X								X				X		
CRDC_PCT_CTY_KGTON	X								X				X		
CRDC_PCT_CTY_PSLOWINC	X								X				X		
CRDC_PCT_CTY_PSTITLEI	X								X				X		
CRDC_PCT_GTENR_STUDENTS	X								X				X		
CRDC_PCT_HBA_DISABLE_STUDENTS	X								X				X		
CRDC_PCT_HBA_RACE_STUDENTS	X								X				X		
CRDC_PCT_HBA_SEX_STUDENTS	X								X				X		
CRDC_PCT_LAW_REFERRAL	X								X				X		
CRDC_PCT_LEA_DESEGPLAN	X								X				X		
CRDC_PCT_LEP_STUDENTS	X								X				X		
CRDC_PCT_RETAIN	X								X				X		
CRDC_PCT_SATACT	X								X				X		
CRDC_PCT_SATACT_IDEA	X								X				X		
CRDC_PCT_SATACT_LEP	X								X				X		
CRDC_PCT_STUD_DESEGPLAN	X								X				X		
CRDC_TOT_ALT	X								X				X		
CRDC_TOT_CHARTER	X								X				X		
CRDC_TOT_DIST_ENROLL	X												X		
CRDC_TOT_FIREARM	X												X		
CRDC_TOT_FTECOUNSELORS	X									X			X		
CRDC_TOT_FTENURSE	X												X		
CRDC_TOT_FTEPSY	X												X		
CRDC_TOT_FTESOC	X												X		
CRDC_TOT_FTETEACH_ABSENT	X									X			X		
CRDC_TOT_FTETEACH_CERT	X									X			X		

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Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CRDC_TOT_FTETEACH_NOTCERT	X								X		X		X		
CRDC_TOT_LEA	X								X		X		X		
CRDC_TOT_MAGNET	X								X		X		X		
CRDC_TOT_PRESCHOOL	X								X		X		X		
CRDC_TOT_PRESCHOOL_AIAN_F	X								X		X		X		
CRDC_TOT_PRESCHOOL_AIAN_M	X								X		X		X		
CRDC_TOT_PRESCHOOL ASN_F	X								X		X		X		
CRDC_TOT_PRESCHOOL ASN_M	X								X		X		X		
CRDC_TOT_PRESCHOOL_BLK_F	X								X		X		X		
CRDC_TOT_PRESCHOOL_BLK_M	X								X		X		X		
CRDC_TOT_PRESCHOOL_HIS_F	X								X		X		X		
CRDC_TOT_PRESCHOOL_HIS_M	X								X		X		X		
CRDC_TOT_PRESCHOOL_MTR_F	X								X		X		X		
CRDC_TOT_PRESCHOOL_MTR_M	X								X		X		X		
CRDC_TOT_PRESCHOOL_NHPI_F	X								X		X		X		
CRDC_TOT_PRESCHOOL_NHPI_M	X								X		X		X		
CRDC_TOT_PRESCHOOL_WHT_F	X								X		X		X		
CRDC_TOT_PRESCHOOL_WHT_M	X								X		X		X		
CRDC_TOT_RAPE_ASSAULT	X										X		X		
CRDC_TOT_SCH_FIREARM	X										X		X		
CRDC_TOT_SCHOOLS	X								X		X		X		
CRDC_TOT_SPEDS	X								X		X		X		
CRDC_TOT_STUD_AIAN_F	X								X		X		X		
CRDC_TOT_STUD_AIAN_M	X								X		X		X		
CRDC_TOT_STUD ASN_F	X								X		X		X		
CRDC_TOT_STUD ASN_M	X								X		X		X		
CRDC_TOT_STUD_BLK_F	X								X		X		X		
CRDC_TOT_STUD_BLK_M	X								X		X		X		
CRDC_TOT_STUD HIS_F	X								X		X		X		

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CRDC_TOT_STUD_HIS_M	X								X		X		X		
CRDC_TOT_STUD_IDEA	X								X		X		X		
CRDC_TOT_STUD_LEP	X								X		X		X		
CRDC_TOT_STUD_MTR_F	X								X		X		X		
CRDC_TOT_STUD_MTR_M	X								X		X		X		
CRDC_TOT_STUD_NHPI_F	X								X		X		X		
CRDC_TOT_STUD_NHPI_M	X								X		X		X		
CRDC_TOT_STUD_WHT_F	X								X		X		X		
CRDC_TOT_STUD_WHT_M	X								X		X		X		
CRDC_TOT_STUDENTS	X								X		X		X		
CRDC_TOT_SUSP	X								X		X		X		
CRDC_TOT_SUSP_IDEA	X								X		X		X		
CRDC_TOT_SUSP_IDEA_LEP	X								X		X		X		
CRDC_TOT_SUSP_LEP	X								X		X		X		
CRDC_TOT_TRANSFER	X										X		X		
CRDC_TOT_TRANSFER_IDEA	X										X		X		

Table 17.2. Variable definitions and specifications, CRDC

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CRDC_PCT_APEXAM_ONEORMORE	Percentage of all students who took one or more AP exams	CRDC: Advanced Placement	TOT_APEXAM_ONEORMORE_M + TOT_APEXAM_ONEORMORE_F; Total number of students who Took some AP exams: Calculated Male Total and Total number of students who Took some AP exams: Calculated Female Total	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_COUNTY_ECE	Percentage of Local Education Authorities in a county that offer early childhood services to children (ages 0-2)	CRDC: LEA Characteristics	Count of LEA where LEA level variable LEA_ECE_IND=YES; Early Childhood Program Indicator (LEA)	Calculated CRDC_TOT_LEA; Total Enrollment
CRDC_PCT_COUNTY_PREK	Percentage of Local Education Authorities in a county that offer pre-school services or programs to children (ages 3–5)	CRDC: LEA Characteristics and Enrollment	Count of LEA where LEA level variable LEA_PS_IND=Yes; Preschool Program Provided by the LEA Indicator (LEA): Does the LEA provide preschool services or programs that serve children ages 3 through 5?	Calculated CRDC_TOT_LEA; Total Enrollment
CRDC_PCT_CTY_KGTN	Percentage of Local Education Authorities in a county that offer one or more kindergarten programs	CRDC: LEA Characteristics and Enrollment	Count of LEA where LEA level variable LEA_KG_IND =Yes; Kindergarten Program Indicator (LEA): Does the LEA provide one or more kindergarten programs that serve any students?	Calculated CRDC_TOT_LEA; Total Enrollment
CRDC_PCT_CTY_PSLWINC	Percentage of Local Education Authorities in a county that offer preschool to low-income families	CRDC: LEA Characteristics and Enrollment	Count of LEA where LEA level variable LEA_PSELIG_LOWINC=Yes; Preschool Eligibility - Student Groups (LEA): Children from low income families	Calculated CRDC_TOT_LEA; Total Enrollment
CRDC_PCT_CTY_PSTITLEI	Percentage of Local Education Authorities in a county that offer preschool to children in Title I schools	CRDC: LEA Characteristics and Enrollment	Count of LEA where LEA level variable LEA_PSELIG_TITLEI=Yes ; Preschool Eligibility - Student Groups (LEA): Children in Title I schools	Calculated CRDC_TOT_LEA; Total Enrollment
CRDC_PCT_GTENR_STUDENTS	Percentage of all students who are enrolled in a gifted and talented education program	CRDC: Gifted and Enrollment	Sum of TOT_GTENR_M and TOT_GTENR_F; Gifted and Talented Student Enrollment: Calculated Male Total and Gifted and Talented Student Enrollment: Calculated Female Total	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CRDC_PCT_HBA_DISABLE_STUDENTS	Percentage of all students who reported as harassed or bullied on the basis of disability	CRDC: Harassment and Bullying	Sum of TOT_HBREPORTED_DIS_M and TOT_HBREPORTED_DIS_F; Students disciplined for bullying or harassment on the basis of disability: Calculated Male Total and Students disciplined for bullying or harassment on the basis of disability: Calculated Female Total	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_HBA_RACE_STUDENTS	Percentage of all students who reported as harassed or bullied on the basis of race, color, or national origin	CRDC: Harassment and Bullying	Sum of TOT_HBREPORTED_RAC_M and TOT_HBREPORTED_RAC_F; Students reported as harassed or bullied on the basis of race, color or national origin: Calculated Male Total and Students reported as harassed or bullied on the basis of race, color or national origin: Calculated Female Total	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_HBA_SEX_STUDENTS	Percentage of all students who reported as harassed or bullied on the basis of sex	CRDC: Harassment and Bullying	Sum of TOT_HBREPORTED_SEX_M and TOT_HBREPORTED_SEX_F; Students reported as harassed or bullied on the basis of sex: Calculated Male Total and Students reported as harassed or bullied on the basis of sex: Calculated Female Total	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_LAW_REFERRAL	Percentage of all students who were referred to a law enforcement agency	CRDC: Referrals and Arrests	Sum of TOT_DISCWODIS_REF_M and TOT_DISCWODIS_REF_F and TOT_DISCWODIS_REF_IDEA_M and TOT_DISCWODIS_REF_IDEA_F; Total Number of Students without disabilities who were referred to a law enforcement agency or official: Calculated Male Total and Total Number of Students without disabilities who were referred to a law enforcement agency or official: Calculated Female Total	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_LEA_DESEGPLAN	Percentage of Local Education Authorities covered by a desegregation order or plan	CRDC: LEA Characteristics and Enrollment	Count of LEAs where LEA_DESEGPLAN=Yes; Desegregation Order or Plan (LEA): Is the LEA covered by a desegregation order or plan?	Calculated CRDC_TOT_SCHOOLS – Total number of schools; Total Enrollment

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CRDC_PCT_LEP_STUDENTS	Percentage of all students with limited English proficiency	CRDC: Enrollment	Sum of TOT_LEPENR_M and TOT_LEPENR_F; Enrollment of Students who are Limited English Proficient (LEP): Calculated Male Total and Enrollment of Students who are Limited English Proficient (LEP): Calculated Female Total	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_RETAIN	Percentage of all students who were retained	CRDC: Retention	Sum of (TOT_RET_KG_M and TOT_RET_KG_F) and (TOT_RET_G01_M to TOT_RET_G12_M) and (TOT_RET_G01_F to TOT_RET_G12_F); Student Retention Indicator	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_SATACT	Percentage of all students who participated in a SAT or ACT test	CRDC: SAT and ACT	Sum of TOT_SATACT_M and TOT_SATACT_F; SAT or ACT Test Participation: Calculated Male Total and SAT or ACT Test Participation: Calculated Female Total	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_SATACT_IDEA	Percentage of all Individuals with Disabilities Education Act (IDEA) students who participated in a SAT or ACT test	CRDC: SAT and ACT	Sum of SCH_SATACT_IDEA_M + SCH_SATACT_IDEA_F; SAT or ACT Test Participation: IDEA Male and SAT or ACT Test Participation: IDEA Female	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_SATACT_LEP	Percentage of all students with limited English proficiency who participated in a SAT or ACT test	CRDC: SAT and ACT	Sum of SCH_SATACT_LEP_M + SCH_SATACT_LEP_F; SAT or ACT Test Participation: LEP Male and SAT or ACT Test Participation: LEP Female	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_PCT_STUD_DESEGPLAN	Percentage of students covered by a desegregation order or plan	CRDC: LEA Characteristics and Enrollment	Count of CRDC_TOT_STUDENTS students where LEA level variable LEA_DESEGPLAN=Yes; Desegregation Order or Plan (LEA): Is the LEA covered by a desegregation order or plan?	Calculated CRDC_TOT_STUDENTS – Total number of students; Total Enrollment
CRDC_TOT_ALT	Total number of alternative schools in the county	CRDC: School Characteristics	Total number of schools with SCH_STATUS_ALT=Yes; School Characteristics: Alternative school	n/a
CRDC_TOT_RAPE_ASSAULT	Total number of incidents of rape, attempted rape, or sexual assault	CRDC: Offenses	SCH_OFFENSE_RAPE + SCH_OFFENSE_BATT; Incidents of rape or attempted rape and Incidents of sexual assault (other than rape)	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CRDC_TOT_CHARTER	Total number of charter schools in the county	CRDC: School Characteristics	Total number of schools with SCH_STATUS_CHARTER=Yes; School Characteristics: Charter school	n/a
CRDC_TOT_DIST_ENR	Total number of students enrolled in distance educational courses	CRDC: Distance Education	TOT_DISTEDENR_M + TOT_DISTEDENR_F; Distance Education Enrollment (LEA): Calculated Male Total and Distance Education Enrollment (LEA): Calculated Female Total	n/a
CRDC_TOT_FIREARM	Total number of incidents of possession of a firearm or explosive device	CRDC: Offenses	SCH_OFFENSE_POSSWX; Incidents of possession of a firearm or explosive device	n/a
CRDC_TOT_FTECOUNSELORS	Total number of full time equivalent school counselors in the county	CRDC: School Support File	SCH_FTECOUNSELORS; Number of FTE school counselors	n/a
CRDC_TOT_FTENURSE	Total number of full time equivalent nurses in the county	CRDC: School Support File	SCH_FTESERVICES_NUR; Number of FTE nurses	n/a
CRDC_TOT_FTEPSY	Total number of full time equivalent psychologists in the county	CRDC: School Support File	SCH_FTESERVICES_PSY; Number of FTE psychologists	n/a
CRDC_TOT_FTESOC	Total number of full time equivalent social workers in the county	CRDC: School Support File	SCH_FTESERVICES_SOC; Number of FTE social workers	n/a
CRDC_TOT_FTETEACH_ABSENT	Total number of full time equivalent teachers who were absent more than 10 school days during the year	CRDC: School Support File	SCH_FTETEACH_ABSENT; Number of FTE teachers who were absent more than 10 school days during the school year	n/a
CRDC_TOT_FTETEACH_CERT	Total number of full time equivalent teachers who are certified in the county	CRDC: School Support File	SCH_FTETEACH_CERT; Number of FTE teachers who are certified	n/a
CRDC_TOT_FTETEACH_NOTCERT	Total number of full time equivalent teachers who are not certified in the county	CRDC: School Support File	SCH_FTETEACH_NOTCERT; Number of FTE teachers who are not certified	n/a
CRDC_TOT_LEA	Total number of Local Education Authorities in a county	CRDC: LEA Characteristics	Count of LEAID in a county; 7 Digit LEAID District Identification Code	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CRDC_TOT_MAGNET	Total number of magnet schools or schools operating a magnet program in the county	CRDC: School Characteristics	Total number of schools with SCH_STATUS_MAGNET=Yes; School Characteristics: Magnet school or school operating a magnet program within the school	n/a
CRDC_TOT_PRESCHOOL	Total number of preschool-aged children served (ages 2-5)	CRDC: Enrollment	Sum of total TOT_PSENTR_M - TOT_PSENTR_F ; Male preschool enrollment and Female preschool enrollment	n/a
CRDC_TOT_PRESCHOOL_AIAN_F	Total number of American Indian/Alaska Native female preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENTR_AM_F; Preschool Enrollment: American Indian/Alaska Native Female	n/a
CRDC_TOT_PRESCHOOL_AIAN_M	Total number of American Indian/Alaska Native male preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENTR_AM_M; Preschool Enrollment: American Indian/Alaska Native Male	n/a
CRDC_TOT_PRESCHOOL ASN_F	Total number of Asian female preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENTR_AS_F; Preschool Enrollment: Asian Female	n/a
CRDC_TOT_PRESCHOOL ASN_M	Total number of Asian male preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENTR_AS_M; Preschool Enrollment: Asian Male	n/a
CRDC_TOT_PRESCHOOL BLK_F	Total number of Black female preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENTR_BL_F; Preschool Enrollment: Black Female	n/a
CRDC_TOT_PRESCHOOL BLK_M	Total number of Black male preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENTR_BL_M; Preschool Enrollment: Black Male	n/a
CRDC_TOT_PRESCHOOL HIS_F	Total number of Hispanic female preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENTR_HI_F; Preschool Enrollment: Hispanic Female	n/a
CRDC_TOT_PRESCHOOL HIS_M	Total number of Hispanic male preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENTR_HI_M; Preschool Enrollment: Hispanic Male	n/a
CRDC_TOT_PRESCHOOL MTR_F	Total number of two or more races female preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENTR_TR_F; Preschool Enrollment: Two or More Races Female	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CRDC_TOT_PRE SCHOOL_MTR_M	Total number of two or more races male preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENR_TR_M; Preschool Enrollment: Two or More Races Male	n/a
CRDC_TOT_PRE SCHOOL_NHPI_F	Total number of Native Hawaiian/Pacific Islander female preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENR_HP_F; Overall Student Enrollment: Native Hawaiian/Pacific Islander Female	n/a
CRDC_TOT_PRE SCHOOL_NHPI_M	Total number of Native Hawaiian/Pacific Islander male preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENR_HP_M; Overall Student Enrollment: Native Hawaiian/Pacific Islander Male	n/a
CRDC_TOT_PRE SCHOOL_WHT_F	Total number of White female preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENR_WH_F; Preschool Enrollment: White Female	n/a
CRDC_TOT_PRE SCHOOL_WHT_M	Total number of White male preschool-aged children (ages 2-5)	CRDC: Enrollment	SCH_PSENR_WH_M; Preschool Enrollment: White Male	n/a
CRDC_TOT_SCH_FIREARM	Total number of schools in the county with at least one incident that involved a shooting	CRDC: Offenses	Count of Schools with SCH_FIREARM_IND=Yes; Firearm Indicator: Has there been at least one incident at your school that involved a shooting (regardless of whether anyone was hurt)?	n/a
CRDC_TOT_SCHOOLS	Total number of public schools in the county	CRDC: School Characteristics	Total number of schools by SCHID; 5 Digit School Identification Code	n/a
CRDC_TOT_SPEDS	Total number of special education schools in the county	CRDC: School Characteristics	Total number of schools with SCH_STATUS_SPED=Yes; School Characteristics: Special education school	n/a
CRDC_TOT_STUD_AIAN_F	Total number of American Indian/Alaska Native female students in the county	CRDC: Enrollment	SCH_ENR_AM_F; Overall Student Enrollment: American Indian/Alaska Native Female	n/a
CRDC_TOT_STUD_AIAN_M	Total number of American Indian/Alaska Native male students in the county	CRDC: Enrollment	SCH_ENR_AM_M; Overall Student Enrollment: American Indian/Alaska Native Male	n/a
CRDC_TOT_STUD ASN_F	Total number of Asian female students in the county	CRDC: Enrollment	SCH_ENR_AS_F; Overall Student Enrollment: Asian Female	n/a
CRDC_TOT_STUD ASN_M	Total number of Asian male students in the county	CRDC: Enrollment	SCH_ENR_AS_M; Overall Student Enrollment: Asian Male	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CRDC_TOT_STUD_BLK_F	Total number of Black female students in the county	CRDC: Enrollment	SCH_ENR_BL_F; Overall Student Enrollment: Black Female	n/a
CRDC_TOT_STUD_BLK_M	Total number of Black male students in the county	CRDC: Enrollment	SCH_ENR_BL_M; Overall Student Enrollment: Black Male	n/a
CRDC_TOT_STUD_HIS_F	Total number of Hispanic female students in the county	CRDC: Enrollment	SCH_ENR_HI_F; Overall Student Enrollment: Hispanic Female	n/a
CRDC_TOT_STUD_HIS_M	Total number of Hispanic male students in the county	CRDC: Enrollment	SCH_ENR_HI_M; Overall Student Enrollment: Hispanic Male	n/a
CRDC_TOT_STUD_IDEA	Total number of Individuals with Disabilities Education Act (IDEA) students in the county	CRDC: Enrollment	SCH_ENR_IDEA_M + SCH_ENR_IDEA_F; Overall Student Enrollment: IDEA Male and Overall Student Enrollment: IDEA Female	n/a
CRDC_TOT_STUD_LEP	Total number of students with limited English proficiency in the county	CRDC: Enrollment	SCH_ENR_LEP_M + SCH_ENR_LEP_F; Overall Student Enrollment: LEP Male and Overall Student Enrollment: LEP Female	n/a
CRDC_TOT_STUD_MTR_F	Total number of two or more races female students in the county	CRDC: Enrollment	SCH_ENR_TR_F; Overall Student Enrollment: Two or More Races Female	n/a
CRDC_TOT_STUD_MTR_M	Total number of two or more races male students in the county	CRDC: Enrollment	SCH_ENR_TR_M; Overall Student Enrollment: Two or More Races Male	n/a
CRDC_TOT_STUD_NHPI_F	Total number of Native Hawaiian/Pacific Islander female students in the county	CRDC: Enrollment	SCH_ENR_HP_F; Overall Student Enrollment: Native Hawaiian/Pacific Islander Female	n/a
CRDC_TOT_STUD_NHPI_M	Total number of Native Hawaiian/Pacific Islander male students in the county	CRDC: Enrollment	SCH_ENR_HP_M; Overall Student Enrollment: Native Hawaiian/Pacific Islander Male	n/a
CRDC_TOT_STUD_WHT_F	Total number of White female students in the county	CRDC: Enrollment	SCH_ENR_WH_F; Overall Student Enrollment: White Female	n/a
CRDC_TOT_STUD_WHT_M	Total number of White male students in the county	CRDC: Enrollment	SCH_ENR_WH_M; Overall Student Enrollment: White Male	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CRDC_TOT_STUDENTS	Total number of students in the county	CRDC: Enrollment	Sum of students enrolled in schools within county - TOT_ENR_F + TOT_ENR_M; Overall Student Enrollment: Calculated Male Total and Overall Student Enrollment: Calculated Female Total	n/a
CRDC_TOT_SUSP	Total number of students without disabilities who received one or more in-school suspensions	CRDC: Suspensions	TOT_DISCWODIS_MULTOOS_M + TOT_DISCWODIS_MULTOOS_F; Total number of students without disabilities who received more than one out-of-school suspension: Calculated Male Total and Total number of students without disabilities who received more than one out-of-school suspension: Calculated Female Total	n/a
CRDC_TOT_SUSP_IDEA	Total number of students with disabilities who received one or more in-school suspensions	CRDC: Suspensions	TOT_DISCWDIS_ISS_IDEA_M + TOT_DISCWDIS_ISS_IDEA_F; Total number of students with disabilities who received one or more in-school suspensions: Calculated IDEA Male Total and Total number of students with disabilities who received one or more in-school suspensions: Calculated IDEA Female Total	n/a
CRDC_TOT_SUSP_IDEA_LEP	Total number of students with limited English proficiency with disabilities who received one or more in-school suspensions	CRDC: Suspensions	SCH_DISCWDIS_ISS_LEP_M + SCH_DISCWDIS_ISS_LEP_F; Students with disabilities who received one or more in-school suspensions: LEP Male and Students with disabilities who received one or more in-school suspensions: LEP Female	n/a
CRDC_TOT_SUSP_LEP	Total number of students with limited English proficiency without disabilities who received one or more in-school suspensions	CRDC: Suspensions	SCH_DISCWODIS_MULTOOS_LEP_M + SCH_DISCWODIS_MULTOOS_LEP_F; Students without disabilities who received more than one out-of-school suspension: LEP Male and Students without disabilities who received more than one out-of-school suspension: LEP Female	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
CRDC_TOT_TRANSFER	Total number of students without disabilities transferred to an alternative school for disciplinary reasons	CRDC: Transfers	TOT_DISCWDIS_TFRALT_IDEA_M + TOT_DISCWDIS_TFRALT_IDEA_F; Total number of students with disabilities transferred to an alternative school for disciplinary reasons: Calculated IDEA Male Total and Total number of students with disabilities transferred to an alternative school for disciplinary reasons: Calculated IDEA Female Total	n/a
CRDC_TOT_TRANSFER_IDEA	Total number of students with disabilities transferred to an alternative school for disciplinary reasons	CRDC: Transfers	TOT_DISCWODIS_TFRALT_M +TOT_DISCWODIS_TFRALT_F; Total number of students without disabilities transferred to an alternative school for disciplinary reasons: Calculated Male Total and Total number of students without disabilities transferred to an alternative school for disciplinary reasons: Calculated Female Total	n/a

Table 17.3 provides important variable notes for users of the SDOH Database to consider when working with CRDC variables.

Table 17.3. CRDC variable notes

Variable Name	Variable Label	Notes
CRDC_PCT_LAW_REFERRAL	Percentage of all students who were referred to a law enforcement agency	For the 2017-18 collection, there were instances where the skip logic in the Student Discipline - Referrals to Law Enforcement & School Related Arrests (ARRS) module did not function as expected. In this module, the skip logic functionality failed to update related data fields. Any schools involved in this skip logic failure will have a "-3" reserve code listed for the module.

Other notes

Once the submission period for CRDC data closed in each of the submission years, LEAs flagged for a particular data quality check had the opportunity to submit an explanation and/or correct their data. If an LEA could not make changes to the data, or believed that no changes were needed, the LEA was asked to provide an explanation justifying their data submission.

Term Definitions

Table 17.4 provides important term definitions for users of the SDOH Database to consider when working with CRDC variables.

Table 17.4. Term definitions, CRDC

Term	Definition
ACT Test (ACT)	A nationally recognized assessment used to indicate college readiness. The ACT is sponsored by ACT, Inc
Advanced Placement (AP)	Refers to a program, sponsored by the College Board, through which students may earn college credit and advanced college placement by successfully completing AP courses and standardized AP exams.
Alternative School	A public elementary or secondary school that addresses the needs of students that typically cannot be met in a regular school program and is designed to meet the needs of students with academic difficulties, students with discipline problems, or both students with academic difficulties and discipline problems. Alternative education schools may be sited in locations other than a traditional school building such as hospitals, mental health centers, jails, or juvenile detention centers.
Certified Teacher	A teacher who has met all applicable state teacher certification requirements for a standard certificate. A certified teacher has a regular/standard certificate/license/endorsement issued by the state. A beginning teacher who has met the standard teacher education requirements is considered to have met state requirements even if he or she has not completed a state-required probationary period. A teacher working towards certification by way of alternative routes, or a teacher with an emergency, temporary, or provisional credential is not considered to have met state requirements.
Charter school	A public school that provides free public elementary and/or secondary education to eligible students under a specific charter executed, pursuant to a state charter school law, by an authorized chartering agency/authority and that is designated by such authority to be a public charter school.
Children with Disabilities (IDEA) – or IDEA Children	Refers to children with intellectual disabilities; hearing impairment, including deafness; speech or language impairment; visual impairment, including blindness; serious emotional disturbance; orthopedic impairment; autism; traumatic brain injury; developmental delay; other health impairment; specific learning disability; deaf-blindness; or multiple disabilities and who, by reason thereof, receive special education and related services under the Individuals with Disabilities Education Act according to an Individualized Education Program, Individual Family Service Plan, or service plan.
Desegregation Order or Plan	An order or plan: (1) that has been ordered by, submitted to, or entered into with a federal or state court; the Office for Civil Rights (OCR), U.S. Department of Education, its predecessor the Department of Health, Education, and Welfare, or another federal agency; or a state agency or official, and (2) that remedies or addresses a school district's actual or alleged segregation of students or staff on the basis of race or national origin that was found or alleged to be in violation of the U.S. Constitution, Title VI of the Civil Rights Act of 1964, and/or state constitution or other state law. A school district remains subject to such a desegregation order or plan until the court, agency, or other competent official finds that the district has satisfied its obligations and has been released from the order or plan.
Distance education courses	Distance education courses meet all the following criteria: (1) be credit-granting; (2) be technology-delivered via audio, video (live or prerecorded), the Internet, or other computer-based technology (e.g., via district network); and (3) have either (a) the instructor in a different location than the students and/or (b) the course content developed in, or delivered from, a different location than that of the students.
English Learner Students (EL)	Students defined as "English learners" in coordination with the state's definition based on section 8101(20) of Elementary and Secondary Education Act, 1965 as modified by the Every Student Succeeds Act, 2015.
Gifted and Talented Programs	Programs during regular school hours that provide special educational opportunities including accelerated promotion through grades and classes and an enriched curriculum for students who are endowed with a high degree of mental ability or who demonstrate unusual physical coordination, creativity, interest, or talent.

Term	Definition
Harassment or Bullying on The Basis of Disability	Refers to intimidation or abusive behavior toward a student based on actual or perceived disability. Harassing conduct may take many forms, including verbal acts and name-calling, as well as non-verbal behavior, such as graphic and written statements, or conduct that is physically threatening, harmful or humiliating. The conduct can be carried out by school employees, other students, and non-employee third parties. Bullying on the basis of disability constitutes disability harassment.
Harassment or Bullying on The Basis of Race, Color, Or National Origin	Refers to intimidation or abusive behavior toward a student based on actual or perceived race, color, or national origin. Harassing conduct may take many forms, including verbal acts and name-calling, as well as non-verbal behavior, such as graphic and written statements, or conduct that is physically threatening, harmful or humiliating. The conduct can be carried out by school employees, other students, and nonemployee third parties. Bullying on the basis of race, color, or national origin constitutes racial harassment.
Harassment or Bullying on The Basis of Sex	Includes sexual harassment and harassment or bullying based on sex stereotyping. Sexual harassment is unwelcome conduct of a sexual nature, such as unwelcome sexual advances, requests for sexual favors, and other verbal, nonverbal, or physical conduct of a sexual nature. Harassment or bullying based on sex stereotyping includes acts of verbal, nonverbal, or physical aggression, intimidation, or hostility based on sex or sex stereotyping, but not involving conduct of a sexual nature. Harassing conduct may take many forms, including verbal acts and name-calling, as well as non-verbal behavior, such as graphic and written statements, or conduct that is physically threatening, harmful or humiliating. The conduct can be carried out by school employees, other students, and non-employee third parties. All students can be victims of harassment or bullying on the basis of sex, and the harasser or bully and the victim can be of the same sex. Bullying on the basis of sex constitutes sexual harassment.
In-School Suspension	An instance in which a child is temporarily removed from his or her regular classroom(s) for at least half a day for disciplinary purposes but remains under the direct supervision of school personnel. Direct supervision means school personnel are physically in the same location as students under their supervision.
Justice Facility	A public or private facility that confines pre-adjudicated/pre-convicted individuals, post-adjudicated/post convicted individuals, or both. Justice facilities include short-term (90 calendar days or less) and long-term (more than 90 calendar days) facilities, such as correctional facilities, detention centers, jails, and prisons. These facilities may confine juveniles (individuals typically under 21 years of age), adults (individuals typically 21 years of age and older), or both. Some states and jurisdictions include individuals younger than age 21 as adults due to statute/legislation and/or justice procedures. For the purposes of the CRDC, only individuals up to 21 years of age who are confined in justice facilities are of interest.
Magnet School	A public school that operates a magnet program for all students or some students within the school. A magnet program is a public school program that offers a special curriculum capable of attracting substantial numbers of students of different racial/ethnic backgrounds, which may also reduce, prevent, or eliminate minority group isolation. The program may be designed to provide an academic or social focus on a particular theme (e.g., science/math, performing arts, gifted/talented, or foreign language).
Nurse	A qualified health care professional who addresses the health needs of students. The provider meets the state standards and requirements for a nurse. Nurses include school nurses.
Preschool Psychologist	Refers to preschool programs and services for children ages 3 through 5. A licensed professional who evaluates and analyzes students' behavior by measuring and interpreting their intellectual, emotional, and social development, and diagnosing their educational and personal problems. A psychologist may diagnose and treat mental disorders and learning disabilities. A psychologist may also diagnose and treat cognitive, behavioral, and emotional problems using individual, child, family, and group therapies. Psychologists include school psychologists.

Term	Definition
Referral to Law Enforcement	An action by which a student is reported to any law enforcement agency or official, including a school police unit, for an incident that occurs on schoolgrounds, during school-related events (in-person or virtual), or while taking school transportation, regardless of whether official action is taken. Citations, tickets, court referrals, and school-related arrests are considered referrals to law enforcement
SAT Reasoning Test (SAT)	A nationally recognized assessment used to indicate college readiness. The SAT (formerly the Scholastic Aptitude Test) is sponsored by the College Board.
School Counselor	A professional staff member assigned specific duties and school time for any of the following activities: counseling with students and parents, consulting with other staff members on learning problems, evaluating student abilities, assisting students in making education and career choices, assisting students in personal and social development, providing referral assistance, and/or working with other staff members in planning and conducting guidance programs for students
Special Education School	A public elementary or secondary school that focuses primarily on serving the educational needs of students with disabilities under IDEA or section 504 of the Rehabilitation Act.
Student Enrollment	Refers to the unduplicated count of students on the rolls of the school. The unduplicated count includes students both present and absent and excludes duplicate counts of students within a specific school or students whose membership is reported by another school. Students should be counted in the school where they physically attend for more than 50% of the school day. For distance education, students must be counted in the school from which they receive more than 50% of their coursework.

Data definitions: <https://ocrdata.ed.gov/resources/datadefinitions>

18. Community Resilience Estimates (CRE)

Sponsor

U.S. Department of Commerce, U.S. Census Bureau

Description

The Community Resilience Estimates (CRE) are published by the U.S. Census Bureau as a standard data product with the intention of understanding the level of risk each neighborhood in the United States faces in the event of disasters, such as a hurricane or the COVID-19 pandemic. The CRE captures community resilience with estimates on the number and rate of individuals with zero risk factors (low risk), one-two risk factors (medium risk) and three or more risk factors (high risk) out of the 10 risk factors that are described in the methodology section below. Variables from the CRE are constructed using data from the ACS and Population Estimates Program (PEP).

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2019 (*note: The U.S. Census Bureau produced 2018 estimates as an experimental file, and made substantial methodological changes prior to releasing the 2019 CRE file. The SDOH Database includes the 2019 CRE file only.*)
- ▶ **SDOH domain(s):**
 - Social context
- ▶ **SDOH variable naming convention:** CRE_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County, census tract

SDOH Database county- and census tract- level files include variables directly from CRE. Variables and labels were renamed for clarity and to fit the conventions in the SDOH Database.

The total population variables that serve as the denominator for these estimates are included in the SDOH Database. These are identified with the _POP_DENOM suffix to distinguish them from population variables from other sources, such as ACS.

Resources

Data was downloaded from the following location: <https://www.census.gov/programs-surveys/community-resilience-estimates/data/datasets.html>.

Quick guide on CRE methodology: https://www2.census.gov/programs-surveys/demo/technical-documentation/community-resilience/2019/cre_quickguide_2019.pdf.

Full CRE Methodology: <https://www.census.gov/programs-surveys/community-resilience-estimates/technical-documentation/methodology.html>.

CRE File Layouts: <https://www.census.gov/programs-surveys/community-resilience-estimates/technical-documentation/file-layouts.html>.

CRE Interactive Map: <https://www.census.gov/library/visualizations/interactive/community-resilience-estimates.html>.

CRE for Equity: <https://www.census.gov/programs-surveys/community-resilience-estimates/data/supplement.html>.

Suggested Citation

AHRQ SDOH Database (v1), from Community Resilience Estimates Social, Economic, and Housing Statistics Division U.S. Census Bureau. Retrieved September 2021 from <https://www.census.gov/programs-surveys/community-resilience-estimates.html>.

Data Set Notes

Reliability

The 2019 Community Resilience Estimates (CRE) use small area estimation (SAE) techniques to combine the 2019 ACS micro data (individual and household levels) and the PEP estimates. Users can refer to resources under the Resources section for further details.

Using household- (HH) and individual (I)-level data from the 2019 ACS, the CRE measures the following 10 risk indicators:

1. Income-to-Poverty Ratio (IPR) < 130 percent (HH).
2. Single or zero caregiver household - only one or no individuals living in the household who are 18-64 (HH).
3. Unit-level crowding defined as > 0.75 persons per room (HH) .
4. Communication barrier defined as either "Limited English-speaking households (HH)" or "No one in the household over the age of 16 with a high school diploma (HH)." .
5. No one in the household is employed full-time, year-round. *The flag is not applied if all residents of the household are aged 65 years or older (HH)*.
6. Disability posing constraint to significant life activity. This includes persons who report having any one of the six disability types (I): hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty.
7. No health insurance coverage (I).
8. Being aged 65 years or older (I).
9. Households without a vehicle (HH).
10. Households without broadband Internet access (HH).

Geographic Levels

CRE produces national-, state-, county-, and tract-level files. The SDOH Database includes variables from the CRE's county- and tract-level files. The CRE county-level file contains estimates for all 3,142 county and county equivalent geographic areas in the United States. The CRE tract-

level file contains estimates for the 73,056 census tracts from the 2010 Census in the United States.

Suppression Rules

Suppression rules are not applicable for CRE variables.

Variable Notes

Table 18.1 below provides information on the variable availability across years. Table 18.2 provides more information on what numerator and denominator variables were drawn for CRE variables in the SDOH Database.

Table 18.1. Variable availability across years, CRE

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CRE_RATE_RISK0	X		X											X	
CRE_RATE_RISK12	X		X											X	
CRE_RATE_RISK3	X		X											X	
CRE_TOT_POP_DENOM	X		X											X	
CRE_TOT_RISK0	X		X											X	
CRE_TOT_RISK12	X		X											X	
CRE_TOT_RISK3	X		X											X	

Table 18.2. Variable definitions and specifications, CRE

Variable Name	Variable Label	Numerator Source Variable; Label	Denominator (WHERE APPLICABLE)
CRE_RATE_RISK0	Rate of individuals with zero risk factors (%)	PRED0_PE; Rate of individuals with zero risk factors	n/a
CRE_RATE_RISK12	Rate of individuals with one or two risk factors (%)	PRED12_PE; Rate of individuals with one-two risk factors	n/a
CRE_RATE_RISK3	Rate of individuals with three or more risk factors (%)	PRED3_PE; Rate of individuals with three plus risk factors	n/a
CRE_TOT_POP_DENOM	Total population estimated from the Census Bureau's Population Estimates Program (PEP) (Denominator for rates of individuals with risk factors)	POPUNI; Total population	n/a
CRE_TOT_RISK0	Estimated number of individuals with zero risk factors	PRED0_E; Estimated number of individuals with zero risk factors	n/a
CRE_TOT_RISK12	Estimated number of individuals with one or two risk factors	PRED12_E; Estimated number of individuals with one-two risk factors	n/a
CRE_TOT_RISK3	Estimated number of individuals with three or more risk factors	PRED3_E; Estimated number of individuals with three plus risk factors	n/a

Other notes

The source file provides margins of error for estimates and rates for each of the three categories (zero risk factors, one or two risk factors, and three or more risk factors).

19. Environmental Protection Agency: Air Quality Statistics Report (EPA)

Sponsor

U.S. Environmental Protection Agency (EPA)

Description

The Air Quality Statistics Report is an EPA summary report produced from its report titled Air Data: Air Quality Data Collected at Outdoor Monitors Across the US (<https://www.epa.gov/outdoor-air-quality-data>). The Air Data website provides air quality data collected by outdoor monitors across the United States, Puerto Rico, and the U.S. Virgin Islands. The data primarily comes from the AQS (Air Quality System) data base. The Air Quality Statistics Report provides each year's values as either hourly or daily observations from outdoor monitors for the six criteria pollutants (Carbon Monoxide (CO), Nitrogen Dioxide (NO₂), Ozone (O₃), Sulfur Dioxide (SO₂), Particulate Matter (PM_{2.5} and PM₁₀) and Lead), related to the following maximum national standards for air quality standards set by EPA:

- Carbon Monoxide: 35 ppm (1-hour), 9 ppm (8-hour)
- Nitrogen Dioxide: 100 ppb (1-hour), 53 ppb (annual)
- Ozone: 0.12 ppm (1-hour), 0.070 ppm (8-hour)
- Sulfur Dioxide: 75 ppb (1-hour), 140 ppb (24-hour), 30 ppb (annual)
- PM_{2.5}: 35 µg/m³ (24-hour), 12.0 µg/m³ (annual)
- PM₁₀: 150 µg/m³ (24-hour)
- Lead: 0.15 µg/m³ (3-month avg)

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2020
- ▶ **SDOH domain(s):**
 - Physical infrastructure
- ▶ **SDOH variable naming convention:** EPAA_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH county files include direct variables from EPA's Air Quality Statistics Report. Variables and labels were renamed for clarity and to fit the conventions in the SDOH.

Resources

We downloaded data for each year using the following filters from <https://www.epa.gov/outdoor-air-quality-data/air-quality-statistics-report> on March 4th, 2022.

- ▶ Year
- ▶ Geographic Area: United States
- ▶ Group Results by: County
- ▶ Exceptional Events: Include exceptional events data

Each data file includes this user's note, "AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated by state, local, and tribal organizations who own and submit the data."

Description of Air Quality Statistics Report and variable definitions are provided in:
<https://www.epa.gov/outdoor-air-quality-data/about-air-data-reports>.

Additional resources include the following:

- **PM2.5 Continuous Monitor Comparability Assessments:** This tool provides a one-page technical report that assesses the comparability of a PM2.5 continuous monitor when collocated with a Federal Reference Method (FRM) sampler. These reports are intended to assist understanding if the PM2.5 continuous monitors operated in their network are appropriate for their intended monitoring objective (i.e., comparison to the NAAQS and/or reporting the AQI). <https://www.epa.gov/outdoor-air-quality-data/pm25-continuous-monitor-comparability-assessments>.
- **Assessment of PM2.5 FEMS Compared to Collocated FRMS:** This tool provides a one-page technical report that assesses the comparability of a PM2.5 continuous monitor when collocated with an FRM sampler. <https://www.epa.gov/sites/default/files/2016-09/documents/comparabilityassessmenttool.pdf>.
- **PM10 Continuous Monitor Comparability Assessments:** This tool provides a one-page technical report that assesses the comparability of a PM10 continuous monitor when collocated with an FRM sampler. These reports are intended to assist monitoring agencies in understanding if the PM10 continuous monitors operated in their network are appropriate for their intended monitoring objective (i.e., comparison to the NAAQS and/or reporting the AQI). <https://www.epa.gov/outdoor-air-quality-data/pm10-continuous-monitor-comparability-assessments>.
- **Assessment of PM10 FEMS Compared to Collocated FRMS:** This tool provides a one-page technical report that assesses the comparability of a PM10 continuous monitor when collocated with an FRM sampler. https://www.epa.gov/sites/default/files/2018-06/documents/pm10_comparability_assessment_tool_-052318.pdf.

Suggested Citation

AHRQ SDOH Database (v1), from United States Environmental Protection Agency. Outdoor Air Quality Data. Air Quality Statistics Report. Retrieved March 2022 from:
<https://www.epa.gov/outdoor-air-quality-data/air-quality-statistics-report>,

Data Set Notes

Reliability

While margins of error are not available in the Air Quality Statistics Report's county level files, the EPA produces the Single Point Precision and Bias report, which provides monitor-level precision and bias summaries in accordance with 40 CFR Part 58 Appendix A: Quality Assurance Requirements for Monitors used in Evaluations of National Ambient Air Quality Standards: <https://www.epa.gov/outdoor-air-quality-data/single-point-precision-and-bias-report>.

The EPA also produces various dashboards and reports to assess the data quality of ambient air measurements by monitoring agency:

- PM2.5 Data Quality Dashboard: https://sti-r-shiny.shinyapps.io/QVA_Dashboard/
- Carbon Monoxide (CO) Data Quality Dashboard: https://sti-r-shiny.shinyapps.io/CO_Dashboard/
- Nitrogen Dioxide (NO₂) Data Quality Dashboard: https://sti-r-shiny.shinyapps.io/NO2_dashboard/
- Ozone (O₃) Data Quality Dashboard: https://sti-r-shiny.shinyapps.io/ozone_dashboard/
- Sulfur Dioxide (SO₂) Data Quality Dashboard: https://sti-r-shiny.shinyapps.io/SO2_dashboard/
- Chemical Speciation Network Annual Site Reports: Annual status reports generated using recent data from each Chemical Speciation Network site provides a summary of the site's results: <https://aqrc.ucdavis.edu/csn-field-sites-maps>
- Interactive Map of Air Quality Monitors: <https://www.epa.gov/outdoor-air-quality-data/interactive-map-air-quality-monitors>
- Ambient Air Monitoring Network Assessment Tools: NetAssess2020 (v1.1): https://sti-r-shiny.shinyapps.io/EPA_Network_Assessment/.

Geographic Levels

The SDOH Database includes direct variables from the EPA AQ's county-level files.

Suppression Rules

The EPA AQ Report provides the option to include or exclude "Exceptional Events," which are unusual or naturally occurring events that can affect air quality, but are not reasonably controllable using techniques that tribal, state or local agencies may implement to attain and maintain the National Ambient Air Quality Standards. All EPPA variables in the SDOH Database include these exceptional events. Examples of these events include wildfires, high wind dust

events, stratospheric ozone intrusions, and volcanic and seismic activities. It is important to note that air quality data affected by these exceptional events are not suppressed. More information can be found in <https://www.epa.gov/air-quality-analysis/treatment-air-quality-data-influenced-exceptional-events-homepage-exceptional> and <https://www.epa.gov/outdoor-air-quality-data/does-exclude-exceptional-events-option-exclude-only-epa-regionally>.

Variable Notes

Table 19.1 below provides information on the variable availability across years. Table 19.2 provides more information on what numerator and denominator variables were drawn for EPAA variables in the SDOH Database.

Table 19.1. Variable availability across years, EPAA

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EPAA_2NDMAX_CO_1HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_2NDMAX_CO_8HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_2NDMAX_O3_1HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_2NDMAX_PM10_24HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_2NDMAX_SO2_24HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_4THMAX_O3_8HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_98PR_NO2_1HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_98PR_PM25_DAILY	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_99PR_SO2_1HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_MAX_PB_3MON	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_MEAN_NO2_1HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_MEAN_SO2_1HR	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_MEAN_WTD_PM10	X			X	X	X	X	X	X	X	X	X	X	X	X
EPAA_MEAN_WTD_PM25	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 19.2. Variable definitions and specifications, EPAA

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)
EPAA_2NDMAX_CO_1HR	2nd highest 1-hour measurement of Carbon Monoxide (CO) in the year (ppm)	CO 2nd Max 1-hr	For Carbon Monoxide, the 2nd highest 1-hour measurement in the year	n/a
EPAA_2NDMAX_CO_8HR	2nd highest non-overlapping 8-hour average of Carbon Monoxide (CO) in the year (ppm)	CO 2nd Max 8-hr	For Carbon Monoxide, the 2nd highest non-overlapping 8-hour average in the year	n/a
EPAA_98PR_NO2_1HR	98th percentile of the daily max 1-hour measurements of Nitrogen Dioxide (NO2) in the year (ppb)	NO2 98th Percentile 1-hr	For Nitrogen Dioxide, the 98th percentile of the daily max 1-hour measurements in the year	n/a
EPAA_MEAN_NO2_1HR	Annual mean of all the 1-hour measurements of Nitrogen Dioxide (NO2) in the year (ppb)	NO2 Mean 1-hr	For Nitrogen Dioxide, the annual mean of all the 1-hour measurements in the year	n/a
EPAA_2NDMAX_O3_1HR	2nd highest daily max 1-hour measurement of Ozone (O3) in the year (ppm)	Ozone 2nd Max 1-hr	For Ozone, the 2nd highest daily max 1-hour measurement in the year	n/a
EPAA_4THMAX_O3_8HR	4th highest daily max 8-hour average of Ozone (O3) in the year (ppm)	Ozone 4th Max 8-hr	For Ozone, the 4th highest daily max 8-hour average in the year	n/a
EPAA_MAX_PB_3MON	Maximum of all rolling 3-month averages of Lead (Pb) in the year (ug/m ³)	Lead Max 3-Mo Avg	For Lead, the maximum of all rolling 3-month averages in the year	n/a
EPAA_2NDMAX_PM10_24HR	2nd highest 24-hour average of PM10 in the year	PM10 2nd Max 24-hr	For PM10, the 2nd highest 24-hour average measurement in the year	n/a
EPAA_MEAN_WTD_PM10	Weighted annual mean (mean weighted by calendar quarter) for the year of PM10 (ug/m ³)	PM10 Mean 24-hr	For PM10, the Weighted Annual Mean (mean weighted by calendar quarter) for the year	n/a
EPAA_MEAN_WTD_PM25	Weighted annual mean (mean weighted by calendar quarter) for the year of PM2.5 (ug/m ³)	PM2.5 Weighted Mean 24-hr	For PM2.5, the Weighted Annual Mean (mean weighted by calendar quarter) for the year (Note: PM2.5 data reported as parameter 88502 are not included in this summary report. Only federal reference method PM2.5 data reported as parameter 88101 are included in this report.)	n/a

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)
EPAA_98PR_PM25_DAILY	98th percentile of the daily average measurements in the year of PM2.5 (ug/m ³)	PM2.5 98th Percentile 24-hr	For PM2.5, the 98th percentile of the daily average measurements in the year (Note: PM2.5 data reported as parameter 88502 are not included in this summary report. Only federal reference method PM2.5 data reported as parameter 88101 are included in this report.)	n/a
EPAA_99PR_SO2_1HR	99th percentile of the daily max 1-hour measurements of Sulfur Dioxide (SO ₂) in the year	SO2 99th Percentile 1-hr	For Sulfur Dioxide, the 99th percentile of the daily max 1-hour measurements in the year	n/a
EPAA_2NDMAX_SO2_24HR	2nd highest 24-hour average of Sulfur Dioxide (SO ₂) in the year	SO2 2nd Max 24-hr	For Sulfur Dioxide, the 2nd highest 24-hour average measurement in the year	n/a
EPAA_MEAN_SO2_1HR	Annual mean of all the 1-hour measurements of Sulfur Dioxide (SO ₂) in the year (ppb)	SO2 Mean 1-hr	For Sulfur Dioxide, the annual mean of all the 1-hour measurements in the year	n/a

Other notes

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated by state, local, and tribal organizations who own and submit the data.

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM_{2.5} and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.”¹⁹

AirData reports are produced by querying the AQS Data Mart directly. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated by state, local, and tribal organizations who own and submit the data.

Data for the current year are considered preliminary until May 1 of the following year. For the SDOH Database, all EPAA variables were downloaded more than a year after final measurement.

Location of air quality sensors introduces a level of variability into their ability to provide complete readings of atmospheric phenomena. Many EPAA measures have high rates of missingness (>70% missing), which reflects that data is only available for locations where there are air quality monitors.

A few counties appear as outliers across years for EPAA_MAX_PB_3MON (FIPSCODE: 29093, 29099, 01109, and 15001). These outliers are due to unusual events that affect air quality. For example, Hawaii County, HI (FIPSCODE 15001) is located near volcanoes and was an outlier for EPAA_MEAN_SO₂_1HR.

The 2014 county file has one county (FIPS=12107, Putnam County) where EPAA_MEAN_SO₂_1HR (Annual mean of all the 1-hour measurements of Sulfur Dioxide (SO₂) in the year (ppb)) was -1, and kept in the SDOH-RD as is.

¹⁹ The first three bullet points under the data set notes are documentation from each download of the data query:
<https://www.epa.gov/outdoor-air-quality-data/air-quality-statistics-report>

20. Environmental Protection Agency: National Walkability Index (EPAN)

Sponsor

U.S. Environmental Protection Agency (EPA)

Description

The National Walkability Index ranks every block group in the United States according to its relative walkability, which is based on measures of the built environment that affect the probability of whether people choose to walk as a mode of transportation. The National Walkability Index is constructed using selected variables on density, diversity of land uses, and proximity to transit from the Smart Location Database (SLD). The final National Walkability Index uses a weighted composite formula indicators to create rank scores and ranges on a scale of 1 to 20 with 1-5.75 categorized as least walkable; 5.76-10.5 categorized as below average walkable; 10.51-15.25 categorized as above average walkable and 15.26-20 most walkable.

Four individual indicators that feed into the construction of the National Walkability Index:

- Intersection density (SLD variable D3b): higher values have been associated with more walking trips
- Proximity to transit stops (SLD variable D4a): shorter distances are associated with more walking trips.
- Employment mix (SLD variable D2b_E8MixA): higher values correlate with more walking trips
- Employment and household mix (SLD variable D2a_EpHHm): higher values correlate with more walking trips.

Each block group in the United States is assigned four ranked scores based on these four variables from SLD and then is placed into 20 quantiles and is given a rank from 1 to 20 depending on the quantile positions. The rank scores are then weighted to produce a National Walkability Score on a scale of 1 to 20 where 1-5.75 is categorized as "Least Walkable", 5.76-10.5 is categorized as "Below average walkable", 10.51-15.25 is "Above average walkable" and 15.26-20 is "Most walkable". A detailed description of how the National walkability index is constructed is provided in the documentation: [National Walkability Index: Methodology and User Guide, June 2021 \(epa.gov\)](#)

Inclusion in the SDOH Database

- **Years available in the SDOH Database:** 2019
- **SDOH domain(s):**
 - Physical infrastructure

- ▶ **SDOH variable naming convention:** EPAN_[VARNAME]
- ▶ **SDOH Database geographic level(s):** Census tract

The SDOH Database census tract-level file aggregates block group walkability index scores to the tract level using a population weighted average, where the population data for this weighting is taken from the EPAN file [TotPop].

Resources

Data (EPA_SmartLocationDatabase_V3_Jan_2021_Final.csv) were downloaded by clicking "Download data for all areas with coverage (ZIP file)" from <https://www.epa.gov/smartgrowth/smart-location-mapping#walkability/>

National Walkability Index: [Walkability Index \(epa.gov\)](#).

National Walkability Index Methodology and User Guide: [National Walkability Index: Methodology and User Guide, June 2021 \(epa.gov\)](#).

Smart Location Database Technical Documentation and User Guide: <https://www.epa.gov/smartgrowth/smart-location-database-technical-documentation-and-user-guide>.

Suggested Citation

AHRQ SDOH Database (v1), from United States Environmental Protection Agency (EPA) National Walkability Index (2021). Retrieved June 2021 from: <https://catalog.data.gov/dataset/walkability-index>.

Data Set Notes

Reliability

EPAN does not contain margins of error.

Geographic Levels

The National Walkability index is reported at the block group level. Block groups are statistical divisions of census tracts and are generally defined to contain between 600 and 3,000 people and usually cover a contiguous area. Each census tract contains at least one block group and within the standard Census Bureau geographic hierarchy, block groups never cross state, county, or census tract boundaries (from https://www.census.gov/programs-surveys/geography/about/glossary.html#par_textimage_4). As mentioned above, the SDOH Database aggregates these block group-level variables to the census tract using a population-weighted average.

Suppression Rules

Suppression rules were not applicable in the source data. Note that because we use a population weighted average in the census tract-level SDOH Database, some block groups with zero population are not given weight in the aggregation.

Variable Notes

Table 20.1 below provides information on the variable availability across years. Table 20.2 provides more information on what numerator and denominator variables were drawn for EPAN variables in the SDOH Database.

Table 20.1. Variable availability across years, EPAN

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EPAN_AVG_NATL_WALK_INDEX			X											X	

Table 20.2. Variable definitions and specifications, EPAN

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)
EPAN_AVG_NATL_WALK_INDEX	Population weighted average of National Walkability Index	SUM across all block groups in the tract (NatWalkInd*PopWeight from TotPop)	NatWalkInd: National Walkability Index score. Calculated by weighted formula using results of indicator rank scores, TotPop: Total population	n/a

Table 20.3 provides important variable notes for users of the SDOH Database to consider when working with EPAN variables.

Table 20.3. EPAN variable notes

VARIABLE NAME	VARIABLE LABEL	NOTE
EPAN_AVG_NATL_WA_LK_INDEX	Population weighted average of National Walkability Index	Block groups with zero population were given zero weight when aggregated to the tract level.

Other notes

Margins of error are not available for the EPAN.

The data used to construct National Walkability Index draw from the Smart Location Database (SLD), which is a nationwide geographic data source that includes over 90 variables.

21. Economic Research Service Rural-Urban Commuting Area (ERS)

Sponsor

U.S. Department of Agriculture

Description

ERS developed a rural-urban classification scheme for assessing commuter flow in metropolitan, micropolitan, small town, and rural areas. Area values are based on population density, urbanization, and daily commuting, and were first calculated at the census tract level and then transferred to ZIP Codes. ERS used Office of Management and Budget concepts to define county-level metropolitan and micropolitan areas for these variables. The 2010 Rural-Urban Commuting Area (RUCA) scheme includes primary and secondary codes to indicate commuter flow. Primary codes are whole numbers 1 through 10, indicating flow within or to urbanized areas (UAs) or urban clusters (UCs). Secondary codes include decimals after the primary code to indicate secondary flow to a UA or UC.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009-2019
- ▶ **SDOH domain(s):**
 - Geography
- ▶ **SDOH variable naming convention:** ERS_[VARNAME]
- ▶ **SDOH Database geographic level(s):** ZIP Code, census tract

The SDOH Database includes the 2010 primary and secondary RUCA classification scheme. We selected variables directly from the ERS RUCA ZIP files for ZIP Code-level files and from the ERS RUCA census tract files for census tract-level files, renaming them for clarity and to fit SDOH naming conventions. Each SDOH ZIP Code and census tract file includes the primary and secondary RUCA Codes.

Resources

Data was downloaded from: <https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/>

Documentation: <https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/documentation/>

Suggested Citation

AHRQ SDOH Database (v1), from U.S. Department of Agriculture, Economic Research Service. 2010 Rural-Urban Commuting Area codes, from <https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes>.

Data Set Notes

Reliability

On July 3, 2019, ERS revised the RUCA codes data product to correct a programming error that affected the 2010 secondary RUCA codes. The revision corrects the secondary codes of 10,909 of 74,002 census tracts. Secondary RUCA codes may be used to classify census tracts into rural and urban categories. The revised secondary codes result in an increase in the number of census tracts classified as rural. This revision did not affect the 2010 primary RUCA codes.

Geographic Levels

The USDA ERA documentation notes that Environmental Systems Research Institute (ESRI) ARC-GIS spatial analysis tools facilitated the transfer of tract-based RUCA classifications to ZIP Code areas. The methodology differed for "area" and "point" ZIP Codes (see "Geographic Considerations" near the beginning of this document).

The ZIP Code data set applies 2010 RUCA classifications to ZIP Code areas by transferring RUCA values from the census tracts in which they are located. The data set includes both "area" ZIP Codes and "point" ZIP Codes, the latter representing post offices or large volume customers. This file replaces the ZIP RUCA 3.1 data set maintained by the University of North Dakota's Center for Rural Health and reflects the correction to the secondary codes described above.

Variable Notes

Table 21.1 below provides information on the variable availability across years. Table 21.2 provides more information on what numerator and denominator variables were drawn for ERS variables in the SDOH Database.

Table 21.1. Variable availability across years, ERS

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ERS_RUCA1_2000			X	X											
ERS_RUCA1_2010		X	X		X	X	X	X	X	X	X	X	X	X	
ERS_RUCA2_2000			X	X											
ERS_RUCA2_2010		X	X		X	X	X	X	X	X	X	X	X	X	

Table 21.2. Variable definitions and specifications, ERS

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)
ERS_RUCA1_2010_ZP	Primary Rural-Urban Commuting Area Code 2010 (ZIP level)	RUCA1 - Primary RUCA Code (ZIP level)	Primary RUCA Code	n/a
ERS_RUCA2_2010_ZP	Secondary Rural-Urban Commuting Area Code 2010 (ZIP level)	RUCA2 - Secondary RUCA Code (ZIP level)	Secondary RUCA Code	n/a
ERS_RUCA1_2010	Primary Rural-Urban Commuting Area Code 2010	Primary RUCA Code 2010	Primary RUCA Code	n/a
ERS_RUCA2_2010	Secondary Rural-Urban Commuting Area Code 2010	Secondary RUCA Code 2010	Secondary RUCA Code	n/a
ERS_RUCA1_2000	Primary Rural-Urban Commuting Area Code 2000	RUCA Primary Code 2000	Primary RUCA Code	n/a
ERS_RUCA2_2000	Secondary Rural-Urban Commuting Area Code 2000	RUCA Secondary Code 2000	Secondary RUCA Code	n/a

Table 21.3 RUCA classification scheme

Primary codes	Secondary codes
1 Metropolitan area core: primary flow within an urbanized area (UA)	1.0 No additional code 1.1 Secondary flow 30% to 50% to a larger UA
2 Metropolitan area high commuting: primary flow 30% or more to a UA	2.0 No additional code 2.1 Secondary flow 30% to 50% to a larger UA
3 Metropolitan area low commuting: primary flow 10% to 30% to a UA	3.0 No additional code
4 Micropolitan area core: primary flow within an urban cluster of 10,000 to 49,999 (large UC)	4.0 No additional code 4.1 Secondary flow 30% to 50% to a UA
5 Micropolitan high commuting: primary flow 30% or more to a large UC	5.0 No additional code 5.1 Secondary flow 30% to 50% to a UA
6 Micropolitan low commuting: primary flow 10% to 30% to a large UC	6.0 No additional code
7 Small town core: primary flow within an urban cluster of 2,500 to 9,999 (small UC)	7.0 No additional code 7.1 Secondary flow 30% to 50% to a UA 7.2 Secondary flow 30% to 50% to a large UC
8 Small town high commuting: primary flow 30% or more to a small UC	8.0 No additional code 8.1 Secondary flow 30% to 50% to a UA 8.2 Secondary flow 30% to 50% to a large UC
9 Small town low commuting: primary flow 10% to 30% to a small UC	9.0 No additional code
10 Rural areas: primary flow to a tract outside a UA or UC	10.0 No additional code 10.1 Secondary flow 30% to 50% to a UA 10.2 Secondary flow 30% to 50% to a large UC 10.3 Secondary flow 30% to 50% to a small UC

22. Food Access Research Atlas (FARA)

Sponsor

U.S. Department of Agriculture, Economic Research Service (ERS)

Description

The Food Access Research Atlas (FARA) provides selected variables related to food access at the census tract level. The food access variables are reported using different definitions of accessibility to supermarket depending on the urbanicity of the census tract.²⁰ In addition to low-income and food access indicators for census tracts, it also offers food access data for the population and for selected subpopulations within census tracts. A mapping tool of low-income and low-access variables in FARA is also available here: <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH:** 2010, 2015 and 2019. Availability of variables varies by year. The 2010 FARA file did not include food access data for selected subpopulations within census tracts and, thus, has a smaller number of variables than included in the SDOH Database from FARA for 2015 and 2019.
- ▶ **SDOH domain(s)**
 - Physical infrastructure
- ▶ **SDOH variable naming convention:**
FARA_[VARNAME]
- ▶ **SDOH Database geographic level(s):** Census tract

The SDOH Database includes direct variables from FARA in the census tract file. We modified variable names and labels for clarity and to distinguish them from similar variables available from other data sources.

Total and subgroup population variables that serve as denominators are included in SDOH and are identified with _POP_DENOM suffix to distinguish them from population variables from other sources, such as ACS. Tract urbanicity is also included given that different definitions of food accessibility are used for different urbanicity levels as noted below.

²⁰ FARA uses access to supermarkets (defined to include supercenters and other large grocery stores) as a proxy for access to stores that sell a variety of foods, including foods that would be part of a healthy diet.

Resources

Data were downloaded for each year from the following site: <https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/>.

Detailed definitions of each variable are provided here: <https://www.ers.usda.gov/data-products/food-access-research-atlas/documentation/>.

Data and documentation for the previous years are available in the Archived Versions For data on the Food Access Research Atlas: [USDA ERS - Go to the Atlas](#).

Introduction to the Food Access Research Atlas:

<https://gisportal.ers.usda.gov/portal/apps/experiencebuilder/experience/?id=a53ebd7396cd4ac3a3ed09137676fd40/>.

State-Level Estimates of Low Income and Low Access Populations:

<https://www.ers.usda.gov/data-products/food-access-research-atlas/state-level-estimates-of-low-income-and-low-access-populations/>.

Suggested Citation

AHRQ SDOH Database (v1), from Economic Research Service (ERS), U.S. Department of Agriculture (USDA). [Food Access Research Atlas](#), Retrieved November 2021 from <https://www.ers.usda.gov/data-products/food-access-research-atlas/>.

Data Set Notes

Reliability

FARA does not contain margins of error.

Prior to 2019, FARA coded missing data as zero but starting in 2019 this data is coded as missing. As a result, data users may perceive a higher level of missing data in the 2019 data, as compared to earlier years.

Geographic Levels

The methodology used to assess distance to the nearest food store are the same for each of the FARA measures. First, the entire country is geographically divided into 0.5-km (about 0.19-mile) square grids, and data on the population are aerially allocated to these grids. Then, distance to the nearest food store is measured for each grid cell by calculating the distance between the geographic center of the 0.5-km square grid that contains estimates of the population, (e.g., number of people and other subgroup characteristics) and the center of the grid with the nearest food store. These measures can then be aggregated to create tract-level estimates.

Suppression Rules

FARA does not include suppression rules.

Variable Notes

Table 22.1 below provides information on the variable availability across years. Table 21.2 provides more information on what numerator and denominator variables were drawn for EFARA variables in the SDOH Database.

Table 22.1. Variable availability across years, FARA

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
FARA_PCT_LA_1_10_POP			X							X				X	
FARA_PCT_LA_1_20_POP			X							X				X	
FARA_PCT_LA_1_AIAN			X							X				X	
FARA_PCT_LA_1_ASIAN			X							X				X	
FARA_PCT_LA_1_BLACK			X							X				X	
FARA_PCT_LA_1_HISP			X							X				X	
FARA_PCT_LA_1_MR			X							X				X	
FARA_PCT_LA_1_NHPI			X							X				X	
FARA_PCT_LA_1_WHITE			X							X				X	
FARA_PCT_LA_HALF_10_POP			X							X				X	
FARA_TOT_AIAN_DENOM			X							X				X	
FARA_TOT_ASIAN_DENOM			X							X				X	
FARA_TOT_BLACK_DENOM			X							X				X	
FARA_TOT_HISP_DENOM			X							X				X	
FARA_TOT_MR_DENOM			X							X				X	
FARA_TOT_NHPI_DENOM			X							X				X	
FARA_TOT_POP_DENOM			X		X					X				X	
FARA_TOT_WHITE_DENOM			X							X				X	
FARA_TRACT_LILA_1_10			X		X					X				X	
FARA_TRACT_LILA_1_20			X		X					X				X	
FARA_TRACT_LILA_HALF_10			X		X					X				X	
FARA_TRACT_LILA_VEHICLE_20			X		X					X				X	
FARA_TRACT_URBANICITY			X		X					X				X	

Table 22.2. Variable definitions and specifications, FARA

Variable Name	Variable Label	Numerator Source Table; Label	Denominator Source Table; Label (WHERE APPLICABLE)
FARA_TRACT_LILA_1_10	Indicator for low income and low access tract measured at 1 mile for urban areas and 10 miles for rural areas	LILATracts_1AND10; Low income and low access tract measured at 1 mile for urban areas and 10 miles for rural areas: Flag for low-income and low access when considering low accessibility at 1 and 10 miles	n/a
FARA_TRACT_LILA_1_20	Indicator for low income and low access tract measured at 1 mile for urban areas and 20 miles for rural areas	LILATracts_1And20; Low income and low access tract measured at 1 mile for urban areas and 20 miles for rural areas: Flag for low-income and low access when considering low accessibility at 1 and 20 miles	n/a
FARA_TRACT_LILA_HALF_10	Indicator for low income and low access tract measured at 1/2 mile for urban areas and 10 miles for rural areas	LILATracts_halfAnd10; Low income and low access tract measured at 1/2 mile for urban areas and 10 miles for rural areas: Flag for low-income and low access when considering low accessibility at 1/2 and 10 miles	n/a
FARA_TRACT_LILA_VEHICLE_20	Indicator for low income and low access tract using vehicle access or low income and low access tract measured at 20 miles	LILATracts_Vehicle; Low income and low access tract using vehicle access or low income and low access tract measured at 20 miles: Flag for low-income and low access when considering vehicle access or at 20 miles	n/a
FARA_PCT_LA_1_AIAN	Percentage of tract population who are American Indian or Alaska Native living more than 1 mile from the nearest supermarket, supercenter, or large grocery store	Iaaian1share; Share of tract population that are American Indian or Alaska Native beyond 1 mile from supermarket	n/a
FARA_PCT_LA_1_ASIAN	Percentage of tract population who are Asian living more than 1 mile from the nearest supermarket, supercenter, or large grocery store	Iaasian1share; Share of tract population that are Asian beyond 1 mile from supermarket	n/a
FARA_PCT_LA_1_BLACK	Percentage of tract population who are Black or African American living more than 1 mile from the nearest supermarket, supercenter, or large grocery store	Iabblack1share; Share of tract population that are Black or African American beyond 1 mile from supermarket	n/a
FARA_PCT_LA_1_HISP	Percentage of tract population who are Hispanic or Latino living more than 1 mile from the nearest supermarket, supercenter, or large grocery store	Iahisp1share; Share of tract population that are of Hispanic or Latino ethnicity beyond 1 mile from supermarket	n/a

Variable Name	Variable Label	Numerator Source Table; Label	Denominator Source Table; Label (WHERE APPLICABLE)
FARA_PCT_LA_1_MR	Percentage of tract population who are not included in the White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander race categories or who identify as more than one race living more than 1 mile from the nearest supermarket, supercenter, or large grocery store	Iaomultir1share; Share of tract population that are Other/Multiple race beyond 1 mile from supermarket	n/a
FARA_PCT_LA_1_NHPI	Percentage of tract population who are Native Hawaiian or Other Pacific Islander living more than 1 mile from the nearest supermarket, supercenter, or large grocery store	Ianhopi1share; Share of tract population that are Native Hawaiian or Other Pacific Islander beyond 1 mile from supermarket	n/a
FARA_PCT_LA_1_10_POP	Percentage of low access population measured at 1 mile for urban areas and 10 miles for rural areas	LAPOP1_10; Population count beyond 1 mile for urban areas or 10 miles for rural areas from supermarket	Pop2010; Population count from 2010 census
FARA_PCT_LA_1_20_POP	Percentage of low access population measured at 1 mile for urban areas and 20 miles for rural areas	LAPOP1_20; Population count beyond 1 mile for urban areas or 20 miles for rural areas from supermarket	Pop2010; Population count from 2010 census
FARA_PCT_LA_HALF_10_POP	Percentage of low access population measured at 1/2 mile for urban areas and 10 miles for rural areas	LAPOP05_10; Population count beyond 1/2 mile for urban areas or 10 miles for rural areas from supermarket	Pop2010; Population count from 2010 census
FARA_PCT_LA_1_WHITE	Percentage of tract population who are White living more than 1 mile from the nearest supermarket, supercenter, or large grocery store	Iawhite1share; Share of tract population that are white beyond 1 mile from supermarket	n/a
FARA_TOT_POP_DENOM	Total number of population in the tract from 2010 Census (Denominator for low access population rates)	Pop2010; Total count of population in tract	n/a
FARA_TOT_AIAN_DENOM	Total number of American Indian or Alaska Native population (Denominator for low access American Indian or Alaska Native population rates)	TractAIAN; Total count of American Indian and Alaska Native population in tract	n/a
FARA_TOT_ASIAN_DENOM	Total number of Asian population (Denominator for low access Asian population rates)	TractAsian; Total count of Asian population in tract	n/a

Variable Name	Variable Label	Numerator Source Table; Label	Denominator Source Table; Label (WHERE APPLICABLE)
FARA_TOT_BLACK_DENOM	Total number of Black or African American population (Denominator for low access Black or African American population rates)	TractBlack; Total count of Black or African American population in tract	n/a
FARA_TOT_HISP_DENOM	Total number of Hispanic or Latino population (Denominator for low access Hispanic or Latino population rates)	TractHispanic; Total count of Hispanic or Latino population in tract	n/a
FARA_TOT_MR_DENOM	Total number of Multiracial population (Denominator for low access Multiracial population rates)	TractOMultir; Total count of Other/Multiple race population in tract	n/a
FARA_TOT_NHPI_DENOM	Total number of Native Hawaiian and Other Pacific Islander population (Denominator for low access Native Hawaiian and Other Pacific Islander population rates)	TractNHOPI; Total count of Native Hawaiian and Other Pacific Islander population in tract	n/a
FARA_TOT_WHITE_DENOM	Total number of White population (Denominator for low access White population rates)	TractWhite; Total count of White population in tract	n/a
FARA_TRACT_URBANICITY	Indicator for urban tract	Flag for urban tract	n/a

Other notes

- The main differences between data in the Food Access Research Atlas (FARA) and Food Environment Atlas (FEA, see below Section 23) relate to the geographic unit and breadth of statistics reported. FARA reports selected food access indicators for census tracts only, whereas FEA includes a wider range of statistics related to food access, choice, health and community characteristics at the county level.
- Since census tract boundaries did not change significantly between 2015 and 2019, the number of census tracts that are low-income, low-income/low-access and other variables from 2019 can be compared with 2015 variable. For further information, see: <https://www.ers.usda.gov/data-products/food-access-research-atlas/documentation/#comparisons>. However, 2015 and 2019 FARA variables used a different approach for coding missing values. Therefore, interpretation of changes over time change should be taken with caution.

23. Food Environment Atlas (FEA)

Sponsor

U.S. Department of Agriculture (USDA), Economic Research Service

Description

The Food Environment Atlas assembles statistics on food environment indicators to stimulate research on the determinants of food choices and diet quality, and to provide a spatial overview of a community's ability to access healthy food. FEA currently includes over 280 indicators of the food environment and combines information from across the federal government, academia, and private sector.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2011, 2012, 2013, 2015, 2016, 2017, 2018 (*availability varies by variable*).
- ▶ **SDOH domain(s):**
 - Physical infrastructure
- ▶ **SDOH variable naming convention:** FEA_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database includes variables selected directly from FEA in the county file. We modified variable names and labels for clarity and to fit the conventions in the SDOH Database.

Resources

We downloaded the current version (last updated: 9/10/2020) of data (Food environment Atlas.csv Files: StateAndCountyData.csv) from: <https://www.ers.usda.gov/data-products/food-environment-atlas/data-access-and-documentation-downloads/>.

Food Environment Atlas: Go to the Atlas <https://www.ers.usda.gov/data-products/food-environment-atlas/go-to-the-atlas/>.

Food Environment Atlas Definitions and Data Sources <https://www.ers.usda.gov/data-products/food-environment-atlas/documentation/>.

Suggested Citation

AHRQ SDOH Database (v1), from U.S. Department of Agriculture (USDA), Economic Research Service (ERS) 2020. Food Environment Atlas. Retrieved September 2021 from: <https://www.ers.usda.gov/data-products/food-environment-atlas/data-access-and-documentation-downloads/>.

Data Set Notes

Reliability

The FEA does not include margins of error.

Geographic Levels

FEA data are produced at state and county levels. County-level FEA variables are included in SDOH Database.

Suppression Rules

The FEA does not include suppression rules.

Variable Notes

Table 23.1 below provides information on the variable availability across years. Table 23.2 provides more information on what numerator and denominator variables were drawn for FEA variables in the SDOH Database.

Table 23.1. Variable availability across years, FEA

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
FEA_PCT_FARMERS_MARKET_SFMNP	X												X		
FEA_PCT_FARMERS_MARKET_SNAP	X												X		
FEA_PCT_FARMERS_MARKET_WIC	X												X		
FEA_PCT_FARMERS_MARKET_WIC_CASH	X												X		
FEA_SNAP_BENEFITS_PER_CAPITA	X						X						X		
FEA_TOT_FARMERS_MARKET	X								X					X	
FEA_TOT_FDPIR	X						X				X				
FEA_TOT_FOODBANK	X											X			
FEA_TOT_WIC_STORES	X					X						X			
FEA_WIC_REDEMP_PER_CAPITA	X					X						X			
FEA_WIC_REDEMP_PER_STORE	X					X						X			
FEA_WIC_STORES_PER_1000	X					X						X			

Table 23.2. Variable definitions and specifications, FEA

Variable Name	Variable Label	Source	Numerator Source Table; Label	Denominator (WHERE APPLICABLE)
FEA_PCT_FARMERS_MARKET_SFMNP	Percentage of all farmers' markets that accept SFMNP benefits	County-level data for 2018 farmers' markets were compiled by USDA's Agricultural Marketing Service, Marketing Services Division.	Variable_Code=="PCT_FMRKT_SFMNP18"; Farmers' markets that report accepting SFMNP (%)	n/a
FEA_PCT_FARMERS_MARKET_SNAP	Percentage of all farmers' markets that accept SNAP benefits	County-level data for 2018 farmers' markets were compiled by USDA's Agricultural Marketing Service, Marketing Services Division. The Food and Nutrition Service maintains a list of farmers' markets currently authorized to accept SNAP.	Variable_Code=="PCT_FMRKT_SNAP18"; Farmers' markets that report accepting SNAP (%)	n/a
FEA_PCT_FARMERS_MARKET_WIC	Percentage of all farmers' markets that accept WIC vouchers	County-level data for 2018 farmers' markets were compiled by USDA's Agricultural Marketing Service, Marketing Services Division. WIC vouchers are for a specific amount of food (i.e., one loaf of whole wheat bread).	Variable_Code=="PCT_FMRKT_WIC18"; Farmers' markets that report accepting WIC (%)	n/a
FEA_PCT_FARMERS_MARKET_WIC_CASH	Percentage of all farmers' markets that accept WIC Cash Value vouchers	County-level data for 2018 farmers' markets were compiled by USDA's Agricultural Marketing Service, Marketing Services Division. WIC Cash Value vouchers are for a specific dollar amount for fruits and vegetables.	Variable_Code=="PCT_FMRKT_WICCASH18"; Farmers' markets that report accepting WIC Cash (%)	n/a
FEA_SNAP_BENEFITS_PER_CAPITA	Average monthly SNAP benefits redeemed per capita (Dollar)	U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Accounts Directorate. Population data are from the U.S. Department of Commerce, Bureau of the Census, 2017 Population Estimates.	VARIABLE_CODE==PC_SNAPBEN17 (YEAR=2017) and PC_SNAPBEN12 (YEAR=2012); SNAP benefits per capita	n/a
FEA_TOT_FARMERS_MARKET	Total number of farmers' markets	USDA's Agricultural Marketing Service, Marketing Services Division	Variable_Code=="FMRKT13"(YEAR=2013) and FMRKT18 (YEAR=2018); Farmers' markets	n/a

Variable Name	Variable Label	Source	Numerator Source Table; Label	Denominator (WHERE APPLICABLE)
FEA_TOT_FDPIR	Total number of the Food Distribution Program on Indian Reservations (FDPIR) sites	Redemption site data are from USDA's Food and Nutrition Service, Food Distribution Division, Supplemental Nutrition and Safety Programs.	VARIABLE_CODE==FDPIR12 (for YEAR==2012) and FDPIR15 (for YEAR==2015); FDPIR Sites	n/a
FEA_TOT_FOODBANK	Total number of food banks (from Feeding America's nationwide network of food banks)	Food bank data are from Feeding America's nationwide network of food banks.	Variable_Code=="FOOD_BANKS18"; Food Banks	n/a
FEA_TOT_WIC_STORES	Total number of stores authorized to accept WIC Program benefits	Store data are from USDA's Food and Nutrition Service, Supplemental Food Programs Division, Program Analysis and Monitoring Branch.	VARIABLE_CODE==WICS11 (for 2011) WICS16 (for 2016); WIC-authorized stores	n/a
FEA_WIC_REDEMP_PER_CAPITA	WIC redemptions per capita (Dollar)	Redemption data are from USDA's Food and Nutrition Service, Supplemental Food Programs Division, Program Analysis and Monitoring Branch. Population data are from the U.S. Department of Commerce, Bureau of the Census, 2018 Population Estimates.	VARIABLE_CODE==PC_WIC_REDEMP11 (for 2011) PC_WIC_REDEMP16 (for 2016); WIC redemptions per capita	n/a
FEA_WIC_REDEMP_PER_STORE	WIC redemptions per WIC-authorized stores (Dollar)	Store and redemption data are from USDA's Food and Nutrition Service, Supplemental Food Programs Division, Program Analysis and Monitoring Branch.	VARIABLE_CODE==REDEMP_WICS11 (for 2011), REDEMP_WICS16 (for 2016) ; WIC redemptions/WIC-authorized stores	n/a

Social Determinants of Health (SDOH) Database

Variable Name	Variable Label	Source	Numerator Source Table; Label	Denominator (WHERE APPLICABLE)
FEA_WIC_STORES_PER_1000	Total number of stores authorized to accept WIC Program benefits per 1,000 population	Store data are from USDA's Food and Nutrition Service, Supplemental Food Programs Division, Program Analysis and Monitoring Branch. Population data are from the U.S. Department of Commerce, Bureau of the Census, 2018 Population Estimates.	Variable_Code=="WICSPTH11" (for 2011), WICSPTH16 (for 2016); WIC-authorized stores/1,000 pop	n/a

Table 23.3 provides important variable notes for users of the SDOH Database to consider when working with FEA variables.

Table 23.3. FEA variable notes

Variable Name	Variable Label	Notes
FEA_PCT_FARMERS_MARKET_SFMN	Percentage of all farmers' markets that accept SFMNP benefits	<p>Definition: The percentage of all farmers' markets in the county that accept Senior Farmers' Market Nutrition Program (SFMNP) benefits.</p> <p>Data sources: USDA's Agricultural Marketing Service, Marketing Services Division compiled county-level data for 2018 farmers' markets .</p> <p>Available year: 2018</p>
FEA_PCT_FARMERS_MARKET_SNAP	Percentage of all farmers' markets in the county that accept SNAP benefits.	<p>Definition: The percentage of all farmers' markets in the county that accept SNAP benefits.</p> <p>Data sources: USDA's Agricultural Marketing Service, Marketing Services Division compiled county-level data for 2018 farmers' markets.</p> <p>Special notes: The Food and Nutrition Service maintains a list of farmers' markets currently authorized to accept SNAP. See SNAP and Farmers' Markets.</p> <p>Available year: 2018</p>
FEA_PCT_FARMERS_MARKET_WIC	Percentage of all farmers' markets that accept WIC vouchers	<p>Definition: The percentage of all farmers' markets in the county that accept WIC vouchers.</p> <p>Data sources: USDA's Agricultural Marketing Service, Marketing Services Division compiled county-level data for 2018 farmers' markets.. WIC vouchers are for a specific amount of food (e.g., one loaf of whole wheat bread).</p> <p>Available year: 2018</p>
FEA_PCT_FARMERS_MARKET_WIC_CA SH	Percentage of all farmers' markets that accept WIC Cash Value vouchers	<p>Definition: The percentage of all farmers' markets in the county that accept WIC Cash Value vouchers.</p> <p>Data sources: USDA's Agricultural Marketing Service, Marketing Services Division compiled county-level data for 2018 farmers' markets .. WIC Cash Value vouchers are for a specific dollar amount for fruits and vegetables. Available year: 2018</p>
FEA_SNAP_BENEFITS_PER_CAPITA	Average monthly SNAP benefits redeemed per capita (Dollars)	<p>Definition: The average monthly dollar amount of SNAP (Supplemental Nutrition Assistance Program, previously called Food Stamp Program) benefits in a county divided by the county population.</p> <p>Data sources: SNAP benefits are from the U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Accounts Directorate. Population data are from the U.S. Department of Commerce, Bureau of the Census, 2017 Population Estimates.</p> <p>Available years: 2012 and 2017</p>
FEA_TOT_FARMERS_MARKET	Total number of farmers' markets	<p>Definition: The number of farmers' markets in the county.</p> <p>Data Sources: The USDA's Agricultural Marketing Service, Marketing Services Division compiled_county-level data for 2013 and 2018 farmers' markets .</p> <p>Available years: 2013 and 2018</p>

Variable Name	Variable Label	Notes
FEA_TOT_FDPIR	Total number of the Food Distribution Program on Indian Reservations (FDPIR) sites	<p>Definition: The number of FDPIR sites per county in 2012 and 2015. The Food Distribution Program on Indian Reservations (FDPIR) is a federal nutrition assistance program for low-income households residing on Indian reservations and low-income Indian households living in designated service areas near reservations or in Oklahoma. FDPIR sites are central locations within Tribal lands where the monthly benefit package may be distributed.</p> <p>Available years: 2012 and 2015</p>
FEA_TOT_FOODBANK	Total number of food banks (from Feeding America's nationwide network of food banks)	<p>Definition: The number of food banks per county in 2018</p> <p>Data sources: Food bank data are from Feeding America's nationwide network of food banks.</p> <p>Available year: 2018</p>
FEA_TOT_WIC_STORES	Total number of stores authorized to accept WIC Program benefits	<p>Definition: The number of stores in a county that are authorized to accept WIC Program (Special Supplemental Nutrition Program for Women, Infants, and Children) benefits. Does not include direct distribution centers serving participants in Mississippi's WIC program.</p> <p>Data sources: Store data are from USDA's Food and Nutrition Service, Supplemental Food Programs Division, Program Analysis and Monitoring Branch.</p> <p>Available years: 2011 and 2016</p>
FEA_WIC_REDEMP_PER_CAPITA	WIC redemptions per capita (Dollar)	<p>Definition: The total dollar amount of WIC Program (Special Supplemental Nutrition Program for Women, Infants, and Children) benefits redeemed through WIC-authorized stores in a county divided by the total county population. Redemptions are set to blank cells in a data download spreadsheet and 'no data' in Atlas map when data are not available or when there are fewer than 4 WIC-authorized stores in a county.</p> <p>Data sources: Redemption data are from USDA's Food and Nutrition Service, Supplemental Food Programs Division, Program Analysis and Monitoring Branch. Population data are from the U.S. Department of Commerce, Bureau of the Census, 2018 Population Estimates.</p> <p>Available years: 2011 and 2016</p>
FEA_WIC_REDEMP_PER_STORE	WIC redemptions per WIC-authorized stores (Dollar)	<p>Definition: The total dollar amount of WIC Program (Special Supplemental Nutrition Program for Women, Infants, and Children) benefits redeemed through WIC-authorized stores in a county in a fiscal year divided by the number of WIC-authorized stores.</p> <p>Data sources: Store and redemption data are from USDA's Food and Nutrition Service, Supplemental Food Programs Division, Program Analysis and Monitoring Branch.</p> <p>Available years: 2011 and 2016</p>
FEA_WIC_STORES_PER_1000	Total number of stores authorized to accept WIC Program benefits per 1,000 population	<p>Definition: The number of stores in a county that are authorized to accept WIC Program (Special Supplemental Nutrition Program for Women, Infants, and Children) benefits per 1,000 population.</p> <p>Data sources: Store data are from USDA's Food and Nutrition Service, Supplemental Food Programs Division, Program Analysis and Monitoring Branch. Population data are from the U.S. Department of Commerce, Bureau of the Census, 2018 Population Estimates.</p> <p>Available years: 2011 and 2016</p>

Term Definitions

Table 23.4 provides important term definitions for users of the SDOH Database to consider when working with FEA variables.

Table 23.4. Term definitions, FEA

Term	Definition
Farmers' market	A farmers' market is a retail outlet in which two or more vendors sell agricultural products directly to customers through a common marketing channel. At least 51 percent of retail sales are direct to consumers.
Food bank	A non-profit that safely stores millions of pounds of food that will soon be delivered to local food programs, like a food pantry. More information on definition of food bank from Feeding America: https://www.feedingamerica.org/hunger-blog/what-difference-between-food-bank-and-food-pantry
The Food Distribution Program on Indian Reservations (FDPIR)	A federal nutrition assistance program for low-income households residing on Indian reservations and low-income Indian households living in designated service areas near reservations or in Oklahoma. FDPIR sites are central locations within Tribal lands where the monthly benefit package may be distributed.
Senior Farmers' Market Nutrition Program (SFMNP)	A program led by USDA's Food and Nutrition Service of the US. Department of Agriculture to provide low-income seniors with access to locally grown fruits, vegetables, honey and herbs. More information can be found: https://www.fns.usda.gov/sfmnp/senior-farmers-market-nutrition-program

24. Long-term Care: Facts on Care in the U.S. Public Use Data (LTCFocus)

Sponsor

National Institute on Aging (1P01AG027296) through a cooperative agreement with the Brown University School of Public Health.

Description

LTCFocus gathers data from primary and secondary sources, including Minimum Data Set (MDS), the Online Survey Certification and Reporting (OSCAR), and a variety of other sources that characterize the policy environment and local market forces affecting nursing home providers. It hosts data regarding the health and functional status of nursing home residents, characteristics of care facilities, state policies relevant to long term care services and financing, and data characterizing the markets in which facilities exist.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2011 – 2019
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** LTC_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The LTCFocus data set selects data from a variety of data sources including:

- a) CMS Minimum Data Set: The Minimum Data Set (MDS) is part of the federally mandated process for clinical assessment of all residents in Medicare and Medicaid certified nursing homes. MDS assessments are completed for all residents in certified nursing homes, regardless of source of payment for the individual resident. MDS assessments are required for residents on admission to the nursing facility, periodically, and on discharge. Nursing homes transmit MDS information electronically to the national MDS database at CMS.
- b) OSCAR and CASPER: OSCAR was an administrative database at CMS for many years. Effective July 2012, Certification and Survey Provider Enhanced Reporting (CASPER) system and the Quality Improvement Evaluation System (QIES) replaced the OSCAR system. Every institutional health care provider in the United States that is certified to provide services under either Medicare or Medicaid (or both) is listed in the CASPER/QIES system.

Resources

Data were downloaded from: <https://ltcfocus.org/data> (last retrieved March, 2022).

Codebook: The data set includes facility, county, and state files, as well as a detailed data dictionary. Users must register to receive access the data and the codebook.

Suggested Citation

AHRQ SDOH Database (v1), from LTCFocus Public Use Data sponsored by the National Institute on Aging (P01 AG027296) through a cooperative agreement with the Brown University School of Public Health. Available at www.ltcfocus.org. <https://doi.org/10.26300/h9a2-2c26>.

Data Set Notes

Reliability

LTCFocus does not provide margins of error.

Geographic Levels

Data are available at the county level.

Suppression Rules

Suppressed data are indicated using "L" in the source data. These suppressed data are set as missing in the SDOH Database. Geographic variation in missingness of LTC variables is related to data suppression. The missingness also reflects the underlying LTCFOCUS data that is based on nursing facility assessments in MDS and annual survey certification in OSCAR/CASPER.

Variable Notes

Table 24.1 below provides information on the variable availability across years. Table 24.2 provides more information on what numerator and denominator variables were drawn for LTC variables in the SDOH Database.

Table 24.1. Variable availability across years, LTC

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
LTC_AVG_ACUITY_INDEX	X			X	X	X	X	X	X	X	X	X	X	X	X
LTC_AVG_AGE	X				X	X	X	X	X	X	X	X	X	X	X
LTC_AVG_DAILY_CENSUS	X					X	X	X	X	X	X	X	X	X	
LTC_AVG_OBS_MEDIAN_LOS	X					X	X	X	X	X	X	X	X	X	X
LTC_AVG_OBS_REHOSP_RATE	X					X	X	X	X	X	X	X	X	X	X
LTC_AVG_OBS_SUCCESSFUL_DISC_RATE	X					X	X	X	X	X	X	X	X	X	X
LTC_AVG_PCT_MEDICAID	X			X	X	X	X	X	X	X	X	X	X	X	X
LTC_AVG_PCT_MEDICARE	X			X	X	X	X	X	X	X	X	X	X	X	X
LTC_AVG_PCT_PRESSURE_ULCER	X					X	X	X	X	X	X	X	X	X	X
LTC_AVG_PCT_PVT_PATIENT_DAYS	X				X	X	X	X	X	X					
LTC_OCCUPANCY_RATE	X				X	X	X	X	X	X	X	X	X	X	X
LTC_PCT_FOR_PROFIT	X				X	X	X	X	X	X	X	X	X	X	X
LTC_PCT_MULTI_FAC	X				X	X	X	X	X	X	X	X	X	X	X
LTC_PCT_RESID_BLACK	X					X	X	X	X	X	X	X	X	X	X
LTC_PCT_RESID_HISPANIC	X					X	X	X	X	X	X	X	X	X	X
LTC_PCT_RESID_WHITE	X					X	X	X	X	X	X	X	X	X	X
LTC_TOT_BEDS	X			X	X	X	X	X	X	X	X	X	X	X	X
LTC_TOT_BEDS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
LTC_TOT_RESIDENTS	X											X	X		
LTC_TOT_RESIDENTS_RATE	X											X	X		

Table 24.2. Variable definitions and specifications, LTC

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
LTC_AVG_ACUITY_INDEX	Average acuity index of the nursing home residents in the county	OSCAR/CASPER	acuindex2_cty; Average Acuity Index -Acuity Index is a measure of the care needed by a nursing home's residents. It is calculated based on the number of residents needing various levels of activities of daily living (ADL) assistance, the number of residents receiving special treatment.	n/a; n/a
LTC_AVG_AGE	Average age of residents present in a nursing home on the 1st Thursday of April within a county	MDS (prevalence)	avgage_cty; Average Age - Average age of residents on the 1st Thursday in April.	n/a; n/a
LTC_AVG_DAILY_CENSUS	Annual average daily census per reporting facility in the county	Residential History File	avg_dailycensus_cty; Average Daily Census	n/a; n/a
LTC_AVG_OBS_MEDIAN_LOS	Average observed median length of stay in the county	MDS	avg_obs_medianlos_cty; Median Length of Stay: Observed	n/a; n/a
LTC_AVG_OBS_REHOSP_RATE	Average rehospitalization rate in the county	MDS	avg_obs_rehosp_cty; Rehospitalization Rate: Observed	n/a; n/a
LTC_AVG_OBS_SUCCESSFUL_DISC_RATE	Average successful discharge rate in the county	MDS	avg_obs_successfuldc_cty; Successful Discharge: Adjusted	n/a; n/a
LTC_AVG_PCT_MEDICAID	Average percentage of nursing home residents in the county whose primary support is Medicaid	OSCAR/CASPER	paymcaid_cty; % Medicaid - Proportion of facility residents whose primary support is Medicaid; For county this is the average proportion among all facilities.	n/a; n/a
LTC_AVG_PCT_MEDICARE	Average percentage of nursing home residents in the county whose primary support is Medicare	OSCAR/CASPER	paymcare_cty; % Medicare - Proportion of facility residents whose primary support is Medicare; For county and state this is the average proportion among all facilities.	n/a; n/a
LTC_AVG_PCT_PRESSURE_ULCER	Average percentage of high-risk long-stay nursing home residents with pressure ulcers in the county	NH Compare	NHCpu_mds3_cty; % long stay with PU: high risk MDS 3.0 - Proportion of high-risk long-stay residents with pressure ulcers (MDS 3.0).	n/a; n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
LTC_AVG_PCT_PVT_PATIENT_DAYS	Average percentage of patient days in a calendar year that were private pay in the county	Residential History File	PctPvtDays_cty; Percent Private Pay Days	n/a; n/a
LTC_OCCUPANCY_RATE	Total nursing home occupancy rate in the county	OSCAR/CASPER	occpct_cty; Occupancy Rate - Number of occupied beds in facility divided by the total number of beds; For county this is the average among all facilities.	n/a; n/a
LTC_PCT_FOR_PROFIT	Percentage of nursing homes that are for-profit	OSCAR/CASPER	multifac_cty; Multi-facility - Indicates whether or not facility is part of a chain; For county and state this is the proportion of facilities that are part of chains.	n/a; n/a
LTC_PCT_MULTI_FAC	Percentage of nursing homes that are owned or leased by a multi-facility (chain) organization	OSCAR/CASPER	profit_cty; For-profit - Indicates whether or not the facility is for-profit; For county and state this is the proportion of facilities that are for-profit.	n/a; n/a
LTC_PCT_RESD_BLACK	Average percentage of residents present in a nursing home on the 1st Thursday of April within the county who are black	MDS (prevalence)	pctblack_mds3_cty; % Black MDS 3.0 (prevalence) - Proportion of residents present on the 1st Thursday in April who are Black (MDS 3.0).	n/a; n/a
LTC_PCT_RESD_HISPANIC	Average percentage of residents present in a nursing home on the 1st Thursday of April within the county who are Hispanic	MDS (prevalence)	pcthisp_mds3_cty; % Hispanic MDS 3.0 (prevalence) - Proportion of residents present on the 1st Thursday in April who are Hispanic (MDS 3.0).	n/a; n/a
LTC_PCT_RESD_WHITE	Average percentage of residents present in a nursing home on the 1st Thursday of April within the county who are white	MDS (prevalence)	pctwhite_mds3_cty; % White MDS 3.0 (prevalence) - Proportion of residents present on the 1st Thursday in April who are White (MDS 3.0).	n/a; n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator Source Variable; Label (WHERE APPLICABLE)
LTC_TOT_BEDS	Total number of nursing home beds in the county	OSCAR/CASPER	totbeds_cty; # of Beds - Number of beds as reported on the annual OSCAR/CASPER (imputed from previous year if missing or implausible); For county and state this is the total number of beds among all facilities.	n/a; n/a
LTC_TOT_BEDS_RATE	Total number of nursing home beds in the county per 1,000 population	OSCAR/CASPER	totbeds_cty; # of Beds - Number of beds as reported on the annual OSCAR/CASPER (imputed from previous year if missing or implausible); For county and state this is the total number of beds among all facilities.	ACS_TOT_POP_WT; Multiply by 1000
LTC_TOT_RESIDENTS	Total number of nursing home residents in the county	OSCAR/CASPER	nresid_cty; Number of nursing home residents	n/a; n/a
LTC_TOT_RESIDENTS_RATE	Total number of nursing home residents in the county per 1,000 population	OSCAR/CASPER	nresid_cty; Number of nursing home residents	ACS_TOT_POP_WT; Multiply by 1000

Table 24.3 provides important variable notes for users of the SDOH Database to consider when working with LTC variables.

Table 24.3. LTC variable notes

Variable Name	Variable Label	Notes
LTC_AVG_ACUITY_INDEX	Average acuity index of the nursing home residents in the county	Average Acuity Index of residents measuring factors such as whether residents require ambulatory assistance or are receiving different types of care or therapy. For further information, refer to the LTCFocus source file. At the county level this is an average of all facility averages.
LTC_PCT_RESID_BLACK	Average percentage of residents present in a nursing home on the 1st Thursday in April within the county who are black	MDS assessments were used to establish the population of residents in all nursing facilities on the 1st Thursday in April. This variable was calculated from the most recent MDS assessment using Section A: Identification Information, Question A1000C: Race/Ethnicity, Black or African American.
LTC_PCT_RESID_HISPANIC	Average percentage of residents present in a nursing home on the 1st Thursday of April within the county who are Hispanic	MDS assessments were used to establish the population of residents in all nursing facilities on the 1st Thursday in April. This variable was calculated from the most recent MDS assessment using Section A: Identification Information, Question A1000D: Race/Ethnicity, Hispanic.
LTC_PCT_RESID_WHITE	Average percentage of residents present in a nursing home on the 1st Thursday of April within the county who are white	MDS assessments were used to establish the population of residents in all nursing facilities on the 1st Thursday in April. This variable was calculated from the most recent MDS assessment using Section A: Identification Information, Question A1000F: Race/Ethnicity, White.
LTC_PCT_PRESSURE_ULCER	Average percentage of high-risk long-stay residents with pressure ulcers in the county	The percentage of high-risk long-stay residents in the facility, county, or state with a pressure ulcer. These data were downloaded from CMS's Nursing Home Compare repository. Data on each nursing home is available in quarterly snapshots for each year. The data reported here are for the second quarter of each year. This quarter was chosen for the SDOH Database since it coincides most closely with the 'prevalence' variables from the 1st Thursday of each April.
LTC_AVG_PCT_MEDICAID	Average percentage of nursing home residents in the county whose primary support is Medicaid	The number of facility residents whose primary support was Medicaid (at the time of the annual survey) was drawn from the annual OSCAR or CASPER data, as was the total number of facility residents. The proportion of residents whose primary support was Medicaid was then calculated. For county and state this is the average proportion among all facilities.
LTC_AVG_PCT_MEDICARE	Average percentage of nursing home residents in the county whose primary support is Medicare	The number of facility residents whose primary support was Medicare (at the time of the annual survey) comes from the annual OSCAR or CASPER data, as was the total number of facility residents. We then calculated the proportion of residents whose primary support was Medicare. For county and state this is the average proportion among all facilities.

Variable Name	Variable Label	Notes
LTC_AVG_OBS_REHOSP RATE	Average rehospitalization rate in the county	The denominator for this rate is total admissions, defined as the total number of admissions to the facility for persons 55 and older for individuals with available risk factors within 18 days of the entry date (NOT taken from the discharge assessment), from hospitals, during the year (A1800=03, indicating 'entered from hospital') who did not have an MDS assessment from any facility during the previous 100 days (i.e. these were new nursing home admissions and does not include residents hospitalized from a facility). The entry date was determined using 2 variables: A1600 (entry date) and A0310F=01 (indicating 'entry tracking records'). The numerator is the number of these admissions who were discharged to an acute hospital within 30 days of admission. This rate is then averaged to the county level.
LTC_AVG_OBS_SUCCESSFUL_DISC RATE	Average successful discharge rate in the county	For each admission to the facility, an individual expected rate of successful discharge was calculated by accounting for a number of risk factors, including end-stage prognosis, hospice care, physical and cognitive functioning, etc. All individual rates were then averaged to determine the facility's expected rate of successful discharge. The adjusted successful discharge rate is calculated for each facility by dividing the observed rate by the expected rate and multiplying by the national average: (observed rate/expected rate) x national average. The facility rate is then averaged to the county.
LTC_AVG_OBS_MEDIAN_LOS	Average observed median length of stay in the county	Length of stay (LOS) is calculated for new admissions to a nursing facility from a hospital. New admissions are defined as any admission assessment from a hospital with no assessments in the 100 days prior to the admission assessment. Each person's LOS is calculated based on the number of days between their admission and discharge. If they are not discharged within 120 days from admission, they are assigned an LOS of 120 days no matter how long they stay past 120 days. When an individual has an interruption in service that is 10 days or fewer, their LOS related to their subsequent readmission to the SNF will be counted with the prior admission's LOS. When an individual has an interruption in service (e.g., is hospitalized) that is greater than 10 days, their LOS ends on the day of discharge to the hospital. Any subsequent admission to the SNF is not counted unless it meets the criteria for a new admission as stated above. The facility median LOS are then averaged to the county.

Other Notes

For years 2009-2013, LTCFocus source files report data separately for Allegheny County, VA (FIPS 51005) and Clifton Forge Independent City, VA (FIPS 51560). Clifton Forge Independent City, VA was added to Allegheny County, VA effective July 1, 2001, so FIPS 51560 is dropped from the SDOH Database. Users should take caution when comparing LTCFocus data for FIPS 51005 between 2009-2013 and later years.

Term Definitions

Table 24.4 provides important term definitions for users of the SDOH Database to consider when working with LTC variables.

Table 24.4. Term definitions, LTC

Term	Definition
Acuity Index	Acuity Index is a measure of the care needed by a nursing home's residents. It is calculated based on the number of residents needing various levels of activities of daily living (ADL) assistance, the number of residents receiving special treatment.
Private patient days	The Residential History File was used to generate what percent of patient days for each facility during the calendar year were private pay. This was then aggregated to the county level.
Nursing Home	Number of beds as reported on the annual survey certification in OSCAR/CASPER for nursing homes (imputed from previous year if missing or implausible); For county this is the total number of beds among all nursing homes. Nursing homes that are Medicaid or Medicare certified are nursing facilities.

25. Home Health Compare (HHC)

Sponsor

U.S. Department of Health and Human Services (DHHS), Centers for Medicare & Medicaid Services (CMS)

Description

HHC provides data on the quality of services provided by Medicare-certified home health agencies mostly through Outcome and Assessment Information Set (OASIS) data submitted to CMS. Home health agencies can use HHC reports to compare their outcomes to those of other agencies. The public can also evaluate a homecare agency's quality outcome variables to determine how well they are applying specific evidence-based processes of care.

In 2019, 10,591 Medicare-certified home health agencies existed throughout the United States. In 2019, these agencies served 5,266,931 beneficiaries through 7,439,849 quality episodes of care. These counts include Medicare Fee for Service (FFS), Medicare Advantage, and Medicaid beneficiaries for whom OASIS data collection is required. In 2019, Medicaid paid for (at least partially) 8.4 percent of these quality episodes, compared to Medicare Advantage's 31.2 percent, and Medicare FFS's 60.4 percent. (<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits>)

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2014 – 2020
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** HHC_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

We downloaded HHC facility-level data ("HHC_SOCRATA_PRVDR" tables) from CMS for each year from 2014 to 2020. The variables presented in the SDOH Database were created by (1) averaging quarterly data for each facility to calculate an annual average, and then (2) averaging across contributing facilities within a county to calculate a county average.

The address of each home health agency was geocoded in order to match FIPS Codes to the location of each agency.

Resources

Data were downloaded from: <https://data.cms.gov/provider-data/archived-data/home-health-services> (last retrieved March, 2022).

[Data dictionary](https://data.cms.gov/provider-data/topics/home-health-services): The data dictionary provides a listing of the variables contained in the national, state, and provider level home health compare files (<https://data.cms.gov/provider-data/topics/home-health-services>).

[Data updates](https://data.cms.gov/provider-data/topics/home-health-services/process-care-outcome-care-quality-measures#data-updates): Information regarding regular updates to the Home Health Compare files is provided on the website (<https://data.cms.gov/provider-data/topics/home-health-services/process-care-outcome-care-quality-measures#data-updates>).

Suggested Citation

AHRQ SDOH Database (v1), from Centers for Medicare & Medicaid Services. (n.d.). Home Health Compare. <https://www.medicare.gov/nursinghomecompare/search.html>.

Data Set Notes

Reliability

The HHC data set does not include any margins of error for variables included in the SDOH Database.

Geographic Levels

Data are reported at the facility level and averaged across contributing facilities within a county to calculate a county average.

Suppression Rules

The HHC data set does not include any suppression rules for variables included in the SDOH Database.

Variable Notes

Table 25.1 below provides information on the variable availability across years. Table 25.2 provides more information on what numerator and denominator variables were drawn for HHC variables in the SDOH Database.

Variables may vary substantially across years. Such changes may be due to the fact the data are reported by state survey agencies. The state survey agencies are responsible for entering this information into the iQIES database and providing updates as needed. For more information, please see: <https://data.cms.gov/provider-data/topics/home-health-services/process-care-outcome-care-quality-measures>

Table 25.1 Variable availability across years, HHC

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
HHC_PCT_HHA_AIDE	X								X	X	X	X	X	X	X
HHC_PCT_HHA_MEDICAL	X								X	X	X	X	X	X	X
HHC_PCT_HHA_NURSING	X								X	X	X	X	X	X	X
HHC_PCT_HHA_OCC_THERAPY	X								X	X	X	X	X	X	X
HHC_PCT_HHA_PHYS_THERAPY	X								X	X	X	X	X	X	X
HHC_PCT_HHA_SPEECH	X								X	X	X	X	X	X	X

Table 25.2. Variable definitions and specifications, HHC

Variable Name	Variable Label	Source	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)
HHC_PCT_HHA_NURSING	Percentage of home health agencies offering nursing care services	Outcome and Assessment Information Set (OASIS)	Offers Nursing Care Services=Y	Home Health Agency Offers Nursing Care Services	n/a
HHC_PCT_HHA_PHYS_THERAPY	Percentage of home health agencies offering physical therapy services	Outcome and Assessment Information Set (OASIS)	Offers Physical Therapy Services=Y	Home Health Agency Offers Physical Therapy Services	n/a
HHC_PCT_HHA_OCC_THERAPY	Percentage of home health agencies offering occupational therapy services	Outcome and Assessment Information Set (OASIS)	Offers Occupational Therapy Services=Y	Home Health Agency Offers Occupational Therapy Services	n/a
HHC_PCT_HHA_SPEECH	Percentage of home health agencies offering speech pathology services	Outcome and Assessment Information Set (OASIS)	Offers Speech Pathology Services=Y	Home Health Agency Offers Speech Pathology Services	n/a
HHC_PCT_HHA_MEDICAL	Percentage of home health agencies offering medical social services	Outcome and Assessment Information Set (OASIS)	Offers Medical Social Services=Y	Home Health Agency Offers Medical Social Services	n/a
HHC_PCT_HHA_AIDE	Percentage of home health agencies offering home health aide services	Outcome and Assessment Information Set (OASIS)	Offers Home Health Aide Services=Y	Home Health Agency Offers Home Health Aide Services	n/a

Other notes

The Internet Quality Improvement Evaluation System data used for the agency characteristics can be updated on an “as-needed” basis by the State Survey Agency with a 2-3 month lag time. Administrative information (like name and address) is updated monthly, although it may take a couple of months for new information to be posted. Newly certified home health agencies may not appear in Care Compare for a year. This time lag allows more time for agencies to submit data and it increases the number of patient episodes of care that can be reported on for an agency.

Term Definitions

Table 25.3 provides important term definitions for users of the SDOH Database to consider when working with HHC variables.

Table 25.3. Term definitions, HHC

Term	Definition
Nursing Services	Nursing services refers to skilled nursing care provided on a part-time or intermittent basis. Skilled nursing care includes services and care that can only be performed safely and correctly by a licensed nurse (either a registered nurse or a licensed practical nurse).
Physical Therapy Services	Physical therapy services include services such as exercise to regain movement and strength to a body area, and training on how to use special equipment or do daily activities, like how to get in and out of a wheelchair or bathtub.
Occupational Therapy Services	An occupational therapist helps a patient with physical, developmental, social, or emotional disabilities relearn how to perform such daily functions as eating, bathing, dressing, and more.
Speech Pathology Services	Speech pathology services include the evaluation and treatment to regain and strengthen or maintain current function or slow decline of speech and language skills. This includes cognitive and swallowing skills.
Medical Social Services	These medical social services are covered when given under the direction of a doctor to help the patient with social and emotional concerns related to your illness. This might include counseling or help finding resources in your community.
Home Health Aide Services	Home health aides can help the patient with his or her basic personal needs such as getting out of bed, walking, bathing, and dressing. Some aides receive specialized training to assist with more specialized care under the supervision of a nurse.

26. Homeland Infrastructure Foundation Level Data (HIFLD)

Sponsor

U.S. Department of Homeland Security

Description

The HIFLD Urgent Care data set consists of any location that can provide emergency medical care and must provide emergency medical treatment beyond what can normally be provided by an emergency medical services (EMS) unit, must be able to perform surgery, or must be able to provide recuperative care beyond what is normally provided by a doctor's office. In times of emergency, the facility must be able to accept patients from the general population or patients from a significant subset of the general population (e.g., children).

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2020
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** HIFLD_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County, ZIP Code, and census tract

We developed distance- to-provider variables from geocoded latitude and longitude coordinates. Data missing in the HIFLD source file were retained as missing in the SDOH Database.

Resources

Data were downloaded from: <https://hifld-geoplatform.opendata.arcgis.com/datasets/urgent-care-facilities> (last retrieved November, 2021).

Suggested Citation

AHRQ SDOH Database (v1), from the Department of Homeland Security. Homeland Infrastructure Foundation-Level Data (HIFLD)—Urgent Care Facilities. 2018. Available: <https://hifld-geoplatform.opendata.arcgis.com/datasets/urgent-care-facilities>.

Data Set Notes

Reliability

The HIFLD data set does not contain margins of error.

Florida and Arizona license Urgent Care facilities, but definitions of Urgent care may differ between licensing and inclusion in the HIFLD data set. Users should note that for these two states there may be Urgent Care facilities in the HIFLD data set that are not licensed in the state as an Urgent Care facility. Urgent Care facilities that are operated by and co-located with a hospital are also excluded because the locations are included in the HIFLD hospital data set.

Geographic Levels

The HIFLD source data set includes the address of each facility, as well as ZIP and FIPS county code information. Geocoded information for each urgent care facility captured in the data set is also included on the data file. This geocoded information was used to construct measures for the SDOH Database at the county, ZIP Code, and census tract levels.

Suppression Rules

The HIFLD data set does not contain any suppressed information.

Variable Notes

Table 26.1 below provides information on the variable availability across years. Table 26.2 provides more information on what numerator and denominator variables were drawn for HIFLD variables in the SDOH Database.

Table 26.1. Variable availability across years, HIFLD

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
HIFLD_DIST_UC_ZP		X													X
HIFLD_DIST_UC_TRACT			X												X
HIFLD_MAX_DIST_UC	X														X
HIFLD_MEAN_DIST_UC	X														X
HIFLD_MEDIAN_DIST_UC	X														X
HIFLD_MIN_DIST_UC	X														X
HIFLD_UC	X														X
HIFLD_UC_RATE	X														X

Table 26.2. Variable definitions and specifications, HIFLD

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR (WHERE APPLICABLE)
HIFLD_MEDIAN_DIST_UC	Median distance in miles to the nearest urgent care, calculated using population weighted tract centroids in the county	Median distance using geocoded data	Latitude and Longitude	n/a
HIFLD_MEAN_DIST_UC	Mean distance in miles to the nearest urgent care, calculated using population weighted tract centroids in the county	Median distance using geocoded data	Latitude and Longitude	n/a
HIFLD_MIN_DIST_UC	Minimum distance in miles to the nearest urgent care, calculated using population weighted tract centroids in the county	Minimum distance using geocoded data	Latitude and Longitude	n/a
HIFLD_MAX_DIST_UC	Maximum distance in miles to the nearest urgent care, calculated using population weighted tract centroids in the county	Minimum distance using geocoded data	Latitude and Longitude	n/a
HIFLD_DIST_UC_ZIP	Distance in miles to the nearest urgent care, calculated using population weighted ZIP centroids	Distance using geocoded 2020 data	Latitude and Longitude	n/a
HIFLD_DIST_UC_TRACT	Distance in miles to the nearest urgent care, calculated using population weighted tract centroids	Distance using geocoded 2020 data	Latitude and Longitude	n/a
HIFLD_UC	Total number of urgent care organizations	Total of IDs in the County (FIPS)	ID of Urgent Care Facility	n/a
HIFLD_UC_RATE	Total number of urgent care organizations per 1,000 population	Total of IDs in the County (FIPS)	ID of Urgent Care Facility	ACS_TOT_POP_WT

Other Data Set Notes

The website notes that the timeliness of this data set is indicated by the [CONTDATE] field. Based upon this field, the oldest record is dated 11/22/2004 and the newest record is dated 07/17/2009. However, the website also notes that the data set was last updated in 2018 (see link to website in Suggested Citation section below).

Term Definitions

Table 24.3 provides important term definitions for users of the SDOH Database to consider when working with HIFLD variables.

Table 26.3. Term definitions, HIFLD

Term	Definition
Urgent Care	Urgent care is defined as the delivery of ambulatory medical care outside of a hospital emergency department on a walk-in basis without a scheduled appointment. (Source: Urgent Care Association of America)

27. Indian Health Service (IHS)

Sponsor

U.S. Department of Health and Human Services, Indian Health Services

Description

The IHS is responsible for providing federal health services to American Indians and Alaska Natives. The provision of health services to members of federally recognized tribes grew out of the special government-to-government relationship between the federal government and Indian tribes. This relationship, established in 1787, is based on Article I, Section 8 of the Constitution. The IHS provides a comprehensive health service delivery system for approximately 2.6 million American Indians and Alaska Natives who belong to 574 federally recognized tribes in 37 states. Health care services are provided in over 883 IHS owned or leased and tribal health care facilities, located mostly in rural and isolated areas.

The Indian health care system includes the following services:

- a) **IHS direct health care services:** IHS services are administered through a system of 12 Area offices and 170 IHS and tribally managed service units.
- b) **Tribally operated health care services:** Titles I and V of the Indian Self-Determination and Education Assistance Act (Public Law 93-638, as amended), provide Tribes the option of exercising their right to self-determination by assuming control and management of programs previously administered by the federal government. Since 1992, the IHS has entered into agreements with tribes and tribal organizations to plan, conduct, and administer programs authorized under Section 102 of the Act. Today, over sixty percent of the IHS appropriation is administered by tribes, primarily through self-determination contracts or self-governance compacts.
- c) **Urban Indian health care services and resource centers:** The IHS Office of Urban Indian Health Programs (OUIHP) was established in 1976 to make health care services more accessible to Urban Indians. The IHS enters into limited, competing contracts and grants with 41 Urban Indian Organizations (UIOs) to provide health care and referral services for Urban Indians throughout the United States. UIOs provide access to culturally appropriate and quality health care services, which include full ambulatory care, limited ambulatory care, outreach and referral, and residential and outpatient substance abuse treatment programs.

Inclusion in the SDOH Database

- **Years available in the SDOH Database:** 2020
- **SDOH domain(s):**
 - Healthcare context
- **SDOH variable naming convention:** IHS_[VARNAME]
- **SDOH Database geographic level(s):** County

The IHS website contains information about the location of different IHS facilities, which was enhanced with updated location information obtained directly from IHS.

We geocoded the files to match FIPS Codes to the location of each IHS facility.

Resources

Data were directly sourced from the Indian Health Service, an agency within the Department of Health and Human Services in September, 2021.

Codebook: The Standard Code Book (SCB) contains definitions relevant to IHS facilities.

Suggested Citation

AHRQ SDOH Database (v1), from the Indian Health Service. IHS facilities. 2021. Available: <https://www.ihs.gov/locations/>.

Data Set Notes

Reliability

The IHS data set does not contain margins of error.

Geographic Levels

IHS facilities are present only in 37 states of the country.

Suppression Rules

The IHS data set does not contain any suppressed information.

Variable Notes

Table 27.1 below provides information on the variable availability across years. Table 27.2 provides more information on what numerator and denominator variables were drawn for IHS variables in the SDOH Database.

Table 27.1. Variable availability across years, IHS

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
IHS_HEALTH_FACILITY	X														X
IHS_HEALTH_FACILITY_RATE	X														X

Table 27.2. Variable definitions and specifications, IHS

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (Where Applicable)	Denominator Label
IHS_HEALTH_FACILITY	Total number of Indian Health Service health care facilities	Count of ASUFAC.AND.ASUFAC.MODIFIER for all facilities except FACILITY TYPE=Dental Clinic	n/a	n/a	n/a
IHS_HEALTH_FACILITY RATE	Total number of Indian Health Service health care facilities per 1,000 population	Count of ASUFAC.AND.ASUFAC.MODIFIER for all facilities except FACILITY TYPE=Dental Clinic	n/a	ACS_TOT_POP_WT	Total weighted population

Table 27.3 provides important variable notes for users of the SDOH Database to consider when working with IHS variables.

Table 27.3. IHS variable notes

Variable Name	Variable Label	Notes
IHS_HEALTH_FACILITY	Total number of Indian Health Service health care facilities	<p>The variable includes IHS facilities that provide direct care, tribally operated health care services, and urban Indian health care services and resource centers.</p> <p>The variable includes Alaska village clinics, alcohol and substance abuse treatment facilities, behavioral health facilities, health centers, health locations, health stations, hospitals, psychiatric inpatient facilities, school health centers, standalone urgent care facilities, youth regional treatment centers, and referral centers.</p> <p>The variable does not include dental clinics.</p>

Term Definitions

Table 27.4 provides important term definitions for users of the SDOH Database to consider when working with IHS variables.

Table 27.4. Term definitions, IHS

Term	Definition
Alaska Village Clinic	A healthcare facility located exclusively within Alaska Native communities and typically leased by IHS; care is usually provided by a community health aide or practitioner
Alcohol Substance Abuse Treatment Facilities	A healthcare facility where alcohol or substance abuse care is provided.
Behavioral Health Facilities	A healthcare facility where behavioral health care is provided.
Elder Care	A daytime facility where those who are retired may receive care and support, returning to their home environment at night.
Health Center	A facility physically separated from a hospital, with a full range of ambulatory services including physician services, nursing, pharmacy, laboratory, and x-ray. Services are available at least 40 hours per week for ambulatory care.
Health Location	An ambulatory care location operating with visiting providers less than one day per week in a remote community that provides limited primary care and dental services.
Health Station	A facility, physically separated from a hospital or health center, where primary care provider services are available on a regularly scheduled basis but for less than 40 hours per week.
Hospital	A permanent facility which contains inpatient beds, organized staff including physician services, continuous nursing services and that provides comprehensive health care including diagnosis and treatment.
Psychiatric Inpatient	A permanent facility which contains inpatient beds, organized staff including physician services, continuous nursing services and that provides exclusively psychiatric or behavioral health care including diagnosis and treatment.
School Health Center	A facility which is a health center and primarily serves students.
Standalone Urgent Care Facility	A facility physically separated from a hospital where urgent health care is provided. Weekend and evening hours are expected.
Youth Regional Treatment Center	A residential treatment facility that provides substance abuse services and other behavioral health interventions for Native American and Alaskan Native youth.

28. Medicare Advantage State/County Penetration Files (MAP)

Sponsor

U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services (CMS)

Description

The MAP files contain county-level data on Medicare Advantage (MA) eligibility and enrollment. CMS maintains these files as part of the MA/Part D Contract and Enrollment data repository, which houses publicly available data such as contracts and plans, enrollment numbers, and service area information. Monthly data files are available spanning 2008–2021.

Penetration data are derived by dividing the number of enrollees by the number of eligible individuals and multiplying the result by 100. Counties for which enrollment data have been suppressed do not have penetration estimates.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 - 2019
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** MP_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database contains MA data published in June of each year. Variables come directly from MAP State/County Penetration files but were renamed for clarity and to fit the naming conventions in the SDOH Database.

Resources

Data for the month of June from each year was downloaded from (last retrieved February, 2022):
<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MCRAdvPartDEnrolData/MA-State-County-Penetration>.

Suggested Citation

AHRQ SDOH Database (v1), from the Centers for Medicare & Medicaid Services. (2020, June). MA State/County Penetration, from <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MCRAdvPartDEnrolData/MA-State-County-Penetration>.

Data Set Notes

Reliability

MAP data do not contain margins of error.

Geographic Levels

The MAP data file lists enrollees by their legal state and county of residence (this is the county that Medicare used for payment purposes). For example, an individual who moved from Baltimore to Los Angeles and enrolled in XYZ Health Plan of California would be paid at the Baltimore rate until the Social Security system recorded the change of address. Consequently, the XYZ enrollment records will include both the California counties in its approved contract service area as well as the counties throughout the United States where XYZ has enrollees.

For two counties Rio Grande Municipio, Puerto Rico (2010-2015) and Pinal County Arizona (2010) the Medicare Advantage Penetration Rate is above 100%. The source data file has an error for these counties in the years specified as it does not include a decimal point where it ought to. This error has been corrected in the SDOH Database. An example is shown below:

SDOH File Year	County	Enrolled in Medicare Advantage	Eligible for Medicare	MA Penetration Rate from Source File	MA Penetration Rate (Corrected)
2015	Río Grande Municipio	4797	4198	11427	114.27
2014	Río Grande Municipio	4746	4135	11478	114.78

Suppression Rules

The privacy laws of HIPAA have been interpreted to prohibit publishing enrollment data with values of 10 or less. Consequently, some enrollment data in this SDOH Database are missing due to suppression in the source data.

Variable Notes

Table 28.1 below provides information on the variable availability across years. Table 28.2 provides more information on what numerator and denominator variables were drawn for MP variables in the SDOH Database.

Table 28.1. Variable availability across years, MP

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MP_MEDICARE_AdVTG_ENROLLED	X			X	X	X	X	X	X	X	X	X	X	X	X
MP_MEDICARE_ELIGIBLES	X			X	X	X	X	X	X	X	X	X	X	X	X
MP_PCT_AdVTG_PEN	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 28.2. Variable definitions and specifications, MP

Variable Name	Variable Label	Numerator	Numerator Label	Denominator (WHERE APPLICABLE)
MP_MEDICARE_ELIGIBLES	Total number of Medicare eligibles in the county	Eligibles	The number of Medicare eligibles in the county	n/a
MP_MEDICARE_AdVTG_ENROLLED	Total number of Medicare Advantage enrollees in the county	Enrolled	The number of Medicare Advantage enrollees in the county (10 or fewer = missing)	n/a
MP_PCT_AdVTG_PEN	Percentage of Medicare eligible beneficiaries enrolled in a Medicare Advantage plan per 100 population	Penetration	Derived field that equals the ratio of enrollees over eligibles x 100	n/a

Other notes

The source data contains some records that have not yet been associated with a specific state and county or a county within a state. These records have not been included within the SDOH Database.

The penetration data is derived by dividing the number of enrollees by the number of eligibles and multiplying the result by 100. The source data does not include this calculation for records where the enrollment data has been suppressed because the enrollment was 10 or less.

29. Medicare Geographic Variation Public Use File (MGV)

Sponsor

U.S. Department of Health and Human Services (DHHS), Centers for Medicare & Medicaid Services (CMS)

Description

The Centers for Medicare & Medicaid Services (CMS) has developed a public use file that enables researchers and policymakers to evaluate trends in health care utilization and spending by geography for the Medicare fee-for-service population. The Medicare Geographic Variation Public Use File (MGV) includes demographic, spending, utilization, and quality indicators at the state level (including the District of Columbia, Puerto Rico, and the Virgin Islands), Hospital Referral Region (HRR) level, and county level.

This public use file is based primarily on information from CMS's Chronic Conditions Data Warehouse (CCW), which contains 100 percent of Medicare claims for beneficiaries who are enrolled in the fee-for-service (FFS) program as well as enrollment and eligibility data. The Geographic Variation Public Use File is composed of 12 separate subfiles: two files with state and county-level data, four files with only state-level data, and six files with HRR-level data. The files are presented in two different formats. The "Table" files present indicators for all states, counties, or HRRs, and can easily be exported from Excel to another data analysis program for additional analysis, while the corresponding "Report" files allow users to compare a specific state, county, or HRR to national Medicare benchmarks. The state- and HRR-level data include age breakouts (under 65, and 65 or older).

Inclusion in the SDOH Database

- **Years available in the SDOH Database:** 2009 – 2019
- **SDOH domain(s):**
 - Healthcare context
- **SDOH variable naming convention:** MGV_[VARNAME]
- **SDOH Database geographic level(s):** County

The MGV data used in the SDOH Database come from the Centers for Medicare & Medicaid Services (CMS) administrative claims for Medicare beneficiaries enrolled in the fee-for-service (FFS) program. These data are available from CMS through the Chronic Conditions Warehouse (CCW; www.ccwdata.org/web/guest/home). The CCW contains 100 percent of Medicare claims for beneficiaries who are enrolled in the fee-for-service (FFS) program as well as enrollment and eligibility data. Since the CCW was designed as a database to support research on chronically ill beneficiaries, it contains other valuable features, such as a unique identifier for each beneficiary

that make it possible to track spending and utilization for individual beneficiaries over time. It also contains flags that indicate if a beneficiary has one or more of 27 specific chronic conditions.

Physician services are defined using the Berenson-Eggers Type of Service (BETOS) classification scheme, which groups services into six major categories: physician evaluation and management, physician procedures, imaging, laboratory tests, durable medical equipment, and other. The total number of distinct BETOS codes is much larger – about 120 – when you count the numerous subgroupings within those major categories.

Resources

Data were downloaded from: <https://data.cms.gov/summary-statistics-on-use-and-payments/medicare-geographic-comparisons/medicare-geographic-variation-by-national-state-county> (last retrieved February, 2022).

Each file has a Documentation section which explains the individual indicators in more detail. Information on the sample population and the methodology used to calculate these indicators can be found in the [Methodological Overview](#) paper and the [Technical Supplement on Standardization](#) paper.

Suggested Citation

AHRQ SDOH Database (v1), from the Centers for Medicare & Medicaid Services. (2020, June). Medicare Geographic Variation Public Use File, from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation/GV_PUF.

Data Set Notes

Reliability

The MGV data set does not include margins of error.

Geographic Levels

Medicare spending is assigned to geographies based on where beneficiaries live, rather than where they receive care. Hospital referral regions (HRRs), states and counties are used as geographic units of analysis in the source data, with only county-level variables included in the SDOH Database.

Suppression Rules

The privacy laws of HIPAA have been interpreted to prohibit publishing enrollment data with values of 10 or less. Consequently, some enrollment data in the MGV file have been assigned an asterisk (*) since enrollment was less than 11. These suppressed values are presented as missing in the SDOH Database.

Variable Notes

Table 29.1 below provides information on the variable availability across years. Table 29.2 provides more information on what numerator and denominator variables were drawn for MGV variables in the SDOH Database.

Table 29.1. Variable availability across years, MGV

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MGV_PCT_BEN_FFS_BLACK	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PCT_BEN_FFS_HISPANIC	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PCT_BEN_FFS_WHITE	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PCT_MEDICAID	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_ACTUAL_EM	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_ACTUAL_HC	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_ACTUAL_IP	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_ACTUAL_OP	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_ACTUAL_PA	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_STD_EM	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_STD_HC	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_STD_IP	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_STD_OP	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_PER_CAPITA_STD_PA	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_TOT_BEN_FFS	X			X	X	X	X	X	X	X	X	X	X	X	X
MGV_TOT_BEN_PART_A_B	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 29.2. Variable definitions and specifications, MGV

Variable Name	Variable Label	Numerator (and Label)	Denominator (WHERE APPLICABLE)
MGV_PCT_MEDICAID	Percentage of Medicare FFS beneficiaries who are eligible for Medicaid for at least one month	Percent Eligible for Medicaid	n/a
MGV_TOT_BEN_PART_A_B	Total number of Medicare beneficiaries with Part A and Part B	Beneficiaries with Part A and Part B	n/a
MGV_TOT_BEN_FFS	Total number of Medicare FFS beneficiaries	FFS Beneficiaries	n/a
MGV_PCT_BEN_FFS_WHITE	Percentage of Medicare FFS beneficiaries who are non-Hispanic White	Percent Non-Hispanic White	n/a
MGV_PCT_BEN_FFS_BLACK	Percentage of Medicare FFS beneficiaries who are Black or African American	Percent African American	n/a
MGV_PCT_BEN_FFS_HISPANIC	Percentage of Medicare FFS beneficiaries who are Hispanic	Percent Hispanic	n/a
MGV_PER_CAPITA_ACTUAL_IP	Per capita Medicare inpatient actual payment	IP Per Capita Actual Costs	n/a
MGV_PER_CAPITA_STD_IP	Per capita Medicare inpatient standardized payment	IP Per Capita Standardized Costs	n/a
MGV_PER_CAPITA_ACTUAL_OP	Per capita Medicare outpatient actual payment	OP Per Capita Actual Costs	n/a
MGV_PER_CAPITA_STD_OP	Per capita Medicare outpatient standardized payment	OP Per Capita Standardized Costs	n/a
MGV_PER_CAPITA_ACTUAL_EM	Per capita Medicare E&M actual payment	E&M Per Capita Actual Costs	n/a
MGV_PER_CAPITA_STD_EM	Per capita Medicare E&M standardized payment	E&M Per Capita Standardized Costs	n/a
MGV_PER_CAPITA_ACTUAL_PA	Per capita Medicare post acute care actual payment	PAC: HH Per Capita Actual Costs + PAC: LTCH Per Capita Actual Costs + PAC: IRF Per Capita Actual Costs +PAC: SNF Per Capita Actual Costs	n/a
MGV_PER_CAPITA_STD_PA	Per capita Medicare post acute care standardized payment	PAC: HH Per Capita Standardized Costs + PAC: LTCH Per Capita Standardized Costs + PAC: IRF Per Capita Standardized Costs + PAC: SNF Per Capita Standardized Costs	n/a
MGV_PER_CAPITA_ACTUAL_HC	Per capita Medicare FQHC/RHC actual payment	FQHC/RHC Per Capita Actual Costs	n/a
MGV_PER_CAPITA_STD_HC	Per capita Medicare FQHC/RHC standardized payment	FQHC/RHC Per Capita Standardized Costs	n/a

Table 29.3 provides important variable notes for users of the SDOH Database to consider when working with MGV variables.

Table 29.3. MGV variable notes

Variable Name	Variable Label	Notes
MGV_PER_CAPITA_STD_HC	Per capita FQHC/RHC standardized payment	<p>The standardized amount starts with the actual payment amount on the claim which is then adjusted for differences in wages using the wage index applicable in the area.</p> <p>The CBSA of the provider is taken from the OSCAR provider database and the associated wage index is used from the OPPS wage index crosswalk on the CMS website. For Rural Health Clinics (RHCs), if the CBSA of a provider cannot be determined, the state rural wage index is used. For Federally Qualified Health Centers (FQHCs), a wage index of 1.0 would be used.</p>
MGV_PER_CAPITA_ACTUAL_IP	Per capita inpatient actual payment	<p>The standardization method for acute hospital claims follows the Inpatient Prospective Payment System (IPPS) payment rules. All IPPS hospitals, as well as Maryland waiver hospitals, Critical Access Hospitals (CAHs), and cancer hospitals are included. Although Maryland hospitals, CAHs and cancer hospitals are paid under special systems, they provide a similar set of acute hospital services as IPPS hospitals. Since the goal of standardization is to allow for resource use comparisons across the country on an equal basis, all acute hospitals are included.</p>
MGV_PER_CAPITA_STD_IP	Per capita inpatient standardized payment	<p>The standardization method for acute hospital claims follows the Inpatient Prospective Payment System (IPPS) payment rules. All IPPS hospitals, as well as Maryland waiver hospitals, Critical Access Hospitals (CAHs), and cancer hospitals are included. Although Maryland hospitals, CAHs and cancer hospitals are paid under special systems, they provide a similar set of acute hospital services as IPPS hospitals. Since the goal of standardization is to allow for resource use comparisons across the country on an equal basis, all acute hospitals are included.</p>

Other notes

The MGV excludes beneficiaries who were enrolled at any point during the year in a Medicare Advantage (MA) plan. There were 24.1 million beneficiaries in MA plans in 2019, about 37.5 percent of the overall total.

The MGV also excludes beneficiaries who were enrolled at any point in the year in Part A only or Part B only (roughly 7.1 million in 2019, about 11 percent of the overall total).

Analytic files do include beneficiaries who died during the calendar year (about 2.1 percent of the study population) as long as they were not excluded for one of the reasons outlined above.

Term Definitions

Table 29.4 provides important term definitions for users of the SDOH Database to consider when working with MGV variables.

Table 29.4. Term definitions, MGV

Term	Definition
Fee-for-service (FFS)	Fee-for-service is a system of health care payment in which a provider is paid separately for each particular service rendered. Original Medicare is an example of fee-for-service coverage. Alternatives to fee-for-service programs include value-based or bundled payments, in which providers are paid based on outcomes and efficiency, rather than for each separate procedure that they perform.
Part A	Medicare Part A hospital insurance covers inpatient hospital care, skilled nursing facility, hospice, lab tests, surgery, home health care.
Part B	Medicare Part B covers physician services, outpatient hospital services, certain home health services, durable medical equipment, and certain other medical and health services not covered by Medicare Part A.
Standardized	<p>The standardized payment methodology:</p> <ul style="list-style-type: none"> a) Eliminates adjustments made to national allowed amounts to reflect differences in regional labor costs and practice expenses (measured by hospital wage indexes and geographic practice cost indexes); b) Substitutes a national amount in the case of services paid on the basis of state fee schedules. c) Eliminates payments to providers that support larger Medicare program goals, such as the payments to hospitals for graduate medical education (GME), indirect medical education (IME), and for serving a large population of poor and uninsured (i.e., disproportionate share payments (DSH)) d) Maintains differences that exist in actual allowed amounts resulting from: the choice of setting in which a service is provided; the choice about who provides the service; the choice as to whether to provide multiple services in the same encounter; and differences in provider experience with regard to outlier cases. e) Treats outlier payments as a given rather than trying to determine what outlier payment would have been in a standardized world. Actual outlier payments are adjusted for differences in wages using the wage index.

30. Minority Health Social Vulnerability Index (MHSVI)

Sponsor

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Office of Minority Health, Agency for Toxic Substances and Disease Registry

Description

The CDC partnered with the Office of Minority Health at the U.S. Department of Health and Human Services to launch the Minority Health Social Vulnerability Index (MHSVI) in 2021. The MHSVI intends to support the identification of racial and ethnic minority communities at risk for disproportionate impact and adverse outcomes due to the COVID-19 pandemic. The Minority Health Social Vulnerability Index extends the Social Vulnerability Index (SVI), which concerns community resilience when faced with natural or human-caused disasters, or disease outbreaks.

The six summary theme ranking variables include the following: socioeconomic status, household composition and disability, minority status and language, housing type and transportation, health care infrastructure and access, and medical vulnerability. These are then combined to create an overall minority health vulnerability index variable.

The MHSVI expands the SVI's Minority Status and Language theme by including statistics for the five racial/ethnic minority groups currently defined by the 1997 OMB Directive 15 and the top five languages spoken by limited English proficient (LEP) populations at the county level. For the Socioeconomic Status theme, Household Composition and Disability theme, and Housing Type and Transportation theme, MHSVI variables are the same as the SVI equivalents in the SDOH Database (CDCSVI_RPL_THEME1_SOCIOECO, CDCSVI_RPL_THEME2_HH_COMP, and CDCSVI_RPL_THEME4_HH_TRANS). The Health Care Infrastructure and Access theme and Medical Vulnerability theme are specific to the MHSVI. Each theme is reported in percentile ranking ranging from 0 (least vulnerable) to 1 (most vulnerable). An overall percentile ranking combines all themes. All percentile ranking values range from 0 to 1, with higher values indicating greater vulnerability.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2018
- ▶ **SDOH domain(s):**
 - Social context
- ▶ **SDOH variable naming convention:** MHSVI_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The 2018 SDOH Database county-level file includes the percentile ranking for each theme and for combined themes. All variables were pulled directly from MHSVI's county-level estimates and were renamed from the original fields for clarity and consistency with other SDOH file variables.

Resources

County-level data (mhi_svi_county_2018.csv) were downloaded from <https://www.minorityhealth.hhs.gov/minority-health-svi/>.

Data dictionary (MinorityHealthSVI_DataDictionary_2018) is also available to download from <https://www.minorityhealth.hhs.gov/minority-health-svi/>.

Minority Health Social Vulnerability Index Overview: https://www.minorityhealth.hhs.gov/minority-health-svi/assets/downloads/MH%20SVI%20Overview_11.19.2021.pdf.

Minority Health Social Vulnerability Index Fact Sheet:
https://www.minorityhealth.hhs.gov/Assets/PDF/MH%20SVI%20Fact%20Sheet_7.15.2021.pdf.

Minority Health Social Vulnerability Index Explorer
<https://onemap.cdc.gov/Portal/apps/MapSeries/index.html?appid=3384875c46d649ee9b452913fd64e3c4>.

Suggested Citation

AHRQ SDOH Database (v1), from the Centers for Disease Control and Prevention; U.S. Department of Health and Human Services; Agency for Toxic Substances and Disease Registry. Minority Health Social Vulnerability Index 2018. Retrieved July 2021 from <https://www.minorityhealth.hhs.gov/minority-health-svi/>.

Data Set Notes

Reliability

Point estimates and margins of error for individual variables that contribute to MHSVI are available in the original data source. Rio Arriba County in New Mexico (FIPSCODE 35039) is the only non-territory county missing some values.

Geographic Levels

Variables from MHSVI are available at the county level.

Suppression Rules

MHSVI data do not contain suppression rules.

Variable Notes

Table 30.1 below provides information on the variable availability across years. Table 30.2 provides data source for variables comprising each MHSVI variable, and more information on what numerator and denominator variables were drawn for MHSVI variables.

Table 30.1. Variable availability across years, MHSVI

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MHSVI_RPL_THEME1_SOCIECO	X												X		
MHSVI_RPL_THEME2_HH_COMP	X												X		
MHSVI_RPL_THEME3_MINO	X												X		
MHSVI_RPL_THEME4_HH_TRANS	X												X		
MHSVI_RPL_THEME5_HCI_ACCESS	X												X		
MHSVI_RPL_THEME6_MV	X												X		
MHSVI_RPL_THEMES_ALL	X												X		

Table 30.2. Variable definitions and specifications, MHSVI

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator (WHERE APPLICABLE)
MHSVI_RPL_THEME1_SOCIECO	Minority Health Social Vulnerability Index: Percentile ranking for socioeconomic theme	Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry Social Vulnerability Index	RPL_THEME1; Percentile ranking for theme 1	n/a
MHSVI_RPL_THEME2_HH_COMP	Minority Health Social Vulnerability Index: Percentile ranking for household composition theme	Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry Social Vulnerability Index	RPL_THEME2; Percentile ranking for theme 2	n/a
MHSVI_RPL_THEME3_MINO	Minority Health Social Vulnerability Index: Percentile ranking for minority status/language theme	American Community Survey	RPL_THEME3; Percentile ranking for theme 3	n/a
MHSVI_RPL_THEME4_HH_TRANS	Minority Health Social Vulnerability Index: Percentile ranking for housing/transportation theme	Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry Social Vulnerability Index	RPL_THEME4; Percentile ranking for theme 4	n/a

Variable Name	Variable Label	Source	Numerator Source Variable; Label	Denominator (WHERE APPLICABLE)
MHSVI_RPL_THEME5_HCI_ACCESS	Minority Health Social Vulnerability Index: Percentile ranking for health care infrastructure/access theme	Homeland Infrastructure Foundation Level Data Open, American Community Survey	RPL_THEME5; Percentile ranking for theme 5	n/a
MHSVI_RPL_THEME6_MV	Minority Health Social Vulnerability Index: Percentile ranking for medical vulnerability theme	Centers for Disease Control and Prevention Interactive Atlas of Heart Disease and Stroke, US Diabetes Surveillance System, Centers for Disease Control and Prevention Division of Diabetes Translation, Institute for Health Metrics and Evaluation, American Community Survey	RPL_THEME6; Percentile ranking for theme 6	n/a
MHSVI_RPL_THEMES_ALL	Percentile ranking for overall Minority Health Social Vulnerability Index		RPL_THEMES; Percentile ranking for all themes	n/a

31. Mapping Medicare Disparities Tool

Sponsor

U.S. Department of Health and Human Services, Office of Minority Health, Centers for Medicare & Medicaid Services (CMS)

Description

CMS launched the Mapping Medicare Disparities (MMD) Tool in 2016. It is an interactive visualization tool centered around a state and county-level map of the United States. It allows users to easily identify the geographic disparities in utilization and outcome variables in the Medicare population. Originally focused on chronic condition prevalence, the tool currently contains many additional variables across multiple domains, such as costs, service utilization, quality of care, and health outcomes.

The MMD Tool – Population View is designed to identify areas of disparities between subpopulations (e.g., racial and ethnic groups) in health outcomes, utilization, and spending. This information provides a starting point for understanding health-related data geographically and may be used to target populations for potential interventions. The MMD Tool presents various health-related variables by state/territory, county, urban vs. rural counties within a state, age, sex, original reason for entitlement, and dual eligibility status (beneficiaries eligible for both Medicare and Medicaid). The MMD Tool also includes Puerto Rico (at the territory and county level) as well as U.S. Virgin Islands, Guam, American Samoa, and Northern Marianas (at the territory-level without county detail). The MMD Tool also offers built-in “analyses” to investigate disparities (1) within counties and across racial and ethnic groups, and (2) within racial and ethnic groups and across counties.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2019, 2020
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** MMD_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database contains MMD variables that span the SDOH domain of healthcare context. The data used in the Population View are based on CMS administrative enrollment and claims data for Medicare beneficiaries enrolled in the fee-for-service program. These data are available from the CMS Chronic Condition Data Warehouse (CCW), a database with 100 percent of the Medicare enrollment and fee-for-service claims data. The prevalence rates are based on 100 percent of Part A and Part B claims. The hospital utilization, preventable hospitalization, readmission, and mortality rates are based on 100 percent inpatient claims, while emergency department utilization rates are based on 100 percent of inpatient and outpatient claims.

Resources

The MMD Tool is available at: <https://data.cms.gov/tools/mapping-medicare-disparities-by-population>.

The MMD Tool allows users to download the national, state/territory, county, or trend profile data via the “Download Data” button below the tables and graphs. This feature allows users to save the data on their computers in a .csv format. Data was retrieved in November, 2021.

Technical documentation is available here: <https://www.cms.gov/About-CMS/Agency-Information/OMH/Downloads/Mapping-Technical-Documentation.pdf>.

Details FAQs are available here: <https://www.cms.gov/About-CMS/Agency-Information/OMH/Downloads/MappingPublicFAQs.pdf>.

Suggested Citation

AHRQ SDOH Database (v1), from the Centers for Medicare & Medicaid Services, Office of Minority Health. (2020). Medicare Mapping Disparities Tool, from <https://data.cms.gov/tools/mapping-medicare-disparities-by-population>.

Data Set Notes

Reliability

The MMD data source file does not include margins of error.

Geographic Levels

Medicare spending is assigned to geographies based on where beneficiaries live, rather than where they received care. Hospital referral regions (HRRs), states and counties are contained in the MMD data source file, but the SDOH Database only contains county-level information.

Suppression Rules

To maintain beneficiary confidentiality and privacy, the underlying data are not individually identifiable health information in compliance with the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule. Except for mortality and readmission variables, suppression is applied as follows:

- A cell (as denoted by a combination of the demographic variables) must have at least eleven (11) individuals, which is the value of the denominator, otherwise this cell is omitted completely from the MMD Tool.
- Instead of the actual values of the denominator, the following five (5) categories are shown for the denominator: (11 – 499; 500 – 999; 1,000 – 4,999; 5,000 – 9,999; ≥ 10,000).

- When percentages are reported, any percentage with a numerator that contains fewer than three but greater than zero individuals is set to zero percent. Any corresponding dollar variables are also set to missing.

Variable Notes

Table 31.1 below provides information on the variable availability across years. Table 31.2 provides more information on what numerator and denominator variables were drawn for MMD variables in the SDOH Database.

Table 31.1. Variable availability across years, MMD

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MMD_ACUTE_PQI_AIAN_RATE	X													X	X
MMD_ACUTE_PQI_ASIAN_RATE	X													X	X
MMD_ACUTE_PQI_BLACK_RATE	X													X	X
MMD_ACUTE_PQI_F_RATE	X													X	X
MMD_ACUTE_PQI_HISP_RATE	X													X	X
MMD_ACUTE_PQI_M_RATE	X													X	X
MMD_ACUTE_PQI_OTHER_RATE	X													X	X
MMD_ACUTE_PQI_WHITE_RATE	X													X	X
MMD_ANXIETY_DISD	X													X	X
MMD_BIPOLAR_DISD	X													X	X
MMD_CHRONIC_PQI_AIAN_RATE	X													X	X
MMD_CHRONIC_PQI_ASIAN_RATE	X													X	X
MMD_CHRONIC_PQI_BLACK_RATE	X													X	X
MMD_CHRONIC_PQI_F_RATE	X													X	X
MMD_CHRONIC_PQI_HISP_RATE	X													X	X
MMD_CHRONIC_PQI_M_RATE	X													X	X
MMD_CHRONIC_PQI_OTHER_RATE	X													X	X
MMD_CHRONIC_PQI_WHITE_RATE	X													X	X
MMD_DEPR_DISD	X													X	X
MMD_ED_VISITS_AIAN_RATE	X													X	X
MMD_ED_VISITS_ASIAN_RATE	X													X	X
MMD_ED_VISITS_BLACK_RATE	X													X	X
MMD_ED_VISITS_DUAL_RATE	X													X	X
MMD_ED_VISITS_F_RATE	X													X	X
MMD_ED_VISITS_HISP_RATE	X													X	X
MMD_ED_VISITS_M_RATE	X													X	X
MMD_ED_VISITS_MED_RATE	X													X	X
MMD_ED_VISITS_OTHER_RATE	X													X	X

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MMD_ED_VISITS_WHITE_RATE	X													X	X
MMD_OUD_IND	X													X	X
MMD_OVERALL_PQI_AIAN_RATE	X													X	X
MMD_OVERALL_PQI_ASIAN_RATE	X													X	X
MMD_OVERALL_PQI_BLACK_RATE	X													X	X
MMD_OVERALL_PQI_F_RATE	X													X	X
MMD_OVERALL_PQI_HISP_RATE	X													X	X
MMD_OVERALL_PQI_M_RATE	X													X	X
MMD_OVERALL_PQI_OTHER_RATE	X													X	X
MMD_OVERALL_PQI_WHITE_RATE	X													X	X
MMD_PERSONALITY_DISD	X													X	X
MMD_READM_AIAN_RATE	X													X	X
MMD_READM_ASIAN_RATE	X													X	X
MMD_READM_BLACK_RATE	X													X	X
MMD_READM_F_RATE	X													X	X
MMD_READM_HISP_RATE	X													X	X
MMD_READM_M_RATE	X													X	X
MMD_READM_OTHER_RATE	X													X	X
MMD_READM_WHITE_RATE	X													X	X
MMD_THREE_OR_MORE_COND	X													X	

Table 31.2. Variable definitions and specifications, MMD

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	DENOMINATOR (WHERE APPLICABLE)
MMD_OVERALL_PQI_M_RATE	Prevention quality overall composite per 100,000 male Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_OVERALL_PQI_F_RATE	Prevention quality overall composite per 100,000 female Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_OVERALL_PQI_WHITE_RATE	Prevention quality overall composite per 100,000 White Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_OVERALL_PQI_BLACK_RATE	Prevention quality overall composite per 100,000 Black Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_OVERALL_PQI_OTHER_RATE	Prevention quality overall composite per 100,000 other race Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_OVERALL_PQI_ASIAN_RATE	Prevention quality overall composite per 100,000 Asian or Pacific Islander Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_OVERALL_PQI_HISP_RATE	Prevention quality overall composite per 100,000 Hispanic Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_OVERALL_PQI_AIAN_RATE	Prevention quality overall composite per 100,000 American Indian or Alaska Native Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ACUTE_PQI_M_RATE	Prevention quality acute composite per 100,000 male Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ACUTE_PQI_F_RATE	Prevention quality acute composite per 100,000 female Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ACUTE_PQI_WHITE_RATE	Prevention quality acute composite per 100,000 White Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ACUTE_PQI_BLACK_RATE	Prevention quality acute composite per 100,000 Black Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ACUTE_PQI_OTHER_RATE	Prevention quality acute composite per 100,000 other race Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ACUTE_PQI_ASIAN_RATE	Prevention quality acute composite per 100,000 Asian or Pacific Islander Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ACUTE_PQI_HISP_RATE	Prevention quality acute composite per 100,000 Hispanic Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ACUTE_PQI_AIAN_RATE	Prevention quality acute composite per 100,000 American Indian or Alaska Native Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_CHRONIC_PQI_M_RATE	Prevention quality chronic composite per 100,000 male Medicare (dual and non-dual) beneficiaries	analysis_value	n/a

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	DENOMINATOR (WHERE APPLICABLE)
MMD_CHRONIC_PQI_F_RATE	Prevention quality chronic composite per 100,000 female Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_CHRONIC_PQI_WHITE_RATE	Prevention quality chronic composite per 100,000 White Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_CHRONIC_PQI_BLACK_RATE	Prevention quality chronic composite per 100,000 Black Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_CHRONIC_PQI_OTHER_RATE	Prevention quality chronic composite per 100,000 other race Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_CHRONIC_PQI_ASIAN_RATE	Prevention quality chronic composite per 100,000 Asian or Pacific Islander Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_CHRONIC_PQI_HISP_RATE	Prevention quality chronic composite per 100,000 Hispanic Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_CHRONIC_PQI_AIAN_RATE	Prevention quality chronic composite per 100,000 American Indian or Alaska Native Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ED_VISITS_M_RATE	Emergency department visits per 1,000 male Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ED_VISITS_F_RATE	Emergency department visits per 1,000 female Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ED_VISITS_WHITE_RATE	Emergency department visits per 1,000 White Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ED_VISITS_BLACK_RATE	Emergency department visits per 1,000 Black Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ED_VISITS_OTHER_RATE	Emergency department visits per 1,000 other race Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ED_VISITS_ASIAN_RATE	Emergency department visits per 1,000 Asian or Pacific Islander Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ED_VISITS_HISP_RATE	Emergency department visits per 1,000 Hispanic Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ED_VISITS_AIAN_RATE	Emergency department visits per 1,000 American Indian or Alaska Native Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_ED_VISITS_MED_RATE	Emergency department visits per 1,000 Medicare only beneficiaries	analysis_value	n/a
MMD_ED_VISITS_DUAL_RATE	Emergency department visits per 1,000 dual beneficiaries	analysis_value	n/a
MMD_READM_M_RATE	All cause readmissions per 100 male admissions	analysis_value	n/a
MMD_READM_F_RATE	All cause readmissions per 100 female admissions	analysis_value	n/a
MMD_READM_WHITE_RATE	All cause readmissions per 100 White admissions	analysis_value	n/a

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	DENOMINATOR (WHERE APPLICABLE)
MMD_READM_BLACK_RATE	All cause readmissions per 100 Black admissions	analysis_value	n/a
MMD_READM_OTHER_RATE	All cause readmissions per 100 other race admissions	analysis_value	n/a
MMD_READM_ASIAN_RATE	All cause readmissions per 100 Asian or Pacific Islander admissions	analysis_value	n/a
MMD_READM_HISP_RATE	All cause readmissions per 100 Hispanic admissions	analysis_value	n/a
MMD_READM_AIAN_RATE	All cause readmissions per 100 American Indian or Alaska Native admissions	analysis_value	n/a
MMD_ANXIETY_DISD	Prevalence of anxiety disorders among Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_BIPOLAR_DISD	Prevalence of bipolar disorder among Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_DEPR_DISD	Prevalence of depressive disorders among Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_PERSONALITY_DISD	Prevalence of personality disorders among Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_OUD_IND	Prevalence of the overarching Opioid Use Disorder (OUD) indicator among Medicare (dual and non-dual) beneficiaries	analysis_value	n/a
MMD_THREE_OR_MORE_COND	Percent of Medicare (dual and non-dual) beneficiaries with three or more claims-based conditions	analysis_value	n/a

Other Notes

Because the readmission and mortality rates are based on index admissions instead of the number of beneficiaries, the MMD Tool does not provide the analysis population categories for readmission and mortality rates. To calculate readmission rates, MMD uses CMS's risk-standardized 30-day all-cause readmission rate calculation methodology was used (available from QualityNet). This methodology calls for a risk-standardized readmission rate (RSRR), derived from the ratio of the number of "predicted" readmissions to the number of "expected" readmissions at a given hospital, multiplied by the national observed readmission rate. The number of predicted readmissions (the numerator) is estimated by the MMD tool using a hierarchical logistic regression model.

Term Definitions

Table 31.3 provides important term definitions for users of the SDOH Database to consider when working with MMD variables.

Table 31.3. Term definitions, MMD

Term	Definition
Prevention Quality Indicators (PQI)	Prevention Quality Indicators are variables that can be used with hospital inpatient discharge data to identify "ambulatory care sensitive conditions." These are conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.

32. Health Resources and Services Administration (HRSA) Medically Underserved Areas (MUA)

Sponsor

U.S. Department of Health and Human Services, Health Resources and Services Administration

Description

Medically underserved areas (MUAs) identify geographic areas with a lack of access to primary care services. This designation helps establish health maintenance organizations and community health centers. MUAs reflect a shortage of primary care health services within geographic areas.

Shortage designation begins with state Primary Care Offices (PCOs). State PCOs:

- Conduct needs assessments in their states,
- Determine what areas are eligible for designations, and
- Submit designation applications to HRSA.

HRSA then reviews the shortage designation applications. If they meet eligibility criteria, the designation is approved.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2019
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** HRSA_MUA_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County and census tract

MUA scores depend on the Index of Medical Underservice (IMU) calculated for the area or population proposed for designation. Under the established criteria, an area with an IMU of 62.0 or below qualifies for designation as an MUA. An area can receive an IMU score between 0-100.

The score is based on the following:

- Provider per 1,000 population ratio [28.7 points max]
- Percent of population at 100% of the Federal Poverty Level (FPL) [25.1 points max]
- Percent of population age 65 and over [20.2 points max]
- Infant Mortality Rate [26 points max] Methodology

Resources

Data were downloaded from: <https://data.hrsa.gov/data/download> (last retrieved March, 2022).

More information regarding medically underserved areas is available here:
<https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation>.

Suggested Citation

AHRQ SDOH Database (v1), from the Health Resources and Services Administration. (2021). Medically Underserved Areas, from <https://data.hrsa.gov/data/download>.

Data Set Notes

Reliability

The HRSA MUA data does not contain margins of error.

Geographic Levels

The SDOH includes variables at the county and census tract levels.

Suppression Rules

The HRSA MUA data set does not include suppression.

Variable Notes

Table 32.1 below provides information on the variable availability across years. Table 32.2 provides more information on what numerator and denominator variables were drawn for MUA variables in the SDOH Database.

Table 32.1. Variable availability across years, MUA

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
HRSA_MUA_CENSUS_TRACT			X	X	X	X	X	X	X	X	X	X	X	X	
HRSA_MUA_COUNTY	X			X	X	X	X	X	X	X	X	X	X	X	

Table 32.2. Variable definitions and specifications, MUA

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	DENOMINATOR (WHERE APPLICABLE)
HRSA_MUA_COUNTY	Medically Underserved Areas (MUAs) - County	Filter MUA/P Status Description=Designated and Medically Underserved Area/Population (MUA/P) Component Geographic Type Description=Single County; filter Population Type=Medically Underserved Area; deduplicate based on MUA/P Area Code after filtering to "Single County" by choosing latest designation date.	n/a
HRSA_MUA_CENSUS_TRACT	Medically Underserved Areas (MUAs) - Census Tract	Filter MUA/P Status Description=Designated and Filter Medically Underserved Area/Population (MUA/P) Component Geographic Type Description=Census Tract; filter Population Type=Medically Underserved Area; deduplicate based on MUA/P Area Code after filtering to "Census Tract" by choosing latest designation date.	n/a

Table 32.3 provides important variable notes for users of the SDOH Database to consider when working with MUA variables.

Table 32.3. MUA variable notes

Variable Name	Variable Label	Notes
HRSA_MUA_COUNTY	Medically Underserved Areas (MUAs) - County	Annual variables were created by filtering on the MUA Update Date to include any areas that had a designation status updated in the year in question, or before the year (for example for 2018, all updates made before 2018 and during 2018 were included in the 2018 SDOH county file).
HRSA_MUA_CENSUS_TRACT	Medically Underserved Areas (MUAs) - Census Tract	Annual variables were created by filtering on MUA/P Update Date to include any areas that had a designation status updated in the year in question or before the year (for example for 2018, all updates made before 2018 and during 2018 were included in the 2018 SDOH census tract file).

Other notes

Some counties and census tracts appear to have more than one MUA designation at the same component level (single county/census tract). The only difference between the two designations is usually the IMU Score, so it does not affect the variables in the SDOH Database. For reference, the counties with multiple designations are provided below:

- a. Holmes County, Florida
- b. Candler County, Georgia
- c. Cook County, Georgia
- d. Hart County, Georgia
- e. Jefferson County, Georgia

33. National Center for Health Statistics Urban-Rural Classification Scheme (NCHS)

Sponsor

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention

Description

NCHS has developed a six-level urban-rural classification scheme for U.S. counties and county-equivalent entities. The most urbanized category consists of “central” counties of large metropolitan areas, and the most rural category consists of nonmetropolitan “noncore” counties.

The 2006 NCHS scheme is based on the 2000 census and the December 2005 OMB delineation of MSAs and micropolitan statistical areas. Each schema includes six classifications. The 2013 NCHS Urban-Rural Classification Scheme for Counties is based on the delineation in February 2013 by the Office of Management and Budget (OMB) of metropolitan statistical areas (MSAs) and micropolitan statistical areas. The key differences between the 2006 and the 2013 NCHS Urban Rural Classification Schemes are contained in the definitions of small metropolitan, micropolitan, and noncore areas.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009-2020
- ▶ **SDOH domain(s):**
 - Geography
- ▶ **SDOH variable naming convention:** NCHS_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

Variables were renamed for clarity and to fit the naming conventions in the SDOH Database. Both the 2006 and 2013 classification schemes are included in each year of the SDOH county-level data files.

Resources

Data and Documentation:

https://www.cdc.gov/nchs/data_access/urban_rural.htm#Data_Files_and_Documentation (last retrieved November, 2022).

Suggested Citation

AHRQ SDOH Database (v1), from Ingram, D. D., & Franco, S. J. (2014, April). 2013 NCHS urban–rural classification scheme for counties. *Vital and Health Statistics. Series 2, Data Evaluation and Methods Research*. Number 166, 1–73. <https://pubmed.ncbi.nlm.nih.gov/24776070>.

Data Set Notes

Reliability

The levels of the NCHS scheme were chosen for their utility in studying health differences across the urban-rural continuum. The NCHS scheme has more metropolitan levels (four) than nonmetropolitan levels (two) because the large U.S. metropolitan population (in 2010, about 85% of the U.S. population) can support more levels for health analyses than the relatively small nonmetropolitan population.

Variable Notes

Table 33.1 below provides information on the variable availability across years. Table 33.2 provides more information on what numerator and denominator variables were drawn for NCHS variables in the SDOH Database.

Table 33.1. Variable availability across years, NCHS

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NCHS_URCS_2006	X			X	X	X	X	X	X	X	X	X	X	X	X
NCHS_URCS_2013	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 33.2. Variable definitions and specifications, NCHS

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
NCHS_URCS_2006	NCHS 2006 Rural-Urban Classification Scheme	Code 2006; NCHS Urban Rural Code (2006)	n/a
NCHS_URCS_2013	NCHS 2013 Rural-Urban Classification Scheme	Code 2013; NCHS Urban Rural Code (2013)	n/a

34. National Environmental Public Health Tracking Network (NEPHTN)

Sponsor

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention

Description

NEPHTN brings together health and environmental data from national, state, and city-level sources and provides supporting information to make the data easier to understand. It hosts data and information on environments and hazards, health effects, and population health, spanning 2001–2019.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2019
- ▶ **SDOH domain(s):**
 - Healthcare context
 - Physical infrastructure
- ▶ **SDOH variable naming convention:** NEPHTN_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

We downloaded data from the NEPHTN Data Explorer and renamed them for clarity and to fit the naming conventions in the SDOH Database. The availability of each variable in the SDOH Database varies by year.

Resources

Data were downloaded from <https://www.cdc.gov/ephtracking> (last retrieved March, 2022).

For more information about the state or national data sources for air quality data, see [Air quality data from EPA ambient air monitors](#), [Air quality estimates modeled using downscaling](#).

The Standardized Precipitation Evapotranspiration Index (SPEI) is an extension of the widely used Standardized Precipitation Index (SPI). The SPEI is designed to consider both precipitation and potential evapotranspiration (PET) in determining drought. SPEI captures the main impact of increased temperatures on water demand. –For more information, see [Standardized Precipitation Evapotranspiration Index \(SPEI\) | NCAR - Climate Data Guide \(ucar.edu\)](#).

Suggested Citation

AHRQ SDOH Database (v1), from the Centers for Disease Control and Prevention. (2020). National Environmental Public Health Tracking Network from <https://www.cdc.gov/ephtracking>.

Data Set Notes

Reliability

NEPHTN data do not contain margins of error.

Geographic Levels

The SDOH Database includes data taken directly from NEPHTN at the county level.

Suppression Rules

Suppression varies across variables:

- a) In general, blanks or missing data within the maps, tables, and charts may be due to one of the following reasons: (1) data were not collected, (2) data were collected but were not provided to CDC, or (3) data were incomplete or did not meet data quality standards.
- b) For air quality data:
 - a. Data completeness for each monitor was based on the availability of 11 observations for each of the four calendar quarters. Data are only provided for counties with monitors that pass the completeness criterion.
- c) For sex ratio data:
 - a. For years 2008 and later, all counts of less than 10 and corresponding rates have been suppressed for all counties and states. For years prior to 2008, non-zero counts less than 6 and corresponding rates have been suppressed to protect confidentiality for counties with less than 100,000 population.

Any suppressed data appears as missing in the SDOH Database.

Variable Notes

Table 34.1 below provides information on the variable availability across years. Table 34.2 provides more information on what numerator and denominator variables were drawn for NEPHTN variables in the SDOH Database.

Table 34.1. Variable availability across years, NEPHTN

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NEPHTN_ARSENIC_MEAN_CSW	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_ARSENIC_MEAN_POP	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_AVG_MODAAC_PM25	X			X	X	X	X	X	X	X	X				
NEPHTN_AVG_MONAAC_PM25	X			X	X	X	X	X	X	X	X	X	X		
NEPHTN_HEATIND_100	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_HEATIND_105	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_HEATIND_90	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_HEATIND_95	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_MAXDROUGHT	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_NUMDROUGHT	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_PCT_ARSENIC_MCL_GREATER10	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_PCT_ARSENIC_MCL_LESS10	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_PCT_ARSENIC_MCL_NOTDETECT	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_PCT_MODPD_PM25	X			X	X	X	X	X	X	X	X				
NEPHTN_PCT_MONPD_PM25	X			X	X	X	X	X	X	X	X	X	X		
NEPHTN_PCT_PARK	X				X						X				
NEPHTN_SEX_RATIO_RATE	X			X	X	X	X	X	X	X	X	X	X	X	
NEPHTN_TEMPERATURE_100	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_TEMPERATURE_105	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_TEMPERATURE_90	X			X	X	X	X	X	X	X	X	X	X	X	X
NEPHTN_TEMPERATURE_95	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 34.2. Variable definitions and specifications, NEPHTN

VARIABLE NAME	VARIABLE LABEL	SOURCE	NUMERATOR	DENOMINATOR (WHERE APPLICABLE)
NEPHTN_ARSENIC_MEAN_POP	Mean concentration of arsenic at the population level (micrograms per liter), by year	Safe Drinking Water Information System (SDWIS) Federal Reporting Services	Summation of Value by PWS ID within county	Total population served by community water system generated by summing the total "Population Served" to the county level
NEPHTN_ARSENIC_MEAN_CSW	Mean concentration of arsenic in community water systems (micrograms per liter), by year	Safe Drinking Water Information System (SDWIS) Federal Reporting Services	Summation of all CWS's (Mean concentration of arsenic in Community Water System x Population served by each CWS) in the county	Number of community water system in the county (obtained by collapsing the CWS cases per county)
NEPHTN_PCT_ARSENIC_MCL_NOTDETECT	Percentage of population in the county served by community water systems with yearly distribution of mean arsenic concentration not detected	Safe Drinking Water Information System (SDWIS) Federal Reporting Services	Population served by CWS with Maximum Contaminant Level: >10	Total population served by community water system generated by summing the total "Population Served" to the county level
NEPHTN_PCT_ARSENIC_MCL_LESS10	Percentage of population in the county served by community water systems with yearly distribution of mean arsenic concentration <10	Safe Drinking Water Information System (SDWIS) Federal Reporting Services	Population served by CWS with Maximum Contaminant Level: <10	Total population served by community water system generated by summing the total "Population Served" to the county level
NEPHTN_PCT_ARSENIC_MCL_GREATER10	Percentage of population in the county served by community water systems with yearly distribution of mean arsenic concentration >10	Safe Drinking Water Information System (SDWIS) Federal Reporting Services	Population served by CWS with Maximum Contaminant Level: not detected	Total population served by community water system generated by summing the total "Population Served" to the county level
NEPHTN_HEATIND_100	Total number of days with daily maximum heat index, absolute threshold: 100°F	North American Land Data Assimilation System (NLDAS)	Value when Absolute Threshold: 100 degrees F	
NEPHTN_HEATIND_105	Total number of days with daily maximum heat index, absolute threshold: 105°F	North American Land Data Assimilation System (NLDAS)	Value when Absolute Threshold: 105 degrees F	
NEPHTN_HEATIND_90	Total number of days with daily maximum heat index, absolute threshold: 90°F	North American Land Data Assimilation System (NLDAS)	Value when Absolute Threshold: 90 degrees F	

VARIABLE NAME	VARIABLE LABEL	SOURCE	NUMERATOR	DENOMINATOR (WHERE APPLICABLE)
NEPHTN_HEATIND_95	Total number of days with daily maximum heat index, absolute threshold: 95°F	North American Land Data Assimilation System (NLDAS)	Value when Absolute Threshold: 95 degrees F	
NEPHTN_MAXDROUGHT	Maximum number of consecutive weeks of cumulative moderate drought or worse per year	The Standardized Precipitation Evapotranspiration Index (SPEI)	Value	
NEPHTN_AVG_MODAAC_PM25	Annual average ambient concentrations of PM2.5 in micrograms per cubic meter (modeled estimates only)	EPA Air Quality System Monitoring Data	Value	
NEPHTN_PCT_MODPD_PM25	Percentage of days with PM2.5 levels over the national ambient air quality standard (modeled estimates only)	EPA Air Quality System Monitoring Data	Value	
NEPHTN_AVG_MONAAC_PM25	Annual average ambient concentrations of PM2.5 in micrograms per cubic meter (monitored values only)	EPA Air Quality System Monitoring Data	Value	
NEPHTN_PCT_MONPD_PM25	Percentage of days with PM2.5 levels over the national ambient air quality standard (monitored values only)	EPA Air Quality System Monitoring Data	Value	
NEPHTN_NUMDROUGHT	Total number of weeks of cumulative moderate drought or worse per year	The Standardized Precipitation Evapotranspiration Index (SPEI)	Value	
NEPHTN_PCT_PARK	Percentage of population living within a half a mile of a park	North American Land Data Assimilation System (NLDAS)	NAVTEQ (2010), Esri StreetMap Premium HERE (2016), and PAD-US (2015), providers of Geographic Information Systems (GIS) data	
NEPHTN_TEMPERATURE_100	Total number of days with daily maximum temperature, absolute threshold: 100°F	North American Land Data Assimilation System (NLDAS)	Value when Absolute Threshold: 105 degrees F	
NEPHTN_TEMPERATURE_105	Total number of days with daily maximum temperature, absolute threshold: 105°F	North American Land Data Assimilation System (NLDAS)	Value when Absolute Threshold: 90 degrees F	

VARIABLE NAME	VARIABLE LABEL	SOURCE	NUMERATOR	DENOMINATOR (WHERE APPLICABLE)
NEPHTN_TEMPERATURE_90	Total number of days with daily maximum temperature, absolute threshold: 90°F	North American Land Data Assimilation System (NLDAS)	Value when Absolute Threshold: 95 degrees F	
NEPHTN_TEMPERATURE_95	Total number of days with daily maximum temperature, absolute threshold: 95°F	North American Land Data Assimilation System (NLDAS)	Value	
NEPHTN_SEX_RATIO_RATE	Male to female sex ratio at birth multiplied by 1,000	CDC's National Center for Health Statistics (NCHS) National Vital Statistics System	Value	

Table 34.3 provides important variable notes for users of the SDOH Database to consider when working with NEPHTN variables.

Table 34.3. NEPHTN variable notes

Variable Name	Variable Label	Notes
NEPHTN_PCT_ARSENIC_MCL_NOTDETECT	Percentage of population in the county served by community water systems with yearly distribution of mean arsenic concentration not detected	A water sample is designated as "non-detected" when the laboratory analysis cannot detect the analyte being measured. A variable is designated as "non-detect" when samples from the same community water system (CWS) were non-detect for an entire year or quarter.
NEPHTN_PCT_PARK	Percentage of population living within a half a mile of a park	2010 and 2015 park data are from different sources; data for these variables are, therefore, not comparable across years. There are no advanced view options for 2015 as the underlying age, race, and race/ethnicity data were unavailable at the time of calculation.

Other notes

Air monitoring data provides information regarding concentrations around the specific location of each monitor. For PM2.5 this can be a rather large area, except when unusual local emissions (e.g., agricultural fires) occur. Within-county variation in concentrations will likely exist but will not be captured in this variable. For more information about the state or national data sources, read these metadata descriptions

here: <https://ephtracking.cdc.gov/showFullMetadataReport.action?id=0C053A3E-CE13-44BB-BF89-DFD84D2E24DF>

Arsenic variables are developed from water system attribute and water quality data stored in state Safe Drinking Water Act (SDWA) databases such as the Safe Drinking Water Information System (SDWIS/State). Data are cleaned and transformed to a standard format. Analytical results of drinking water samples (usually taken at entry points to the distribution system or representative sampling points after treatment) are used in conjunction with information about each CWS (such as service population and latitude and longitude of representative location of the CWS service area) to generate the variables.

NEPHTN variables for air temperature (K) at 2 meters above the surface, specific humidity at 2 meters above the surface, and surface pressure (Pa) are derived from the Forcing File A of Phase 2 of the North American Land Data Assimilation System (NLDAS-2). NLDAS-2 is available at the 1/8th-degree grid (approximately 14x14 km) and consists of 103,936 grid cells that cover the entire United States, excluding Alaska and Hawaii. Census tract and county-level estimates of temperature and heat index are obtained from modeled data, which are available by 1/8th-degree grid. The process of converting grid-level data to other geographies using a population-weighted centroid approach may lead to potential misclassification of temperature and heat index for some areas.

More information about NLDAS can be found here: <http://www.emc.ncep.noaa.gov/mmb/nldas/>

Park data in NEPHTN are taken from [NAVTEQ \(2010\)](#), [Esri StreetMap Premium HERE \(2016\)](#), and [PAD-US \(2015\)](#), providers of Geographic Information Systems (GIS) data. The underlying map

database is a compilation of first-hand observation of geographic features and third-party data sources.

Term Definitions

Table 34.4 provides important term definitions for users of the SDOH Database to consider when working with NEPHTN variables.

Table 34.4. Term definitions, NEPHTN

Term	Definition
Sex ratio at birth	Number of male births divided by the number of female births multiplied by 1,000.

35. Nursing Home Compare (NHC)

Sponsor

U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services

Description

The Centers for Medicare & Medicaid Services (CMS) developed and maintains the publicly accessible NHC data repository. Nursing Home Compare (NHC) reports Medicare-certified nursing homes, that generally provide skilled nursing level of care. Data have been published quarterly since 2013 and contain detailed information about every Medicare- and Medicaid-certified nursing home in the United States, such as the number of beds, the daily census of residents, and staffing characteristics.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2013 – 2019
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** NHC_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database includes number of facilities, number of federally certified beds, average number of residents based on Minimum Data Set (MDS) daily census, reported licensed staffing, and nursing hours per resident per day (registered nurse [RN] + licensed practical nurse [LPN]) information from the NHC file

NHC facility-level data (“ProviderInfo” tables) were downloaded from CMS for each year from 2013 to 2019. The variables presented in the SDOH Database were derived by (1) averaging monthly data for each facility to calculate an annual average, and then (2) averaging across contributing facilities within a county to calculate a county average.

Payroll-Based Journal (PBJ) system - The PBJ system allows nursing homes to electronically submit the number of hours facility staff are paid to work each day. The information is submitted quarterly and is auditible to ensure accuracy. Staffing data are collected on the director of nursing, registered nurses (RNs) with administrative duties, RNs, licensed practical nurses (LPNs) with administrative duties, LPNs, certified nurse aides (CNAs), medication aides, and nurse aides in training. These data are submitted quarterly and are due 45 days after the end of each reporting period. CMS uses only data submitted and accepted by the deadline for staffing calculations and in the Five-Star Rating System. The resident census is based on a daily resident census variable that CMS calculates using MDS assessments.

Resources

Data were downloaded from <https://data.cms.gov/provider-data/archived-data/nursing-homes> (last retrieved March, 2022).

User guide: The NHC user guide provides information about the variables contained in the data set and the methodology for constructing them.

Suggested Citation

AHRQ SDOH Database (v1), from the Centers for Medicare & Medicaid Services. (n.d.). Nursing Home Compare. <https://www.medicare.gov/nursinghomecompare/search.html>.

Data Set Notes

Reliability

The NHC source files do not include margins of error for variables included in the SDOH Database.

Geographic Levels

NHC source data are at the facility level and were averaged across contributing facilities within a county to calculate a county average for the SDOH Database.

Suppression Rules

The NHC source files do not include any suppression for variables included in the SDOH Database. Geographic variation in missingness of NHC variables reflects the underlying CMS NHC data.

Variable Notes

Table 35.1 below provides information on the variable availability across years. Table 35.2 provides more information on what numerator and denominator variables were drawn for NEPHTN variables in the SDOH Database.

Table 35.1. Variable availability across years, NHC

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NHC_AVG_ADJ_NURSE_STAFF	X							X	X	X	X	X	X	X	X
NHC_AVG_LIC_STAFF	X							X	X	X	X	X	X	X	X
NHC_AVG REP_NURSE_STAFF	X							X	X	X	X	X	X	X	X
NHC_FACS RATE	X							X	X	X	X	X	X	X	X
NHC_TOT_FACS	X							X	X	X	X	X	X	X	X

Table 35.2. Variable definitions and specifications, NHC

VARIABLE NAME	VARIABLE LABEL	SOURCE	Numerator Source Variable; Label	Denominator Source Variable; Label
NHC_AVG_ADJ_NURSE_STAFF	Average adjusted hours per day of total nurse staff (RN+LPN+Aide) per reporting facility	Payroll Based Journal Data	ADJ_TOTAL; Calculated annual average across facilities in a county: Adjusted total nurse staffing, hours per day (RN+LPN+Aide)	n/a
NHC_AVG_LIC_STAFF	Average hours per day of licensed staff (RN+LPN) per reporting facility	Payroll Based Journal Data	TOTLICHRD; Calculated annual average across facilities in a county: Reported licensed staffing, hours per day (RN+LPN)	n/a
NHC_AVG REP_NURSE_STAFF	Average reported hours per day of total nurse staff (RN+LPN+Aide) per reporting facility	Payroll Based Journal Data	TOTHRD; Calculated annual average across facilities in a county: Reported nurse staffing, hours per day (RN+LPN+Aide)	n/a
NHC_FACS RATE	Total number of nursing home facilities per 100,000 people	CASPER	PROVNUM; Calculated - rate of unique facilities in a county per 100,000 people	B103001; ACS Total Weighted Population
NHC_TOT_FACS	Total number of nursing home facilities	CASPER	PROVNUM; Calculated - count of unique facilities in a county	n/a

Table 35.3 provides important variable notes for users of the SDOH Database to consider when working with NHC variables.

Table 35.3. NHC variable notes

Variable Name	Variable Label	Notes
NHC_AVG_LIC_STAFF	Average hours per day of licensed staff (RN+LPN) per reporting facility	Note that the PBJ staffing data include both facility employees (full-time and part-time) and individuals under an organization (agency) contract or an individual contract. The PBJ staffing data do not include "private duty" nursing staff reimbursed by a resident or his/her family. Also not included are hospice staff and feeding assistants. Calculations of the staffing data are based on a ratio of the nursing staff hours to residents in the nursing home during a calendar quarter. The resulting ratios are displayed on Nursing Home Compare as hours per resident per day.
NHC_AVG_CM_NURSE_STAFF	Average case-mix hours per day of total nurse staff (RN+LPN+Aide) per reporting facility	CMS adjusts the reported staffing ratios for case-mix, using the Resource Utilization Group (RUG-IV) case-mix system. The CMS Staff Time Resource Intensity Verification (STRIVE) Study measured the average number of RN, LPN, and nurse aide minutes associated with each RUG-IV group (using the 66-group version of RUG-IV).

Term Definitions

Table 35.4 provides important term definitions for users of the SDOH Database to consider when working with NHC variables.

Table 35.4. Term definitions, NHC

Term	Definition
Registered Nurse	A registered nurse (RN) is a licensed medical professional who provides clinical care. RNs in a nursing home perform many of the same duties as they do in the hospital setting, including taking vital signs, giving medications, performing assessments, and overseeing patient treatment plans. Under the PBJ, an RN includes RN director of nursing (job code 5), registered nurses with administrative duties (job code 6), and registered nurses (job code 7).
Licensed Practical Nurse	A person who has graduated from an accredited school of nursing and has become licensed to provide basic nursing care under the supervision of a physician or registered nurse. Under the PBJ, an LPN includes licensed practical/licensed vocational nurses with administrative duties (job code 8) and licensed practical/vocational nurses (job code 9).
Aide	Health-care worker usually trained and often certified to assist nurses (as in a hospital or nursing home) in providing basic patient care and services (such as bathing, feeding, or measuring vital signs of patients). Under the PBJ, a nurse aide includes certified nurse aides (job code 10), aides in training (job code 11), and medication aides/technicians (job code 12).
Physical Therapy Staffing	Staff who provide therapy for the preservation, enhancement, or restoration of movement and physical function impaired or threatened by disease, injury, or disability that utilizes therapeutic exercise, physical modalities (such as massage and electrotherapy), assistive devices, and patient education and training
Case-Mix	The term case-mix refers to the type or mix of patients treated by a hospital or unit. The term is often used to describe the billing system of the hospital or unit, since the "cost per item" of health care is based on the case-mix.

36. National Oceanic and Atmospheric Administration Climate Divisional Database (NOAAC)

Sponsor

National Oceanic and Atmospheric Administration (NOAA)

Description

The National Oceanic and Atmospheric Administration's (NOAA) National Climatic Data Center (NCDC) uses the Monthly U.S. Climate Divisional Database (NOAAC) to issue monthly State of the Climate Reports (<https://www.ncei.noaa.gov/monitoring/monthly-climate-reports>). The NOAAC draws data from the Global Historical Climatology Network-Daily (GHCN-Daily) stations, which has several major observing networks in North America. NOAAC draws from five networks; the National Weather Service (NWS) Cooperative Observing (COOP) program, National Interagency Fire Center (NIFC) Remote Automatic Weather Station (RAWS) network, the USDA Snow Telemetry (SNOWTELE) network, the Environment Canada (EC) network, and part of Mexico Servicio Meteorologico Nacional (SMN) network.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2020
- ▶ **SDOH domain(s):**
 - Physical infrastructure
- ▶ **SDOH variable naming convention:** NOAAC_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

SDOH Database county-level files include monthly minimum, average, maximum temperature, and precipitation from NOAAC. All variables were selected directly from the following county-level source files:

- climdiv-tmpccy-v1.0.0-20210707.txt (for average temperature),
- climdiv-tmincy-v1.0.0-20210604.txt (for minimum temperature),
- climdiv-tmaxcy-v1.0.0-20210604.txt (for maximum temperature),
- climdiv-pcpnccy-v1.0.0-20210604..txt (for precipitation data).

NOAAC variables were renamed from the original fields for clarity and consistency with other SDOH Database variables.

Resources

We downloaded all data from <https://www.ncei.noaa.gov/data/climdiv/access/>.

Documentation is also available from: <https://www.ncei.noaa.gov/data/climdiv/access/county-readme.txt>.

Suggested Citation

For details on how variables in NOAAC are constructed, see:

Vose, R. S., Applequist, S., Squires, M., Durre, I., Menne, M. J., Williams, C. N., Jr., Fenimore, C., Gleason, K., & Arndt, D. (2014). Improved Historical Temperature and Precipitation Time Series for U.S. Climate Divisions, *Journal of Applied Meteorology and Climatology*, 53(5), 1232-1251. Retrieved Oct 29, 2021, from <https://journals.ametsoc.org/view/journals/apmc/53/5/jamc-d-13-0248.1.xml>.

AHRQ SDOH Database (v1), from Vose, Russell S.; Applequist, Scott; Squires, Mike; Durre, Imke; Menne, Matthew J.; Williams, Claude N., Jr.; Fenimore, Chris; Gleason, Karin; Arndt, Derek (2014): NOAA Monthly U.S. Climate Divisional Database (NClimDiv). NOAA National Climatic Data Center. doi:10.7289/V5M32STR. Retrieved from: <https://www.ncei.noaa.gov/data/climdiv/access/>.

Data Set Notes

Reliability

All GHCN-Daily stations are routinely reviewed for logical, serial and spatial quality assurance.

Series and spatial checks were conducted to eliminate residual outliers before computing monthly values.

For temperature, bias adjustments were done to account for historical changes in observation time, station location, temperature instrumentation and siting conditions.

There were 48 counties missing all data in NOAAC. All of these counties are contained in Puerto Rico, Alaska, Hawaii and the District of Columbia.

Geographic Levels

NOAAC reports all climate variables at the county level.

Suppression Rules

NOAAC data include no suppression.

Variable Notes

Table 36.1 below provides information on the variable availability across years. Table 36.2 provides more information on what numerator and denominator variables were drawn for NOAAC variables in the SDOH Database.

Table 36.1. Variable availability across years, NOAAC

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NOAAC_AVG_TEMP_APR	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_AUG	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_DEC	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_FEB	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_JAN	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_JUL	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_JUN	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_MAR	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_MAY	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_NOV	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_OCT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_AVG_TEMP_SEP	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_APR	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_AUG	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_DEC	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_FEB	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_JAN	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_JUL	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_JUN	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_MAR	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_MAY	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_NOV	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_OCT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MAX_TEMP_SEP	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_APR	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_AUG	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_DEC	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_FEB	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_JAN	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_JUL	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_JUN	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_MAR	X			X	X	X	X	X	X	X	X	X	X	X	X

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NOAAC_MIN_TEMP_MAY	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_NOV	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_OCT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_MIN_TEMP_SEP	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_APR	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_AUG	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_DEC	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_FEB	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_JAN	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_JUL	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_JUN	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_MAR	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_MAY	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_NOV	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_OCT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAC_PRECIPITATION_SEP	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 36.2. Variable definitions and specifications, NOAAC

VARIABLE NAME	VARIABLE LABEL	SOURCE FILE	NUMERATOR	NUMERATOR LABEL	DENOMINATOR
NOAAC_AVG_TEMP_APR	Monthly (April) average temperature (Fahrenheit)	climdiv-tmpccy	APR-VALUE:33-39	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_AUG	Monthly (August) average temperature (Fahrenheit)	climdiv-tmpccy	AUG-VALUE:61-67	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_DEC	Monthly (December) average temperature (Fahrenheit)	climdiv-tmpccy	DEC-VALUE:89-96	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_FEB	Monthly (February) average temperature (Fahrenheit)	climdiv-tmpccy	FEB-VALUE:19-25	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_JAN	Monthly (January) average temperature (Fahrenheit)	climdiv-tmpccy	JAN-VALUE:12-18	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_JUL	Monthly (July) average temperature (Fahrenheit)	climdiv-tmpccy	JULY-VALUE:54-60	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_JUN	Monthly (June) average temperature (Fahrenheit)	climdiv-tmpccy	JUNE-VALUE:47-53	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_MAR	Monthly (March) average temperature (Fahrenheit)	climdiv-tmpccy	MAR-VALUE: 19-25	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_MAY	Monthly (May) average temperature (Fahrenheit)	climdiv-tmpccy	MAY-VALUE:40-46	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_NOV	Monthly (November) average temperature (Fahrenheit)	climdiv-tmpccy	NOV-VALUE:82-88	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_OCT	Monthly (October) average temperature (Fahrenheit)	climdiv-tmpccy	OCT-VALUE:75-81	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_AVG_TEMP_SEP	Monthly (September) average temperature (Fahrenheit)	climdiv-tmpccy	SEPT-VALUE:68-74	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a

VARIABLE NAME	VARIABLE LABEL	SOURCE FILE	NUMERATOR	NUMERATOR LABEL	DENOMINATOR
NOAAC_MAX_TEMP_APR	Monthly (April) maximum temperature (Fahrenheit)	climdiv-tmaxcy	APR-VALUE:33-39	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_AUG	Monthly (August) maximum temperature (Fahrenheit)	climdiv-tmaxcy	AUG-VALUE:61-67	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_DEC	Monthly (December) maximum temperature (Fahrenheit)	climdiv-tmaxcy	DEC-VALUE:89-96	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_FEB	Monthly (February) maximum temperature (Fahrenheit)	climdiv-tmaxcy	FEB-VALUE: 19-25	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_JAN	Monthly (January) maximum temperature (Fahrenheit)	climdiv-tmaxcy	JAN-VALUE:12-18	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_JUL	Monthly (July) maximum temperature (Fahrenheit)	climdiv-tmaxcy	JULY-VALUE:54-60	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_JUN	Monthly (June) maximum temperature (Fahrenheit)	climdiv-tmaxcy	JUNE-VALUE:47-53	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_MAR	Monthly (March) maximum temperature (Fahrenheit)	climdiv-tmaxcy	MAR-VALUE: 19-25	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_MAY	Monthly (May) maximum temperature (Fahrenheit)	climdiv-tmaxcy	MAY-VALUE:40-46	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_NOV	Monthly (November) maximum temperature (Fahrenheit)	climdiv-tmaxcy	NOV-VALUE:82-88	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_OCT	Monthly (October) maximum temperature (Fahrenheit)	climdiv-tmaxcy	OCT-VALUE:75-81	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MAX_TEMP_SEP	Monthly (September) maximum temperature (Fahrenheit)	climdiv-tmaxcy	SEPT-VALUE:68-74	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_APR	Monthly (April) minimum temperature (Fahrenheit)	climdiv-tmincy	APR-VALUE:33-39	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a

VARIABLE NAME	VARIABLE LABEL	SOURCE FILE	NUMERATOR	NUMERATOR LABEL	DENOMINATOR
NOAAC_MIN_TEMP_AUG	Monthly (August) minimum temperature (Fahrenheit)	climdiv-tmincy	AUG-VALUE:61-67	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_DEC	Monthly (December) minimum temperature (Fahrenheit)	climdiv-tmincy	DEC-VALUE:89-96	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_FEB	Monthly (February) minimum temperature (Fahrenheit)	climdiv-tmincy	FEB-VALUE: 19-25	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_JAN	Monthly (January) minimum temperature (Fahrenheit)	climdiv-tmincy	JAN-VALUE:12-18	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_JUL	Monthly (July) minimum temperature (Fahrenheit)	climdiv-tmincy	JULY-VALUE:54-60	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_JUN	Monthly (June) minimum temperature (Fahrenheit)	climdiv-tmincy	JUNE-VALUE:47-53	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_MAR	Monthly (March) minimum temperature (Fahrenheit)	climdiv-tmincy	MAR-VALUE:19-25	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_MAY	Monthly (May) minimum temperature (Fahrenheit)	climdiv-tmincy	MAY-VALUE:40-46	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_NOV	Monthly (November) minimum temperature (Fahrenheit)	climdiv-tmincy	NOV-VALUE:82-88	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_OCT	Monthly (October) minimum temperature (Fahrenheit)	climdiv-tmincy	OCT-VALUE:75-81	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_MIN_TEMP_SEP	Monthly (September) minimum temperature (Fahrenheit)	climdiv-tmincy	SEPT-VALUE:68-74	Monthly Divisional Temperature: Range of values -50.00 to 140.00 degree Fahrenheit	n/a
NOAAC_PRECIPITATION_APR	Monthly (April) precipitation (Inches)	climdiv-pcpnyc	APR-VALUE:33-39	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_AUG	Monthly (August) precipitation (Inches)	climdiv-pcpnyc	AUG-VALUE:61-67	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_DEC	Monthly (December) precipitation (Inches)	climdiv-pcpnyc	DEC-VALUE:89-96	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a

VARIABLE NAME	VARIABLE LABEL	SOURCE FILE	NUMERATOR	NUMERATOR LABEL	DENOMINATOR
NOAAC_PRECIPITATION_FEB	Monthly (February) precipitation (Inches)	climdiv-pcpnyc	FEB-VALUE: 19-25	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_JAN	Monthly (January) precipitation (Inches)	climdiv-pcpnyc	JAN-VALUE:12-18	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_JUL	Monthly (July) precipitation (Inches)	climdiv-pcpnyc	JULY-VALUE:54-60	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_JUN	Monthly (June) precipitation (Inches)	climdiv-pcpnyc	JUNE-VALUE:47-53	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_MAR	Monthly (March) precipitation (Inches)	climdiv-pcpnyc	MAR-VALUE:19-25	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_MAY	Monthly (May) precipitation (Inches)	climdiv-pcpnyc	MAY-VALUE:40-46	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_NOV	Monthly (November) precipitation (Inches)	climdiv-pcpnyc	NOV-VALUE:82-88	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_OCT	Monthly (October) precipitation (Inches)	climdiv-pcpnyc	OCT-VALUE:75-81	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a
NOAAC_PRECIPITATION_SEP	Monthly (September) precipitation (Inches)	climdiv-pcpnyc	SEPT-VALUE:68-74	Monthly Divisional Precipitation: Range of values 00.00 to 99.99.	n/a

Other notes

NOAAC does not incorporate precipitation data from RAWS because this network's tipping-bucket gauges are unheated, leading to suspect cold weather data.

For all data in NOAAC, only stations having at least 10 years of valid monthly data since 1950 are used.

Data were accessed on the following dates:

- Climdiv-tmpccy: accessed 7/26/2021
- Climdiv-tmincy: accessed 6/8/2021
- Climdiv-tmaxcy: accessed 6/8/2021
- Climdiv-pcpnyc: accessed 6/8/2021

37. National Oceanic and Atmospheric Administration Storm Events Database (NOAAS)

Sponsor

National Center for Environmental Information (NCEI), National Environmental Satellite, Data and Information Service (NESDIS) and National Oceanic and Atmospheric Administration (NOAA)

Description

The Storm Events Database documents storms and other significant and unusual weather events collected by NOAA's National Weather Service (NWS). The Storm Events Database captures: "1) the occurrence of storms and other significant weather phenomena having sufficient intensity to cause loss of life, injuries, significant property damage, and/or disruption to commerce; 2) rare, unusual, weather phenomena that generate media attention, such as snow flurries in South Florida or the San Diego coastal area; and 3) other significant meteorological events, such as record maximum or minimum temperatures or precipitation that occur in connection with another event" (<https://www.ncdc.noaa.gov/stormevents/>). The Storm Events Database has been published since 1950 and the database is used to produce the NOAA Storm Data Publication, which is a monthly listing of storms and unusual weather phenomena. (<https://www.ncdc.noaa.gov/IPS/sd/sd.html>). Since 1996, 48 event types defined in Directive 10-1605: <https://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf>) are included in the database. It is important to note that the weather events included in the database are those considered exceptional events by NWS.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2020
- ▶ **SDOH domain(s):**
 - Physical infrastructure
- ▶ **SDOH variable naming convention:** NOAAS_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database county-level data files contain constructed variables from NOAAS. NOAAS variables were named from the original fields for clarity and consistency with other SDOH Database variables.

Resources

Data were downloaded for each year (StormEvent_details-ftp_v_1.0_dYYYY_cYYYYMMDD.csv) from: <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/Storm Data FAQ Page> <https://www.ncdc.noaa.gov/stormevents/faq.jsp>.

National Weather Service Instruction 10-1605 (July 26, 2021)
<https://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf>.

Storm Data Bulk Data Format:

<https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/Storm-Data-Bulk-csv-Format.pdf>.

Storm Data Export Format, Field Names:

<https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/Storm-Data-Export-Format.pdf>.

Suggested Citation

AHRQ SDOH Database (v1), from National Center for Environmental Information (NCEI), National Environmental Satellite, Data and Information Service (NESDIS) and National Oceanic and Atmospheric Administration (NOAA), Storm Events Database 2009-2020 Retrieved August 2021 from <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>.

Data Set Notes

Reliability

The Storm Event Database captures 48 different types of storm events and unusual weather events. The NWS draws from multiple sources, such as state and local officials, emergency responders, media reports, and nationwide networks. These records are compared, validated and submitted to the National Climatic Data Center for inclusion in the database. For each event, a detailed record of the start and end date, its geographic location, and associated property damage, associated injuries and deaths are recorded.

Some information appearing in Storm Data may be provided by or gathered from sources outside the National Weather Service (NWS), such as the media, law enforcement and/or other government agencies, private companies, individuals. An effort is made to use the best available information but time and resource constraints, may prevent NWS from verifying them. More information can be found at: <https://www.ncdc.noaa.gov/stormevents/faq.jsp>.

Geographic Levels

- Each row in the Storm Events Database represents a storm event or an unusual weather event, and for the SDOH Database these events were aggregated to the county level. The steps used to aggregate the events to a county-level in the SDOH are as follows:
 - Events that were designated to a marine zone were dropped.
 - If no storm event or an unusual weather event was assigned to a specific county, zero was assigned.

- Events that had a Public Zone designation were mapped to counties using the Zone-county Correlation File derived from U.S. Counties and NWS Public Forecast Zones <https://www.weather.gov/gis/ZoneCounty>.
 - Each record in the Correlation File represents a single polygon from the public forecast zone shapefile. When a county is divided into multiple zones, this is reflected by multiple records of the event for each county with the same zone.
 - The Zone-county Correlation File maintains the most-up-to-date relationship between zones and county and historical changes are not reflected in this crosswalk.
 - There were four counties (Rota, Tinian, Saipan, and Northern Islands) that had a state code of 69, which is for "Northern Mariana Islands," but were assigned "Guam" as a state in the source file. We corrected these four counties and assigned the correct state, "Northern Mariana Islands," reserved for state code, 69.
 - Some manual matching of events (~200 events) from zones to county were made based on zone names, communication with NOAA and manual searches on which counties zones mapped to:
 - There were few changes in the State of New Mexico in 2019:
<https://noaa.maps.arcgis.com/apps/Cascade/index.html?appid=a1d72f6bb230449a92c47f18917ee3ee>
 - NMZ510 fell within Rio Arriba County.
 - NMZ512 covered multiple counties and covered portions of Taos, Rio Arriba Santa Fe and San Miguel Counties.
 - CA-Z179 was split into three new zones - CA-Z300, 304, and 308.
 - CA-Z300: The Northern half is in Merced County. The southern half is in Fresno County.
 - CA-Z304: The Northern half is in Fresno County. The southern half is in Kings County.
 - CA-Z308: The Northern tip is in Fresno County. The middle part is in Kings County. The rest (from the middle to the bottom) is in Kern County.
 - CA-Z306: This zone is located in Fresno County.
 - WY-Z043: This zone did not exist since the late 1990s and was a data entry error. We dropped events associated with zone.

Suppression Rules

NOAAS data does not contain suppression rules.

Variable Notes

Table 37.1 below provides information on the variable availability across years. Table 37.2 provides more information on what numerator and denominator variables were drawn for NOAAS variables in the SDOH Database.

Table 37.1. Variable availability across years, NOAAS

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NOAAS_PROPERTY_DAMAGE	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_DEATHS_DIRECT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_DEATHS_INDIRECT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_DROUGHT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_FLOOD	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_HAIL	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_HEAT_EVENTS	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_HURRICANE_STORM	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_INJURIES_DIRECT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_INJURIES_INDIRECT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_STORMEVENT	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_TORNADO	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_WILDFIRE	X			X	X	X	X	X	X	X	X	X	X	X	X
NOAAS_TOT_WIND	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 37.2. Variable definitions and specifications, NOAAS

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
NOAAS_PROPERTY_DAMAGE	Estimated amount of damage to property incurred by the storm events during the year (Dollar)	damage_property	The estimated amount of damage to property incurred by the weather event	n/a	n/a
NOAAS_TOT_DEATHS_DIRECT	Total number of deaths directly caused by storm events during the year	DEATHS_DIRECT	The number of deaths directly caused by the weather event.	n/a	n/a
NOAAS_TOT_DEATHS_INDIRECT	Total number of deaths indirectly caused by storm events during the year	DEATHS INDIRECT	The number of deaths indirectly caused by the weather event.	n/a	n/a
NOAAS_TOT_INJURIES_DIRECT	Total number of injuries directly caused by storm events during the year	INJURIES_DIRECT	The number of injuries directly caused by the weather event.	n/a	n/a
NOAAS_TOT_INJURIES_INDIRECT	Total number of injuries indirectly caused by storm events during the year	INJURIES INDIRECT	The number of injuries indirectly caused by the weather event.	n/a	n/a

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
NOAAS_TOT_STORMEVENT	Total number of storm events	N: n is count of storm event, which is also denoted by each row in the file.	n/a	n/a	n/a
NOAAS_TOT_TORNADO	Total number of tornadoes	EVENT_TYPE=="Tornado"	The only events permitted in Storm Data are listed and defined in Table 1 of Section 2.1.1 of NWS Directive 10-1605 at http://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf .	n/a	n/a
NOAAS_TOT_WIND	Total number of wind events	EVENT_TYPE=="Strong Wind" or "Thunderstorm Wind" or "High Wind"	The only events permitted in Storm Data are listed and defined in Table 1 of Section 2.1.1 of NWS Directive 10-1605 at http://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf .	n/a	n/a
NOAAS_TOT_HAIL	Total number of hail events	EVENT_TYPE=="Hail"	The only events permitted in Storm Data are listed and defined in Table 1 of Section 2.1.1 of NWS Directive 10-1605 at http://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf .	n/a	n/a
NOAAS_TOT_HURRICANE_STORM	Total number of hurricanes and tropical storms	EVENT_TYPE=="Hurricane" & "Tropical Storm"	The only events permitted in Storm Data are listed and defined in Table 1 of Section 2.1.1 of NWS Directive 10-1605 at http://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf .	n/a	n/a
NOAAS_TOT_FLOOD	Total number of floods	EVENT_TYPE=="Flood" EVENT_TYPE=="Flash Flood" EVENT_TYPE=="Coastal flood" EVENT_TYPE=="Lakeshore flood"	The only events permitted in Storm Data are listed and defined in Table 1 of Section 2.1.1 of NWS Directive 10-1605 at http://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf .	n/a	n/a
NOAAS_TOT_WILDFIRE	Total number of wildfires	EVENT_TYPE=="Wildfire"	The only events permitted in Storm Data are listed and defined in Table 1 of Section 2.1.1 of NWS Directive 10-1605 at http://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf .	n/a	n/a

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
NOAAS_TOT_HEAT_EVENTS	Total number of heat events	EVENT_TYPE=="Excessive Heat" or "Heat"	The only events permitted in Storm Data are listed and defined in Table 1 of Section 2.1.1 of NWS Directive 10-1605 at http://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf .	n/a	n/a
NOAAS_TOT_DROUGHT	Total number of drought	EVENT_TYPE=="Drought"	The only events permitted in Storm Data are listed and defined in Table 1 of Section 2.1.1 of NWS Directive 10-1605 at http://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf .	n/a	n/a

Table 37.3 provides important variable notes for users of the SDOH Database to consider when working with NOAAS variables.

Table 37.3. NOAAS variable notes

VARIABLE NAME	VARIABLE LABEL	NOTE
NOAAS_PROPERTY_DAMAGE	Estimated amount of damage to property incurred by the storm events during the year (Dollar)	Property damage refers to damage inflicted to property (e.g., structures, objects, vegetation) as well as public infrastructures and facilities. Damage estimates provide a measure of impact caused by storm events.
NOAAS_TOT_DEATHS_DIRECT	Total number of deaths directly caused by storm events during the year	Direct fatality refers to fatalities directly attributable to hydrometeorological events or impacts by airborne/falling/moving debris (e.g., wind, tornado) and provides a measure of populations' exposure to storm events.
NOAAS_TOT_DEATHS_INDIRECT	Total number of deaths indirectly caused by storm events during the year	Indirect fatality refers to fatalities that occurred in the vicinity of a hydrometeorological event or after it has ended, but not directly caused by impact or debris from the event. Although the fatality may not be directly caused by the storm events, it can be an important indicator for the resilience of existing infrastructure and resources available to respond to natural disaster. Fatality caused by an accident on ice-covered roads is an example of indirect fatality.

Other notes

- It is important to note that events that occur at the zone level are attributed to multiple counties. Property damage, direct/indirect deaths, and direct/indirect injuries from the weather event that occurred in these zones that overlap with multiple counties are double counted, so users should use caution with comparing across counties.
- Data from NOAAS should not be aggregated to a higher geographic level.
- Some extreme weather events may appear as outliers due to the large amount of damage caused. Extreme events with more than \$1 billion property damage in the county are listed below.

Table 37.4. Extreme events with more than \$1 billion property damage

STATENM	YEAR	MONTH_NAME	EVENT_TYPE	CZ_TYPE	CZ_FIPS	CZ_NAME	DAMAGE_PROPERTY
ARIZONA	2010	October	Hail	C	13	MARICOPA	1.80B
TENNESSEE	2010	May	Flood	C	37	DAVIDSON	1.50B
ALABAMA	2011	April	Tornado	C	83	LIMESTONE	1.00B
ALABAMA	2011	April	Tornado	C	125	TUSCALOOSA	1.50B
MISSOURI	2011	May	Tornado	C	97	JASPER	2.80B
MISSISSIPPI	2011	May	Flood	C	143	TUNICA	1.00B
TENNESSEE	2011	May	Flood	C	157	SHELBY	2.00B
NEW JERSEY	2012	October	Coastal Flood	Z	13	WESTERN MONMOUTH	5.00B
NEW JERSEY	2012	October	High Wind	Z	14	EASTERN MONMOUTH	1.50B
NEW JERSEY	2012	October	Coastal Flood	Z	14	EASTERN MONMOUTH	5.00B
NEW JERSEY	2012	October	Coastal Flood	Z	20	WESTERN OCEAN	2.50B
NEW JERSEY	2012	October	Coastal Flood	Z	26	EASTERN OCEAN	7.50B
OKLAHOMA	2013	May	Tornado	C	27	CLEVELAND	2.00B
MICHIGAN	2014	August	Flash Flood	C	163	WAYNE	1.10B
TEXAS	2015	October	Flash Flood	C	349	NAVARRO	1.00B
FLORIDA	2016	October	Tropical Storm	Z	33	ST. JOHNS	2.00B
LOUISIANA	2016	August	Flood	C	5	ASCENSION	1.07B
LOUISIANA	2016	August	Flood	C	33	EAST BATON ROUGE	1.68B
LOUISIANA	2016	August	Flood	C	63	LIVINGSTON	1.34B
TEXAS	2016	April	Hail	C	29	BEXAR	1.36B
COLORADO	2017	May	Hail	C	59	JEFFERSON	2.30B
PUERTO RICO	2017	September	Flash Flood	C	137	TOA BAJA	2.50B
TEXAS	2017	August	Flash Flood	C	39	BRAZORIA	2.00B
TEXAS	2017	August	Flash Flood	C	157	FORT BEND	8.00B
TEXAS	2017	August	Flash Flood	C	167	GALVESTON	10.00B
TEXAS	2017	August	Tropical Storm	Z	200	LIBERTY	1.00B

Social Determinants of Health (SDOH) Database

STATENM	YEAR	MONTH_NAME	EVENT_TYPE	CZ_TYPE	CZ_FIPS	CZ_NAME	DAMAGE_PROPERTY
TEXAS	2017	August	Flash Flood	C	201	HARRIS	10.00B
TEXAS	2017	August	Hurricane	Z	243	NUECES	1.00B
TEXAS	2017	August	Hurricane	Z	245	ARANSAS	1.75B
TEXAS	2017	August	Flash Flood	C	245	JEFFERSON	3.00B
TEXAS	2017	August	Flash Flood	C	339	MONTGOMERY	7.00B
TEXAS	2017	August	Flash Flood	C	361	ORANGE	1.50B
CALIFORNIA	2018	July	Wildfire	Z	15	NORTHERN SACRAMENTO VALLEY	1.50B
CALIFORNIA	2018	July	Wildfire	Z	15	NORTHERN SACRAMENTO VALLEY	1.50B
CALIFORNIA	2018	November	Wildfire	Z	66	NORTHEAST FOOTHILLS/SACRAMENTO VALLEY	17.00B
CALIFORNIA	2018	November	Wildfire	Z	66	NORTHEAST FOOTHILLS/SACRAMENTO VALLEY	17.00B
CALIFORNIA	2018	November	Wildfire	Z	66	NORTHEAST FOOTHILLS/SACRAMENTO VALLEY	17.00B
NORTH CAROLINA	2018	September	Hurricane	Z	107	INLAND NEW HANOVER	1.00B
TEXAS	2019	October	Tornado	C	113	DALLAS	1.55B

Source: NOAA Storm Events Database

Term Definitions

Table 37.5 provides important term definitions for users of the SDOH Database to consider when working with NOAAS variables.

Table 37.5. Term definitions, NOAAS

Term	Definition
Coastal Flood (Z)	Flooding of coastal areas due to the vertical rise above normal water level caused by strong, persistent onshore wind, high astronomical tide, and/or low atmospheric pressure, resulting in damage, erosion, flooding, fatalities, or injuries. Coastal areas are defined as those portions of coastal land zones (coastal county/parish) adjacent to the waters, bays, and estuaries of the oceans. Farther inland, the Storm Data preparer determines the boundary between coastal and inland areas, where flood events will be encoded as Flash Flood or Flood rather than Coastal Flood. Terrain (elevation) features will determine how far inland the coastal flooding extends.
Damage	Damage refers to damage inflicted to private property (e.g., structures, objects, vegetation) as well as public infrastructure and facilities.
Direct Fatalities/Injuries	A direct fatality or injury is defined as a fatality or injury directly attributable to the hydrometeorological event itself, or impact by airborne/falling/moving debris (e.g., missiles generated by wind, water, ice, lightning, tornado, dust storms). In these cases, the "active" agent was the weather event itself or the debris/missiles. For more details, refer to https://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf
Drought	Drought is a deficiency of moisture that results in adverse impacts on people, animals, or vegetation over a sizeable area. Conceptually, drought is a protracted period of deficient precipitation resulting in extensive damage to crops, resulting in loss of yield. There are different kinds of drought: meteorological, agricultural, hydrological, and social-economic, with each kind of drought starting and ending at different times. Additional information can be obtained at: http://drought.unl.edu/DroughtBasics/WhatisDrought.aspx
Excessive Heat (Z)	Excessive heat results from a combination of high temperatures (well above normal) and high humidity. An Excessive Heat event occurs and is reported in Storm Data whenever heat index values meet or exceed locally/regionally established excessive heat warning thresholds.
Flash Flood (C)	A life-threatening, rapid rise of water into a normally dry area beginning within minutes to multiple hours of the causative event (e.g., intense rainfall, dam failure, ice jam). Ongoing flooding can intensify to the shorter-term flash flooding in cases where intense rainfall results in a rapid surge of rising flood waters.
Flood (C)	Any high flow, overflow, or inundation by water which causes damage. In general, this would mean the inundation of a normally dry area caused by an increased water level in an established watercourse, or ponding of water, that poses a threat to life or property.
Hail (C)	Frozen precipitation in the form of balls or irregular lumps of ice. Although the minimum size of hail qualifying as "severe" is 1 inch diameter, all reports of hail that is 3/4 of an inch or larger in diameter will be entered.
Heat (Z)	A period of heat resulting from the combination of high temperatures (above normal) and relative humidity. A heat event occurs and is reported in NOAAS whenever heat index values meet or exceed locally/regionally established advisory thresholds.
High Wind (Z)	Sustained non-convective winds of 35 knots (40 mph) or greater lasting for 1 hour or longer, or gusts of 50 knots (58 mph) or greater for any duration (or otherwise locally/regionally defined). In some mountainous areas, the above numerical values are 43 knots (50 mph) and 65 knots (75 mph), respectively.
Hurricane/Typhoon (Z)	A tropical cyclone in which the maximum 1-minute sustained surface wind is 64 knots (74 mph) or greater. In the Atlantic Ocean or the North Pacific Ocean east of the International Date Line, this event would be labeled a Hurricane, and in the North Pacific Ocean west of the International Dateline, this event would be classified as a Typhoon.

Term	Definition
Indirect Fatalities/Injuries	Fatalities and injuries, occurring in the vicinity of a hydrometeorological event, or after it has ended, but not directly caused by impact or debris from the event (weather event was a passive entity), are classified as indirect. For more details, refer to https://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf
Lakeshore Flood (Z)	Flooding of lakeshore areas due to the vertical rise of water above normal level caused by strong, persistent onshore wind and/or low atmospheric pressure, resulting in damage, erosion, flooding, fatalities, or injuries. Lakeshore areas are defined as those portions of land zones (coastal county/parish) adjacent to the waters of the Great Lakes and other lakes with specific assigned Marine Zones.
Strong Wind (Z)	Non-convective winds gusting less than 50 knots (58 mph), or sustained winds less than 35 knots (40 mph), resulting in a fatality, injury, or damage. Consistent with regional guidelines, mountain states may have higher criteria.
Thunderstorm Wind (C)	Winds, arising from convection (occurring within 30 minutes of lightning being observed or detected), with speeds of at least 50 knots (58 mph), or winds of any speed (non-severe thunderstorm winds below 50 knots) producing a fatality, injury, or damage.
Tornado (C)	A violently rotating column of air, extending to or from a cumuliform cloud or underneath a cumuliform cloud, to the ground, and often (but not always) visible as a condensation funnel. For a vortex to be classified as a tornado, it must be in contact with the ground and extend to/from the cloud base, and there should be some semblance of ground-based visual effects such as dust/dirt rotational markings/swirls, or structural or vegetative damage or disturbance.
Tropical Storm (Z)	A tropical cyclone in which the 1-minute sustained surface wind ranges from 34 to 63 knots (39 to 73 mph).
Wildfire (Z)	Any significant forest fire, grassland fire, rangeland fire, or wildland-urban interface fire that consumes the natural fuels and spreads in response to its environment. "Significant" is defined as a wildfire that causes one or more fatalities, one or more significant injuries, and/or property damage (optional: include significant damages to firefighting equipment if loss estimates are available).

38. The Opportunity Atlas (OPP)

Sponsor

United States Census Bureau, Opportunity Insights

Description

United States Census Bureau partnered with Raj Chetty and Nathan Hendren from Harvard University and John Friedman from Brown University to construct the Opportunity Atlas and the data tool to provide a better understanding of children's outcomes in adulthood at the census tract level using data from across the U.S.

The Opportunity Atlas uses de-identified data from the 2000 and 2010 decennial censuses linked to data from federal income tax returns and 2005-2015 ACS microdata. The sample consists of children born between 1978-1983, including those born in the U.S. and authorized childhood immigrants and include the characteristics of 20 million children.

Measures provide estimates of intergenerational mobility in the United States. For example, OPP_TOP20_BLK_M_HH_INC_25PT provides the probability that an African American male born between 1978-1983 with parents in the bottom quartile of the income distribution would reach the top quintile of the household income distribution as an adult in 2005-2015.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2010 and 2015 (*Children born between 1973-1983 are followed through adulthoods. SDOH include OPP data in years when the outcome variables are reported*).
- ▶ **SDOH domain(s):**
 - Economic context
- ▶ **SDOH variable naming convention:** OPP_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County and census tract

OPP variables were renamed from the original fields for clarity and consistency with other SDOH Database variables. Because of the noise injection to protect privacy of individuals in the data set, Opportunity Atlas source data from the Census Bureau website have values for probabilities below 0 and above 1. The SDOH Database truncates probability values that fall outside of range to 0 and 1. If users wish to aggregate the variables to a higher geographic level, they are advised to work with the original untruncated source data.

Resources

Data (county_outcomes.dta, tract_outcomes.dta) were downloaded from:

<https://www.census.gov/programs-surveys/ces/data/public-use-data/opportunity-atlas-data-tables.html>.

Executive Summary: https://www2.census.gov/ces/opportunity/opportunity_atlas_summary.pdf.

Opportunity Atlas Interactive Mapping Tool: <https://www.opportunityatlas.org/>.

Opportunity Atlas Slides: https://www2.census.gov/ces/opportunity/opportunity_atlas_slides.pdf.

Opportunity Atlas: Mapping the Childhood Roots of Social Mobility:
<https://www.census.gov/library/working-papers/2018/adrm/CES-WP-18-42R.html>.

https://opportunityinsights.org/wp-content/uploads/2018/10/Atlas_methods.pdf.

https://opportunityinsights.org/wp-content/uploads/2018/10/atlas_slides.pdf.

https://opportunityinsights.org/wp-content/uploads/2018/10/atlas_paper.pdf.

Suggested Citation

AHRQ SDOH Database (v1), from U.S. Census Bureau, Opportunity Insights. Opportunity Atlas [All Outcomes by Census Tract Race, Gender, and Parental Income Percentile, All Outcomes by County Race, Gender, and Parental Income Percentile] Retrieved October 2021 from:
<https://www.census.gov/programs-surveys/ces/data/public-use-data/opportunity-atlas-data-tables.html>.

Data Set Notes

Reliability

To protect privacy, a small amount of noise is added to each of the estimates; this noise is typically less than one-tenth the standard error of the estimate itself. The standard errors reported incorporate both sampling error and the noise that was added to the point estimates to protect privacy.

Standard errors are provided in the Opportunity Atlas source file.

Suppression Rules

Cells with fewer than 20 children are suppressed. Estimates with substantial standard errors are also suppressed, which results in high missingness of OPP variables.

There is one tract (42003517000) in the 2015 SDOH Database census tract-level file where kfr_top20_black_female_n is equal to 19, even though the suppression rule for OPP is 20.

Variable Notes

Table 38.1 below provides information on the variable availability across years. Table 38.2 provides more information on what numerator and denominator variables were drawn for OPP variables in the SDOH Database.

Table 38.1. Variable availability across years, OPP

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
OPP_INCAR ASN F HH 100PT	X		X		X										
OPP_INCAR ASN F HH 1PT	X		X		X										
OPP_INCAR ASN F HH 25PT	X		X		X										
OPP_INCAR ASN F HH 50PT	X		X		X										
OPP_INCAR ASN F HH 75PT	X		X		X										
OPP_INCAR ASN F N	X		X		X										
OPP_INCAR ASN M HH 100PT	X		X		X										
OPP_INCAR ASN M HH 1PT	X		X		X										
OPP_INCAR ASN M HH 25PT	X		X		X										
OPP_INCAR ASN M HH 50PT	X		X		X										
OPP_INCAR ASN M HH 75PT	X		X		X										
OPP_INCAR ASN M N	X		X		X										
OPP_INCAR BLK F HH 100PT	X		X		X										
OPP_INCAR BLK F HH 1PT	X		X		X										
OPP_INCAR BLK F HH 25PT	X		X		X										
OPP_INCAR BLK F HH 50PT	X		X		X										
OPP_INCAR BLK F HH 75PT	X		X		X										
OPP_INCAR BLK F N	X		X		X										
OPP_INCAR BLK M HH 100PT	X		X		X										
OPP_INCAR BLK M HH 1PT	X		X		X										
OPP_INCAR BLK M HH 25PT	X		X		X										
OPP_INCAR BLK M HH 50PT	X		X		X										
OPP_INCAR BLK M HH 75PT	X		X		X										
OPP_INCAR BLK M N	X		X		X										
OPP_INCAR HSP F HH 100PT	X		X		X										
OPP_INCAR HSP F HH 1PT	X		X		X										
OPP_INCAR HSP F HH 25PT	X		X		X										
OPP_INCAR HSP F HH 50PT	X		X		X										

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Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
OPP_INCAR_HSP_F_HH_75PT	X		X		X										
OPP_INCAR_HSP_F_N	X		X		X										
OPP_INCAR_HSP_M_HH_100PT	X		X		X										
OPP_INCAR_HSP_M_HH_1PT	X		X		X										
OPP_INCAR_HSP_M_HH_25PT	X		X		X										
OPP_INCAR_HSP_M_HH_50PT	X		X		X										
OPP_INCAR_HSP_M_HH_75PT	X		X		X										
OPP_INCAR_HSP_M_N	X		X		X										
OPP_INCAR_NAM_F_HH_100PT	X		X		X										
OPP_INCAR_NAM_F_HH_1PT	X		X		X										
OPP_INCAR_NAM_F_HH_25PT	X		X		X										
OPP_INCAR_NAM_F_HH_50PT	X		X		X										
OPP_INCAR_NAM_F_HH_75PT	X		X		X										
OPP_INCAR_NAM_F_N	X		X		X										
OPP_INCAR_NAM_M_HH_100PT	X		X		X										
OPP_INCAR_NAM_M_HH_1PT	X		X		X										
OPP_INCAR_NAM_M_HH_25PT	X		X		X										
OPP_INCAR_NAM_M_HH_50PT	X		X		X										
OPP_INCAR_NAM_M_HH_75PT	X		X		X										
OPP_INCAR_NAM_M_N	X		X		X										
OPP_INCAR_OTHER_F_HH_100PT	X		X		X										
OPP_INCAR_OTHER_F_HH_1PT	X		X		X										
OPP_INCAR_OTHER_F_HH_25PT	X		X		X										
OPP_INCAR_OTHER_F_HH_50PT	X		X		X										
OPP_INCAR_OTHER_F_HH_75PT	X		X		X										
OPP_INCAR_OTHER_F_N	X		X		X										
OPP_INCAR_OTHER_M_HH_100PT	X		X		X										
OPP_INCAR_OTHER_M_HH_1PT	X		X		X										
OPP_INCAR_OTHER_M_HH_25PT	X		X		X										

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
OPP_INCAR_OTHER_M_HH_50PT	X		X		X										
OPP_INCAR_OTHER_M_HH_75PT	X		X		X										
OPP_INCAR_OTHER_M_N	X		X		X										
OPP_INCAR_WHT_F_HH_100PT	X		X		X										
OPP_INCAR_WHT_F_HH_1PT	X		X		X										
OPP_INCAR_WHT_F_HH_25PT	X		X		X										
OPP_INCAR_WHT_F_HH_50PT	X		X		X										
OPP_INCAR_WHT_F_HH_75PT	X		X		X										
OPP_INCAR_WHT_F_N	X		X		X										
OPP_INCAR_WHT_M_HH_100PT	X		X		X										
OPP_INCAR_WHT_M_HH_1PT	X		X		X										
OPP_INCAR_WHT_M_HH_25PT	X		X		X										
OPP_INCAR_WHT_M_HH_50PT	X		X		X										
OPP_INCAR_WHT_M_HH_75PT	X		X		X										
OPP_INCAR_WHT_M_N	X		X		X										
OPP_TOP20 ASN F HH 100PT	X		X								X				
OPP_TOP20 ASN F HH 1PT	X		X								X				
OPP_TOP20 ASN F HH 25PT	X		X								X				
OPP_TOP20 ASN F HH 50PT	X		X								X				
OPP_TOP20 ASN F HH 75PT	X		X								X				
OPP_TOP20 ASN F N	X		X								X				
OPP_TOP20 ASN M HH 100PT	X		X								X				
OPP_TOP20 ASN M HH 1PT	X		X								X				
OPP_TOP20 ASN M HH 25PT	X		X								X				
OPP_TOP20 ASN M HH 50PT	X		X								X				
OPP_TOP20 ASN M HH 75PT	X		X								X				
OPP_TOP20 ASN M N	X		X								X				
OPP_TOP20 BLK F HH 100PT	X		X								X				
OPP_TOP20 BLK F HH 1PT	X		X								X				

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
OPP_TOP20_BLK_F_HH_25PT	X		X							X					
OPP_TOP20_BLK_F_HH_50PT	X		X							X					
OPP_TOP20_BLK_F_HH_75PT	X		X							X					
OPP_TOP20_BLK_F_N	X		X							X					
OPP_TOP20_BLK_M_HH_100PT	X		X							X					
OPP_TOP20_BLK_M_HH_1PT	X		X							X					
OPP_TOP20_BLK_M_HH_25PT	X		X							X					
OPP_TOP20_BLK_M_HH_50PT	X		X							X					
OPP_TOP20_BLK_M_HH_75PT	X		X							X					
OPP_TOP20_BLK_M_N	X		X							X					
OPP_TOP20_HSP_F_HH_100PT	X		X							X					
OPP_TOP20_HSP_F_HH_1PT	X		X							X					
OPP_TOP20_HSP_F_HH_25PT	X		X							X					
OPP_TOP20_HSP_F_HH_50PT	X		X							X					
OPP_TOP20_HSP_F_HH_75PT	X		X							X					
OPP_TOP20_HSP_F_N	X		X							X					
OPP_TOP20_HSP_M_HH_100PT	X		X							X					
OPP_TOP20_HSP_M_HH_1PT	X		X							X					
OPP_TOP20_HSP_M_HH_25PT	X		X							X					
OPP_TOP20_HSP_M_HH_50PT	X		X							X					
OPP_TOP20_HSP_M_HH_75PT	X		X							X					
OPP_TOP20_HSP_M_N	X		X							X					
OPP_TOP20_NAM_F_HH_100PT	X		X							X					
OPP_TOP20_NAM_F_HH_1PT	X		X							X					
OPP_TOP20_NAM_F_HH_25PT	X		X							X					
OPP_TOP20_NAM_F_HH_50PT	X		X							X					
OPP_TOP20_NAM_F_HH_75PT	X		X							X					
OPP_TOP20_NAM_F_N	X		X							X					
OPP_TOP20_NAM_M_HH_100PT	X		X							X					

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
OPP_TOP20_NAM_M_HH_1PT	X		X							X					
OPP_TOP20_NAM_M_HH_25PT	X		X							X					
OPP_TOP20_NAM_M_HH_50PT	X		X							X					
OPP_TOP20_NAM_M_HH_75PT	X		X							X					
OPP_TOP20_NAM_M_N	X		X							X					
OPP_TOP20_OTHER_F_HH_100PT	X		X							X					
OPP_TOP20_OTHER_F_HH_1PT	X		X							X					
OPP_TOP20_OTHER_F_HH_25PT	X		X							X					
OPP_TOP20_OTHER_F_HH_50PT	X		X							X					
OPP_TOP20_OTHER_F_HH_75PT	X		X							X					
OPP_TOP20_OTHER_F_N	X		X							X					
OPP_TOP20_OTHER_M_HH_100PT	X		X							X					
OPP_TOP20_OTHER_M_HH_1PT	X		X							X					
OPP_TOP20_OTHER_M_HH_25PT	X		X							X					
OPP_TOP20_OTHER_M_HH_50PT	X		X							X					
OPP_TOP20_OTHER_M_HH_75PT	X		X							X					
OPP_TOP20_OTHER_M_N	X		X							X					
OPP_TOP20_WHT_F_HH_100PT	X		X							X					
OPP_TOP20_WHT_F_HH_1PT	X		X							X					
OPP_TOP20_WHT_F_HH_25PT	X		X							X					
OPP_TOP20_WHT_F_HH_50PT	X		X							X					
OPP_TOP20_WHT_F_HH_75PT	X		X							X					
OPP_TOP20_WHT_F_N	X		X							X					
OPP_TOP20_WHT_M_HH_100PT	X		X							X					
OPP_TOP20_WHT_M_HH_1PT	X		X							X					
OPP_TOP20_WHT_M_HH_25PT	X		X							X					
OPP_TOP20_WHT_M_HH_50PT	X		X							X					
OPP_TOP20_WHT_M_HH_75PT	X		X							X					
OPP_TOP20_WHT_M_N	X		X							X					

Table 38.2. Variable definitions and specifications, OPP

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR ASN F HH 100PT	Fraction incarcerated on April 1st 2010: Asian female child with parents from 100th household income percentile	jail_asian_female_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR ASN F HH 1PT	Fraction incarcerated on April 1st 2010: Asian female child with parents from 1st household income percentile	jail_asian_female_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR ASN F HH 25PT	Fraction incarcerated on April 1st 2010: Asian female child with parents from 25th household income percentile	jail_asian_female_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR ASN F HH 50PT	Fraction incarcerated on April 1st 2010: Asian female child with parents from 50th household income percentile	jail_asian_female_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR ASN F HH 75PT	Fraction incarcerated on April 1st 2010: Asian female child with parents from 75th household income percentile	jail_asian_female_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR ASN M HH 100PT	Fraction incarcerated on April 1st 2010: Asian male child with parents from 100th household income percentile	jail_asian_male_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR ASN M HH 1PT	Fraction incarcerated on April 1st 2010: Asian male child with parents from 1st household income percentile	jail_asian_male_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR ASN M HH 25PT	Fraction incarcerated on April 1st 2010: Asian male child with parents from 25th household income percentile	jail_asian_male_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR ASN M HH 50PT	Fraction incarcerated on April 1st 2010: Asian male child with parents from 50th household income percentile	jail_asian_male_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR ASN M HH 75PT	Fraction incarcerated on April 1st 2010: Asian male child with parents from 75th household income percentile	jail_asian_male_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR BLK F HH 100PT	Fraction incarcerated on April 1st 2010: Black or African American female child with parents from 100th household income percentile	jail_black_female_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR BLK F HH 1PT	Fraction incarcerated on April 1st 2010: Black or African American female child with parents from 1st household income percentile	jail_black_female_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR BLK F HH 25PT	Fraction incarcerated on April 1st 2010: Black or African American female child with parents from 25th household income percentile	jail_black_female_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR BLK F HH 50PT	Fraction incarcerated on April 1st 2010: Black or African American female child with parents from 50th household income percentile	jail_black_female_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR_BLK_F_HH_75PT	Fraction incarcerated on April 1st 2010: Black or African American female child with parents from 75th household income percentile	jail_black_female_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_BLK_M_HH_100PT	Fraction incarcerated on April 1st 2010: Black or African American male child with parents from 100th household income percentile	jail_black_male_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_BLK_M_HH_1PT	Fraction incarcerated on April 1st 2010: Black or African American male child with parents from 1st household income percentile	jail_black_male_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_BLK_M_HH_25PT	Fraction incarcerated on April 1st 2010: Black or African American male child with parents from 25th household income percentile	jail_black_male_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_BLK_M_HH_50PT	Fraction incarcerated on April 1st 2010: Black or African American male child with parents from 50th household income percentile	jail_black_male_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_BLK_M_HH_75PT	Fraction incarcerated on April 1st 2010: Black or African American male child with parents from 75th household income percentile	jail_black_male_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_HSP_F_HH_100PT	Fraction incarcerated on April 1st 2010: Hispanic female child with parents from 100th household income percentile	jail_hisp_female_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR_HSP_F_HH_1PT	Fraction incarcerated on April 1st 2010: Hispanic female child with parents from 1st household income percentile	jail_hisp_female_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_HSP_F_HH_25PT	Fraction incarcerated on April 1st 2010: Hispanic female child with parents from 25th household income percentile	jail_hisp_female_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_HSP_F_HH_50PT	Fraction incarcerated on April 1st 2010: Hispanic female child with parents from 50th household income percentile	jail_hisp_female_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_HSP_F_HH_75PT	Fraction incarcerated on April 1st 2010: Hispanic female child with parents from 75th household income percentile	jail_hisp_female_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_HSP_M_HH_100PT	Fraction incarcerated on April 1st 2010: Hispanic male child with parents from 100th household income percentile	jail_hisp_male_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_HSP_M_HH_1PT	Fraction incarcerated on April 1st 2010: Hispanic male child with parents from 1st household income percentile	jail_hisp_male_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_HSP_M_HH_25PT	Fraction incarcerated on April 1st 2010: Hispanic male child with parents from 25th household income percentile	jail_hisp_male_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR_HSP_M_HH_50PT	Fraction incarcerated on April 1st 2010: Hispanic male child with parents from 50th household income percentile	jail_hisp_male_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_HSP_M_HH_75PT	Fraction incarcerated on April 1st 2010: Hispanic male child with parents from 75th household income percentile	jail_hisp_male_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_NAM_F_HH_100PT	Fraction incarcerated on April 1st 2010: Native American female child with parents from 100th household income percentile	jail_natam_female_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_NAM_F_HH_1PT	Fraction incarcerated on April 1st 2010: Native American female child with parents from 1st household income percentile	jail_natam_female_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_NAM_F_HH_25PT	Fraction incarcerated on April 1st 2010: Native American female child with parents from 25th household income percentile	jail_natam_female_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_NAM_F_HH_50PT	Fraction incarcerated on April 1st 2010: Native American female child with parents from 50th household income percentile	jail_natam_female_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_NAM_F_HH_75PT	Fraction incarcerated on April 1st 2010: Native American female child with parents from 75th household income percentile	jail_natam_female_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR_NAM_M_HH_100PT	Fraction incarcerated on April 1st 2010: Native American male child with parents from 100th household income percentile	jail_natam_male_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_NAM_M_HH_1PT	Fraction incarcerated on April 1st 2010: Native American male child with parents from 1st household income percentile	jail_natam_male_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_NAM_M_HH_25PT	Fraction incarcerated on April 1st 2010: Native American male child with parents from 25th household income percentile	jail_natam_male_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_NAM_M_HH_50PT	Fraction incarcerated on April 1st 2010: Native American male child with parents from 50th household income percentile	jail_natam_male_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_NAM_M_HH_75PT	Fraction incarcerated on April 1st 2010: Native American male child with parents from 75th household income percentile	jail_natam_male_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_OTHER_F_HH_100PT	Fraction incarcerated on April 1st 2010: Other race female child with parents from 100th household income percentile	jail_other_female_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_OTHER_F_HH_1PT	Fraction incarcerated on April 1st 2010: Other race female child with parents from 1st household income percentile	jail_other_female_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR_OTHER_F_HH_25PT	Fraction incarcerated on April 1st 2010: Other race female child with parents from 25th household income percentile	jail_other_female_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_OTHER_F_HH_50PT	Fraction incarcerated on April 1st 2010: Other race female child with parents from 50th household income percentile	jail_other_female_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_OTHER_F_HH_75PT	Fraction incarcerated on April 1st 2010: Other race female child with parents from 75th household income percentile	jail_other_female_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_OTHER_M_HH_100PT	Fraction incarcerated on April 1st 2010: Other race male child with parents from 100th household income percentile	jail_other_male_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_OTHER_M_HH_1PT	Fraction incarcerated on April 1st 2010: Other race male child with parents from 1st household income percentile	jail_other_male_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_OTHER_M_HH_25PT	Fraction incarcerated on April 1st 2010: Other race male child with parents from 25th household income percentile	jail_other_male_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_OTHER_M_HH_50PT	Fraction incarcerated on April 1st 2010: Other race male child with parents from 50th household income percentile	jail_other_male_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR_OTHER_M_HH_75PT	Fraction incarcerated on April 1st 2010: Other race male child with parents from 75th household income percentile	jail_other_male_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_WHT_F_HH_100PT	Fraction incarcerated on April 1st 2010: White female child with parents from 100th household income percentile	jail_white_female_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_WHT_F_HH_1PT	Fraction incarcerated on April 1st 2010: White female child with parents from 1st household income percentile	jail_white_female_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_WHT_F_HH_25PT	Fraction incarcerated on April 1st 2010: White female child with parents from 25th household income percentile	jail_white_female_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_WHT_F_HH_50PT	Fraction incarcerated on April 1st 2010: White female child with parents from 50th household income percentile	jail_white_female_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_WHT_F_HH_75PT	Fraction incarcerated on April 1st 2010: White female child with parents from 75th household income percentile	jail_white_female_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_WHT_M_HH_100PT	Fraction incarcerated on April 1st 2010: White male child with parents from 100th household income percentile	jail_white_male_p100; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR_WHT_M_HH_1PT	Fraction incarcerated on April 1st 2010: White male child with parents from 1st household income percentile	jail_white_male_p1; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_WHT_M_HH_25PT	Fraction incarcerated on April 1st 2010: White male child with parents from 25th household income percentile	jail_white_male_p25; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_WHT_M_HH_50PT	Fraction incarcerated on April 1st 2010: White male child with parents from 50th household income percentile	jail_white_male_p50; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_INCAR_WHT_M_HH_75PT	Fraction incarcerated on April 1st 2010: White male child with parents from 75th household income percentile	jail_white_male_p75; jail: Fraction incarcerated on April 1st, 2010 (where incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility)	n/a
OPP_TOP20 ASN F HH 100PT	Probability of reaching the top quintile of the national household income distribution: Asian female child with parents from 100th household income percentile	kfr_top20_asian_female_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20 ASN F HH 1PT	Probability of reaching the top quintile of the national household income distribution: Asian female child with parents from 1st household income percentile	kfr_top20_asian_female_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20 ASN F HH 25PT	Probability of reaching the top quintile of the national household income distribution: Asian female child with parents from 25th household income percentile	kfr_top20_asian_female_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20 ASN F HH 50PT	Probability of reaching the top quintile of the national household income distribution: Asian female child with parents from 50th household income percentile	kfr_top20_asian_female_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20 ASN F HH 75PT	Probability of reaching the top quintile of the national household income distribution: Asian female child with parents from 75th household income percentile	kfr_top20_asian_female_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20 ASN M HH 100PT	Probability of reaching the top quintile of the national household income distribution: Asian male child with parents from 100th household income percentile	kfr_top20_asian_male_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20 ASN M HH 1PT	Probability of reaching the top quintile of the national household income distribution: Asian male child with parents from 1st household income percentile	kfr_top20_asian_male_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20 ASN M HH 25PT	Probability of reaching the top quintile of the national household income distribution: Asian male child with parents from 25th household income percentile	kfr_top20_asian_male_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20 ASN M HH 50PT	Probability of reaching the top quintile of the national household income distribution: Asian male child with parents from 50th household income percentile	kfr_top20_asian_male_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20 ASN M HH 75PT	Probability of reaching the top quintile of the national household income distribution: Asian male child with parents from 75th household income percentile	kfr_top20_asian_male_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20_BLK_F_HH_100PT	Probability of reaching the top quintile of the national household income distribution: Black or African American female child with parents from 100th household income percentile	kfr_top20_black_female_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_BLK_F_HH_1PT	Probability of reaching the top quintile of the national household income distribution: Black or African American female child with parents from 1st household income percentile	kfr_top20_black_female_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_BLK_F_HH_25PT	Probability of reaching the top quintile of the national household income distribution: Black or African American female child with parents from 25th household income percentile	kfr_top20_black_female_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_BLK_F_HH_50PT	Probability of reaching the top quintile of the national household income distribution: Black or African American female child with parents from 50th household income percentile	kfr_top20_black_female_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_BLK_F_HH_75PT	Probability of reaching the top quintile of the national household income distribution: Black or African American female child with parents from 75th household income percentile	kfr_top20_black_female_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_BLK_M_HH_100PT	Probability of reaching the top quintile of the national household income distribution: Black or African American male child with parents from 100th household income percentile	kfr_top20_black_male_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_BLK_M_HH_1PT	Probability of reaching the top quintile of the national household income distribution: Black or African American male child with parents from 1st household income percentile	kfr_top20_black_male_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20_BLK_M_HH_25PT	Probability of reaching the top quintile of the national household income distribution: Black or African American male child with parents from 25th household income percentile	kfr_top20_black_male_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_BLK_M_HH_50PT	Probability of reaching the top quintile of the national household income distribution: Black or African American male child with parents from 50th household income percentile	kfr_top20_black_male_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_BLK_M_HH_75PT	Probability of reaching the top quintile of the national household income distribution: Black or African American male child with parents from 75th household income percentile	kfr_top20_black_male_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_HSP_F_HH_100PT	Probability of reaching the top quintile of the national household income distribution: Hispanic female child with parents from 100th household income percentile	kfr_top20_hisp_female_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_HSP_F_HH_1PT	Probability of reaching the top quintile of the national household income distribution: Hispanic female child with parents from 1st household income percentile	kfr_top20_hisp_female_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_HSP_F_HH_25PT	Probability of reaching the top quintile of the national household income distribution: Hispanic female child with parents from 25th household income percentile	kfr_top20_hisp_female_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_HSP_F_HH_50PT	Probability of reaching the top quintile of the national household income distribution: Hispanic female child with parents from 50th household income percentile	kfr_top20_hisp_female_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20_HSP_F_HH_75PT	Probability of reaching the top quintile of the national household income distribution: Hispanic female child with parents from 75th household income percentile	kfr_top20_hisp_female_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_HSP_M_HH_100PT	Probability of reaching the top quintile of the national household income distribution: Hispanic male child with parents from 100th household income percentile	kfr_top20_hisp_male_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_HSP_M_HH_1PT	Probability of reaching the top quintile of the national household income distribution: Hispanic male child with parents from 1st household income percentile	kfr_top20_hisp_male_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_HSP_M_HH_25PT	Probability of reaching the top quintile of the national household income distribution: Hispanic male child with parents from 25th household income percentile	kfr_top20_hisp_male_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_HSP_M_HH_50PT	Probability of reaching the top quintile of the national household income distribution: Hispanic male child with parents from 50th household income percentile	kfr_top20_hisp_male_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_HSP_M_HH_75PT	Probability of reaching the top quintile of the national household income distribution: Hispanic male child with parents from 75th household income percentile	kfr_top20_hisp_male_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_NAM_F_HH_100PT	Probability of reaching the top quintile of the national household income distribution: Native American female child with parents from 100th household income percentile	kfr_top20_natam_female_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20_NAM_F_HH_1PT	Probability of reaching the top quintile of the national household income distribution: Native American female child with parents from 1st household income percentile	kfr_top20_natam_female_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_NAM_F_HH_25PT	Probability of reaching the top quintile of the national household income distribution: Native American female child with parents from 25th household income percentile	kfr_top20_natam_female_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_NAM_F_HH_50PT	Probability of reaching the top quintile of the national household income distribution: Native American female child with parents from 50th household income percentile	kfr_top20_natam_female_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_NAM_F_HH_75PT	Probability of reaching the top quintile of the national household income distribution: Native American female child with parents from 75th household income percentile	kfr_top20_natam_female_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_NAM_M_HH_100PT	Probability of reaching the top quintile of the national household income distribution: Native American male child with parents from 100th household income percentile	kfr_top20_natam_male_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_NAM_M_HH_1PT	Probability of reaching the top quintile of the national household income distribution: Native American male child with parents from 1st household income percentile	kfr_top20_natam_male_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_NAM_M_HH_25PT	Probability of reaching the top quintile of the national household income distribution: Native American male child with parents from 25th household income percentile	kfr_top20_natam_male_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20_NAM_M_HH_50PT	Probability of reaching the top quintile of the national household income distribution: Native American male child with parents from 50th household income percentile	kfr_top20_natam_male_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_NAM_M_HH_75PT	Probability of reaching the top quintile of the national household income distribution: Native American male child with parents from 75th household income percentile	kfr_top20_natam_male_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_OTHER_F_HH_100PT	Probability of reaching the top quintile of the national household income distribution: Other race female child with parents from 100th household income percentile	kfr_top20_other_female_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_OTHER_F_HH_1PT	Probability of reaching the top quintile of the national household income distribution: Other race female child with parents from 1st household income percentile	kfr_top20_other_female_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_OTHER_F_HH_25PT	Probability of reaching the top quintile of the national household income distribution: Other race female child with parents from 25th household income percentile	kfr_top20_other_female_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_OTHER_F_HH_50PT	Probability of reaching the top quintile of the national household income distribution: Other race female child with parents from 50th household income percentile	kfr_top20_other_female_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_OTHER_F_HH_75PT	Probability of reaching the top quintile of the national household income distribution: Other race female child with parents from 75th household income percentile	kfr_top20_other_female_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20_OTHER_M_HH_100PT	Probability of reaching the top quintile of the national household income distribution: Other race male child with parents from 100th household income percentile	kfr_top20_other_male_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_OTHER_M_HH_1PT	Probability of reaching the top quintile of the national household income distribution: Other race male child with parents from 1st household income percentile	kfr_top20_other_male_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_OTHER_M_HH_25PT	Probability of reaching the top quintile of the national household income distribution: Other race male child with parents from 25th household income percentile	kfr_top20_other_male_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_OTHER_M_HH_50PT	Probability of reaching the top quintile of the national household income distribution: Other race male child with parents from 50th household income percentile	kfr_top20_other_male_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_OTHER_M_HH_75PT	Probability of reaching the top quintile of the national household income distribution: Other race male child with parents from 75th household income percentile	kfr_top20_other_male_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_WHT_F_HH_100PT	Probability of reaching the top quintile of the national household income distribution: White female child with parents from 100th household income percentile	kfr_top20_white_female_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_WHT_F_HH_1PT	Probability of reaching the top quintile of the national household income distribution: White female child with parents from 1st household income percentile	kfr_top20_white_female_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20_WHT_F_HH_25PT	Probability of reaching the top quintile of the national household income distribution: White female child with parents from 25th household income percentile	kfr_top20_white_female_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_WHT_F_HH_50PT	Probability of reaching the top quintile of the national household income distribution: White female child with parents from 50th household income percentile	kfr_top20_white_female_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_WHT_F_HH_75PT	Probability of reaching the top quintile of the national household income distribution: White female child with parents from 75th household income percentile	kfr_top20_white_female_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_WHT_M_HH_100PT	Probability of reaching the top quintile of the national household income distribution: White male child with parents from 100th household income percentile	kfr_top20_white_male_p100; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_WHT_M_HH_1PT	Probability of reaching the top quintile of the national household income distribution: White male child with parents from 1st household income percentile	kfr_top20_white_male_p1; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_WHT_M_HH_25PT	Probability of reaching the top quintile of the national household income distribution: White male child with parents from 25th household income percentile	kfr_top20_white_male_p25; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_TOP20_WHT_M_HH_50PT	Probability of reaching the top quintile of the national household income distribution: White male child with parents from 50th household income percentile	kfr_top20_white_male_p50; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20_WHT_M_HH_75PT	Probability of reaching the top quintile of the national household income distribution: White male child with parents from 75th household income percentile	kfr_top20_white_male_p75; kfr: Mean percentile rank (relative to other children born in the same year) in the national distribution of household income (i.e. own earnings and spouse's earnings) measured as mean earnings in 2014-2015 for the baseline sample	n/a
OPP_INCAR ASN F N	Number of children with no missing data used to construct the incarceration outcome for Asian female	jail_asian_female_n; Number of children of Asian and female with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR ASN M N	Number of children with no missing data used to construct the incarceration outcome for Asian male	jail_asian_male_n; Number of children of Asian and male with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR BLK F N	Number of children with no missing data used to construct the incarceration outcome for Black or African American female	jail_black_female_n; Number of children of Black or African American and female with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR BLK M N	Number of children with no missing data used to construct the incarceration outcome for Black or African American male	jail_black_male_n; Number of children of Black or African American and male with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR HSP F N	Number of children with no missing data used to construct the incarceration outcome for Hispanic female	jail_hisp_female_n; Number of children of Hispanic and female with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR HSP M N	Number of children with no missing data used to construct the incarceration outcome for Hispanic male	jail_hisp_male_n; Number of children of Hispanic and male with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR NAM F N	Number of children with no missing data used to construct the incarceration outcome for Native American female	jail_natam_female_n; Number of children of Native American and female with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR NAM M N	Number of children with no missing data used to construct the incarceration outcome for Native American male	jail_natam_male_n; Number of children of Native American and male with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR OTHER F N	Number of children with no missing data used to construct the incarceration outcome for Other race female	jail_other_female_n; Number of children of Other race and female with non-missing data used to construct the estimate for incarceration	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_INCAR_OTHER_M_N	Number of children with no missing data used to construct the incarceration outcome for Other race male	jail_other_male_n; Number of children of Other race and male with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR_WHT_F_N	Number of children with no missing data used to construct the incarceration outcome for White female	jail_white_female_n; Number of children of White and female with non-missing data used to construct the estimate for incarceration	n/a
OPP_INCAR_WHT_M_N	Number of children with no missing data used to construct the incarceration outcome for White male	jail_white_male_n; Number of children of White and male with non-missing data used to construct the estimate for incarceration	n/a
OPP_TOP20 ASN F N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Asian female	kfr_top20_asian_female_n; Number of children of Asian and female with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20 ASN M N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Asian male	kfr_top20_asian_male_n; Number of children of Asian and male with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20 BLK F N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Black or African American female	kfr_top20_black_female_n; Number of children of Black or African American and female with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20 BLK M N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Black or African American male	kfr_top20_black_male_n; Number of children of Black or African American and male with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20 HSP F N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Hispanic female	kfr_top20_hisp_female_n; Number of children of Hispanic and female with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
OPP_TOP20_HSP_M_N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Hispanic male	kfr_top20_hisp_male_n; Number of children of Hispanic and male with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20_NAM_F_N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Native American female	kfr_top20_natam_female_n; Number of children of Native American and female with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20_NAM_M_N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Native American male	kfr_top20_natam_male_n; Number of children of Native American and male with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20_OTHER_F_N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Other race female	kfr_top20_other_female_n; Number of children of Other race and female with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20_OTHER_M_N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for Other race male	kfr_top20_other_male_n; Number of children of Other race and male with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20_WHT_F_N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for White female	kfr_top20_white_female_n; Number of children of White and female with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a
OPP_TOP20_WHT_M_N	Number of children with no missing data used to construct the mean predicted probability of reaching the top quintile of the national household income distribution for White male	kfr_top20_white_male_n; Number of children of White and male with non-missing data used to construct the estimate for reaching the top quintile of the national household income distribution	n/a

39. Program for the International Assessment of Adult Competencies (PIAAC)

Sponsor

Department of Education, National Center for Education Statistics

Description

The U.S. Program for the International Assessment of Adult Competencies (PIAAC) Skill Map provides model-based state and county level measures of adults' (16-74 years old) proficiency in literacy and numeracy. The statistics were estimated using small area estimation (SAE) from PIACC assessments data (2012/2014/2017) linked to ACS (2013-2017) data. The PIACC Skills Map includes average proficiency scores for all counties in the United States and reports the percentage of adults at each proficiency level.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2017
- ▶ **SDOH domain(s):**
 - Education
- ▶ **SDOH variable naming convention:** PIAAC_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

Resources

Data were downloaded from: <https://nces.ed.gov/surveys/piaac/skillsmmap/> (last retrieved March, 2021).

Suggested Citation

AHRQ SDOH Database (v1), from National Center for Education Statistics. U.S. Skills Map: State and County Indicators of Adult Literacy and Numeracy. Retrieved March 2021 from: <https://nces.ed.gov/surveys/piaac/skillsmmap/>.

Data Set Notes

Reliability

The PIAAC source file includes 95 percent credible intervals (based on Bayesian statistics) and coefficients of variations.

Geographic Levels

PIACC variables are reported at the county level in the SDOH Database, taken directly from the source data set.

Suppression Rules

PIAAC source files contain suppressed data to ensure confidentiality of individuals in the release of public-use aggregate and microdata.

Variable Notes

Table 39.1 below provides information on the variable availability across years. Table 39.2 provides more information on what numerator and denominator variables were drawn for PIAAC variables in the SDOH Database.

Table 39.1. Variable availability across years, PIAAC

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PIAAC_LIT_AVG_SCORE	X											X			
PIAAC_LIT_PCT_LEVEL1_OR_BELOW	X											X			
PIAAC_LIT_PCT_LEVEL2	X											X			
PIAAC_LIT_PCT_LEVEL3_OR_ABOVE	X											X			
PIAAC_NUM_AVG_SCORE	X											X			
PIAAC_NUM_PCT_LEVEL1_OR_BELOW	X											X			
PIAAC_NUM_PCT_LEVEL2	X											X			
PIAAC_NUM_PCT_LEVEL3_OR_ABOVE	X											X			
PIAAC_POP_TARGET	X											X			

Table 39.2. Variable definitions and specifications, PIAAC

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
PIAAC_LIT_AVG_SCORE	Literacy average score indirect estimates	Lit_A; Literacy average score indirect estimates	n/a
PIAAC_LIT_PCT_LEVEL1_OR_BELOW	Literacy percentage at or below Level 1 indirect estimates	Lit_P1*100; Lit_P1: Literacy proportion at or below Level 1 indirect estimates	n/a
PIAAC_LIT_PCT_LEVEL2	Literacy percentage at Level 2 indirect estimates	Lit_P2*100; Lit_P2: Numeracy proportion at Level 2 indirect estimates	n/a
PIAAC_LIT_PCT_LEVEL3_OR_ABOVE	Literacy percentage at or above Level 3 indirect estimates	Lit_P3*100; Lit_P3: Literacy proportion at or above Level 3 indirect estimates	n/a
PIAAC_NUM_AVG_SCORE	Numeracy average score indirect estimates	Num_A; Numeracy average score indirect estimates	n/a
PIAAC_NUM_PCT_LEVEL1_OR_BELOW	Numeracy percentage at or below Level 1 indirect estimates	Num_P1*100; Num_P1: Numeracy proportion at or below Level 1 indirect estimates	n/a
PIAAC_NUM_PCT_LEVEL2	Numeracy percentage at Level 2 indirect estimates	Num_P2*100; Num_P2: Numeracy proportion at Level 2 indirect estimates	n/a
PIAAC_NUM_PCT_LEVEL3_OR_ABOVE	Numeracy percentage at or above Level 3 indirect estimates	Num_P3*100; Num_P3: Numeracy proportion at or above Level 3 indirect estimates	n/a
PIAAC_POP_TARGET	PIAAC Target population: population between age 16-74	POP_TARGET; Target population: population between age 16-74	POP_TARGET; Target population: population between age 16-74

Other Notes

When reporting PIAAC model-based estimates of average scale scores or percentages at proficiency levels, it is recommended that the associated 95% credible intervals are also included in all reports. For more guidelines see: *PIAAC Small Area Estimation (SAE) Guidance for Using State and County Estimates of Adult Skills.*

<https://nces.ed.gov/surveys/piaac/skillsmmap/static/media/PIAAC-SAE-UserGuidance.6d3cf265.pdf>.

The U.S. PIAAC State and County estimates are based on area-level hierarchical Bayes linear three-fold models. Details of the methodology can be found at:

<https://nces.ed.gov/pubs2020/2020225.pdf>.

PIACC provides data on the target population (individuals 16-74 years old) derived from the ACS 2013-2017. Details on derivation of population total is available at:

<https://nces.ed.gov/surveys/piaac/skillsmmap/static/media/PIAAC-SAE-UserGuidance.6d3cf265.pdf>.

40. Physician Compare (PC)

Sponsor

U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services

Description

General information about doctors and clinicians in the Provider Data Catalog and on Medicare Care Compare profile pages comes primarily from the Provider, Enrollment, Chain, and Ownership System (PECOS) and is checked against Medicare claims data. This information is updated twice a month. For a clinician or group's information to appear on Care Compare, they must have the following:

- Current and "approved" Medicare enrollment records in PECOS
- A valid physical practice location or address
- A valid specialty
- A National Provider Identifier (NPI) for a clinician
- At least one Medicare Fee-for-Service claim within the last six months for a clinician
- At least two approved clinicians reassigning their benefits to the group

The PC file changes substantially by year reflecting clinicians' participating and reporting in Medicare's evolving quality payment programs.

Inclusion in the SDOH Database

- **Years available in the SDOH Database:** 2014 – 2019
- **SDOH domain(s):**
 - Healthcare context
- **SDOH variable naming convention:** PC_[VARNAME]
- **SDOH Database geographic level(s):** County

The Doctors and Clinicians national downloadable file is organized at the individual clinician level; each line is unique at the clinician/enrollment record/group/address level. Clinicians with multiple Medicare enrollment records and/or single enrollments linking to multiple practice locations are listed on multiple lines.

Source files were geocoded to match FIPS Codes to the location of each provider as mentioned in the source file.

Resources

Data were downloaded from <https://data.cms.gov/provider-data/archived-data/doctors-clinicians>.

The codebook is available here: <https://data.cms.gov/provider-data/topics/doctors-clinicians>.

Suggested Citation

AHRQ SDOH Database (v1), from Centers for Medicare & Medicaid Services. (n.d.). Physician Compare. <https://data.cms.gov/provider-data/topics/doctors-clinicians>.

Data Set Notes

Reliability

The Physician Compare source file does not include margins of error.

Geographic Levels

Physician Compare data are aggregated from the provider level to the county level.

Suppression Rules

The Physician Compare data file does not include suppression rules.

Variable Notes

Variables vary substantially across years. Such changes may reflect three reasons:

(1) how the data is/was captured—that is, the set of physicians reporting for any given measure varies year to year.

(2) variation of data sources over time: 2014-2016 was originally pulled from the Physician Quality Reporting System, and the subsequent years from the Quality Payment Program data:

https://qpp-cm-prod-content.s3.amazonaws.com/uploads/250/Physician_Compare_Webinar_Slides_August_2018.pdf

(3) variable names are missing in two quarter files in 2014 and one quarter file in 2016, and these quarterly files with missing variable labels were not accounted for 2014 and 2016 POS variable creation.

Three reasons mentioned above could point to substantial variations of values observed over years.

Table 40.1 below provides information on the variable availability across years. Table 40.2 provides more information on what numerator and denominator variables were drawn for PC variables in the SDOH Database.

Table 40.1. Variable availability across years, PC

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PC_PCT_MEDICARE_APPRVD_FULL_AMT	X								X	X	X	X	X	X	X
PC_PCT_MEDICARE_ASSIGNMENT_AMT	X								X	X	X	X	X	X	X

Table 40.2. Variable definitions and specifications, PC

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR (WHERE APPLICABLE)
PC_PCT_MEDICARE_APPRVD_FULL_AMT	Percentage of clinicians who accept Medicare Approved Amounts in Full	ASSGN=Y	Accept Medicare Approved Amounts in Full	n/a
PC_PCT_MEDICARE_MAY_APPRVD_FULL_AMT	Percentage of clinicians who may accept the Medicare Approved Amounts	ASSGN=M	May accept the Medicare Approved Amount	n/a

The two variables listed in table 40.1 and 40.2 are compliments because these are created from a binary clinician-level response to whether they take the Medicare approved amount is (Accept/May Accept). See the 'medical assignment' section in the link:
https://data.cms.gov/provider-data/sites/default/files/data_dictionaries/physician/DOC_Data_Dictionary.pdf.

Term Definitions

Table 40.3 provides important term definitions for users of the SDOH Database to consider when working with PC variables.

Table 40.3. Term definitions, PC

Term	Definition
Medicare Assignment	Indicator for whether a clinician accepts Medicare-approved amount as payment in full.

41. Provider of Services Files (POS)

Sponsor

U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services

Description

The Provider of Services File - Hospital & Non-Hospital Facilities data provide critical resources for federal regulator requirements as well as support for ongoing quality & research efforts sponsored by CMS. This file contains provider certification by Medicare, termination, accreditation, ownership, name, location, and other characteristics organized by CMS Certification Number.

The POS file contains data on characteristics of hospitals and other types of healthcare facilities, including the name and address of the facility and the type of Medicare services the facility provides, among other information. The data are collected through the Centers for Medicare & Medicaid Services (CMS) Regional Offices. The file, updated quarterly, contains an individual record for each Medicare-approved provider.

This data are gathered as part of the CMS Provider Certification process and are updated each time a provider is recertified. The specific timetable for recertification varies by provider type.

The POS file changes by year reflecting changes in the numbers and types of Medicare-approved providers.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2020
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** POS_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County, ZIP Code, and census tract

We geocoded files to match FIPS Codes to the location of each home health agency.

Resources

Data were downloaded from: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Provider-of-Services> (last retrieved March, 2022).

Suggested Citation

AHRQ SDOH Database (v1), from Centers for Medicare & Medicaid Services. (n.d.). Provider of Services File. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Provider-of-Services>.

Data Set Notes

Reliability

The POS data source file does not include margins of error.

Geographic Levels

POS data were aggregated from the provider level to the county, ZIP Code, and census tract level using geocoded data derived from the address information included in the POS file.

Suppression Rules

The POS data source does not include suppression rules.

Variable Notes

Table 41.1 below provides information on the variable availability across years. Table 41.2 provides more information on what numerator and denominator variables were drawn for POS variables in the SDOH Database.

Table 41.1. Variable availability across years, POS

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
POS_CMHC_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_DIST_ALC		X				X	X	X	X	X	X	X	X	X	X
POS_DIST_ALC_TRACT			X	X	X	X	X	X	X	X	X	X	X	X	X
POS_DIST_CLINIC		X				X	X	X	X	X	X	X	X	X	X
POS_DIST_CLINIC_TRACT			X	X	X	X	X	X	X	X	X	X	X	X	X
POS_DIST_ED		X				X	X	X	X	X	X	X	X	X	X
POS_DIST_ED_TRACT			X	X	X	X	X	X	X	X	X	X	X	X	X
POS_DIST_MEDSURG_ICU		X				X	X	X	X	X	X	X	X	X	X
POS_DIST_MEDSURG_ICU_TRACT			X	X	X	X	X	X	X	X	X	X	X	X	X
POS_DIST_OBSTETRICS		X				X	X	X	X	X	X	X	X	X	X
POS_DIST_OBSTETRICS_TRACT			X	X	X	X	X	X	X	X	X	X	X	X	X
POS_DIST_PED_ICU		X				X	X	X	X	X	X	X	X	X	X
POS_DIST_PED_ICU_TRACT			X	X	X	X	X	X	X	X	X	X	X	X	X
POS_DIST_TRAUMA		X				X	X	X	X	X	X	X	X	X	X
POS_DIST_TRAUMA_TRACT			X		X	X	X	X	X	X	X	X	X	X	X
POS_FQHC_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HHA_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSP_ALC_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSP_AMBULANCE_RATE	X			X	X				X	X	X	X	X	X	X
POS_HOSP_BURN_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSP_CHEMO_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSP_ED_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSP_MEDSURG_ICU_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSP_OBSTETRIC_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSP_PED_ICU_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSP_PSYCH_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSP_REHAB_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_HOSPICE_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
POS_MAX_DIST_ALC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MAX_DIST_CLINIC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MAX_DIST_ED	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MAX_DIST_MEDSURG_ICU	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MAX_DIST_OBSTETRICS	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MAX_DIST_PED_ICU	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MAX_DIST_TRAUMA	X				X	X	X	X	X	X	X	X	X	X	X
POS_MEAN_DIST_ALC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEAN_DIST_CLINIC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEAN_DIST_ED	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEAN_DIST_MEDSURG_ICU	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEAN_DIST_OBSTETRICS	X				X	X	X	X	X	X	X	X	X	X	X
POS_MEAN_DIST_PED_ICU	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEAN_DIST_TRAUMA	X				X	X	X	X	X	X	X	X	X	X	X
POS_MEDIAN_DIST_ALC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEDIAN_DIST_CLINIC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEDIAN_DIST_ED	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEDIAN_DIST_MEDSURG_ICU	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEDIAN_DIST_OBSTETRICS	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MEDIAN_DIST_PED_ICU	X				X	X	X	X	X	X	X	X	X	X	X
POS_MEDIAN_DIST_TRAUMA	X				X	X	X	X	X	X	X	X	X	X	X
POS_MIN_DIST_ALC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MIN_DIST_CLINIC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MIN_DIST_ED	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MIN_DIST_MEDSURG_ICU	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MIN_DIST_OBSTETRICS	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MIN_DIST_PED_ICU	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_MIN_DIST_TRAUMA	X				X	X	X	X	X	X	X	X	X	X	X
POS_NF_BEDS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
POS_NF_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_PCT_HOSP_FOR_PROFIT	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_PCT_HOSP_GOV	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_PCT_HOSP_NON_PROFIT	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_RHC_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_SNF_BEDS_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_SNF_RATE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_ASC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_CMHC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_FQHC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HHA	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSP_ALC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSP_AMBULANCE	X			X	X				X	X	X	X	X	X	X
POS_TOT_HOSP_BURN	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSP_CHEMO	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSP_ED	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSP_MEDSURG_ICU	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSP_OBSTETRIC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSP_PED_ICU	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSP_PSYCH	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSP_REHAB	X				X	X	X	X	X	X	X	X	X	X	X
POS_TOT_HOSPICE	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_NF	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_NF_BEDS	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_RHC	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_SNF	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_TOT_SNF_BEDS	X			X	X	X	X	X	X	X	X	X	X	X	X
POS_PCT_HOSP_GOV	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 41.2. Variable definitions and specifications, POS

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	Denominator Source Variable; Label
POS_MEDIAN_DIST_ED	Median distance in miles to the nearest emergency department, calculated using population weighted tract centroids in the county	DCTD_ER_SRVC_CD= 1, 2, 3; Hospitals with an Emergency department	n/a
POS_MEDIAN_DIST_MEDSURG_ICU	Median distance in miles to the nearest medical-surgical ICU, calculated using population weighted tract centroids in the county	ICU_SRVC_CD= 1, 2, 3; Hospitals with a Medical-surgical ICU	n/a
POS_MEDIAN_DIST_TRAUMA	Median distance in miles to the nearest designated trauma center, calculated using population weighted tract centroids in the county	SHCK_TRMA_SRVC_CD= 1, 2, 3; Hospitals with a Designated trauma center	n/a
POS_MEDIAN_DIST_PED_ICU	Median distance in miles to the nearest pediatric ICU, calculated using population weighted tract centroids in the county	PED_ICU_SRVC_CD= 1, 2, 3; Hospitals with a Pediatric ICU	n/a
POS_MEDIAN_DIST_OBSTETRICS	Median distance in miles to the nearest obstetrics department, calculated using population weighted tract centroids in the county	OB_SRVC_CD= 1, 2, 3; Hospitals with a Obstetrics Department	n/a
POS_MEDIAN_DIST_CLINIC	Median distance in miles to the nearest health clinic (FQHC, RHC), calculated using population weighted tract centroids in the county	PRVDR_CTGRY_CD=12, 21; FQHC/RHC	n/a
POS_MEDIAN_DIST_ALC	Median distance in miles to the nearest hospital with alcohol and drug abuse inpatient care, calculated using population weighted tract centroids in the county	ALCHL_DRUG_SRVC_CD= 1, 2, 3; Hospitals with an alcohol and drug abuse inpatient care	n/a
POS_MEAN_DIST_ED	Mean distance in miles to the nearest emergency department, calculated using population weighted tract centroids in the county	DCTD_ER_SRVC_CD= 1, 2, 3; Hospitals with an Emergency department	n/a
POS_MEAN_DIST_MEDSURG_ICU	Mean distance in miles to the nearest medical-surgical ICU, calculated using population weighted tract centroids in the county	ICU_SRVC_CD= 1, 2, 3; Hospitals with a Medical-surgical ICU	n/a
POS_MEAN_DIST_TRAUMA	Mean distance in miles to the nearest designated trauma center, calculated using population weighted tract centroids in the county	SHCK_TRMA_SRVC_CD= 1, 2, 3; Hospitals with a Designated trauma center	n/a
POS_MEAN_DIST_PED_ICU	Mean distance in miles to the nearest pediatric ICU, calculated using population weighted tract centroids in the county	PED_ICU_SRVC_CD= 1, 2, 3; Hospitals with a Pediatric ICU	n/a
POS_MEAN_DIST_OBSTETRICS	Mean distance in miles to the nearest obstetrics department, calculated using population weighted tract centroids in the county	OB_SRVC_CD= 1, 2, 3; Hospitals with a Obstetrics Department	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	Denominator Source Variable; Label
POS_MEAN_DIST_CLINIC	Mean distance in miles to the nearest health clinic (FQHC, RHC), calculated using population weighted tract centroids in the county	PRVDR_CTGRY_CD=12, 21; FQHC/RHC	n/a
POS_MEAN_DIST_ALC	Mean distance in miles to the nearest hospital with alcohol and drug abuse inpatient care, calculated using population weighted tract centroids in the county	ALCHL_DRUG_SRVC_CD= 1, 2, 3; Hospitals with an alcohol and drug abuse inpatient care	n/a
POS_MIN_DIST_ED	Minimum distance in miles to the nearest emergency department, calculated using population weighted tract centroids in the county	DCTD_ER_SRVC_CD= 1, 2, 3; Hospitals with an Emergency department	n/a
POS_MIN_DIST_MEDSURG_ICU	Minimum distance in miles to the nearest medical-surgical ICU, calculated using population weighted tract centroids in the county	ICU_SRVC_CD= 1, 2, 3; Hospitals with a Medical-surgical ICU	n/a
POS_MIN_DIST_TRAUMA	Minimum distance in miles to the nearest designated trauma center, calculated using population weighted tract centroids in the county	SHCK_TRMA_SRVC_CD= 1, 2, 3; Hospitals with a Designated trauma center	n/a
POS_MIN_DIST_PED_ICU	Minimum distance in miles to the nearest pediatric ICU, calculated using population weighted tract centroids in the county	PED_ICU_SRVC_CD= 1, 2, 3; Hospitals with a Pediatric ICU	n/a
POS_MIN_DIST_OBSTETRICS	Minimum distance in miles to the nearest obstetrics department, calculated using population weighted tract centroids in the county	OB_SRVC_CD= 1, 2, 3; Hospitals with a Obstetrics Department	n/a
POS_MIN_DIST_ALC	Minimum distance in miles to the nearest hospital with alcohol and drug abuse inpatient care, calculated using population weighted tract centroids in the county	PRVDR_CTGRY_CD=12, 21; FQHC/RHC	n/a
POS_MIN_DIST_CLINIC	Minimum distance in miles to the nearest health clinic (FQHC, RHC), calculated using population weighted tract centroids in the county	ALCHL_DRUG_SRVC_CD= 1, 2, 3; Hospitals with an alcohol and drug abuse inpatient care	n/a
POS_MAX_DIST_ED	Maximum distance in miles to the nearest emergency department, calculated using population weighted tract centroids in the county	DCTD_ER_SRVC_CD= 1, 2, 3; Hospitals with an Emergency department	n/a
POS_MAX_DIST_MEDSURG_ICU	Maximum distance in miles to the nearest medical-surgical ICU, calculated using population weighted tract centroids in the county	ICU_SRVC_CD= 1, 2, 3; Hospitals with a Medical-surgical ICU	n/a
POS_MAX_DIST_TRAUMA	Maximum distance in miles to the nearest designated trauma center, calculated using population weighted tract centroids in the county	SHCK_TRMA_SRVC_CD= 1, 2, 3; Hospitals with a Designated trauma center	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	Denominator Source Variable; Label
POS_MAX_DIST_PED_ICU	Maximum distance in miles to the nearest pediatric ICU, calculated using population weighted tract centroids in the county	PED_ICU_SRVC_CD= 1, 2, 3; Hospitals with a Pediatric ICU	n/a
POS_MAX_DIST_OBSTETRICS	Maximum distance in miles to the nearest obstetrics department, calculated using population weighted tract centroids in the county	OB_SRVC_CD= 1, 2, 3; Hospitals with a Obstetrics Department	n/a
POS_MAX_DIST_CLINIC	Maximum distance in miles to the nearest health clinic (FQHC, RHC), calculated using population weighted tract centroids in the county	PRVDR_CTGRY_CD=12, 21; FQHC/RHC	n/a
POS_MAX_DIST_ALC	Maximum distance in miles to the nearest hospital with alcohol and drug abuse inpatient care, calculated using population weighted tract centroids in the county	ALCHL_DRUG_SRVC_CD= 1, 2, 3; Hospitals with an alcohol and drug abuse inpatient care	n/a
POS_DIST_ED_ZIP	Distance in miles to the nearest emergency department, calculated using population weighted ZIP centroids	DCTD_ER_SRVC_CD= 1, 2, 3; Hospitals with an Emergency department	n/a
POS_DIST_MEDSURG_ICU_ZIP	Distance in miles to the nearest medical-surgical ICU, calculated using population weighted ZIP centroids	ICU_SRVC_CD= 1, 2, 3; Hospitals with a Medical-surgical ICU	n/a
POS_DIST_TRAUMA_ZIP	Distance in miles to the nearest designated trauma center, calculated using population weighted ZIP centroids	SHCK_TRMA_SRVC_CD= 1, 2, 3; Hospitals with a Designated trauma center	n/a
POS_DIST_PED_ICU_ZIP	Distance in miles to the nearest pediatric ICU, calculated using population weighted ZIP centroids	PED_ICU_SRVC_CD= 1, 2, 3; Hospitals with a Pediatric ICU	n/a
POS_DIST_OBSTETRICS_ZIP	Distance in miles to the nearest obstetrics department, calculated using population weighted ZIP centroids	OB_SRVC_CD= 1, 2, 3; Hospitals with a Obstetrics Department	n/a
POS_DIST_CLINIC_ZIP	Distance in miles to the nearest health clinic (FQHC, RHC), calculated using population weighted ZIP centroids	PRVDR_CTGRY_CD=12, 21; FQHC/RHC	n/a
POS_DIST_ALC_ZIP	Distance in miles to the nearest hospital with alcohol and drug abuse inpatient care, calculated using population weighted ZIP centroids	ALCHL_DRUG_SRVC_CD= 1, 2, 3; Hospitals with an alcohol and drug abuse inpatient care	n/a
POS_DIST_ED_TRACT	Distance in miles to the nearest emergency department, calculated using population weighted tract centroids	DCTD_ER_SRVC_CD= 1, 2, 3; Hospitals with an Emergency department	n/a
POS_DIST_MEDSURG_ICU_TRACT	Distance in miles to the nearest medical-surgical ICU, calculated using population weighted tract centroids	ICU_SRVC_CD= 1, 2, 3; Hospitals with a Medical-surgical ICU	n/a
POS_DIST_TRAUMA_TRACT	Distance in miles to the nearest designated trauma center, calculated using population weighted tract centroids	SHCK_TRMA_SRVC_CD= 1, 2, 3; Hospitals with a Designated trauma center	n/a

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	Denominator Source Variable; Label
POS_DIST_PED_ICU_TRACT	Distance in miles to the nearest pediatric ICU, calculated using population weighted tract centroids	PED_ICU_SRVC_CD= 1, 2, 3; Hospitals with a Pediatric ICU	n/a
POS_DIST_OBSTETRICS_TRACT	Distance in miles to the nearest obstetrics department, calculated using population weighted tract centroids	OB_SRVC_CD= 1, 2, 3; Hospitals with a Obstetrics Department	n/a
POS_DIST_CLINIC_TRACT	Distance in miles to the nearest health clinic (FQHC, RHC), calculated using population weighted tract centroids	PRVDR_CTGRY_CD=12, 21; FQHC/ RHC	n/a
POS_DIST_ALC_TRACT	Distance in miles to the nearest hospital with alcohol and drug abuse inpatient care, calculated using population weighted tract centroids	ALCHL_DRUG_SRVC_CD= 1, 2, 3; Hospitals with an alcohol and drug abuse inpatient care	n/a
POS_FQHC_RATE	Total number of FQHCs per 1,000 population	PRVDR_CTGRY_CD=21; FQHC	ACS_TOT_POP_WT; Total weighted population
POS_TOT_FQHC	Total number of FQHCs	PRVDR_CTGRY_CD=21; FQHC	n/a
POS_CMHC_RATE	Total number of Community Mental Health Centers per 1,000 population	PRVDR_CTGRY_CD=19; Community Mental Health Centers	ACS_TOT_POP_WT; Total weighted population
POS_TOT_CMHC	Total number of Community Mental Health Centers	PRVDR_CTGRY_CD=19; Community Mental Health Centers	n/a
POS_RHC_RATE	Total number of Rural Health Clinics per 1,000 population	PRVDR_CTGRY_CD=21; Rural Health Clinics	ACS_TOT_POP_WT; Total weighted population
POS_TOT_RHC	Total number of Rural Health Clinics	PRVDR_CTGRY_CD=21; Rural Health Clinics	n/a
POS_HHA_RATE	Total number of home health agencies per 1,000 population	PRVDR_CTGRY_CD=5; Home health agencies	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HHA	Total number of home health agencies	PRVDR_CTGRY_CD=5; Home health agencies	n/a
POS_HOSPICE_RATE	Total number of hospices per 1,000 population	PRVDR_CTGRY_CD=16; Hospices	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HOSPICE	Total number of hospices	PRVDR_CTGRY_CD=16; Hospices	n/a
POS_ASC_RATE	Total number of ambulatory surgical centers per 1,000 population	PRVDR_CTGRY_CD=15; Ambulatory surgical centers	ACS_TOT_POP_WT; Total weighted population
POS_TOT_ASC	Total number of ambulatory surgical centers	PRVDR_CTGRY_CD=15; Ambulatory surgical centers	n/a
POS_SNF_RATE	Total number of skilled nursing facilities per 1,000 population	PRVDR_CTGRY_CD=4; Skilled nursing facilities	ACS_TOT_POP_WT; Total weighted population
POS_TOT_SNF	Total number of skilled nursing facilities	PRVDR_CTGRY_CD=4; Skilled nursing facilities	n/a
POS_NF_RATE	Total number of nursing facilities per 1,000 population	PRVDR_CTGRY_CD=10; Nursing facilities	ACS_TOT_POP_WT; Total weighted population

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	Denominator Source Variable; Label
POS_TOT_NF	Total number of nursing facilities	PRVDR_CTGRY_CD=10; Nursing facilities	n/a
POS_TOT_NF_BEDS	Total number of nursing facility certified beds	CRTFD_BED_CNT and PRVDR_CTGRY_CD=10; Nursing facility certified beds	n/a
POS_NF_BEDS_RATE	Total number of nursing facility certified beds per 1,000 population	CRTFD_BED_CNT and PRVDR_CTGRY_CD=11; Nursing facility certified beds	ACS_TOT_POP_WT; Total weighted population
POS_TOT_SNF_BEDS	Total number of skilled nursing facility certified beds	CRTFD_BED_CNT and PRVDR_CTGRY_CD=4; Skilled nursing facility certified beds	n/a
POS_SNF_BEDS_RATE	Total number of skilled nursing facility certified beds per 1,000 population	CRTFD_BED_CNT and PRVDR_CTGRY_CD=4; Skilled nursing facility certified beds	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HOSP_OBSTETRIC	Total number of hospitals with obstetric care	OB_SRVC_CD=1, 2, 3; Hospitals with an Obstetrics Department	n/a
POS_HOSP_OBSTETRIC_RATE	Total number of hospitals with obstetric care per 1,000 population	OB_SRVC_CD=1, 2, 3; Hospitals with an Obstetrics Department	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HOSP_PED_ICU	Total number of hospitals with pediatric ICU	PED_ICU_SRVC_CD=1, 2, 3; Hospitals with Pediatric ICU	n/a
POS_HOSP_PED_ICU_RATE	Total number of hospitals with pediatric ICU per 1,000 population	PED_ICU_SRVC_CD=1, 2, 3; Hospitals with Pediatric ICU	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HOSP_BURN	Total number of hospitals with burn care	BURN_CARE_UNIT_SRVC_CD=1, 2, 3; Hospitals with a Burn Care Unit	n/a
POS_HOSP_BURN_RATE	Total number of hospitals with burn care per 1,000 population	BURN_CARE_UNIT_SRVC_CD=1, 2, 3; Hospitals with a Burn Care Unit	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HOSP_MEDSURG_ICU	Total number of hospitals with medical-surgical ICU	ICU_SRVC_CD=1, 2, 3; Hospitals with Medical-surgical ICU	n/a
POS_HOSP_MEDSURG_ICU_RATE	Total number of hospitals with medical-surgical ICU per 1,000 population	ICU_SRVC_CD=1, 2, 3; Hospitals with Medical-surgical ICU	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HOSP_ALC	Total number of hospitals with alcohol and/or drug abuse inpatient care	ALCHL_DRUG_SRVC_CD=1, 2, 3; Hospitals with alcohol and/or drug abuse inpatient care	n/a
POS_HOSP_ALC_RATE	Total number of hospitals with alcohol and/or drug abuse inpatient care per 1,000 population	ALCHL_DRUG_SRVC_CD=1, 2, 3; Hospitals with alcohol and/or drug abuse inpatient care	ACS_TOT_POP_WT; Total weighted population

VARIABLE NAME	VARIABLE LABEL	Numerator Source Variable; Label	Denominator Source Variable; Label
POS_TOT_HOSP_PSYCH	Total number of hospitals with psychiatric care	PSYCH_SRVC_CD=1, 2, 3; Hospitals with psychiatric care	n/a
POS_HOSP_PSYCH_RATE	Total number of hospitals with psychiatric care per 1,000 population	PSYCH_SRVC_CD=1, 2, 3; Hospitals with psychiatric care	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HOSP_AMBULANCE	Total number of hospitals with ambulance services	TOT_AFLTD_AMBLNC_SRVC_CNT=1, 2, 3; Hospitals with ambulance services (<i>note: these are affiliated Medicare participating ambulance services</i>)	n/a
POS_HOSP_AMBULANCE_RATE	Total number of hospitals with ambulance services per 1,000 population	TOT_AFLTD_AMBLNC_SRVC_CNT=1, 2, 3; Hospitals with ambulance services	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HOSP_CHEMO	Total number of hospitals with chemotherapy	CHMTHR PY_SRVC_CD=1, 2, 3; Hospitals with chemotherapy	n/a
POS_HOSP_CHEMO_RATE	Total number of hospitals with chemotherapy per 1,000 population	CHMTHR PY_SRVC_CD=1, 2, 3; Hospitals with chemotherapy	ACS_TOT_POP_WT; Total weighted population
POS_TOT_HOSP_ED	Total number of hospitals with emergency department	DCTD_ER_SRVC_CD=1, 2, 3; Hospitals with emergency department	n/a
POS_HOSP_ED_RATE	Total number of hospitals with emergency department per 1,000 population	DCTD_ER_SRVC_CD=1, 2, 3; Hospitals with emergency department	ACS_TOT_POP_WT; Total weighted population
POS_PCT_HOSP_FOR_PROFIT	Percentage of hospitals that are private for-profit hospitals	GNRL_CNTL_TYPE_CD=1, 2, 3, 13; Hospital Type	n/a
POS_PCT_HOSP_NON_PROFIT	Percentage of hospitals that are private not-for-profit hospitals	GNRL_CNTL_TYPE_CD=4, 5, 6; Hospital Type	n/a
POS_PCT_HOSP_GOV	Percentage of hospitals that are government (federal, state, local, district) hospitals	GNRL_CNTL_TYPE_CD=7, 8, 9, 10, 11, 12; Hospital Type	n/a

Other Notes

The CMS Provider of Services File lists services provided by hospitals under the following categories:

- 0 - Not Provided
- 1 - Provided by staff
- 2 - Provided under arrangement
- 3 - Provided by staff and under arrangement

"Under arrangement" refers to any arrangement pursuant to which a hospital bills its patients for services provided under arrangement with another and payment to the hospital by Medicare discharges the patient's liability to the service provider. The SDOH Database counts all services provided by staff and/or under arrangement.

Term Definitions

Table 41.3 provides important term definitions for users of the SDOH Database to consider when working with POS variables.

Table 41.3. Term definitions, POS

Term	Definition
<i>Nursing facility (POS)</i>	A facility which primarily provides to residents skilled nursing care and related services for the rehabilitation of injured, disabled, or sick persons, or, on a regular basis, health-related long-term care services above the level of custodial care to other than individuals with intellectual disabilities. Nursing facilities are generally certified as Medicaid providers.
<i>Skilled Nursing facility (POS)</i>	A facility which primarily provides inpatient skilled nursing care and related services to patients who require medical, nursing, or rehabilitative services but does not provide the level of care or treatment available in a hospital. Skilled nursing facilities are generally certified as Medicare providers.
<i>Hospitals</i>	<p>Short-term general hospitals provide medical or surgical care for acute illnesses or conditions. Majority of short-term general hospitals are nonfederal and are classified as community hospitals by the American Hospital Association. Some short-term general hospitals are operated by the federal government and provide medical or surgical care for specific patient populations like active military personnel. Nonfederal psychiatric care hospitals render acute hospital care for patients with mental health illness. Nonfederal long-term care hospitals provide patients with extreme illnesses medical and rehabilitative care over prolonged periods.</p> <p>Source: Liu, Jason B., and Rachel R. Kelz. "Types of hospitals in the United States." <i>Jama</i> 320, no. 10 (2018): 1074-1074.</p>

42. Small Area Health Insurance Estimates Program (SAHIE)

Sponsor

United States Census Bureau

Description

The U.S. Census Bureau's Small Area Health Insurance Estimates (SAHIE) program provides model-based single-year estimates of numbers and proportions of those with and without health insurance coverage for demographic groups (<https://www.census.gov/data/datasets/time-series/demo/sahie/estimates-acss.html>). SAHIE uses survey data from the American Community Survey (ACS) with administrative records data and Census 2010 data.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2019
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** SAIHE_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database county files include seven variables that came directly from SAHIE's county-level estimates.

Resources

Data were downloaded from: <https://www.census.gov/data/datasets/time-series/demo/sahie/estimates-acss.html> (last retrieved July 2021).

Suggested Citation

AHRQ SDOH Database (v1), from Small Area Health Insurance Estimates. (n.d.). U.S. Census Bureau. <https://www.census.gov/data/datasets/time-series/demo/sahie/estimates-acss.html>

Data Set Notes

Reliability

Margins of error (MOE) are provided in SAHIE. All published margins of error for SAHIE estimates are based on a 90 percent confidence level.

In November 2012, the Census Bureau revised SAHIE 2009 county-level data to correct a processing error in the original October 2011 release. The SDOH Database includes the revised estimates.

Geographic Levels

SAHIE produces model-based estimates at the county and state level. SDOH includes direct county-level estimates from SAHIE.

Suppression Rules

Some SAHIE data are suppressed to ensure confidentiality. For further information, refer to the following: <https://www.census.gov/programs-surveys/sahie/technical-documentation/source-and-accuracy.html>.

Variable Notes

Table 42.1 below provides information on the variable availability across years. Table 42.2 provides more information on what numerator and denominator variables were drawn for SAHIE variables in the SDOH Database.

Table 42.1. Variable availability across years, SAHIE

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SAHIE_PCT_UNINSURED64	X			X	X	X	X	X	X	X	X	X	X	X	
SAHIE_PCT_UNINSURED64_138_400FPL	X						X	X	X	X	X	X	X	X	
SAHIE_PCT_UNINSURED64_138FPL	X			X	X	X	X	X	X	X	X	X	X	X	
SAHIE_PCT_UNINSURED64_200FPL	X			X	X	X	X	X	X	X	X	X	X	X	
SAHIE_PCT_UNINSURED64_250FPL	X			X	X	X	X	X	X	X	X	X	X	X	
SAHIE_PCT_UNINSURED64_400FPL	X			X	X	X	X	X	X	X	X	X	X	X	
SAHIE_TOT_POP64	X			X	X	X	X	X	X	X	X	X	X	X	

Table 42.2. Variable definitions and specifications, SAHIE

VARIABLE NAME	VARIABLE LABEL	Numerator Source Table; Label	DENOMINATOR	DENOMINATOR LABEL
SAHIE_PCT_UNINSURED64	Estimated percentage of uninsured population for all income levels (under 65 years)	PCTUI ; Percent of uninsured in demographic groups	agecat=-0, racecat=0, sexcat=0, iprcat=0	agecat=0 (under 65 years), racecat=0 (all races), sexcat=0 (both races), iprcat=0 (all income levels)
SAHIE_PCT_UNINSURED64_138_400FPL	Estimated percentage of uninsured population between 138%-400% of poverty (under 65 years)	PCTUI ; Percent of uninsured in demographic groups	agecat=-0, racecat=0, sexcat=0, iprcat=5	agecat=0 (under 65 years), racecat=0 (all races), sexcat=0 (both races), iprcat=5 (Between 138%-400% of poverty)
SAHIE_PCT_UNINSURED64_138FPL	Estimated percentage of uninsured population at or below 138% of poverty (under 65 years)	PCTUI ; Percent of uninsured in demographic groups	agecat=-0, racecat=0, sexcat=0, iprcat=3	agecat=0 (under 65 years), racecat=0 (all races), sexcat=0 (both races), iprcat=3 (At or below 138% of poverty)
SAHIE_PCT_UNINSURED64_200FPL	Estimated percentage of uninsured population at or below 200% of poverty (under 65 years)	PCTUI ; Percent of uninsured in demographic groups	agecat=-0, racecat=0, sexcat=0, iprcat=1	agecat=0 (under 65 years), racecat=0 (all races), sexcat=0 (both races), iprcat=1 (At or below 200% of poverty)
SAHIE_PCT_UNINSURED64_250FPL	Estimated percentage of uninsured population at or below 250% of poverty (under 65 years)	PCTUI ; Percent of uninsured in demographic groups	agecat=-0, racecat=0, sexcat=0, iprcat=2	agecat=0 (under 65 years), racecat=0 (all races), sexcat=0 (both races), iprcat=2 (At or below 250% of poverty)
SAHIE_PCT_UNINSURED64_400FPL	Estimated percentage of uninsured population at or below 400% of poverty (under 65 years)	PCTUI ; Percent of uninsured in demographic groups	agecat=-0, racecat=0, sexcat=0, iprcat=4	agecat=0 (under 65 years), racecat=0 (all races), sexcat=0 (both races), iprcat=4 (At or below 400% of poverty)
SAHIE_TOT_POP64	Estimated population under 65 years	NIPR; Number of demographic groups	agecat=-0, racecat=0, sexcat=0, iprcat=0	agecat=0 (under 65 years), racecat=0 (all races), sexcat=0 (both races), iprcat=0 (all income levels)

Other Notes

SAHIE does not cover Kalawao, HI (FIPS 15005) and thus has missing value for this county.

Details may not sum to totals because of rounding.

Most demographic and income categories are derived from the 2005-2007 Small Area Health Insurance Estimates (SAHIE) that used Current Population Survey (CPS) data. Noted in the table are additional age and income categories that Census added after SAHIE transitioned to using the American Community Survey (ACS).

SAHIE includes income-to-poverty rates used by the Patient Protection and Affordable Care Act. Families in the income range of "greater than or equal to 138 percent IPR but less than or equal to 400 IPR" are eligible for subsidies to purchase health insurance through the Health Insurance Market Place.

SAHIE variables are calculated for population under the age of 65 since most people 65 year and older are covered by Medicare or Supplemental Security (SSI).

The 2013 SAHIE data release was updated to provide a basis for comparison for the 2014 SAHIE. The 2014 SAHIE was the first time where more up-to-date Medicaid and Children's Health Insurance Program (CHIP) source data were used.

The income category for between 138%-400% of poverty is available for 2012 SAHIE and subsequent years. The SDOH variable, SAHIE_PCT_UNINSURED64_138_400FPL is not available for 2009-2011.

Term Definitions

Table 42.3 provides important term definitions for users of the SDOH Database to consider when working with SAHIE variables.

Table 42.3. Term definitions, SAHIE

Term	Definition
<i>Insured</i>	<p>SAHIE uses the ACS definition of insured: Is this person CURRENTLY covered by any of the following types of health insurance or health coverage plans?</p> <ul style="list-style-type: none"> • Insurance through a current or former employer or union (of this person or another family member) • Insurance purchased directly from an insurance company (by this person or another family member) • Medicare, for people 65 and older, or people with certain disabilities (Note: SAHIE does not report insurance rates for people over 65 since over 98% of people over the age of 65 are insured) • Medicaid, Medical Assistance, or any kind of government-assistance plan for those with low incomes or a disability • TRICARE or other military health care • Indian Health Services* • VA (including those who have ever used or enrolled for VA health care) • Any other type of health insurance or health coverage plan (user specified) <p>*People whose only health coverage is IHS are uninsured as IHS is not considered comprehensive coverage.</p>
<i>Income-to-poverty rates (IPRs)</i>	<p>The income-to-poverty rates are defined by the ratio of family income to the federal poverty threshold. A low ratio indicates lower income. Less than or equal to 138 percent of the federal poverty threshold applicable to that family.</p>

43. Small Area Income and Poverty Estimates Program (SAIPE)

Sponsor

United States Census Bureau

Description

The U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program (<https://www.census.gov/programs-surveys/saipe.html>) provides model-based single-year estimates of income and poverty for counties, school districts and states. SAIPE estimates are produced by combining administrative records, American Community Survey, Annual Social and Economic Supplement (ASEC) of the CPS, decennial census, federal income tax returns, SNAP benefit recipients, BEA personal income estimates, supplemental security income estimates, postcensal demographic estimates. More information on SAIPE model inputs may be found at <https://www.census.gov/programs-surveys/saipe/guidance/model-input-data.html>.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2020
- ▶ **SDOH domain(s):**
 - Economic context
- ▶ **SDOH variable naming convention:** SAIPE_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database county-level files include seven variables that were pulled directly from SAIPE's county-level estimates.

Resources

SAIPE File Layouts <https://www2.census.gov/programs-surveys/saipe/technical-documentation/file-layouts/state-county/>.

2010-2019 County-Level Estimation Details <https://www.census.gov/programs-surveys/saipe/technical-documentation/methodology/counties-states/county-level.html>.

SAIPE Methodology <https://www.census.gov/programs-surveys/saipe/technical-documentation/methodology.html>.

SAIPE Model Input Data <https://www.census.gov/data/datasets/time-series/demo/saipe/model-tables.html>.

SAIPE Data Interactive Tool https://www.census.gov/data-tools/demo/saipe/#/?map_geoSelector=aa_c.

Data Set Notes

Reliability

SAIPE source files include 90-percent confidence intervals.

Geographic Levels

SAIPE variables are estimated at school-district, county and state levels. The SDOH Database includes variables selected directly from SAIPE's county file.

Suppression Rules

Some SAIPE source data are suppressed to ensure confidentiality.

Variable Notes

Table 43.1 below provides information on the variable availability across years. Table 43.2 provides more information on what numerator and denominator variables were drawn for SAIPE variables in the SDOH Database.

Table 43.1. Variable availability across years, SAIPE

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SAIPE_MEDIAN_HH_INCOME	X			X	X	X	X	X	X	X	X	X	X	X	X
SAIPE_PCT_POV	X			X	X	X	X	X	X	X	X	X	X	X	X
SAIPE_PCT_POV_0_17	X			X	X	X	X	X	X	X	X	X	X	X	X
SAIPE_PCT_POV_5_17	X			X	X	X	X	X	X	X	X	X	X	X	X
SAIPE_TOT_POV	X			X	X	X	X	X	X	X	X	X	X	X	X
SAIPE_TOT_POV_0_17	X			X	X	X	X	X	X	X	X	X	X	X	X
SAIPE_TOT_POV_5_17	X			X	X	X	X	X	X	X	X	X	X	X	X

Table 43.2. Variable definitions and specifications, SAIPE

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SAIPE_MEDIAN_HH_INCOME	Estimated median household income	Median Household Income: Median Household Income	n/a	n/a	n/a
SAIPE_PCT_POV	Estimated percentage of people of all ages in poverty	All Ages: Poverty Percent, All Ages	n/a	n/a	n/a
SAIPE_PCT_POV_0_17	Estimated percentage of people aged 0-17 in poverty	Age 0-17: Poverty Percent, Age 0-17	n/a	n/a	n/a
SAIPE_PCT_POV_5_17	Estimated percentage of related children aged 5-17 in families in poverty	Age 5-17 in Families: Poverty Percent, Age 5-17 in Families	n/a	n/a	n/a
SAIPE_TOT_POV	Estimated number of people of all ages in poverty	All Ages: Poverty Estimate, All Ages	n/a	n/a	n/a
SAIPE_TOT_POV_0_17	Estimated number of people aged 0-17 in poverty	Age 0-17: Poverty Estimate, Age 0-17	n/a	n/a	n/a
SAIPE_TOT_POV_5_17	Estimated number of related children aged 5-17 in families in poverty	Age 5-17 in Families: Poverty Estimate, Age 5-17 in Families	n/a	n/a	n/a

Term Definitions

Table 43.3 provides important term definitions for users of the SDOH Database to consider when working with SAIPE variables.

Table 43.3. Term definitions, SAIPE

Term	Definition
Household Income	Household income includes the income of the householder and all other people 15 years and older in the household, whether they are related to the householder. The median is based on the income distribution of all households, including those with no income.
Poverty	All SAIPE poverty rates refer to the official poverty rate set by OMB. Status is determined by comparing total annual family before-tax income to a table of federal poverty thresholds that vary by family size, number of related children, and age of householder. If a family's income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty. For people not living in families, poverty status is determined by comparing the individual's total income to their threshold. For more general information on poverty, please see: http://www.census.gov/topics/income-poverty/poverty .
Related children	Children who are related to householder by birth, marriage, or adoption.

44. Stanford Education Data Archive (SEDA)

Sponsor

Funded by the Institute of Education Sciences, the Spencer Foundation, the William T. Grant Foundation, the Bill and Melinda Gates Foundation, Overdeck Family Foundation and Russell Sage Foundation

Description

The Stanford Education Data Archive (SEDA) is part of the Educational Opportunity Project at Stanford University. It is a national database to help the research community, policymakers, educators and parents learn about and improve educational outcomes for children in the United States. It uses restricted-use data from the Department of Education's National Center for Education Statistics (NCES) EdFacts database to estimate score distributions of tests in schools, school districts, counties, metropolitan statistical areas, commuting zones, and states for school years 2008-09 through 2017-18. SEDA includes a wide range of data on educational conditions, contexts, and outcomes in school districts and counties in the United States.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2018
- ▶ **SDOH domain(s):**
 - Education
- ▶ **SDOH variable naming convention:** SEDA_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database county-level files include variables that were transferred directly from SEDA for school years 2008-09 through 2017-18. The SEDA variables span the SDOH domain of education and draw all its variables from SEDA's county-level long file (seda_county_long_cs_4.1 from <http://purl.stanford.edu/db586ns4974>).

Cohort Scale (CS) estimates are recommended for research purposes. The CS scale is considered an effect size, relative to the grade-specific standard deviation of student-level scores in the common average cohort. For example, a county with a mean of 0.5 on the CS scale means that the average student scored approximately 0.5 standard deviations higher than the average national reference cohort scored in that same grade.

It is important to note that the CS scale does not enable comparisons across grades or between subjects (Math and English Language Arts). Gaps are estimated as the difference in average achievement between subgroups, using the mean estimates from CS.

Resources

We downloaded data (`seda_county_long_cs_4.1.csv`) from
<http://purl.stanford.edu/db586ns4974>.

The codebook (`seda_codebook_county_4.1.csv`) is also available to download from the same link as the data.

Stanford Education Data Archive Technical Documentation (version 4.1)
https://stacks.stanford.edu/file/druid:db586ns4974/seda_documentation_4.1.pdf.

Educational Opportunity Project at Stanford University: <https://edopportunity.org>.

Using Heteroskedastic Ordered Probit Models to Recover Moments of Continuous Test Score Distributions from Coarsened Data
<https://journals.sagepub.com/doi/10.3102/1076998616666279>.

Using Pooled Heteroskedastic Ordered Probit Models to Improve Small-Sample Estimates of latent Test Score Distributions
<https://journals.sagepub.com/doi/10.3102/1076998620922919>.

Suggested Citation

AHRQ SDOH Database (v1), from Reardon, S. F., Ho, A. D., Shear, B. R., Fahle, E. M., Kalogrides, D., Jang, H., & Chavez, B. (2021). Stanford Education Data Archive (Version 4.1) [seda_county_long_cs_4.1]. Retrieved July 2021 from <http://purl.stanford.edu/db586ns4974>.

Data Set Notes

SEDA uses a restricted-use version of data from EdFacts database, which provides counts of students in proficiency levels for nearly every school in the U.S. for all 50 states, DC, and Puerto Rico for school years 2008-09 through 2017-18, for grades 3-8, for both Math and English Language Arts (ELA) for various subgroups. Using the schools and districts identified by NCES IDs, the data sets are then linked to other data sources such as the Common Core of Data (CCD). From there, SEDA local education agency (LEA) IDs are created and used as stable school identifiers. To create stable district identifiers, called SEDA LEA IDs, the school's most recent geographical information and the most recent school district the school was observed (see the SEDA Technical Documentation: for exceptions to that rule) based on the 2019 elementary and unified school district boundaries from Education Demographic and Geographic Estimates (EDGE).

To account for the proficiency thresholds that are based on different assessments across states, SEDA used the National Assessment of Educational Progress (NAEP), a test taken in every state, to determine thresholds on the same scale. SEDA would first draw a random sample of Grades 4 and 8 students in every state where the NAEP assessment is administered in math and ELA in odd years (e.g., 2009, 2011, 2013, 2015, 2017, and 2019). From NAEP, they would determine the relative performance of states on the NAEP assessment. In the grades and years when NAEP assessments were not administered to students, SEDA averaged the scores in the grades and

years just before and just after to obtain estimates for untested grades, subjects, and years. For more information, refer to the technical documentation:

https://stacks.stanford.edu/file/druid:db586ns4974/seda_documentation_4.1.pdf.

Reliability

Standard errors are included in the original SEDA data source.

Geographic Levels

SEDA variables are reported at the county level.

Suppression Rules

Suppression rules were applied when:

- Fewer than 95% of students were tested. This suppression rule was not applied prior to 2012-13 school year, so percentages with missing data are generally higher in SEDA after 2012-2013 school year.
- More than 20% of students took alternative assessments.
- Fewer than 20 students are represented in the estimate. For gap measures, it is required that each group has at least 20 unique students in each reported cell.
- The estimates are too imprecise to be informative.

Variable Notes

Table 44.1 below provides information on the variable availability across years. Table 44.2 provides more information on what numerator and denominator variables were drawn for SEDA variables in the SDOH Database.

Table 44.1. Variable availability across years, SEDA

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SEDA_CS_MN_ELA_GR3_ALL	X			X	X	X	X	X	X	X	X	X	X		
SEDA_CS_MN_ELA_GR3 ASN	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR3_BLK	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR3_ECD	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR3_HSP	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR3_MTR	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR3_NAM	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR3_NECK	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR3_WHT	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR8_ALL	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR8 ASN	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR8_BLK	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR8_ECD	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR8_HSP	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR8_MTR	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR8_NAM	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR8_NECK	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_ELA_GR8_WHT	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR3_ALL	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR3 ASN	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR3_BLK	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR3_ECD	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR3_HSP	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR3_MTR	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR3_NAM	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR3_NECK	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR3_WHT	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR8_ALL	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR8 ASN	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR8_BLK	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR8_ECD	X			X	X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR8_HSP	X			X	X	X	X	X	X	X	X	X	X	X	

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2020
				X	X	X	X	X	X	X	X	X	X	2019
SEDA_CS_MN_MATH_GR8_MTR	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR8_NAM	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR8_NEC	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_MN_MATH_GR8_WHT	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR3_ALL	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR3 ASN	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR3_BLK	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR3_ECD	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR3_HSP	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR3_MTR	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR3_NAM	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR3_NECK	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR3_WHT	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR8_ALL	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR8 ASN	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR8_BLK	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR8_ECD	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR8_HSP	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR8_MTR	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR8_NAM	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR8_NECK	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_ELA_GR8_WHT	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR3_ALL	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR3 ASN	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR3_BLK	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR3_ECD	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR3_HSP	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR3_MTR	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR3_NAM	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR3_NECK	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR3_WHT	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR8_ALL	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR8 ASN	X			X	X	X	X	X	X	X	X	X	X	

Social Determinants of Health (SDOH) Database

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2020
				X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR8_BLK	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR8_ECD	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR8_HSP	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR8_MTR	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR8_NAM	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR8_NEA	X			X	X	X	X	X	X	X	X	X	X	
SEDA_CS_TOT_MATH_GR8_WHT	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR3_NEG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR3_WAG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR3_WBG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR3_WHG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR3_WMG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR3_WNG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR8_NEG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR8_WAG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR8_WBG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR8_WHG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR8_WMG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_ELA_GR8_WNG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR3_NEG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR3_WAG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR3_WBG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR3_WHG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR3_WMG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR3_WNG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR8_NEG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR8_WAG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR8_WBG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR8_WHG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR8_WMG	X			X	X	X	X	X	X	X	X	X	X	
SEDA_MATH_GR8_WNG	X			X	X	X	X	X	X	X	X	X	X	

Table 44.2. Variable definitions and specifications, SEDA

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_MATH_GR3_NEG	Grade 3 Math Cohort Scale (CS) Gap, Non-Economically disadvantaged (Non-ECD)-Economically disadvantaged (ECD)	cs_mn_neg	County grade-year-subject (gyb) Estimated Non-ECD-ECD Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR8_NEG	Grade 8 Math Cohort Scale (CS) Gap, Non-Economically disadvantaged (Non-ECD)-Economically disadvantaged (ECD)	cs_mn_neg	County grade-year-subject (gyb) Estimated Non-ECD-ECD Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR3_NEG	Grade 3 ELA Cohort Scale (CS) Gap, Non-Economically disadvantaged (Non-ECD)-Economically disadvantaged (ECD)	cs_mn_neg	County grade-year-subject (gyb) Estimated Non-ECD-ECD Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR8_NEG	Grade 8 ELA Cohort Scale (CS) Gap, Non-Economically disadvantaged (Non-ECD)-Economically disadvantaged (ECD)	cs_mn_neg	County grade-year-subject (gyb) Estimated Non-ECD-ECD Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR3_WAG	Grade 3 Math Cohort Scale (CS) Gap, White-Asian	cs_mn_wag	County grade-year-subject (gyb) Estimated White-Asian Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR8_WAG	Grade 8 Math Cohort Scale (CS) Gap, White-Asian	cs_mn_wag	County grade-year-subject (gyb) Estimated White-Asian Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR3_WAG	Grade 3 ELA Cohort Scale (CS) Gap, White-Asian	cs_mn_wag	County grade-year-subject (gyb) Estimated White-Asian Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_ELA_GR8_WAG	Grade 8 ELA Cohort Scale (CS) Gap, White Asian	cs_mn_wag	County grade-year-subject (gyb) Estimated White-Asian Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR3_WBG	Grade 3 Math Cohort Scale (CS) Gap, White-Black or African American	cs_mn_wbg	County grade-year-subject (gyb) Estimated White-Black Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR8_WBG	Grade 8 Math Cohort Scale (CS) Gap, White-Black or African American	cs_mn_wbg	County grade-year-subject (gyb) Estimated White-Black Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR3_WBG	Grade 3 ELA Cohort Scale (CS) Gap, White-Black or African American	cs_mn_wbg	County grade-year-subject (gyb) Estimated White-Black Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR8_WBG	Grade 8 ELA Cohort Scale (CS) Gap, White-Black or African American	cs_mn_wbg	County grade-year-subject (gyb) Estimated White-Black Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR3_WHG	Grade 3 Math Cohort Scale (CS) Gap, White-Hispanic	cs_mn_whg	County grade-year-subject (gyb) Estimated White-Hispanic Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR8_WHG	Grade 8 Math Cohort Scale (CS) Gap, White-Hispanic	cs_mn_whg	County grade-year-subject (gyb) Estimated White-Hispanic Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR3_WHG	Grade 3 ELA Cohort Scale (CS) Gap, White-Hispanic	cs_mn_whg	County grade-year-subject (gyb) Estimated White-Hispanic Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR8_WHG	Grade 8 ELA Cohort Scale (CS) Gap, White-Hispanic	cs_mn_whg	County grade-year-subject (gyb) Estimated White-Hispanic Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_MATH_GR3_WMG	Grade 3 Math Cohort Scale (CS) Gap, White-Multiracial	cs_mn_wmg	County grade-year-subject (gyb) Estimated White-Multiracial Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR8_WMG	Grade 8 Math Cohort Scale (CS) Gap, White-Multiracial	cs_mn_wmg	County grade-year-subject (gyb) Estimated White-Multiracial Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR3_WMG	Grade 3 ELA Cohort Scale (CS) Gap, White-Multiracial	cs_mn_wmg	County grade-year-subject (gyb) Estimated White-Multiracial Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR8_WMG	Grade 8 ELA Cohort Scale (CS) Gap, White-Multiracial	cs_mn_wmg	County grade-year-subject (gyb) Estimated White-Multiracial Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR3_WNG	Grade 3 Math Cohort Scale (CS) Gap, White-Native American	cs_mn_wng	County grade-year-subject (gyb) Estimated White-Native American Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_MATH_GR8_WNG	Grade 8 Math Cohort Scale (CS) Gap, White-Native American	cs_mn_wng	County grade-year-subject (gyb) Estimated White-Native American Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR3_WNG	Grade 3 ELA Cohort Scale (CS) Gap, White-Native American	cs_mn_wng	County grade-year-subject (gyb) Estimated White-Native American Gap Estimate, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_ELA_GR8_WNG	Grade 8 ELA Cohort Scale (CS) Gap, White-Native American	cs_mn_wng	County grade-year-subject (gyb) Estimated White-Native American Gap Estimate, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR3_ALL	Grade 3 Math Mean Cohort Scale (CS), All students	cs_mn_all	County grade-year-subject (gyb) Ach Mean, All Students, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_CS_MN_MATH_GR8_ALL	Grade 8 Math Mean Cohort Scale (CS), All students	cs_mn_all	County grade-year-subject (gyb) Ach Mean, All Students, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR3_ALL	Grade 3 Math Sample Size, All students	totgyb_all	Sample Size for All Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR8_ALL	Grade 8 Math Sample size, All students	totgyb_all	Sample Size for All Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR3_ALL	Grade 3 ELA Mean Cohort Scale (CS), All students	cs_mn_all	County grade-year-subject (gyb) Ach Mean, All Students, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR8_ALL	Grade 8 ELA Mean Cohort Scale (CS), All students	cs_mn_all	County grade-year-subject (gyb) Ach Mean, All Students, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR3_ALL	Grade 3 ELA Sample Size, All students	totgyb_all	Sample Size for All Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR8_ALL	Grade 8 ELA Sample size, All students	totgyb_all	Sample Size for All Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR3 ASN	Grade 3 Math Mean Cohort Scale (CS), Asian students	cs_mn_asn	County grade-year-subject (gyb) Ach Mean, Asian Students, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR8 ASN	Grade 8 Math Mean Cohort Scale (CS), Asian students	cs_mn_asn	County grade-year-subject (gyb) Ach Mean, Asian Students, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_CS_TOT_MATH_GR3 ASN	Grade 3 Math Sample Size, Asian students	totgyb_asn	Sample Size for Asian Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR8 ASN	Grade 8 Math Sample size, Asian students	totgyb_asn	Sample Size for Asian Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR3 ASN	Grade 3 ELA Mean Cohort Scale (CS), Asian students	cs_mn_asn	County grade-year-subject (gyb) Ach Mean, Asian Students, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR8 ASN	Grade 8 ELA Mean Cohort Scale (CS), Asian students	cs_mn_asn	County grade-year-subject (gyb) Ach Mean, Asian Students, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR3 ASN	Grade 3 ELA Sample Size, Asian students	totgyb_asn	Sample Size for Asian Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR8 ASN	Grade 8 ELA Sample size, Asian students	totgyb_asn	Sample Size for Asian Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR3 BLK	Grade 3 Math Mean Cohort Scale (CS), Black or African American students	cs_mn_blk	County grade-year-subject (gyb) Ach Mean, Black Students, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR8 BLK	Grade 8 Math Mean Cohort Scale (CS), Black or African American students	cs_mn_blk	County grade-year-subject (gyb) Ach Mean, Black Students, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR3 BLK	Grade 3 Math Sample Size, Black or African American students	totgyb_blk	Sample Size for Black Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_CS_TOT_MATH_GR8_BLK	Grade 8 Math Sample size, Black or African American students	totgyb_blk	Sample Size for Black Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR3_BLK	Grade 3 ELA Mean Cohort Scale (CS), Black or African American students	cs_mn_blk	County grade-year-subject (gyb) Ach Mean, Black Students, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR8_BLK	Grade 8 ELA Mean Cohort Scale (CS), Black or African American students	cs_mn_blk	County grade-year-subject (gyb) Ach Mean, Black Students, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR3_BLK	Grade 3 ELA Sample Size, Black or African American students	totgyb_blk	Sample Size for Black Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR8_BLK	Grade 8 ELA Sample size, Black or African American students	totgyb_blk	Sample Size for Black Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR3_HSP	Grade 3 Math Mean Cohort Scale (CS), Hispanic students	cs_mn_hsp	County grade-year-subject (gyb) Ach Mean, Hispanic Students, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR8_HSP	Grade 8 Math Mean Cohort Scale (CS), Hispanic students	cs_mn_hsp	County grade-year-subject (gyb) Ach Mean, Hispanic Students, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR3_HSP	Grade 3 Math Sample Size, Hispanic students	totgyb_hsp	Sample Size for Hispanic Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR8_HSP	Grade 8 Math Sample size, Hispanic students	totgyb_hsp	Sample Size for Hispanic Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_CS_MN_ELA_GR3_HSP	Grade 3 ELA Mean Cohort Scale (CS), Hispanic students	cs_mn_hsp	County grade-year-subject (gyb) Ach Mean, Hispanic Students, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR8_HSP	Grade 8 ELA Mean Cohort Scale (CS), Hispanic students	cs_mn_hsp	County grade-year-subject (gyb) Ach Mean, Hispanic Students, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR3_HSP	Grade 3 ELA Sample Size, Hispanic students	totgyb_hsp	Sample Size for Hispanic Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR8_HSP	Grade 8 ELA Sample size, Hispanic students	totgyb_hsp	Sample Size for Hispanic Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR3_MTR	Grade 3 Math Mean Cohort Scale (CS), Multiracial students	cs_mn_mtr	County grade-year-subject (gyb) Ach Mean, Multiracial Students, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR8_MTR	Grade 8 Math Mean Cohort Scale (CS), Multiracial students	cs_mn_mtr	County grade-year-subject (gyb) Ach Mean, Multiracial Students, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR3_MTR	Grade 3 Math Sample Size, Multiracial students	totgyb_mtr	Sample Size for Multiracial Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR8_MTR	Grade 8 Math Sample size, Multiracial students	totgyb_mtr	Sample Size for Multiracial Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR3_MTR	Grade 3 ELA Mean Cohort Scale (CS), Multiracial students	cs_mn_mtr	County grade-year-subject (gyb) Ach Mean, Multiracial Students, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_CS_MN_ELA_GR8_MTR	Grade 8 ELA Mean Cohort Scale (CS), Multiracial students	cs_mn_mtr	County grade-year-subject (gyb) Ach Mean, Multiracial Students, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR3_MTR	Grade 3 ELA Sample Size, Multiracial students	totgyb_mtr	Sample Size for Multiracial Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR8_MTR	Grade 8 ELA Sample size, Multiracial students	totgyb_mtr	Sample Size for Multiracial Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR3_NAM	Grade 3 Math Mean Cohort Scale (CS), Native American students	cs_mn_nam	County grade-year-subject (gyb) Ach Mean, Native American Students, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR8_NAM	Grade 8 Math Mean Cohort Scale (CS), Native American students	cs_mn_nam	County grade-year-subject (gyb) Ach Mean, Native American Students, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR3_NAM	Grade 3 Math Sample Size, Native American students	totgyb_nam	Sample Size for Native American Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR8_NAM	Grade 8 Math Sample size, Native American students	totgyb_nam	Sample Size for Native American Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR3_NAM	Grade 3 ELA Mean Cohort Scale (CS), Native American students	cs_mn_nam	County grade-year-subject (gyb) Ach Mean, Native American Students, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR8_NAM	Grade 8 ELA Mean Cohort Scale (CS), Native American students	cs_mn_nam	County grade-year-subject (gyb) Ach Mean, Native American Students, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_CS_TOT_ELA_GR3_NAM	Grade 3 ELA Sample Size, Native American students	totgyb_nam	Sample Size for Native American Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR8_NAM	Grade 8 ELA Sample size, Native American students	totgyb_nam	Sample Size for Native American Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR3_WHT	Grade 3 Math Mean Cohort Scale (CS), White students	cs_mn_wht	County grade-year-subject (gyb) Ach Mean, White Students, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR8_WHT	Grade 8 Math Mean Cohort Scale (CS), White students	cs_mn_wht	County grade-year-subject (gyb) Ach Mean, White Students, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR3_WHT	Grade 3 Math Sample Size, White students	totgyb_wht	Sample Size for White Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR8_WHT	Grade 8 Math Sample size, White students	totgyb_wht	Sample Size for White Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR3_WHT	Grade 3 ELA Mean Cohort Scale (CS), White students	cs_mn_wht	County grade-year-subject (gyb) Ach Mean, White Students, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR8_WHT	Grade 8 ELA Mean Cohort Scale (CS), White students	cs_mn_wht	County grade-year-subject (gyb) Ach Mean, White Students, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR3_WHT	Grade 3 ELA Sample Size, White students	totgyb_wht	Sample Size for White Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_CS_TOT_ELA_GR8_WHT	Grade 8 ELA Sample size, White students	totgyb_wht	Sample Size for White Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR3_ECD	Grade 3 Math Mean Cohort Scale (CS), Economically disadvantaged (ECD) students	cs_mn_ecd	County grade-year-subject (gyb) Ach Mean, Econ Disadvantaged (ECD) Students, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR8_ECD	Grade 8 Math Mean Cohort Scale (CS), Economically disadvantaged (ECD) students	cs_mn_ecd	County grade-year-subject (gyb) Ach Mean, Econ Disadvantaged (ECD) Students, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR3_ECD	Grade 3 Math Sample Size, Economically disadvantaged (ECD) students	totgyb_ecd	Sample Size for Econ Disadvantaged (ECD) Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR8_ECD	Grade 8 Math Sample size, Economically disadvantaged (ECD) students	totgyb_ecd	Sample Size for Econ Disadvantaged (ECD) Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR3_ECD	Grade 3 ELA Mean Cohort Scale (CS), Economically disadvantaged (ECD) students	cs_mn_ecd	County grade-year-subject (gyb) Ach Mean, Econ Disadvantaged (ECD) Students, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR8_ECD	Grade 8 ELA Mean Cohort Scale (CS), Economically disadvantaged (ECD) students	cs_mn_ecd	County grade-year-subject (gyb) Ach Mean, Econ Disadvantaged (ECD) Students, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR3_ECD	Grade 3 ELA Sample Size, Economically disadvantaged (ECD) students	totgyb_ecd	Sample Size for Econ Disadvantaged (ECD) Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

VARIABLE NAME	VARIABLE LABEL	NUMERATOR	NUMERATOR LABEL	DENOMINATOR	DENOMINATOR LABEL
SEDA_CS_TOT_ELA_GR8_ECD	Grade 8 ELA Sample size, Economically disadvantaged (ECD) students	totgyb_ecd	Sample Size for Econ Disadvantaged (ECD) Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR3_NECK	Grade 3 Math Mean Cohort Scale (CS), Non-Economically disadvantaged (Non-ECD) students	cs_mn_nec	County grade-year-subject (gyb) Ach Mean, Non-ECD Students, Cohort Scale (CS)	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_MATH_GR8_NECK	Grade 8 Math Mean Cohort Scale (CS), Non-Economically disadvantaged (Non-ECD) students	cs_mn_nec	County grade-year-subject (gyb) Ach Mean, Non-ECD Students, Cohort Scale (CS)	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR3_NECK	Grade 3 Math Sample Size, Non-Economically disadvantaged (Non-ECD) students	totgyb_nec	Sample Size for Non-ECD Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_MATH_GR8_NECK	Grade 8 Math Sample size, Non-Economically disadvantaged (Non-ECD) students	totgyb_nec	Sample Size for Non-ECD Estimates (number of tests in grade-year-subject (gyb))	grade==8 AND subject=="mth"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR3_NECK	Grade 3 ELA Mean Cohort Scale (CS), Non-Economically disadvantaged (Non-ECD) students	cs_mn_nec	County grade-year-subject (gyb) Ach Mean, Non-ECD Students, Cohort Scale (CS)	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_MN_ELA_GR8_NECK	Grade 8 ELA Mean Cohort Scale (CS), Non-Economically disadvantaged (Non-ECD) students	cs_mn_nec	County grade-year-subject (gyb) Ach Mean, Non-ECD Students, Cohort Scale (CS)	grade==8 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)
SEDA_CS_TOT_ELA_GR3_NECK	Grade 3 ELA Sample Size, Non-Economically disadvantaged (Non-ECD) students	totgyb_nec	Sample Size for Non-ECD Estimates (number of tests in grade-year-subject (gyb))	grade==3 AND subject=="rla"	grade: Tested Grade, subject: Tested Subject, values are "math" (Mathematics) or "ela" (English/Language Arts)

Other Notes

The county file does not include special education schools.

There is high missingness (> 70%) for most of the gap variables including subgroups by race/ethnicity, reflecting the increased application of suppression rules for small subgroups.

45. Social Vulnerability Index (CDC SVI)

Sponsor

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC)

Description

The SVI uses U.S. Census data to determine the social vulnerability of every census tract. The SVI ranks each tract on 15 social factors, including poverty, lack of vehicle access, and crowded housing, and groups them into four main themes. Each tract receives a separate ranking for each of the four themes, as well as an overall ranking.

The four themes are socioeconomic factors, household composition and disability factors, minority status and language factors, and housing type and transportation.

These four themes (factor groups) are used to calculate the overall vulnerability index.

The four summary theme ranking variables, are as follows: Socioeconomic, Household Composition and Disability, Minority Status and Language, and Housing Type and Transportation. Percentile ranking values range from 0 to 1, with higher values indicating greater vulnerability.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2010, 2014, 2016, 2018
- ▶ **SDOH domain(s):**
 - Social context
- ▶ **SDOH variable naming convention:** CDCSVI_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County and census tract

SDOH Database variables were drawn directly from the SVI and renamed from the original fields for clarity and consistency with other SDOH Database variables.

Resources

Data were downloaded from

https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html.

Documentation is available at:

https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html.

Suggested Citation

AHRQ SDOH Database (v1), from Centers for Disease Control and Prevention; Agency for Toxic Substances and Disease Registry; Geospatial Research, Analysis, and Services Program. Social Vulnerability Index 2018, 2016, 2014, and 2010 [Databases]. Retrieved from https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html

Data Set Notes

Reliability

Margins of error for individual variables underlying the SVI are included in the original data source. Whenever available, the data set uses Census-calculated MOEs. If Census MOEs are unavailable, for instance when aggregating variables within a table, they use approximate formulas provided by the Census in Appendix A (pages A-14 through A-17) of A Compass for Understanding and Using American Community Survey Data found in the following linked file:

<https://www.census.gov/content/dam/Census/library/publications/2008/acs/ACSGeneralHandbook.pdf>

Geographic Levels

CDC SVI data are available at the county and census tract levels.

Suppression Rules

The SVI source data does not contain suppression rules.

Variable Notes

Table 45.1 below provides information on the variable availability across years. Table 45.2 provides more information on what numerator and denominator variables were drawn for CDC SVI variables in the SDOH Database.

Table 45.1. Variable availability across years, CDC SVI

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CDCSVI_RPL_THEME1_SOCIECO	X		X		X				X		X		X		
CDCSVI_RPL_THEME2_HH_COMP	X		X		X				X		X		X		
CDCSVI_RPL_THEME3_MINO	X		X		X				X		X		X		
CDCSVI_RPL_THEME4_HH_TRANS	X		X		X				X		X		X		
CDCSVI_RPL_THEMES_ALL	X		X		X				X		X		X		

Table 45.2. Variable definitions and specifications, CDC SVI

VARIABLE NAME	VARIABLE LABEL	NUMERATOR LABEL	NUMERATOR VARIABLE	Numerator Source Variable; Label	DENOMINATOR (WHERE APPLICABLE)
CDCSVI_RPL_THEME1_SOCIECO	Social Vulnerability Index: Percentile ranking for socioeconomic theme	RPL_THEME1	Percentile ranking for Socioeconomic theme summary	RPL_THEME1; Percentile ranking for Socioeconomic theme summary	n/a
CDCSVI_RPL_THEME2_HH_COMP	Social Vulnerability Index: Percentile ranking for household composition theme	RPL_THEME2	Percentile ranking for Household Composition theme summary	RPL_THEME2; Percentile ranking for Household Composition theme summary	n/a
CDCSVI_RPL_THEME3_MINO	Social Vulnerability Index: Percentile ranking for minority status/language theme	RPL_THEME3	Percentile ranking for Minority Status/Language theme	RPL_THEME3; Percentile ranking for Minority Status/Language theme	n/a
CDCSVI_RPL_THEME4_HH_TRANS	Social Vulnerability Index: Percentile ranking for housing/transportation theme	RPL_THEME4	Percentile ranking for Housing Type/Transportation theme	RPL_THEME4; Percentile ranking for Housing Type/Transportation theme	n/a
CDCSVI_RPL_THEMES_ALL	Percentile ranking for overall Social Vulnerability Index	RPL_THEMES	Overall percentile ranking	RPL_THEMES; Overall percentile ranking	n/a

46. U.S. Cancer Statistics (USCS)

Sponsor

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Division of Cancer Prevention and Control

Description

The CDC Division of Cancer Prevention and Control produces annual U.S. Cancer Statistics (USCS) which estimate cancer burden across states based on publicly reported public health surveillance systems. Cancer incidence statistics are available by type of cancer, stage, race/ethnicity, sex, and age group for multiple geographic areas, including state, county, and health service area. Data tables are available from 1992 through 2017; however, county-level data were only published in more recent years (2015 to 2018, as of August 2021), and health service area data were newly published with the 2016 data release. USCS data contain 1-year averages for state and national rates and 5-year averages for county-level data.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2015 – 2018
- ▶ **SDOH domain(s):**
 - Healthcare context
- ▶ **SDOH variable naming convention:** CVDC_USCS_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County

The SDOH Database county data files contain 5-year average cancer incidence from USCS in the 2015 to 2018 data files, spanning the SDOH domain of healthcare context. The 5-year average is included only in the SDOH Database file corresponding to the last year of the 5-year period (e.g., the 2015 SDOH Database file contains the 5-year average for 2011 to 2015). Incidence rates are drawn directly from the USCS downloads (BYAREA_COUNTY.TXT files for each year) and renamed from the original fields for clarity and consistency with other variables.

Resources

Data are downloaded from: https://www.cdc.gov/cancer/uscs/dataviz/download_data.html (last retrieved November, 2021).

Technical notes are available here: <https://www.cdc.gov/cancer/uscs/dataviz/archive.htm>.

Suggested Citation

AHRQ SDOH Database (v1), from Centers for Disease Control and Prevention. (2020). U.S. Cancer Statistics. Retrieved from https://www.cdc.gov/cancer/uscs/dataviz/download_data.html.

Data Set Notes

Reliability

The source data contain 95 percent confidence intervals for county-specific incidence.

Geographic Levels

Data are available at the county level. County level incidence data are not available from Kansas and Minnesota because of state legislation and regulations which prohibit the release of county-level data to outside entities.

Since counties change over time, users should be careful to take into account changes in geography across years. In 2013, Bedford City, Virginia (FIPS 51515) was added to Bedford County (FIPS 51019), resulting in an approximate increase of 6,000 in the population of Bedford County. The original USCS data assigned this a new unique FIPS (51917) to distinguish the results, but for the purposes of the SDOH Database, we have reassigned the results to Bedford County (51019) to maintain consistent FIPS codes across datasets and years.

Suppression Rules

The following suppression rules are implemented in the ASCII files:

- Rates and Counts are suppressed if fewer than 16 cases were reported in a specific category
- Rate and Counts are suppressed if a state requested suppressions for race and ethnicity.

Variable Notes

Table 46.1 below provides information on the variable availability across years. Table 46.2 provides more information on what numerator and denominator variables were drawn for USCS variables in the SDOH Database.

Table 46.1. Variable availability across years, USCS

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CDC_USCS AGE ADJ INC RATE	X								X	X	X	X			
CDC_USCS AGE ADJ MORT RATE	X								X	X	X	X			
CDC_USCS TOT INC COUNT	X								X	X	X	X			
CDC_USCS TOT MORT COUNT	X								X	X	X	X			

Table 46.2. Variable definitions and specifications, USCS

VARIABLE NAME	VARIABLE LABEL	NUMERATOR LABEL	NUMERATOR VARIABLE	DENOMINATOR (WHERE APPLICABLE)	DENOMINATOR LABEL
CDC_USCS AGE ADJ INC RATE	Total age-adjusted cancer incidence per 100,000 people in the county	AGE_ADJUSTED_RATE where EVENT_TYPE = Incidence, RACE=All Races, SEX=Both, SITE>All Cancer Sites Combined	Age-adjusted rate of cancer incidence per 100,000	n/a	n/a
CDC_USCS TOT INC COUNT	Total cancer incidence in the county	COUNT where EVENT_TYPE = Incidence, RACE=All Races, SEX=Both, SITE>All Cancer Sites Combined	Count of cancer incidence	n/a	n/a
CDC_USCS AGE ADJ MORT RATE	Total age-adjusted cancer mortality per 100,000 people in the county	AGE_ADJUSTED_RATE where EVENT_TYPE = Mortality, RACE=All Races, SEX=Both, SITE>All Cancer Sites Combined	Age-adjusted rate of cancer mortality per 100,000	n/a	n/a
CDC_USCS TOT MORT COUNT	Total cancer mortality in the county	COUNT where EVENT_TYPE = Mortality, RACE=All Races, SEX=Both, SITE>All Cancer Sites Combined	Count of cancer mortality	n/a	n/a

47. Washington University Saint Louis - Atmospheric Composition Analysis Group (WUSTL)

Sponsor

Atmospheric Composition Analysis Group at Washington University Saint Louis.

Description

The Atmospheric Composition Analysis Group (ACAG) is a research group in Washington University in St. Louis (WUSTL) that focuses on applications of satellite observations, global models, and in situ measurements for better understanding on air quality, climate, and biogeochemical cycling (<https://sites.wustl.edu/acag/>). The ACAG publishes various air quality and other climate related data products that draw from satellite remote sensing, global chemical transport models, and ground-and-aircraft-based observations that collect atmospheric constituents that are not observed from satellite.

Inclusion in the SDOH Database

- ▶ **Years available in the SDOH Database:** 2009 – 2020
- ▶ **SDOH domain(s):**
 - Physical infrastructure
- ▶ **SDOH variable naming convention:** WUSTL_[VARNAME]
- ▶ **SDOH Database geographic level(s):** County, census tract

The SDOH Database county and census tract files include annual mean of PM2.5 particulate matter constructed from the annual mean surface PM2.5 file with resolution ($0.01^\circ \times 0.01^\circ$) of V5.GL.02: total PM2.5 mass only data set (<https://sites.wustl.edu/acag/datasets/surface-pm2-5/>). Gridded data sets are provided to allow users to agglomerate data with flexibility. Annual mean PM2.5 was constructed by projecting the raster data into the same coordinate system as that of census tract and county defined by the Census Bureau while maintaining the pixel value. The projected raster data were then aggregated from the pixel level, represented as grid cells to census polygons, a process known as “raster extraction”. Details of the spatial analysis used to construct variables are provided under the Data Set Notes section below.

County and census tract boundaries changed over the time period covered (2009-2020). Therefore, in the SDOH Database, a consistent set of boundaries defined by the 2010 decennial census was used for years covered 2010-2019, boundaries defined by the 2000 decennial census were used for the 2009 file, and boundaries defined by the 2020 decennial census were used for the 2020 file.

Suggested Citation

Aaron van Donkelaar, Melanie S. Hammer, Liam Bindle, Michael Brauer, Jeffery R. Brook, Michael J. Garay, N. Christina Hsu, Olga V. Kalashnikova, Ralph A. Kahn, Colin Lee, Robert C. Levy, Alexei Lyapustin, Andrew M. Sayer and Randall V. Martin (2021). Monthly Global Estimates of Fine Particulate Matter and Their Uncertainty Environmental Science & Technology, 2021, doi:10.1021/acs.est.1c05309. <https://pubs.acs.org/doi/abs/10.1021/acs.est.1c05309>.

AHRQ SDOH Database (v1), from Atmospheric Composition Analysis Group, Washington University in Saint Louis. Surface PM2.5: Global/Regional Estimates (V5.GL.02) Annual mean PM2.5 [ug/m³] at 0.01° × 0.01° (2009-2020) Retrieved December 2021 from:
<https://wustl.app.box.com/v/ACAG-V5GL02-GWRPM25/folder/148055284876>

Data Set Notes

Reliability

The data sets are gridded at the finest resolution of the information sources that were incorporated (0.01° × 0.01°).

Geographic Levels

WUSTL provided all data as raster data. Each raster file in format was read in Python using ArcPy script and projected to the same coordinate system as that for the 2010 county and census tract files (NAD 1983 (2011) Contiguous USA Albers, EPSG code = 6350). We implemented raster extraction in R to extract values from raster image cells and calculate the mean of cell values for each county and census tract.

Suppression

Missing cell values were excluded from the value extraction, but no suppression rules are included in the source data.

Variable Notes

Table 47.1 below provides information on the variable availability across years. Table 47.2 provides more information on what numerator and denominator variables were drawn for WUSTL variables in the SDOH Database.

Table 47.1. Variable availability across years, WUSTL

Variable Name	County	ZIP Code	Census Tract	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WUSTL_AVG_PM25	X		X	X	X	X	X	X	X	X	X	X	X	X	X

Table 47.2. Variable definitions and specifications, WUSTL

VARIABLE NAME	VARIABLE LABEL	NUMERATOR
WUSTL_AVG_PM25	Annual mean of Particulate Matter (PM2.5) concentration ($\mu\text{g}/\text{m}^3$)	PM25_YYYY

Other Notes

Some counties and tracts have a missing value for all years because they were out of the spatial extent of the input files. They are located in Alaska, Hawaii, Puerto Rico, American Samoa, Guam, Northern Mariana Islands, and Virgin Islands.

There are some outliers in the file that likely reflect unusual weather events. For example, in the 2017 county file, there were some counties in Montana (e.g., 30077 (Powell County)) that had among the highest level of PM2.5. These values likely reflect 2017 Montana wildfires.

Appendix A. Beta – SDOH Database Variable Crosswalk

Table A.1 below provides users of the Social Determinants of Health (SDOH) Beta Data Files with a crosswalk of Beta variables that can be matched to the SDOH Database variables. Beta variables listed in this table either matched entirely completely (variable name and construct) or have since had a variable name update in the SDOH Database. Beta variables that are not listed in this table can be assumed to have been either have been dropped or changed beyond a variable naming update in the SDOH Database.

Table A.1 Beta – SDOH Database Variable Crosswalk

Beta Variable Name	SDOH Database Variable Name	Final Status
ACS_GINI_INDEX	ACS_GINI_INDEX	No change
ACS_MEDIAN_AGE	ACS_MEDIAN_AGE	No change
ACS_MEDIAN_HOME_VALUE	ACS_MEDIAN_HOME_VALUE	No change
ACS_PCT_10UNITS	ACS_PCT_10UNITS	No change
ACS_PCT_1UP_OWNER_1ROOM	ACS_PCT_1UP_OWNER_1ROOM	No change
ACS_PCT_1UP_PERS_1ROOM	ACS_PCT_1UP_PERS_1ROOM	No change
ACS_PCT_1UP_RENT_1ROOM	ACS_PCT_1UP_RENT_1ROOM	No change
ACS_PCT_ADMIN	ACS_PCT_ADMIN	No change
ACS_PCT AGE 0_17	ACS_PCT AGE 0_17	No change
ACS_PCT AGE 0_4	ACS_PCT AGE 0_4	No change
ACS_PCT AGE 10_14	ACS_PCT AGE 10_14	No change
ACS_PCT AGE 15_17	ACS_PCT AGE 15_17	No change
ACS_PCT AGE 18_44	ACS_PCT AGE 18_44	No change
ACS_PCT AGE 45_64	ACS_PCT AGE 45_64	No change
ACS_PCT AGE 5_9	ACS_PCT AGE 5_9	No change
ACS_PCT_API_LANG	ACS_PCT_API_LANG	No change
ACS_PCT_ARMED_FORCES	ACS_PCT_ARMED_FORCES	No change
ACS_PCT_ART	ACS_PCT_ART	No change
ACS_PCT_BACHELOR_DGR	ACS_PCT_BACHELOR_DGR	No change
ACS_PCT_CHILD_1FAM	ACS_PCT_CHILD_1FAM	No change
ACS_PCT_COMMT_15MIN	ACS_PCT_COMMT_15MIN	No change
ACS_PCT_COMMT_29MIN	ACS_PCT_COMMT_29MIN	No change
ACS_PCT_COMMT_59MIN	ACS_PCT_COMMT_59MIN	No change
ACS_PCT_COMMT_60MINUP	ACS_PCT_COMMT_60MINUP	No change
ACS_PCT_CONSTRUCT	ACS_PCT_CONSTRUCT	No change
ACS_PCT_CTZ_NONUS_BORN	ACS_PCT_CTZ_NONUS_BORN	No change
ACS_PCT_CTZ_US_BORN	ACS_PCT_CTZ_US_BORN	No change
ACS_PCT_DRIVE_2WORK	ACS_PCT_DRIVE_2WORK	No change
ACS_PCT_EDUC	ACS_PCT_EDUC	No change
ACS_PCT_ENGL_NOT_ALL	ACS_PCT_ENGL_NOT_ALL	No change
ACS_PCT_ENGL_NOT_WELL	ACS_PCT_ENGL_NOT_WELL	No change
ACS_PCT_ENGL VERY WELL	ACS_PCT_ENGL VERY WELL	No change
ACS_PCT_ENGL_WELL	ACS_PCT_ENGL_WELL	No change
ACS_PCT_ENGLISH	ACS_PCT_ENGLISH	No change
ACS_PCT_FEMALE	ACS_PCT_FEMALE	No change

Beta Variable Name	SDOH Database Variable Name	Final Status
ACS_PCT_FINANCE	ACS_PCT_FINANCE	No change
ACS_PCT_FOREIGN_BORN	ACS_PCT_FOREIGN_BORN	No change
ACS_PCT_GRANDP_NO_RESPS	ACS_PCT_GRANDP_NO_RESPS	No change
ACS_PCT_GRANDP_RESPS_NO_P	ACS_PCT_GRANDP_RESPS_NO_P	No change
ACS_PCT_GRP_QRT	ACS_PCT_GRP_QRT	No change
ACS_PCT_GULFWAR_2001	ACS_PCT_GULFWAR_2001	No change
ACS_PCT_HS_GRADUATE	ACS_PCT_HS_GRADUATE	No change
ACS_PCT_INFORM	ACS_PCT_INFORM	No change
ACS_PCT_LT_HS	ACS_PCT_LT_HS	No change
ACS_PCT_MANUFACT	ACS_PCT_MANUFACT	No change
ACS_PCT_MEDICAID_ANY	ACS_PCT_MEDICAID_ANY	No change
ACS_PCT_MEDICARE_ONLY	ACS_PCT_MEDICARE_ONLY	No change
ACS_PCT_NATURE	ACS_PCT_NATURE	No change
ACS_PCT_NON_CITIZEN	ACS_PCT_NON_CITIZEN	No change
ACS_PCT_NONCTN_1990	ACS_PCT_NONCTN_1990	No change
ACS_PCT_NONCTN_2010	ACS_PCT_NONCTN_2010	No change
ACS_PCT_OTH_EURP	ACS_PCT_OTH_EURP	No change
ACS_PCT_OTH_LANG	ACS_PCT_OTH_LANG	No change
ACS_PCT_OTHER	ACS_PCT_OTHER	No change
ACS_PCT_OTHER_INS	ACS_PCT_OTHER_INS	No change
ACS_PCT_POSTHS_ED	ACS_PCT_POSTHS_ED	No change
ACS_PCT_PRIVATE_ANY	ACS_PCT_PRIVATE_ANY	No change
ACS_PCT_PRIVATE_EMPL	ACS_PCT_PRIVATE_EMPL	No change
ACS_PCT_PRIVATE_MDCR	ACS_PCT_PRIVATE_MDCR	No change
ACS_PCT_PRIVATE_OTHER	ACS_PCT_PRIVATE_OTHER	No change
ACS_PCT_PRIVATE_SELF	ACS_PCT_PRIVATE_SELF	No change
ACS_PCT_PROFESS	ACS_PCT_PROFESS	No change
ACS_PCT_PUB_COMMET_15MIN	ACS_PCT_PUB_COMMET_15MIN	No change
ACS_PCT_PUB_COMMET_29MIN	ACS_PCT_PUB_COMMET_29MIN	No change
ACS_PCT_PUB_COMMET_59MIN	ACS_PCT_PUB_COMMET_59MIN	No change
ACS_PCT_PUB_COMMET_60MINUP	ACS_PCT_PUB_COMMET_60MINUP	No change
ACS_PCT_PUBL_TRANSIT	ACS_PCT_PUBL_TRANSIT	No change
ACS_PCT_PUBLIC_ONLY	ACS_PCT_PUBLIC_ONLY	No change
ACS_PCT_RETAIL	ACS_PCT_RETAIL	No change
ACS_PCT_SPANISH	ACS_PCT_SPANISH	No change
ACS_PCT_TAXICAB_2WORK	ACS_PCT_TAXICAB_2WORK	No change
ACS_PCT_TRANSPORT	ACS_PCT_TRANSPORT	No change
ACS_PCT_TRICARE_VA	ACS_PCT_TRICARE_VA	No change
ACS_PCT_UNINSURED	ACS_PCT_UNINSURED	No change
ACS_PCT_WALK_2WORK	ACS_PCT_WALK_2WORK	No change
ACS_PCT_WHOLESALE	ACS_PCT_WHOLESALE	No change
ACS_PCT_WORK_NO_CAR	ACS_PCT_WORK_NO_CAR	No change
AHRF_DAYS_AIR_QLT	AHRF_DAYS_AIR_QLT	No change
AHRF_HPSA_DENTIST	AHRF_HPSA_DENTIST	No change
AHRF_HPSA_MENTAL	AHRF_HPSA_MENTAL	No change
AHRF_HPSA_PRIM	AHRF_HPSA_PRIM	No change
AHRF_PCT_GOOD_AQ	AHRF_PCT_GOOD_AQ	No change
AHRF_TXC_SITE_CNTRL	AHRF_TXC_SITE_CNTRL	No change
AHRF_TXC_SITE_NO_CNTRL	AHRF_TXC_SITE_NO_CNTRL	No change

Beta Variable Name	SDOH Database Variable Name	Final Status
AHRF_USDA_RUCC_2013	AHRF_USDA_RUCC_2013	No change
CAF_ADJ COUNTY_1	CAF_ADJ COUNTY_1	No change
CAF_ADJ COUNTY_10	CAF_ADJ COUNTY_10	No change
CAF_ADJ COUNTY_11	CAF_ADJ COUNTY_11	No change
CAF_ADJ COUNTY_12	CAF_ADJ COUNTY_12	No change
CAF_ADJ COUNTY_13	CAF_ADJ COUNTY_13	No change
CAF_ADJ COUNTY_14	CAF_ADJ COUNTY_14	No change
CAF_ADJ COUNTY_2	CAF_ADJ COUNTY_2	No change
CAF_ADJ COUNTY_3	CAF_ADJ COUNTY_3	No change
CAF_ADJ COUNTY_4	CAF_ADJ COUNTY_4	No change
CAF_ADJ COUNTY_5	CAF_ADJ COUNTY_5	No change
CAF_ADJ COUNTY_6	CAF_ADJ COUNTY_6	No change
CAF_ADJ COUNTY_7	CAF_ADJ COUNTY_7	No change
CAF_ADJ COUNTY_8	CAF_ADJ COUNTY_8	No change
CAF_ADJ COUNTY_9	CAF_ADJ COUNTY_9	No change
CHR_PREMAT_DEATH_RATE	CHR_PREMAT_DEATH_RATE	No change
CHR_SEGREG_BLACK	CHR_SEGREG_BLACK	No change
CHR_SEGREG_NON_WHITE	CHR_SEGREG_NON_WHITE	No change
COUNTY	COUNTY	No change
CRDC_PCT COUNTY_ECE	CRDC_PCT COUNTY_ECE	No change
CRDC_PCT COUNTY_PREK	CRDC_PCT COUNTY_PREK	No change
CRDC_PCT CTY_KGTN	CRDC_PCT CTY_KGTN	No change
CRDC_PCT CTY_PSLOWINC	CRDC_PCT CTY_PSLOWINC	No change
CRDC_PCT CTY_PSTITLEI	CRDC_PCT CTY_PSTITLEI	No change
CRDC_PCT LEA_DESEGPLAN	CRDC_PCT LEA_DESEGPLAN	No change
CRDC_TOT LEA	CRDC_TOT LEA	No change
CRDC_TOT_SCHOOLS	CRDC_TOT_SCHOOLS	No change
CRDC_TOT_STUDENTS	CRDC_TOT_STUDENTS	No change
NCHS_URCS_2006	NCHS_URCS_2006	No change
NCHS_URCS_2013	NCHS_URCS_2013	No change
NEPHTN_HEATIND_100	NEPHTN_HEATIND_100	No change
NEPHTN_HEATIND_105	NEPHTN_HEATIND_105	No change
NEPHTN_HEATIND_90	NEPHTN_HEATIND_90	No change
NEPHTN_HEATIND_95	NEPHTN_HEATIND_95	No change
NEPHTN_MAXDROUGHT	NEPHTN_MAXDROUGHT	No change
NEPHTN_NUMDROUGHT	NEPHTN_NUMDROUGHT	No change
NEPHTN_TEMPERATURE_100	NEPHTN_TEMPERATURE_100	No change
NEPHTN_TEMPERATURE_105	NEPHTN_TEMPERATURE_105	No change
NEPHTN_TEMPERATURE_90	NEPHTN_TEMPERATURE_90	No change
NEPHTN_TEMPERATURE_95	NEPHTN_TEMPERATURE_95	No change
REGION	REGION	No change
STATE	STATE	No change
TERRITORY	TERRITORY	No change
YEAR	YEAR	No change
ACS_HH_SIZE	ACS_AVG_HH_SIZE	Variable name change only
ACS_VA_MEDIAN_INCOME	ACS_MEDIAN_VET_INC	Variable name change only
ACS_NONVA_MEDIAN_INCOME	ACS_MEDIAN_NONVET_INC	Variable name change only
ACS_PCT_AGE_65UP	ACS_PCT_AGE_ABOVE65	Variable name change only
ACS_PCT_CHILD_DISAB	ACS_PCT_CHILD_DISAB	Variable name change only

Beta Variable Name	SDOH Database Variable Name	Final Status
ACS_PCT_GRANDKID_TOT	ACS_PCT_CHILDREN_GRANDPARENT	Variable name change only
ACS_PCT_ASSOCIATE_DGR	ACS_PCT_COLLEGE_ASSOCIATE_DGR	Variable name change only
ACS_PCT_GRANDP_RESPS	ACS_PCT_GRANDP_RESPS_P	Variable name change only
ACS_PCT_GULFWAR_1990	ACS_PCT_GULFWAR_1990_2001	Variable name change only
ACS_PCT_1FAM_HH_FOOD_STMP	ACS_PCT_HH_1FAM_FOOD_STMP	Variable name change only
ACS_PCT_HH_1PERS	ACS_PCT_HH_1PERS	Variable name change only
ACS_PCT_INTERNET	ACS_PCT_HH_INTERNET	Variable name change only
ACS_PCT_LIMIT_ENGLISH	ACS_PCT_HH_LIMIT_ENGLISH	Variable name change only
ACS_PCT_SMARTPHONE	ACS_PCT_HH_SMARTPHONE	Variable name change only
ACS_PCT_MOBILE_HOME	ACS_PCT_HU_MOBILE_HOME	Variable name change only
ACS_PCT_HH_NO_FUEL	ACS_PCT_HU_NO_FUEL	Variable name change only
ACS_PCT_NO_VEH	ACS_PCT_HU_NO_VEH	Variable name change only
ACS_PCT_MEDICAID_ANY64	ACS_PCT_MEDICAID_ANY_BELOW64	Variable name change only
ACS_PCT_NONVA_DISABLE	ACS_PCT_NONVET_DISABLE_18_64	Variable name change only
ACS_PCT_NONVA_POOR	ACS_PCT_NONVET_POV_18_64	Variable name change only
ACS_PCT_OWNED_HH	ACS_PCT_OWNER_HU	Variable name change only
ACS_PCT_OWNER_HH_CHILD	ACS_PCT_OWNER_HU_CHILD	Variable name change only
ACS_PCT_PERSON_INC124	ACS_PCT_PERSON_INC_100_124	Variable name change only
ACS_PCT_PERSON_INC199	ACS_PCT_PERSON_INC_125_199	Variable name change only
ACS_PCT_PERSON_INC200	ACS_PCT_PERSON_INC_ABOVE200	Variable name change only
ACS_PCT_PRIVATE_ANY64	ACS_PCT_PRIVATE_ANY_BELOW64	Variable name change only
ACS_PCT_PRIVATE_2	ACS_PCT_PRIVATE_EMPL	Variable name change only
ACS_PCT_PRIVATE_EMPL64	ACS_PCT_PRIVATE_EMPL_BELOW64	Variable name change only
ACS_PCT_PRIVATE_SELF64	ACS_PCT_PRIVATE_SELF_BELOW64	Variable name change only
ACS_PCT_PUBLIC_OTHER	ACS_PCT_PUBLIC_OTHER_BELOW64	Variable name change only
ACS_PCT_RENTED_HH	ACS_PCT_RENTER_HU	Variable name change only
ACS_PCT_RENTER_65UP	ACS_PCT_RENTER_HU_ABOVE65	Variable name change only
ACS_PCT_RENTER_HH_CHILD	ACS_PCT_RENTER_HU_CHILD	Variable name change only
ACS_PCT_RENT_COST_30PCT	ACS_PCT_RENTER_HU_COST_30PCT	Variable name change only
ACS_PCT_SELF_MDCR	ACS_PCT_SELF_MDCR_ABOVE35	Variable name change only
ACS_PCT_TRICARE_VA64	ACS_PCT_TRICARE_VA_BELOW64	Variable name change only
ACS_PCT_UNINSURED64	ACS_PCT_UNINSURED_BELOW64	Variable name change only
ACS_PCT_VACANT_HH	ACS_PCT_VACANT_HU	Variable name change only
ACS_PCT_VA	ACS_PCT_VET	Variable name change only
ACS_PCT_VA_BACHELOR	ACS_PCT_VET_BACHELOR	Variable name change only
ACS_PCT_VA_COLLEGE	ACS_PCT_VET_COLLEGE	Variable name change only
ACS_PCT_VA_DISABLE	ACS_PCT_VET_DISABLE_18_64	Variable name change only
ACS_PCT_VA_LABOR_FORCE	ACS_PCT_VET_LABOR_FORCE_18_64	Variable name change only
ACS_PER_CAPITA_INCOME	ACS_PER_CAPITA_INC	Variable name change only
ACS_TOTAL_HOUSEHOLD	ACS_TOT_HH	Variable name change only
ACS_TOTAL_POP_WT	ACS_TOT_POP_WT	Variable name change only
AHRF_HOSP_AMMS	AHRF_TOT_HOSP_ADMISSEONS	Variable name change only
AHRF_IP_DAY_NH_HOSP	AHRF_IP_DAY_NH_HOSP_RATE	Variable name change only
AHRF_IP_DAY_ST_G_HOSP	AHRF_IP_DAY_ST_G_HOSP_RATE	Variable name change only
AHRF_IP_DAY_STNG_LT	AHRF_IP_DAY_STNG_LT_RATE	Variable name change only
AHRF_LOW_EDUC_USDA	AHRF_LOW_EDUC_USDA	Variable name change only
AHRF_MCR_BN_READM	AHRF_MCR_BN_READM_RATE	Variable name change only
AHRF_OP_VST_LT_G_ER_OP	AHRF_OP_VST_LT_ER_OP_RATE	Variable name change only
AHRF_OP_VST_ST_G_ER_OP	AHRF_OP_VST_ST_G_ER_OP_RATE	Variable name change only

Beta Variable Name	SDOH Database Variable Name	Final Status
AHRF_OP_VST_ST_OTHR	AHRF_OP_VST_ST_G_OTHR_RATE	Variable name change only
AHRF_SURG_OPRN_IP	AHRF_SURG_OPRN_IP_RATE	Variable name change only
AHRF_SURG_OPRN_OP	AHRF_SURG_OPRN_OP_RATE	Variable name change only
AHRF_AIRBORNE_STG_ISO_HOSPS	AHRF_TOT_ARBRNE_ST_G_ISO_HOSPS	Variable name change only
AHRF_AIRBORNE_STG_ISO_ROOMS	AHRF_TOT_ARBRNE_ST_G_ISO_ROOMS	Variable name change only
AHRF_AIRBORNE_STNGLT_ISO_ROOMS	AHRF_TOT_ARBRNE_STNGLT_ISO_ROOM	Variable name change only
AHRF_CARDIACIC_BEDS	AHRF_TOT_CARDIAC_IC_BEDS	Variable name change only
AHRF_CARDIACIC_HOSP	AHRF_TOT_CARDIAC_IC_HOSP	Variable name change only
AHRF_CARDIOVAS_DIS	AHRF_TOT_CARDIOVAS_SPEC	Variable name change only
AHRF_COLON_SRG	AHRF_TOT_COLON_SRG	Variable name change only
AHRF_COMM_HLTH_CNTR	AHRF_TOT_COM_HEALTH_GRANT	Variable name change only
AHRF_DERMATOLOGY	AHRF_TOT_DERMATOLOGY	Variable name change only
AHRF_ER_MED	AHRF_TOT_ER_MED	Variable name change only
AHRF_ER_VST_ST_G_HOSP	AHRF_TOT_ER_VST_ST_G_HOSP	Variable name change only
AHRF_GASTROENTRLG	AHRF_TOT_GASTROENTEROLOGY	Variable name change only
AHRF_GEN_INTERNAL_MED	AHRF_TOT_GEN_INTERNAL_MED	Variable name change only
AHRF_GENRL_SURG	AHRF_TOT_GENRL_SURG	Variable name change only
AHRF_HOSP_BED	AHRF_TOT_HOSP_BED	Variable name change only
AHRF_HOSP_BEDS_LT	AHRF_TOT_HOSP_BEDS_LT	Variable name change only
AHRF_TOT_HOSPS	AHRF_TOT_HOSPS	Variable name change only
AHRF_LT_HOSP	AHRF_TOT_LT_HOSP	Variable name change only
AHRF_RATE_MCR_BN_READM	AHRF_MCR_BN_READM_RATE	Variable name change only
AHRF_MCR_IP_DAY_ST_G	AHRF_TOT_MCR_IP_DAY_ST_G	Variable name change only
AHRF_MDCD_INP_DAY_STGH	AHRF_TOT_MDCD_IP_DAY_ST_G	Variable name change only
AHRF_MDCR_FFS_ACT_COST	AHRF_TOT_MDCR_FFS_ACT_COST	Variable name change only
AHRF_MDCR_FFS_STD_COST	AHRF_TOT_MDCR_FFS_STD_COST	Variable name change only
AHRF_TOTAL_MDS	AHRF_TOT_MDS	Variable name change only
AHRF_MED_SPEC	AHRF_TOT_MED_SPEC	Variable name change only
AHRF_MEDSURGIC_BEDS	AHRF_TOT_MEDSURGIC_BEDS	Variable name change only
AHRF_MEDSURGIC_HOSP	AHRF_TOT_MEDSURGIC_HOSP	Variable name change only
AHRF_N_STGH_EXP	AHRF_TOT_N_ST_G_EXP	Variable name change only
AHRF_N_STGH_EXP_1000	AHRF_TOT_N_ST_G_EXP_1000	Variable name change only
AHRF_N_STGH_PAYRLL	AHRF_TOT_N_ST_G_PAYRLL	Variable name change only
AHRF_N_STGH_PAYRLL_1000	AHRF_TOT_N_ST_G_PAYRLL_1000	Variable name change only
AHRF_NEONATALIC_BEDS	AHRF_TOT_NEONATALIC_BEDS	Variable name change only
AHRF_NEONATALIC_HOSP	AHRF_TOT_NEONATALIC_HOSP	Variable name change only
AHRF_NEUROLGICAL_SURG	AHRF_TOT_NEUROLOGICAL_SURG	Variable name change only
AHRF_NH_BED_STNGH	AHRF_TOT_NH_BED_STNGH	Variable name change only
AHRF_NURSE_PRACT	AHRF_TOT_NURSE_PRACT	Variable name change only
AHRF_OB_GYN	AHRF_TOT_OB_GYN	Variable name change only
AHRF_OPTHALMOLGY	AHRF_TOT_OPHTHALMOLOGY	Variable name change only
AHRF_OPRT_ROOM	AHRF_TOT_OPRT_ROOM	Variable name change only
AHRF_OTHER_SPEC	AHRF_TOT_OTHER_SPEC	Variable name change only
AHRF_OTOLARYNGOLGY	AHRF_TOT_OTOLARYNGOLOGY	Variable name change only
AHRF_OUTPAT_VST_STNGH	AHRF_TOT_OUTPAT_VST_STNGH	Variable name change only
AHRF_PEDIATRICS	AHRF_TOT_PEDIATRICS	Variable name change only
AHRF_PHYS_PRIMARY	AHRF_TOT_PHYS_PRIMARY	Variable name change only
AHRF_PHYSICIAN_ASSIST	AHRF_TOT_PHYSICIAN_ASSIST	Variable name change only
AHRF_PLASTIC_SURG	AHRF_TOT_PLASTIC_SURG	Variable name change only

Beta Variable Name	SDOH Database Variable Name	Final Status
AHRF_PULMONARY_DIS	AHRF_TOT_PULMONARY_SPEC	Variable name change only
AHRF_RURL_REFRRL_CNT	AHRF_TOT_RURL_REFRRL_CNT	Variable name change only
AHRF_ST_COMM_HOSP	AHRF_TOT_ST_COMM_HOSP	Variable name change only
AHRF_ST_COMM_HOSP_ADMS	AHRF_TOT_ST_COMM_HOSP_ADMS	Variable name change only
AHRF_ST_G_HOSP	AHRF_TOT_ST_G_HOSP	Variable name change only
AHRF_ST_G_HOSP_ADMS	AHRF_TOT_ST_G_HOSP_ADMS	Variable name change only
AHRF_ST_G_HOSP_BED	AHRF_TOT_ST_G_HOSP_BED	Variable name change only
AHRF_ST_N_G_HOSP	AHRF_TOT_ST_N_G_HOSP	Variable name change only
AHRF_STNG_LT_HOSP_ADMS	AHRF_TOT_STNG_LT_HOSP_ADMS	Variable name change only
AHRF_SURG_SPECS	AHRF_TOT_SURG_SPECS	Variable name change only
AHRF_THORACIC_SURG	AHRF_TOT_THORACIC_SURG	Variable name change only
AMFAR_DISTMAT	AMFAR_AVG_DISTMAT	Variable name change only
AMFAR_DISTSSP	AMFAR_AVG_DISTSSP	Variable name change only
AMFAR_MMEPERCAP	AMFAR_MME_PER_CAPITA	Variable name change only
AMFAR_OPIOIDRXRATE	AMFAR_OPIOIDRX_RATE	Variable name change only
AMFAR_DRUGDEP	AMFAR_PCT_DRUGDEP_ABOVE12	Variable name change only
AMFAR_NONMEDPAIN	AMFAR_PCT_NONMEDPAIN_ABOVE12	Variable name change only
AMFAR_AMATFAC	AMFAR_TOT_AMATFAC	Variable name change only
AMFAR_HCVTFAC	AMFAR_TOT_HCVTFAC	Variable name change only
AMFAR_HIVTFAC	AMFAR_TOT_HIVTFAC	Variable name change only
AMFAR_MEDAMATFAC	AMFAR_TOT_MEDAMATFAC	Variable name change only
AMFAR_MEDHCVTFAC	AMFAR_TOT_MEDHCVTFAC	Variable name change only
AMFAR_MEDHIVTFAC	AMFAR_TOT_MEDHIVTFAC	Variable name change only
AMFAR_MEDMHFAC	AMFAR_TOT_MEDMHFAC	Variable name change only
AMFAR_MHFAC	AMFAR_TOT_MHFAC	Variable name change only
CCBP RATE_BWLSTORES_PER_1000	CCBP_BWLSTORES_RATE	Variable name change only
CCBP RATE_CFS_PER_1000	CCBP_CFS_RATE	Variable name change only
CCBP RATE_CHS_PER_1000	CCBP_CHS_RATE	Variable name change only
CCBP RATE_CS_PER_1000	CCBP_CS_RATE	Variable name change only
CCBP RATE_CFHEDORS_PER_1000	CCBP_EORS_RATE	Variable name change only
CCBP RATE_FCRSC_PER_1000	CCBP_FCRSC_RATE	Variable name change only
CCBP RATE_FF_PER_1000	CCBP_FF_RATE	Variable name change only
CCBP RATE_FSR_PER_1000	CCBP_FSR_RATE	Variable name change only
CCBP RATE_GAMBLING_PER_1000	CCBP_GAMBLING_RATE	Variable name change only
CCBP RATE_SFS_PER_1000	CCBP_SFS_RATE	Variable name change only
CCBP RATE_SHELTERS_PER_1000	CCBP_SHELTERS_RATE	Variable name change only
CCBP RATE_SOCS_PER_1000	CCBP_SOCS_RATE	Variable name change only
USCS AGE ADJUSTED RATE	CDC_USCS_AGE_ADJ_INC_RATE	Variable name change only
USCS COUNT	CDC_USCS_TOT_INC_COUNT	Variable name change only
CDC HEART DISEASE DEATH	CDCA_HEART_DTH_RATE_ABOVE35	Variable name change only
SVI_RPL_THEME1_SOCIECO	CDCSVI_RPL_THEME1_SOCIECO	Variable name change only
SVI_RPL_THEME2_HH_DISB	CDCSVI_RPL_THEME2_HH_COMP	Variable name change only
SVI_RPL_THEME3_MINO	CDCSVI_RPL_THEME3_MINO	Variable name change only
SVI_RPL_THEME4_HH_TRANS	CDCSVI_RPL_THEME4_HH_TRANS	Variable name change only
SVI_RPL_THEMES_ALL	CDCSVI_RPL_THEMES_ALL	Variable name change only
CDC_OPIOID_DEATH	CDCW_OPIOID_DTH_RATE	Variable name change only
CEN_AREALAND_SQM	CEN_AREALAND_SQM COUNTY	Variable name change only
CEN_POPDENSITY_2018	CEN_POPDENSITY_COUNTY	Variable name change only
CHR_FIREARM_DEATH	CHR_FIREARM_DEATH_RATE	Variable name change only

Beta Variable Name	SDOH Database Variable Name	Final Status
CHR_MENTAL_DR_RATE	CHR_MENTAL_PROV_RATE	Variable name change only
CHR_ADULT_OBESITY	CHR_PCT_ADULT_OBESITY	Variable name change only
CHR_ALCOHOL_DRIV_DEATH	CHR_PCT_ALCOHOL_DRIV_DEATH	Variable name change only
CHR_DIABETES_PREV	CHR_PCT_DIABETES	Variable name change only
CHR_EXCESS_DRINK	CHR_PCT_EXCESS_DRINK	Variable name change only
CHR_MENTAL_DISTRESS	CHR_PCT_MENTAL_DISTRESS	Variable name change only
CHR_PHYS_INACTIVITY	CHR_PCT_PHYS_INACTIVITY	Variable name change only
CHR_PHYSICAL_DISTRESS	CHR_PCT_PHYSICAL_DISTRESS	Variable name change only
CHR_POOR_HEALTH	CHR_PCT_POOR_HEALTH	Variable name change only
CHR_SMOKING	CHR_PCT_SMOKING	Variable name change only
CHR_TEEN_BIRTH	CHR_TEEN_BIRTH_RATE_15_19	Variable name change only
CHR_MENTAL_DR_NUM	CHR_TOT_MENTAL_PROV	Variable name change only
CHR_VIOLENT_CRIME	CHR_VIOLENT_CRIME_RATE	Variable name change only
FIPS CODE	COUNTYFIPS	Variable name change only
CRDC_TOT_PREK	CRDC_TOT_PRESCHOOL	Variable name change only
MP_ENROLLED	MP_MEDICARE_ADVtg_ENROLLED	Variable name change only
MP_ELIGIBLES	MP_MEDICARE_ELIGIBLES	Variable name change only
MP_PERCPEN	MP_PCT_ADVtg_PEN	Variable name change only
NEPHTN_MODAAC_PM25	NEPHTN_AVG_MODAAC_PM25	Variable name change only
NEPHTN_MONAAC_PM25	NEPHTN_AVG_MONAAC_PM25	Variable name change only
NEPHTN_MODPD_PM25	NEPHTN_PCT_MODPD_PM25	Variable name change only
NEPHTN_MODPDPM25_OVER	NEPHTN_PCT_MODPD_PM25	Variable name change only
NEPHTN_MONPD_PM25	NEPHTN_PCT_MONPD_PM25	Variable name change only
NEPHTN_MONPDPM25_OVER	NEPHTN_PCT_MONPD_PM25	Variable name change only
NEPHTN_PARK	NEPHTN_PCT_PARK	Variable name change only
NHC_LIC_STAFF	NHC_AVG_LIC_STAFF	Variable name change only
NHC_NUMFACS	NHC_TOT_FACS	Variable name change only