

Community-Level Health (CLH) Database



Overview of the Community-Level Health (CLH) Database

Webinar Overview

- Community-Level Health (CLH) Database
 - ▶ Objectives
 - ▶ Overview
 - ▶ Data
 - ▶ Documentation

Objectives of the CLH Database



Make health data easier to use



Show geographic differences



Enable analyses to identify effective interventions



OFFICE OF THE SECRETARY
**PATIENT-CENTERED OUTCOMES
RESEARCH TRUST FUND**

CLH Database Development



Met quarterly with a small group of experts from other federal agencies who work with community-level health datasets



Conducted an environmental scan and identified 96 peer-reviewed articles between 2023 and 2024 citing the predecessor Database

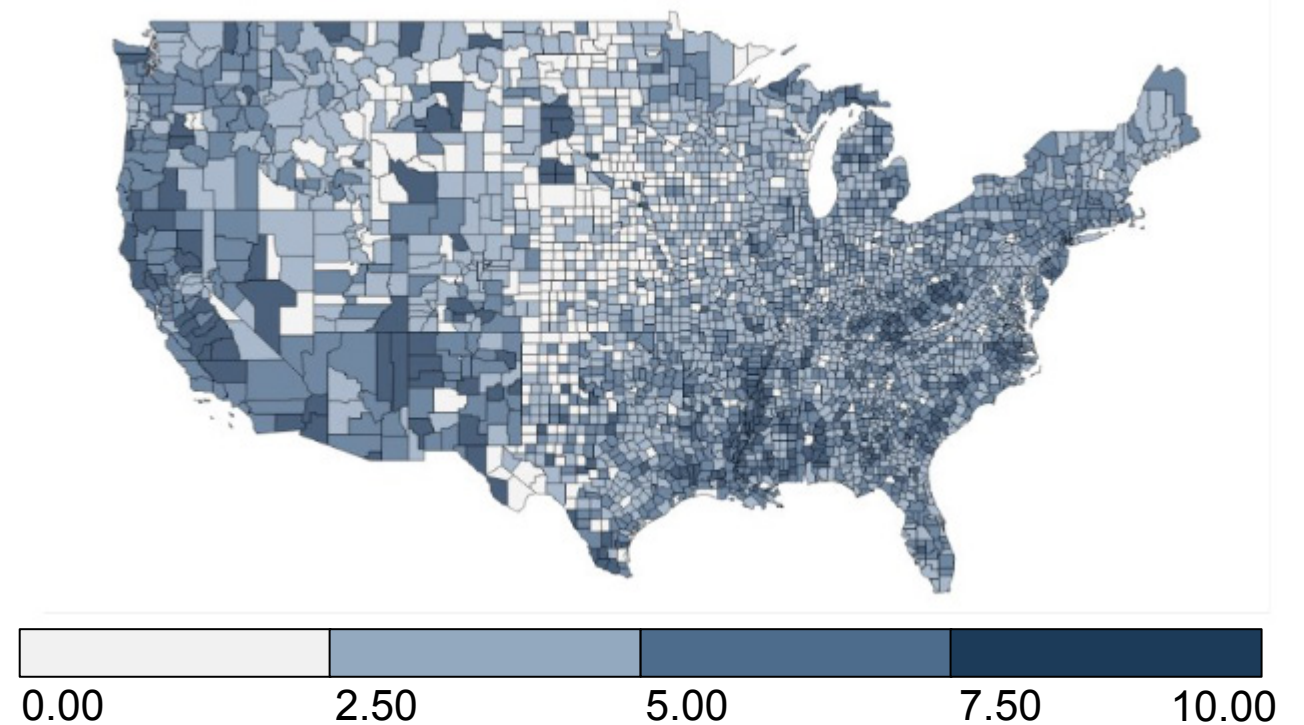


Used input to select additional health data sources and variables. CLH Database updates and replaces the AHRQ SDOH Database.

Geographic Levels and Years Available

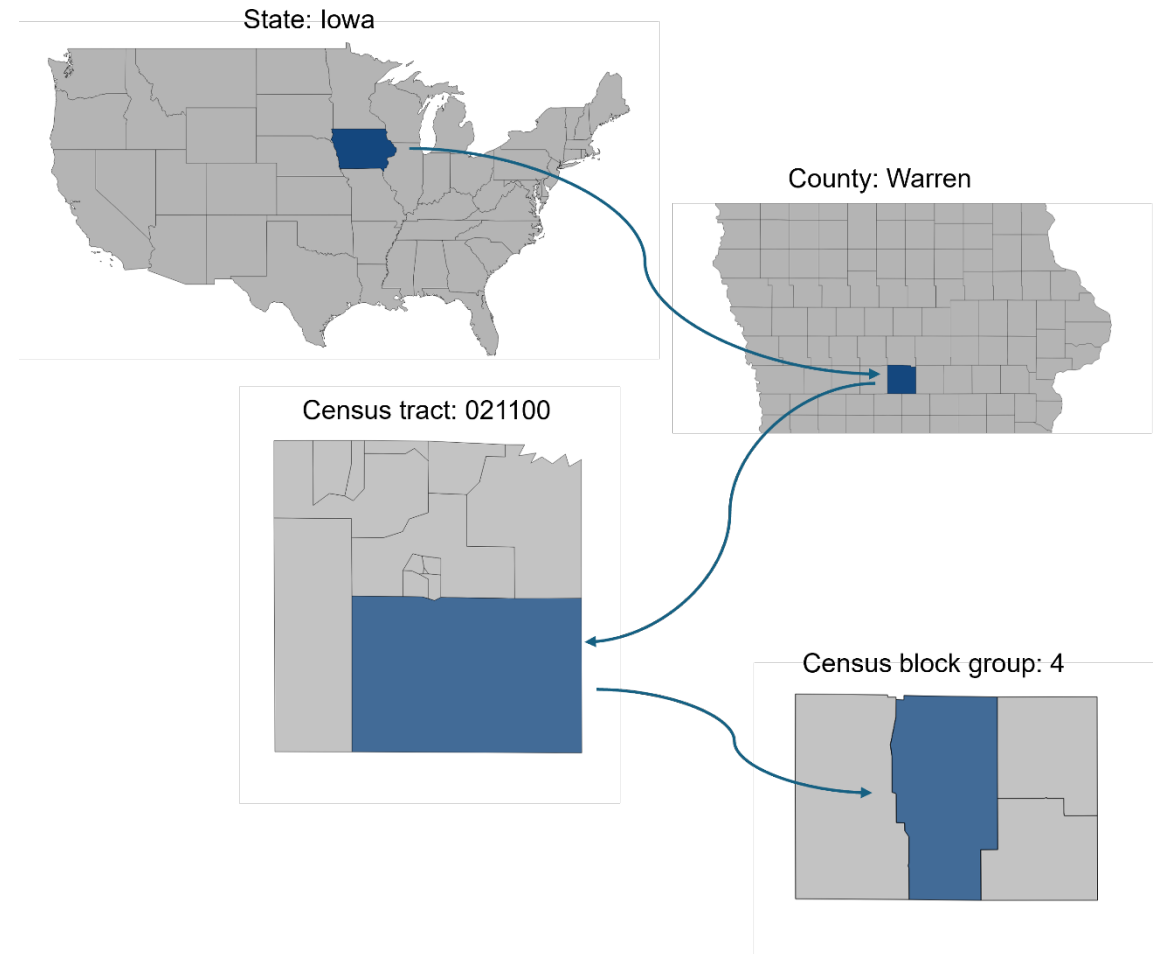
- County: 2009-2023
- Zip Code: 2011-2023
- Census Tract: 2009-2023
- Census Block Group: 2013-2023
- More than 17,000 variables are available across different geographies and years

Percentage of civilian labor force that is unemployed
(ages 16 and over), 2022

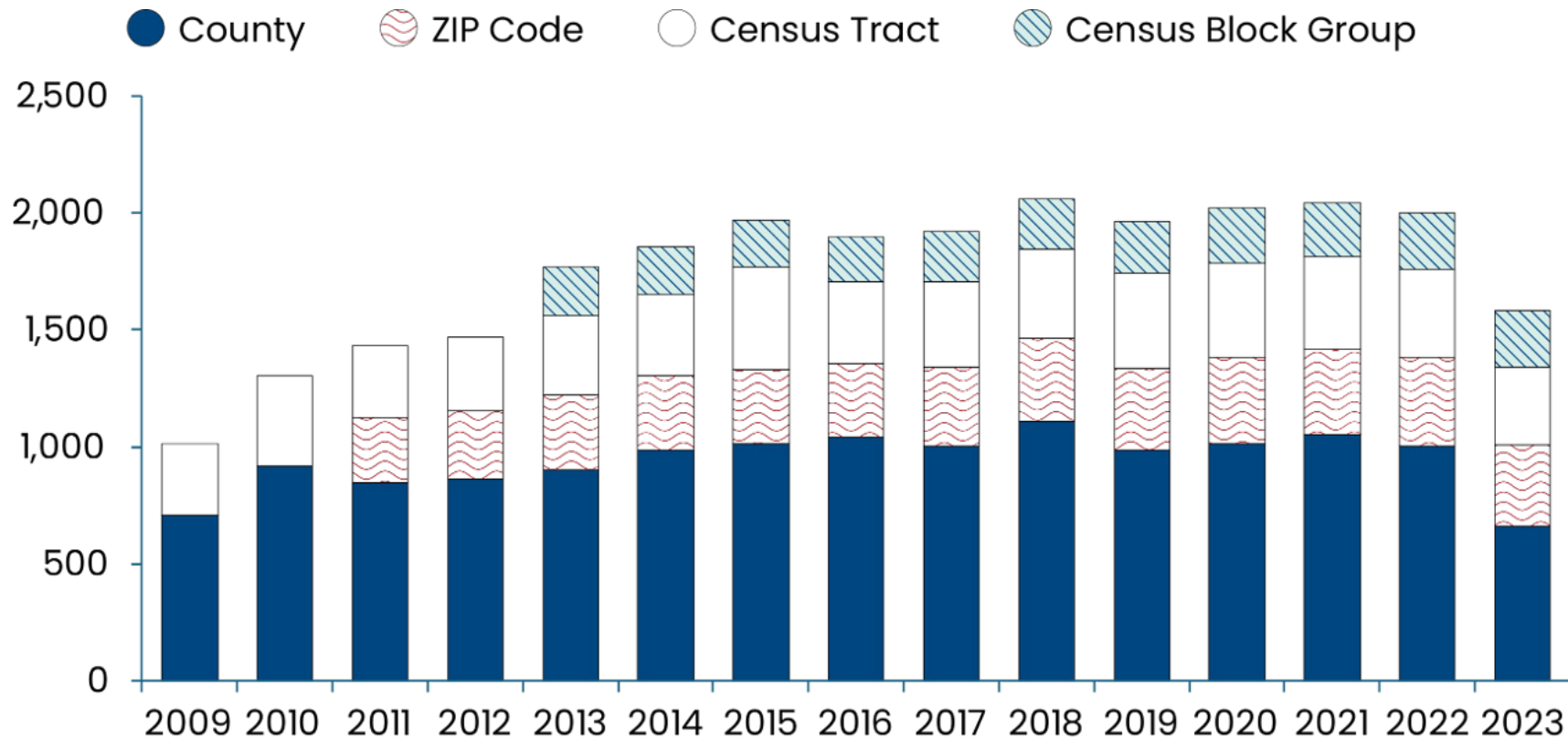


New Geographic Level: Census Block Group

- More granular geographic data available
- Census block group data available for 238 variables in 2023
- Available for 2013 to 2023



Number of Variables Available by Year and Geography



- Counties have the highest number of variables
- Zip code and census tract have similar number of variables
- Census block groups new
- Due to data availability, fewer variables in most recent year

Examples of Sources



AMERICAN
COMMUNITY
SURVEY
U.S. CENSUS BUREAU



Medicare Geographic
Variation - by National,
State & County

County Business Patterns



County Health
Rankings & Roadmaps



Area Health Resources Files

usaleep Neighborhood Life
Expectancy Project

CLH Database Topics



Demographics

- Households
- People
- Indices



Economics

- Employment
- Income
- Poverty



Education

- Attainment
- Education funding
- Literacy
- Numeracy
- School system



Physical Infrastructure

- Food and exercise access
- Housing and mobility
- Transportation
- Internet connectivity
- Environment
- Social services



Health

- Characteristics of healthcare (facilities, providers)
- Distance to providers
- Health behaviors
- Health care quality
- Health insurance status
- Utilization and cost
- Health outcomes



Examples of Demographic Variables

Subtopic	Variable	Data Source	Geographic Level & Years
People	Population Demographics: <ul style="list-style-type: none"> • Percentage between ages 0-17 • Percentage age 65 and over • Percentage Veterans 	American Community Survey	County (2009-2023) Zip (2011-2023) Tract (2009-2023) Block Group (2013-2023)
	Lack of social and emotional support	CDC PLACES	County (2022) Zip (2022) Tract (2022)
	Social isolation	CDC PLACES	County (2022) Zip (2022) Tract (2022)
Indices	Social Vulnerability Index	CDC SVI	County (2010, 2014, 2016, 2018, 2020, 2022) Zip (2022) Tract (2010, 2014, 2016, 2018, 2020, 2022)
	Area Deprivation Index	Neighborhood Atlas	Block Group (2015; 2020; 2022; 2023)



Examples of Economic and Education Variables

Subtopic	Variable	Data Source	Geographic Level & Years
Employment	Unemployment rate	American Community Survey	County (2009-2023) Zip (2011-2023) Tract (2009-2023) Block Group (2013-2023)
Income	Median household income	American Community Survey	County (2009-2023) Zip (2011-2023) Tract (2009-2023) Block Group (2013-2023)
	Percent with income below poverty level	American Community Survey	County (2009-2023) Zip (2011-2023) Tract (2009-2023) Block Group (2013-2023)
Attainment	Percentage of adults older than 25 years with a high school degree	American Community Survey	County (2009-2023) Zip (2011-2023) Tract (2009-2023) Block Group (2013-2023)



Examples of Health Variables

Subtopic	Variable	Data Source	Geographic Level & Years
Providers	Physician rate	Area Health Resource File	County (2010-2022)
	Nurse Practitioner rate	Area Health Resource File	County (2010-2023)
	Physician Assistant rate	Area Health Resource File	County (2010-2023)
Facilities	Hospital bed rate	Area Health Resource File	County (2009-2022)
	Community health center grantees	Area Health Resource File	County (2013-2023)
Health insurance status	Percent with employer-sponsored health insurance	American Community Survey	County (2013-2023) Zip (2013-2023) Tract (2013-2023) Block Group (2013-2023)
	Percent Uninsured	American Community Survey	County (2013-2023) Zip (2013-2023) Tract (2013-2023) Block Group (2013-2023)
Utilization and Costs	Inpatient days per 1,000 population	Area Health Resource File	County (2009-2022)
	Medicare inpatient spending per capita	Medicare Geographic Variation	County (2009-2022)



Examples of Health Variables, cont'd

Subtopic	Variable	Data Source	Geographic Level & Years
Health Outcomes	Cancer mortality	CDC US Cancer	County (2015-2022)
	Cardiovascular disease mortality	CDC Atlas	County (2009-2021)
	Opioid drug overdose mortality	CDC Wonder	County (2009-2023)
	Life expectancy	County Health Rankings	County (2017-2022)
	Life expectancy	USALEEP	Tract (2015)
	Self-reported health conditions (e.g. asthma)	CDC PLACES	County (2018-2022) Zip (2018-2022) Tract (2018-2022)
	Health conditions among Medicare enrollees (e.g., OUD)	Mapping Medicare Disparities	County (2019-2023)
Health Behaviors	Self-reported health behaviors (e.g., Smoking, Binge drinking)	CDC PLACES	County (2020-2022) Zip (2020-2022) Tract (2020-2022)

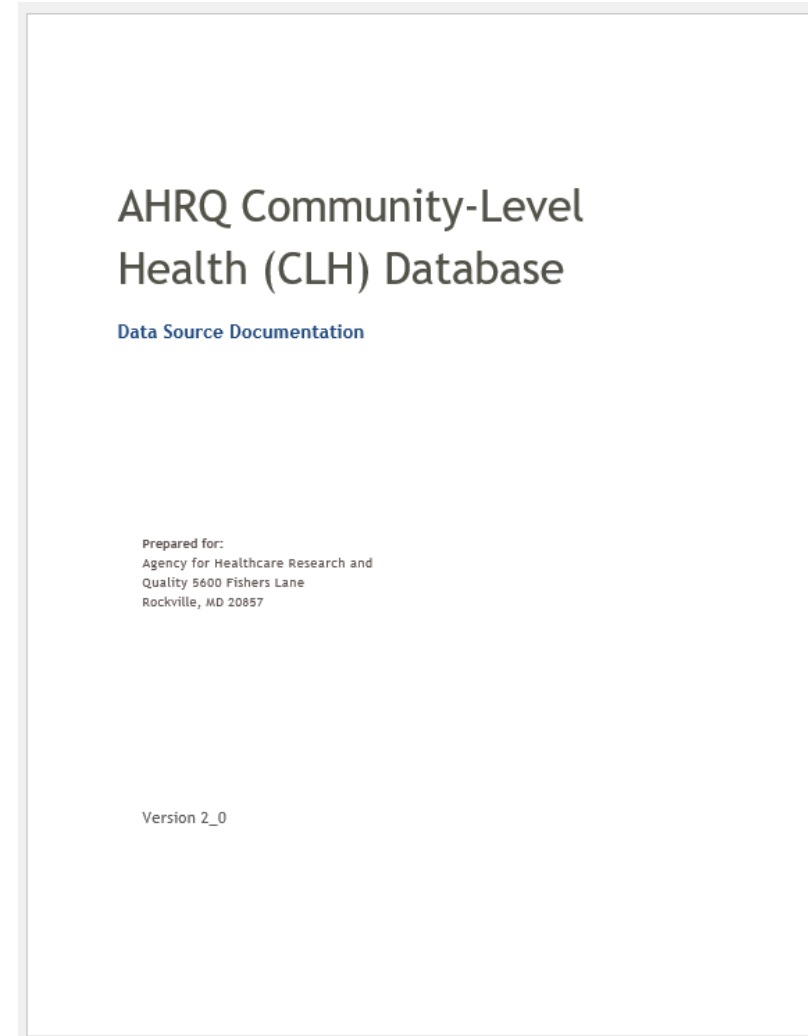


Examples of Physical Infrastructure Variables

Subtopic	Variable	Data Source	Geographic Level & Years
Housing and mobility	Median home value	American Community Survey	County (2009-2023) Zip (2011-2023) Tract (2009-2023) Block Group (2013-2023)
Internet connectivity	Percent of households with broadband internet	American Community Survey	County (2017-2023) Zip (2017-2023) Tract (2017-2023) Block Group (2017-2023)
	Percent of households with cellular data only	American Community Survey	County (2017-2023) Zip (2017-2023) Tract (2017-2023) Block Group (2017-2023)
Environment	Number of storm events	NOAA Storm	County (2009-2023)
	Number of heat risk factors	U.S. Census Bureau CRE for Heat	County (2019, 2022) Tract (2019, 2022)
Food and exercise access	Facilities per 1,000 population (e.g., grocery stores, convenience stores, fast food, fitness centers)	County Business Patterns	County (2009-2023)
	Facility counts (e.g., grocery stores, convenience stores, fast food, fitness centers)	County Business Patterns	Zip (2011-2023)

Data and Documentation

- Data are Excel files by year and geography
- PDF documentation file (all sources and years)
- Codebook files for each year (separate tabs by geography)



Data Source Documentation – Data Sources, Variable Definitions and Specifications Example: CCBP

AHRQ Community-Level Health (CLH) Database
Version 2

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 CLH Database

- ▶ Years available in the CLH Database: 2009 - 2023
- ▶ CLH domain(s):
 - Physical infrastructure
 - Demographics
- ▶ CLH variable naming convention: CCBP_[VARIABLE]
- ▶ CLH Database geographic level(s): County and ZIP Code

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

Data Sources Documentation | Page 163

AHRQ Community-Level Health (CLH) Database
Version 2

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 can be downloaded from the county- and ZIP Code-level files at: <https://www.census.gov/programs-surveys/cbp/data/tables.html> (last retrieved July 2025).

Direct links to the data files are below. These links were used to automate the downloads.

Data Files:

<https://www2.census.gov/programs-surveys/cbp/datasets>

Select the year and download the data sets.

- County Data Format - cbpYco.zip
- Zip Code Data Format - zbpYYdetail.zip

Population Denominator Files:

<https://www2.census.gov/programs-surveys/popest/datasets/>

Select the year(s)->counties->totals and download the file (co-estYYYY-alldata.csv).

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 CLH Database (v2), 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 Sources Documentation | Page 164

AHRQ Community-Level Health (CLH) Database
Version 2

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 CLH 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 CLH Database.

The documentation contains variable information on domains, naming conventions, geographic levels, additional resources, and citation assistance

Data Source Documentation - Variable Definitions and Specifications Example

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; NHGIS 2009 Numerator: R4VE005; Veteran: Some college or associate's degree	B21003_002; NHGIS 2009 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; NHGIS 2009 Numerator: R4VE003 + R4VE004; Veteran: Less than high school graduate and Veteran: High school graduate (includes equivalency)	B21003_002; NHGIS 2009 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; NHGIS 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

- Documentation provides:
 - ▶ Variable name
 - ▶ Variable label
 - ▶ Source table
 - ▶ Table universe
 - ▶ Numerator and denominator for calculation

Geographic Considerations

- New 2020 census population estimates
 - ▶ 2009 file based on the 2000 census tract boundaries
 - ▶ 2010-2019 files based on 2010 census tract boundaries
 - ▶ 2020-2023 files based on 2020 census tract boundaries
- Changes to County Federal Information Processing Standard (FIPS) Code
 - ▶ Geographic changes at the county-level over the years in the database
 - ▶ Retain FIPS codes for all counties that existed in the specific file year for the 5-year ACS estimate
 - ▶ For Connecticut, variables follow the geography and codes of the source dataset (either counties or planning regions)

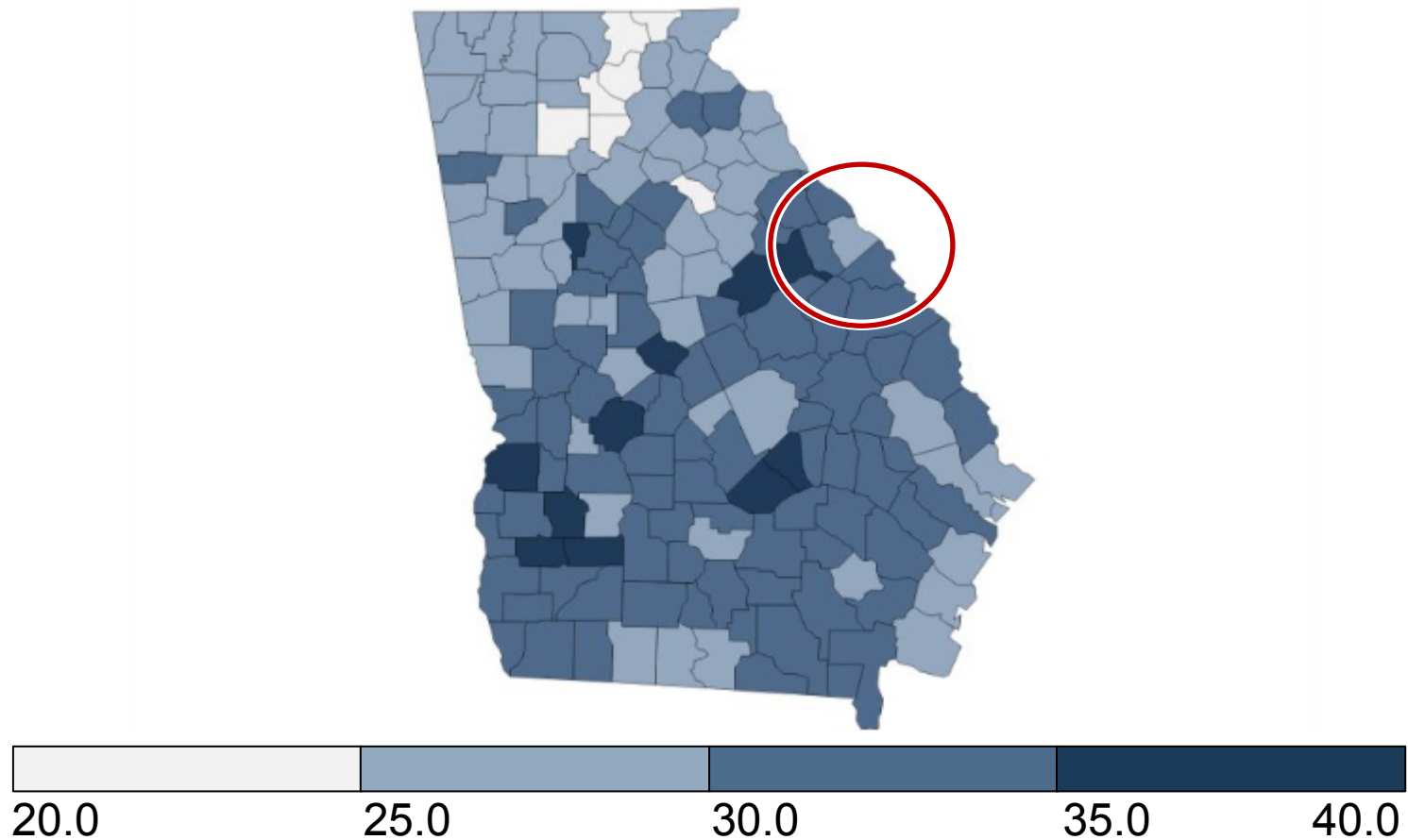
Codebooks Example

- Variable information and summary statistics for each geographic level
- Can filter variables for specific topics

Topic	Sub-topic	Data Source	Variable Name	Variable Label	County 2009	County 2010	County 2011	County 2012	County 2013	County 2014	County 2015
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_FCRSC_RATE	Total number of fitness centers and recreational sports ce	X	X	X	X	X	X	X
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_FF_RATE	Total number of limited service restaurants (fast food esta	X	X	X	X	X	X	X
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_FSR_RATE	Total number of full service restaurants per 1,000 people	X	X	X	X	X	X	X
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_SFS_RATE	Total number of specialized food stores per 1,000 people	X	X	X	X	X	X	X
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_SOGS_RATE	Total number of supermarkets and other grocery (except c	X	X	X	X	X	X	X
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_TOT_BWLSTORES	Total number of beer, wine and liquor stores							
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_TOT_CFS	Total number of community food services							
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_TOT_CS	Total number of convenience stores							
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_TOT_FCRSC	Total number of fitness centers and recreational sports centers							
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_TOT_FF	Total number of limited service restaurants (fast food establishments)							
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_TOT_FSR	Total number of full service restaurants							
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_TOT_SFS	Total number of specialized food stores							
4. Physical infrastructure	Food and exercise access	CCBP	CCBP_TOT_SOGS	Total number of supermarkets and other grocery (except convenience) stores							
4. Physical infrastructure	Food and exercise access	CDCP	CDCP_FOODINSECU_12_MTH	Age-adjusted prevalence of adults aged 18 years and older who report food insecurity in the past 12 months							
4. Physical infrastructure	Food and exercise access	CDCP	CDCP_FOODINSECU_12_MTH	Crude prevalence of adults aged 18 years and older who report food insecurity in the past 12 months							

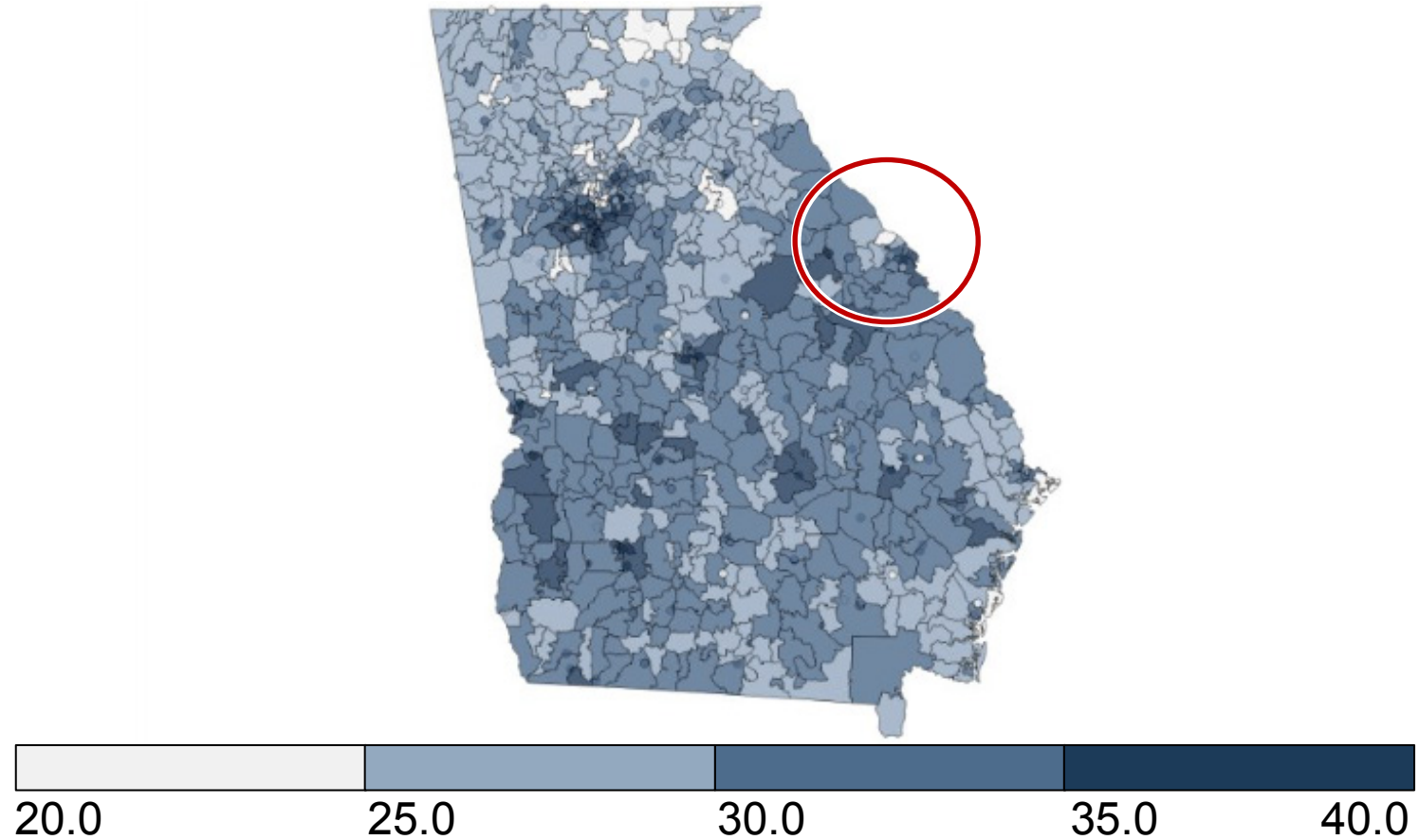
Data by County

Crude prevalence of adults aged 18 years and older who report lack of social and emotional support by county in Georgia, 2022 (%)



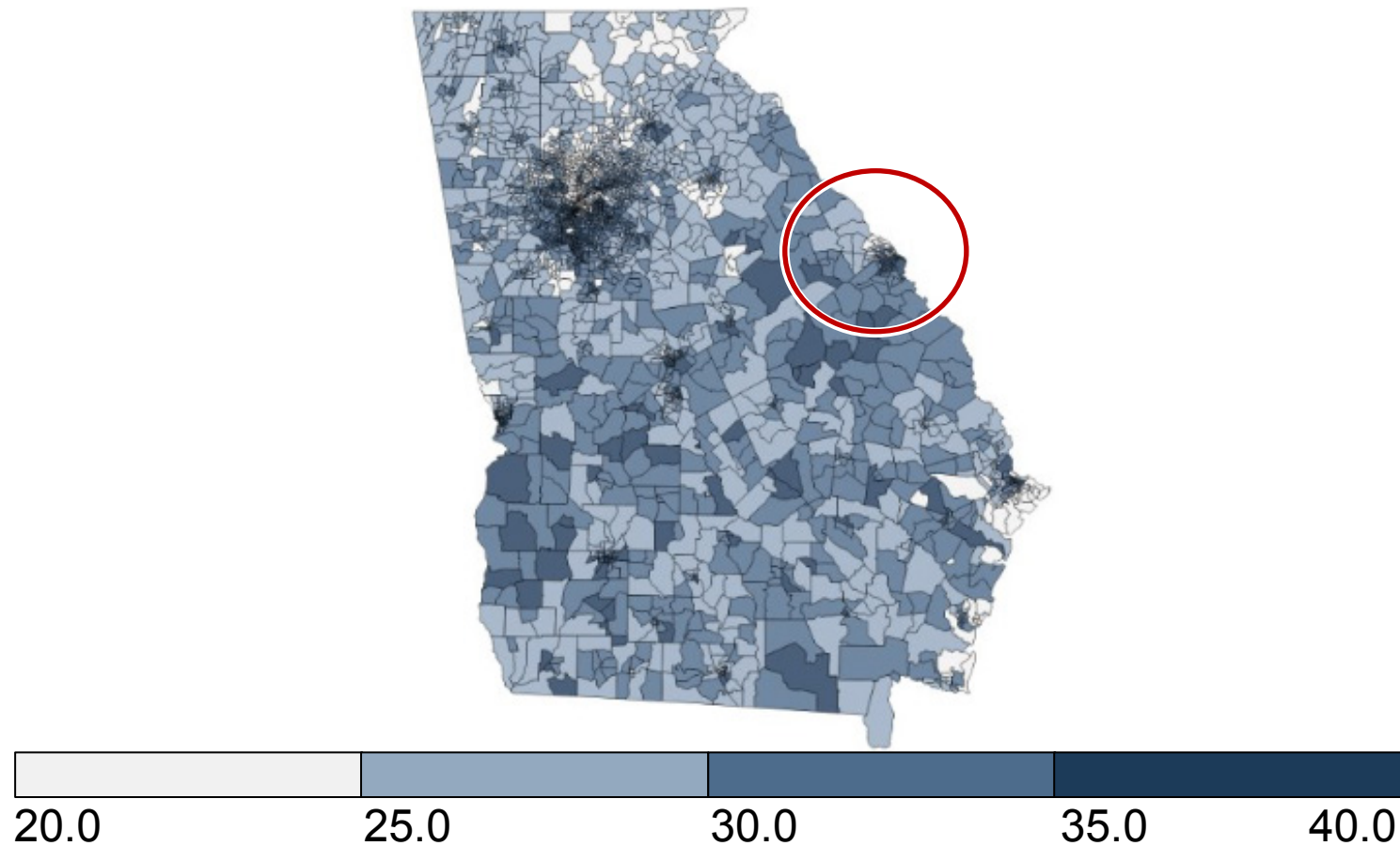
Data by ZIP Code

Crude prevalence of adults aged 18 years and older who report lack of social and emotional support by ZIP code in Georgia, 2022 (%)



Data by Census Tract

Crude prevalence of adults aged 18 years and older who report lack of social and emotional support by census tract in Georgia, 2022 (%)



Conclusion & Thank You

