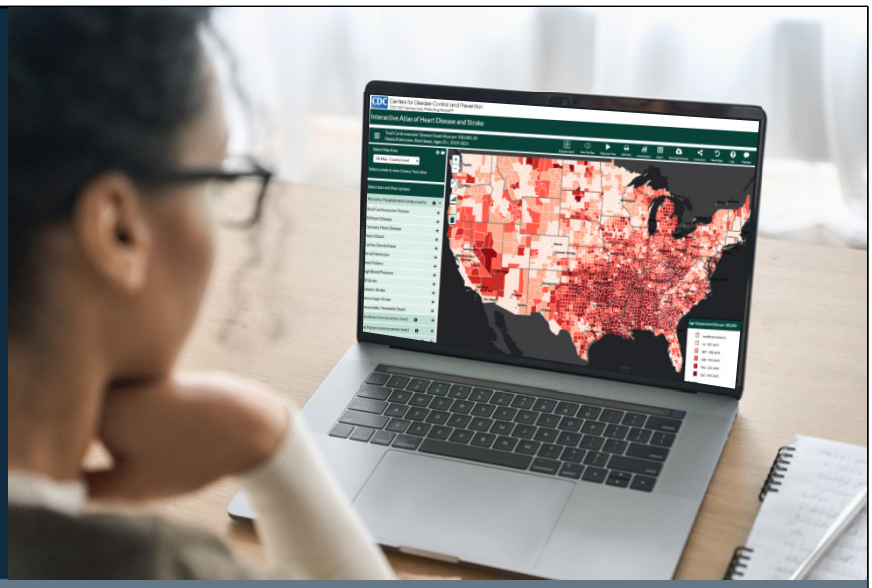
Using the Atlas of Heart Disease and Stroke *to Address* Hypertension Management in Your Community



U.S. Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention

The Atlas of Heart Disease and Stroke is a data-rich tool anyone can use to examine the cardiovascular disease burden in communities across the United States.

For those who receive funding from CDC's Division for Heart Disease and Stroke Prevention, the maps in the Atlas can be used to support your work.

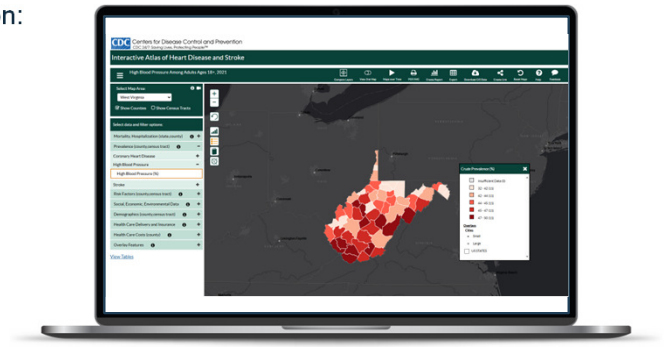
In this presentation, we will walk through examples of how you can use the Atlas to improve hypertension management in your communities.

For an overview of the Atlas or step-by-step instructions, go to www.CDC.gov and search "Atlas of Heart Disease and Stroke."

Using the Atlas to Address Hypertension Management in Your Community

Easy access to high-quality local-level data on:

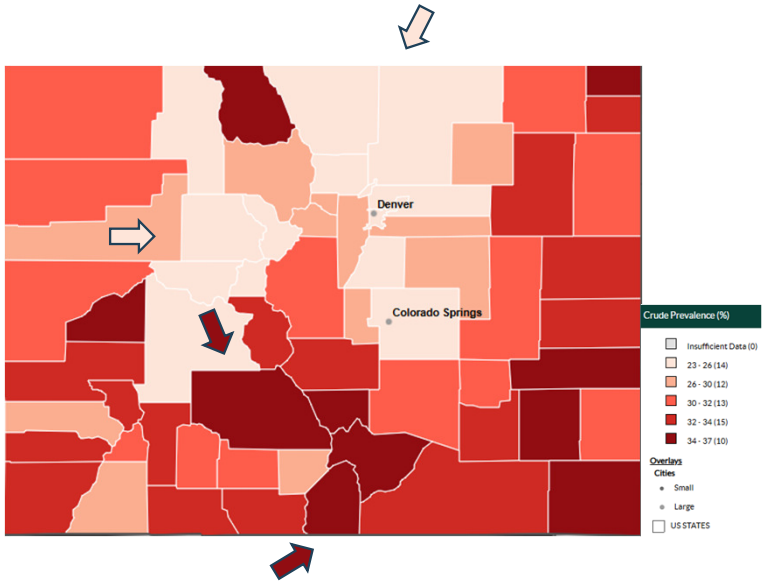
- Self-Reported Hypertension Prevalence
- Rural-Urban Status
- Community Characteristics
- Proximity to Care
- Medication Use
- Population Demographics



2

The Atlas provides easy access to a wide range of high-quality, local-level data. For this example, we'll be using data on self-reported hypertension prevalence, that is, adults who have been told by a health professional that they have high blood pressure, along with rural-urban status, community characteristics, proximity to care, medication use, and population demographics. This example demonstrates how you can use the Atlas to examine and communicate patterns of hypertension in your community.

Hypertension Prevalence by County



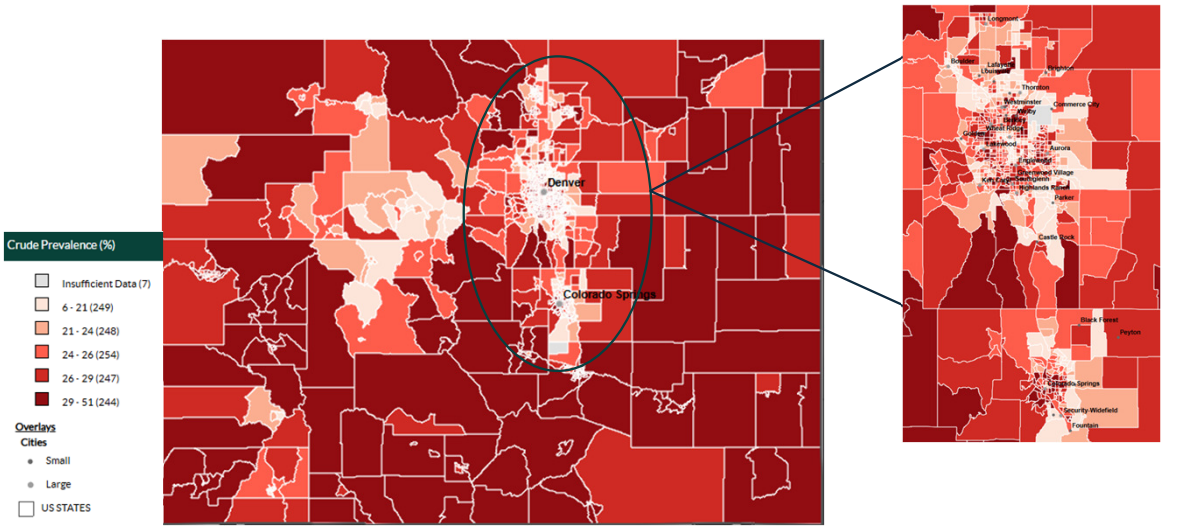
Data Source: PLACES. Centers for Disease Control and Prevention. 2021 (2023 release).

Notes: Data are displayed for ages 18+; hypertension prevalence data are not available by age, sex, race/ethnicity.

3

We can start by examining geographic patterns of hypertension prevalence by county. We can see the location of counties with the lowest prevalence of hypertension in light pink and those with the highest prevalence of hypertension in dark red, as well as the counties in the middle categories. On this map, we can see that counties with the heaviest burden of hypertension are concentrated primarily in the southeastern region. The legend to the right of the map shows the number of counties in each category in parentheses. There is also a category for insufficient data, which may occur when the population in an area is too small to generate a reliable estimate.

Hypertension Prevalence by Census Tract



Data Source: PLACES. Centers for Disease Control and Prevention. 2021 (2023 release).
Notes: Data are displayed for ages 18+; Hypertension prevalence data are not available by age, sex, race/ethnicity.

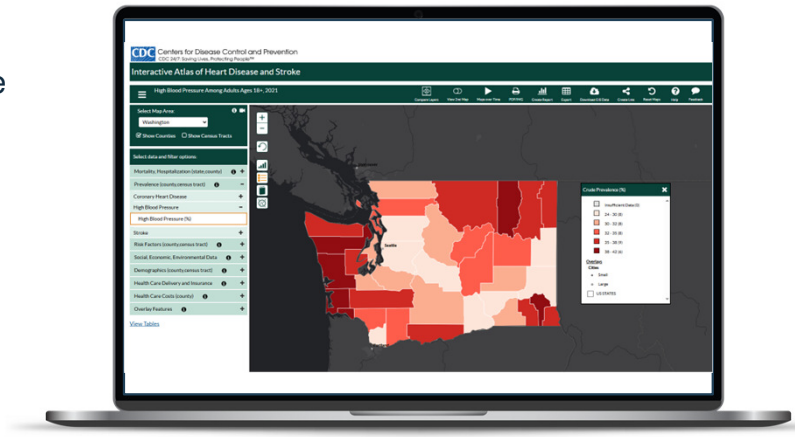
4

With the Atlas, you can also map data by census tract. This allows for a more local-level view of geographic differences in the prevalence of hypertension. It should be noted that census tracts in urban areas are often too small to show up on a state map. So, when mapping by census tract, it is important to zoom in for an urban area in order to see the geographic patterns/differences within that area. When you are using the Atlas, it is easy to zoom in and out of an area.

A Note on Using the Atlas

Maps from the Atlas of Heart Disease and Stroke provide critical contextual information but do *not* indicate causation.

Now let's start to contextualize hypertension prevalence using additional maps.

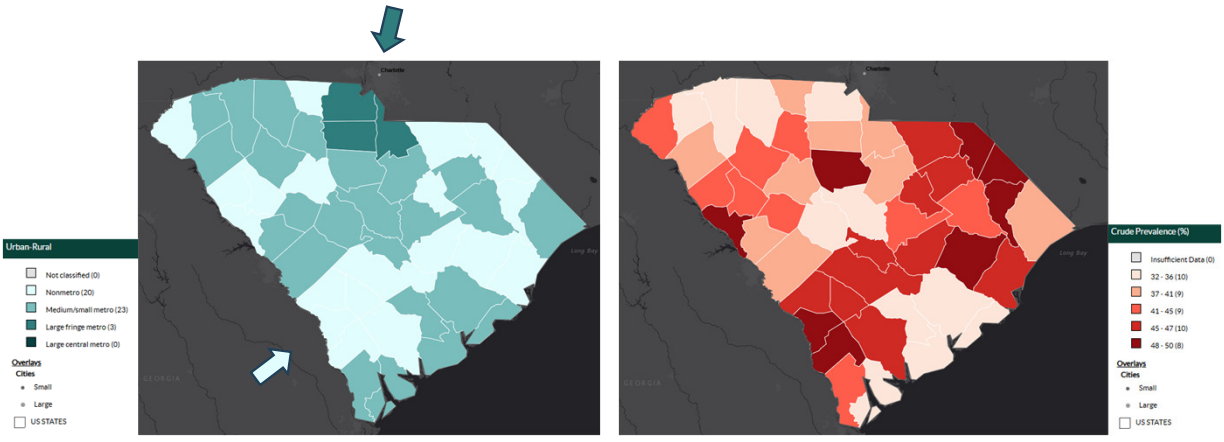


5

It's important to note that maps from the Atlas of Heart Disease and Stroke provide important contextual information but do not indicate causation. Rather than drawing conclusions about relationships, we can use these maps to understand the characteristics of communities with varying prevalence of hypertension. This context informs hypertension management decisions that are tailored to the needs of each community.

Now let's start to contextualize hypertension prevalence using additional maps.

Rural Urban Status and Hypertension Prevalence by County



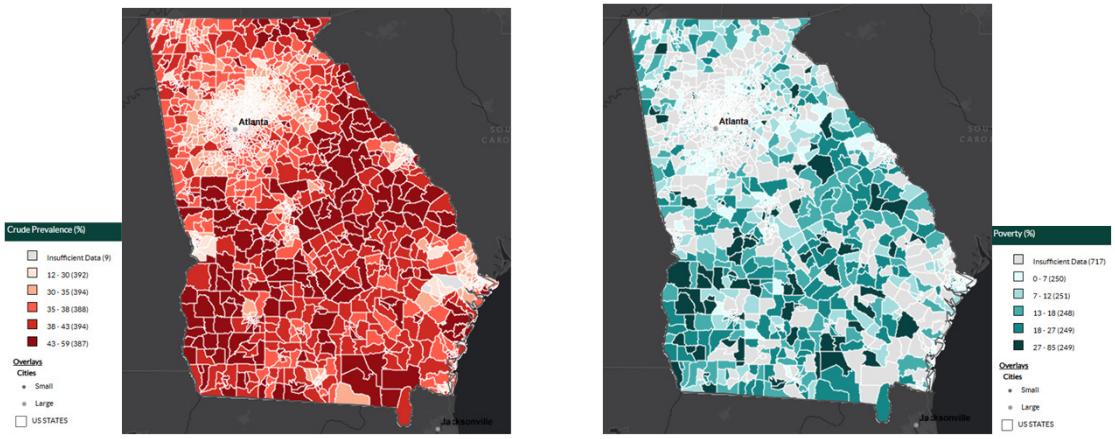
Rural-Urban Status **Hypertension Prevalence**

Data Sources
Hypertension: PLACES. Centers for Disease Control and Prevention. 2021 (2023 release).
Rural-Urban Status: National Center for Health Statistics. Centers for Disease Control and Prevention. 2013.

6

Here we see maps of rural-urban status and hypertension prevalence. The most rural areas are light teal and the most urban areas are dark teal. In this example, it appears that counties with the highest prevalence of hypertension are often in rural areas.

Hypertension Prevalence and Poverty by Census Tract



Hypertension Prevalence **% of Population Living in Poverty**

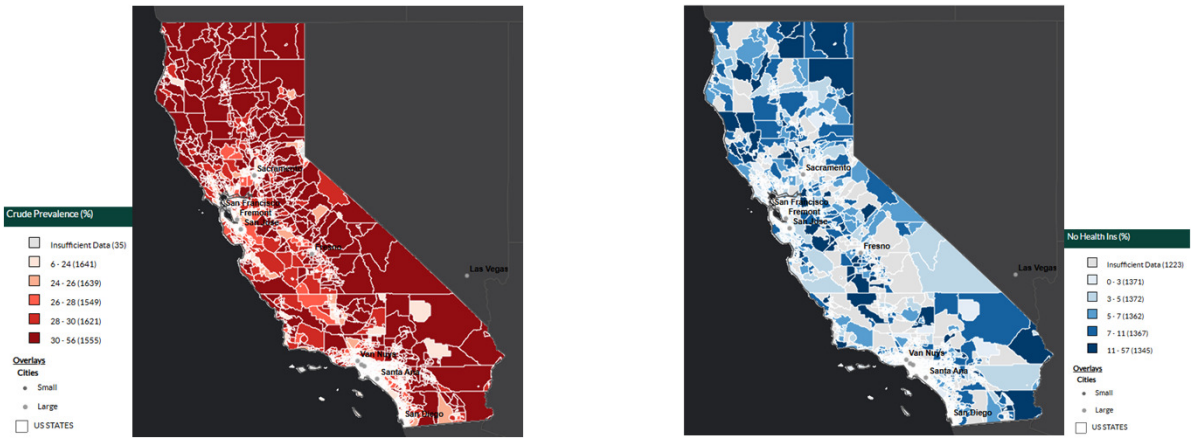
Data Sources
Hypertension: PLACES. Centers for Disease Control and Prevention. 2021 (2023 release).
Poverty: Small Area Income and Poverty Estimates Program. U.S. Census Bureau. 2022.

Note: Hypertension data are for ages 18+; poverty data are for all ages.

7

Now that we've established hypertension prevalence and rural-urban patterns, let's examine a few community characteristics. The Atlas displays data for a range of community characteristics, including poverty. On this slide, we are displaying patterns of hypertension prevalence, this time at the census tract level, and the percent of the population living below the poverty line, also by census tract. These maps could help to further specify where hypertension prevention and treatment programs are needed and how to tailor them to the needs of those communities.

Hypertension Prevalence and Health Insurance Status by Census Tract



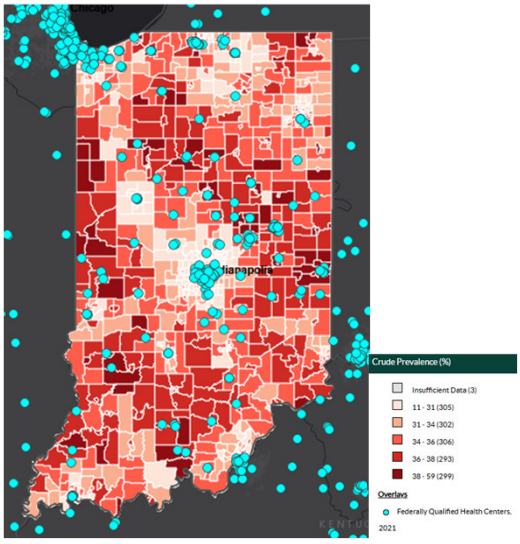
Hypertension Prevalence | **% Without Health Insurance**

Data Source: Small Area Health Insurance Estimates. U.S. Census Bureau. 2021.
Note: Hypertension data are for people ages 18+; health insurance data are for people under age 65.

8

Lack of health insurance is an obstacle to accessing health care. With the Atlas, we can compare the geographic patterns of hypertension prevalence at the census tract level to the percent of those without health insurance, also by census tract. Next let's take a look at where people may be able to seek medical care with or without health insurance.

Hypertension Prevalence and Locations of Federally Qualified Health Centers by Census Tract

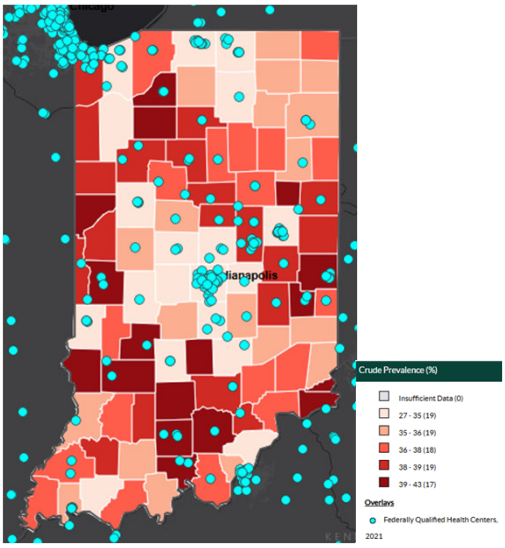


Data Sources
Hypertension: PLACES. Centers for Disease Control and Prevention. 2021 (2023 release).
Federally Qualified Health Centers: Health Resource and Service Administration. 2021.

9

With the Atlas, you can see the locations of Federally Qualified Health Centers, or FQHCs, shown as light blue circles, together with the geographic pattern of hypertension prevalence. With this map, we can identify the areas with high prevalence of hypertension but little proximity to FQHCs.

Hypertension Prevalence and Locations of Federally Qualified Health Centers by County

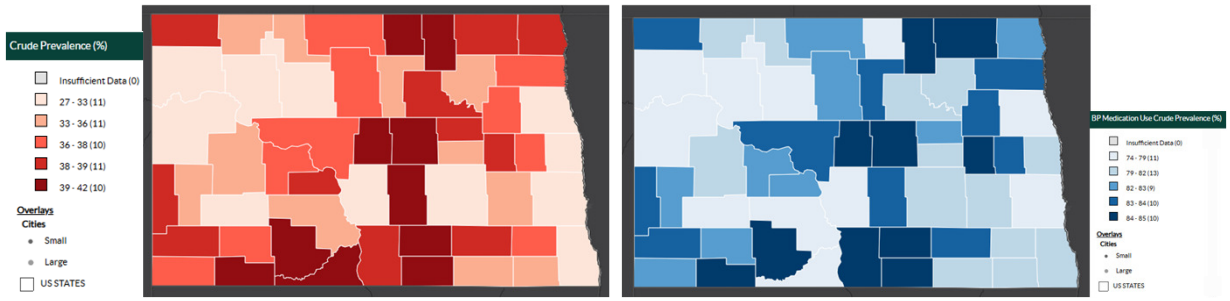


Data Sources
Hypertension: PLACES. Centers for Disease Control and Prevention. 2021 (2023 release).
Federally Qualified Health Centers: Health Resource and Service Administration. 2021.

10

These data can be mapped at both the census tract and county levels. We can see that even at the county level, there are entire counties with the highest prevalence of hypertension but no FQHCs.

Hypertension Prevalence and High Blood Pressure Medication Use by County



Hypertension Prevalence

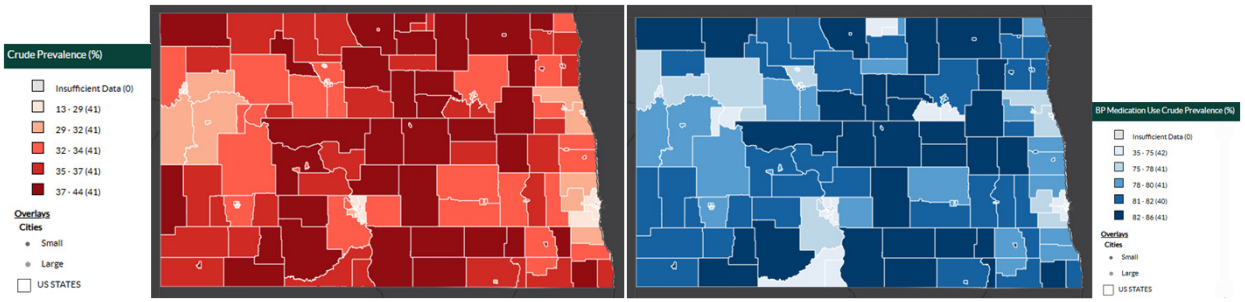
% Blood Pressure Medication Use Among Adults with High Blood Pressure

Data Source (Hypertension and Blood Pressure Medication Use): PLACES. Centers for Disease Control and Prevention. 2021 (2023 release).
Note: Data displayed are for ages 18+.

11

Because medication is one very important way to address hypertension, it is helpful to observe how the patterns of high blood pressure medication use line up with the prevalence of hypertension. That is what we are looking into with these two maps. In comparing these maps, we see that many of the counties with the highest prevalence of hypertension also have high proportions of blood pressure medication use.

Hypertension Prevalence and High Blood Pressure Medication Use by Census Tract



Hypertension Prevalence

% Blood Pressure Medication Use Among Adults with High Blood Pressure

Data Source (Hypertension and Blood Pressure Medication Use): PLACES. Centers for Disease Control and Prevention. 2021 (2023 release).

Note: Data displayed are for ages 18+.

12

We can break these data down by census tract, too, to look at hypertension prevalence and medication use at a more granular level.

Hypertension Prevalence and Pharmacies and Drug Stores by County

Hypertension Prevalence

Number of Pharmacies and Drug Stores per 100,000 population

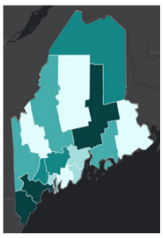
Data Sources
Hypertension: PLACES. Centers for Disease Control and Prevention. 2021 (2023 release).
Pharmacies and Drug Stores: County Business Patterns. U.S. Census Bureau. 2021.

Note: Hypertension data displayed are for ages 18+.

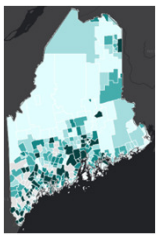
13

The Atlas also includes county-level data on pharmacies and drug stores per 100,000 people. This way we can identify if there may be communities with high prevalence of hypertension but little geographic proximity to pharmacies.

Population Demographics by County and Census Tract



Population Count, Ages 18+



Population Count, Ages 18+

Percentage of Total Population Ages 65+

Population Count, Women Ages 18+

Population Count, Men Ages 18+

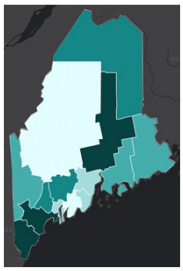
Data Source: American Community Survey. U.S. Census Bureau. 2018-2022.

14

The Atlas includes important demographic data by county and census tract. These maps provide important contextual information that can be used to identify where priority populations are located. For instance, you can display maps by age group, such as the count of people ages 18 and older, or the percent of the total population ages 65 and older. If you are interested, you can also examine the population distributions by sex.

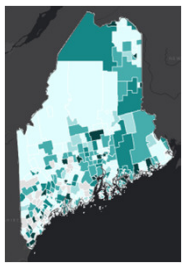
Population Demographics by County and Census Tract

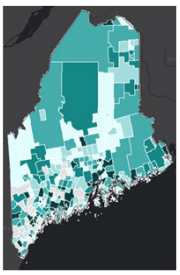
Black Adults (#) (Non-Hispanic)

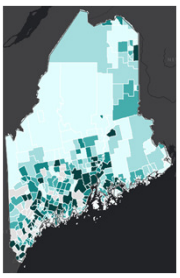


Hispanic/Latino Adults (#)

White Adults (#) (Non-Hispanic)







Data Source: American Community Survey. U.S. Census Bureau. 2018-2022.

15

These demographic data also include the racial and ethnic makeup of an area at the county and census tract levels. You can use these demographic data to tailor hypertension prevention and treatment programs to the needs of specific communities. However, hypertension prevalence data are not available at the county or census tract level for these demographic groups.

Sharing Your Maps

Ways to Share

- Create a link to share your map
- Download maps as PDFs for slides or reports
- Download the data to make your own maps & graphs
- Download county profiles for counties of interest
- View the data in table form

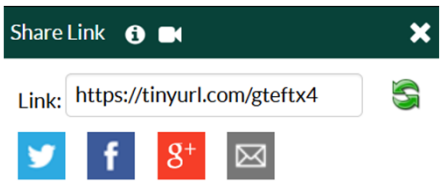
16

The Atlas has numerous features you can use to make and share data and maps. Once you have created the maps you want, you can…

Sharing Your Maps

Ways to Share

- **Create a link to share your map**
- Download maps as PDFs for slides or reports
- Download the data to make your own maps & graphs
- Download county profiles for counties of interest
- View the data in table form



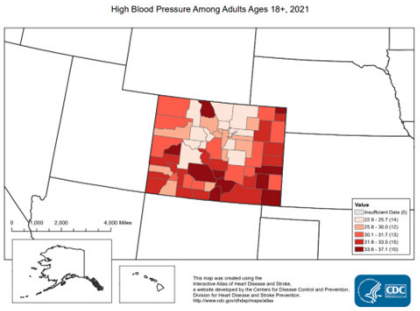
17

Create a link to share each map,

Sharing Your Maps

Ways to Share

- Create a link to share your map
- **Download maps as PDFs for slides or reports**
- Download the data to make your own maps & graphs
- Download county profiles for counties of interest
- View the data in table form



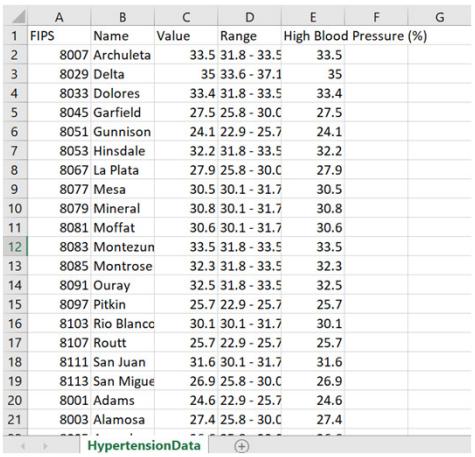
18

Download your maps as PDFs,

Sharing Your Maps

Ways to Share

- Create a link to share your map
- Download maps as PDFs for slides or reports
- **Download data to make your own maps & graphs**
- Download county profiles for counties of interest
- View the data in table form



	A	B	C	D	E	F	G
1	FIPS	Name	Value	Range	High Blood Pressure (%)		
2	8007	Archuleta	33.5	31.8 - 33.5	33.5		
3	8029	Delta	35	33.6 - 37.1	35		
4	8033	Dolores	33.4	31.8 - 33.5	33.4		
5	8045	Garfield	27.5	25.8 - 30.0	27.5		
6	8051	Gunnison	24.1	22.9 - 25.7	24.1		
7	8053	Hinsdale	32.2	31.8 - 33.5	32.2		
8	8067	La Plata	27.9	25.8 - 30.0	27.9		
9	8077	Mesa	30.5	30.1 - 31.7	30.5		
10	8079	Mineral	30.8	30.1 - 31.7	30.8		
11	8081	Moffat	30.6	30.1 - 31.7	30.6		
12	8083	Montezun	33.5	31.8 - 33.5	33.5		
13	8085	Montrose	32.3	31.8 - 33.5	32.3		
14	8091	Ouray	32.5	31.8 - 33.5	32.5		
15	8097	Pitkin	25.7	22.9 - 25.7	25.7		
16	8103	Rio Blanco	30.1	30.1 - 31.7	30.1		
17	8107	Routt	25.7	22.9 - 25.7	25.7		
18	8111	San Juan	31.6	30.1 - 31.7	31.6		
19	8113	San Migue	26.9	25.8 - 30.0	26.9		
20	8001	Adams	24.6	22.9 - 25.7	24.6		
21	8003	Alamosa	27.4	25.8 - 30.0	27.4		

HypertensionData

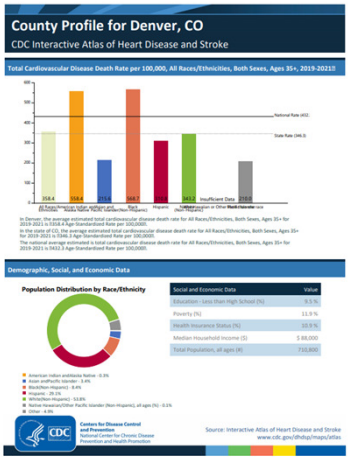
19

Download the data used to make the maps,

Sharing Your Maps

Ways to Share

- Create a link to share your map
- Download maps as PDFs for slides or reports
- Download data to make your own maps & graphs
- **Download county profiles**
- View the data in table form



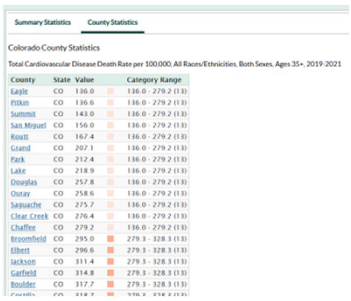
20

Create downloadable county profiles,

Sharing Your Maps

Ways to Share

- Create a link to share your map
- Download maps as PDFs for slides or reports
- Download the data to make your own maps & graphs
- Download county profiles for counties of interest
- **View the data in table form**



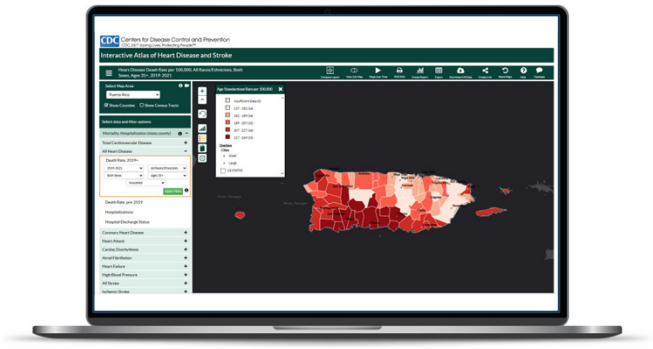
21

And view the data in table form.

Recap

We used the **Atlas** to make maps that provide context for self-reported hypertension prevalence using data on:

- Rural-Urban Status
- Poverty Status
- Health Insurance Status
- Locations of FQHCs
- Hypertension Medication Use
- Pharmacies and Drug Stores
- Community Demographics



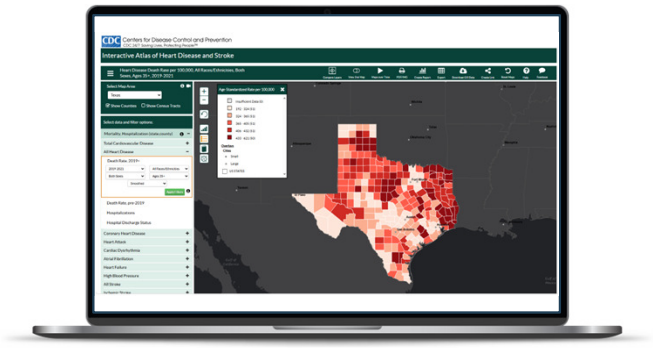
22

To recap, using the Atlas, we made maps that display the prevalence of hypertension by county and census tract, rural-urban status, poverty status, health insurance status, FQHC locations, hypertension medication use, pharmacies and drug stores, and community demographics.

Recap

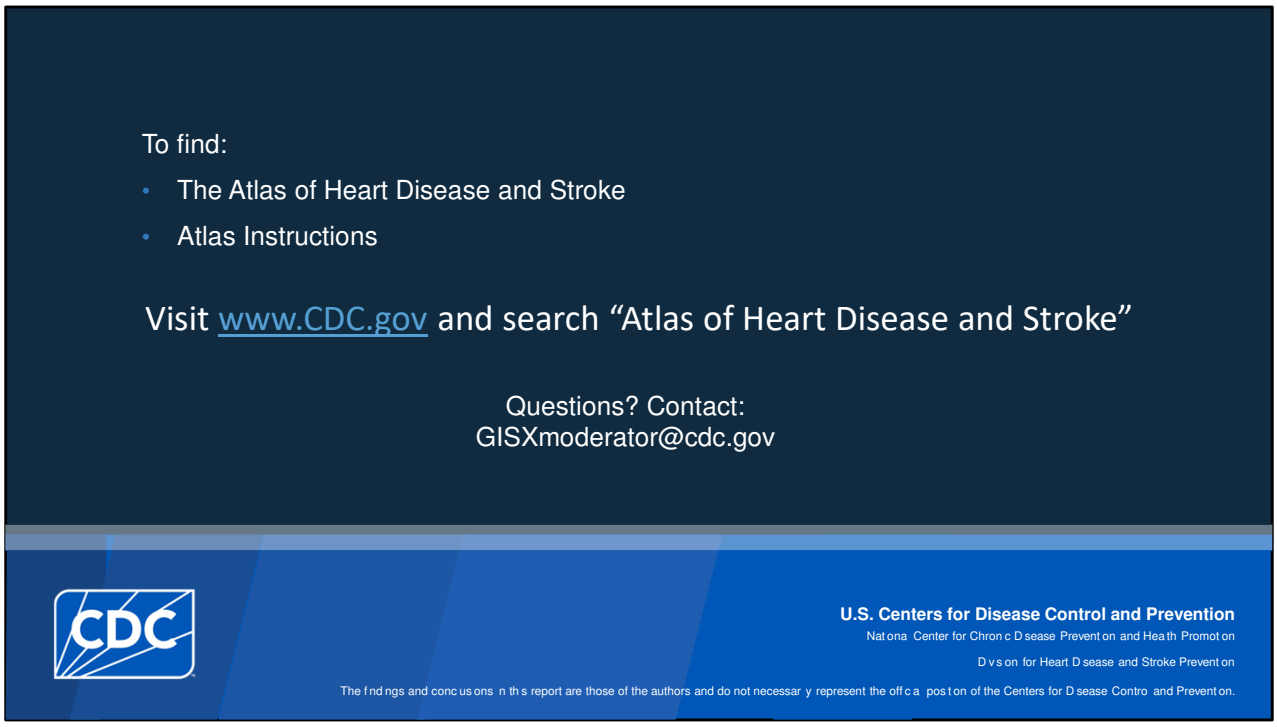
These maps offer unique opportunities to:

- Document geographic differences
- Enhance partnerships
- Tailor program planning to the needs of communities



23

Maps like these can be used to document geographic differences in your communities, enhance partnerships both within your organization and with other organizations, and tailor program planning to the needs of your community.



Thank you for your interest. You can find the Atlas of Heart Disease and Stroke and instructions on how to use the Atlas by visiting www.CDC.gov and searching “Atlas of Heart Disease and Stroke.”