## Population data by geography, US Census Data Data Source

The Census Bureau combines data from several sources, both internal and external. It is a trustworthy source of data, as it is government data.

#### **Data Collection**

The combined data that the Census Bureau sources is administrative, from other business, and internal survey data. Surveys are automatically processed and translated into ASCII. As there is a lot of data to process in the surveys, it can take over a year to release population counts.

#### **Contents Overview**

Each observation has a county, a year, and population figures for that county during that year: the total population, the male population, the female population, and eighteen age-range populations (e.g., 25 to 29 years of age).

#### Limitations

The lag presents a limitation, as the latest data will not match the current year. However, it shouldn't be much more than a year behind. There is a note that there are estimates involved, too, as the response rate of the survey is 99.98%.

#### Relevancy

This data set will be useful for determining each state's vulnerable population count.

# Counts of influenza laboratory test results by state Data Source

The data comes from health providers external to the CDC. The CDC is also a government entity, so the data source is trustworthy.

#### **Data Collection**

The data is survey data, as it is collected through voluntary reporting to the CDC by public health organizations and healthcare providers. There is little lag time, as reporting is updated weekly. Any past inaccuracies are reconciled in future reports. I could not find this said explicitly, but it's safe to assume that the report compilation is automated to a larger degree than manually. I make this assumption because of the quick turnaround of data that comes from many sources.

#### **Contents Overview**

#### **Influenza Visits**

Influenza Visits tracks patient visits to a medical provider for influenza. It counts the number of visits, number of providers, and total patients seen by week and state from late 2010 to early 2019. This reporting comes from 3,500 outpatient healthcare providers.

#### **Lab Tests**

Lab Tests counts the number of positive influenza laboratory tests by week and state from late 2010 to early 2015. This reporting comes from 100 public health providers and over 300 clinical laboratories located throughout the United States and its territories.

#### Limitations

The most recent data is "preliminary and may change as more data is received". Also, the outside reporting is voluntary, so it is not necessarily comprehensive.

#### Relevancy

While these two datasets do not apply directly to the hypothesis, which examines the relationship between vulnerable populations and flu deaths, the datasets may be relevant later in the project. Flu visits and positive flu tests could be used in staffing estimates.

### **Survey of Flu Shot Rates in Children**

#### **Data Source**

The data are internal to the CDC. As mentioned before, we can trust the credibility of this source.

#### **Data Collection**

As mentioned in the title, the data are collected by survey. It is a phone survey in which recipients may or may not grant permission for the CDC to contact their child(ren)'s vaccination provider(s). Then, the vaccination providers share administrative data. Lag time was not mentioned on the CDC site.

#### **Contents Overview**

The data contains flu shot data for children 6 months to 17 years. It's categorized by geographic state and contains family demographics including poverty level, race, and parent marital status.

#### Limitations

The surveys are used to come up with estimates, so the results are not exact.

#### Relevancy

This dataset does not apply to the hypothesis. Additionally, it is not complete enough to be relevant; it only includes vaccination estimates for children, which is not the only vulnerable population group.

### **Sources (by order of reference)**

https://www.census.gov/about/what/admin-data.html
https://www.census.gov/history/www/innovations/technology/tabulation and processing.ht
ml

https://www.cdc.gov/flu/weekly/overview.htm#Outpatient

https://www.cdc.gov/vaccines/imz-managers/nis/about.html