

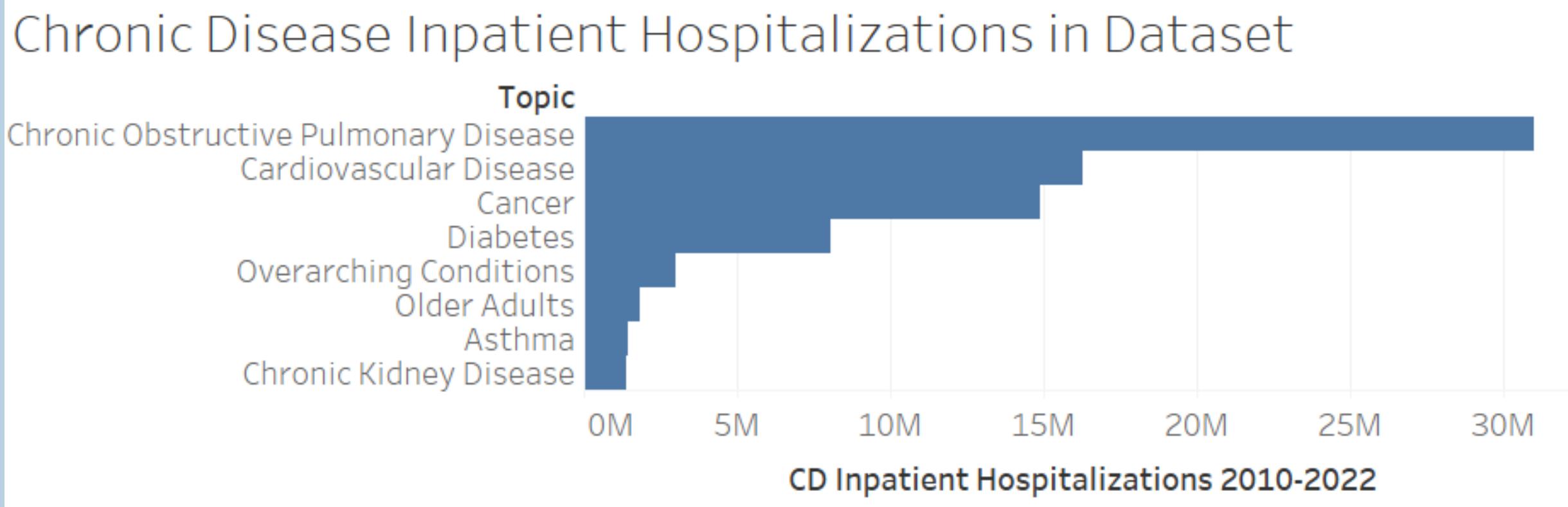


Edmond Kinnard

# US Chronic Diseases

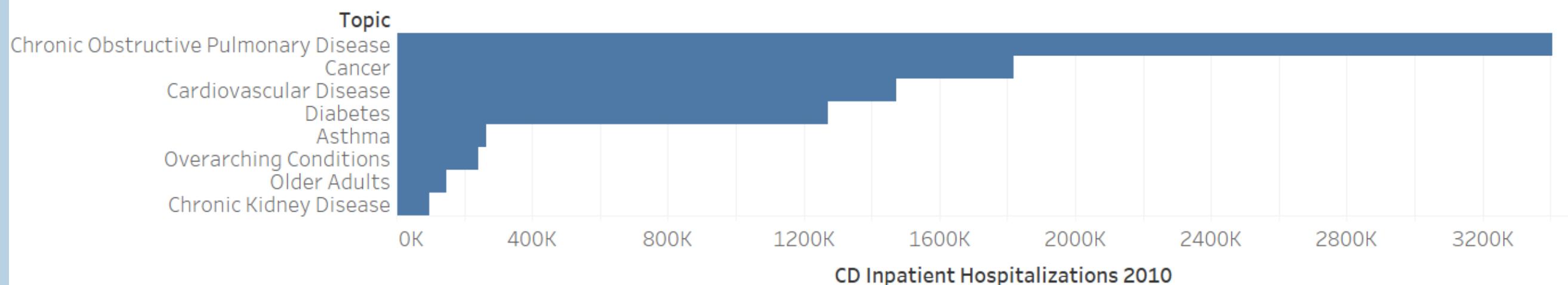


# Based on Inpatient Hospitalizations



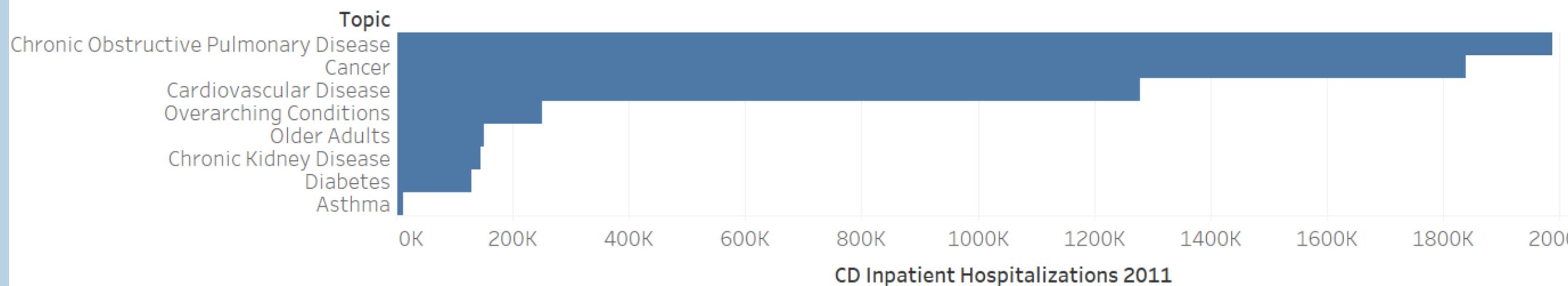
# Based on Inpatient Hospitalizations

Chronic Disease Inpatient Hospitalizations in Dataset



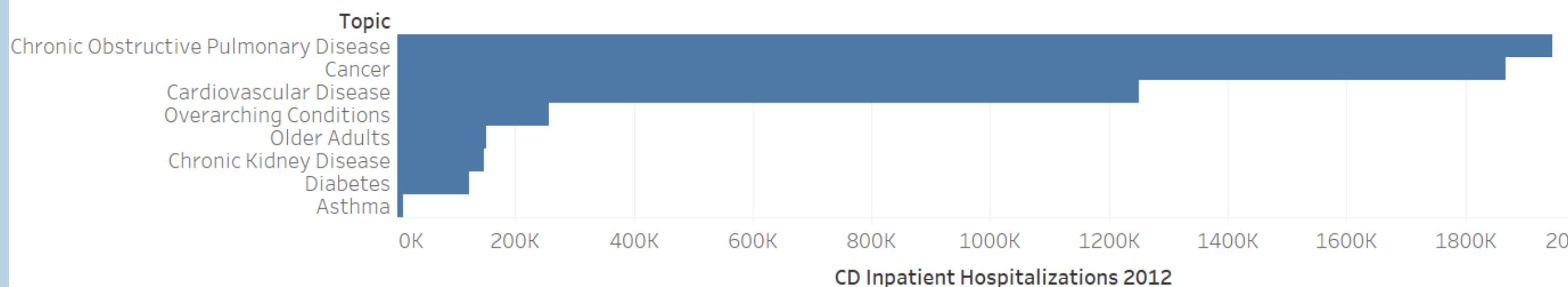
2010

Chronic Disease Inpatient Hospitalizations in Dataset



2011

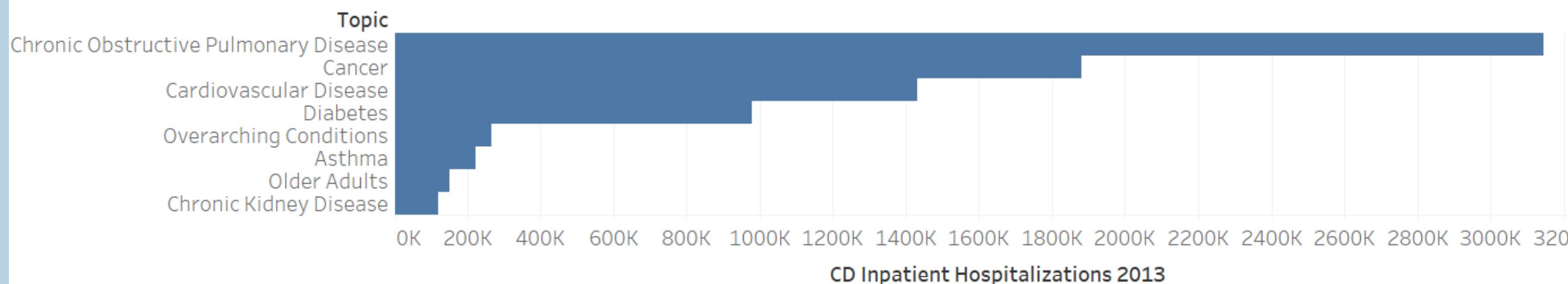
Chronic Disease Inpatient Hospitalizations in Dataset



2012

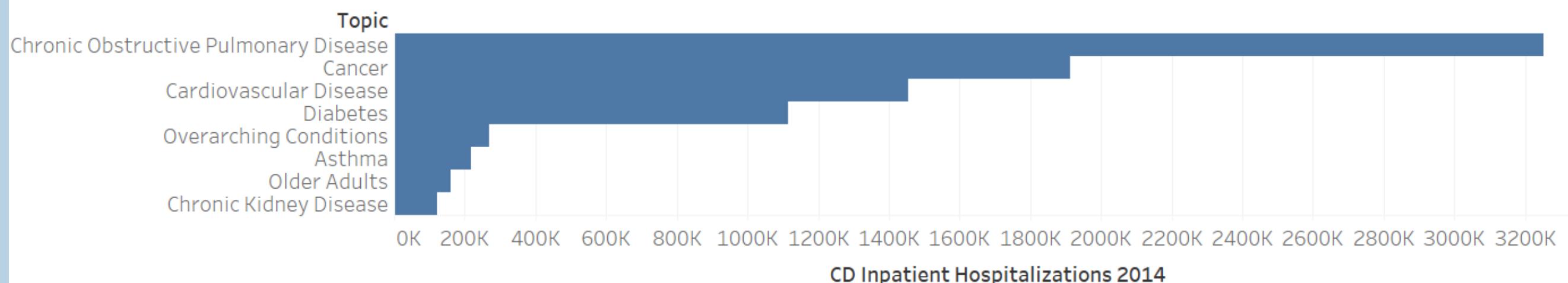
# Based on Inpatient Hospitalizations

Chronic Disease Inpatient Hospitalizations in Dataset



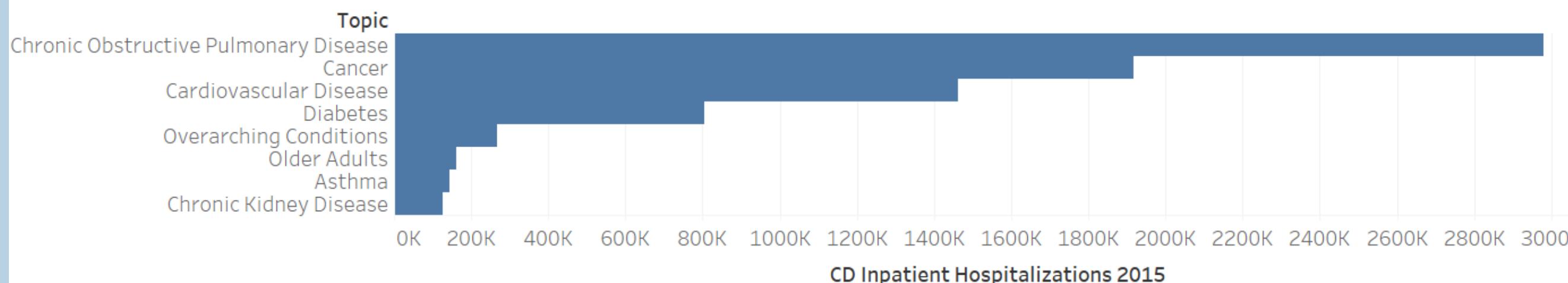
2013

Chronic Disease Inpatient Hospitalizations in Dataset



2014

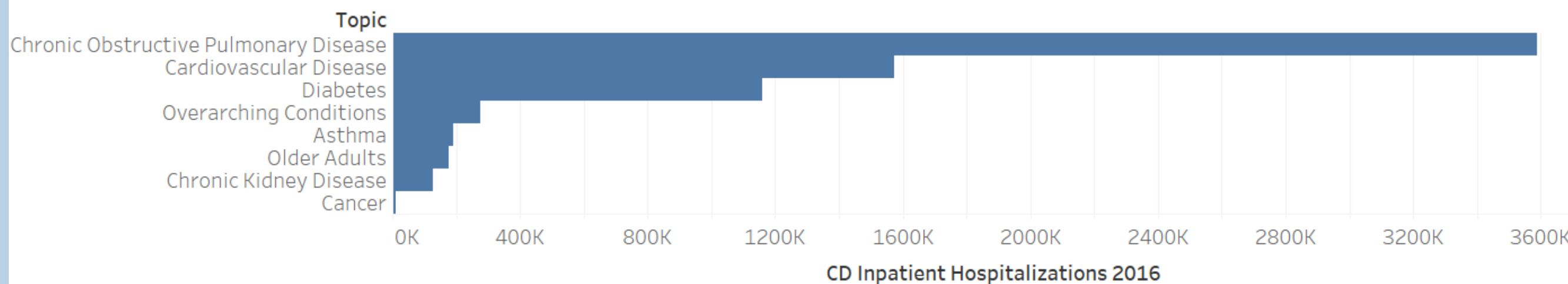
Chronic Disease Inpatient Hospitalizations in Dataset



2015

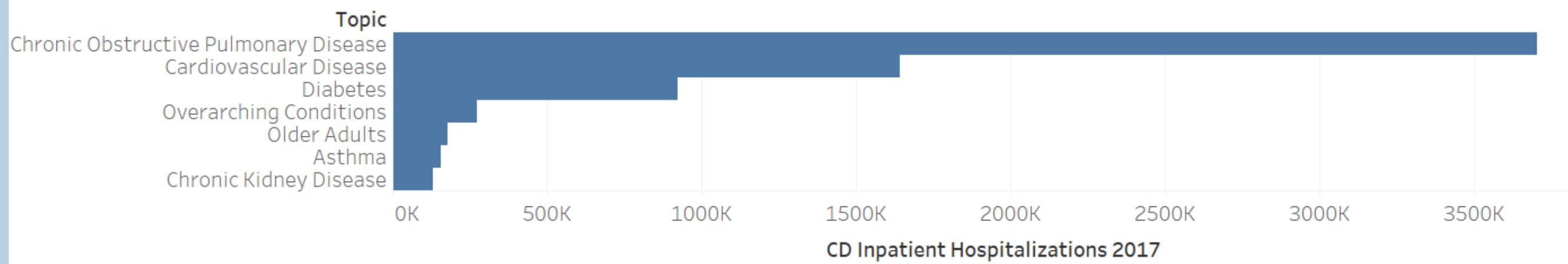
# Based on Inpatient Hospitalizations

Chronic Disease Inpatient Hospitalizations in Dataset



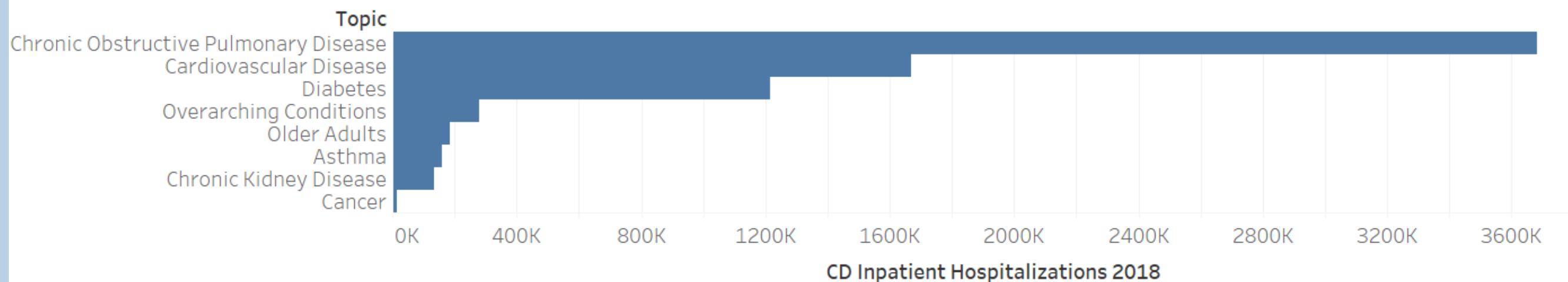
2016

Chronic Disease Inpatient Hospitalizations in Dataset



2017

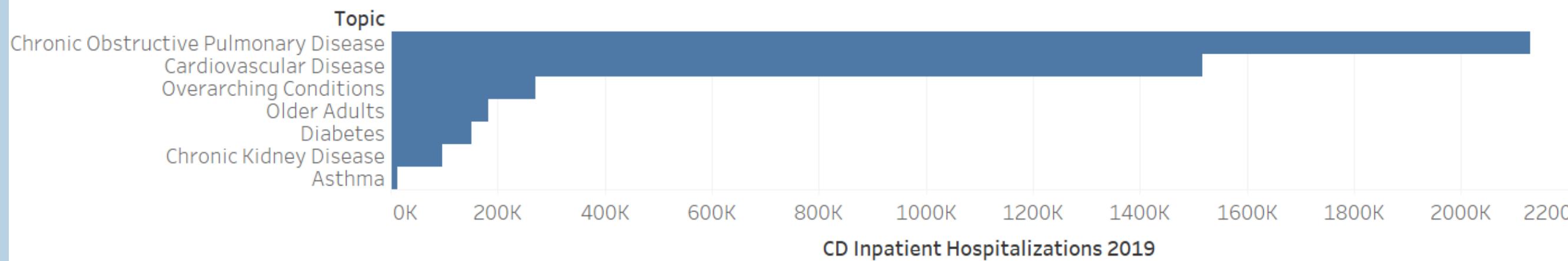
Chronic Disease Inpatient Hospitalizations in Dataset



2018

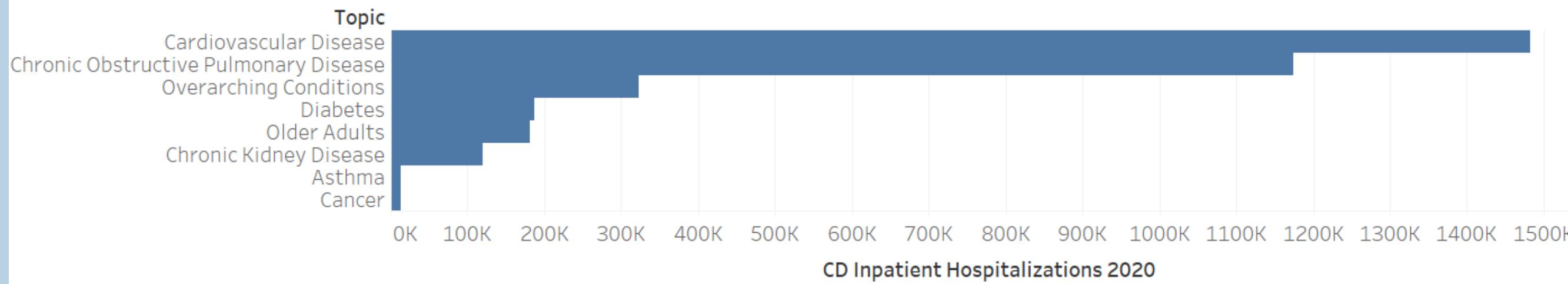
# Based on Inpatient Hospitalizations

Chronic Disease Inpatient Hospitalizations in Dataset



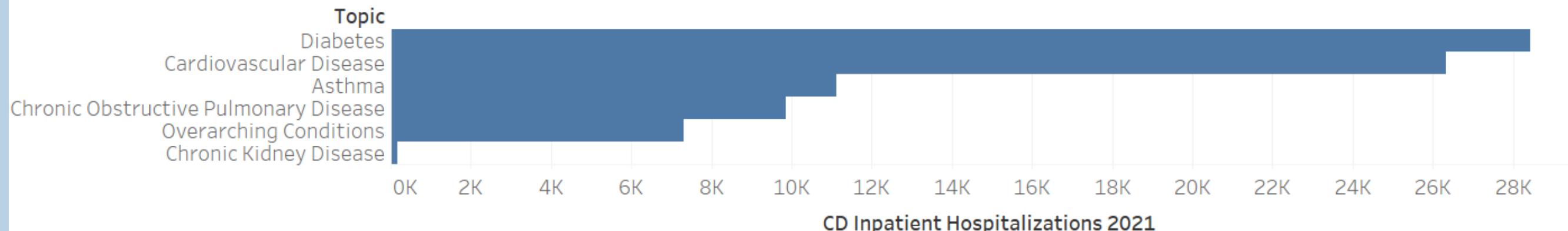
2019

Chronic Disease Inpatient Hospitalizations in Dataset



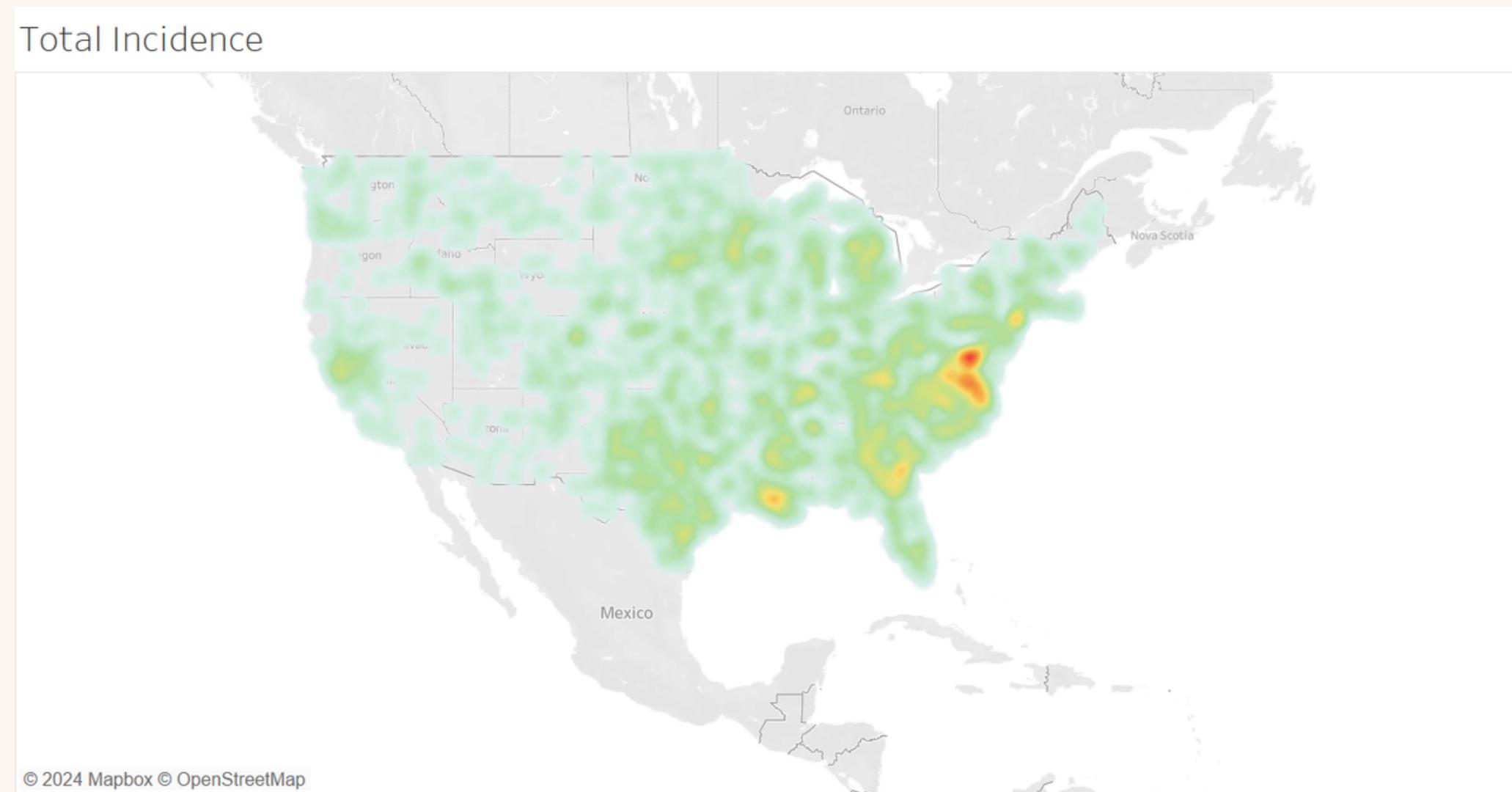
2020

Chronic Disease Inpatient Hospitalizations in Dataset



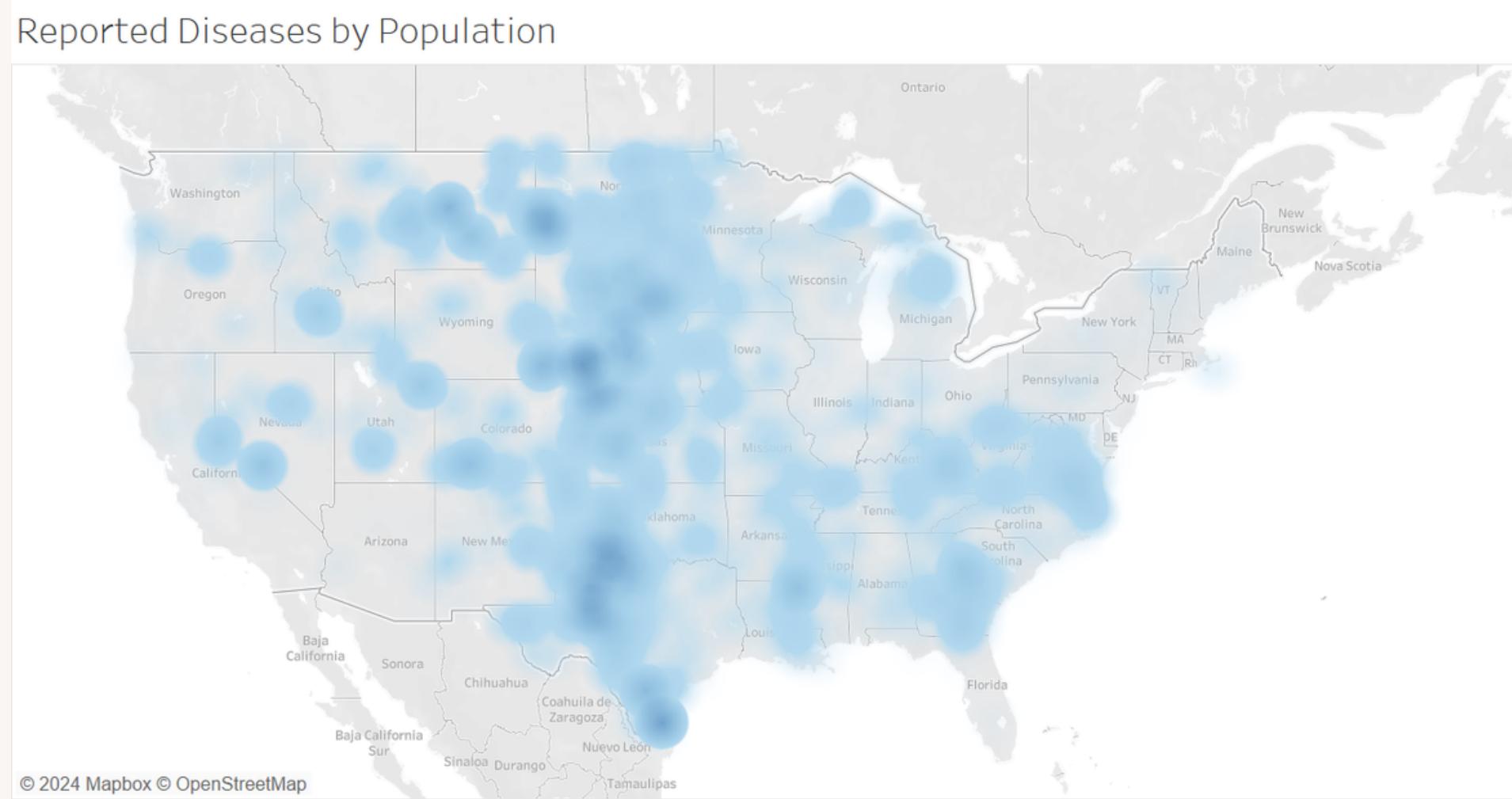
2021

# Where are the diseases?



- Concentrations:
  - Washington DC / Virginia
  - Southeast
- Diseases shown:
  - Chronic Obstructive Pulmonary Disease
  - Cardiovascular Disease
  - Cancer
  - Diabetes
  - Asthma
  - Chronic Kidney Disease

# Where are the Diseases by Population?



\*\*Incidence divided by local population count

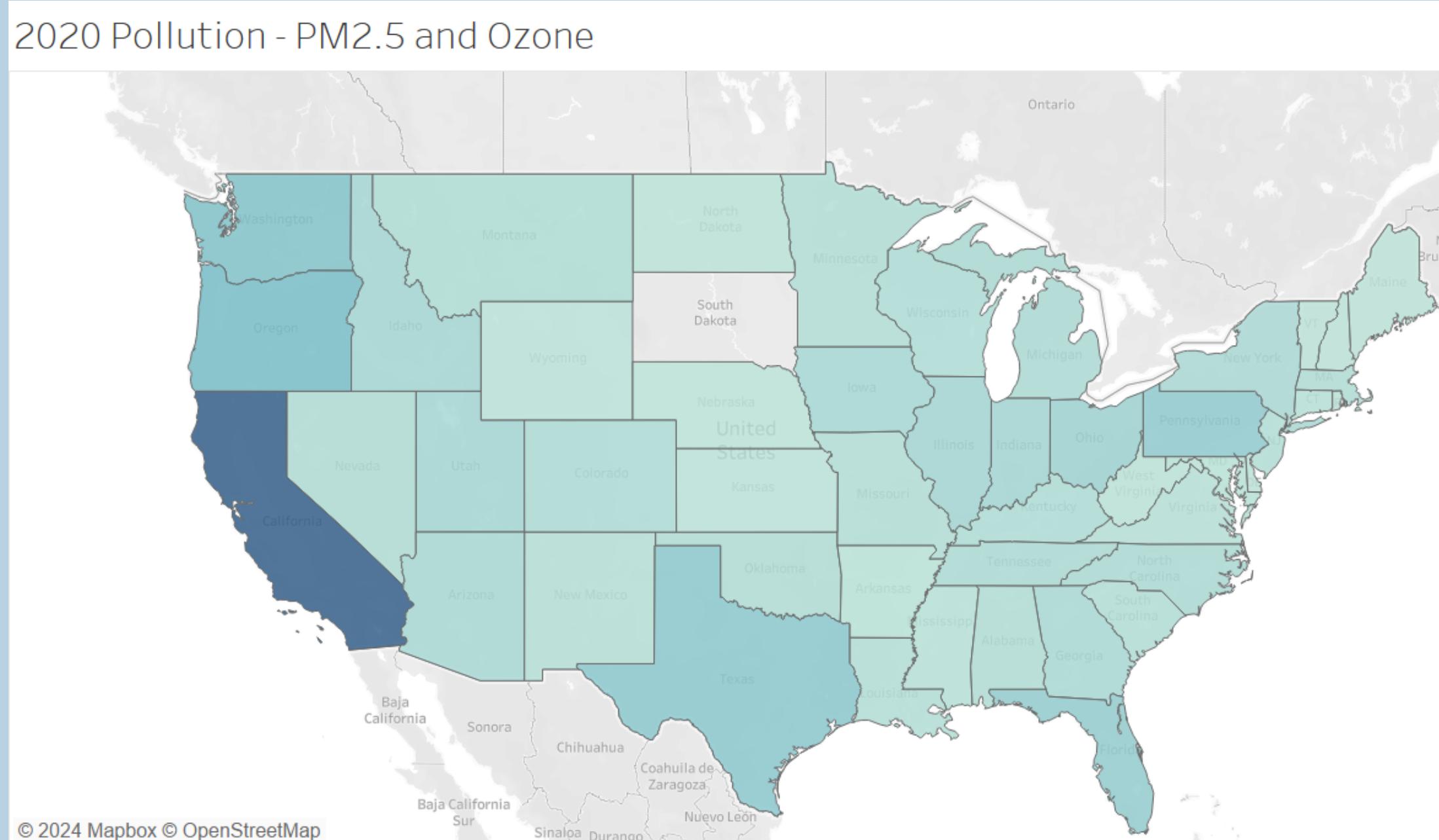
## Concentration:

- South Texas through North Dakota

## Diseases shown:

- Chronic Obstructive Pulmonary Disease
- Cardiovascular Disease
- Cancer
- Diabetes
- Asthma
- Chronic Kidney Disease

# Where is the air pollution?



**California**

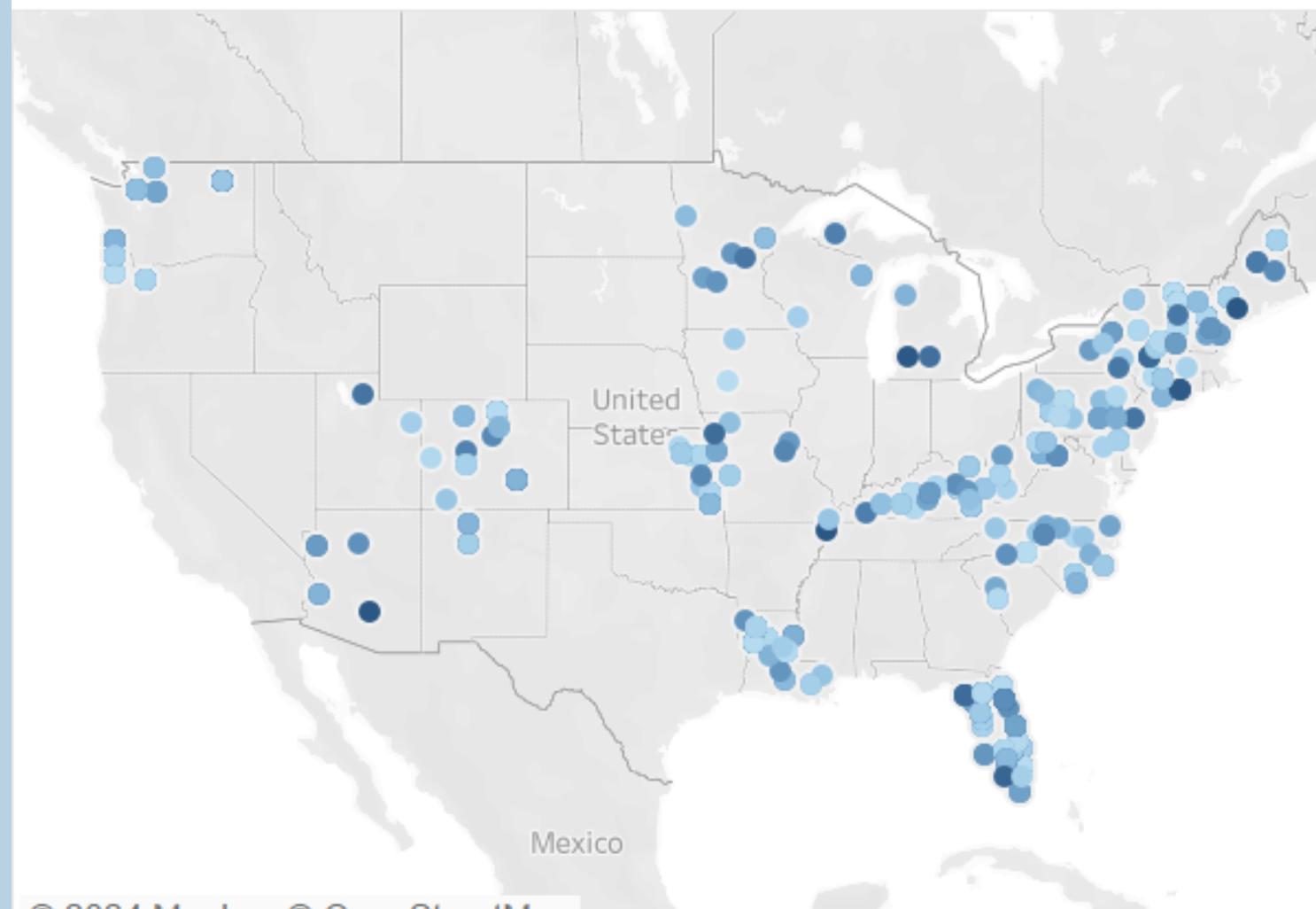
**Washington**

**Oregon**

# Where is the Water Pollution?

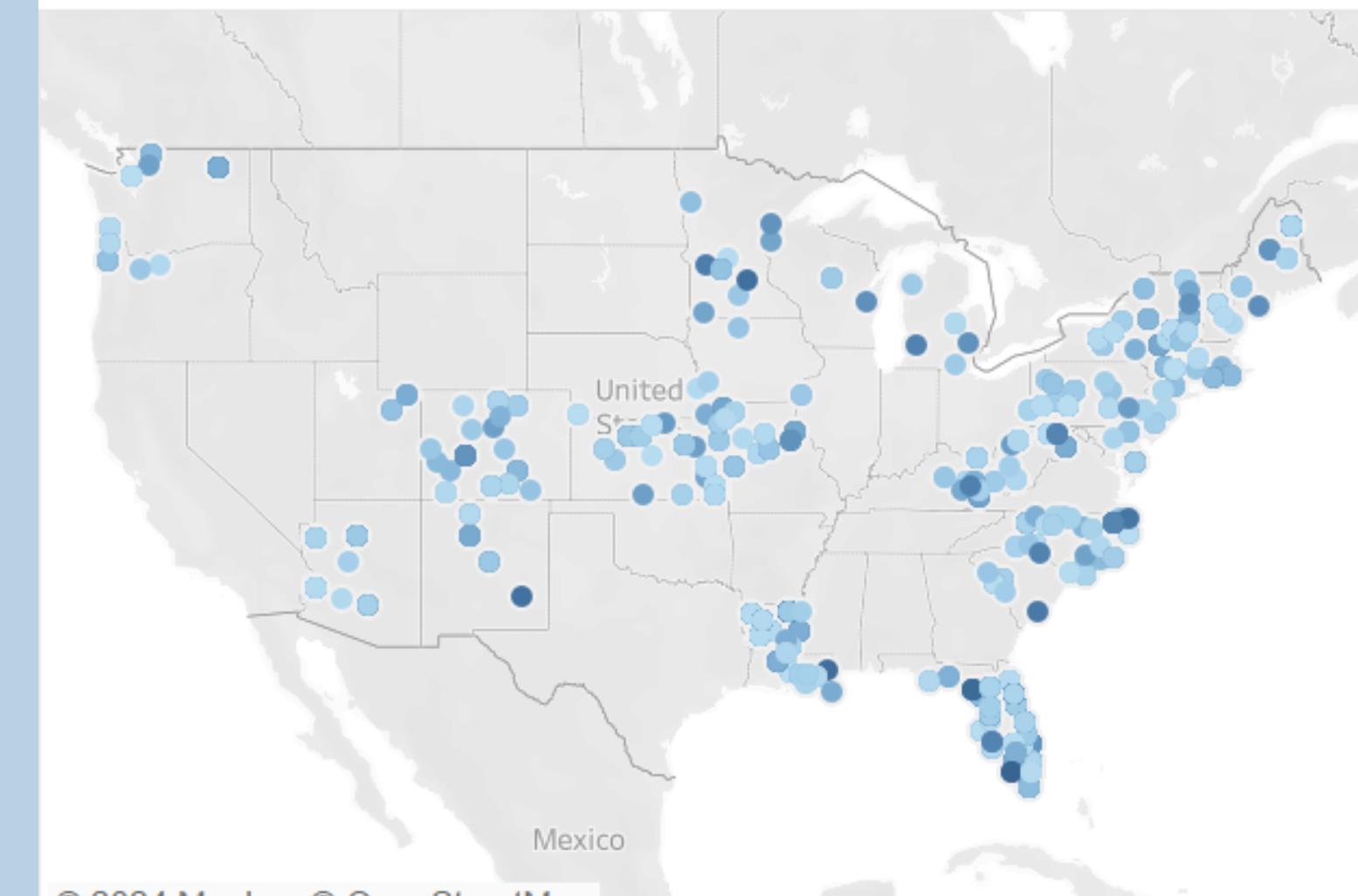
## Haloacetic Acid

Annual Mean Concentration of Haloacetic Acid



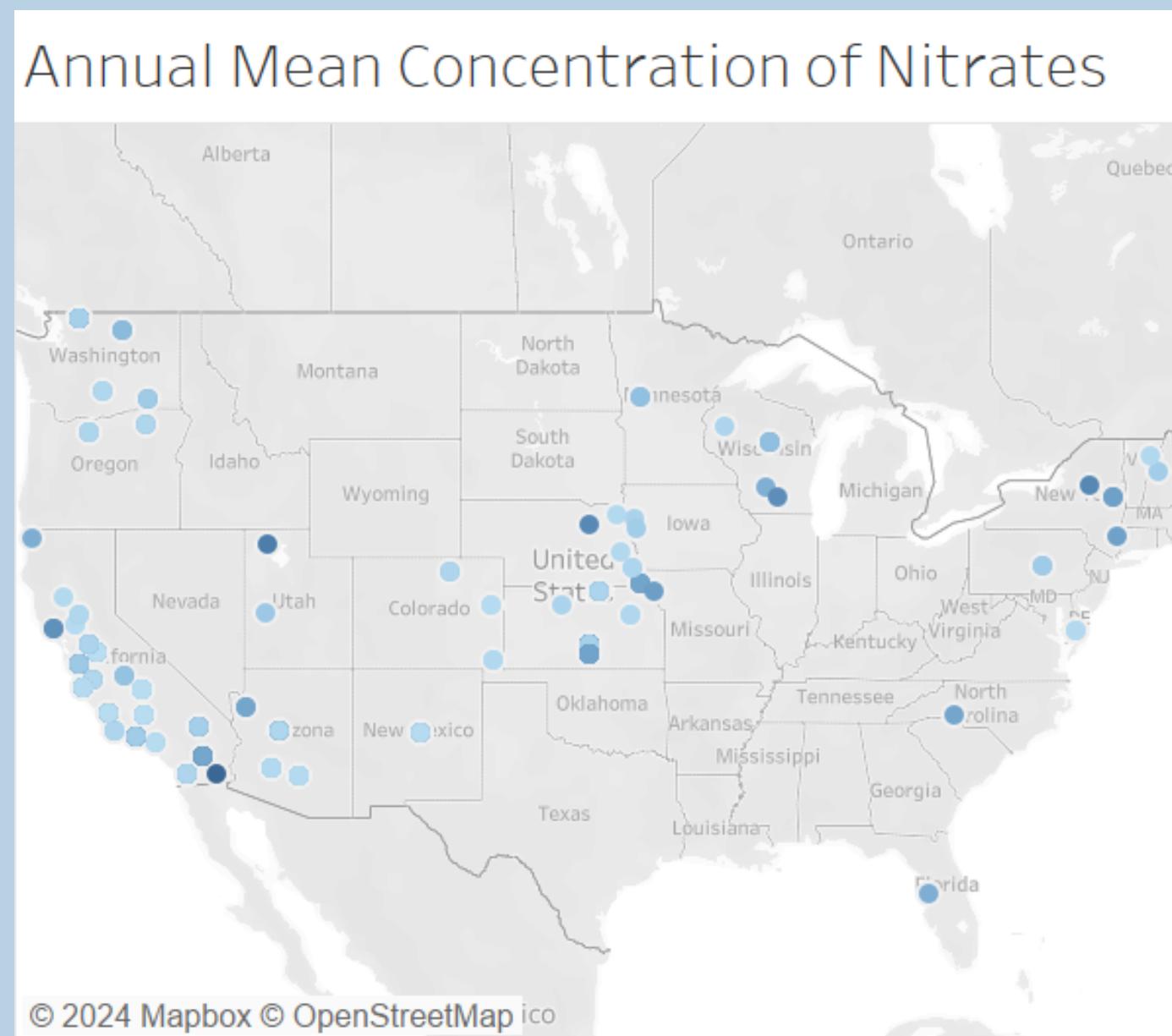
## Trihalomethane

Annual Mean Concentration of Trihalomethane

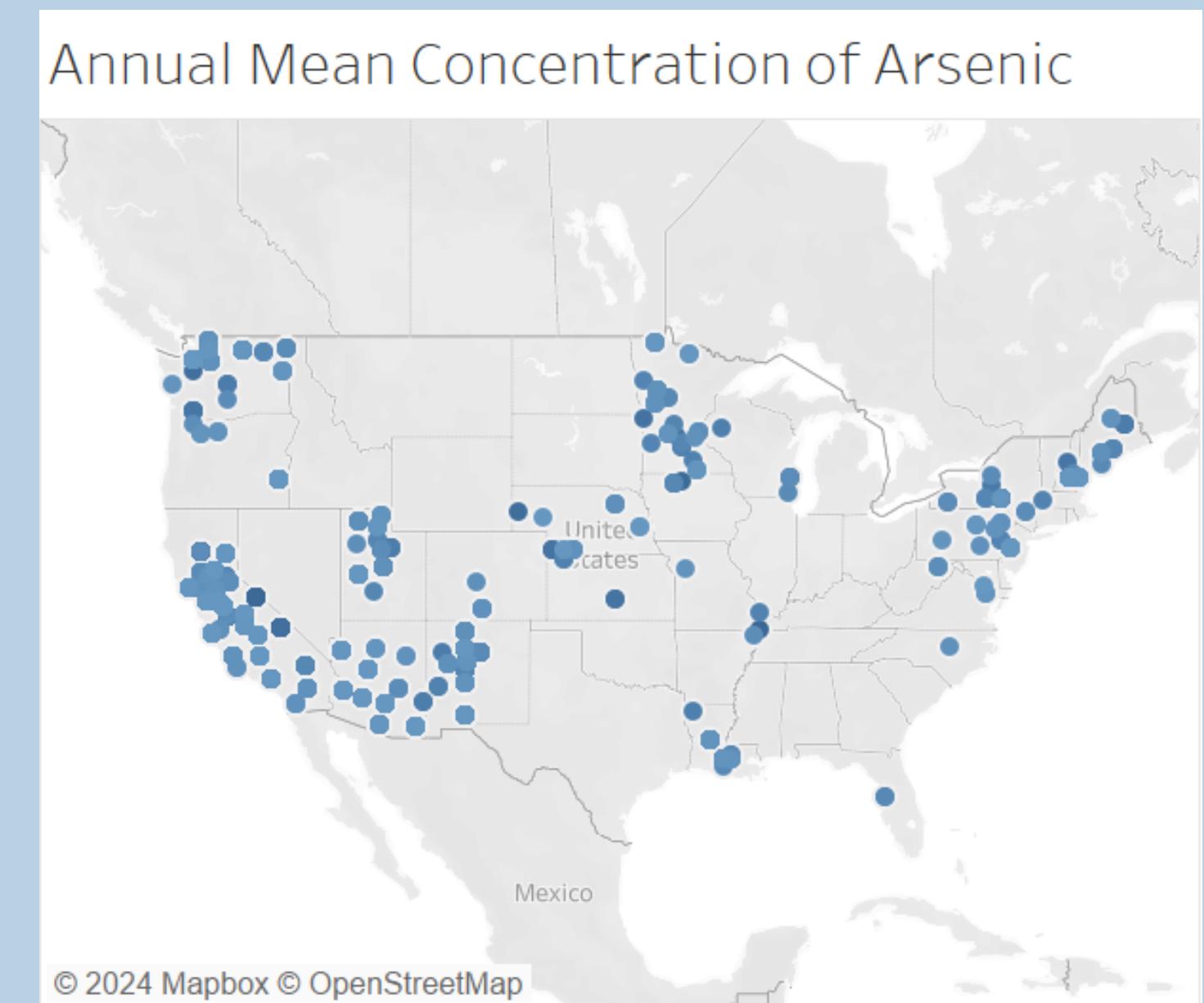


# Where is the Water Pollution?

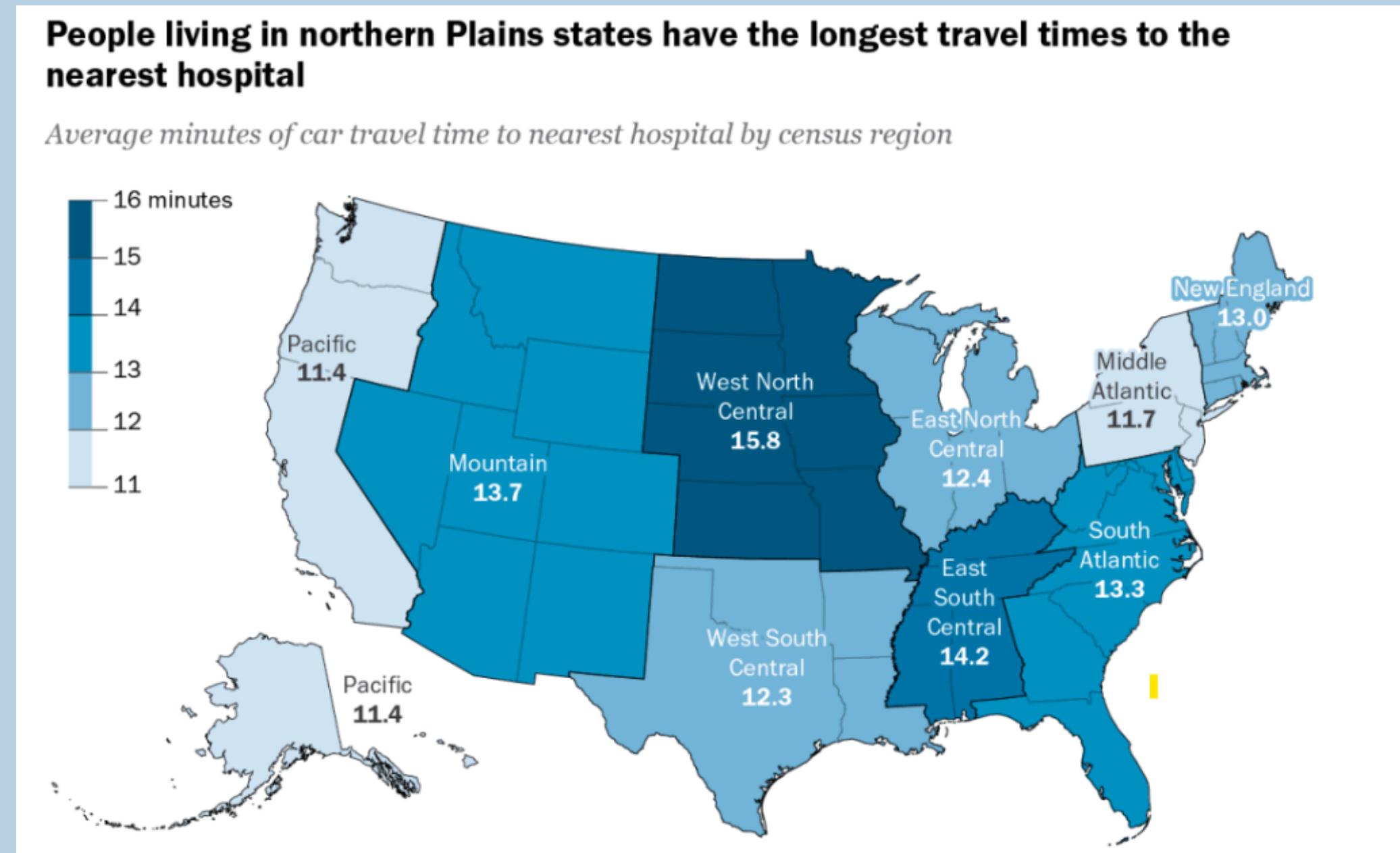
## Nitrates



## Arsenic



# Access to Healthcare by Distance to Nearest Hospital:

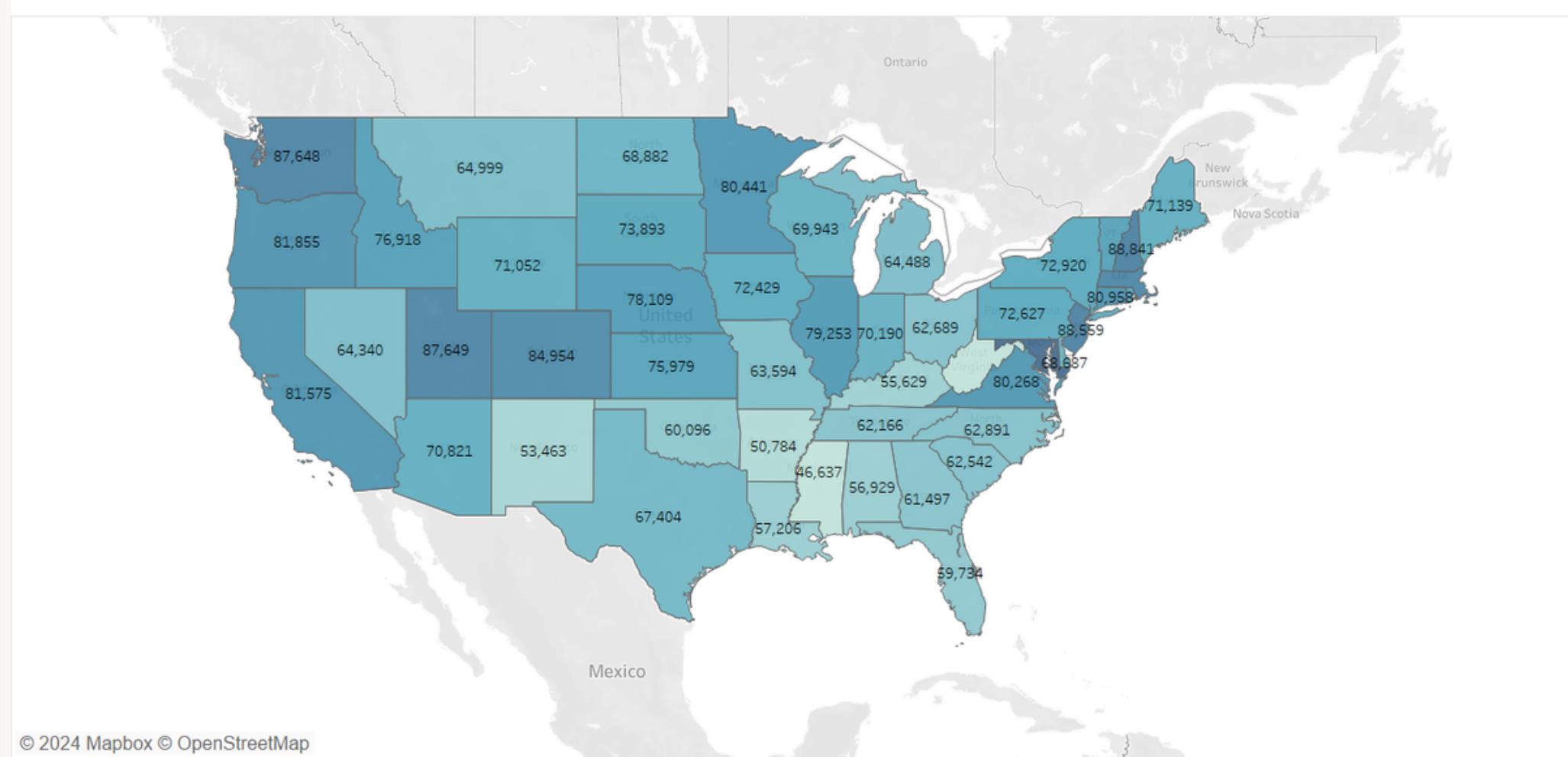


Possible that more difficult access to hospitals/specialists in plains area preventing patients from catching diseases in early phase.

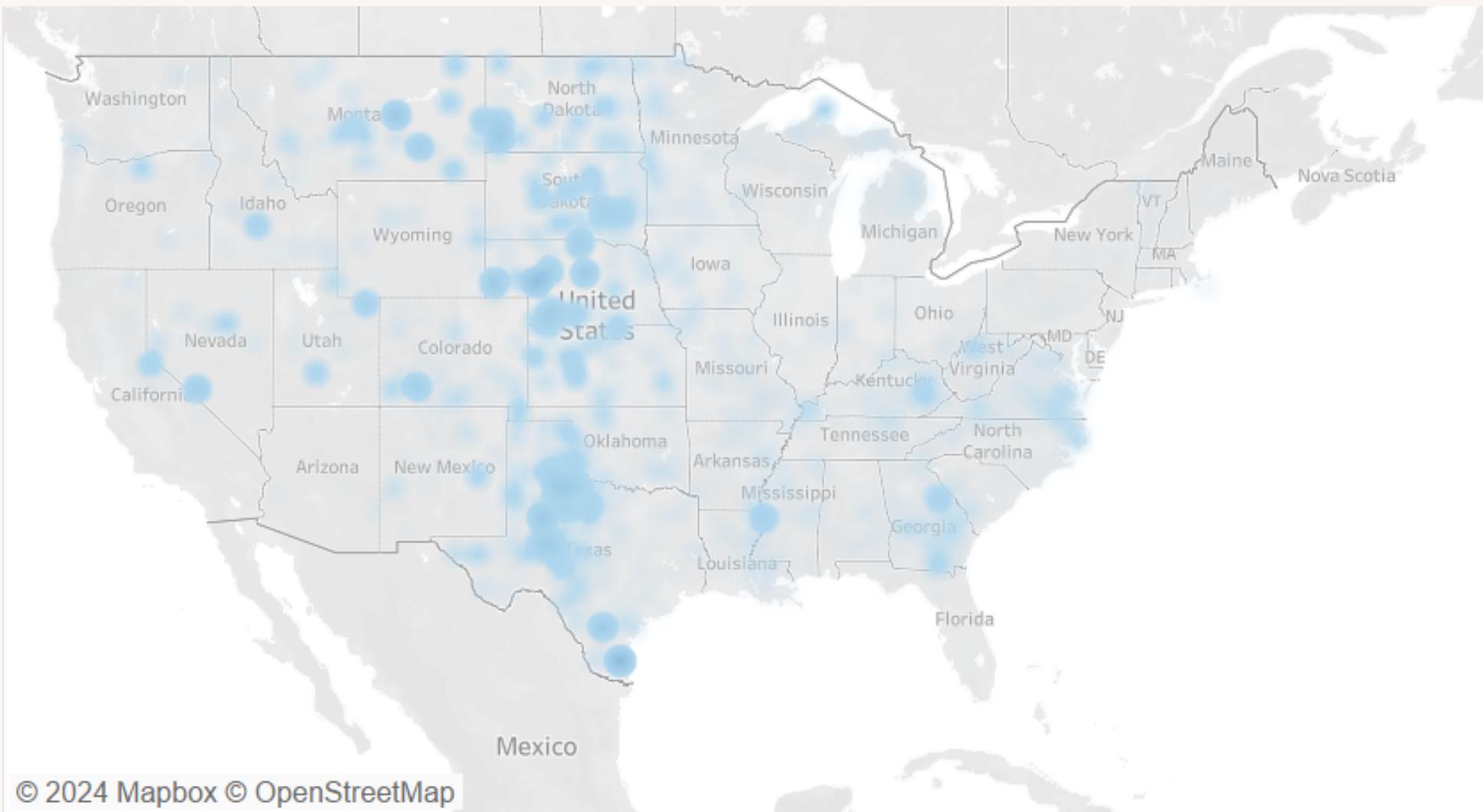
\*Pew Research

# Where Is the Money?

Median Household Income - 2021



# Where is Chronic Obstructive Pulmonary Disease by Population?



\*\*Incidence divided by local population count

## Concentration:

- South and East Texas through North Dakota

According to American Lung Association:

- Rates of COPD are 60% higher in rural areas compared to urban.
  - Smoking
  - Access to healthcare
  - NOTE: Texas rates are low in major cities

# Current Smokers - State Rankings

<u>Rank</u>	<u>State</u>	<u>Current Smokers</u>	<u>Current Smokers Percentage</u>
12	Oklahoma	576,977	20.10%
13	Michigan	1,441,675	19.30%
14	South Dakota	124,347	19.30%
15	South Carolina	711,229	18.80%
16	Pennsylvania	1,837,177	18.70%
17	Wyoming	82,278	18.70%
18	North Dakota	103,343	18.30%
19	Nevada	394,177	17.60%
20	Georgia	1,307,100	17.50%
21	New Mexico	264,465	17.50%
22	Kansas	360,137	17.40%
23	Maine	179,036	17.30%
24	Montana	138,198	17.20%

**5 out of 6 in COPD mid-country cluster are above average in smoking rates by population**

# In Conclusion:

Chronic diseases (Due in large part to COPD) seem to favor the Mid-West:

- Rural
- Increased distance to hospitals
- Above-Average prevalence of smoking

