

# Exploratory Questions

## Asthma Dataset(s)

### California

- How do asthma rates vary by location?
- How variable are the air quality metrics by location?
- Does a segment of the population more commonly have asthma-related emergency visits?

### Requires other data

## Air Quality Dataset(s)

### EPA AQS annual summaries by county (CA only)

- How variable are the air quality metrics in the same location across multiple years?
- How many measurement locations are there compared to the CA counties?
- Are there counties with no data?
- Variability of each AQ measurement across CA counties
- Availability of each AQ measurement across CA counties
- Types and comparison between measurement methods and metrics

### EPA AQS annual summaries by county (US)

- Number of counties with available data in 2021
- Availability of each AQ measurement across US counties
- Types and comparison between measurement methods and metrics. How do these differ from California dataset?

### EPA AQS daily summaries by county (optional)

- How variable are the air quality metrics in the same location throughout a year?

## Census Datasets

### Businesses by County

- What metrics are available indicating activity by sector in a county?
- Which metrics are best proxy for business activities leading to air pollution?

### Population by County

- What demographic information is available?
- What years is information available for?

## Combined Datasets

- What is the correlation between air quality metrics and asthma-related emergency visits?
- How do asthma-related emergency visits correlate with types of local industries?
- Are types of local industries and air quality metrics collinear?
- What is the projected asthma risk for a selected county in the US based on the modeled relationships from California?