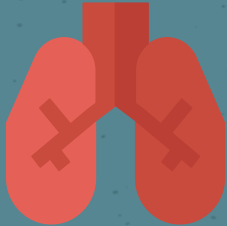


Asking Questions about Lung Diseases



- COVID-19
- Asthma
- COPD

Asthma

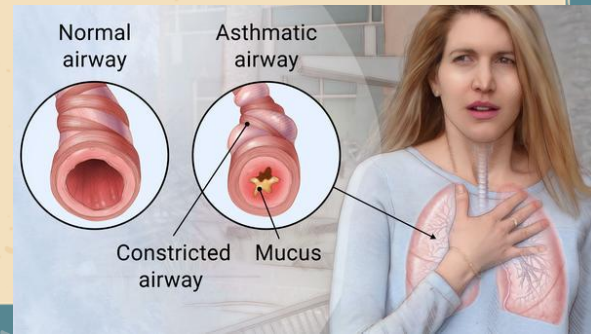


Description:

- Incurable condition that causes airways to tighten and overproduce mucus - making it harder to breath.
- Symptoms like wheezing can flare-up from exercising, outdoor allergens, etc.
- An inhaler is the primary treatment, but severe flare-ups (exacerbations) require emergency care

Potential Research Questions:

- Does air quality in an area correlate with increased rates of asthma flare-ups (exacerbations)?
- Can older housing lead to more asthma exacerbations?
- Why do some counties report higher rates of Asthma?



COVID-19



Description:

- Viral respiratory infection in the same family as the common cold
- Symptoms range from mild to severe, with poor health being the main risk factor for complications
- As of June 14, 2022, **1.01 million** Americans have died from Covid-19

Potential Research Questions:

- What is the relationship between covid-19 infections and suicide rates in the US?
- How have 911 dispatch patterns for medical emergencies changed since the pandemic? Have less people visited hospitals as a result of covid?
- How have vaccination rates in underserved populations been different than rates in overserved populations? Suburban vs rural vs city?

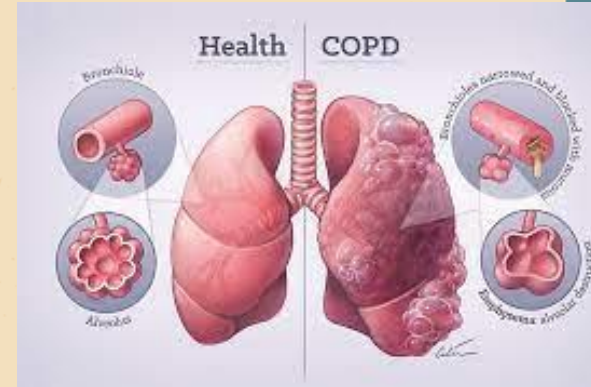
COPD (Chronic Obstructive Pulmonary Disease)

Description:

- Common group of diseases that prevent proper airflow from the lungs due to inflammation
- Arises due to long term smoking or exposure to irritating gases/particles over time
- 3rd leading cause of death in the world

Potential Research Questions:

- What is the relationship with increased vaping prevalence and COPD or other pulmonary diseases in teens?
- Do COPD and Asthma exacerbations occur in certain areas at a higher rate?
- Has Pittsburgh's and other industrial cities' manufacturing and pollution affected COPD rates?



*Click on each image to access the link

COVID-19 Datasets to Explore



CDC National Covid Tracker

- 53.5k + entries
- Tracks COVID cases, deaths, hospitalizations by day since pandemic started by state
- Most popular COVID dataset, updated 2x/day

How to use:

- Huge dataset, make sure to use the 'state' column to filter for the state you are researching
- Cases are self reported by local health departments

Daily Update for the United States

Cases

New Cases (Daily Avg)
107,077

Case Trends



Jul 2022

Aug 2022

Total Cases
92,296,142

Deaths

New Deaths (Daily Avg)
395

Death Trends



Jul 2022

Aug 2022

Total Deaths
1,030,010

Hospitalizations

New Admissions (Daily Avg)
6,154

Admission Trends



Jul 2022

Aug 2022

Current Hospitalizations
35,840

Vaccinations

% First Booster Dose
34.4%

People Age 5+



Total First Booster Dose
107,490,375

*Click on each image to access the link

Lung Disease Datasets to Explore



Childhood Asthma Healthcare Utilization

- 398 observations (one for each census tract)
- Data has rates of hospitalizations, ED visits, and urgent care visits for kids due to Asthma
- Data covers 75% of all Pittsburgh kids under 18

How to use:

- Use column 'total_members' and divide by the other columns to get proportions to avoid population as a confounding variable



Allegheny County Health Department

- 918,478 entries of COVID-19 vaccinations
- Gives date of vax (initial doses/booster)
- No locations

How to use:

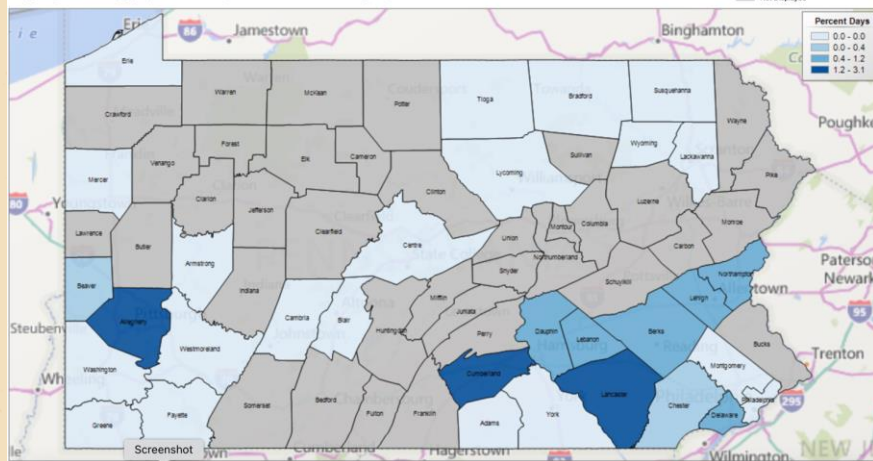
- Use dataset to look at vaccination rates by gender, ethnicity, age
- Municipal data can be used for vaccinations in the past 30 days with location

*Click on each image to access the link

Lung Disease Datasets to Explore

Air Quality: Percent of days and number of person days with PM_{2.5} levels over the National Ambient Air Quality Standard (NAAQS) Created: 07/02/2022

Air Quality Measure: PM_{2.5} (Days over US Standard) Year: 2019 Distribution Type: Optimal



PA Particulate Matter Tracker

- Dataset gives air quality reports from 2001-2019
- County-level data
- Particulate matter in the air can cause lung issues
- Most State Health Depts. will have this data (NJ)

How to use:

- Select Air Quality from categories in menu
- Create a custom table based on what counties, years, and type of air quality measure you want
- Some counties are not reported

*Click on each image to access the link

Lung Disease Datasets to Explore

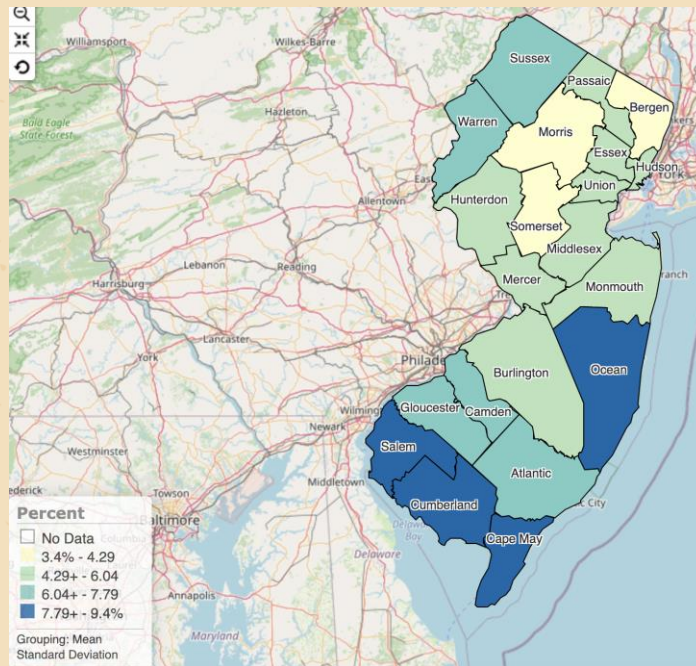


NJ COPD Rates 2011-2019

- County-level COPD rates data
- Based on The NJ Behavioral Risk Factor Survey

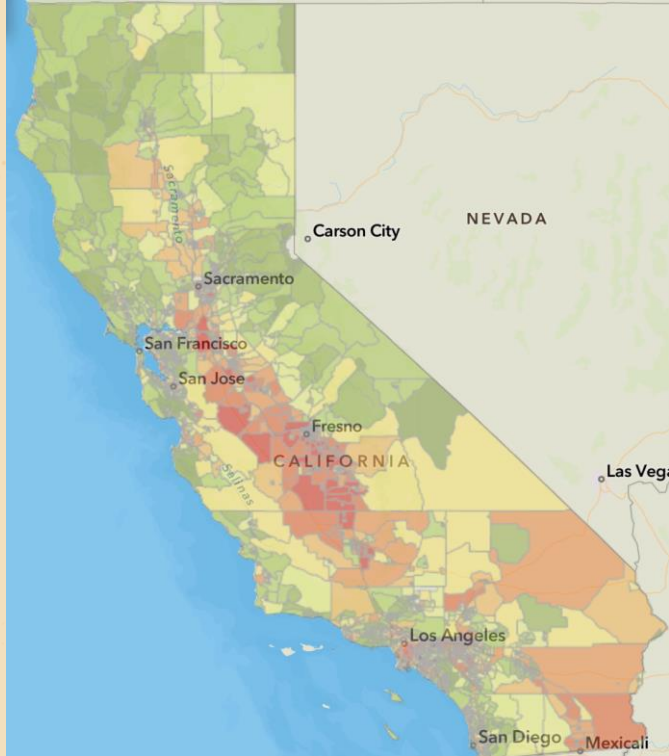
How to use:

- Click on image above to access 2011-2019 data
- Or go to [main website](#) -> Health Topics -> Queryable Datasets -> COPD (choose one)
 - Use filters to specify based on your question



*Click on each image to access the link

Lung Disease Datasets to Explore



OEHHA
California Office of Environmental
Health Hazard Assessment

CA Pollution Ratings

- CalEnviroScreen 4.0
- Dataset gives pollution scores for CA areas
- Census-Tract level data with county information
- Really interesting maps

How to use:

- Find CalEnviroScreen 4.0 Excel and Data Dictionary PDF link on website for excel download

*Click on each image to access the link

COVID-19 Datasets to Explore



COVID-19 Aggregate Case Counts

- Per day COVID-19 case counts in PA
- Collected from Dept. of Health
- By County
- Easy to use

How to use:

- Columns are self-explanatory
- Large dataset



COVID-19 Aggregate Death Counts

- Per day COVID-19 death counts in PA
- Collected from Dept. of Health
- By County
- Easy to use

How to use:

- Columns are self-explanatory
- Large dataset