Exploring influenza cases in New York State with an interactive dashboard, trend comparison, and statistical analysis

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Deliverable 1

Data 606 SP 2020

https://www.nfid.org/infectious-diseases/influenza-flu/

Project

- Explore seasonal influenza datasets to glean insights
  - Trends
  - Risk factors (location, population, vaccine coverage and effectiveness)
  - And more!
- Determine the significance of trends/correlations
  - Using R and Python
- Create an interactive dashboard
  - Enabling healthcare professionals and researchers to make inferences and/or decisions based on their expertise.
    - This may include preventative measures, preparedness, and outreach

Main Data Set and Source

- Influenza Laboratory-Confirmed Cases By County: Beginning 2009-10 Season (HealthData.gov, 2020)
  - Originally from New York State Department of Health (health.data.ny.gov, 2020)
- Weekly counts of laboratory-confirmed influenza cases and type from 2009-present in **New York (State).**
  - Nine Columns (Season, Region, County, CDC Week, Week Ending Date, Disease, Count, County Centroid, and FIPS)
  - 62,286 rows
- Other datasets will be used to supplement my findings
  - State Specific Influenza Vaccination Coverage (CDC, provided by Kaggle – 2019)
  - Population data, vaccine effectiveness (CDC), and more may be used.

Rationale

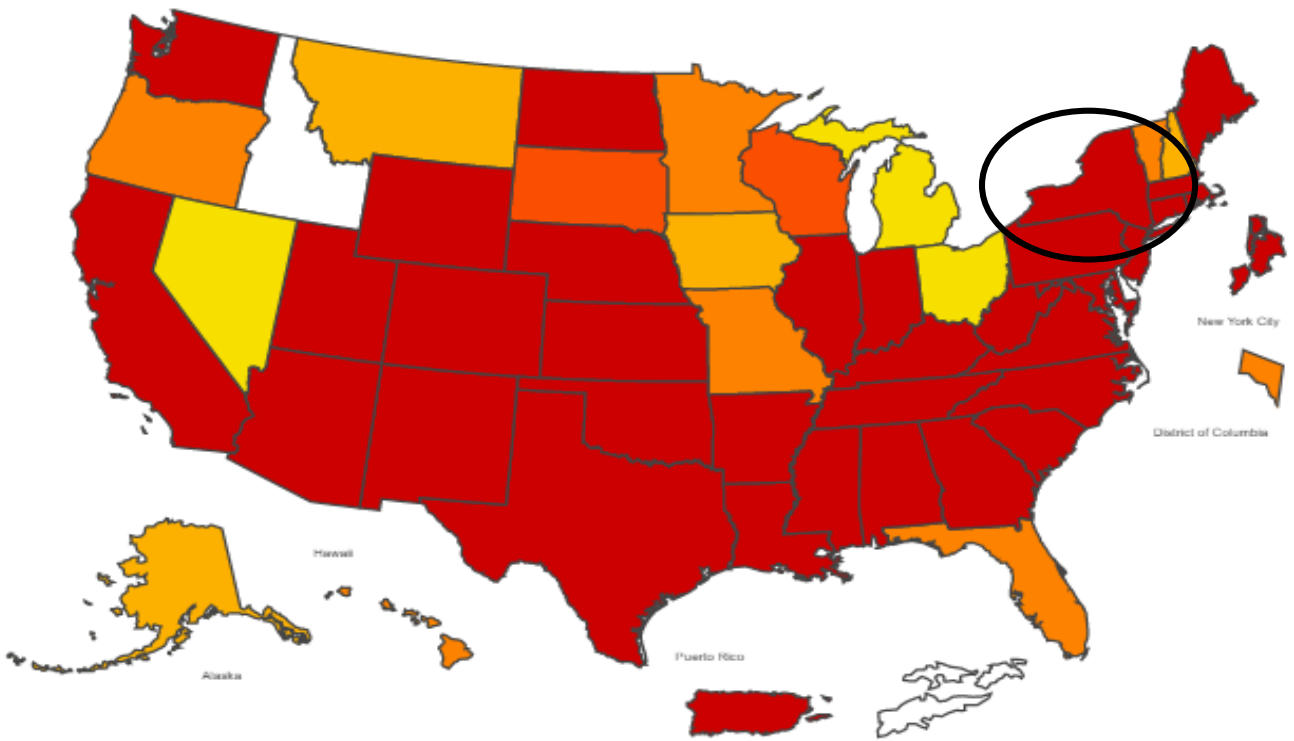
- Why is this important?
  - Seasonal flu is deadly and widespread
    - So far in this 2019-2020 flu season, an estimated 10,000 people have died and 180,000 hospitalized in the United States (Centers for Disease Control, 2020)
  - Seasonal flu data can help us better understand and prepare for the pandemic flu
- Why New York State?
  - Has locations that range from highly populated to rural
  - High influenza-like illness activity (like most states currently)
  - Has up-to-date data

FLUVIEW interactive

A Weekly Influenza Surveillance Report Prepared by the Influenza Division

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet

2019-20 Influenza Season Week 4 ending Jan 25, 2020



ILI Activity Level

- High
- Moderate
- Low
- Minimal
- Insufficient Data

https://www.cdc.gov/flu/weekly/index.htm#ILIActivityMap

Questions and Feedback?

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https://github.com/kathuerta/DATA606

Thank you!

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