



BEGINNING – PROJECT OVERVIEW

- **Motivation:** The United States has an influenza season where more people than usual suffer from the flu. Some people, particularly those in vulnerable populations, develop serious complications and end up in the hospital. Hospitals and clinics need additional staff to adequately treat these extra patients. The medical staffing agency provides this temporary staff.
- **Objective:** Determine when to send staff, and how many, to each state.
- **Scope:** The scope of the analysis encompasses examining historical influenza data, including incidence rates, peak seasons, and regional variations, to forecast staffing needs across the country. It involves identifying patterns, seasonal fluctuations, and high-risk periods for influenza outbreaks. Additionally, the analysis will assess the implications of influenza trends on the demand for temporary healthcare workers, considering factors such as clinic size, patient demographics, and geographic location.

The data used is from 2009 - 2017 and obtained from the CDC and US Census Bureau.

2A. MIDDLE – HYPOTHESIS AND ANALYSIS (WHO IS THE VULNERABLE POPULATION?)

- If the population data by age are analyzed relating to mortality rates, then the older individuals over 65 years will exhibit a higher mortality rate, which emphasizes the significance to focus on the elderly population during the flu season.
 - Show a pie chart of 65+ influenza deaths vs 1 – 64 influenza deaths and Provide a description of pie chart, Include percent of 65+ population in relation to total population.
 - Show a scatterplot of the relationship between 65+ population and total influenza deaths Provide a description of the scatterplot.

MIDDLE – ANALYSIS (LOCATION OF VULNERABLE POPULATION)

- Use Location to show where the vulnerable population is found, Show a horizontal chart highlighting the top influenza deaths states in the US
- Show a horizontal chart highlighting the largest 65+ populations in the US, Create a combination map showing a choropleth of the US, each state is colored based on 65+.

END – RECOMMENDATIONS (AND POSSIBLY FORECAST)

- Provide a conclusion summary, highlighting that 65+ is the vulnerable population and when the peaks of influenza are.