

PREPARING FOR INFLUENZA SEASON IN USA

OVERVIEW:

The United States has an influenza season where more people than usual suffer from the flu. Hospitals and clinics need additional staff to adequately treat these extra patients. The medical staffing agency provides this temporary staff.

OBJECTIVE:

The goal of the analysis was to assist a medical staff agency in providing temporary workers during the Influenza season in the US. To achieve this,

- I analyzed demographic data from 2009 to 2017 across 50 states. The analysis involved tasks such as data wrangling, transforming data, integrating two datasets, and deriving new variables.
- Utilizing Tableau for visualization, I presented insights on the top states affected by Influenza in the 65+ age group, as well as the peak season (December to April) of influenza. These findings helped the medical staff agency in effectively allocating temporary workers based on the identified trends.

TOOLS USED: Microsoft Excel, World, Tableau

DESIGNING A RESEARCH PROJECT

- ✓ Translating business requirements into a research project via formulating research questions and hypothesis.
- ✓ Sourcing the relevant data for the project.
- ✓ Preparing a project management plan.

DATA PREPARATION

- ✓ Checking for integrity & quality issues.
- ✓ Cleaning data, removing duplicates and handling missing values.
- ✓ Transforming data and integrating two data sets.
- ✓ Deriving new variables.

STATISTICAL HYPOTHESIS TESTING

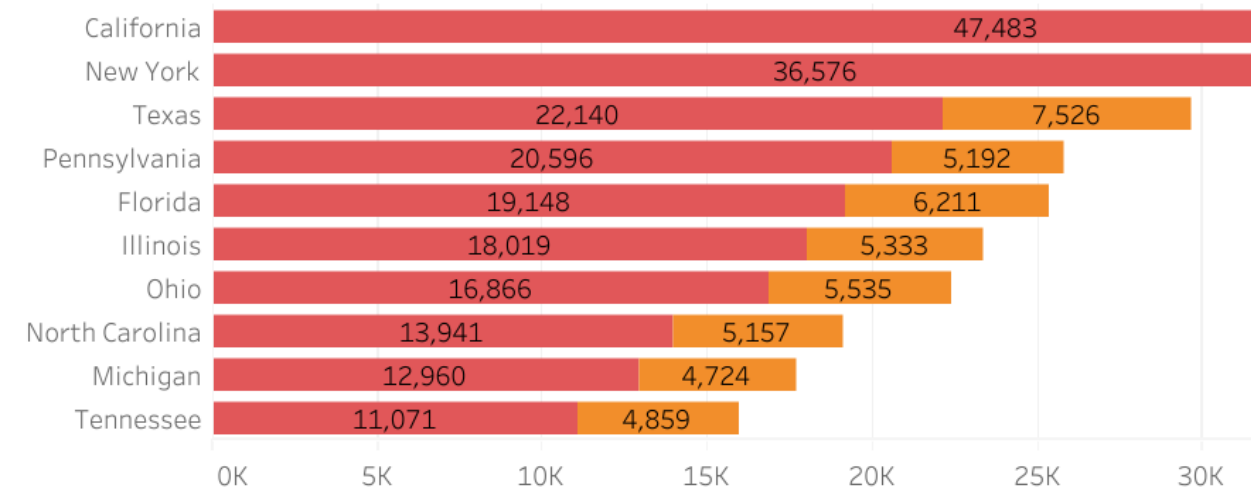
- ✓ Calculating variance and data spread (variance, standard deviation, outliers) for two variables in question.
- ✓ Calculating correlation between two variables .
- ✓ Conducting a two sample t-test to test
- ✓ The hypothesis.
- ✓ Interpreting the results.

DATA VISUALIZATION & STORYTELLING IN TABLEAU

- ✓ Creating composition & comparison charts.
- ✓ Temporal visualizations & forecasting.
- ✓ Statistical visualizations: box plots, histograms, bubble charts & scatter plots.
- ✓ Spatial analysis.
- ✓ Creating a narrative & recording a video presenting results.

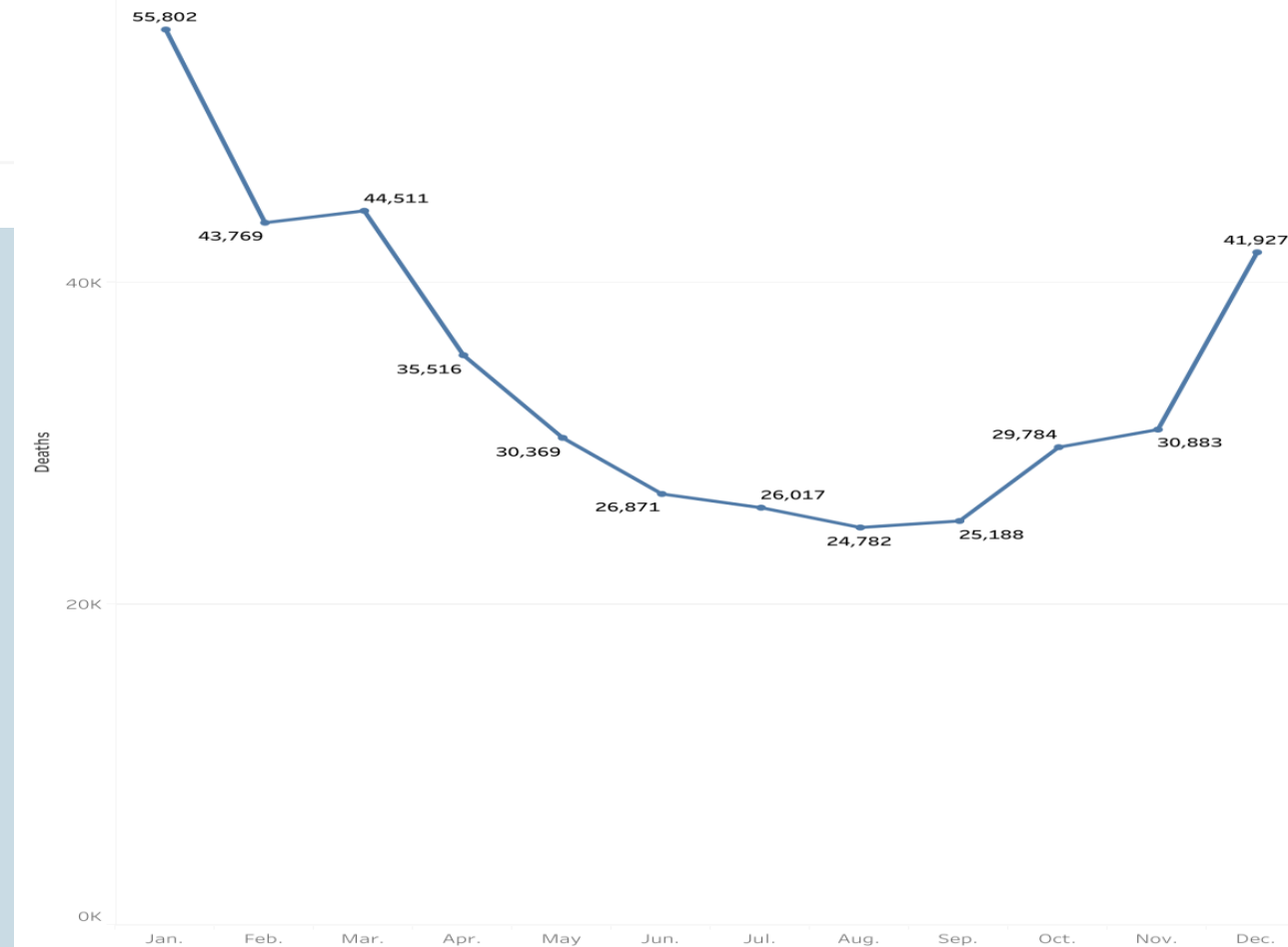
RECOMMENDATION

FLU DEATH ABOVE 65 YEAR AND LESS THAN 65 YEAR AGE PER STATE



- Highest Influenza deaths with **65+** age group vulnerable population are California, New York and Texas. So, focus on allocating staff according to above basis.
- December to April are months of Influenza with January month at its peak. **53%** of total deaths from influenza occurred during this time. So, deploy more medical staff during this time.

TOTAL DEATHS FROM INFLUENZA BY MONTHS(2009-17)



LINKS FOR FURTHER EXPLORATION

- [Tableau Interactive Dashboard](#)
- [Video presentation of project](#)
- [Interim report](#)
- [Project Management plan](#)
- [Project brief](#)