



2018

INFLUENZA SEASON

PLAN OF ACTION.

SCHAY KIERSTIN ESPARZA

Preparing for the 2018 Influenza Season

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

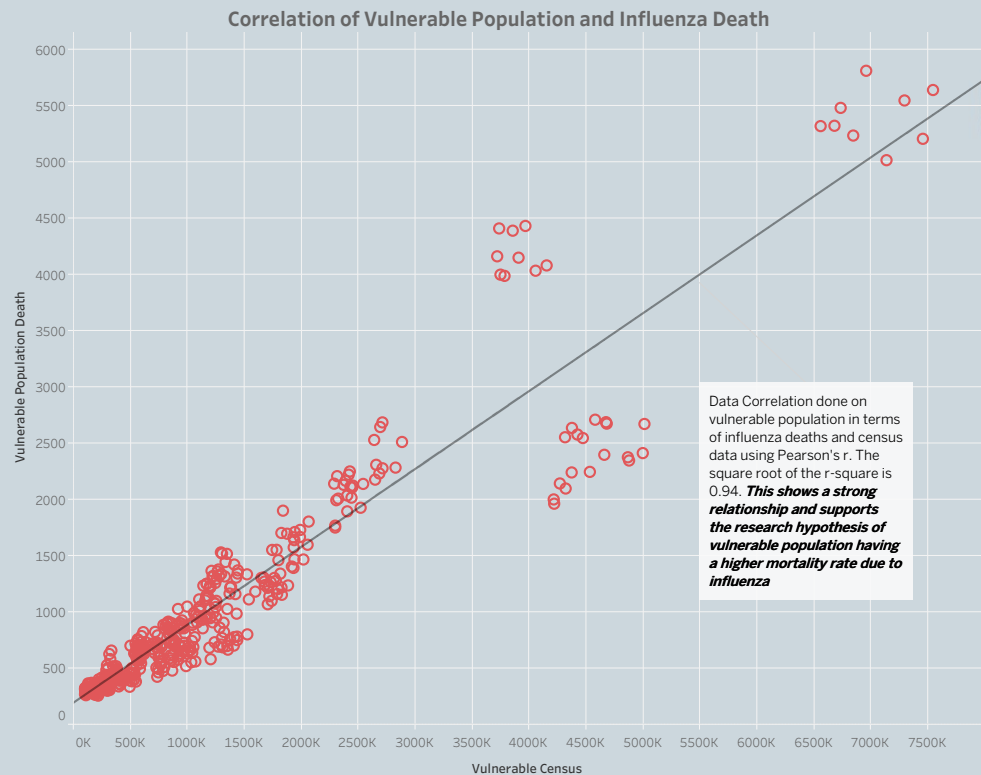
The agency covers all hospitals in each of the 50 states of the United States, and the project will plan for the upcoming influenza season.



HYPOTHESIS

Vulnerable populations are patients likely to develop flu complications requiring additional care, as identified by the Centers for Disease Control and Prevention (CDC). **Children under the age of 5 and older adults above 65 years old are considered to be vulnerable populations.**

"If a vulnerable person contracts the flu, then their mortality rate will be higher than that of a non-vulnerable person."

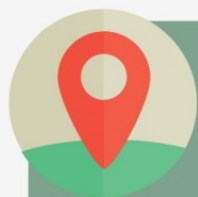


Vulnerable Population

Under 5 years old
Over the age of 65 years old

Non-Vulnerable
Population

Between the ages of 5 - 64 years old



Total Population Census

541,693 38,521,420

Vulnerable Census

110,623 7,543,093

Vulnerable Census

110,623

2,000,000

4,000,000

6,000,000

7,543,093

Year

2009

2010

2011

2012

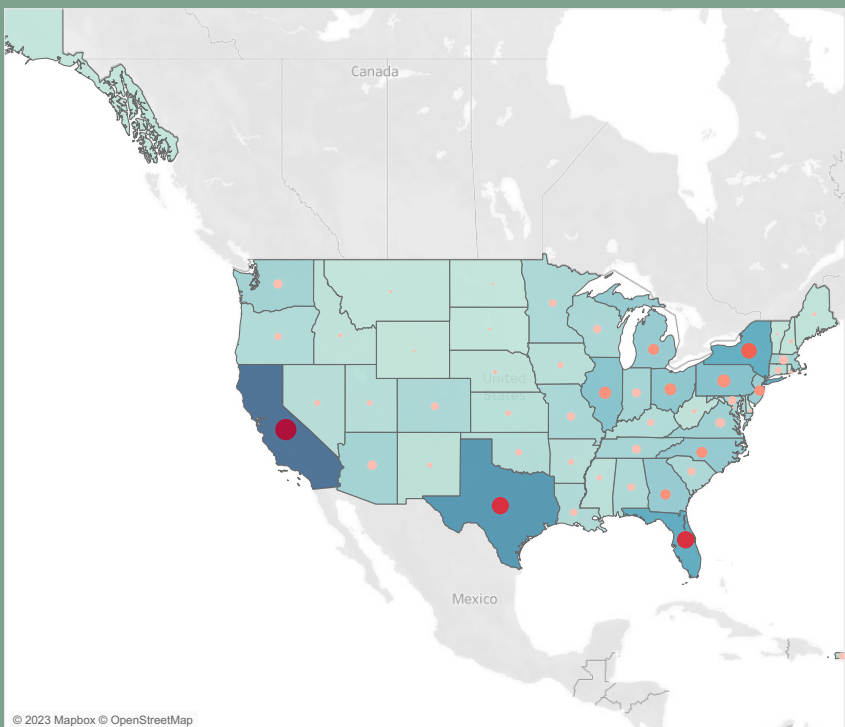
2013

2014

2015

2016

2017



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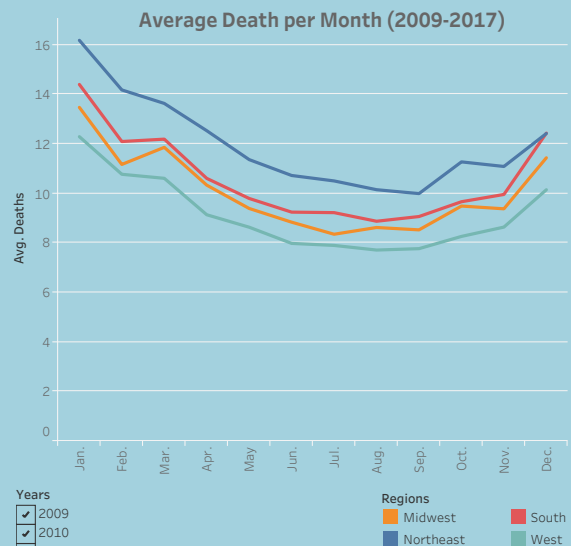
2017 Top 5 States with the Highest Number of Vulnerable Population.

California , New York, Florida, Texas, Pennsylvania.

2017 Top 5 States with the Highest Number of Death



The hypothesis of a vulnerable person having higher mortality rate than that of a non-vulnerable person is demonstrated here.



When is Flu Season?

Influenza cases are highest from December to March across the state over the years.

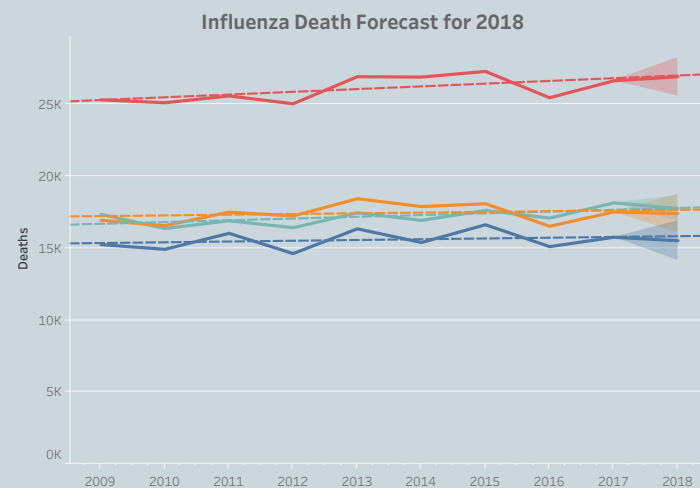
From 2009-2017, the flu season peaked in January with death tolls average from 12-16 across the states.



How will the 2018 Influenza Season Look Like?

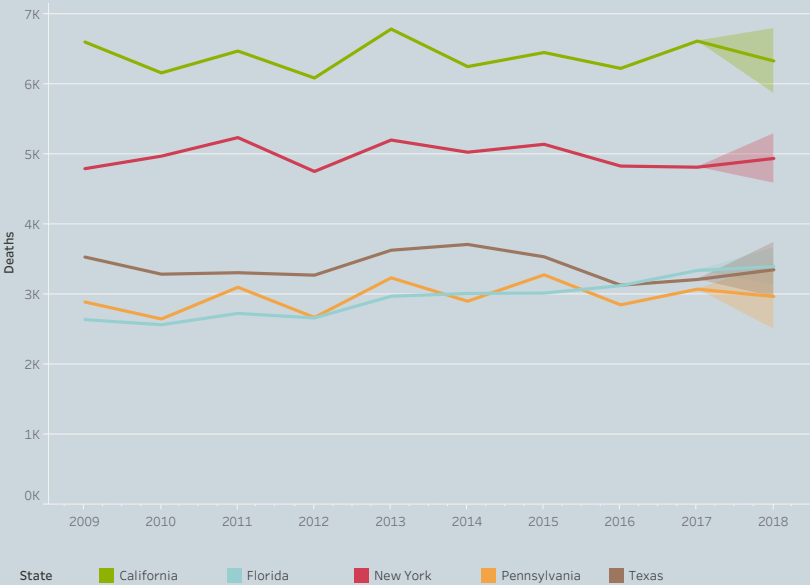
Forecasted data for 2018 predicts that the South will have the highest death toll. This is followed by the West, Midwest and the Northeast respectively.

A total of 77,612 people are predicted to pass from influenza-related death in the year 2018.



CONCLUSIONS AND RECOMMENDATIONS

2018 Death Toll Forecast for States with the Highest Vulnerable Population



Influenza season in the United States puts everyone at an increased risk of mortality especially those who are more vulnerable due to their age and their health. With more people seeking medical treatment during the peak months of the influenza, a strain in the healthcare system is created which warrants for additional staffing needs to support the influx of patients seeking care.

Recommendations to help prepare for the next influenza season.

1. Additional staffing needed from **December to March** with influenza cases increasing around those months.
2. Deployment of staff all around the United States with emphasis on sending more to states with high numbers of vulnerable population such as **California, Florida, New York, Pennsylvania and Texas.**

