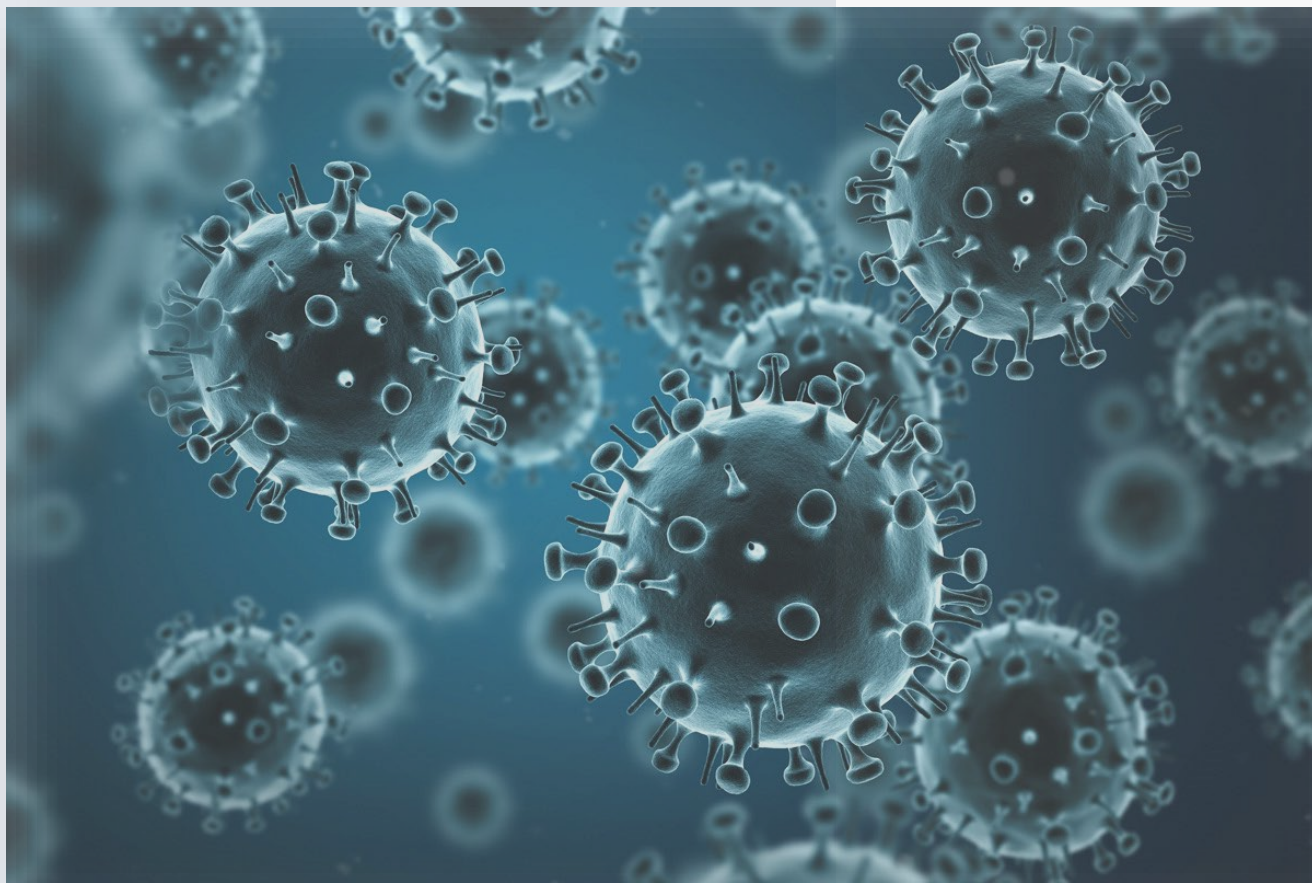


PREPARING FOR INFLUENZA SEASON





PREPARING FOR INFLUENZA SEASON

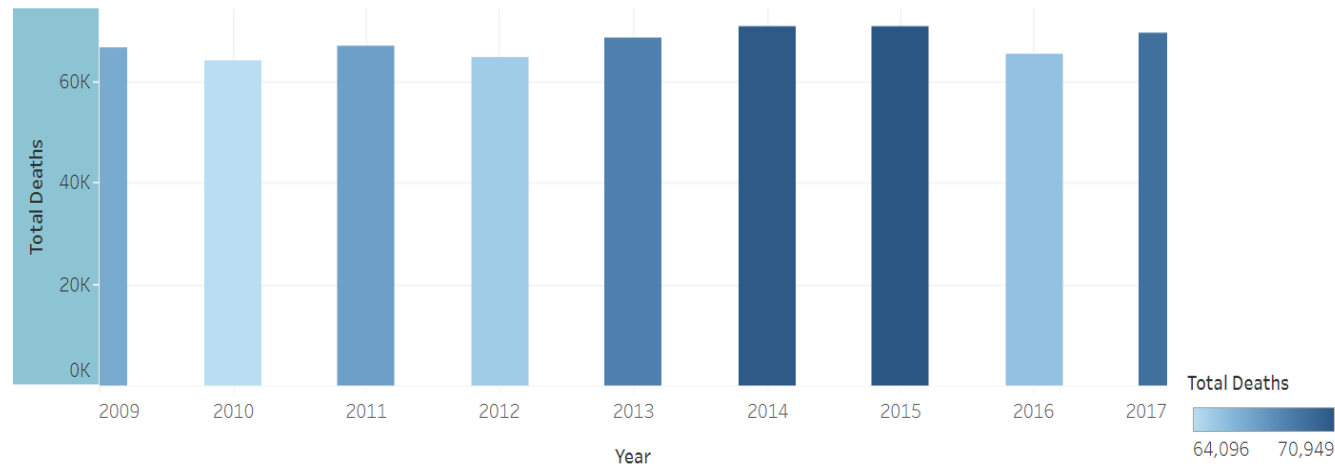
The United States has an influenza season where more people than usual suffer from the flu. Some people, particularly those in vulnerable populations, develop serious complications and end up in the hospital. Hospitals and clinics experience increased traffic and patients during influenza season and end up needing additional staff to adequately treat extra patients.

- **Objective:** Determine in which states to send additional staff.
- **Success factors:** Determine higher risk states through the United States to prioritize resources towards those places.
- **Assumptions to verify:** Vulnerable populations suffer the most-severe impacts from the flu and are the most likely to end up in the hospital. Every year the death rates are the same.

SYMPTOMS

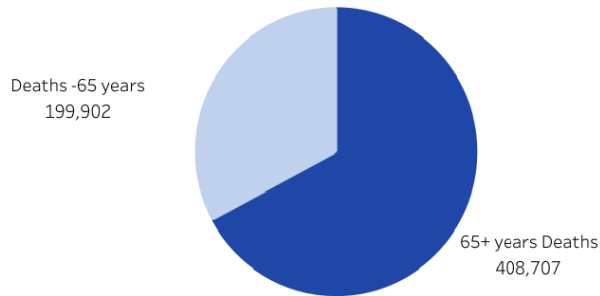


Total Influenza Deaths by Year



Vulnerable population category

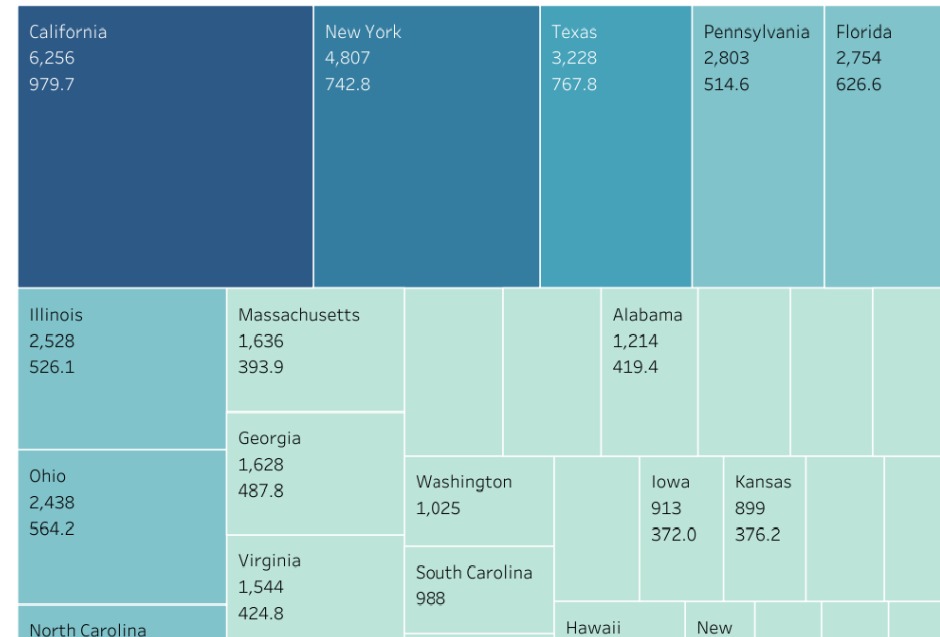
Mortality Rate Count for Influenza Season (2009-2017)



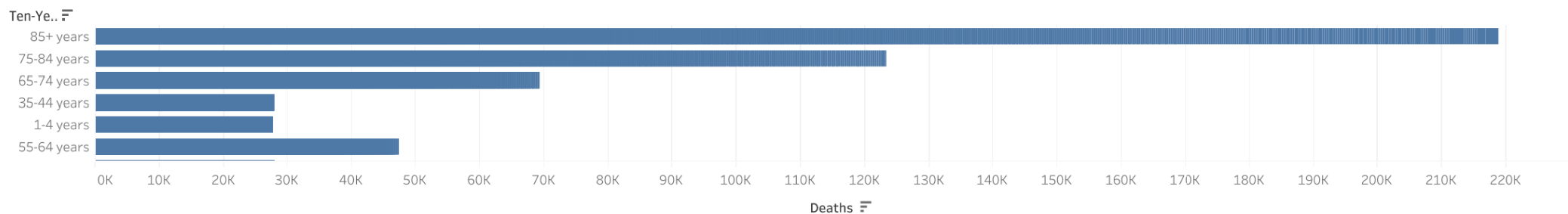
Vulnerable population represents those patients likely to develop flu complications requiring additional care, as identified by the Centers for Disease Control and Prevention (CDC). By counting the deaths through Influenza Season, the most at-risk group are the adults over 65 years old.

These are the patients that should receive immediate care, among those with other known conditions or low immunity system: children under 5 years, and pregnant women, as well as individuals with HIV/AIDs, cancer, heart disease, stroke, diabetes, asthma, and children with neurological disorders.

Average Influenza Deaths by State (years 2009-2017) for Total Population and +65 one



Influenza Deaths by age groups



Influenza in U.S: Preparing for the Flu

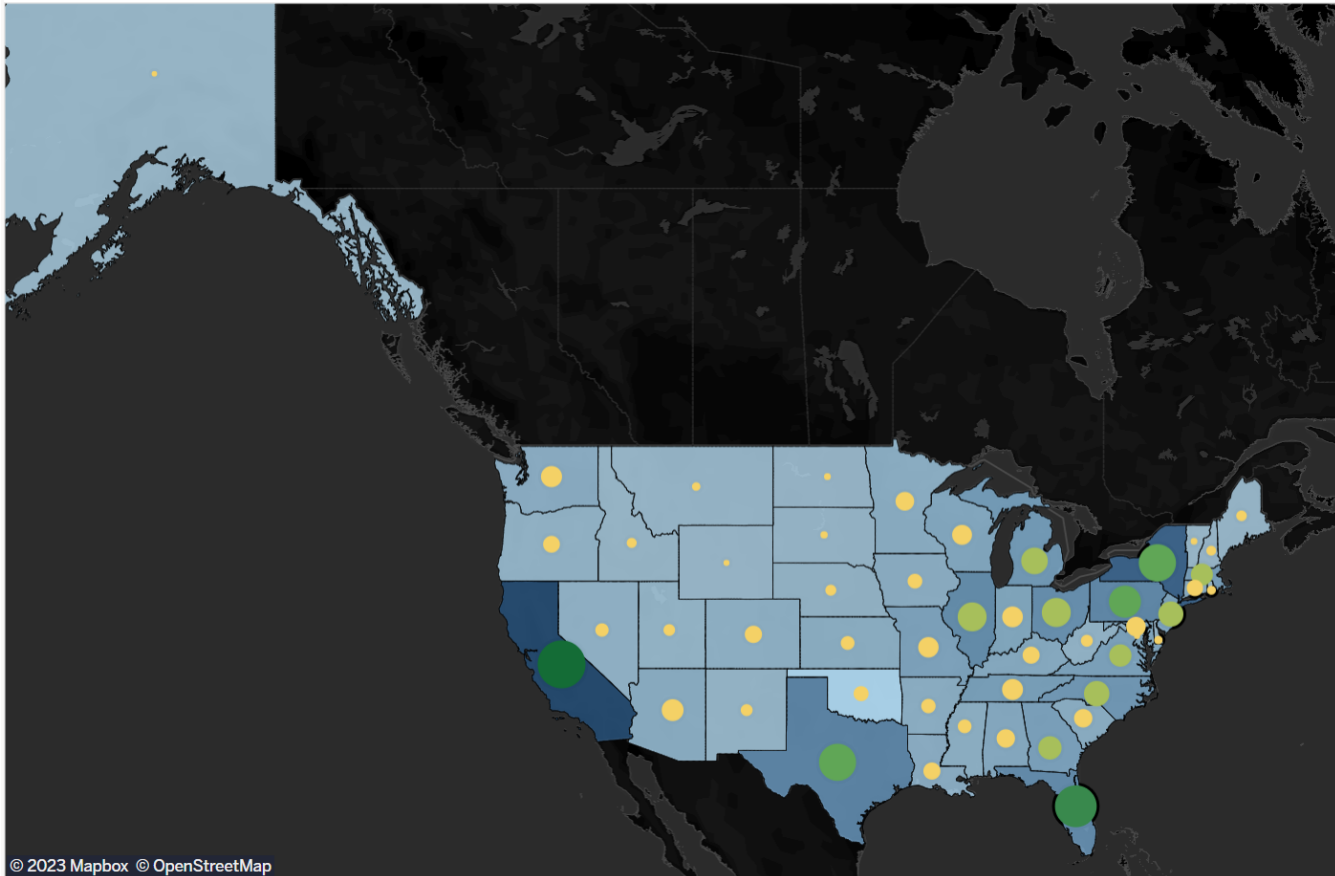
What category of population is the most at risk?

What states in US are most affected by the virus?

When is Influenza Season?

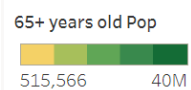
Vulnerable States in U.S

US Population&Deaths for over 65years during Influenza Season



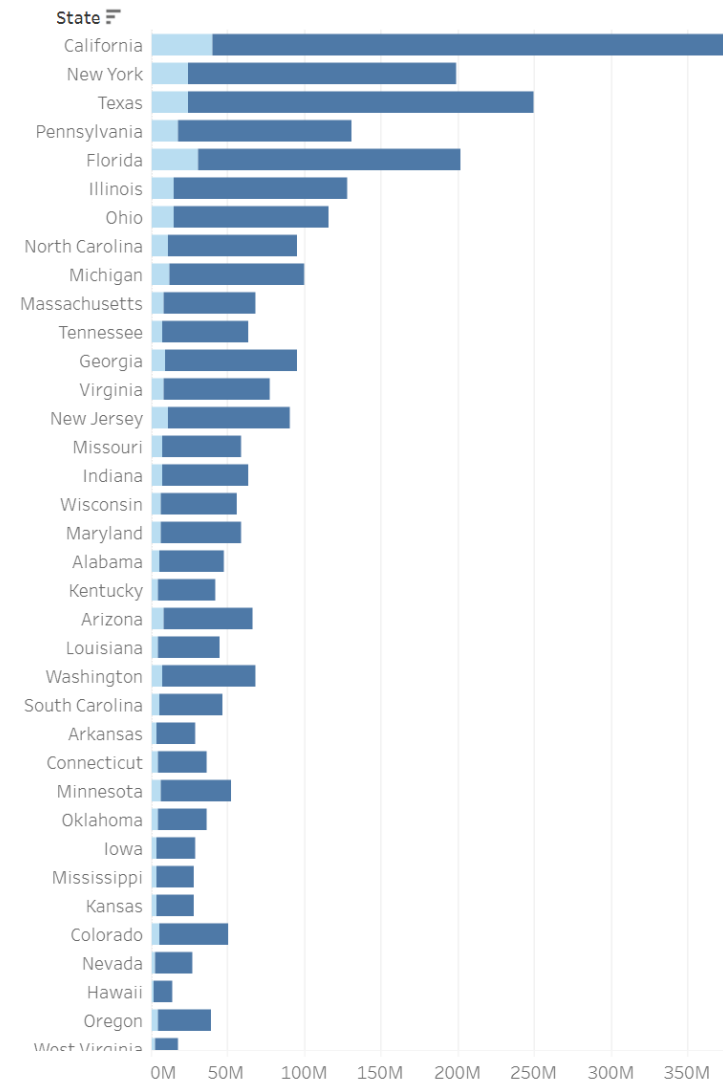
65+ years Deaths

65+ years old Pop



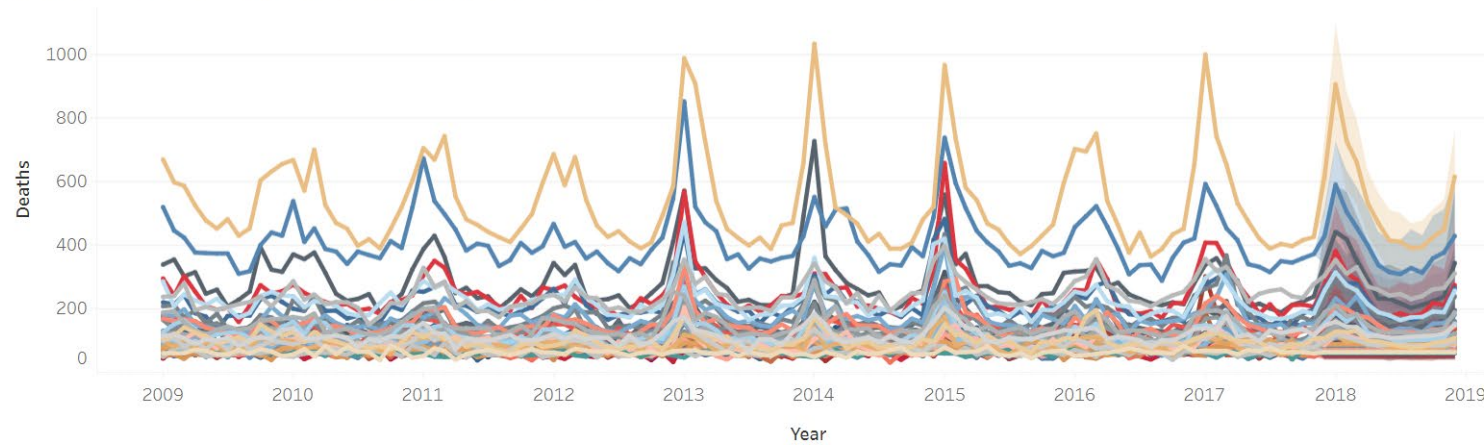
High-Risk States are considered the ones where the Vulnerable Population has the highest number, compared with the Total Population. These are California, New York, Texas, Pennsylvania, Florida, Illinois and Ohio.

Comparison between Total Population and +65 years



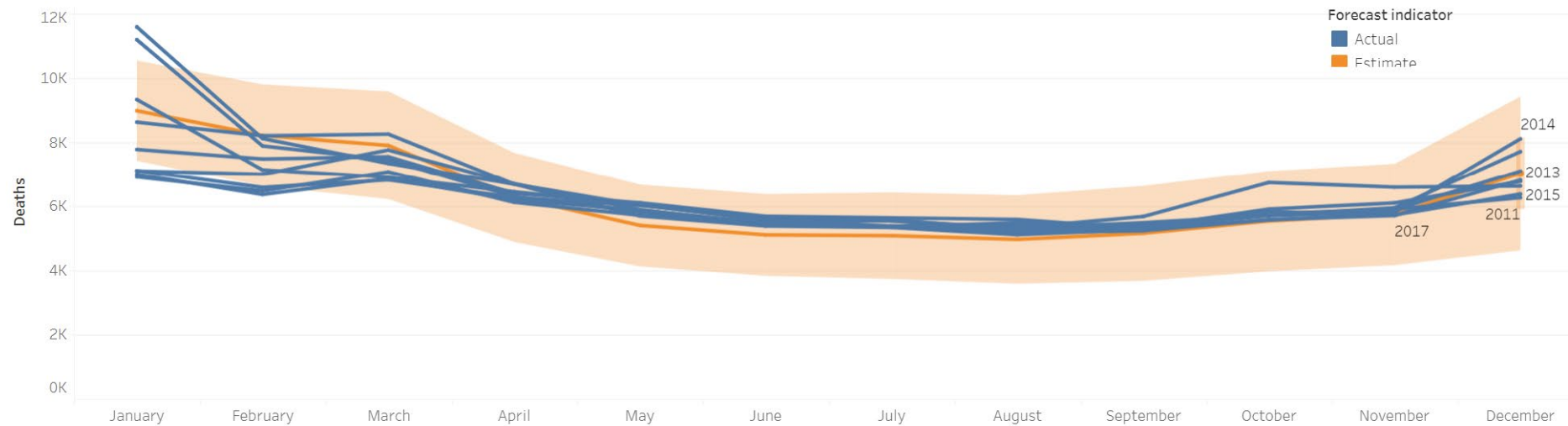
Vulnerable months

Influenza Deaths by State and Year Forecast



In the United States, flu season usually occurs in the fall and winter. While influenza viruses spread year-round, most of the time flu activity peaks between November-March, with high activity during in **December and January**.

Total Influenza Deaths by Months and Years



What category of population is the most at risk?

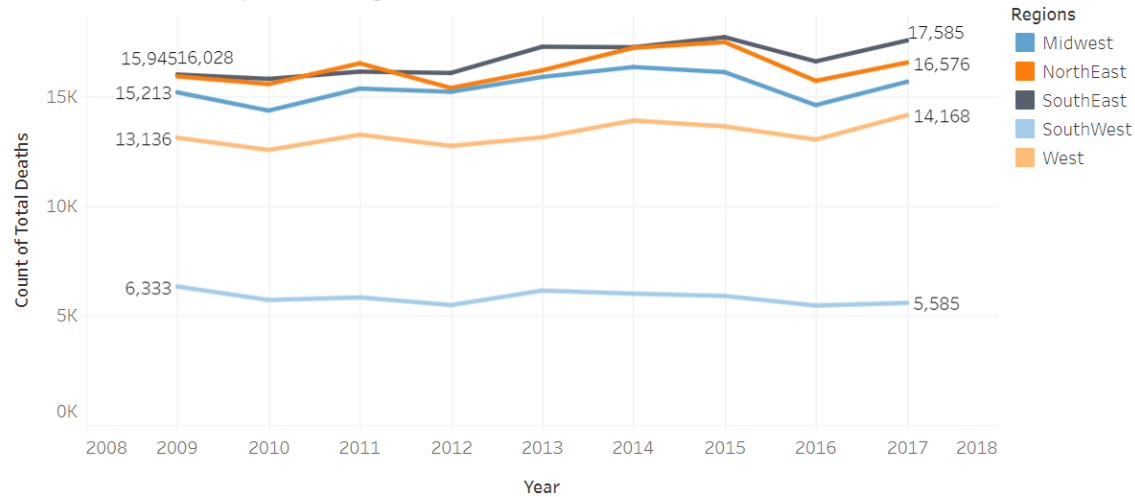
What states in US are most affected by the virus?

When is Influenza Season?

Conclusions and Recommendations

Conclusion and Recommendations

Influenza Deaths per US Regions

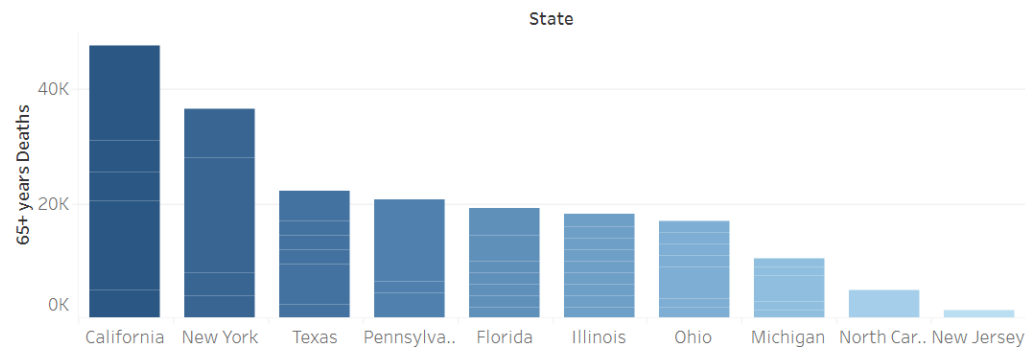


Influenza is a virus that affects population throughout all United States, mostly in Southeast, Northeast, Midwest regions. The vulnerable people are those in +65 years of age category. The high season lasts from December to February.

Recommendations:

- Influenza vaccination is the most effective strategy to prevent influenza infections
- Campaigns should be made to inform the population about the risks
- Extra staff should be allocated to hospitals in the most vulnerable top areas mostly during December-February.
- Wearing masks as long as the virus is still said to be active.

Top 10 Vulnerable US States



Bottom 10 Vulnerable US States

