Task 2.9 - Data Storytelling with Presentations

File created on: 1/23/2024 4:36:27 PM

Project Brief:Preparing for Influenza Season

Getting Ready for the Influenza Season

Covering the period 2009 - 2017 in anticipation for 2018

Goal:

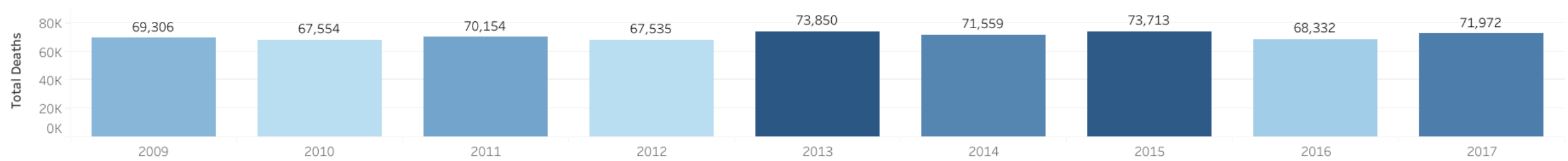To help a medical staffing agency that provides temporary workers to clinics and hospitals as needed.

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 severe complications and end up in the hospital. Hospitals and clinics need additional staff to treat these extra patients adequately. The medical staffing agency provides this temporary staff.

Objective:..

Annually, more than 67,000 individuals in the United States die succumb to Influenza

Cumulative Influenza-Related deaths in the USA between 2009 and 2017

Year	Total Deaths
2009	69,306
2010	67,554
2011	70,154
2012	67,535
2013	73,850
2014	71,559
2015	73,713
2016	68,332
2017	71,972

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Insights Derived from Influenza Fatalities Data

Hypothesis:
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Population .. ☐ Death..
☐ Death

Influenza Fatalities among Individuals Aged 65 and Over, as well as Below, from 2009 to 2017

Top 10 Cumulative Statewide Fatalities from 2009 to 2017
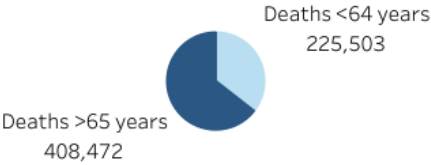
Year
☑ 2009
☑ 2010
☑ 2011
☑ 2012
☑ 2013
☑ 2014
☑ 2015
☑ 2016
☑ 2017

Deaths <64 years
225,503

Deaths >65 years
408,472

| California 47,483 9,410 | New York 36,576 7,347 | Pennsylvania 20,596 5,250 | Illinois 18,019 5,164 | North |
| Texas 22,140 | Florida 19,148 6,037 | Ohio 16,866 5,494 | Massachusetts 11,176 |
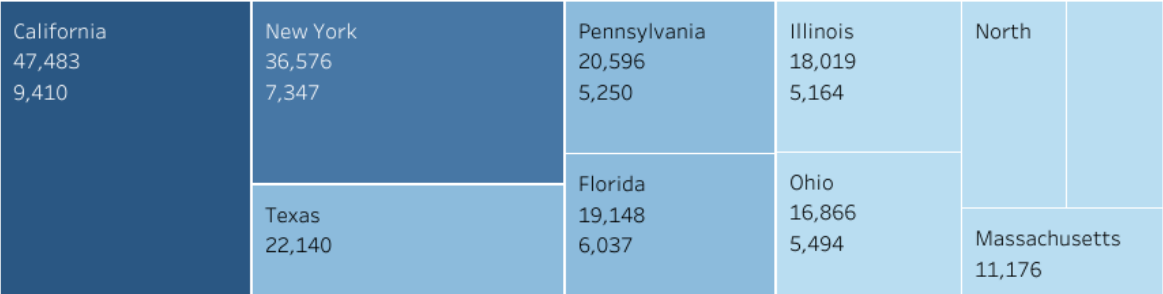
### Contrasting Cumulative Influenza Fatalities in States for Age Groups 65 Years and Over and Below from 2009 to 2017

U.S. State

California   47,483   9,410
New York   36,576   7,347

0K 2K 4K 6K 8K 10K 12K 14K 16K 18K 20K 22K 24K 26K 28K 30K 32K 34K 36K 38K 40K 42K 44K 46K 48K 50K 52K 54K 56K 58K

Deaths

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Mortality in the United States Across Age Groups and Populations

Top 10 Cumulative Fatalities per State Based on Vulnerable Age Groups
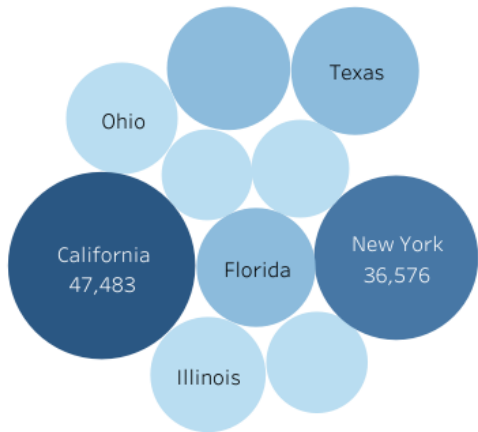
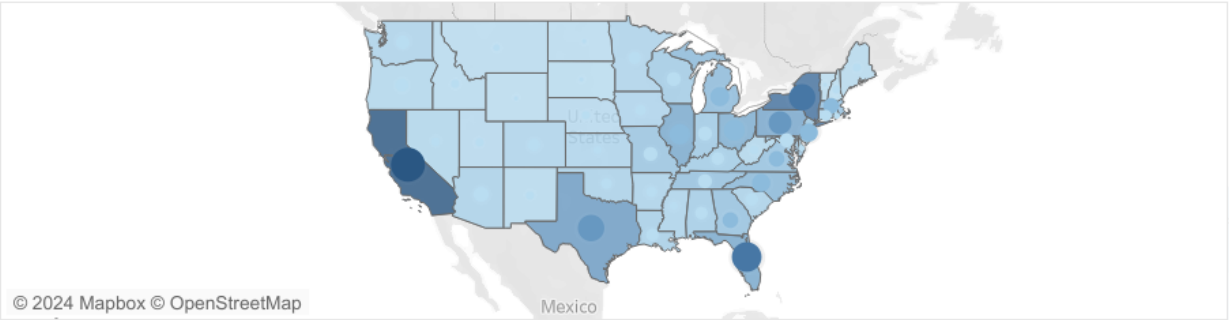Population >65 years
- 103,201
- 2,000,000
- 4,000,000

Deaths >65..   11 1 77 483

Population ..   103 2 1629 82

Population and Influenza Fatalities in States

Age Group: 65 Years and Older

© 2024 Mapbox © OpenStreetMap

Observing the data, heightened vulnerability among those aged 65 and older is evident in states like California, New York, Texas, Pennsylvania, and Florida.
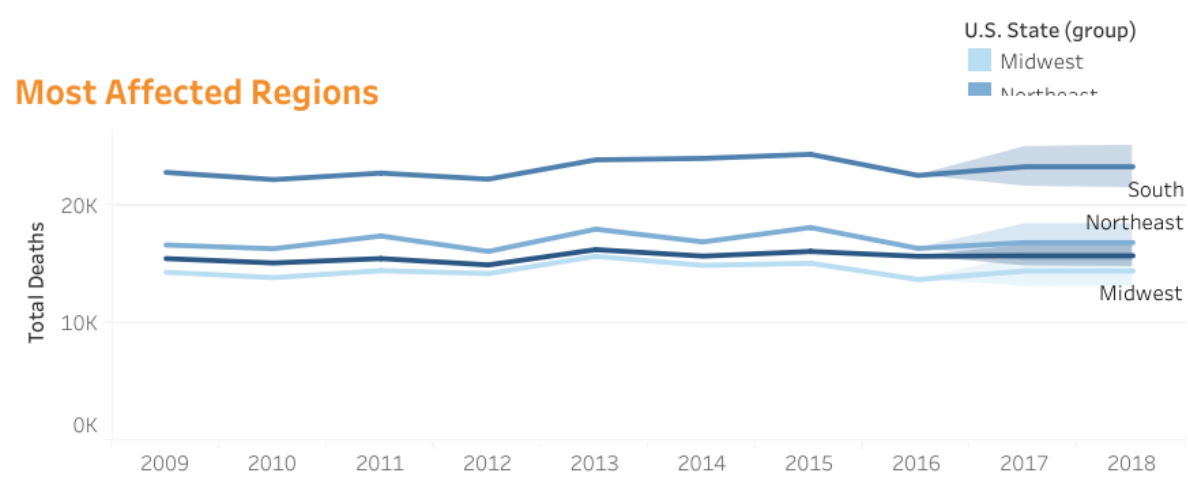
California, Texas, Florida, and New York have the largest 65+ populations and the most significant number of influenza deaths within this age group. North Dakota, Vermont, Delawar..

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Findings and Suggestions

Most Affected Regions

U.S. State (group)
- Midwest
- Northeast

South
Northeast
Midwest

Insights

1. Individuals aged 65 and above exhibit heightened susceptibility to mortality attributed to Influenza.
2. States characterized by larger populations demonstrate elevated mortality rates within the aforementioned vulnerable age cohorts.
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Top 5 Most Affected States

U.S. State
- California
- Florida

California
New York
Texas
Florida
Pennsylvania
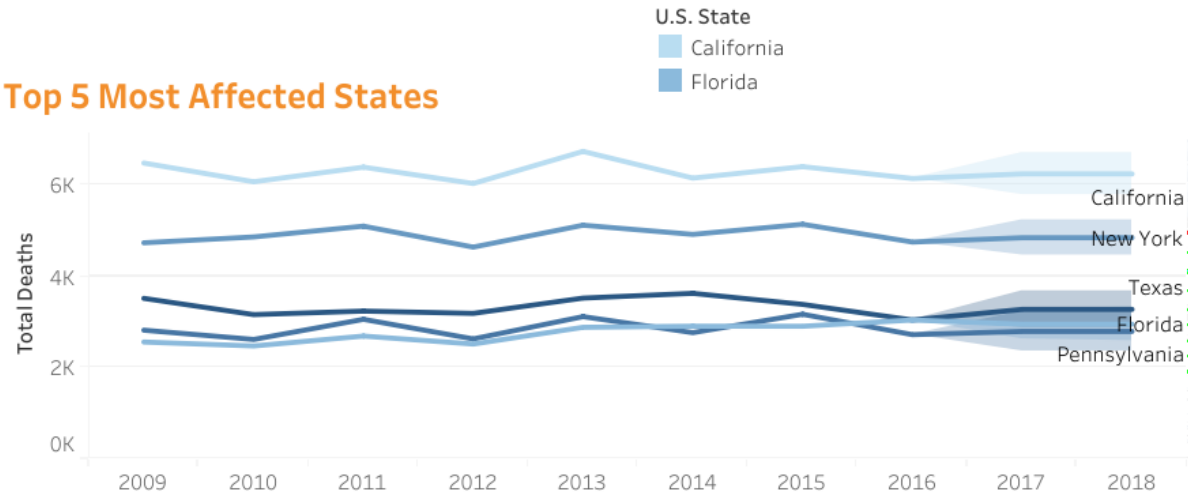
Recommendations:

Deploy additional medical personnel strategically to coastal regions in the United States, specifically focusing on California, Florida, Texas, New York, and Pennsylvania. This deployment should be synchronized with the peak periods of influenza prevalence in these top five states throughout the year. Such a targeted approach e..