

Influenza Season

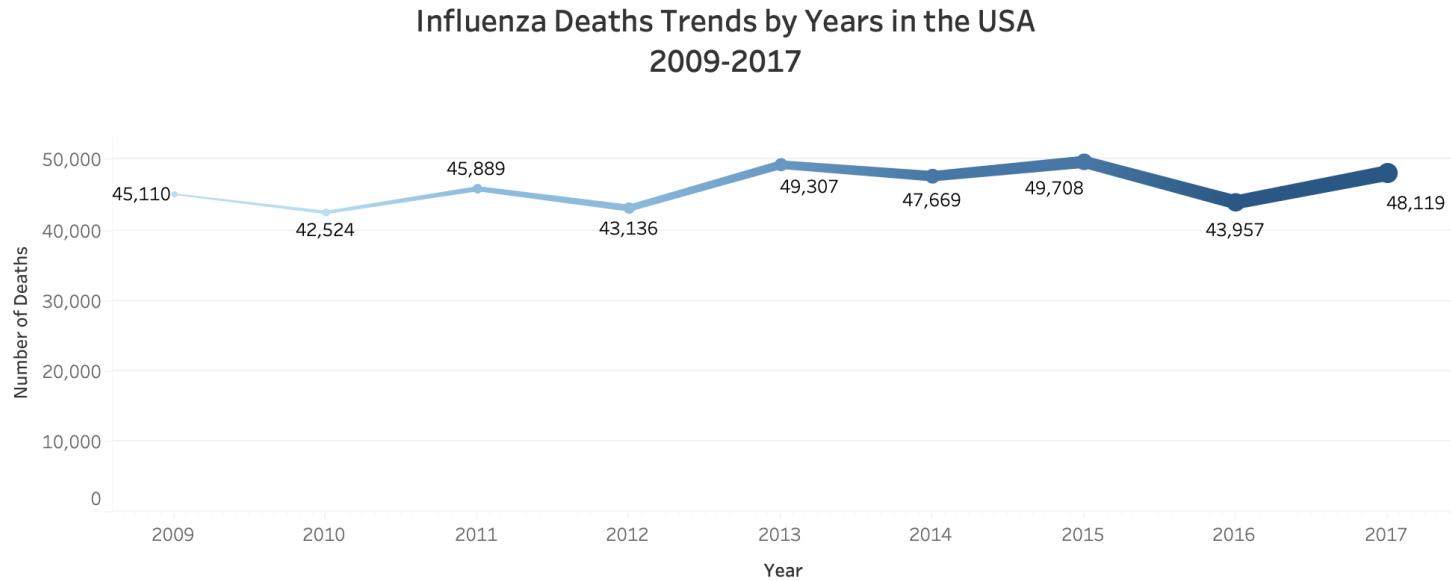
Does influenza flu deaths increase with age?	WHEN is the Flu Season and HOW does it impact each STATE.	The Most Versus the Least Affected States	PAST Versus FUTURE. What to expect? Forecasting by State.	WHO is AT RISK?
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PREPARING FOR INFLUENZA SEASON IN THE USA

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.

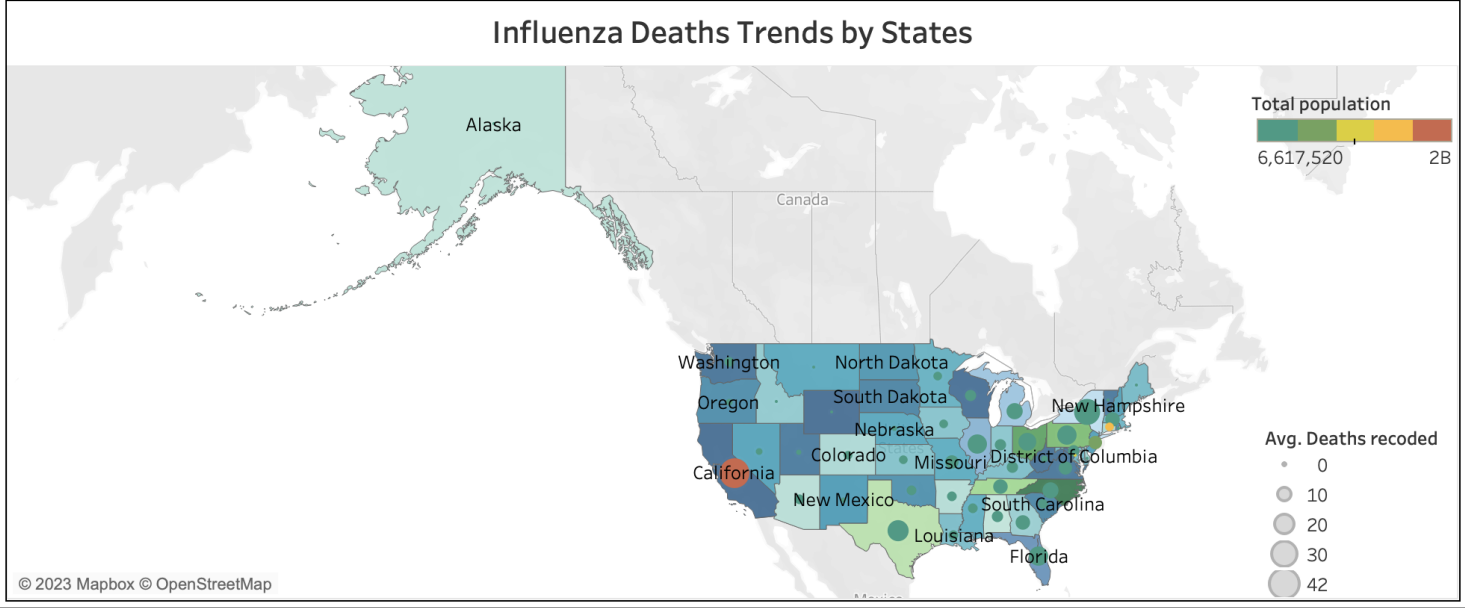
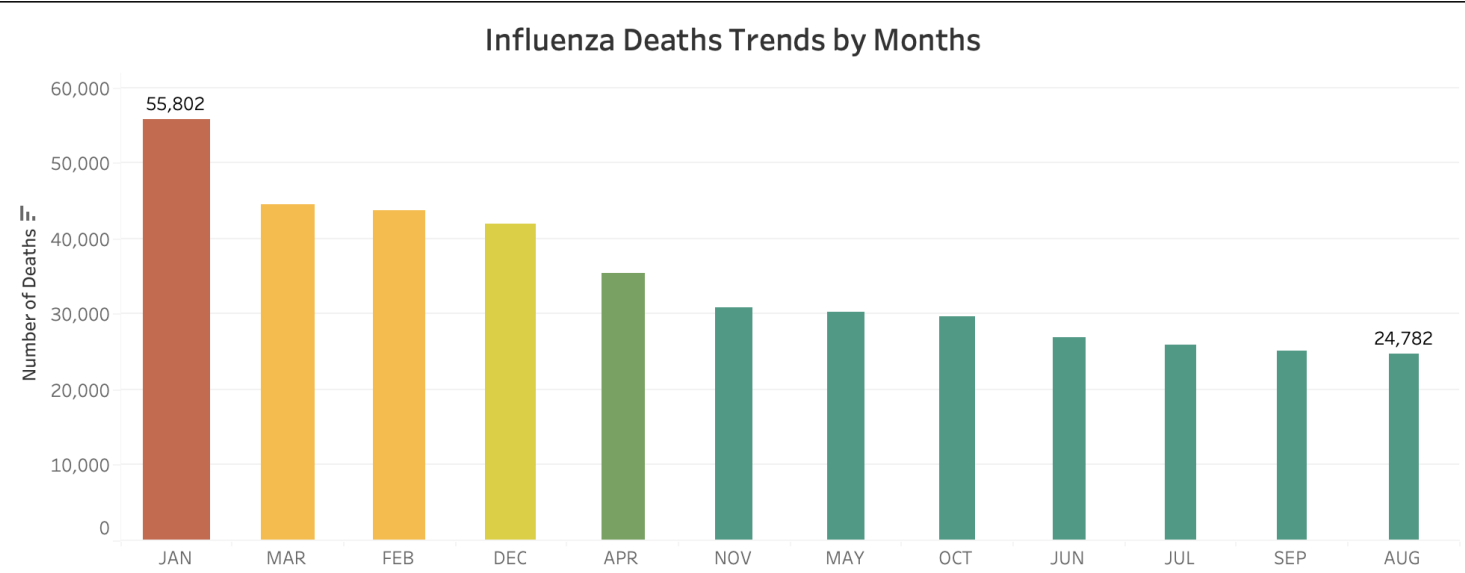
Objective: This project's goal is to plan for the upcoming influenza season by providing temporary workers to clinics and hospitals on an as-needed basis. Therefore, the analysis is looking to determine when to send staff, and how many, to each state. The data sets used contain entries from 2009 to 2017.

Research hypothesis
If patients are part of the vulnerable population category, then the mortality by influenza increases.



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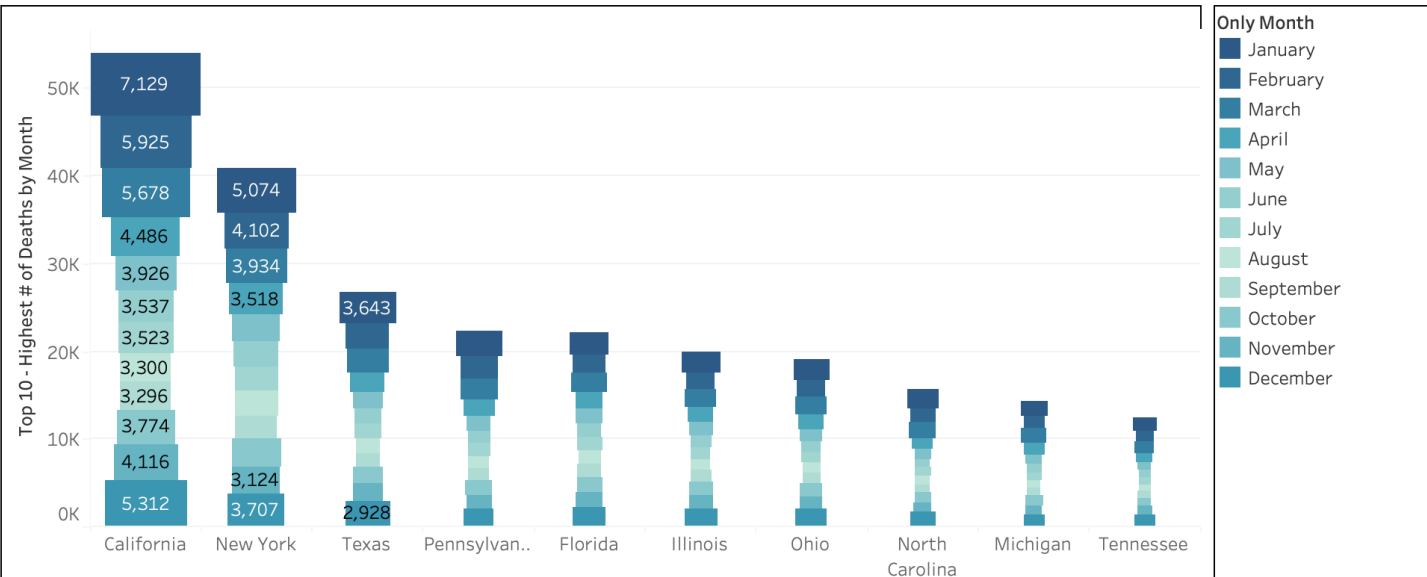
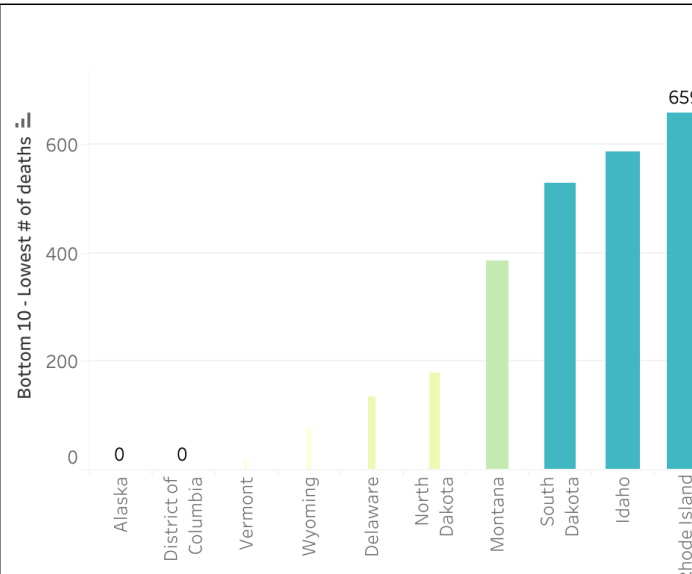
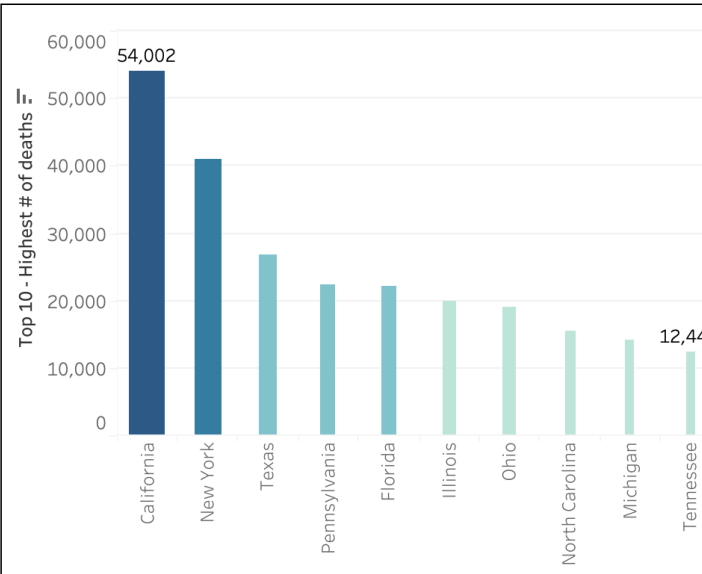
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Does influenza flu deaths increase with age?

WHEN is the Flu Season and HOW does it impact each STATE.

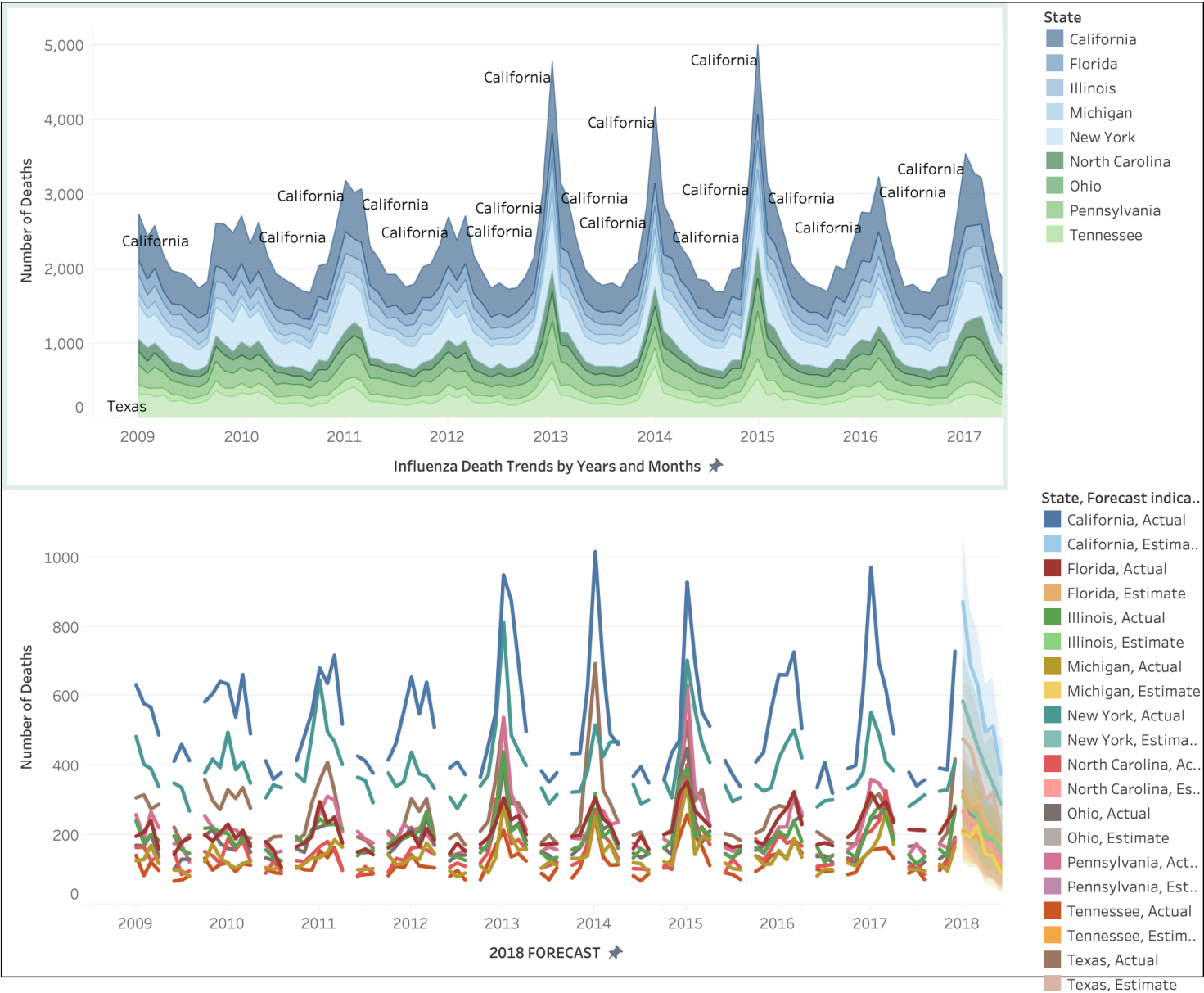
PAST Versus FUTURE. What to expect? Forecasting by State.

WHO is AT RISK



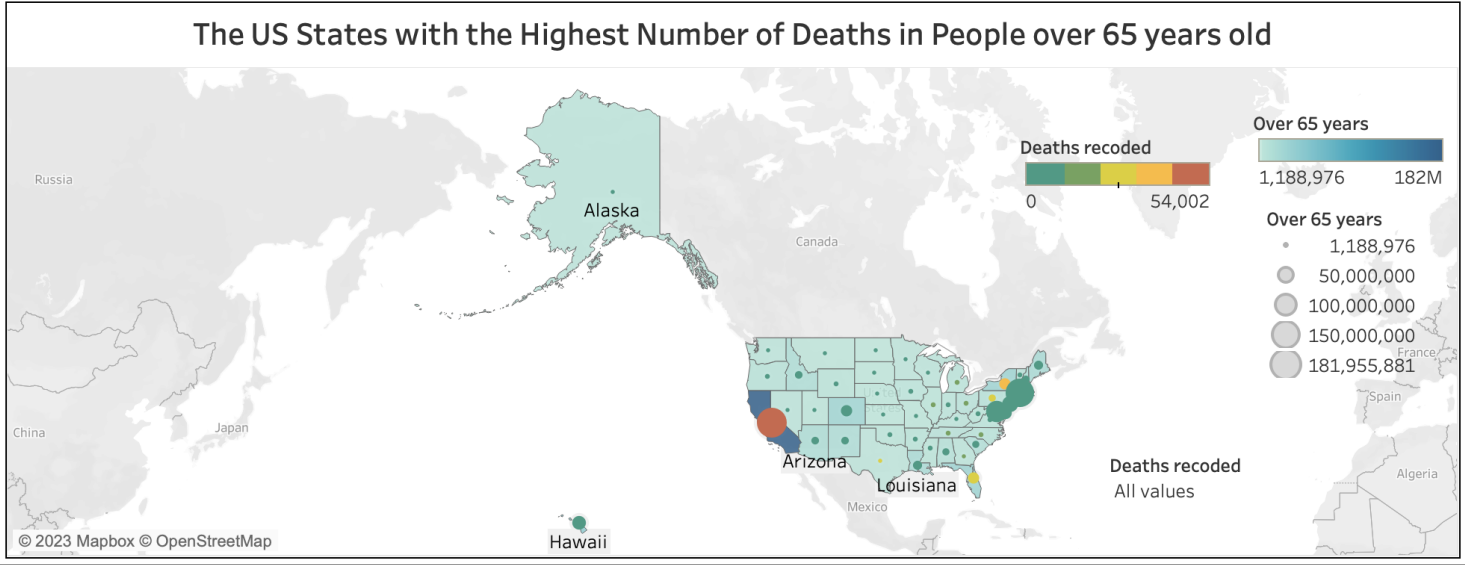
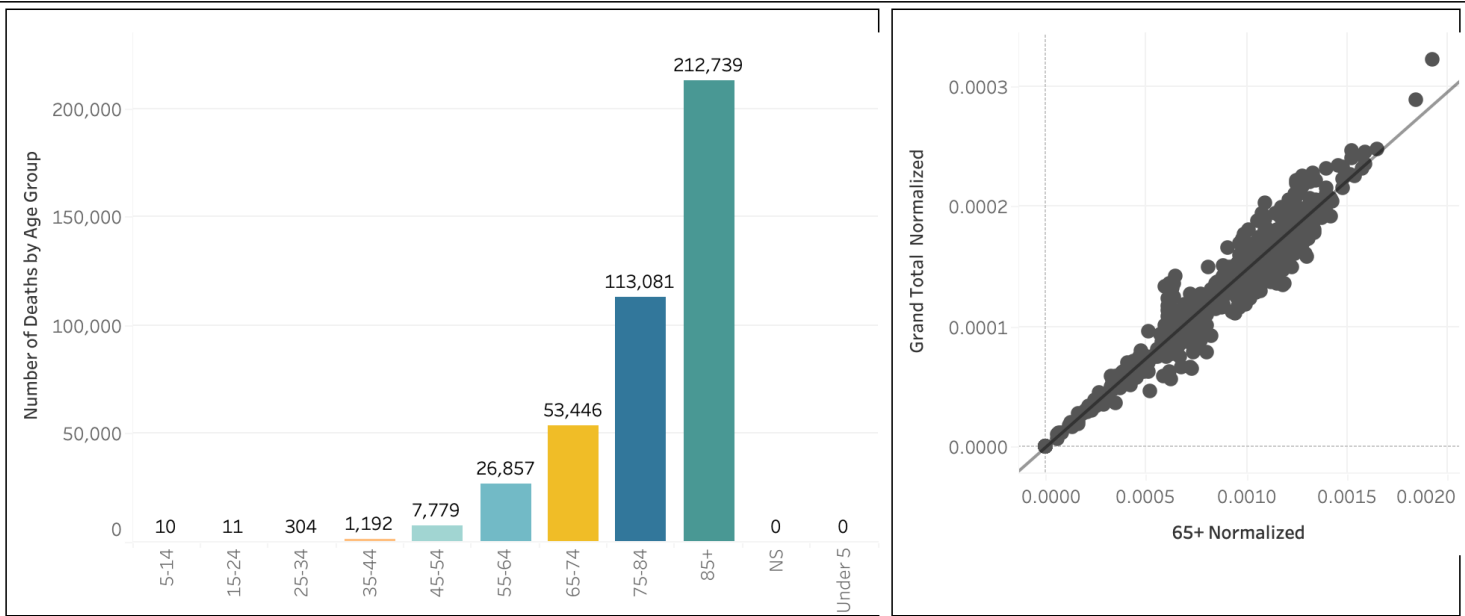
Influenza Season

- WHEN is the Flu Season and HOW does it impact each STATE.
- The Most Versus the Least Affected States
- PAST Versus FUTURE. What to expect? Forecasting by State.
- WHO is AT RISK?
- Vulnerable versus Less Vulnerable Population



Influenza Season

The Most Versus the Least Affected States	PAST Versus FUTURE. What to expect? Forecasting by State.	WHO is AT RISK?	Vulnerable versus Less Vulnerable Population	California, New York, Florida. How about other states like Hawaii?
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Influenza Season

PAST Versus FUTURE.
What to expect?
Forecasting by State.

WHO is AT RISK?

Vulnerable versus Less Vulnerable
Population

California, New York, Florida. How
about other states like Hawaii?

The Result

Vulnerable Population

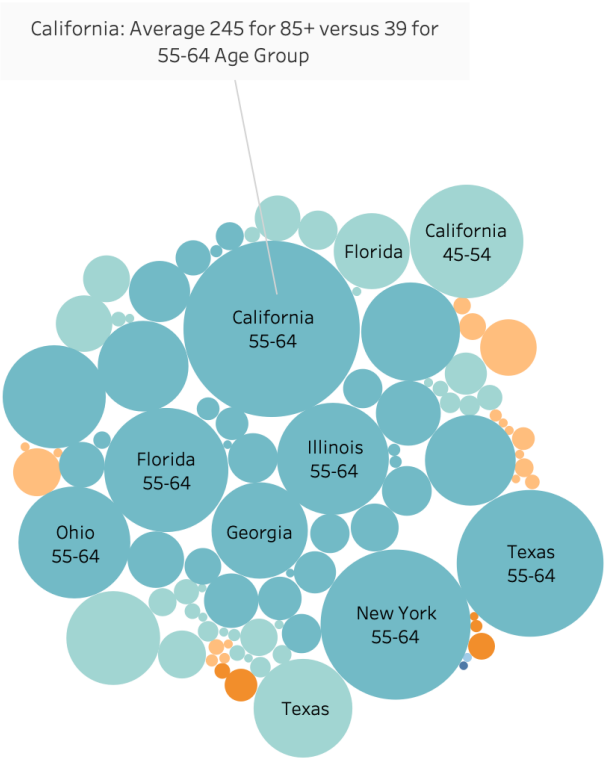
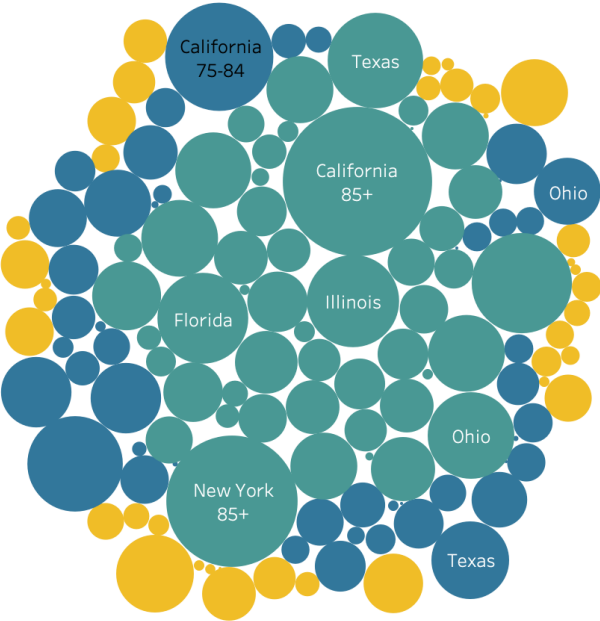
- Under 5
- 85+
- 75-84
- 65-74

Highlight State

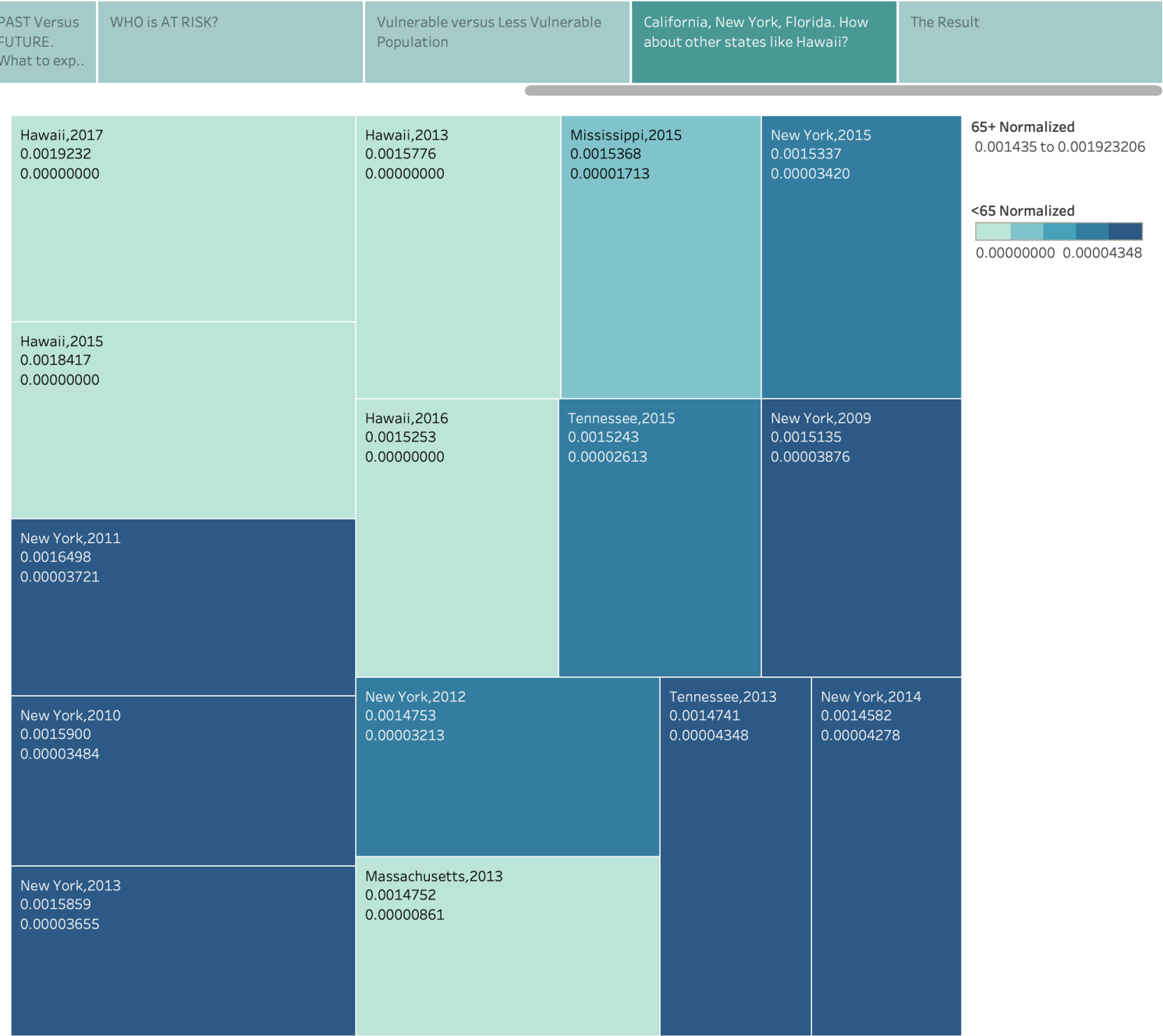
No items highlighted

Less-Vulnerabl..

- 55-64
- 45-54
- 35-44
- 25-34
- 15-24
- 5-14



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PAST Versus FUTURE. What to exp..	WHO is AT RISK?	Vulnerable versus Less Vulnerable Population	California, New York, Florida. How about other states like Hawaii?	The Result
<p>After the integration and normalization of the data it was revealed that states such as Hawaii have a high percentage of deaths compared to their relatively small population. When preparing for the influenza season, these states don't have to be overlooked.</p> <p>There is a Moderate to Strong Relationship between the 65+ Age Group normalized values and 65+ Grand Total showing that the population over 65 years old has the highest number of deaths among the total population.</p> <p>Although the current analysis addressed the question where to send the medical staff, it couldn't address the question of how many medical staff need to be deployed. Therefore, further analysis on data sets that provide information about the presence of the medical staff in each state in the previous years, past hospitalization of the vulnerable population and their vaccination status along with information about the vulnerable population under five years old, pregnant women, and imuno-compromised people will be needed to plan accordingly for the following influenza season.</p> <p>THANK YOU!</p>				