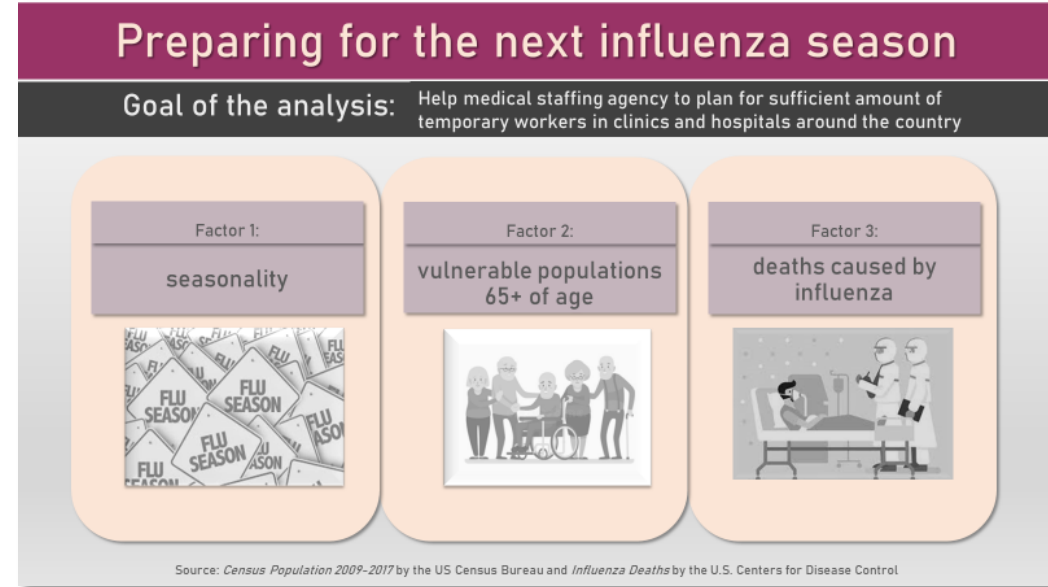


CASE STUDY

INFLUENZA

Analysis of the flu season in the U.S.

Tools: EXCEL and TABLEAU PUBLIC



The project was motivated by the fact that the United States experiences flu seasons when more people than usual suffer from the illness. It required to examine differences in staffing needs across each of the individual states.

During this project about flu season in the United States, I had a chance to expand on Excel analytical functions and work on visualizations in [Tableau Public](#).

The data about demography, flu deaths, flu shots, doctor's visits, and test results were [collected in 5 separate sets](#). Sources of the data are Census Bureau and CDC.

Upon exploring the business requirement document, I learned to **interpret the business requirements** from a data perspective by translating them into questions that guided me through the analysis.

While designing a data research project, I constructed a **project management plan** and developed a hypothesis: the US states with more vulnerable populations most likely record higher flu deaths numbers, thus hospitals in those states need more staff to handle sick patients.

In this project, I worked mostly with Census and Flu Death sets. Using exploration techniques learned from the previous project, I profiled the data and checked them for **accuracy and consistency**.

Since data was spread between two sets, I needed to map variables and perform many steps to **transform** the data. Then, I was able to integrate the sets and look for a **correlation** between selected variables.

Finally, I learned how to turn my research hypothesis into a testable **statistical hypothesis** by creating the null hypothesis, calculating the significance level, and interpreting the p-value. In this study case, I rejected the null hypothesis and confirmed my research hypothesis.

The second part of the influenza project concentrated on **visualizations** of the results in Tableau.

I created comparison, temporal, spatial, and textual charts. Since the scope of the project required looking for insights to prepare for the next season, I also generated a **forecast**.

In Tableau's **dashboard**, I produced a report with my findings along with recommendations and video-recorded the insights for the stakeholders.

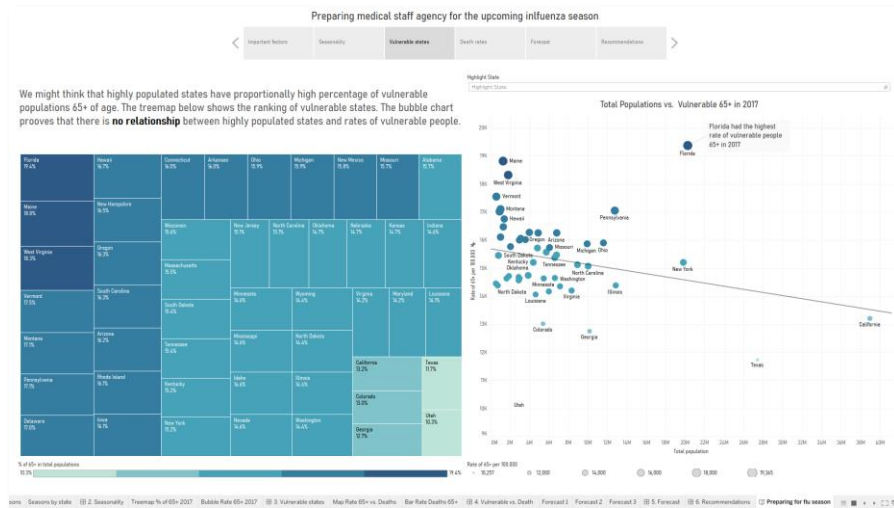


Fig. 1 Treemap and bubble chart showing no relationship between highly populated states and rates of vulnerable populations.

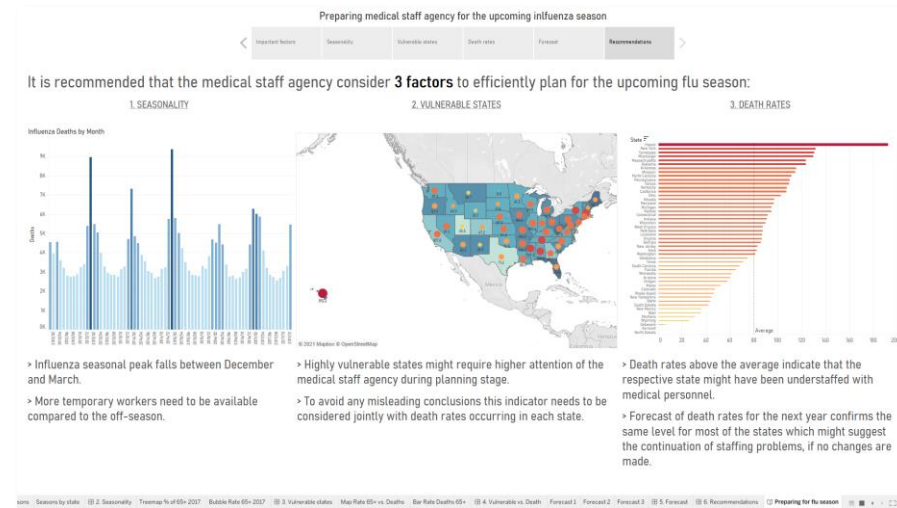


Fig. 2 Storyboard with recommendations created in Tableau's dashboard.

[Here](#) is the link to my Tableau dashboard and [here](#) you can watch my recording.