**Task 2.10 Presenting Findings to Stakeholders**

Presentation Link: <https://www.loom.com/share/3e1c8f1129f1406a84ebe77d53466f96?sid=cca23163-3b39-4ff2-9704-2270fb07305f>

Tableau Presentation Link: [2.9 Preparing for Influenza Season Version 2 | Tableau Public](https://public.tableau.com/app/profile/alex.kaplan3758/viz/2_9PreparingforInfluenzaSeasonVersion2/InfluenzaSeason?publish=yes)

* Slide 1: **Preparing for Influenza Season**

Explain preparing for flu season to adequately provide staff to medical locations for influenza patients. Doing this because vulnerable populations are most at risk of developing sever symptoms and dying compared to non vulnerable populations. Give brief overview of talking points for the presentation.

**Visuals to help:** Use bar chart to show deaths per year.

* Slide 2: **Vulnerable populations, Intro**
  + State your hypothesis We can see they also have the most deaths per capita compared to nonvulnerable aged populations. Define what vulnerable populations are and how they’re disproportionately affected by influenza.
  + <https://www.loom.com/share/6d5aaa97ccb840bfa7ad59210cb7917f?sid=f95a067c-a4ab-4c30-b3f4-fd3315714a0d>

**Visuals:** Display deaths per capita in bar graph to show 65 and above have more deaths per capita than nonvulnerable.

* Slide 3: **Vulnerable populations, Results**
  + The results of your test; this is how impactful vulnerable populations are to overall flu severity
  + Location: this is where those populations are located, and this will guide recommendations to these areas. Show interactivity of maps.

Slide 4: **Correlation**

Discuss strong positive correlation between number of influenza related deaths and vulnerable populations. Point out how we can use this information to provide medical staff accordingly.

Slide 5: Age Groups with most deaths

Discuss bar graph comparing deaths of each age group with 75-84 being the highest by far. Has nearly double the deaths of the previous age group. Also reference pie chart of vulnerable vs non vulnerable populations.

* Slide 6: **Seasonality**
  + Address *when.* Point out California, Florida, Texas, and New York are the states with the most influenza related deaths. Point out high amount of deaths in 2017.
  + January and December are the months where Influenza season peaks.

**Slide 7 Forecast:** Use forecast visual to predict 2018 influenza deaths

Explain that 2018 is predicted to have similar death trends compared to previous years. California, New York, Florida, and Texas are still states that are likely to have the most influenza related deaths in 2018. Explain it is advisable to send medical staff to these states in 2018.

* **Slide 8**: **Conclusion**
  + Summarize everything you've discussed: purpose of the project, impact of vulnerable populations, seasonality
  + Give your recommendations. Reiterate peak months are Jan & Dec. Attention should be given to overstaffing and understaffing across each state since exact number of staff was not given for this analysis. State considered understaffed if ratio is under 90% and overstaffed if above 110%. Point out top 5 states and their death counts and populations at their peaks.

**Slide 9** Recommendations and Next steps. Sending more medical staff to states with most influenza related deaths like California and New York. Texas, Pennsylvania, and Florida have a moderate need for medical staff.

Next steps: discuss what will need to happen next to move forward with the project. Maybe budgeting is another factor that needs to be discussed next to quantify how much staff to send to each location? Explain how it may be helpful to collect additional data for populations with preexisting conditions which could make someone more at risk for influenza related death. Make sure states are not over or understaffed. Conduct follow up analyses using surveys or interviews to monitor if influenza related deaths are being reduced.

Project Limitations and Metrics

6. **Were there any limitations that prevented you from conducting an analysis?** One limitation was not knowing the vaccination rate of each state. If I had that information, I could more accurately allocate medical staff to states not only with high influenza death rates but also with low flu vaccination rates for their citizens. Another limitation was not knowing if people of vulnerable age groups were also suffering from preexisting conditions such as diabetes, cancer, HIV, asthma, etc. Having historic data on patients with these preexisting conditions could have made the analysis more accurate for knowing if the influenza related deaths were due to more than just their age. It would have also been helpful to have the patient to staff ratio for each state. If I had this information, I would have been able to more accurately calculate the number of staff to allocate to each state by knowing if certain states were understaffed or overstaffed before the peak of influenza season.

**Did your data have any limitations that may have affected your results?** One limitation for my results would be the data only noting one cause of death. This could create some issues in knowing the exact cause of death if patients with preexisting conditions like AIDS or diabetes started declining before influenza or if influenza was in fact what caused their deaths. With many of the numbers of deaths being suppressed, the death counts among younger populations could be inaccurate since I had to estimate the deaths for these populations. It would be helpful to have a higher exact number of deaths in younger populations because they could require more medical staff in states where they make up a lot of the population. Another limitation could be only having the death counts per state and not per individual county of each state. This could result in medical staff being allocated inaccurately to clinics and hospitals in each state.

**Consider this in terms of data quality and data bias. How might you monitor the impact of the staffing changes you recommended?** I would monitor the ratio of staff to patients each year, especially during peak months of January and December to see if they are higher than last year with particular attention to those in California, New York, and Florida. I would also observe the number of influenza related deaths for vulnerable populations for 2018 to see if these numbers decreased with additional medical staffing. If they have not, I made need to approach the future analyses differently.

**Is there a metric that could be used for monitoring this impact?** One metric that could be monitored is the number of influenza related admissions into hospitals to keep track of staffing requirements in each state. I would also keep track of each state’s population compared with their influenza related deaths for 2018. This ratio could provide insight as to whether the staffing allocations are decreasing or increasing the number of influenza related deaths in each state. Another metric I would keep track of is the flu vaccination rates of each state. Knowing if they are increasing or decreasing could provide insight to whether that state will have fewer influenza deaths or not which could help determine if they need more staff or less.