Task 2.8 Textual Analysis

**Part 1** [2.8 Word Cloud and Packed Bubble Chart | Tableau Public](https://public.tableau.com/app/profile/alex.kaplan3758/viz/2_8WordCloudandPackedBubbleChart/WordCloud?publish=yes)

Word Cloud

A screenshot of a computer

Description automatically generated

Packed Bubble Chart

A screenshot of a computer

Description automatically generated with medium confidence

4. **Explain what the bubble chart tells you that the word cloud can’t.** Bubble charts are used to compare frequencies between many variables in a much easier way to see than if visualizing through a word cloud. They allow for a more precise comparison since there is very little text to read unlike the word clouds. Word clouds can also be tough to distinguish clustered specific words from each other while bubble charts can be organized to more specific words or limitations. Bubble charts are much easier and quicker to read compared to word clouds which can be overwhelming and confusing especially to a less technically trained audience.

**Part 2**

3a. **What sort of data might you receive from unstructured survey questions posed to staff and patients?** You could receive unstructured data regarding flu symptoms and their severity for patients visiting a medical office or hospital. We can also survey each state and see how many of their citizens are vaccinated against influenza. Patient treatment options and choices by the patients can also be given through unstructured data. We could also see data describing patterns of influenza infections such as how long on average they last for patients, and if certain states are seeing an increased number of cases in particular months of the year.

3b. **How could textual analysis be used to produce insights from this data?** Using a word cloud to characterize textual data such as flu symptoms, treatment plans, and length of infection can give us new insights that were not as clear in the original data. It may also be necessary to use a word cloud for each patients’ health status because patients with comorbidities such as obesity or asthma may struggle with influenza symptoms compared to patients without these conditions. We can look at the word cloud results and determine if there is a trend for the most common symptoms, how long the average hospital stay is for a patient, and even if the influenza vaccine rate is higher in certain states. We can use all these insights more efficiently allocate medical staff to states with higher survey results of all these factors.

4a. **With influenza staffing needs determined and plans in place for the next influenza season, how might you use textual analysis to measure the success of the project?** We could use textual analysis to assess how the patients’ treatments went and how their overall experience was in the hospital or medical office. We could even use textual analysis to rate their experience with their specific healthcare provider. We could also use textual analysis to see if certain states need more influenza vaccines to better prepare for next year’s influenza season.

**4b. How could textual analysis be used to produce insights from this data?** We can use a word cloud structured with sentiment analysis to see how the patients felt after going to their medical professional and their office for treatment. We would want to pay close attention to see if patient responses are positive, negative, or neutral. For instance, some patients may feel like there was inadequate availability to see their medical provider which could be due to lack of staff or limited exam rooms to treat patients. Other patients in a different state might feel that they had a positive experience with their treatment and that they were able to see their medical professional in a timely manner. This could be helpful to note for next year’s flu season so we can allocate medical staff in other states more appropriately.