PART 1: TEXTUAL ANALYSIS

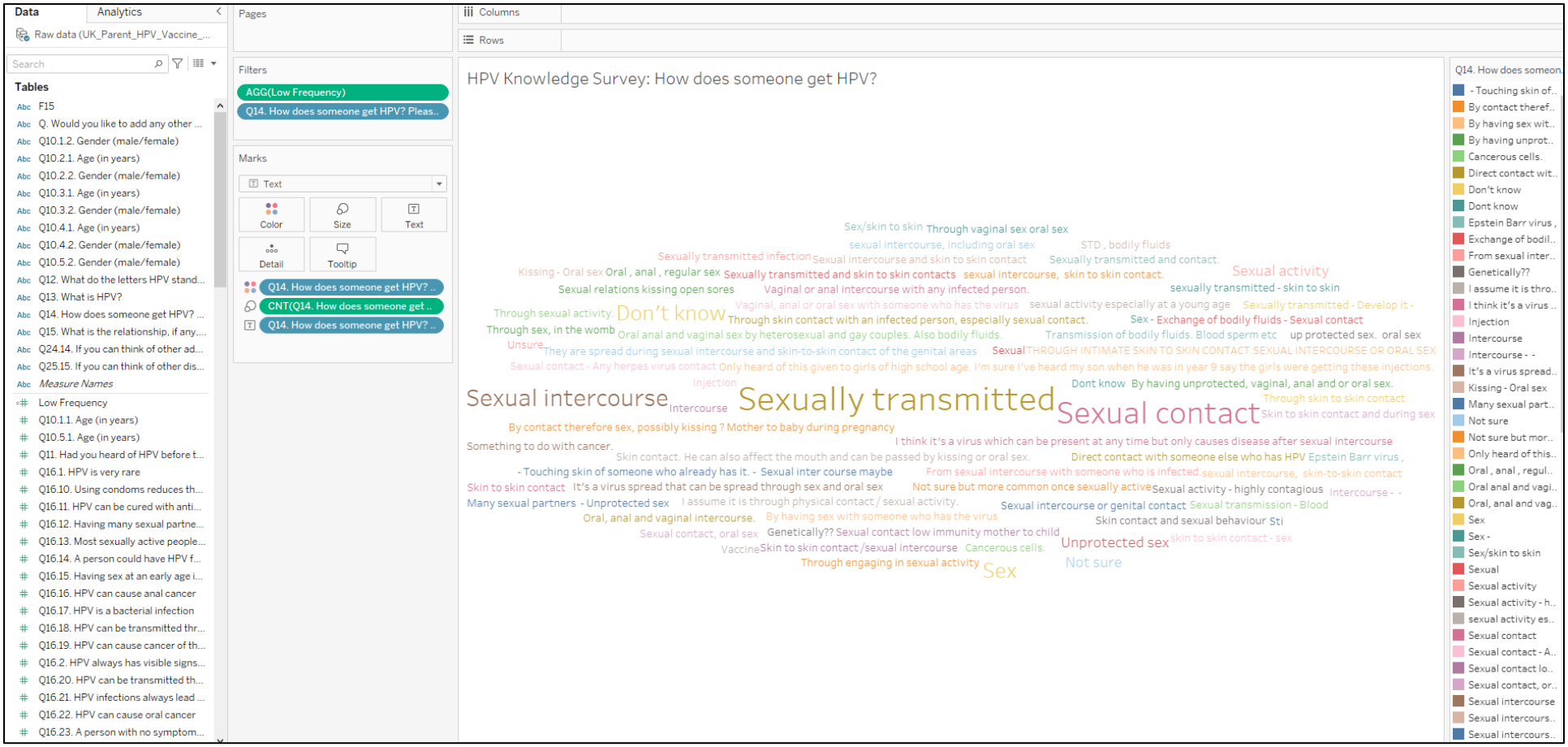

Tableau Public Link:

https://public.tableau.com/app/profile/mindy.duong/viz/DataImmersionTask2_8TextualAnalysis/TextualAnalysis?publish=yes

PART 1: BUBBLE CHART

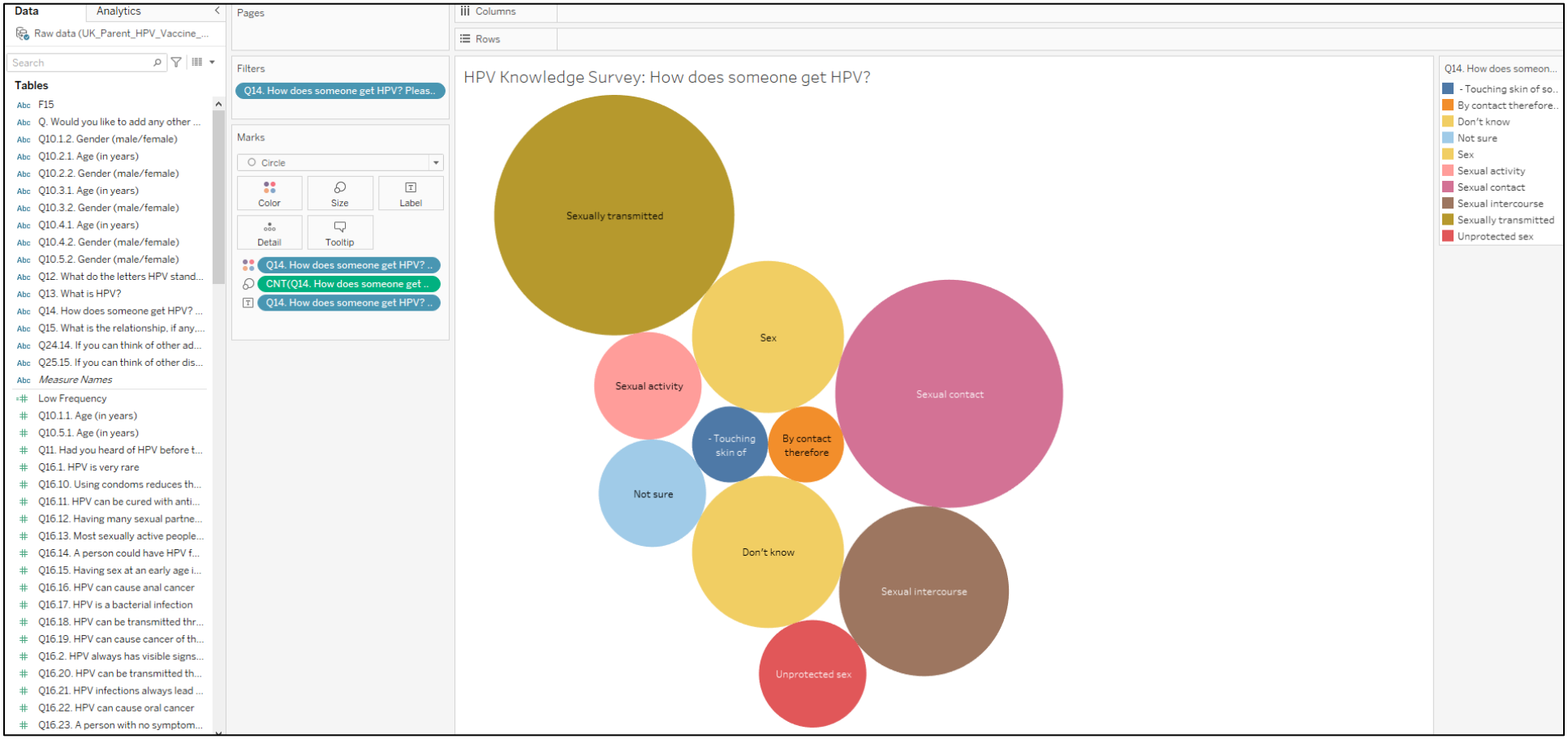

Tableau Public Link:
https://public.tableau.com/app/profile/mindy.duong/viz/DataImmersionTask2_8TextualAnalysisBubbleChart/TextualAnalysisBubbleChart?publish=yes

Explain what the bubble chart tells you that the word cloud can't.

The sizing utilized with a bubble chart provides more clarity than the word cloud. The individual circles also are easier to read than the word cloud as it provides clear boundaries between each word; at a quick glance, the word cloud looks like it almost it has (incoherent) sentences.

PART 2:

1. **How might unstructured survey data supplement your student project?**
   Unstructured survey data from patients may provide insight on what motivates them to get (or not get) the influenza vaccine on a regular (annual) basis. The responses may also provide insight on whether the respondent have trust in healthcare professionals and would follow recommended safety protocols to prevent influenza from spreading. The quantitative data we can collect only provides information on the "what," but these unstructured survey data (i.e., qualitative data) can provide insight into the "why."

   - **What sort of data might you receive from unstructured survey questions posed to staff and patients?**
     We might receive information on the quality of the staff, both current and the ones we've deployed in the past (and may deploy again). We can see whether a clinic or hospital is short-staffed, but even if we threw tens or hundreds of medical staff at that location, if they suck at their jobs, it may not have any viable effects on the influenza mortality rates. We can also get responses on the quality of the facility and overall happiness of the staff, because even high-quality and high-performing professionals can get unmotivated and slip if their work environment is toxic.

   - **How could textual analysis be used to produce insights from this data?**
     If, for example, we ask what they're unsatisfied about at the medical facility, we may get top responses like "supervisor/boss," "colleague/coworker," "pay/salary," "supplies," etc. and from there we can provide more recommendation on how to improve those factors so people can focus on the patients and influenza situation. Another potential question we can pose is why people aren't getting vaccinated, and we may get responses like "convenience," or "accessibility," which would give us a start on how to focus outreach and education efforts.

2. **How might surveys or other forms of unstructured data be useful to analyze as a *next step* in this project?**
   As mentioned previously, unstructured data provides us qualitative answers to the "why" questions portion of our assignment (e.g., Why does this state have less influenza deaths? Why is this medical facility doing better than this one? Etc.). It isn't so simple of a formula as "smaller facilities need more staff" since we also need to know the quality of said staff. A medical facility or state can have double the staffing, but also double the influenza mortality rates due to low-quality staff and/or poor education and outreach of the importance of the influenza vaccine.

   Following the deployment and influenza season, we can administer an evaluation survey to see the effects of the additional medical staff. We can compare death count and mortality rates quantitatively, but since we are dealing with people, not robots, we need to survey their thoughts and feelings of the situation. For example, was it overwhelming or helpful to have the additional medical staff?

   - **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?**
     During the deployment and after, we can issue a survey on how staff and patients are feeling about the situation, then perform a sentiment analysis. If the sentiment is generally positive, we can continue moving forward with our plan; if the sentiment is neutral or negative, we can evaluate and strategize a contingency plan to hopefully shift the sentiment in a more positive direction.

   - **How could textual analysis be used to produce insights from this data?**

As previously mentioned, sentiment analysis can be performed to gauge responses from staff and patients on the quality of care they are receiving from our additional medical staff deployment. From there, we can plan accordingly on how to effectively move forward.