Hillel Krief 02/15/2022

Stakeholder Communication

## Meetings

* Meetings will be held by video conference our stakeholders span many different sectors nationwide.
* All relevant stakeholders will be a part of the meeting
* Business requirements, project goals, clarifications, and privacy questions will be the topic of our initial meeting
* Another meeting will be held at the end of the project to discuss our findings and implementing potential solutions.

## Phone Calls

* The data analyst will be in touch via telephone call if they have anything to clarify.

## Emails

* The data analyst will be in touch via email with any small questions as well as updates on where the project is holding.
* If things are running behind schedule or if an urgent issue arises, an email will be sent out as well as a potential meeting to discuss time extension

Schedule and Milestones

* **End of Week Two: (*1.2/1.3)***
  + Creation of questions and hypothesis
  + Data Collection and Design
* **End of Week Four: Data Preparation *(1.4/1.5/1.6)***
  + Data Sourcing
  + Data Cleaning and Quality Measures
* **End of Week Five: Data Integration *(1.7)***
  + Integrate Multiple datasets into one
* **End of Week Six: Conduct Statistical Analysis *(1.8/1.9)***
  + Descriptive Statistics
  + Inferential Statistics
* **End of Week Seven: Conduct Data Analysis *(1.10)***
  + Solidify findings
  + Create presentations
* **End of Week Eight: Present to Stakeholders**

Project Deliverables

* Midway report explaining hypothesis and summary of analysis of data
* Video Presentation to stakeholders where a visual analysis will be presented along with suggestions for solution implementation

Audience Definition

The audience will include nurses, physician assistants, doctors, and patients of Influenza. Therefore, most of the audience will be well versed in medical terms relating to Influenza but not necessarily to data analysis. Therefore, details will be included since the audience would be considered domain experts, but analytical terms will be broken down and explained. There will be a glossary of terms included as well.

Questions

## Which type of Illnesses or medical issues require more staffing that usual?

According to “Amnhealthcare” Each year, between 3% and 11% of the U.S. population gets sick with the flu, depending on the severity of the virus, according to the US Centers for Disease Control (CDC). For healthcare organizations, the flu season begins with mass inoculations against the particular virus, then treatment of many people who get sick because they either weren’t vaccinated or the vaccine didn’t work for them. **Many healthcare organizations take on extra staff to handle the increased care demands of the flu season**.[[1]](#footnote-1)

## Where in the past have, we seen a similar staffing issues as a result of a national medical issue?

As the COVID-19 pandemic progresses, staffing shortages will likely occur due to HCP exposures, illness, or the need to care for family members at home.[[2]](#footnote-2)

## During COVID, where have we seen hospital shortages or surpluses?

“According to the White House's COVID-19 Community Profile Report, **New Mexico** is enduring the worst shortages, with half of its hospitals reporting a staffing issue in the week that ended Jan. 9. **Vermont** comes in second with 47% of hospitals reporting a staffing shortage, followed by **Rhode Island** (42%), **West Virginia** (41%) and **Arizona** (40%). All these states were colored in the red category in the White House's report.

On the opposite of the spectrum, the report put 10 states and Washington, D.C., in the green category, with less than 10% of hospitals facing shortages: Connecticut, Alaska, Illinois, New York, Maine, Montana, Idaho, Texas, South Dakota and Utah. It's particularly notable that New York is avoiding major shortages, as New York City is one of the top hot spots in the country for COVID right now.”[[3]](#footnote-3)

## Where are the states with the most senior citizens?

Of the top 5 states with staffing shortages during the pandemic, 4 of them are within the top 15 states with the most senior citizens, who are more vulnerable to getting ill from viruses like COVID or Influenza. [[4]](#footnote-4)

Hypothesis

Our goal is to have our staff be distributed in a way where no organization is over or understaffed while making sure to adequately equip health organizations with staff members treat patients during the Influenza seasons. To ensure this we need to figure out:

1. The areas of medicine that staffing is needed for Influenza (EX: Hospital, vaccination)
2. States with most cases
3. States with the most vulnerable populations (EX: Senior Citizens, Ill patients)
4. What times of year influenza is prominent?

Based on this I hypothesize that:

**If we a state has a high vulnerability population then a higher rate of influenza hospitalizations will occur**

Data Wishlist

1. **Hospitalizations** due to Influenza, with age, year, state, Illnesses, and vaccination status
2. **Flu Rates** by state, age, year, vaccination status
3. **Vulnerable/at risk** **citizens** by state
4. **Staffing** Numbers by State
5. **Vaccination rate** by age, state, and year

1. https://www.amnhealthcare.com/amn-insights/covid/blog/flu-season-during-pandemic-could-create-healthcare-staffing-crisis/ [↑](#footnote-ref-1)
2. https://www.cdc.gov/coronavirus/2019-ncov/hcp/mitigating-staff-shortages.html#:~:text=As%20the%20COVID%2D19%20pandemic,place%20to%20mitigate%20these%20shortages. [↑](#footnote-ref-2)
3. https://www.usnews.com/news/health-news/articles/2022-01-13/states-with-the-biggest-hospital-staffing-shortages [↑](#footnote-ref-3)
4. https://www.prb.org/resources/which-us-states-are-the-oldest/ [↑](#footnote-ref-4)