Project Proposal

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Project goals:

Our goal for this project is to determine the best vaccine rollout plan. We want to take into consideration different characteristics associated with deaths, such as gender, age, comorbidities, and state. Then, we want to rank the number of deaths within each of the different characteristics, and assign a score.

Given an individual's information, we want to find the score for each characteristic and then combine them all together to get a singular vaccine score for that person. Based on the ranges of scores possible, we will impose a timeline. Based on the individual's vaccine score, the program will determine when is the best time for them to get vaccinated.

Data sources:

Datasets for each characteristic group will be used to show how the characteristics of the groups impact the total deaths. All datasets come from the National Center for Health Statistics' COVID-19 data uploaded by the Center for Disease Control.

Deaths by Contributing Comorbidities - CDC (NCHS)
Deaths by Age and Sex - CDC (NCHS)
Death by State - CDC (NCHS)

General methodology:

We will go about this project by first cleaning and analyzing the datasets we found. After we analyzed the factors present in each dataset, we will weigh each factor based on how much the factor is likely to lead to death from COVID-19. The factors will then be aggregated together to produce a score to an individual indicating what order they will be vaccinated in.

We also plan to create visualizations to illustrate the data better. One illustration we plan could be used to illustrate the deaths based on comorbidities to see which ones are the most common. Another could be sort deaths according to age and sex, while a third one can be used to show death by state.

Project Significance:

The Covid pandemic has left everyone feeling trapped, after nearly a year of waiting people are still unable to go outside without a mask. From walking your dog to shopping for clothes almost every aspect of our lives has been affected. Now with the creation of the Covid vaccine there is hope that we can soon return to our old ways of life. However it is important to recognize that some groups are more vulnerable when assessing Covid infection risks.

This program will determine the most efficient way to distribute the vaccine so that the individuals with the highest risk are first to receive the vaccine. By vaccinating those who are most likely to suffer serious consequences as a result of a Covid infection we minimize the possibility of preventable deaths.