

## Final Project Reflections

1) Were there any limitations that prevented you from conducting an analysis?

- The datasets that were provided don't have information about: Hospitals distribution by state, number of practicing doctors and nurses that work in hospital environment by state. That information was valuable to give an exact idea about how we can properly distribute the medical staff. I think that only with population counts and number of deaths there is a limited analysis.
- Another aspect is the economic situation of each state. Which states have the worst economic issues like low-income family rates, high levels of poverty or people in difficult situations. This is an aspect that directly affects the mortality rate.
- Data about the health insurance distribution, it could also help to see in which regions there are a few health insurance covers. It will also affect the mortality rates and impact on the number of people that visit a hospital or clinic. It would be great to know which regions are in need for better health insurance assistance.
- More data about the vaccine's shots could also be very helpful because the only dataset about vaccine shots was for children.

2) Did your data have any limitations that may have affected your results? Consider this in terms of data quality and data bias.

- There were some states without death counts (lack of data) like Alaska and District of Columbia. The analysis for those states was not correct and they maybe must be excluded from the results.
- The census from the US Bureau is taken only every 10 years and the population data is not updated.
- I decided to not use the data sets from flu shots and patient visits because the flu shots were only for children (mostly without death counts) and the patient visits does not have positive influenza cases rate for the entire region.

3) How might you monitor the impact of the staffing changes you recommended?

The monitoring could be done with:

- Looking at the death rate. A reduction can be a sign of better health assistance.
- Looking at the hospital occupation. If the occupation is better distributed (same assistance quality in all hospitals) and if there are hospitals beds for everyone.
- Medical staff surveys each 6 months. Asking doctors and nurses if their working conditions and mental health are good or if some improvements could be made.
- Patient surveys each 6 months. Asking patients how they feel about medical assistance.

4) Is there a metric that could be used for monitoring this impact?

- Mortality rate. If there is a reduction in the mortality rate it is possible that the health assistance improved.
- Medical staff distribution rate by number of patients. Is there enough medical staff per person?