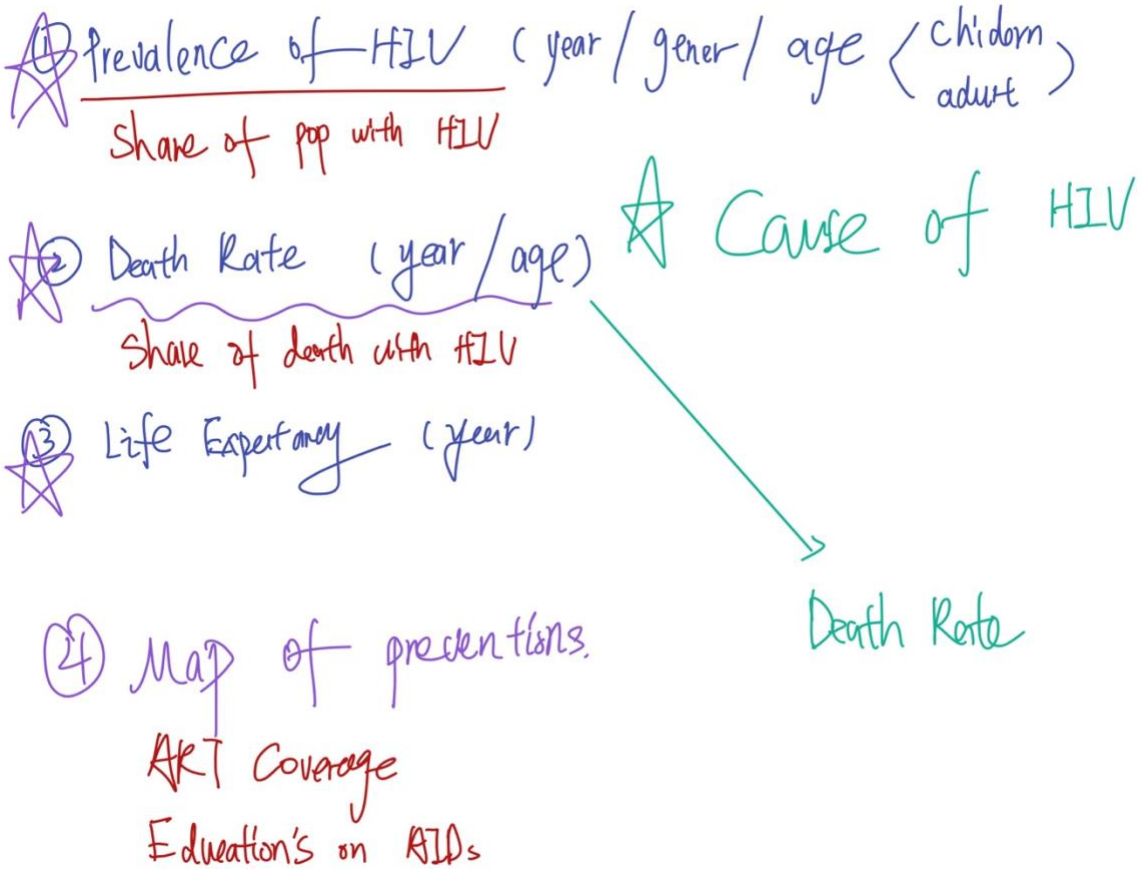
Process Book
Group D – HIV

Group Members: Tong Shen, Zehui Wang, Wenxuan Zhang

Tong Shen: ts3341@columbia.edu
Zehui Wang: zw2525@columbia.edu
Wenxuan Zhang: wz2538@columbia.edu

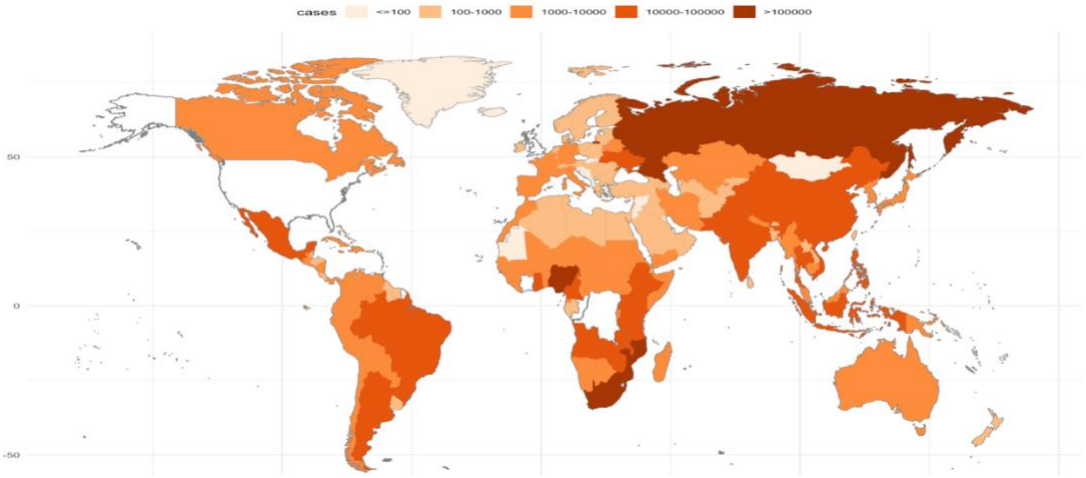
Our motivation for this project was originally showing how HIV is distributed across the world; however, when we start planning on our project, we got more ideas than just showing the distribution. We want to show how HIV is taking away people' lives, and how the prevention of HIV is taking place across the world.

This is the note I, Zehui, took when we first met and discussed about our project.

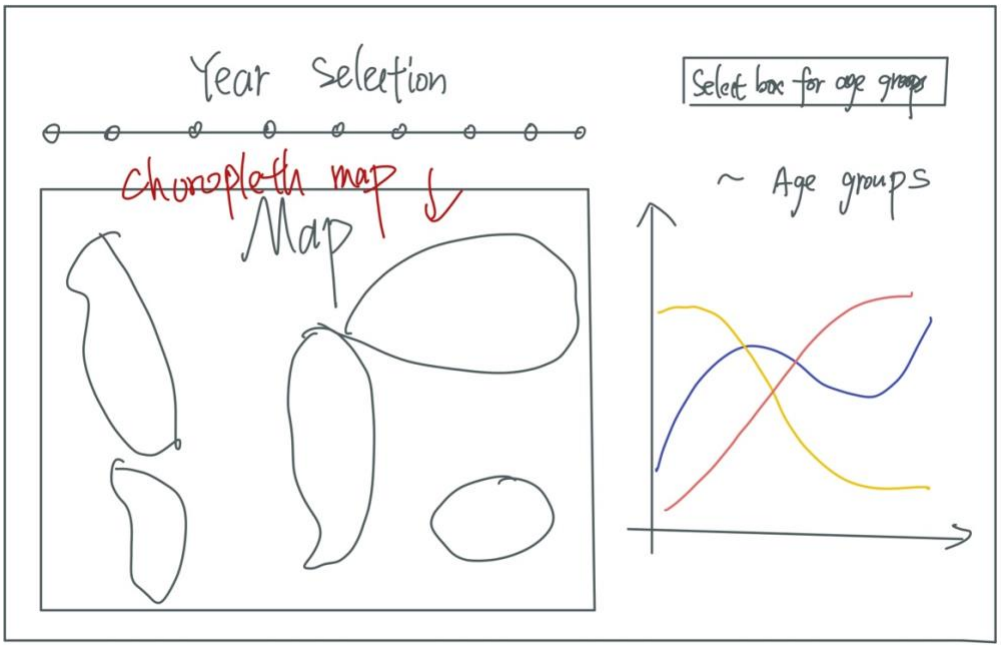


Though it is simple, but it helped us to start working on the data visualization project, and then we moved to the next step, actual map building process. This is the very

first map we got for the “Number of New Infections Each Year”, but we discarded it because the lack of interactivity, and we want to show how year would be an important factor for HIV distribution.



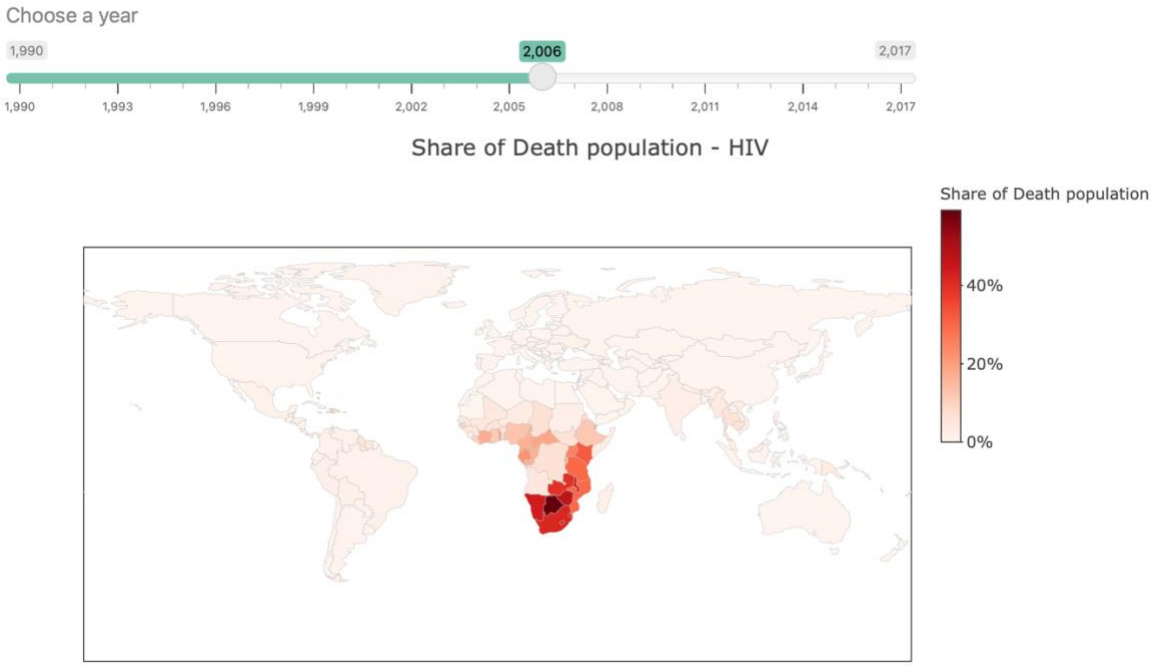
Then we met and decided that for all the maps, Year, should always been an input variable, ideally, we could also have other variables as input to the maps. We investigate many professional HIV-related data visualization websites and found that we could also focus on how HIV performs on different age groups. So, we got another wanted dashboard style.



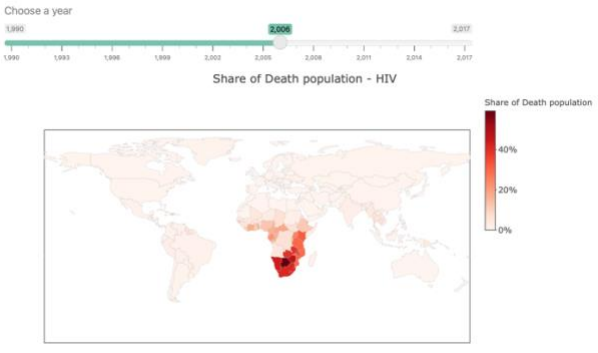
Actual Visualizations on the Webpage:

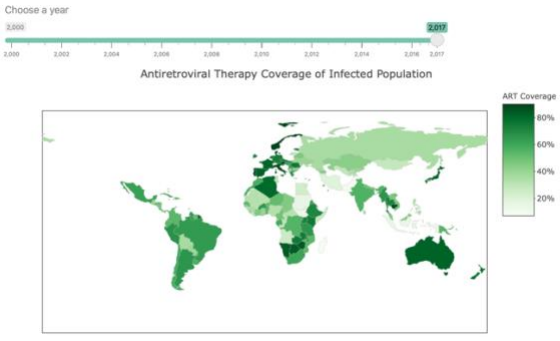
There are four main parts on our website, worldwide distribution of HIV, worldwide death caused by HIV, prevention of HIV and HIV related tweet text analysis.

In the first three sections, we plotted the choropleth map with respected to each variable and Year. The user could easily choose different year as the input to check the distribution of HIV related variables.

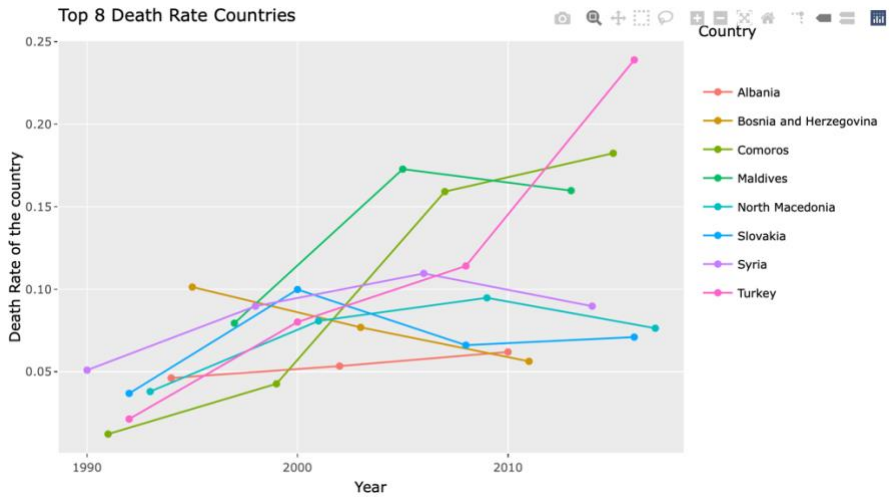


These two maps are 1) Share of death caused by HIV and 2) ART (a treatment of HIV) distribution across the world.

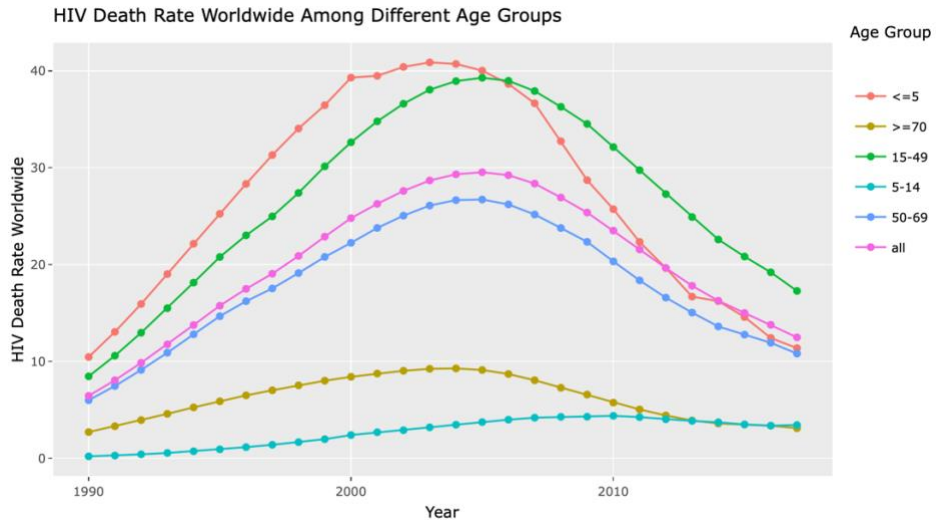




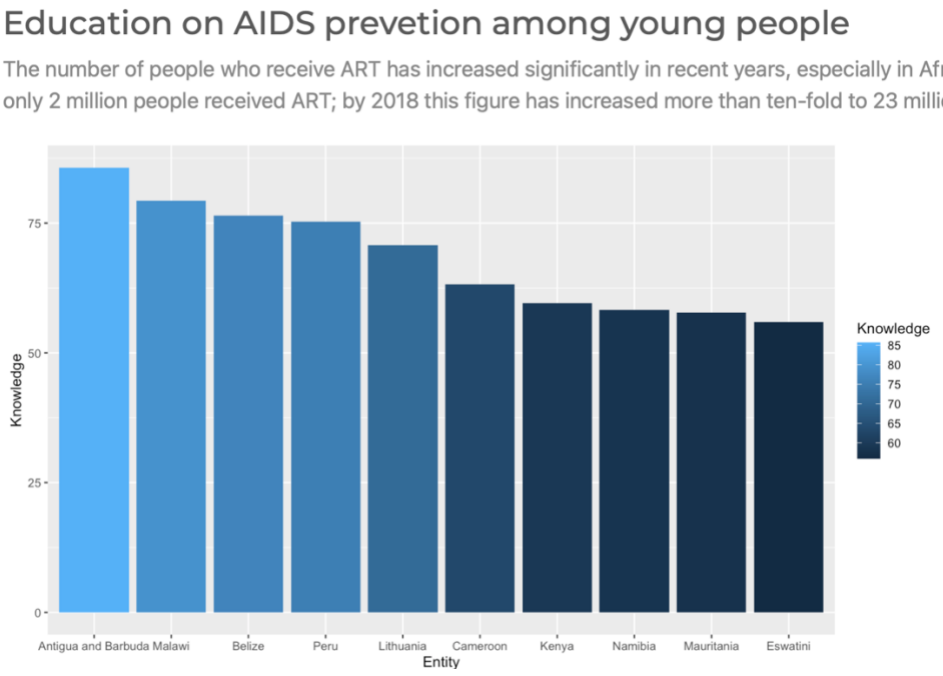
I also took a further look at the death rate of HIV in the most "severe" counties. I filter out the 8 most severe countries infected by HIV and plot their death rate by Year. From the plot, we can see that for Turkey, Maldives and Comoros, the death rate of HIV increases with time; while for many other countries, the death rate of HIV is controlled gradually.



Other than combining the death rate of each age group with the map above, I decide to plot it separately. It is great news to see that the death rate, worldwide, is becoming under controlled with time.



Other than the ART methods to cure HIV after infection, we could also take another look at how preventative methods, such as education about HIV, is distributed.



In order to have some text analysis content in our project, I use Twitter API to get "HIV" related text content and plot a word could.