**History for project**

This study also enables us to compare the scale of the impact with previous epidemics, such as the 1918 influenza pandemic and the 2014 Ebola virus outbreak,” he said.

The [1918 flu pandemicTrusted Source](https://www.cdc.gov/flu/pandemic-resources/1918-pandemic-h1n1.html) caused more than 500 million deaths around the globe and an estimated 675,000 deaths in the United States. It reduced life expectancy in the United States by 11.8 years.

The 2014 Ebola virus, which affected several countries in West and Central Africa, led to a drop in life expectancy of between 1.6 and 5.6 years in Liberia, he notes.

To date, more than [6.8 million](https://coronavirus.jhu.edu/) people in the United States have had COVID-19. More than 200,000 have died.

Unlike the 1918 flu pandemic, which mostly affected younger people ranging in age from their teens through their early 40s, the coronavirus outbreak has been particularly devastating to older adults, says [J. Alex Navarro](http://chm.med.umich.edu/about/j-alexander-navarro-phd/), PhD, assistant director of the Center for the History of Medicine at the University of Michigan. He adds that the average age of persons affected by the 1918 flu pandemic was 28.

“If it was mostly influencing the elderly, we still would have seen a drop (in life expectancy), but not as dramatic,” he said.

According to the [World Health OrganizationTrusted Source](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200907-weekly-epi-update-4.pdf?sfvrsn=f5f607ee_2), the United States, India, and Brazil have the largest number of confirmed COVID-19 cases.

And in the United States, the pandemic has had a disproportionately high impact on Black, Latino, and Native Americans.

Navarro believes the biggest declines in life expectancy will be seen in these communities of color, and believes the countries with the highest number of cases will have the greatest declines of life expectancy.

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**Life expectancy after covid effect worldwide**

The Global Health Observatory (GHO) data repository under World Health Organization (WHO) keeps track of the health status as well as many other related factors for all countries The datasets are made available to public for the purpose of health data analysis. The dataset related to life expectancy, health factors for 193 countries has been collected from the same WHO data repository website and its corresponding economic data was collected from United Nation website. Among all categories of health-related factors only those critical factors were chosen which are more representative. It has been observed that in the past 15 years , there has been a huge development in health sector resulting in improvement of human mortality rates especially in the developing nations in comparison to the past 30 years. Therefore, in this project we have considered data from year 2000-2015 for 193 countries for further analysis. The individual data files have been merged together into a single dataset. On initial visual inspection of the data showed some missing values. As the datasets were from WHO, we found no evident errors. Missing data was handled in R software by using Missmap command. The result indicated that most of the missing data was for population, Hepatitis B and GDP. The missing data were from less known countries like Vanuatu, Tonga, Togo,Cabo Verde etc. Finding all data for these countries was difficult and hence, it was decided that we exclude these countries from the final model dataset. The final merged file(final dataset) consists of 22 Columns and 2938 rows which meant 20 predicting variables. All predicting variables was then divided into several broad categories:​Immunization related factors, Mortality factors, Economical factors and Social factors

Features are :

* **Adult Moratility** : - The adult mortality rate refers to the probability that those who have reached age 15 will die before reaching age 60 (shown per 1,000 persons).
* **Infant Death**:- Infant mortality is the death of an infant before his or her first birthday. The infant mortality rate is the number of infant deaths for every 1,000 live births.
* **Alchohol**:- Adults drinking seven to 14 drinks per week could expect, on average, a six-month shorter life expectancy as of age 40. Those drinking 14 to 25 drinks per week could expect a shorter life expectancy by one to two years. Alcohol, recorded per capita (15+) consumption (in litres of pure alcohol)
* **Percentage of expenditure:-** Expenditure on health as a percentage of Gross Domestic Product per capita(%)
* **Hepatits B:-** Hepatitis B (HepB) immunization coverage among 1-year-olds (%)
* **Measles:**- Measles - number of reported cases per 1000 population. Measles is a highly contagious infectious disease caused by measles virus. Symptoms usually develop 10–12 days after exposure to an infected person and last 7–10 days. Initial symptoms typically include fever, often greater than 40 °C (104 °F), cough, runny nose, and inflamed eyes.
* **BMI :**- Average Body Mass Index of entire population
* **Under five deaths:**- Number of under-five deaths per 1000 population
* **Polio**:- Polio (Pol3) immunization coverage among 1-year-olds (%)
* **Total Expenditure:-** General government expenditure on health as a percentage of total government expenditure (%)
* **Diphteria:-** Diphtheria tetanus toxoid and pertussis (DTP3) immunization coverage among 1-year-olds (%)
* **HIV/AIDS:-** Deaths per 1 000 live births HIV/AIDS (0-4 years)
* **GDP:-** Gross Domestic Product per capita (in USD)
* **Population:**- Population of the country
* **Thiness 10- 19 years:-** Prevalence of thinness among children and adolescents for Age 10 to 19 (% )
* **Thinness 5- 9 years**:- Prevalence of thinness among children for Age 5 to 9(%)
* **Income composition of resources**:- Human Development Index in terms of income composition of resources (index ranging from 0 to 1)
* **Schooling:-** Number of years of Schooling(years)
* **COVID :** - Deaths per 100 K cases