

Hi, I am Bikin Ghimire, and my project is Analyzing Leading Causes of Deaths in Canada.

Why this specific topic?

Analyzing leading causes of death supports public health planning by helping public health officials and policymakers allocate resources effectively, develop prevention strategies, and implement new policies to reduce the mortality rate.

It's also useful in monitoring trends by identifying emerging threats to be prepared for it and evaluate effectiveness of interventions to decide whether to continue those interventions or to change them.

And finally, it helps in research and innovation by motivating development of new treatments and advancing new diagnostic methods to high death causes.

Now, we quickly move on to the key findings from the project. I'll first share the findings and make my conclusions from the findings collectively at the end. We have very general numbers and pie chart to show the division of deaths, but the important one is the bar graph at the bottom. We can see that Cancer is the leading cause of death in Canada. Also, upon clustering the data with age, we further found out that while the leading cause of death for people above the age of 30 is Cancer, the leading cause of death for people below the age of 30 is Accidents, which in the overall graph ranks 5<sup>th</sup>.

Our next finding is that there is a positive correlation between Age and Total Deaths, meaning the number of deaths is higher for older people. There is a single outlier for people aged over 85 years, which makes sense because people then start to die of natural causes.

We can also see that there is a positive correlation between years and Total Deaths, meaning that the total number of deaths of people has continued to increase every year in Canada.

The 3<sup>rd</sup> set of findings show that 3 causes of deaths that have increased the most is, again, Cancer, which has steadily increased since 2020; Accidents which has peaked since 2017, which is also when Canada saw a sudden increase in immigrants; and covid-19 as well, since it was first recorded in Canada in 2020.

Our 4<sup>th</sup> finding is a bit odd. We've compared the rise/fall of two causes of death, where the symptoms are similar; COVID-19 and Influenza and pneumonia. What we can notice here is that when COVID-19 deaths started to be recorded, the number of deaths by Influenza and Pneumonia has started to dip down more. This will be important for our conclusion.

Finally, we have predicted the total deaths for the next five years using linear regression. Although the prediction claims the total death count will be low in the immediately following year, it does predict a continuous linear rise.

So, with these findings I have made the following conclusions.

The first is, to control the mortality rate of Canada, people of a younger age need more awareness and care regarding traffic rules and regulations to reduce deaths by accidents, while people of older age require more regular health services. It may also be necessary to aware new immigrants of traffic rules and regulations in Canada to further prevent road accidents.

My 2<sup>nd</sup> claim is that the policies and interventions to prevent against and treat cancer need to be reviewed and potentially reworked as well, because the mortality rate has continuously increased over the years. So, the public officials need to come up with new awareness and innovation against cancer.

My 3<sup>rd</sup> conclusion is that the death count recorded for COVID-19 could actually be false. There has been a popular claim among famous health experts that the COVID-19 death records were unnecessarily high because hospitals reports deaths with similar symptoms as death by COVID as long as the person was infected with COVID at the time of death. That is why we compared the death rate of COVID and Influenza earlier. But, to be certain of this claim, more analyses is necessary.

Finally, I believe that the death count is bound to increase in the upcoming years so the public health sector needs to prepare better prevention materials, as well as allocate resources

properly so that health centers across the country are well prepared for the situation.

This concludes my analysis of Leading Causes of Deaths in Canada. If you have any questions, I'd be happy to address them. Thank you!