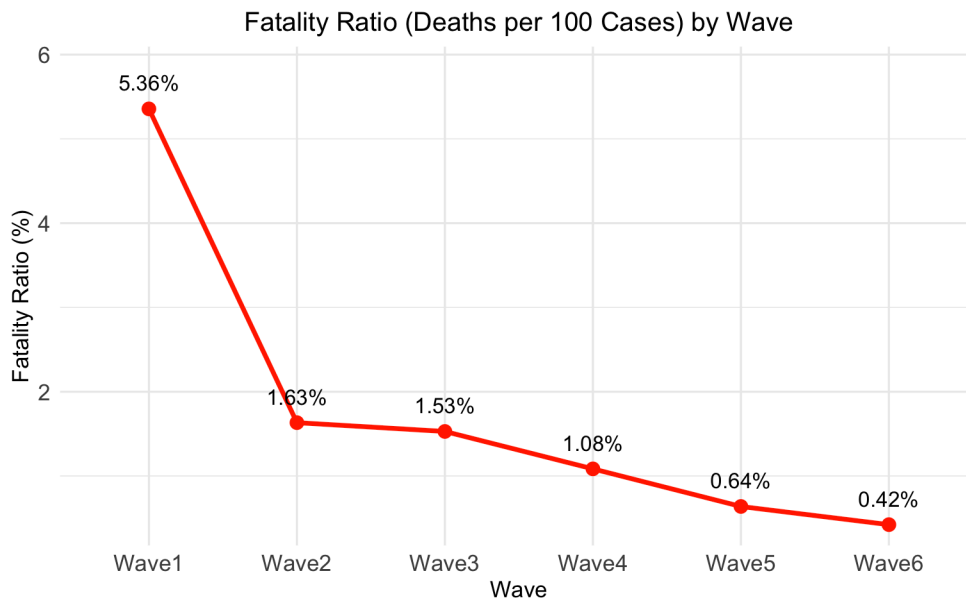


Supplementary Methods

Visualizations

To address question 3, we present a detailed analysis of the characteristics of the COVID-19 virus across different waves. The first plot captures the declining trend in the fatality ratio (deaths per 100 cases) over time, providing evidence that COVID-19 became less virulent as the pandemic progressed.

```
format width height colorspace matte filesize density
1      PNG   1540    951          sRGB FALSE   97718   72x72
```



The second plot illustrates the trends in COVID-19 cases and deaths across different wave periods. The data reveal that while the virus's fatality ratio decreased, the number of cases increased dramatically, particularly reaching its peak during wave 5. This plot suggests that the virus became more transmissible over time and peaked at wave 5, potentially due to the emergence of highly contagious variants.

```
format width height colorspace matte filesize density
1      PNG  1540    951          sRGB FALSE   122093   72x72
```

