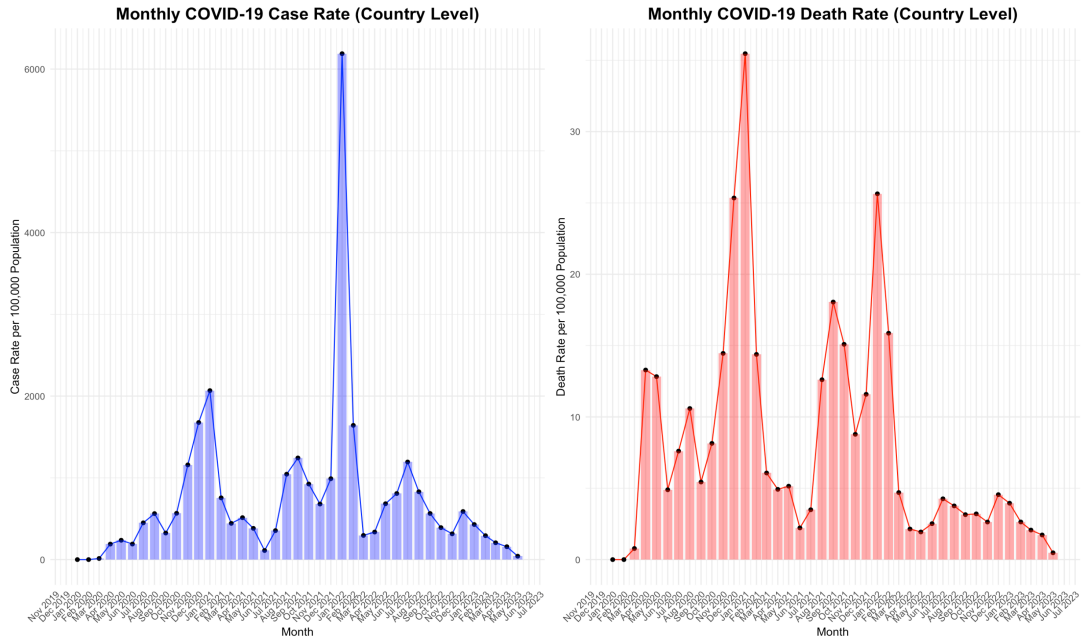
Figures:

Fig 1



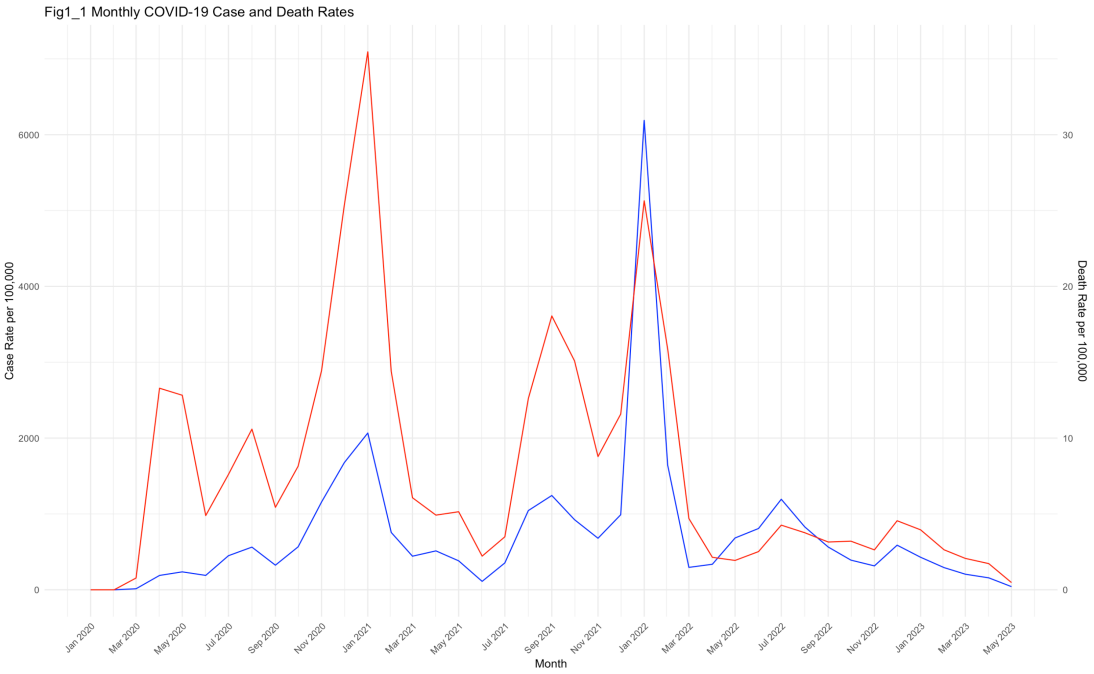


Fig_1 and Fig_1_1 help us to understand the trend of COVID-19 death and case rate in month units.

Case Rate: (Total Case/ Total population) * 100,000

Death Rate: (Total Death/ Total population) * 100,000

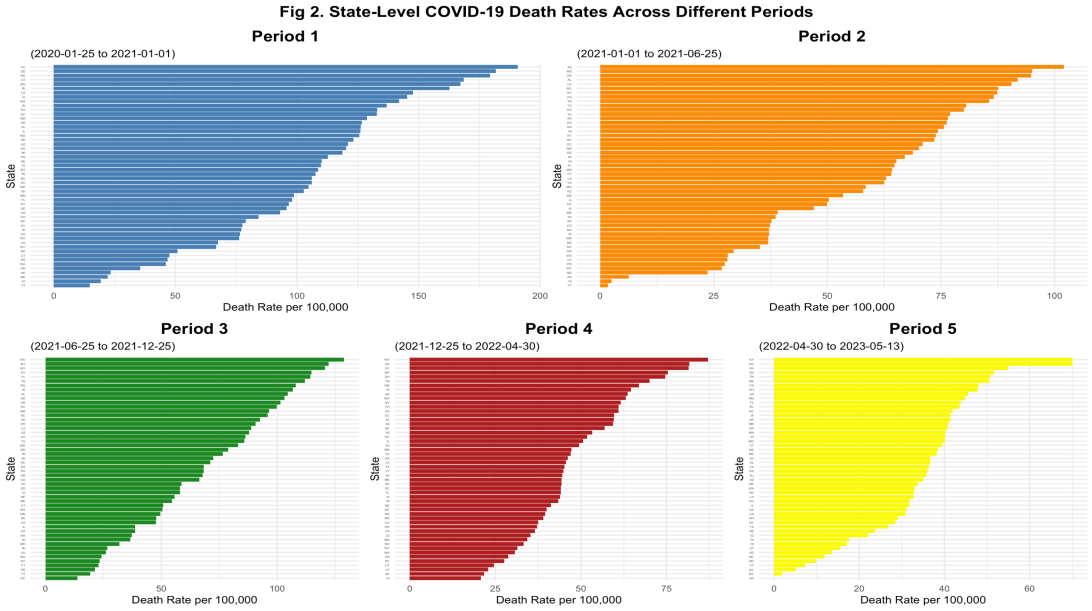
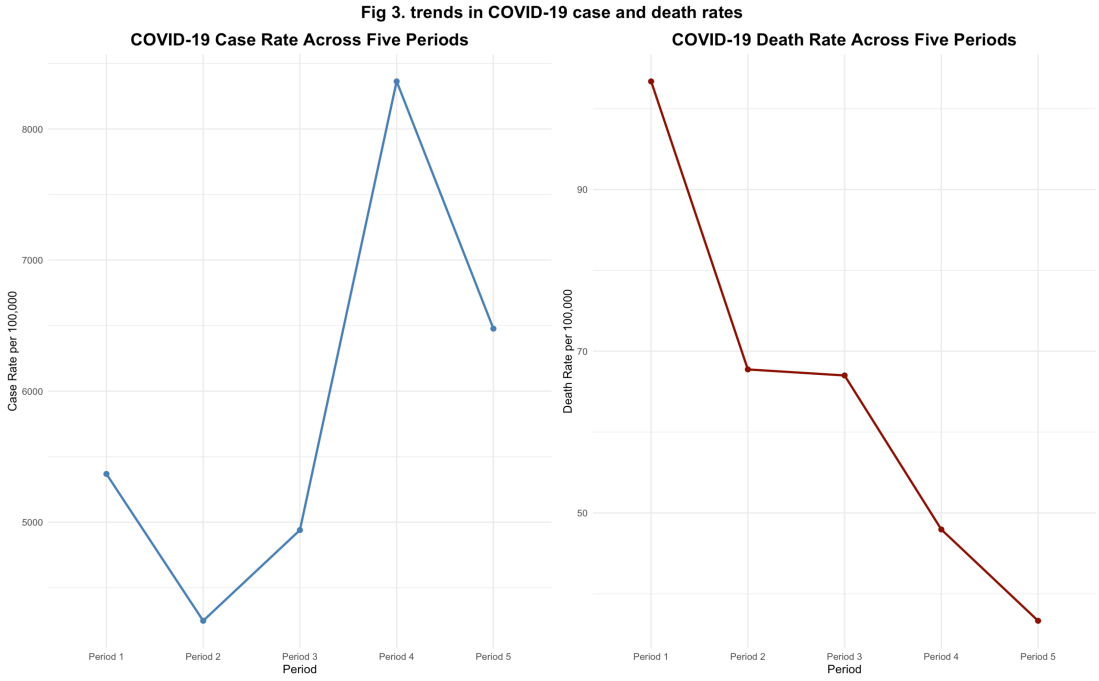


Figure 2 were created to visualize the state-wise death rates for each period, showing variations across states and over time.



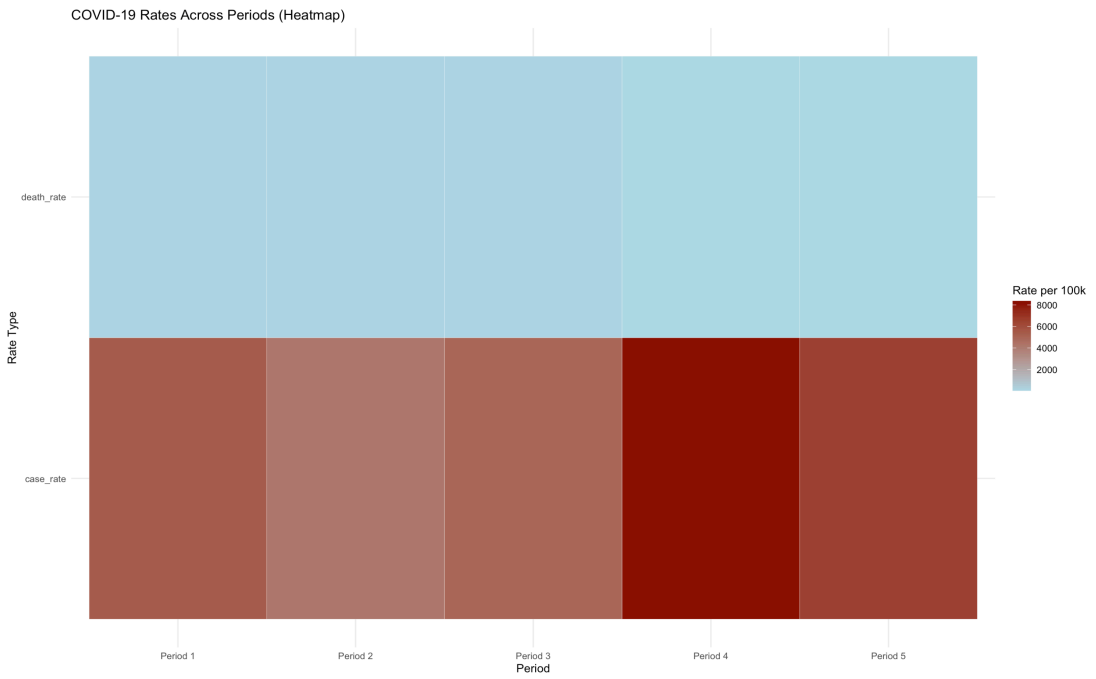


Figure 3 and Figure 3_1 provide insights into trends in COVID-19 cases and death rates per 100,000 population across five periods.

Table:

Table 1: Data set after data cleaning

Data Sources	• Population data: U.S. Census Bureau's National Population Estimates (2020–2023). • COVID-19 data: CDC weekly reports for cases and deaths.
Key Variables	• `state`, `state_name`: State identifiers. • `date`: Date of the record. • `population`: State population. • `cases`, `deaths`: Weekly counts of COVID-19 cases and deaths. • `mmwr_week`, `mmwr_year`: Weeks and years calculated using the `lubridate` package.

Table 1 provides an overview of the data structure: