**Report**

1. **Explanation of Visualizations**

**KPI Cards**

**Total Confirmed Cases, Total Recoveries, Total Deaths, Total Vaccinations, Fully Vaccinated %**

These provide an at-a-glance view of the overall COVID-19 and vaccination status globally or filtered by country.

**Line Chart – Trend of COVID-19 Cases Over Time**

Displays daily trends for **Confirmed**, **Recovered**, and **Deceased** cases.

Allows tracking of infection waves and recovery patterns.

**Bar Chart – Confirmed & Recovered Cases by States**

Compares the scale of the outbreak and recovery efforts across States.

**Map Visualization – Vaccination & Cases by Country**

Combines geospatial data with metrics to visualize vaccination progress and case numbers regionally.

**Pie/Donut Chart – Vaccine Type Distribution**

Shows which vaccines are predominantly used globally or in a selected country.

**Gauge Chart – Fully Vaccinated %**

Highlights progress toward the 100% vaccination goal.

**Slicers – Date, Country, State, WHO Region**

Enable users to filter and dynamically update all visuals for focused analysis.

1. **Justification for Chosen KPIs**

**Total Confirmed Cases** – Measures the pandemic’s spread.

**Total Recoveries** – Indicates healthcare success and resilience.

**Total Deaths** – Tracks the human cost and severity.

**Total Vaccinations Administered** – Shows the scale of vaccine rollout.

**Fully Vaccinated %** – Measures progress toward herd immunity.

These KPIs are critical for monitoring **both the disease burden and the response efforts**.

1. **Insights Derived**

**Trend Observations**

Multiple peaks in confirmed cases show distinct waves of the pandemic.

Recovery rates improve in later waves, indicating better healthcare response.

**Vaccination Insights**

Some countries have high vaccination counts but low fully vaccinated %, suggesting partial dose coverage.

Certain regions predominantly use one vaccine type.

**Geographic Variations**

WHO regions vary significantly in both infection rates and vaccination progress.

Urbanized or well-funded countries generally show faster vaccine coverage.

**Anomalies**

Some entries in the dataset have vaccination % exceeding 100% — likely due to double-counting or data entry errors.