COVID-19 CASES ANALYSIS

Abstract:

The COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents an unprecedented challenge to public health, food systems and the world of work. The economic and social disruption caused by the pandemic is devastating: tens of millions of people are at risk of falling into extreme poverty, while the number of undernourished people, currently estimated at nearly 690 million, could increase by up to 132 million by the end of the year.

Impacts of covid-19:

These negative impacts could be related to **rise in poverty levels, food insecurity, disrupted healthcare and other personal factors such as demise of caregivers and psychological stress.**

Types of Tests:

Viral tests look for a current infection with SARS-CoV-2, the virus that causes COVID-19, by testing specimens from your nose or mouth. All tests should be performed following FDA's requirements.
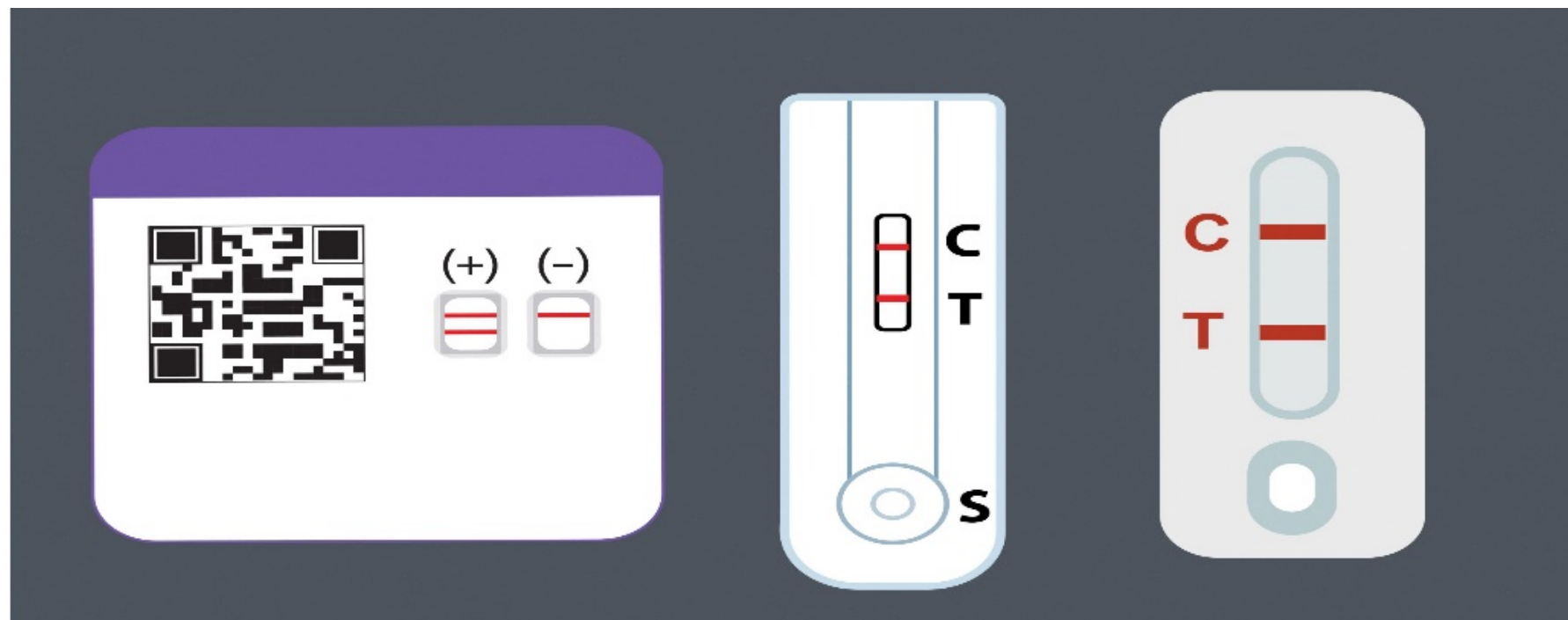
There are two main types of viral tests:

- ☒ Polymerase Chain Reaction (PCR) tests
- ☒ Antigen tests

PCR Test:

PCR tests are the "gold standard" for COVID-19 tests. They are a type of nucleic acid amplification test (NAAT), which are more likely to detect the virus than antigen tests. Your sample will usually be taken by a healthcare provider and transported to a laboratory for testing. It may take up to 3 days to receive results.

Antigen Test:

     Antigen tests* are rapid tests that usually produce results in 15-30 minutes. Positive results are very accurate and reliable. However, in general, antigen tests are less likely to detect the virus than PCR tests, especially when symptoms are not present. Therefore, a single negative antigen test cannot rule out infection. To be confident you do not have COVID-19, FDA recommends 2 negative antigen tests for individuals with symptoms or 3 antigen tests for those without symptoms, performed 48 hours apart. A single PCR test can be used to confirm an antigen test result.
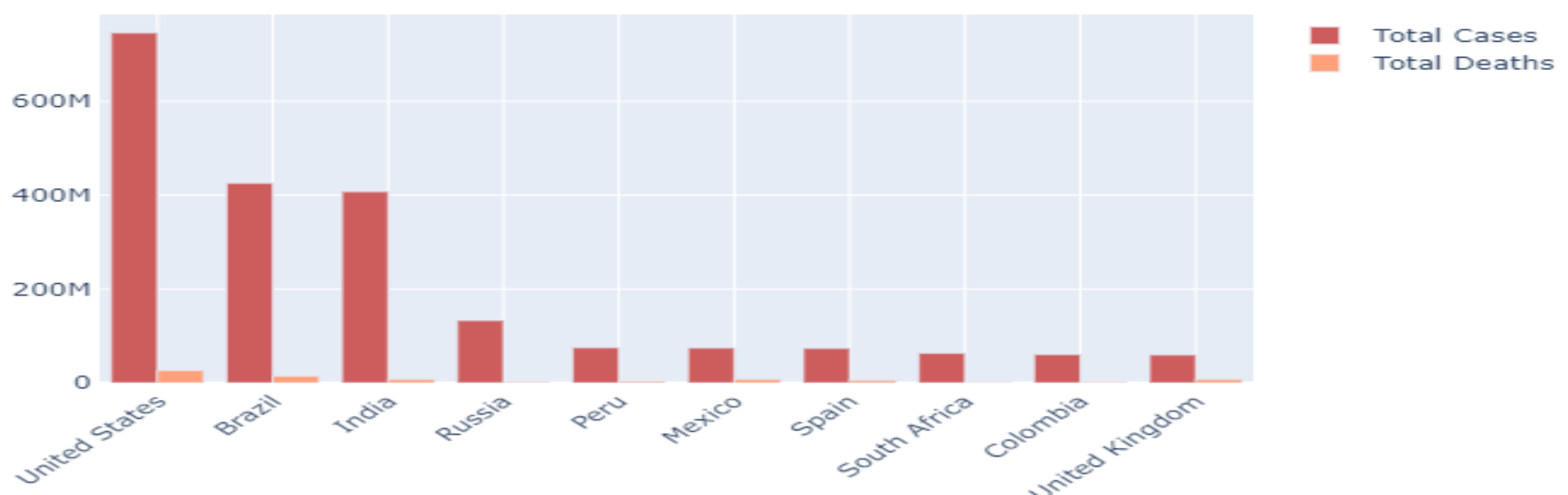
Data Set:

Day	Month	Year	Cases	Deaths	Countries and Territories
31	5	2021	366	5	Austria
31	5	2021	2017	14	Belgium
31	5	2021	53	5	Bulgaria
31	5	2021	186	12	Croatia

31	5	2021	44	0	Cyprus
31	5	2021	113	4	Czechia
31	5	2021	949	0	Denmark
31	5	2021	58	1	Estonia
31	5	2021	63	0	Finland
31	5	2021	8541	44	France
31	5	2021	1978	36	Germany
31	5	2021	906	30	Greece
31	5	2021	156	5	Hungary
31	5	2021	0	0	Iceland
31	5	2021	366	0	Ireland
31	5	2021	2948	44	Italy
31	5	2021	180	0	Latvia
31	5	2021	4	0	Liechtenstein
31	5	2021	184	9	Lithuania
31	5	2021	0	0	Luxembourg
31	5	2021	4	0	Malta
31	5	2021	2717	6	Netherlands
31	5	2021	0	0	Norway
31	5	2021	579	56	Poland
31	5	2021	445	0	Portugal
31	5	2021	158	29	Romania
31	5	2021	200	4	Slovakia
31	5	2021	138	3	Slovenia
31	5	2021	9732	48	Spain
31	5	2021	1900	1	Sweden

Program:

```python
fig = go.Figure()
fig.add_trace(go.Bar(
    x=data["Country"],
    y=data["Total Cases"],
    name='Total Cases',
    marker_color='indianred'
))
fig.add_trace(go.Bar(
    x=data["Country"],
    y=data["Total Deaths"],
    name='Total Deaths',
    marker_color='lightsalmon'
))
fig.update_layout(barmode='group', xaxis_tickangle=-45)
fig.show()
```

Output:

Program:

```python
import pandas as pd
covid_data=
pd.read_csv('https://raw.githubusercontent.com/CSSEGISandData/COVID-19/master/
csse_covid_19_data/csse_covid_19_daily_reports/03-18-2020.csv',usecols=['Last
Update','Country/Region','Confirmed','Deaths','Recovered'])
result=covid_data.groupby('Country/Region').max().sort_values(by='Confirmed',
ascending=False)[:10]
pd.set_option('display.max_column',None)
print(result)
```

Output:

```
Dataset information:
&                    Last Update  Confirmed  Deaths
Recovered
Country/Region
China              2020-03-18T12:13:09      67800    3122
56927
Italy              2020-03-18T17:33:05      35713    2978
4025
Iran               2020-03-18T12:33:02      17361    1135
5389
Spain              2020-03-18T13:13:13      13910     623
1081
Germany            2020-03-18T19:33:02      12327      28
105
France             2020-03-18T18:33:02       9043     148
12
Korea, South       2020-03-18T02:53:03       8413      84
1540
Switzerland        2020-03-18T14:53:05       3028      28
15
United Kingdom     2020-03-18T14:53:05       2626      71
65
US                 2020-03-18T19:53:03       2495      55
106
```