

# **COVID -19 CASE ANALYSIS**

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## **ANALYSIS OBJECTIVE:**

The pandemic of Coronavirus Disease 2019 (COVID-19) is a timely reminder of the nature and impact

of Public Health Emergencies of International Concern. As of 12 January 2022, there were over 314 million cases and

over 5.5 million deaths notified since the start of the pandemic.

The COVID-19 pandemic takes variable shapes and

forms, in terms of cases and deaths, in different regions and countries of the world. The objective of this study is to

analyse the variable expression of COVID-19 pandemic so that lessons can be learned towards an effective public

health emergency response.

## **Methods:**

We conducted a mixed-methods study to understand the heterogeneity of cases and deaths due to the

COVID-19 pandemic. Correlation analysis and scatter plot were employed for the quantitative data. We used Spear-

man's correlation analysis to determine relationship strength between cases and deaths and socio-economic and

health systems. We organized qualitative information from the literature and conducted a thematic analysis to recog-

nize patterns of cases and deaths and explain the findings from the quantitative data.

### **Results:**

We have found that regions and countries with high human development index have higher cases and deaths per million population due to COVID-19. This is due to international connectedness and mobility of their population related to trade and tourism, and their vulnerability related to older populations and higher rates of non-communicable diseases. We have also identified that the burden of the pandemic is also variable among high- and middle-income countries due to differences in the governance of the pandemic, fragmentation of health systems, and socio-economic inequities.

### **Conclusion:**

The COVID-19 pandemic demonstrates that every country remains vulnerable to public health emergencies. The aspiration towards a healthier and safer society requires that countries develop and implement a coherent and context-specific national strategy, improve governance of public health emergencies, build the capacity of their (public) health systems, minimize fragmentation, and tackle upstream structural issues, including socio-

economic inequities. This is possible through a primary health care approach, which ensures provision of universal and equitable promotive, preventive and curative services, through whole-of-government and whole-of-society approaches.

**Keywords:**

Pandemics, Epidemics, COVID-19, Heterogeneity, Governance, Equity

**DATA COLLECTION :**

The file contains information on newly reported COVID-19 cases and deaths in

EU/EEA countries. Each row contains the corresponding data for a certain day and per country. The

file is updated daily. You may use the data in line with ECDC's copyright policy.

**Source**

ECDC uses multiple information sources per country. The information sources are Ministries of

Health or National Public Health Institutes (websites, twitter official accounts or Facebook official

accounts). More information is available at <https://www.ecdc.europa.eu/en/covid-19/data->

collection.

## Interpretation of COVID-19 data

The data included in this file is collected by the ECDC Epidemic Intelligence from various sources and

is affected by the local testing strategy, laboratory capacity and the effectiveness of surveillance

systems. Comparing the epidemiological situation regarding COVID-19 between countries should

therefore not be based on these rates alone. However, at the individual country level, this indicator

may be useful for monitoring the national situation over time.

Testing policies and the number of tests performed per 100 000 persons, vary markedly across the

EU/EEA. More extensive testing will inevitably lead to more cases being detected.

The daily reported COVID-19 cases and deaths number should be used in combination with other

factors including testing policies, number of tests performed, test positivity, excess mortality and

rates of hospital and Intensive Care Unit (ICU) admissions, when analysing the epidemiological

situation in a country. Most of these indicators are presented for EU/EEA Member States in the

Country Overview report.

Even when using several indicators in combination, comparisons between countries should be done with caution and relevant epidemiological expertise.

#### Variable Definition Code

dateRep Date of reporting

“dd/mm/yyyy”

string

day unit8

month unit8

year unit16

cases Number of newly reported cases int64

deaths Number of newly reported deaths int64

countriesAndterritories Name of the country or territory string

geoId 2-letter code string

countriesAndterritoryCode 3-letter ISO code string

popData2020 Eurostat 2020 data int64

continentExp Name of the continent reporting string

#### **DATA SOURCE :**

Dataset:

<https://www.kaggle.com/datasets/chakradharmattapalli/covid-19-cases>

## DATA VISUALIZATION :

