مركز أبوظبي
للصحة العامة
ABU DHABI PUBLIC
HEALTH CENTRE

SCIENTIFIC RESEARCH MONITORING ON COVID-19

29 SEPTEMBER 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19 (ISSUE 240)

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ABU DHABI PUBLIC HEALTH CENTRE

Abu Dhabi Public Health Center (ADPHC) is gathering the latest scientific research updates and trends on coronavirus disease (COVID-19) in a daily report. The report provides summaries on breakthrough or updated research on COVID-19 to allow health care professionals and public health professionals get easy and fast access to information.

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Research
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Statistics

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Note : All articles presented in this report represent the authors' views and not necessarily represents Abu Dhabi Public Health Center views or directions. Due the nature of daily posting , some minor language errors are expected.
For further inquiries you may communicate with us as PHP@adphc.gov.ae

RESEARCH UPDATES

The views and opinions expressed in this report are those of the authors and do not reflect the official policy or position of the Abu Dhabi Public Health Center (ADPHC).

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Public Health Response

Lessons learnt from Easing COVID-19 Restrictions: An Analysis of Countries and Regions in Asia Pacific and Europe

Epidemiology

Extracorporeal Membrane Oxygenation for Severe Acute Respiratory Distress Syndrome Associated with COVID-19: A Retrospective Cohort Study

EPIDEMIOLOGY

FROM 21 JAN TO 28 SEPT 2020

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Figure 1: Total Number of Infected, Recovered, and Death Cases

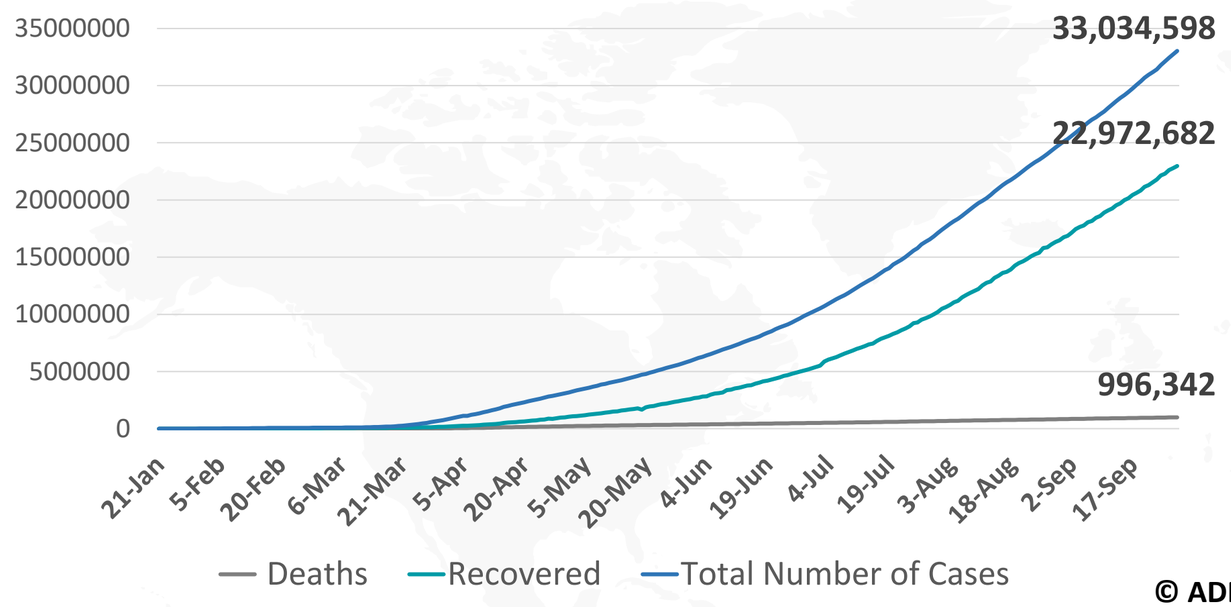


Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)

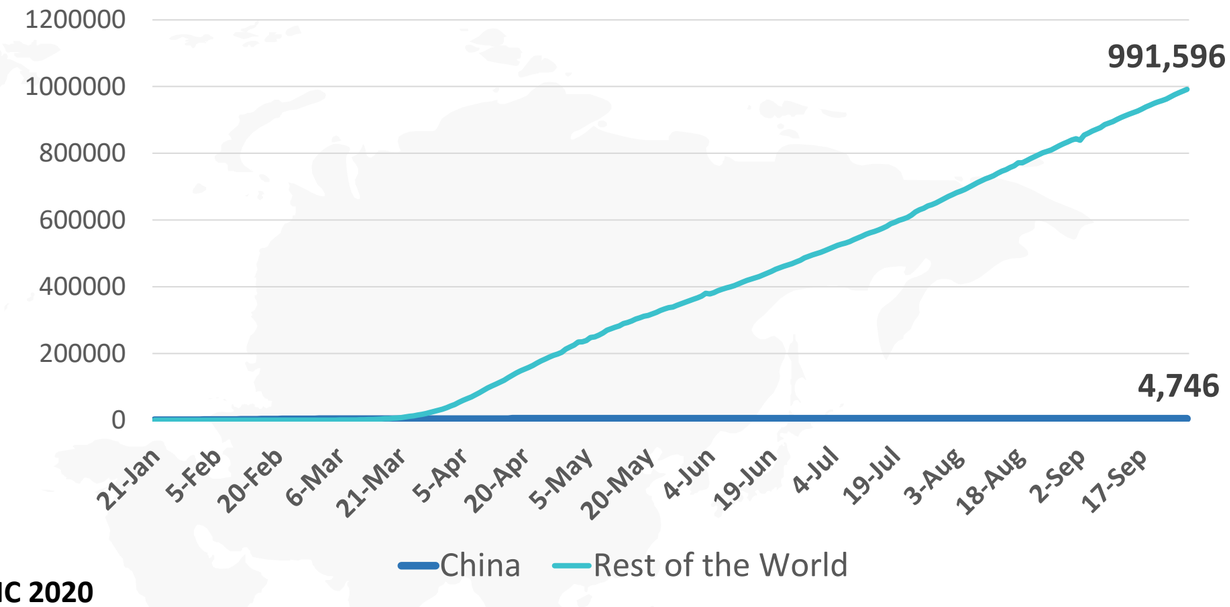


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

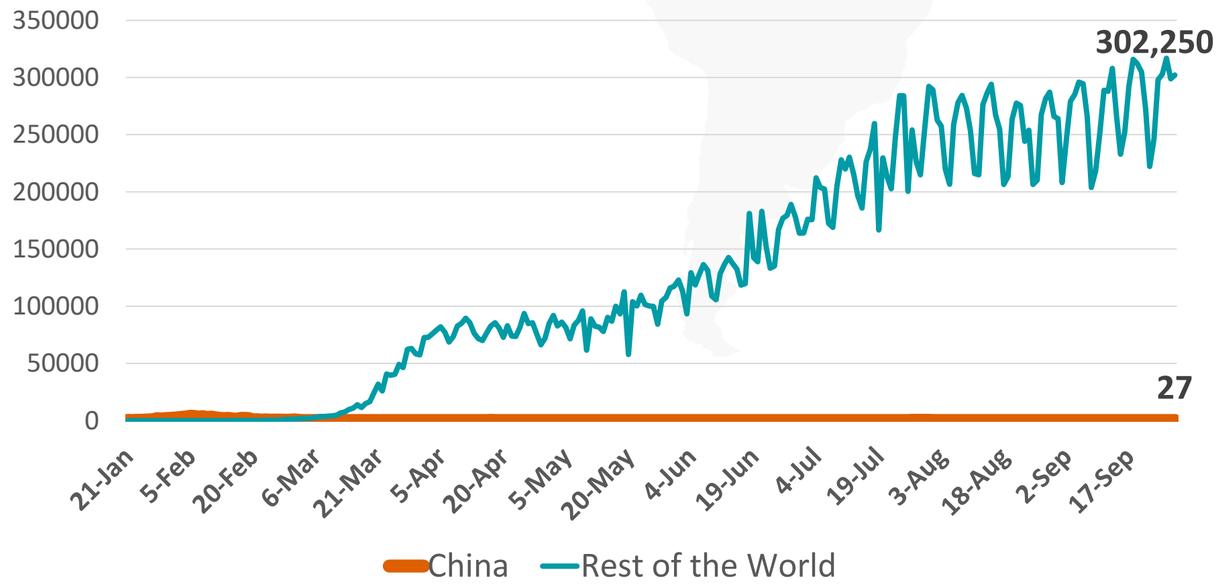
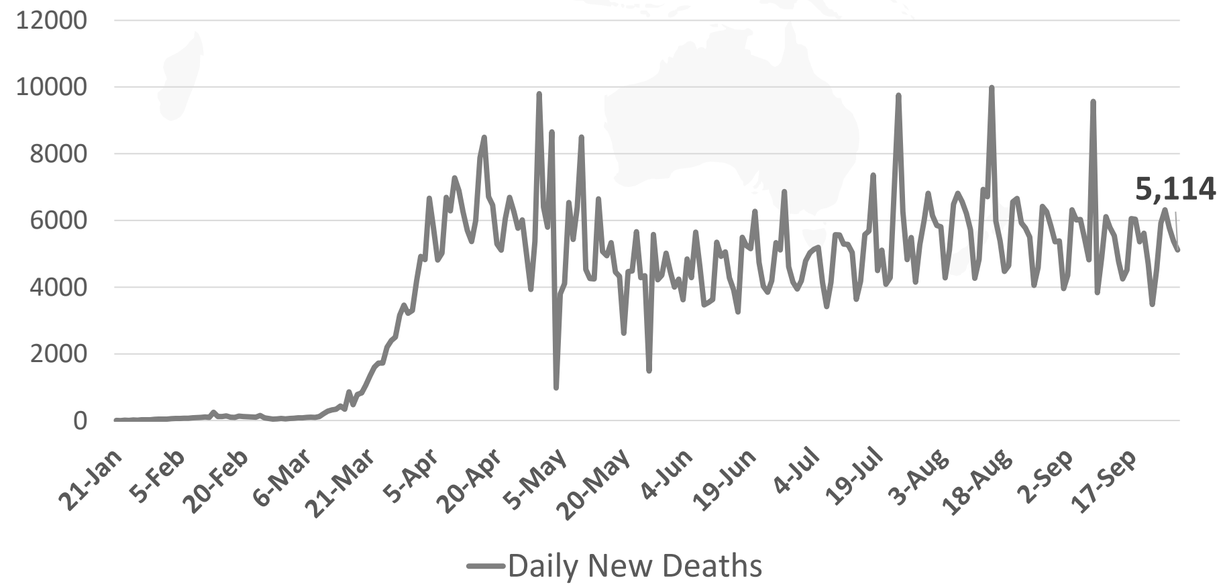


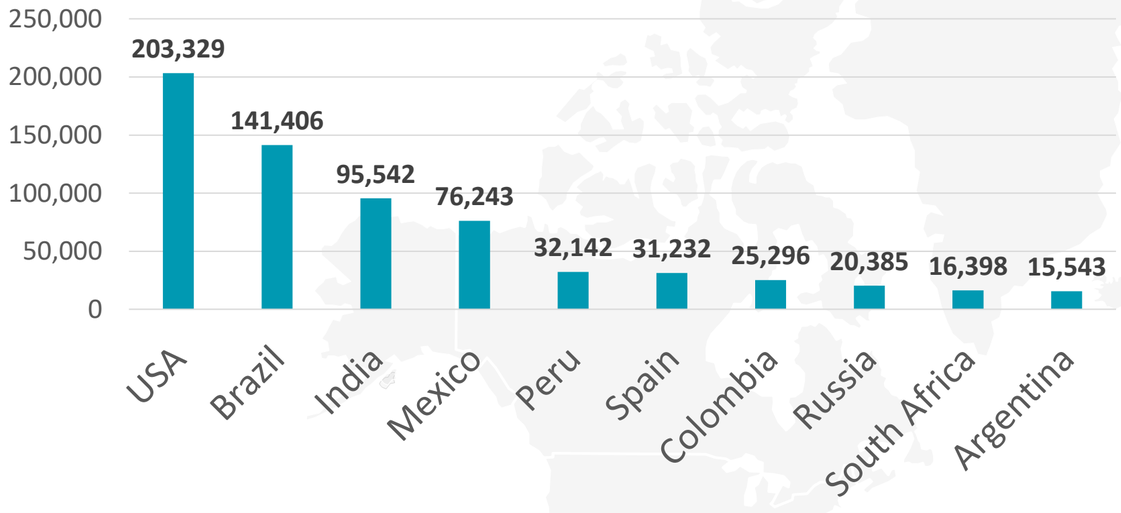
Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)



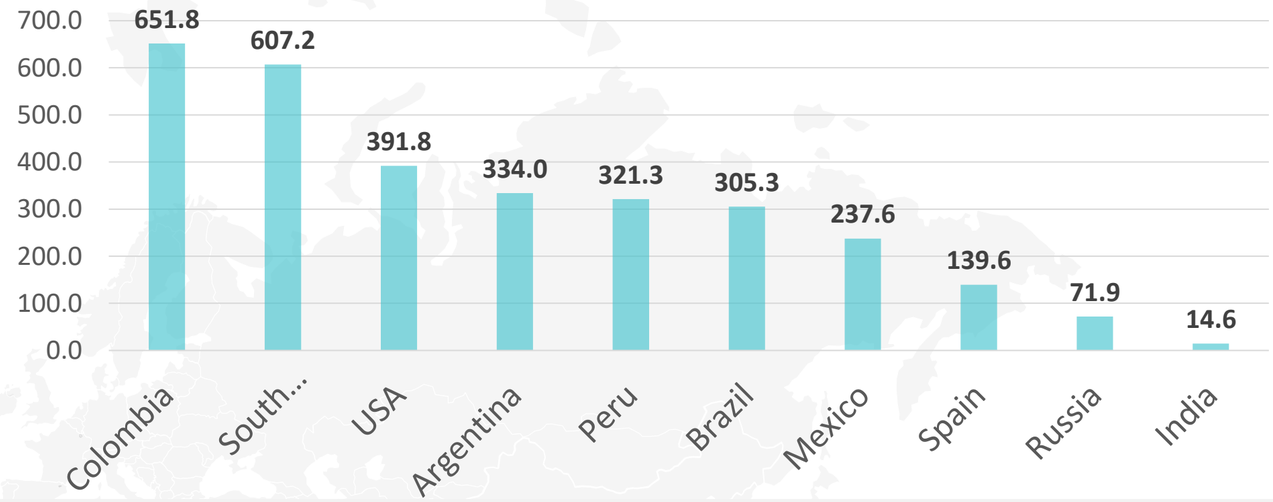
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: John Hopkins, WHO

Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

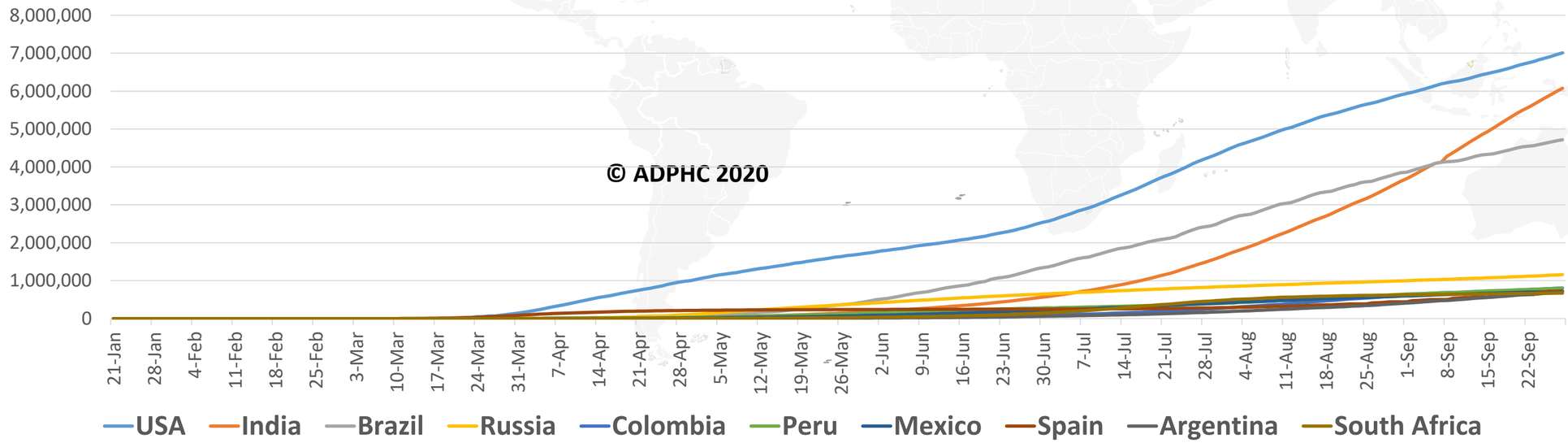
TOTAL DEATHS



DEATHS PER MILLION



TOTAL INFECTED CASES



USA	7,009,110
India	6,074,702
Brazil	4,717,991
Russia	1,159,573
Colombia	806,038
Peru	800,142
Mexico	726,431
Spain	716,481
Argentina	702,484
South Africa	670,766

Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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Figure 6: COVID-19 Status in the UAE (Federal Competitiveness and Statistics Authority Dashboard)

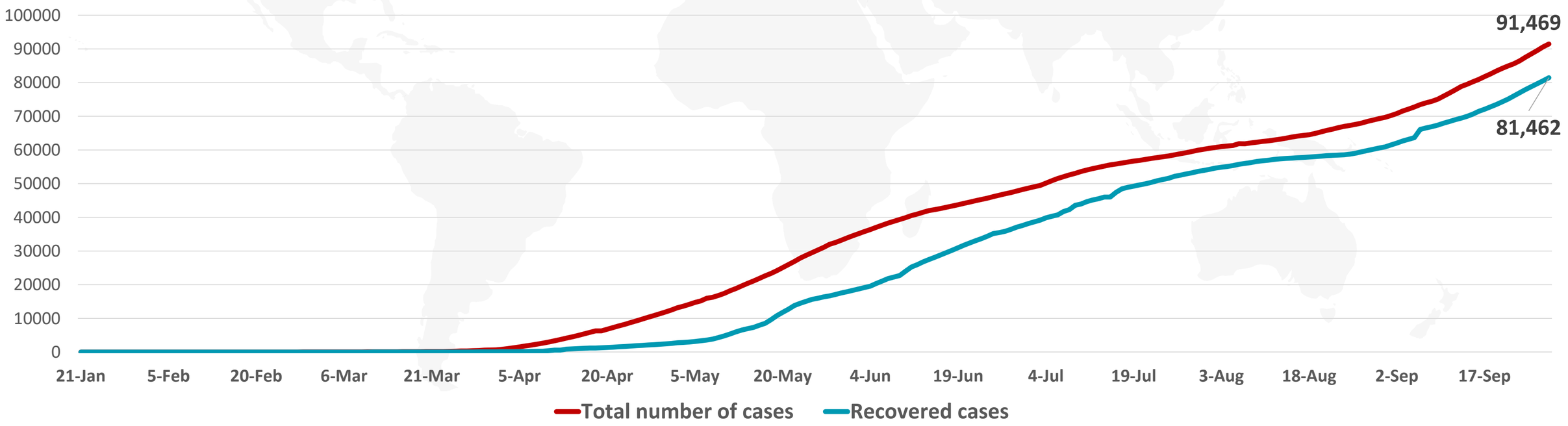
Daily Tests
95,499.0 Average Tests
965.6 per 100k population
1.0% Positive Rate

Daily Cases
928.6 Average Cases
9.4 per 100k population

Daily Recovered
910.9 Average Recovered
9.2 per 100k population

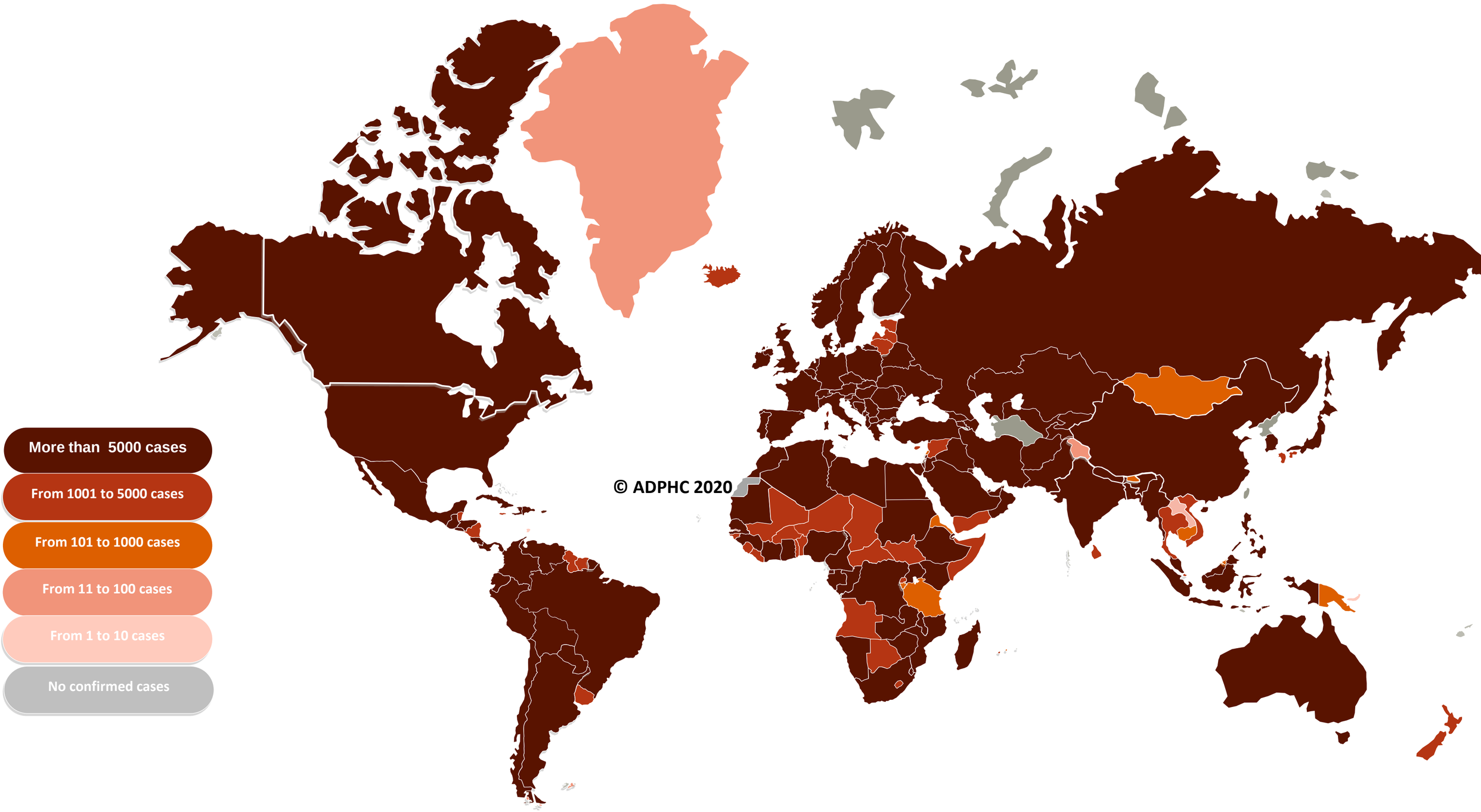
Daily Deaths
1.1 Average Deaths
0.0 per 100k population
0.1% Case Fatality Rate

TOTAL NUMBER OF INFECTED AND RECOVERED CASES DUE TO COVID-19 REPORTED BY THE UAE



Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: FCSA, WHO, John Hopkins

Figure 7A : Global Distribution of COVID-19 Cases



Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

EPIDEMIOLOGY

Date: 28 SEPT 2020

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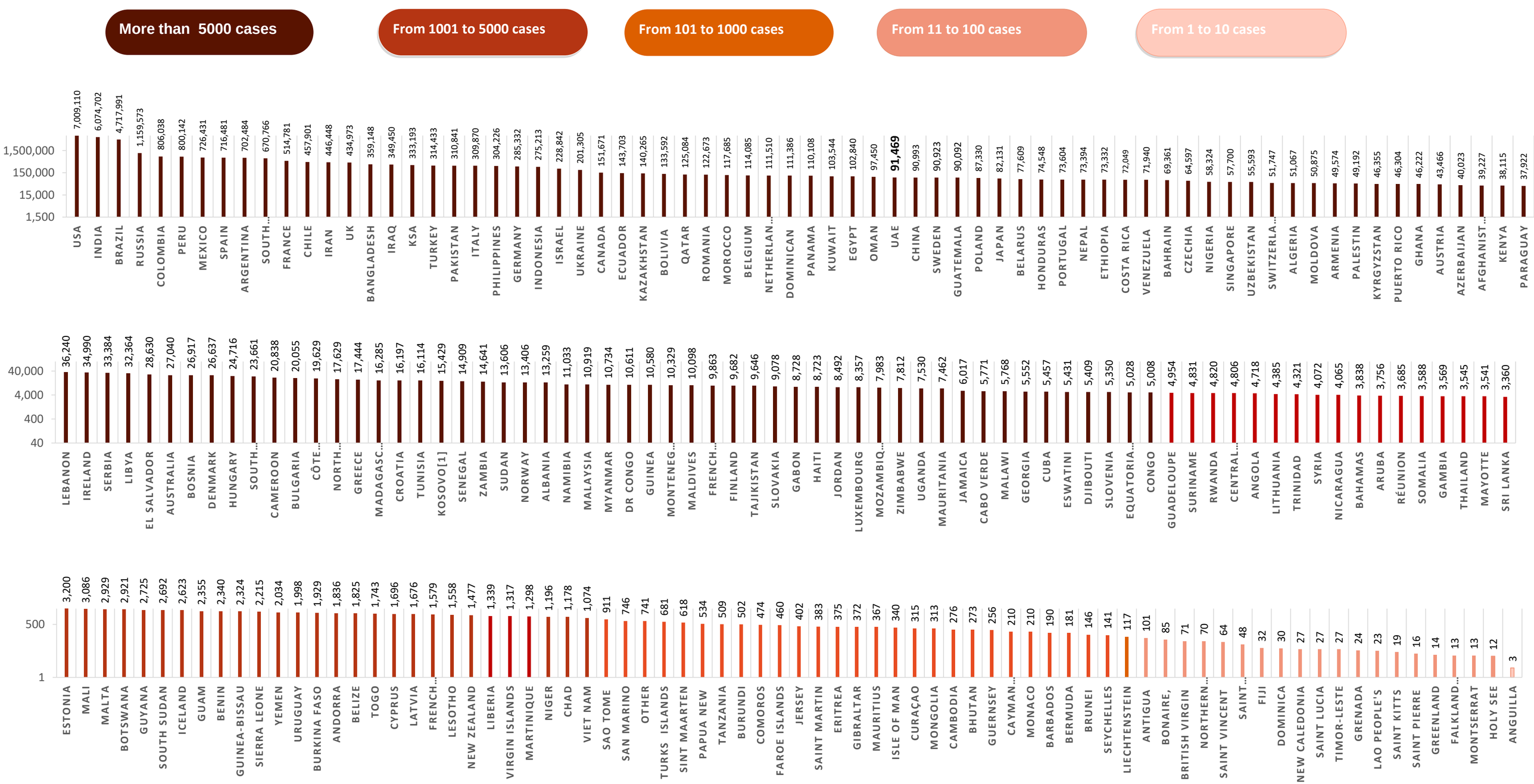
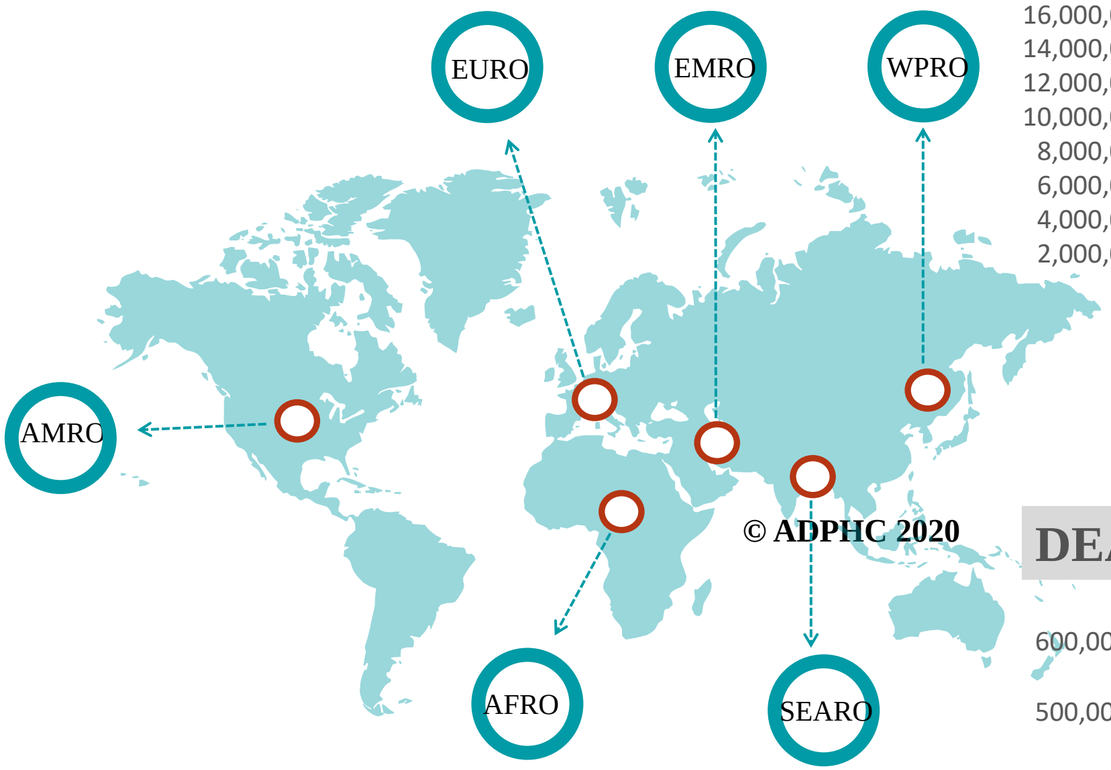
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



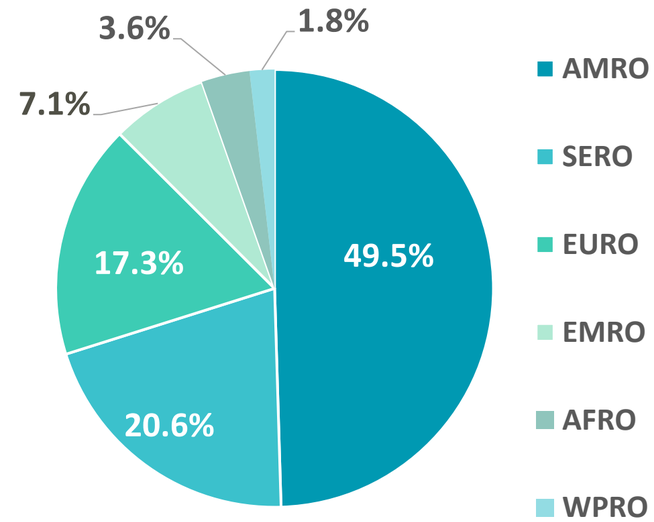
Other*:includes cases and deaths reported under the international conveyance(Diamond Princess)

Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

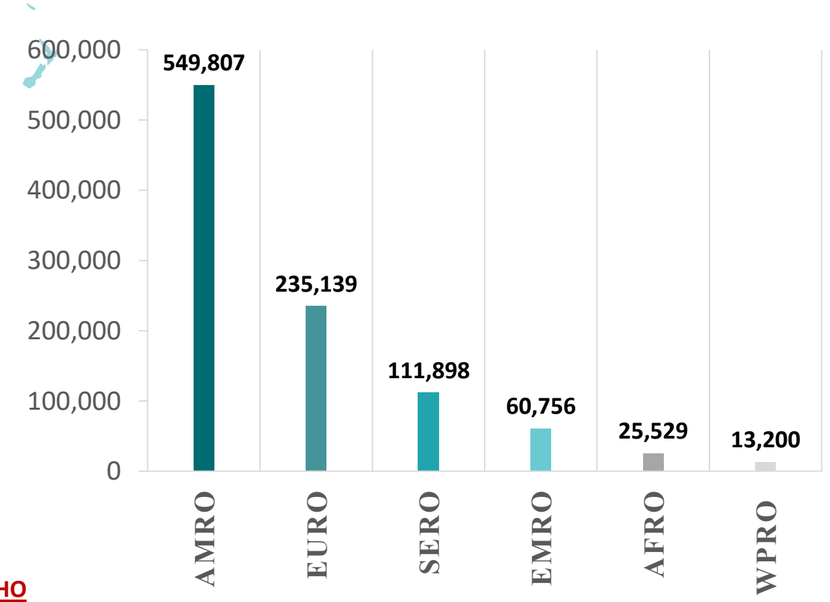
Figure 8: Global Distribution of COVID-19 Cases per Region

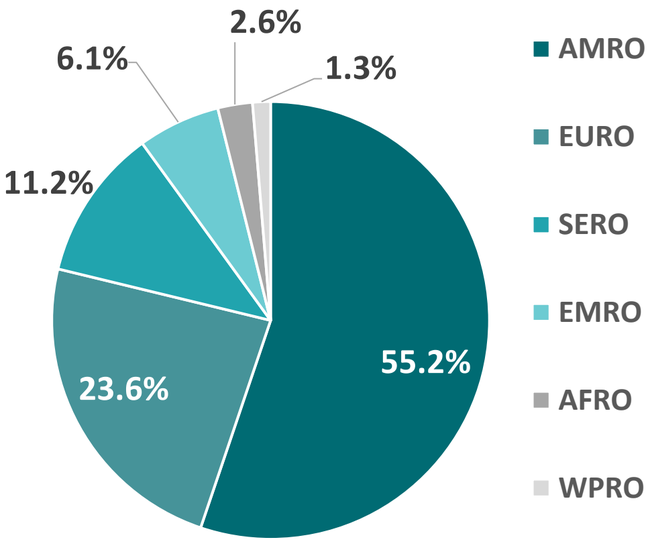


INFECTED



DEATHS





Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

EPIDEMIOLOGY

Date: 28 SEPT 2020

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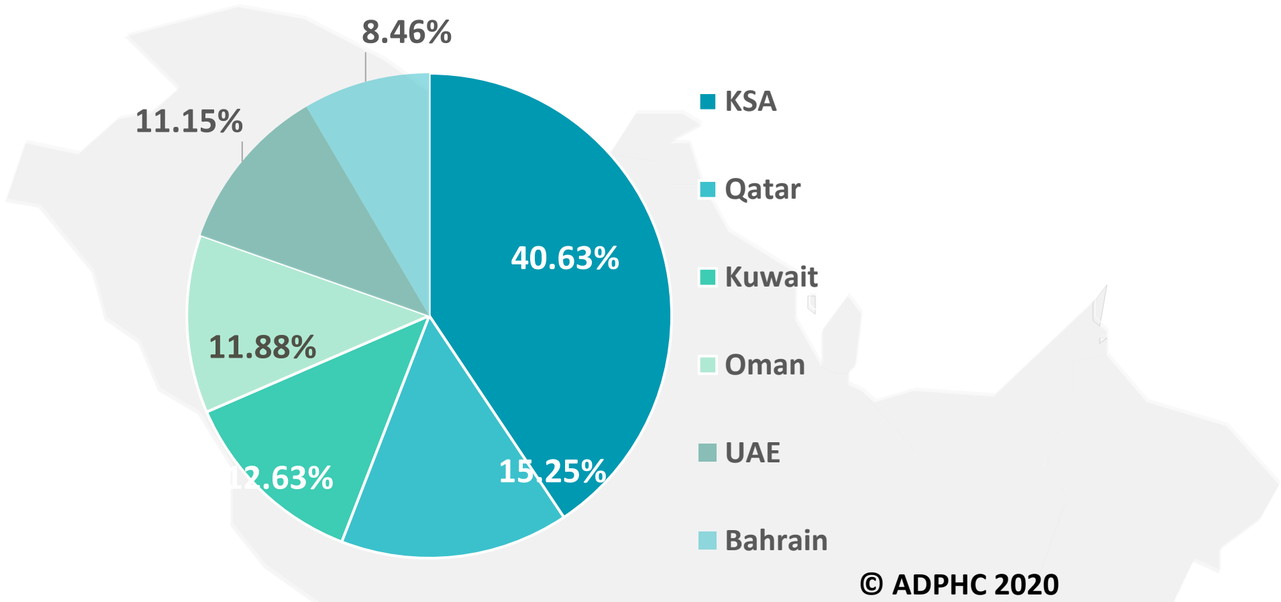
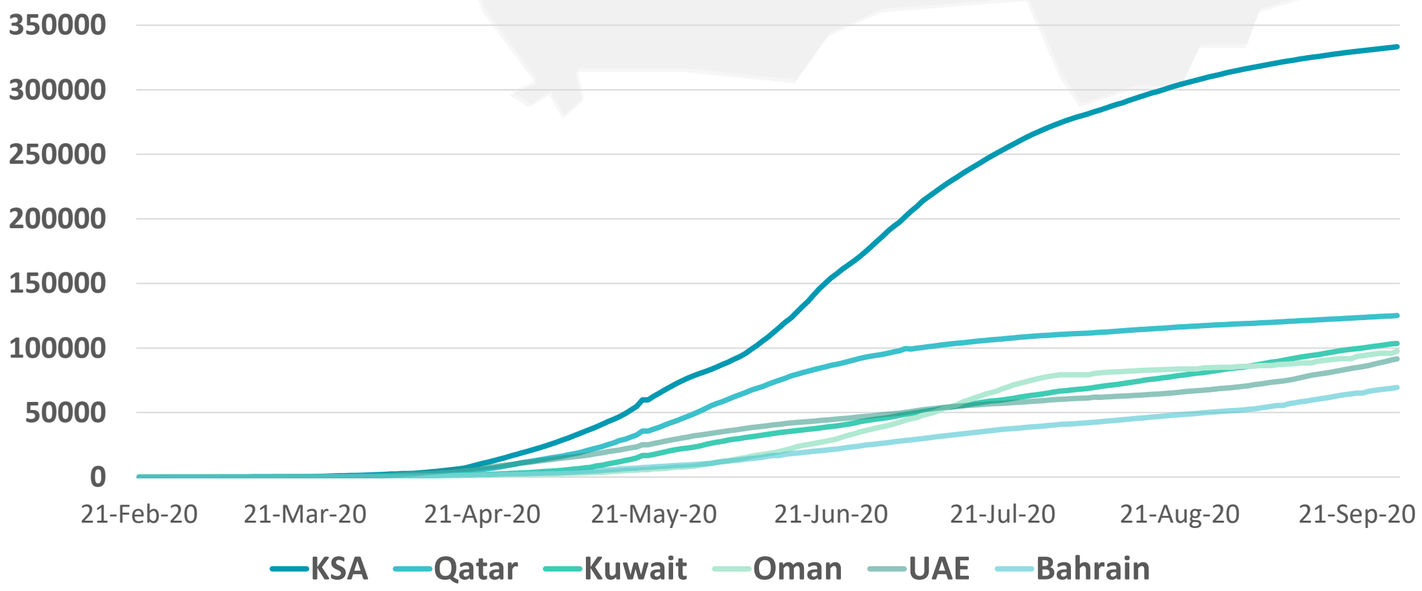
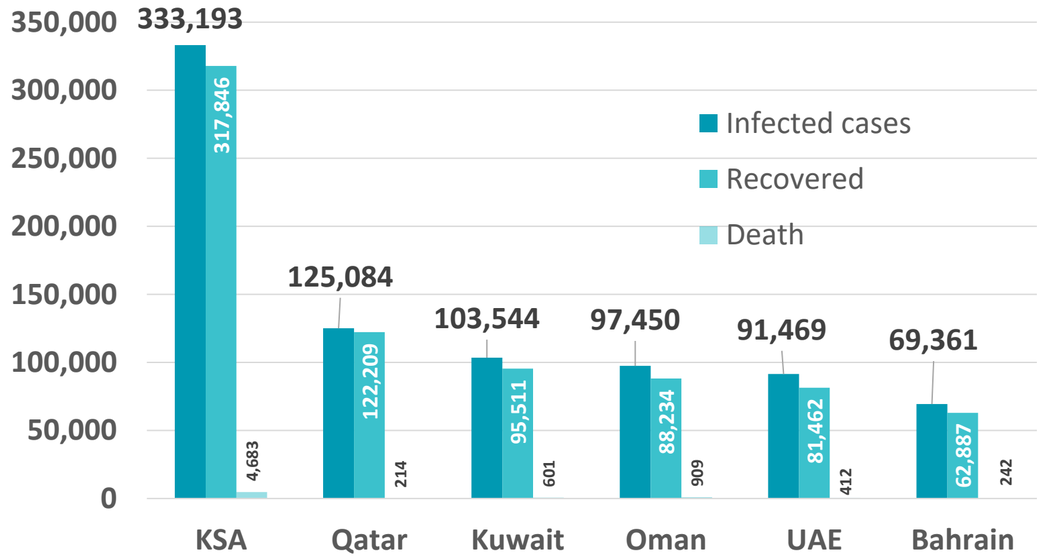
Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

TOTAL NUMBER OF INFECTED CASES

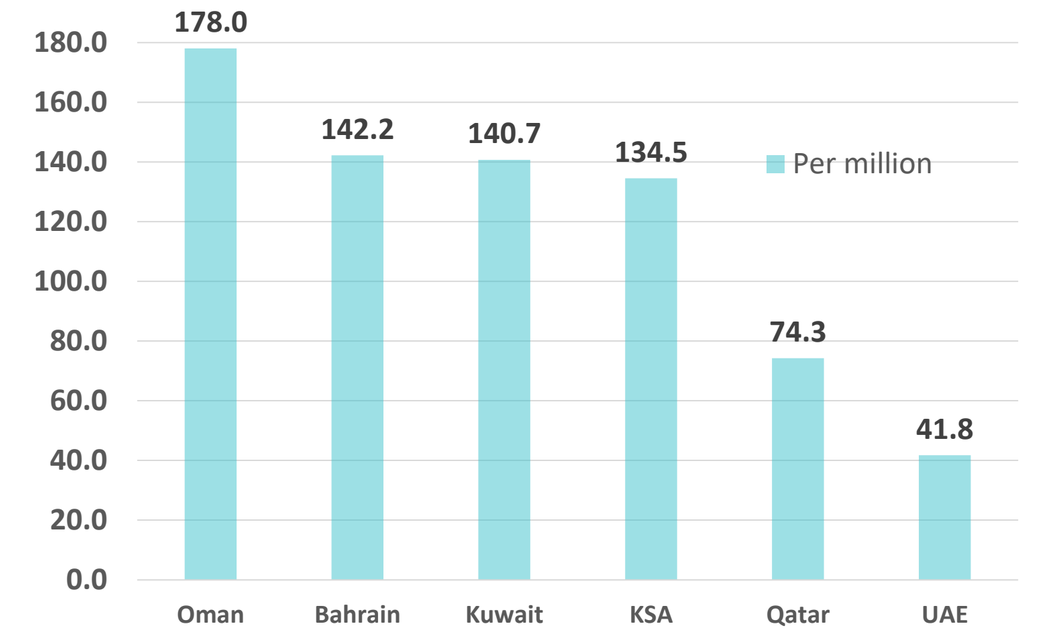




TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS

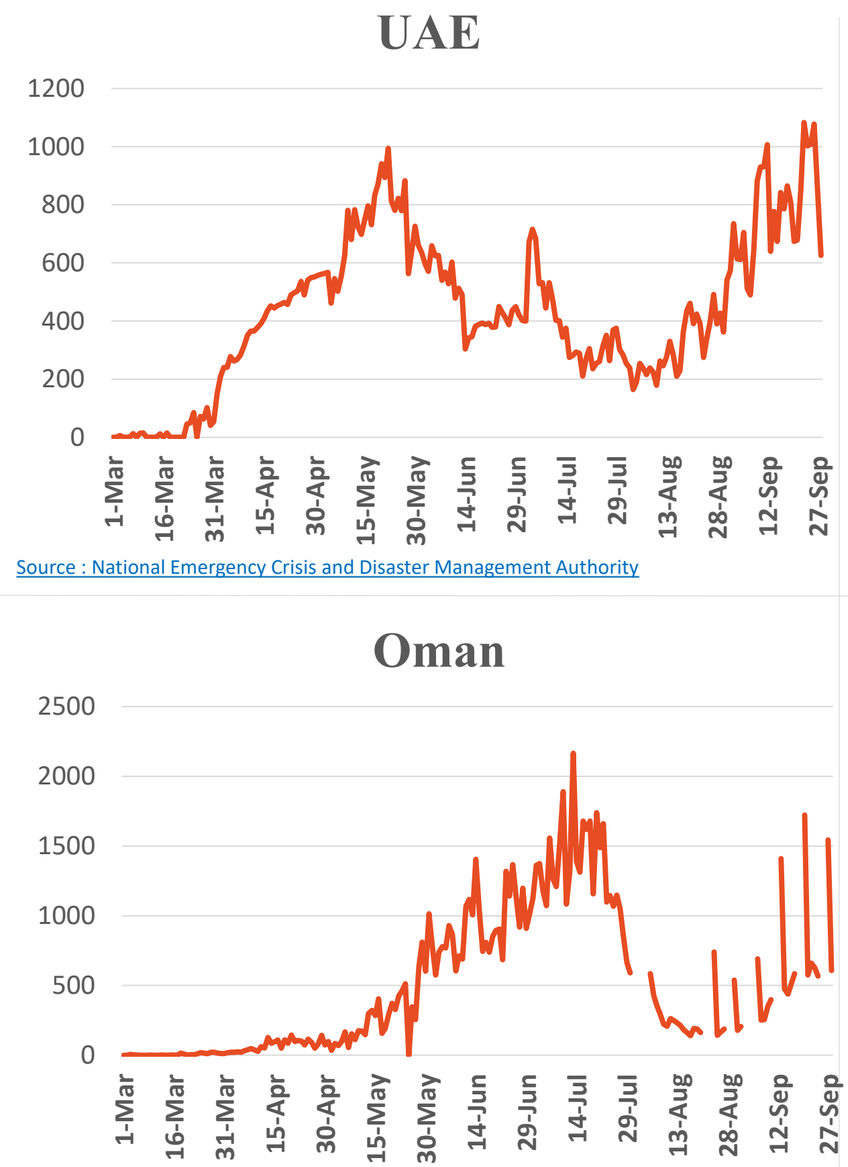


DEATHS PER MILLION

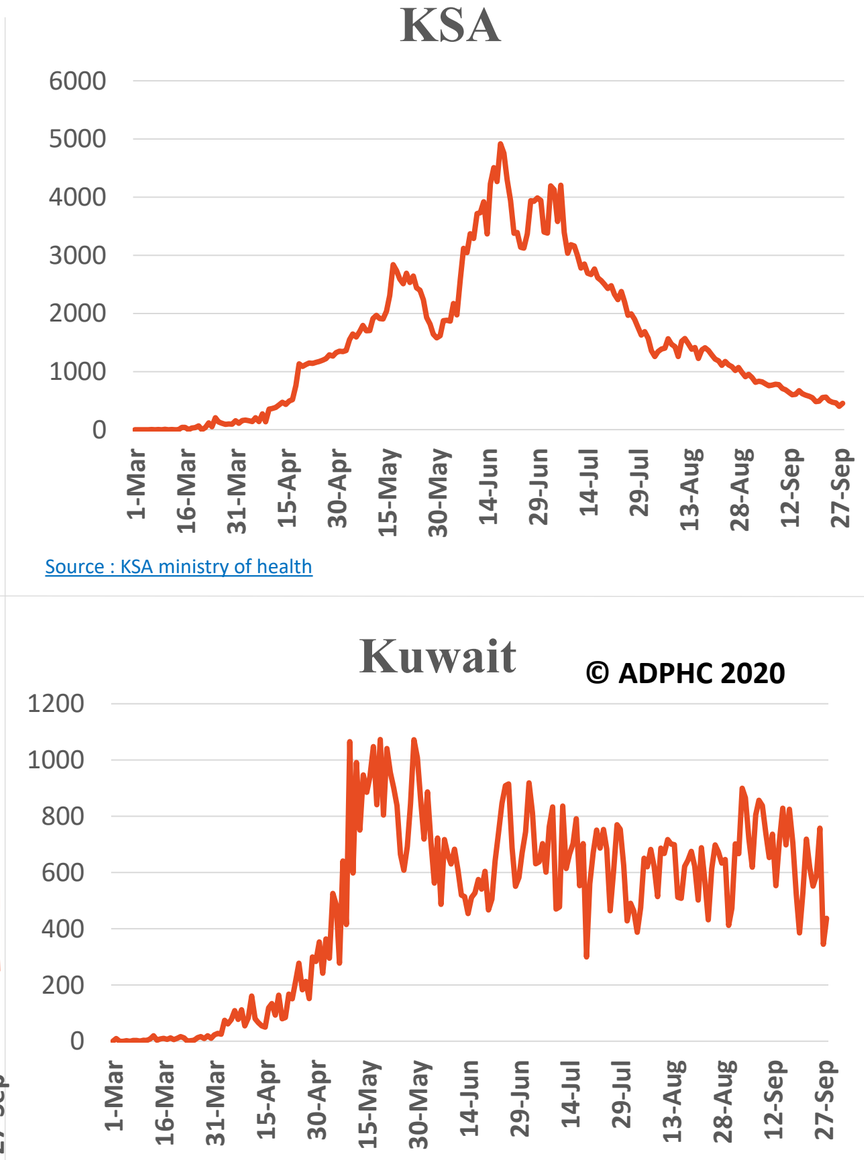


Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: John Hopkins, WHO

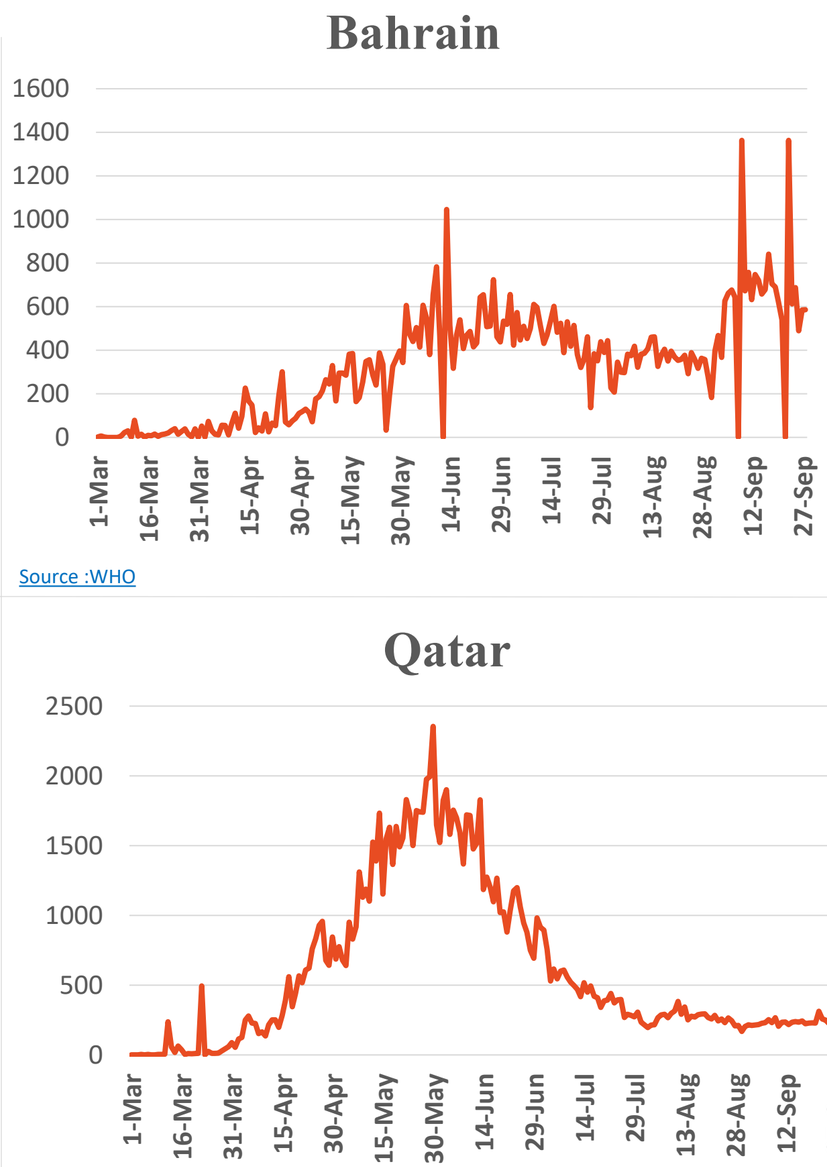
Figure 10: Comparative Analysis of the Distribution of COVID-19 New Cases in GCC Countries



Source : National Emergency Crisis and Disaster Management Authority



Source : KSA ministry of health



Source :WHO

Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August, 21,23,28,30 August, 2, 4، 5,11,12,18,19,25 & 26 September
*No announced statistic data on weekends and official holidays.

Source : Kuwait ministry of health

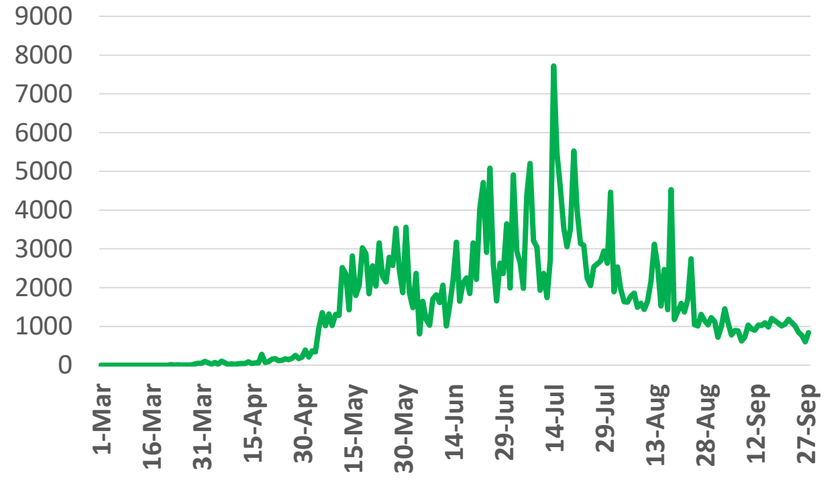
Source : Qatar ministry of health

Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE

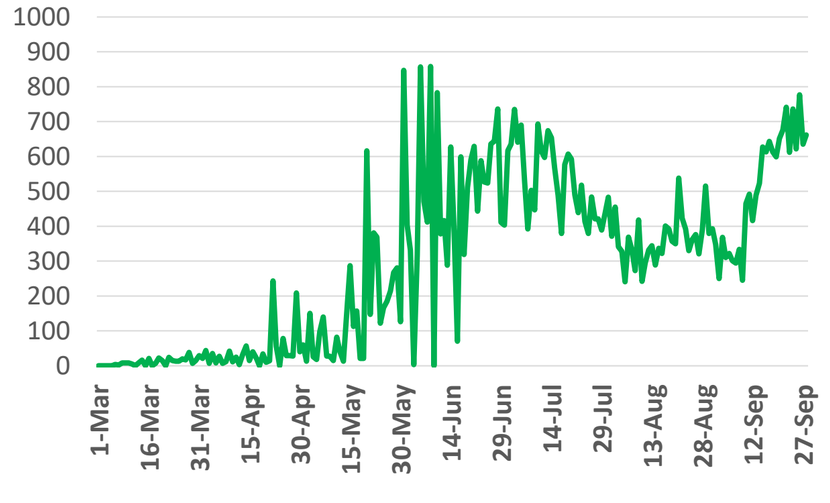
Source : National Emergency Crisis and Disaster Management Authority

KSA



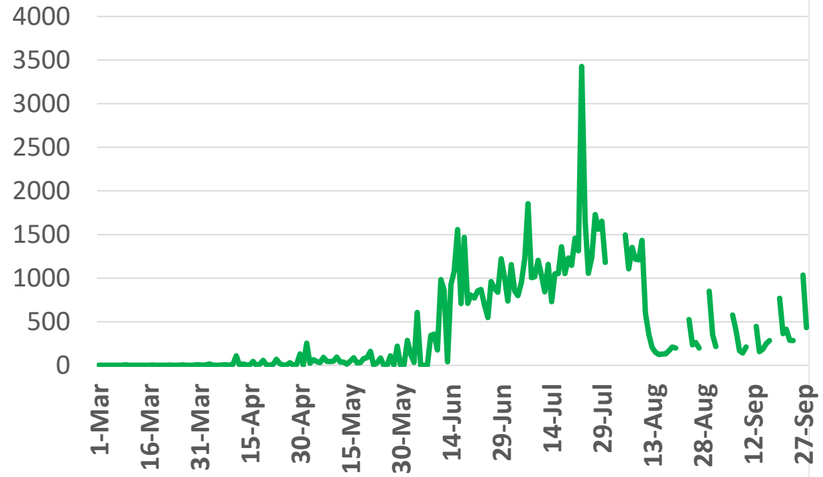
Source : KSA ministry of health

Bahrain



Source : Bahrain ministry of health

Oman



Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August, 21,23,28,30 August, 2, 4، 5,11,12,18,19,25 & 26 September

Kuwait

Source : Kuwait ministry of health

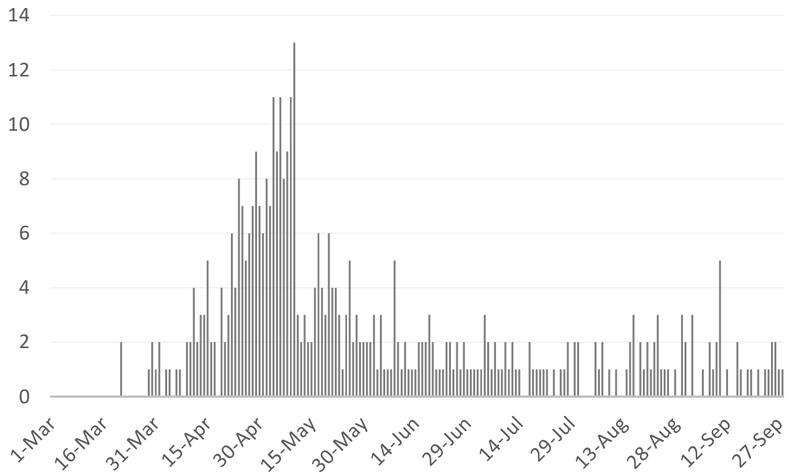
Qatar

Source : Qatar ministry of health

*No announced statistic data on weekends and official holidays.

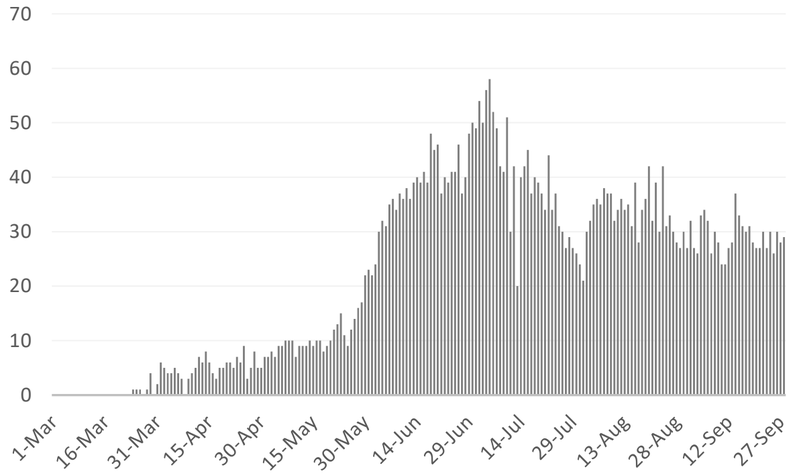
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



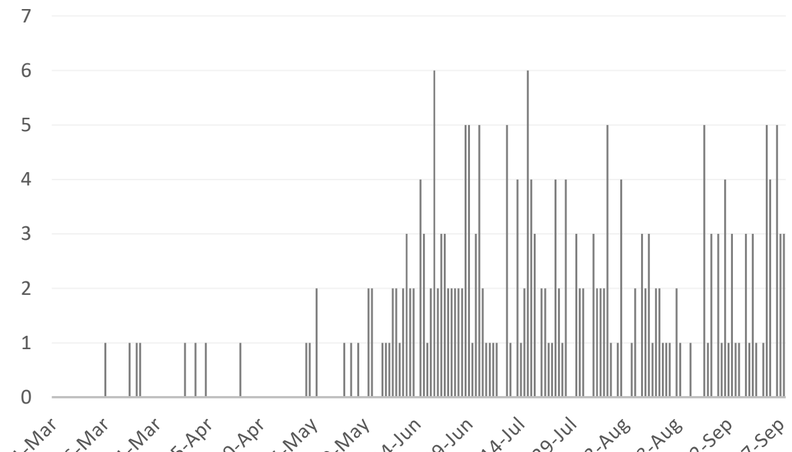
Source : National Emergency Crisis and Disaster Management Authority

KSA



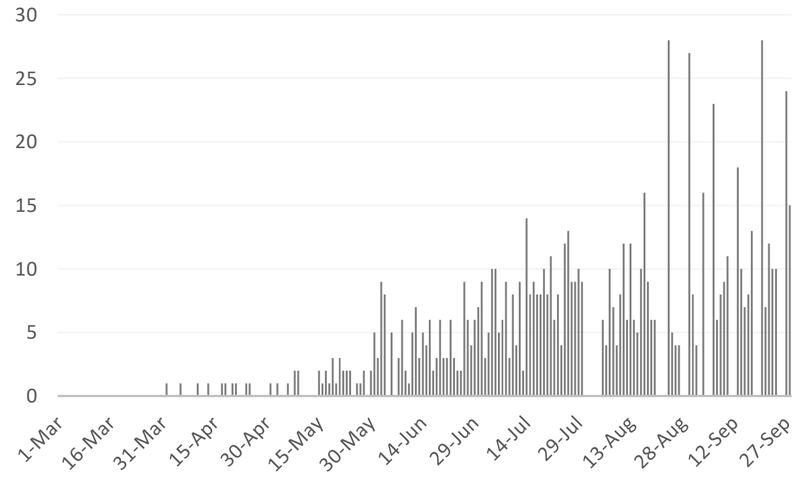
Source : KSA ministry of health

Bahrain



Source :WHO

Oman



Source :Oman ministry of health

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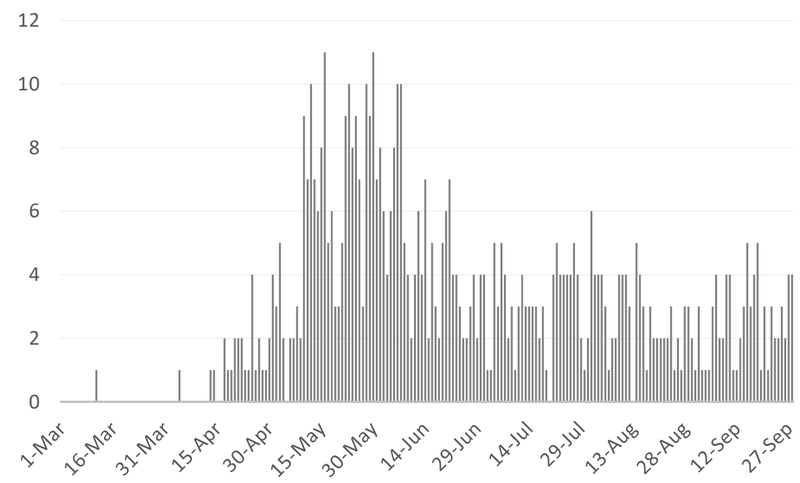
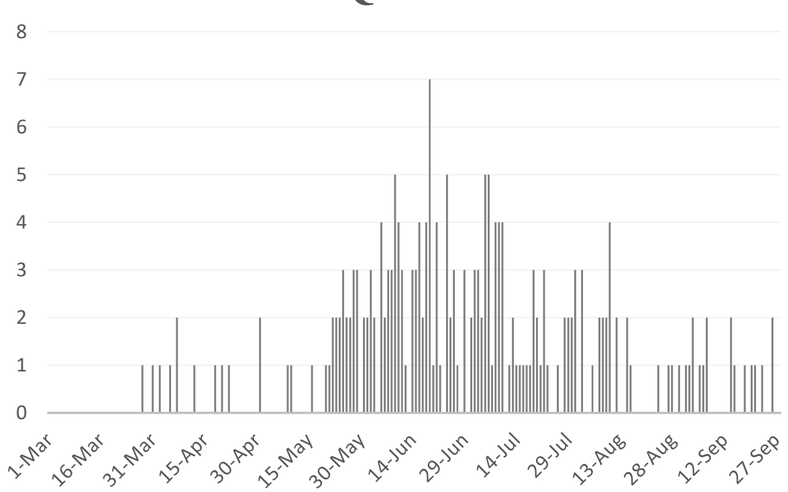
Kuwait



Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

*No announced statistic data on weekends and official holidays.

PUBLIC HEALTH RESPONSE

مركز أبوظبي للصحة العامة
ABU DHABI PUBLIC HEALTH CENTRE

Article 1

Published

Lessons learnt from Easing COVID-19 Restrictions: An Analysis of Countries and Regions in Asia Pacific and Europe

September 24, 2020 THE LANCET

This Health Policy paper uses an adapted framework to examine the approaches taken by nine high-income countries and regions that have started to ease COVID-19 restrictions.

The Burning Question

- When and how a country should ease restrictions are the common challenges that governments worldwide now face as they seek to balance various health, social, and economic concerns.

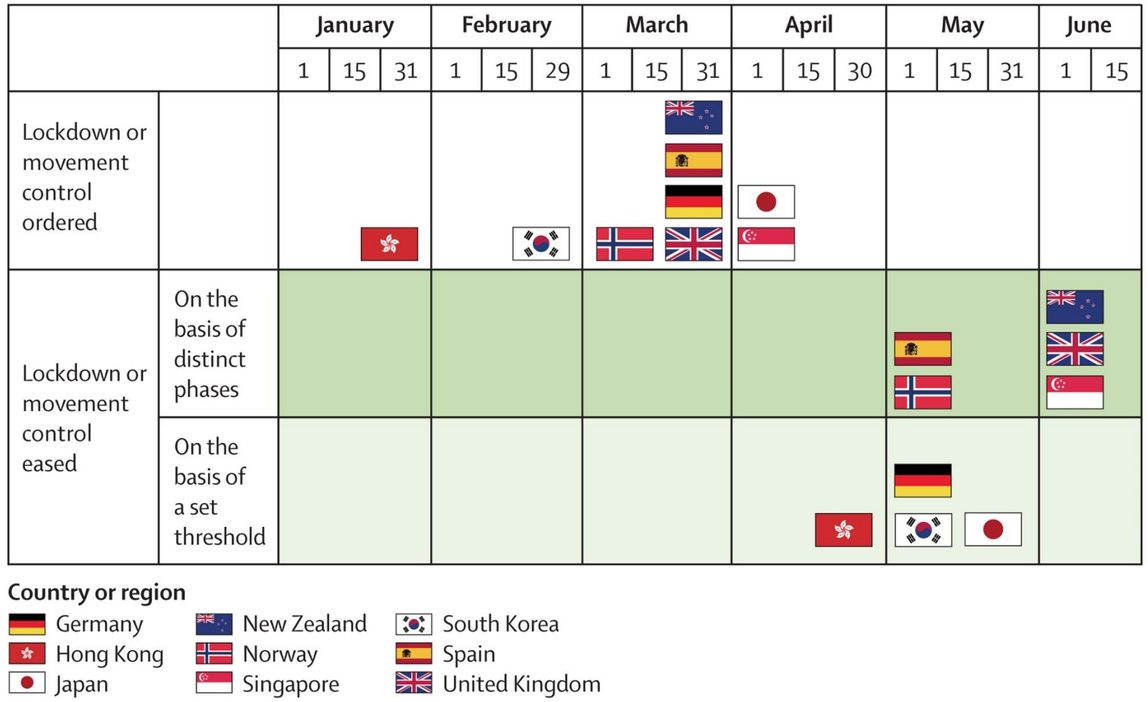
Methodology

- A comparative analysis of an adapted framework was performed to examine the 'exit strategy' by nine countries including Hong Kong, Japan, New Zealand, Singapore, and South Korea (Asia Pacific region) and Germany, Norway, Spain, and the UK (Europe).

Overall Approaches

- Decisions regarding easing restrictions are based on combinations of the epidemiology of infections and the social and economic consequences of restrictions.
- Unfortunately, governments are not explicit about their goals and transparent in their decision making and lack a clear overall strategy.

Figure. Timeline for imposing and easing of restriction



PUBLIC HEALTH RESPONSE

Continued

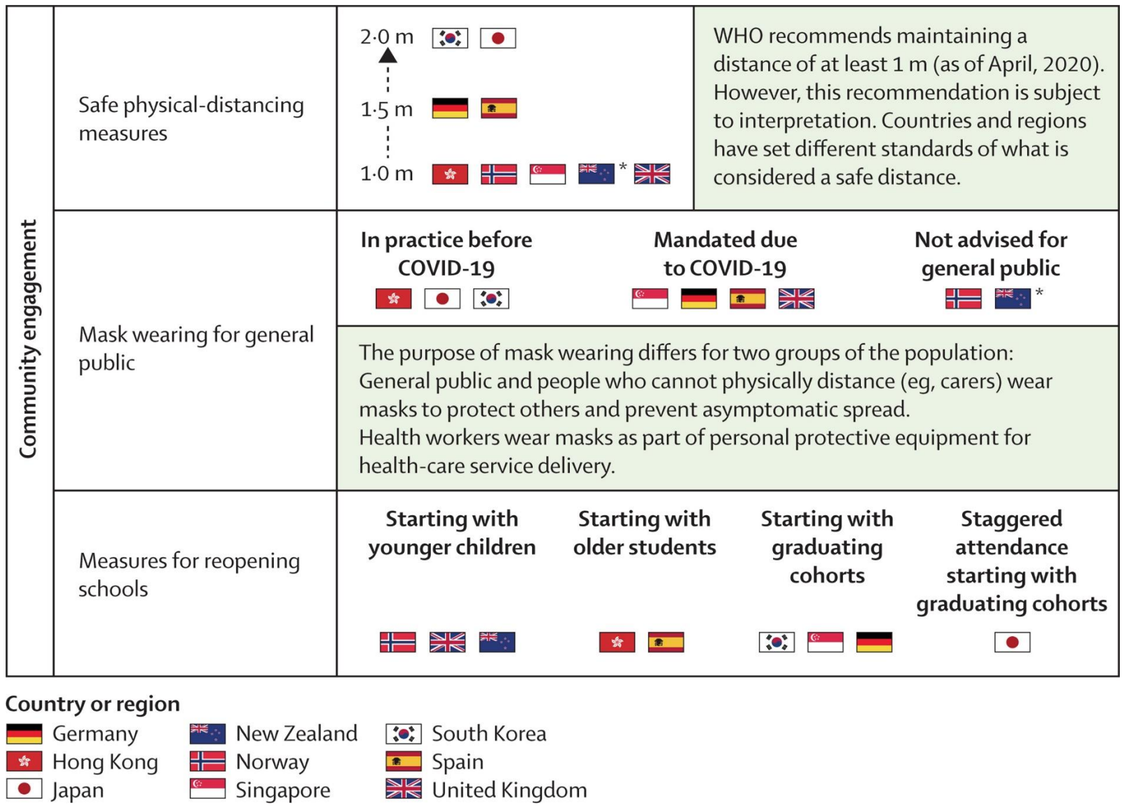
1) Knowledge of Infection Status

- Indicators to monitor the epidemiological situation
  - Countries and regions have varied in their ability to implement effective find, test, trace, isolate, and support systems.
  - Some locations in Asia, such as South Korea and Hong Kong, had systems that functioned well at the beginning of the pandemic, and other countries, such as Germany, were able to redeploy resources, whereas some countries, such as the UK and Spain, have struggled.
  - **A country should not open up until it has a surveillance system of high quality in place and has confirmed that infections are being suppressed.**
  - **The reproduction number (R) should be safely less than 1 to allow relaxation of restrictions.**

2) Community Engagement

- Safe policies for physical distancing and mask-wearing
- Precautionary measures in schools and workplaces
- Communication to secure public trust and cooperation
- Protecting vulnerable populations
- Providing socioeconomic support

Figure. Key measures in place to allow safe easing of restrictions



PUBLIC HEALTH RESPONSE

Continued

3) Public-Health Capacity

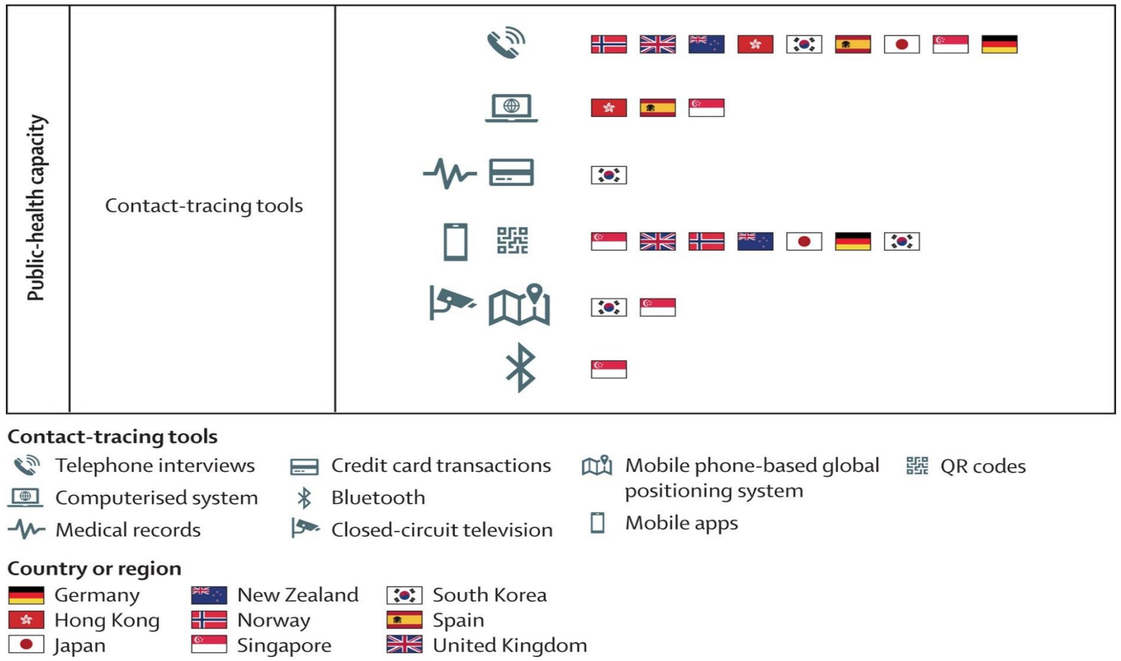
- Testing, tracing, and isolating
- Role of experts

4) Health-System Capacity

- Treatment facilities
- Medical equipment
- Health-care workforce

- In some countries, shortages of personal protective equipment have forced medical staff to work without adequate protection, and shortages of ventilators have forced staff to make difficult rationing decisions.
- Therefore, governments have increased efforts to procure necessary medicines and equipment, by sourcing from overseas and boosting the capacity of domestic companies.

Figure. Contact-tracing tools in the nine countries and regions



5) Measures for Border Control –

- Inbound travel restrictions

- The inflow of travelers should be managed to reduce the risk of people with COVID-19 travelling into the area.
- All arrivals entering Singapore, New Zealand, Hong Kong and South Korea, are subject to mandatory COVID-19 testing and 14-day quarantine at home or at designated facilities.
- By contrast, European countries have been slow to require routine testing of travelers.
- To prevent the potential rise in imported cases countries should incorporate automated processes, such as computerized health declarations and thermal-imaging cameras to facilitate temperature screening of visitors.

TREATMENT

Article 2

Published September 25, 2020 THE LANCET

Extracorporeal Membrane Oxygenation for Severe Acute Respiratory Distress Syndrome Associated with COVID-19: A Retrospective Cohort Study

- Clinical evidence supports the use of extracorporeal membrane oxygenation (ECMO) in acute respiratory distress syndrome (ARDS). Several health organizations recommend the use of ECMO for COVID-19-related acute hypoxaemic respiratory failure. However, there have been no large, international cohort studies of ECMO for COVID-19 reported to date.

- The authors of this study used data from the Extracorporeal Life Support Organization (ELSO) Registry to characterize the epidemiology, hospital course, and outcomes of patients aged 16 years or older with confirmed COVID-19 who had ECMO support initiated between Jan and May 2020, at 213 hospitals from 36 countries. The investigators sought to identify the hospital death in a time-to-event analysis assessed at 90 days after ECMO initiation.

- Of the 1035 patients with COVID-19 who received ECMO, 67 (6%) remained hospitalized, 311 (30%) were discharged home, or to an acute rehabilitation center, 101 (10%), were discharged to a long-term acute care center or unspecified location, 176 (17%), were discharged to another hospital, and 380 (37%) died. The estimated cumulative incidence of in-hospital mortality 90 days after the initiation of ECMO was 37·4% (95% CI 34·4–40·4).

- Interestingly, the use of ECMO for circulatory support was independently associated with higher in-hospital mortality (hazard ratio 1·89, 95% CI 1·20–2·97). In the subset of patients with COVID-19 receiving respiratory (venovenous) ECMO and characterized as having acute respiratory distress syndrome, the estimated cumulative incidence of in-hospital mortality 90 days after the initiation of ECMO was 38·0% (95% CI 34·6–41·5). Interpretation In patients with COVID-19 who received ECMO, both estimated mortality 90 days after ECMO and mortality in those with a final disposition of death or discharge were less than 40%.

EPIDEMIOLOGY

Continued

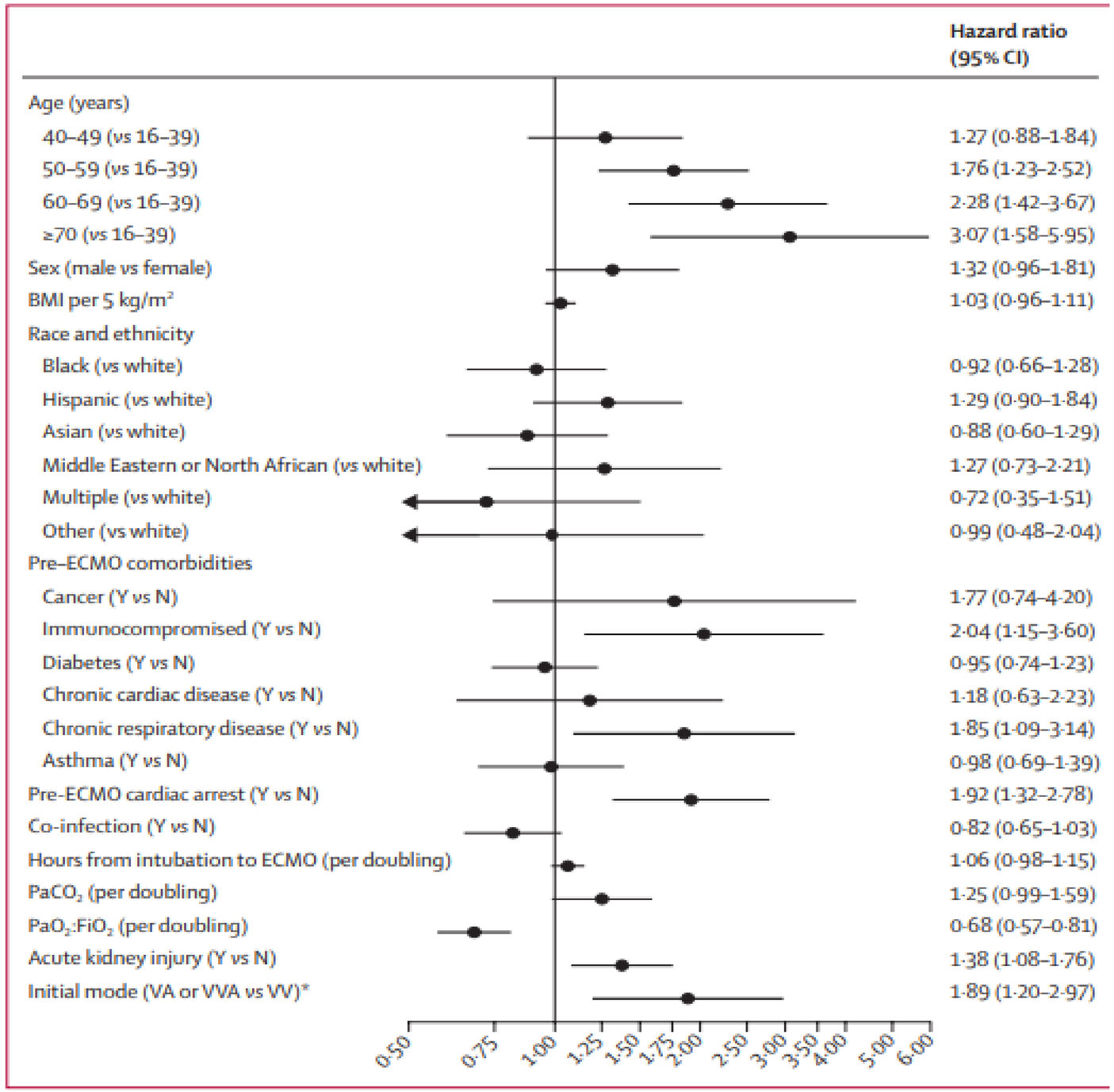


***Figure 3*: Cox model for factors associated with in-hospital mortality in patients with COVID-19 supported with ECMO**

THANK YOU

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