مركز أبوظبي
للصحة العامة
ABU DHABI PUBLIC
HEALTH CENTRE

SCIENTIFIC RESEARCH MONITORING ON COVID-19

14 SEPTEMBER 2020

For accessing the full series of published scientific reports please visit the following link:
https://www.doh.gov.ae/ar/covid-19/Healthcare-Professionals/Scientific-Publication

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SCIENTIFIC RESEARCH MONITORING ON COVID-19 (ISSUE 225)

مركز أبوظبي للصحة العامة
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
Update

Statistics

Articles
Summary

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

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RESEARCH UPDATES

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Public Health Response

Fairly Prioritizing Groups for Access to COVID-19 Vaccines

Public Health Response

Reassuring the Public and Clinical Community About the Scientific Review and Approval of a COVID-19 Vaccine

Treatment

Association Between Administration of Systemic Corticosteroids and Mortality Among Critically Ill Patients with COVID-19: A Meta-Analysis

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EPIDEMIOLOGY

FROM 21 JAN TO 13 SEPT 2020

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

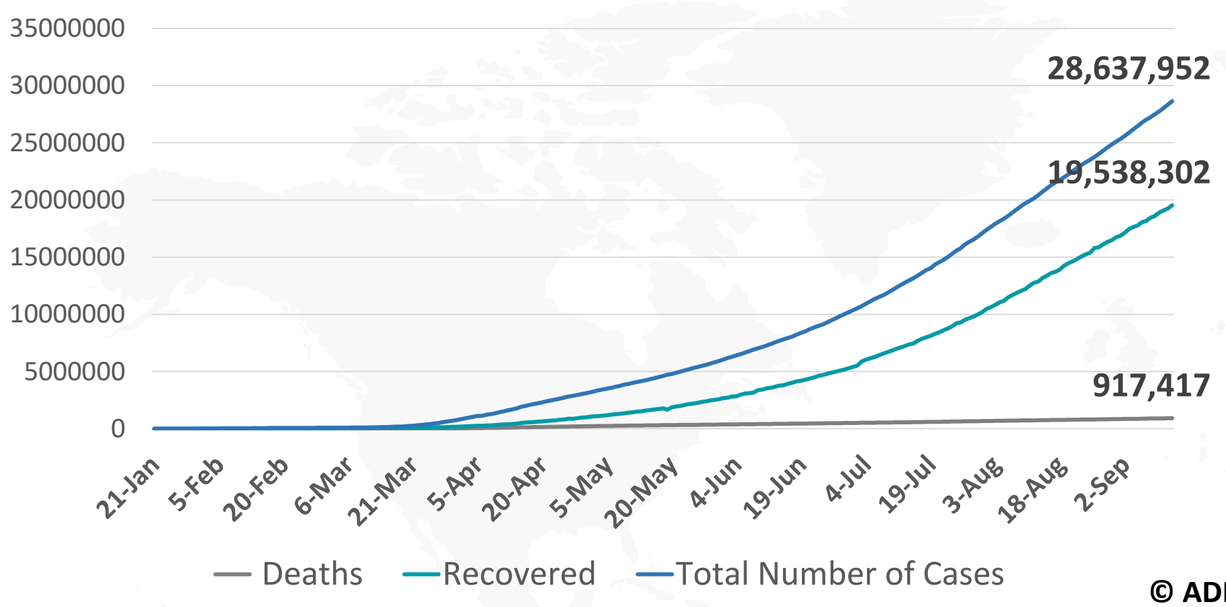


Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)

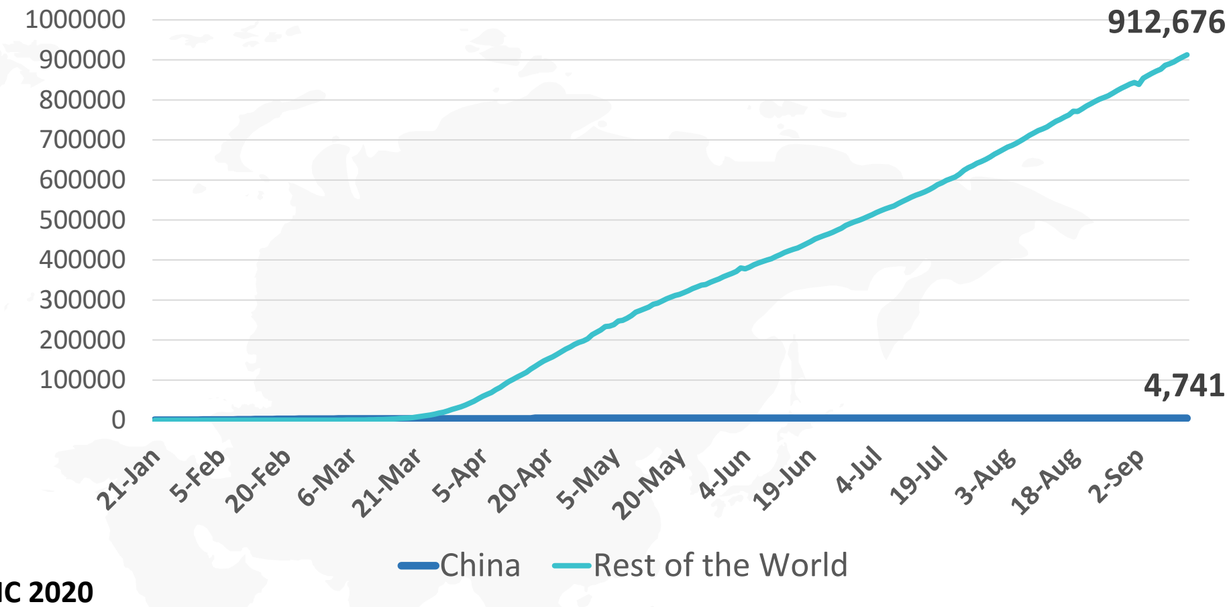


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

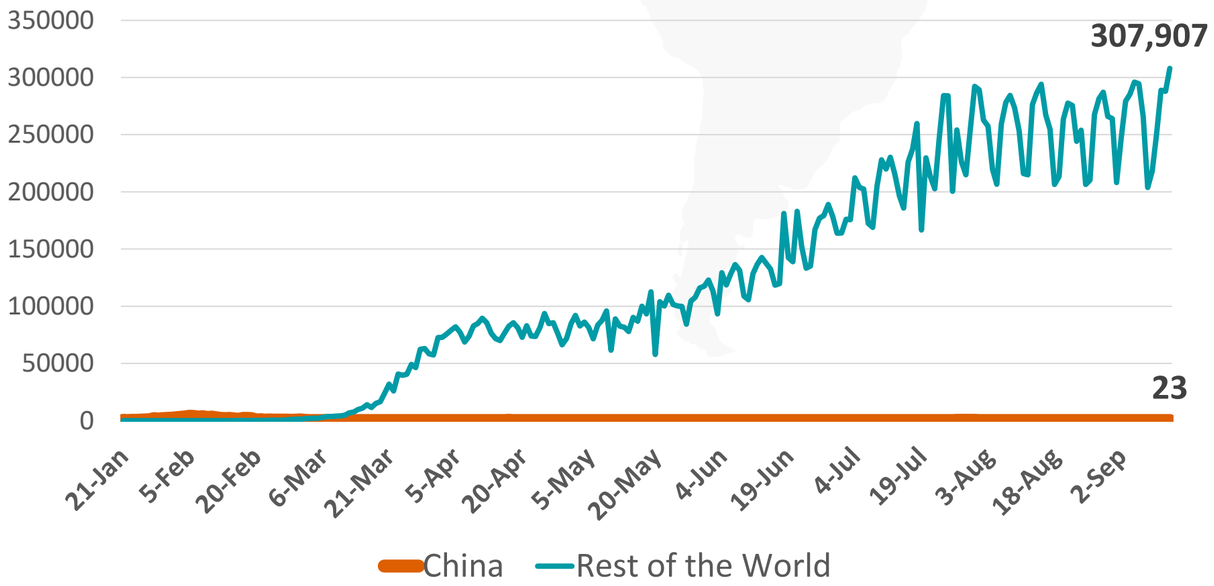
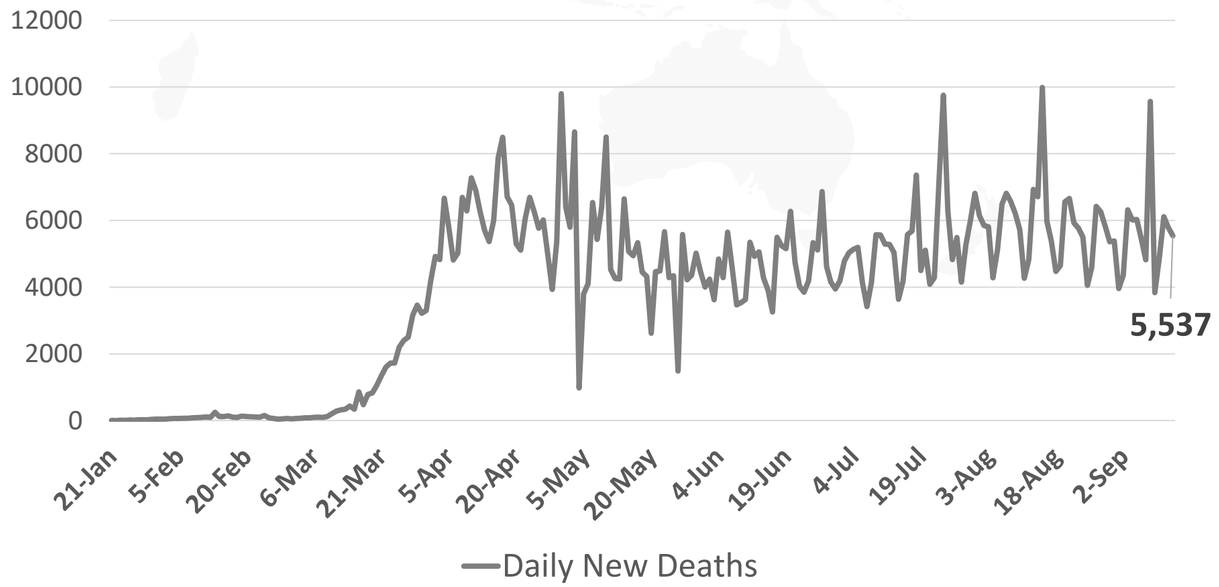


Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)



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

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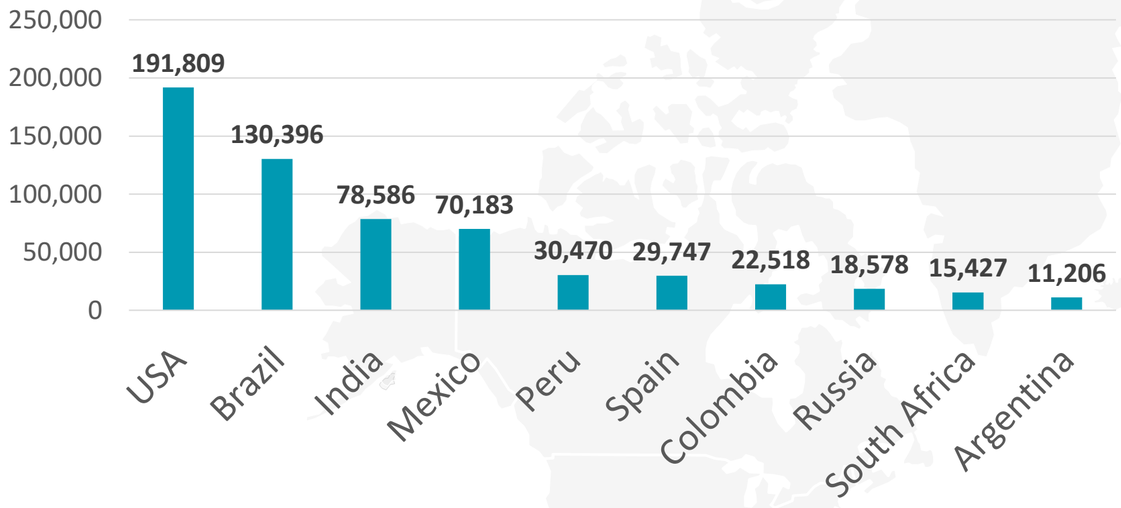
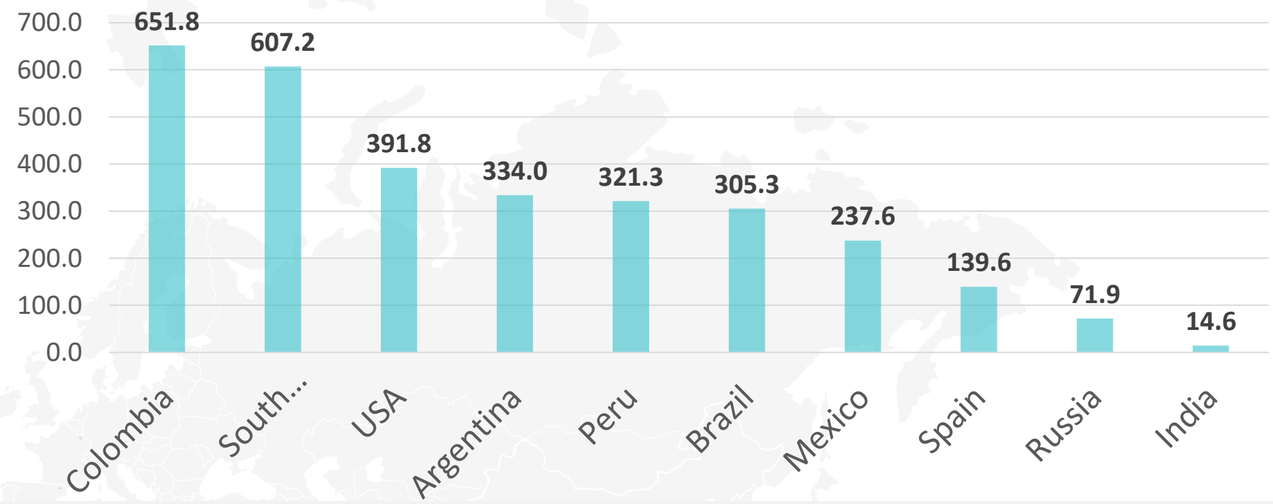
Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

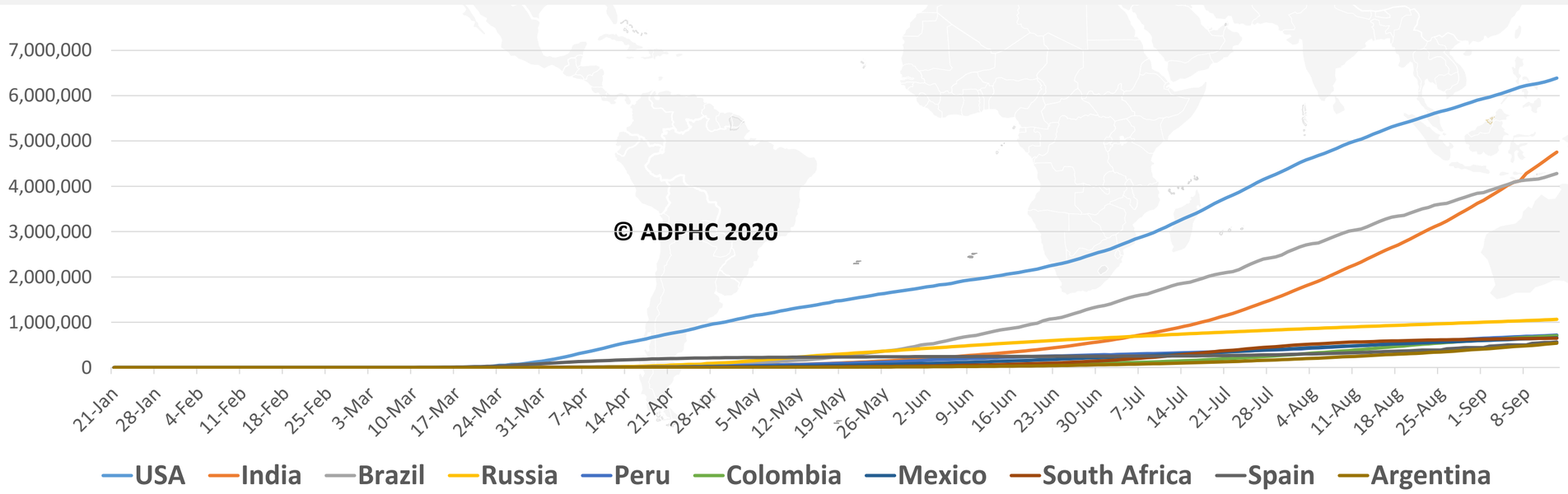
TOTAL DEATHS



DEATHS PER MILLION



TOTAL INFECTED CASES



USA	6,386,832
Brazil	4,754,356
India	4,282,164
Russia	1,062,811
Peru	716,670
Colombia	702,088
Mexico	658,299
South Africa	648,214
Spain	566,326
Argentina	535,705

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EPIDEMIOLOGY

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

Daily Tests

78,848.4 Average Tests

797.2 per 100k population

1.0% Positive Rate

Daily Cases

786.4 Average Cases

8.0 per 100k population

Daily Recovered

479.4 Average Recovered

4.8 per 100k population

Daily Deaths

1.6 Average Deaths

0.0 per 100k population

0.2% Case Fatality Rate

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

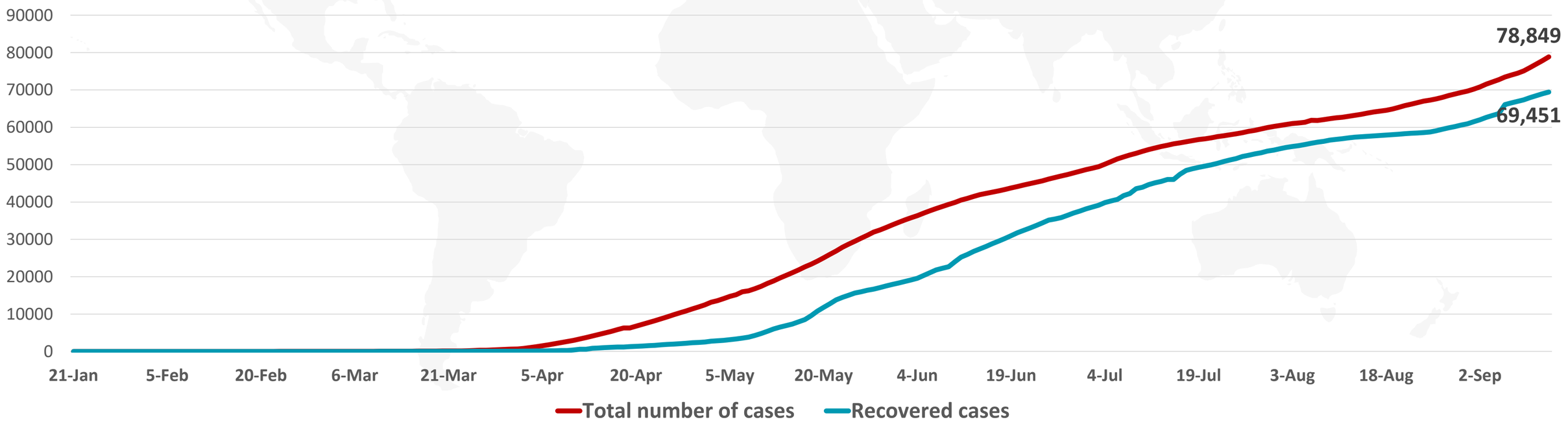

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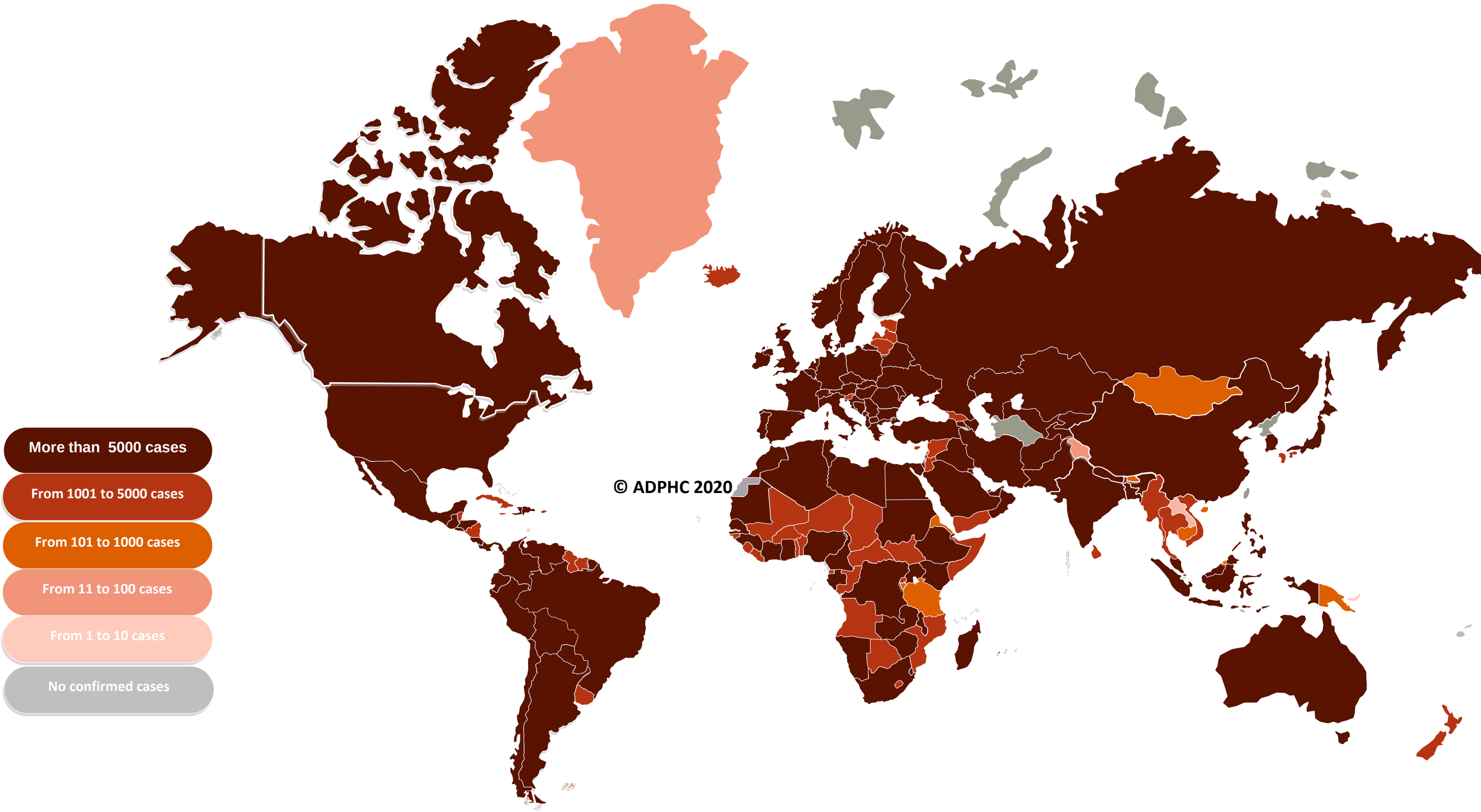
Figure 7A : Global Distribution of COVID-19 Cases



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EPIDEMIOLOGY

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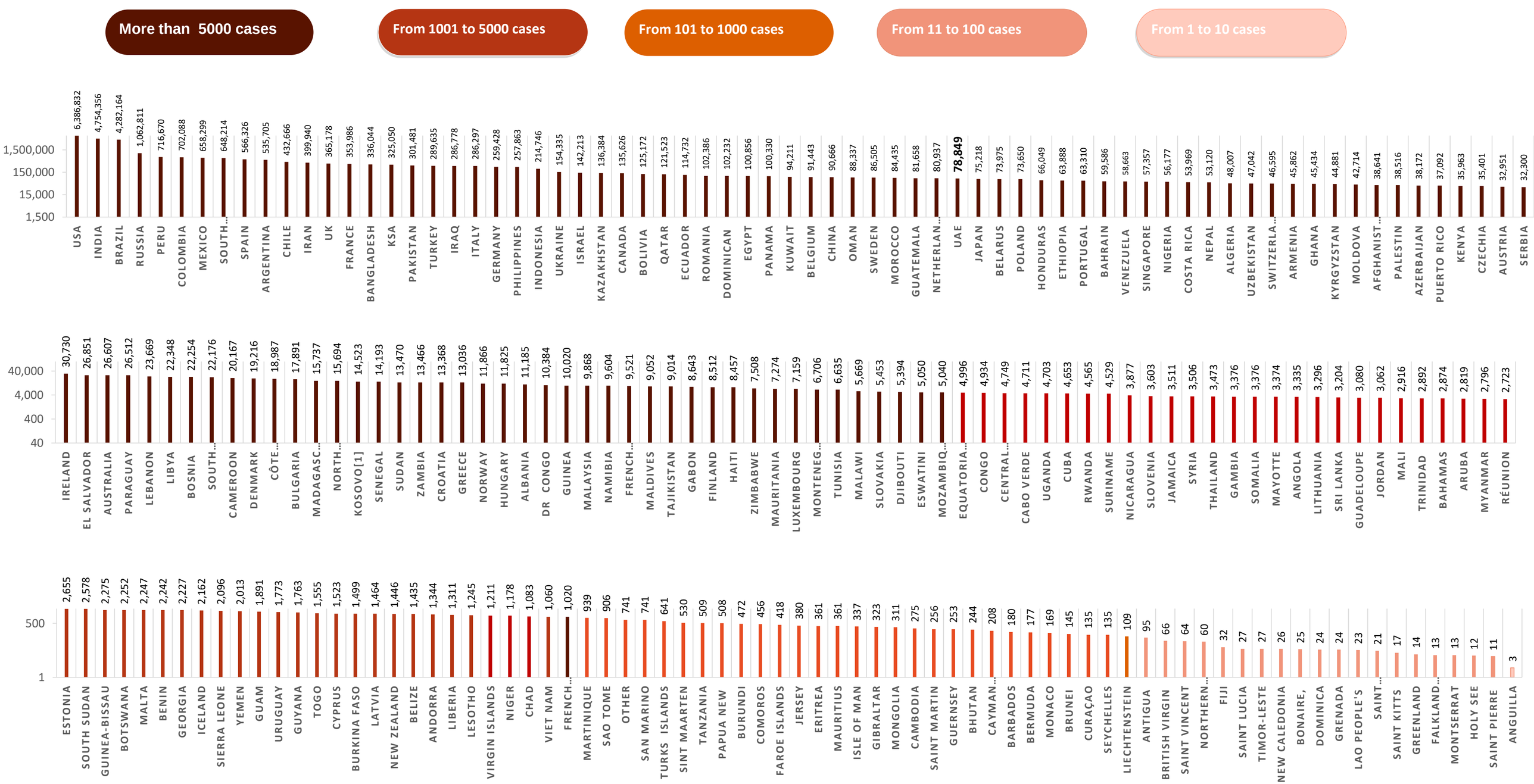
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



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

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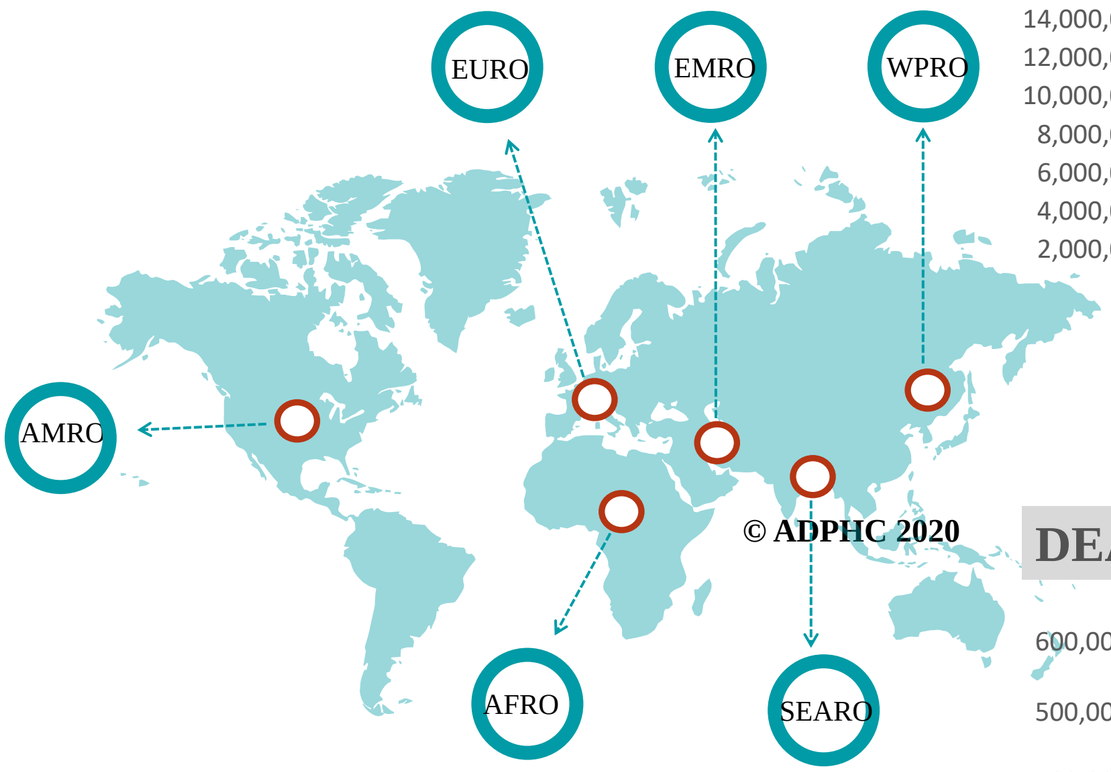
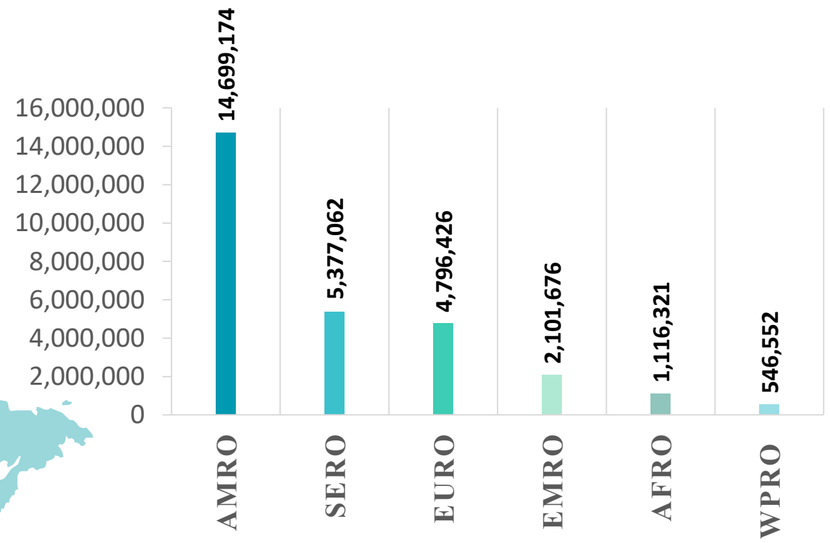
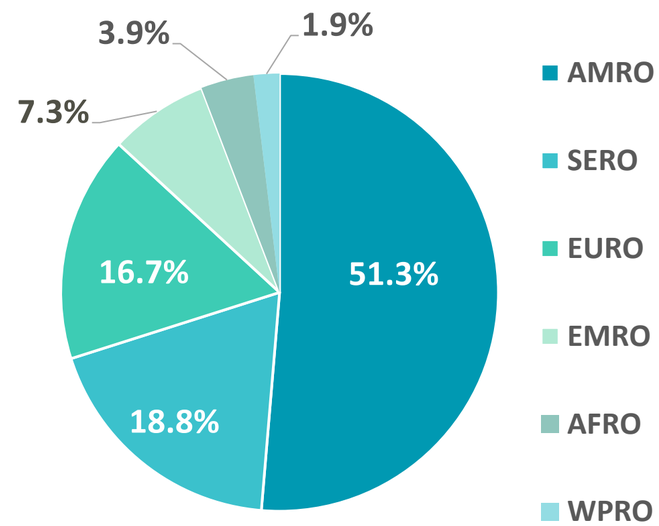
Figure 8: Global Distribution of COVID-19 Cases per Region

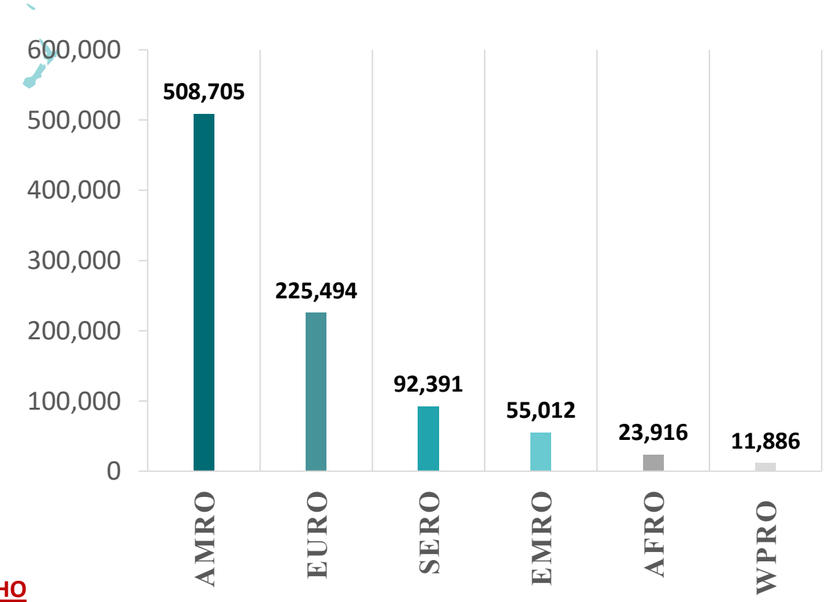


INFECTED





DEATHS



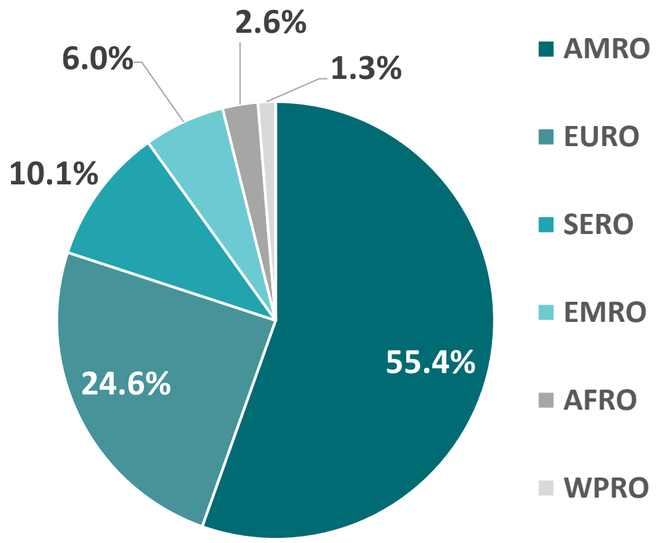


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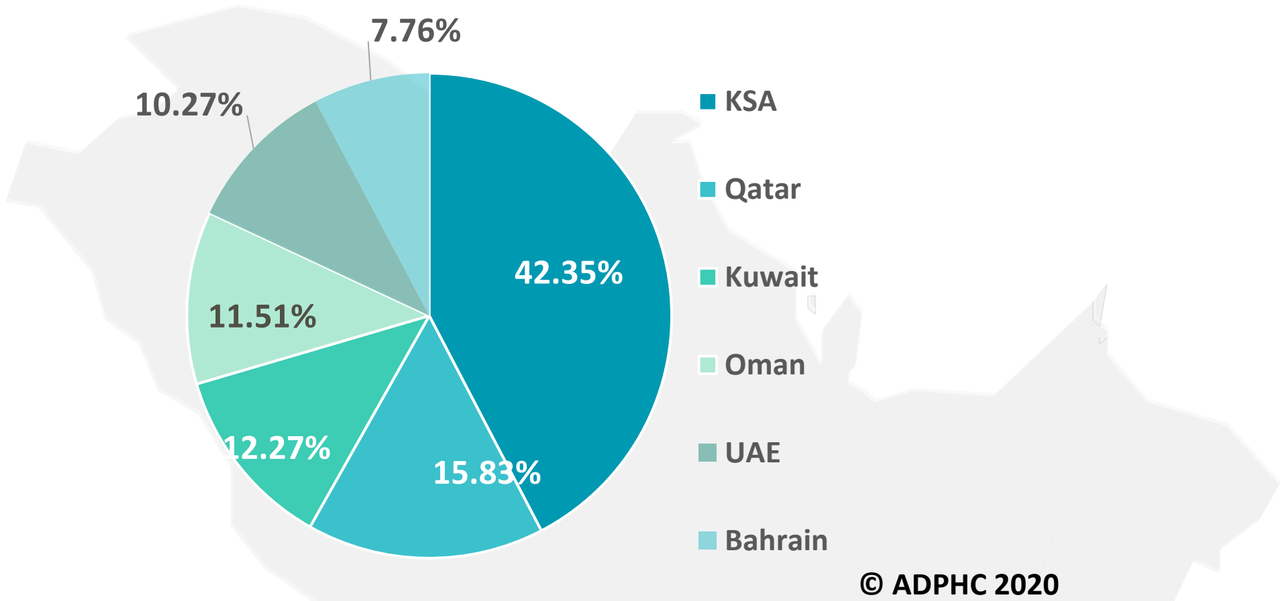
Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

TOTAL NUMBER OF INFECTED CASES



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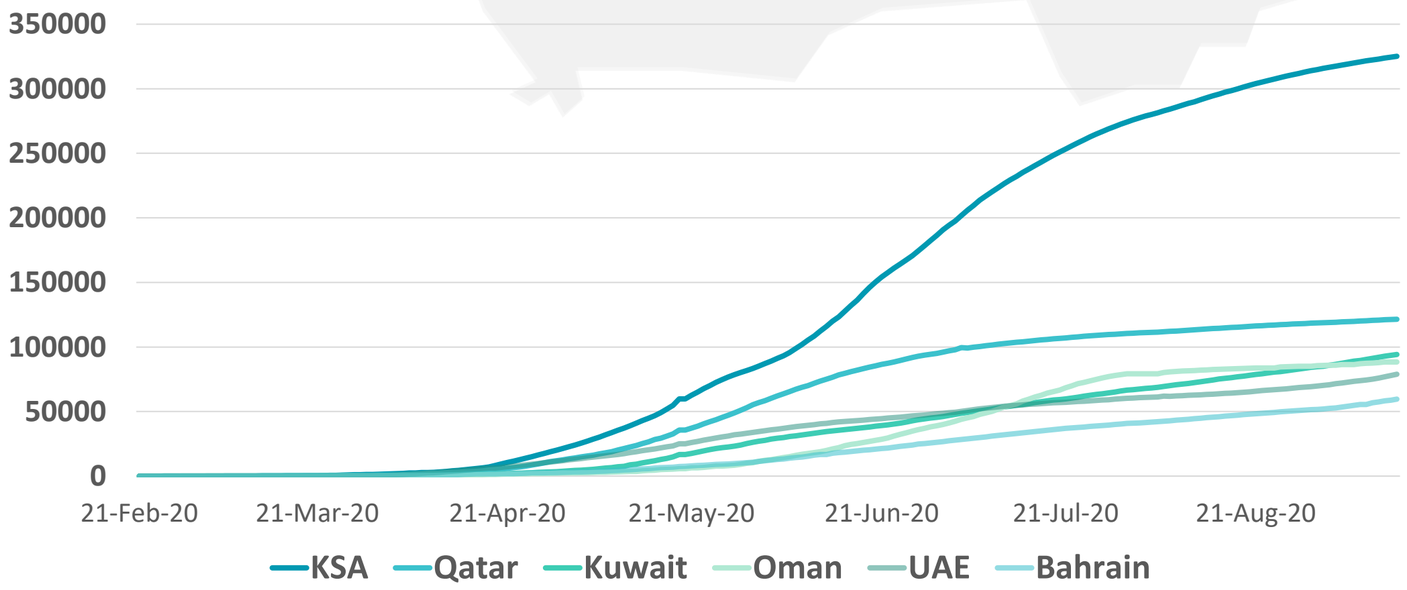
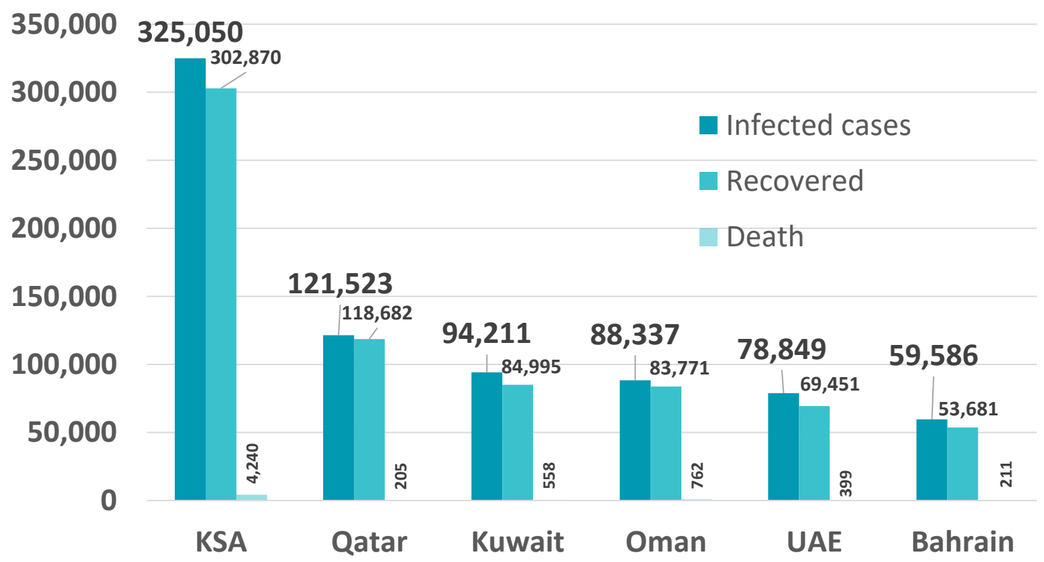


TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATHS PER MILLION

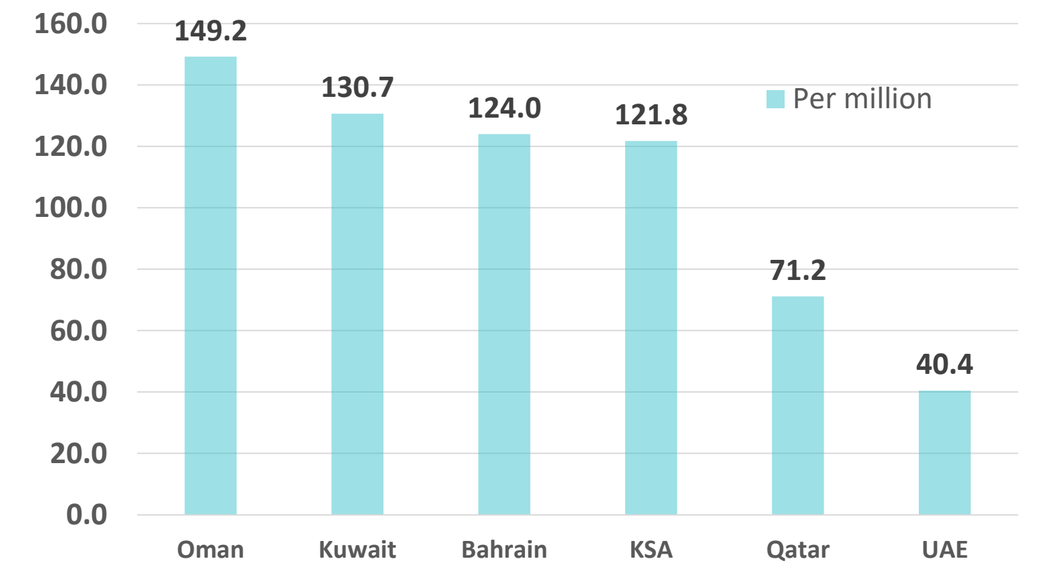


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Figure 10: Comparative Analysis of the Distribution of COVID-19 New Cases in GCC Countries

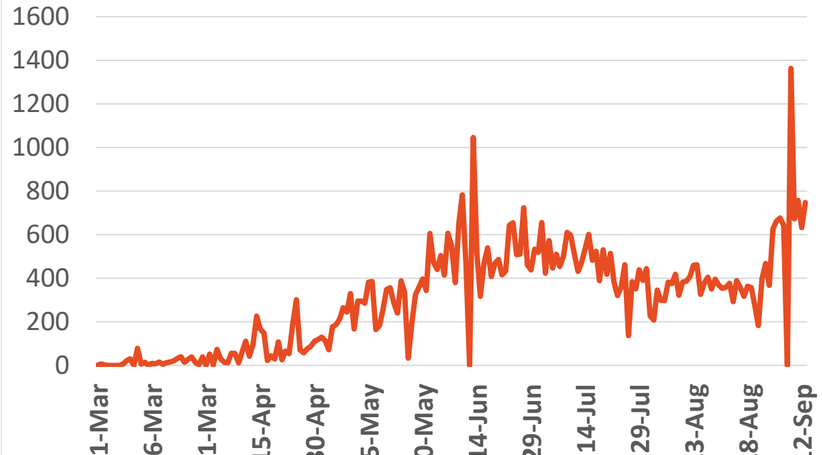
UAE

Source : National Emergency Crisis and Disaster Management Authority

KSA

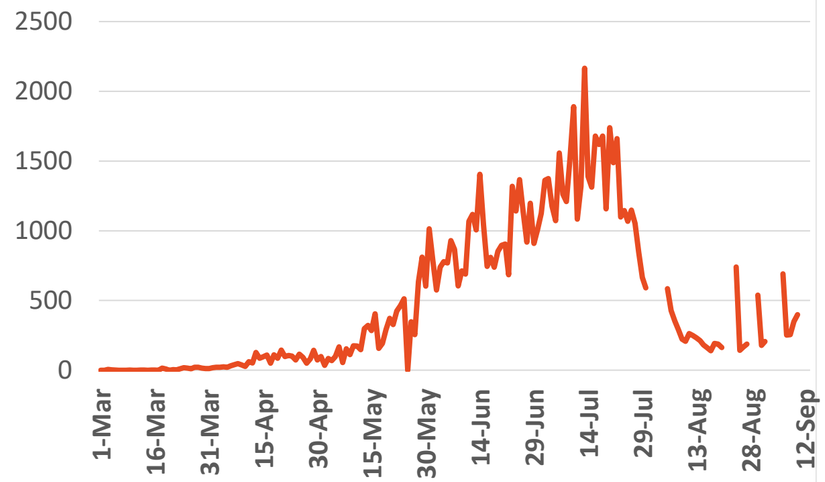
Source : KSA ministry of health

Bahrain



Source :WHO

Oman



Source :Oman ministry of health

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

*No announced statistic data on weekends and official holidays.

Kuwait

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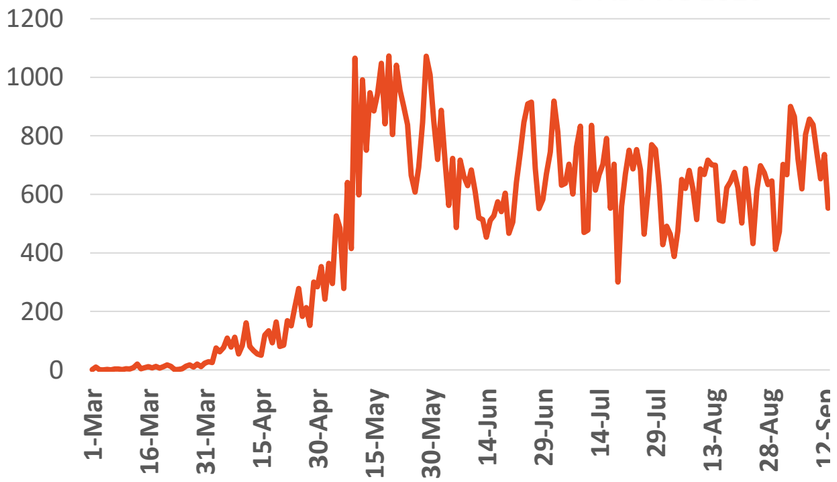
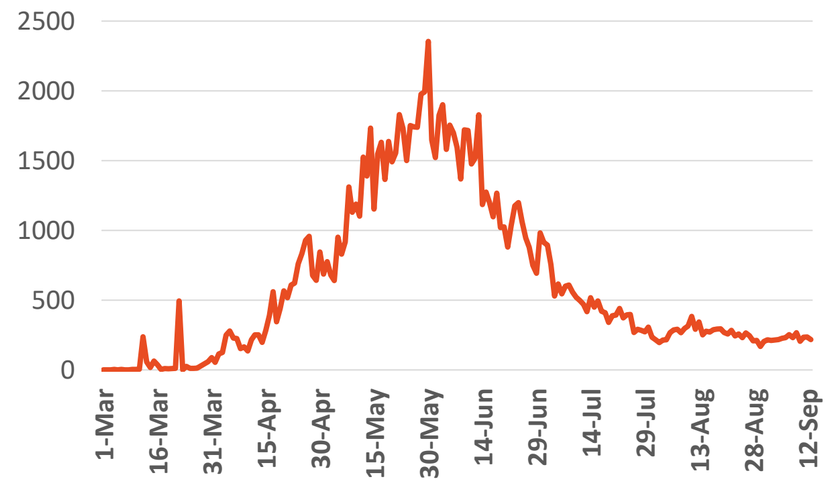


Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

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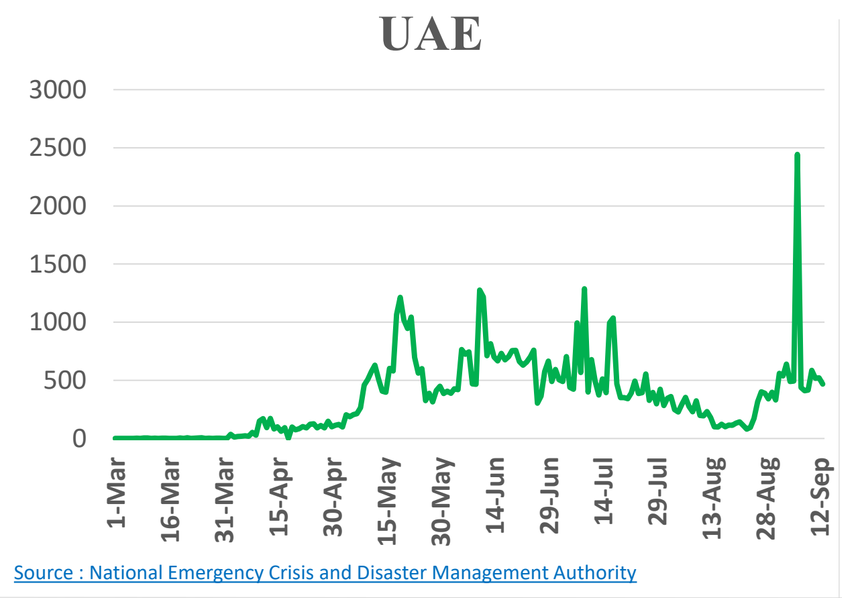
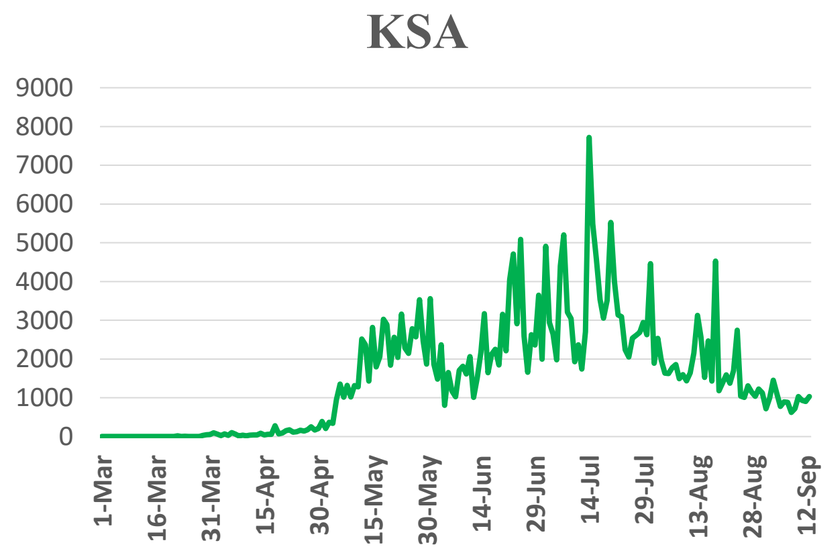
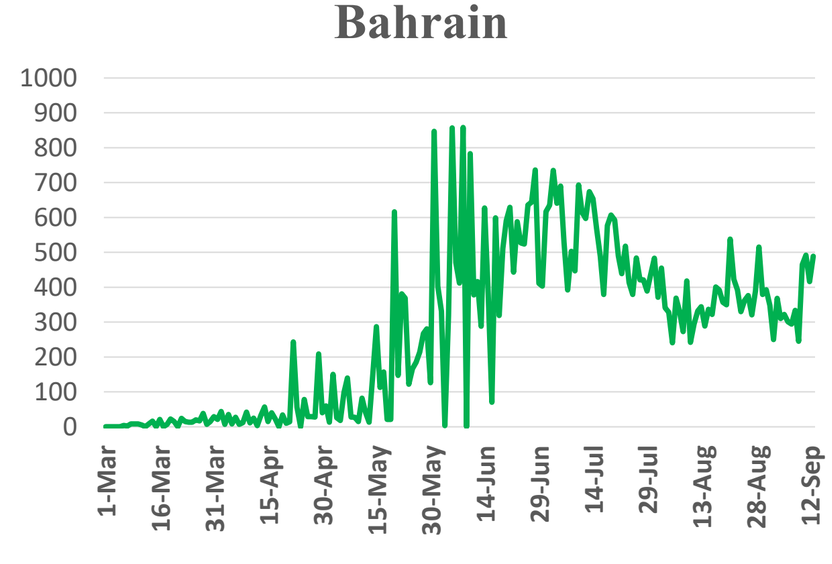
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries



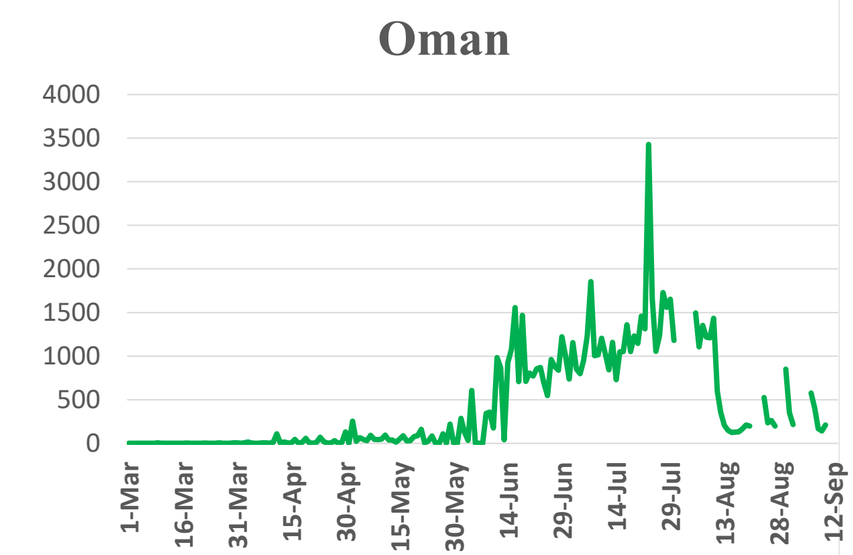
Source : National Emergency Crisis and Disaster Management Authority



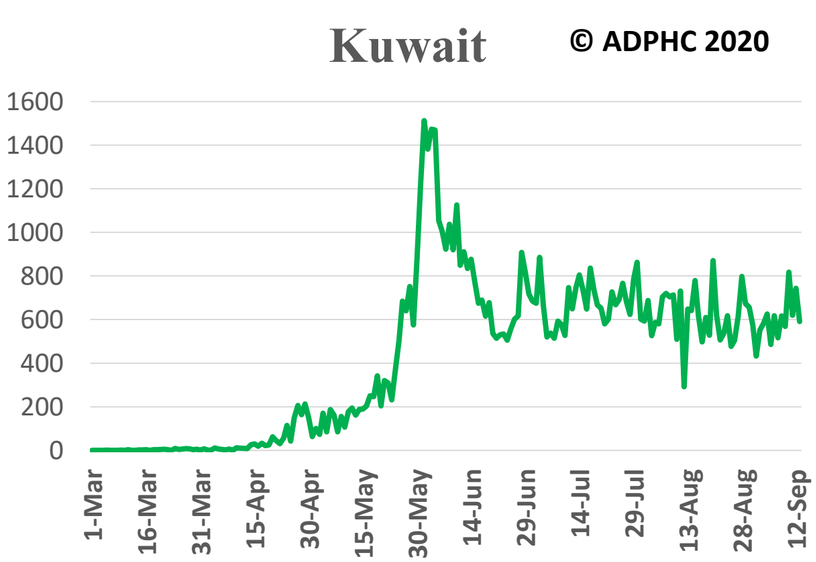
Source : KSA ministry of health



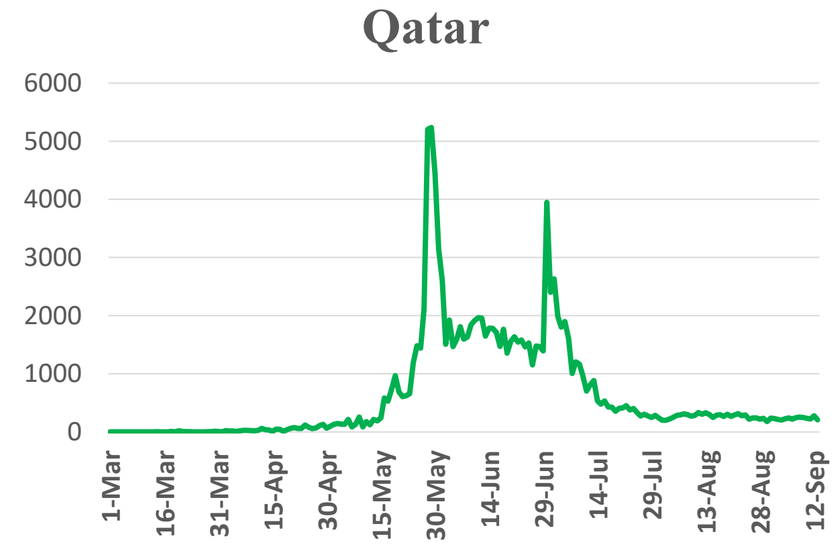
Source : Bahrain ministry of health



Source :Oman ministry of health



Source : Kuwait ministry of health



Source : Qatar ministry of health

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

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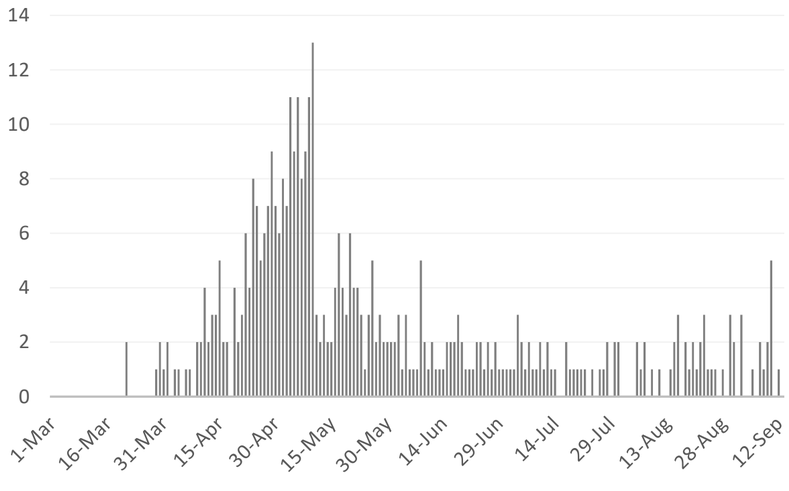
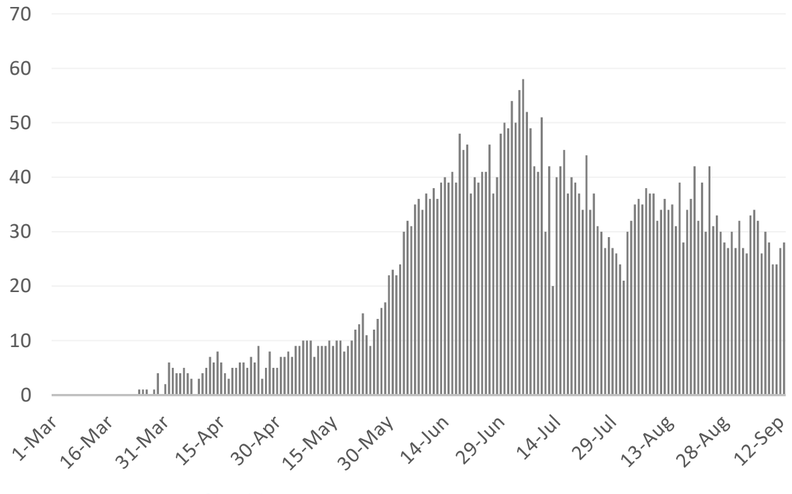
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



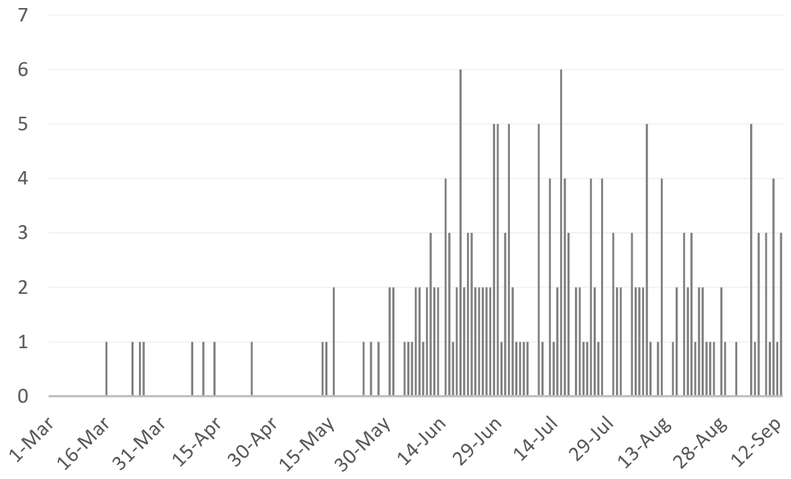
Source : National Emergency Crisis and Disaster Management Authority

KSA



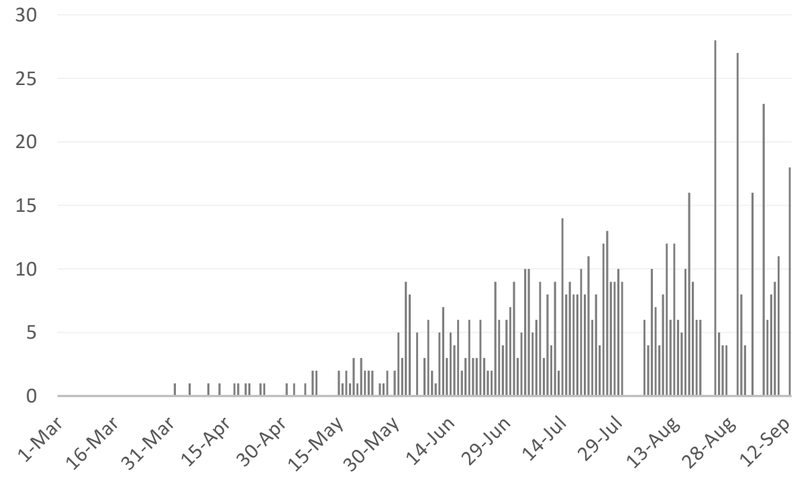
Source : KSA ministry of health

Bahrain



Source :WHO

Oman



Source :Oman ministry of health

Kuwait

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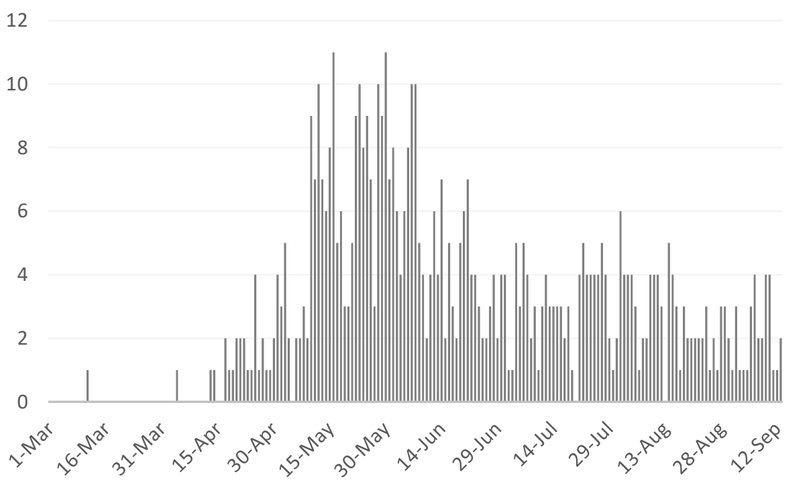
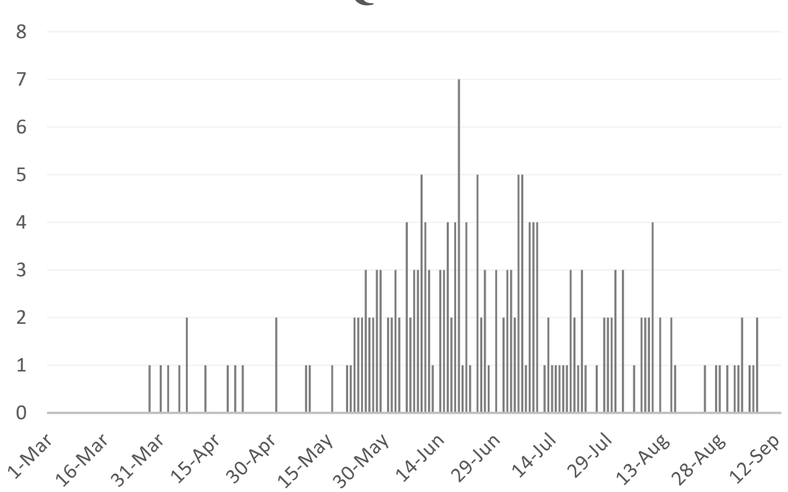


Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

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

*No announced statistic data on weekends and official holidays.

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Article 1

Fairly Prioritizing Groups for Access to COVID-19 Vaccines

Published September 10, 2020, JAMA

The supply of approved COVID-19 vaccine will be limited at the initial stage. In the United States, the National Academy of Medicine (NAM) has proposed a framework for vaccine allocation. This Viewpoint described how ethical values should guide the prioritization of the vaccine among populations in the US as well as other countries.

eTable. Ethical Values and Prioritizing Access to Scarce COVID-19 Vaccines

Ethical values	Potential dimensions	Priority groups
Benefiting people and limiting harm	Saving lives Preventing loss of future life Preventing medical complications Preventing socioeconomic harms	Health workers People in high-risk jobs and housing situations People at medical risk Older people (for some dimensions)
Prioritizing the disadvantaged	Addressing socioeconomic disadvantage and oppression Preventing deaths earlier in life Addressing medical vulnerability	Health workers People in high-risk jobs and housing People at medical risk Individual race-based prioritization[a]
Equal concern	Treating equals equally Identical treatment for all[a]	Any group where harm is prevented or the disadvantaged are prioritized Lottery or weighted lottery[a] (only achieves identical treatment)
Reciprocity[a]	Prioritizing worthy individuals[a]	Health workers People in high-risk jobs Research participants[a]

[a]These values, dimensions, or prioritizations are inappropriate for the allocation of vaccines in public health emergencies such as the COVID-19 pandemic.

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PUBLIC HEALTH RESPONSE

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Article 2

Published

Reassuring the Public and Clinical Community About the Scientific Review and Approval of a COVID-19 Vaccine

September 10, 2020, JAMA

- In the United States, the Food and Drug Administration (FDA) is willing to use an Emergency Use Authorization (EUA) for vaccines before phase 3 trials are complete. The EUA provides a rapid approach to facilitate the availability and use of vaccines during a public health emergency.

- According to the director of the FDA center responsible for vaccine review, the vaccine will only be authorized or licensed when it meets the guidelines for safety and efficacy. FDA staff have the ability to evaluate the phase 3 trial data and decide if the trials establish safety and effectiveness. After that, they should be able to recommend either an EUA or full licensure to provide access to a safe and effective vaccine as quickly as possible.

- Important safeguards should be established to reassure the clinical community and public about any vaccine approval. The FDA should explain the role of the data and safety monitoring board (DSMB) for the vaccine trials, and any correspondence between the DSMB and the investigators should be shared with the public. Two additional groups such as Vaccines and Related Biological Products Advisory Committee and the Advisory Committee on Immunization Practices (ACIP) have an important responsibility to the government and the public.

- The FDA should share all the available data about a vaccine candidate with vaccine advisory committee and ACIP before making any decision about an EUA or approval. The FDA should seek the input of both committees before making a decision. An FDA decision consistent with the advice of these independent experts will then reassure the public.

- The FDA remains the agency to answer the question of when vaccines are safe and effective for the population. It also remains essential for the FDA to be fully informed by scientific experts, to promote trust and confidence on the path to ending the pandemic.

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TREATMENT

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Article 3

Published September 08, 2020 AJGP

Association Between Administration of Systemic Corticosteroids and Mortality Among Critically Ill Patients With COVID-19: A Meta-Analysis

This prospective meta-analysis of 7 randomized trials, aimed to estimate association between administration of corticosteroids compared with usual care or placebo and 28-day all-cause mortality in hospitalized, critically ill patients with suspected/confirmed COVID-19. The trials included in this analysis were conducted in 12 countries from February 26 to June 9, 2020.

Methods

- 1703 critically ill patients with COVID-19 were included in the analysis, of which 678 patients were randomized to receive systemic dexamethasone, hydrocortisone, or methylprednisolone and 1025 patients received usual care or placebo.
- Primary outcome was defined as all-cause mortality at 28 days after randomization.
- Secondary outcome was investigator-defined serious adverse events.

Findings

- Around 32% deaths of patients randomized to corticosteroids occurred, compared to 41% of deaths of patients with usual care/placebo.
- The association of corticosteroids & mortality within subgroups defined by patient characteristics & randomization time (Fig:1).
- No evidence to suggest that the risk of serious adverse events were higher in patients assigned to corticosteroids except for the two smallest trials, in which the total number of serious adverse events were one and three.
- No evidence to suggest that a higher dose of corticosteroids was associated with greater benefit than a lower dose.

Conclusion

- Administration of systemic corticosteroids, compared with usual care or placebo in critically ill patients with COVID-19, was associated with lower 28-day all-cause mortality

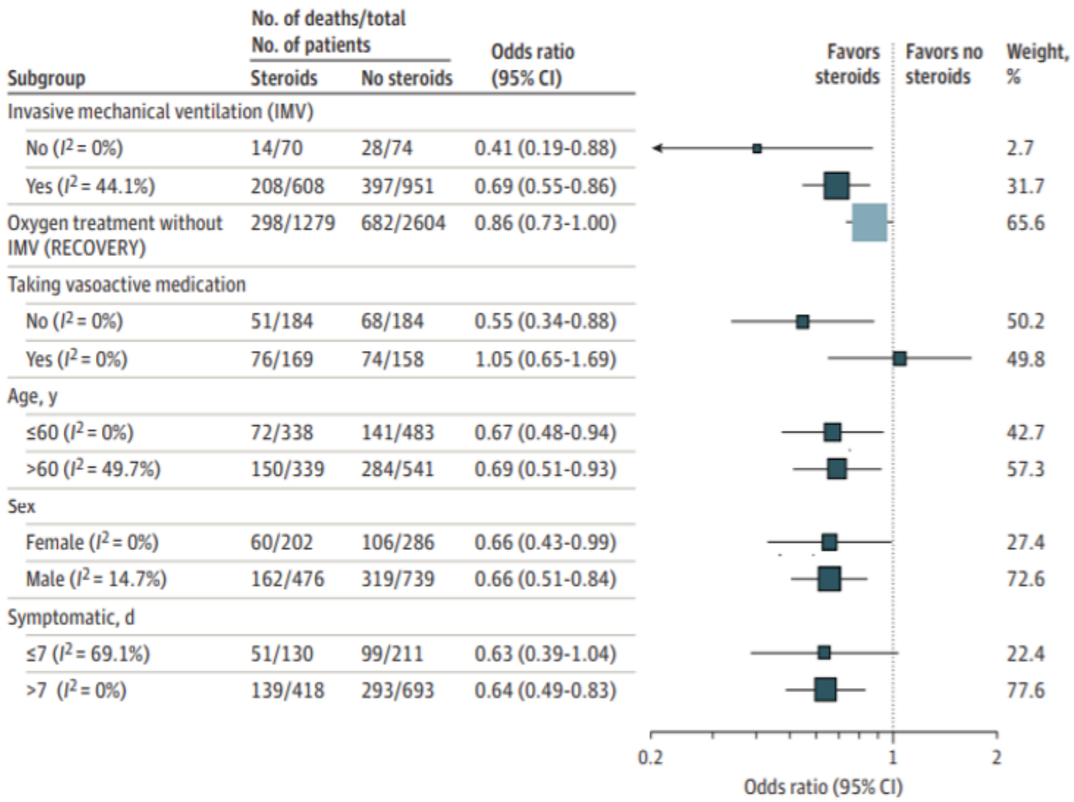

Figure 1: Association Between Corticosteroids &28-Day All-Cause Mortality Within Subgroups Defined by Patient Characteristics at the Time of Randomization

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THANK YOU

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