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للصحة العامة
ABU DHABI PUBLIC
HEALTH CENTRE

SCIENTIFIC RESEARCH MONITORING ON COVID-19

2 AUGUST 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19 (ISSUE 182)

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

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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

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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Transmission

Seroprevalence of Antibodies to SARS-CoV-2 in 10 Sites in the United States, March 23-May 12, 2020

Transmission

Summary of Seroprevalence Studies

EPIDEMIOLOGY

FROM 21 JAN TO 1 AUG 2020

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

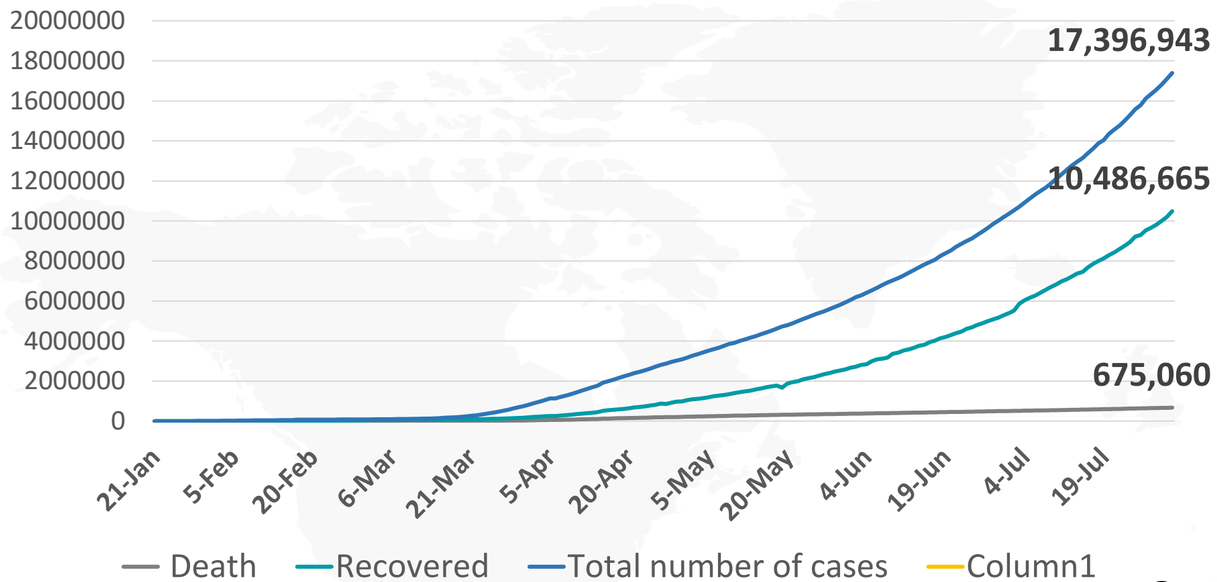


Figure 3: Total Number of Death Due to COVID-19 (China and result of the world)

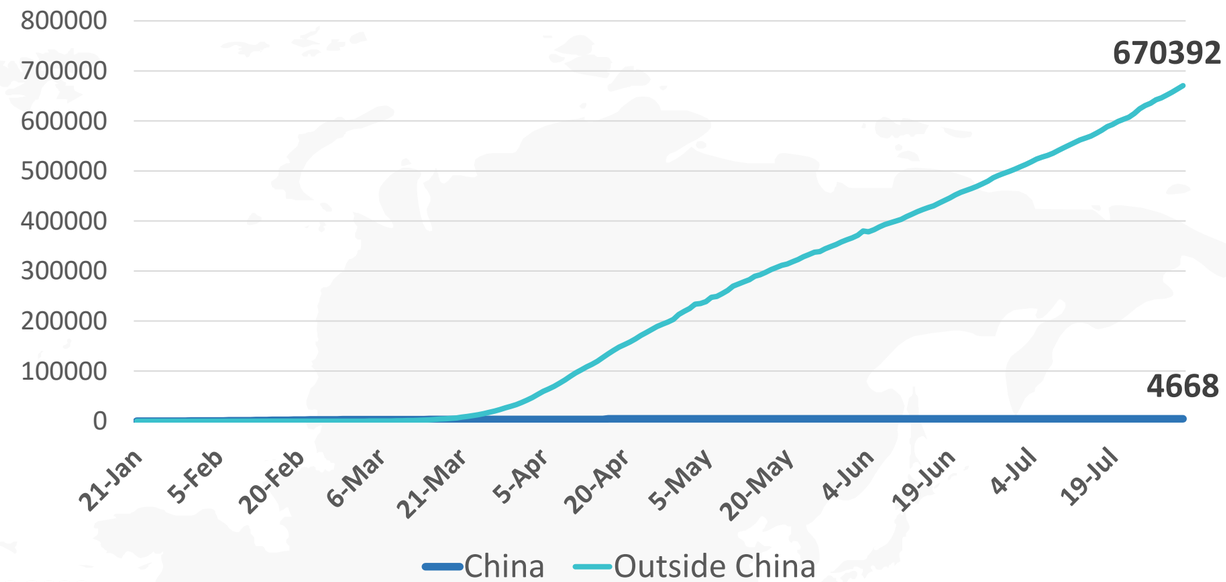


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

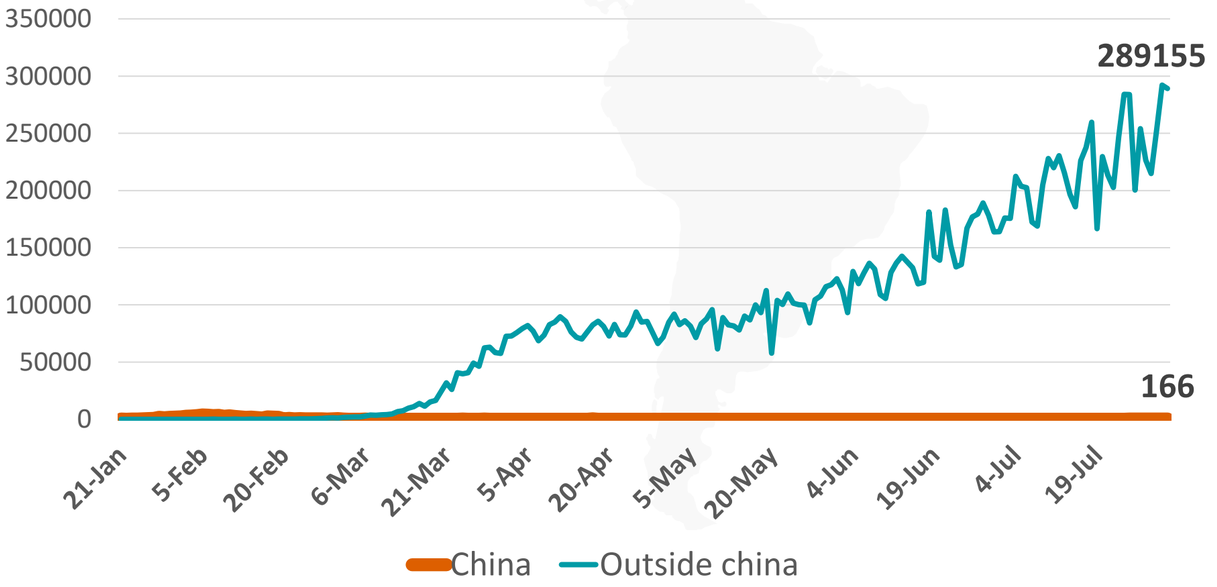
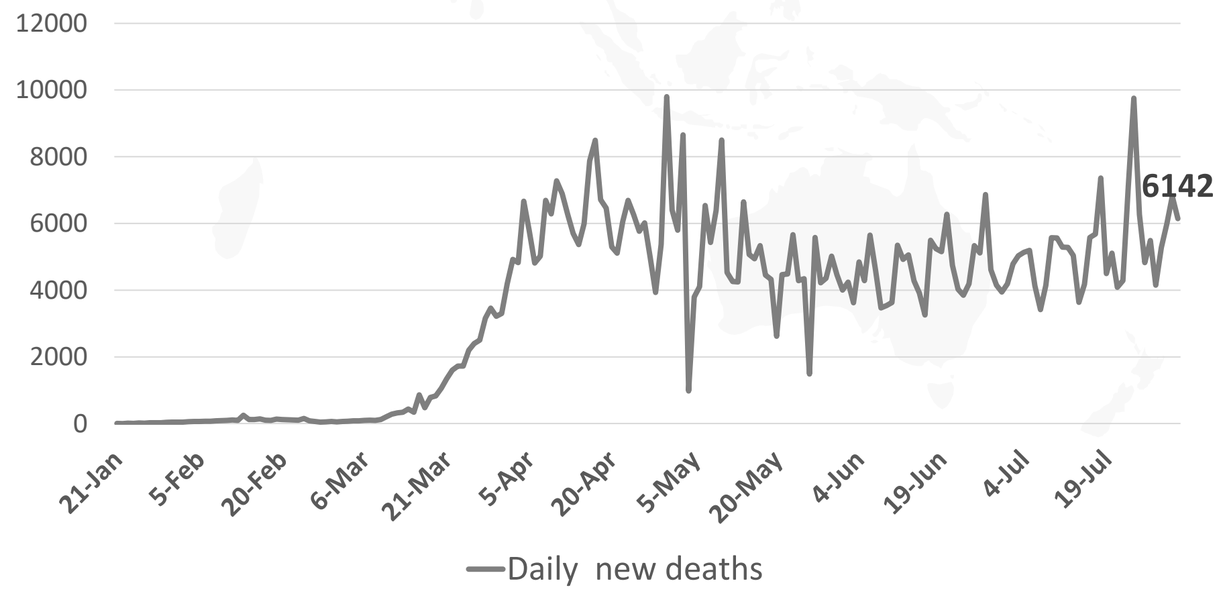


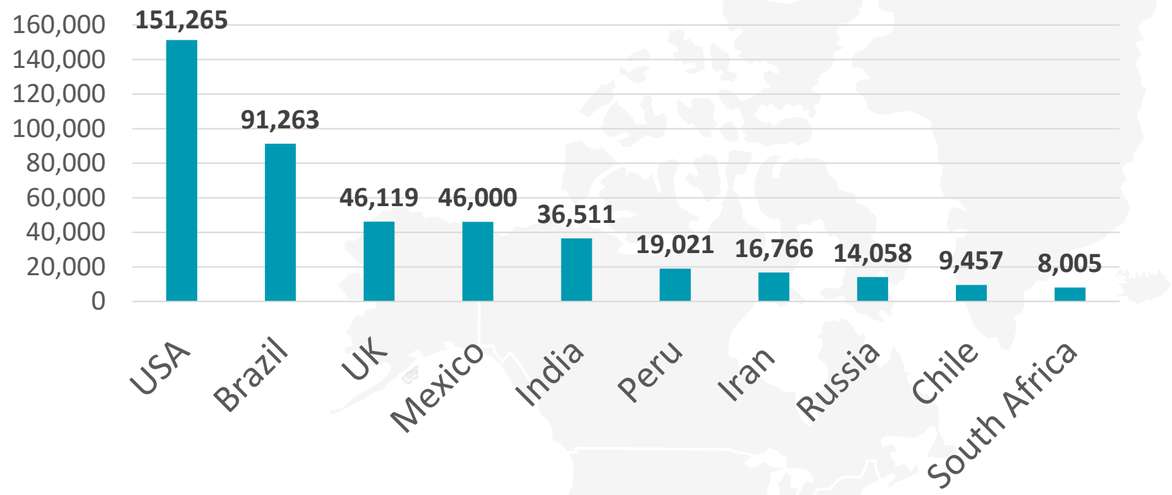
Figure 4: Global Daily New Deaths Due to COVID-19 (China and rest of the world)



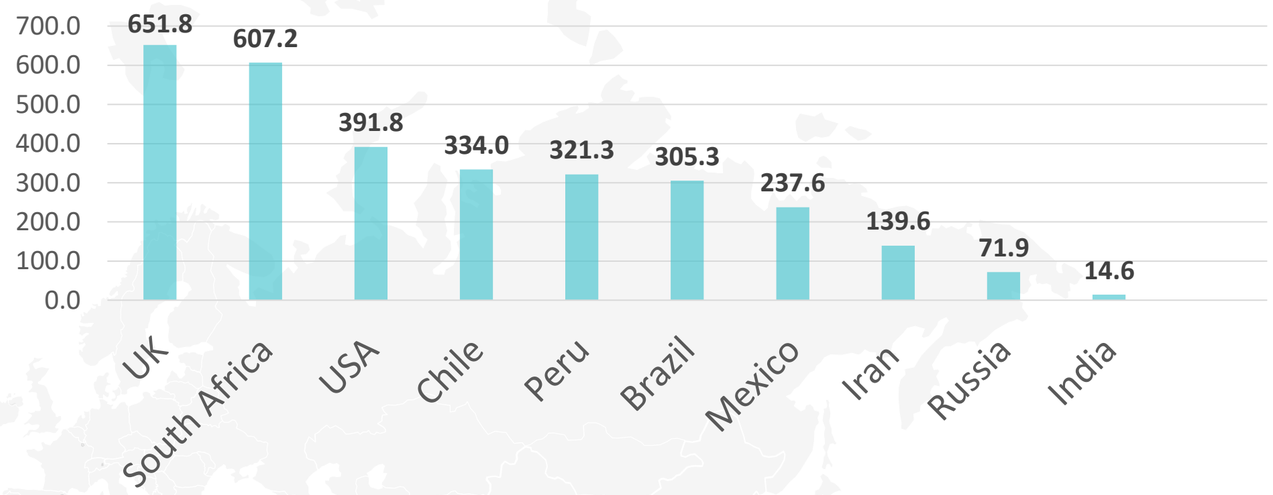
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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

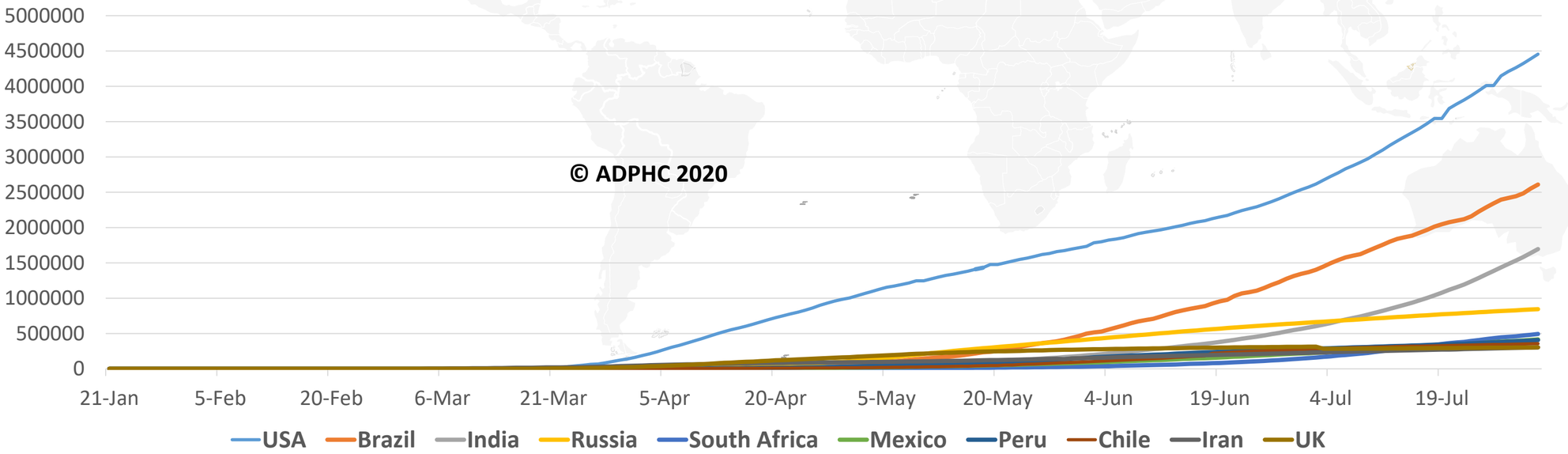
TOTAL DEATHS



DEATHS PER MILLION



TOTAL INFECTED CASES



USA	4,456,389
Brazil	2,610,102
India	1,695,988
Russi	845,443
South Africa	493,183
Peru	416,179
Mexico	407,492
Chile	355,667
UK	304,204
Iran	303,185

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

EPIDEMIOLOGY

FROM 21 JAN TO 1 AUG 2020

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

Daily Tests

48,964.0 Average Tests

495.1 per 100k population

0.6% Positive Rate

Daily Cases

314.0 Average Cases

3.2 per 100k population

Daily Recovered

375.3 Average Recovered

3.8 per 100k population

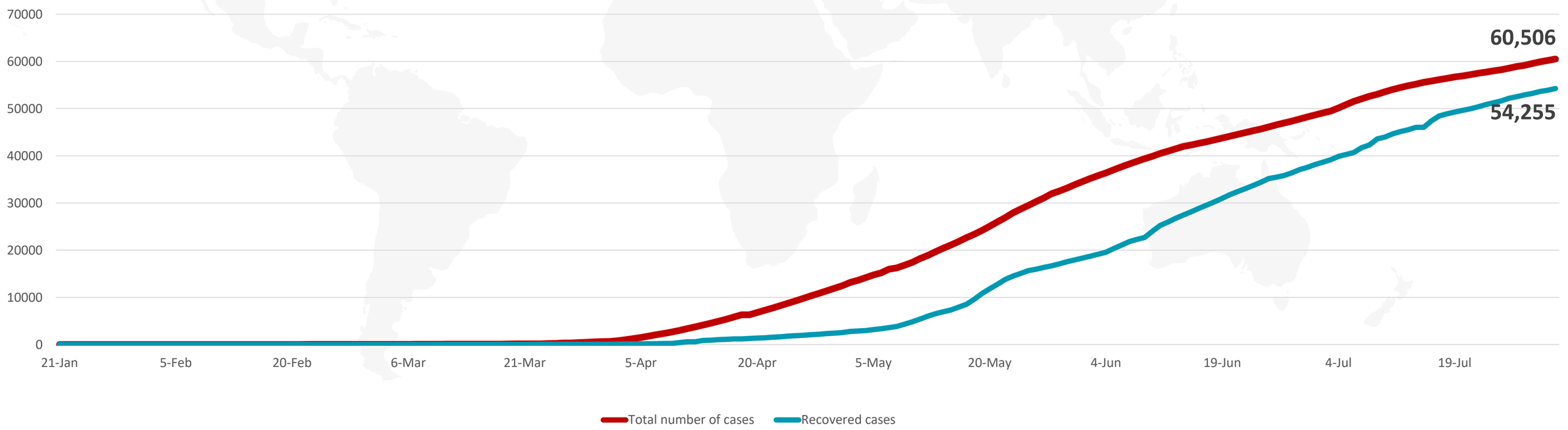
Daily Deaths

1.1 Average Deaths

0.0 per 100k population

0.4% 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,

EPIDEMIOLOGY

Date: 1 AUG 2020

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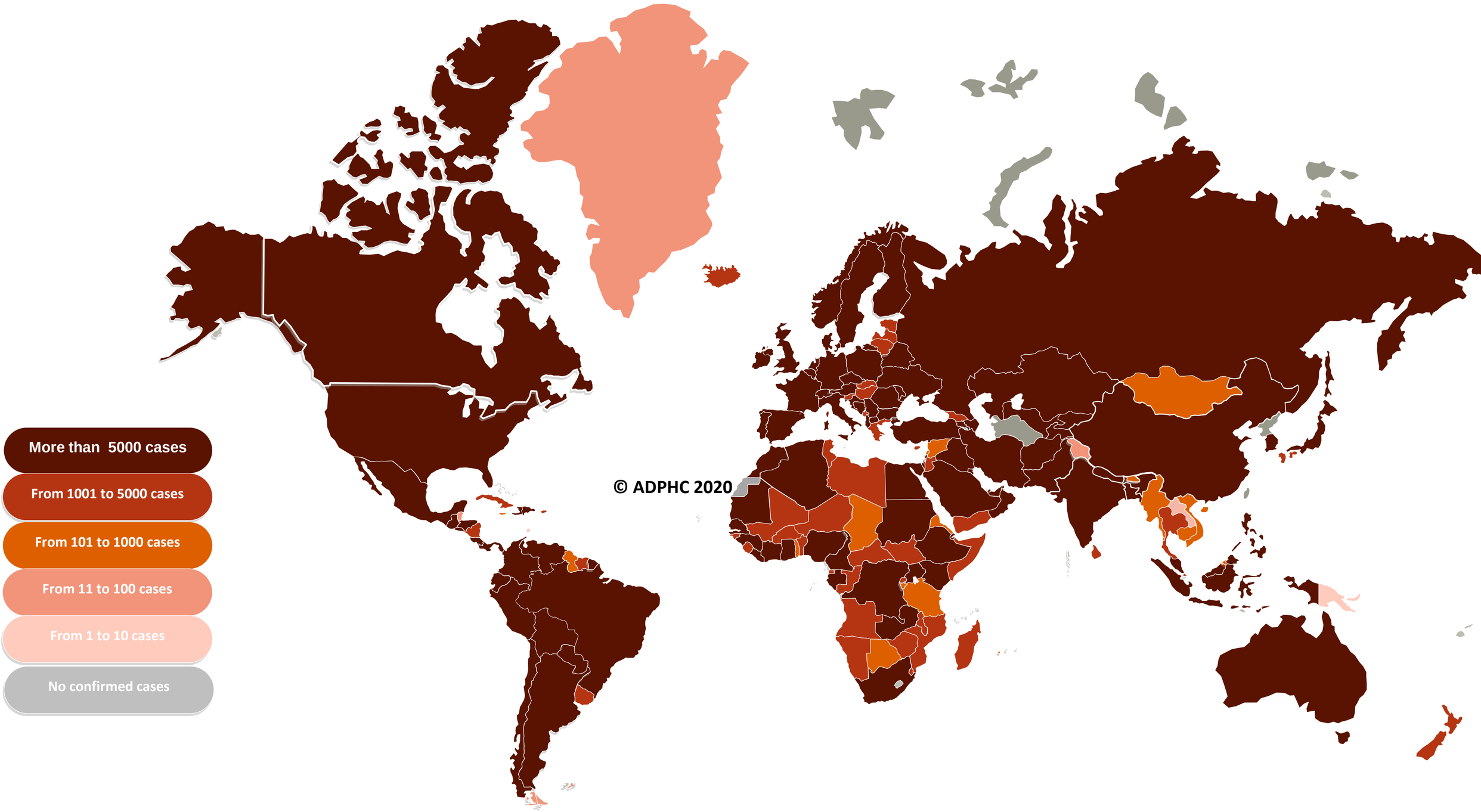
Figure 7A : Global Distribution of COVID-19 Cases



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

EPIDEMIOLOGY

Date: 1 AUG 2020

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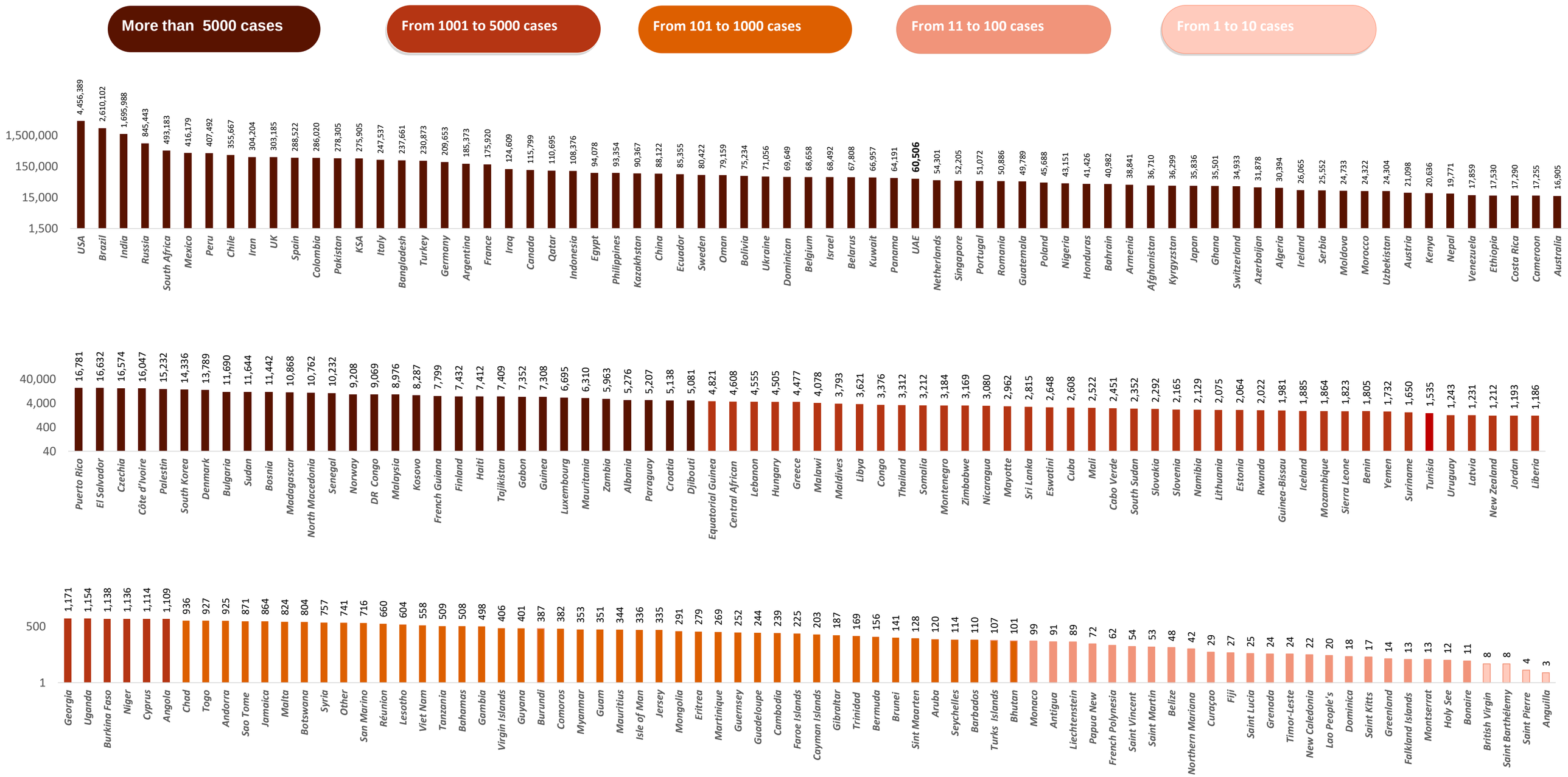
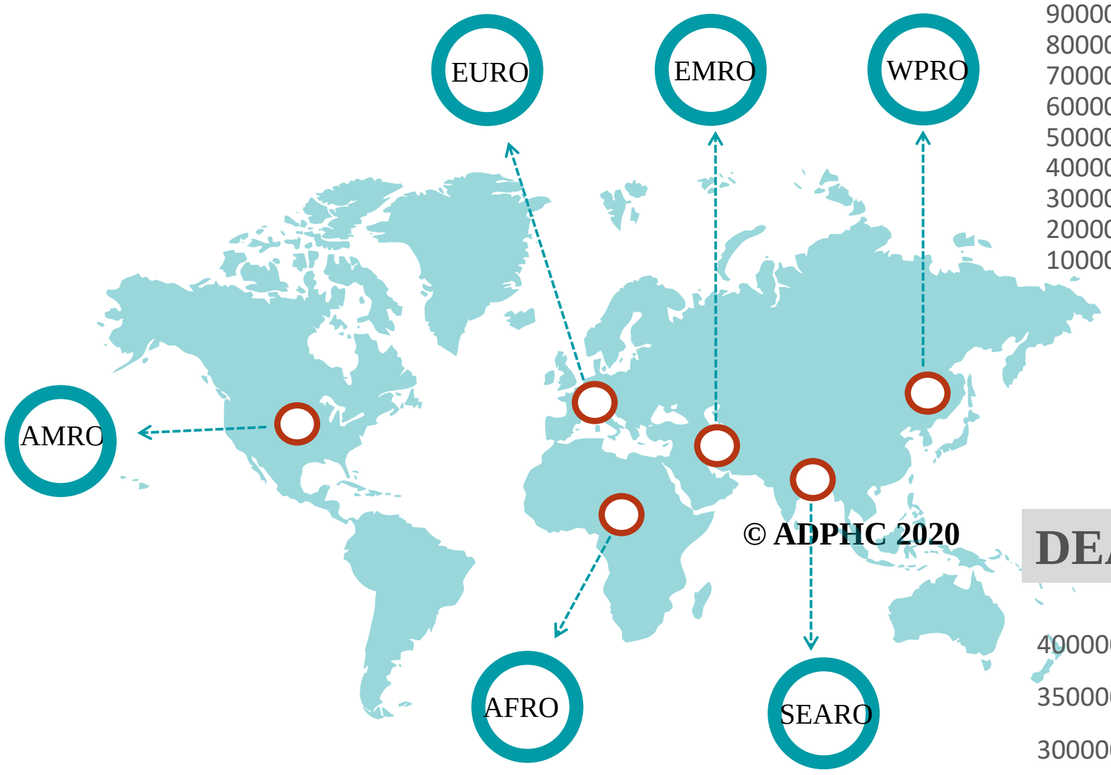
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



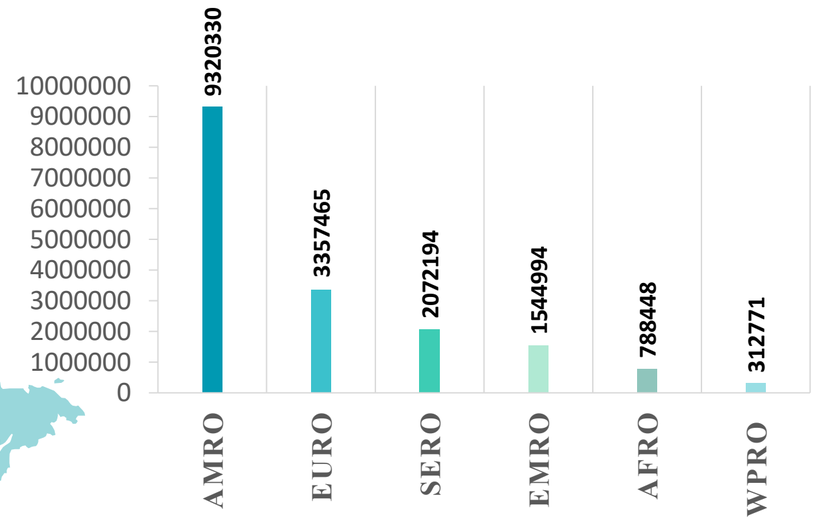
Other*:includes cases and deaths reported under the international conveyance(Diamond Princess)

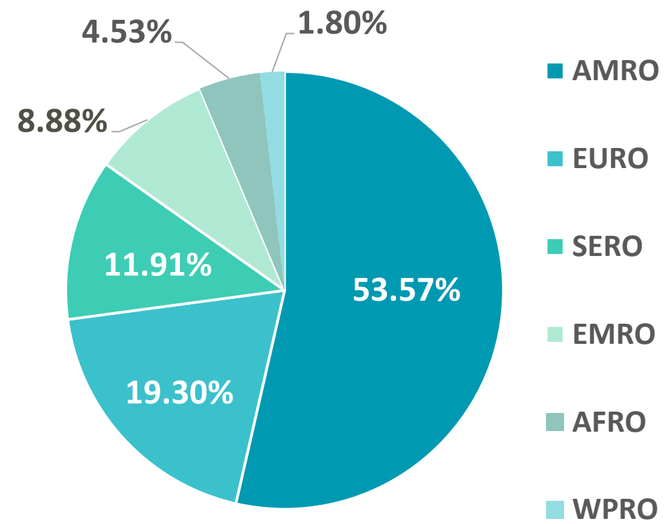
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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

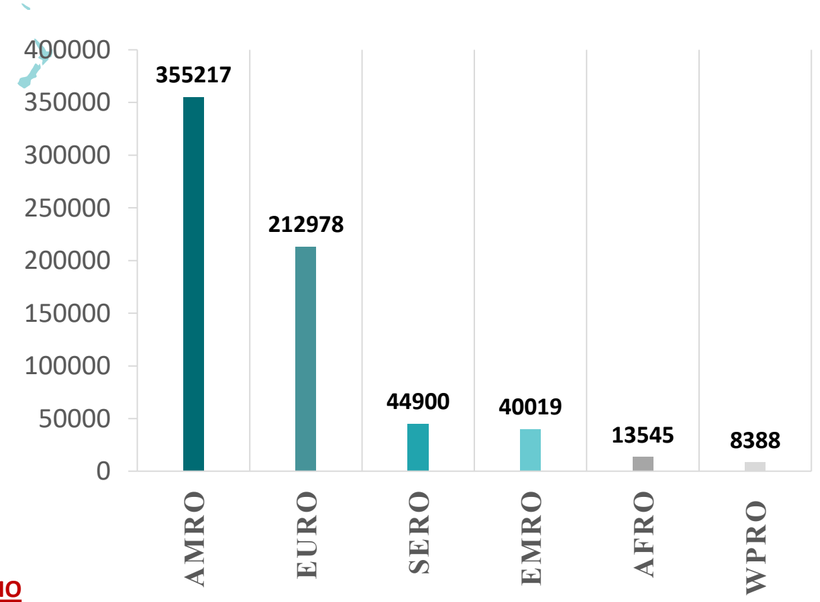


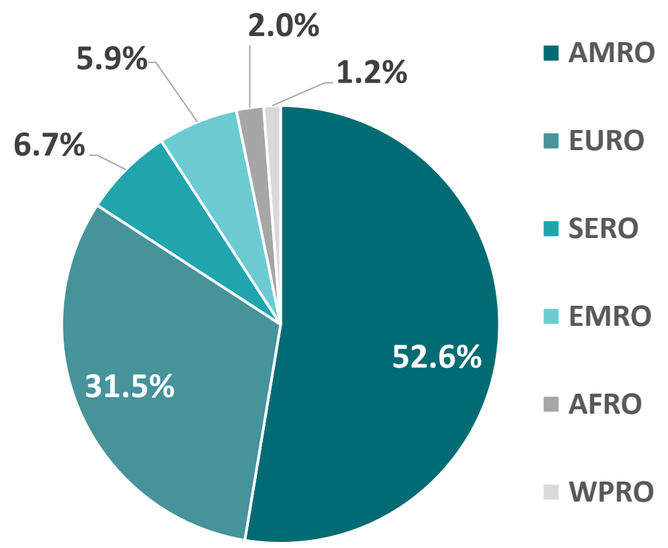
INFECTED





DEATH

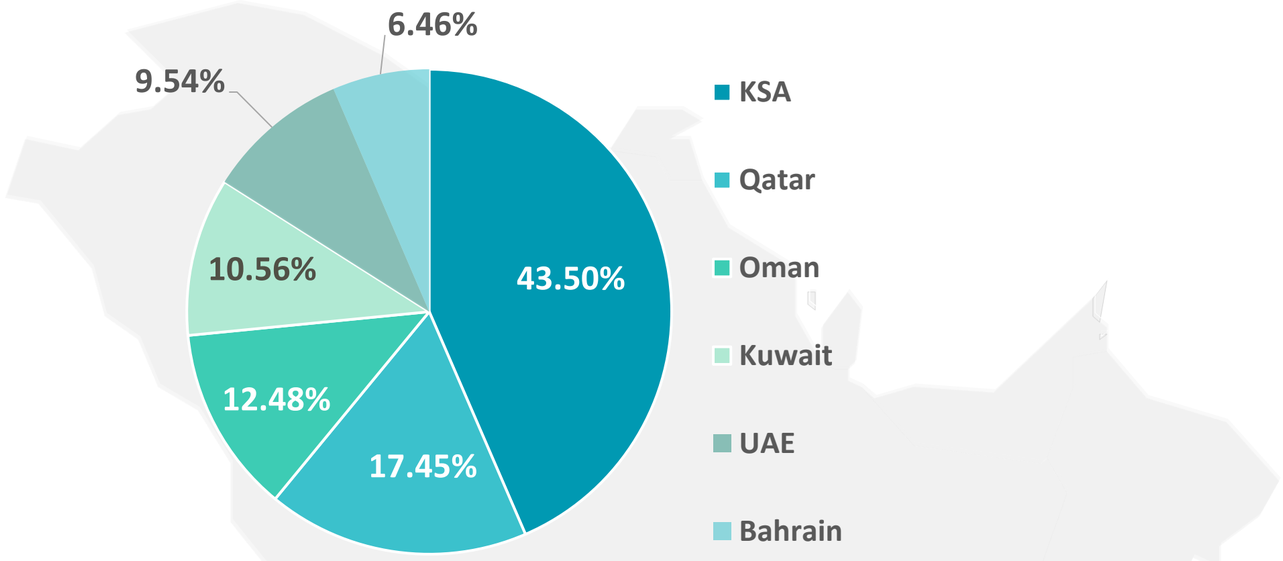


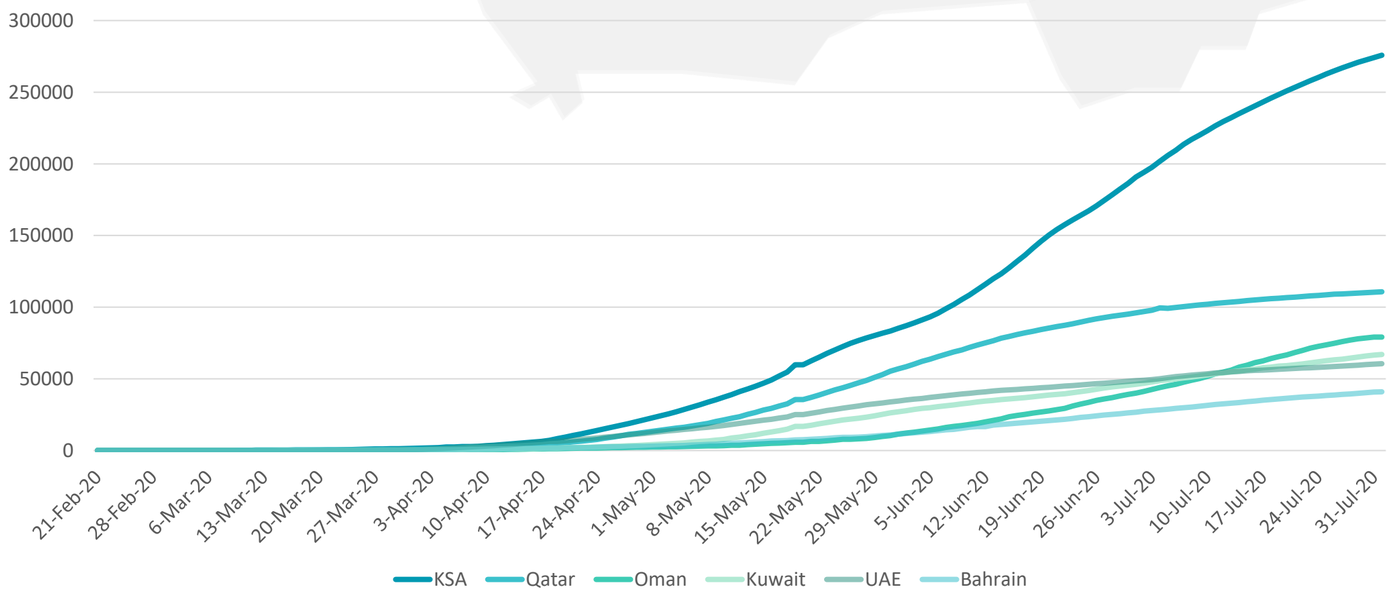


Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

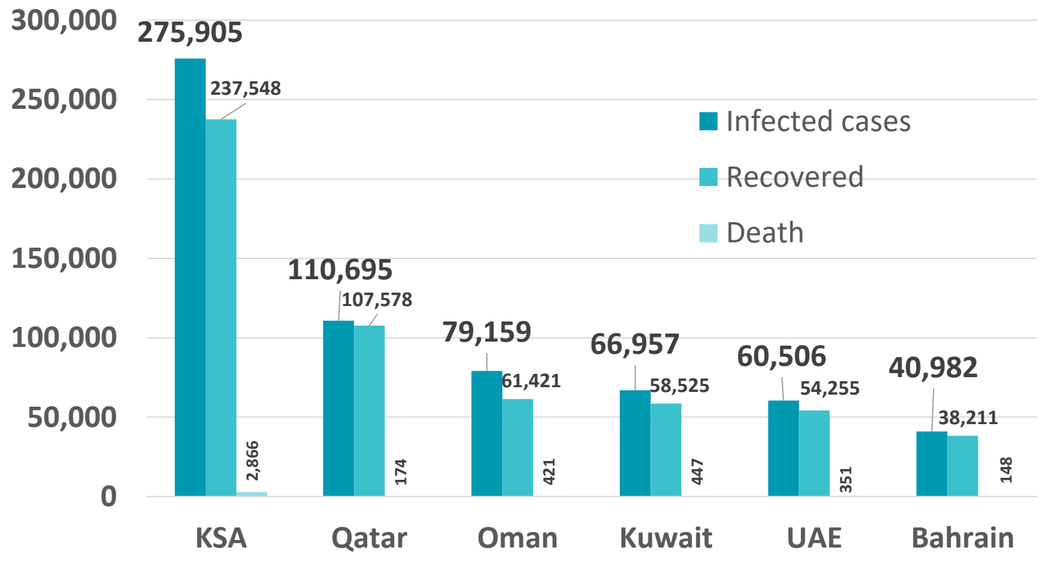
Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

TOTAL NUMBER OF INFECTED CASES

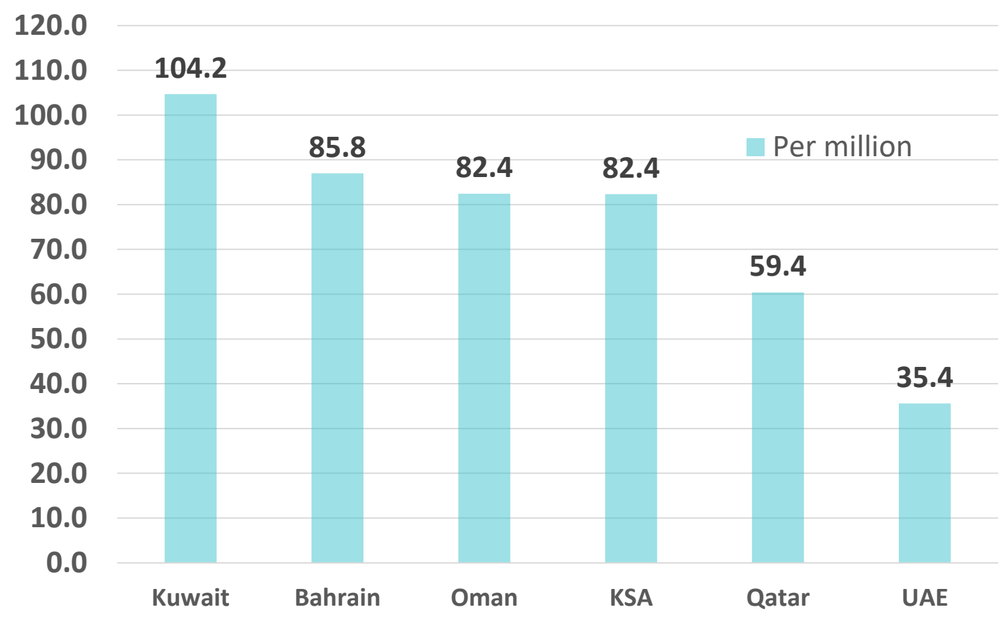




TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATH PER MILLION



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

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

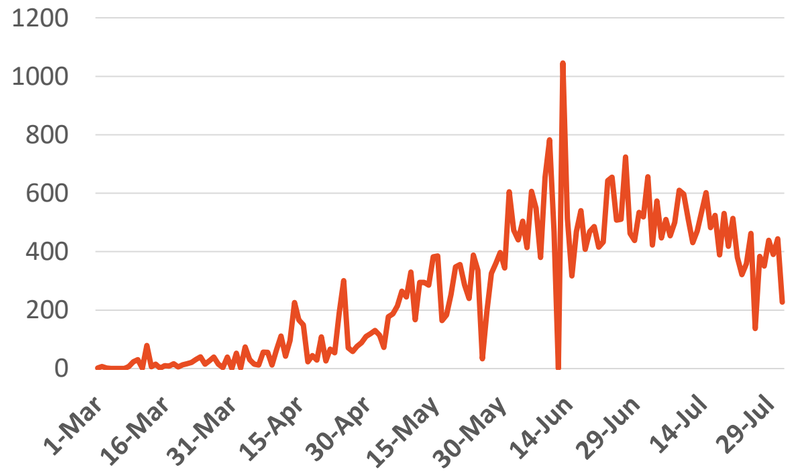
UAE

Source : National Emergency Crisis and Disaster Management Authority

KSA

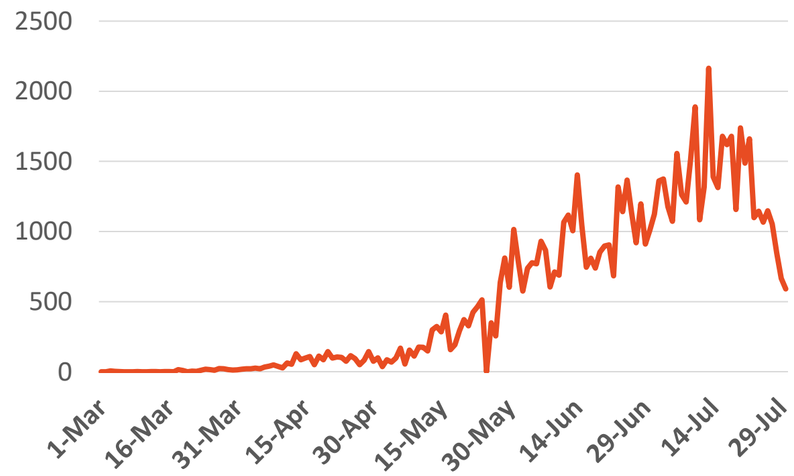
Source : KSA ministry of health

Bahrain



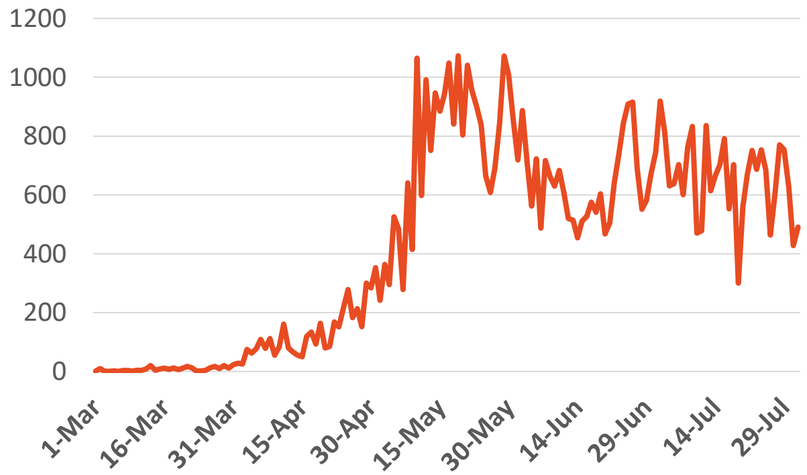
Source :WHO

Oman



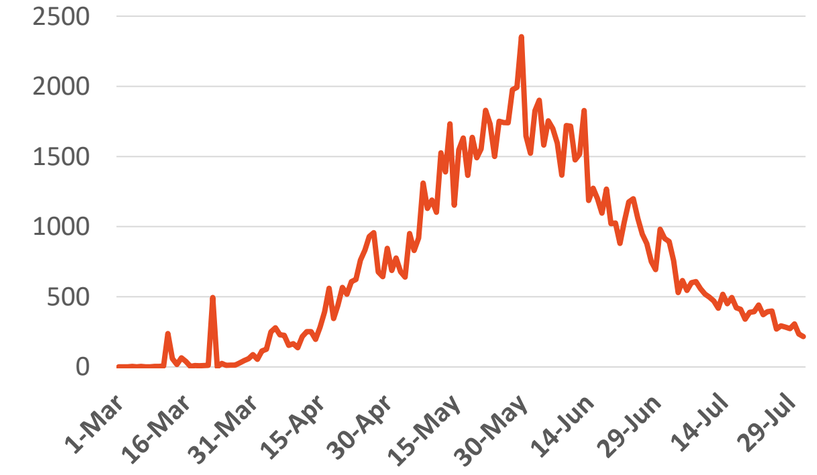
Source :Oman ministry of health

Kuwait



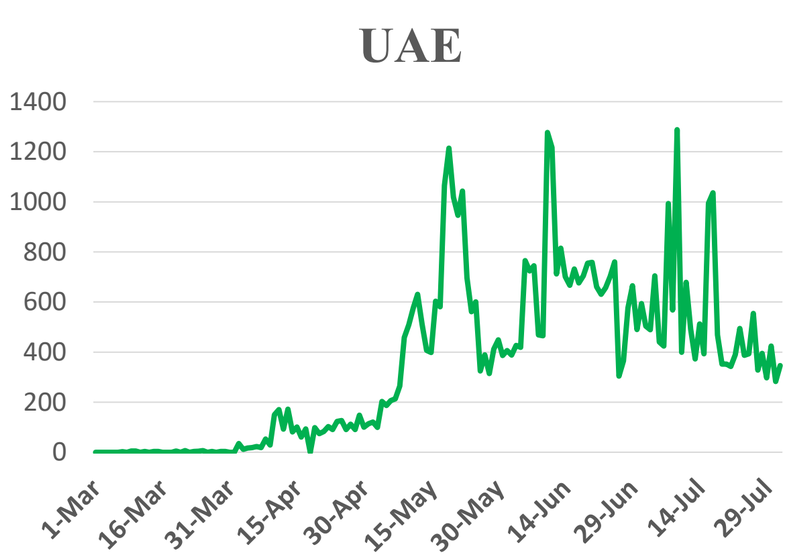
Source : Kuwait ministry of health

Qatar

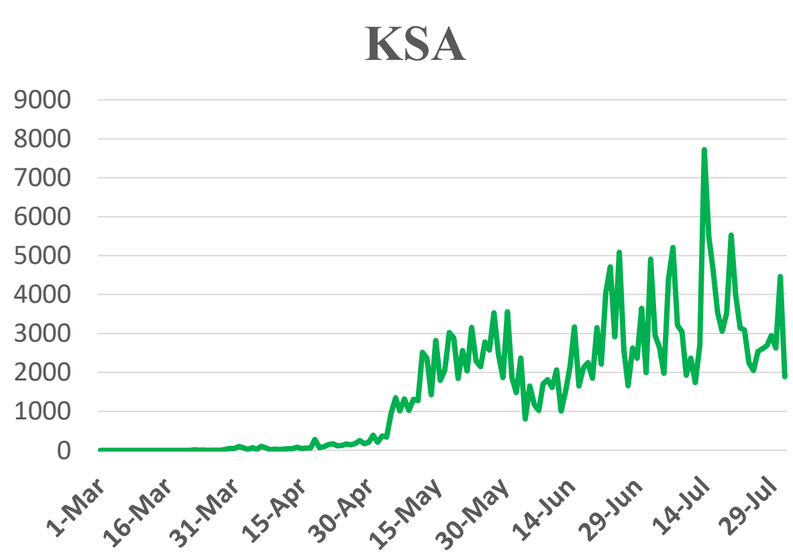


Source : Qatar ministry of health

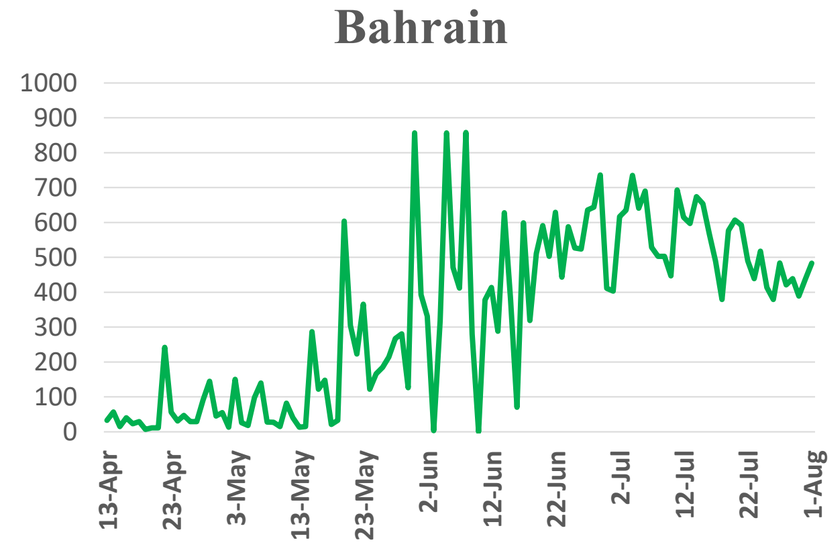
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries



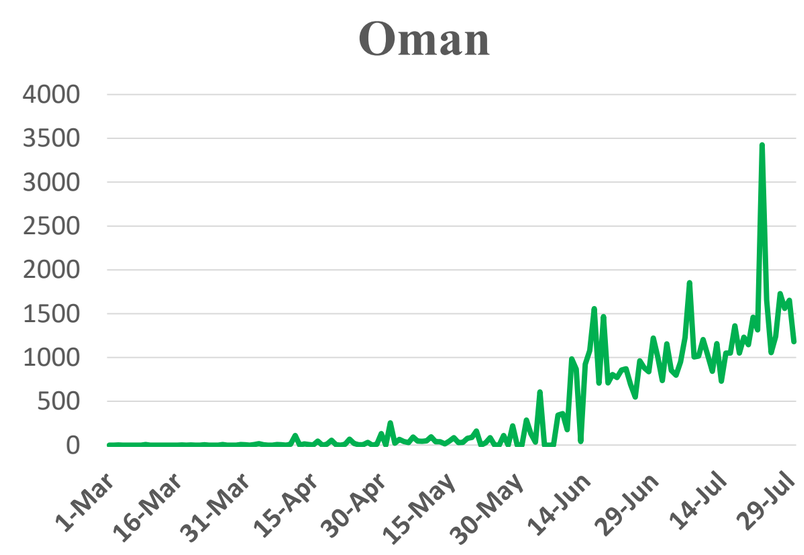
Source : National Emergency Crisis and Disaster Management Authority



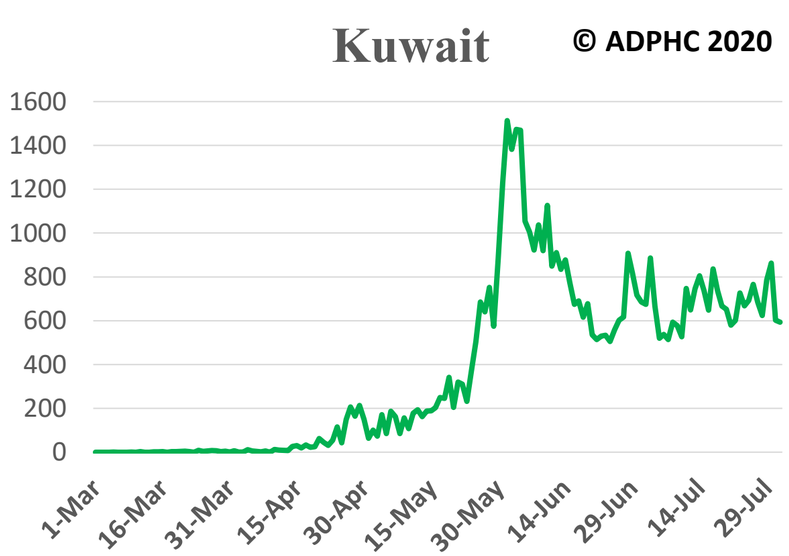
Source : KSA ministry of health



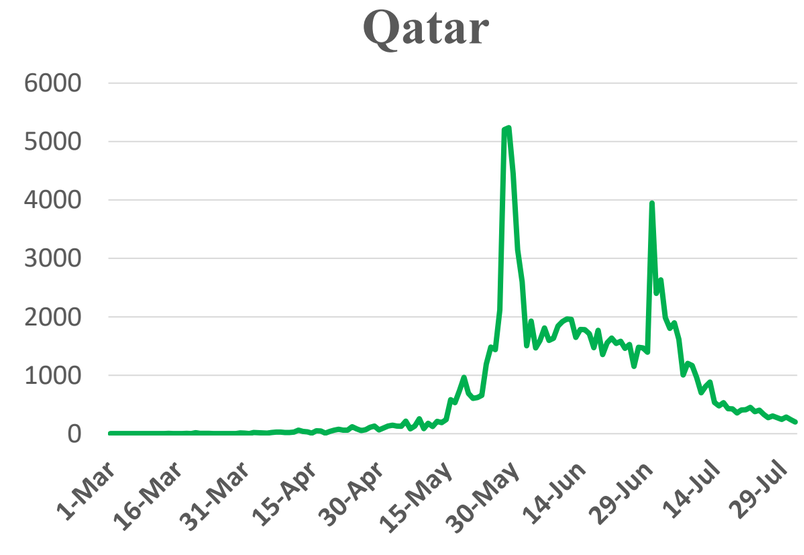
Source : GCCStat



Source :Oman ministry of health



Source : Kuwait ministry of health

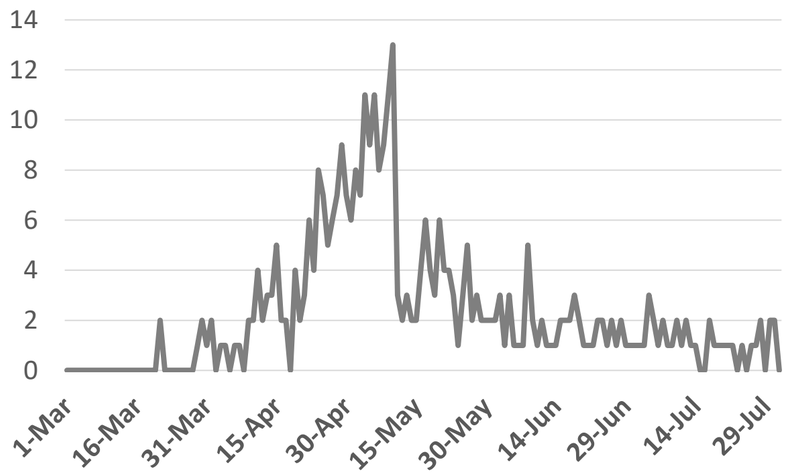


Source : Qatar ministry of health

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

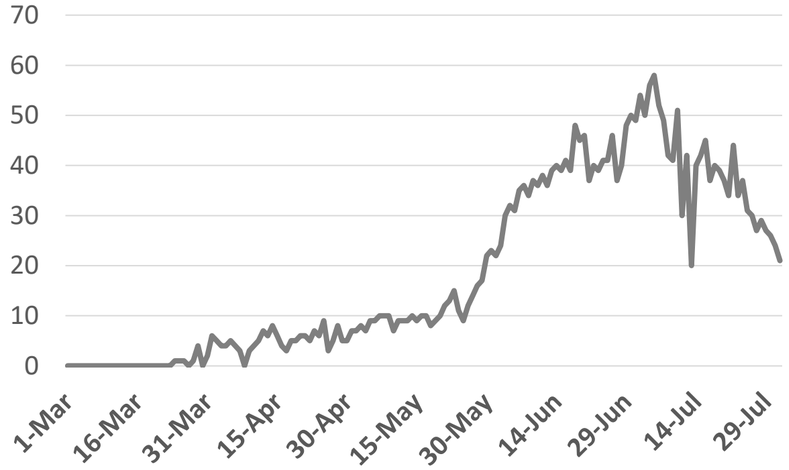
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



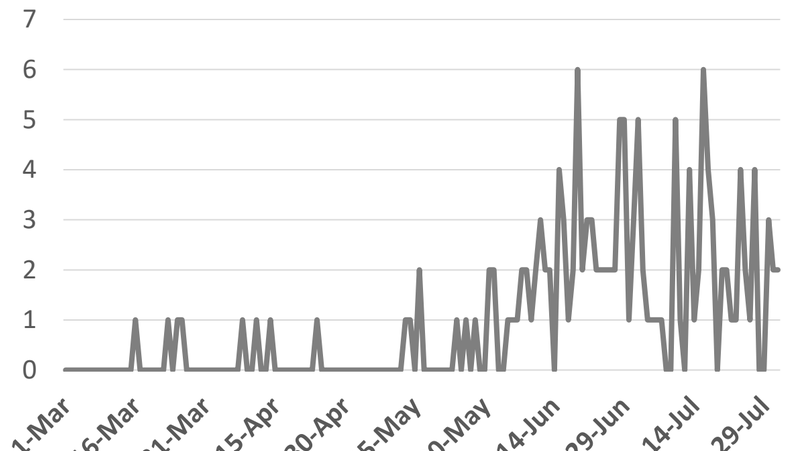
Source : National Emergency Crisis and Disaster Management Authority

KSA



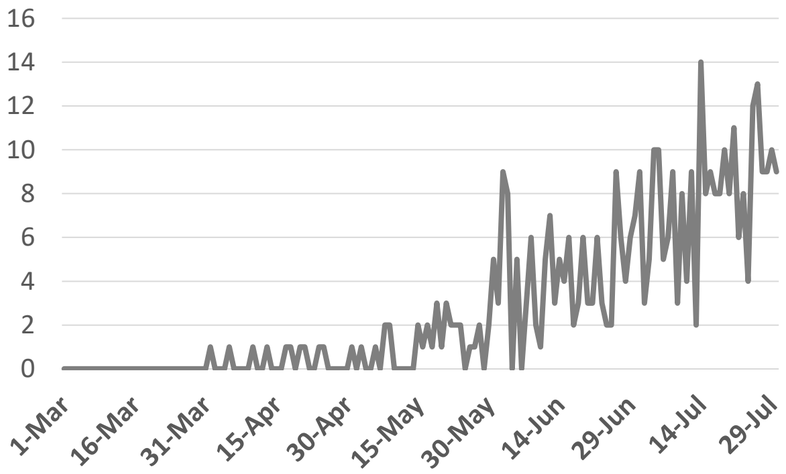
Source : KSA ministry of health

Bahrain



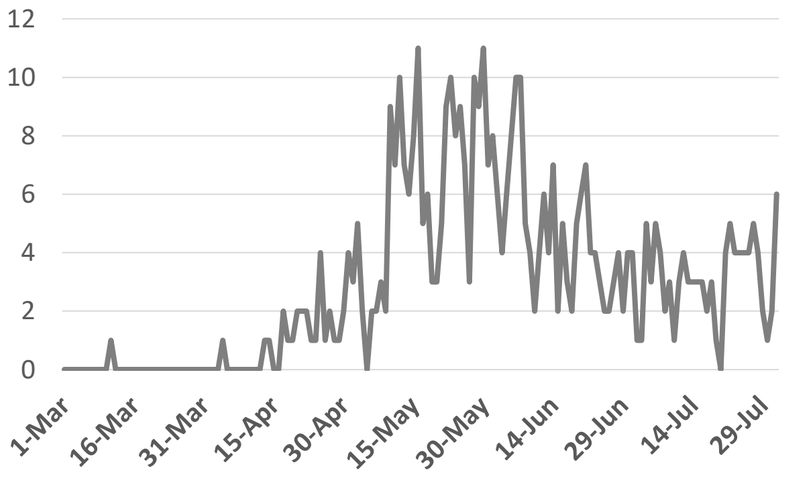
Source :WHO

Oman



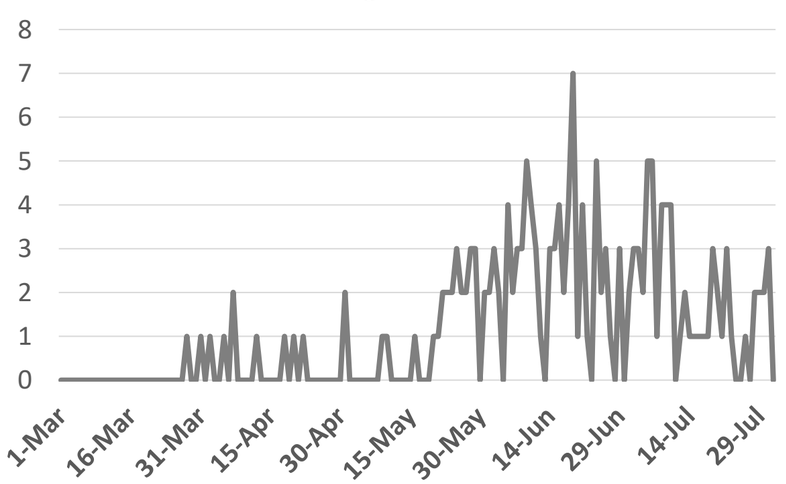
Source :Oman ministry of health

Kuwait



Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

TRANSMISSION

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Article 1

Seroprevalence of Antibodies to SARS-CoV-2 in 10 Sites in the United States, March 23-May 12, 2020

Published 27 July 2020 JAMA

Summarized by subject matter expert

This study estimated the presence of SARS-CoV2 antibodies across 10 different locations in the United States.

Background

- The number of confirmed COVID-19 cases does not show the full picture of infection.
- Large-scale seroprevalence (antibodies) studies provide better estimates of the proportion of the population previously infected.

Methodology

- A cross-sectional study using a convenience sampling method of 16,025 participants (55% women).
- Presence of SARS-CoV2 antibodies were estimated using an enzyme-linked immunosorbent assay, and estimates were standardized to the site populations by age and sex.
- Number of infections in each site was estimated by extrapolating seroprevalence (presence of antibodies) to site populations.
- Estimated infections were compared with the number of reported COVID-19 cases as of last specimen collection date.

Findings

- The presence of antibodies ranged from **1.0% (95% CI, 0.3%-2.4%) in California to 6.9% (95% CI, 5.0%-8.9%) in New York.**
- Seroprevalence estimates fell within this range for the remaining eight sites.
- No clear association between seroprevalence by age and sex across sites.
- When seroprevalence estimates were compared with several reported cases, the estimation of 176,012 infections was **6.0 (range, 4.3-7.8) times greater than the 29,287 reported cases in Connecticut.**
- The estimation of 161,936 infections was 23.8 (range, 14.8-34.7) times greater than the 6794 reported cases in Missouri.
- Estimated numbers of infections for other sites were at least ten times greater than the number of reported cases.

TRANSMISSION

Continued

Public Health Message

- The results of this study suggest that at the time of specimen collection from March to early May 2020, the majority of people in ten diverse geographic sites in the US; had not been infected with SARS-CoV-2. They further suggest that the number of infections was greater than the number of reported cases throughout the study period.

- These infections likely include:
  - Asymptomatic and mild infections for which health care was not sought
  - Symptomatic infections in people who either did not seek care or in whom SARS-CoV-2 viral testing was not performed, but who still may have contributed to ongoing virus transmission in the population.

- The results of this study should not be used to make assumptions about population immunity because the relationship between detectable antibodies to SARS-CoV-2 and protective-immunity against future infection is not known.

- The seroprevalence estimates reported in this study are more likely to reflect infections that occurred a minimum of 1 to 2 weeks before the specimen collection.

- People often do not know if they are infected with SARS-CoV-2 therefore; the public should continue to take the following steps to help prevent the spread of Covid-19:
  - Wear cloth face coverings when outside the home
  - Remain 6 feet apart from other people
  - Wash hands frequently
  - Stay home when sick

SEROPREVALENCE STUDIES

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List of Some of the Currently Published Results of Seroprevalence Studies

Spanish Study

Seropositivity: **5%**

Population: over 60,000 participants.

Swiss Study

Seropositivity:**10%**

Population: 2766 participants.

American study

Seropositivity:**6.9%**

Population: 16025 participants.

Chinese Study

Seropositivity: **3.8%**

Population: 17,368 participants

Swedish Study

Seropositivity: **7.3%**

Population: 1200 participants.

UAE Study

Started: 19.07.2020

Expected to involve more than: 20,000 participant

More than: 4000 household

41 labor camps

Currently Ongoing

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