مركز أبوظبي
للصحة العامة
ABU DHABI PUBLIC
HEALTH CENTRE

SCIENTIFIC RESEARCH MONITORING ON COVID-19

16 AUGUST 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19 (ISSUE 196)

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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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WHO
Report

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

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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Clinical Features

Cardiac Involvement in Patients Recovered From COVID-2019 Identified Using Magnetic Resonance Imaging

Epidemiology

Comparison of Estimated Excess Deaths in New York City During the COVID-19 and 1918 Influenza Pandemics

Vaccine

Effect of an Inactivated Vaccine against SARS-CoV-2 on Safety and Immunogenicity Outcomes Interim Analysis of 2 Randomized Clinical Trials

- The International Narcotics Control Board, World Health Organization, and the United Nations Office on Drugs and Crime have released a statement calling on governments to ensure that the procurement and supply of controlled medicines in countries meet the needs of patients, both those who have COVID-19 and those who require internationally controlled medicines for other medical conditions.

- While several countries in the Americas have implemented innovative strategies to boost immunization programmes during the COVID-19 pandemic, concerns about the risk of exposure, as well as challenges accessing services during the lockdown, have led to a reduction in vaccination coverage. This was shown in a series of surveys carried out by the WHO Regional Office for the Americas.

- Africa is marking six months since the first cases of COVID-19 were detected on the continent. Cases have been gradually increasing, with South Africa bearing the brunt of the crisis, with over half a million cases and 11 000 deaths.

EPIDEMIOLOGY

FROM 21 JAN TO 15 AUG 2020

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

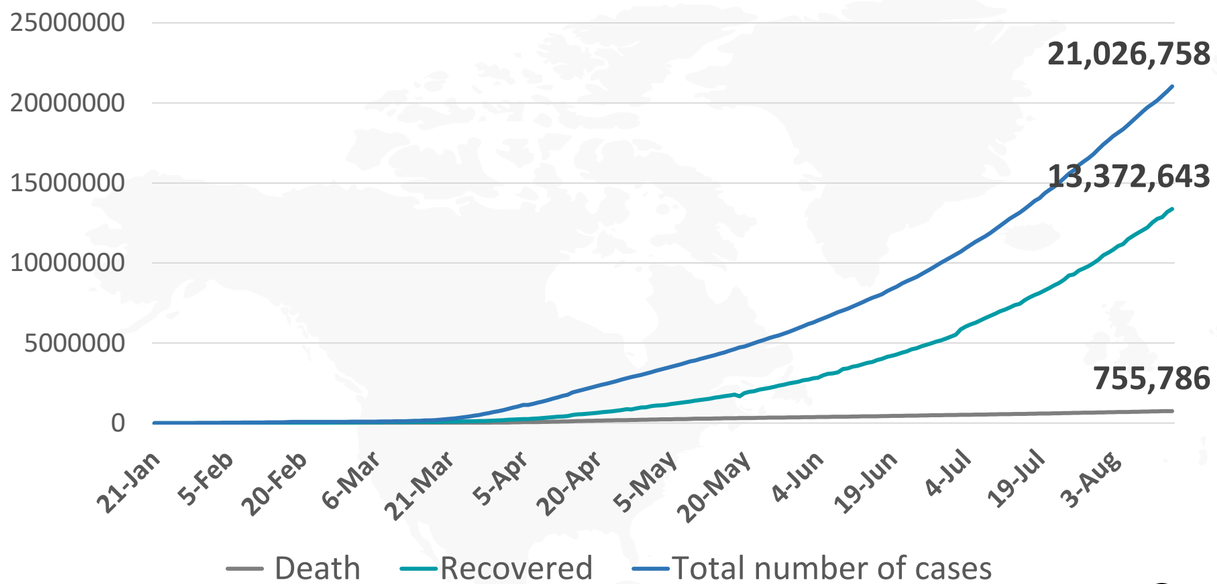


Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)

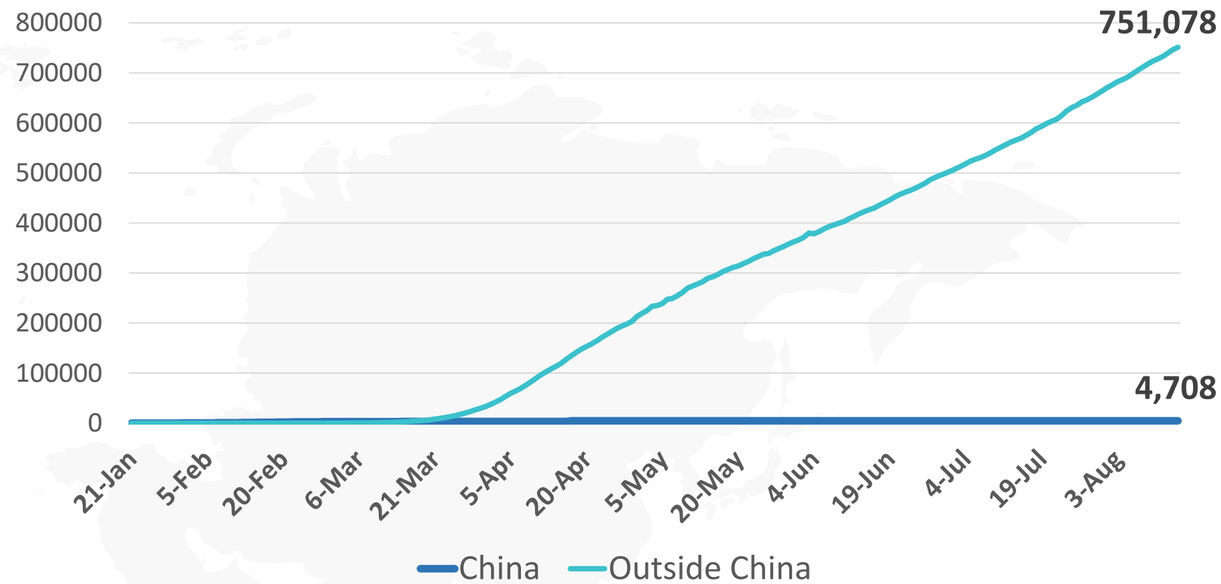


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

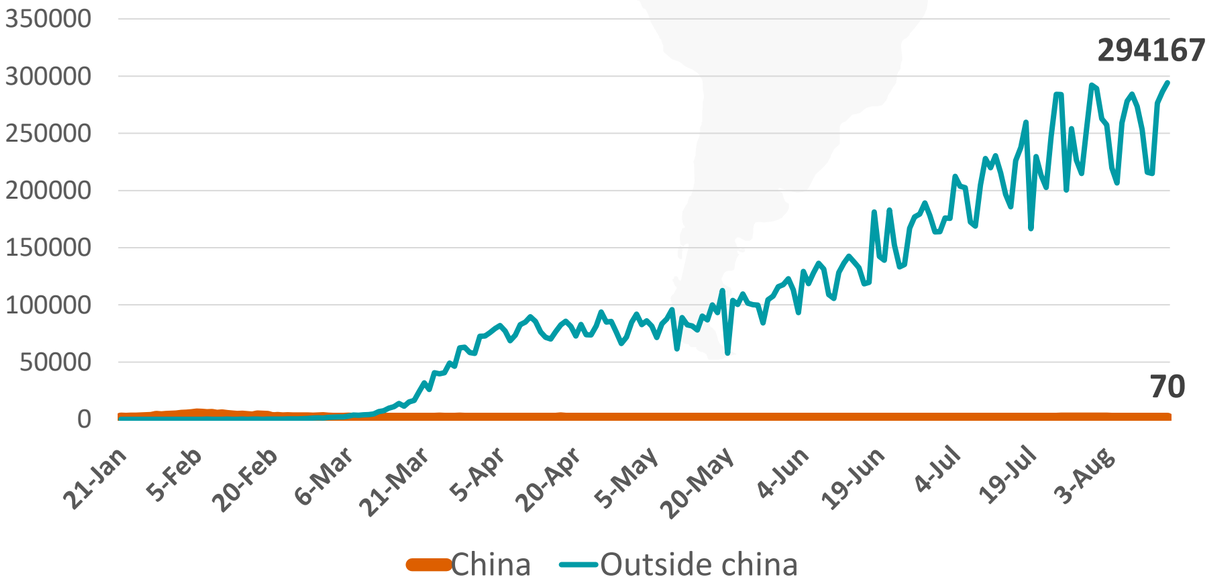
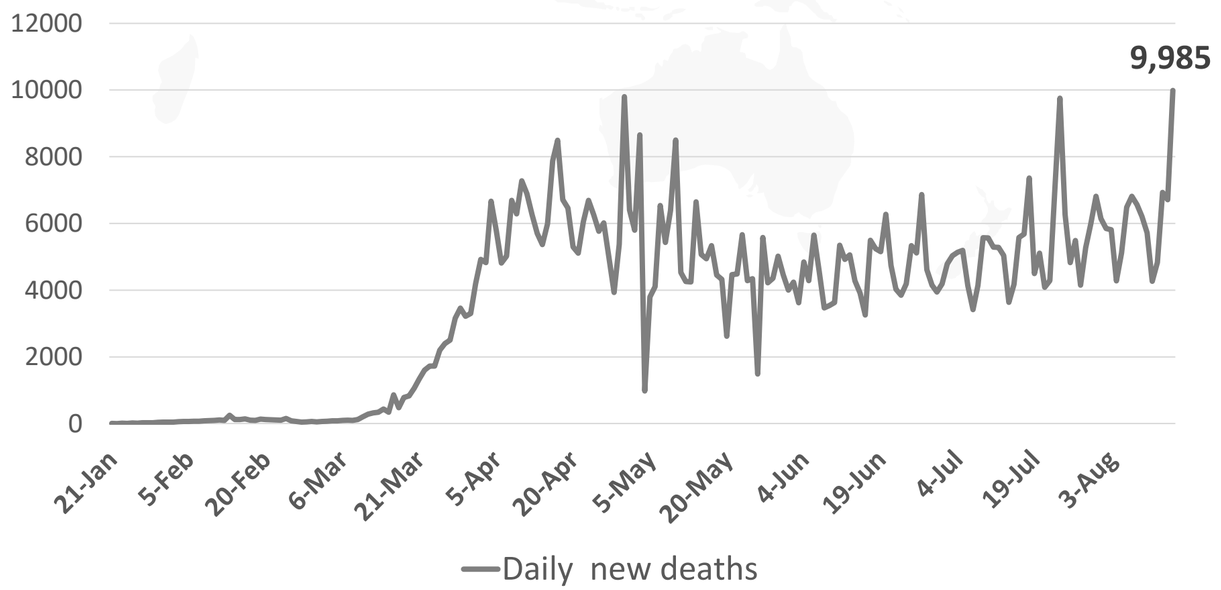


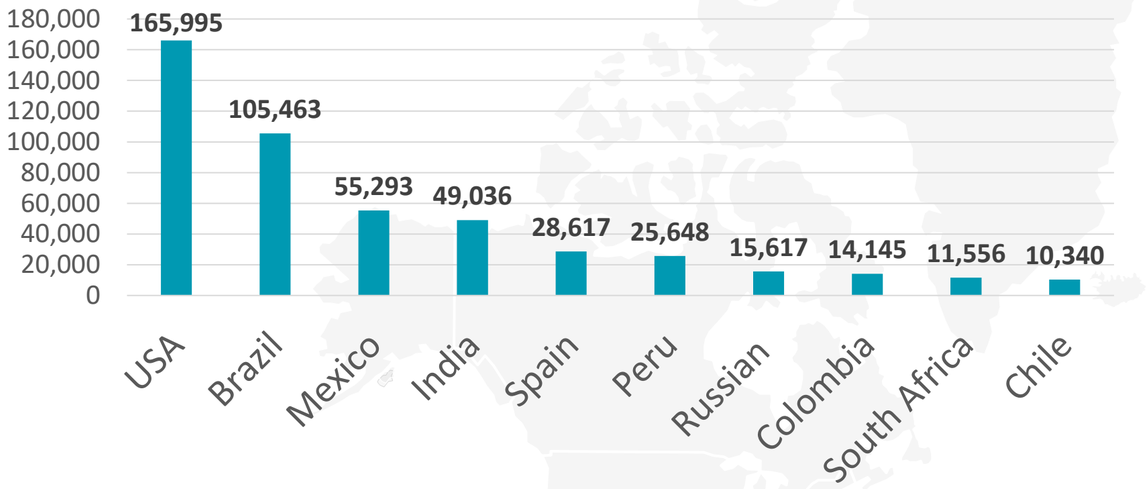
Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)



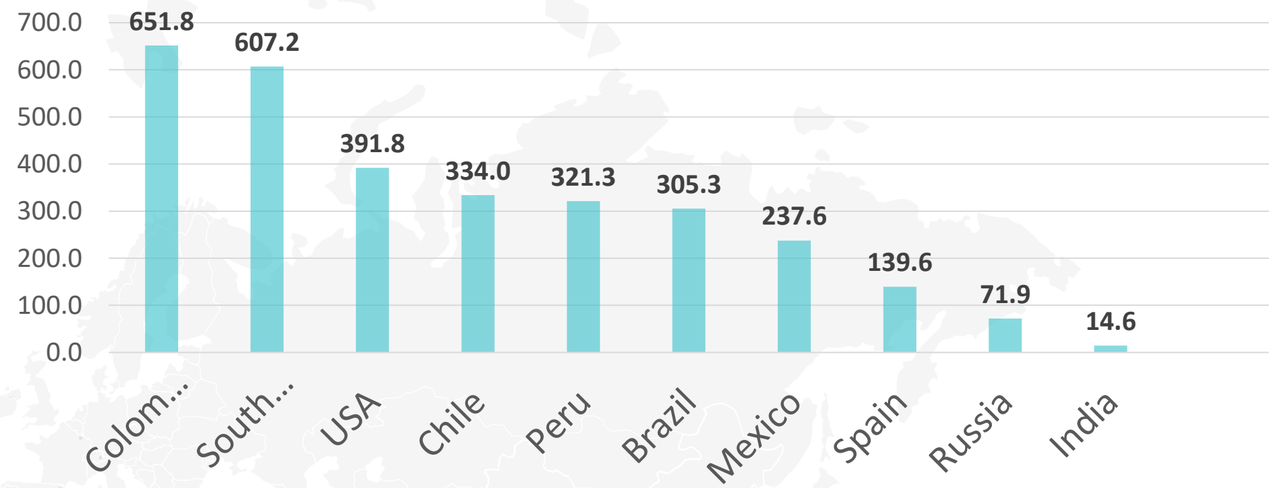
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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

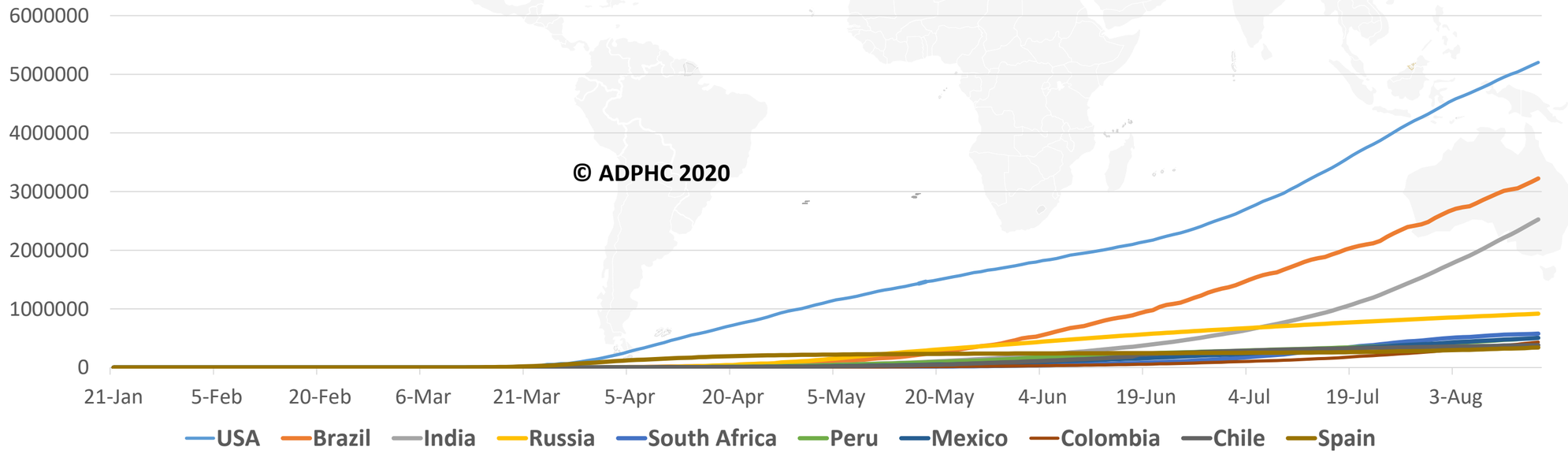
TOTAL DEATHS



DEATHS PER MILLION



TOTAL INFECTED CASES



USA	5,203,206
Brazil	3,224,876
India	2,526,192
Russia	917,884
South Africa	579,140
Peru	507,996
Mexico	505,751
Colombia	433,805
Chile	382,111
Spain	342,813

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

EPIDEMIOLOGY

FROM 21 JAN TO 15 AUG 2020

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

Daily Tests

69,455.0 Average Tests

702.2 per 100k population

0.4% Positive Rate

Daily Cases

257.4 Average Cases

2.6 per 100k population

Latest United Arab Emirates COVID-19 Data

Daily Recovered

189.4 Average Recovered

1.9 per 100k population

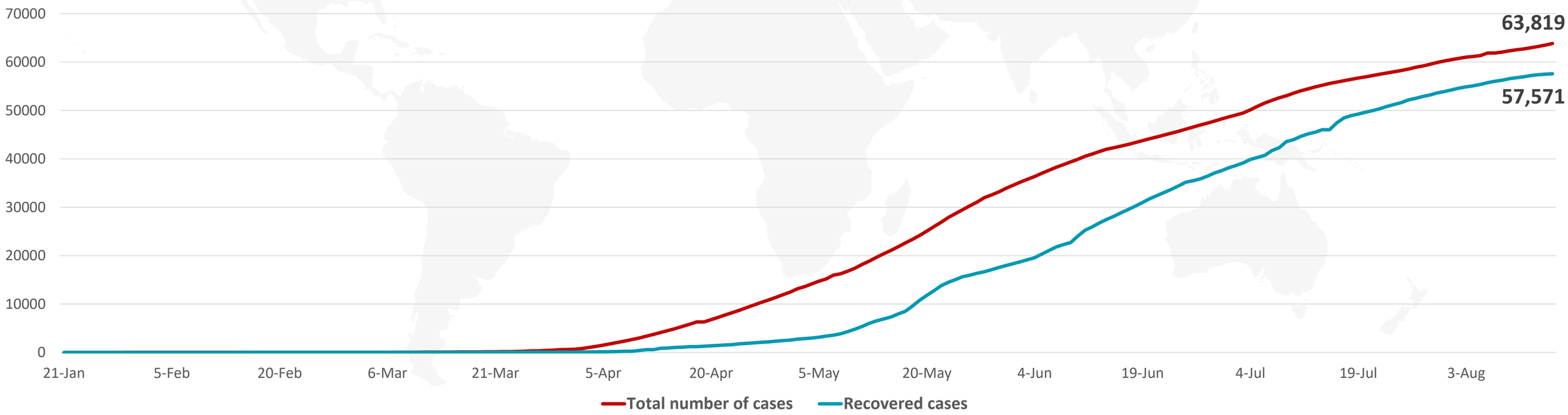
Daily Deaths

0.7 Average Deaths

0.0 per 100k population

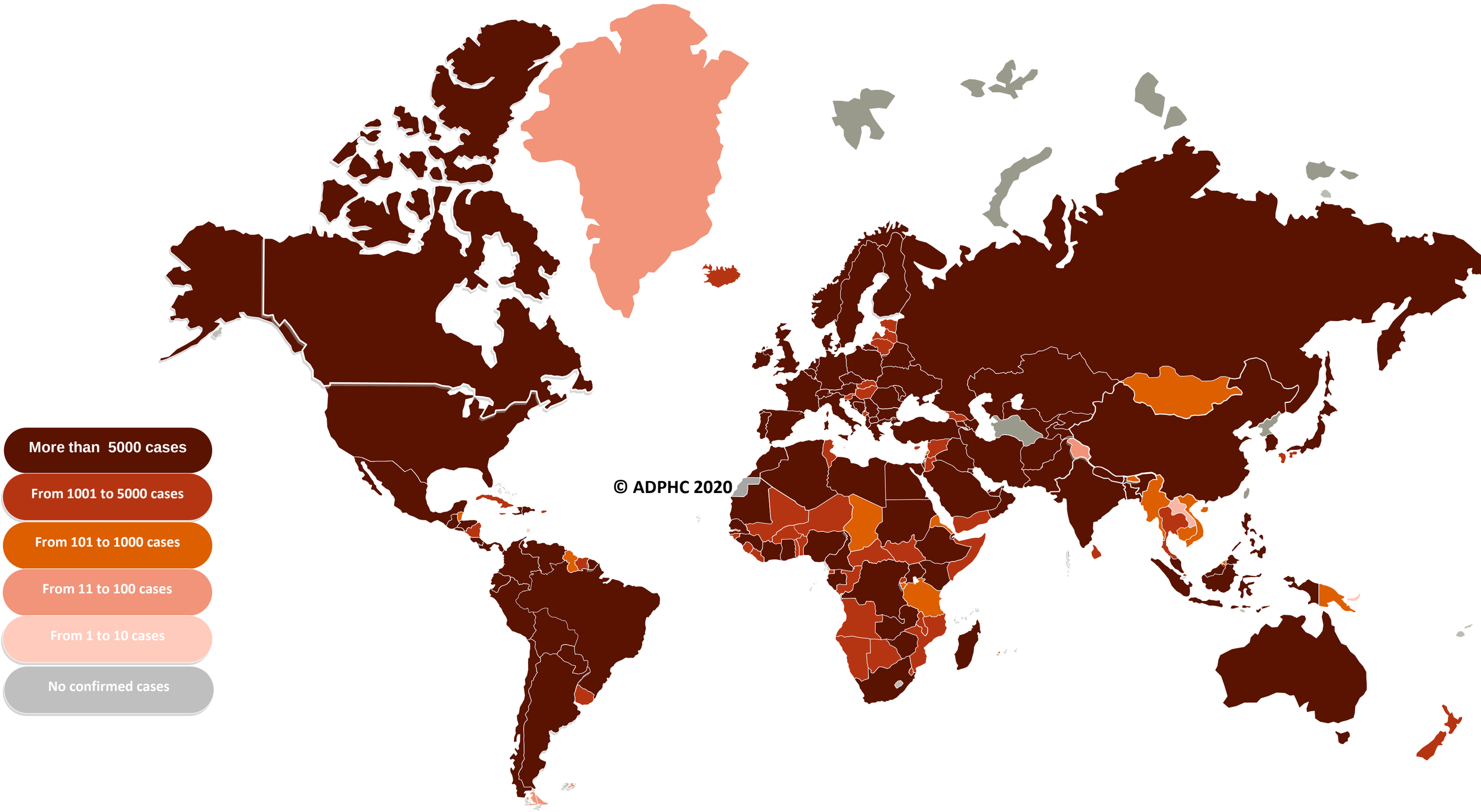
0.3% Case Fatality Rate

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,

Figure 7A : Global Distribution of COVID-19 Cases



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

EPIDEMIOLOGY

Date: 15 AUG 2020

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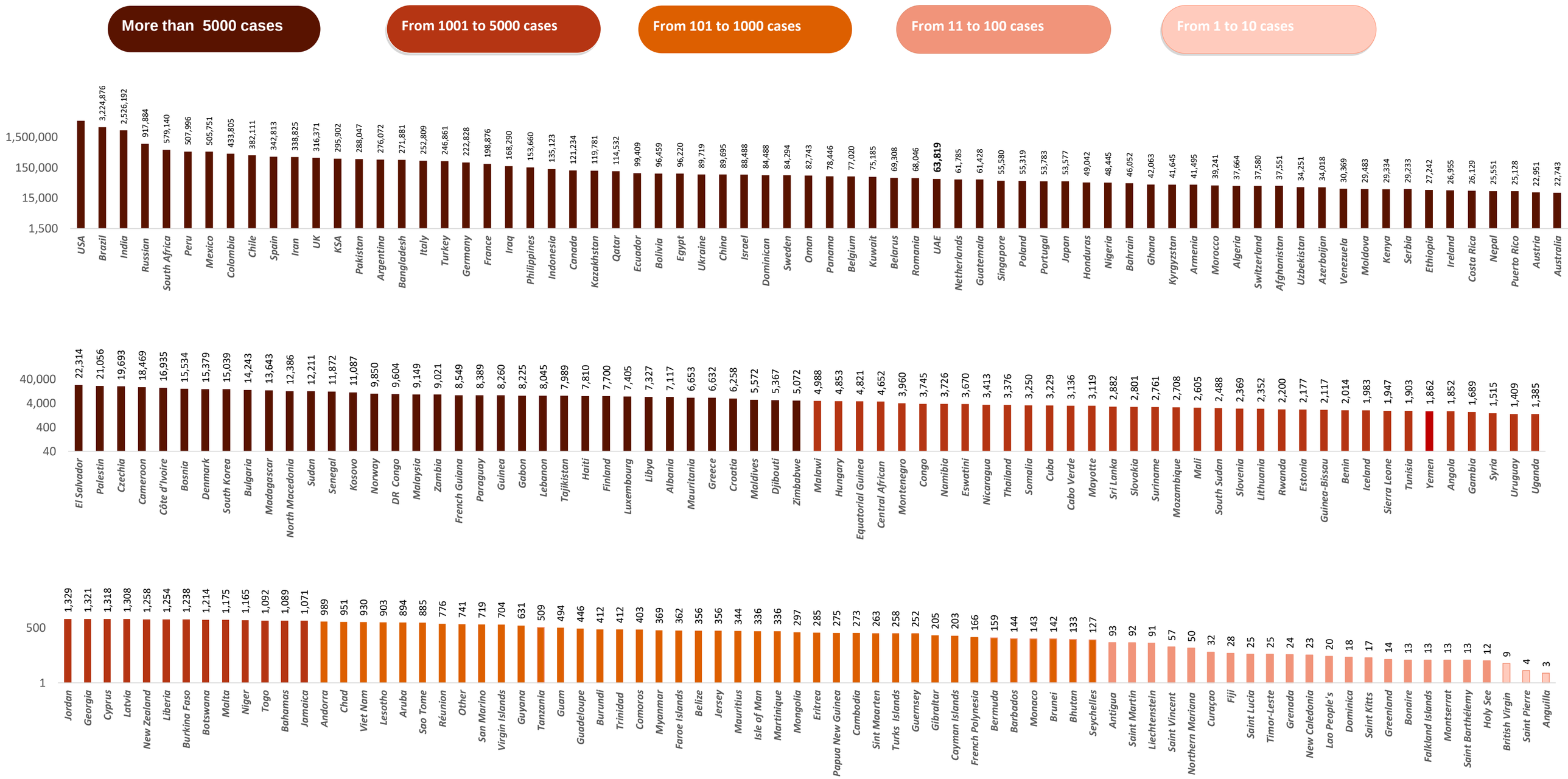
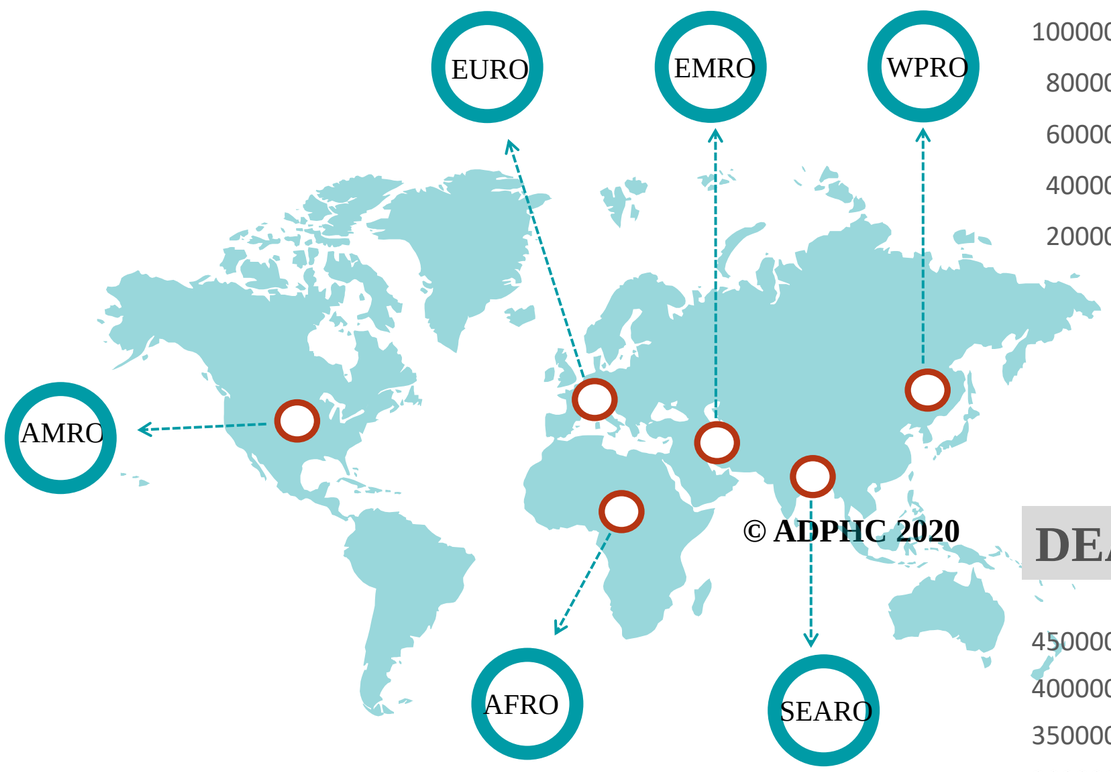
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



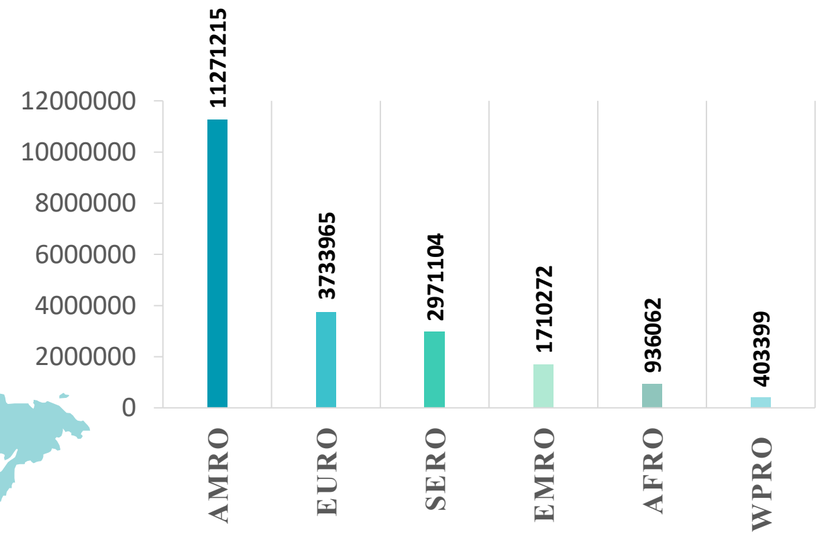
Other*:includes cases and deaths reported under the international conveyance(Diamond Princess)

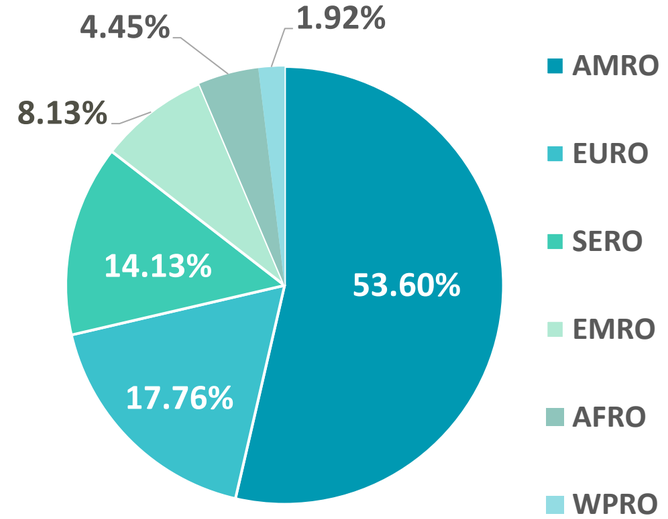
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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

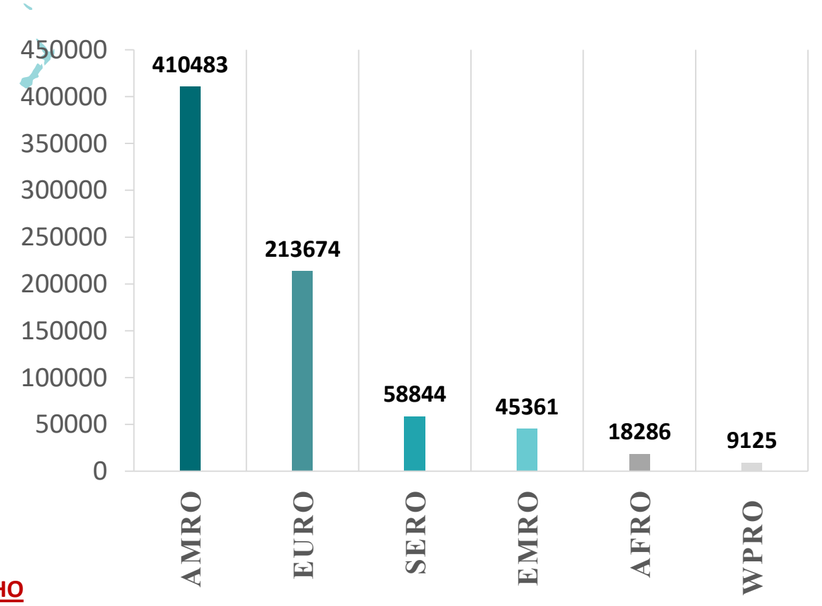


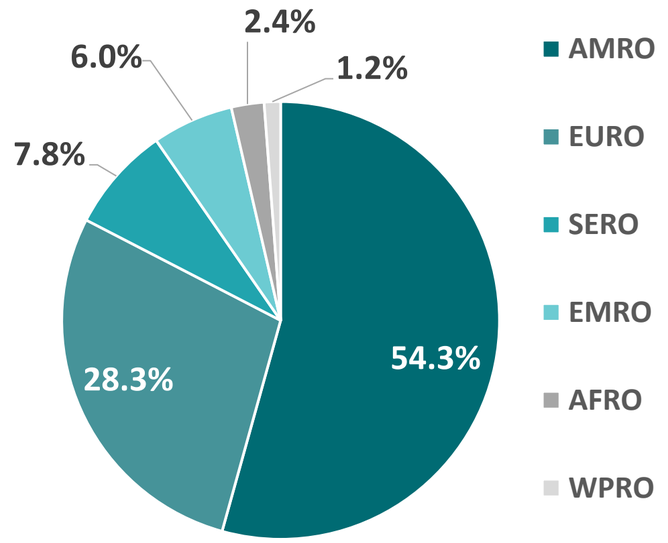
INFECTED





DEATHS

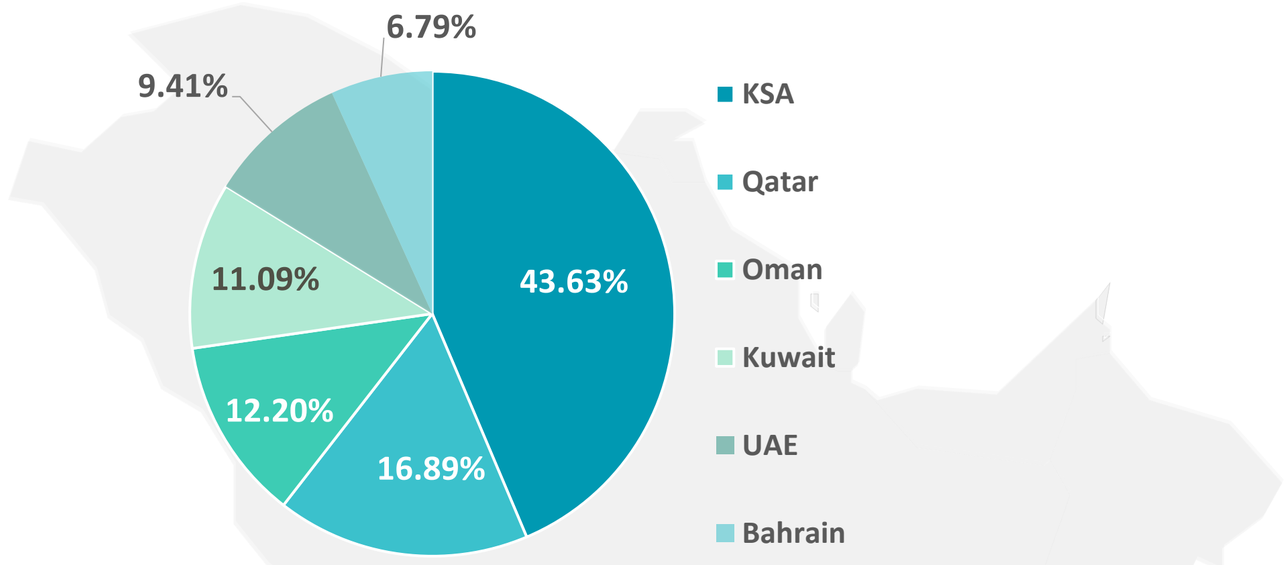


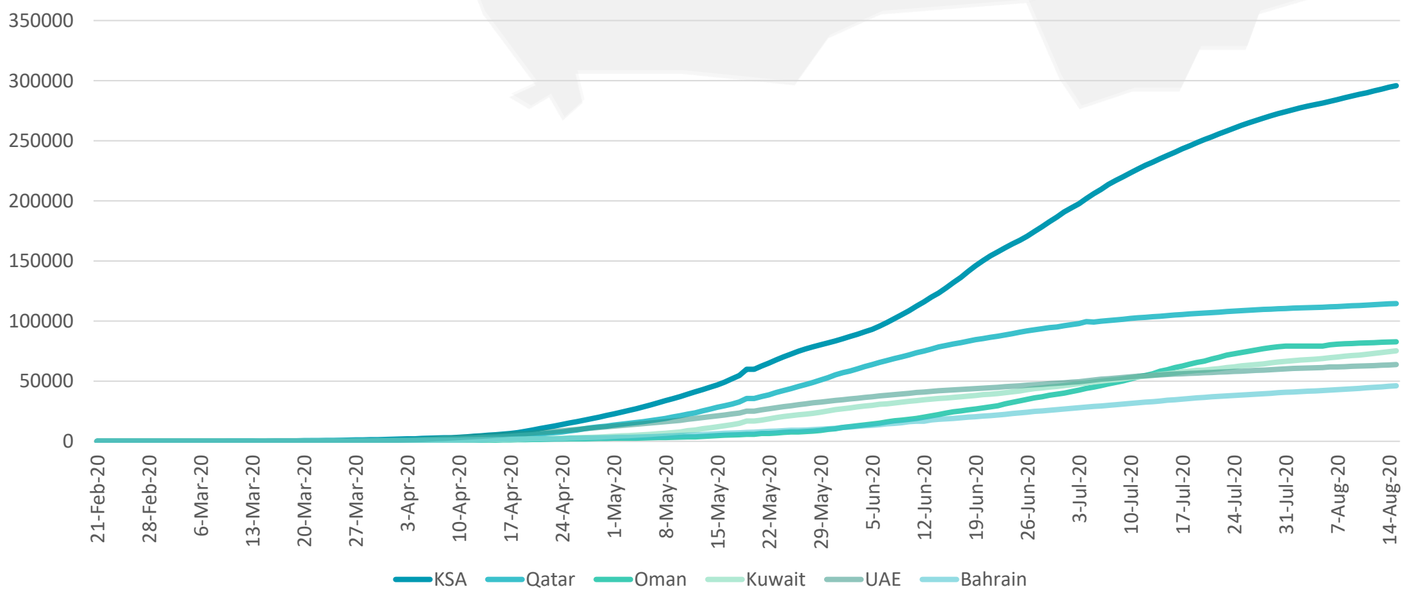


Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

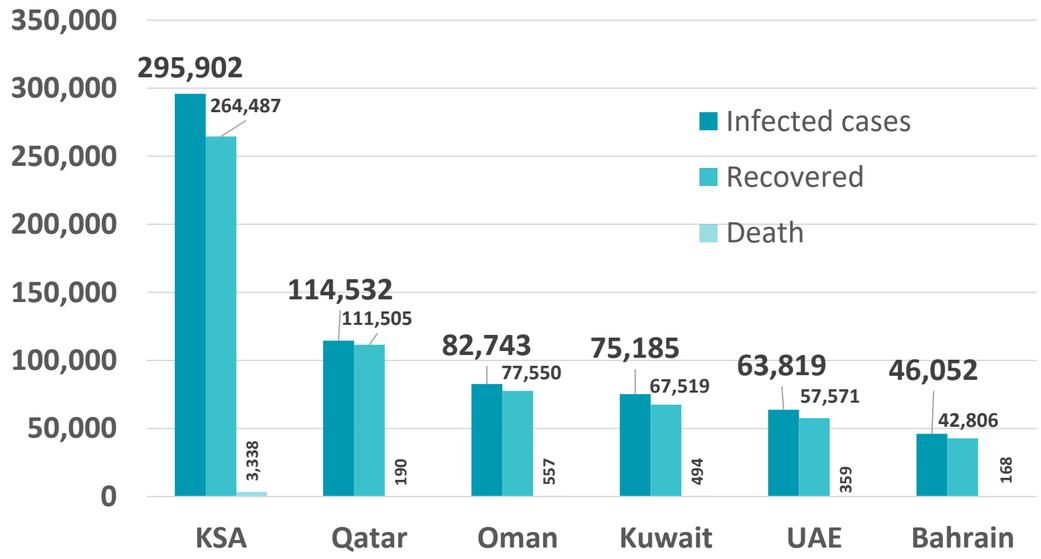
Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

TOTAL NUMBER OF INFECTED CASES

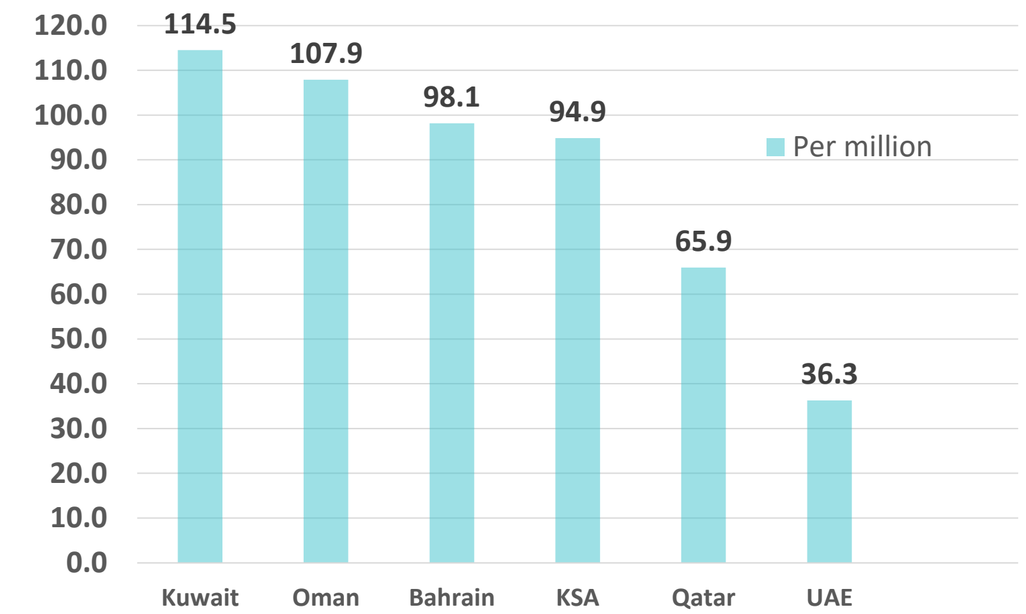




TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATHS PER MILLION



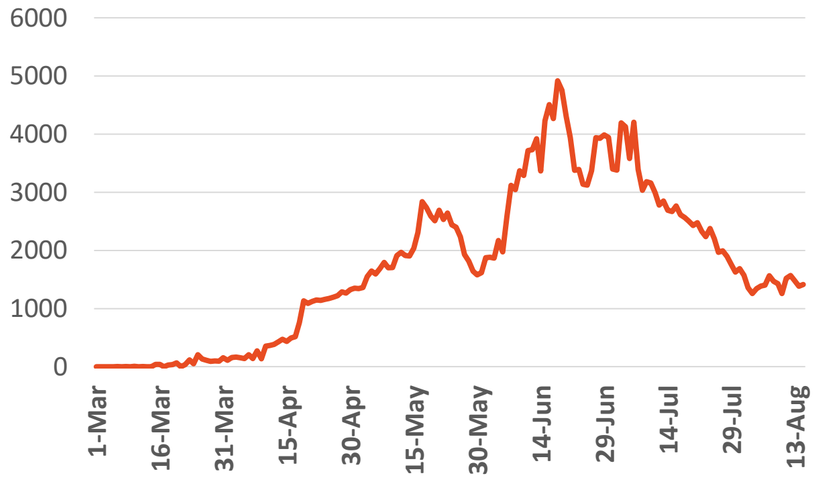
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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

UAE

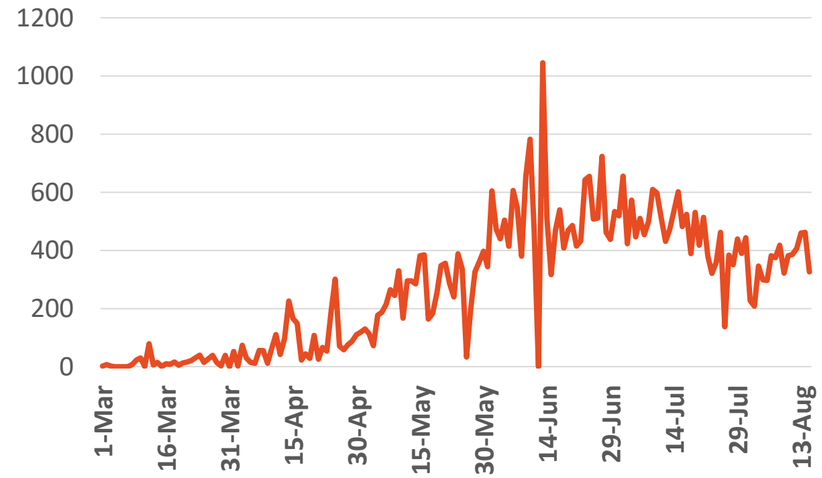
Source : National Emergency Crisis and Disaster Management Authority

KSA



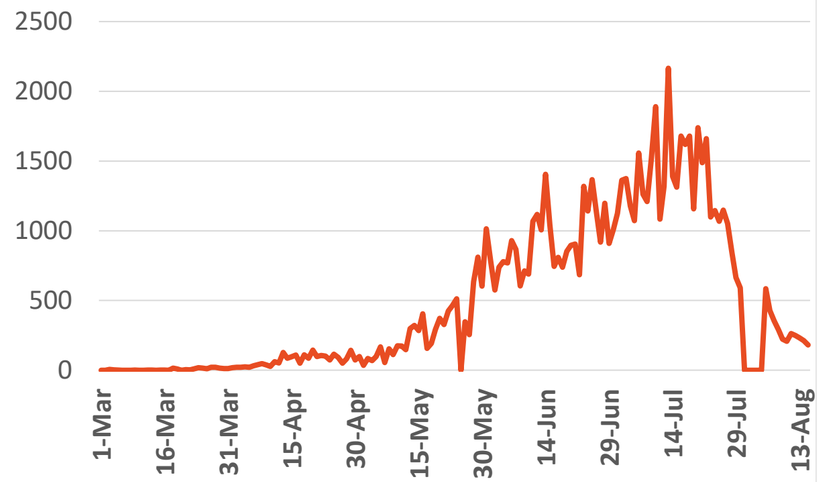
Source : KSA ministry of health

Bahrain



Source :WHO

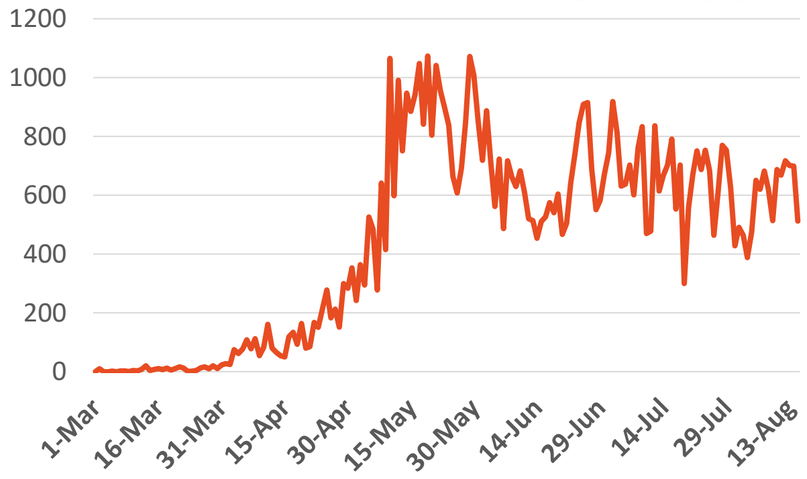
Oman



Source :Oman ministry of health

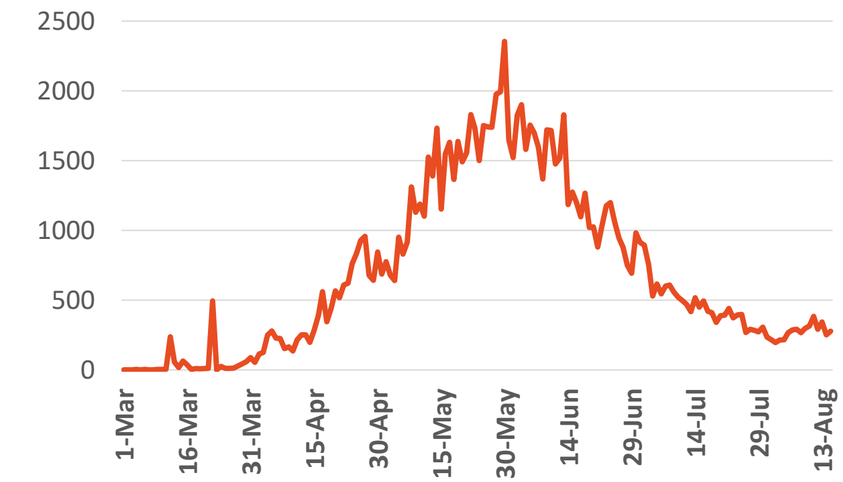
No announced statistic data from 31 July to 4 August

Kuwait



Source : Kuwait ministry of health

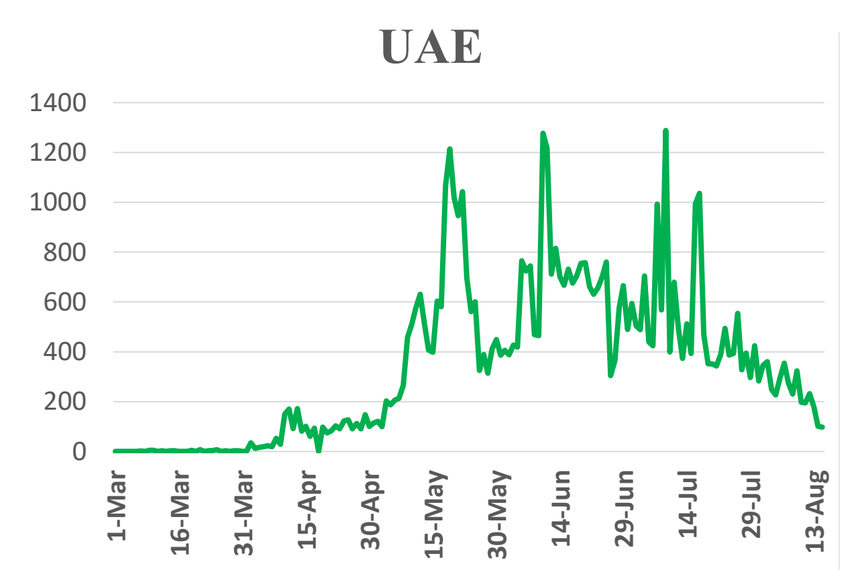
Qatar



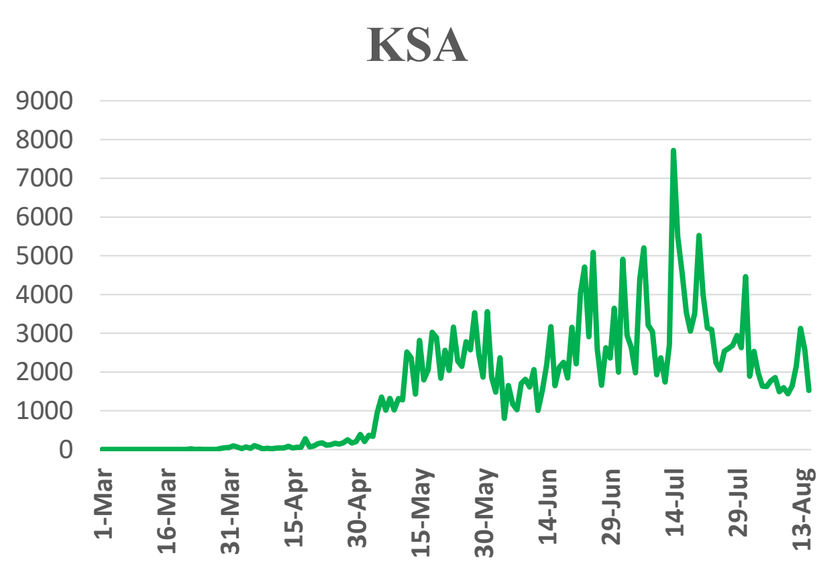
Source : Qatar ministry of health

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

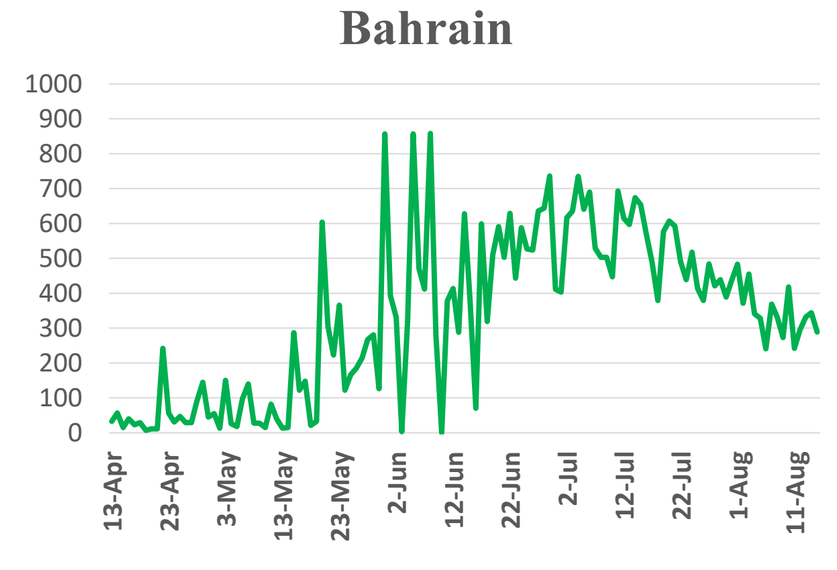
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries



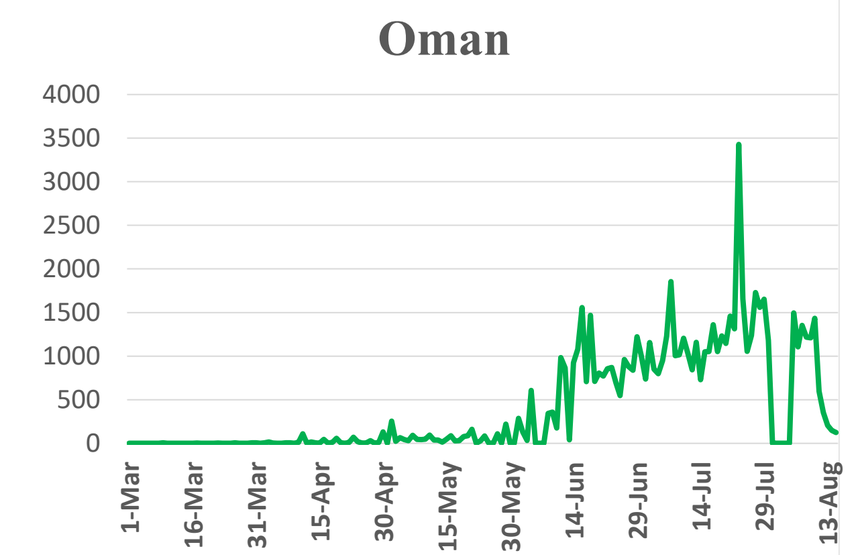
Source : National Emergency Crisis and Disaster Management Authority



Source : KSA ministry of health

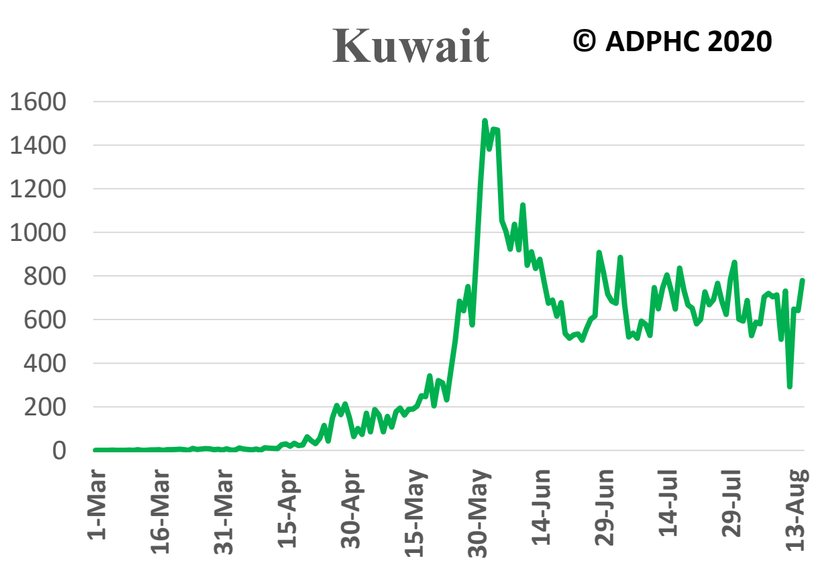


Source : GCCStat

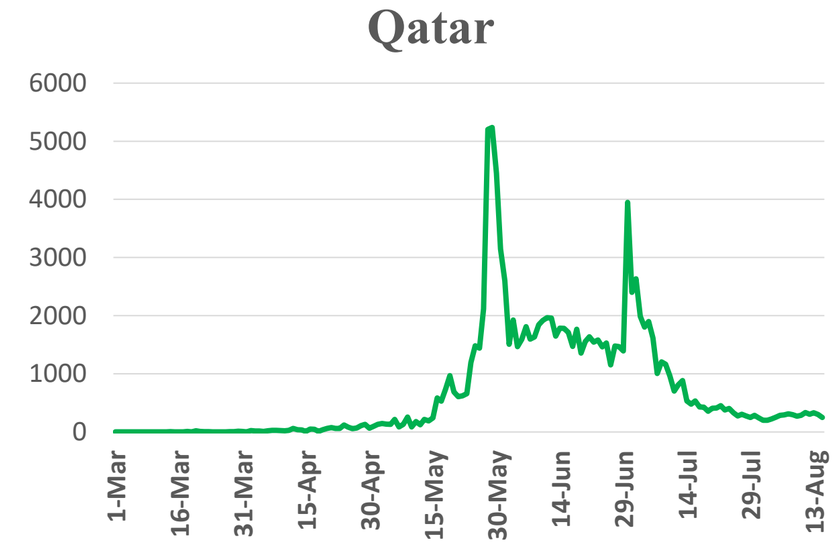


Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August



Source : Kuwait ministry of health

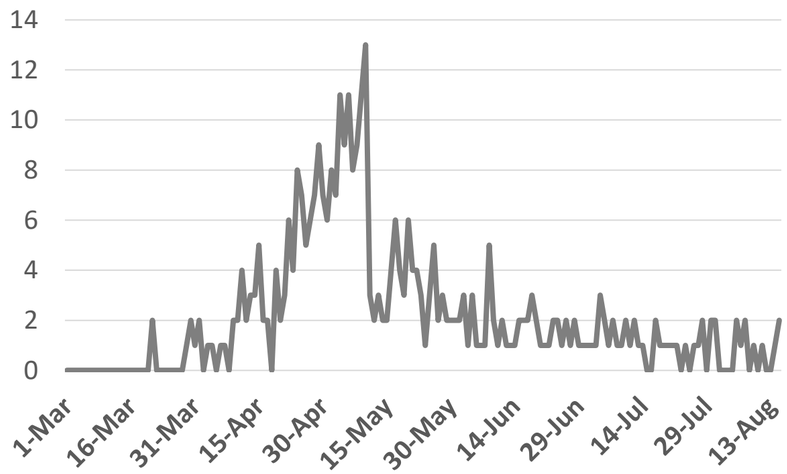


Source : Qatar ministry of health

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

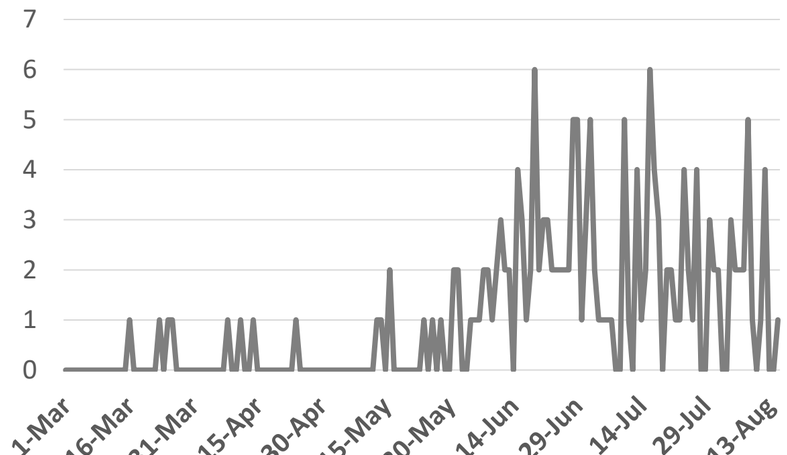


Source : National Emergency Crisis and Disaster Management Authority

KSA

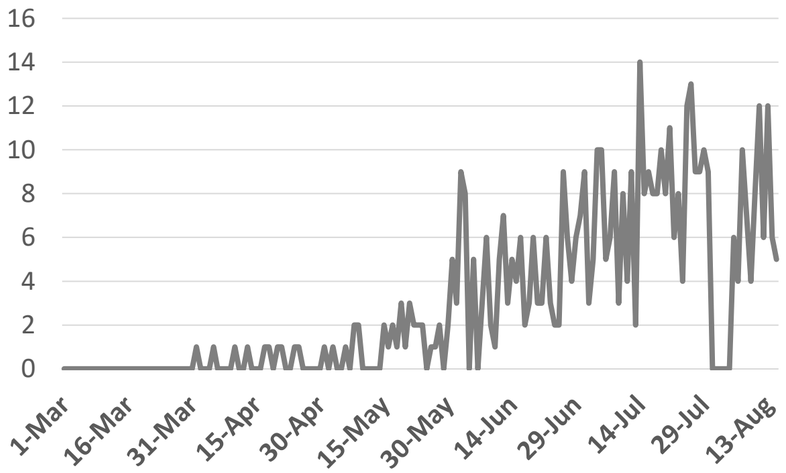
Source : KSA ministry of health

Bahrain



Source :WHO

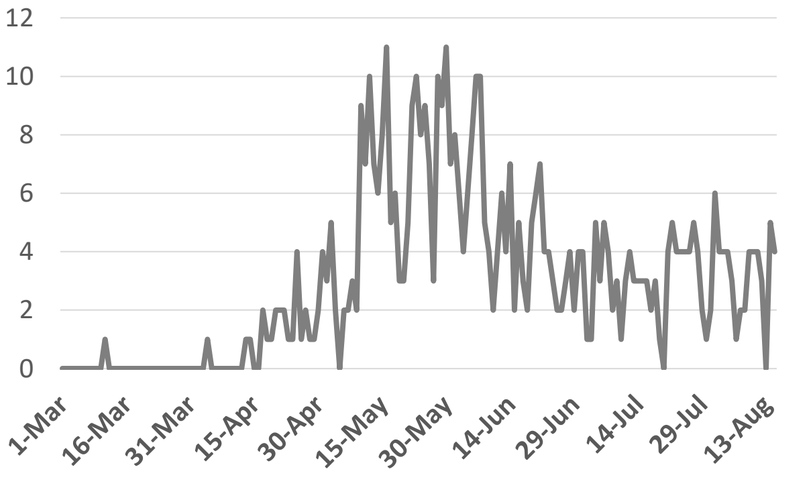
Oman



Source :Oman ministry of health

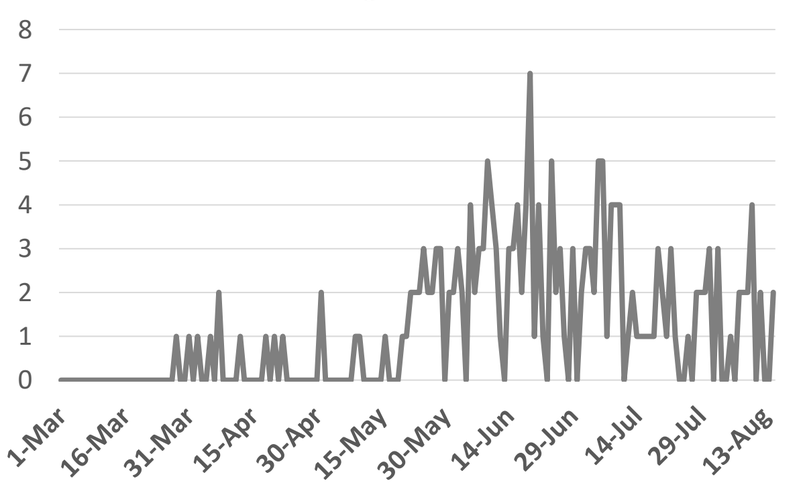
*No announced statistic data from 31 July to 4 August

Kuwait



Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

CLINICAL FEATURE

Article 1

Published

Cardiac Involvement in Patients Recovered From COVID-2019 Identified Using Magnetic Resonance Imaging

30 July 2020 **THE AMERICAN COLLEGE OF CARDIOLOGY FOUNDATION**

- This was a single-center, retrospective, case-control study performed at Tongji Hospital, in Wuhan, China, which evaluated the cardiac involvement in patients recovered from coronavirus disease-2019 (COVID-19) using cardiac magnetic resonance (CMR).

- All patients with a confirmed COVID-19 diagnosis who recovered from the infection (discharged) and experienced cardiac symptoms; including chest pain, palpitation, and chest distress were included and underwent CMR examination. Patient with a history of coronary artery disease or myocarditis were excluded.

- A total of 26 patients were identified, fifteen patients (58%) had abnormal CMR findings on conventional CMR sequences.

- Based on these findings, attention should be paid to the possible myocardial involvement in patients recovered from COVID-19 with cardiac symptoms.

EPIDEMIOLOGY

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Article 2

Comparison of Estimated Excess Deaths in New York City During the COVID-19 and 1918 Influenza Pandemics

Published 13 August 2020 JAMA

- Utilizing public data from Centers for Disease Control and Prevention (CDC, 1914-1918), New York City Department of Health and Mental Hygiene (2020), and US Census Bureau (2017-2020), the cohort study compared the incident rates of all-cause death in New York City during the peak of the H1N1 influenza pandemic in 1918 and early COVID-19 in 2020. Incidence rate per person-months and corresponding 95% CI were calculated for October and November (61 days) from 1914 to 1918, and from March 11 to May 11, 2020 (61 days) separately. Person-month units were obtained by dividing the 61-day incident rates by two.

- A total of 31,589 all-cause deaths occurred in 5,500,000 residents provide an incident rate of 287.17 deaths per 100,000 person-months. The incident rate ratio for all-cause death during the influenza pandemic compared with corresponding periods from 1914 to 1917 was 2.80 (95% CI: 2.74-2.86). In early COVID-19, a total of 33,465 all-cause deaths occurred in 8,280,000 residents provide an incident rate of 202.08 deaths per 100,000 person-months (95% CI: 199.03-205.17). The incident rate ratio for all-cause death during the study period compared with corresponding periods from 2017-2019 was 4.15 (95% CI: 4.05-4.24).

- The results suggest that the mortality associated with COVID-19 during early phase was comparable to the peak mortality observed during the influenza pandemic. These findings may help officials and the public contextualize the unusual magnitude of the COVID-19 leading to well-judged policies that may help to decrease transmission by decreasing the reproduction number and prevent the consumption of essential supplies of life-saving resources.

VACCINE

Article 3

Published 13 August 2020 JAMA

Effect of an Inactivated Vaccine against SARS-CoV-2 on Safety and Immunogenicity Outcomes Interim Analysis of 2 Randomized Clinical Trials

- Randomized, double-blind, and placebo-controlled phase 1 (n=96) and phase 2 (n=224) trials were conducted in Henan Province, China among healthy adults aged 18 to 59 years to assess an inactivated COVID-19 vaccine. In the phase 1 trial, participants were randomly and equally assigned into 1 of 3 dose groups (2.5, 5, and 10 μg/dose) and a control group of aluminum hydroxide (alum) adjuvant only group (n=24 per group) and received three intramuscular injections on days 0, 28, and 56. In the phase 2 trial, participants were randomly divided into 2 schedule groups (5 μg/dose) [injections on days 0 and 14 (n=84) vs. alum only (n= 28), and days 0 and 21 (n=84) vs. alum only (n=28)].

- Participants in the phase 1 trial randomized to aluminum hydroxide (alum) only and low, medium, and high vaccine doses on days 0, 28, and 56, seven-day adverse reactions occurred in 12.5%, 20.8%, 16.7%, and 25.0% respectively. The geometric mean titers of neutralizing antibodies at day 14 after three injections were 316, 206, and 297 in the low, medium, and high dose groups respectively. In the phase 2 trial, participants randomized to the medium dose, seven-day adverse reactions occurred in 6.0% and 14.3% who received injections on days 0 and 14 vs. alum only, and 19.0% and 17.9% who received injections on days 0 and 21 vs. alum only respectively. The geometric mean titers of neutralizing antibodies in the vaccine groups on day 14; after two injections were 121 vs 247 respectively.

- The findings showed that inactivated COVID-19 vaccine had a low rate of adverse reactions and demonstrated immunogenicity. Longer-term assessment of safety and efficacy will require phase 3 trials.

Note: This vaccine has currently entered phase 3 clinical trial in the UAE.