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للصحة العامة
ABU DHABI PUBLIC
HEALTH CENTRE

SCIENTIFIC RESEARCH MONITORING ON COVID-19

9 AUGUST 2020

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https://www.doh.gov.ae/ar/covid-19/Healthcare-Professionals/Scientific-Publication

SCIENTIFIC RESEARCH MONITORING ON COVID-19 (ISSUE189)

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

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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Transmission

Risk of COVID-19 in Health-Care Workers in Denmark: An Observational Cohort Study

Public Health Response

COVID-19 Interstitial Pneumonia: Monitoring the Clinical Course in Survivors

Public Health Response

Mortality in COVID-19 Is Not Merely a Question of Resource Availability

- WHO has published guidance on the public health surveillance of coronavirus disease 2019 (COVID-19) in humans caused by infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This document combines and supersedes the Global surveillance guidance for COVID-19 caused by human infection with COVID-19 virus: Interim guidance, and Surveillance strategies for COVID-19 human infection: Interim Guidance 10 May 2020.

- A plane carrying 20 tonnes of trauma and surgical supplies from WHO has landed in Beirut, Lebanon to support the treatment of patients injured by the blast which occurred in the city on 4 August. This latest emergency has occurred at a time of recent civil unrest, economic crisis, the COVID-19 outbreak and heavy refugee burden. “We are in this together, and we are committed to supporting Lebanon in this very difficult time,” said Dr Najat Rochdi, UN Resident Coordinator in Lebanon.

EPIDEMIOLOGY

FROM 21 JAN TO 8 AUG 2020

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

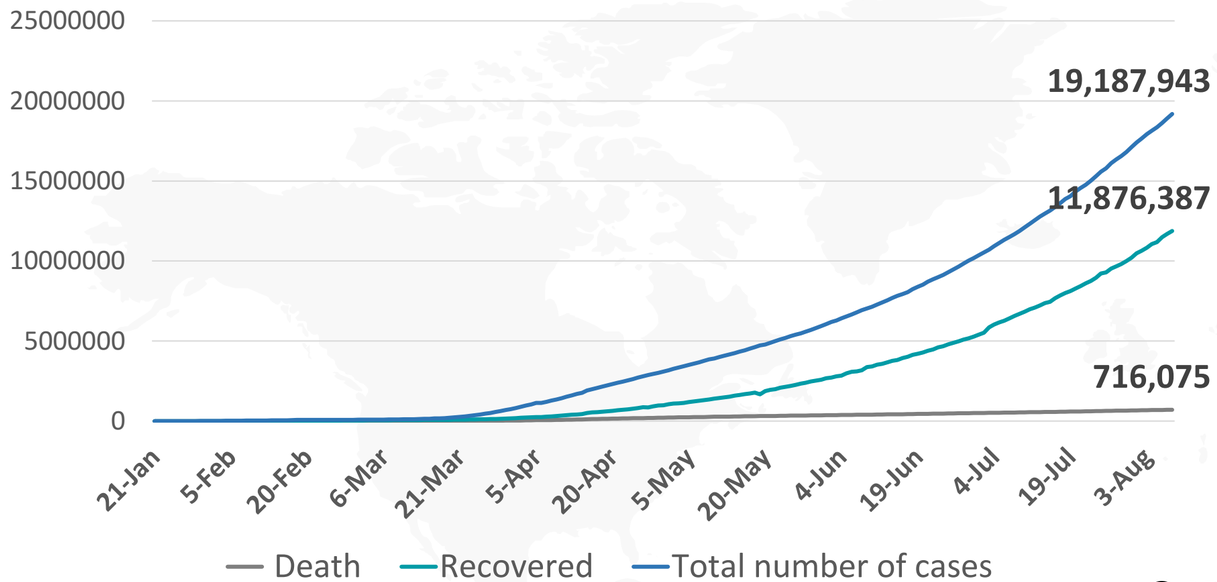


Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)

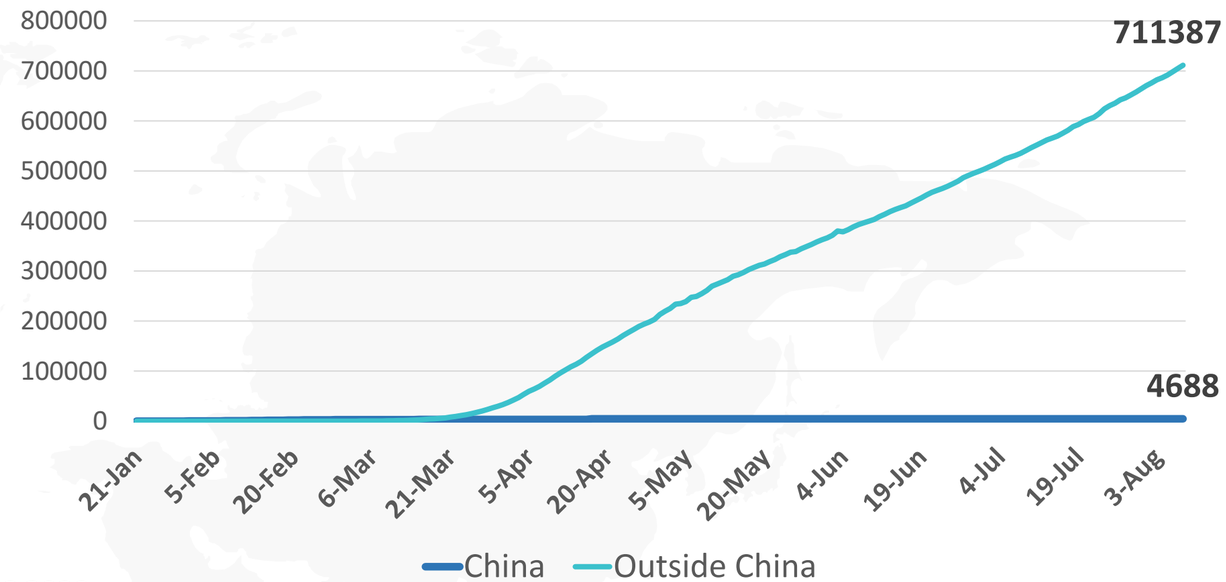


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

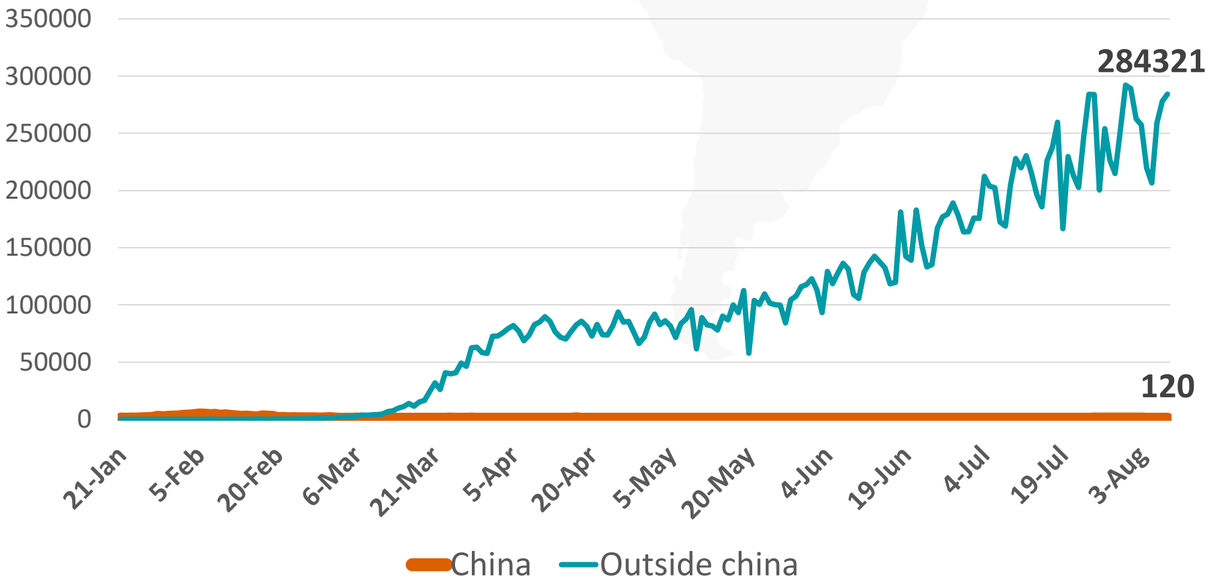
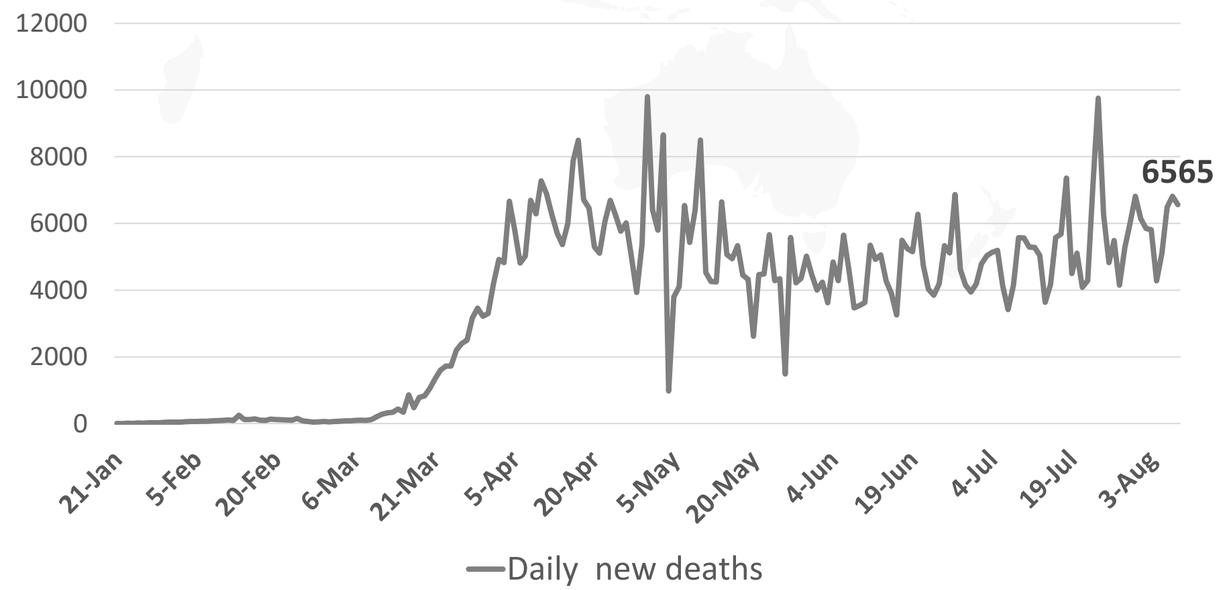


Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)



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

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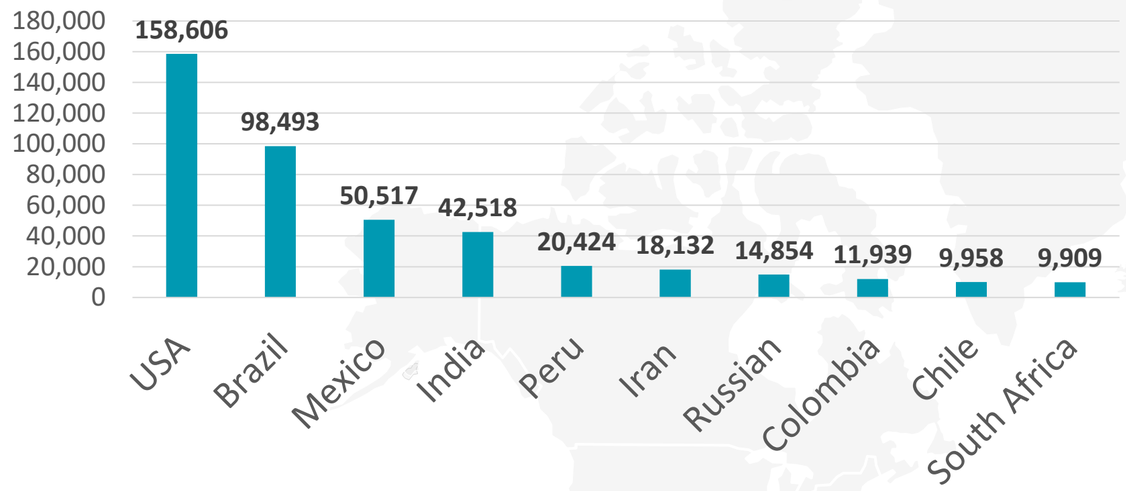
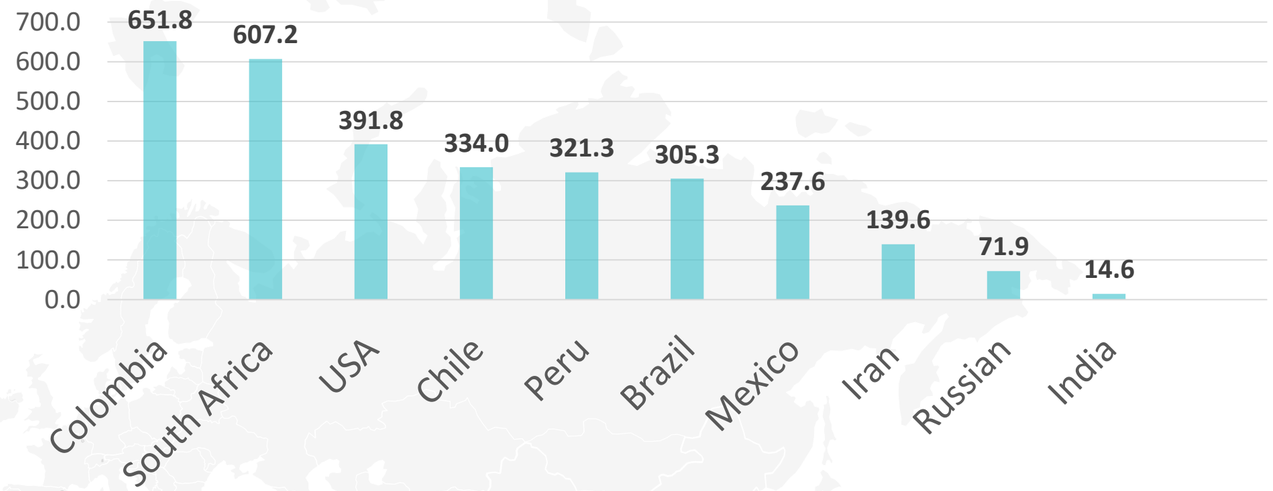
Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

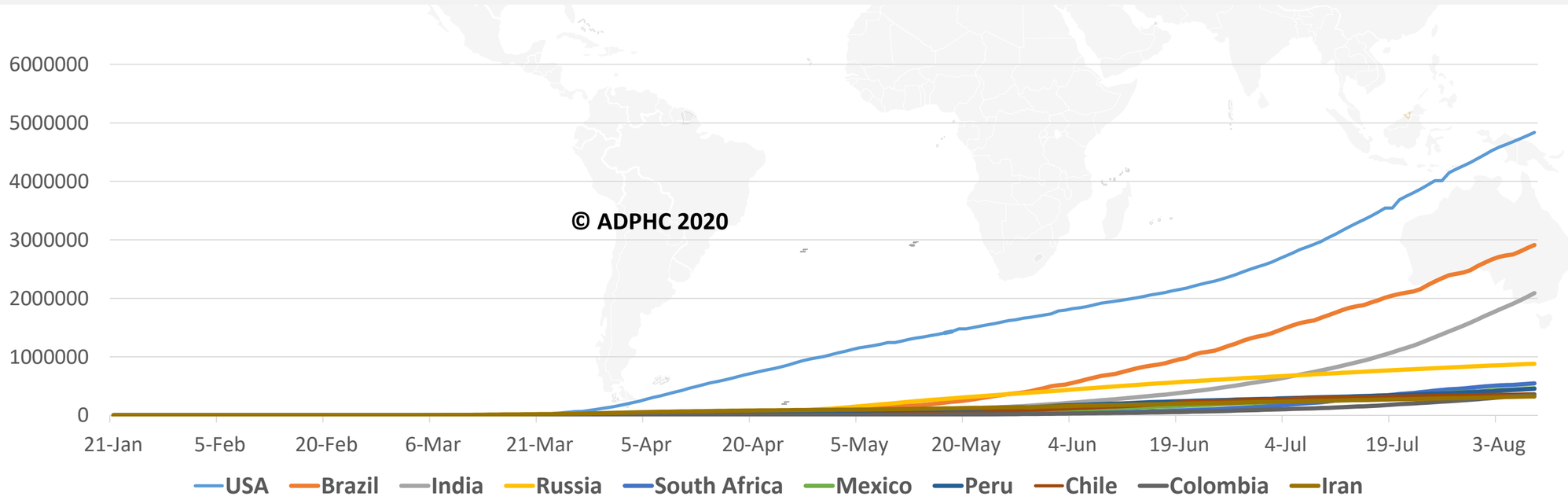
TOTAL DEATHS



DEATHS PER MILLION



TOTAL INFECTED CASES



USA	4,836,930
Brazil	2,912,212
India	2,088,611
Russia	882,347
South Africa	545,476
Mexico	462,690
Peru	455,409
Chile	368,825
Colombia	357,710
Iran	322,567

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EPIDEMIOLOGY

FROM 21 JAN TO 8 AUG 2020

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

Daily Tests

45,643.6 Average Tests

461.5 per 100k population

0.5% Positive Rate

Daily Cases

220.0 Average Cases

2.2 per 100k population

Daily Recovered

284.3 Average Recovered

2.9 per 100k population

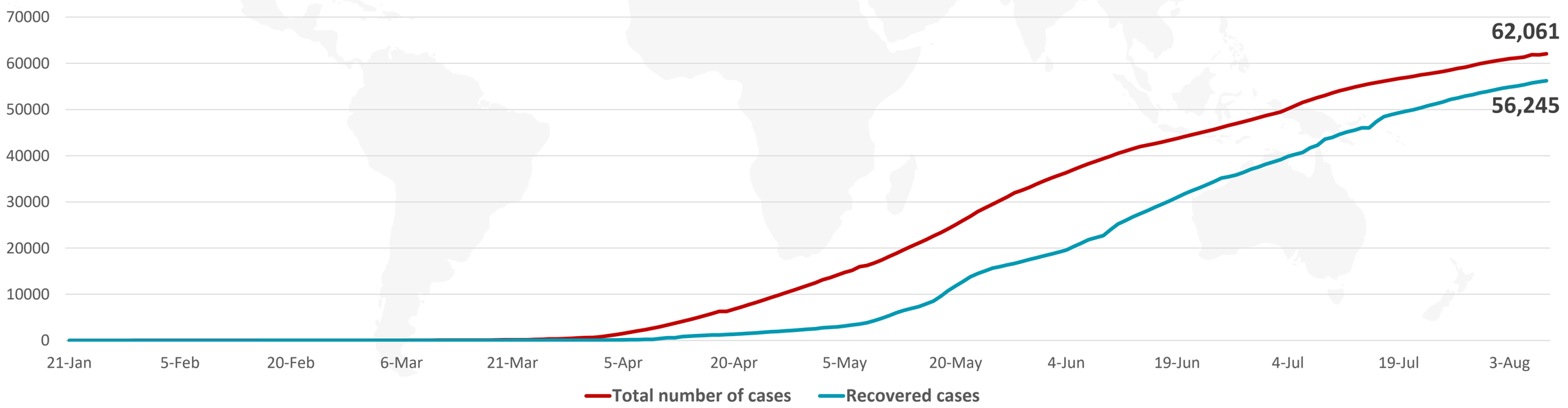
Daily Deaths

0.7 Average Deaths

0.0 per 100k population

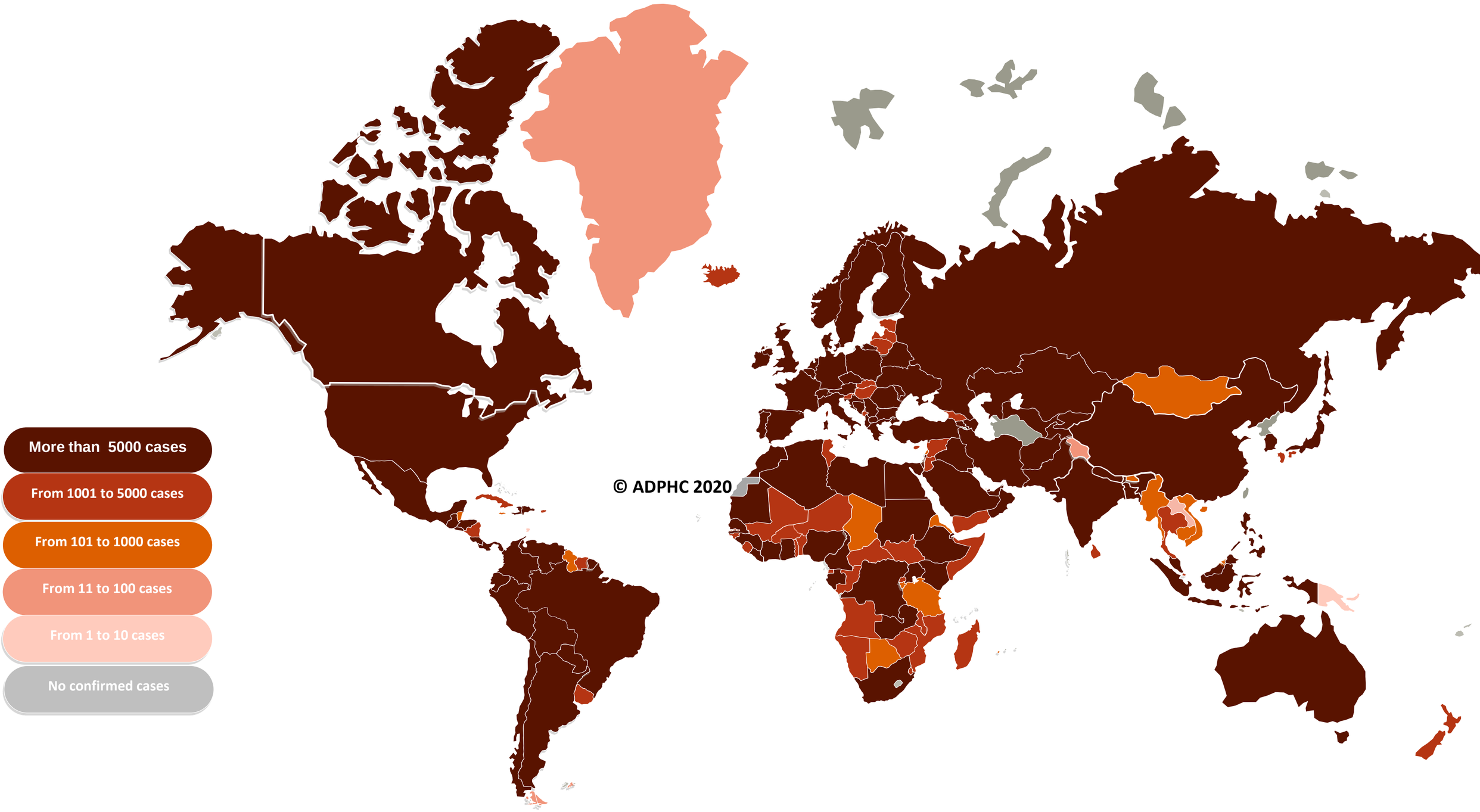
0.3% Case Fatality Rate

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: 8 AUG 2020

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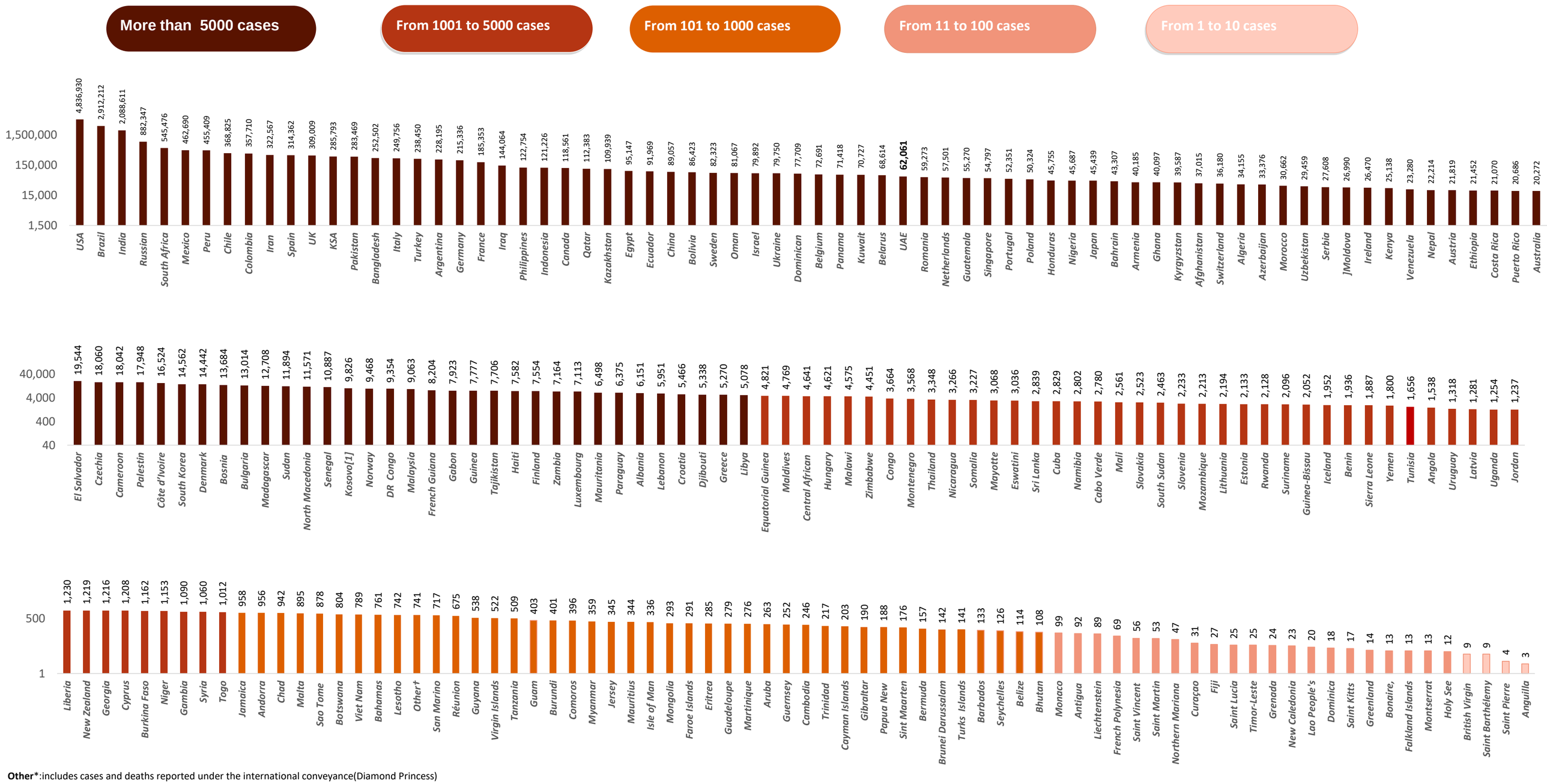
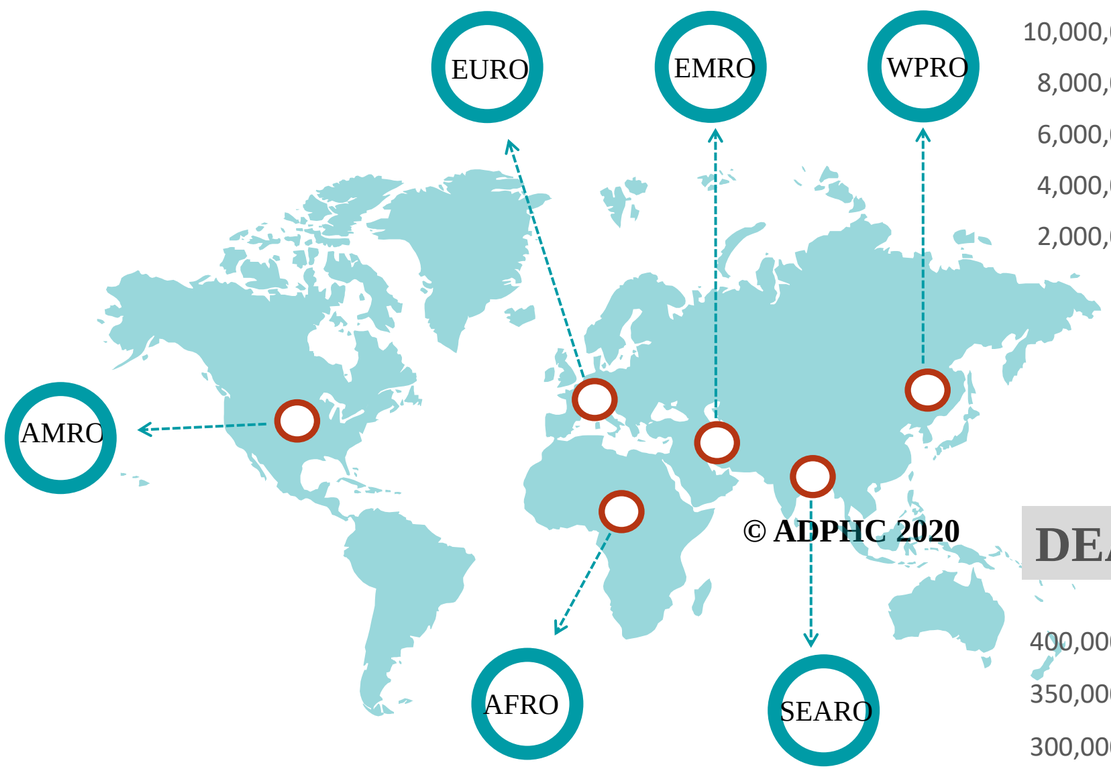
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



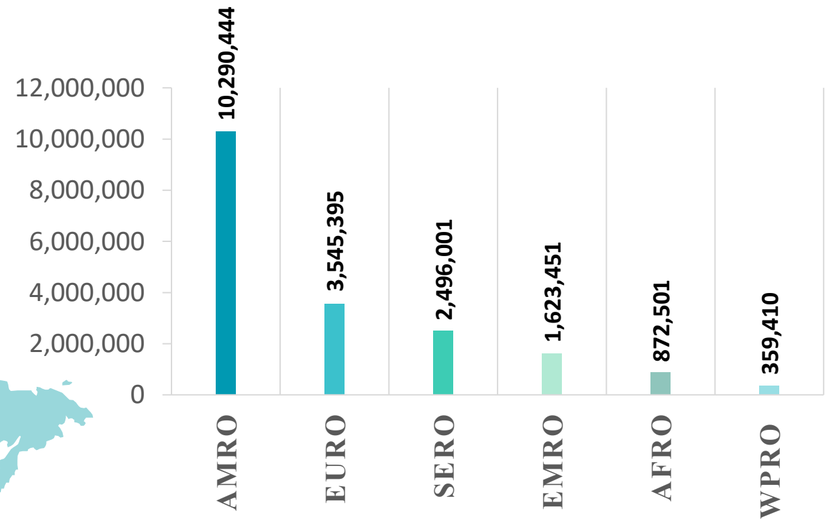
Other*:includes cases and deaths reported under the international conveyance(Diamond Princess)

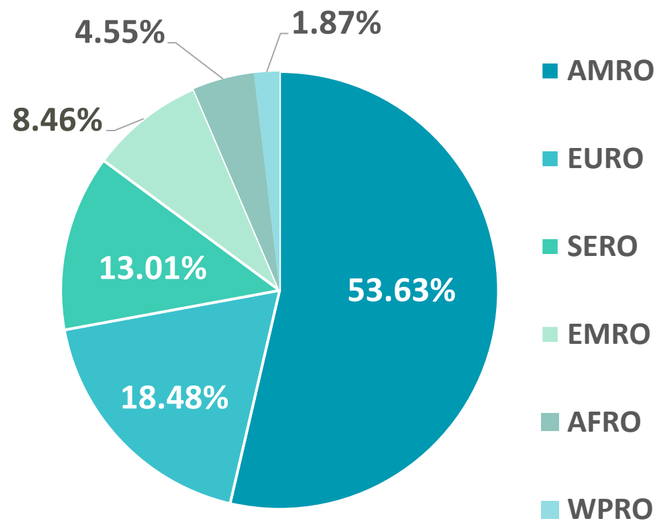
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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

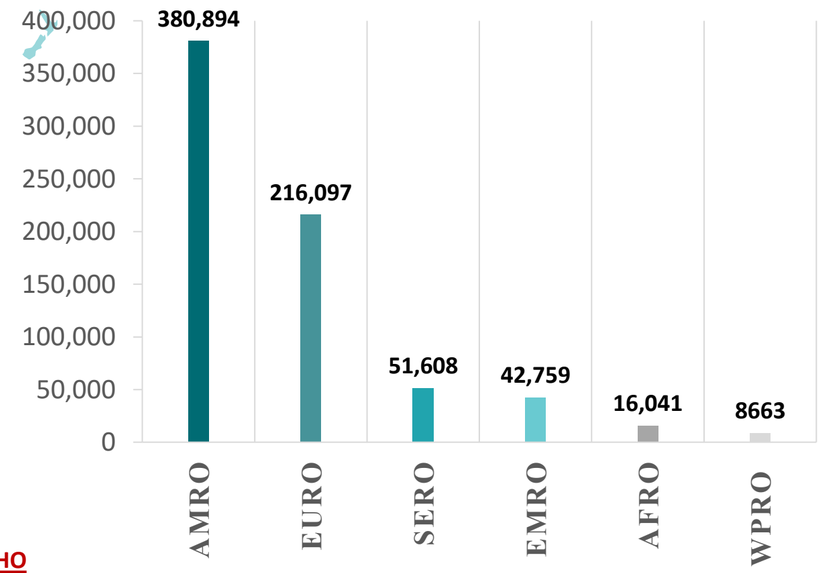


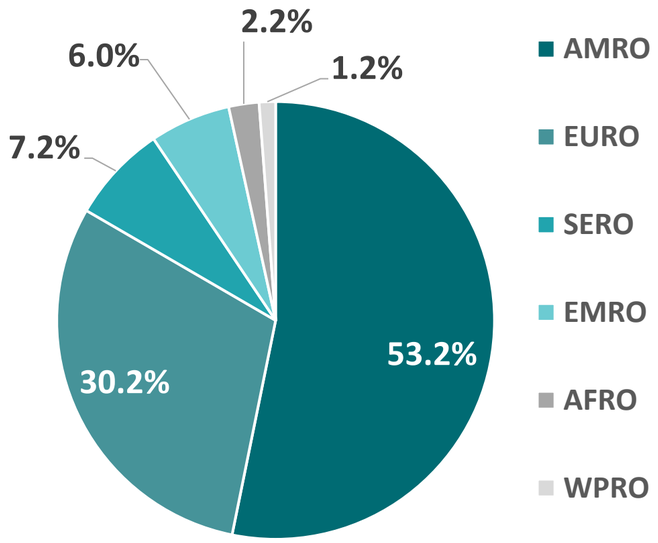
INFECTED





DEATHS





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

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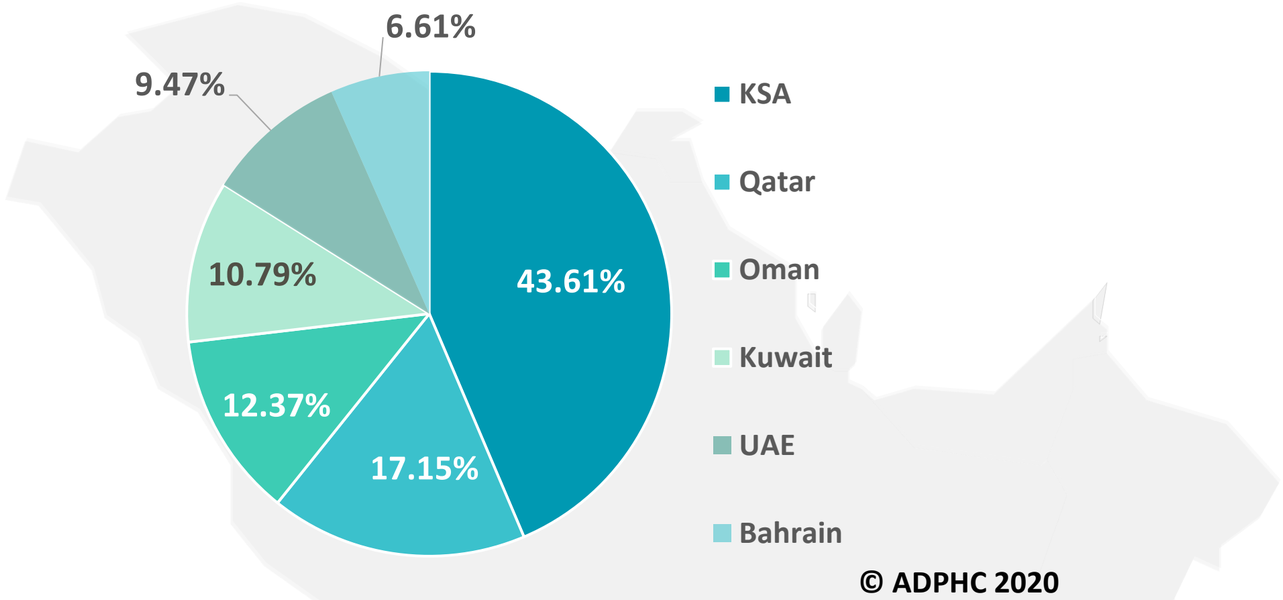
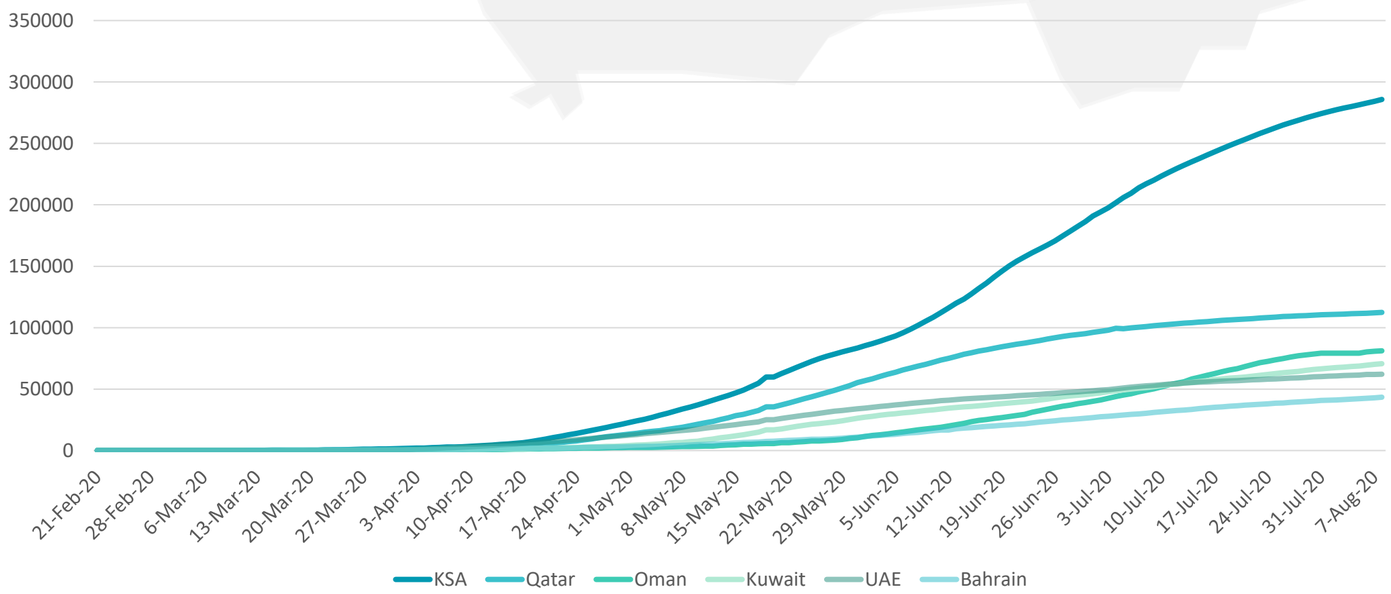
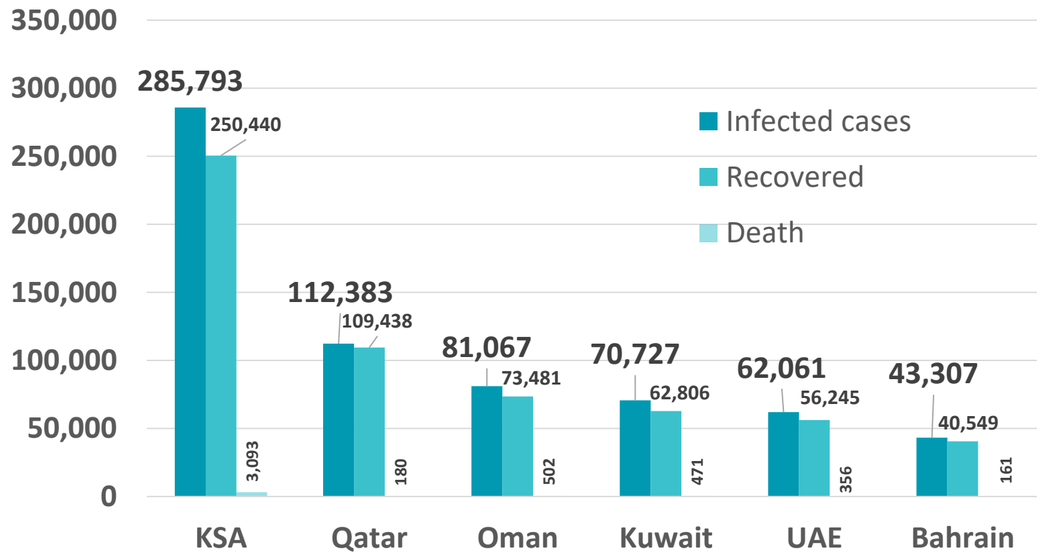
Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

TOTAL NUMBER OF INFECTED CASES

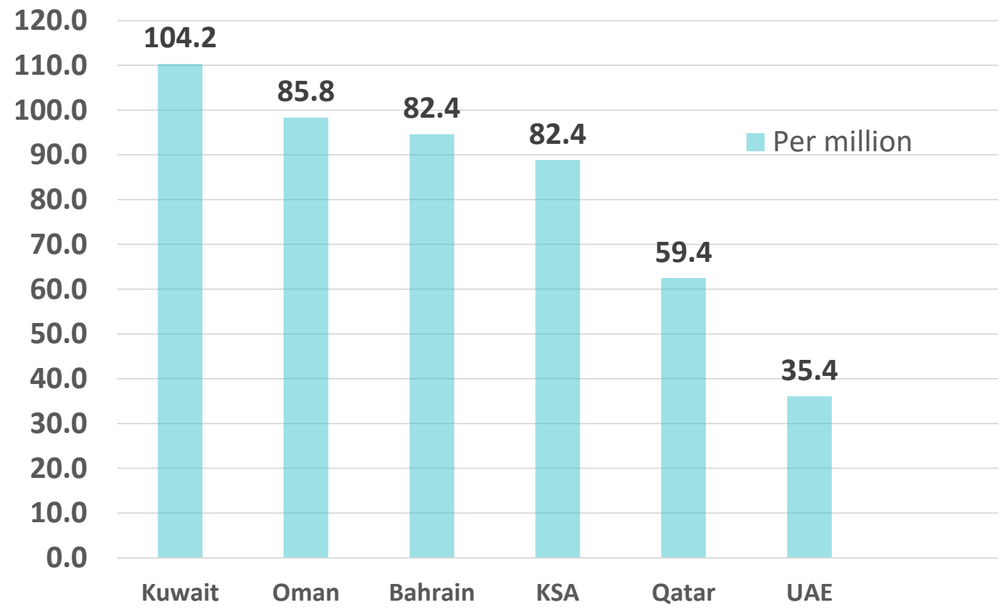




TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATHS PER MILLION



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

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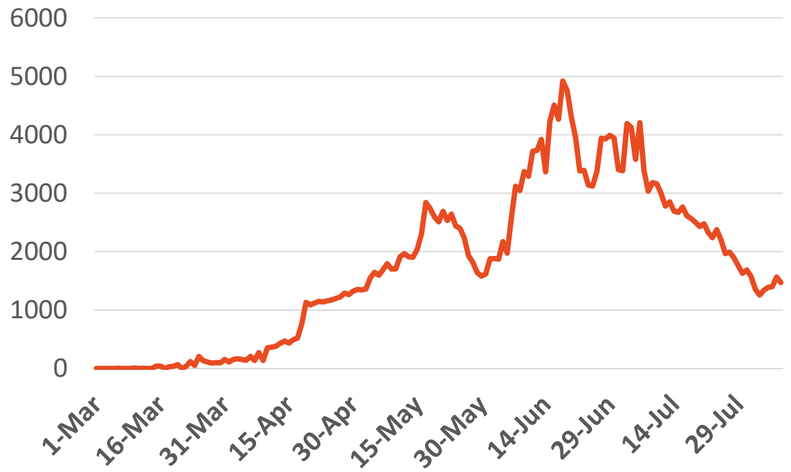
Figure 10: Comparative Analysis of the Distribution of COVID-19 New Cases in GCC Countries

UAE

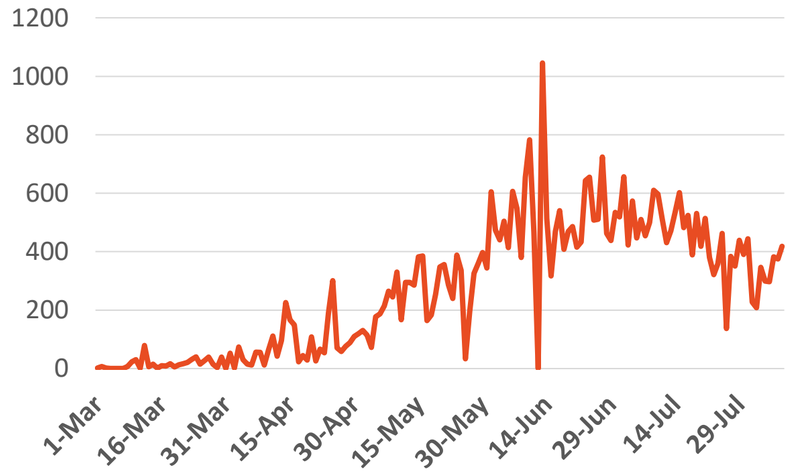
Source : National Emergency Crisis and Disaster Management Authority

KSA



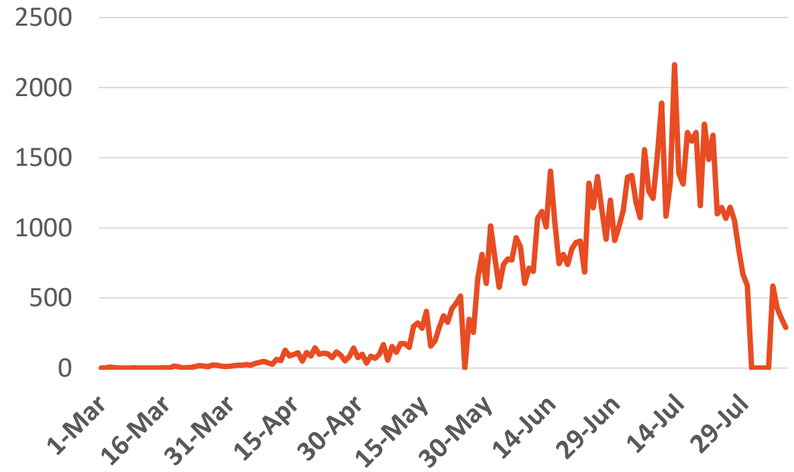
Source : KSA ministry of health

Bahrain



Source :WHO

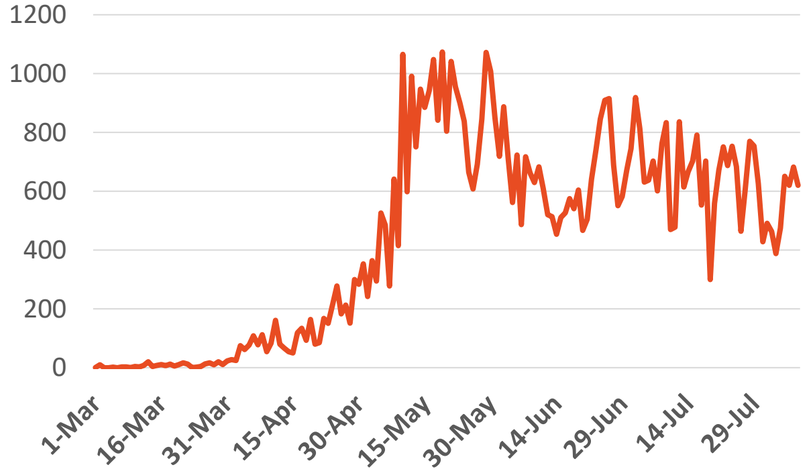
Oman



Source :Oman ministry of health

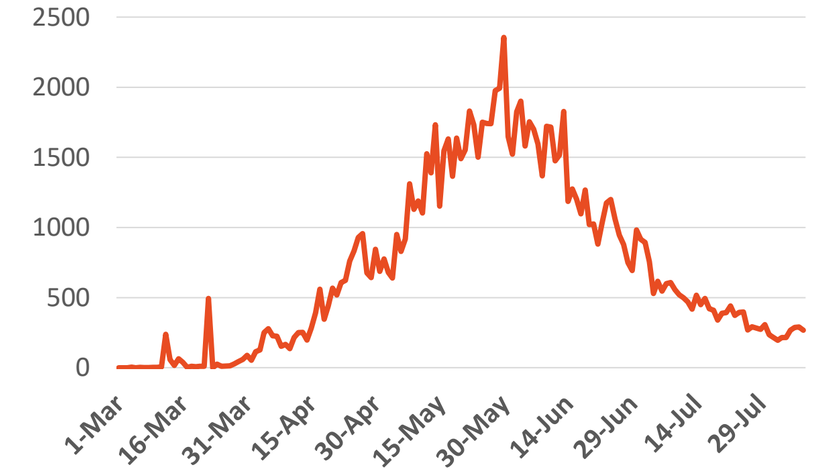
No announced statistic data from 31 July to 4 August

Kuwait



Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

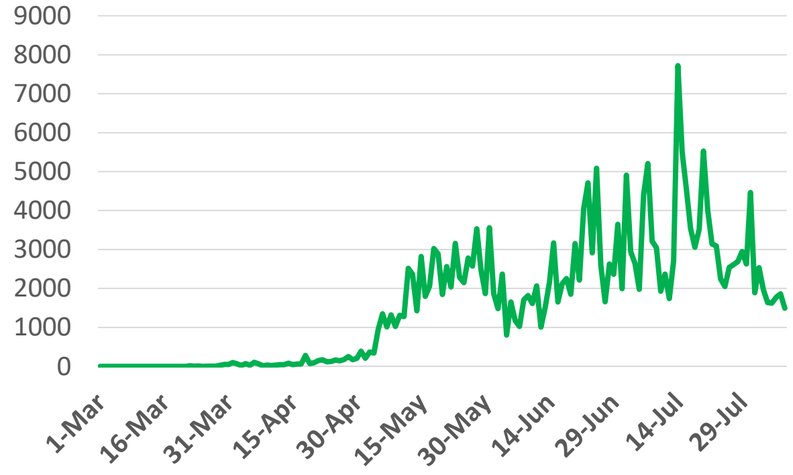
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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

UAE

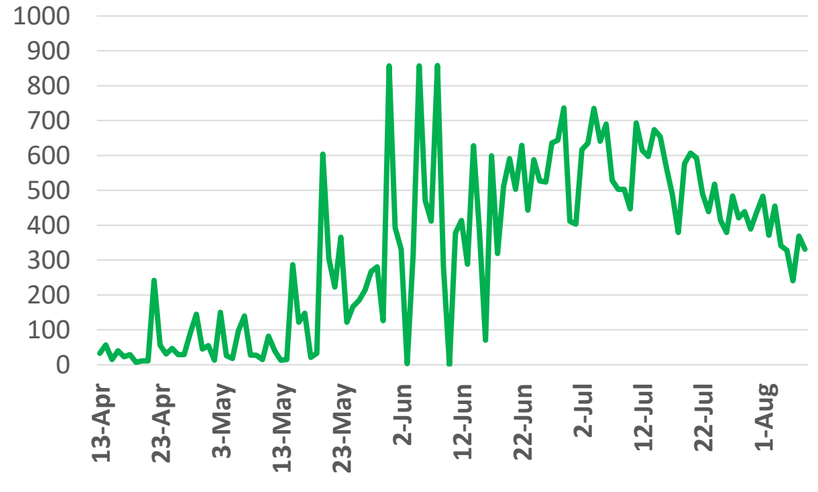
Source : National Emergency Crisis and Disaster Management Authority

KSA



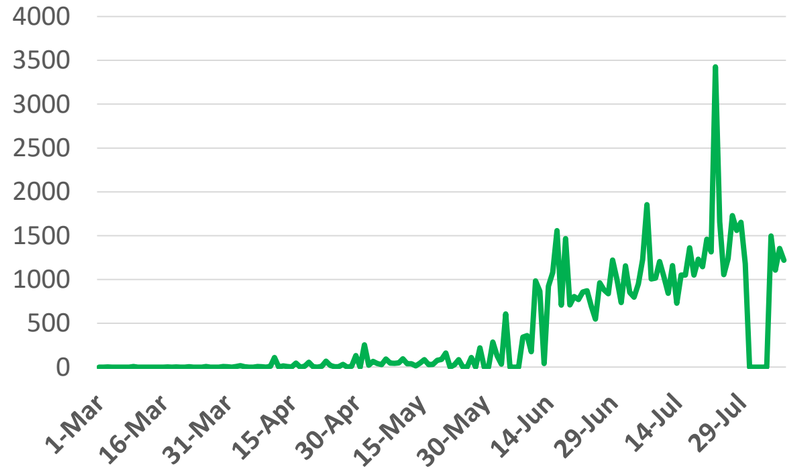
Source : KSA ministry of health

Bahrain



Source : GCCStat

Oman



Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August

Kuwait

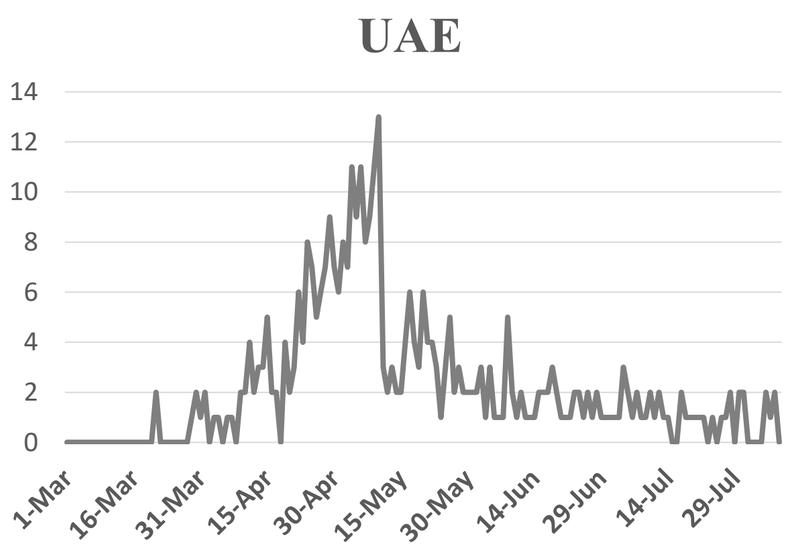
Source : Kuwait ministry of health

Qatar

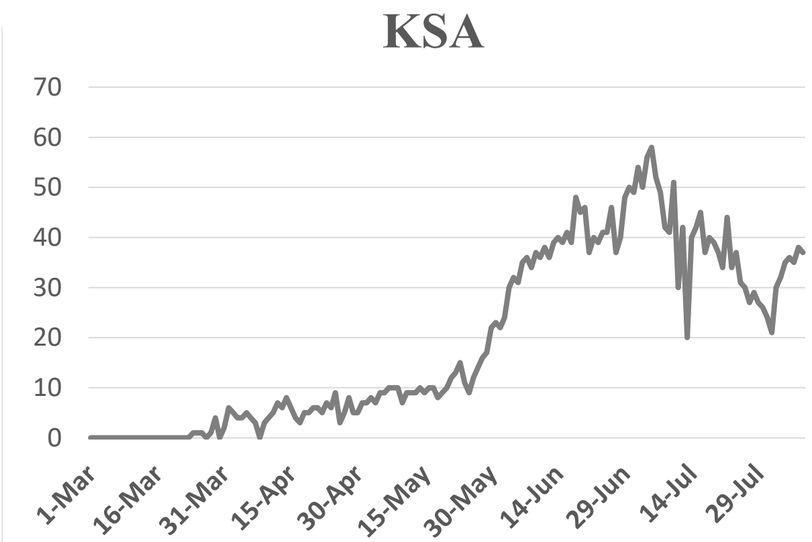
Source : Qatar ministry of health

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

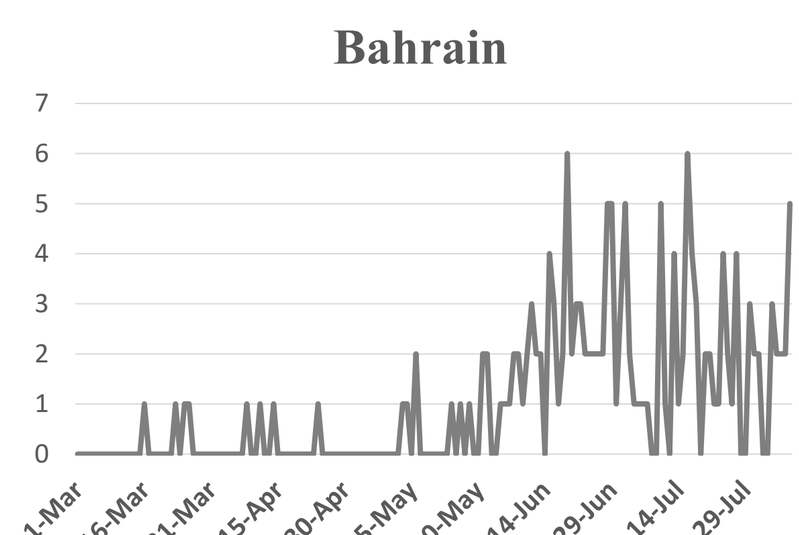
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries



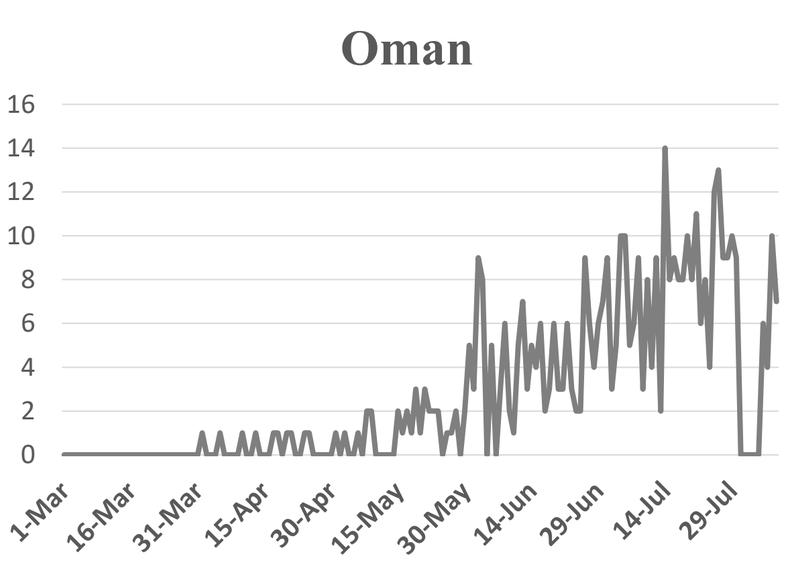
Source : National Emergency Crisis and Disaster Management Authority



Source : KSA ministry of health

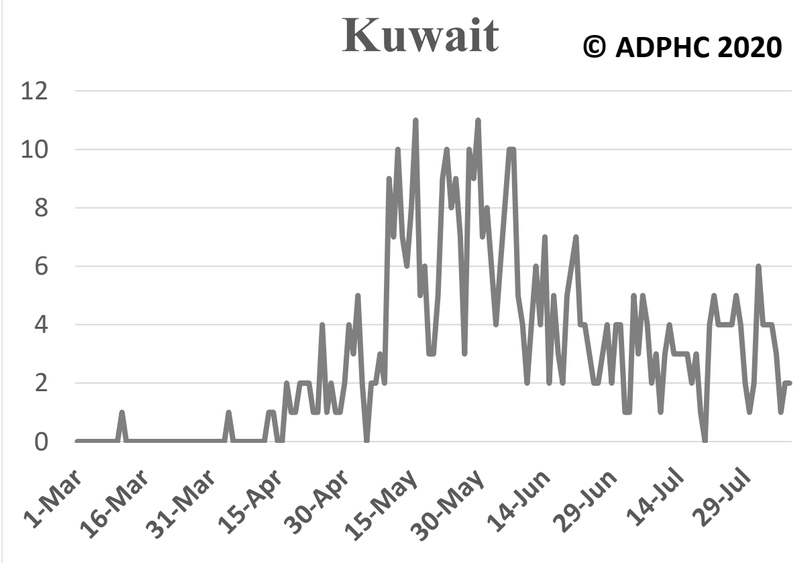


Source :WHO

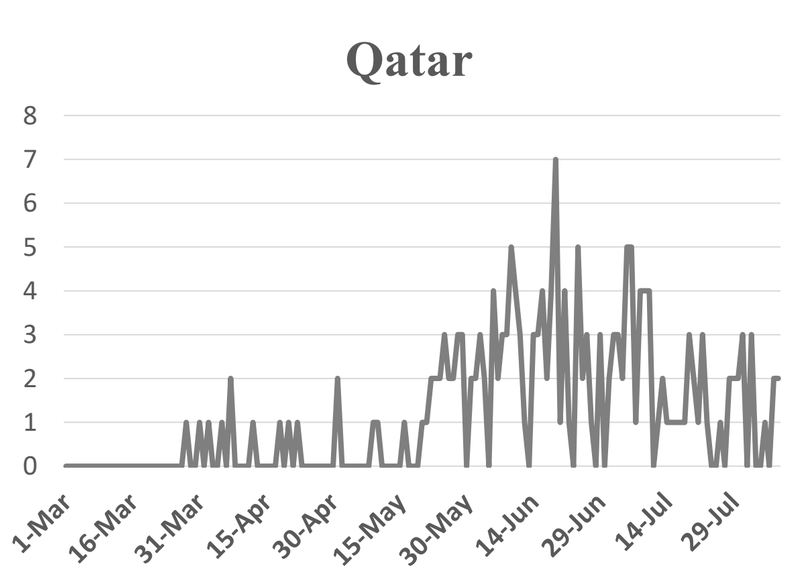


Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August



Source : Kuwait ministry of health



Source : Qatar ministry of health

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

Article 1

Risk of COVID-19 in Health-Care Workers in Denmark: An Observational Cohort Study

Published 03 August 2020 THE LANCET

An observational cohort study, where health-care workers in the Capital Region hospitals in Denmark were screened to estimate the prevalence of antibodies against SARS-Cov-2. Results were compared to the prevalence of anti-SARS-Cov-2 antibodies among blood donors in the Capital Region hospital. The Seroprevalence was higher in health-care workers than in blood donors.

Background

It is hypothesized that health-care workers are highly exposed to SARS-Cov-2 in comparison to the general population. This study aimed to investigate the prevalence of antibodies against SARS-CoV-2 in health-care workers and the proportion of seroconverted health-care workers with previous symptoms of COVID-19.

Methodology

This observational cohort study was conducted between April 15 and April 23, 2020. The screening was offered to health-care workers in the Capital Region of Denmark, including medical, nursing, and other students who were associated with hospitals in the region. The screening included point-of-care tests for IgM and IgG antibodies against SARS-CoV-2. Test results and participant characteristics were recorded. Results were compared with findings in blood donors in the Capital Region in the study period.

Findings

- A total of 29 295 health-care workers were screened, of whom 28 792 (98·28%) provided their test results
- Of those who had the test, 1163 (4·04%) seropositive health-care workers.
- Seroprevalence was higher in health-care workers than in blood donors (142 [3·04%] of 4672; risk ratio [RR] 1·33)
- Seroprevalence was higher in male health-care workers (331 [5·45%] of 6077) than in female health-care workers [3·66%] RR 1·49.
- Frontline health-care workers working in hospitals had a significantly higher seroprevalence (4·55%) than health-care workers in other settings (3·29%; RR 1·38).
- **Loss of taste or smell was the symptom that was most strongly associated with seropositivity (377 [32·39%] of 1164 participants with this symptom were seropositive vs 786 [2·84%] of 27 628 without this symptom; RR 11·38 [10·22–12·68]).**

PUBLIC HEALTH RESPONSE

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Article 2

Published

COVID-19 Interstitial Pneumonia: Monitoring the Clinical Course in Survivors

03 August 2020 THE LANCET

- The approach to decide when it is safe to schedule COVID-19 survivors for elective in-person visits has been published in previous studies. However, no empirical evidence or consensus exists on how patients should be followed-up. Here, the authors propose an approach for consideration, based upon evolving clinical knowledge, clinical experience and rationale.

- The varying extent of pulmonary fibrosis and lung function impairment among survivors of COVID-19, and the unknown course of such abnormalities, highlight the need for pulmonary clinicians to closely monitor disease course in survivors.

- The study call on the pulmonary community to work together to develop a uniform and systematic approach to follow- up of COVID survivors. Such an approach should facilitate research and knowledge generation and, ultimately, improve patient outcomes.

- The authors in this study suggest a follow-up approach to monitor the disease course and health outcomes among COVID-19 survivors.

- Such follow-up will generate knowledge about the natural course of the disease and facilitate enrolment in clinical trials assessing the treatment of abnormalities with immun- modulating drugs and antifibrotic drugs.

PUBLIC HEALTH RESPONSE

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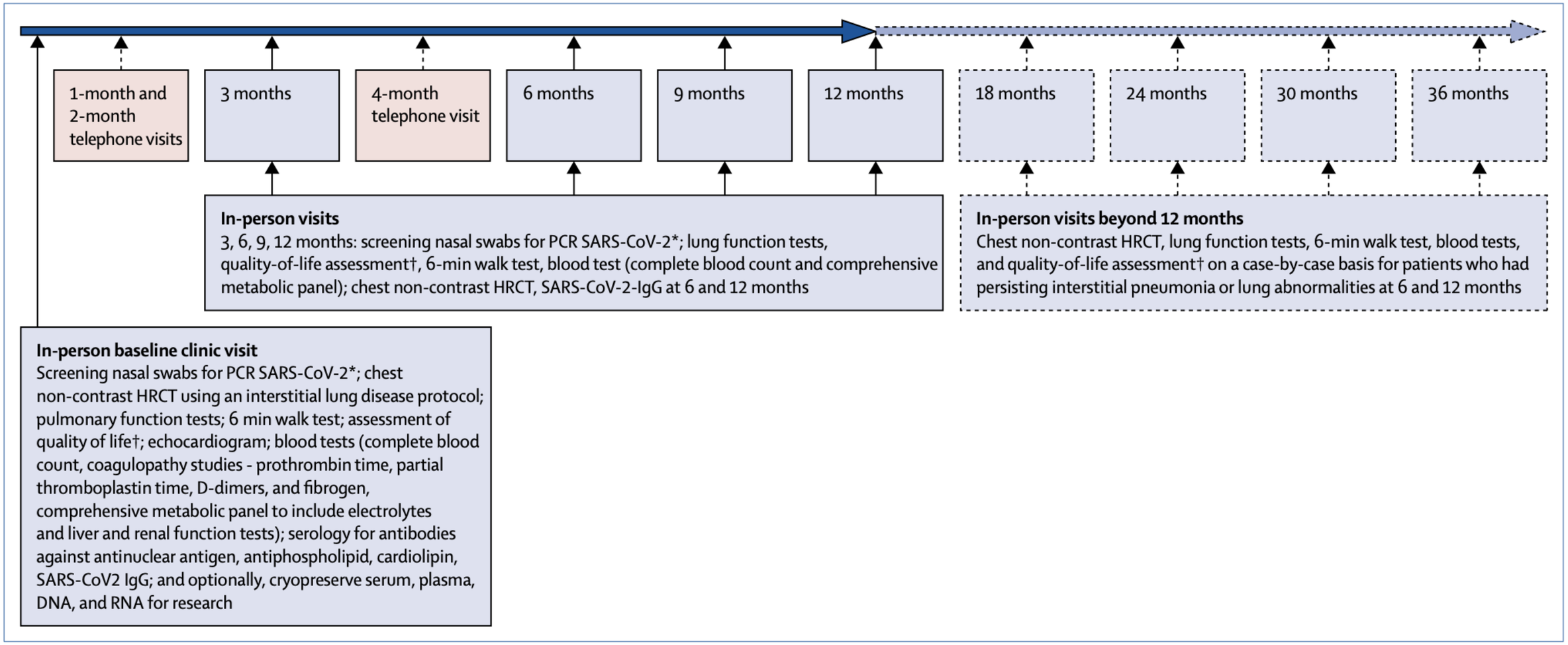
Continued

Suggested Survival Follow up



Article 3

Mortality in COVID-19 Is Not Merely a Question of Resource Availability

Published 28 July 2020 THE LANCET

- German authorities introduced physical distancing and other lockdown measures before the exponential surge of intensive care unit (ICU) admissions. As a result ICU beds have not been overwhelmed, with at least 40% of all registered ICU beds available.

- The outcomes of COVID-19 patients was studied in a health-care system with sufficient resources. The study evaluated a cohort comprising 10,021 patients diagnosed with COVID-19 who were admitted to 920 hospitals across Germany between Feb 26, 2020, and April 19, 2020.

- Despite the availability of ICU for all patients, Germany had high mortality of 22% in hospitalized patients. The median age of patients in the studied cohort of 72 years was higher than in other published cohorts. For example, median age of 63 years in the New York cohort, and 47 years in an early Chinese cohort. The mortality in German was similar to that reported in New York (21%) but was higher than that in the younger patients in China (1·4%). Germany had high mortality of 72% in patients aged 80 years and older who required mechanical ventilation. Even higher mortality of 97% was reported for patients older than 65 years and requiring mechanical ventilation in the New York cohort. The median length of hospital stay differed between these two cohorts 10 days in the German cohort and 4 days in the New York cohort, which might reflect the different strains on the two health-care systems. The findings support the strong association of poor outcomes with demographic characteristics (older age and male sex) and comorbidities.

- The authors conclude that although ventilators do provide oxygen to the lung, the problem might not be lack of oxygen but lack of blood perfusion to these lung capillaries (blood supply), furthermore optimal timing for intubation is still debateable. The authors recommend that treatment of severe cases should focus on anticoagulant therapy in the future.