

SCIENTIFIC RESEARCH MONITORING ON COVID-19

24 JULY 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>

SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 174)



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.

Click on icon to view content



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).

Clinical Features

Thrombosis in Hospitalized Patients with COVID-19 in a New York City Health System

Vaccine

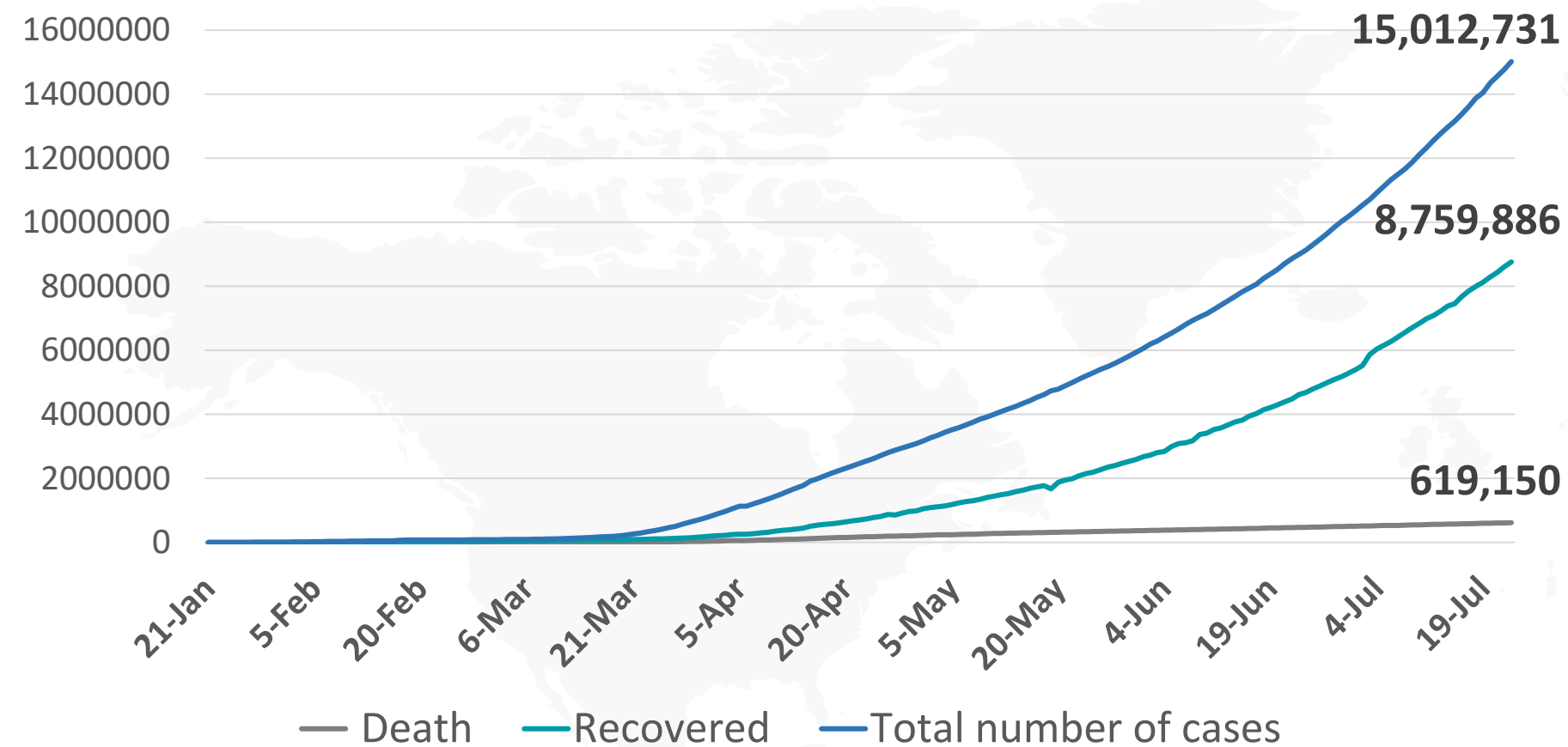
**Safety and Immunogenicity of the ChAdOx1 nCoV-19 Vaccine Against SARS-CoV-2:
A Preliminary Report of a Phase 1/2, Single-Blind, Randomised Controlled Trial**



- The Africa Centres for Disease Control and Prevention (Africa CDC) have launched an expert advisory committee to provide independent scientific advice and support to countries on the safety, efficacy and quality of traditional medicine therapies.
- The Federated States of Micronesia (FSM) is one of the few countries where there have not been any COVID-19 cases reported. Since early January, the WHO Regional Office for the Western Pacific has been working with the government and partners to support FSM to prepare for COVID-19 with a special focus on empowering local communities.
- WHO, UNDP, UNAIDS and the O’Neill Institute for National and Global Health Law at Georgetown University, have jointly launched an initiative called COVID-19 Law Lab. [The COVID-19 Law Lab](#) gathers and shares legal documents related to COVID-19 from over 190 countries across the world to help countries establish and implement strong legal frameworks to manage the pandemic.
- Information on the Working Group on SARS-COV-2 Genetic Sequence Evolution:
 - Monitoring mutations in the virus is critical as it may affect the transmissibility, severity and/or the effectiveness of countermeasures, such as future vaccines or therapeutics. In addition, changes need to be monitored for their impact on diagnostic tests.
 - One such mutation that is currently of interest is called the “D614G” mutation, which was first observed in February 2020 it has been suggested that the “D614G” mutation might make the virus more transmissible and research is currently ongoing to assess this.
 - WHO has established a working group on SARS-CoV-2 evolution to advise and support WHO in the timely detection and evaluation of potentially relevant mutations in SARS-CoV-2.
 - The first meeting of the WHO Working group on SARSCoV-2 genetic sequence evolution was held in June 2020 and the working group continues to meet via teleconference.

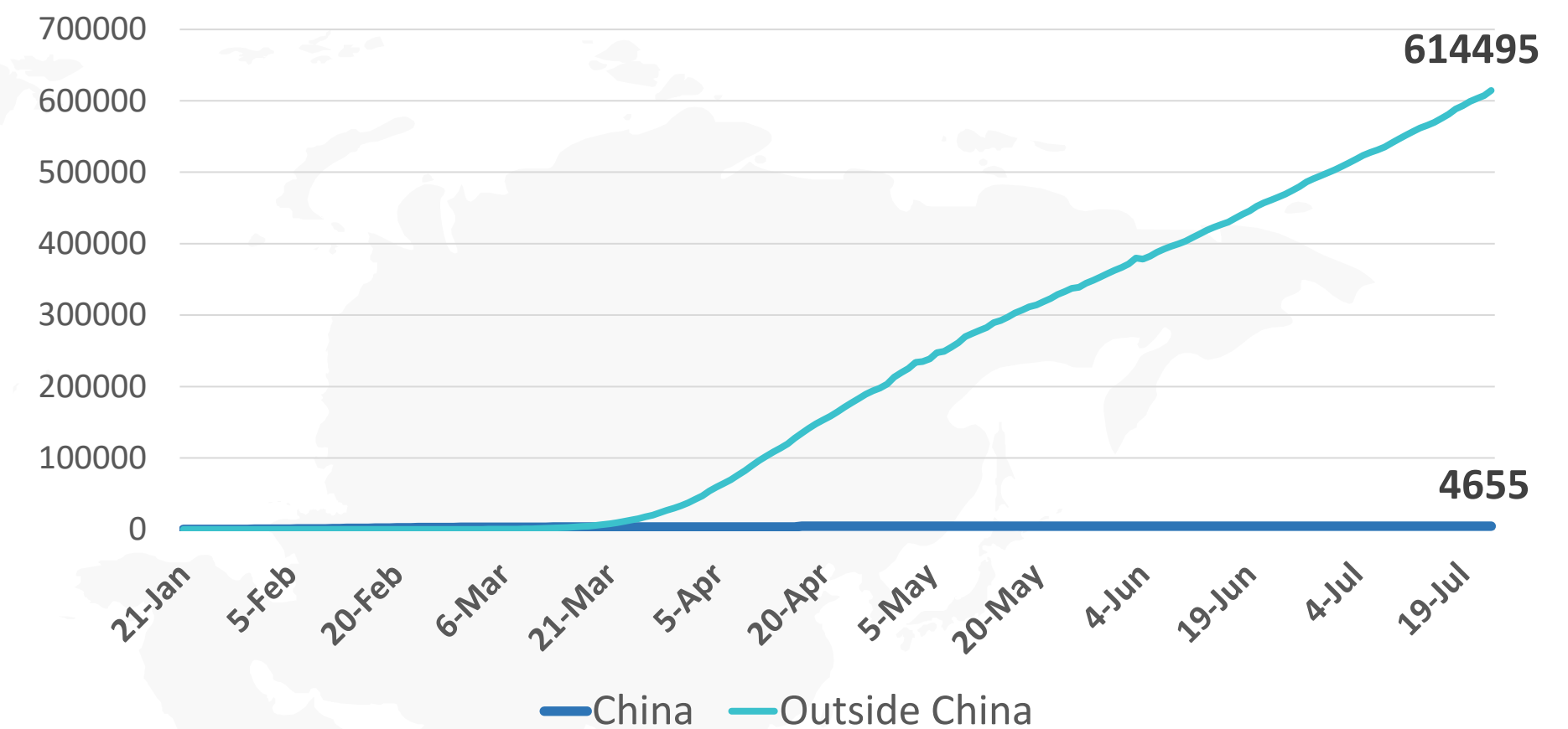


Figure 1: Total number of infected, recovered, and death cases



© ADPHC 2020

Figure 3: Total number of death due to COVID-19 (china and the result of the world)



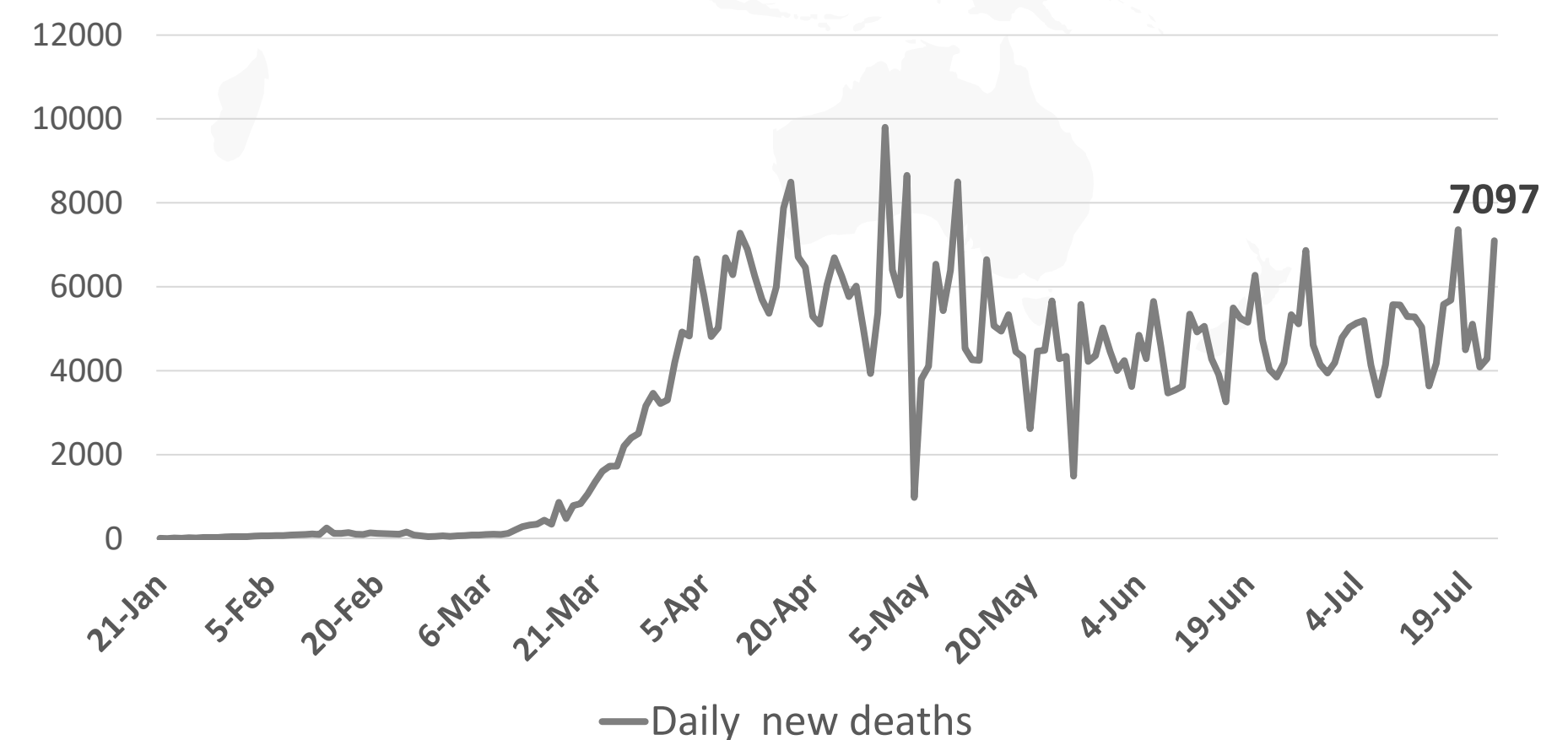
China Outside China

Figure 2: Daily new infected COVID-19 cases (china and the rest of the world)



China Outside china

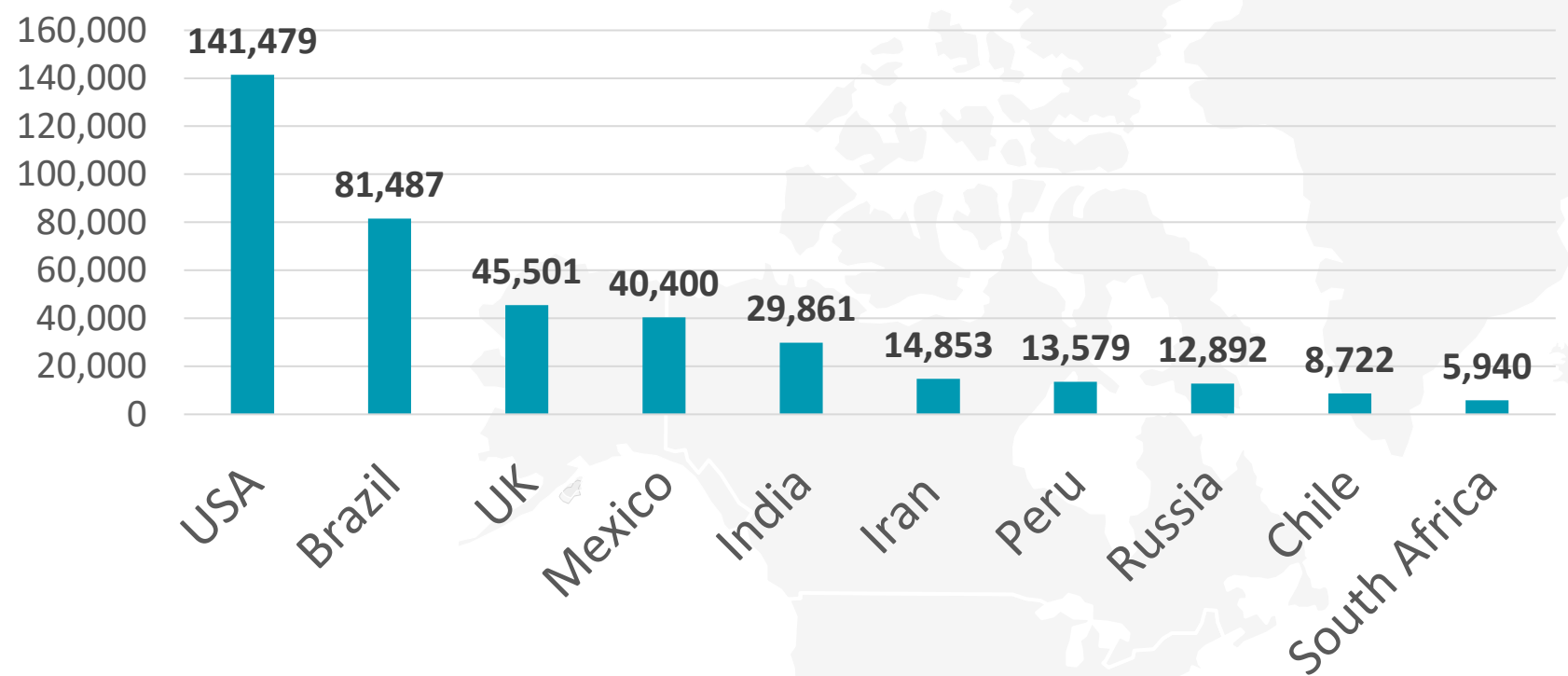
Figure 4: Global daily new deaths due to COVID-19 (china and rest world)



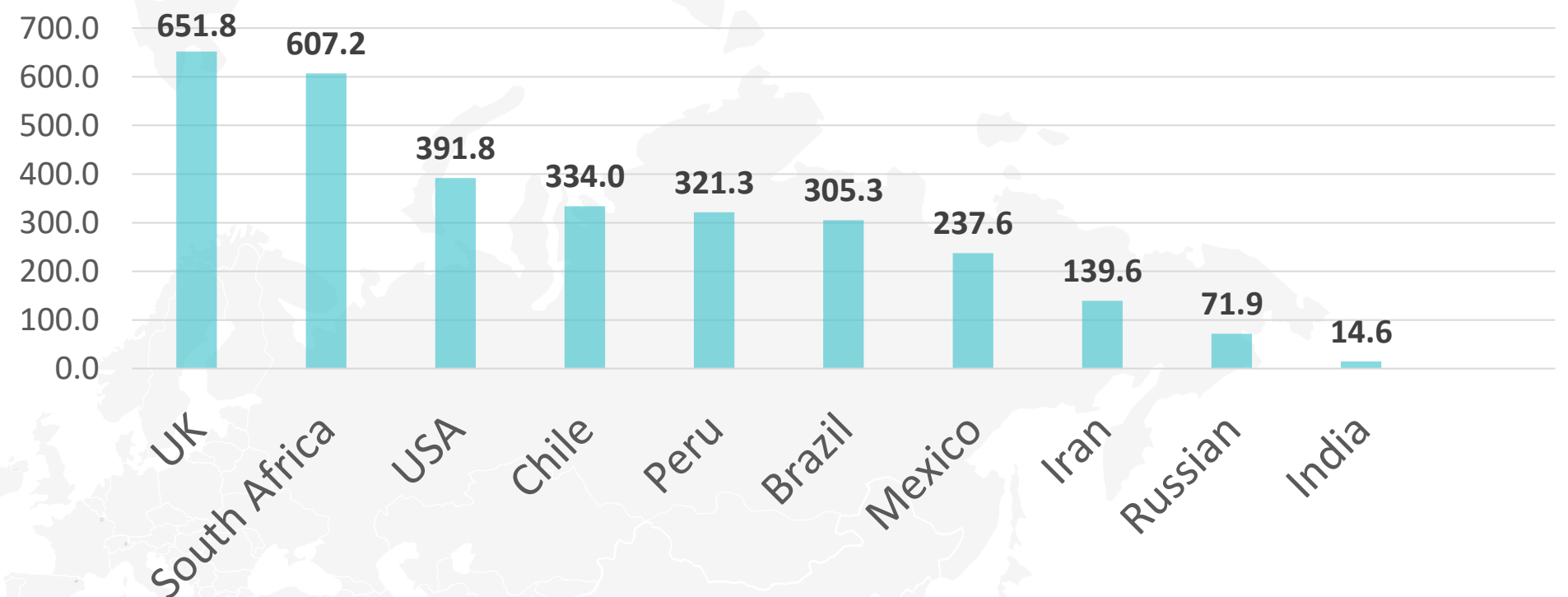
Daily new deaths

Figure 3: Top 10 countries in the total number of cases due to COVID-19

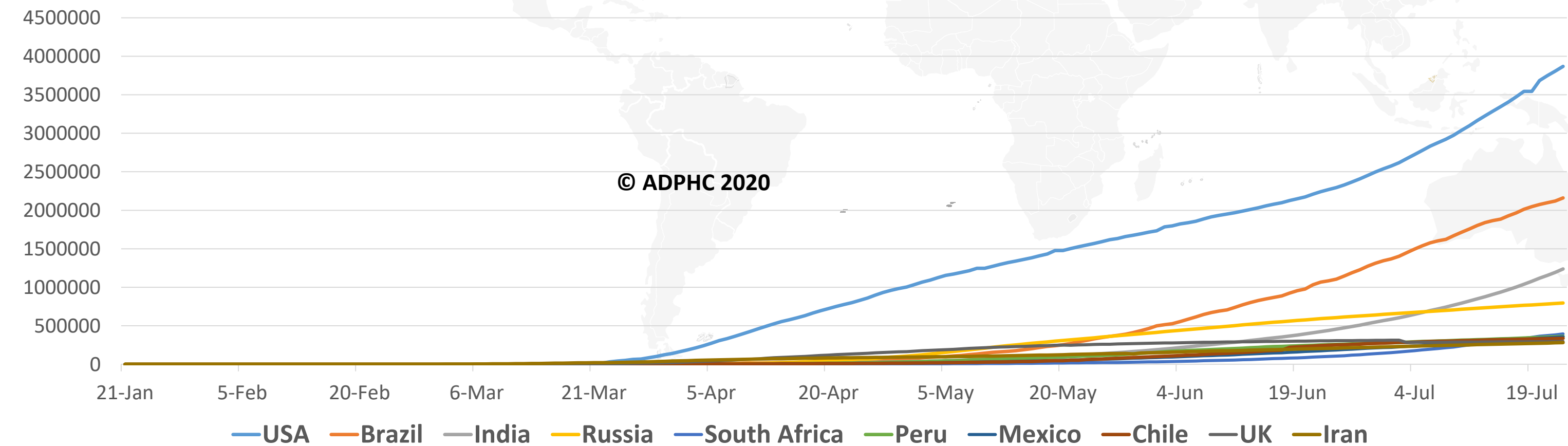
TOTAL DEATHS



DEATHS PER MILLION



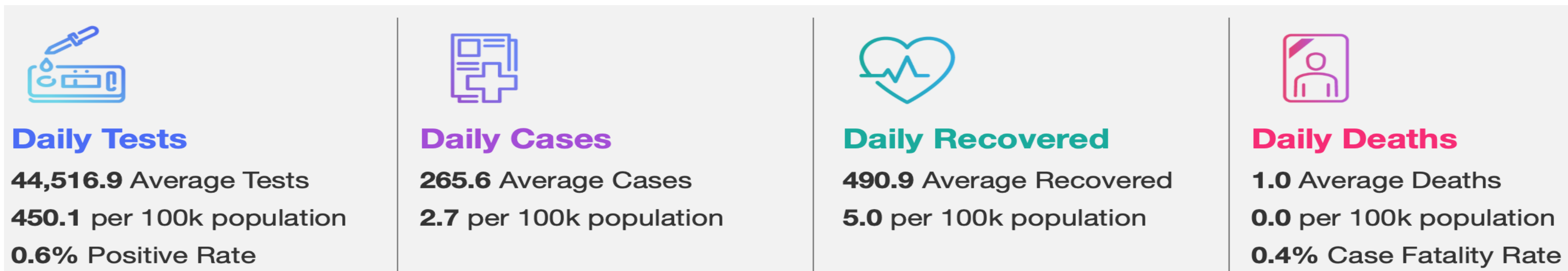
TOTAL INFECTED CASES



USA	3,868,453
Brazil	2,159,654
India	1,238,635
Russi	795,038
South Africa	394,948
Peru	362,087
Mexico	356,255
Chile	336,402
UK	296,381
Iran	281,413



Figure 5: COVID19 STATUS IN THE UAE (Federal Competitiveness and Statistics Authority dashboard)



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

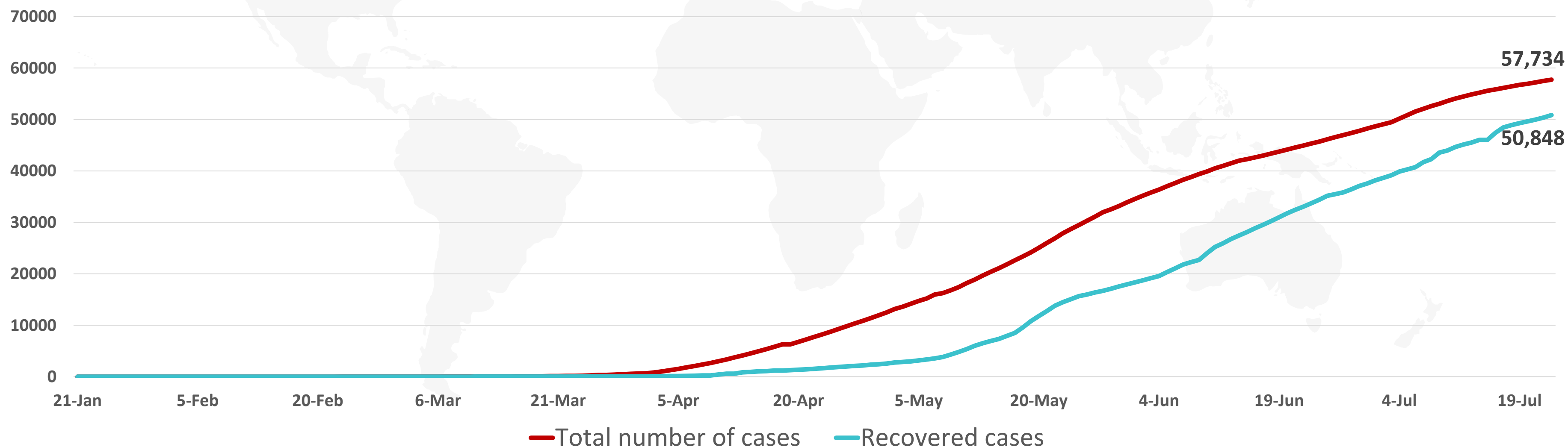
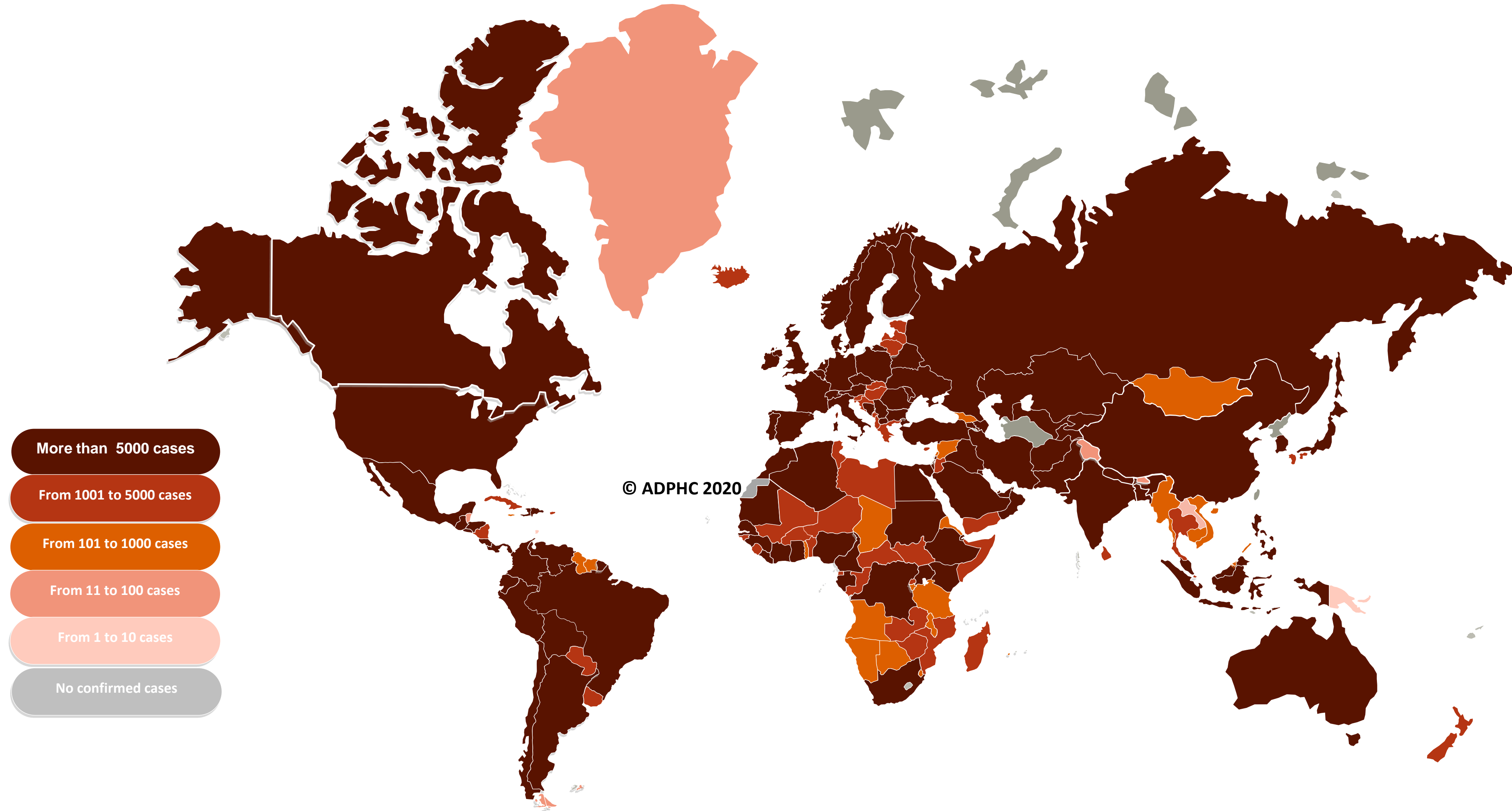


Figure 7A : Global distribution of COVID-19 cases



More than 5000 cases

From 1001 to 5000 cases

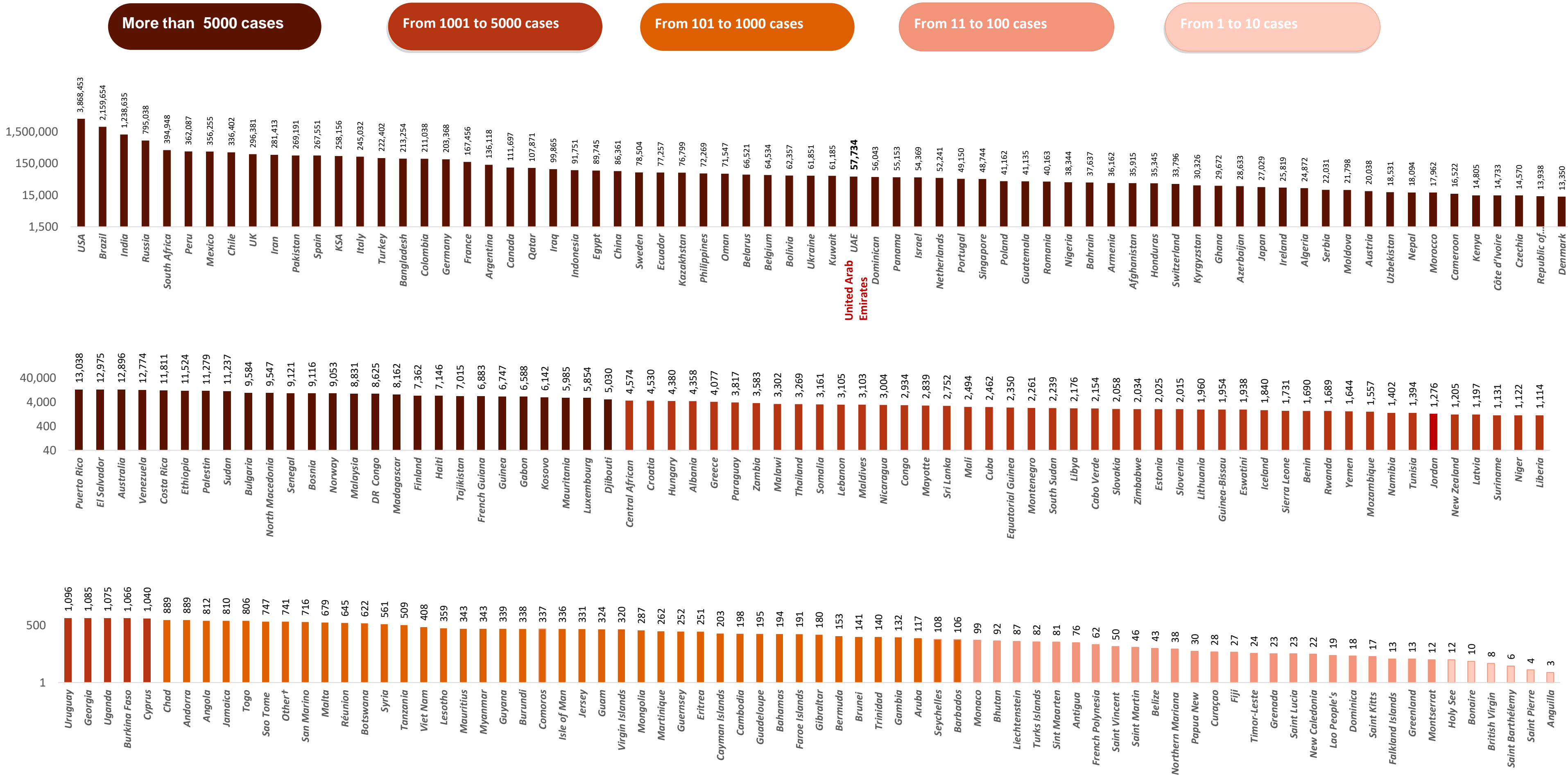
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

Figure 7B: Bar chart illustrate the global distribution of COVID19 cases



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

Figure 8: illustrate the Global distribution of COVID19 cases per region

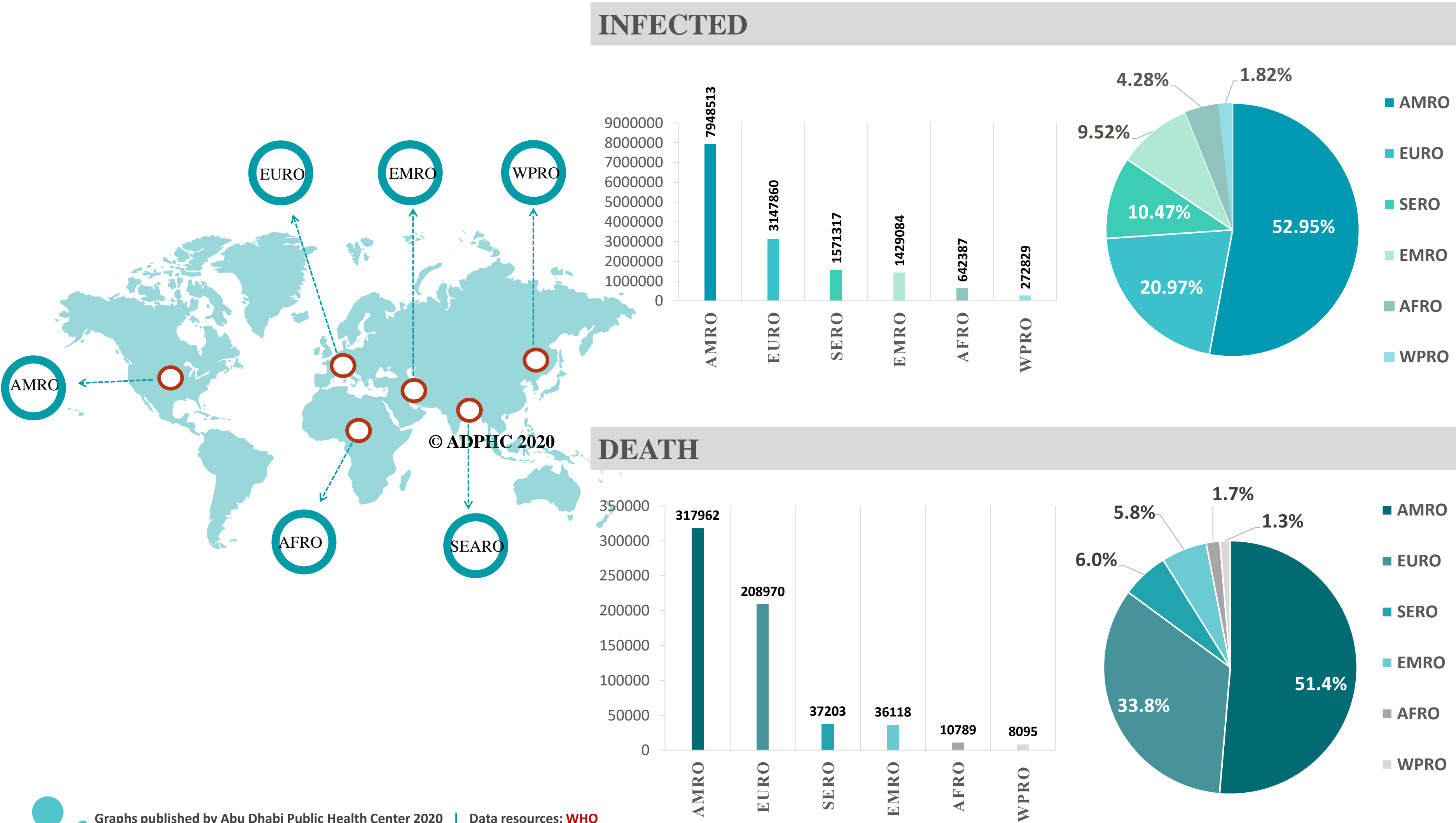
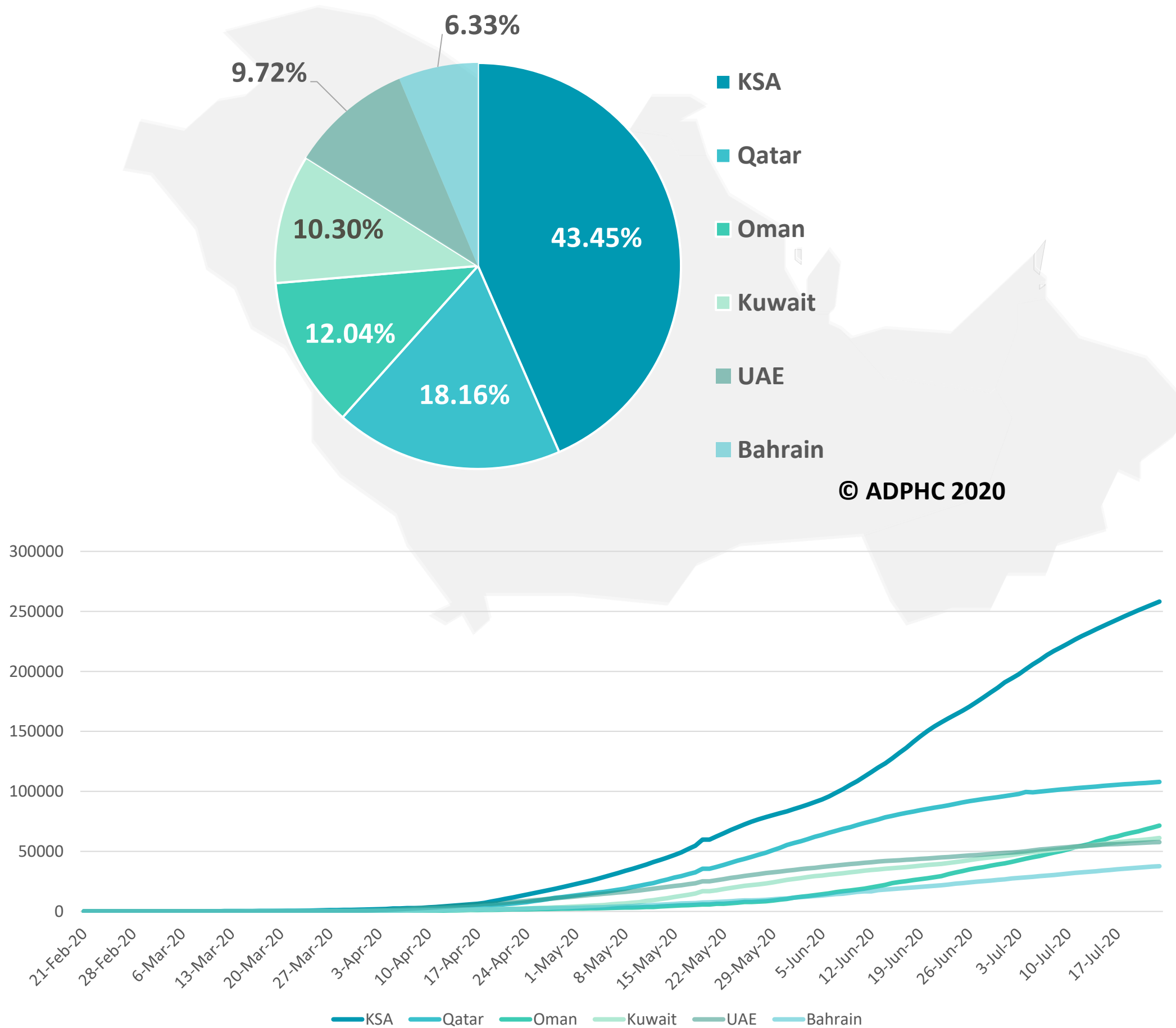
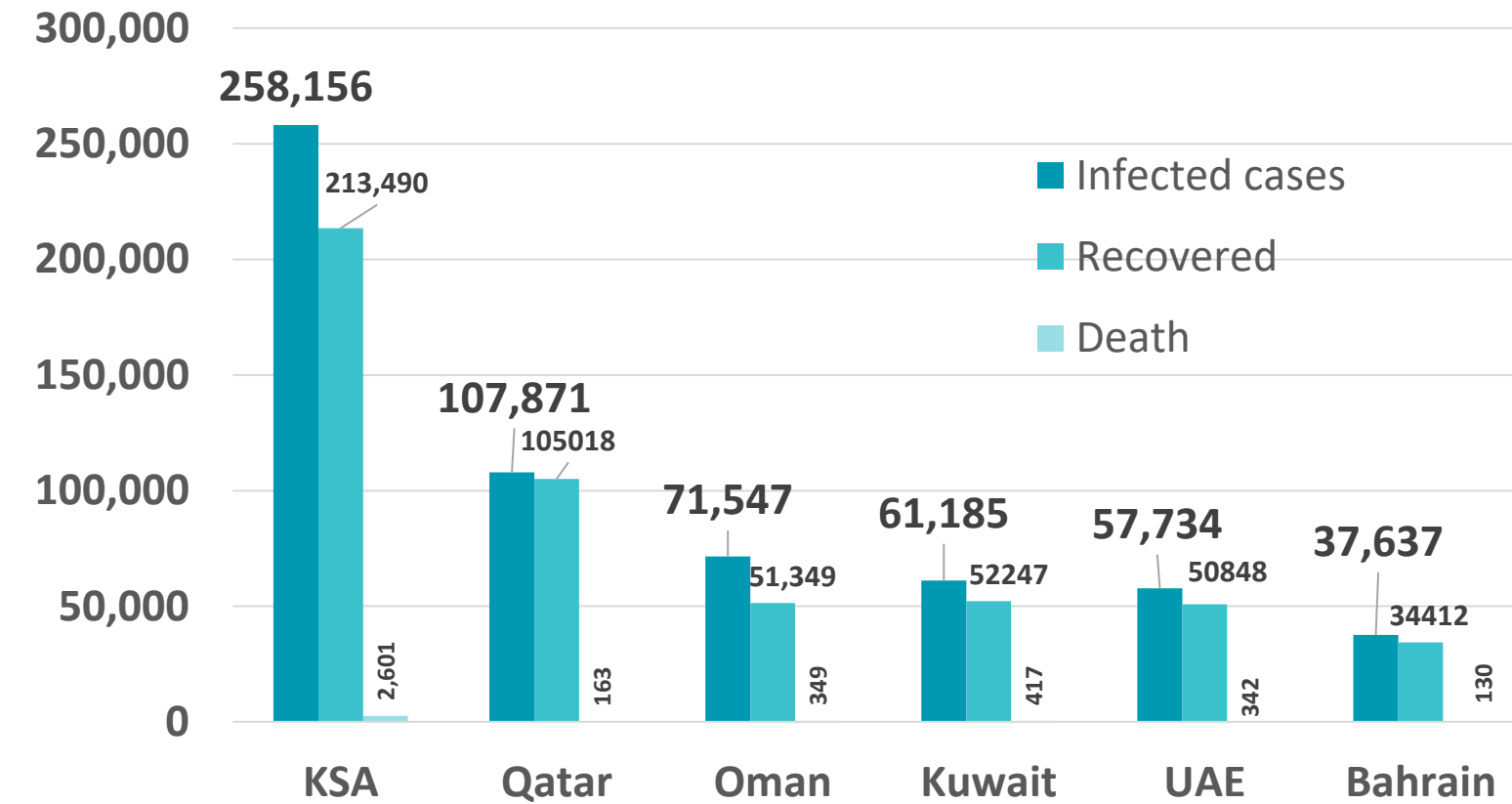


Figure 9: Comparative analysis of the distribution of COVID19 cases in GCC countries

TOTAL NUMBER OF INFECTED CASES



TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATH PER MILLION

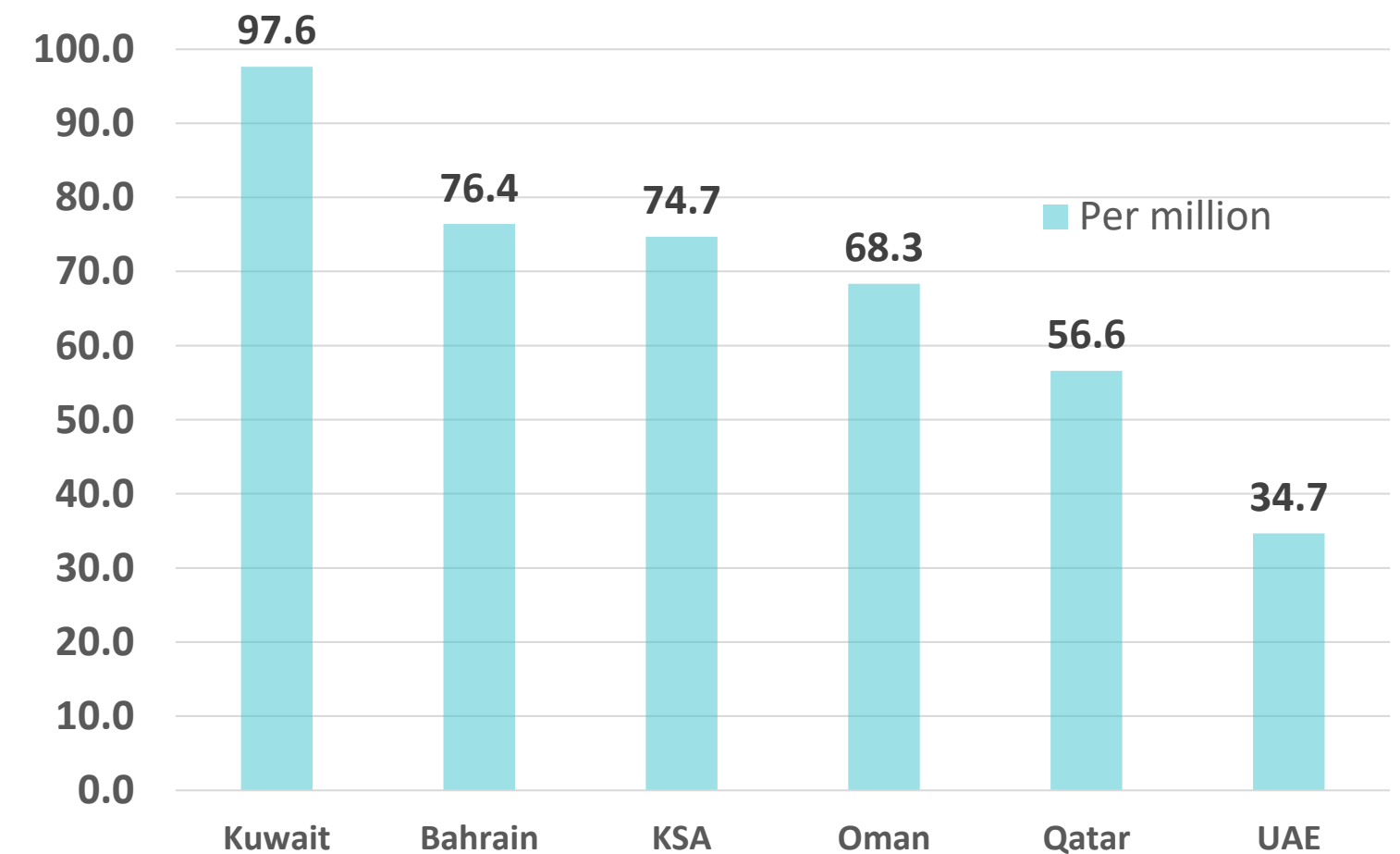


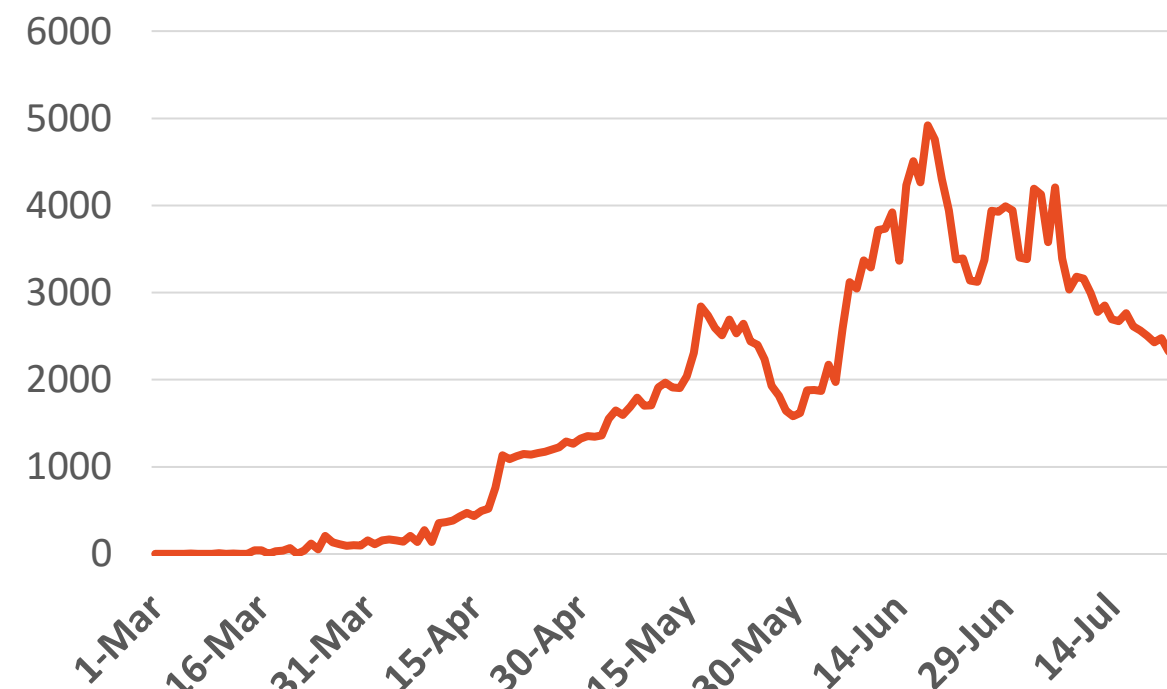
Figure 10: Comparative analysis of the distribution of COVID19 new cases in GCC countries

UAE



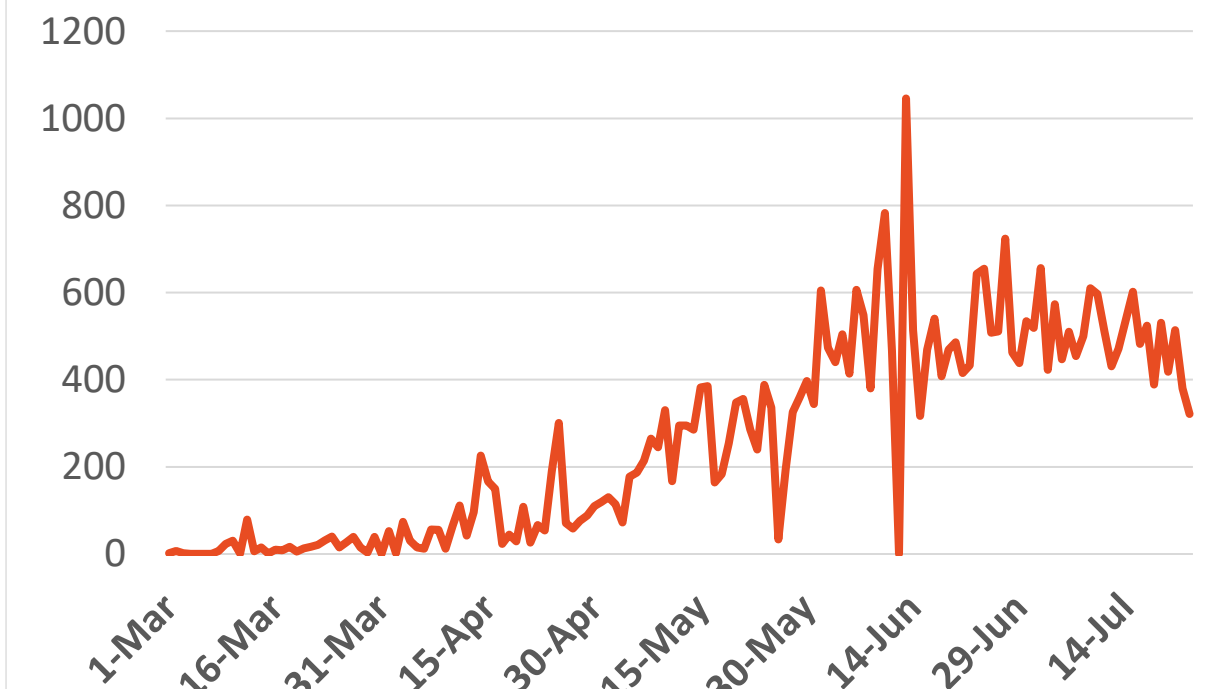
Source : National Emergency Crisis and Disaster Management Authority

KSA



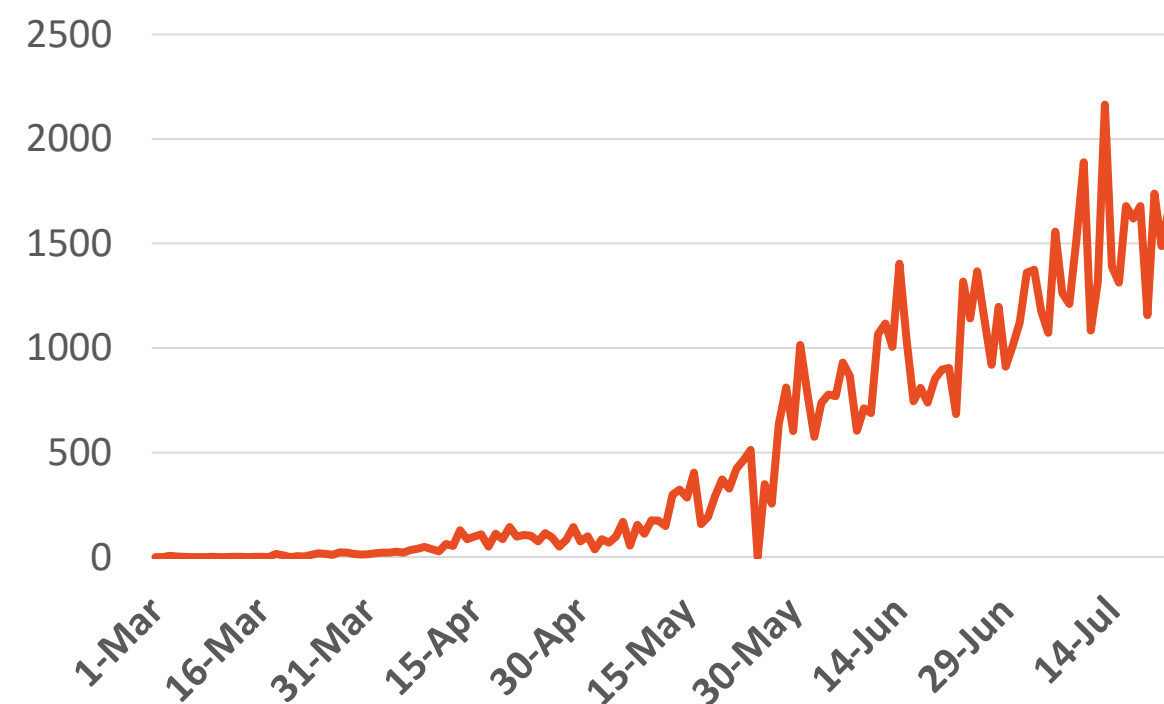
Source : KSA ministry of health

Bahrain



Source :WHO

Oman



Source :Oman ministry of health

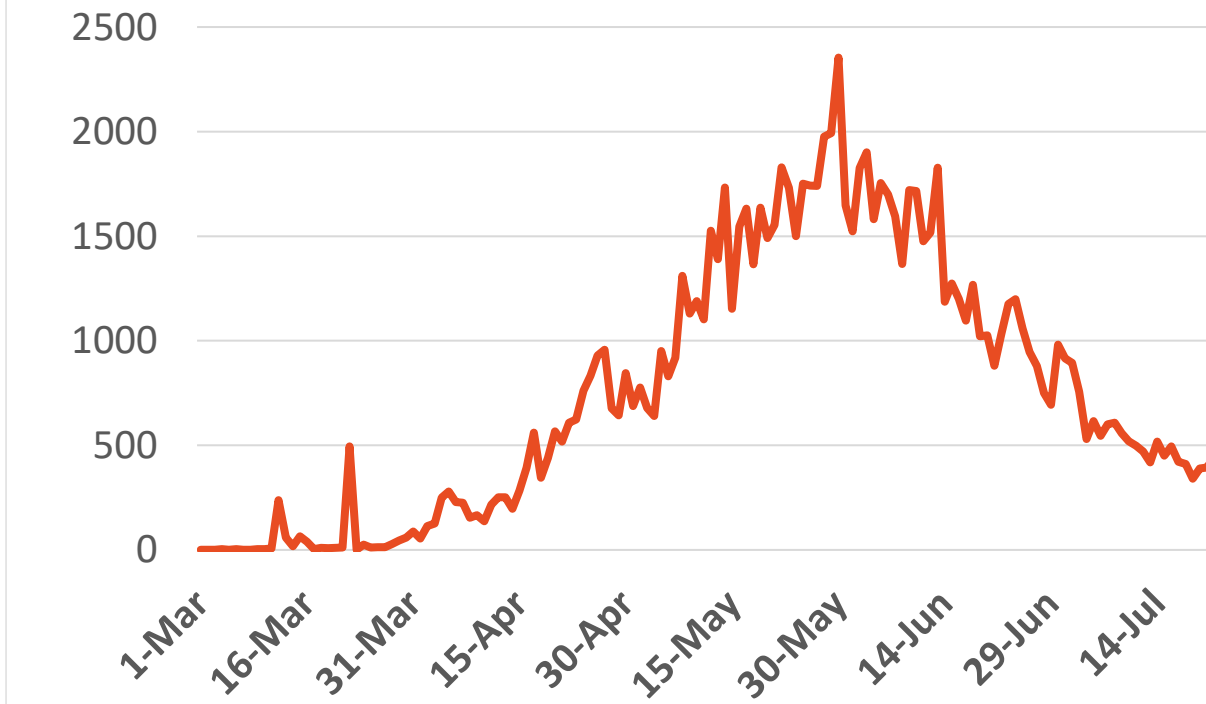
Kuwait

© ADPHC 2020



Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

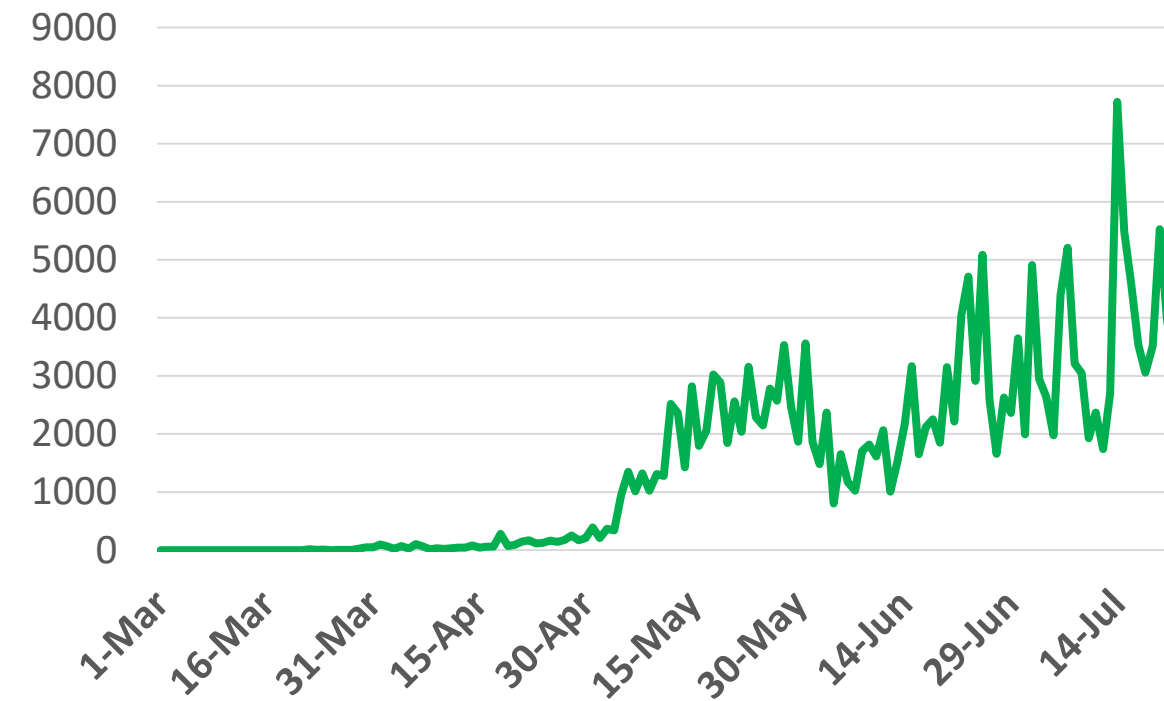
Figure 11: Comparative analysis of the distribution of COVID19 newly recovered cases in GCC Countries

UAE



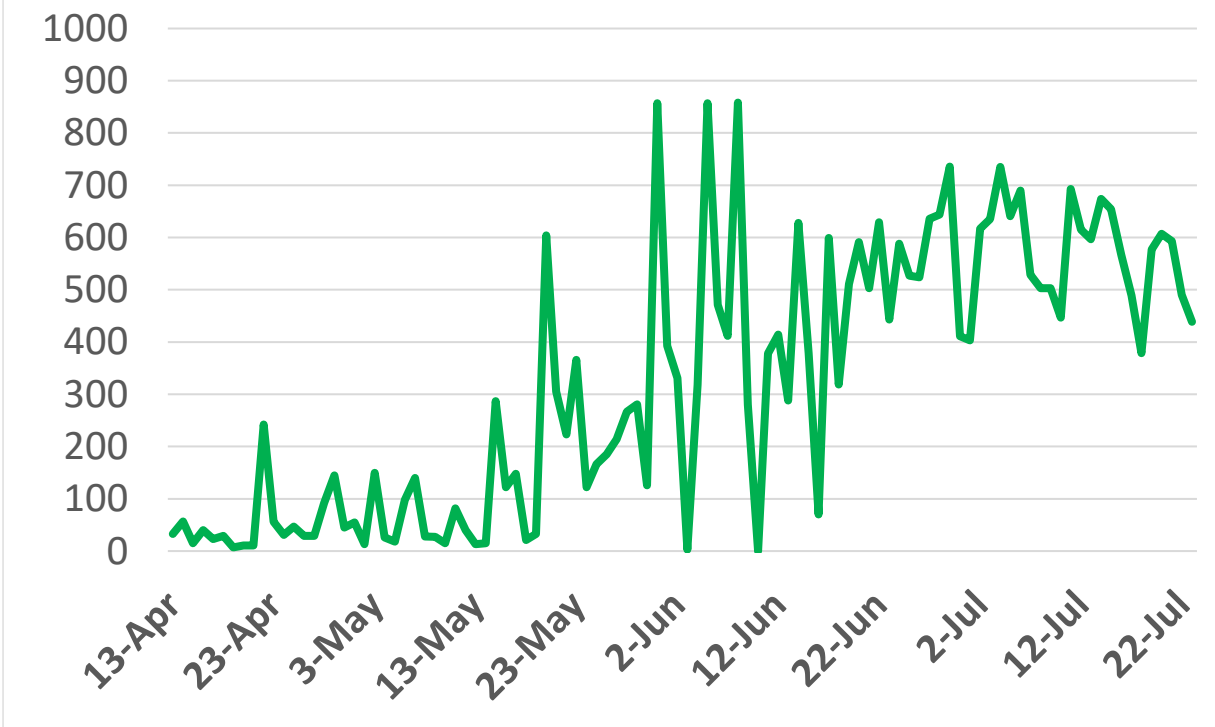
Source : National Emergency Crisis and Disaster Management Authority

KSA



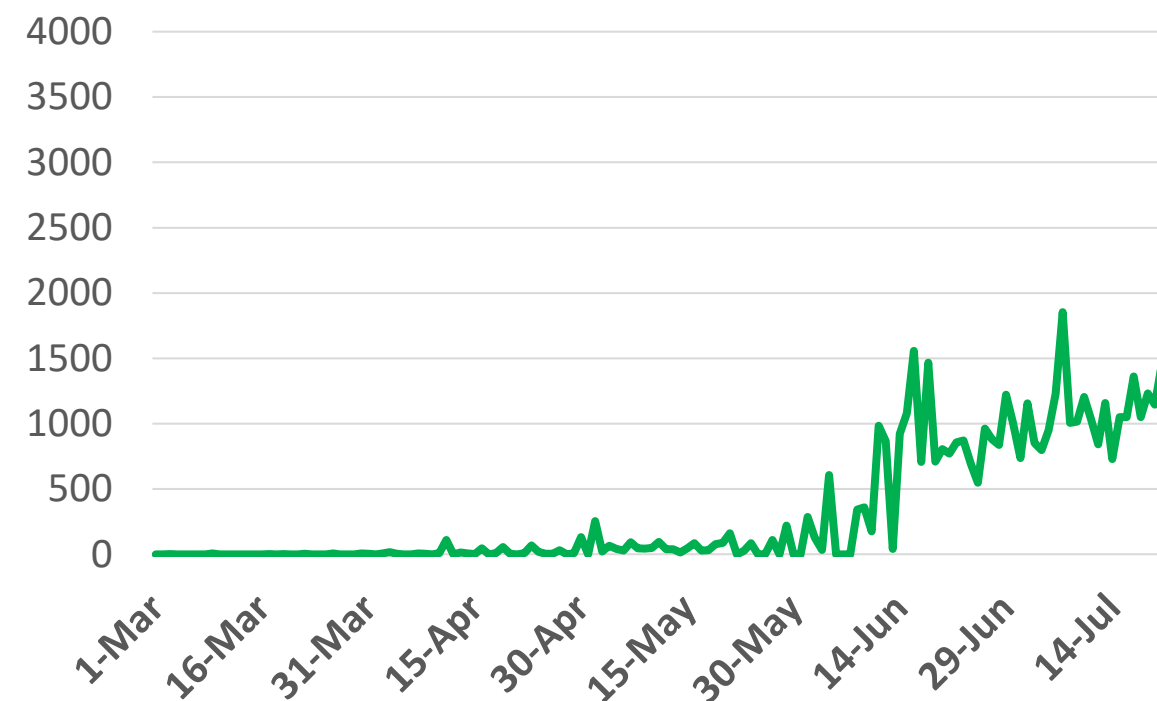
Source : KSA ministry of health

Bahrain



Source : GCCStat

Oman



Source : Oman ministry of health

Kuwait

© ADPHC 2020



Source : Kuwait ministry of health

Qatar

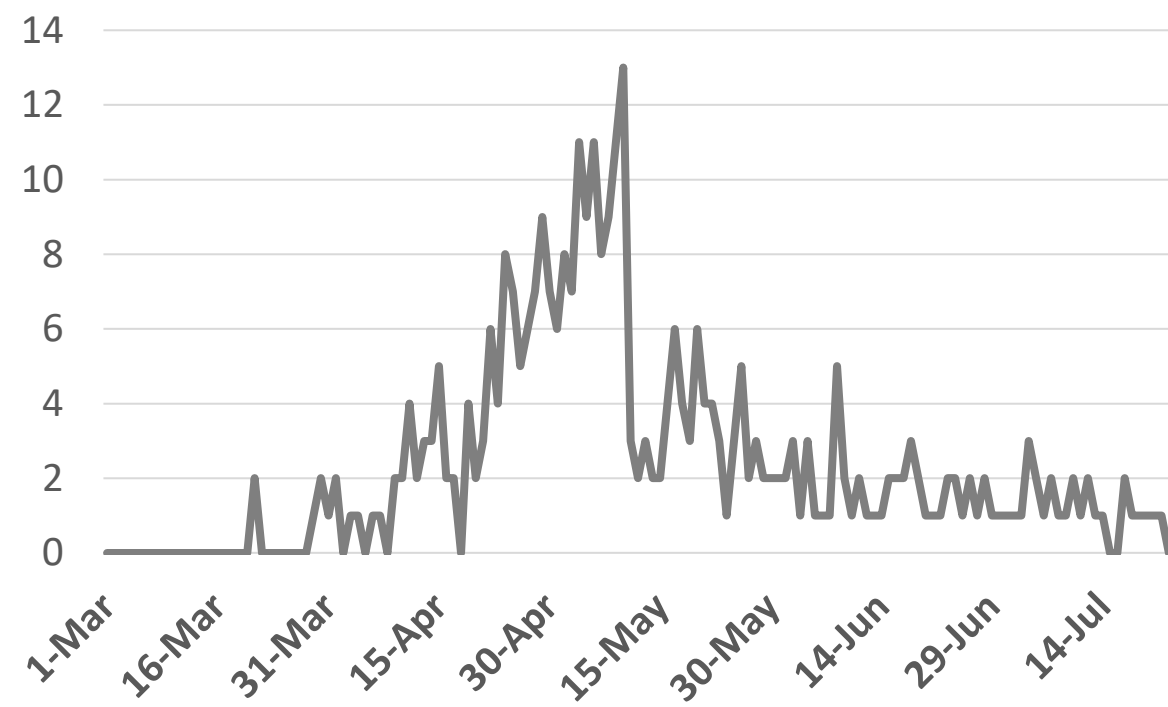


Source : Qatar ministry of health



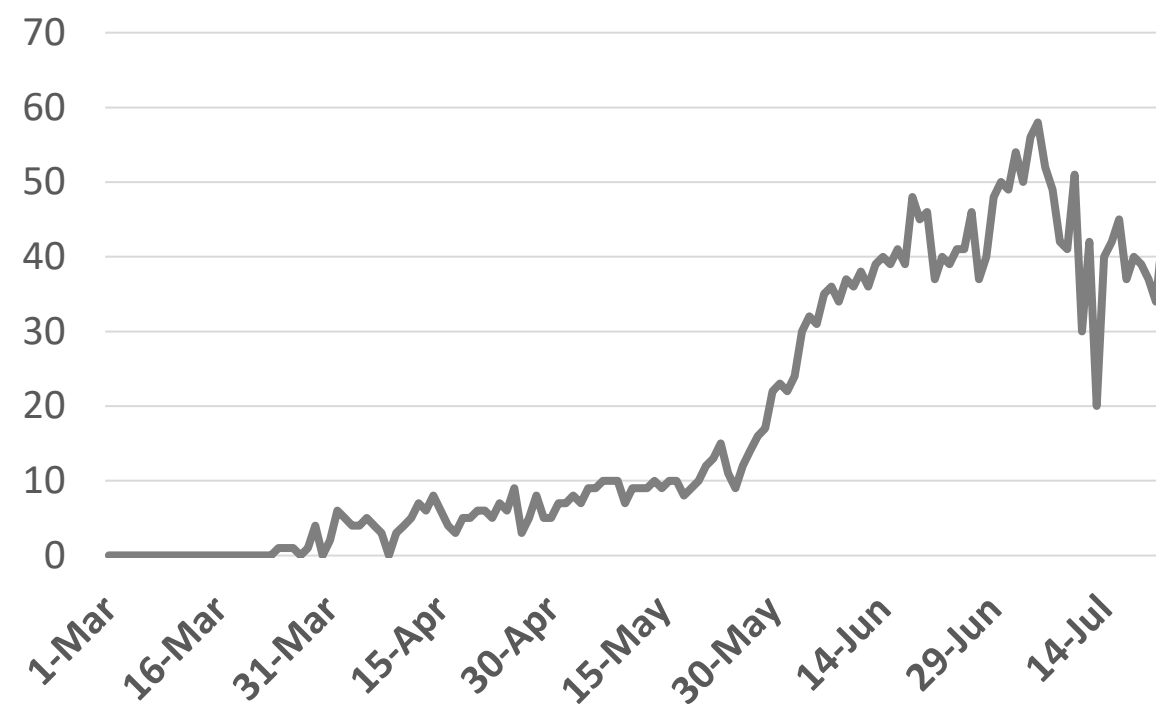
Figure 12: Comparative analysis of the distribution of COVID19 newly death cases in GCC countries

UAE



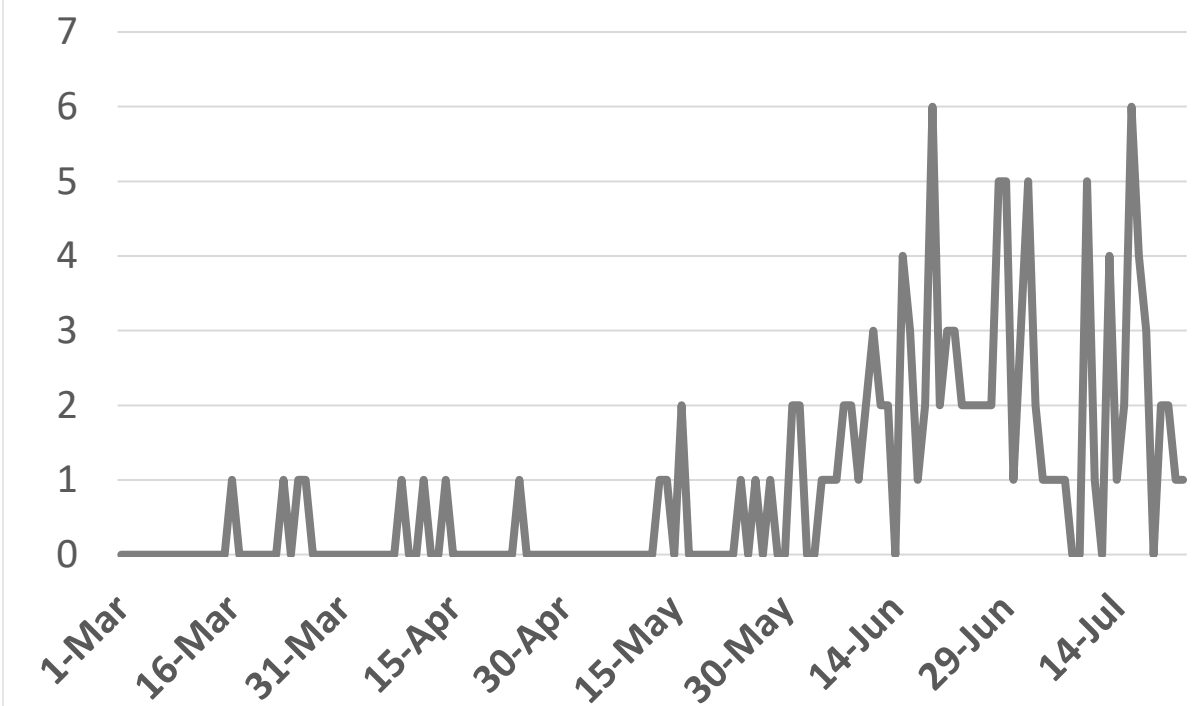
Source : National Emergency Crisis and Disaster Management Authority

KSA



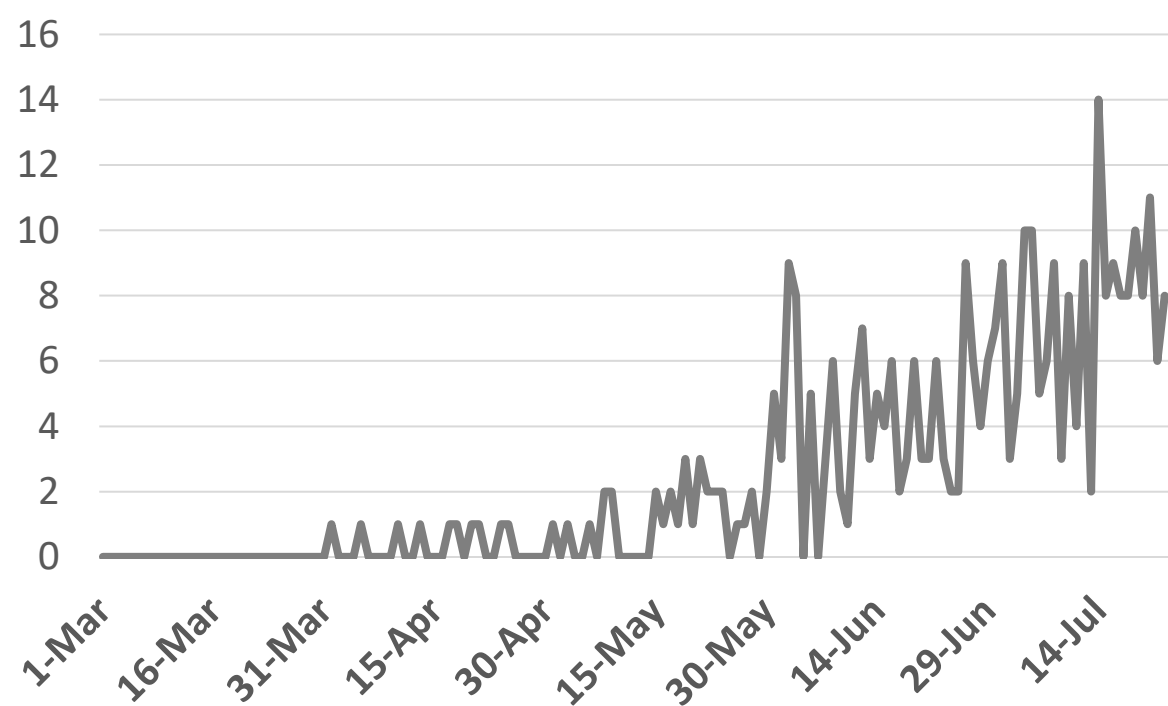
Source : KSA ministry of health

Bahrain



Source :WHO

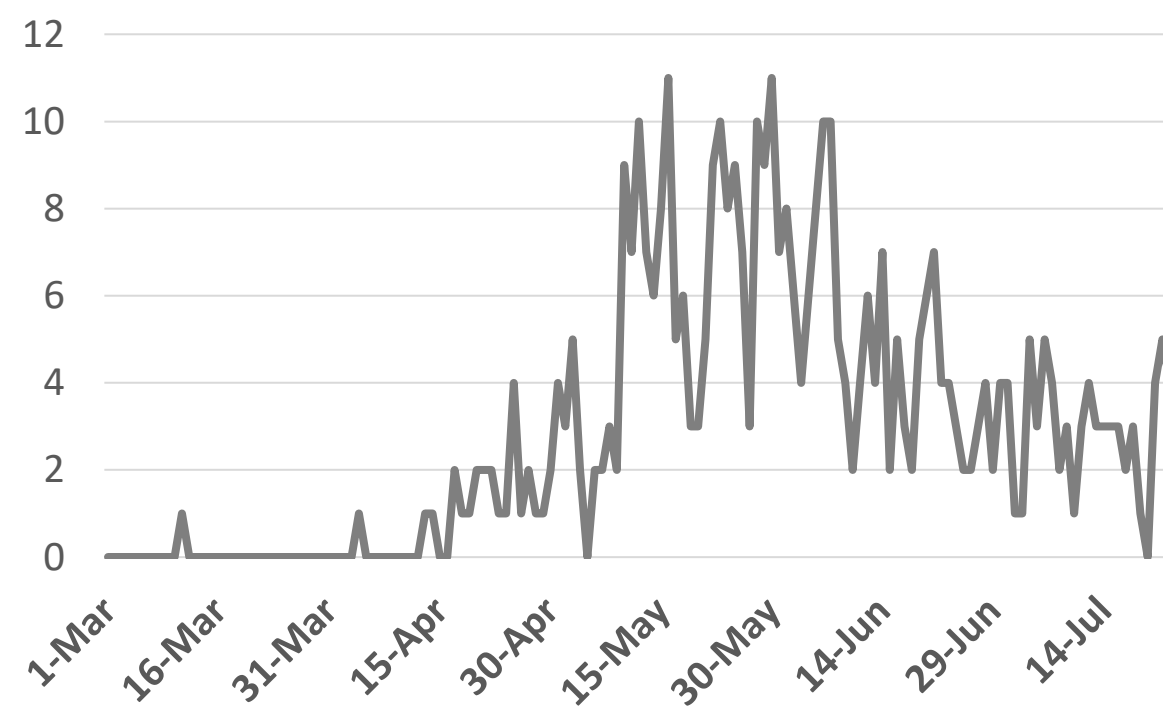
Oman



Source :Oman ministry of health

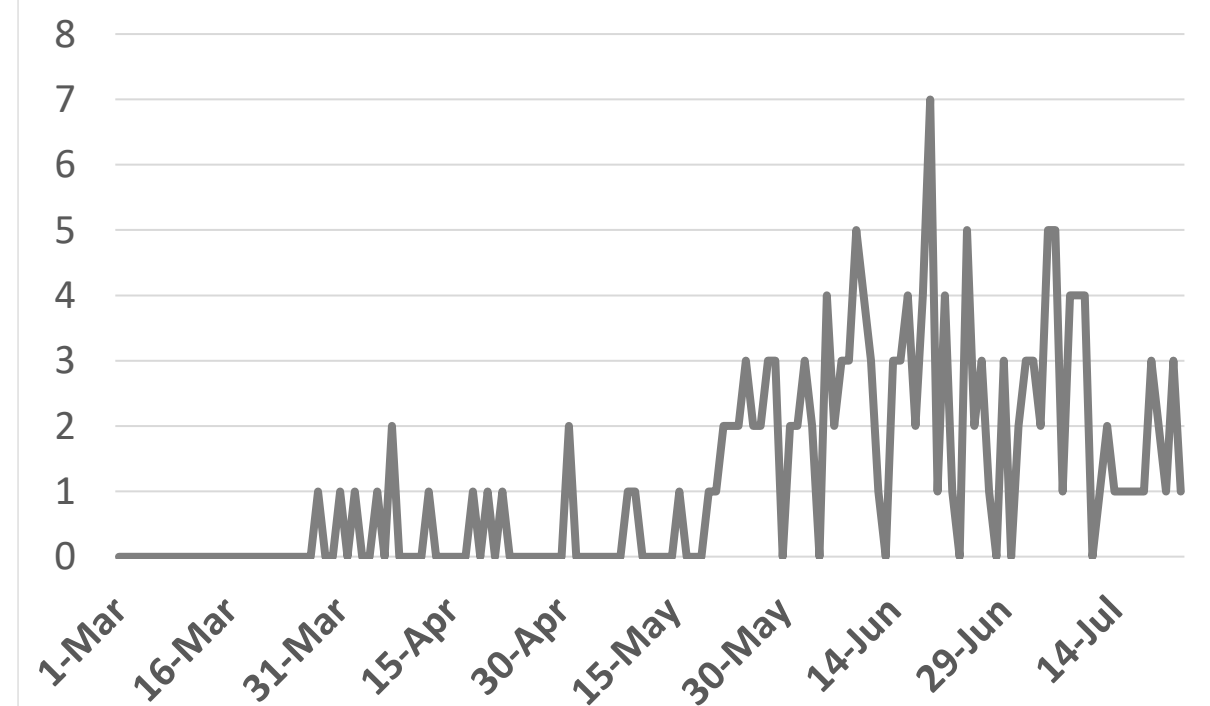
Kuwait

© ADPHC 2020



Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

Article 1:

Thrombosis in Hospitalized Patients With COVID-19 in a New York City Health System

Published

20 July 2020 [JAMA](#)

- This study assessed the incidence of, and risk factors for, venous and arterial thrombotic events in all hospitalized patients with COVID-19 at Langone Health, which consists of 4 hospitals in New York City.
- Patients aged at least 18 years who tested positive for SARS-CoV-2 (n=3,334) and admitted to an affiliated hospital between March 1 and April 17, 2020, were included in this study. An open-source natural language processing tool (simple NLP), with sensitivity and specificity greater than 95%, searched clinical notes and radiology reports for thrombotic events. Additional chart reviews were conducted on echocardiograms, presumptive diagnoses, and diagnostic codes for thrombotic endpoints. All findings were confirmed by manual chart review.
- Thrombotic events occurred in 533 (16%) patients. Among 829 ICU patients, 244 (29.4%) had a thrombotic event, and among 2505 non-ICU patients, 289 (11.5%) had a thrombotic event. Mortality was higher in those with thrombotic events (43.2% vs 21.0%; $p < 0.001$). Age, gender (male), race/ethnicity (Hispanic), coronary artery disease, prior myocardial infarction, and higher D-dimer levels at hospital presentation were associated with a thrombotic event.
- The results showed variation by clinical setting and thrombotic event. While thrombosis is found in other acute infections such as during 2009 influenza pandemic (prevalence 5.9%), the thrombotic risk appears higher in COVID-19. Thrombosis may be due to a cytokine storm, hypoxic injury, endothelial dysfunction, hypercoagulability, and/or increased platelet activity.



Article 2:

Published

20 July 2020 [THE LANCET](#)

Safety and Immunogenicity of the ChAdOx1 nCoV-19 Vaccine Against SARS-CoV-2: A Preliminary Report of a Phase 1/2, Single-Blind, Randomised Controlled Trial

This study reports the results of the first clinical trial on ChAdOx1 nCoV-19 (AZD1222) developed by OXFORD University, on healthy majority-white UK adults aged 18–55 years. This is a phase 1/2, participant-blinded, multicenter, randomized controlled trial conducted at five centers in the UK. 1077 participants were enrolled and assigned to receive either ChAdOx1 nCoV-19 (n=543) or MenACWY (meningococcal vaccine as a control) (n=534).

Findings

- The vaccine was safe and tolerated, with reduced adverse reaction **when paracetamol was used prophylactically for the first 24 h after vaccination.** The adverse reaction was reduced after a second dose.
- **Humoral responses to SARS-CoV-2 spike protein peaked by day 28 post-prime and cellular responses were induced in all participants by day 14.**
- Neutralizing antibodies were induced in all participants after a second vaccine dose. After two doses, potent cellular and humoral immunogenicity was present in all participants studied.

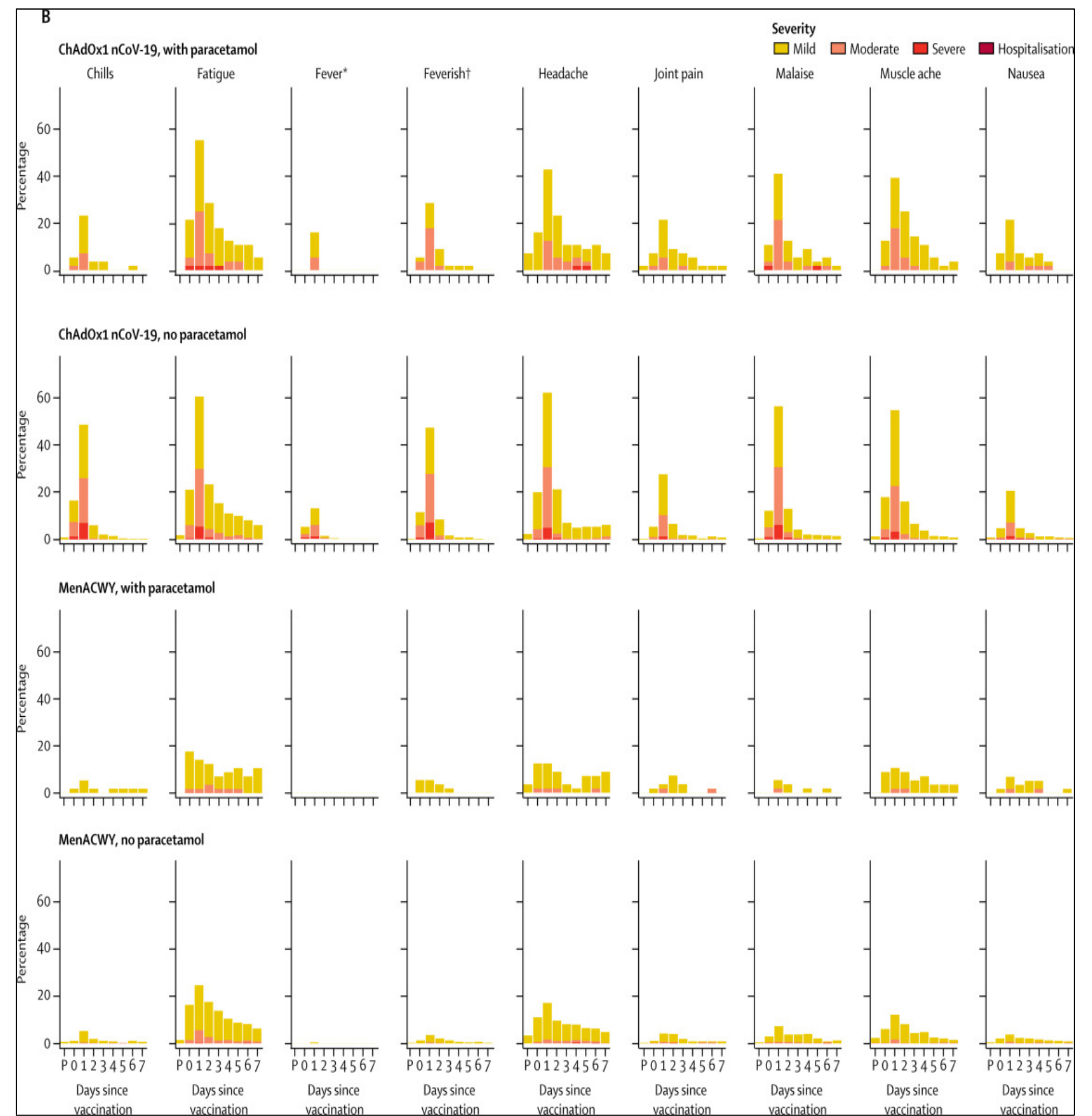
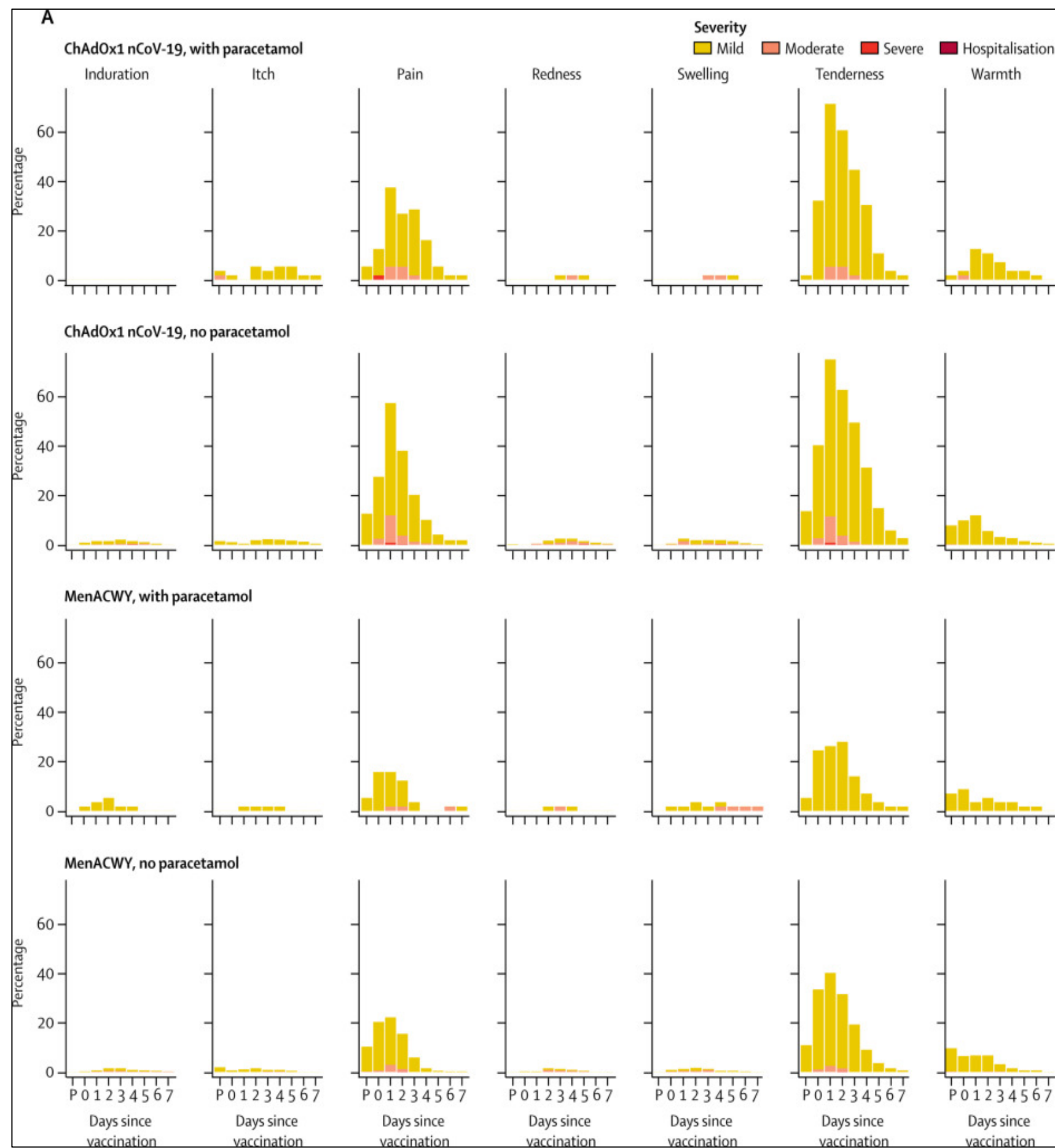
Conclusion

- Immunization with ChAdOx1 nCoV-19 results in rapid induction of both humoral and cellular immune responses against SARS-CoV-2, with increased responses after a second dose. Further clinical studies, including in older adults, should be done with this vaccine.
- Preliminary findings show that the candidate ChAdOx1 nCoV-19 vaccine given as a single dose was safe and tolerated, despite a higher reactogenicity profile than the control vaccine, MenACWY.
- No serious adverse reactions to ChAdOx1 nCoV-19 occurred.



Continued:

Solicited local (A) and systemic (B) adverse reactions in first 7 days after vaccination as recorded in participant symptom electronic diaries



THANK YOU

 ADPHCAE  ADPHC_AE  ADPHC_AE  ADPHC.AE  ADPHC-AE  056 2312171