

SCIENTIFIC RESEARCH MONITORING ON COVID-19

10 AUGUST 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE190)

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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Vaccine

Unwavering Regulatory Safeguards for COVID-19 Vaccines

Public Health Response

Detection of Coronavirus Disease 2019 Viral Material on Environmental Surfaces of an Ophthalmology Examination Room

Treatment

Vitamin D for COVID-19: A Case to Answer?

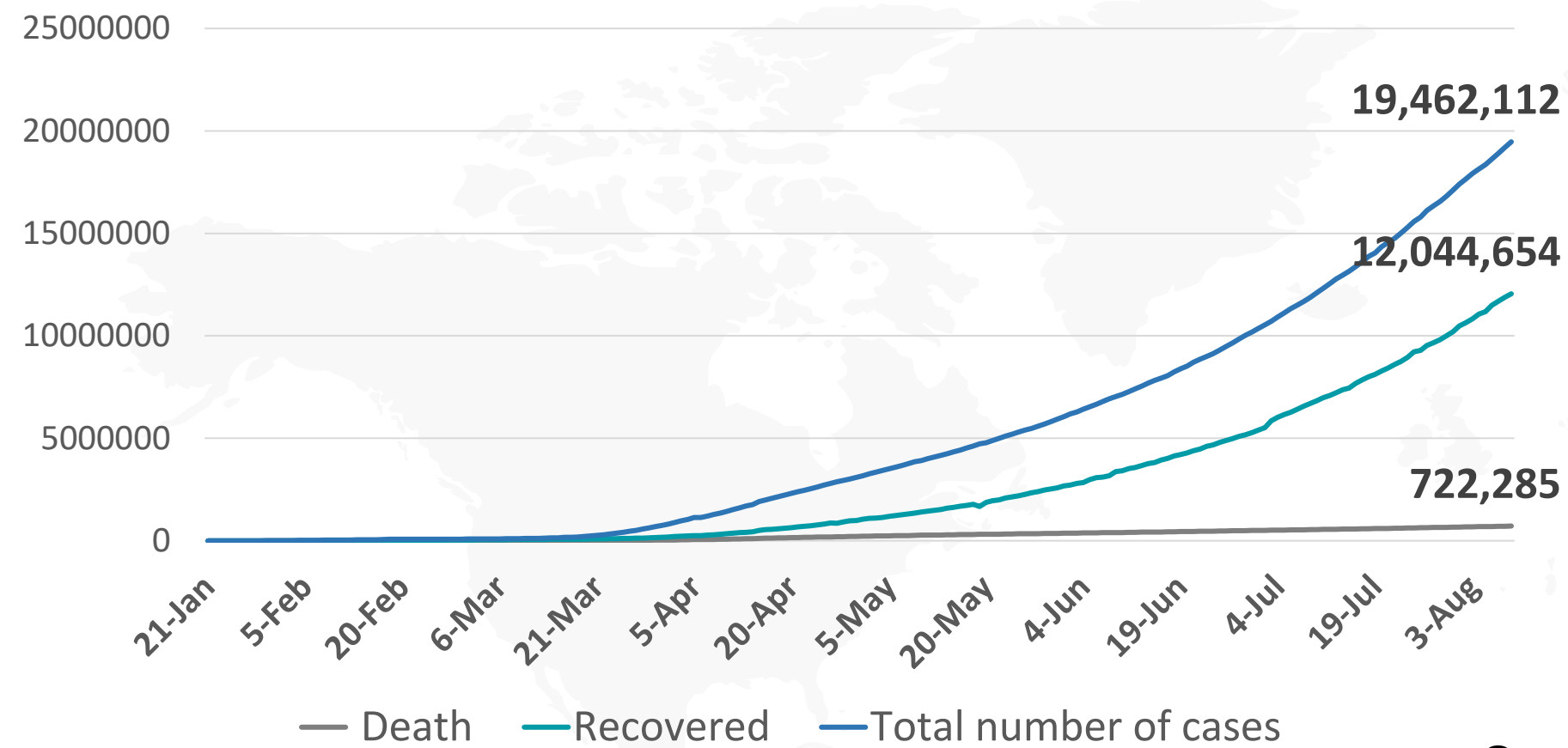




- “Now it’s time to work together. Now it’s time to fight the virus”, said Dr Tedros in a media briefing on Thursday last week.
- Dr Mike Ryan, Executive Director, WHO Health Emergencies Program also said that “...we have to create a new partnership. A new deal between government services and community action. Communities’ individuals have to be empowered, educated. They have to want to participate.”

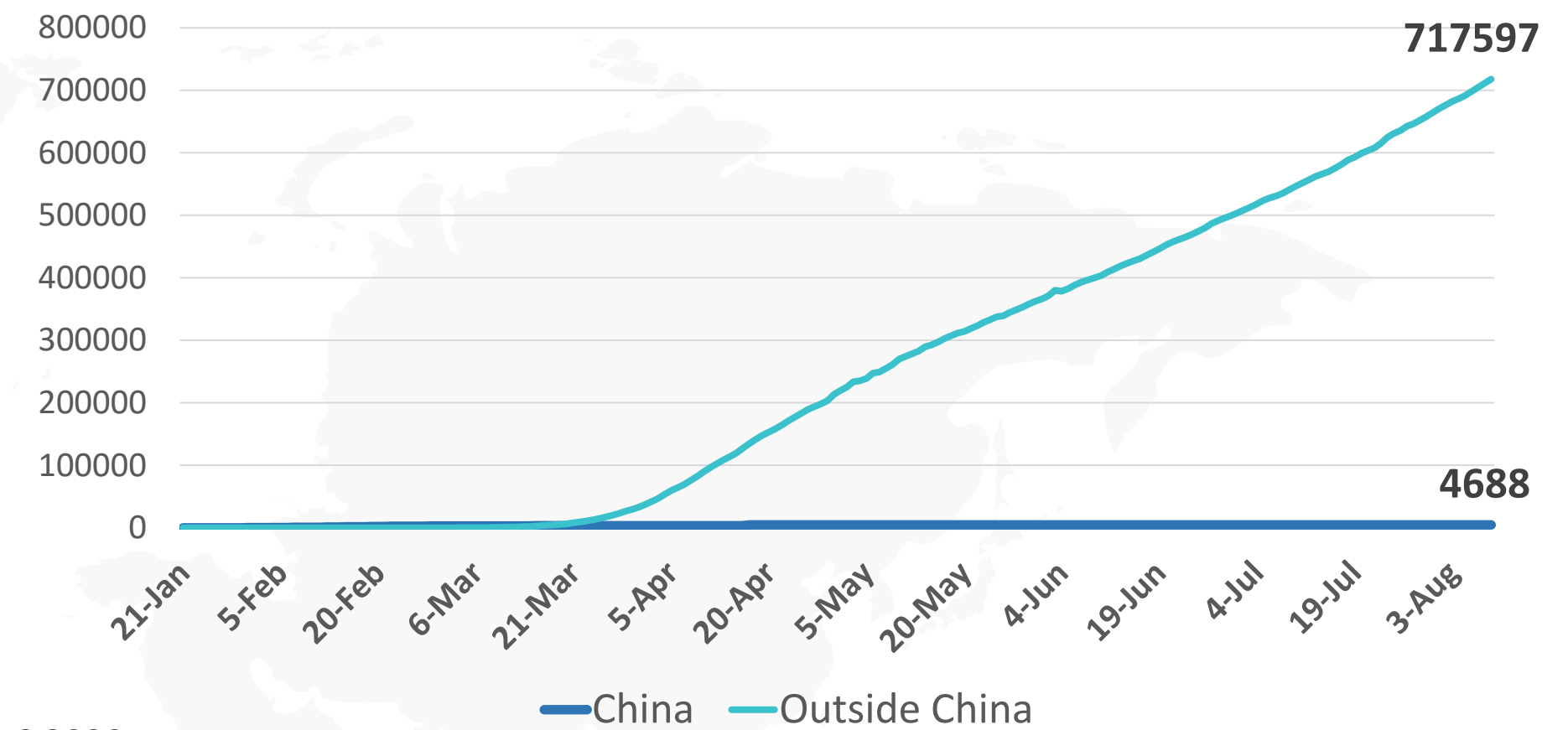


Figure 1: Total Number of Infected, Recovered, and Death Cases



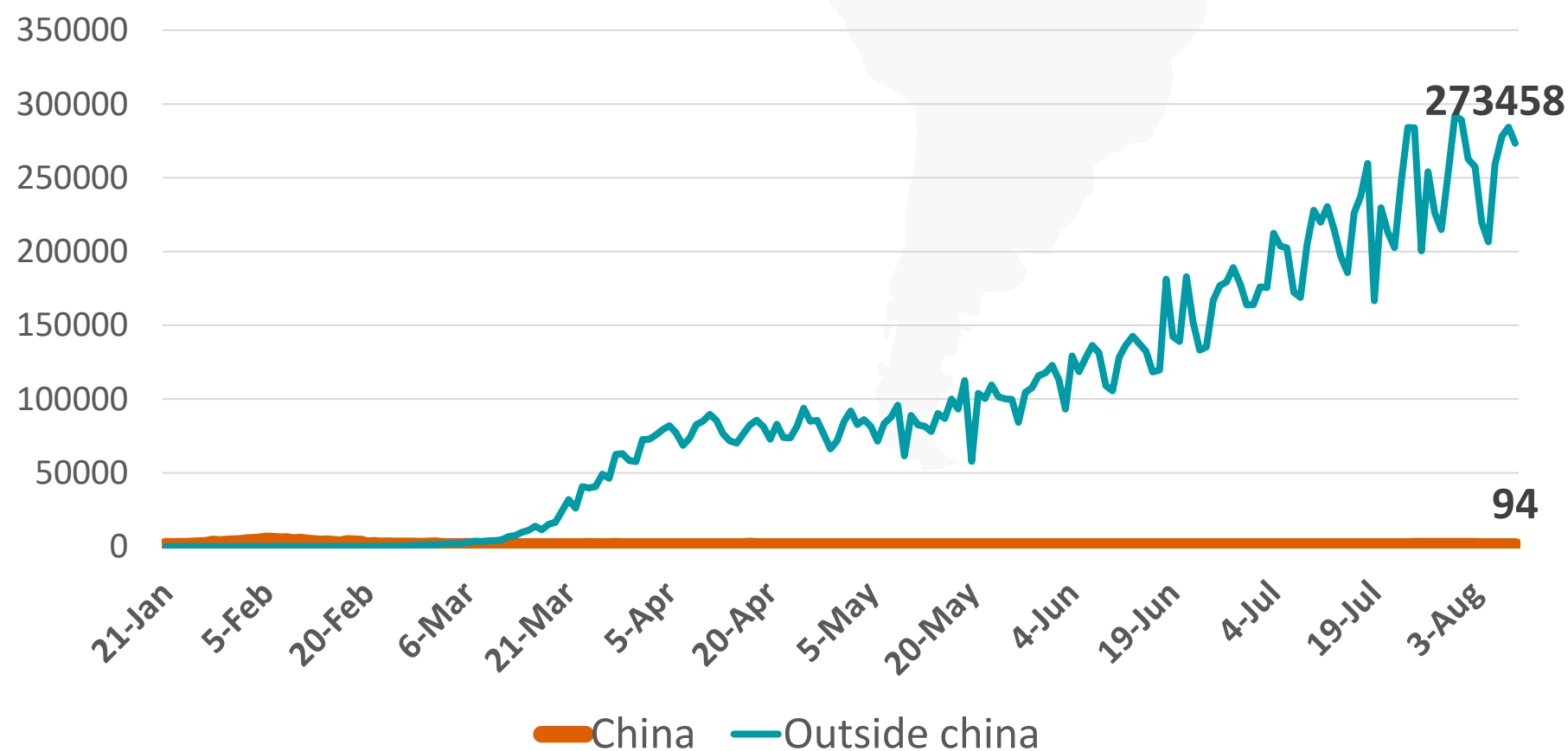
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Figure 3: Total Number of Death Due to COVID-19 (China and result of the world)



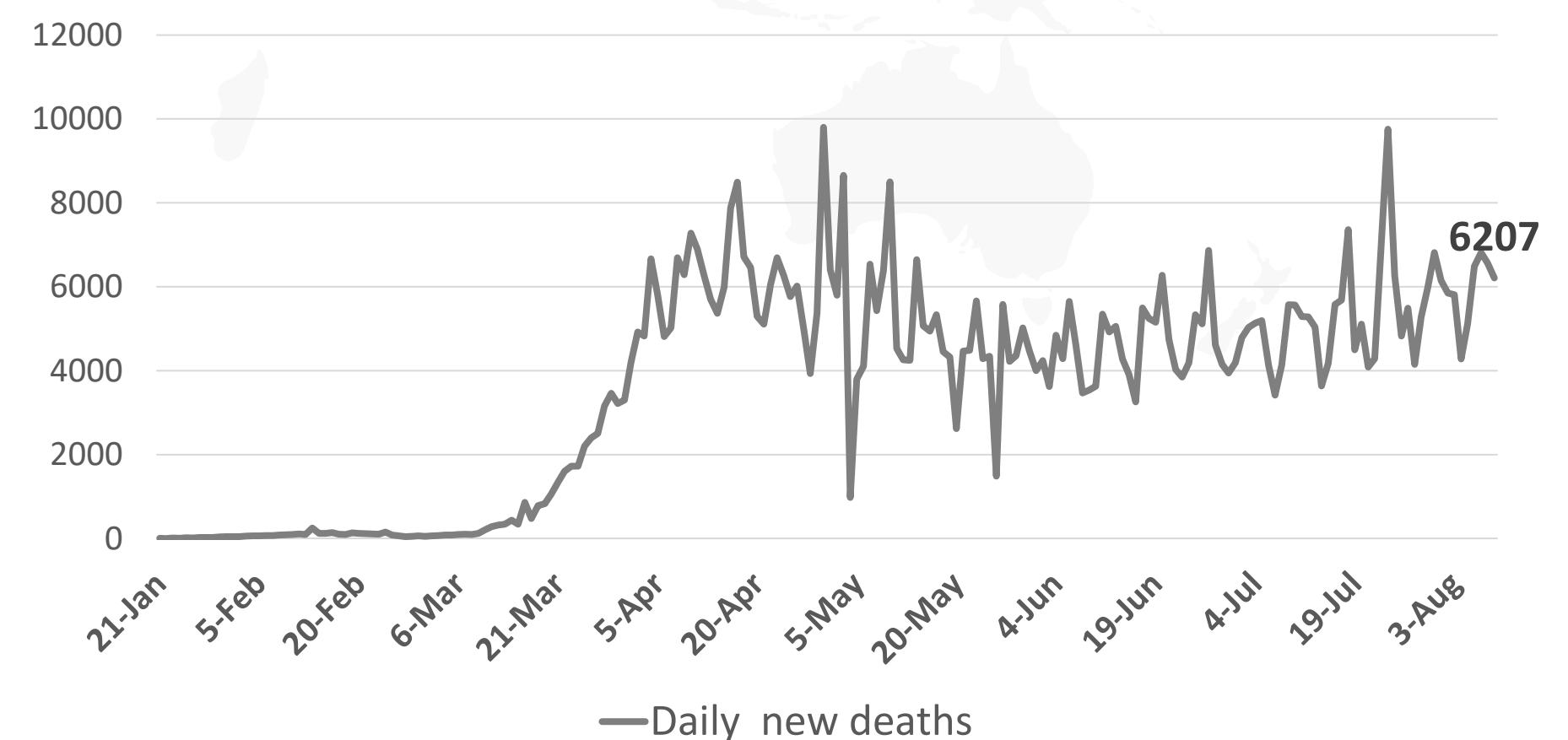
China Outside China

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



China Outside china

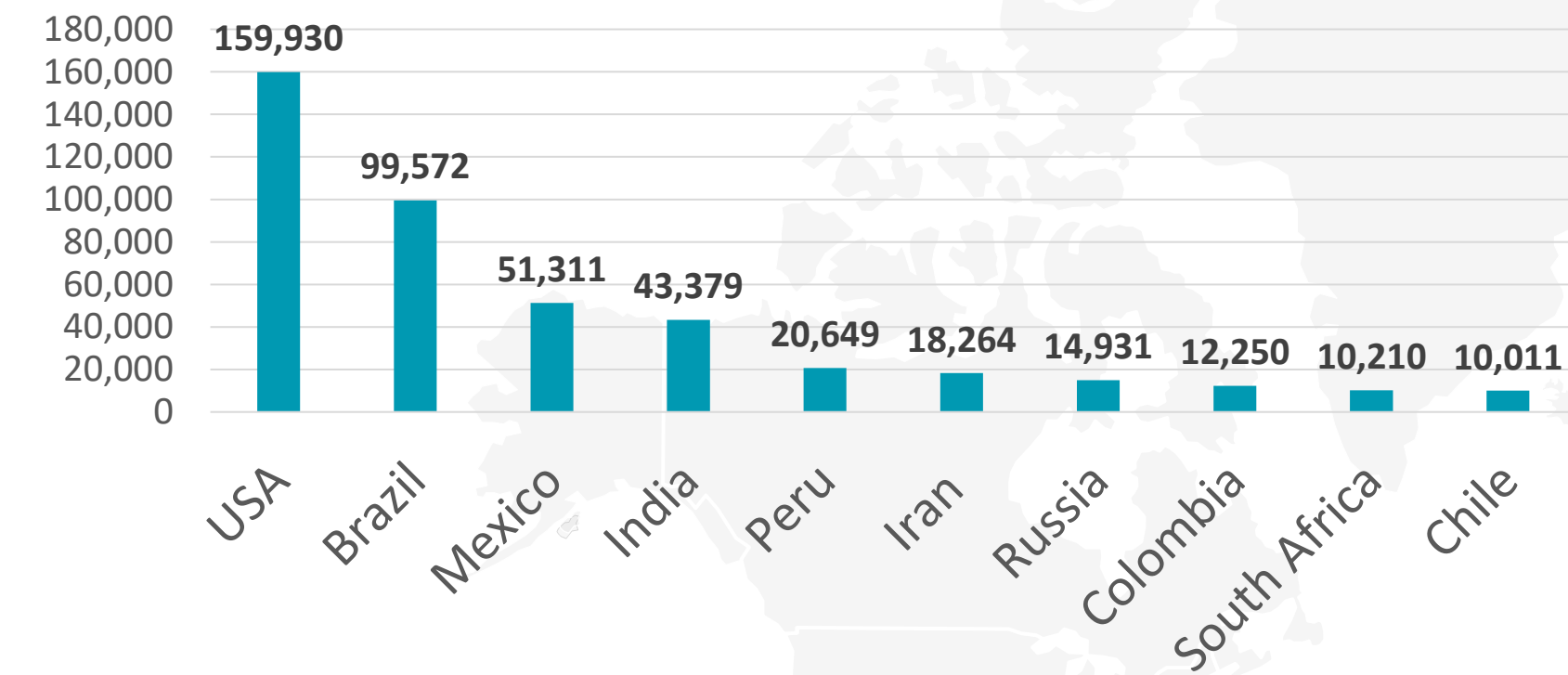
Figure 4: Global Daily New Deaths Due to COVID-19 (China and rest of the world)



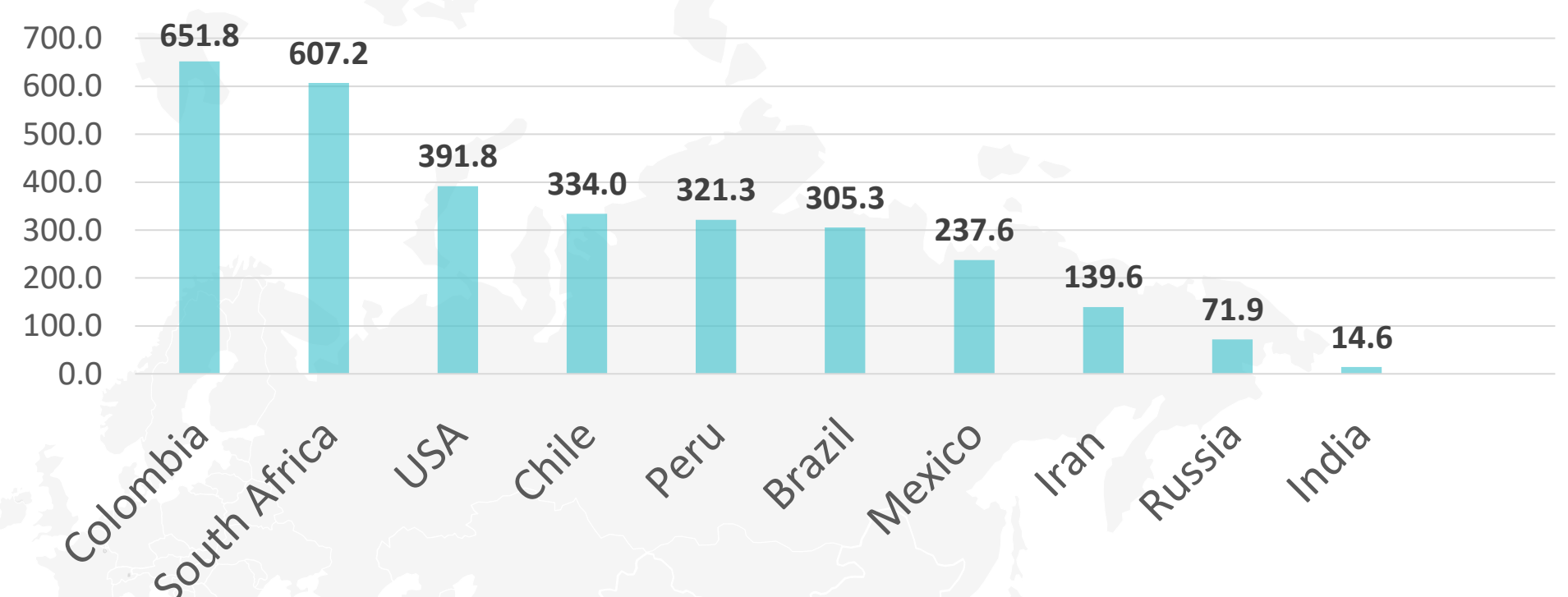
Daily new deaths

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

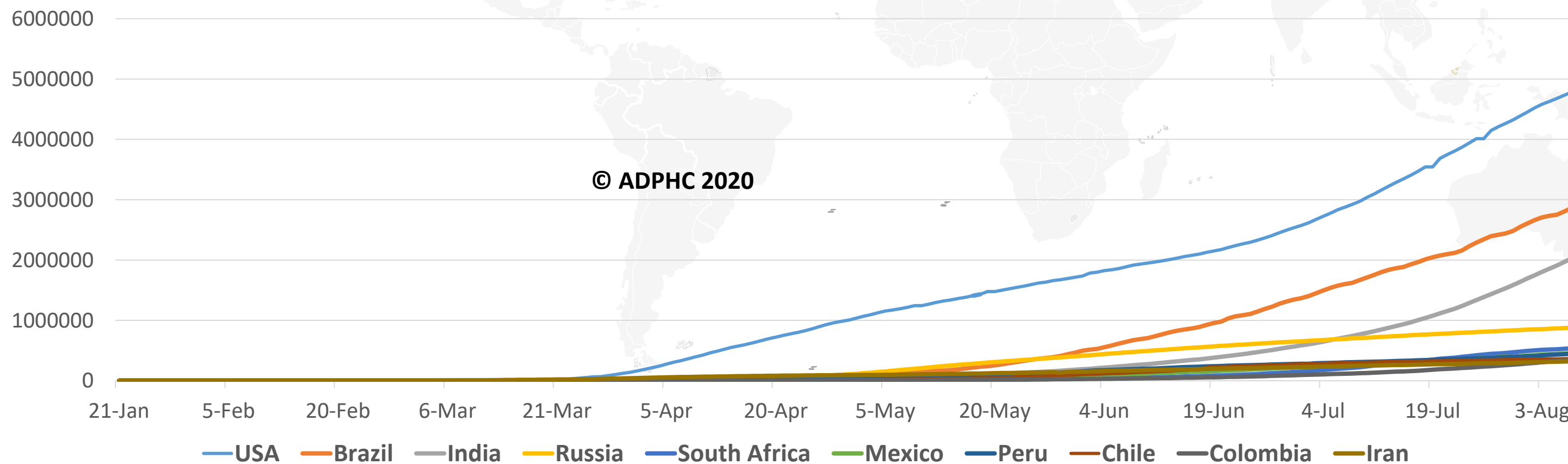
TOTAL DEATHS



DEATHS PER MILLION

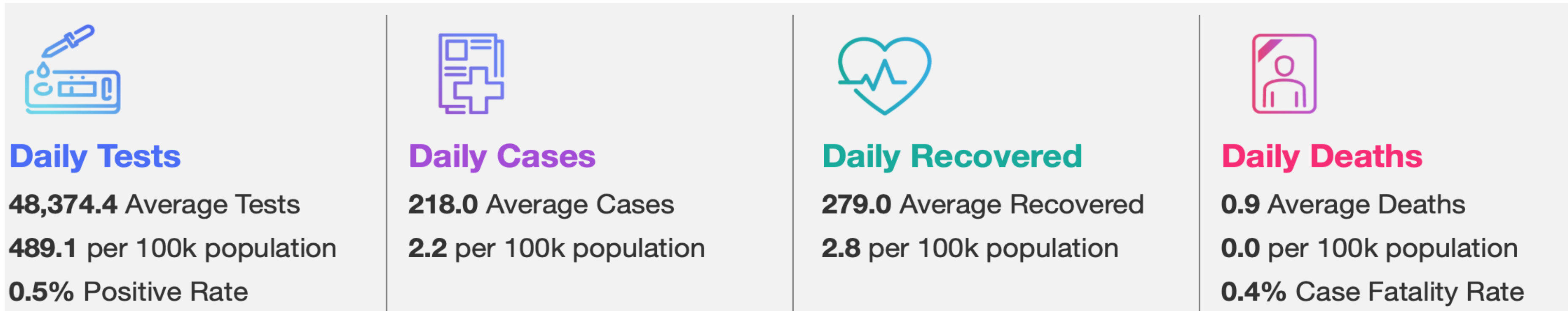


TOTAL INFECTED CASES



USA	4,897,958
Brazil	2,962,442
India	2,153,010
Russia	887,536
South Africa	553,188
Mexico	469,407
Peru	463,875
Chile	371,023
Colombia	367,196
Iran	324,692

Figure 6: COVID-19 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

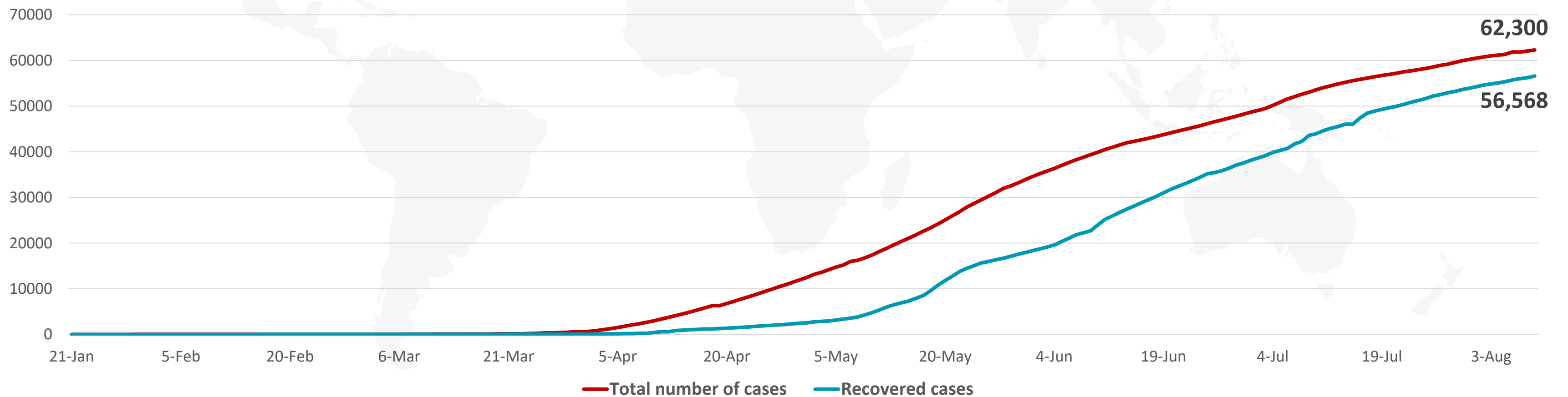
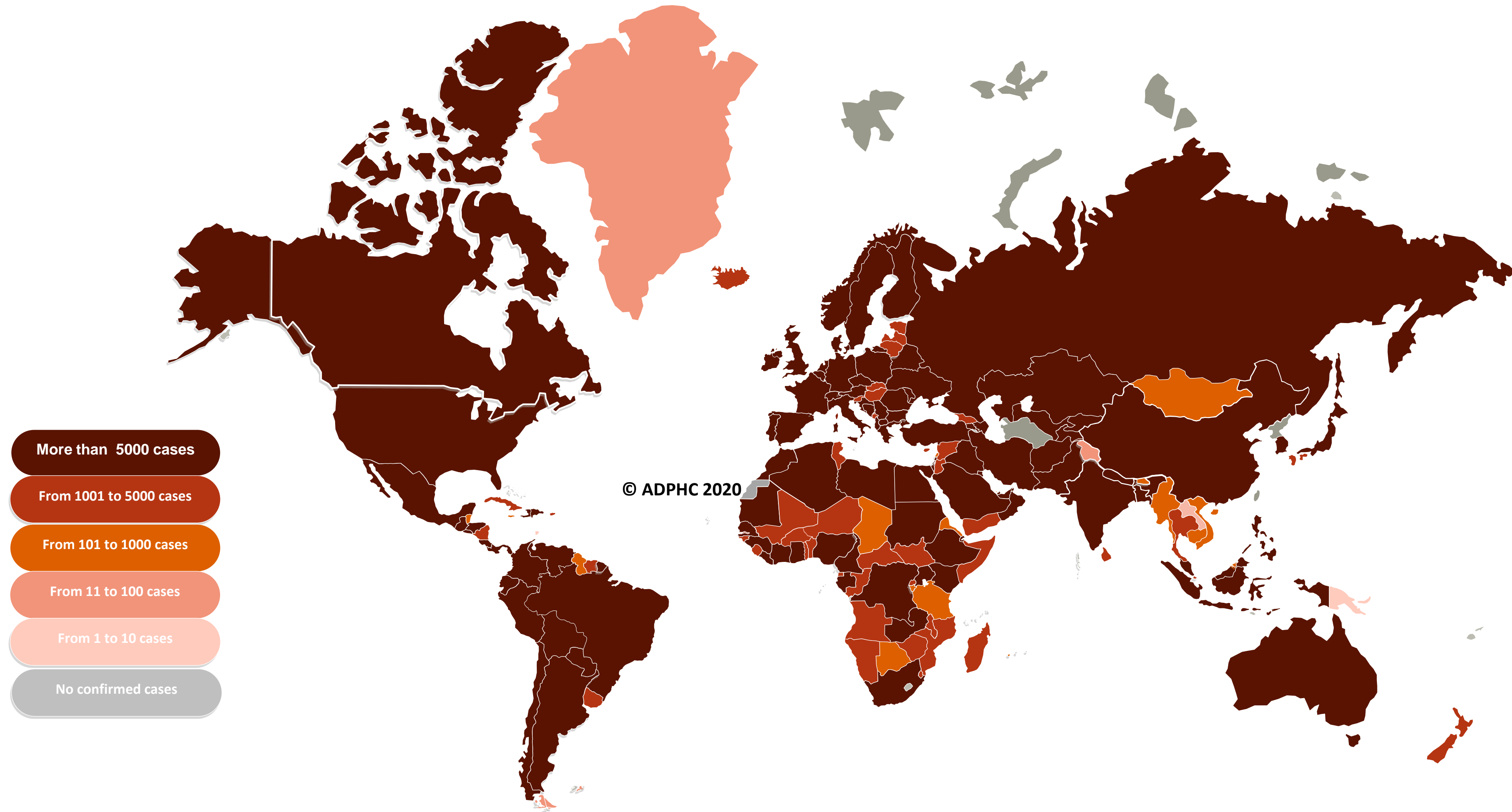


Figure 7A : Global Distribution of COVID-19 Cases



More than 5000 cases

From 1001 to 5000 cases

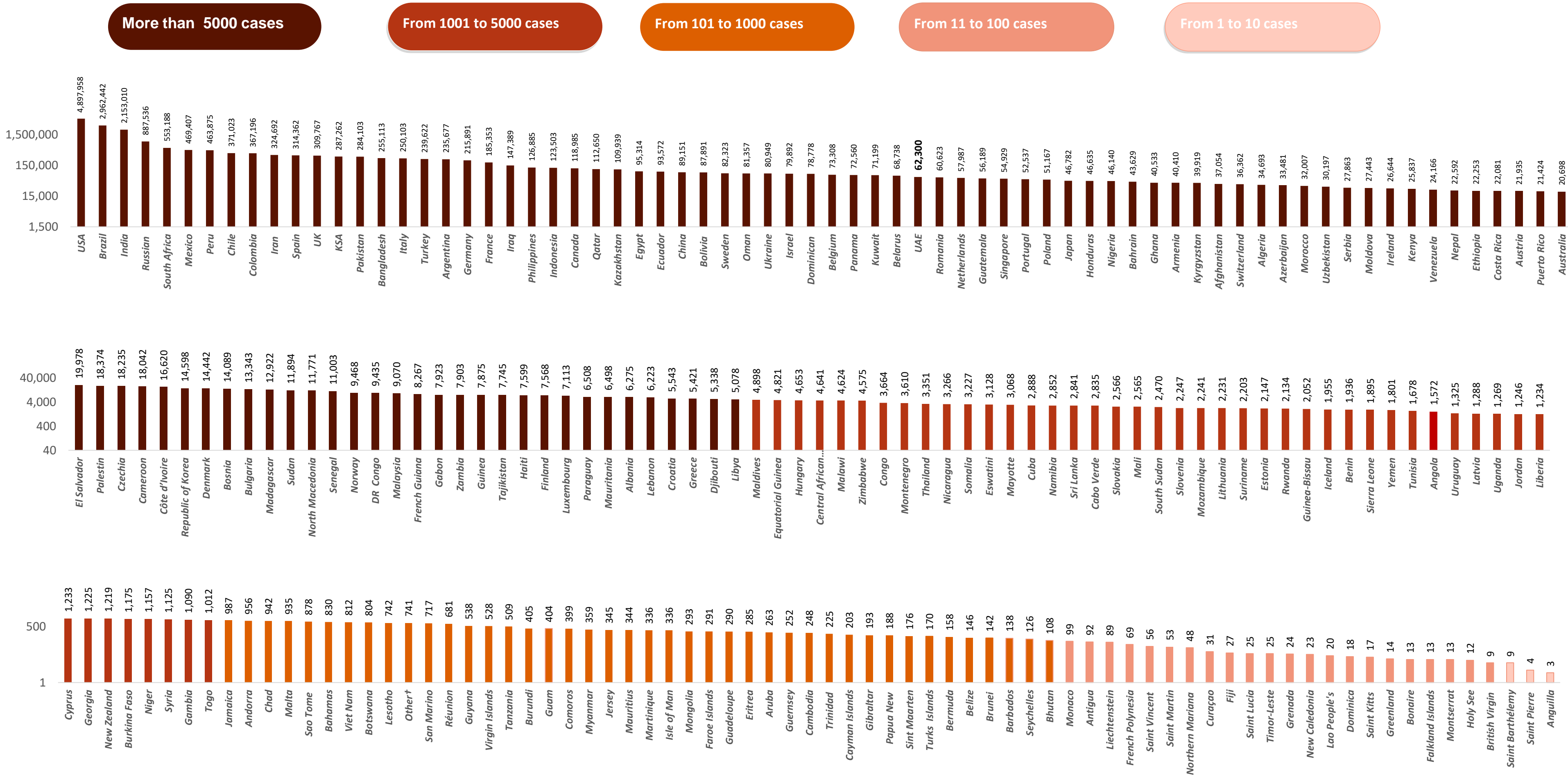
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

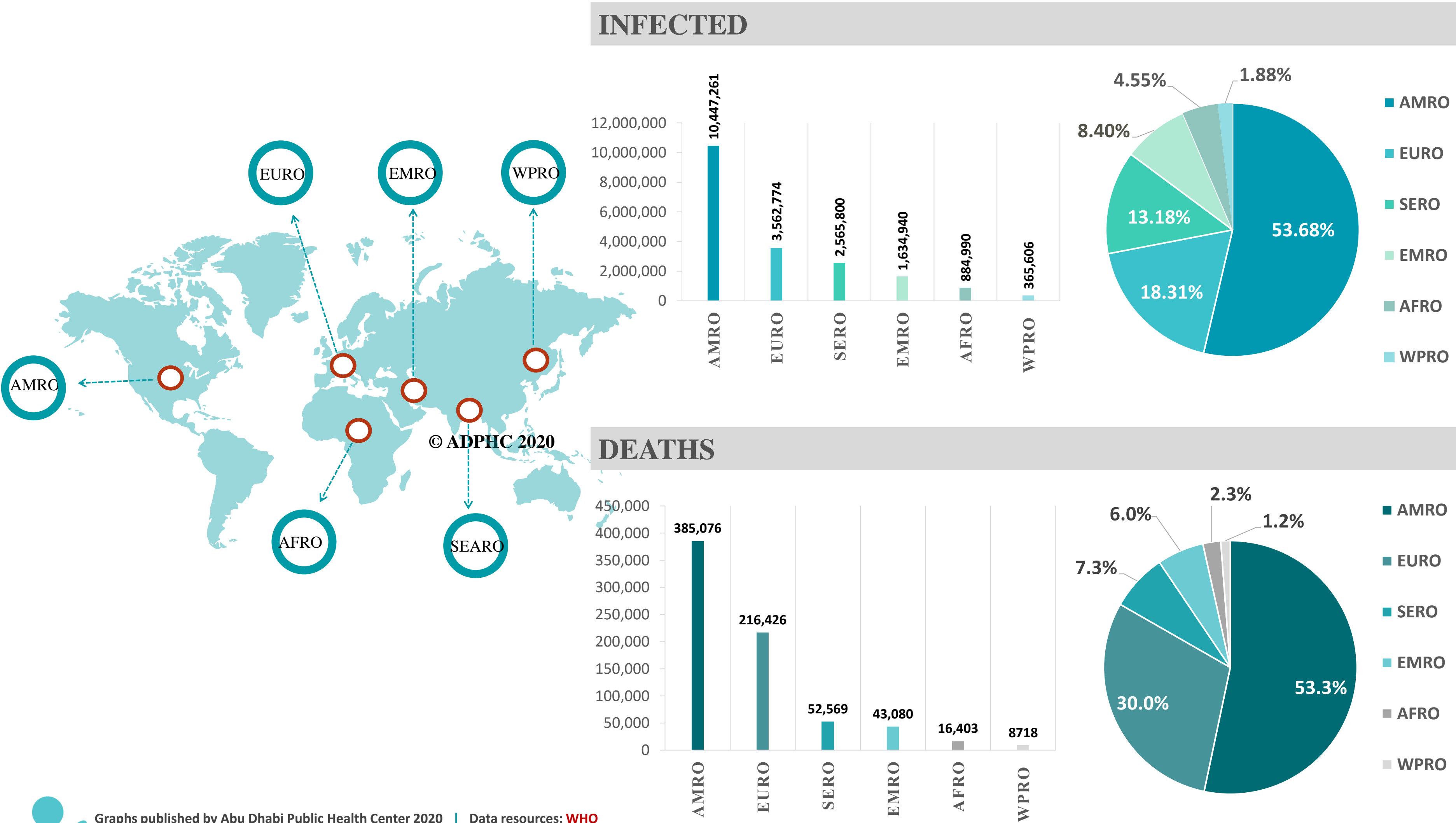
No confirmed cases

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



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

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



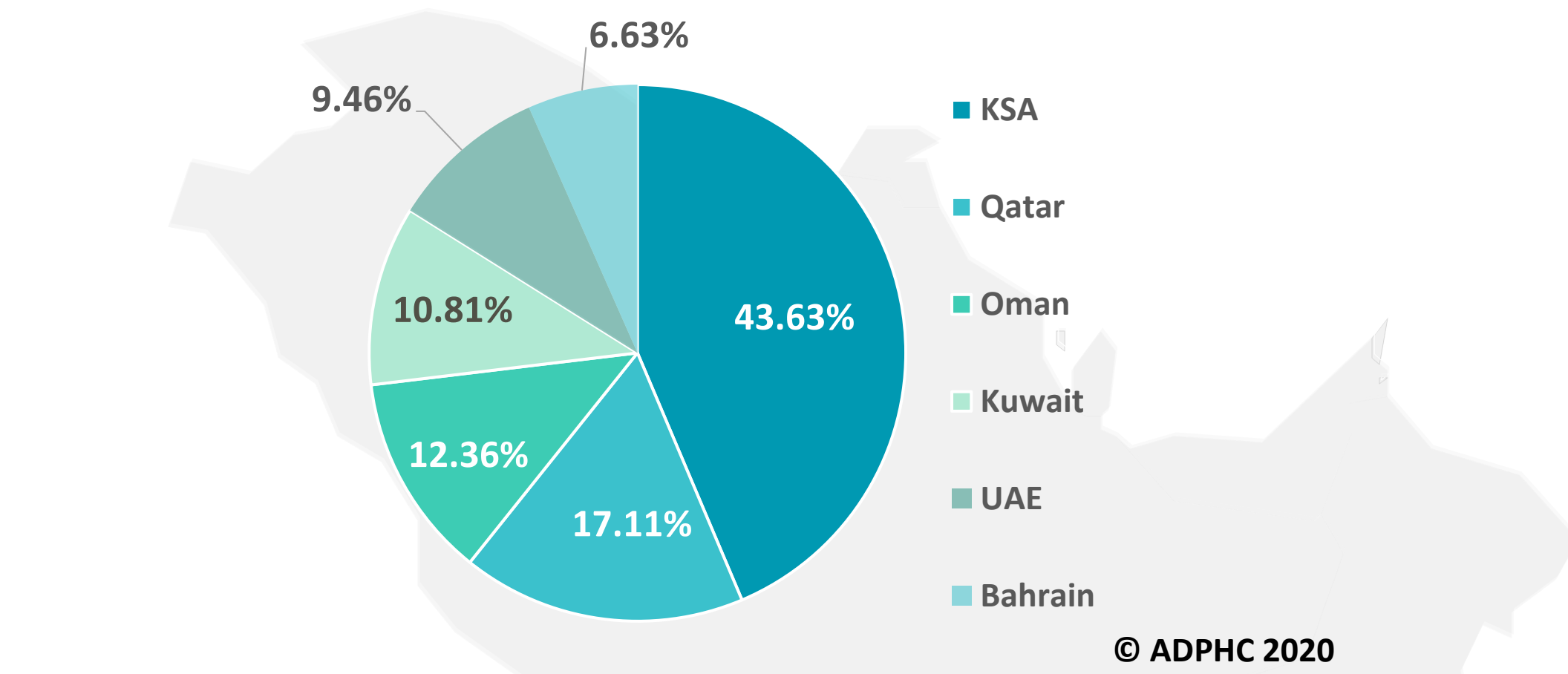
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: [WHO](#)

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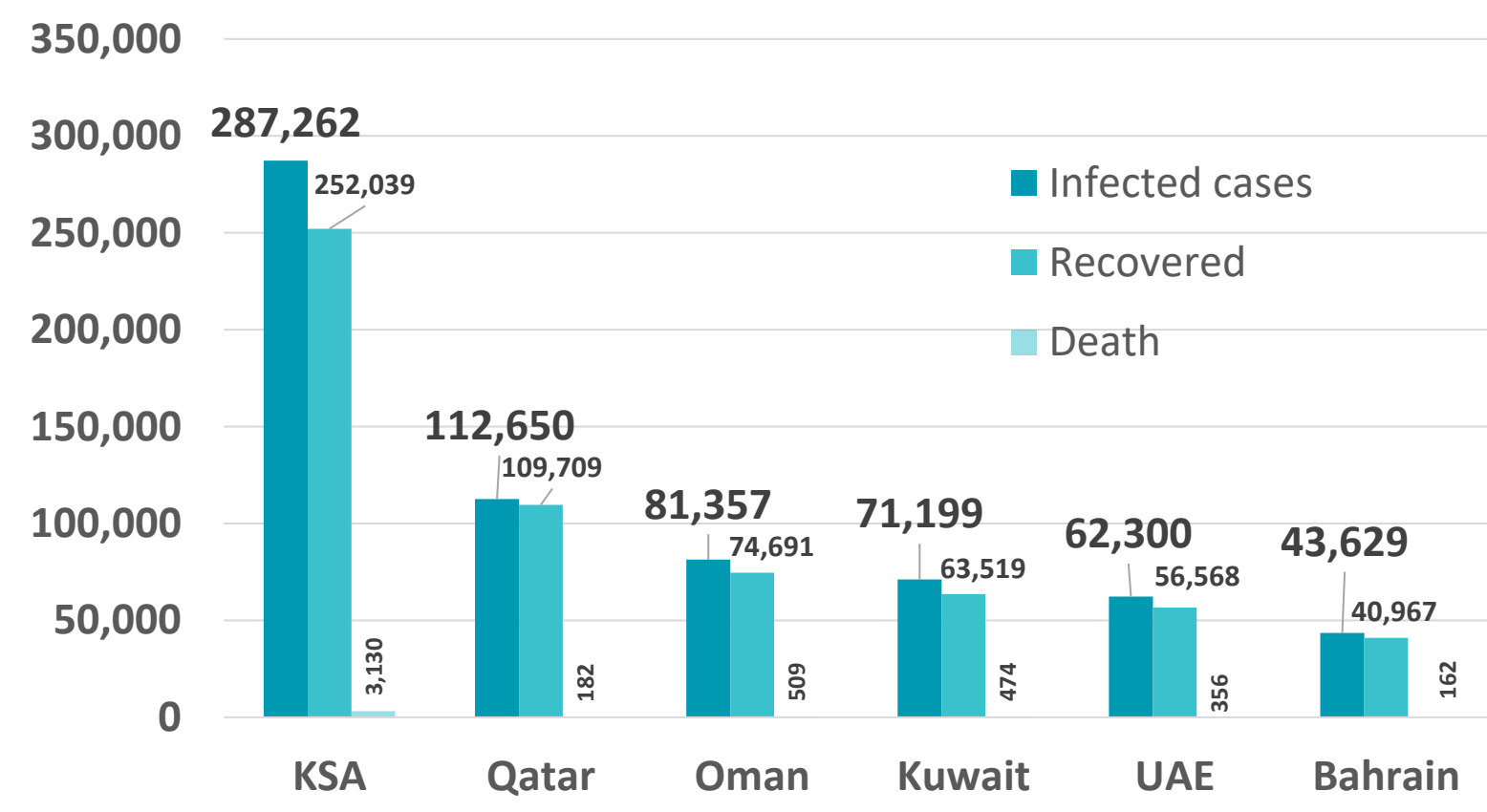
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Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

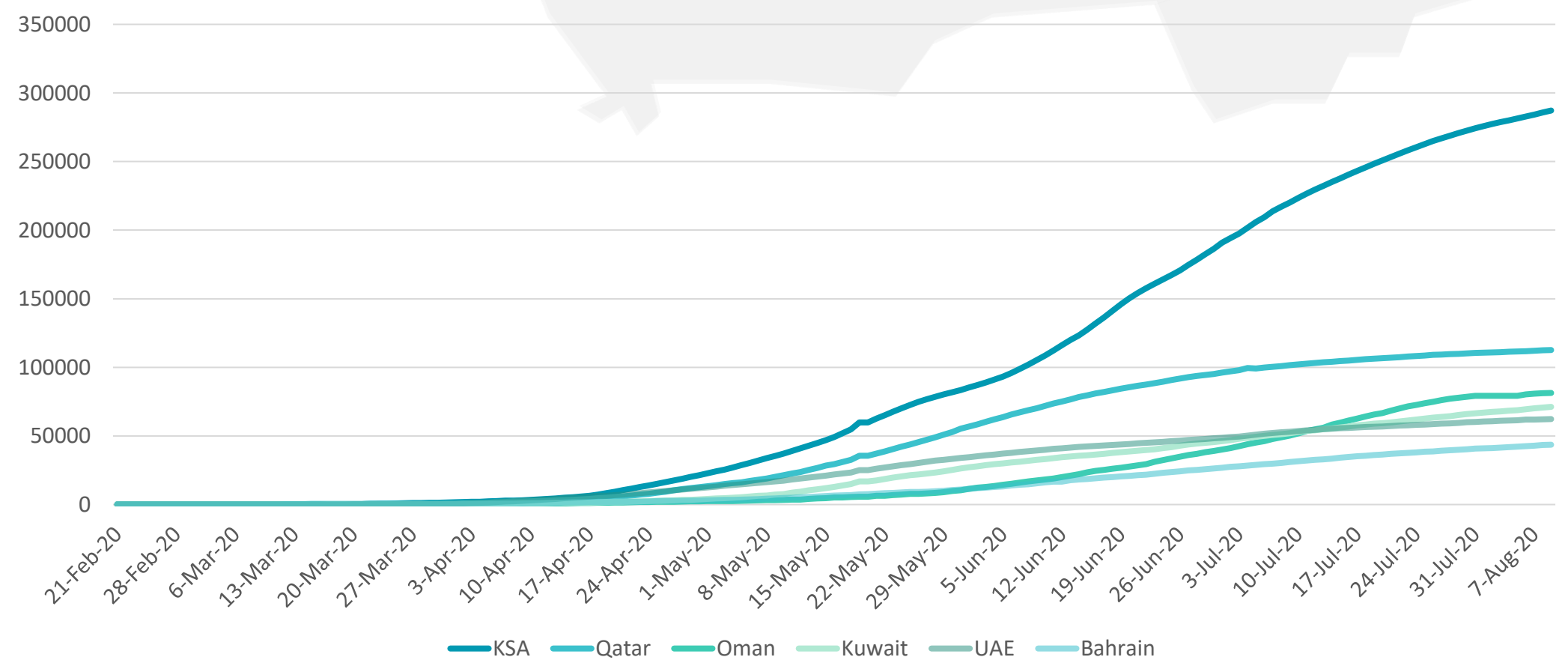
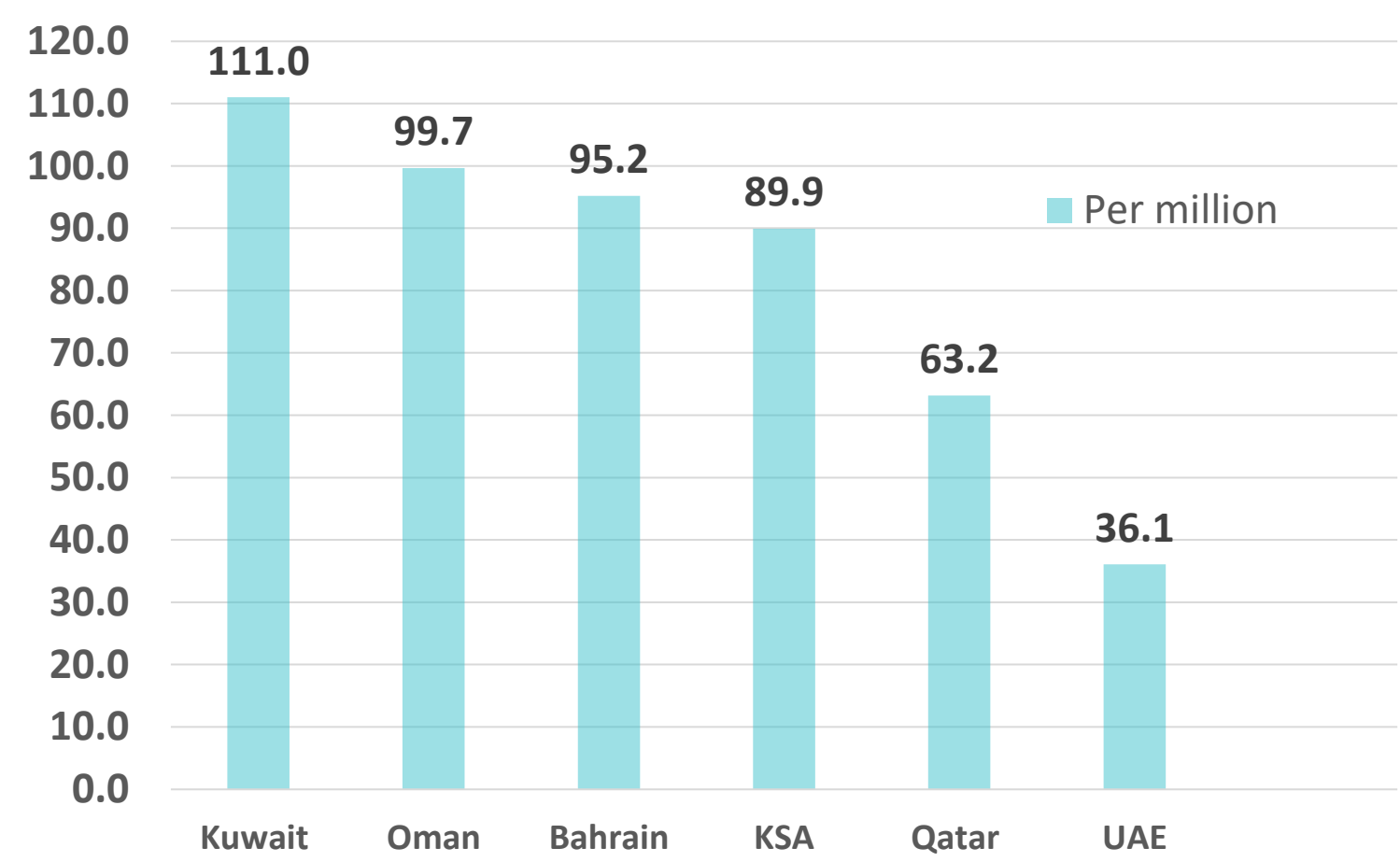
TOTAL NUMBER OF INFECTED CASES



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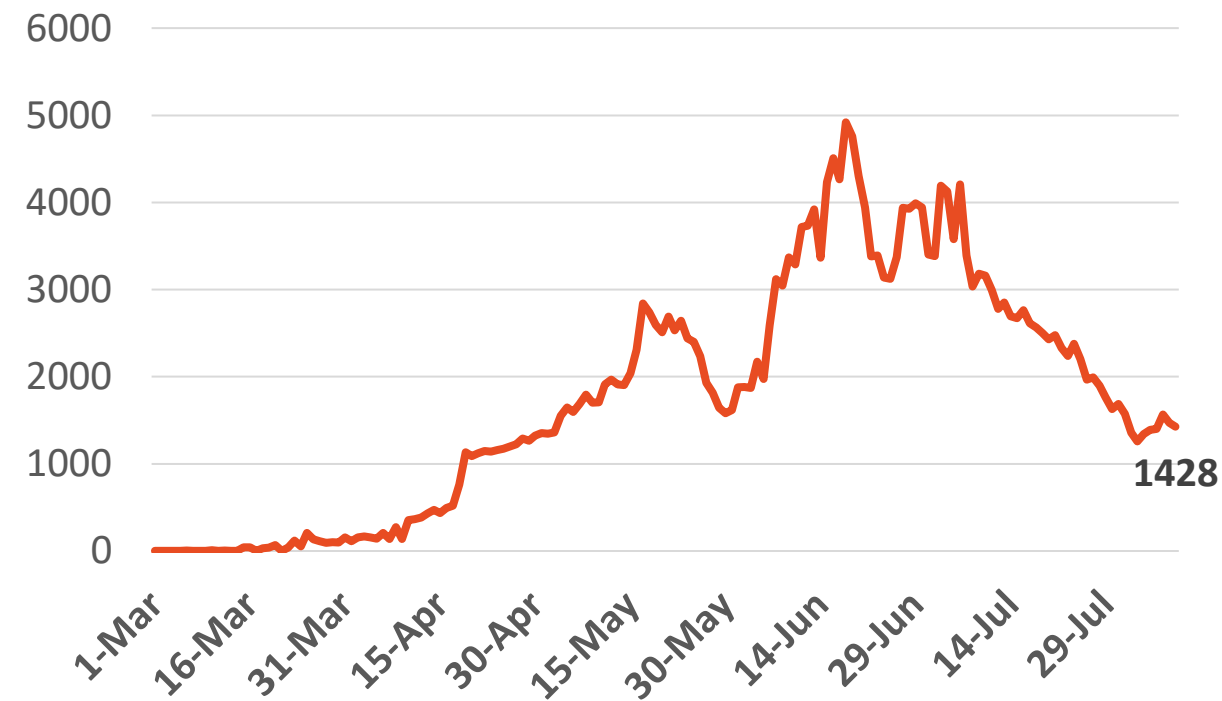
Figure 10: Comparative Analysis of the Distribution of COVID-19 New Cases in GCC Countries

UAE



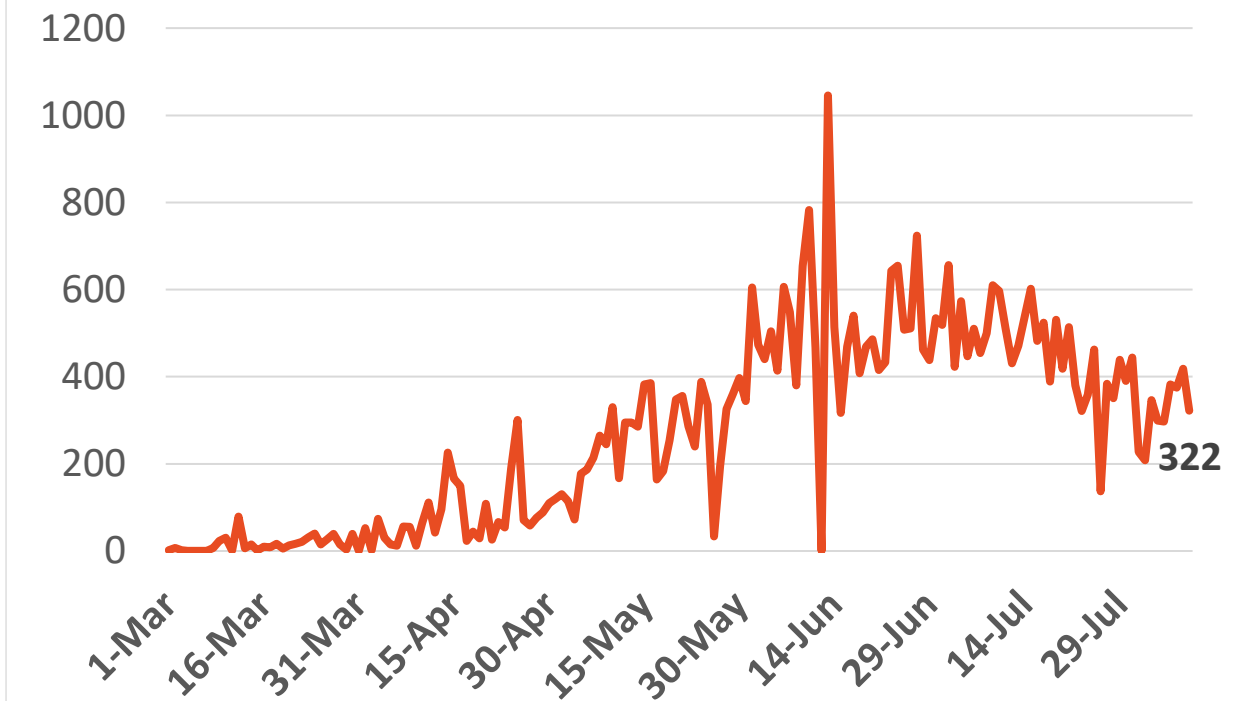
Source : National Emergency Crisis and Disaster Management Authority

KSA



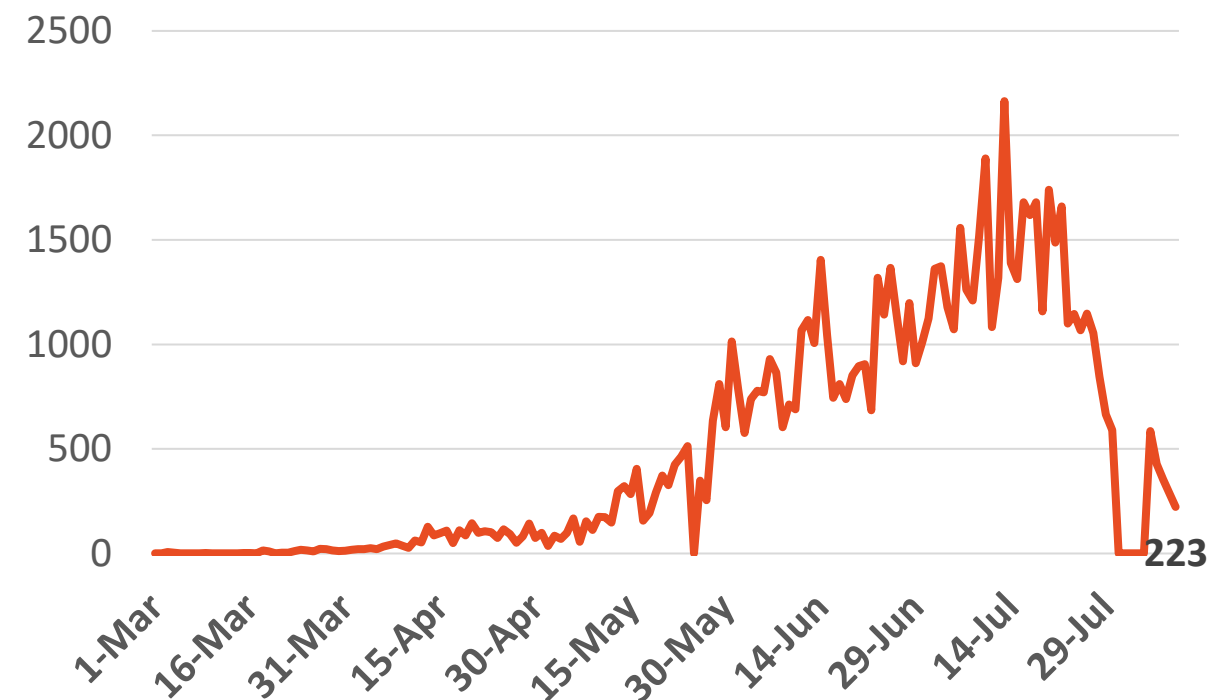
Source : KSA ministry of health

Bahrain



Source :WHO

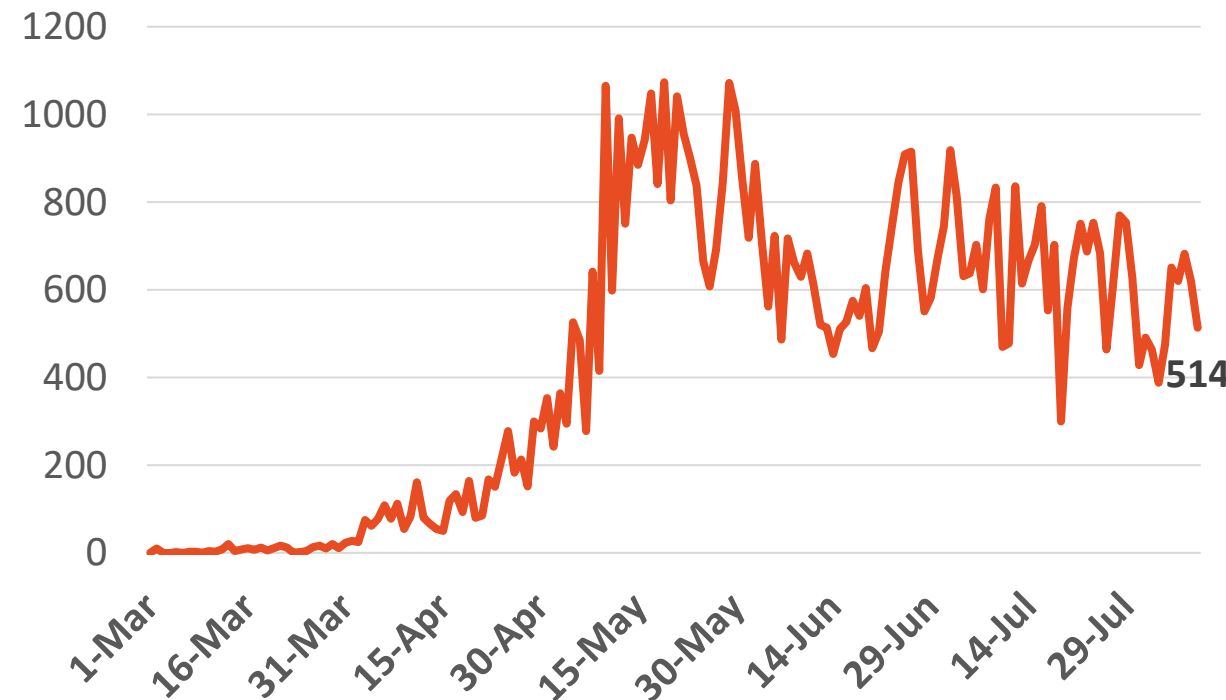
Oman



Source :Oman ministry of health
No announced statistic data from 31 July to 4 August

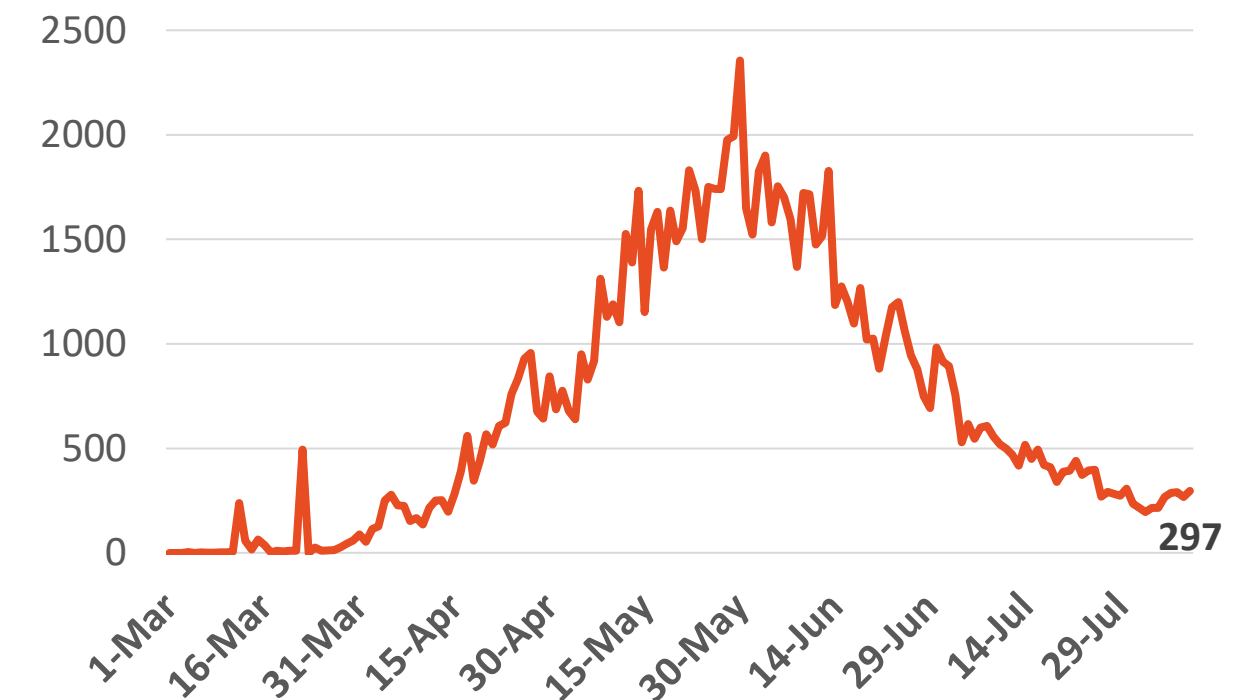
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

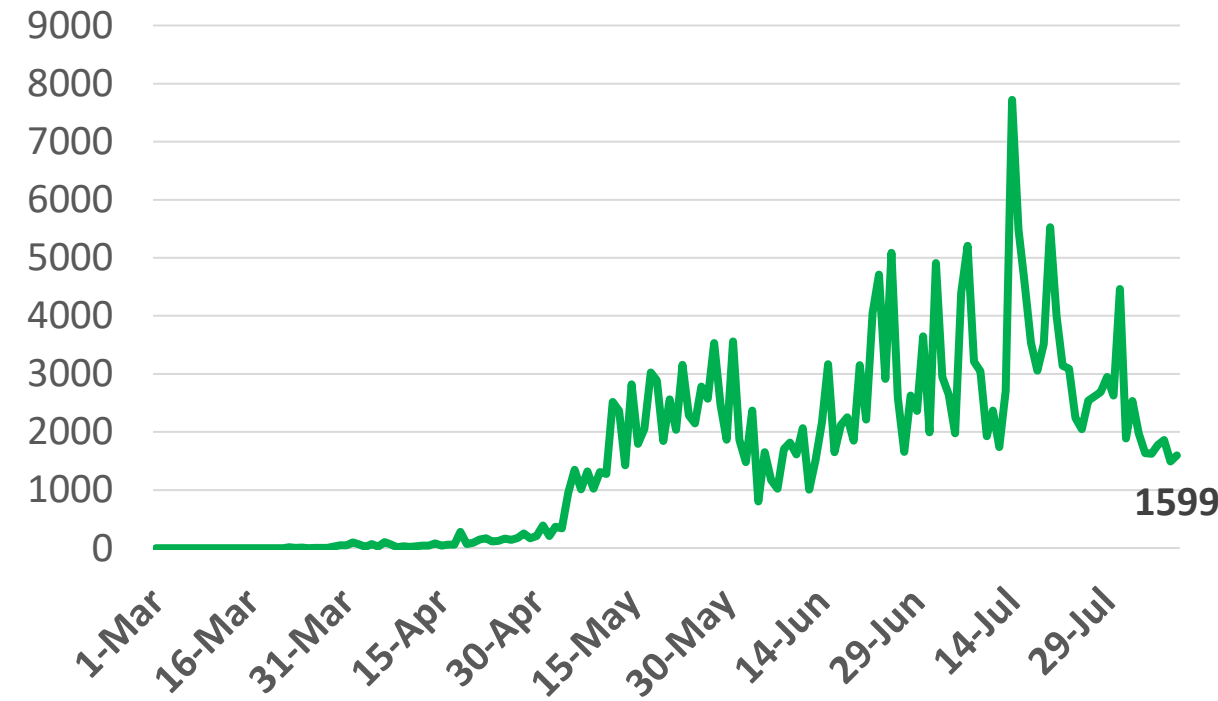
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE



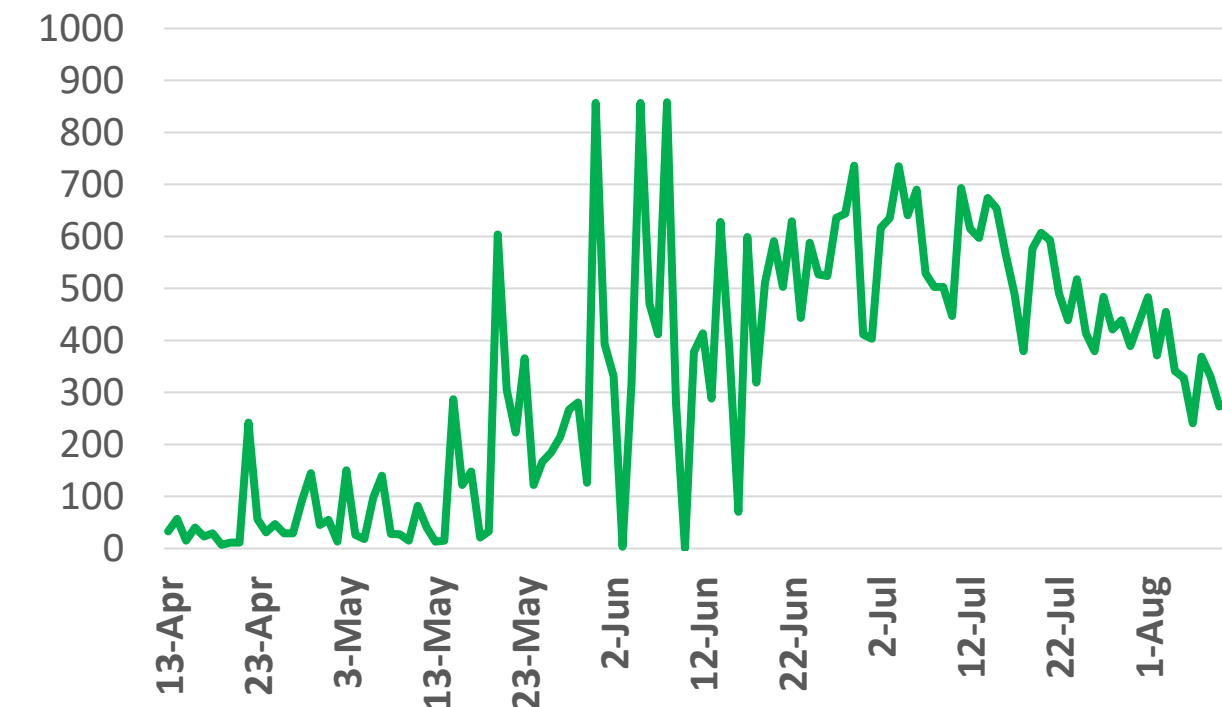
Source : National Emergency Crisis and Disaster Management Authority

KSA



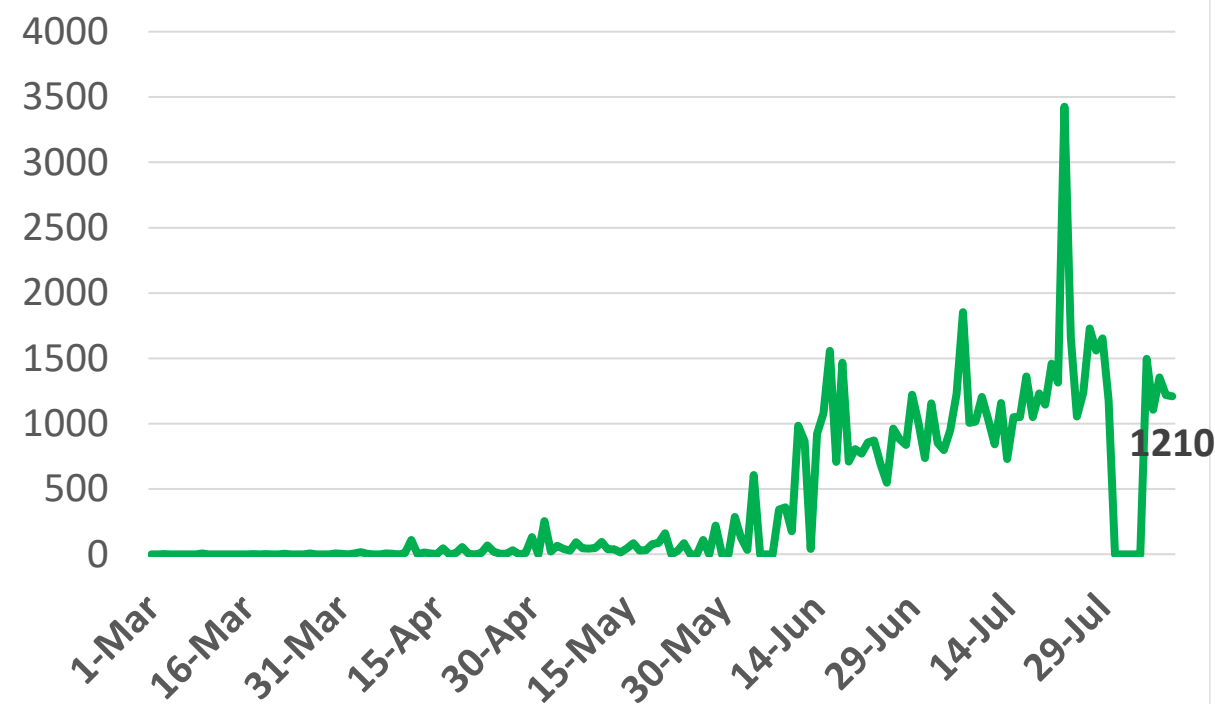
Source : KSA ministry of health

Bahrain



Source : GCCStat

Oman



Source : Oman ministry of health

*No announced statistic data from 31 July to 4 August

Kuwait

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Source : Kuwait ministry of health

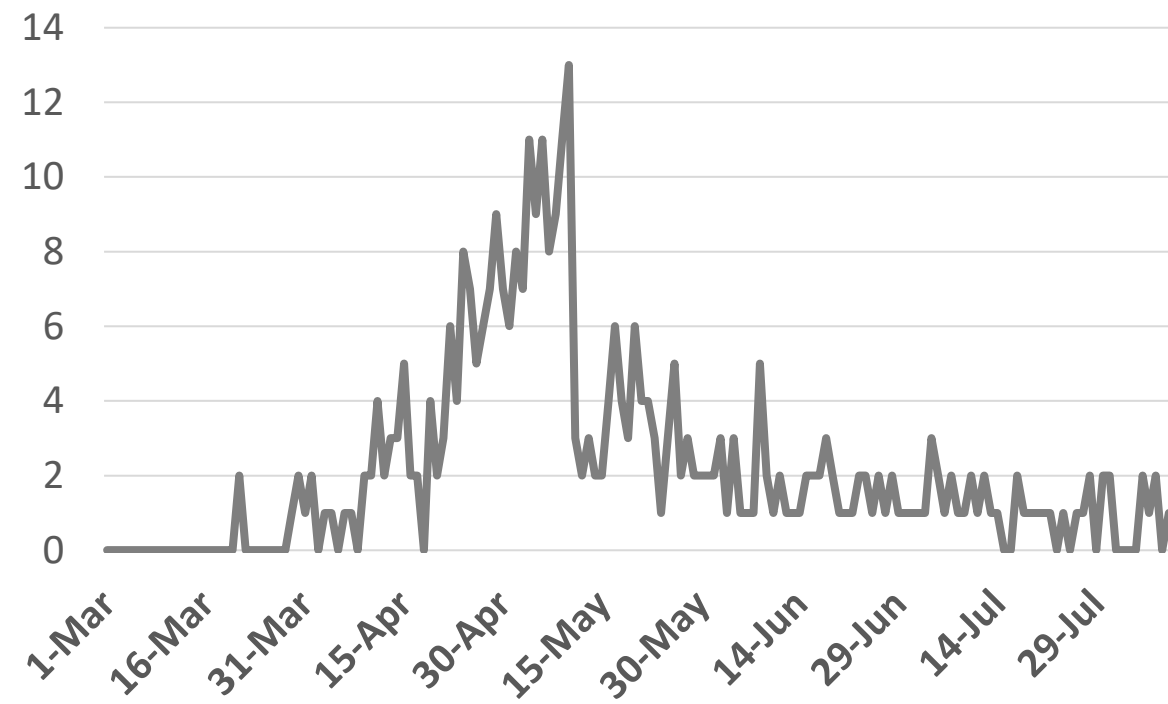
Qatar



Source : Qatar ministry of health

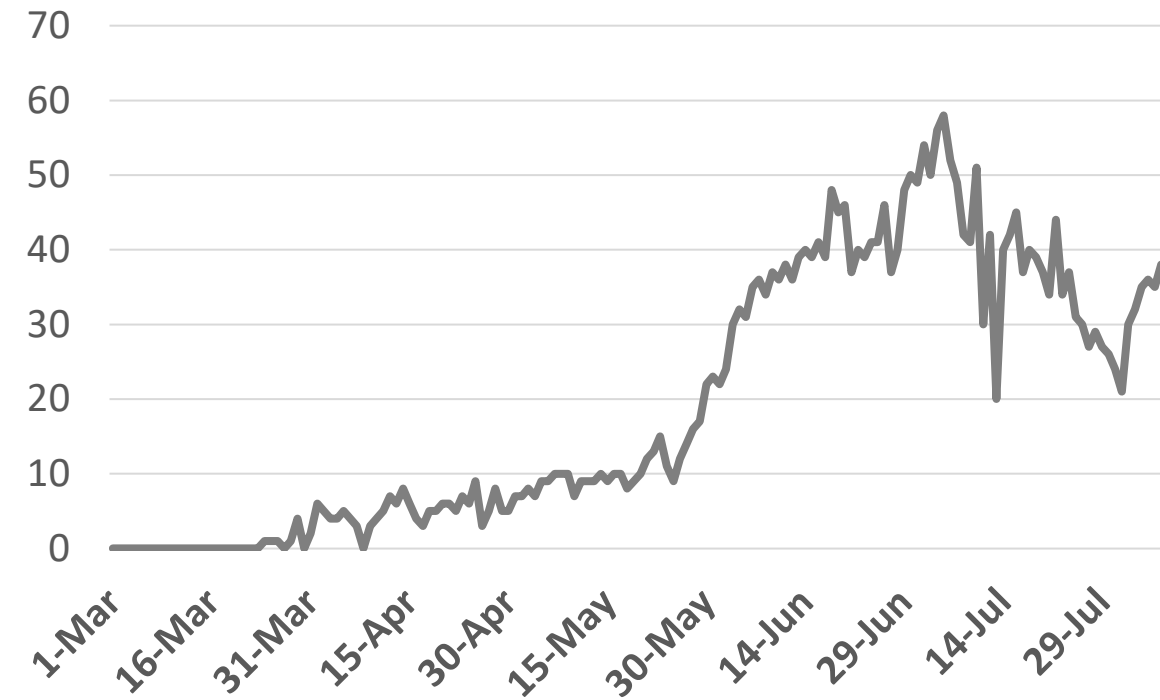
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



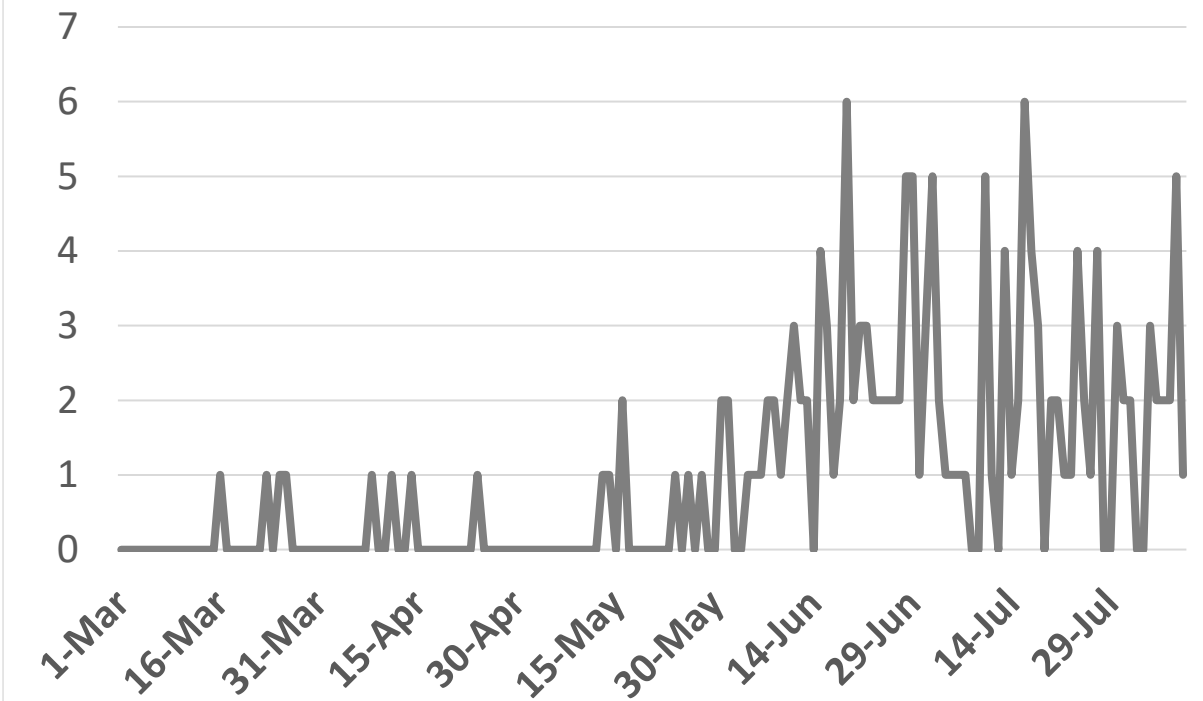
Source : National Emergency Crisis and Disaster Management Authority

KSA



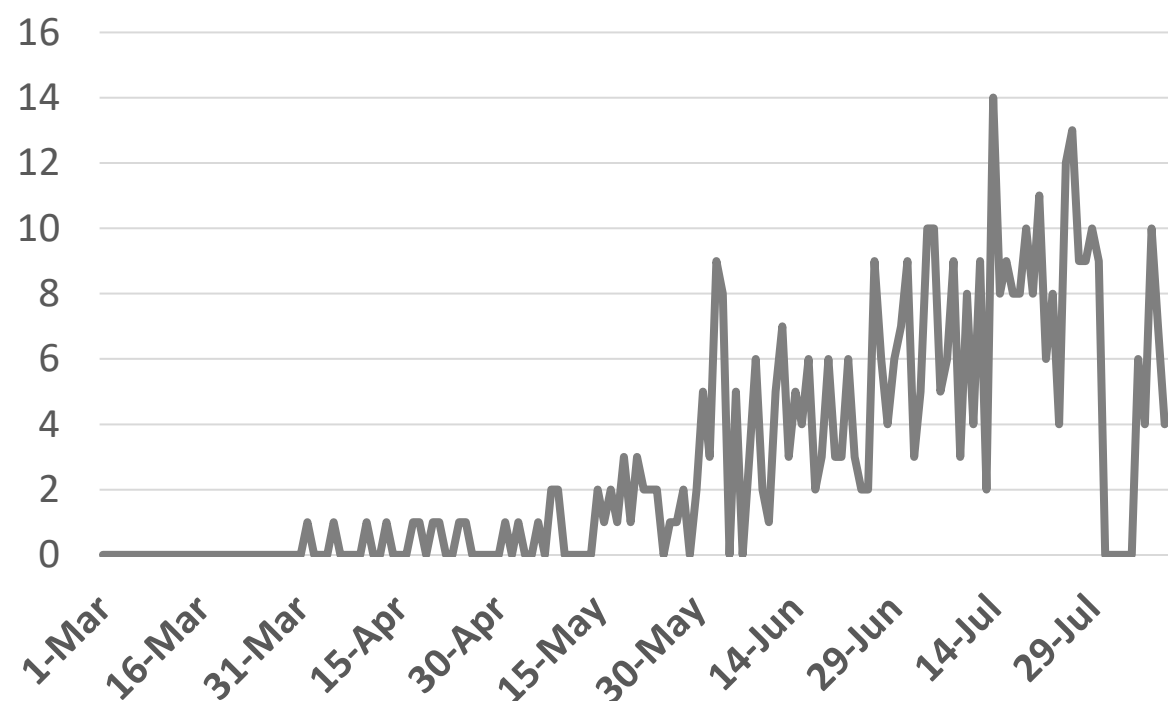
Source : KSA ministry of health

Bahrain



Source :WHO

Oman

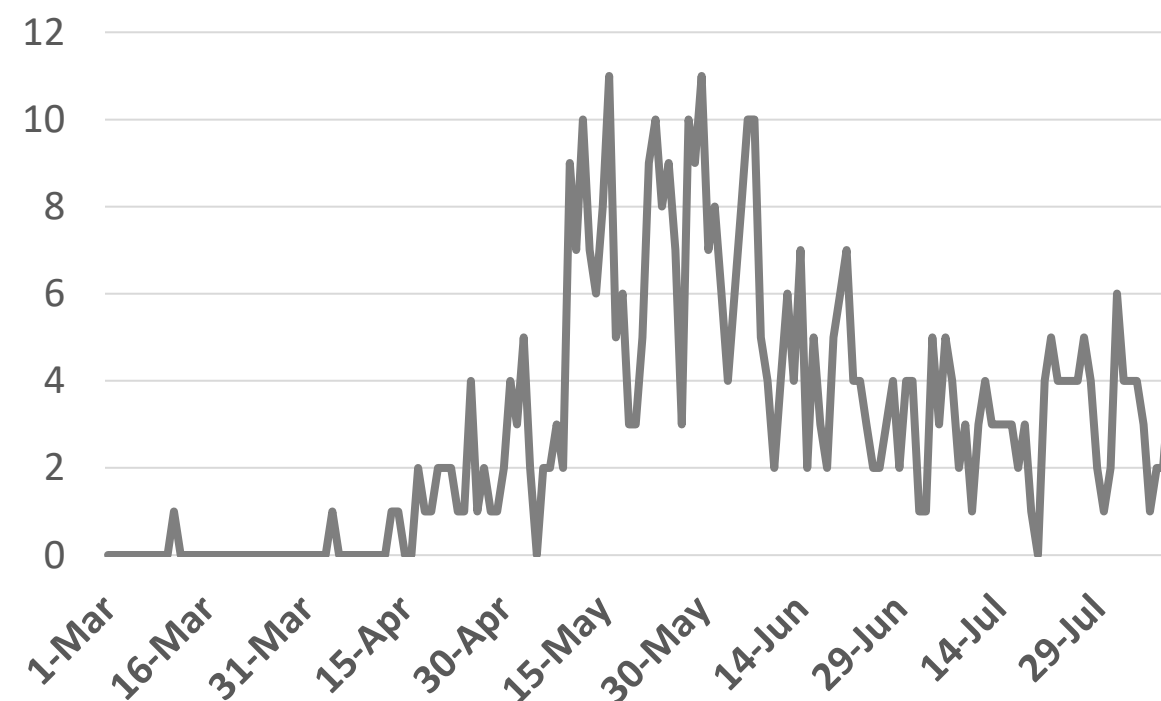


Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August

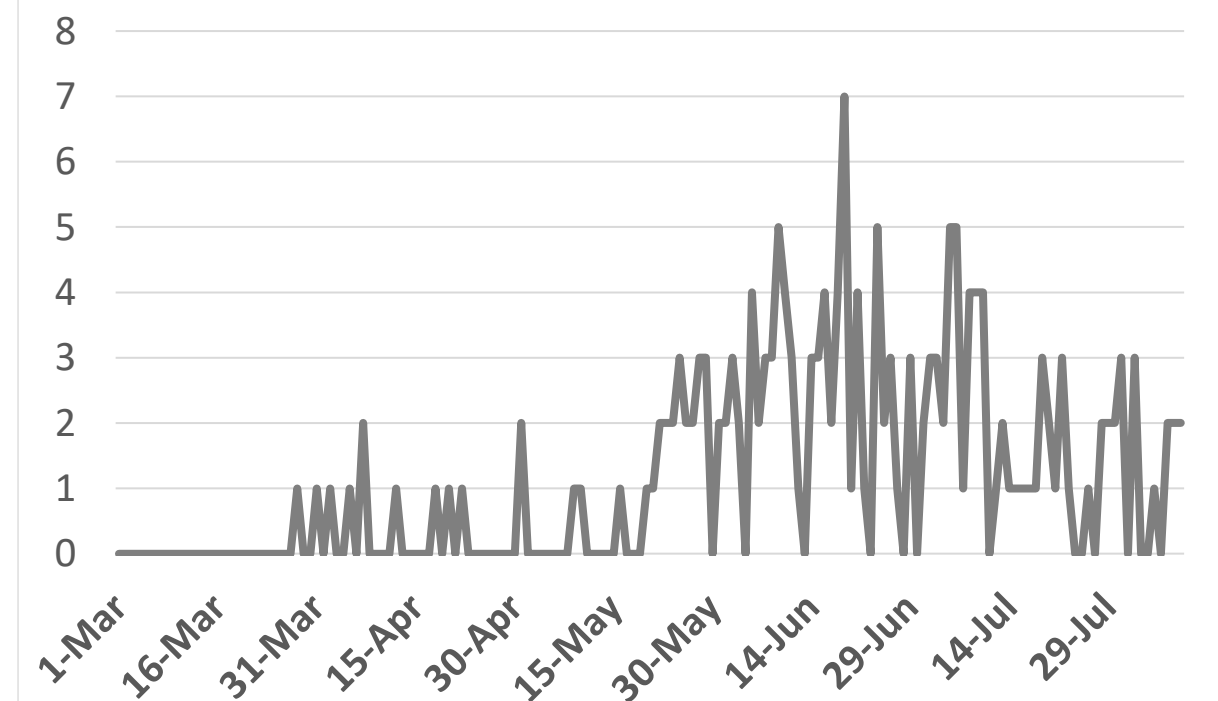
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health



Article 1

Unwavering Regulatory Safeguards for COVID-19 Vaccines

Published

07 August 2020 [JAMA](#)

- Vaccine development is a challenging attempt that carries substantial financial risk due to the high rate of failure during the development process. On June 30, 2020, the United States Food and Drug Administration (FDA) issued guidelines for the development and licensure of vaccines to prevent COVID-19.
- FDA is committed to ensuring that any vaccine is developed in line with all of FDA's quality standards and that its safety and effectiveness are verified before being authorized or licensed. FDA has recommended that the primary efficacy endpoint point estimate for a placebo-controlled efficacy trial should be at least 50%. To verify efficacy; trials should follow best practices for methodology such as randomized, double-blind designs with placebo control. In terms of safety, adequately powered trials are necessary to detect adverse events and to evaluate safety considerations concerning dosing.
- A vaccine needs to be widely deployed to achieve population-wide immunity. Therefore, the data derived from nonclinical and clinical studies must indicate that the vaccine is safe and effective for widespread use. FDA recognizes that the pandemic has disproportionately affected many populations and recommends that investigators ensure sufficient representation of ethnic minorities, older adults, and individuals with medical comorbidities in the clinical studies.
- It is important to decide before vaccine authorization or licensure about how post-market surveillance will be conducted to ensure that infrastructure is in place for pharmacovigilance. FDA platforms the Vaccine Adverse Event Reporting System and the Sentinel Initiative, coupled with existing federal collaborations on vaccine safety, can offer useful starting points for post-market surveillance.
- The work to develop COVID-19 vaccines is proof to not only scientific innovation but also the FDA's commitment to facilitate this effort. A safe and effective COVID-19 vaccine that meets or exceeds the FDA regulatory standards will provide important momentum for pandemic recovery.



Article 2

Published

Detection of Coronavirus Disease 2019 Viral Material on Environmental Surfaces of an Ophthalmology Examination Room

03 August 2020 [JAMA](#)

- This prospective observational study was conducted in Turkey on March 20, 2020, after the first officially confirmed COVID-19 case on March 11, 2020. A triage system was used to determine the risk of COVID-19 from asymptomatic patients presented for examination in an ophthalmology clinic. Samples were collected from the biomicroscope stage, slit lamp shield, phoropter, tonometer, and door handles twice daily and tested by RT-PCR. The first samples were collected before starting the daily examinations (at 8:30 a.m.) and the second samples were collected after the last patient had left the room (at 5:00 p.m.).
- Thirty-one visitors entered the room. Of those, 22 underwent ophthalmic examinations and 9 were companions. Fourteen samples were collected from the surfaces in the examination room. Seven samples that were taken before starting the examinations had negative results whereas 5 of 7 samples taken after the last patient had left the room had negative results. Two samples that were collected from the slit lamp shield and phoropter, were found to be positive for COVID-19.
- The results showed that presence of viral material in a circle 1 m in diameter around where the patients sat. This study provided objective data about the potential for asymptomatic patients, those accompanying them, or health care personnel in an eye examination room to leave viral material on the surfaces tested. Future studies are needed to determine the clinical relevance of these findings.



Article 3

Vitamin D for COVID-19: A Case to Answer?

Published

03 August 2020 [THE LANCET](#)

This paper reviewed the literature regarding the potential role for vitamin D for COVID-19 patients through Meta-analyses of randomized controlled trials conducted from 2007–2020 to reveal the protective effects of vitamin D against acute respiratory infections.

Findings

- Laboratory data relating to effects of vitamin D on host responses to SARSCoV-2 are scarce, but one study that screened four compound libraries for antiviral activity, reported an inhibitory effect of the active vitamin D metabolite 1,25-dihydroxyvitamin D in human nasal epithelial cells infected with SARS-CoV-2
- Recently, researchers have shown that airway diseases are associated with dysregulated vitamin D metabolism. Two prospective studies can provide insights into the potential for reverse causality, but results from those published to date are conflicting: one retrospective longitudinal study from Israel reported independent associations between low pre-pandemic 25(OH)D levels and subsequent incidence and severity of COVID-19, but a similar study in the UK showed no such associations.
- Recent hospital-based treatment trials may prove challenging to detect a signal for vitamin D supplementation in severe COVID-19 for two reasons:
 - Patients tend to present to hospital in the hyperinflammatory stage of the disease, so it might be too late for them to benefit from any antiviral effects induced by vitamin D supplementation.
 - It could be hard to show the effect of a micronutrient over and above dexamethasone, which has potent anti-inflammatory actions and now represents the standard of care in severe disease.

