

SCIENTIFIC RESEARCH MONITORING ON COVID-19

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 200)

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



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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Treatment

Extracorporeal Membrane Oxygenation for Severe Acute Respiratory Distress Syndrome Associated with COVID-19: A Retrospective Cohort Study

Public Health Response

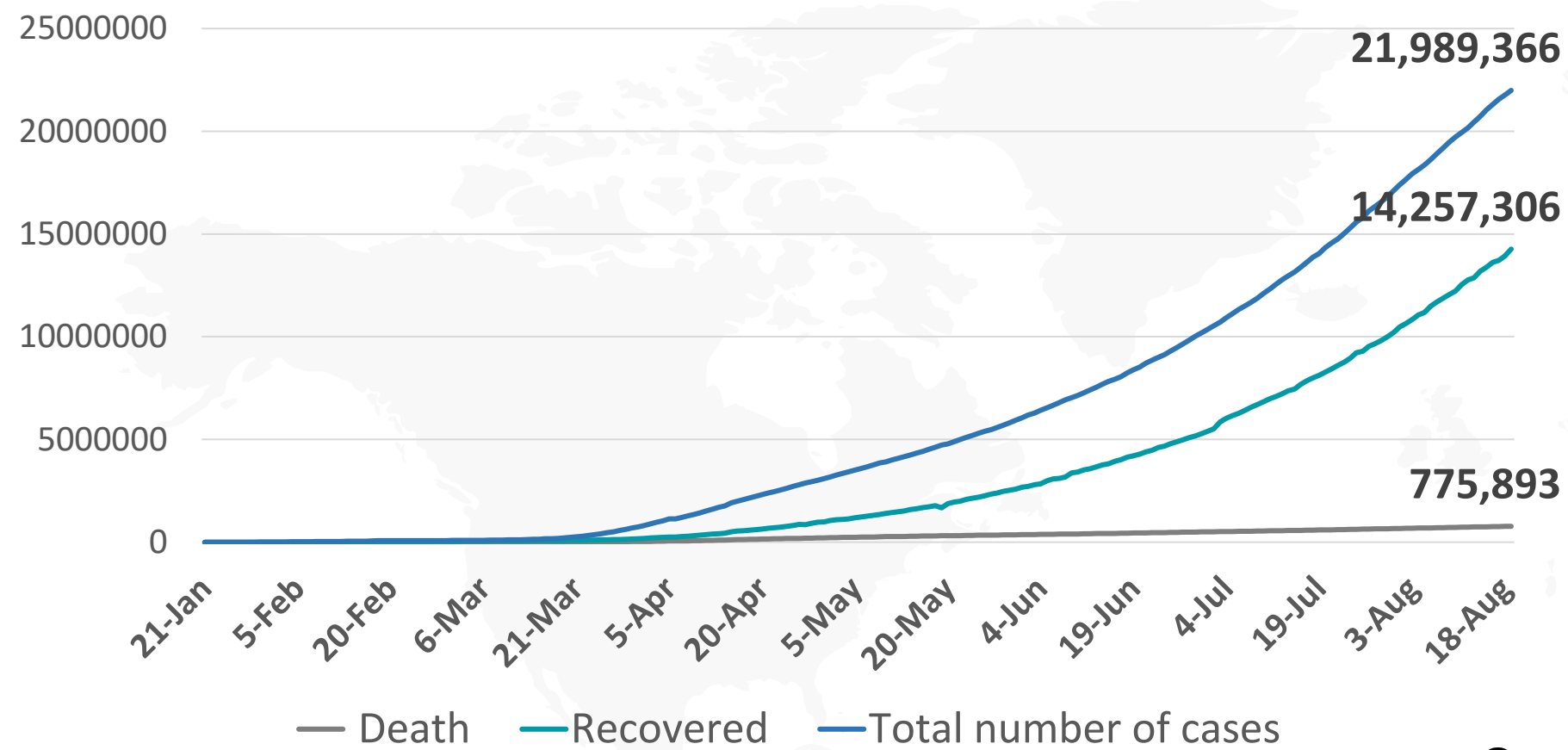
The EVALI Outbreak and Vaping in the COVID-19 Era

Treatment

Outcomes Associated With Use of a Kinin B2 Receptor Antagonist Among Patients with COVID-19



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)

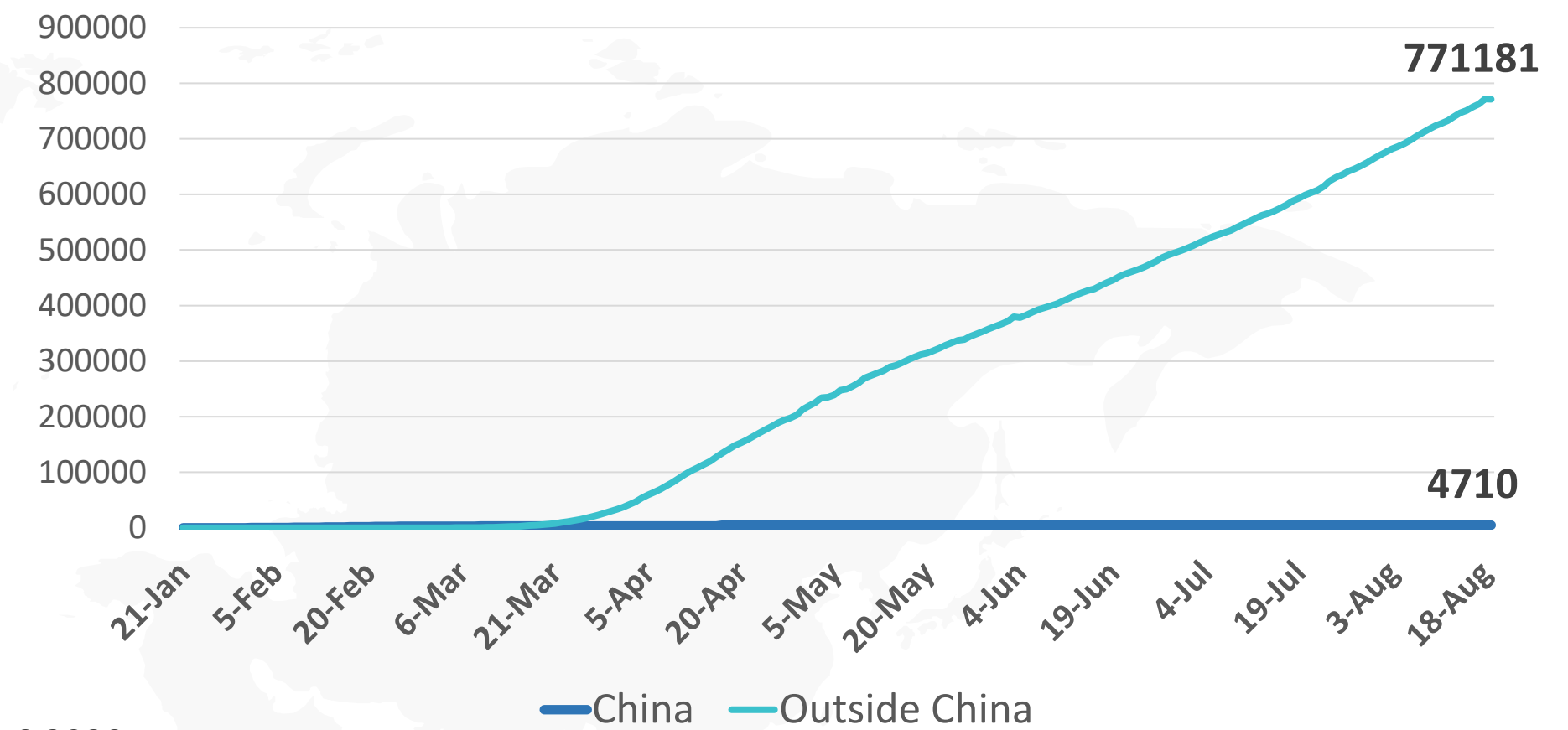


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

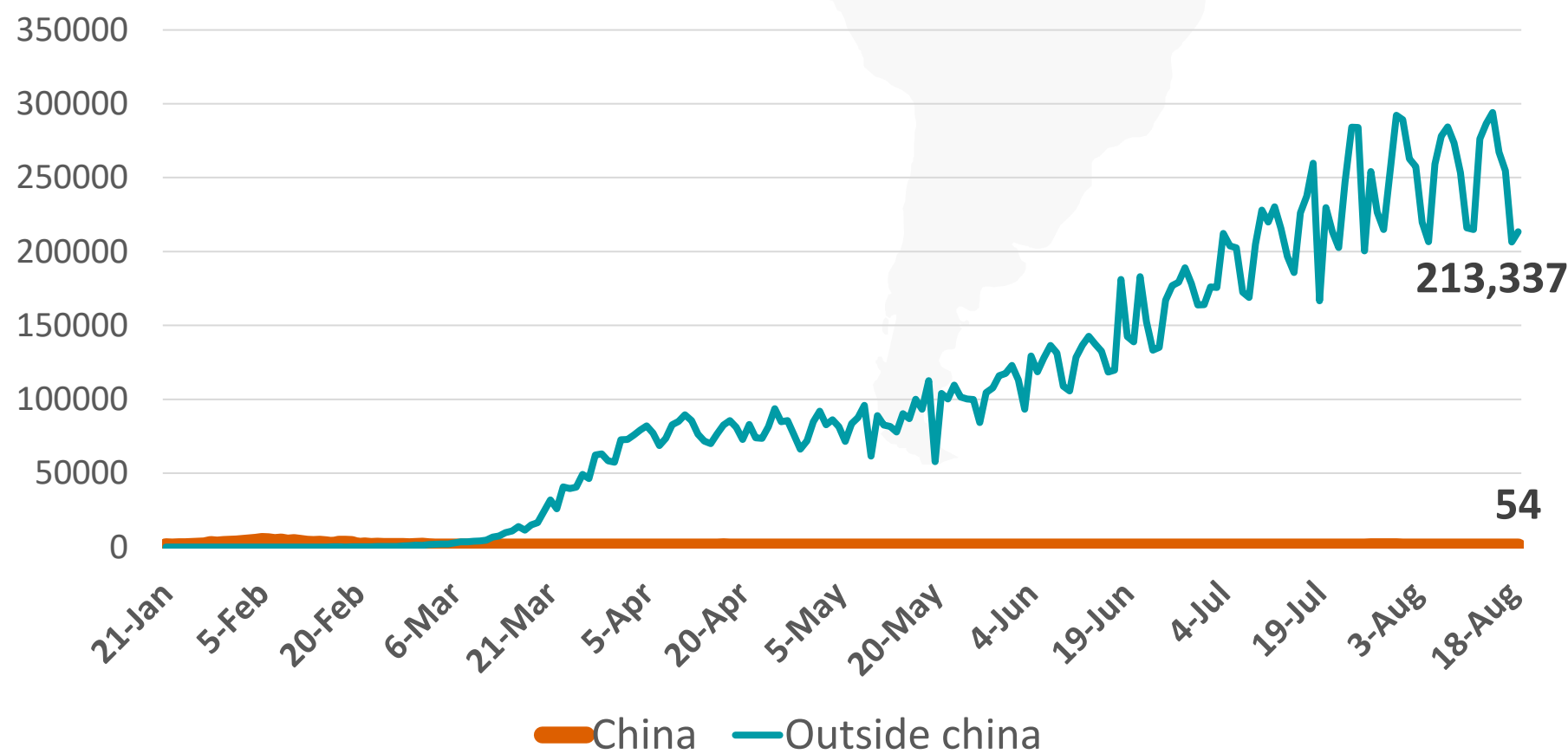


Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)

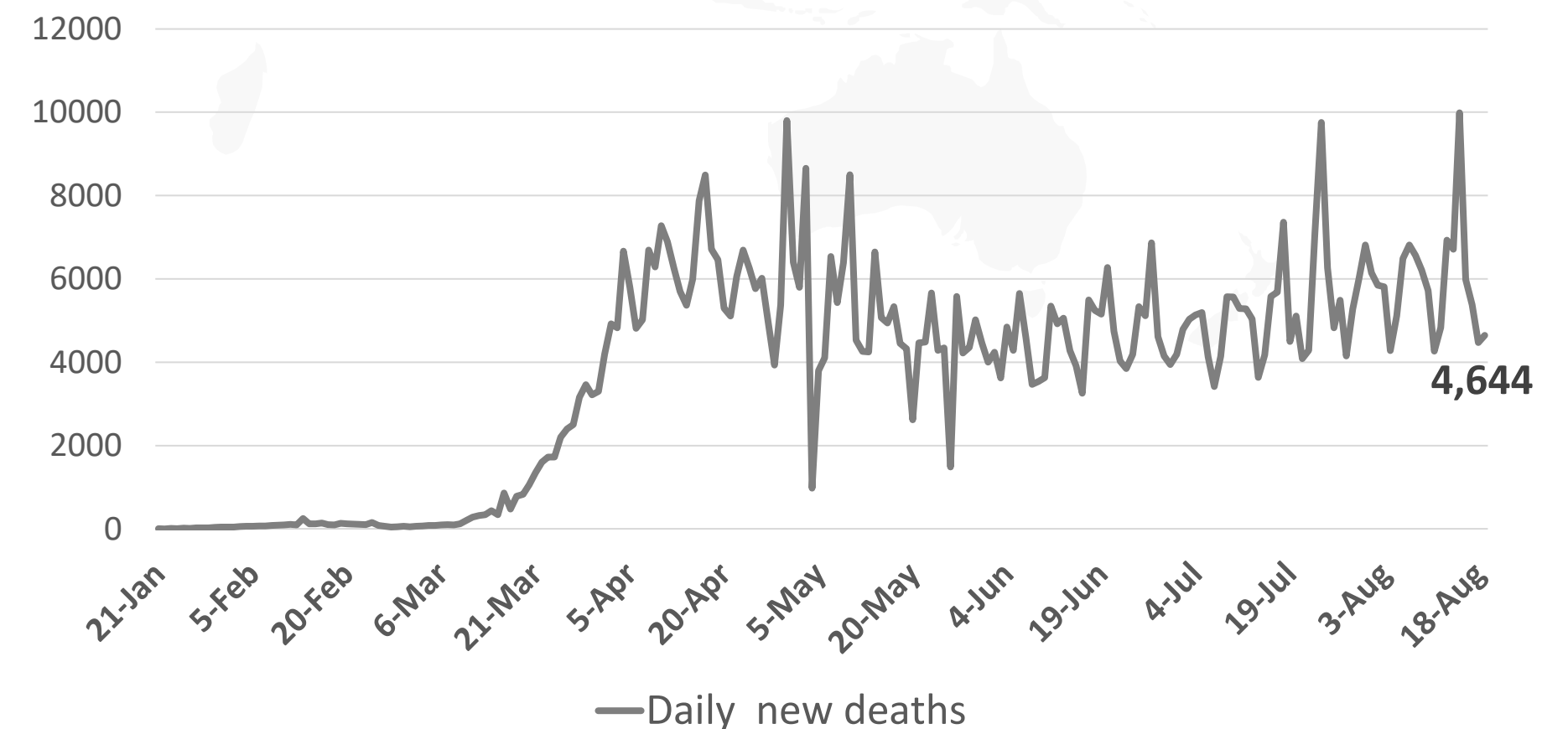
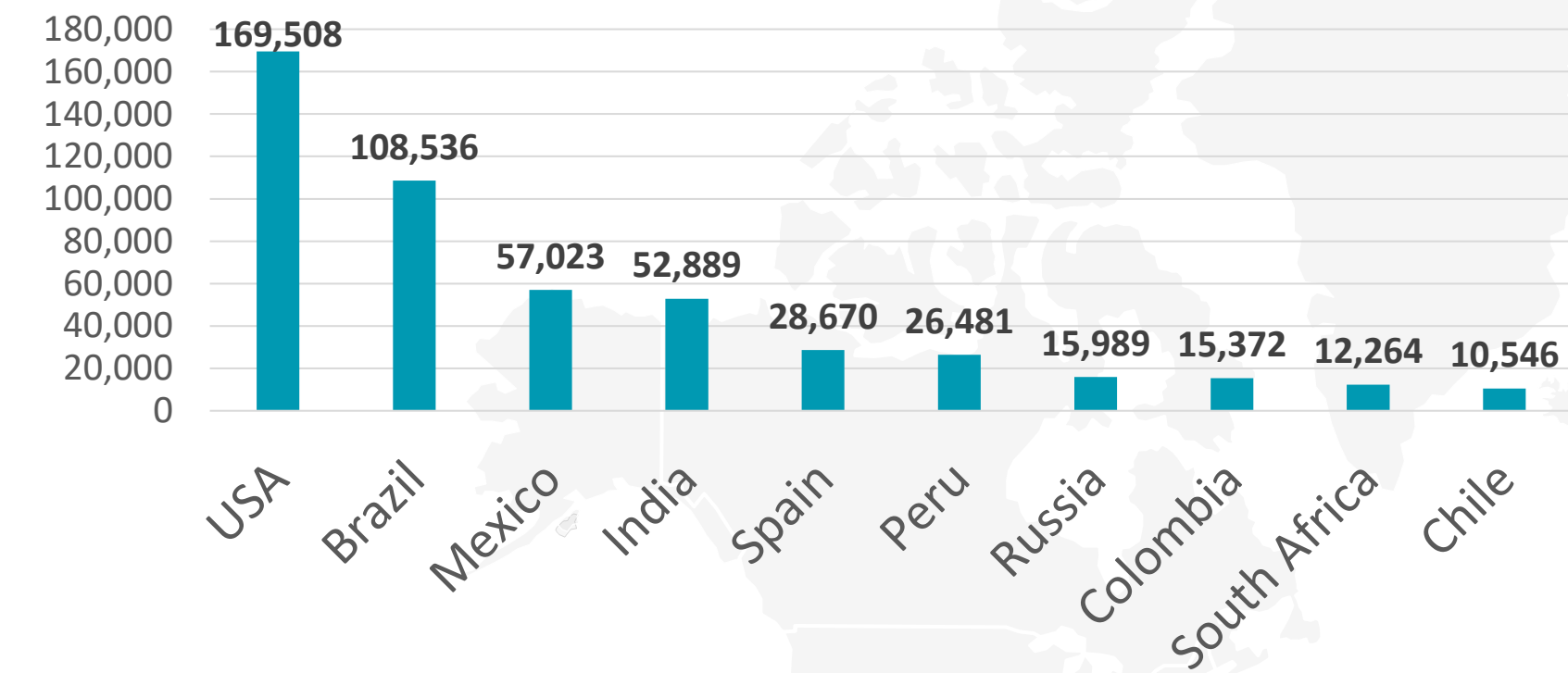
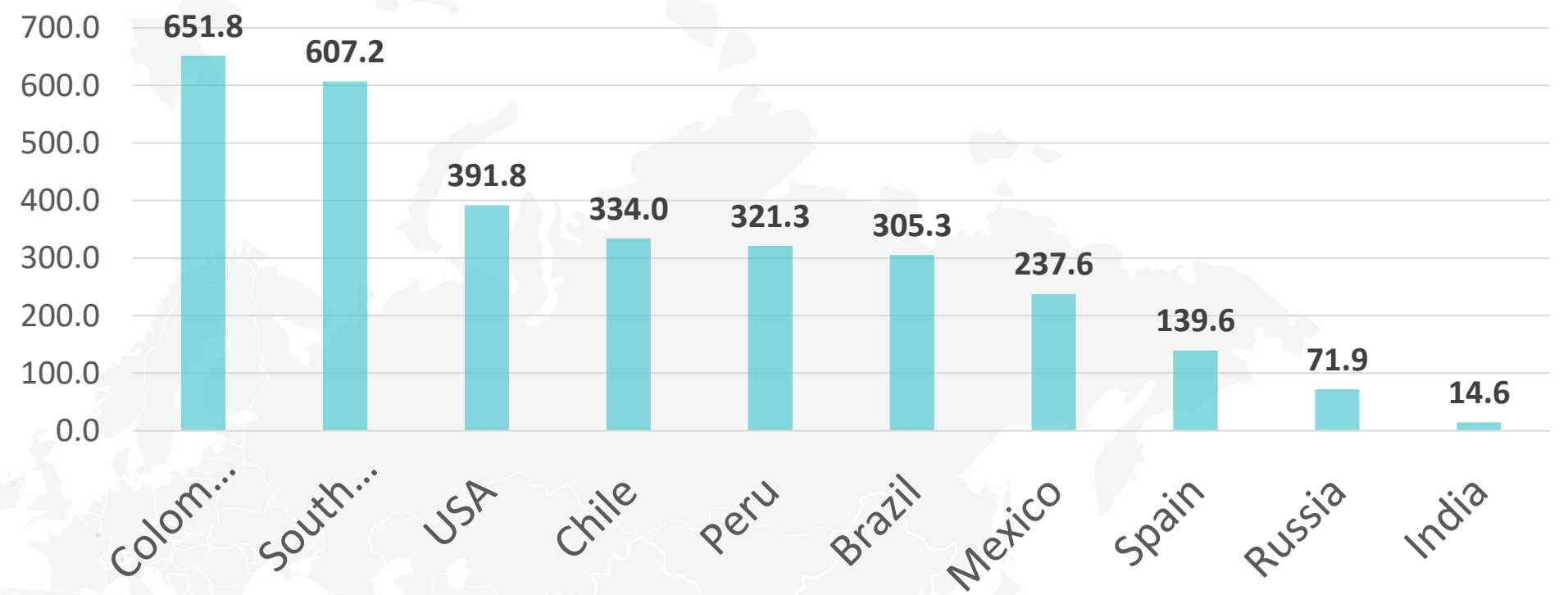


Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

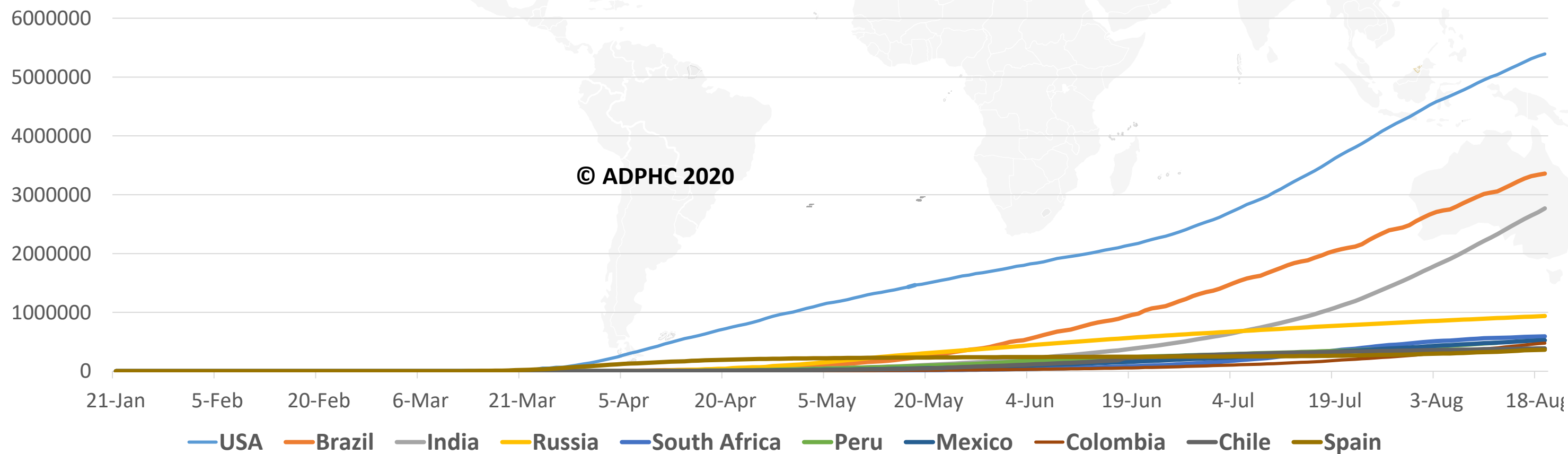
TOTAL DEATHS



DEATHS PER MILLION

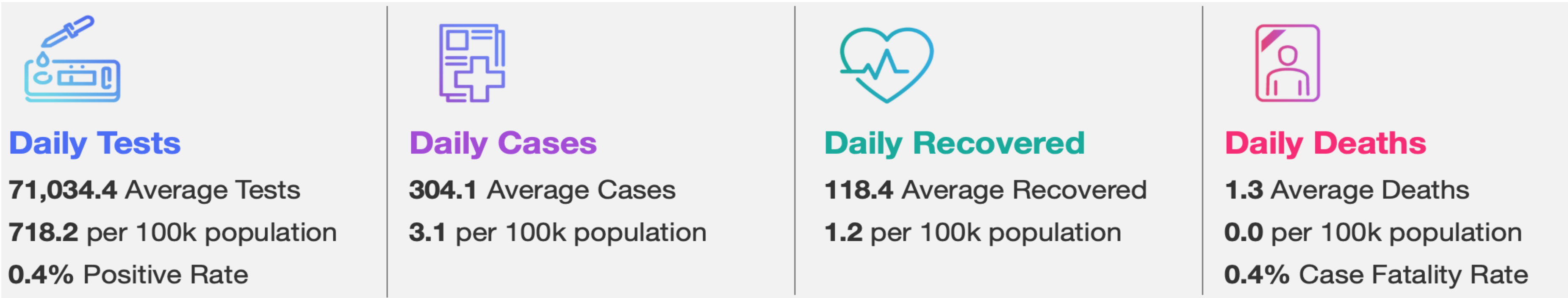


TOTAL INFECTED CASES



USA	5,393,138
Brazil	3,359,570
India	2,767,273
Russia	937,321
South Africa	592,144
Peru	541,493
Mexico	525,733
Colombia	476,660
Chile	388,855
Spain	364,196

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

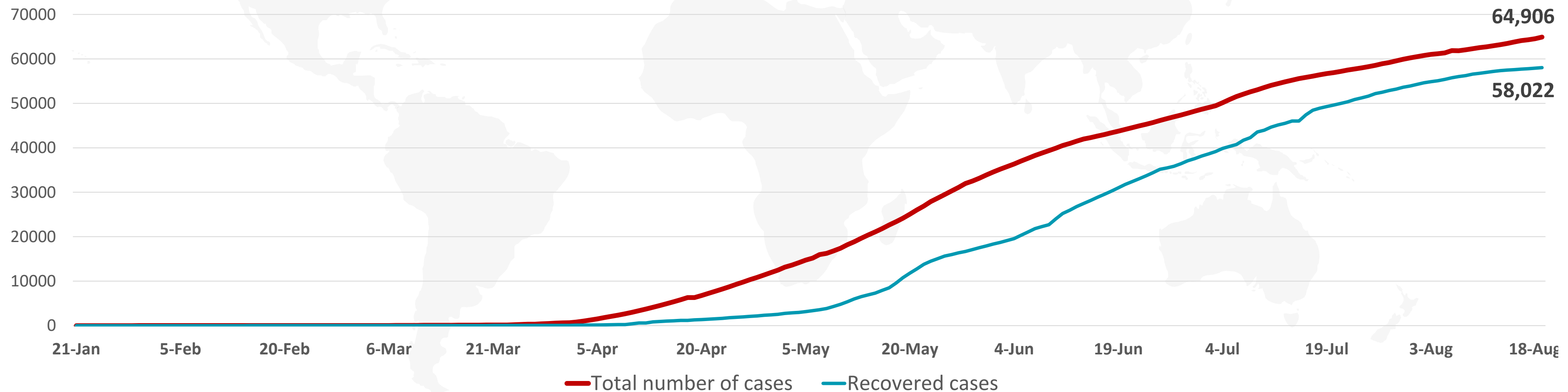
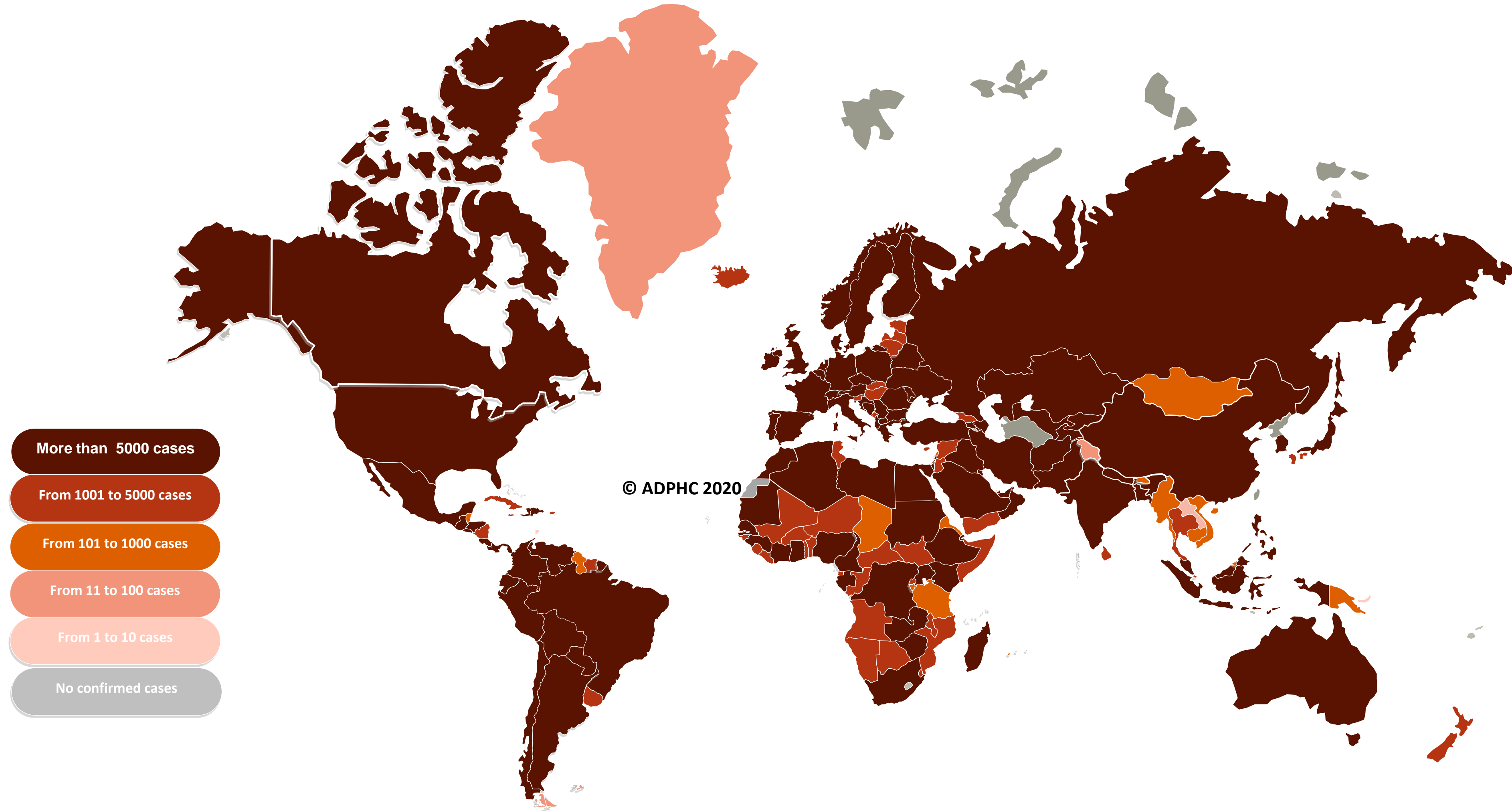


Figure 7A : Global Distribution of COVID-19 Cases



More than 5000 cases

From 1001 to 5000 cases

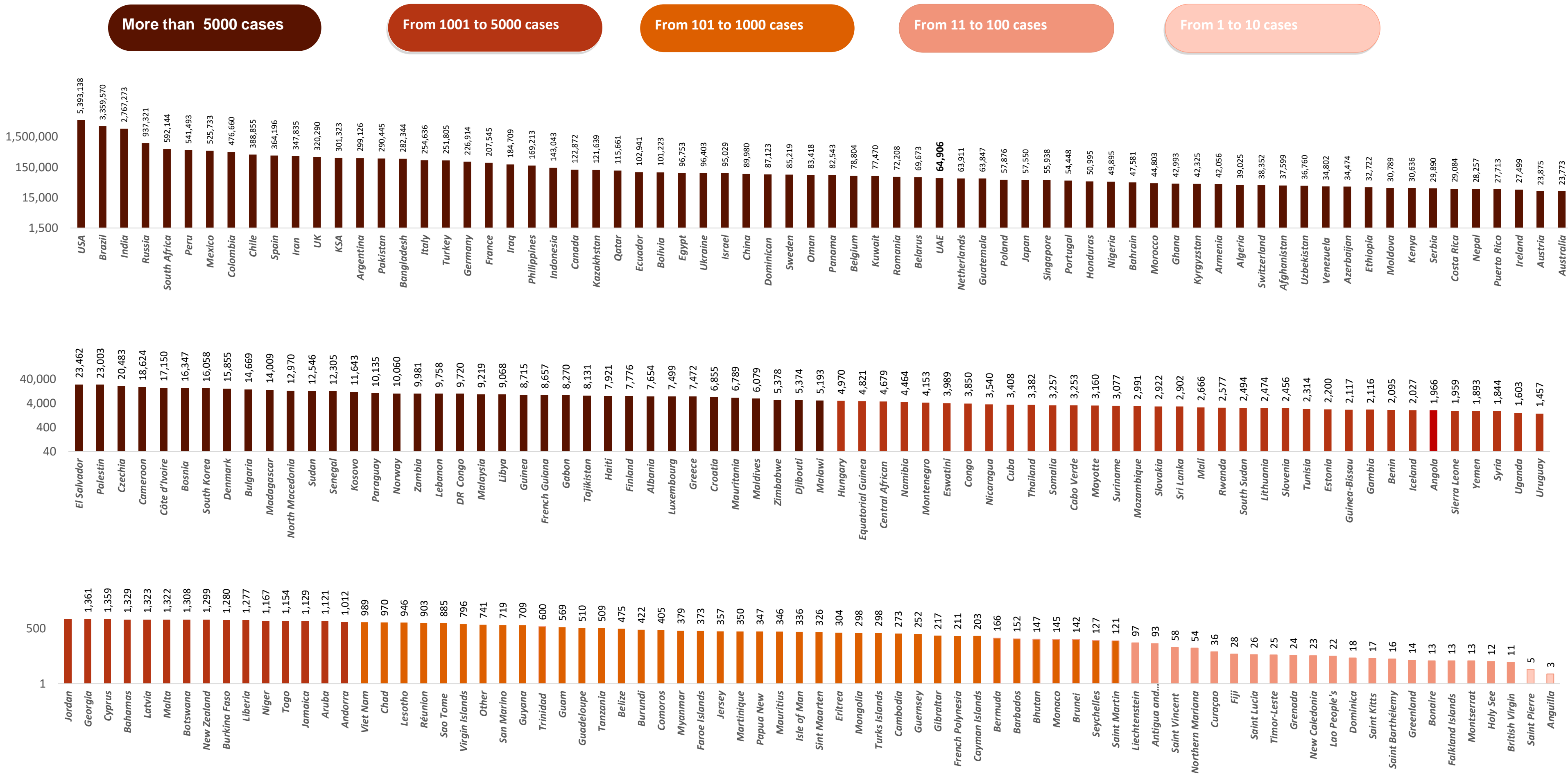
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

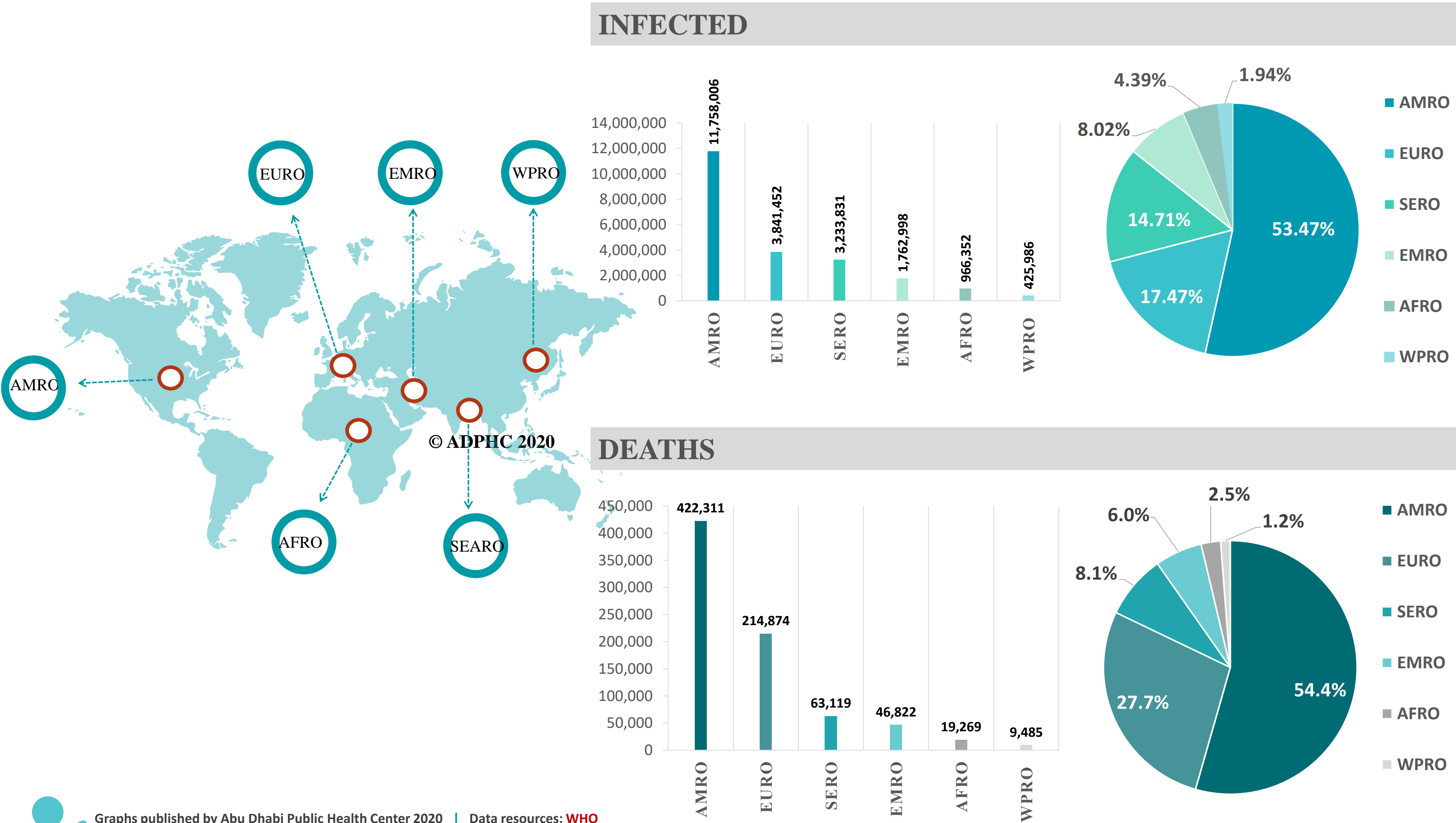
No confirmed cases

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



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

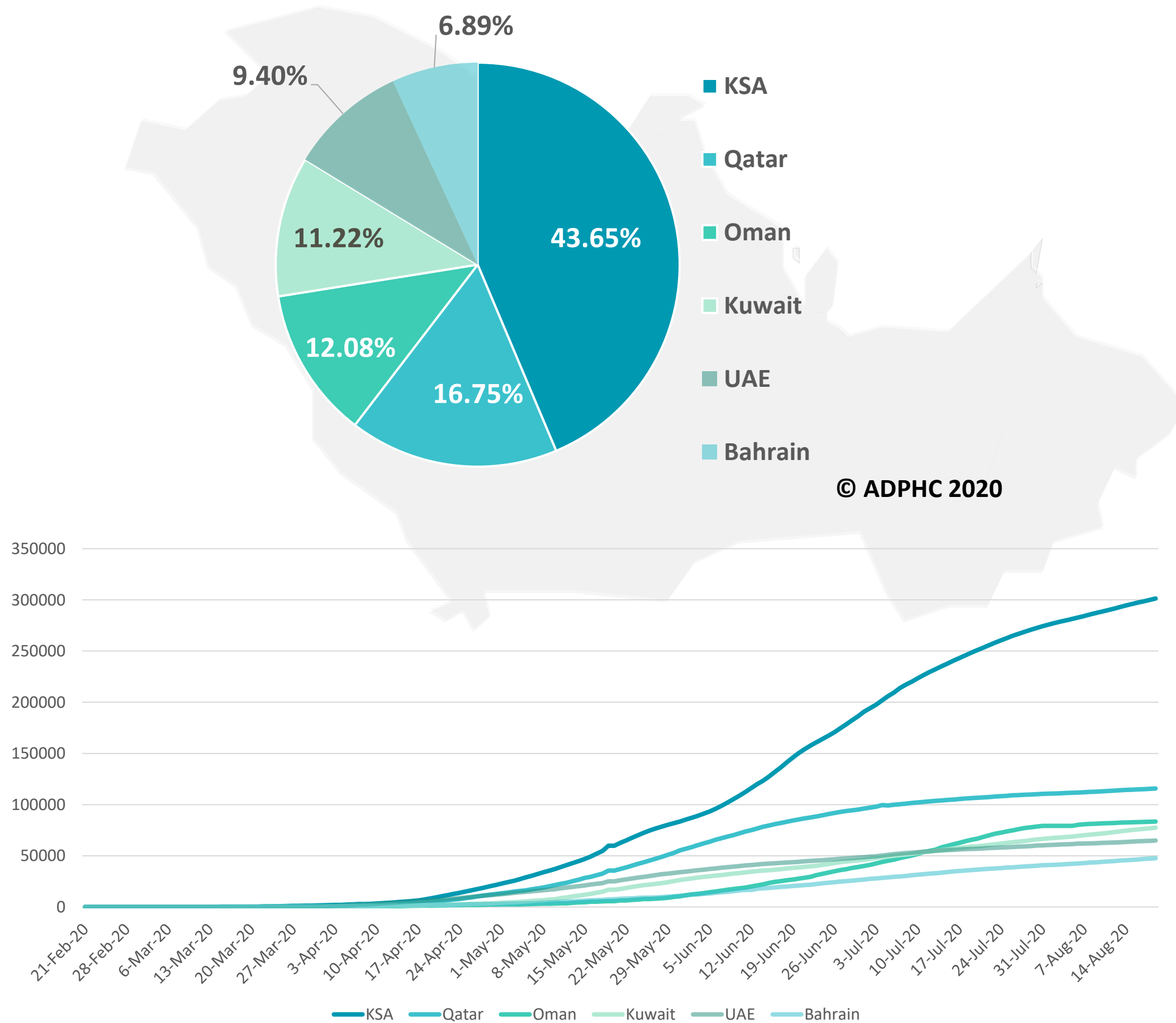
Figure 8: Global Distribution of COVID-19 Cases per Region



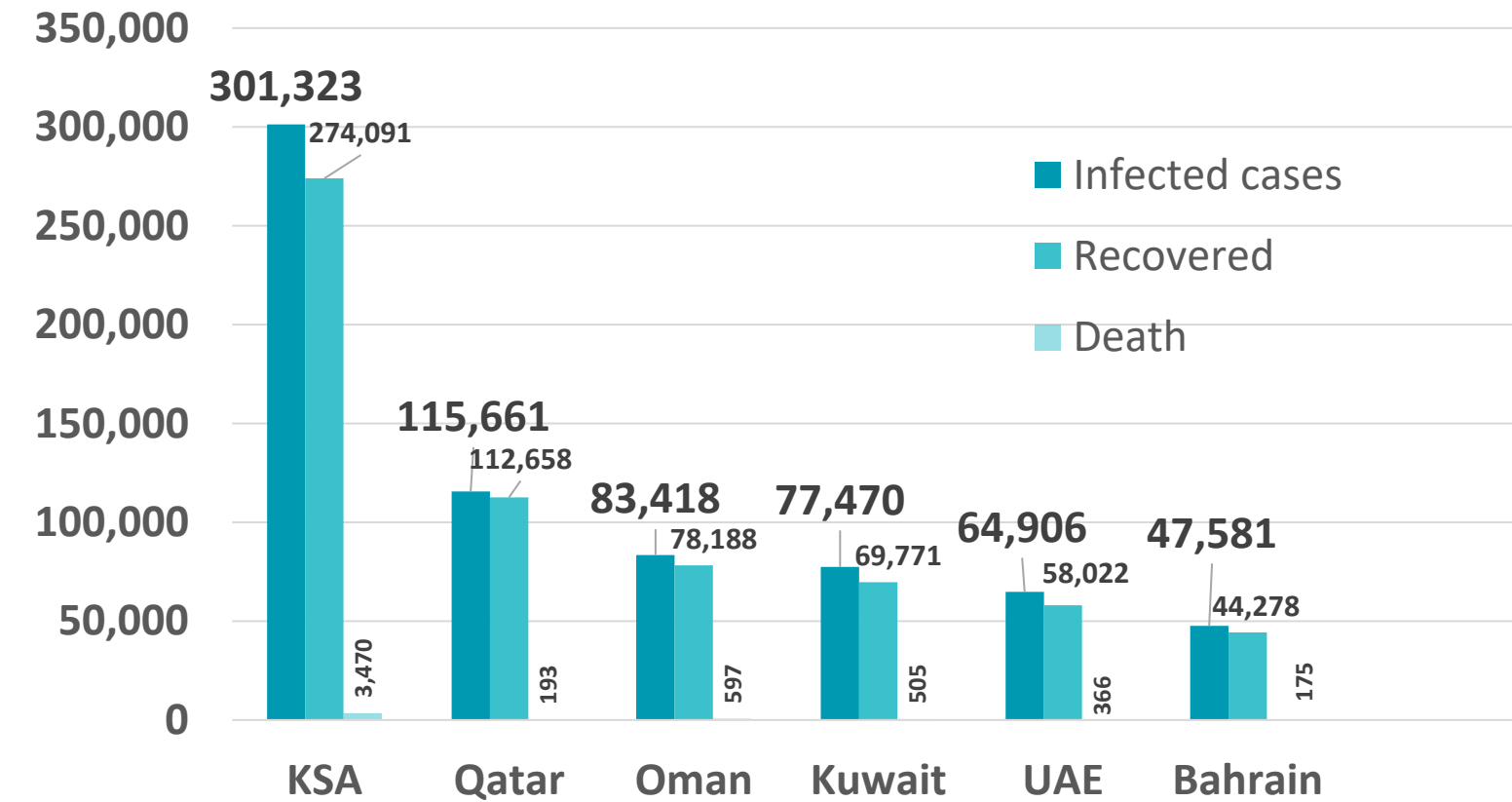
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: [WHO](https://www.who.int)

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

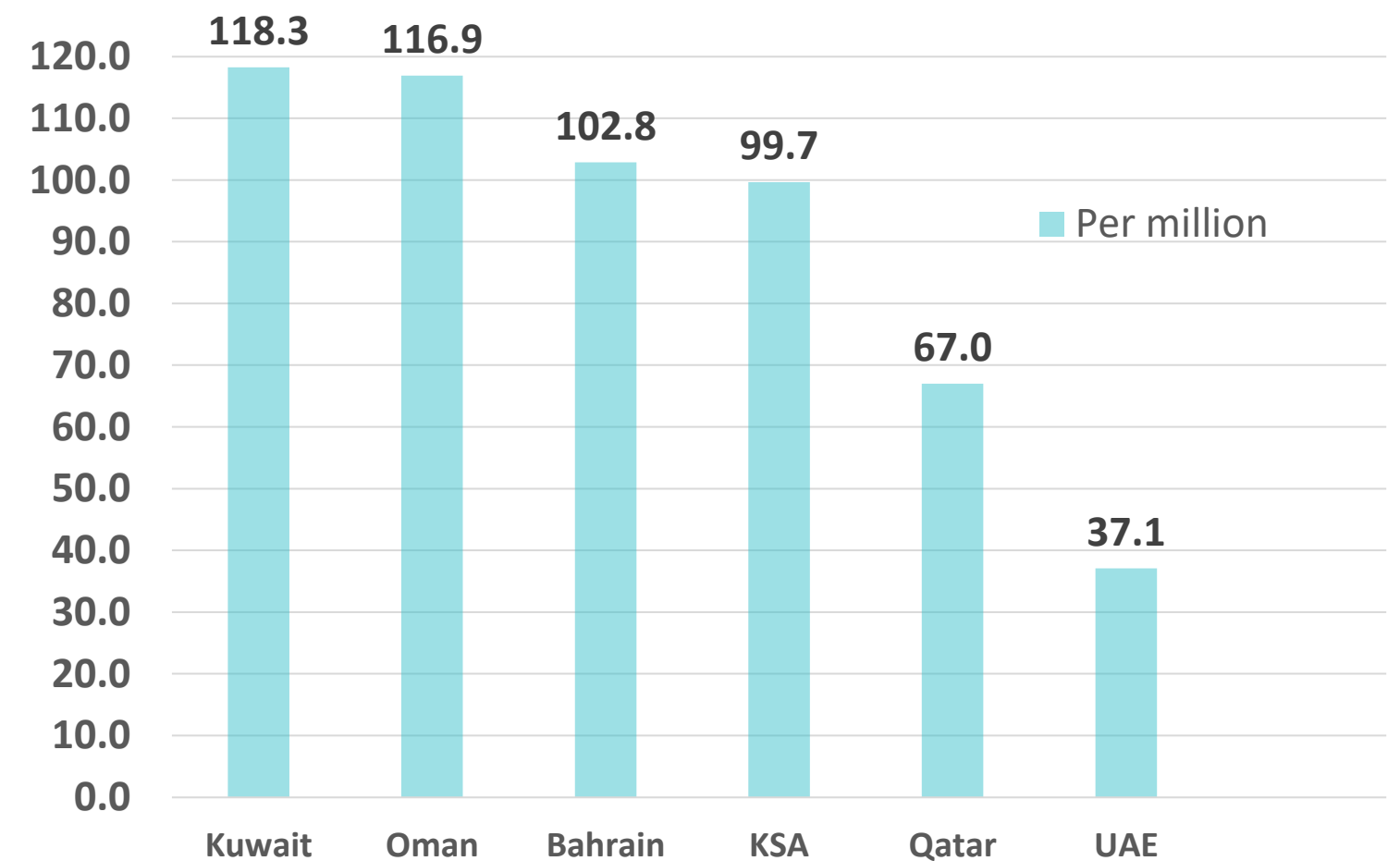
TOTAL NUMBER OF INFECTED CASES



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



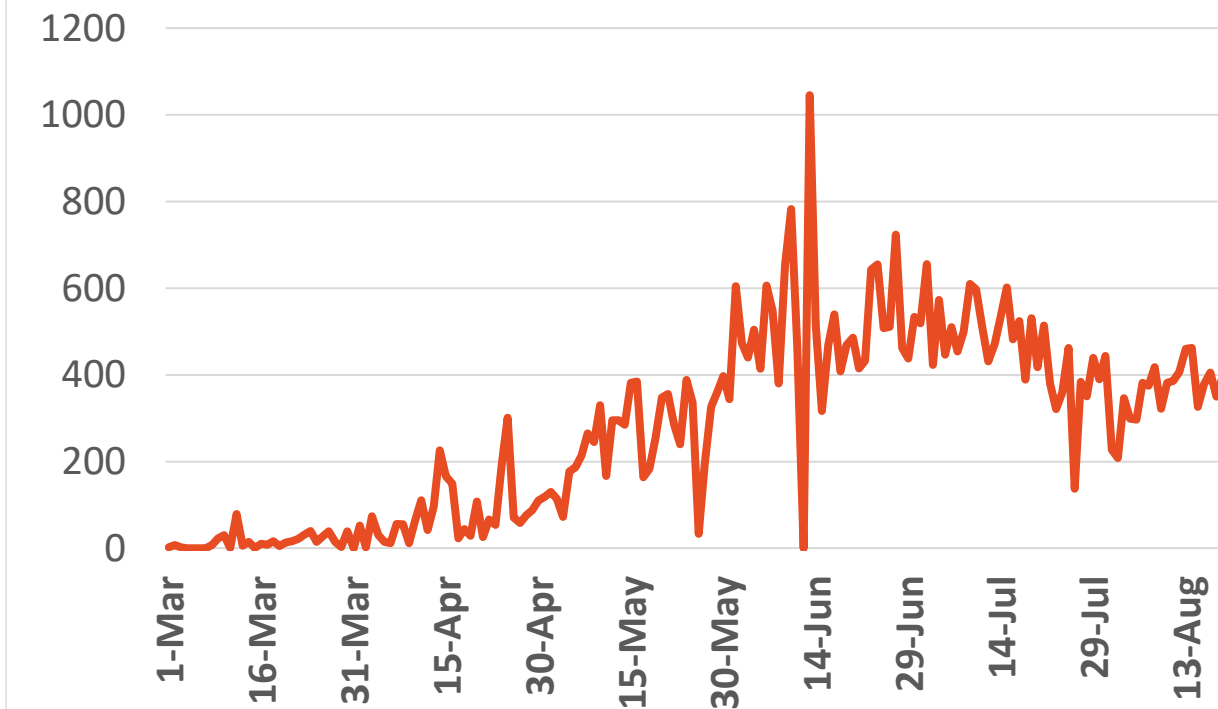
Source : National Emergency Crisis and Disaster Management Authority

KSA



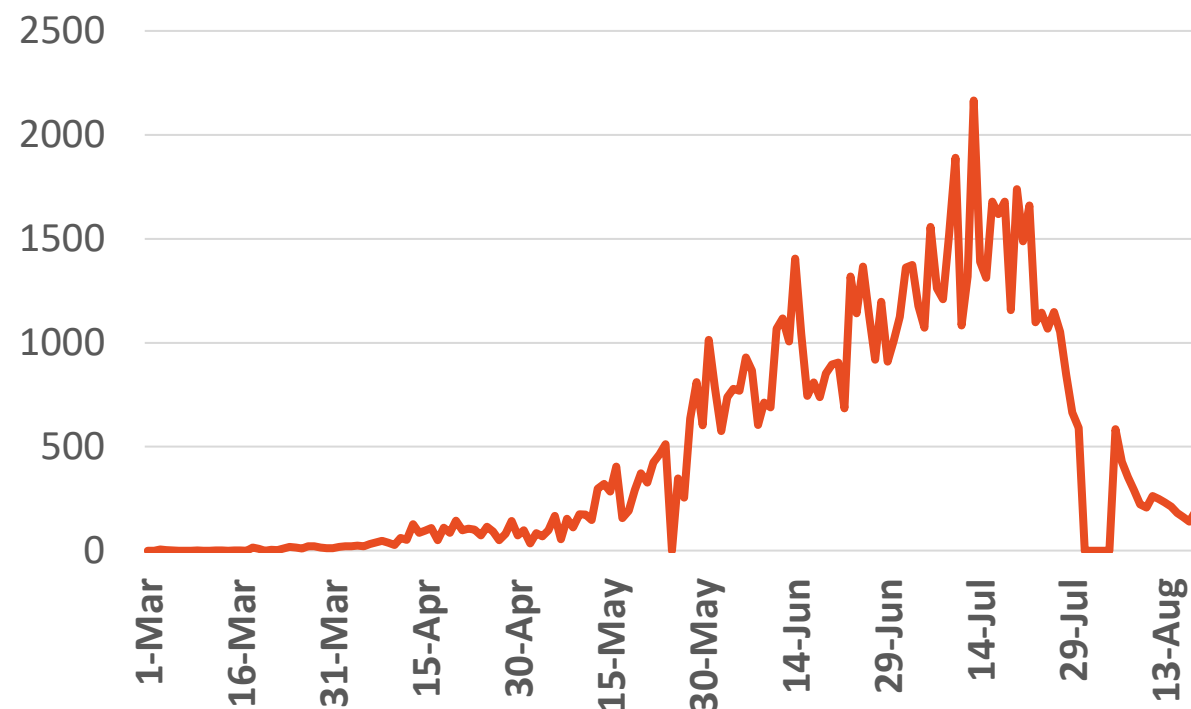
Source : KSA ministry of health

Bahrain



Source :WHO

Oman

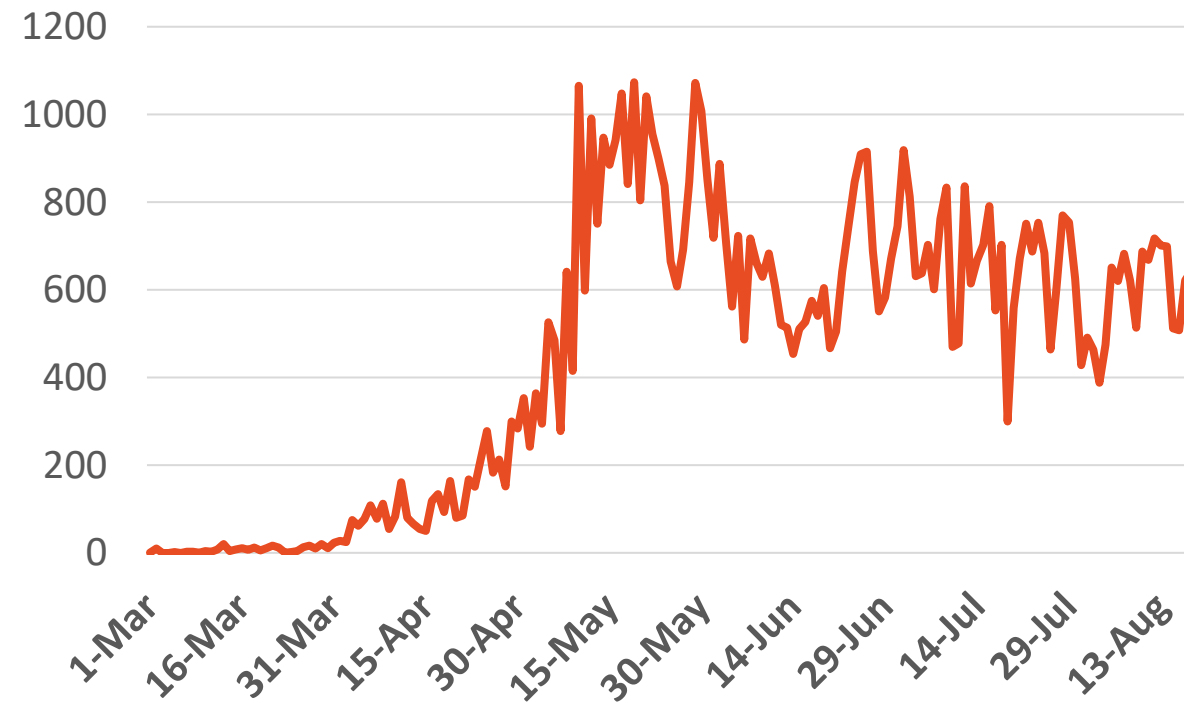


Source :Oman ministry of health

No announced statistic data from 31 July to 4 August

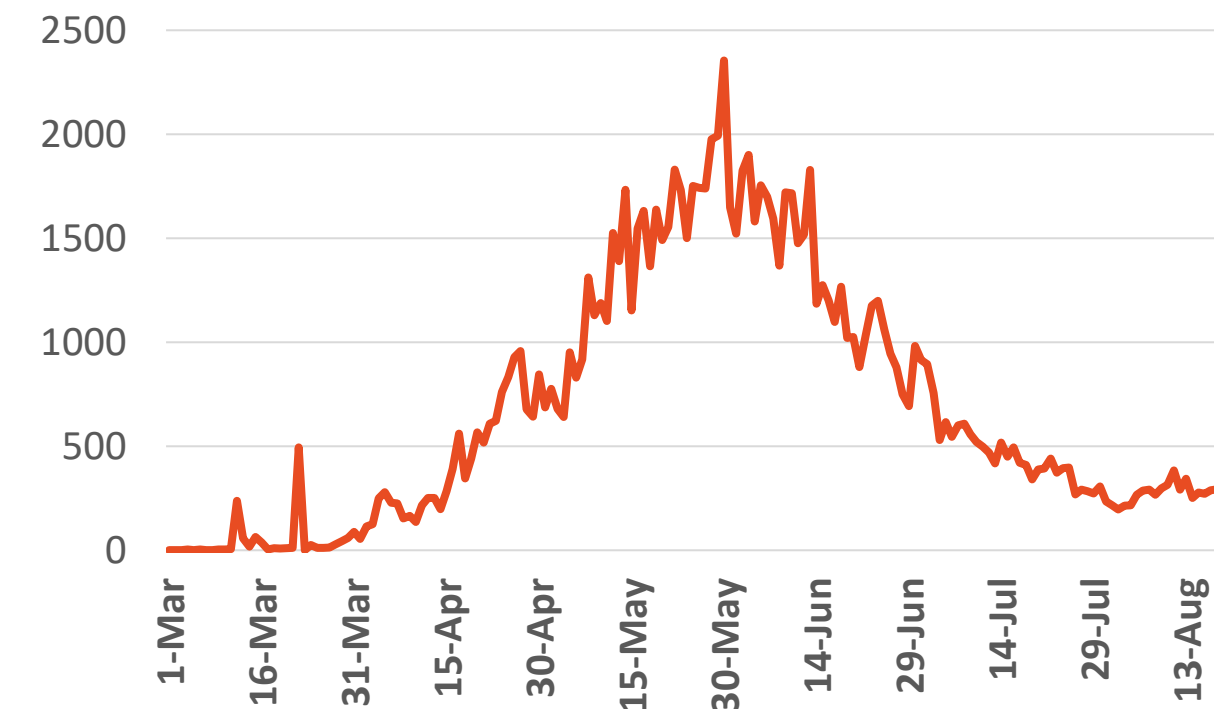
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health



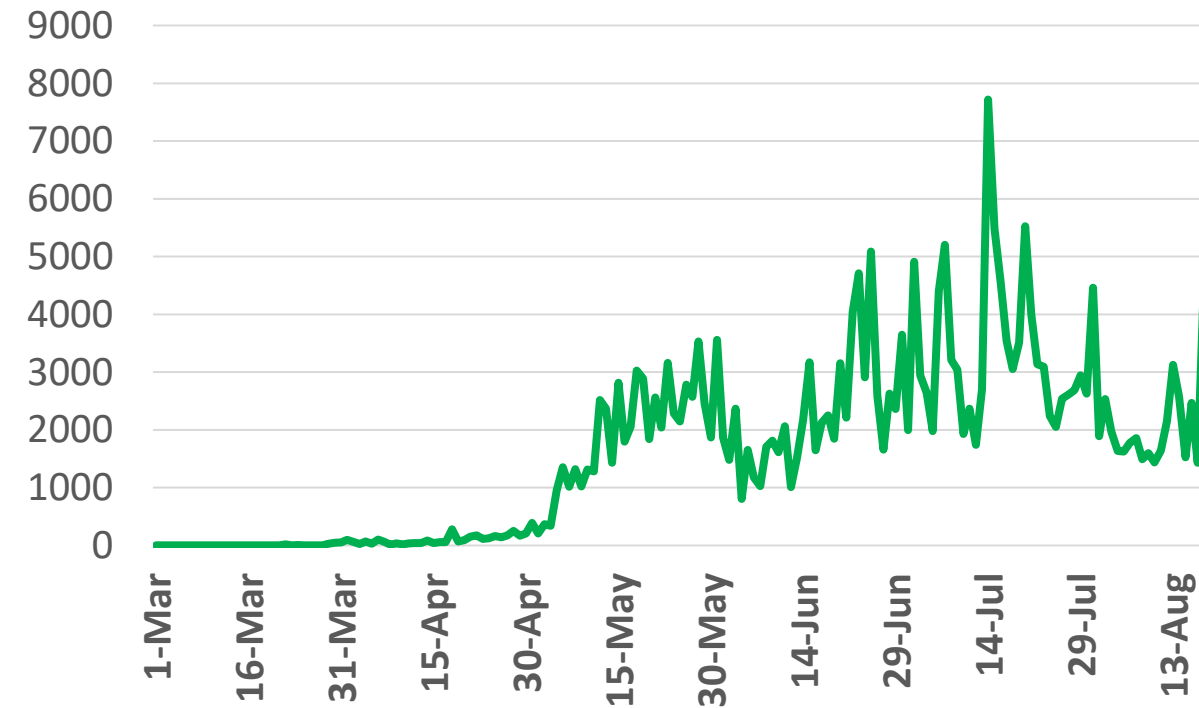
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE



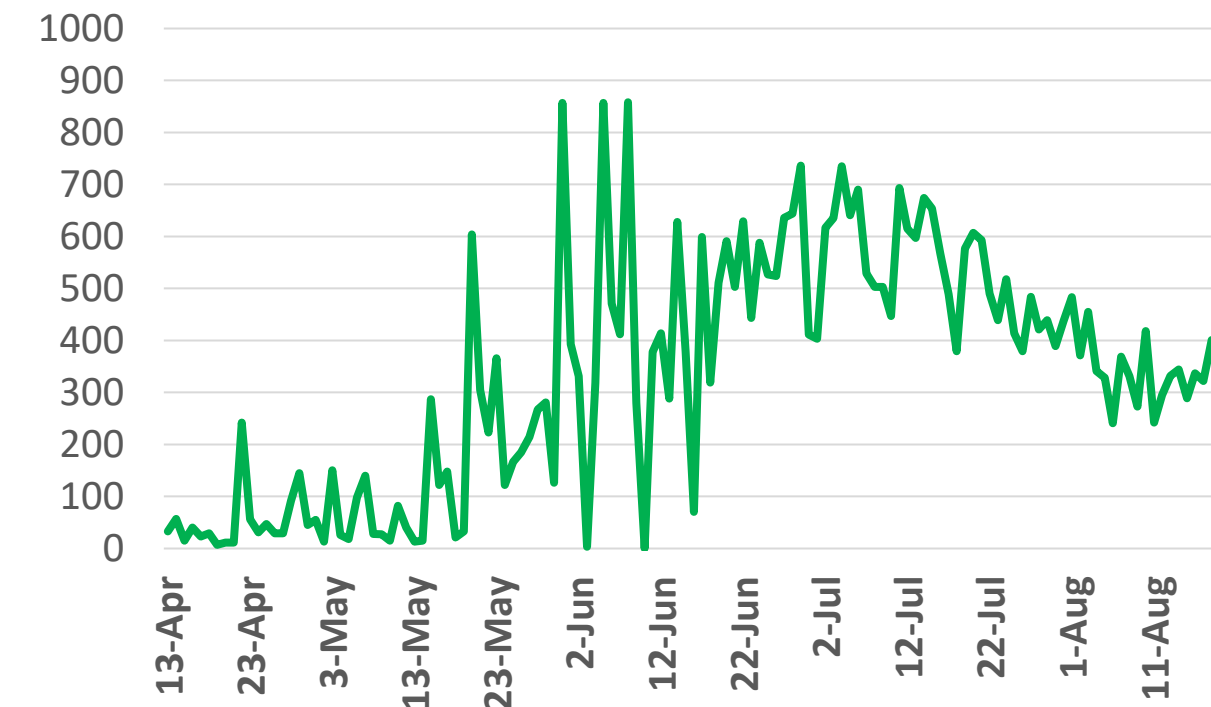
Source : National Emergency Crisis and Disaster Management Authority

KSA



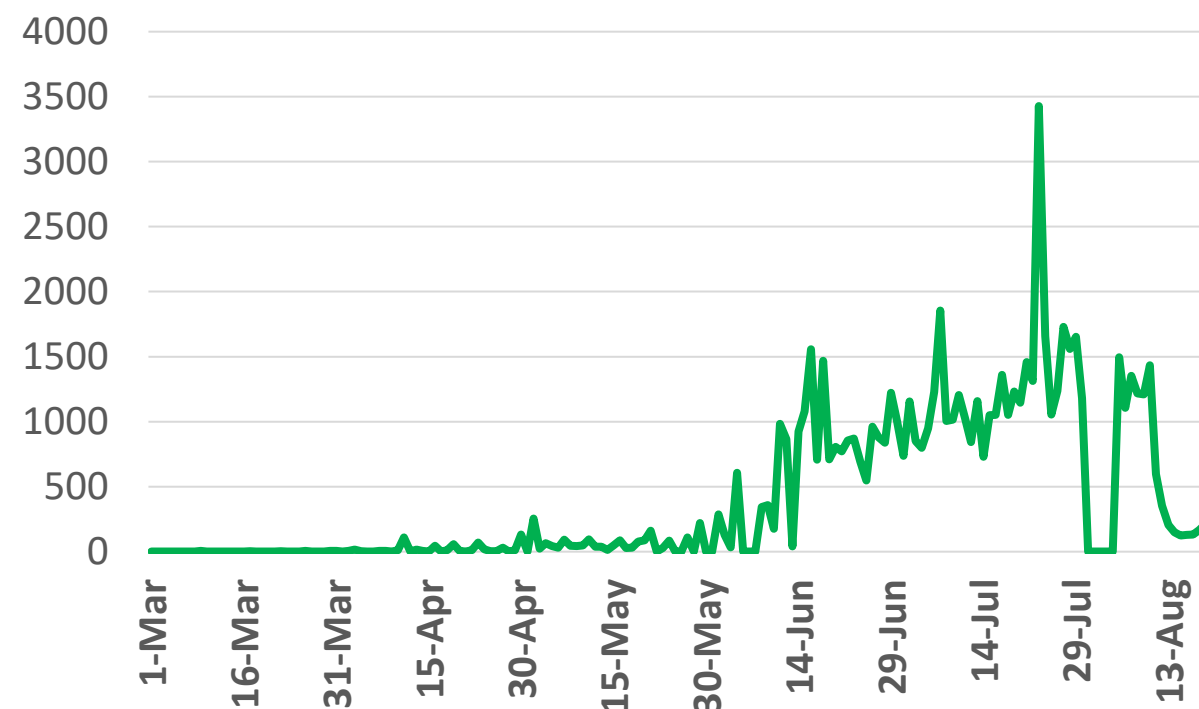
Source : KSA ministry of health

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

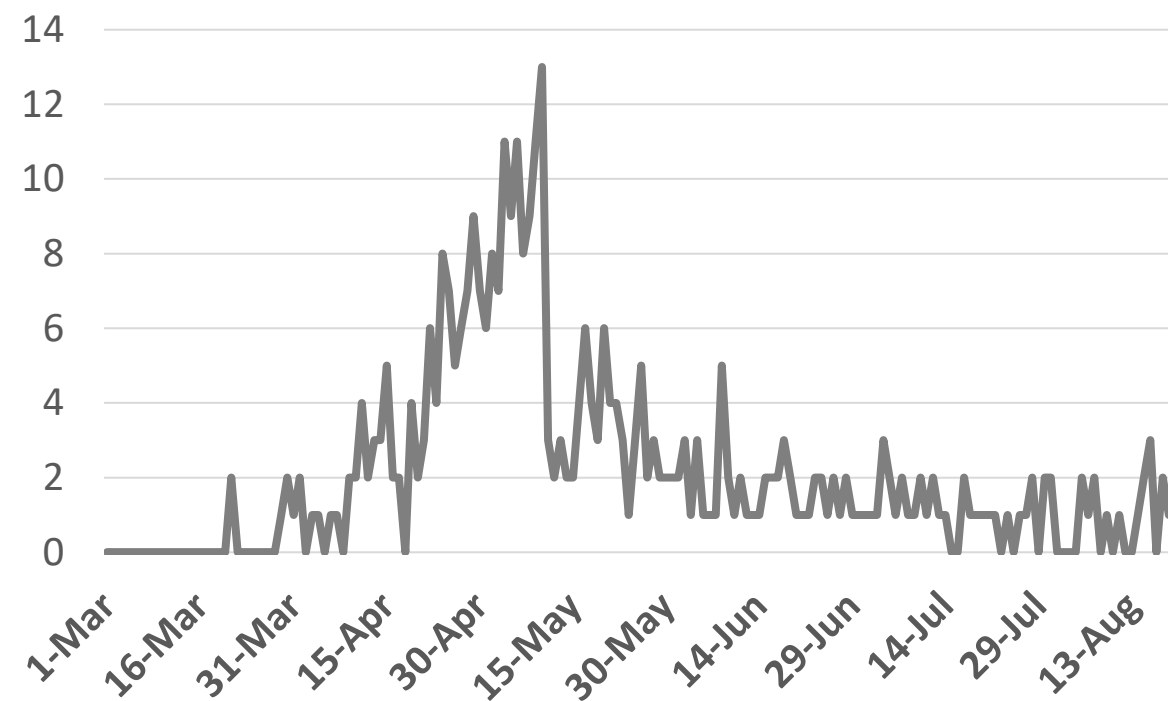
Qatar



Source : Qatar ministry of health

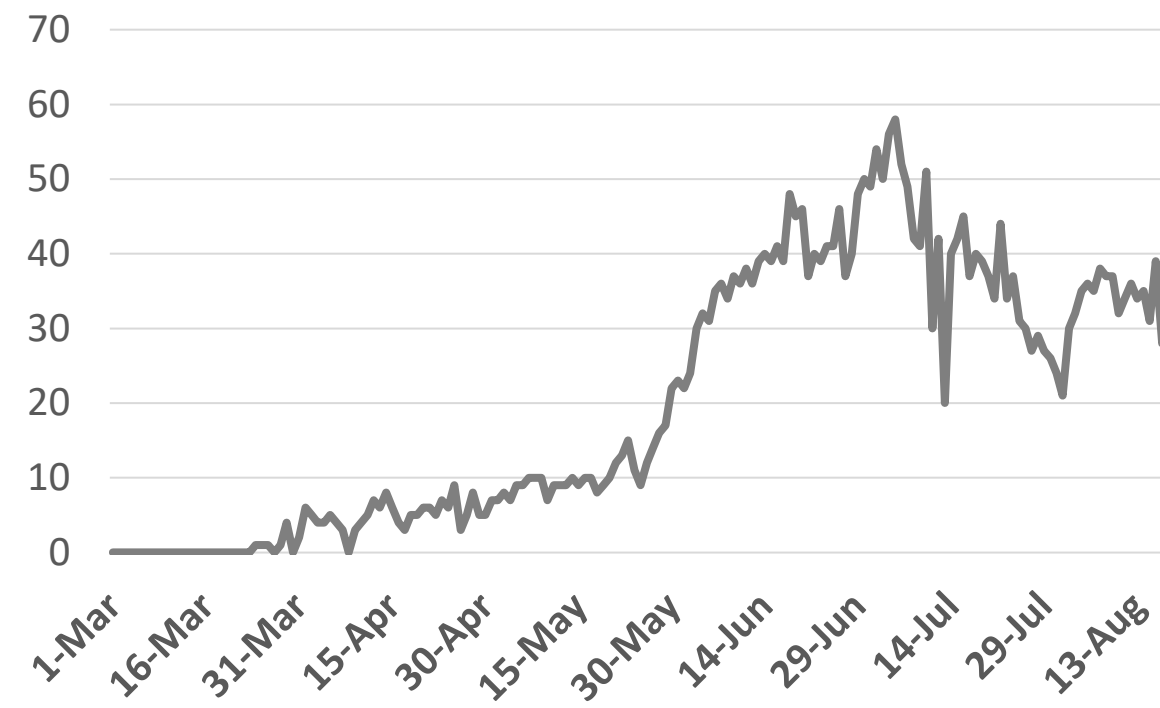
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



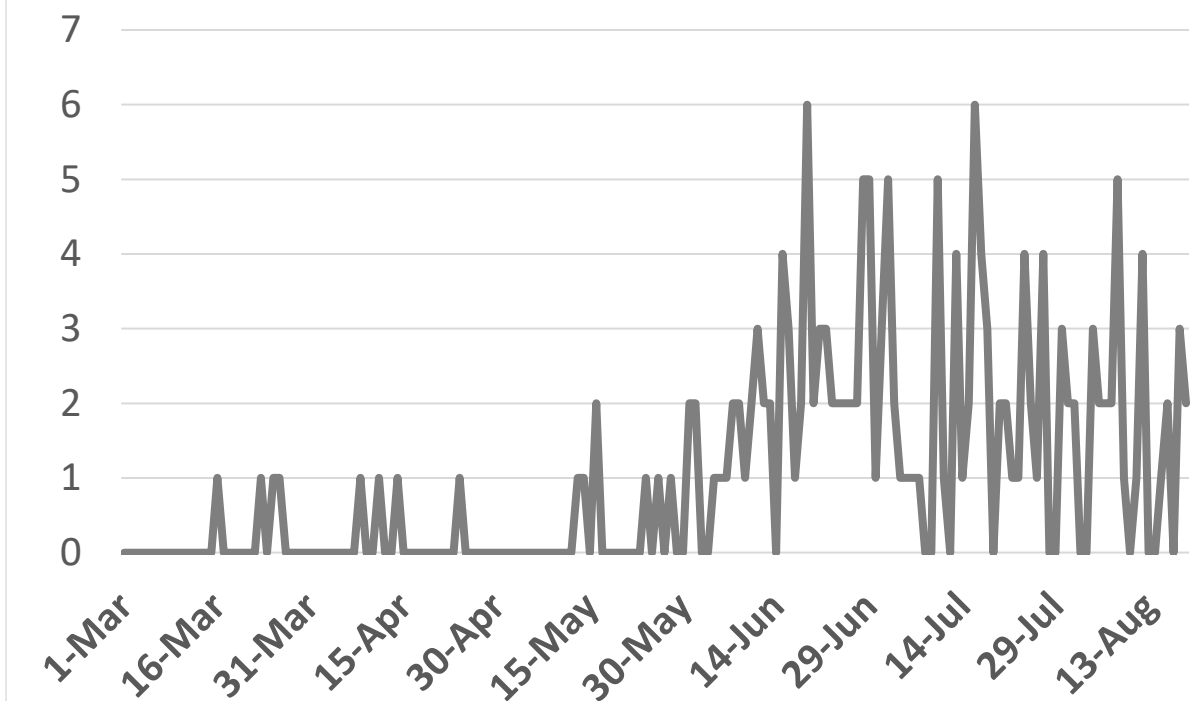
Source : National Emergency Crisis and Disaster Management Authority

KSA



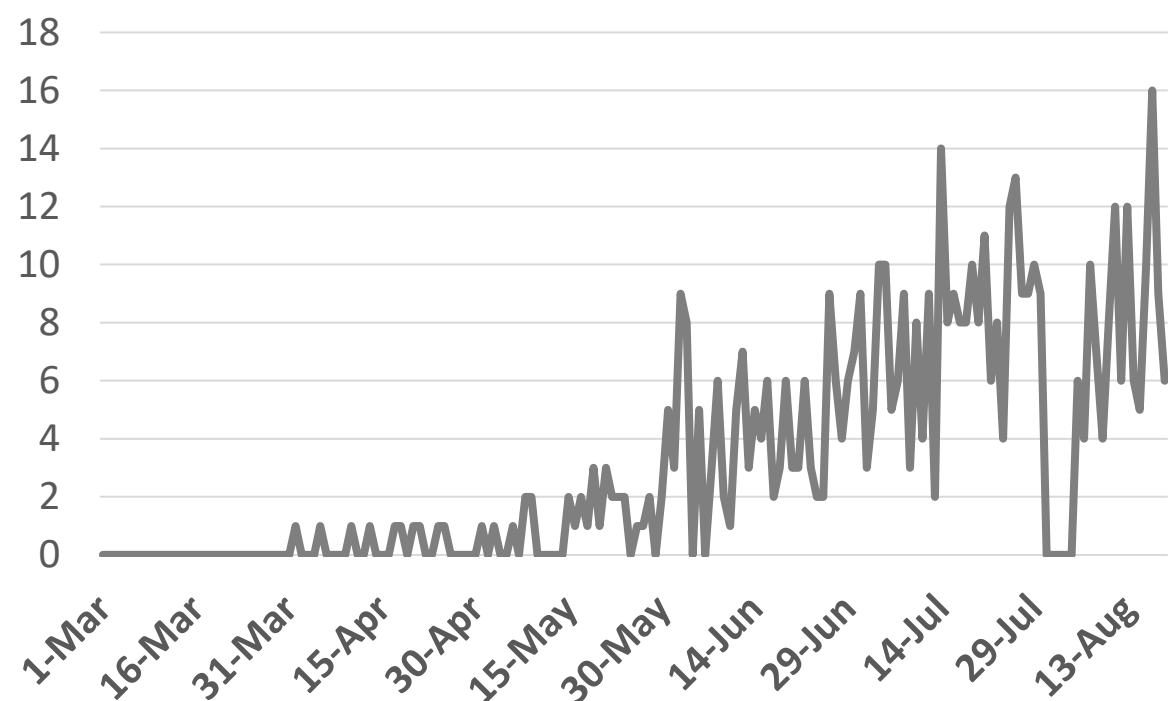
Source : KSA ministry of health

Bahrain



Source :WHO

Oman

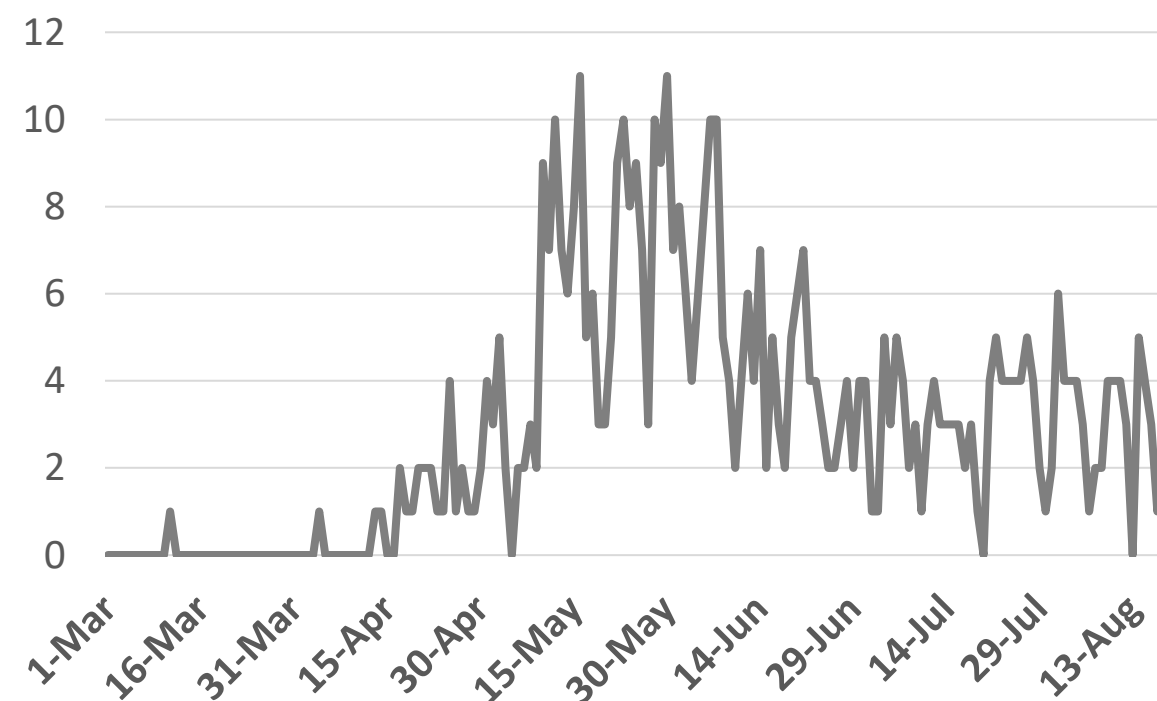


Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August

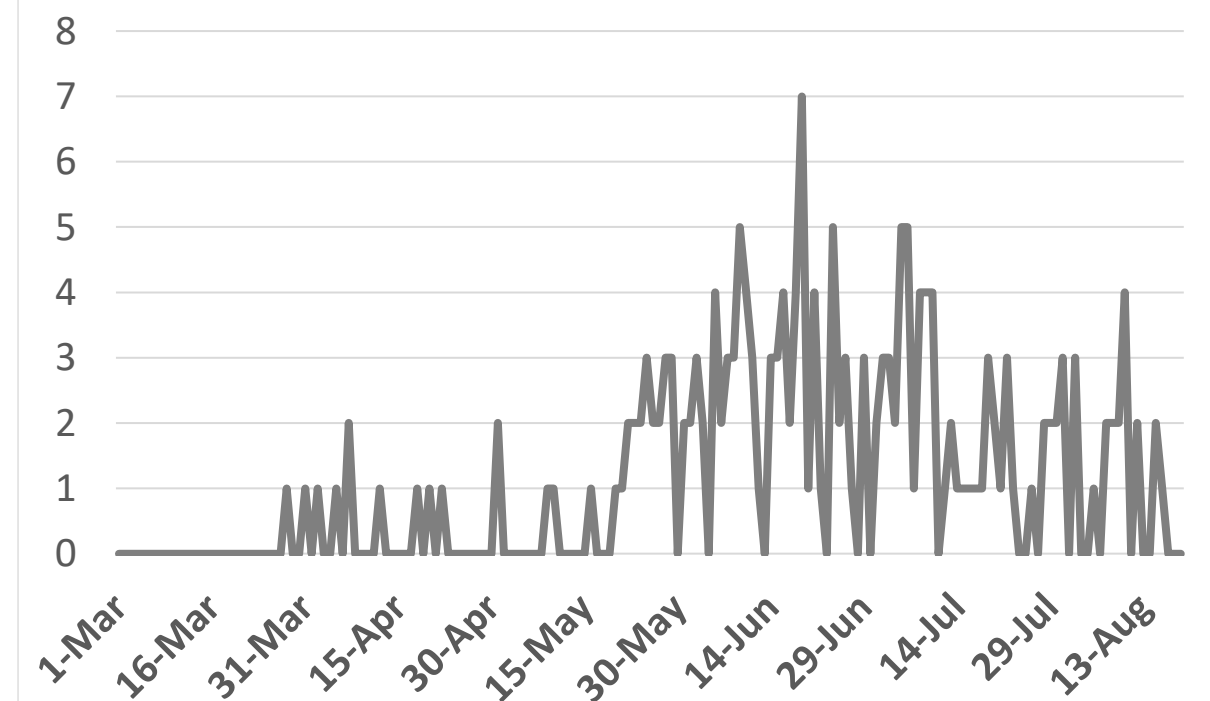
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

Article 1

Published

13 August 2020 [THE LANCET](#)

Extracorporeal Membrane Oxygenation for Severe Acute Respiratory Distress Syndrome Associated with COVID-19: A Retrospective Cohort Study

The efficacy of extracorporeal membrane oxygenation (ECMO) for patients with severe ARDS secondary to COVID-19 is unknown. Literature review revealed 21 articles that reported cases of patients infected with SARS-CoV-2 who received ECMO for acute respiratory failure. However, these studies included only 1 to 32 patients. Thirty days survival was reported in few of these cases. The investigators in this study sought to establish the clinical characteristics and outcomes of patients with respiratory failure and COVID-19 treated with ECMO in a retrospective cohort study in France.

Outcome were categorized into four different states (states 1–4):

State 1: On ECMO

State 2: In the ICU and weaned off ECMO

State 3: Alive and out of ICU

State 4: Death

Finding

- This retrospective study, with 83 patients received ECMO included (out of 492 patients admitted to critical care) over a period of 2 months in 5 ICUs in Paris. Pre-ECMO, 78 (94%) patients had been prone-positioned; their normal median driving pressure and normal PaO₂/FiO₂ .
- At 60 days post-ECMO initiation, the estimated probabilities of occupation in each state were 6% (95% CI 3–14) for state 1, 18% (11–28) for state 2, 45% (35–56) for state 3, and 31% (22–42) for state 4. 35 (42%) patients had major bleeding and four (5%) had a haemorrhagic stroke. 30 patients died.





Continued

- The investigators concluded that the estimated 60-day survival of ECMO-rescued patients with COVID-19 was similar to that of studies published in the past 2 years on ECMO for severe ARDS. If another COVID-19 outbreak occurs, ECMO should be considered for patients developing refractory respiratory failure despite optimized care.

	All patients (N=83)	Alive and discharged from the ICU (n=48)*	Alive and still in the ICU (n=5)†	Died (n=30)
Age, years	49 (41-56)	45 (38-53)	49 (43-58)	52 (48-58)
Sex				
Male	61 (73%)	34 (71%)	3 (60%)	24 (80%)
Female	22 (27%)	14 (29%)	2 (40%)	6 (20%)
Body-mass index, kg/cm ²	30.4 (27.9-34.1)	31.1 (27.7-34.6)	28.6 (26.3-30.4)	29.4 (28.2-33.8)



Article 2

The EVALI Outbreak and Vaping in the COVID-19 Era

Published

14 August 2020 [THE LANCET](#)

- This article is reporting that EVALI, which is an acronym for (E-cigarette, or Vaping, product use - Associated Lung Injury) initially reported early in August 2019, which might be mimicking the presentation of COVID19 and other respiratory symptoms. EVALI can only be diagnosed through autopsy. The article raises a concern that the CDC has stopped reporting The EVALI since the start of COVID19 pandemic (total of 68 deaths).
- Concerns have been raised about the convergence of vaping, and its effects, with COVID-19 infection—especially in young people.
- A recent population-based study published on Aug 11, 2020, which surveyed 4351 adolescents and young adults aged 13–24 years, has highlighted how the effects of vaping might now be colliding.
- Those reporting use of e-cigarettes only, or dual-use with tobacco, were at a five-times or seven-times increased risk, respectively, of a COVID-19 diagnosis, compared with non-users.
- The accumulating evidence for risks of COVID-19 in those who use e-cigarettes has prompted legislators to write a letter to the US Food and Drug Administration (FDA) commissioner, **earlier this week, asking for e-cigarettes to be withdrawn from the market during the pandemic.**
- For many adults, the pandemic has been a time to stop smoking. According to a study from University College London, more than a million have quit smoking in the UK during the pandemic. The author recommends that E-cigarettes should not be an option to aid to quitting, furthermore, smoking cessation services should focus on traditional aids to quitting.



Article 3

Outcomes Associated With Use of a Kinin B2 Receptor Antagonist Among Patients with COVID-19

Published

13 August 2020 [JAMA](#)

- Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) enters the cell via (ACE2) receptor. ACE2 is involved in degrading the kinin-bradykinin, a potent peptide that can cause vascular leakage. The authors investigated whether treatment with the bradykinin 2 receptor antagonist (icatibant) in patients with COVID-19 could be used as a treatment strategy.
- In this case-control study, the investigators included 9 patients for treatment with 3 doses of 30 mg of icatibant (Firazyr; Shire Pharmaceuticals Ireland Limited) by subcutaneous injection at 6-hour intervals. Patients with COVID-19 infections were eligible for icatibant treatment if they had an oxygen saturation of less than 90% without supplemental oxygen, needed 3 L/min supplemental oxygen or more, and had a CT severity score of 7 or greater. However, patients with acute ischemic events at the time of eligibility were excluded.
- Nine cases were matched to 18 controls. The mean age was 55 years for cases with icatibant and 58 years for controls.

Findings

- In all 9 patients, there was a marked decrease in oxygen supplementation. **After 3 injections of icatibant, 4 patients (44%) were no longer oxygen-dependent within 10 to 35 hours.**
- In 5 patients (56%), there was a substantial decrease in oxygen supplementation after treatment with icatibant.
- The Overall, in 8 of 9 patients (89%) treated with icatibant, a reduction of 3 L/min in oxygen supplementation or greater after 24 hours as compared to only 3 (17%) in the control group. No severe adverse events reported with the study drug.
- The authors concluded that icatibant was associated and improved oxygenation, suggesting its use in targeting the kallikrein-kinin system in patients with early stages of COVID-19 infections.

THANK YOU

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