

SCIENTIFIC RESEARCH MONITORING ON COVID-19

5 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>

The Abu Dhabi Public health Center is gathering the latest scientific research updates and daily trends on coronavirus disease (COVID-19) in one daily report. The scientific daily report provides summaries on breakthrough or updated researches in COVID-19 to allow health care professionals and public health professionals get an easy and fast access to the information they need.

CONTENT

To View content clinic on icon



Today
highlights



WHO
report



Statistic



Article
summaries

v

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

All articles presented in this report represents the authors' views and not necessarily represents Abu Dhabi Public Health Center views or directions.

Today's Research Updates

Public Health Response

Observational study of UK mobile health apps for COVID-19

Treatment

Covid-19: Public health agencies review whether vitamin D supplements could reduce risk

Clinical Feature and transmission

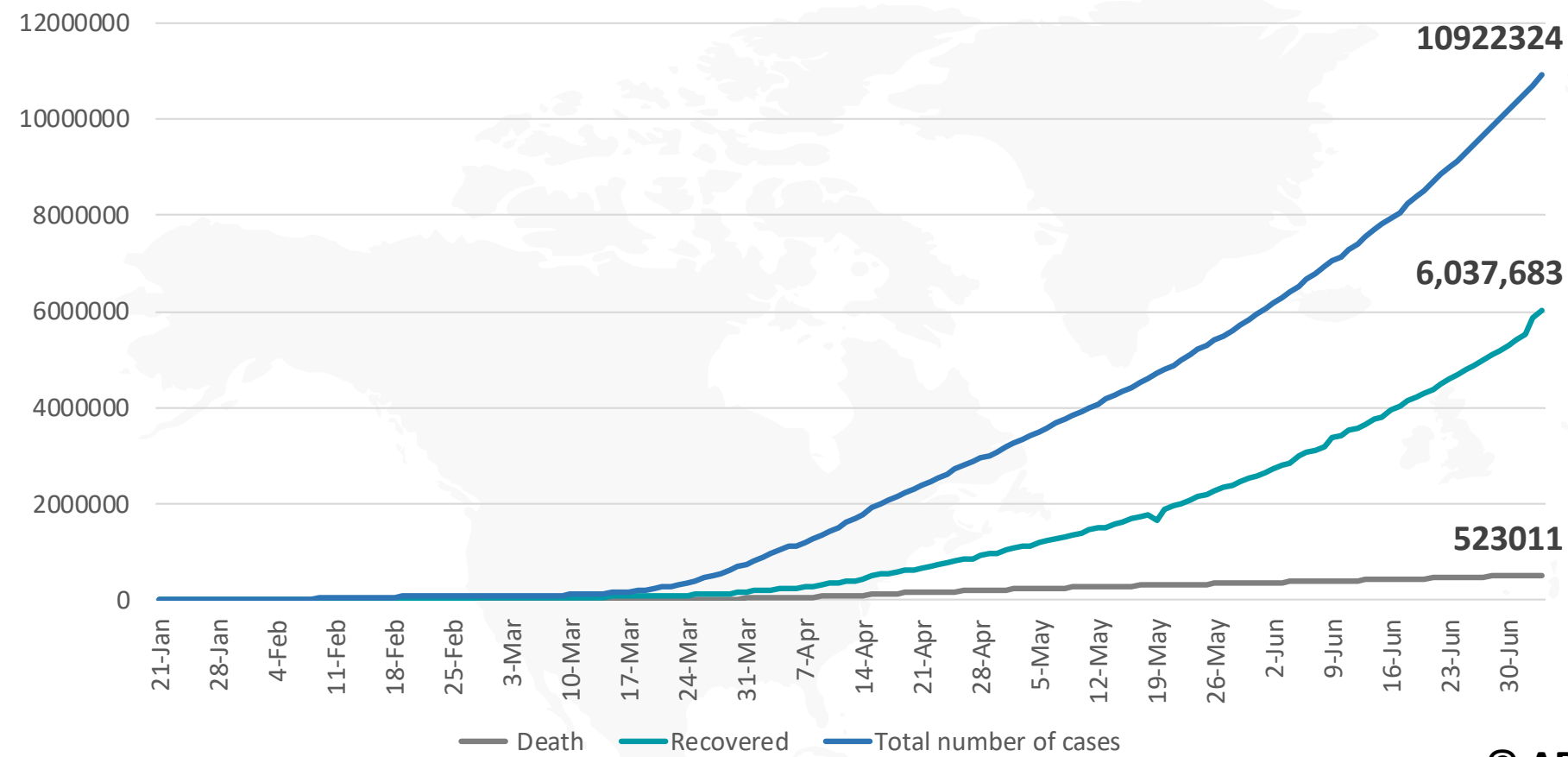
COVID-19 in children and young people



- WHO is providing support to bridge a shortfall in oxygen supplies in Iraq. To counter severe shortages, WHO has airlifted 300 oxygen concentrators from WHO's warehouses in the United Arab Emirates.
- As African countries begin to reopen borders and air spaces, it is crucial that governments take effective measures to mitigate the risk of a surge in infections.
- The UN Secretary-General, Mr. António Guterres in his remarks to the Security Council on the Maintenance of International Peace and Security warned that the COVID-19 pandemic has been affecting peace and security around the world. He stated that “Collective security and our shared well-being are under assault on many fronts led by a relentless disease and abetted by global fragilities.”



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)

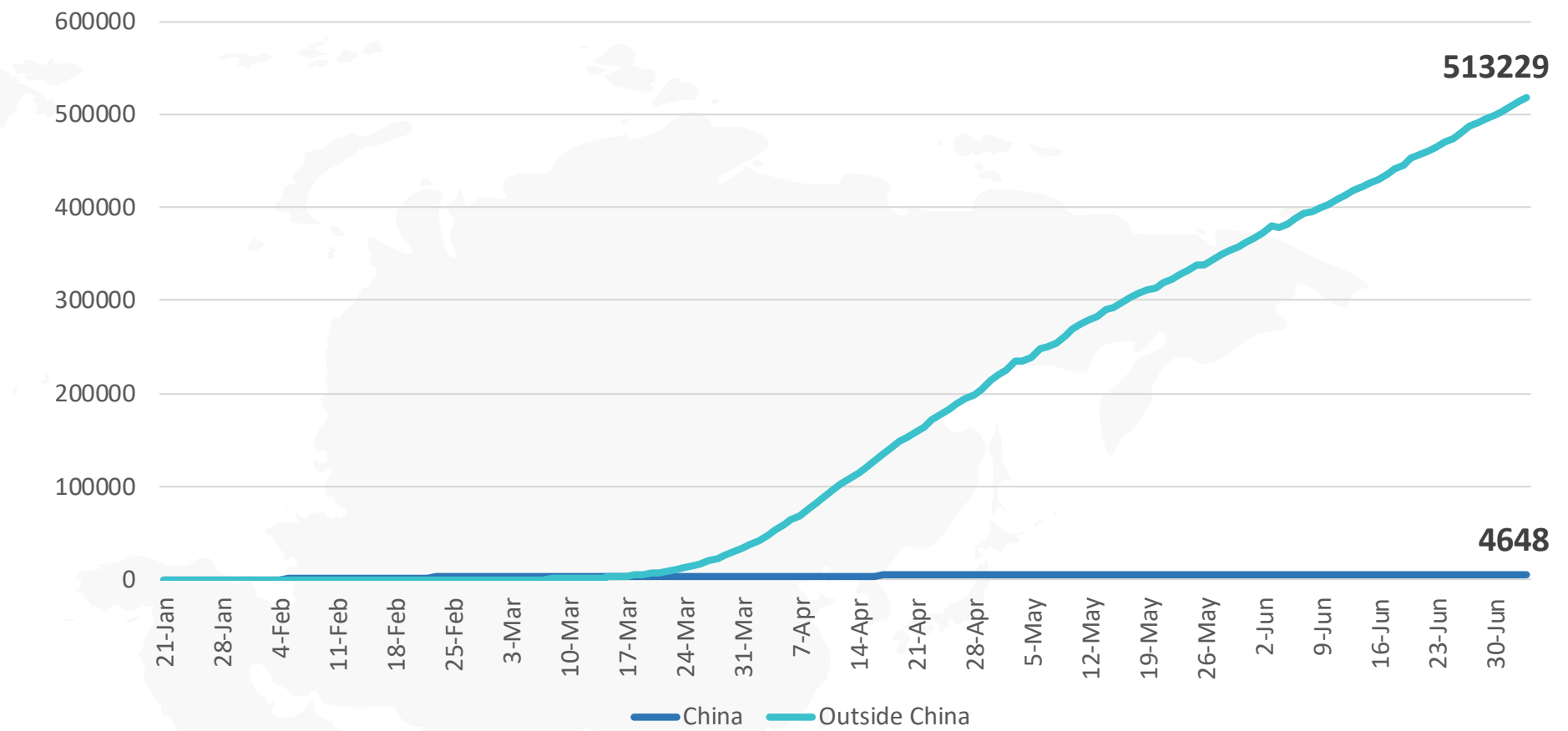


Figure 2: Daily new infected COVID-19 cases (china and the rest of the world)

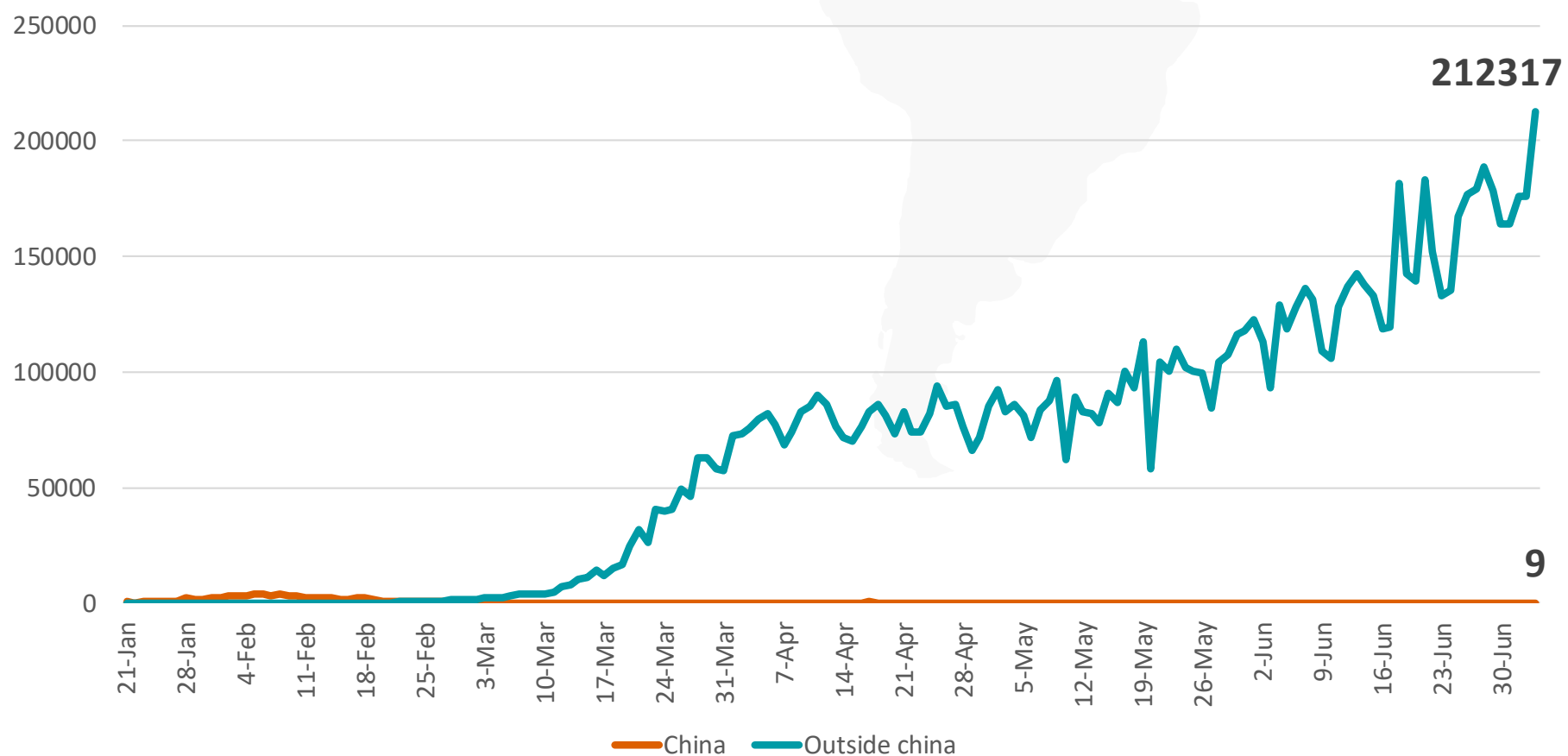


Figure 4: Global daily new deaths due to COVID-19 (china and rest world)

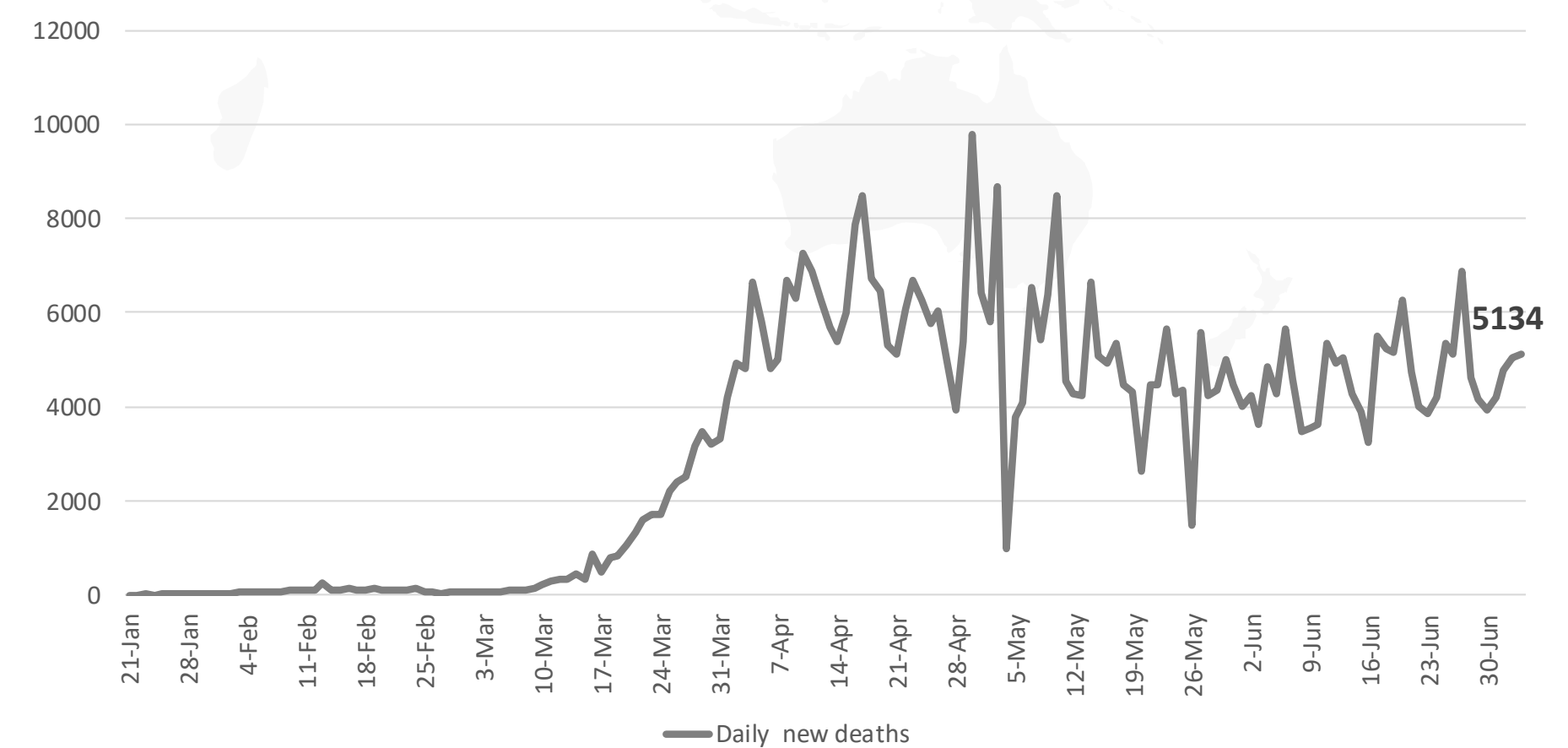


Figure 3: Top 10 countries in the total number of cases due to COVID-19

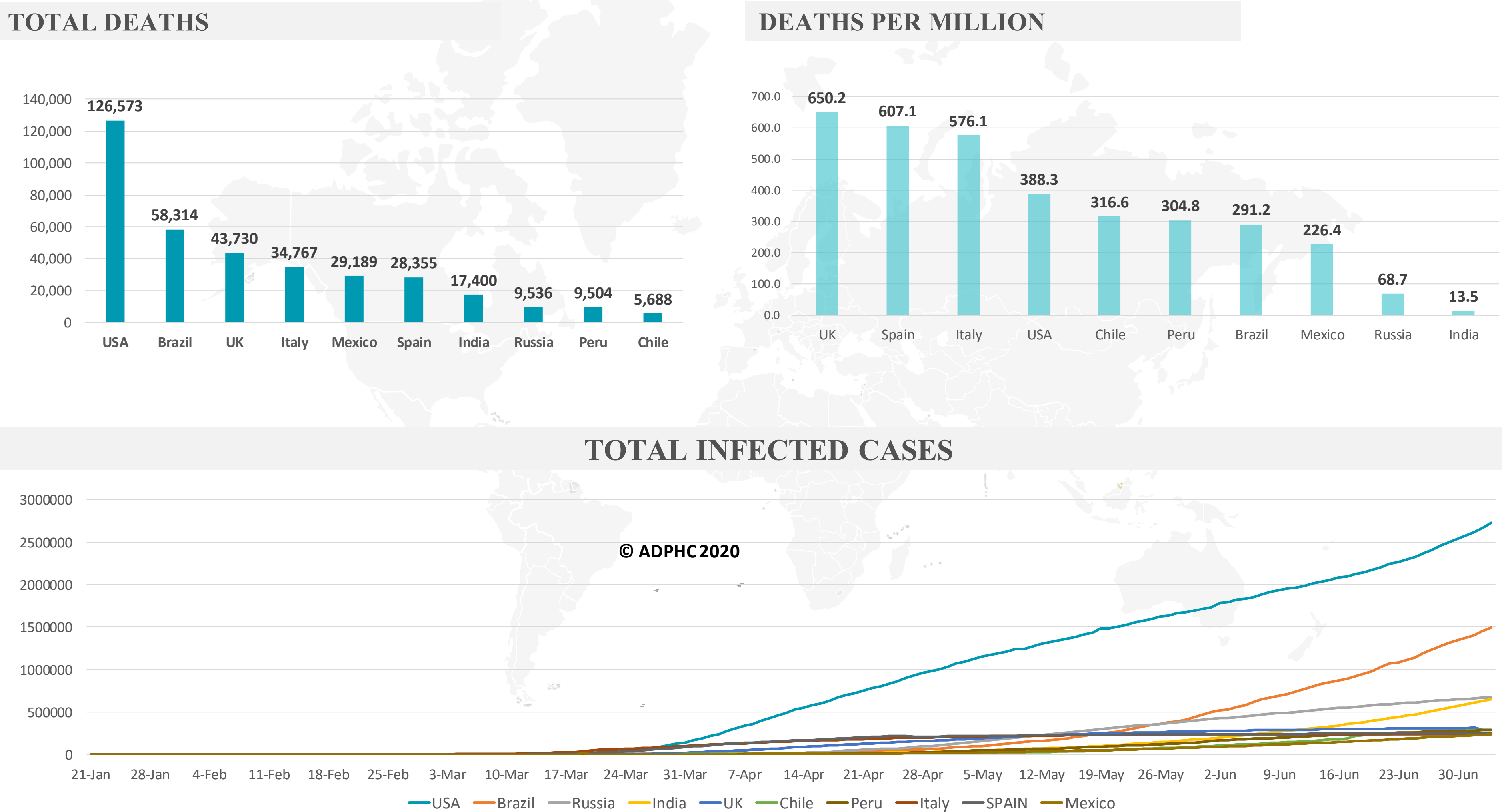


Figure 5: Total infected and recovered to COVID-19 reported by UAE.

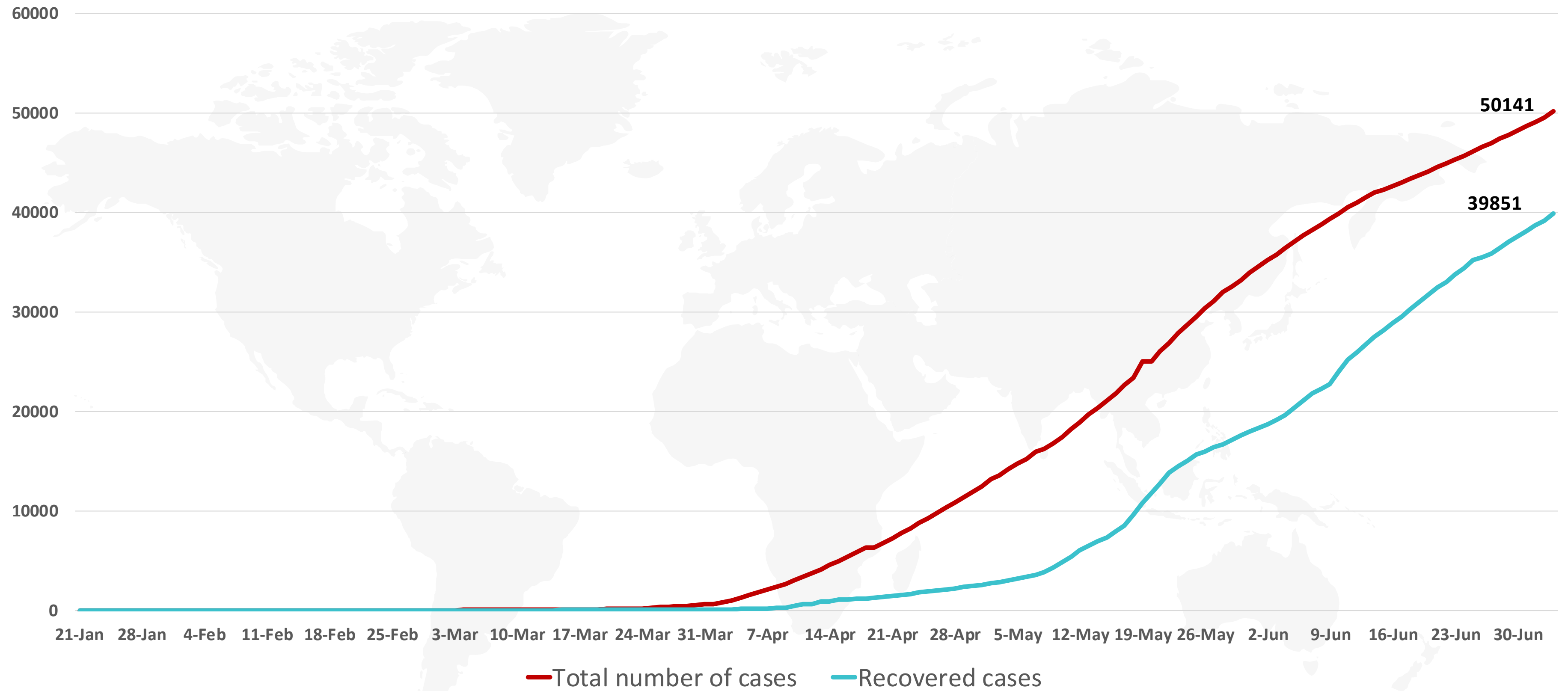
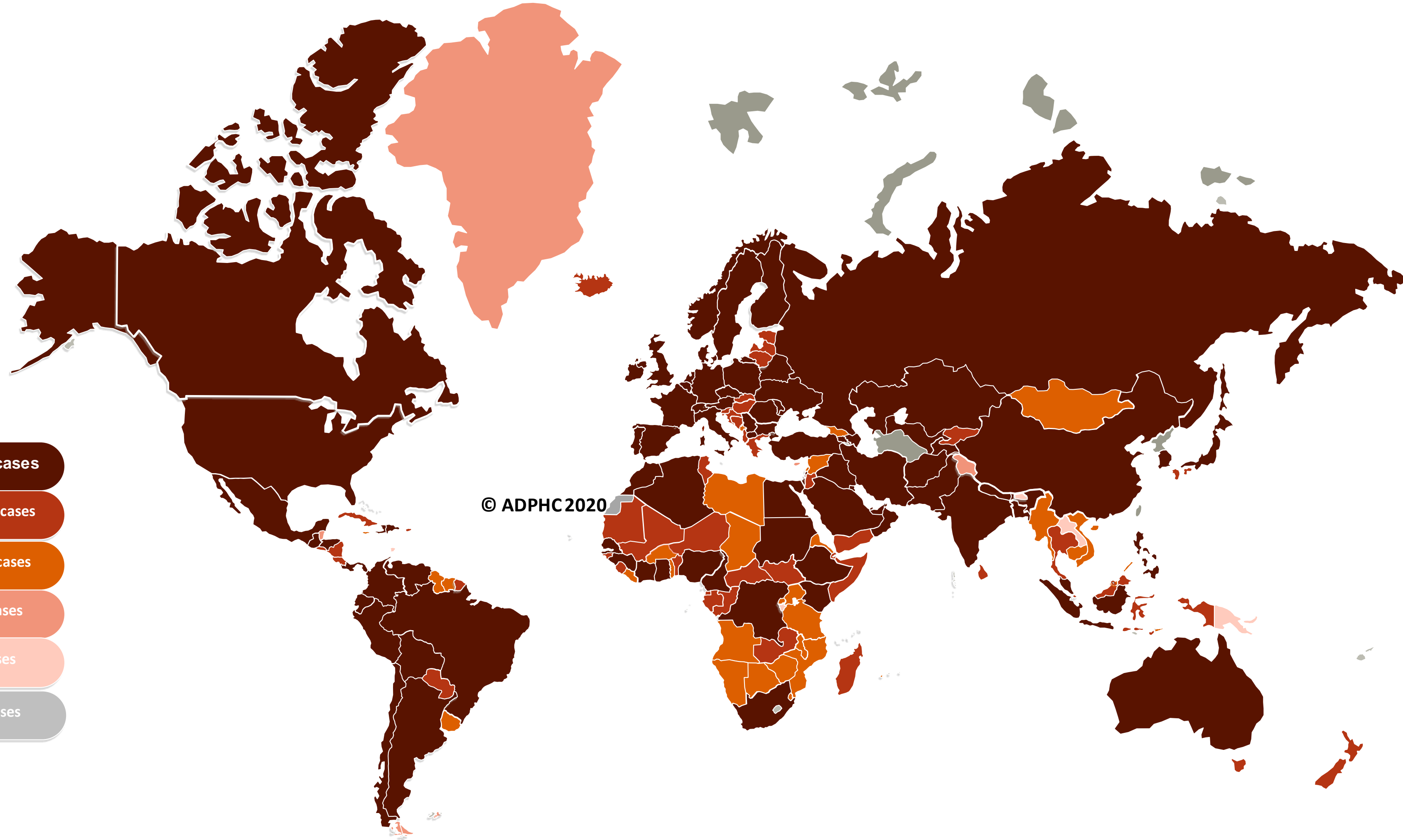


Figure 7A : Global distribution of COVID-19 cases



More than 5000 cases

From 1001 to 5000 cases

From 101 to 1000 cases

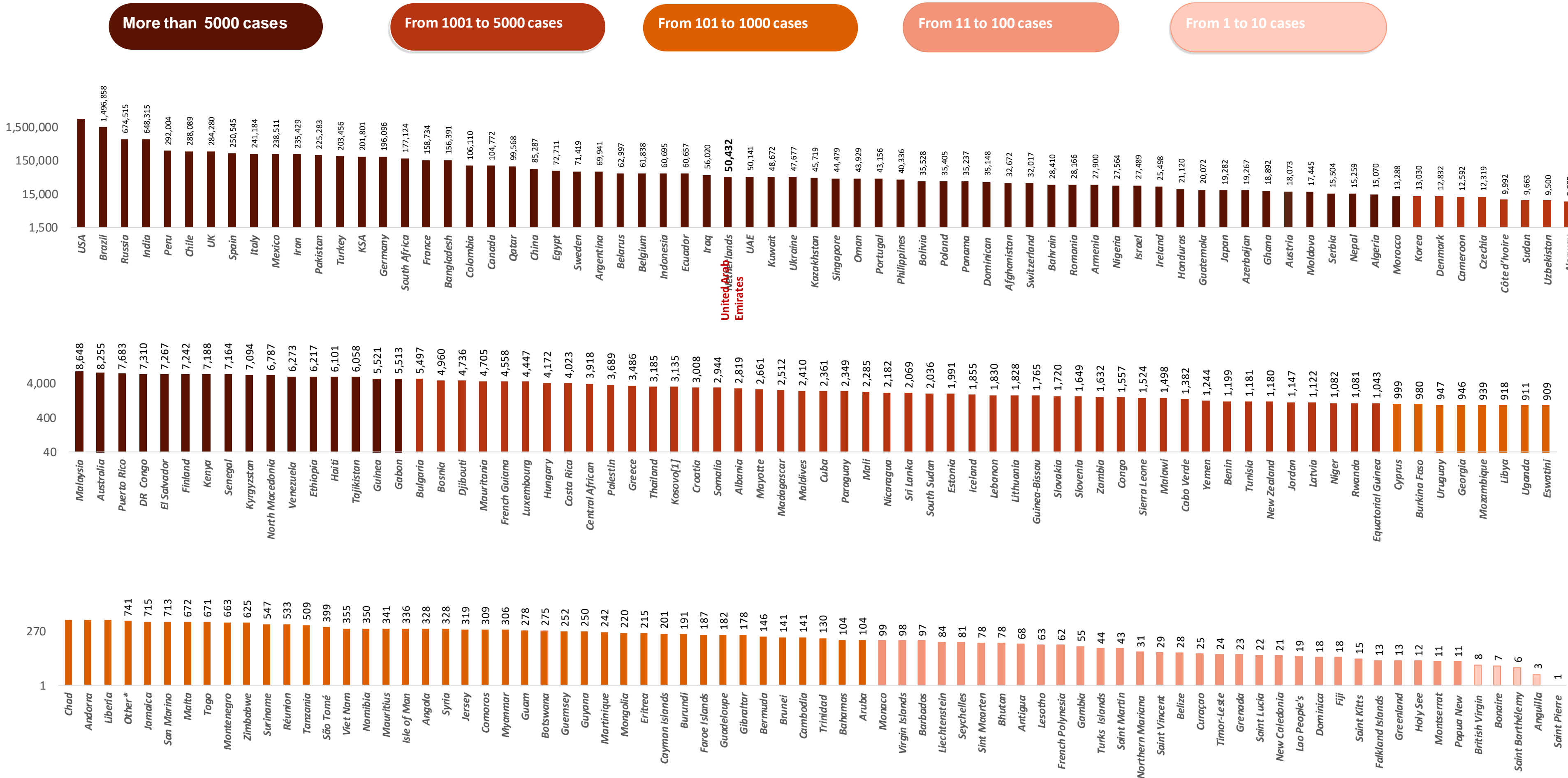
From 11 to 100 cases

From 1 to 10 cases

No confirmed cases



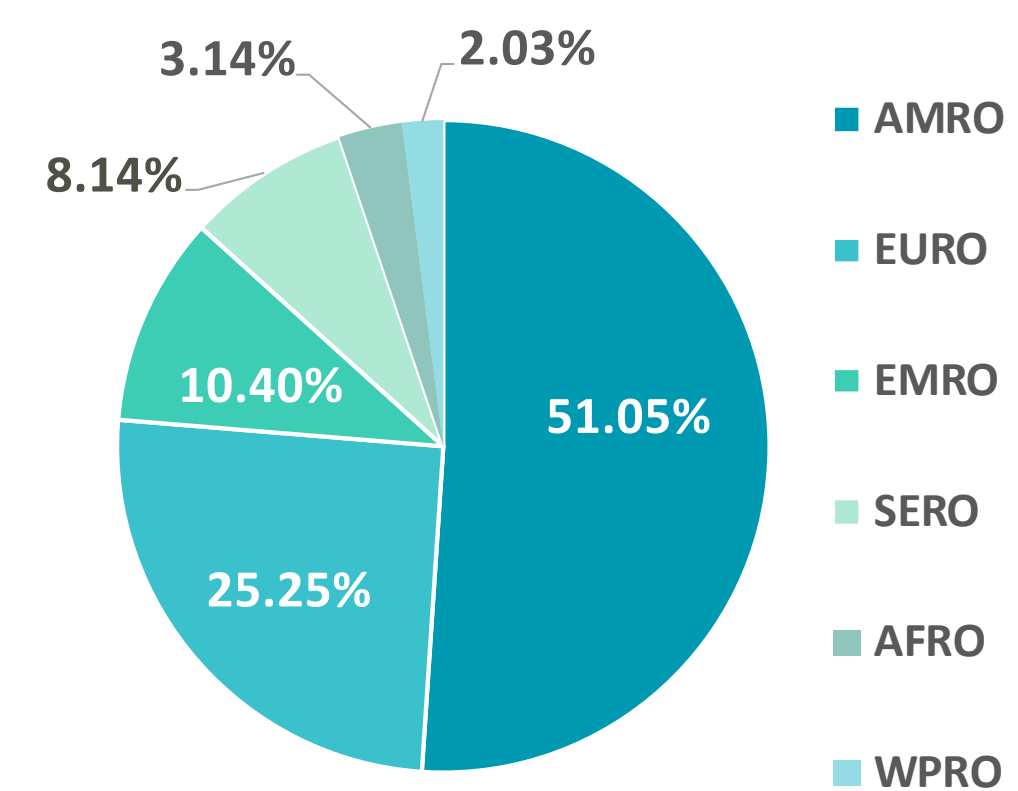
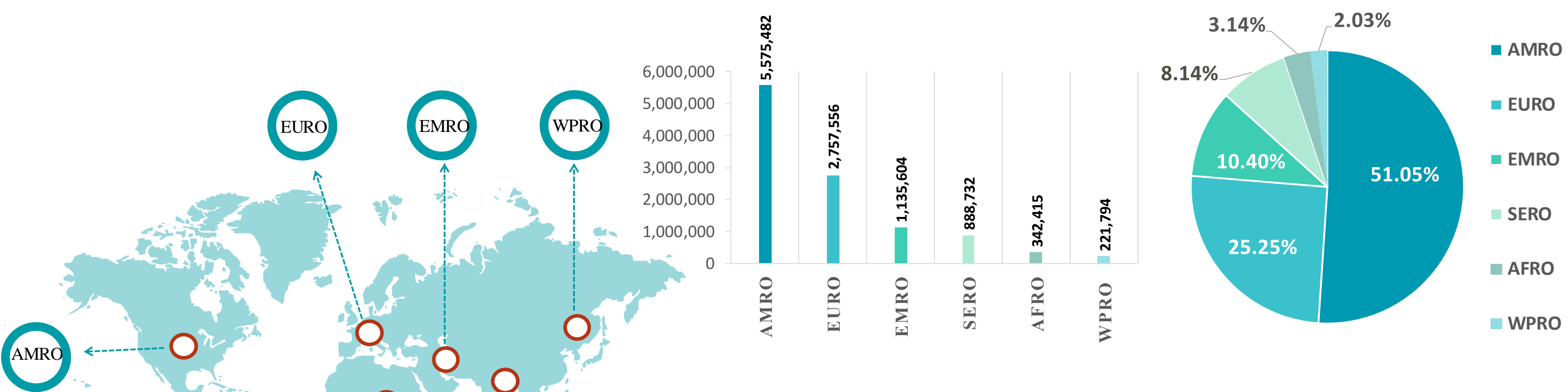
Figure 7B: Bar chart illustrate the global distribution of COVID19 cases



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

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

INFECTED



DEATH

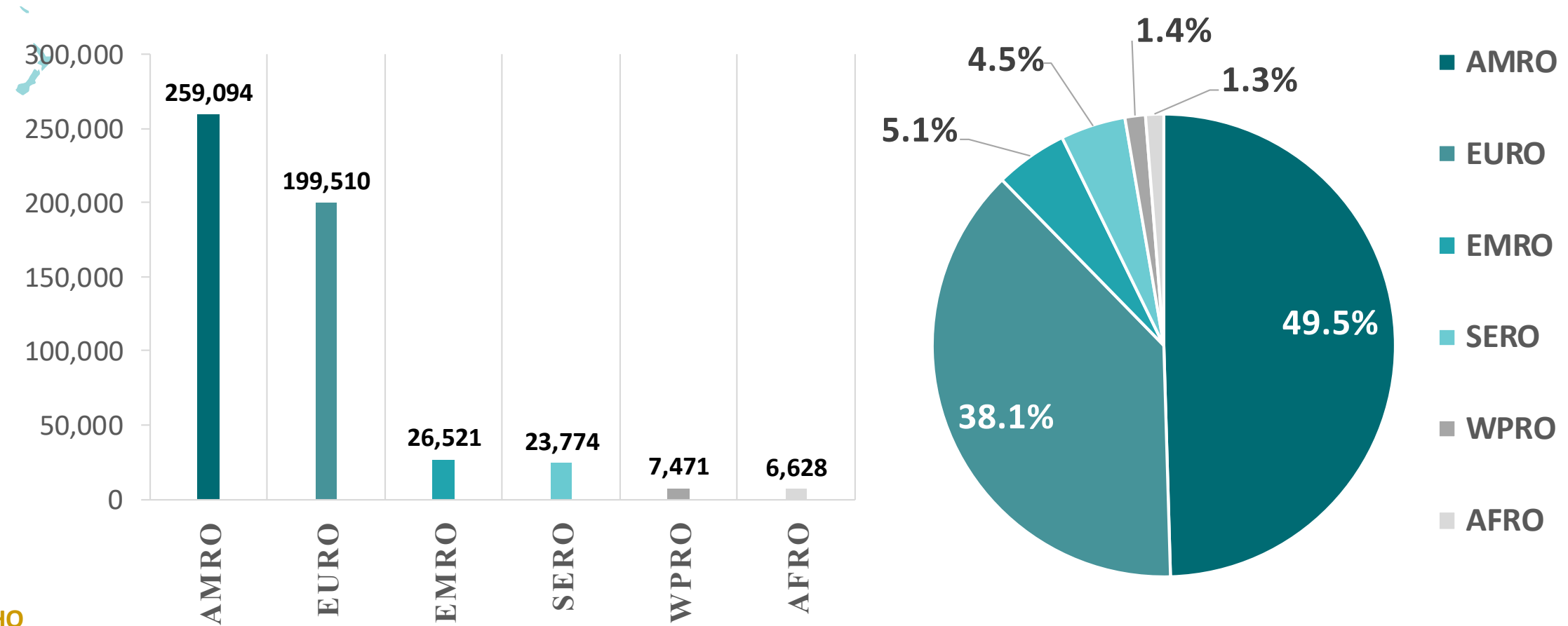
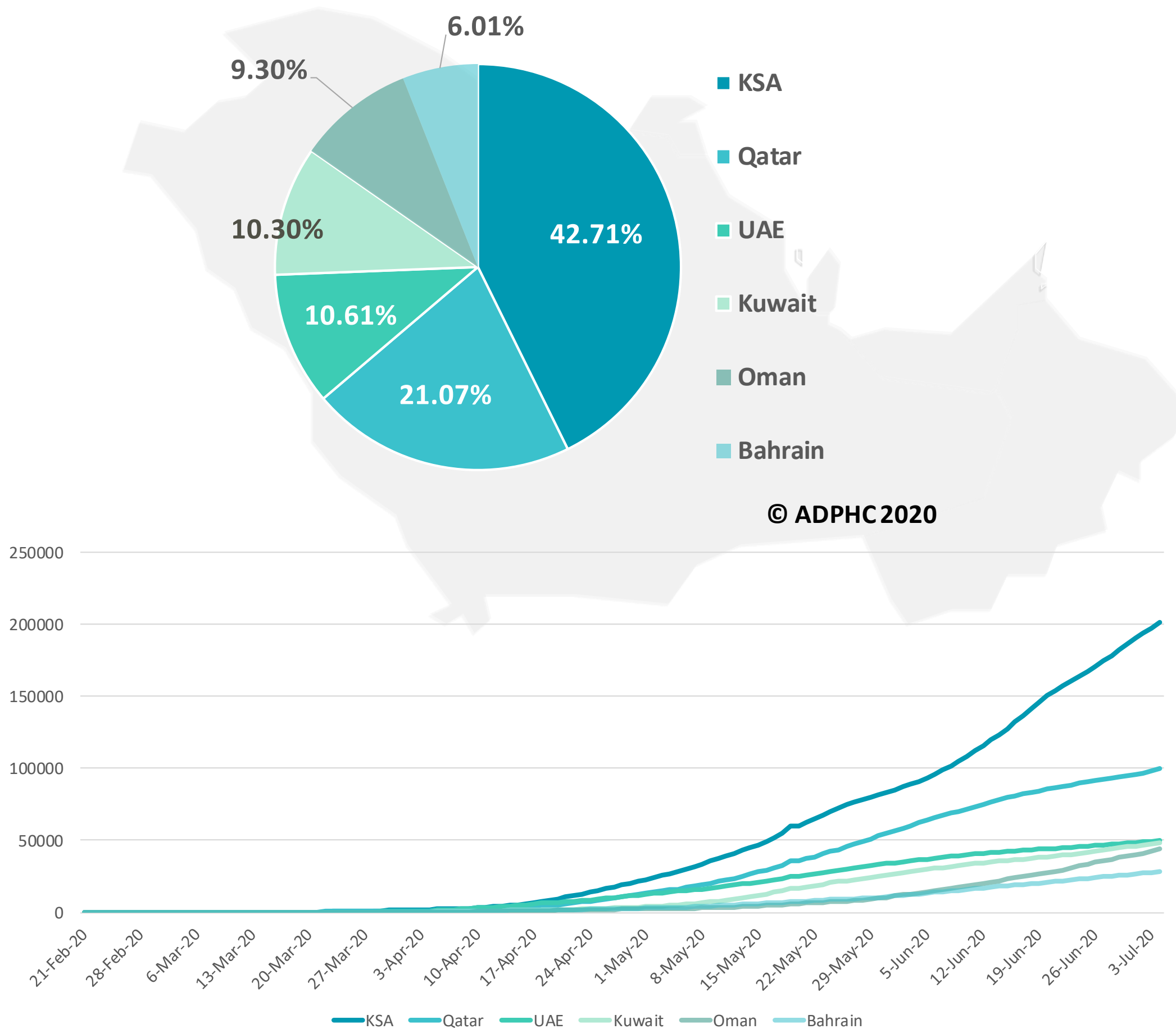
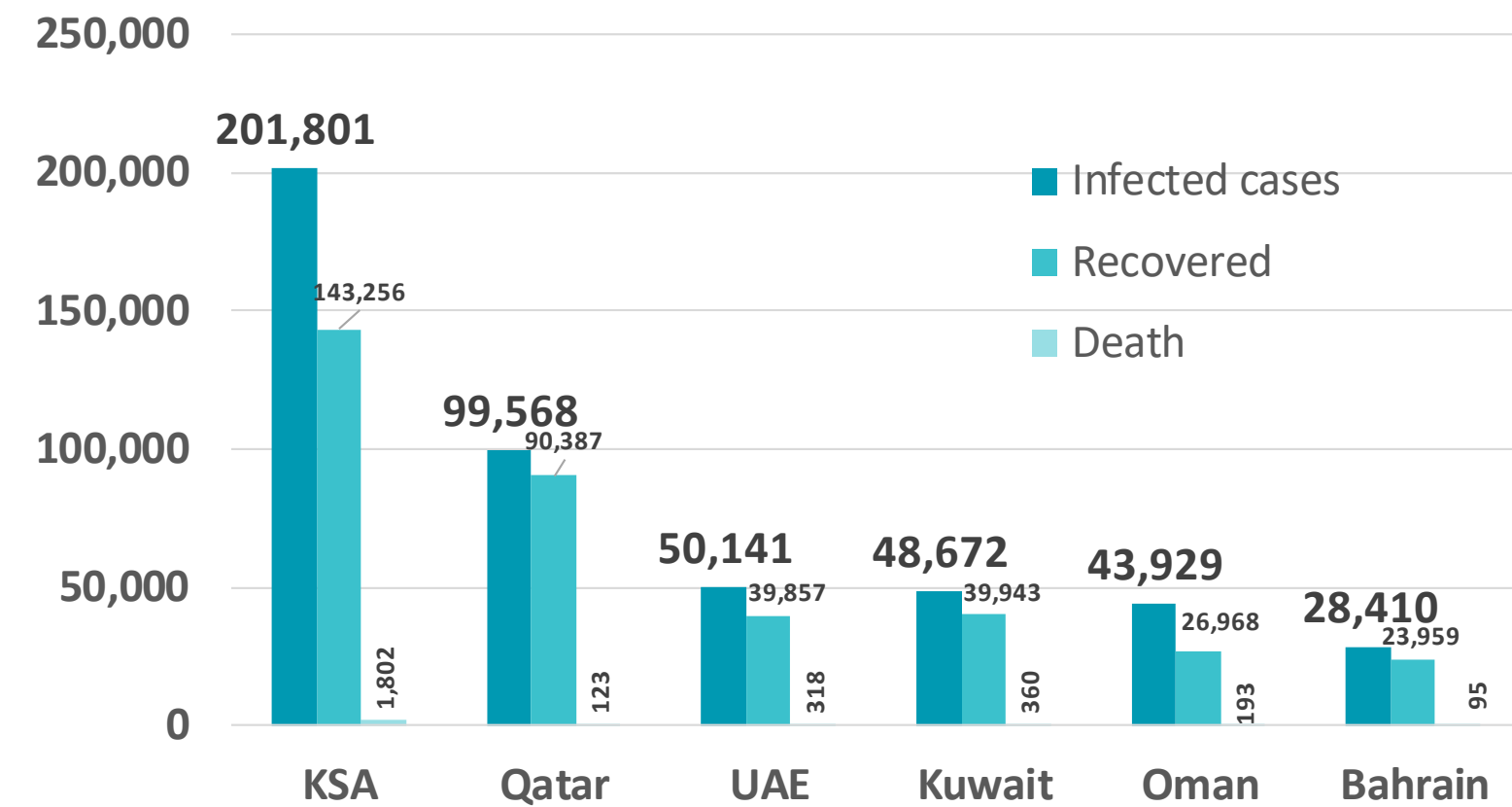


Figure 9: Comparative analysis of the distribution of COVID19 cases in GCC countries

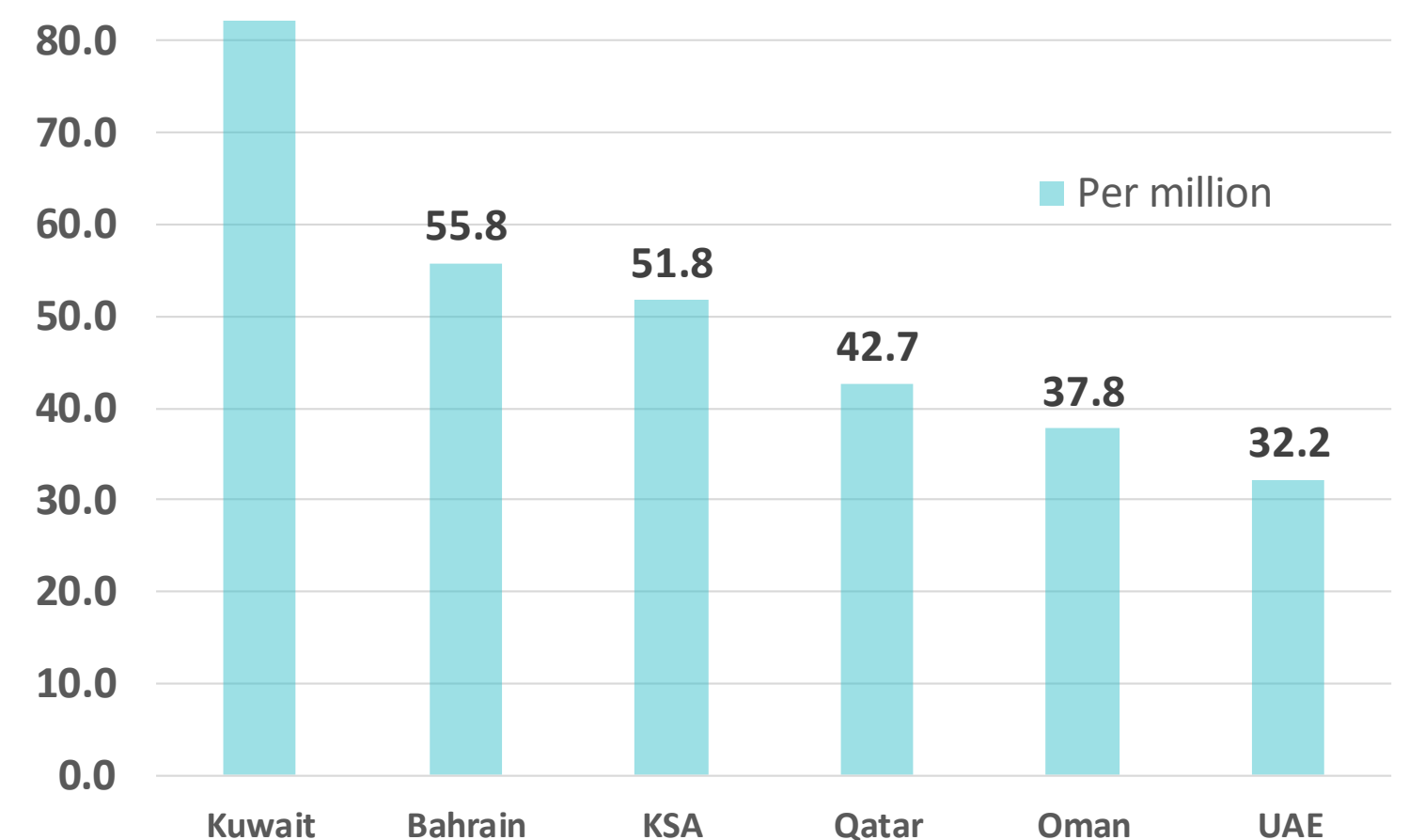
TOTAL NUMBER OF INFECTED CASES



TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATH PER MILLION



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

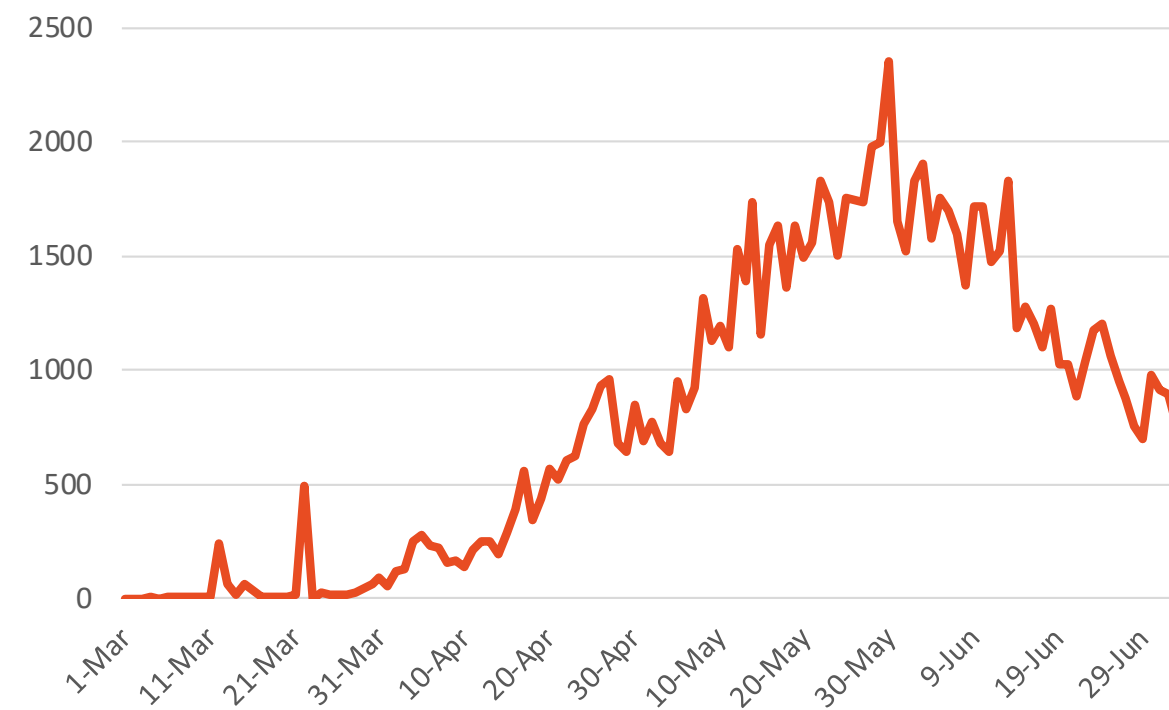
Figure 10: Comparative analysis of the distribution of COVID19 new cases in GCC countries

KSA



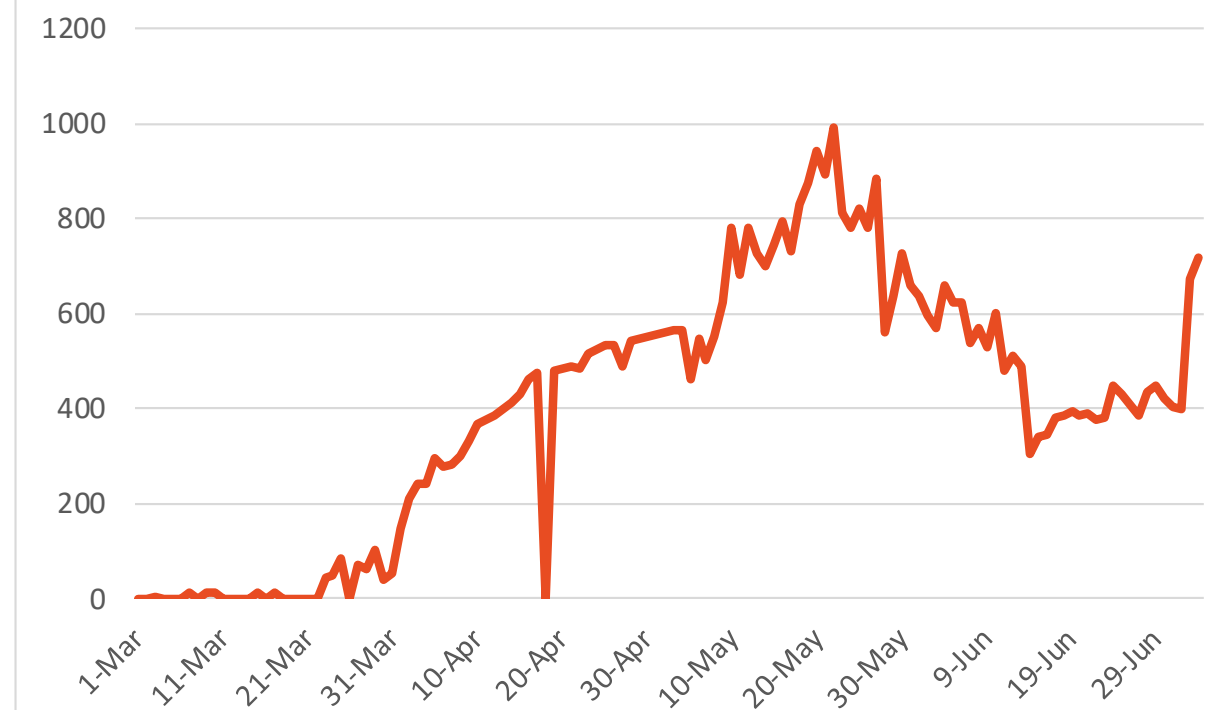
Source : KSA ministry of health

Qatar



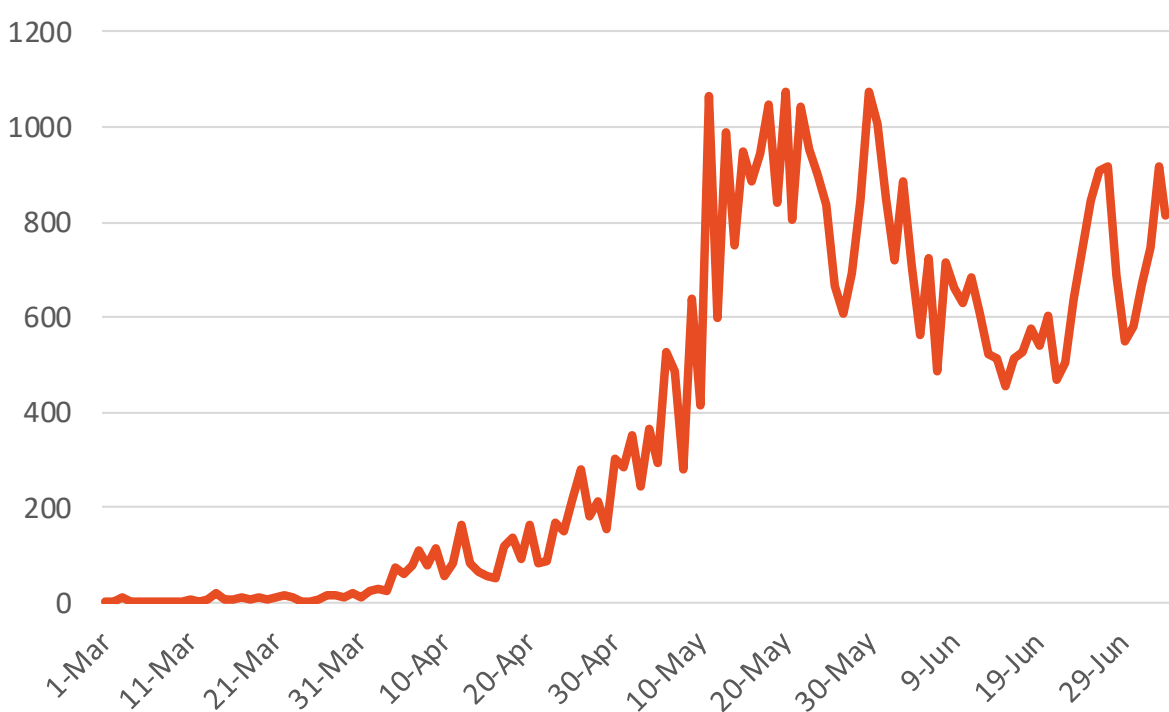
Source : Qatar ministry of health

UAE



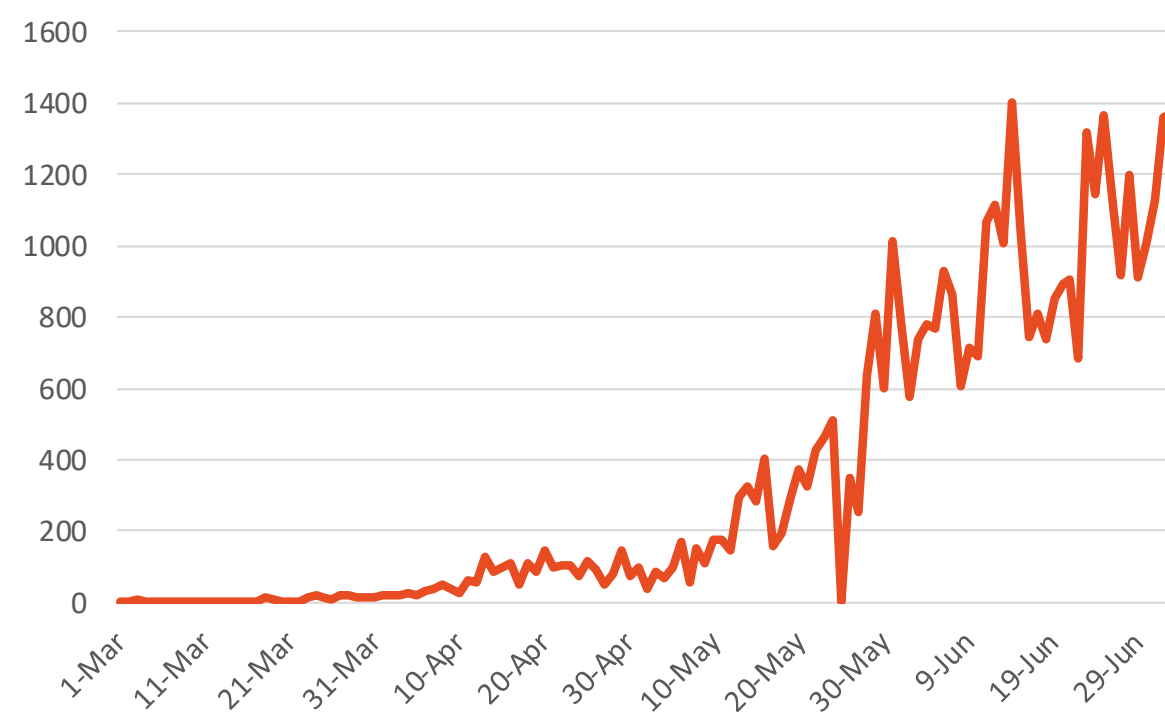
Source : National Emergency Crisis and Disaster Management Authority

Kuwait



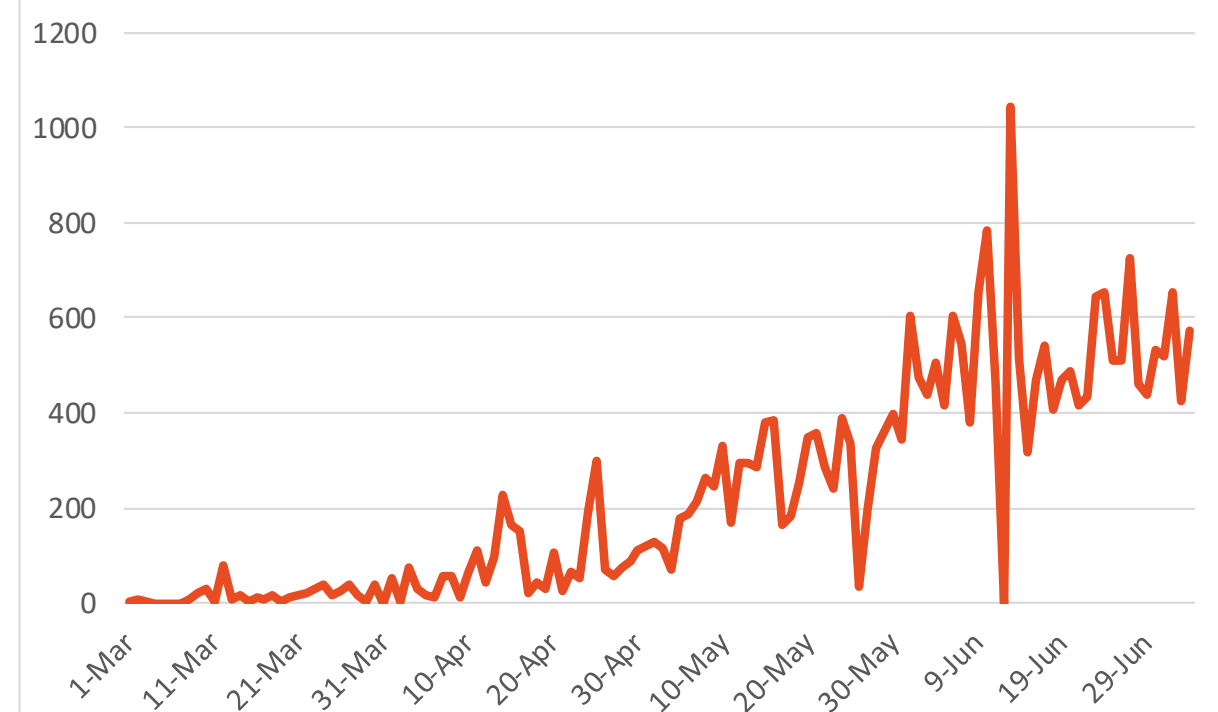
Source : Kuwait ministry of health

Oman © ADPHC 2020



Source : Oman ministry of health

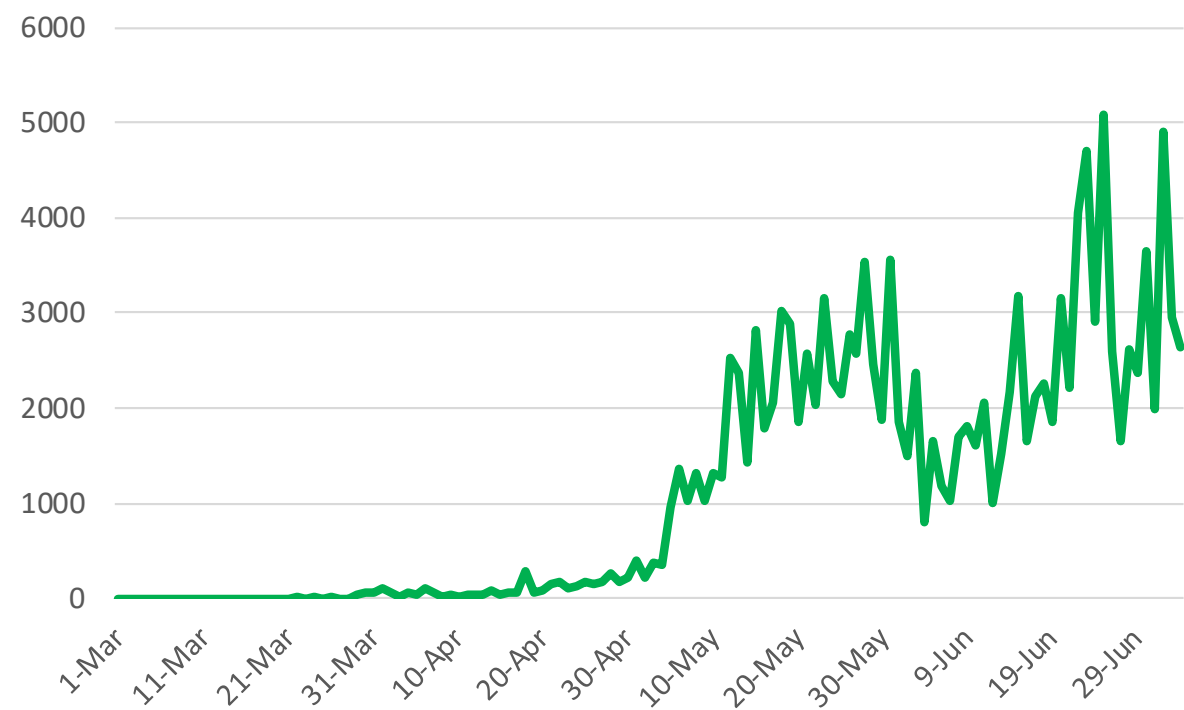
Bahrain



Source : WHO

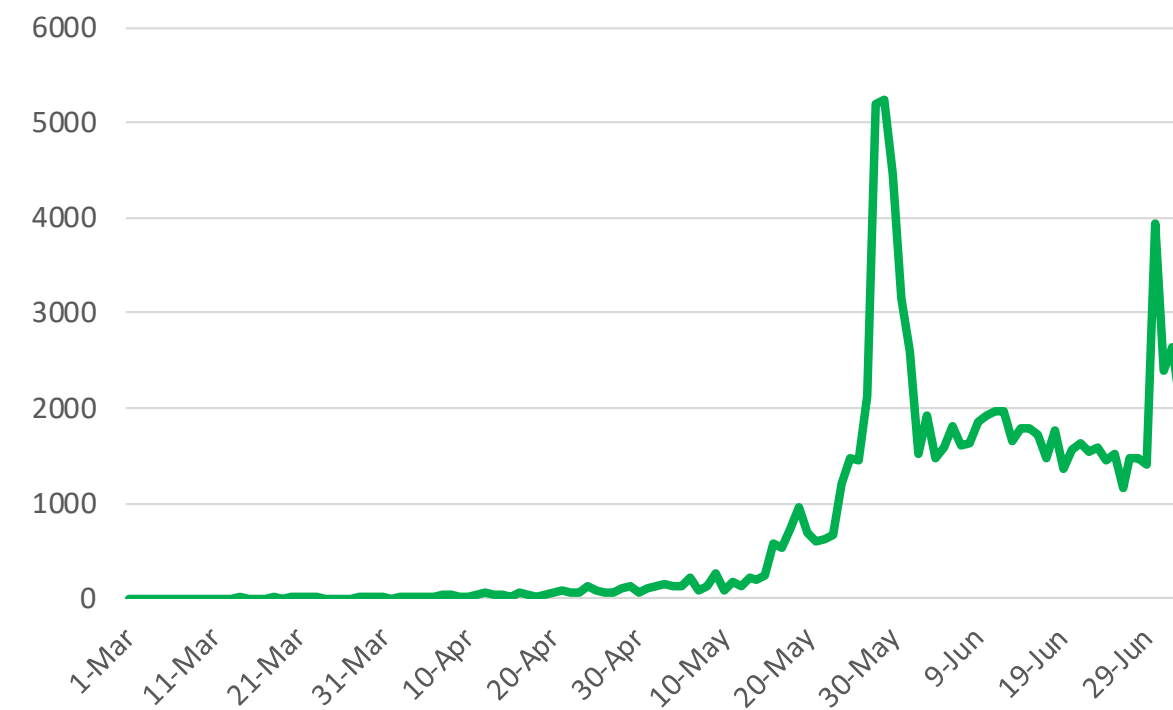
Figure 11: Comparative analysis of the distribution of COVID19 newly recovered cases in GCC Countries

KSA



Source : [KSA ministry of health](#)

Qatar



Source : [Qatar ministry of health](#)

UAE



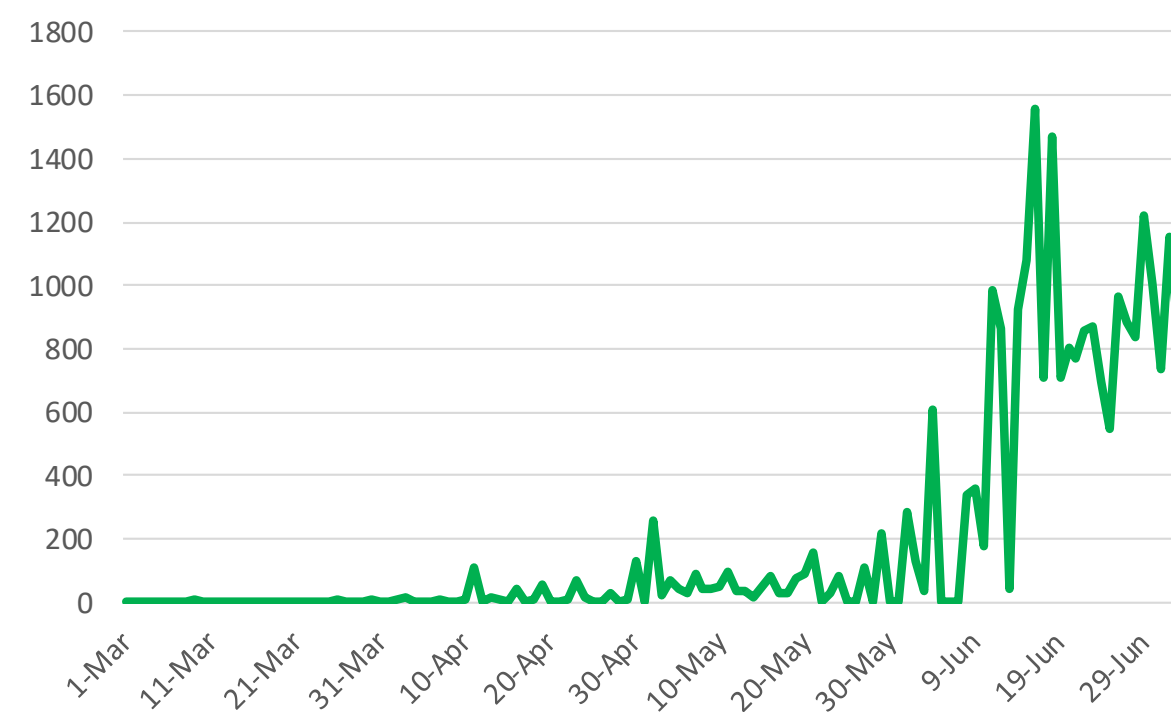
Source : [National Emergency Crisis and Disaster Management Authority](#)

Kuwait



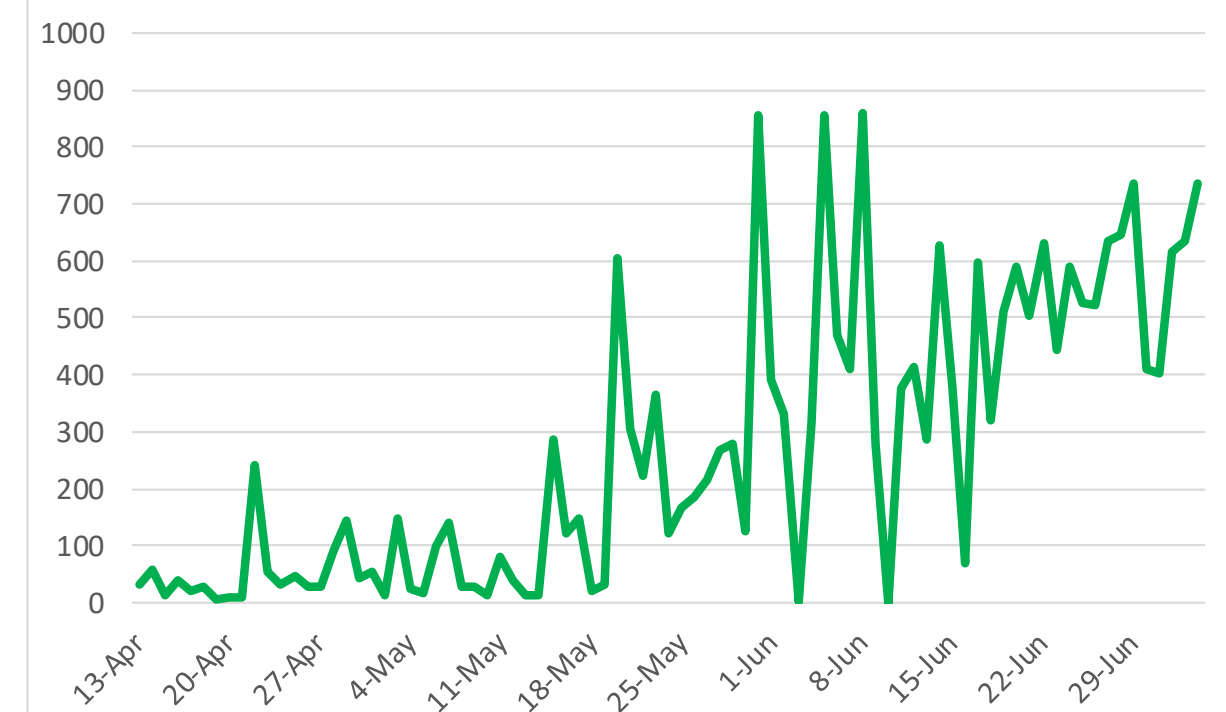
Source : [Kuwait ministry of health](#)

Oman © ADPHC 2020



Source : [Oman ministry of health](#)

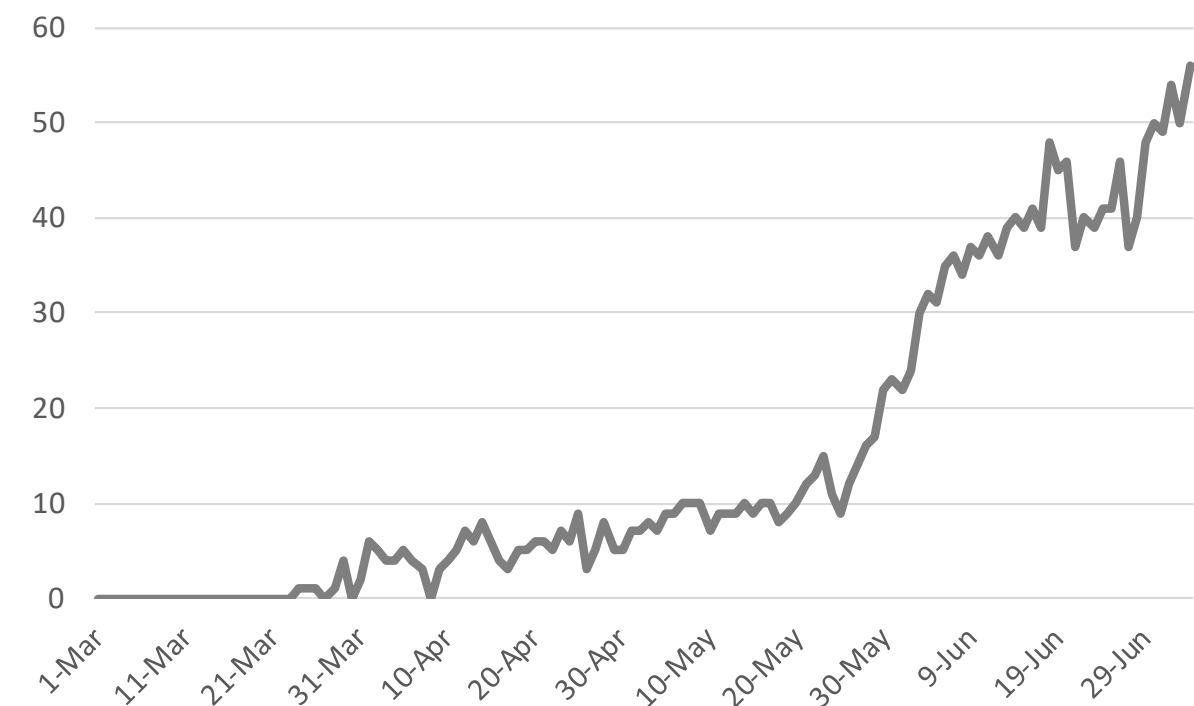
Bahrain



Source : [GCCStat](#)

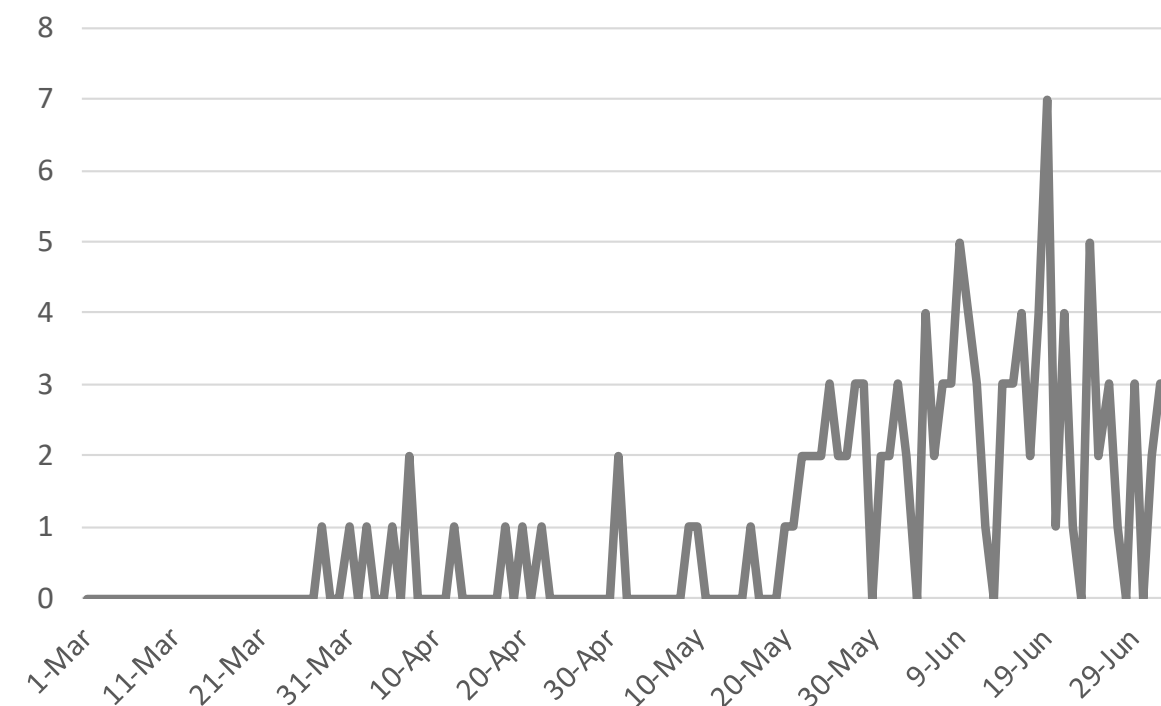
Figure 12: Comparative analysis of the distribution of COVID19 newly death cases in GCC countries

KSA



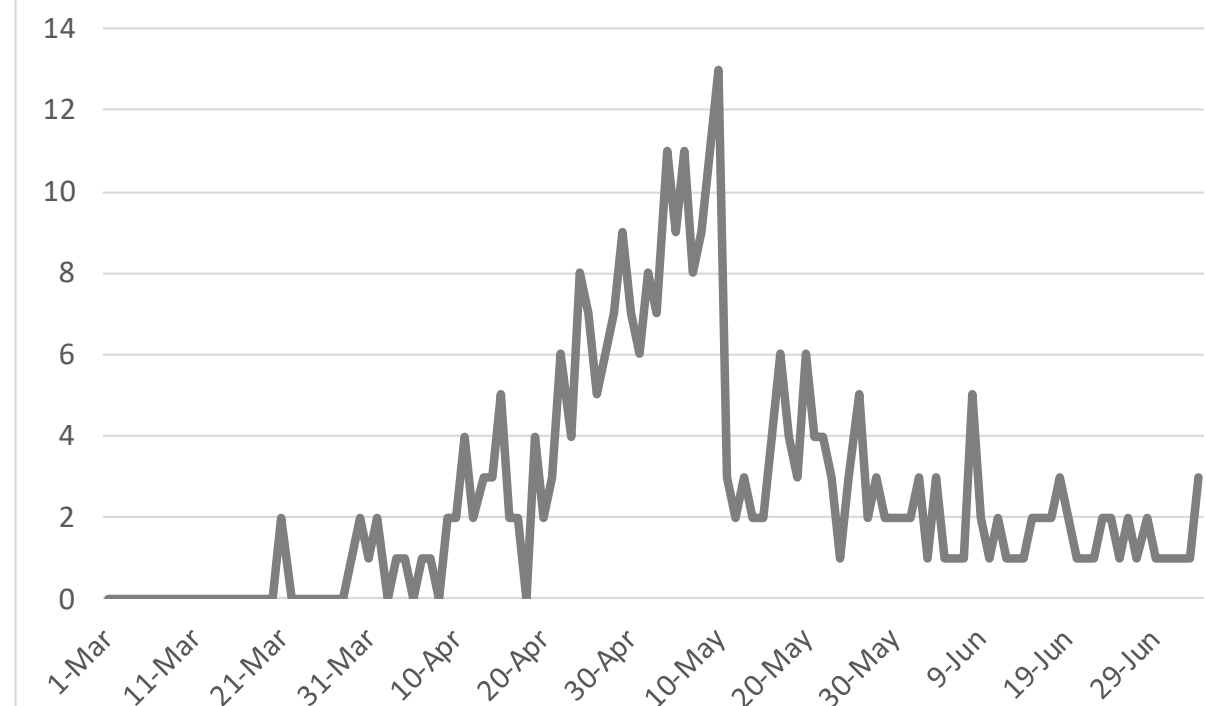
Source : KSA ministry of health

Qatar



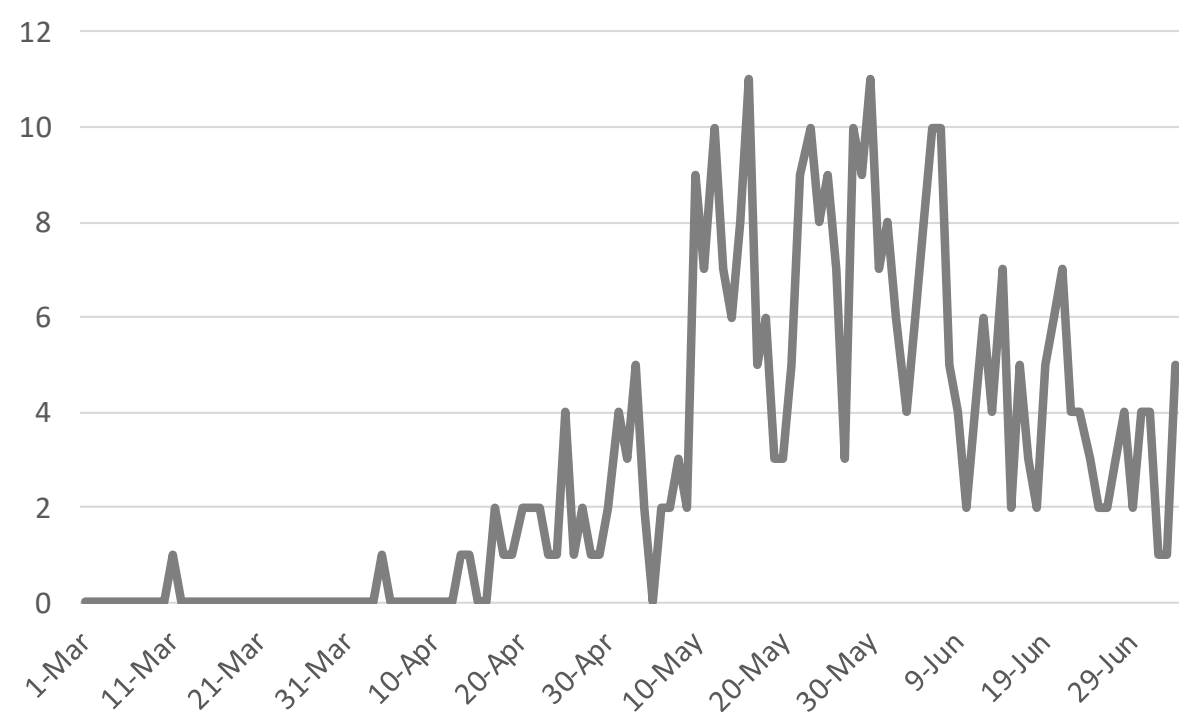
Source : Qatar ministry of health

UAE



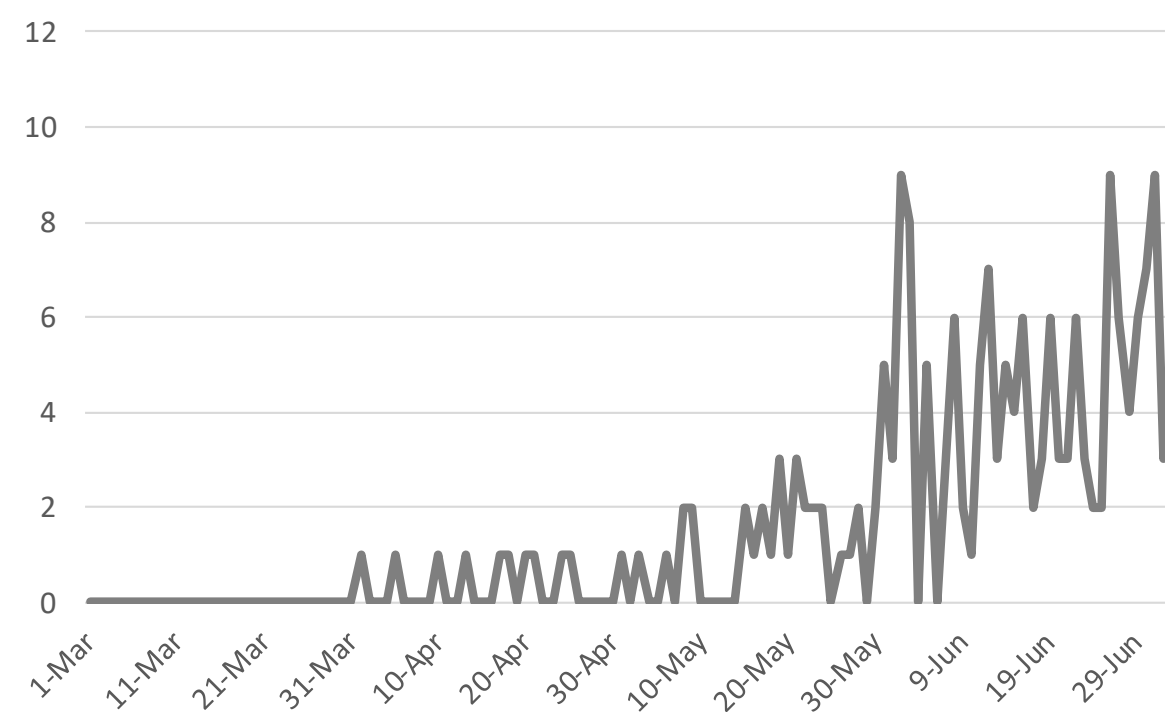
Source : National Emergency Crisis and Disaster Management Authority

Kuwait



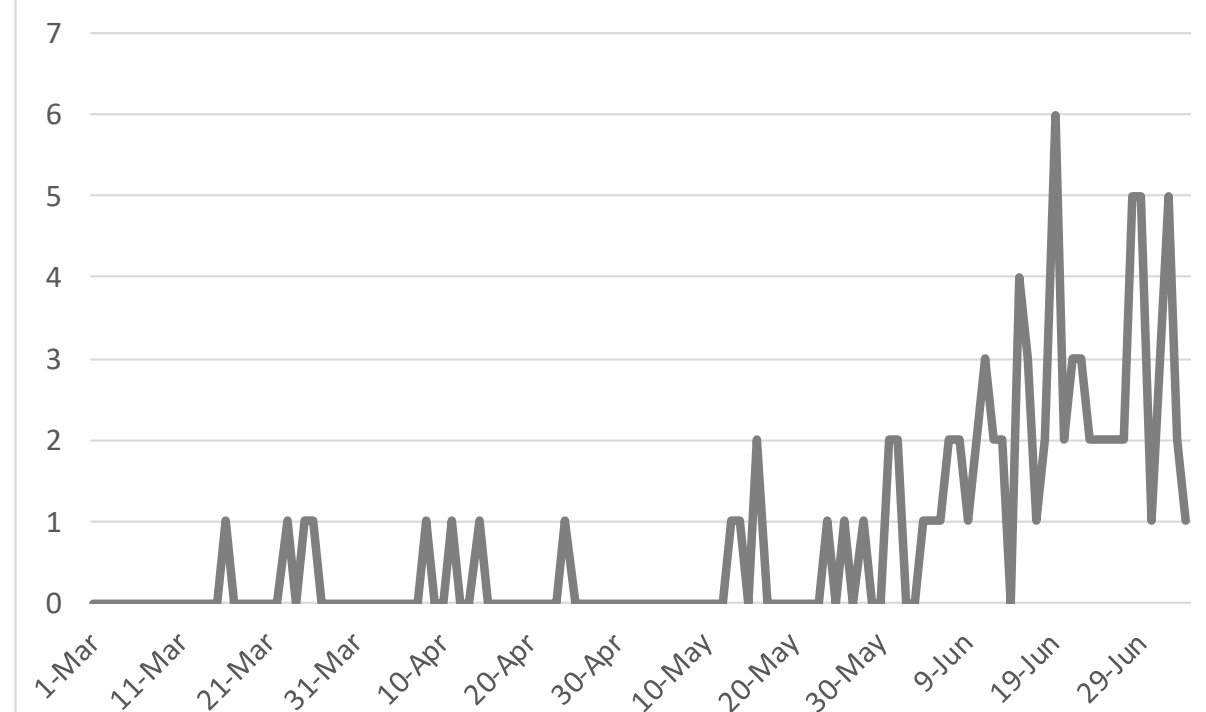
Source : Kuwait ministry of health

Oman © ADPHC 2020



Source :Oman ministry of health

Bahrain



Source :WHO



Article 1: Observational study of UK mobile health apps for COVID-19

Published

June 24 2020 in [the Lancet Digital Health](#)

- This study evaluated the features of mobile phone apps released in response to the COVID-19 pandemic.
- The study identified 82 apps from 35 different countries, through searching mobile application store platforms.
- Apps were evaluated using the Systems Wide Analysis of mobile health-related technologies (SWAT) tool in line with the NHS Digital Assessment Questionnaire.
- Mobile apps were assessed based on its usability, functionality, ethical values, security and privacy, user-perceived value, design, and content.

Findings

- Critical appraisal showed a total median SWAT score of 25.5 (range 9–32, interquartile range 18.75–28.25).
- The highest scores were achieved by apps from health-care organizations, such as the NHS and WHO. Highest scores were achieved by the:
 - NHS24: COVID-19 app (scored 33 out of a possible 38).
 - COVID19 Symptom Study app (scored 32 out of a possible 38).
- Scores for design were relatively high across most apps (median 4, IQR 3–4), with 78% of apps achieving a score of 3 or more.
- Median score for usability was 7 (IQR 6–9) and for functionality was 5 (IQR 4–6.25).
- Highest scores were attained by 75% of the apps (median 2, IQR 1.75–2) for data security and privacy.
- 50% of the apps were aimed at providing information; 10 (13.2%) for contact tracing and seven (9.2%) as diagnostic tools.

Conclusions

- Mobile phone apps can be used for information provision, contact tracing and diagnostic purposes.
- Although mobile technologies have huge potential to influence the course of the COVID-19 pandemic, major limitations and challenges such as low number of people using the app, data governance, quality, and efficacy must be addressed, this will require a substantial international collaborative effort.

Article 2: Covid-19: Public health agencies review whether vitamin D supplements could reduce risk

Published

June 19, 2020 in [BMJ](#)

- In the United Kingdom (UK), Public Health Agencies in England (PHE) and Scotland (PHS) have conducted reviews into the potential for Vitamin D to reduce the risk of COVID-19. Previous research reported that Vitamin D supplements reduced the risk of acute respiratory infections. As the pandemic increased, greater awareness of this report prompted speculation in the media that Vitamin D supplements could offer benefits against COVID-19.
- There was no clinical studies that investigated the impact of Vitamin D on immune responses to the SARS-CoV-2 virus. Many studies looked at other respiratory viruses and found that Vitamin D metabolites increase innate antiviral immune responses while simultaneously dampening down inflammation that has been highlighted as a major problem in COVID-19.
- **PHE recommended that everyone should consider Vitamin D supplement as people might not get enough Vitamin D from sunlight due to lockdown. Furthermore, there was not enough evidence to recommend Vitamin D supplements particularly for reducing risk of COVID-19. Both PHE and PHS recommended Vitamin D supplement for ethnic minority (dark skin) who require more sun exposure to make Vitamin D.**
- A national longitudinal study is being conducted where participants complete an initial online questionnaire collecting information on determinants of Vitamin D status. This information is linked to notifications of incident COVID-19 captured through monthly online follow up. Preliminary data showed that two third of the participants were not taking supplemental Vitamin D. In addition, a randomized controlled trial is planned looking at the potential for different vitamin D supplement strategies to reduce the risk of COVID-19.

Article 3: COVID-19 in children and young people

Published

June 29, 2020 in [THE LANCET](#)

- Previous studies have suggested that pediatric infection risk is similar to adults. A possible explanation for the mild disease phenotypes of COVID-19 in the majority of children and young people is due to higher titres of antibodies directed against seasonal coronaviruses abrogating immune complex deposition and antibody-dependent enhancement.
- Angiotensin-converting enzyme 2 (ACE2) transmembrane enzyme is the cellular receptor for SARS-CoV-2. Variation in ACE2 expression might affect disease susceptibility and progression. ACE2 expression is highest among children, young people, and women. It decreases with age and is lowest in people with diabetes and hypertension thus lower levels of expression of the viral receptor ACE2 are found in those at the highest risk for progression of COVID-19 to a severe disease phenotype.
- Previous registry data reported that children with autoimmune or inflammatory conditions might be better protected from severe COVID-19. Additionally, some treatments could positively affect pathogen clearance (e.g., antimalarial drugs) or prevent hyper-inflammation (e.g., cytokine blockers). Conclusive statements on the risk of infection in children with rheumatic diseases are premature due to lack of data. Therefore, recommendations regarding the protection of children with autoimmune or inflammatory conditions do not differ significantly from adults.



THANK YOU

 ADPHCAE  ADPHC_AE  ADPHC_AE  ADPHC.AE  ADPHC-AE  056 2312171