

SCIENTIFIC RESEARCH MONITORING ON COVID-19

09 DECEMBER 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 310)

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 (1/2)

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

A Randomized Trial of Convalescent Plasma in COVID-19 Severe Pneumonia

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A novel use of telemedicine during the COVID-19 pandemic

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A living WHO guideline on drugs for COVID-19

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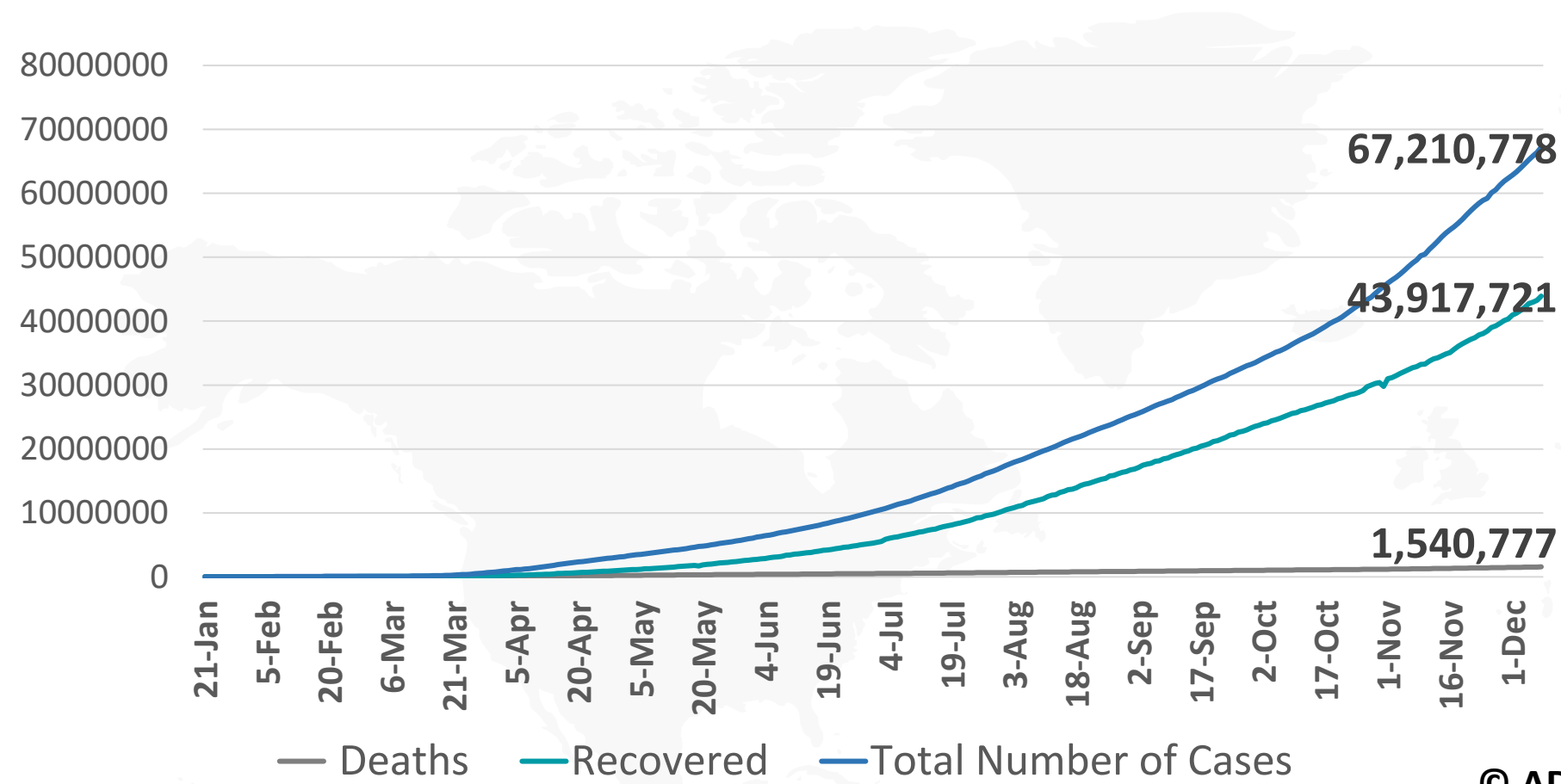
Metformin and risk of mortality in patients hospitalized with COVID-19: a retrospective cohort analysis

Treatment

Association of inhaled and systemic corticosteroid use with Coronavirus Disease 2019 (COVID-19) test positivity in patients with Chronic Pulmonary Diseases

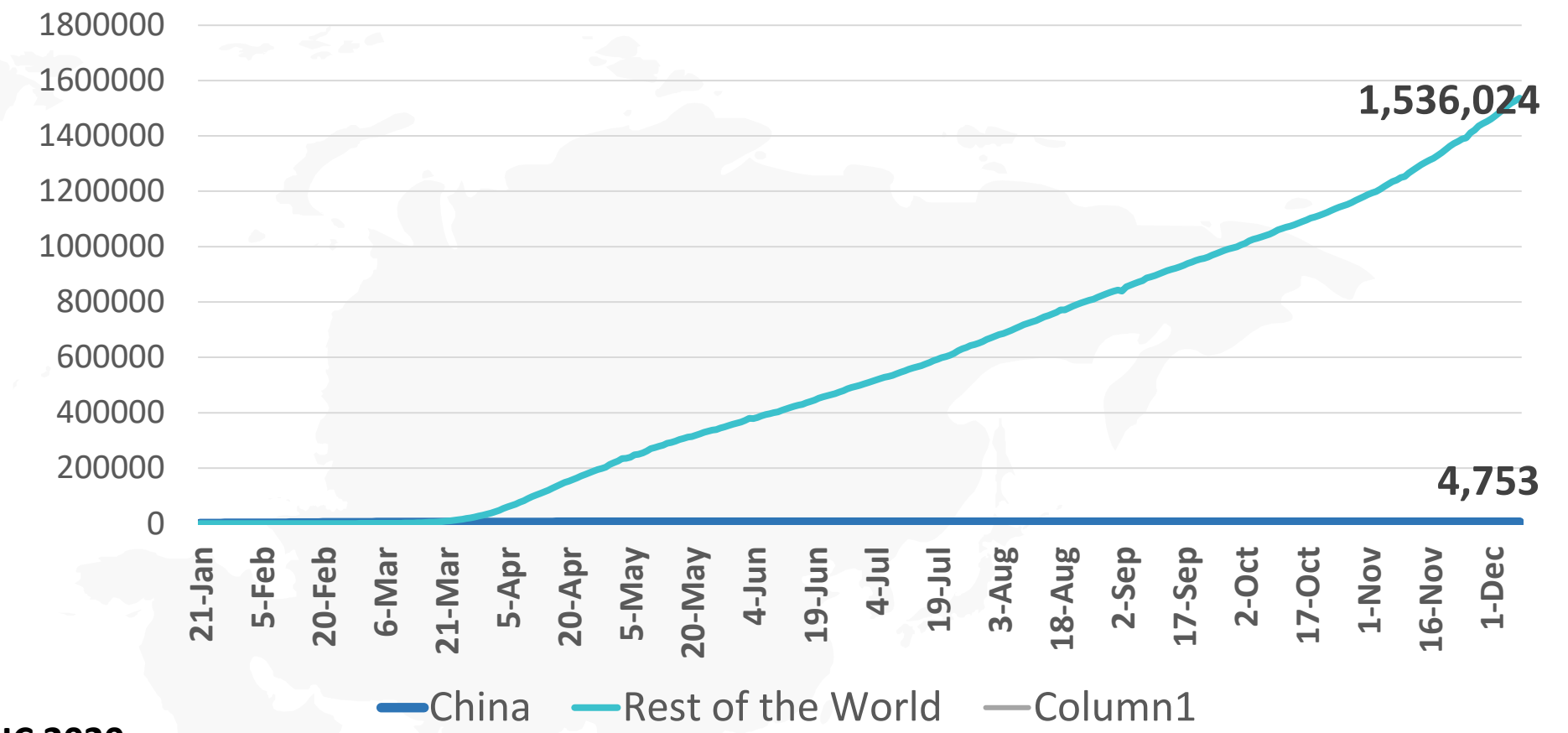


Figure 1: Total Number of Infected, Recovered, and Death Cases



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



Note: the number of recovered cases in 31st October recorrected from 30 million to 29 million in Johns Hopkins website

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

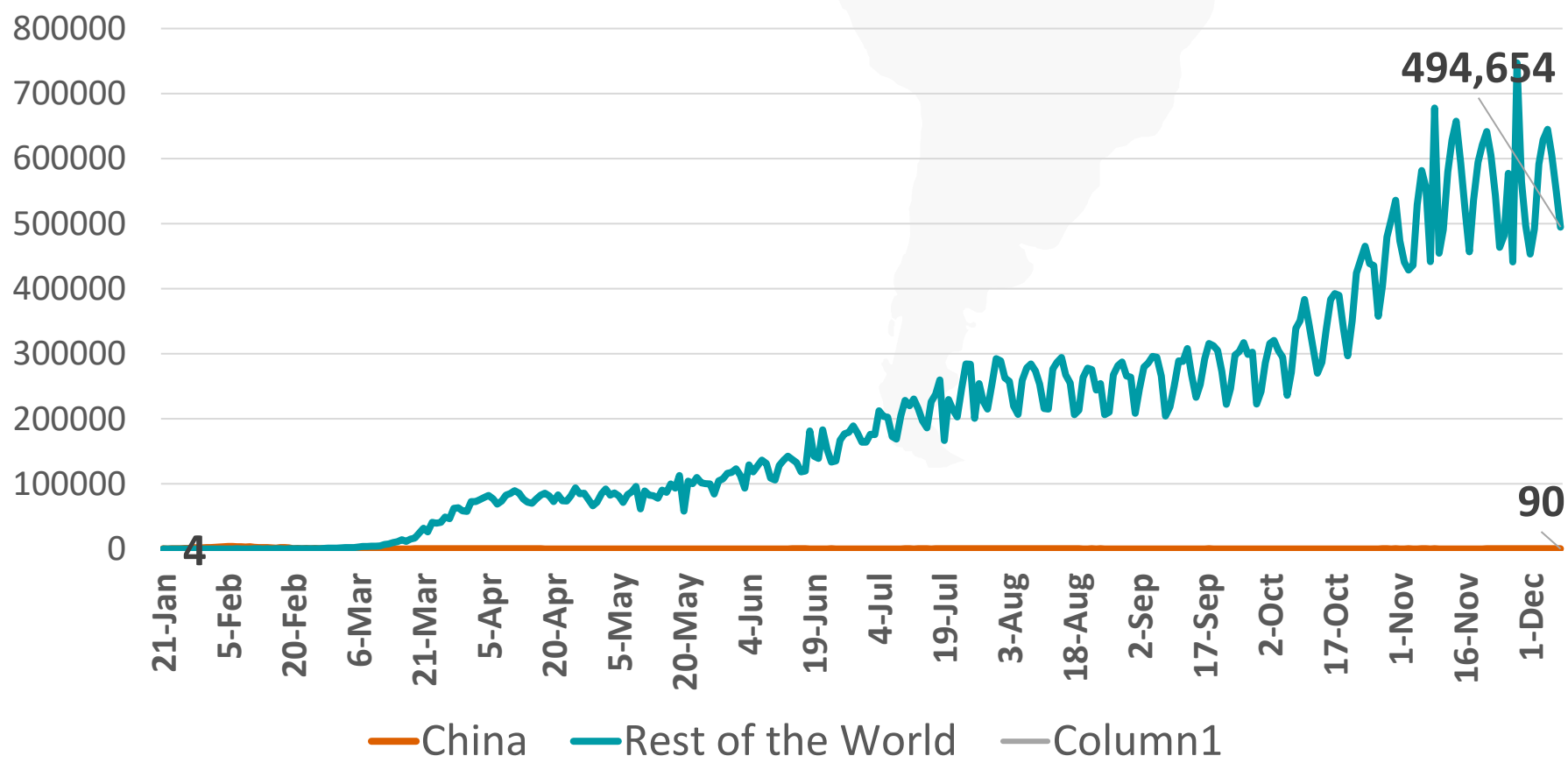


Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)

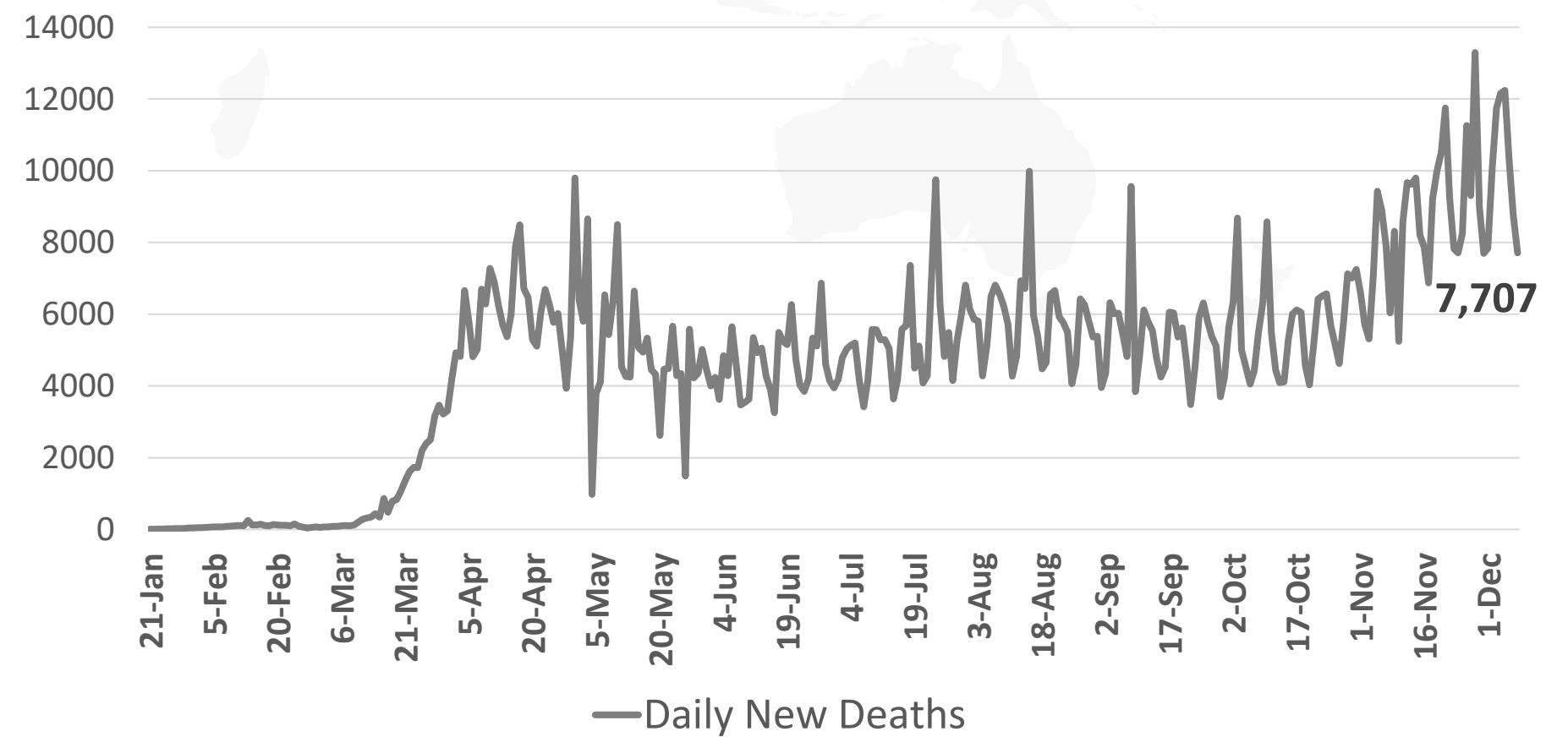
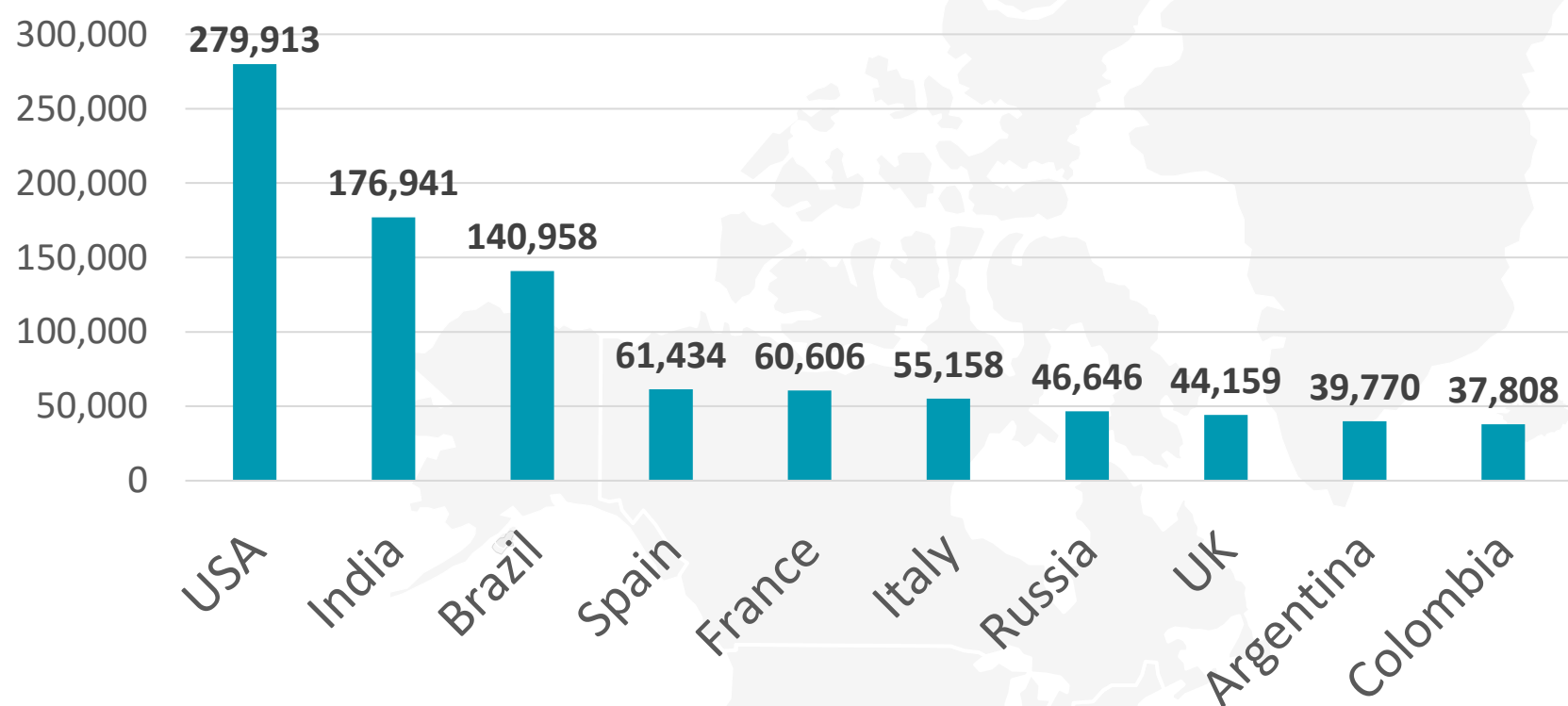
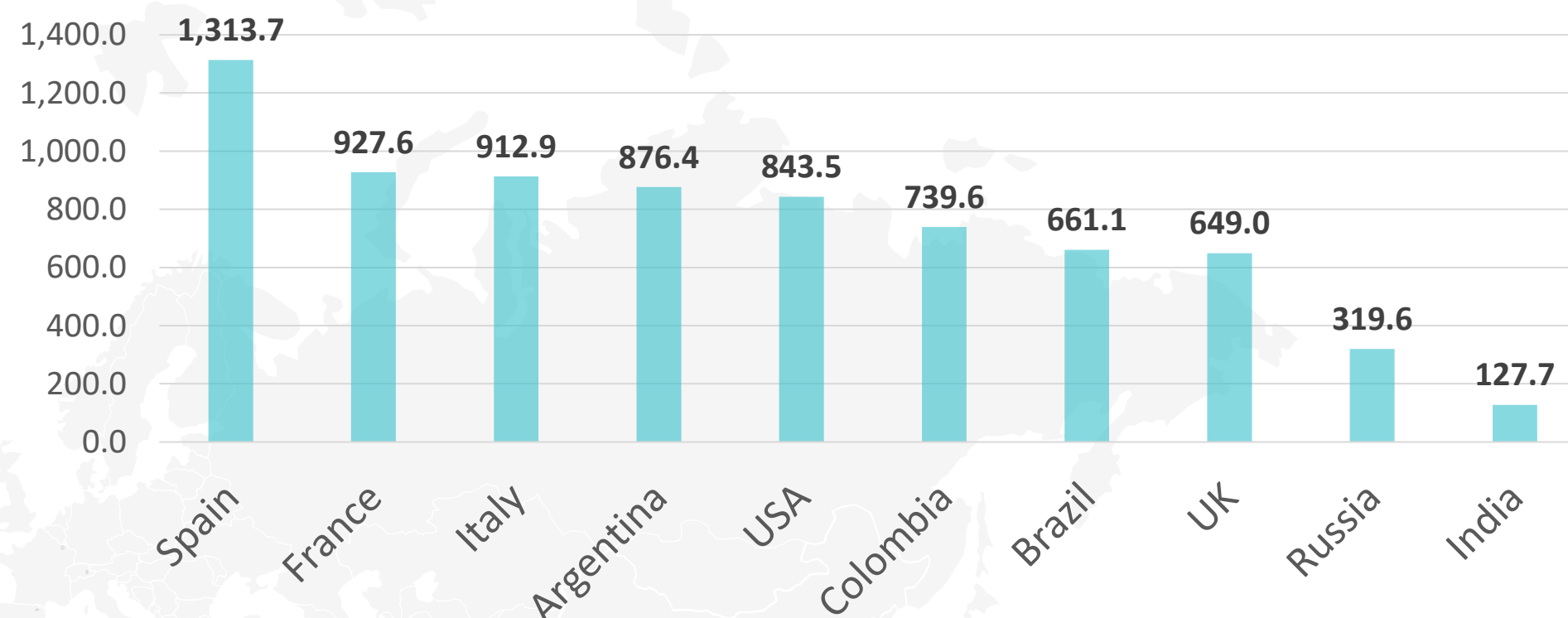


Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

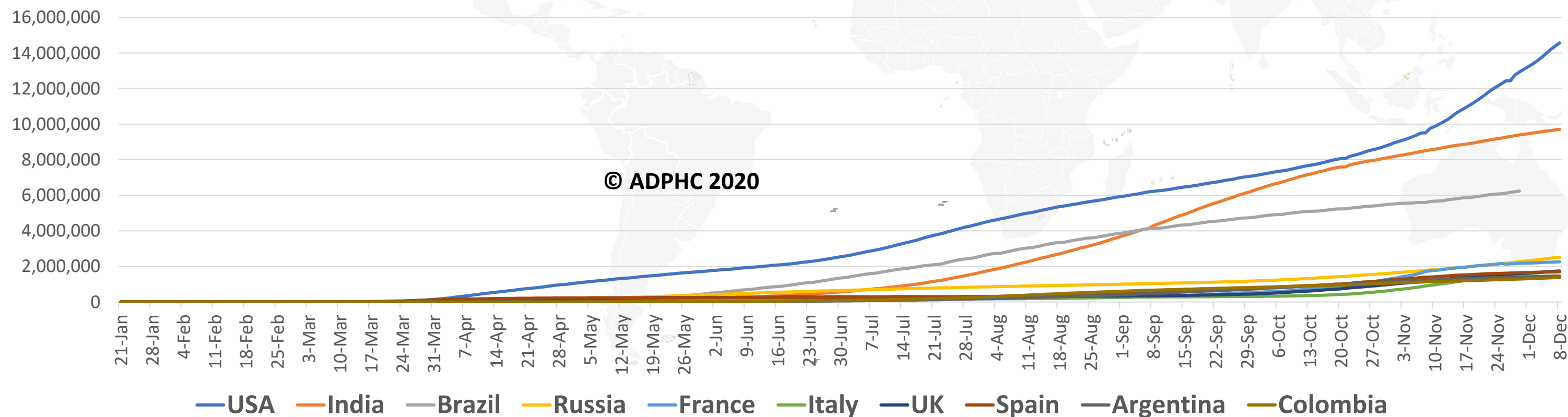
TOTAL DEATHS



DEATHS PER MILLION

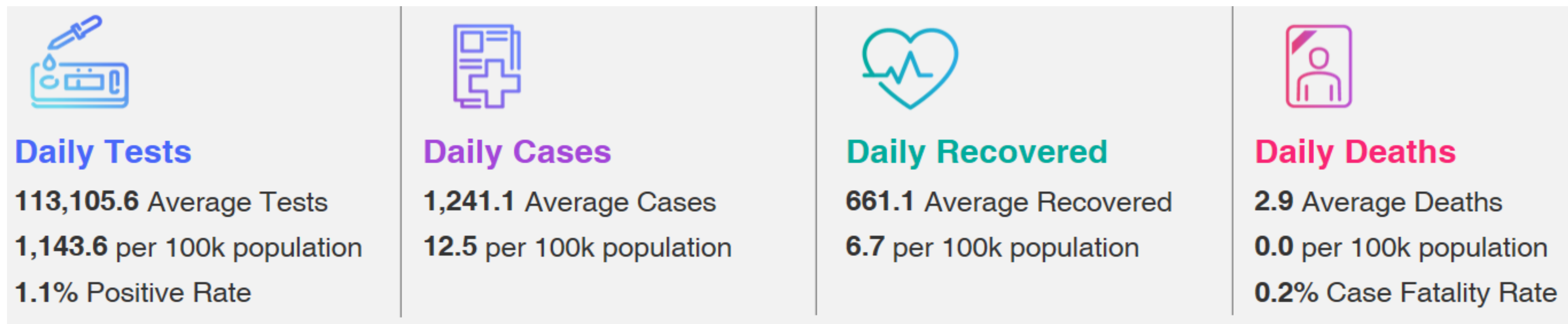


TOTAL INFECTED CASES



USA	14,570,523
India	9,703,770
Brazil	6,603,540
Russia	2,515,009
France	2,255,955
Italy	1,742,557
UK	1,737,964
Spain	1,702,328
Argentina	1,463,110
Colombia	1,371,103

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

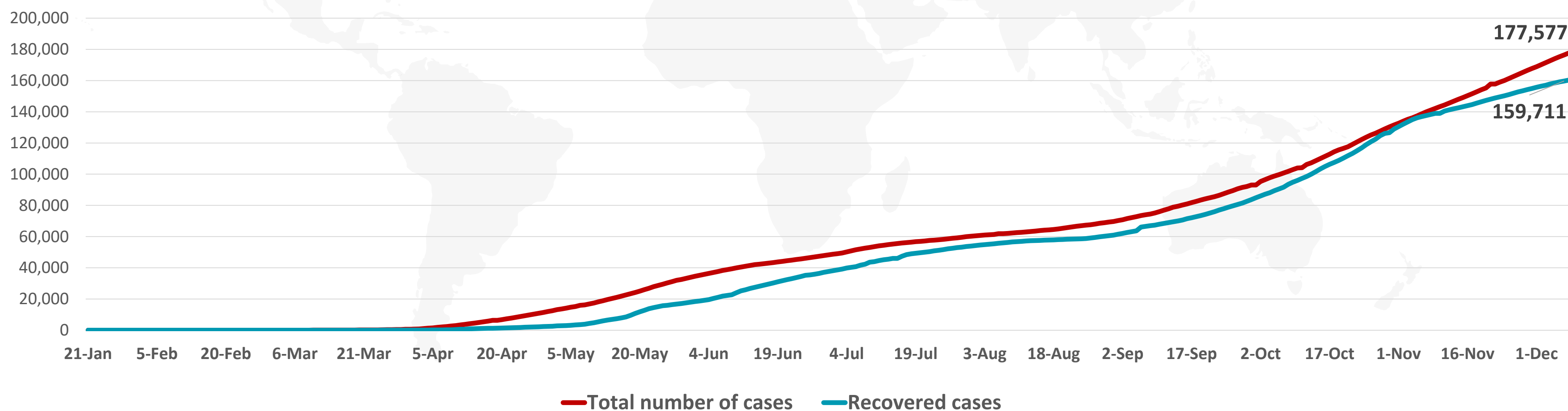
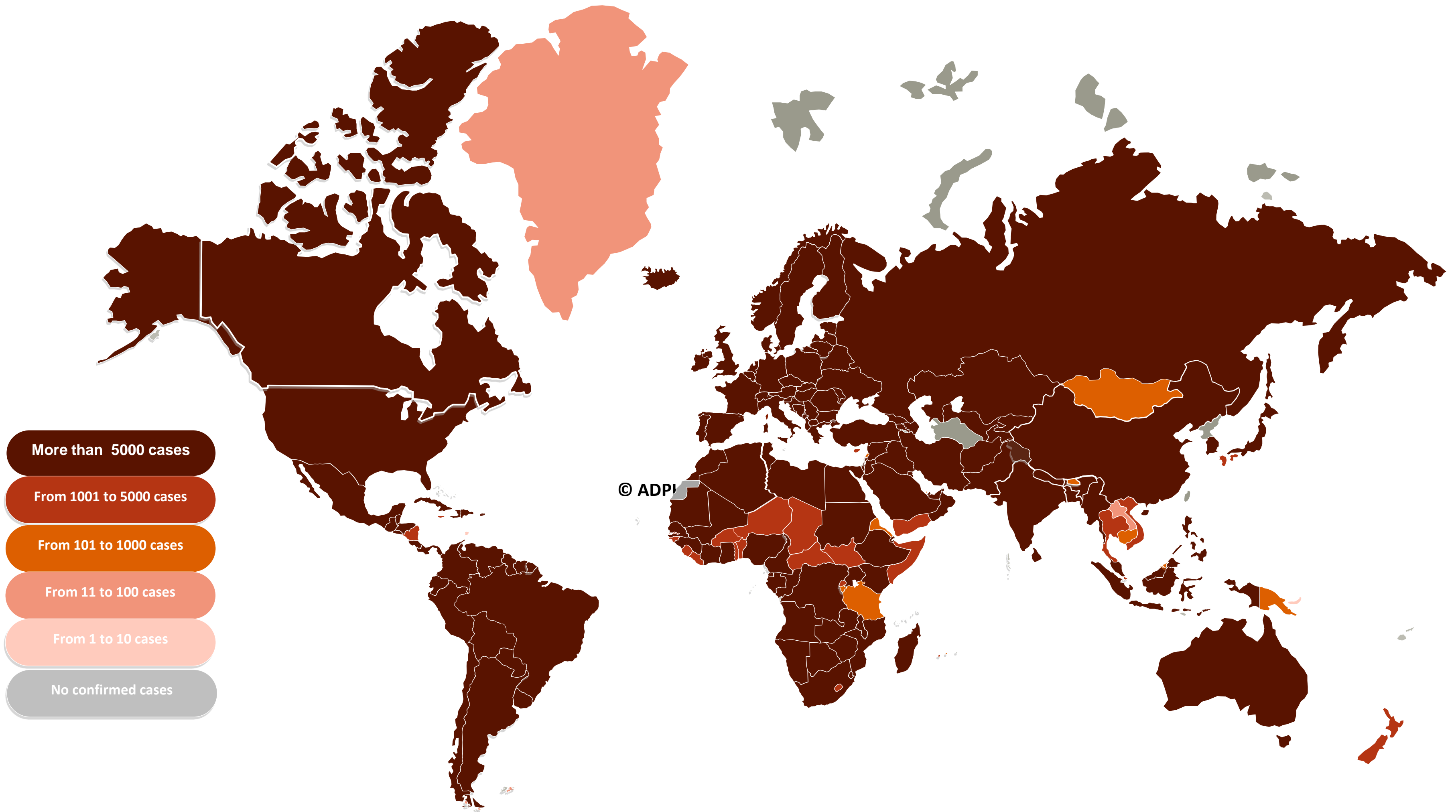


Figure 7A : Global Distribution of COVID-19 Cases



More than 5000 cases

From 1001 to 5000 cases

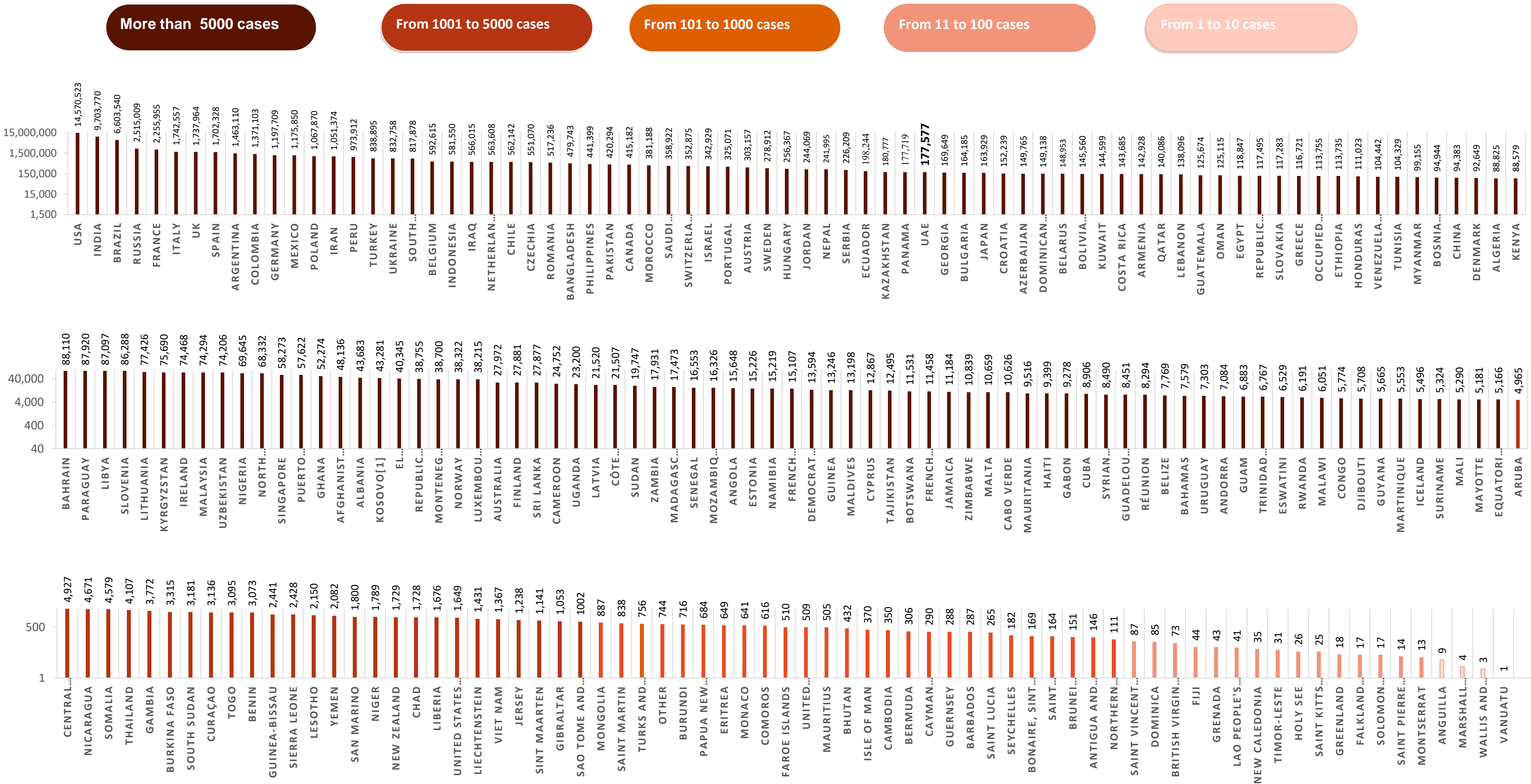
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

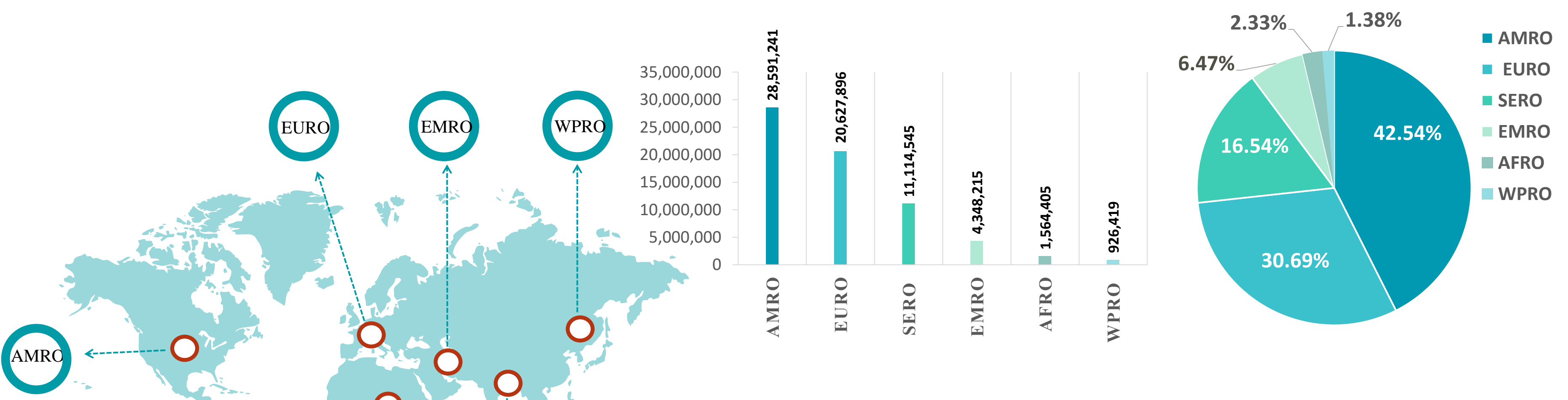
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



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

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

INFECTED



DEATHS

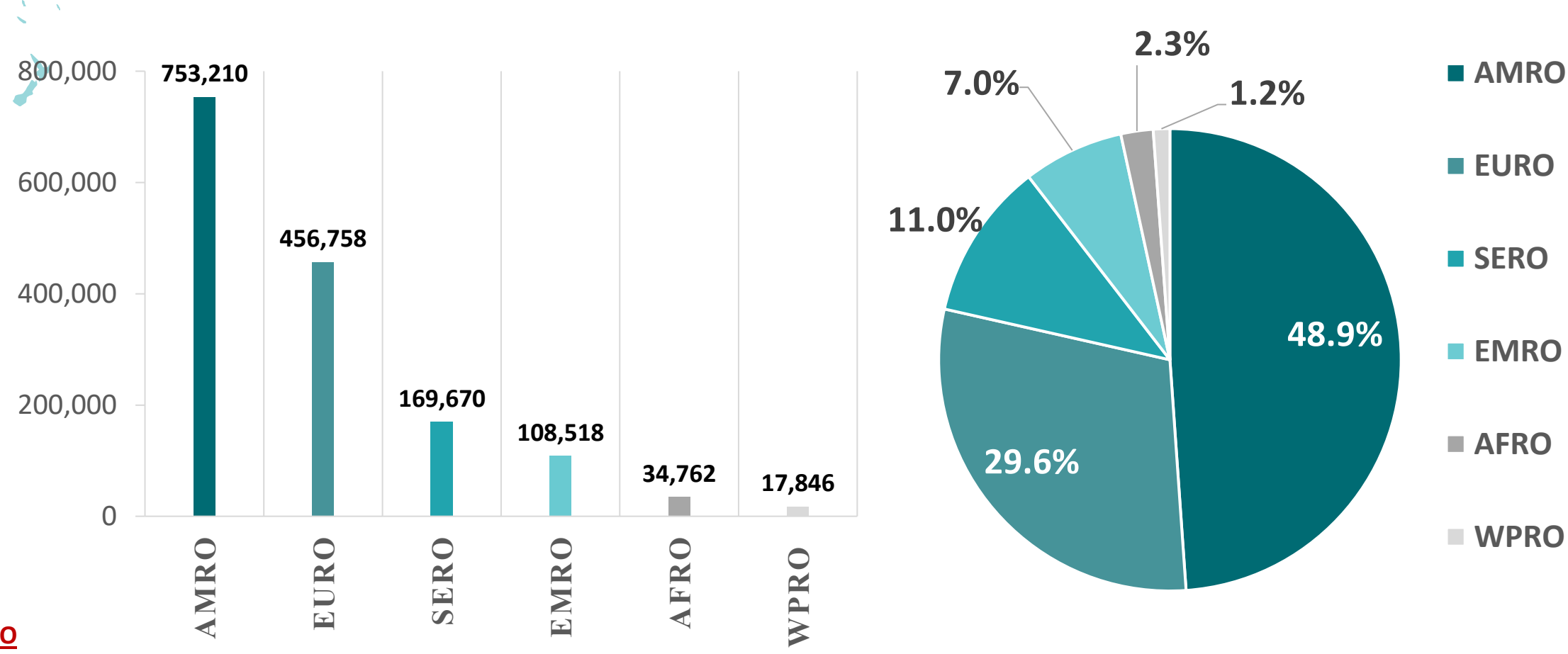
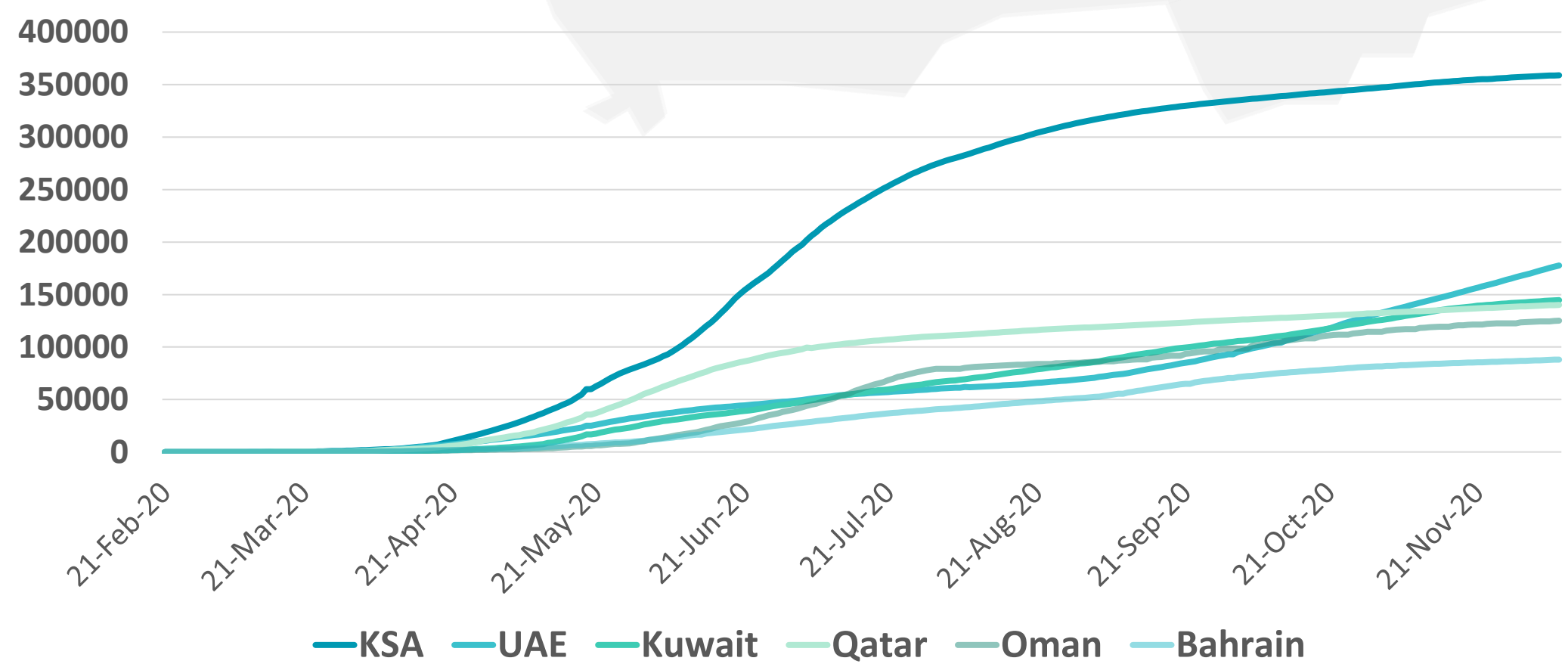
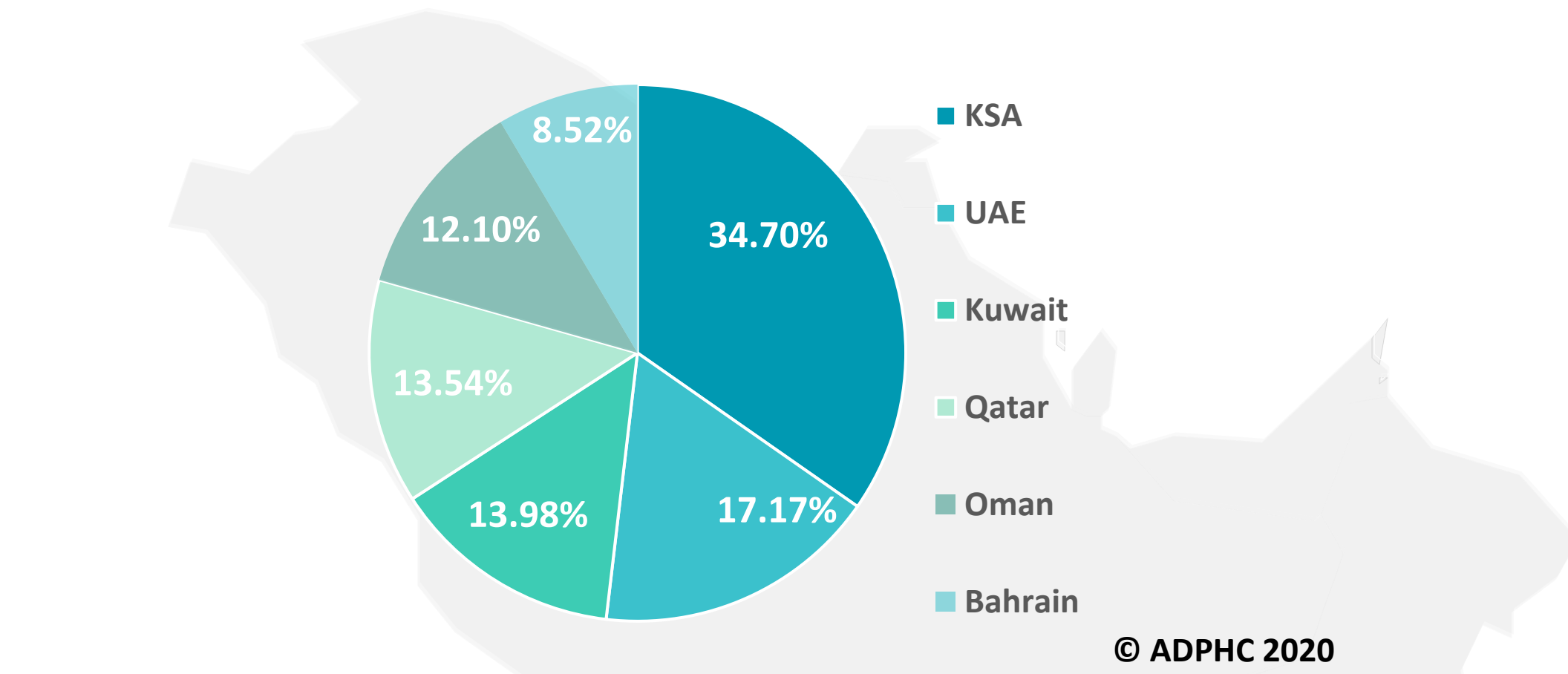
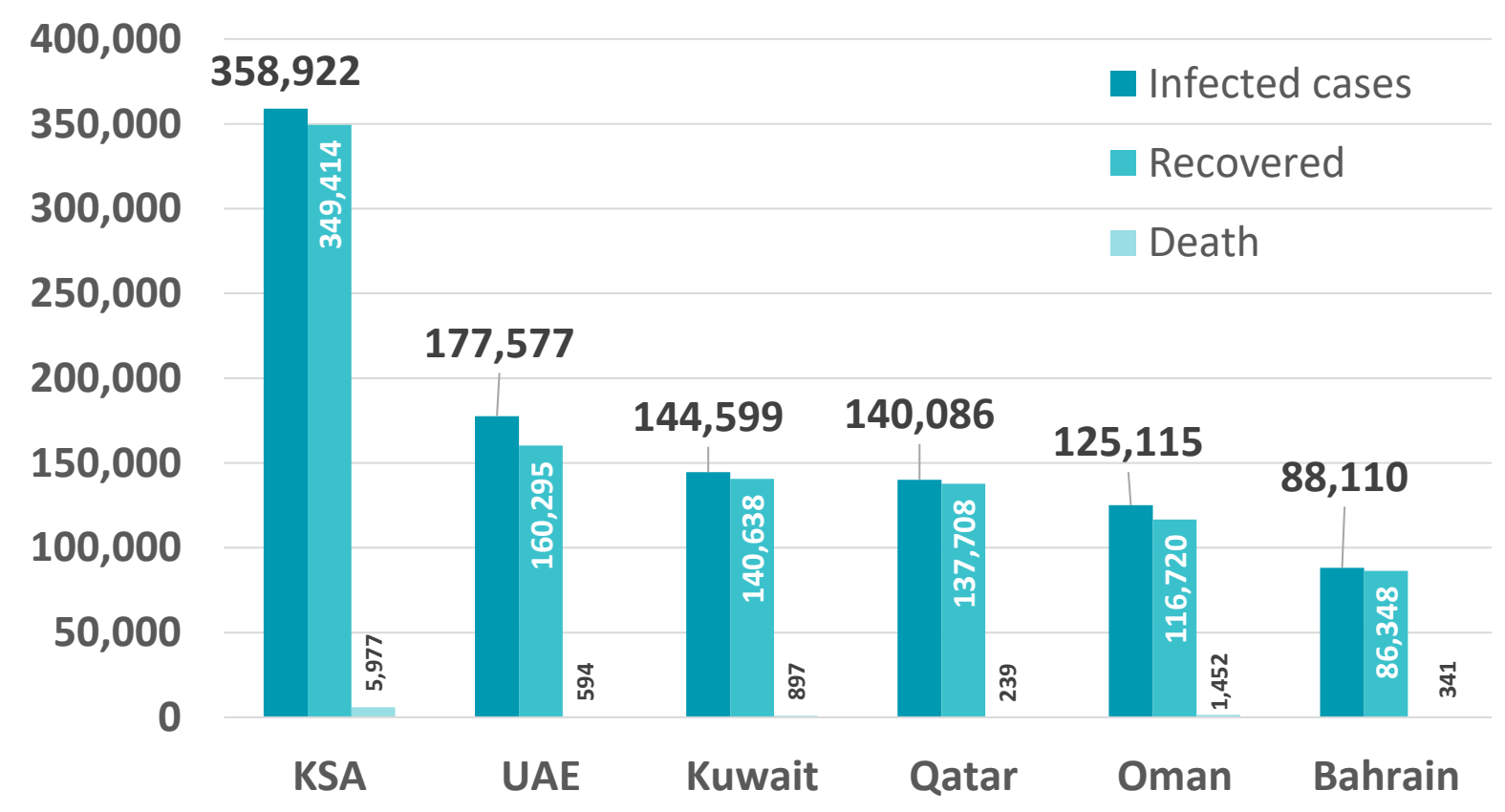


Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

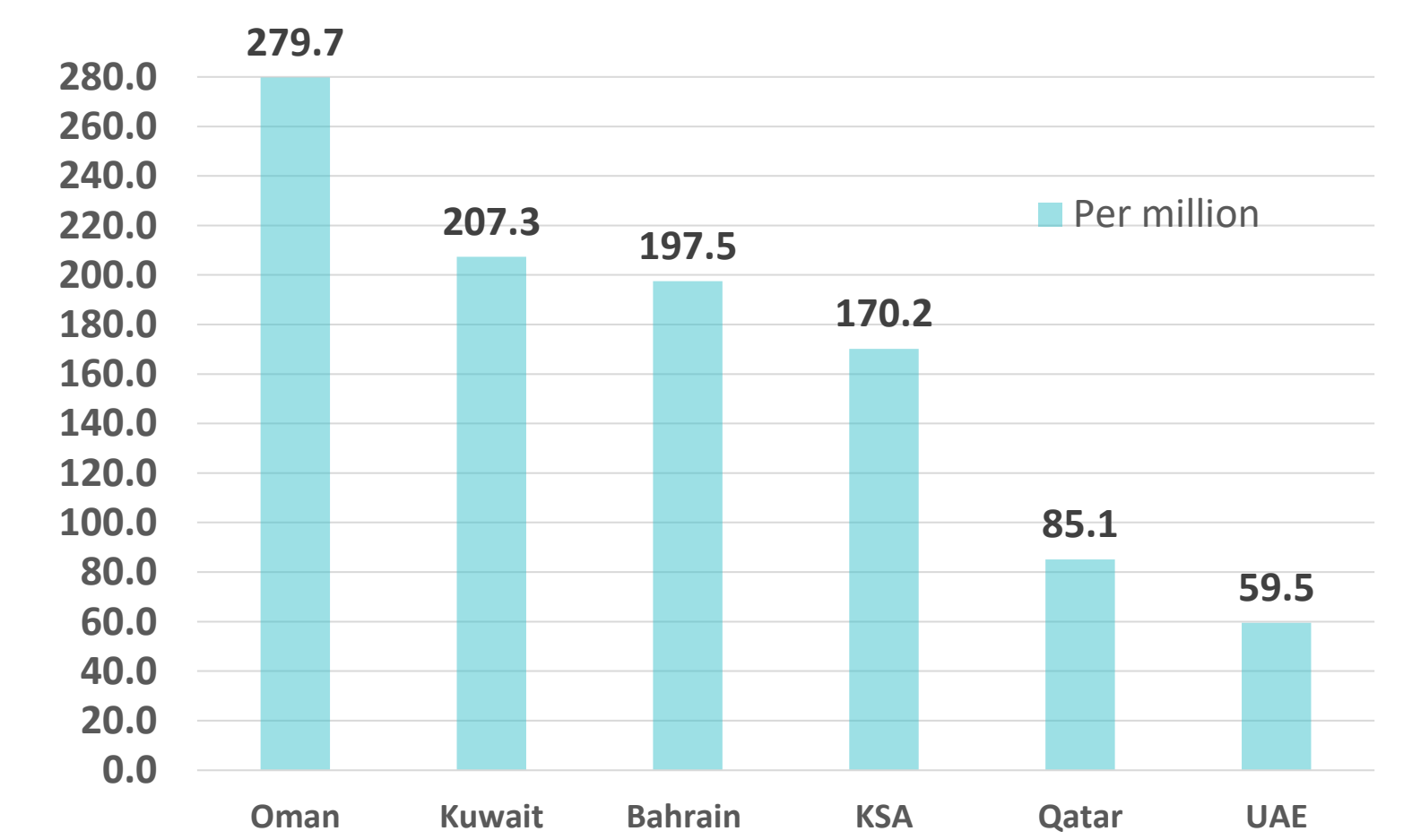
TOTAL NUMBER OF INFECTED CASES



TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATHS PER MILLION



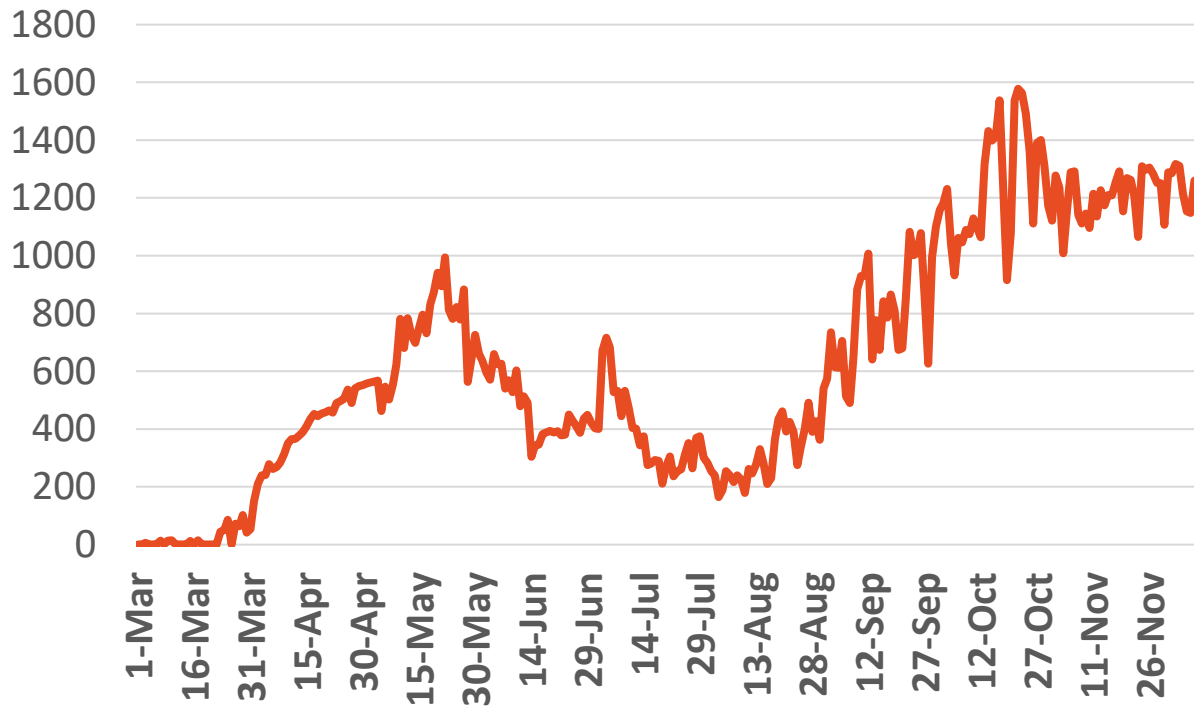
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: [John Hopkins](#), [WHO](#)

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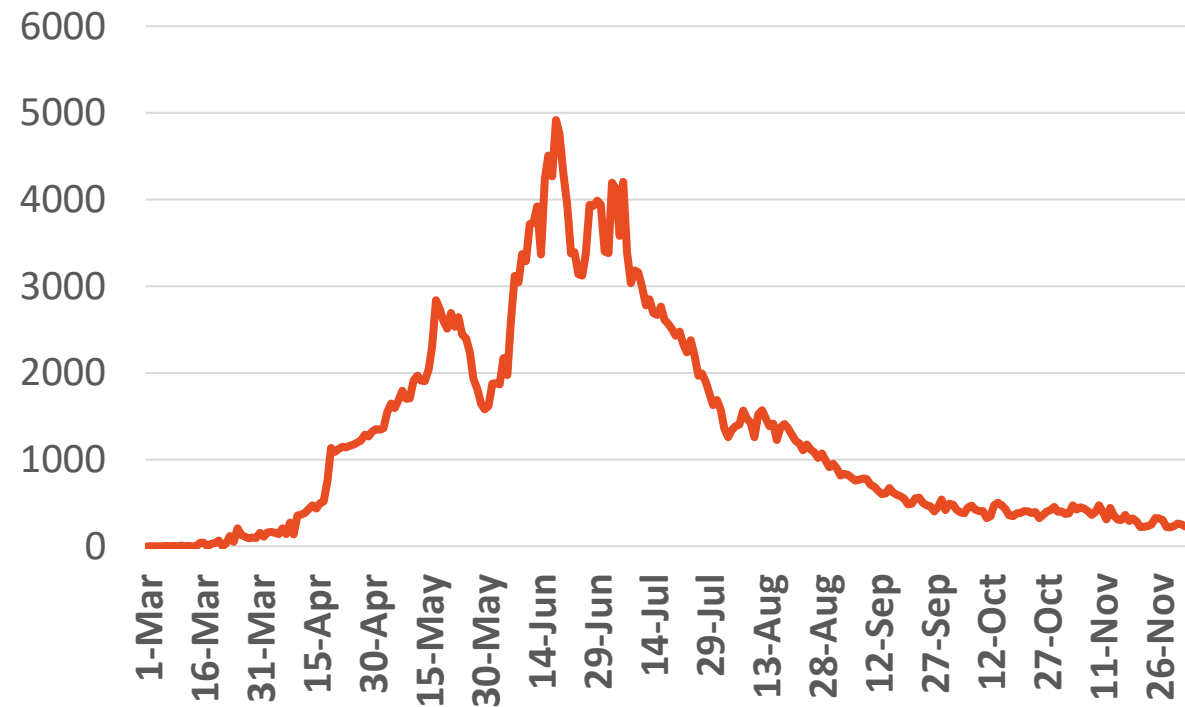
Figure 10: Comparative Analysis of the Distribution of COVID-19 New Cases in GCC Countries

UAE



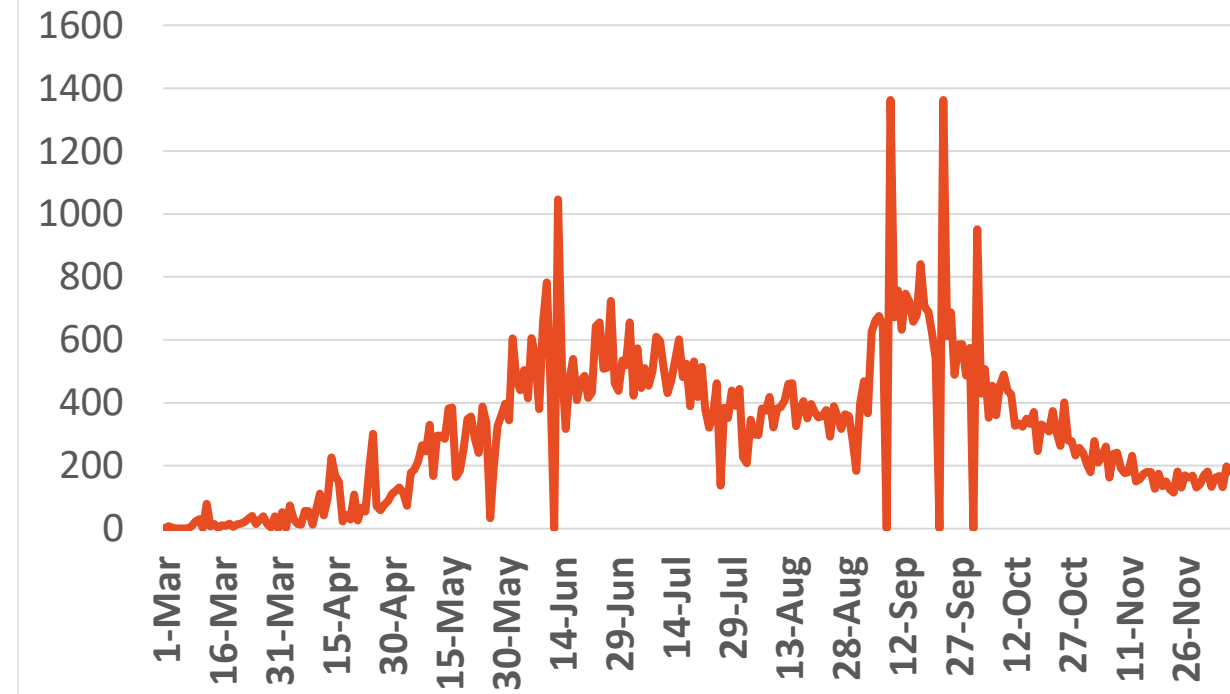
Source : National Emergency Crisis and Disaster Management Authority

KSA



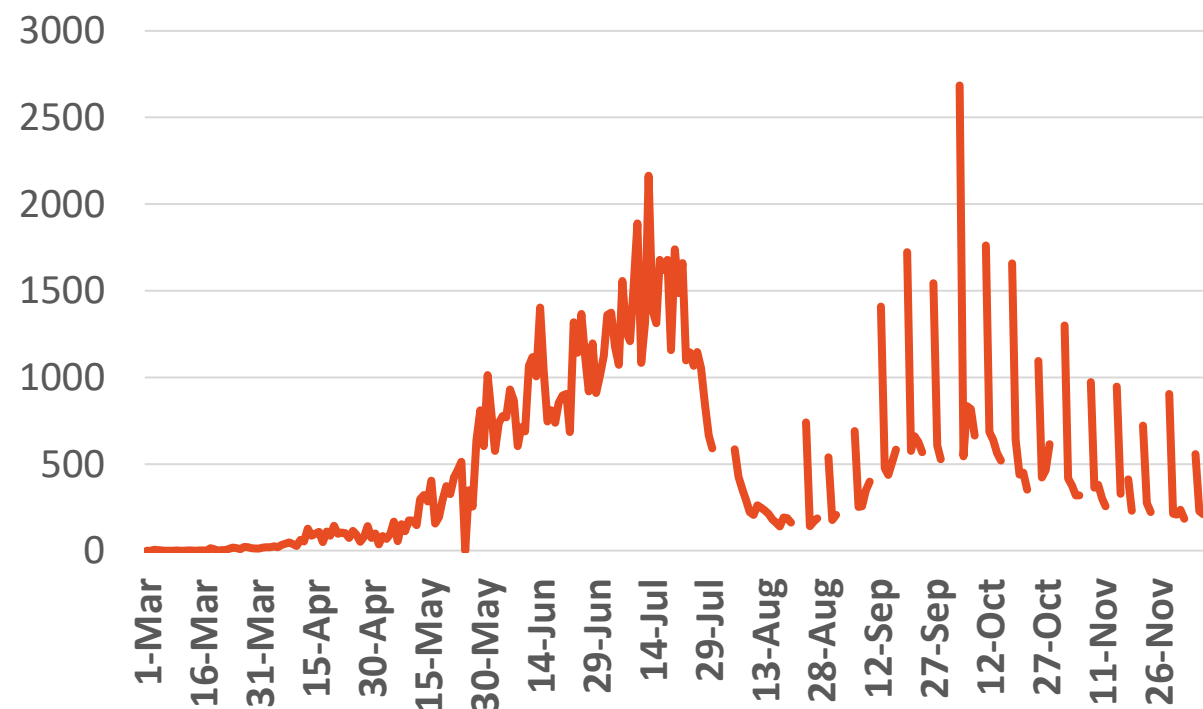
Source : KSA ministry of health

Bahrain



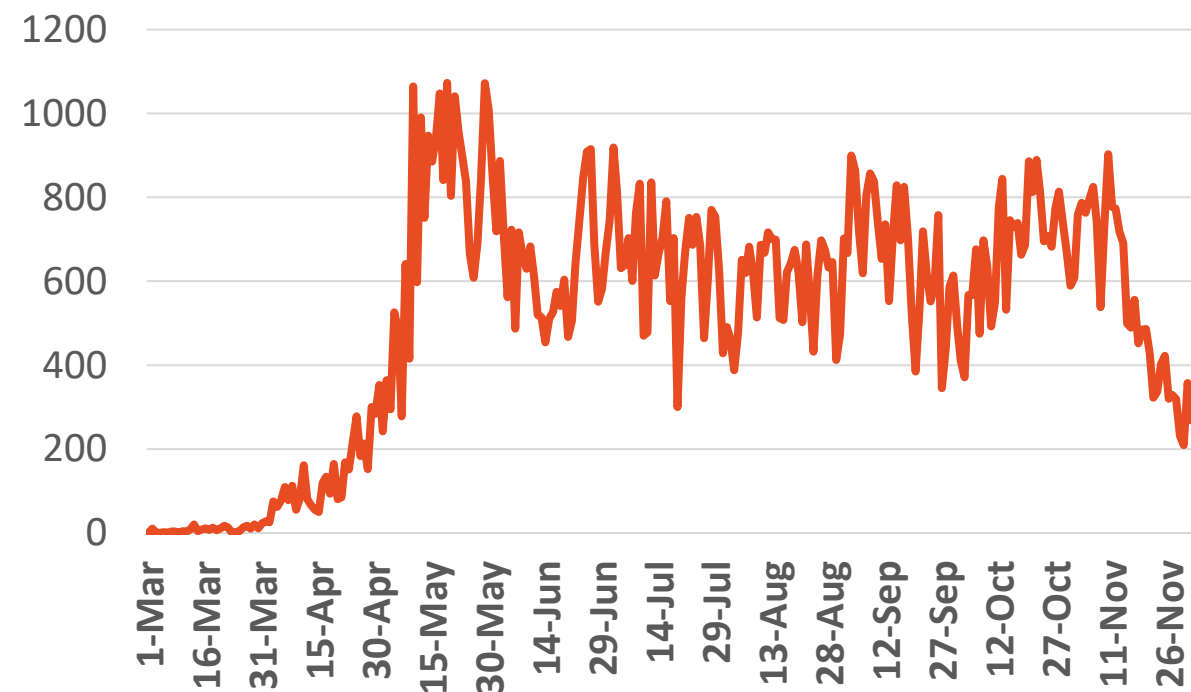
Source :WHO

Oman



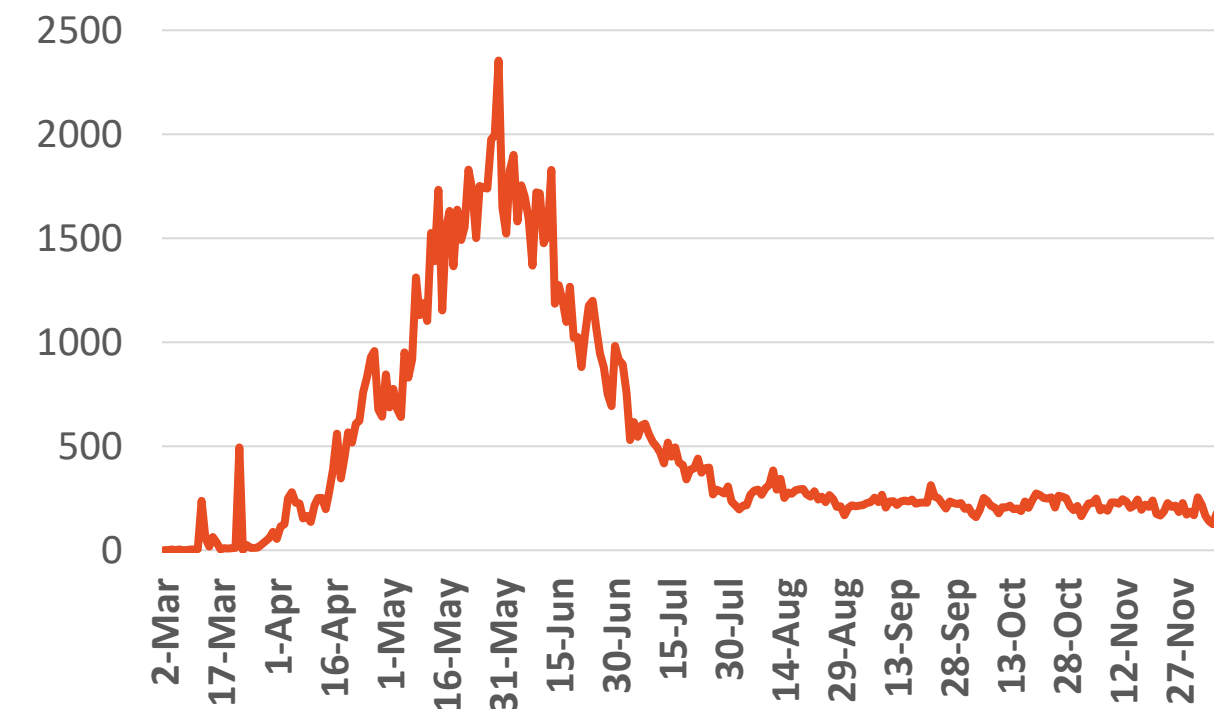
Source :Oman ministry of health

Kuwait



Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

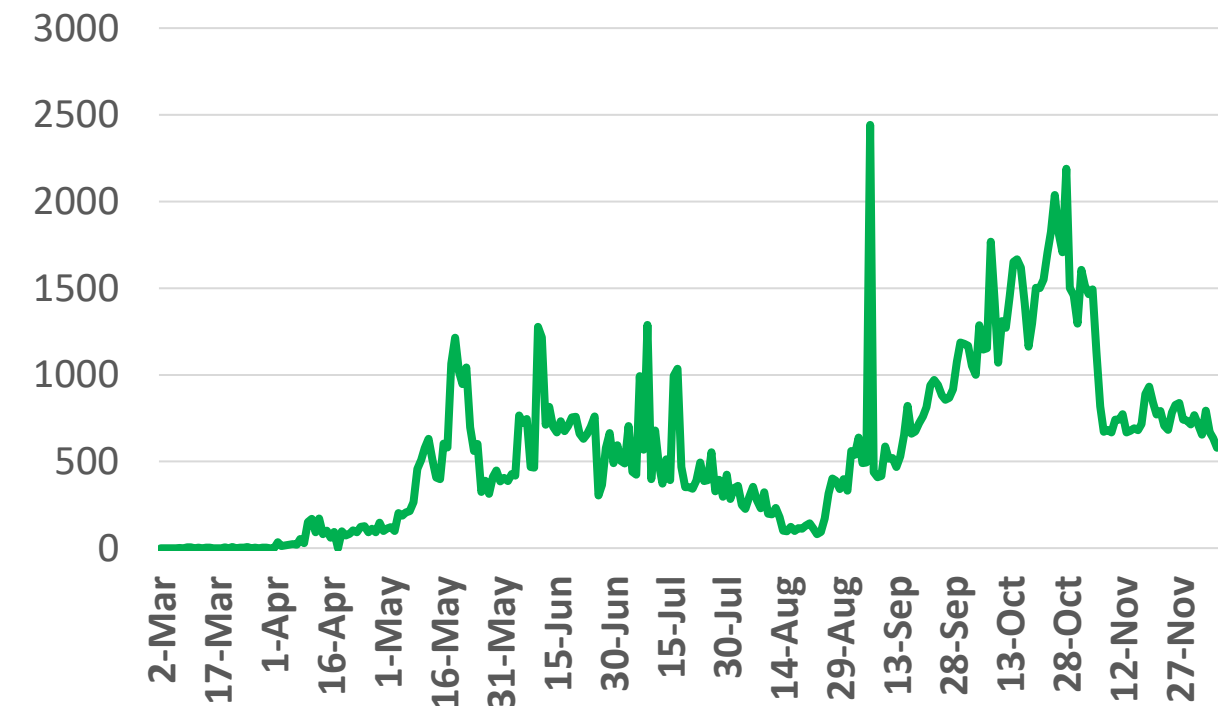
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*No announced statistic data from 31 JUL to 4 AUG, 21,23,28,30 AUG 2,4, 5,11,12,18,19,25 ,26,30 SEP,1,2,9,10,16,17,23,24,30,21 OCT, 6,7,13,14,17,20,21, 25,26,6 DEC
*No announced statistic data on weekends and official holidays.



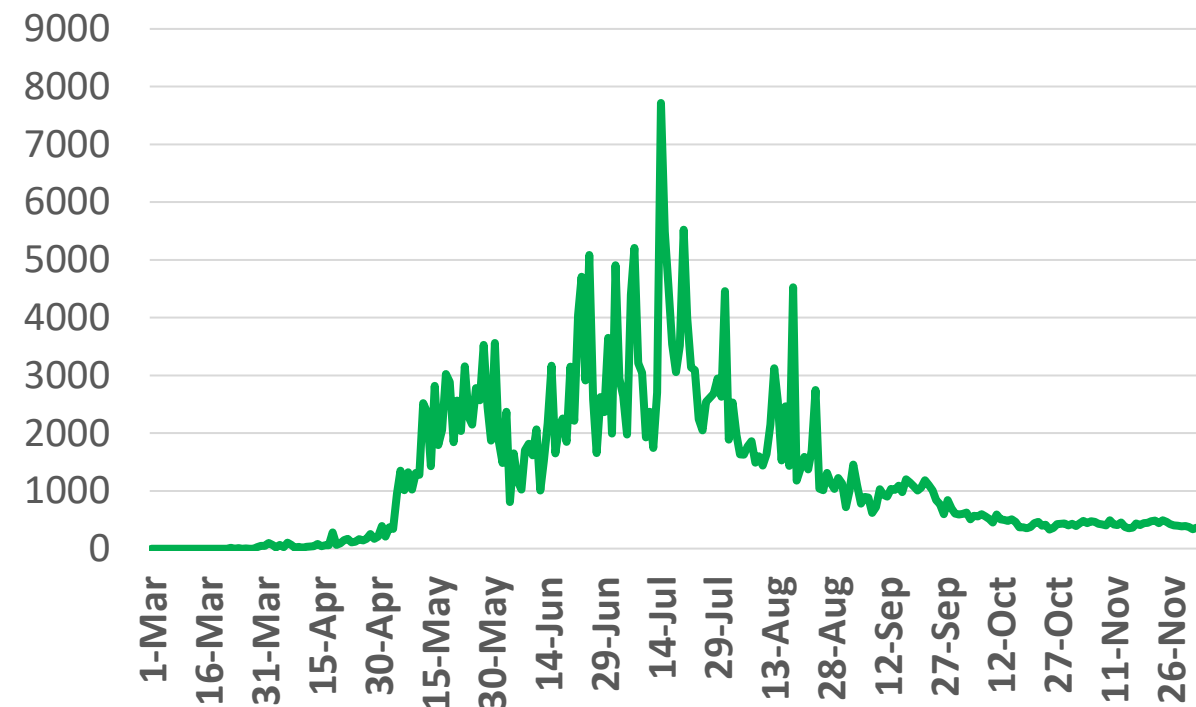
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE



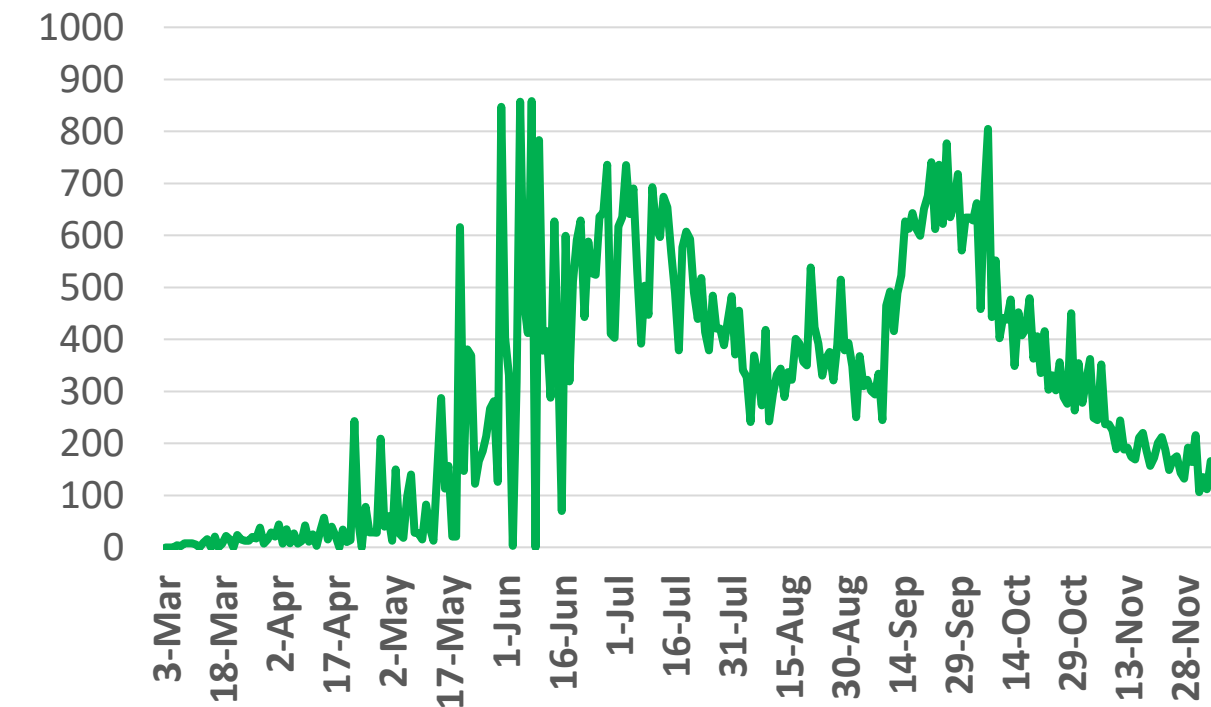
Source : National Emergency Crisis and Disaster Management Authority

KSA



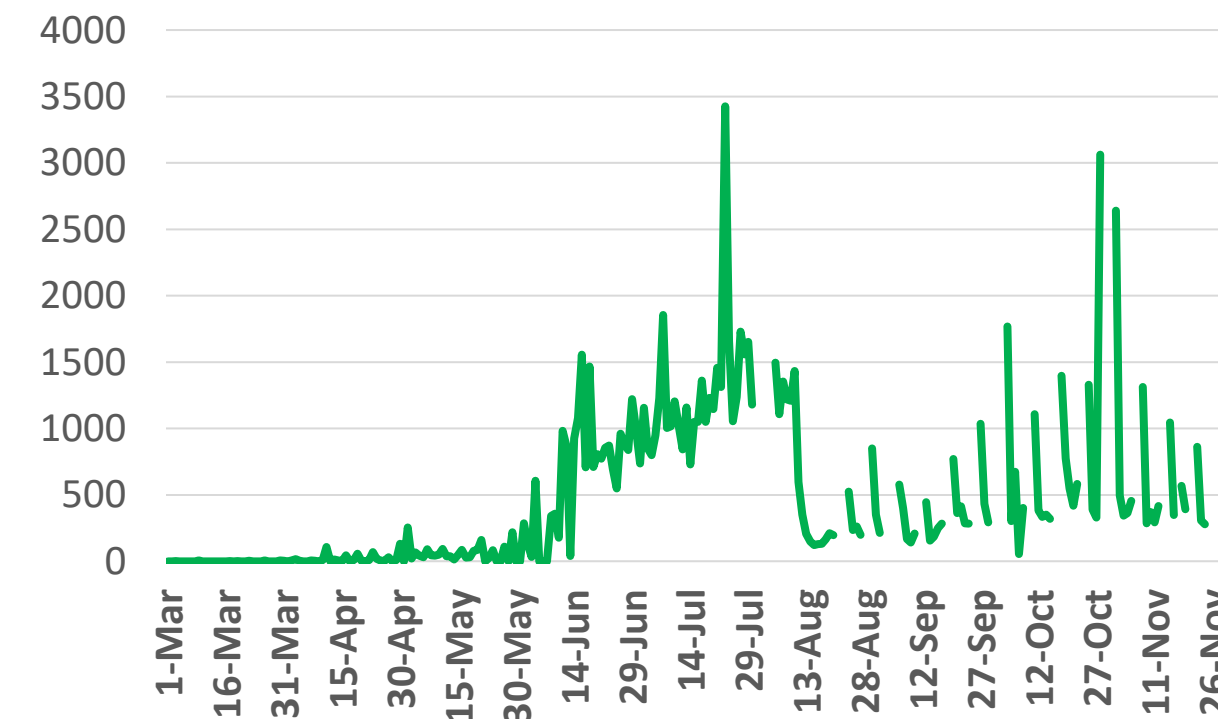
Source : KSA ministry of health

Bahrain



Source : Bahrain ministry of health

Oman



Source : Oman ministry of health

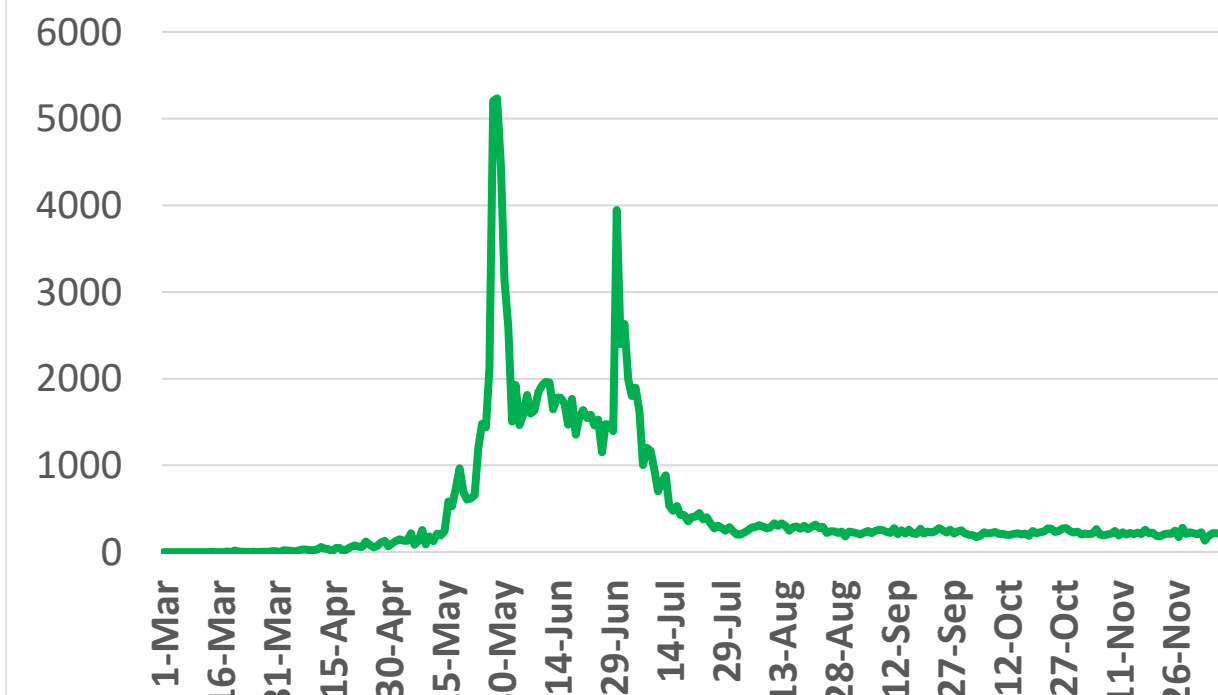
Kuwait



Source : Kuwait ministry of health

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QATAR



Source : Qatar ministry of health

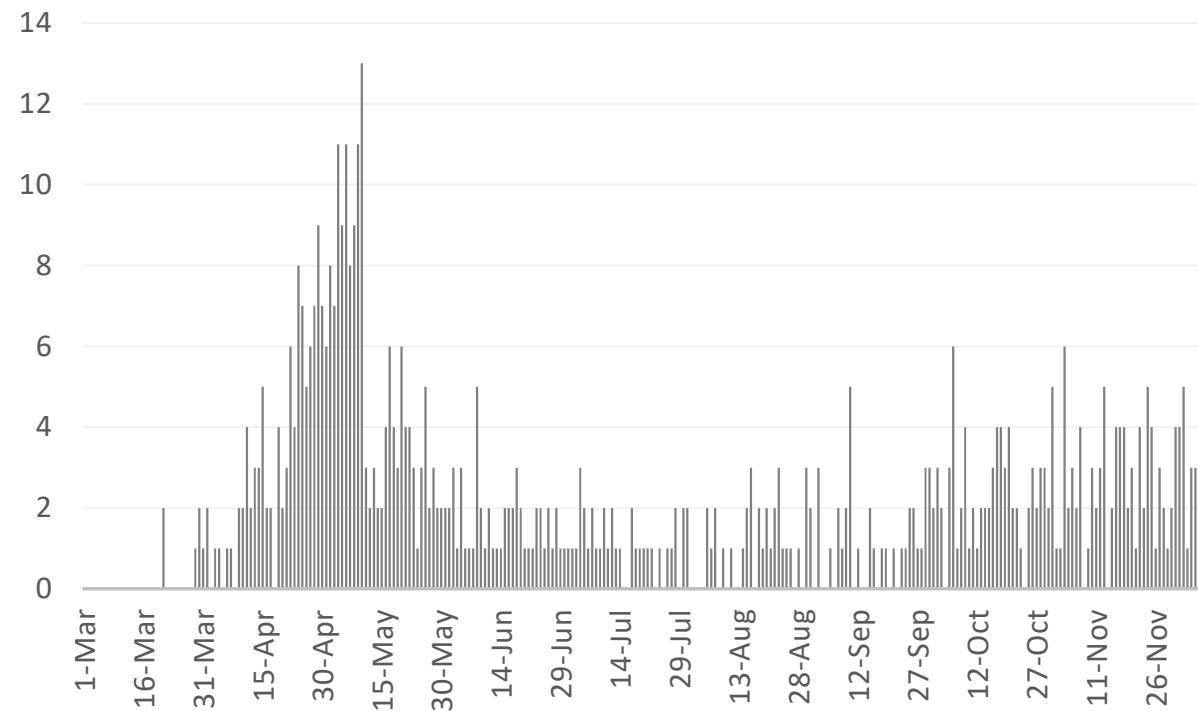
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No announced statistic data on weekends and official holidays.



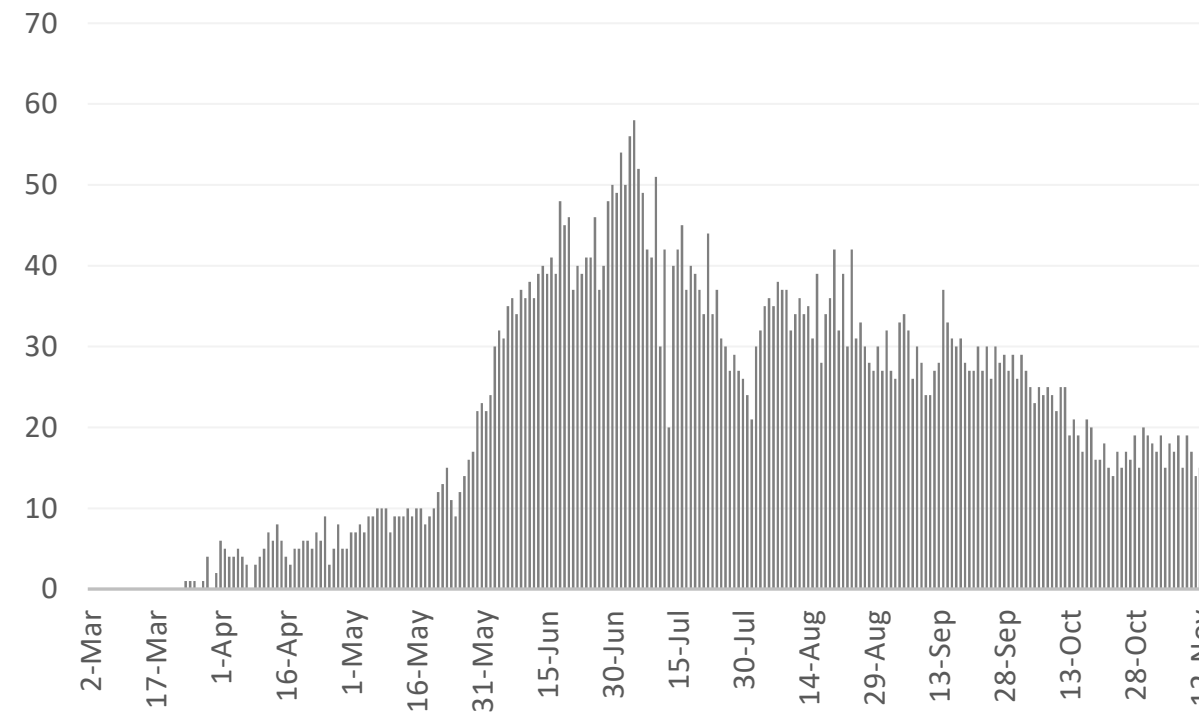
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



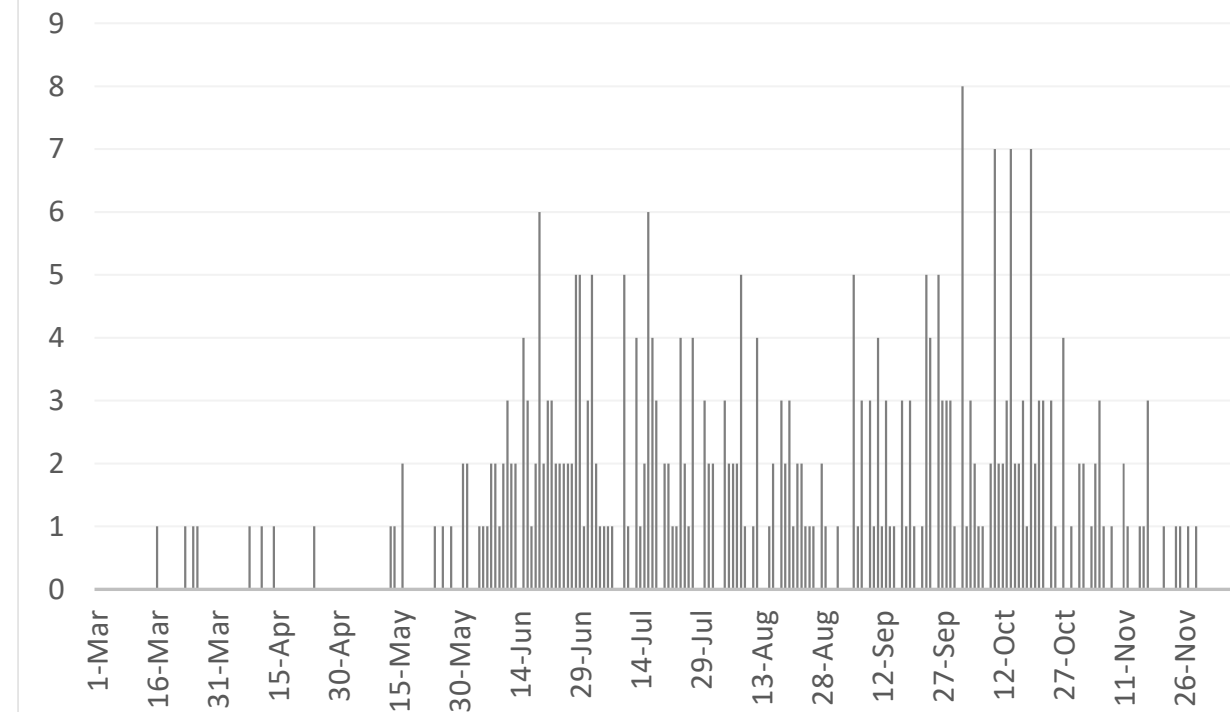
Source : National Emergency Crisis and Disaster Management Authority

KSA



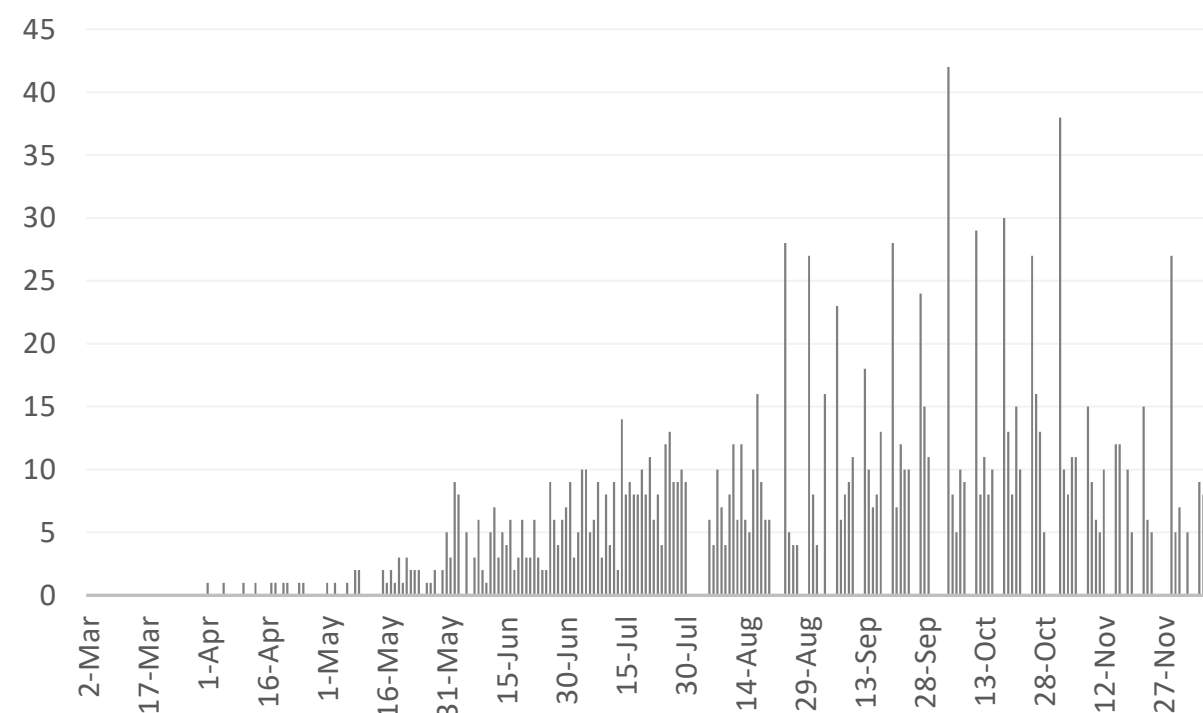
Source : KSA ministry of health

Bahrain



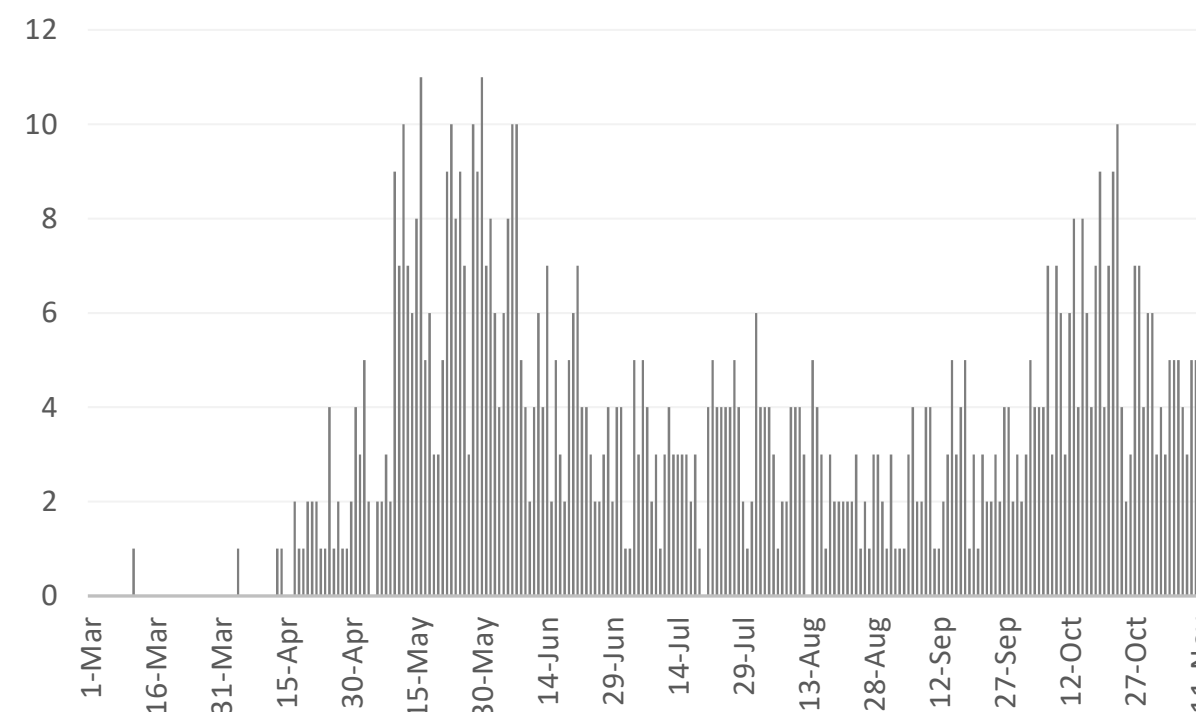
Source :WHO

Oman



Source :Oman ministry of health

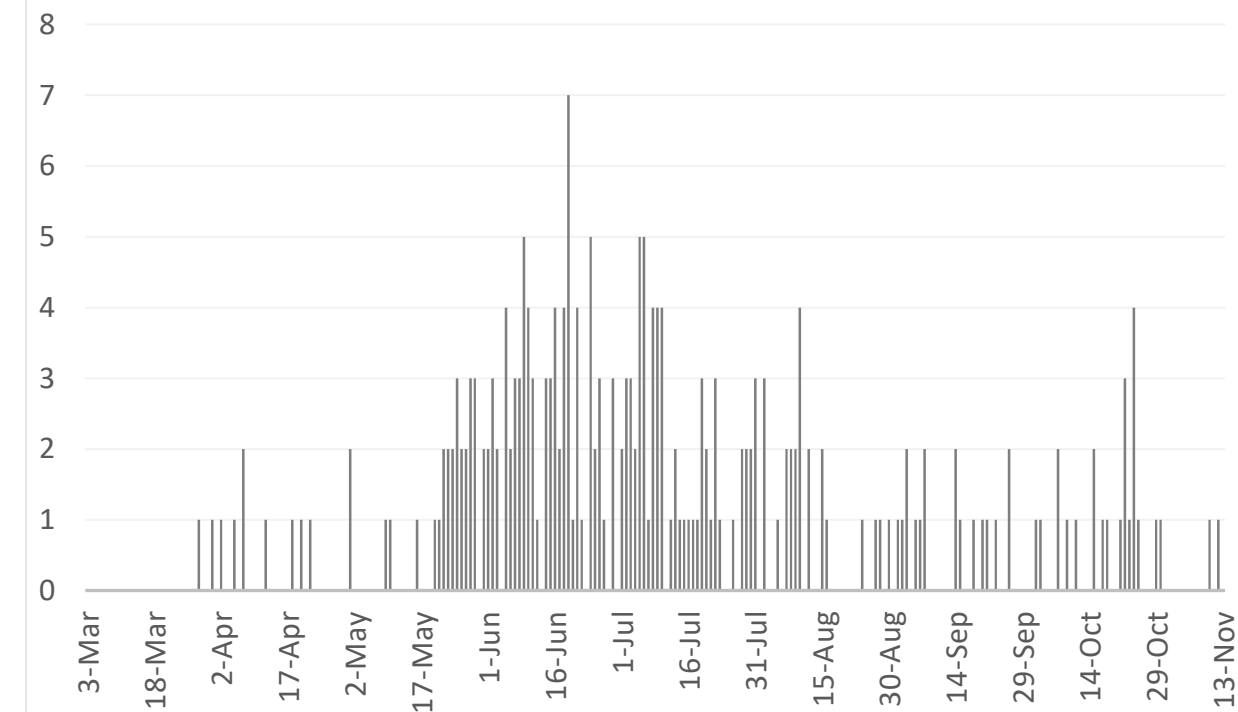
Kuwait



Source : Kuwait ministry of health

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Qatar



Source : Qatar ministry of health

*No announced statistic data from 31 JUL 4 AUG, 21,23,28,30 AUG 2, 4, 5,11,12,18,19,25 ,26,30 SEP,1,2,9,10,16,17,23,24,30,21 OCT, 6,7,13,14,17,20,21,25,26,6 DEC
*No announced statistic data on weekends and official holidays.





Article 1

Published

November 24, 2020, [NEJM](#)

A Randomized Trial of Convalescent Plasma in COVID-19 Severe Pneumonia

- This PlasmAr trial (a double-blind, placebo-controlled, multicenter trial conducted at 12 clinical sites in Argentina) aimed to evaluate the safety and efficacy of convalescent plasma in the treatment of SARS-CoV-2 pneumonia.
- The main hypothesis of this trial was that in patients with severe SARS-CoV-2 pneumonia, treatment with convalescent plasma would be associated with improved clinical outcomes.
- Eligible participants were randomly assigned in a 2:1 ratio to receive either convalescent plasma or placebo. The findings suggest that the utilization of convalescent plasma therapy in addition to standard treatment in patients with severe pneumonia due to COVID-19 did not reduce mortality or improve other clinical outcomes at day 30 as compared with placebo.
- Hence, the use of convalescent plasma as a standard of care in such patients should be re-evaluated. Further studies regarding antibody therapy may be best focused on other populations or on interventions with other types of preparations, such as intravenous immunoglobulin or anti-SARS-CoV-2 monoclonal antibodies.





Article 2

A novel use of telemedicine during the COVID-19 pandemic

Published

November 24, 2020, [IJID](#)

- This study demonstrated how telemedicine system was set up in Malta led by the experts.
- The aim was to protect the hospital healthcare resources in the country whilst simultaneously safeguarding the health of COVID-19 infected patients.
- During the set-up procedure, the patient's data was collected prospectively and stored in one database. This data was then analyzed to extract the demographics and outcomes of all these patients.
- Through telemedicine, the majority (91%) of 369 infected patients were managed safely in the community. Only a minority of patients (6%) was admitted to the main acute hospitals and there were no increased morbidity or mortality related to the medical decisions made using this telemedicine tool.
- The findings of the study suggested that COVID-19 telemedicine project in Malta achieved its main goals, aimed at relieving the burden on the main local acute hospitals whilst ensuring the optimal medical management for the infected patients. Moreover, telemedicine can be used to ensure that healthcare resources are used in the most efficient and effective way during the pandemic.





Article 3

A living WHO guideline on drugs for COVID-19

Published

September 4, 2020, [BMJ](#)

- This is a living guideline by WHO on drugs for COVID-19. It replaces an earlier version published on 4 September 2020.
- WHO has partnered with the non-profit Magic Evidence Ecosystem Foundation (MAGIC) for methodologic support, to develop and disseminate living guidance for COVID-19 drug treatments, based on a living systematic review and network analysis.
- An international standing Guideline Development Group (GDG) of content experts, clinicians, patients, and methodologists produced recommendations following standards for trustworthy guideline development using the GRADE approach. When moving from evidence to the conditional recommendation against the use of Remdesivir in patients with COVID-19, the panel emphasized the evidence suggesting no important effect on mortality, need for mechanical ventilation, time to clinical improvement, and other patient-important outcomes. Considering the low or very low certainty evidence for all outcomes, the panel interpreted the evidence as not proving that Remdesivir is ineffective; rather, there is no evidence based on currently available data that it does improve patient-important outcomes.
- The panel placed low value on small and uncertain benefits in the presence of the remaining possibility of important harms. In addition, the panel considered contextual factors such as resources, feasibility, acceptability, and equity for countries and health care systems.



Article 4

Published

Metformin and risk of mortality in patients hospitalized with COVID-19: a retrospective cohort analysis

December 3, 2020, [LANCET](#)

- This retrospective cohort analysis from Jan 1 to June 7, 2020, evaluated de-identified claims data from UnitedHealth Group (UHG)'s Clinical Discovery Claims Database.
- Around 6256 of the 15 380 individuals with pharmacy claims data from Jan 1 to June 7, 2020 were included in the study. The primary objective was to understand whether home metformin use was associated with decreased mortality in people hospitalized for COVID-19 with obesity or type 2 diabetes, while, the secondary objectives were to assess sex-specific effects.
- The findings revealed that Metformin was significantly associated with reduced mortality in women with obesity or type 2 diabetes who were admitted to hospital for COVID-19.
- Future prospective studies are needed to understand the mechanism and causality. If findings are reproducible, metformin could be widely distributed for prevention of COVID-19 mortality, because it is safe and inexpensive.





Article 5

Published

November 28, 2020, [RESMED](#)

Association of inhaled and systemic corticosteroid use with Coronavirus Disease 2019 (COVID-19) test positivity in patients with Chronic Pulmonary Diseases

- This cohort study of subjects who were tested for the suspected COVID-19 between March 11 - June 23, 2020 examined if the use of inhaled or systemic corticosteroids affects the likelihood of developing COVID-19 infection.
- The use of medication, testing results, and comorbidities were attained from the medical records. Following an evaluation of different propensity score weighting methods, overlap propensity score weighting was used to analyze the association between COVID-19 diagnosis and medication use.
- The cohort in this study consisted of 928 patients, of which 12% were tested positive. Most of the patients i.e. around 66% had a history of chronic pulmonary diseases. There was no significant association between inhaled corticosteroid use and testing positive for COVID-19. Moreover, the systemic corticosteroid use was associated with a lower odds ratio (0.95, 95% CI: 0.91–0.99) of testing positive for COVID-19.
- Comparable results were found when the analysis was restricted to those with any chronic pulmonary diseases, with asthma or with chronic obstructive pulmonary disease (COPD). This study therefore, supports the recommendation that patients with chronic pulmonary diseases, including COPD or asthma who need treatment with either inhaled or systemic corticosteroids, should continue their use in the time of COVID-19 pandemic.



THANK YOU

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