

SCIENTIFIC RESEARCH MONITORING ON COVID-19

1 NOVEMBER 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 543)

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.

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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

Dexamethasone and Remdesivir: Finding Method in the COVID-19 Madness

Public Health Response

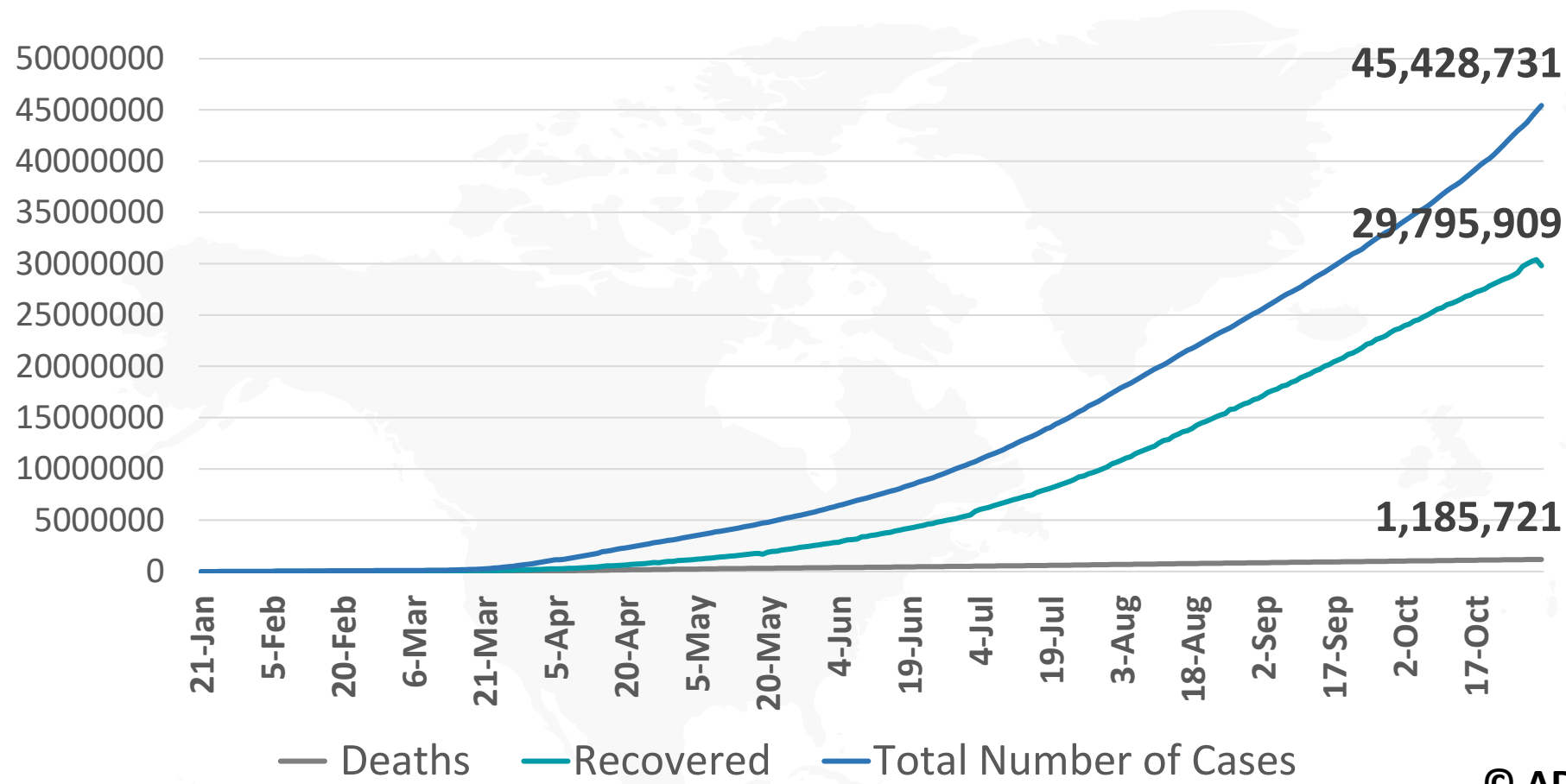
Facemasks as a COVID-19 Barrier: A Window into the Overlooked Experience of Chronic Dyspnea?

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Physical Distancing in Schools for SARS-CoV-2 and the Resurgence of Rhinovirus

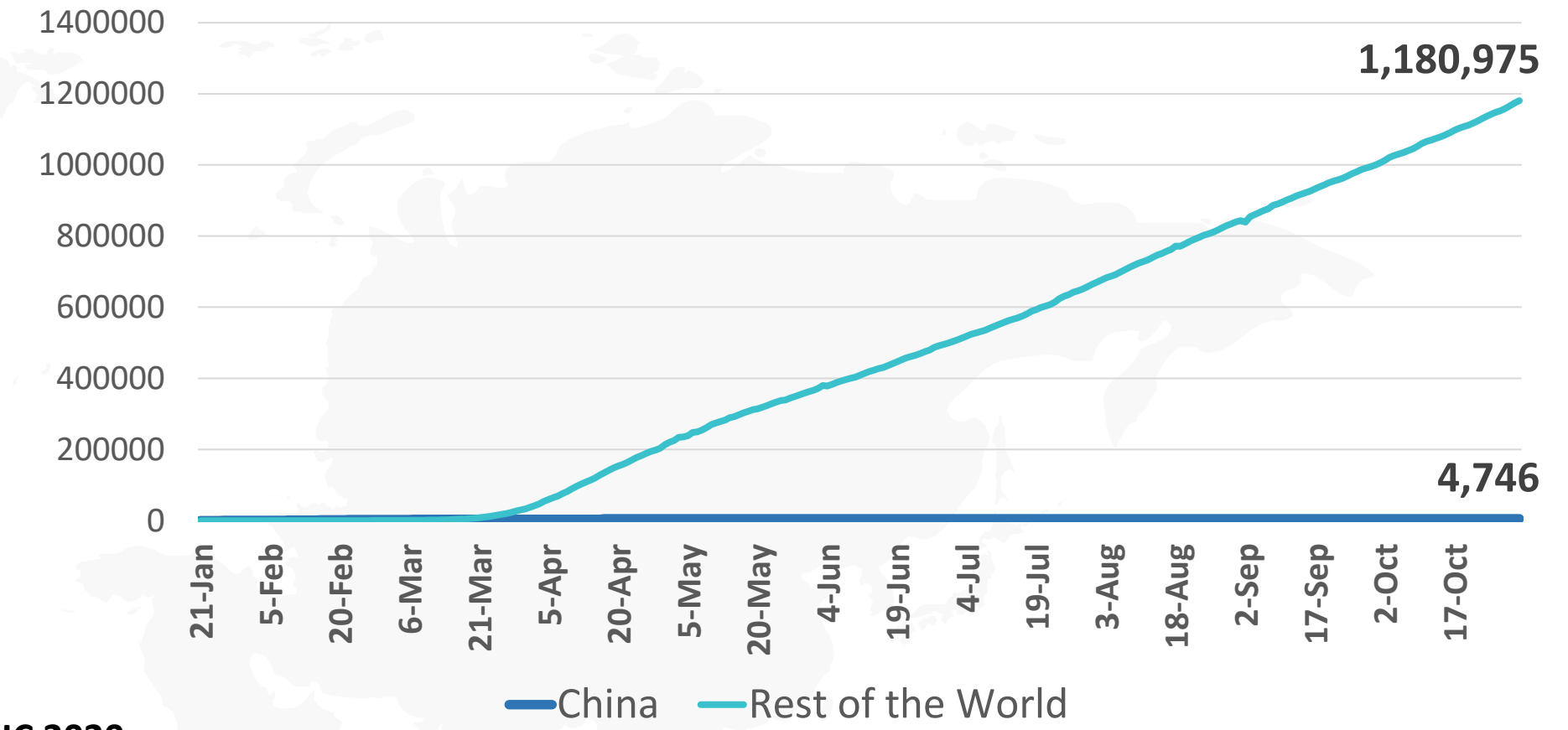


Figure 1: Total Number of Infected, Recovered, and Death Cases



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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)

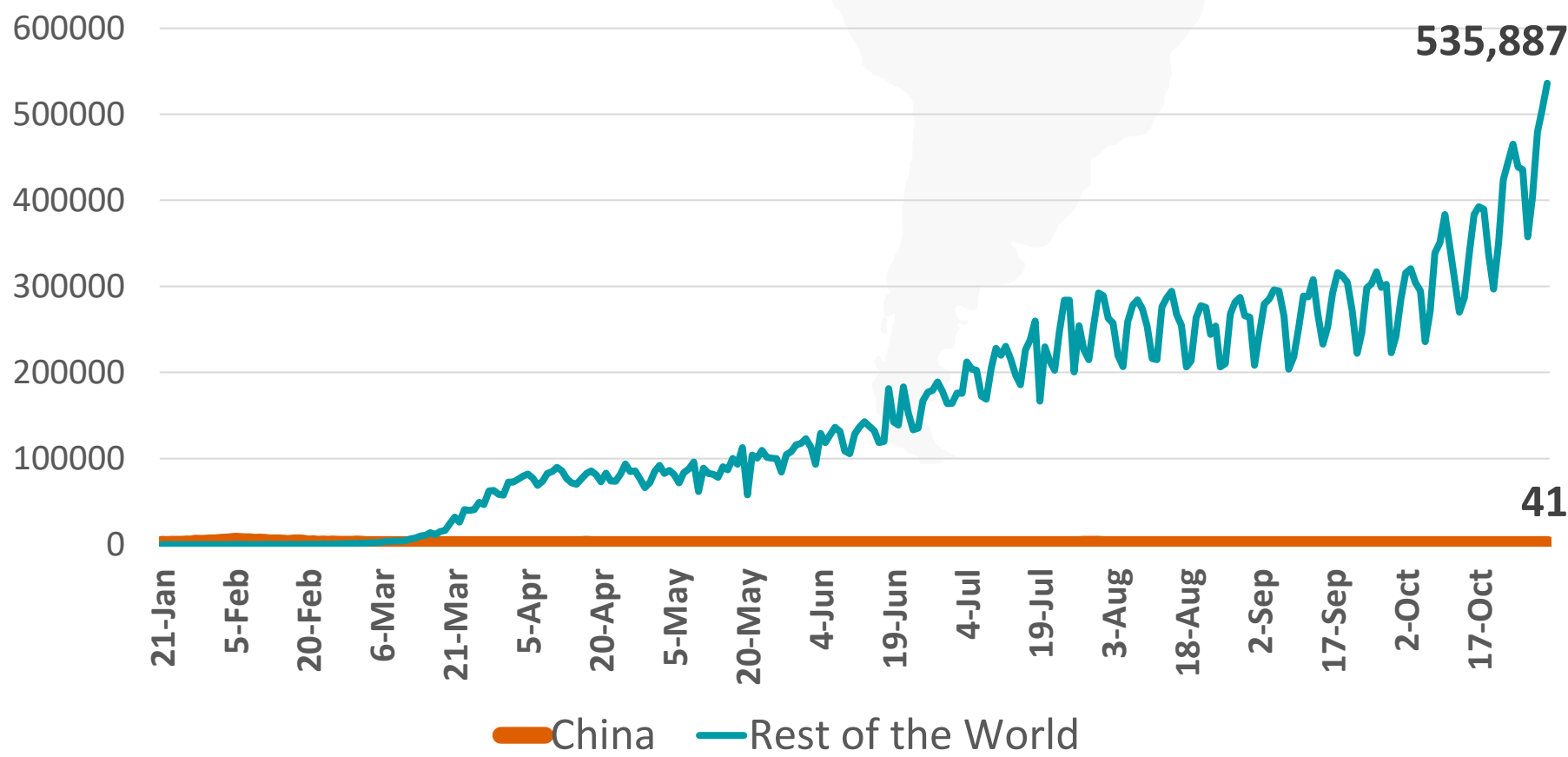


Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)

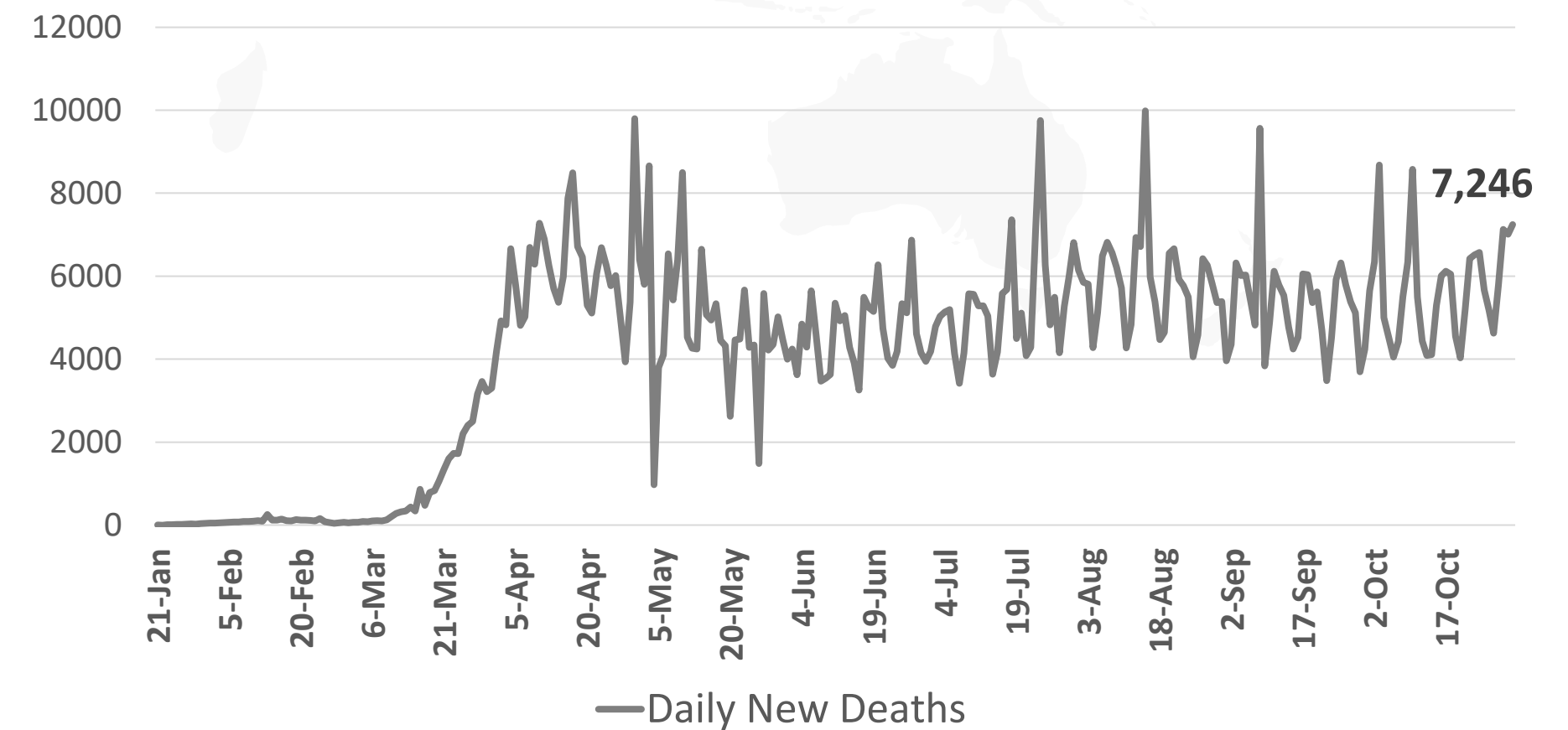
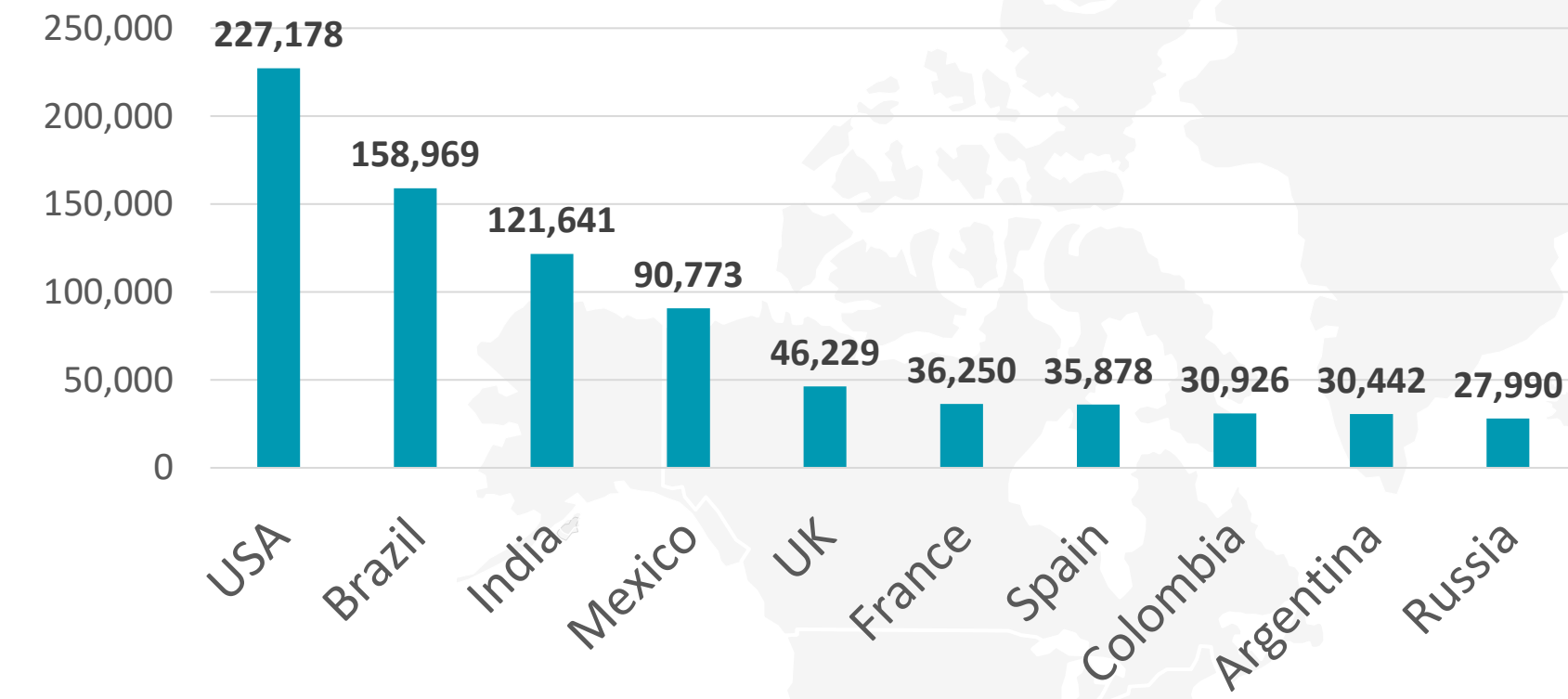
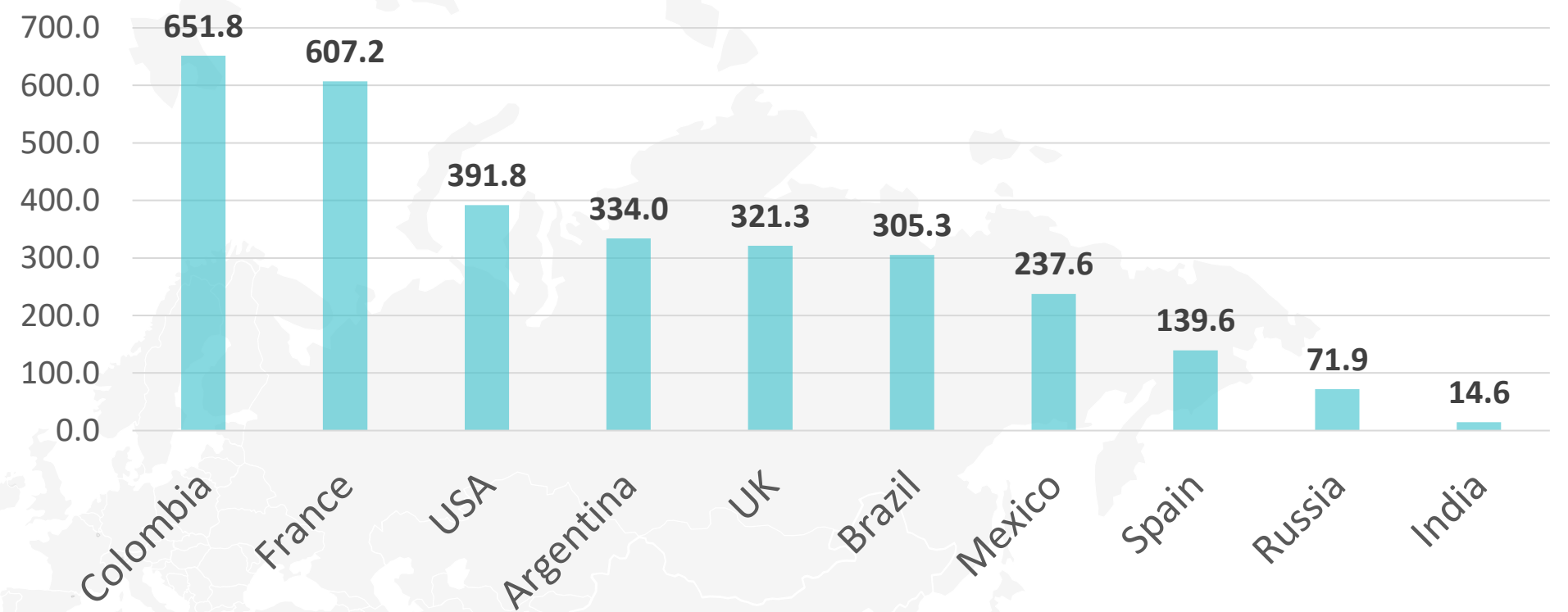


Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

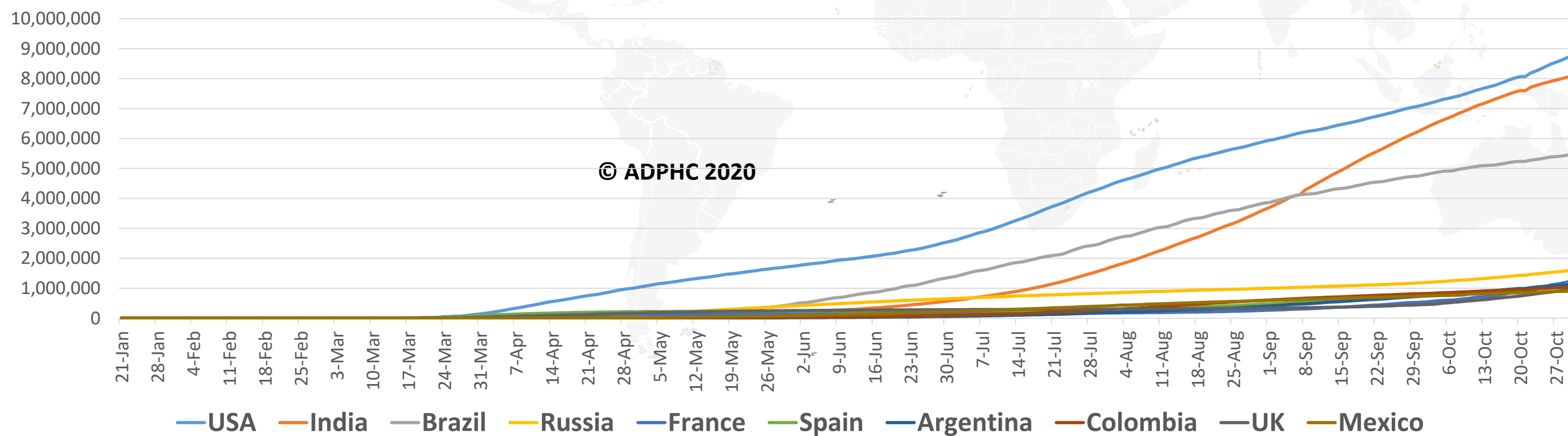
TOTAL DEATHS



DEATHS PER MILLION

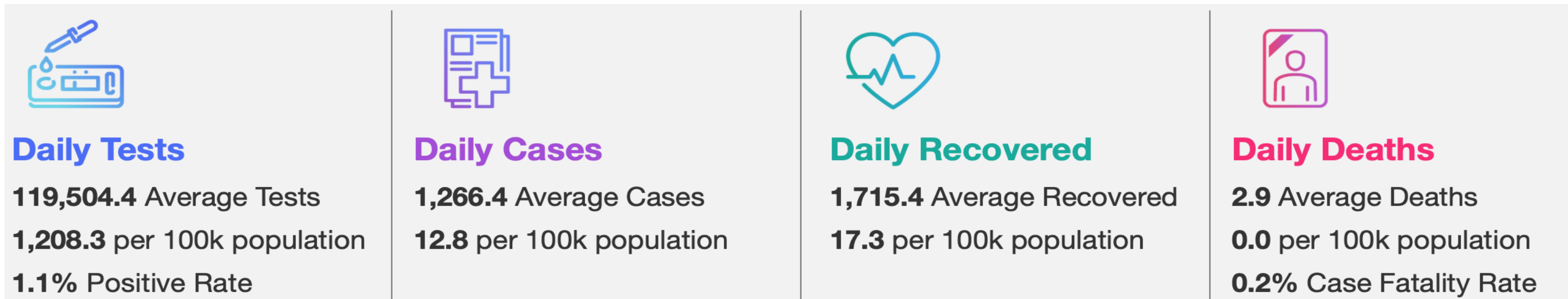


TOTAL INFECTED CASES



USA	8,852,730
India	8,137,119
Brazil	5,494,376
Russia	1,618,116
France	1,299,278
Spain	1,185,678
Argentina	1,143,800
Colombia	1,053,122
UK	989,749
Mexico	912,811

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

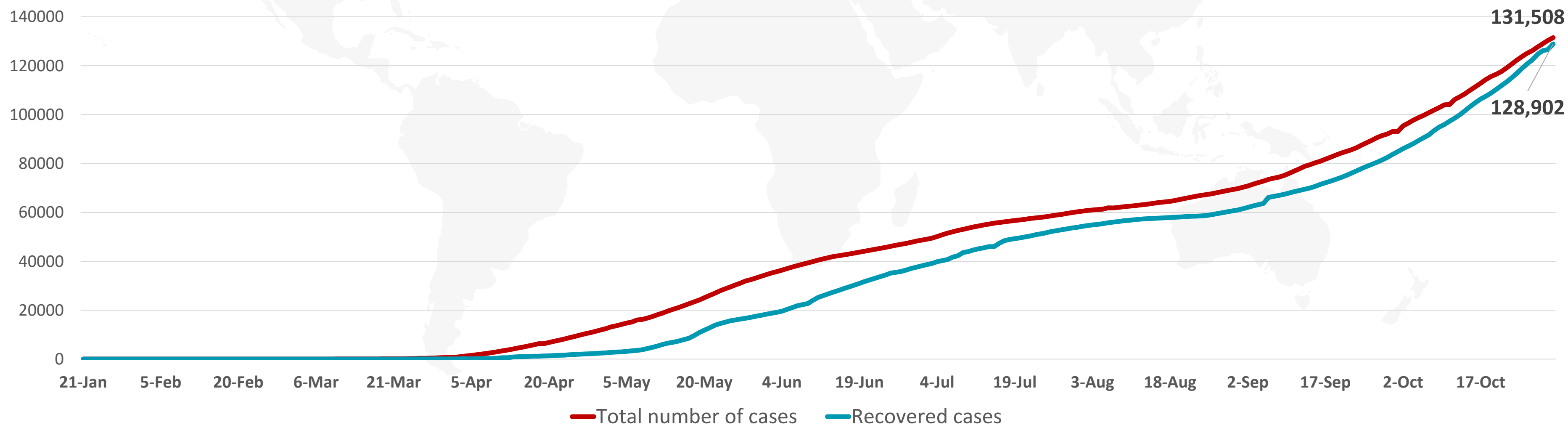
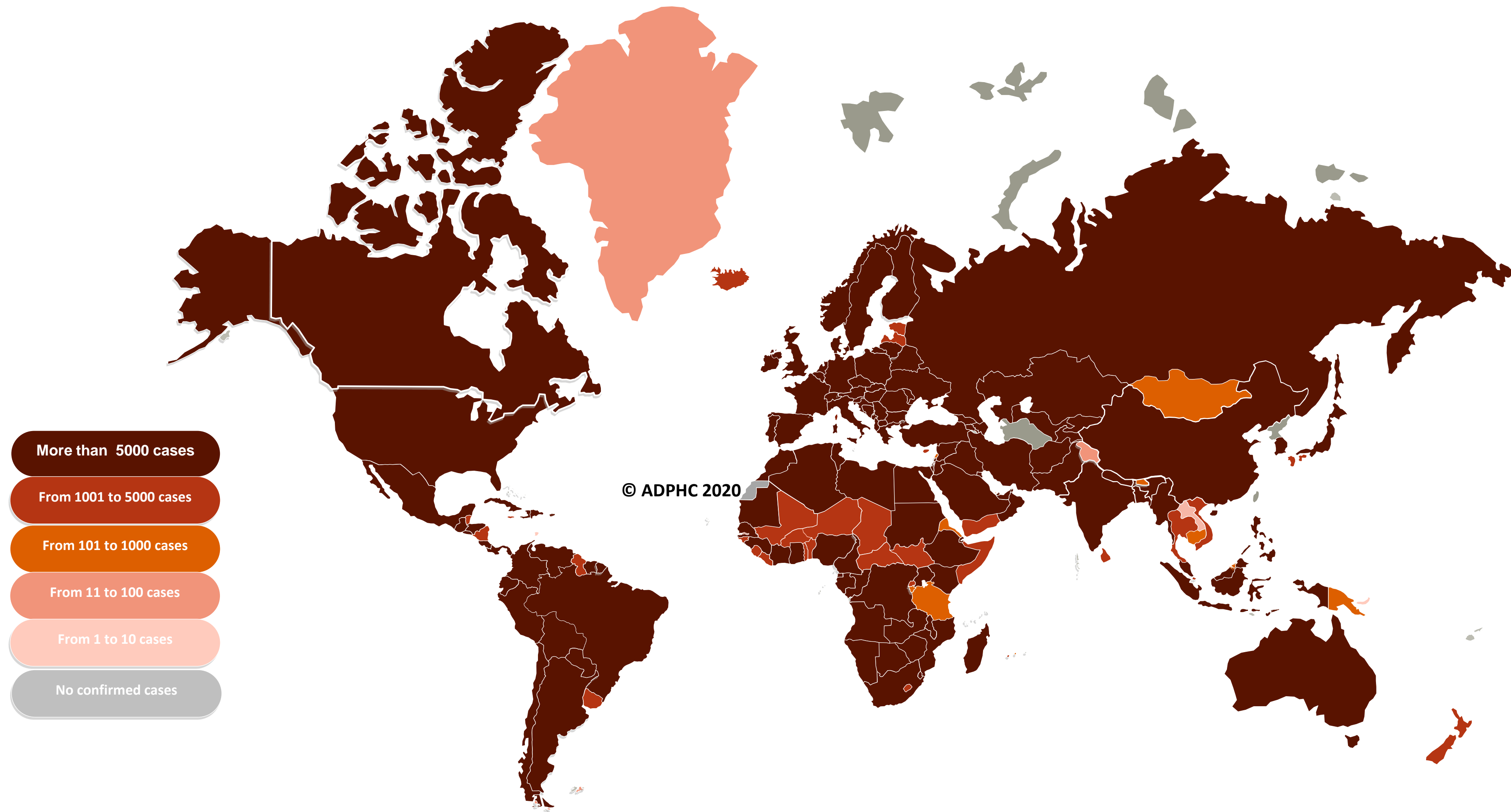


Figure 7A : Global Distribution of COVID-19 Cases



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

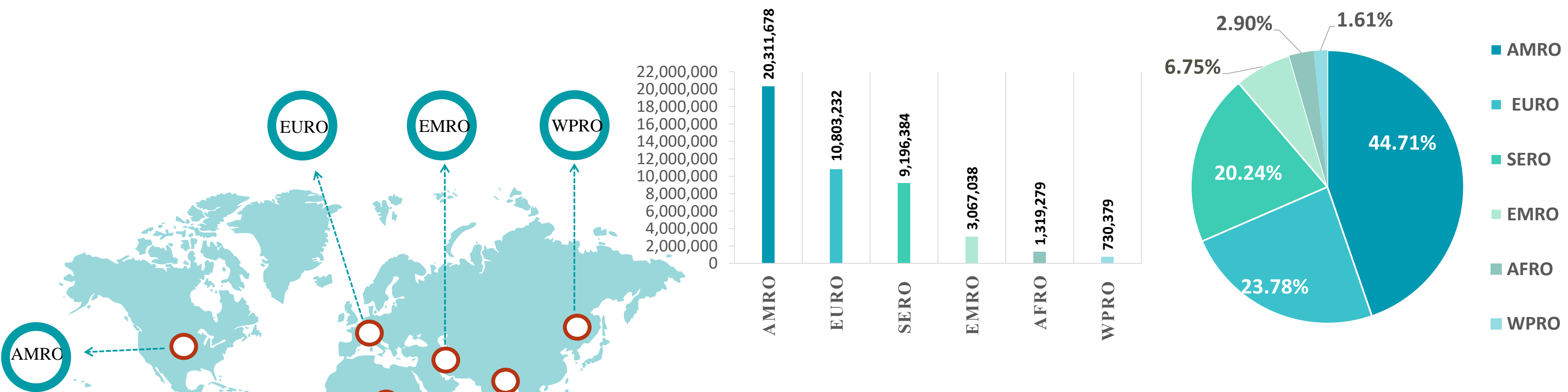


Other*: includes cases and deaths reported under the international conveyance(Diamond Princess)



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

INFECTED



DEATHS

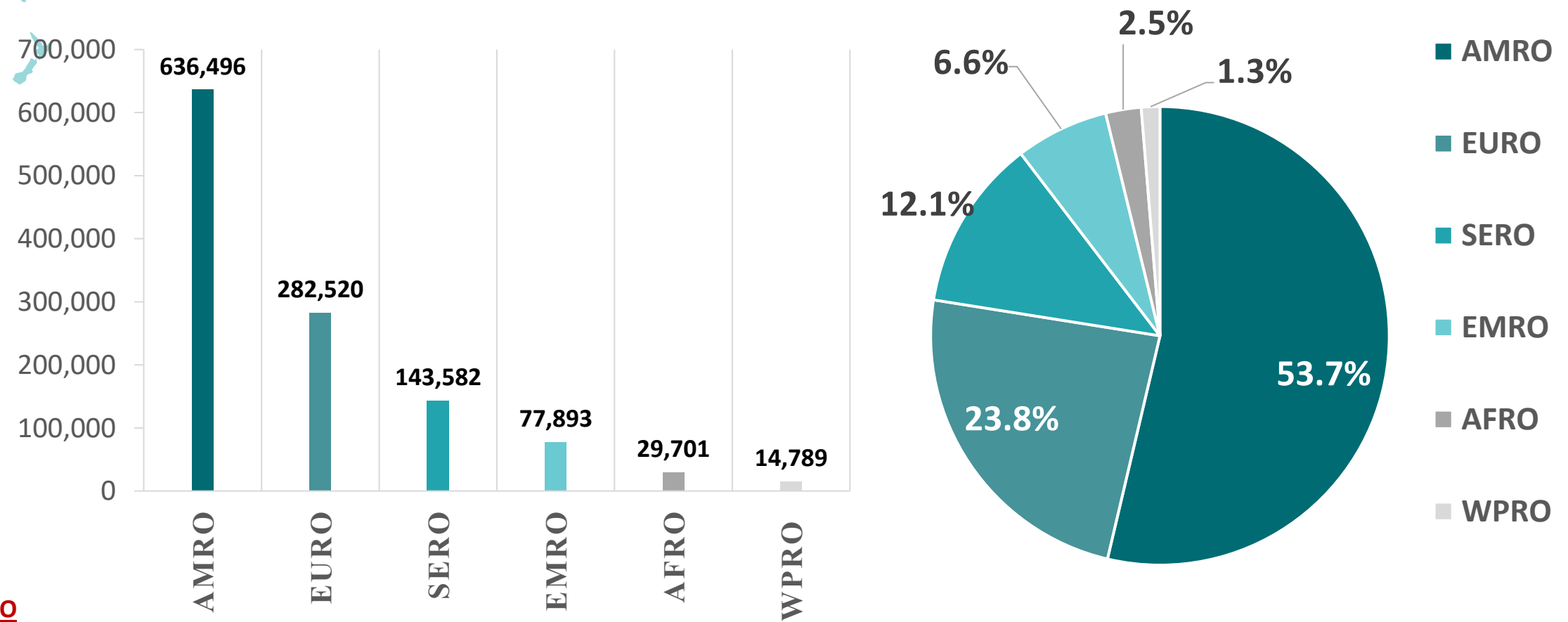
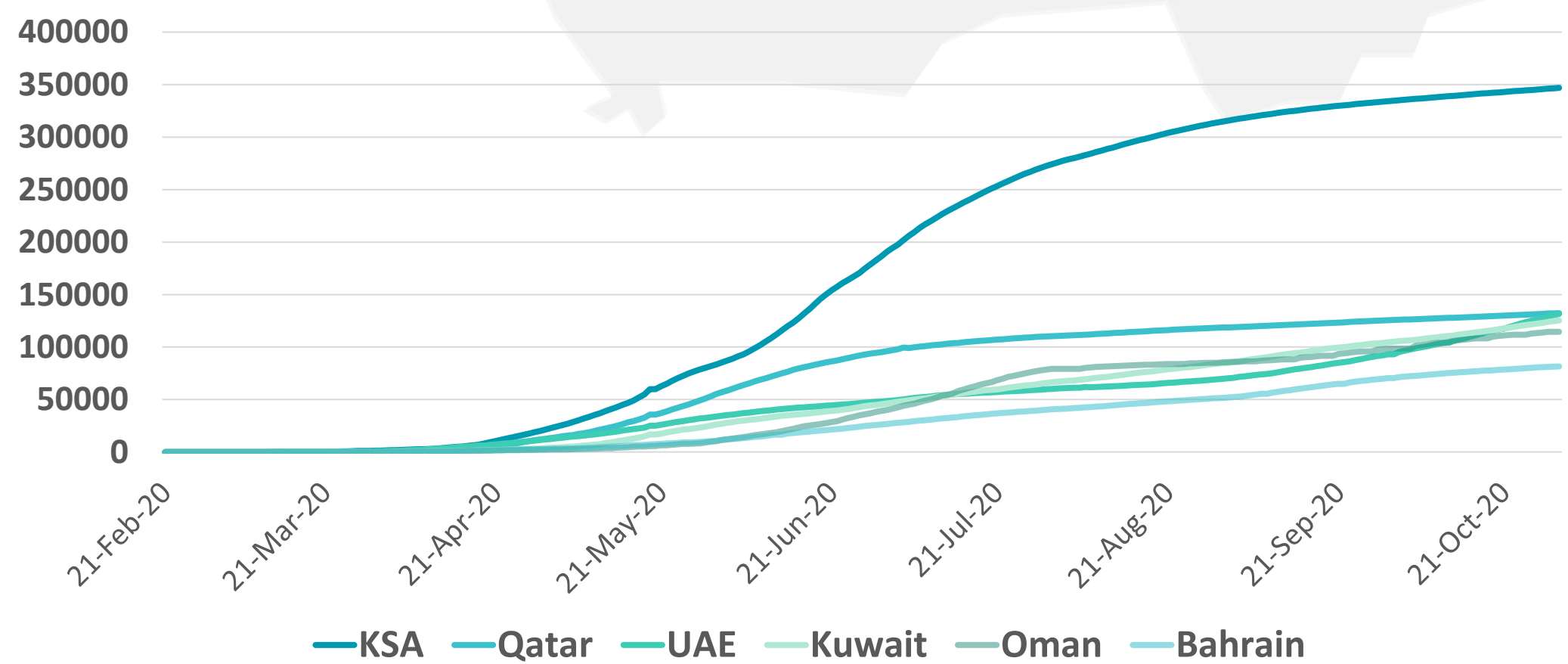
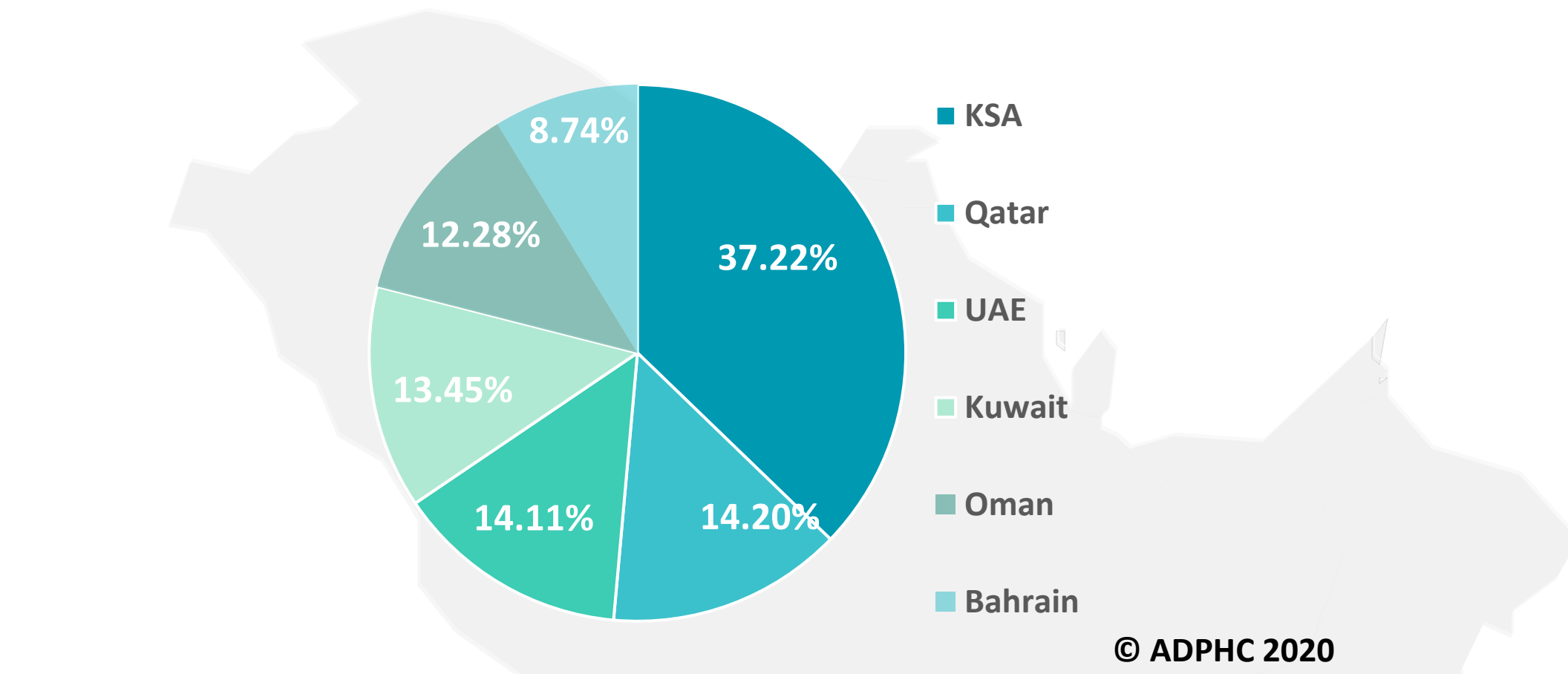
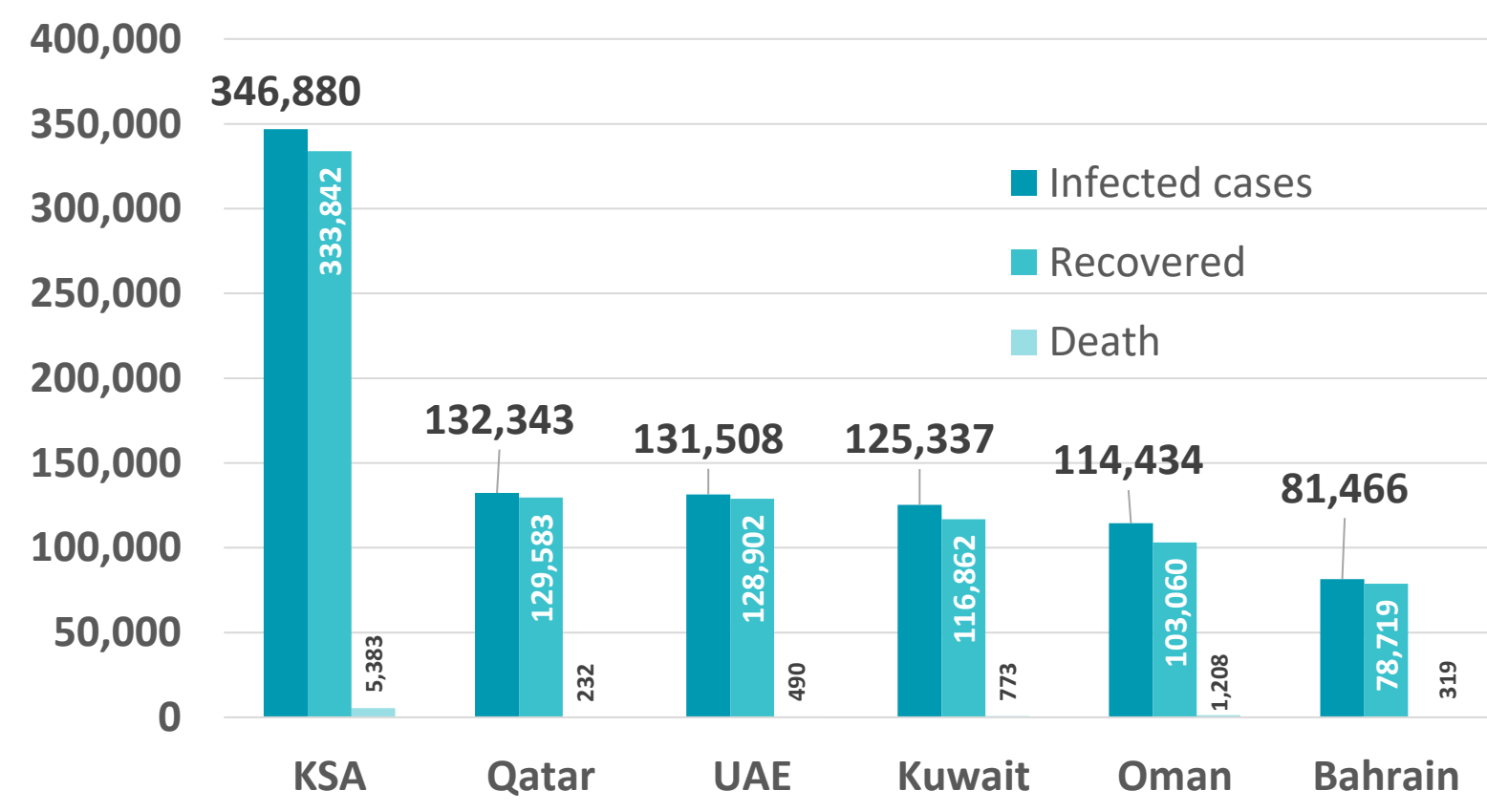


Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

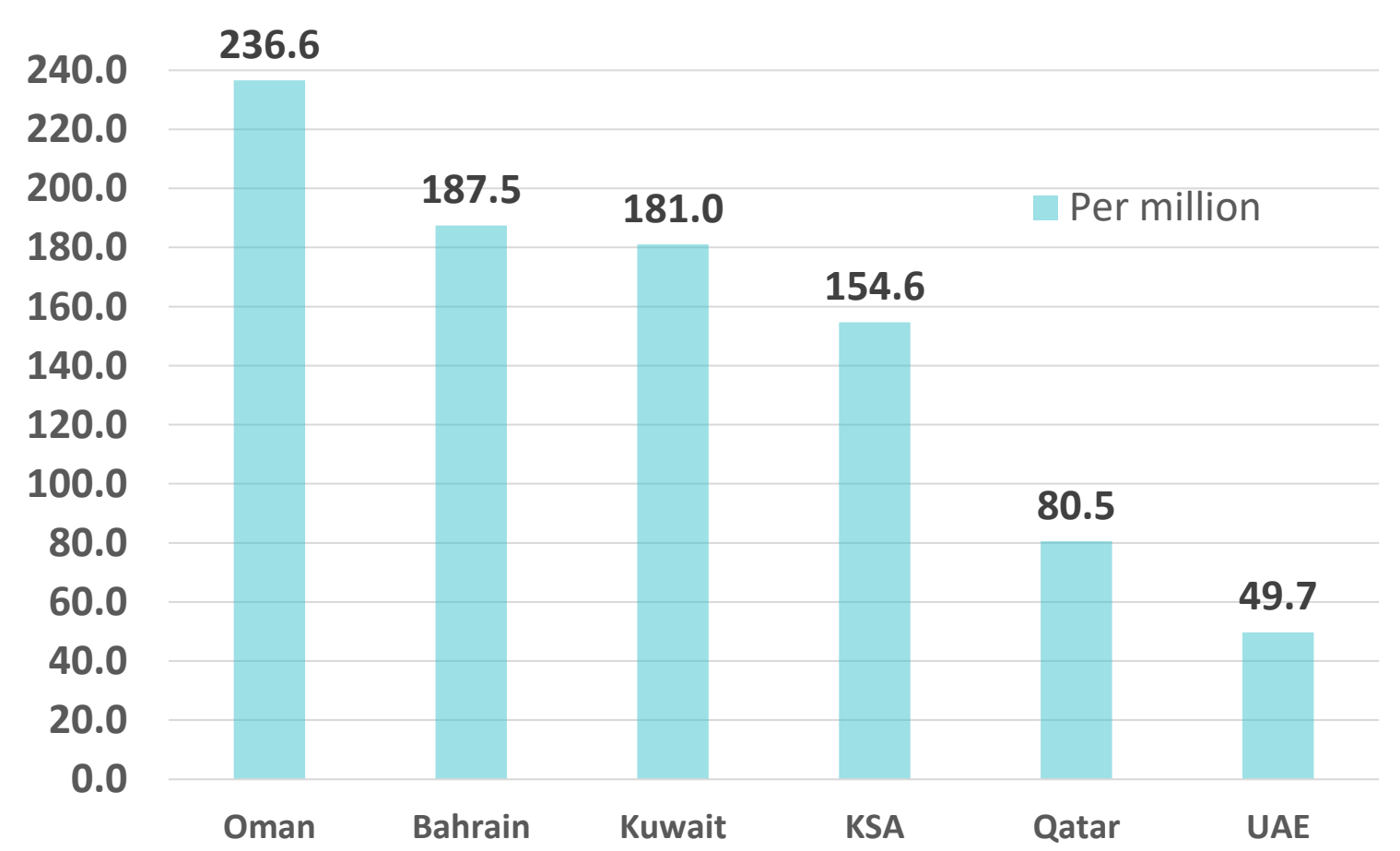
TOTAL NUMBER OF INFECTED CASES



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



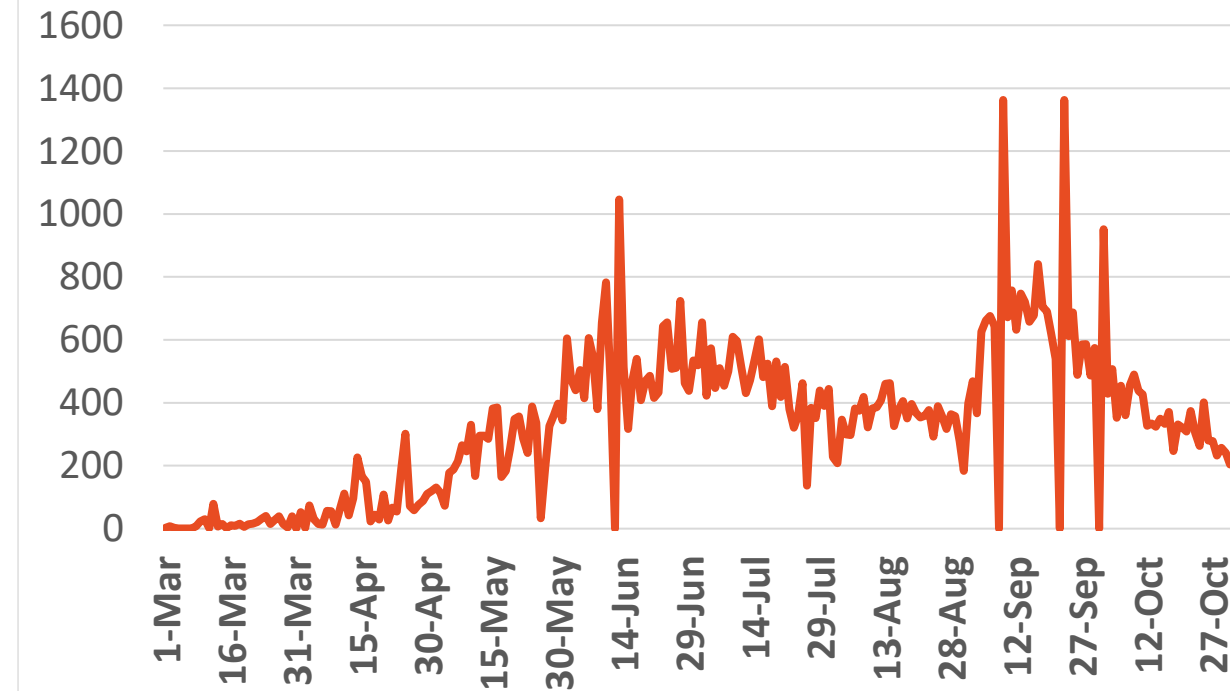
Source : National Emergency Crisis and Disaster Management Authority

KSA



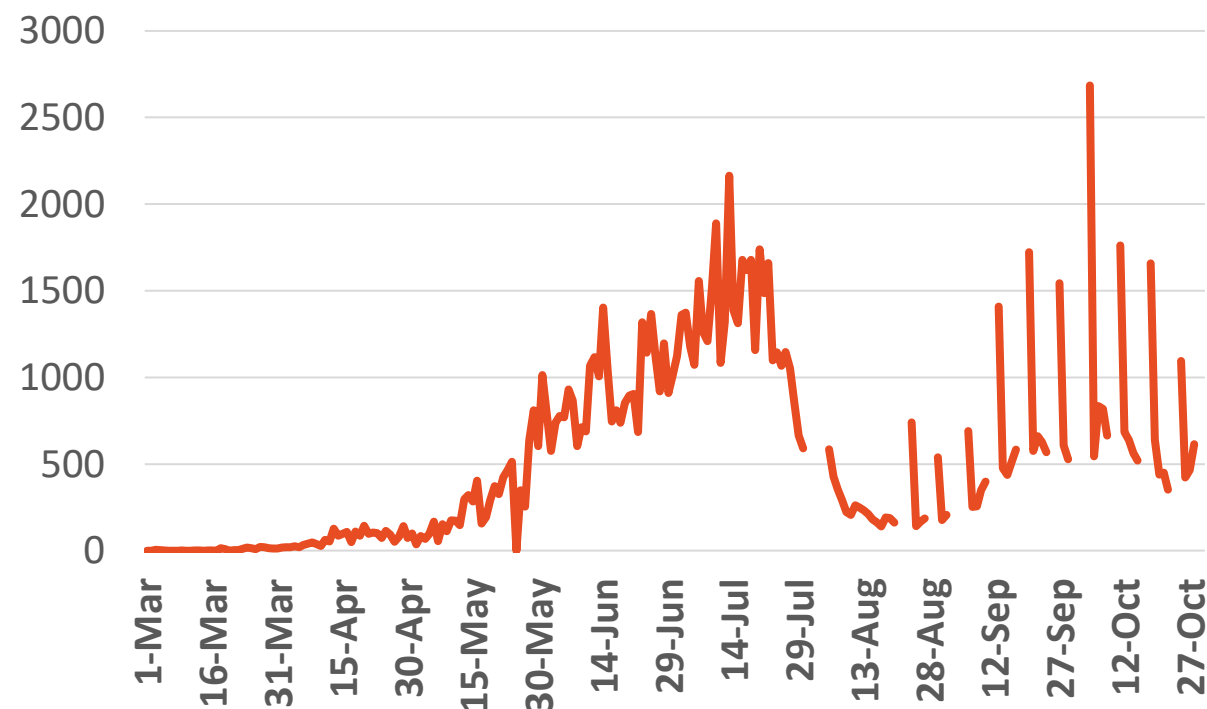
Source : KSA ministry of health

Bahrain



Source :WHO

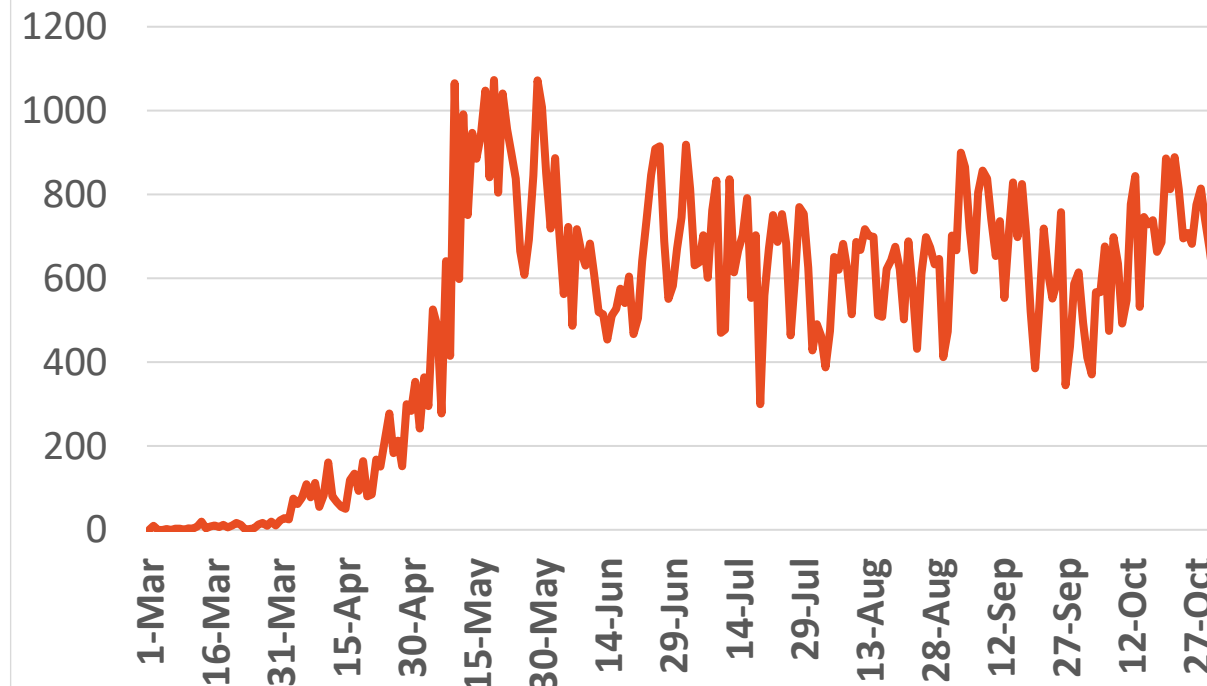
Oman



Source :Oman ministry of health

Kuwait

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Source : Kuwait ministry of health

Qatar



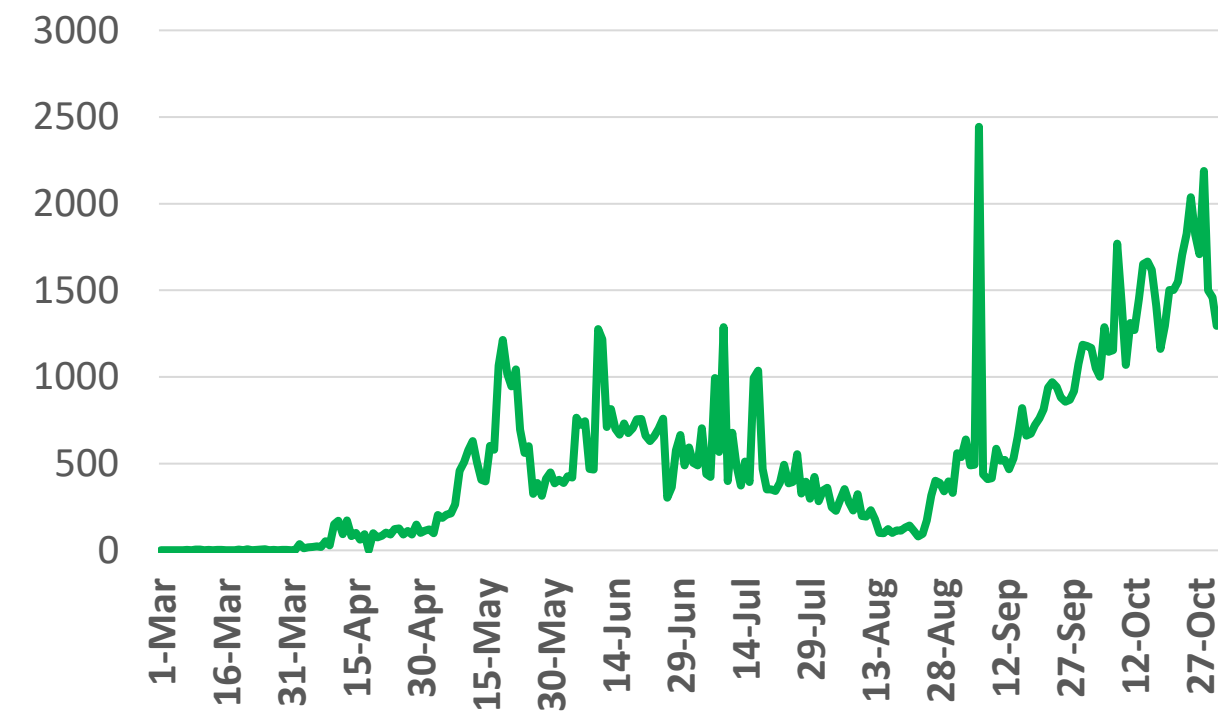
Source : Qatar ministry of health

*No announced statistic data from 31 July to 4 August, 21,23,28,30 August 2, 4, 5,11,12,18,19,25, 26,30 September,1,2,9,10,16,17,23 & 24 October
*No announced statistic data on weekends and official holidays.



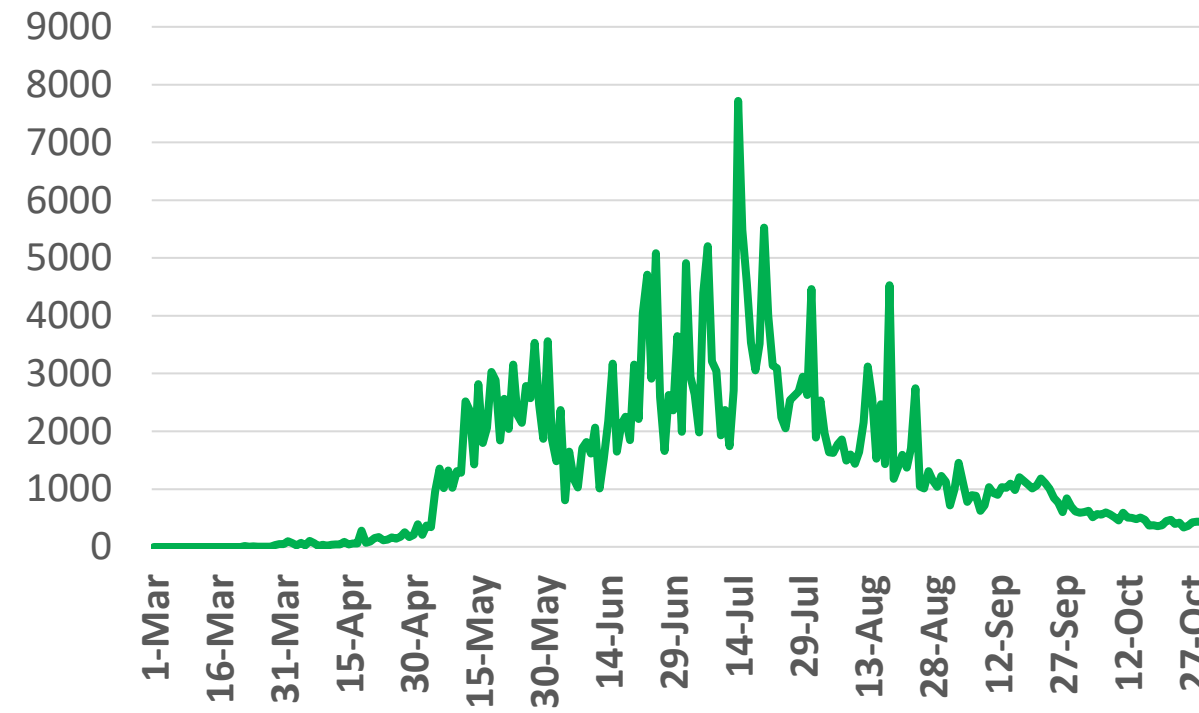
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE



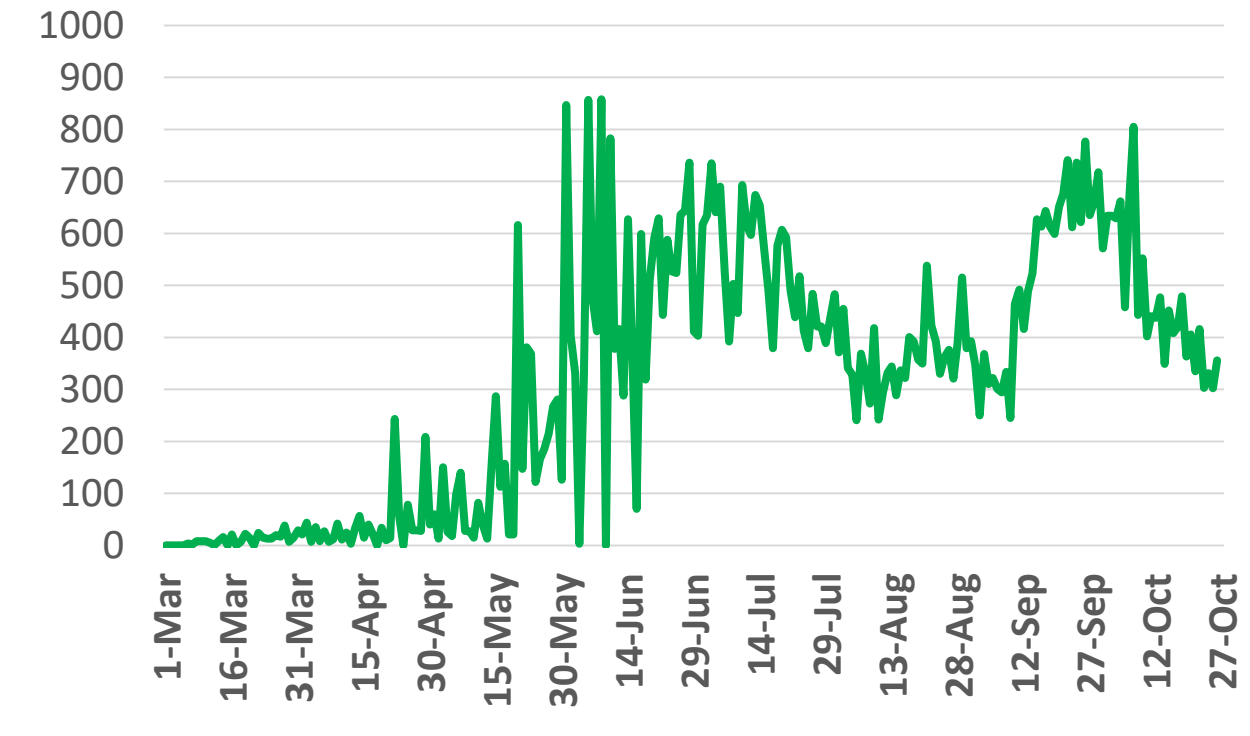
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KSA



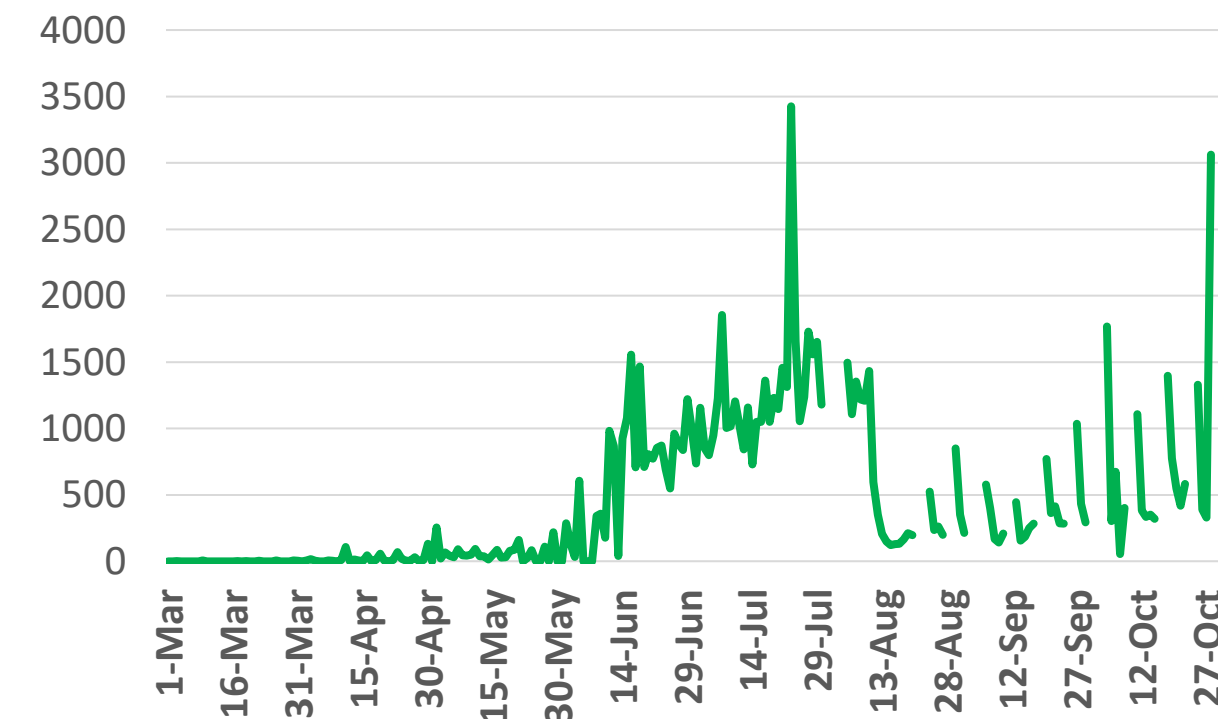
Source : KSA ministry of health

Bahrain



Source : Bahrain ministry of health

Oman



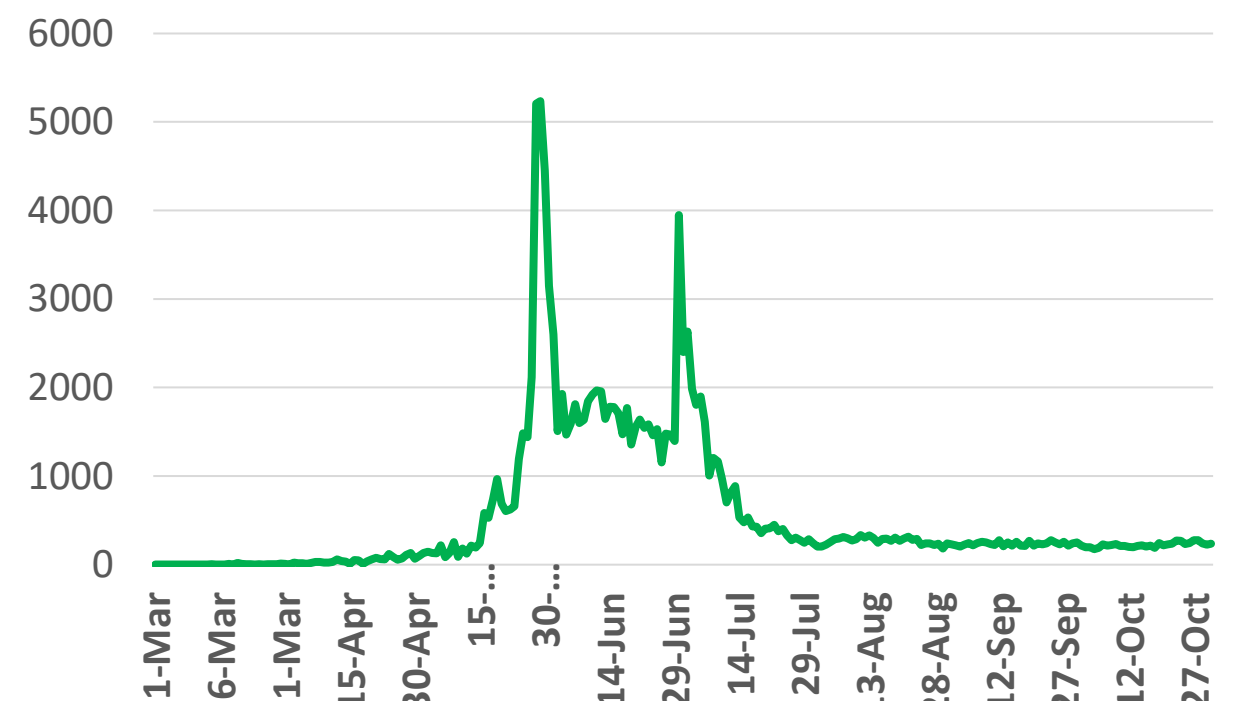
Source : Oman ministry of health

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Source : Kuwait ministry of health

Qatar



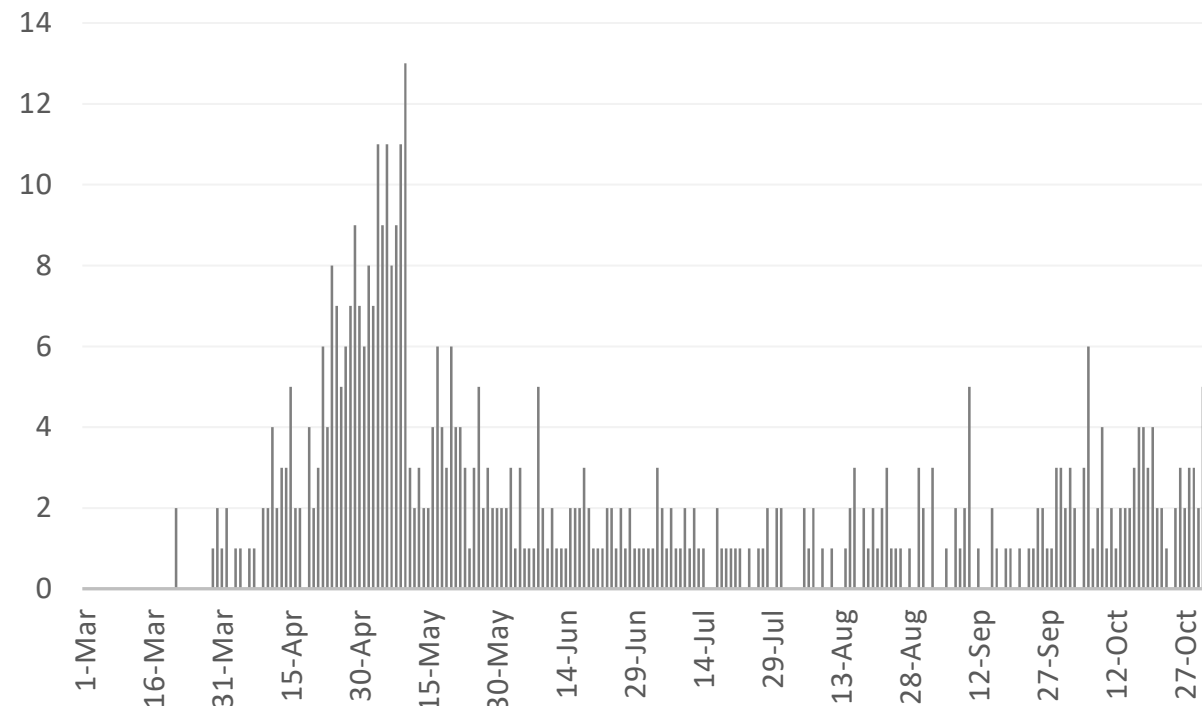
Source : Qatar ministry of health

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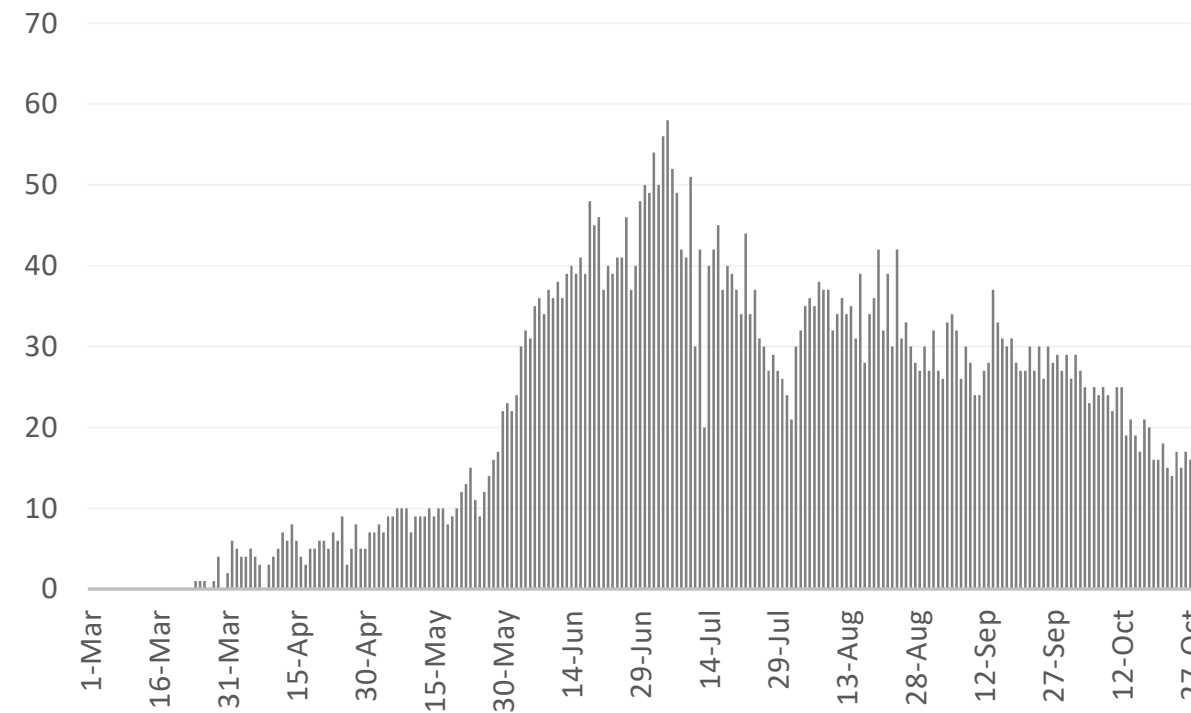
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



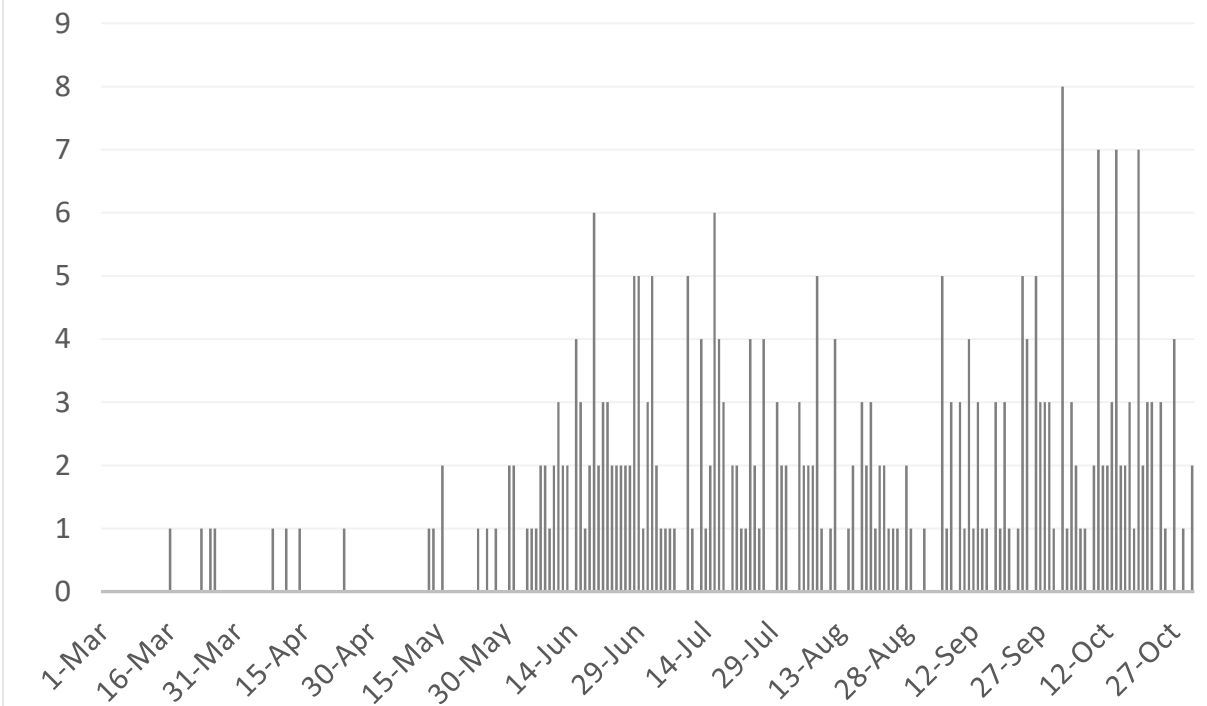
Source : National Emergency Crisis and Disaster Management Authority

KSA



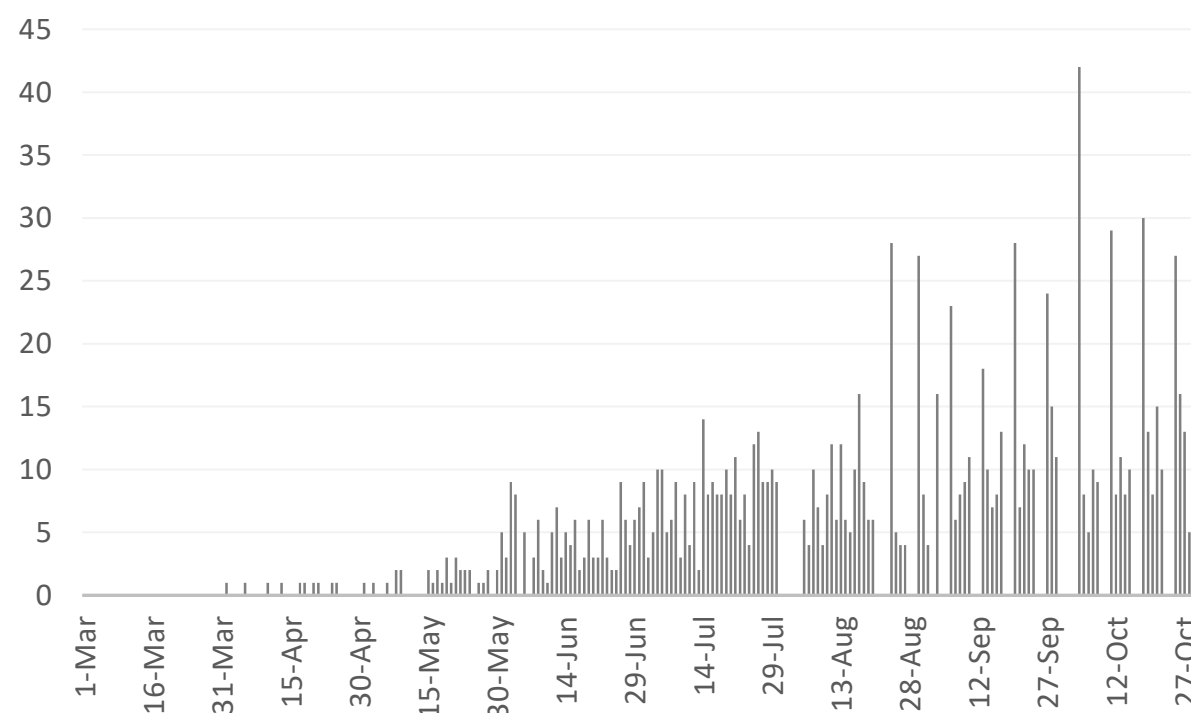
Source : KSA ministry of health

Bahrain



Source :WHO

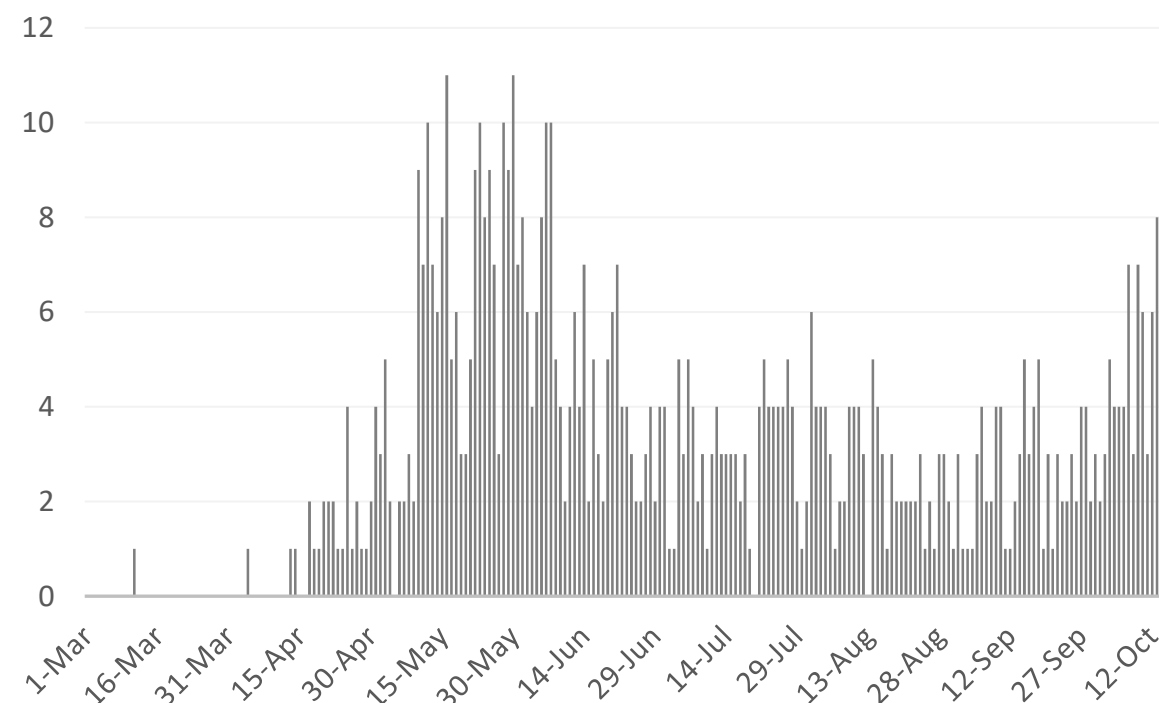
Oman



Source :Oman ministry of health

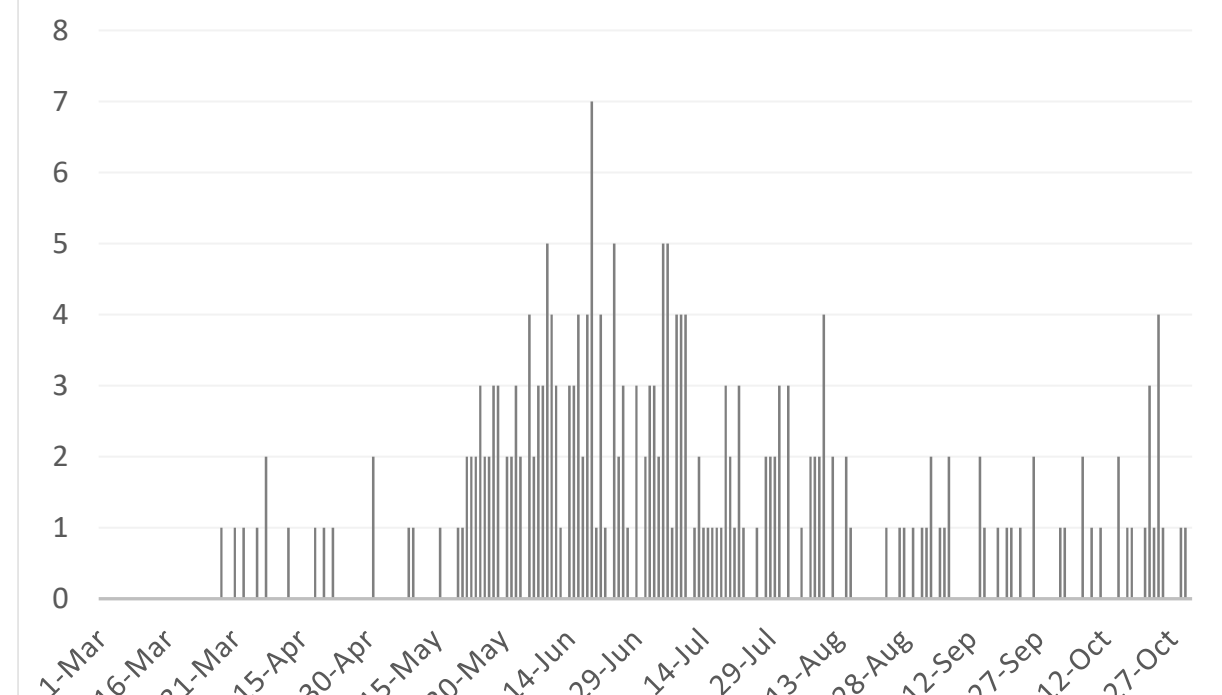
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

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Article 1

Dexamethasone and Remdesivir: Finding Method in the COVID-19 Madness

Published

October 23, 2020, [THE LANCET](#)

- During COVID-19 pandemic, the infectious disease communities have conducted several multinational, randomized clinical trials. They have achieved desirable statistical power and speed but had to sacrifice complexity and nuance to do so. Their blunted messages are broadcast to non-experts before peer review by press releases.
- Preliminary results from the RECOVERY trial showed that a significant reduction in day 28 mortality with dexamethasone up to one third in ventilated patients. These results need to be carefully reviewed, at the trial's choice of outcome time point, a specific population, and subgroup analyses done after multiple testing procedures. Furthermore, dexamethasone was supposedly harmful for early, non-severe cases, in whom viral replication was likely to be ongoing and the cytokine storm not yet at peak. The news of a significant reduction in mortality is so well accepted that people might forget that cause-specific mortality was not reported.
- Effects of Remdesivir (antiviral) on SARS-CoV-2 shedding is essential to confirm the in vivo activity of a drug. However, data on shedding duration have not been reported by the multinational phase 3 randomized controlled trial (RCT). A smaller trial conducted in China showed no difference in viral shedding in patients randomly assigned to Remdesivir or placebo.
- Although large RCTs allow for rapid and statistically significant results their preprint releases need to be carefully interpreted. Smaller trials with more thorough data collection and more nuanced outcomes should not be abandoned or prematurely terminated. Combined therapies such as antiviral and anti-inflammatory medications will bring new challenges. The results of these searches will require careful review.





Article 2

Facemasks as a COVID-19 Barrier: A Window into the Overlooked Experience of Chronic Dyspnea?

Published

October 23, 2020, [THE LANCET](#)

- The COVID-19 pandemic has resulted in an extensive use of facemasks that contribute to the protection against contamination of the people wearing them and those in close proximity. Facemasks can be uncomfortable to wear that can change our relationship with our own breathing because of slightly resistive to airflow and a possible source of carbon dioxide rebreathing.
- Disease related change in the respiratory system can result in dyspnoea. The impact of dyspnoea on the lives of those affected is further aggravated by the invisibility that unfortunately characterises the experience. Dyspnoea is not only under-diagnosed and associated with the delayed diagnosis but also under-evaluated, under-addressed and often associated with an apparent lack of empathy from others.
- Wearing a facemask to fight the circulation of SARS-CoV-2 makes breathing a conscious experience that can be oppressive. This dyspnoea is mild at rest; however, it can become sufficiently disturbing when climbing stairs, during talking, during walking, and when in confined or crowded spaces - for people to seek respiratory relief by removing their masks.
- Respiratory discomfort induced by facemasks could be considered as a form of mass experiential learning liable to bring many people to discover the overlooked existential experience of dyspnoeic patients. This offers a unique opportunity to raise public awareness of what it means to be constantly aware of and bothered by one's own breathing. This phenomenon could be supported by foundations and charities that promote lung health.



Article 3

Physical Distancing in Schools for SARS-CoV-2 and the Resurgence of Rhinovirus

Published

October 22, 2020, [THE LANCET](#)

- During COVID-19 pandemic, children have greater difficulty adhering to physical distancing rules but are believed to transmit the virus less efficiently as compared with adults. Rhinoviruses circulate round the year with peaks in spring and autumn and are transmitted in the same way as SARS-CoV-2.
- In the United Kingdom (UK), adult patients (n=3,898) admitted to hospital were tested (from March 23 to September 20, 2020) using PCR testing for a wide range of respiratory viruses including SARS-CoV-2. The rate of respiratory virus detection in 2020 was compared with (n=1,898) in the same period in 2019.
- There was a drop in the rate of detection of all respiratory viruses including rhinovirus following the nationwide lockdown on March 23, 2020. Detection of rhinovirus remained low after the easing of national lockdown on May 10, 2020, as compared with the previous year. However, around two weeks after re-opening of state primary and secondary schools in early September, there was a sharp increase in the number of detections similar to that reported in 2019.
- **These findings suggest that physical distancing adopted by the schools do not effectively prevent rhinovirus transmission.** Furthermore, the results might have important implications for the circulation of both influenza and SARS-CoV-2 in the coming winter. Schools are required by the government to perform their own risk assessment and adapt a series of infection control measures to their own circumstances to minimize the risk of SARS-CoV-2 transmission.



Article 3

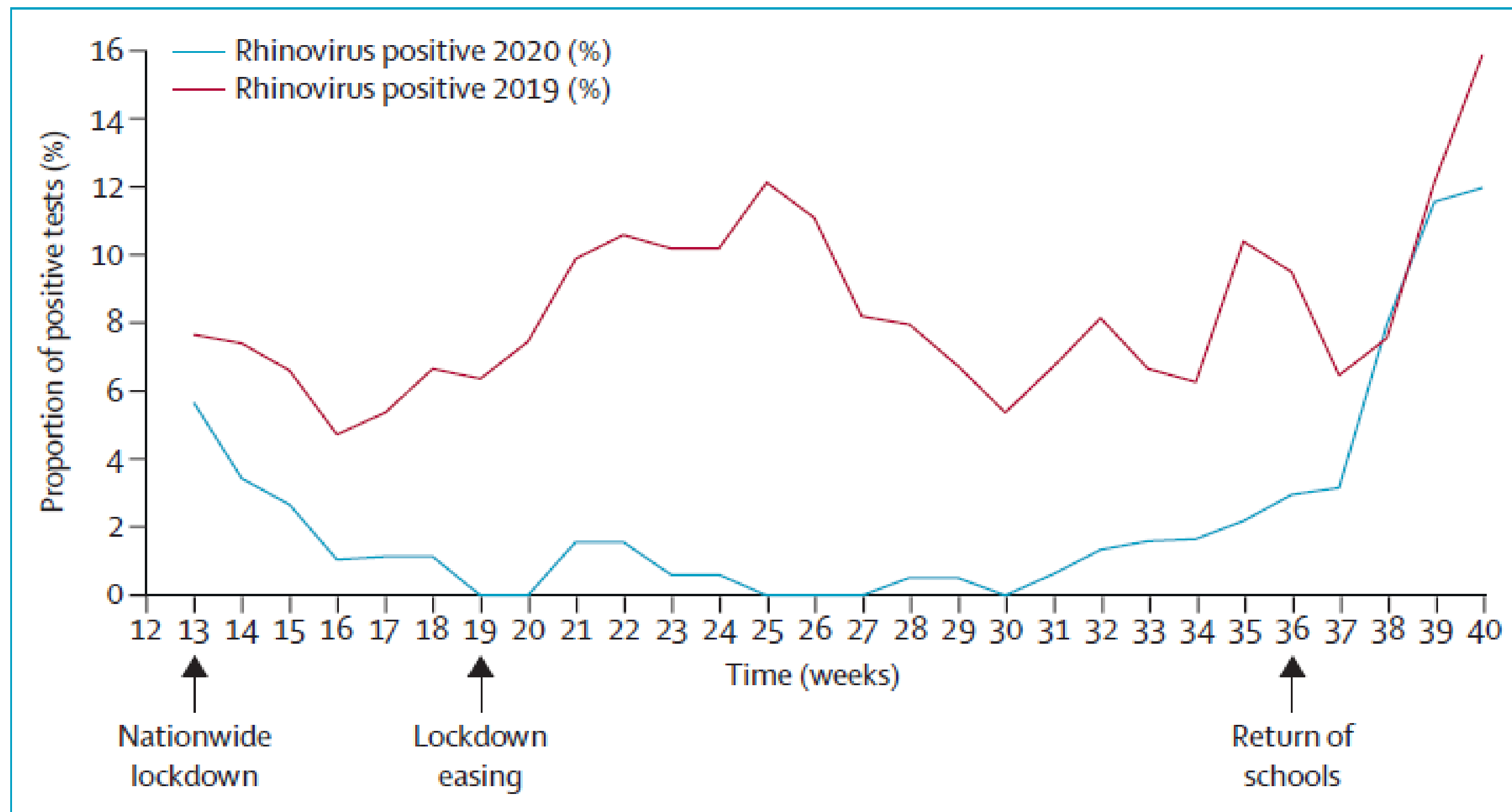


Figure: Proportion of tests positive for human rhinovirus
Data points are 2-week rolling average.



THANK YOU

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