

SCIENTIFIC RESEARCH MONITORING ON COVID-19

25 OCTOBER 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 536)

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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Clinical Features

Impact of COVID-19 Mitigation Measures on the Incidence of Preterm Birth: A National Quasi-Experimental Study

Public Health Response

Unnecessary Obstacles to COVID-19 Mass Testing

Public Health Response

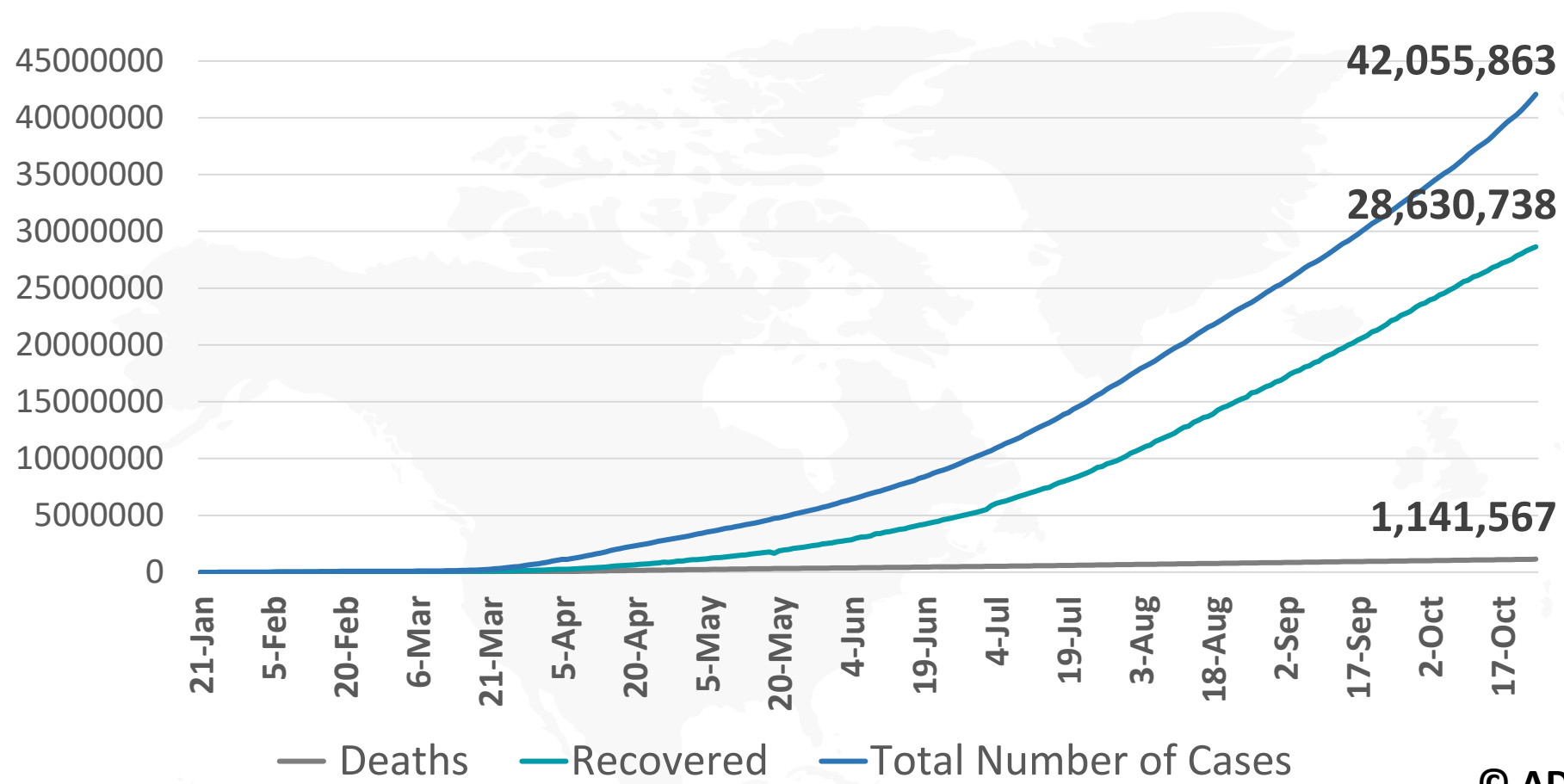
COVID-19 Recovery: Potential Treatments for Post-Intensive Care Syndrome

Public Health Response

Taking Pandemic Sequelae Seriously: from the Russian Influenza to COVID-19 Long-Haulers



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)

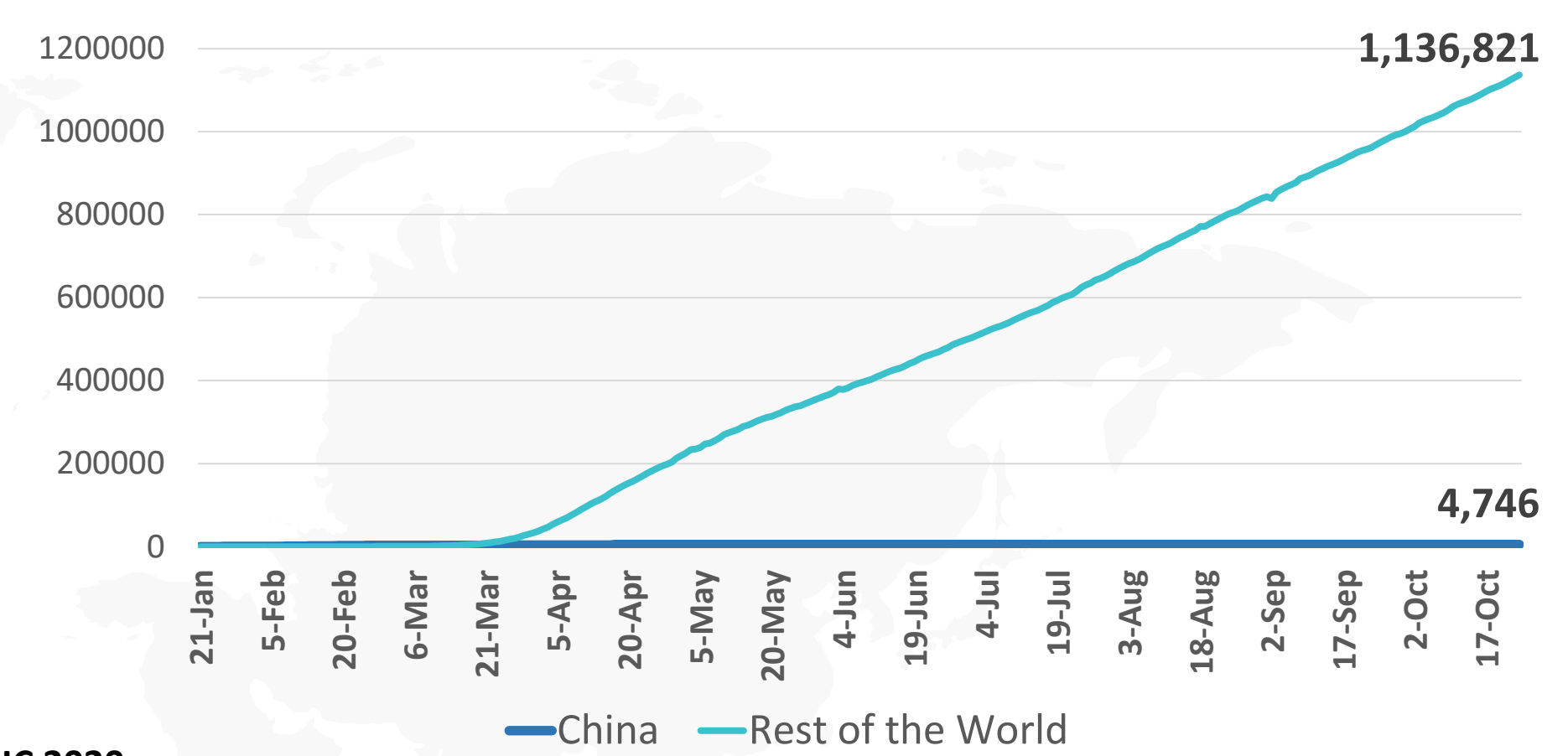


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

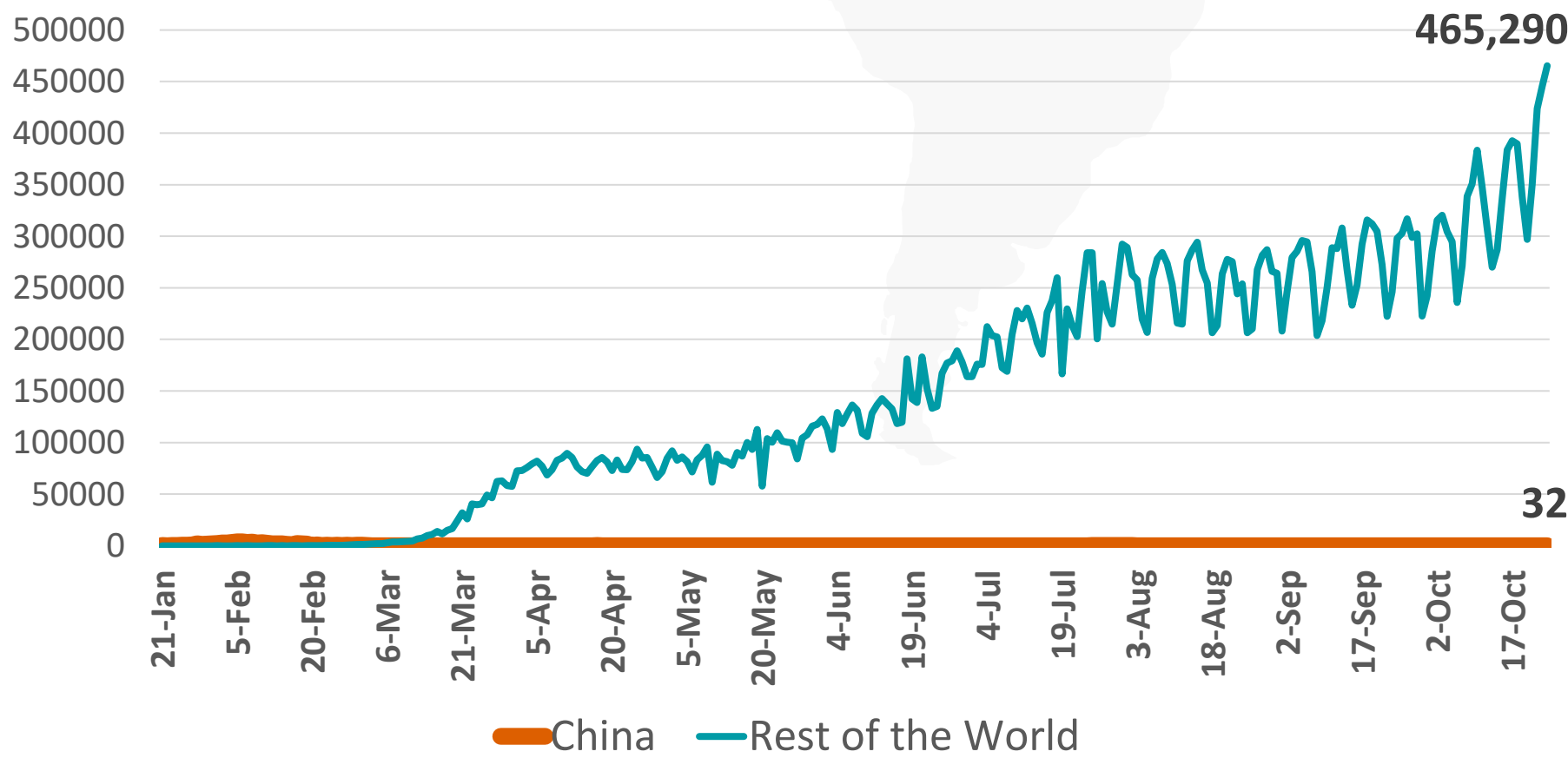


Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)

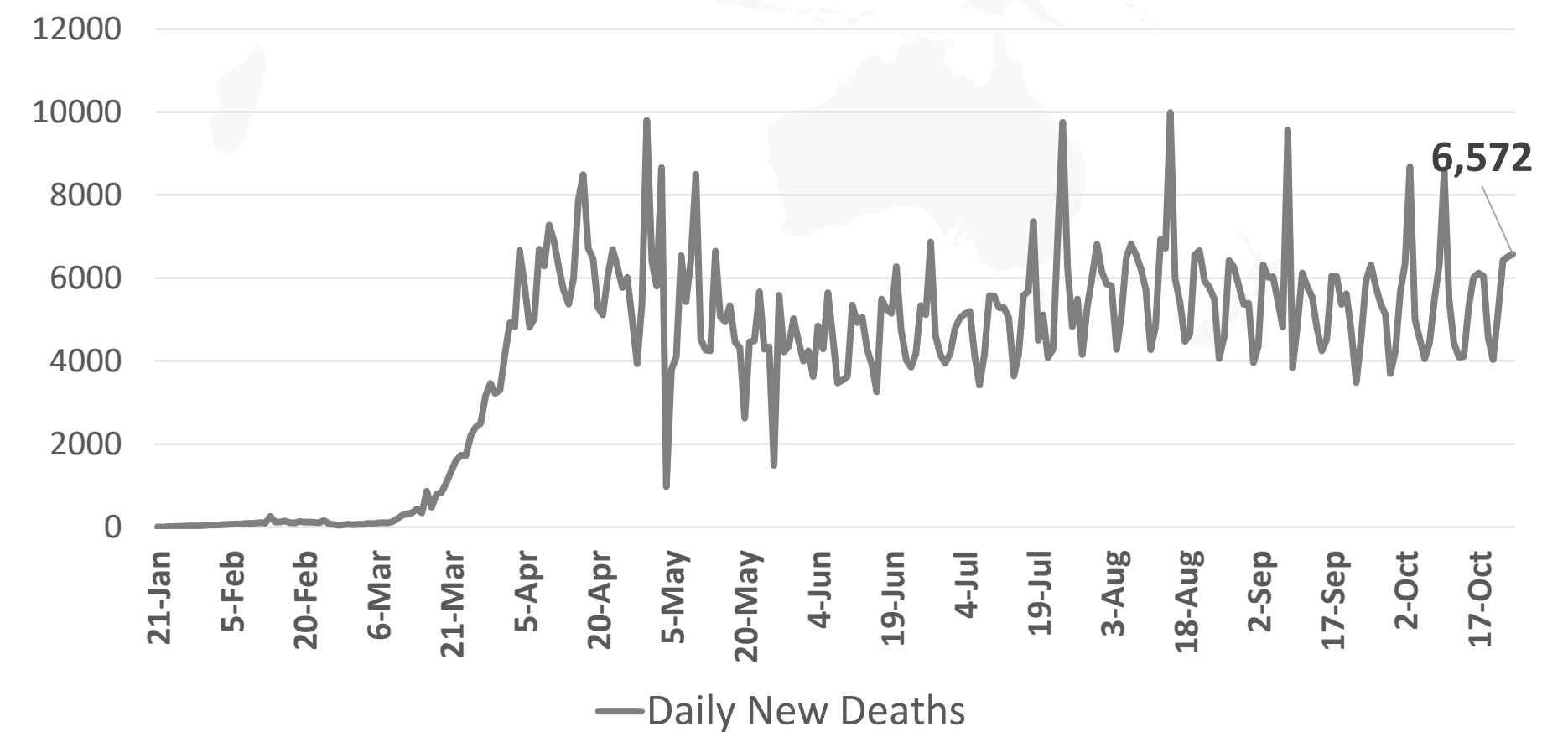
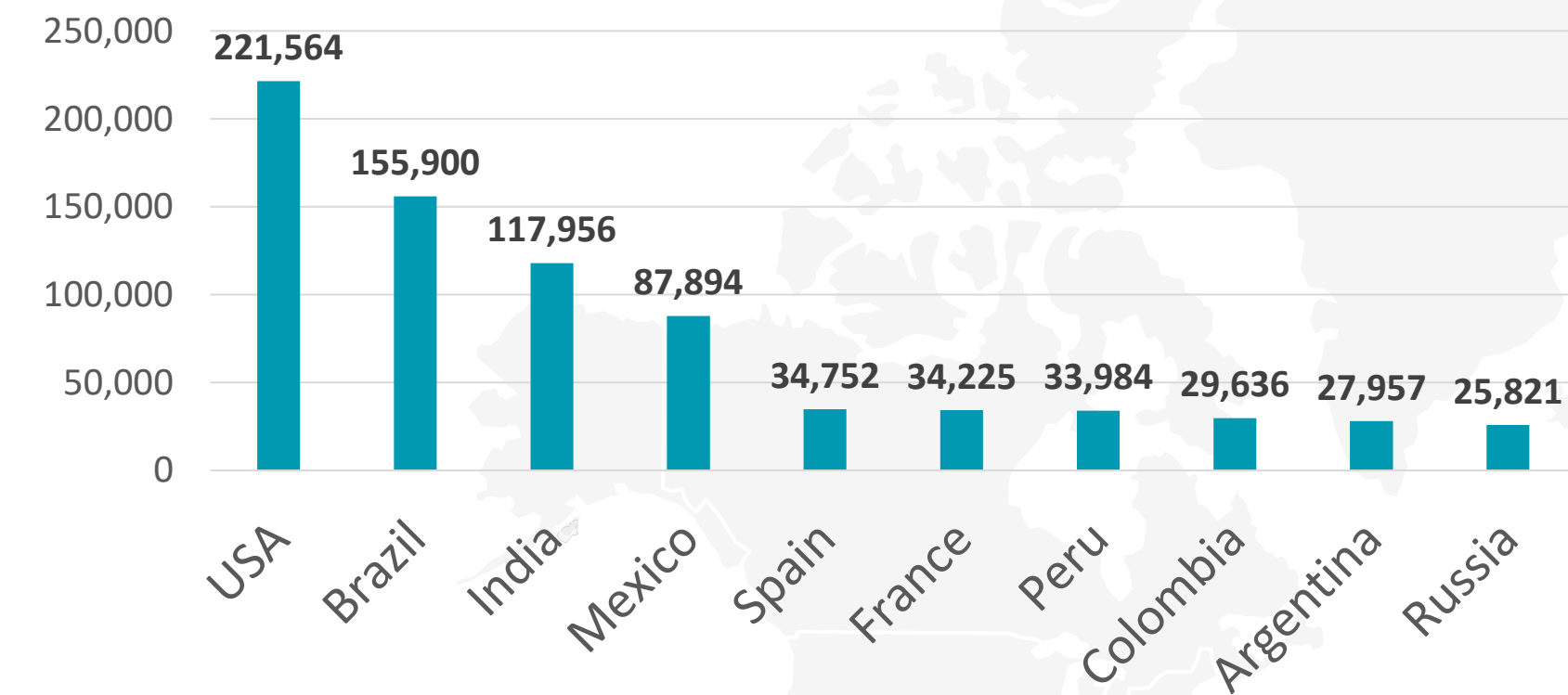
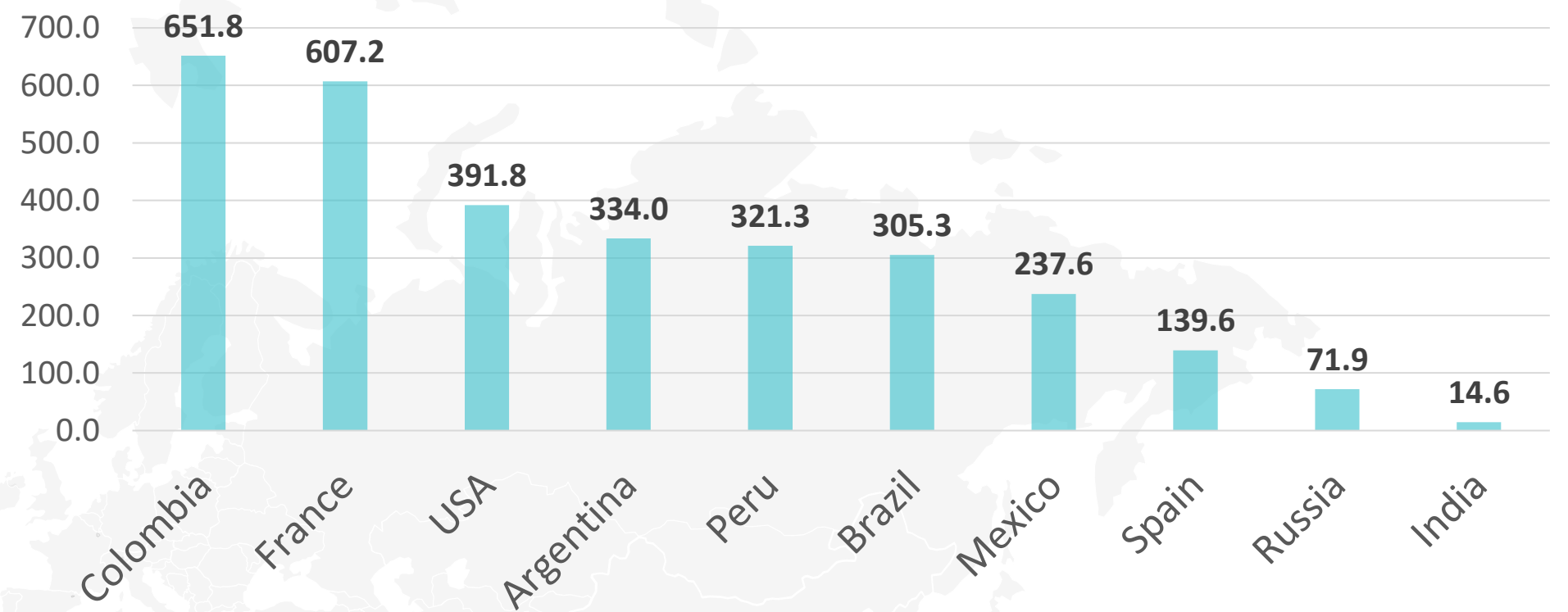


Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

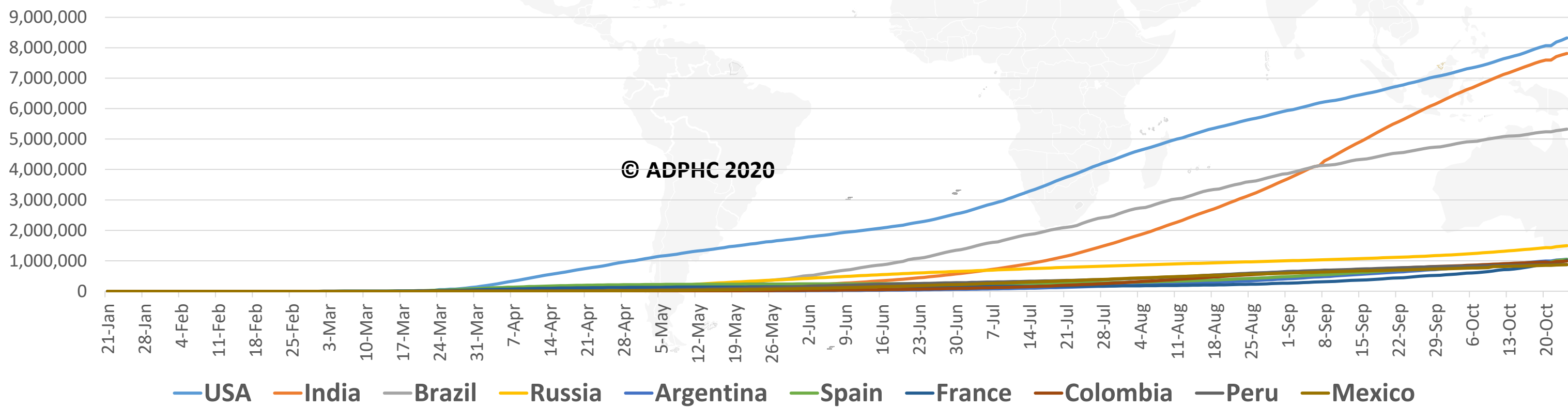
TOTAL DEATHS



DEATHS PER MILLION



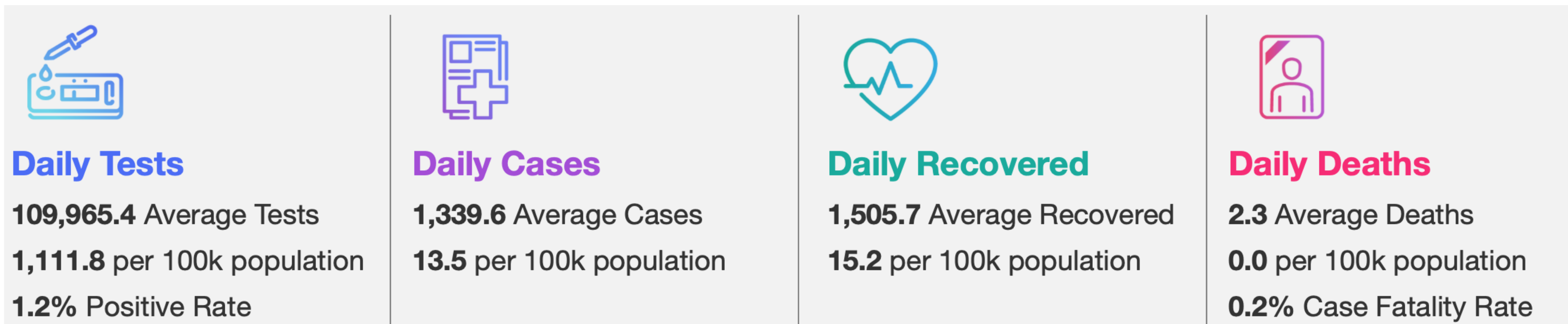
TOTAL INFECTED CASES



USA	8,320,491
India	7,814,682
Brazil	5,323,630
Russia	1,497,167
Argentina	1,053,650
Spain	1,046,132
France	1,010,554
Colombia	990,270
Peru	879,876
Mexico	874,171



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

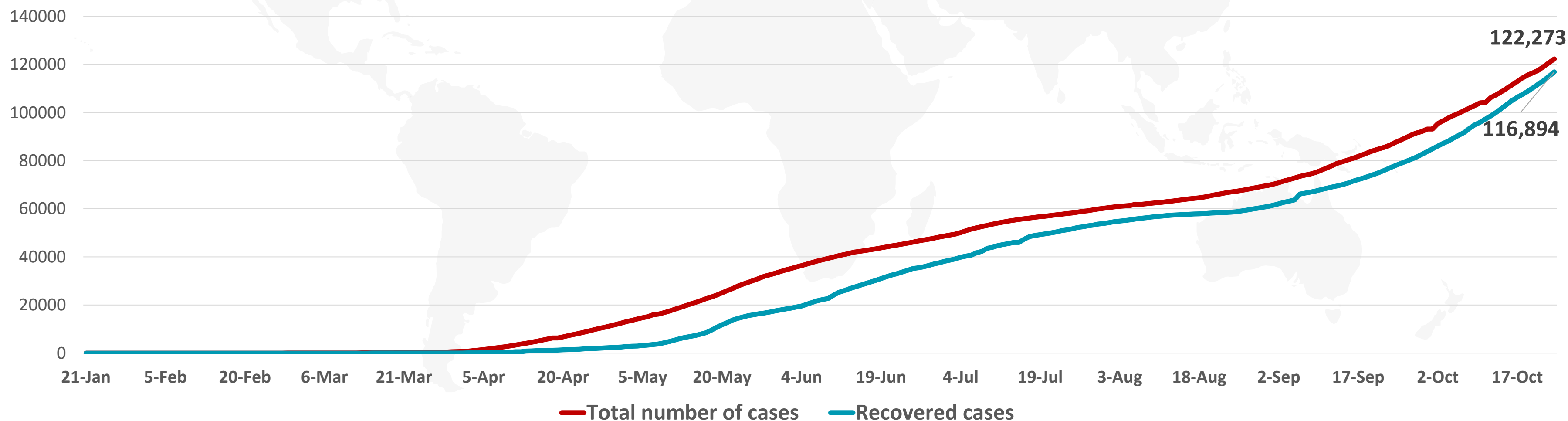
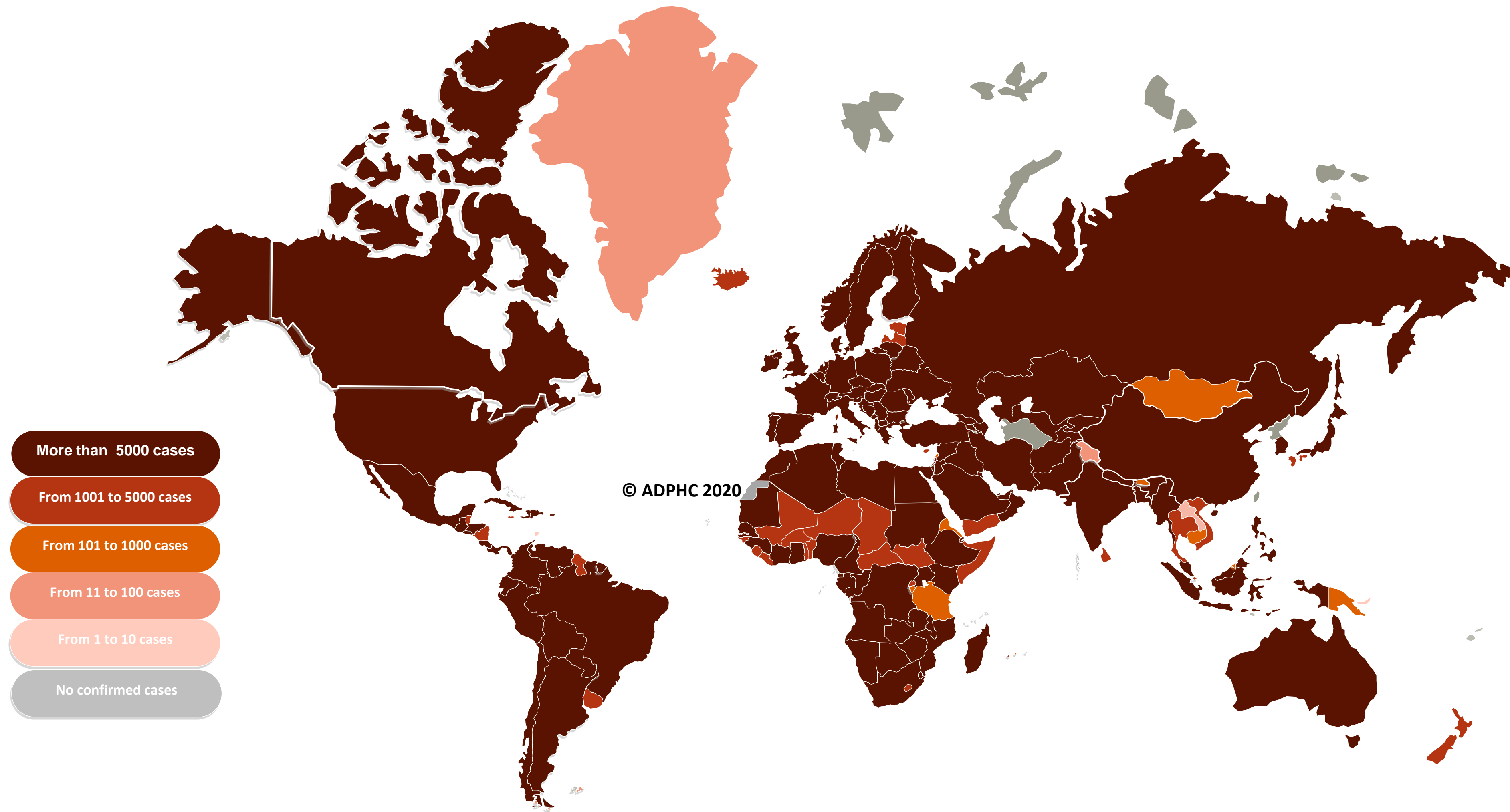


Figure 7A : Global Distribution of COVID-19 Cases



More than 5000 cases

From 1001 to 5000 cases

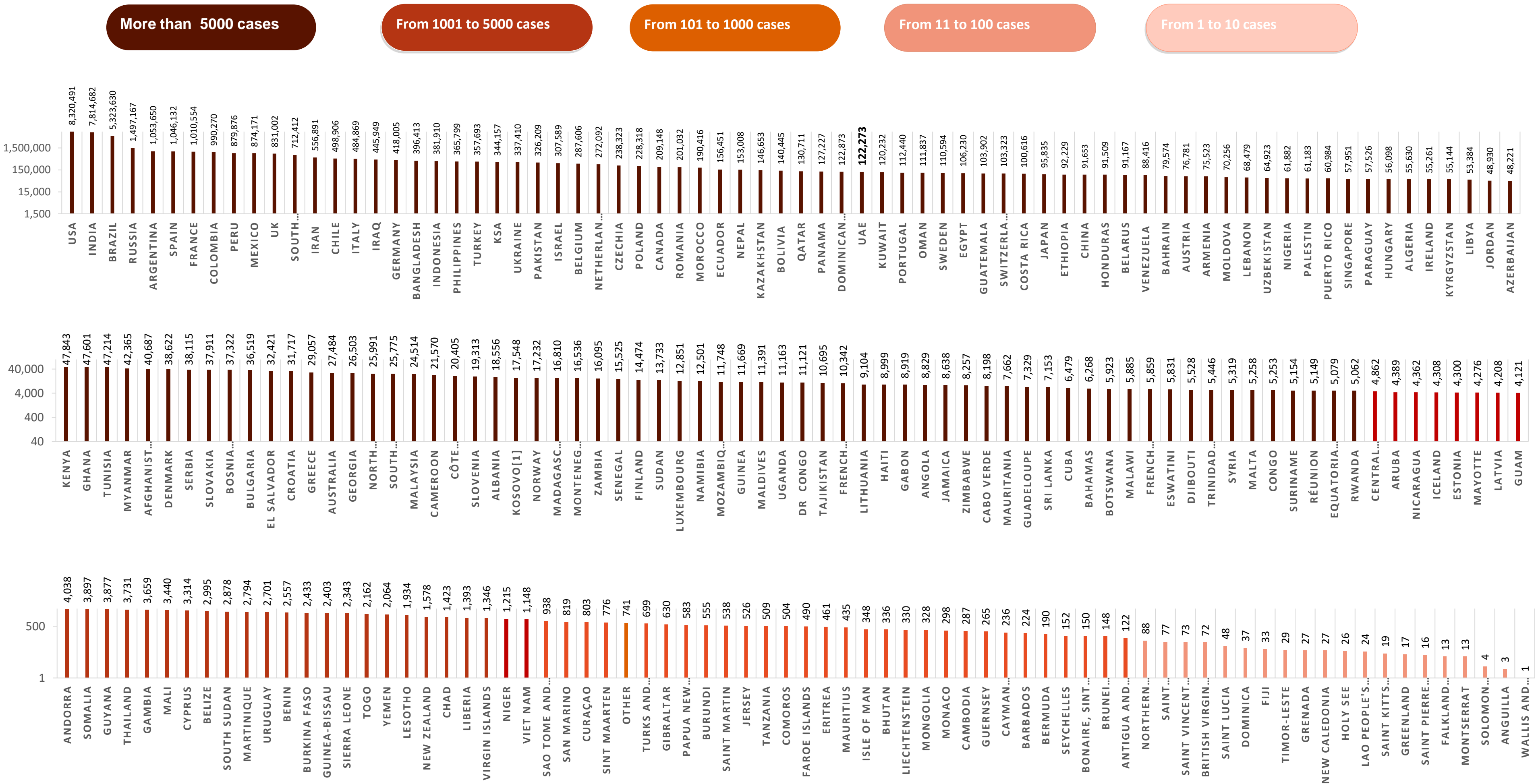
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

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

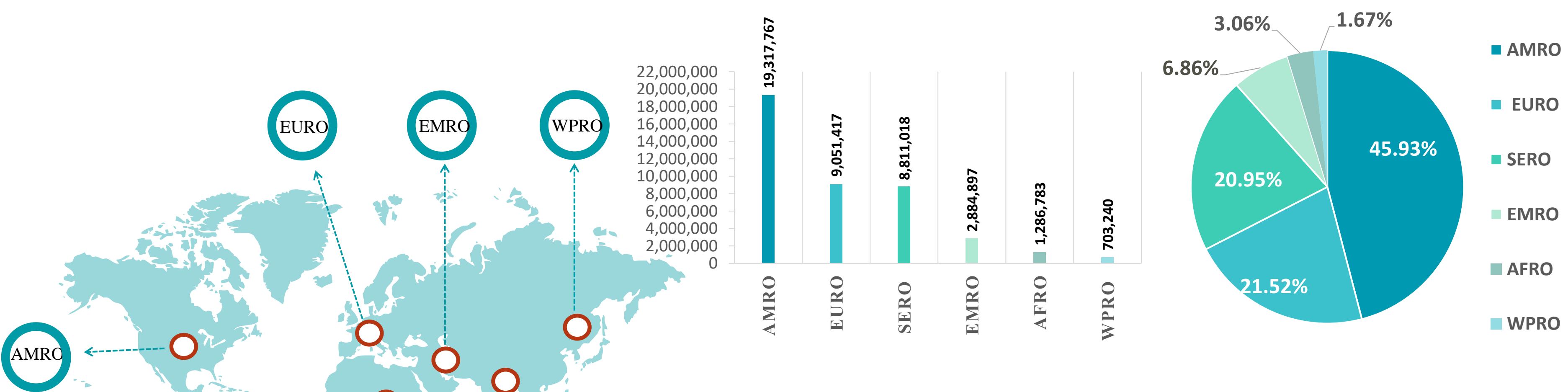


Other*: includes cases and deaths reported under the international conveyance(Diamond Princess)



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

INFECTED



DEATHS

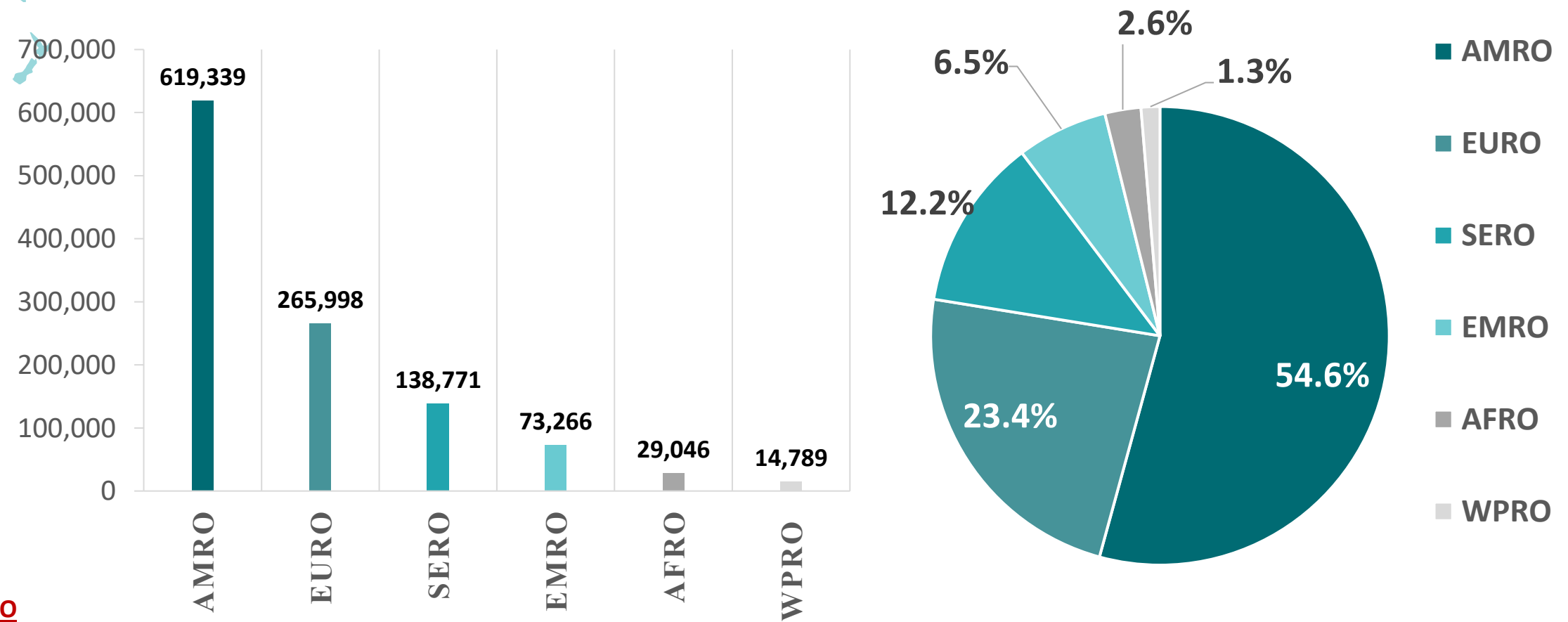
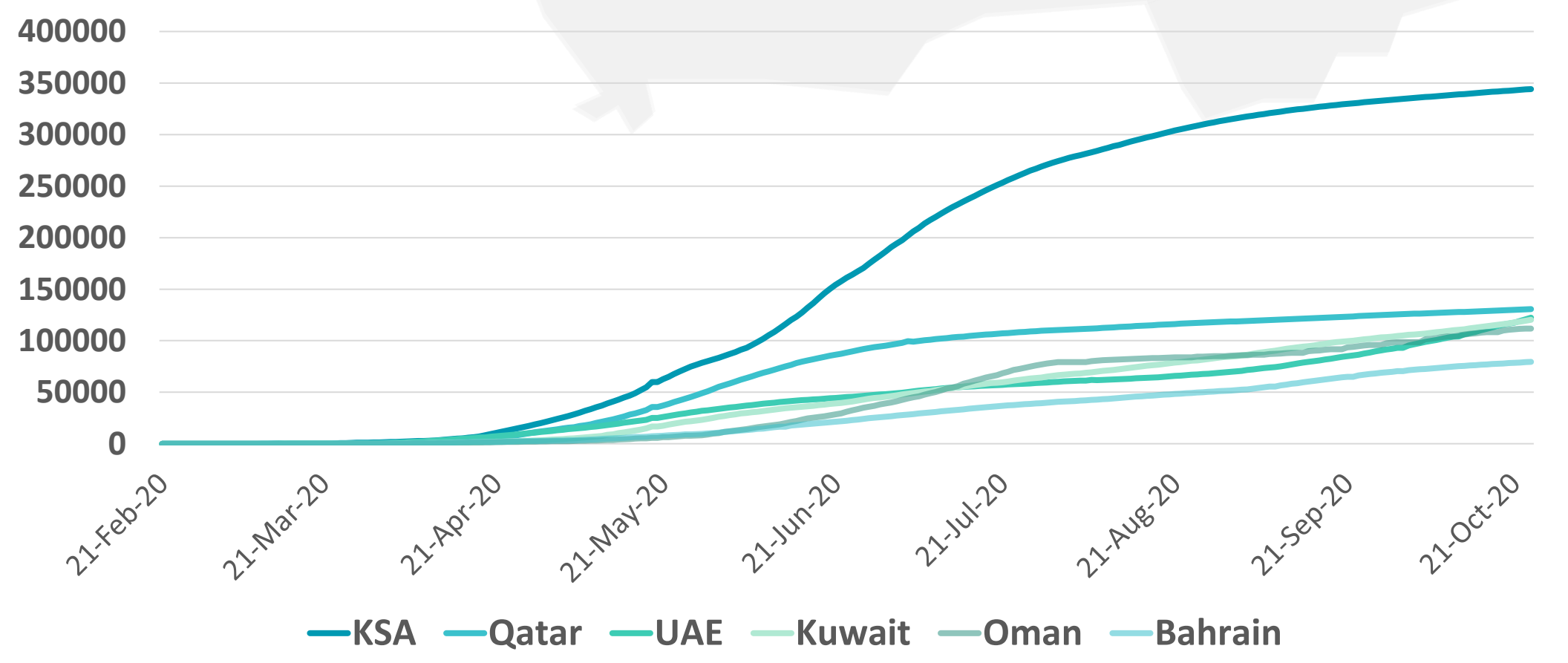
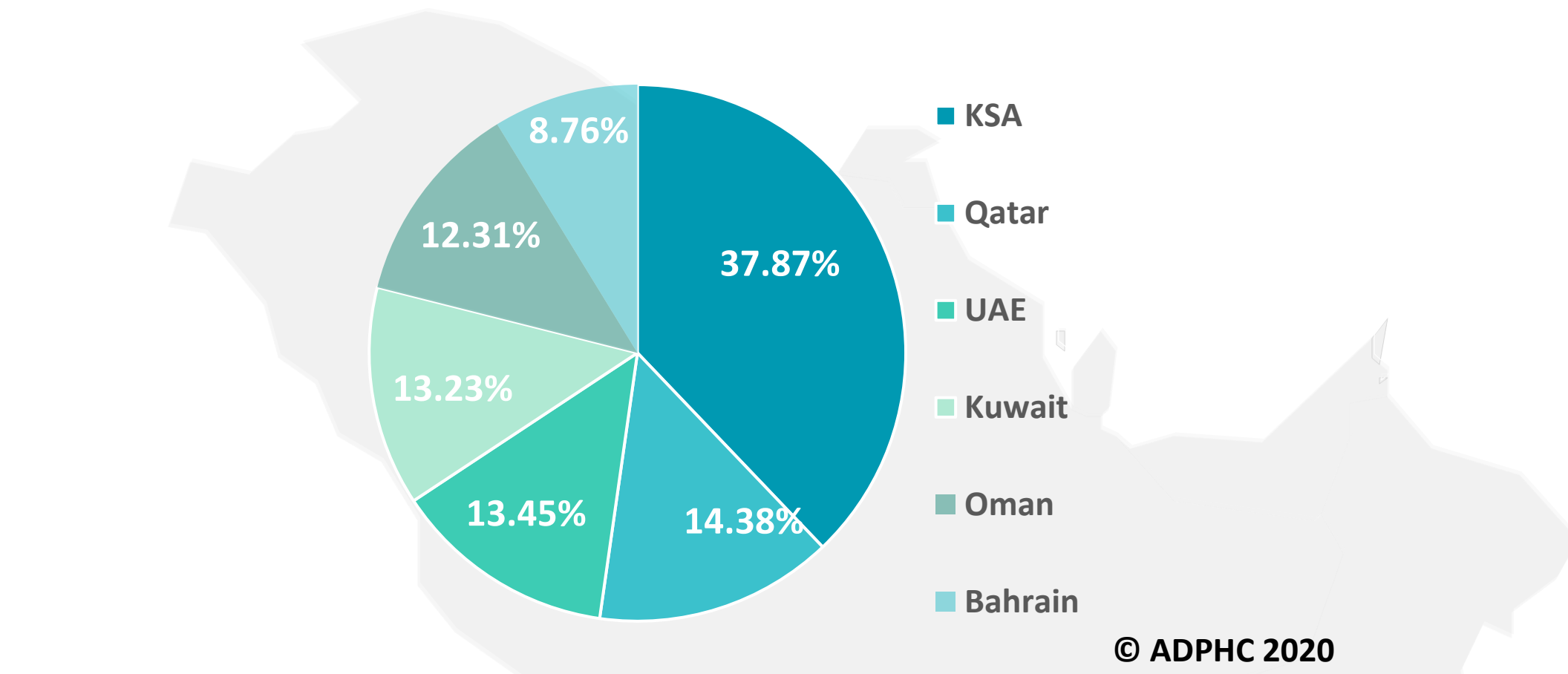
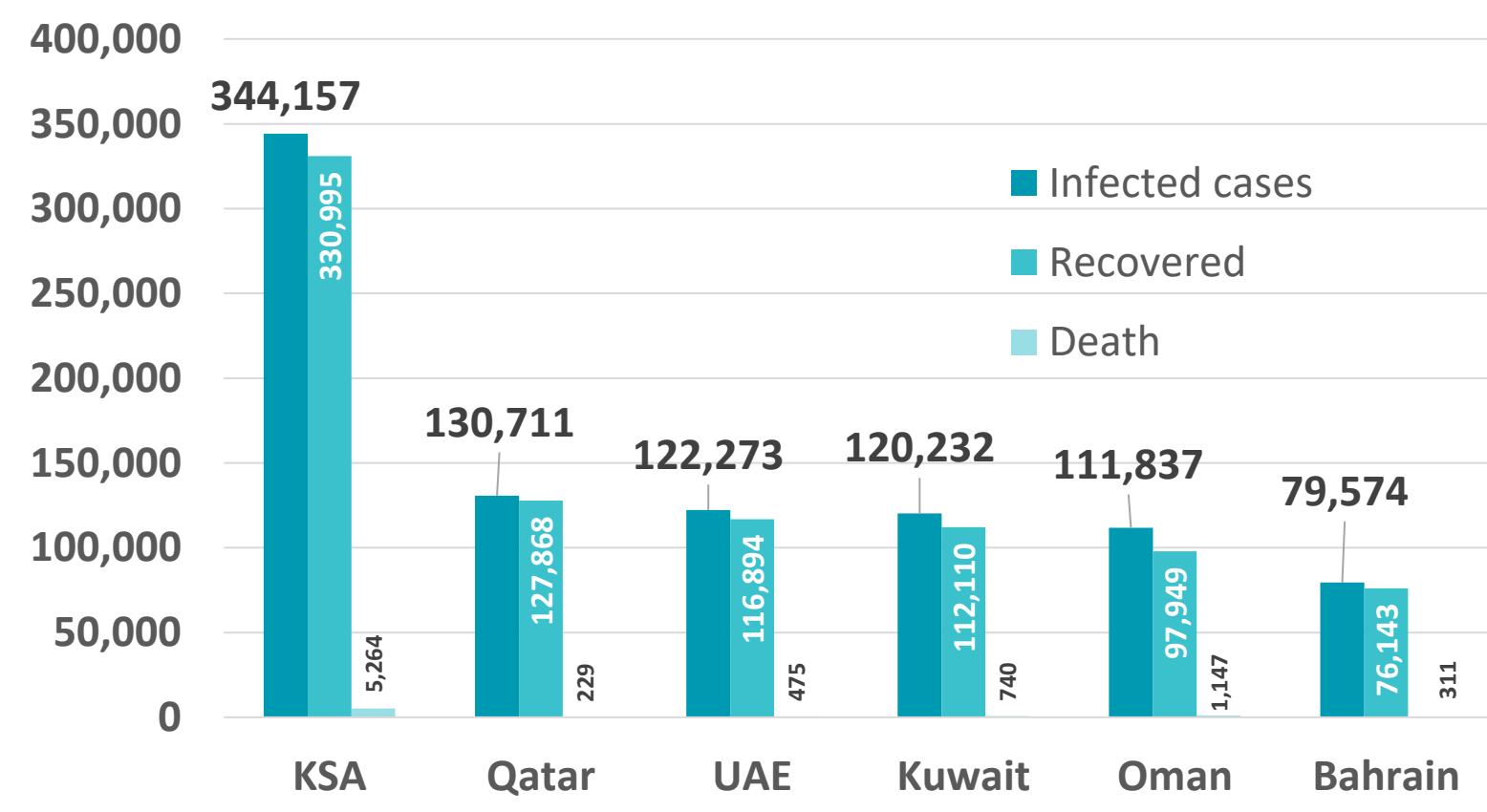


Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

TOTAL NUMBER OF INFECTED CASES



TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATHS PER MILLION

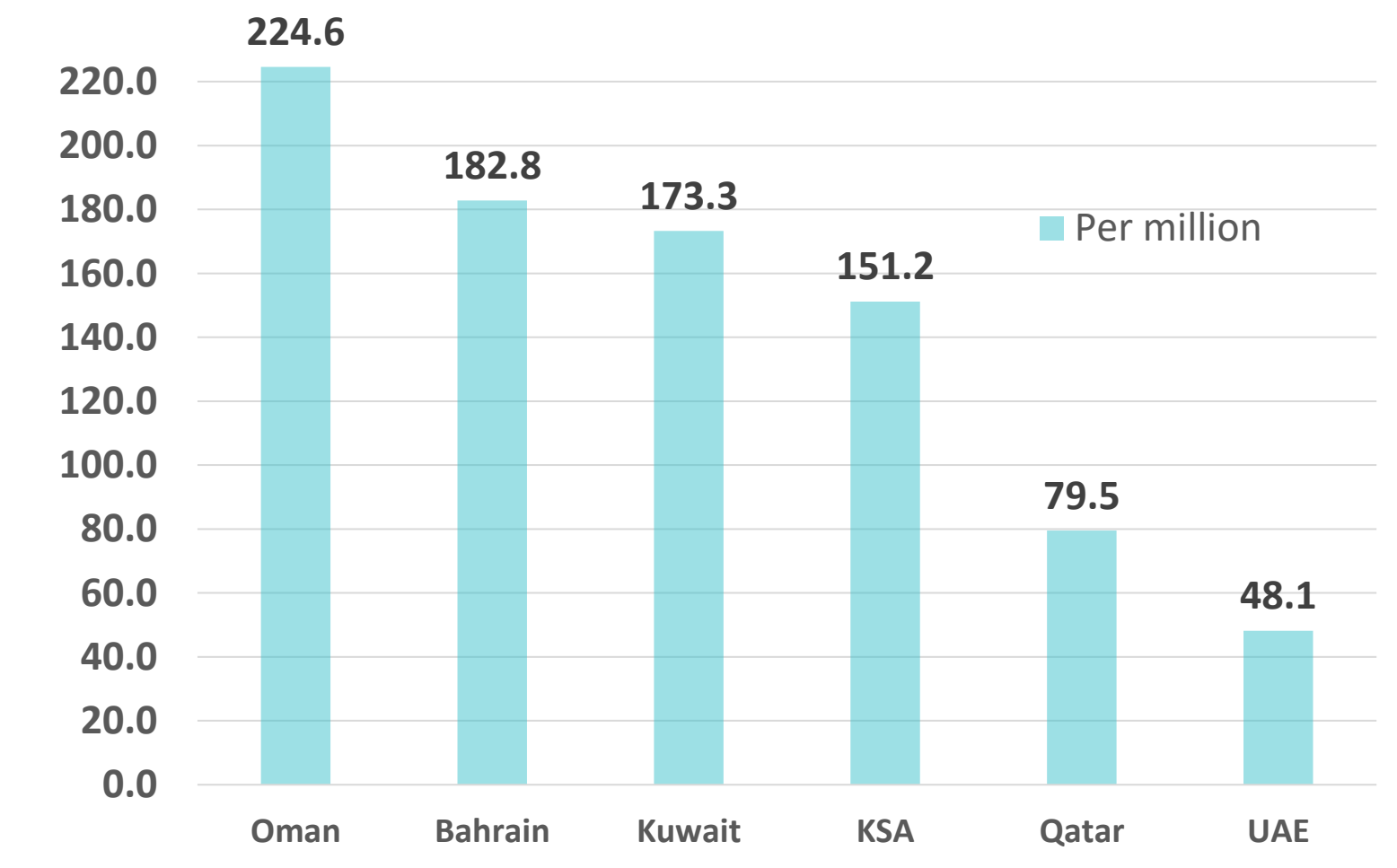


Figure 10: Comparative Analysis of the Distribution of COVID-19 New Cases in GCC Countries

UAE



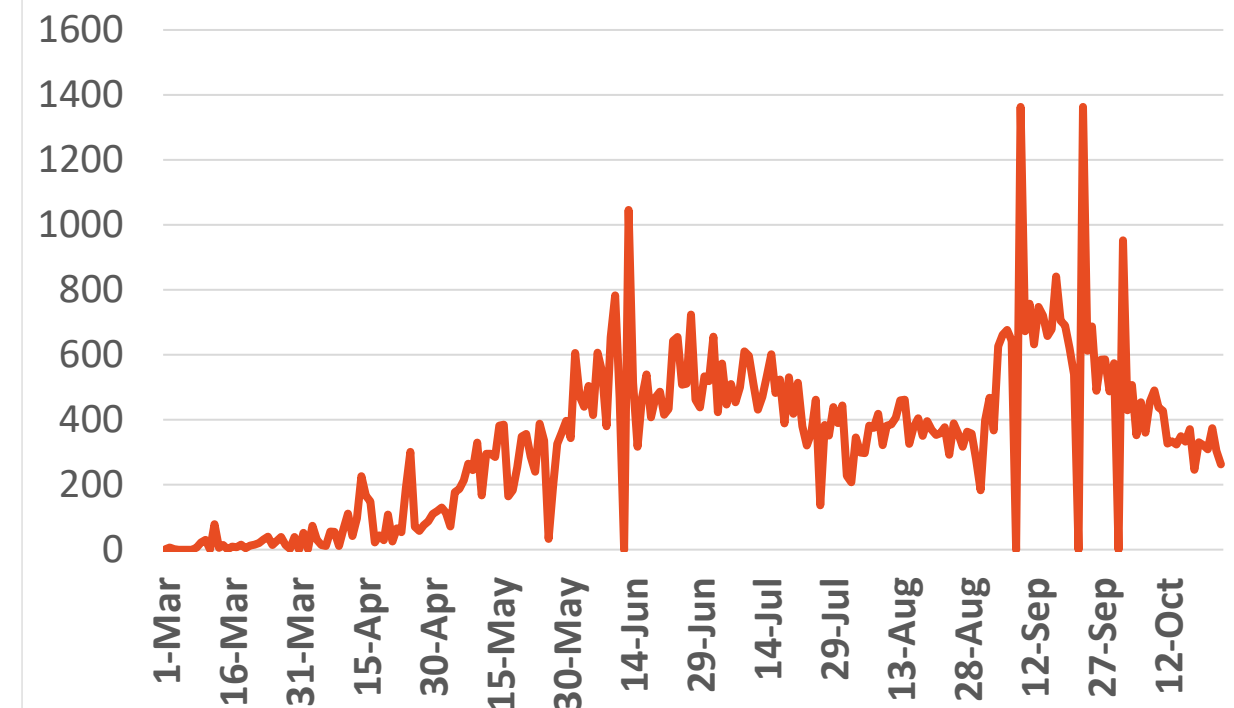
Source : National Emergency Crisis and Disaster Management Authority

KSA



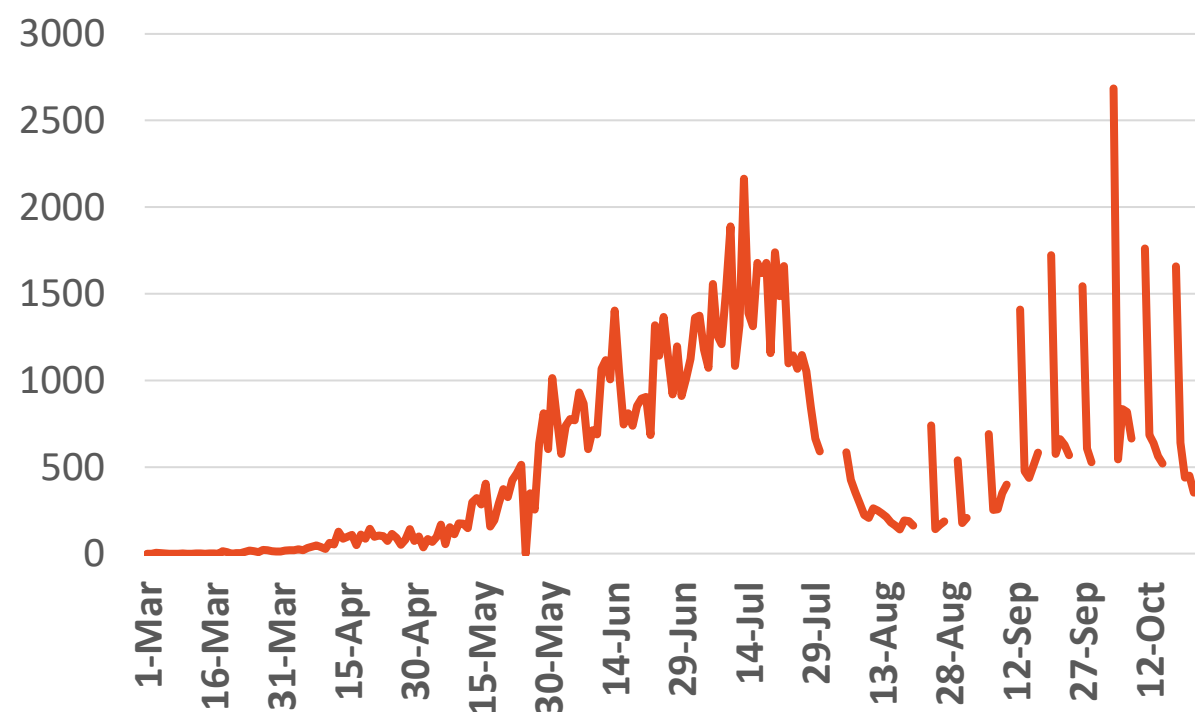
Source : KSA ministry of health

Bahrain



Source :WHO

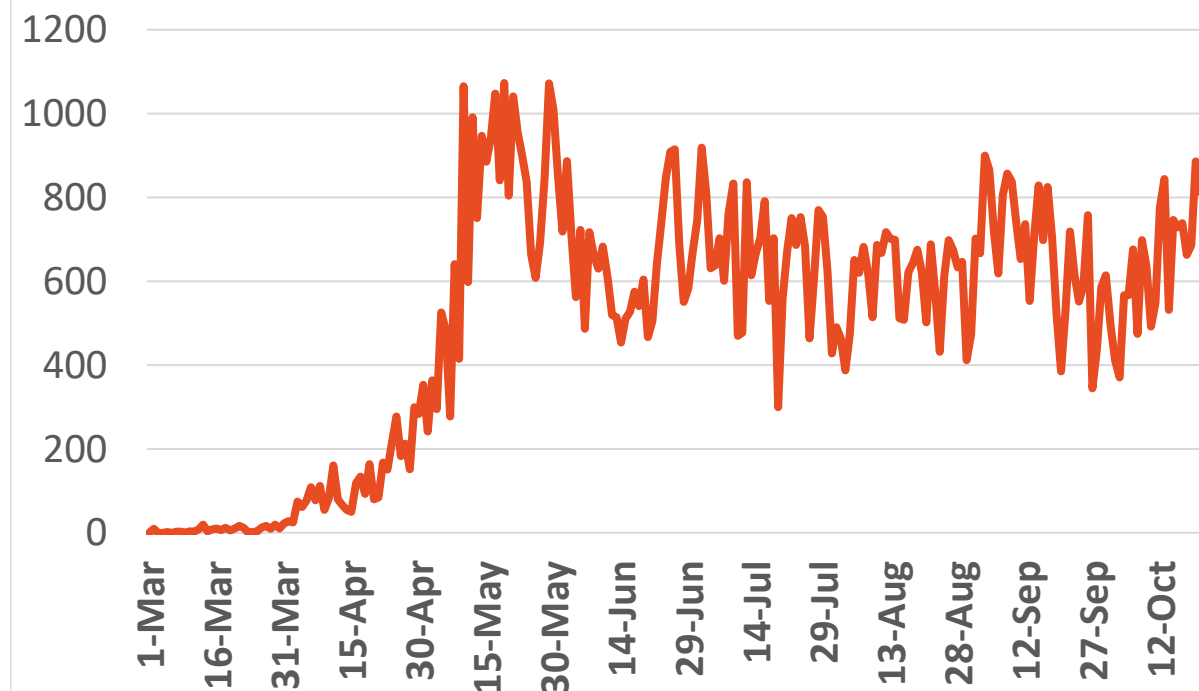
Oman



Source :Oman ministry of health

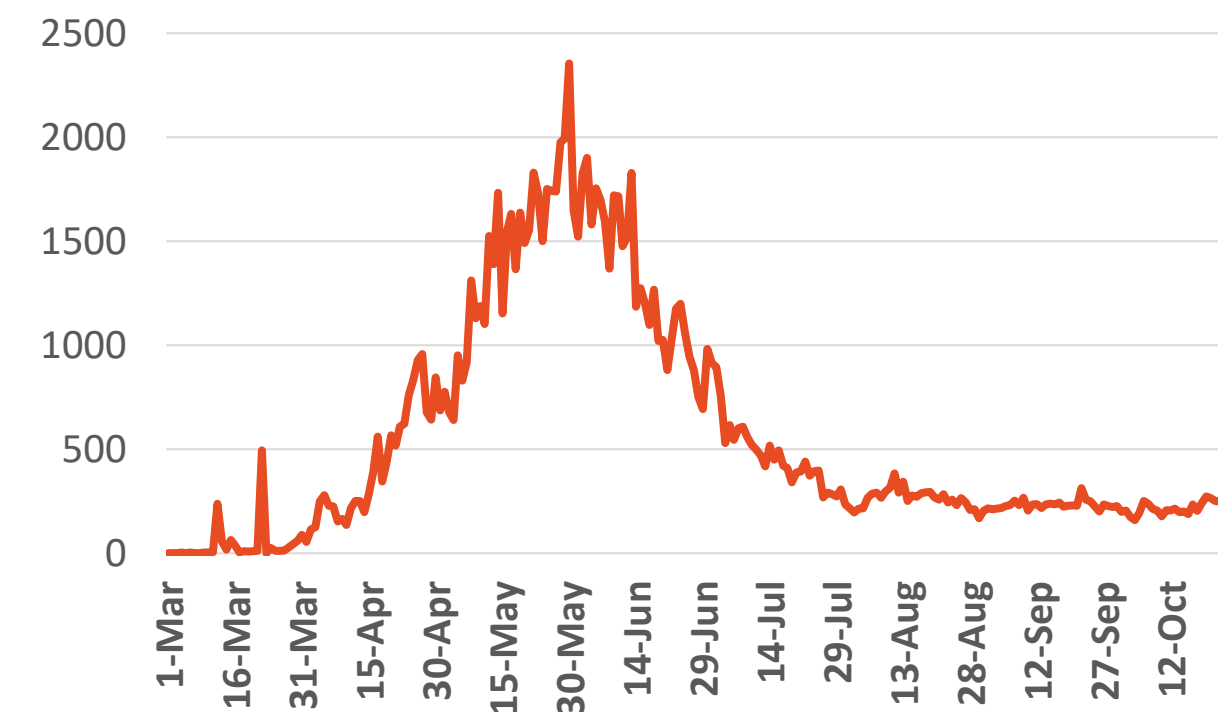
Kuwait

© ADPHC 2020



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.



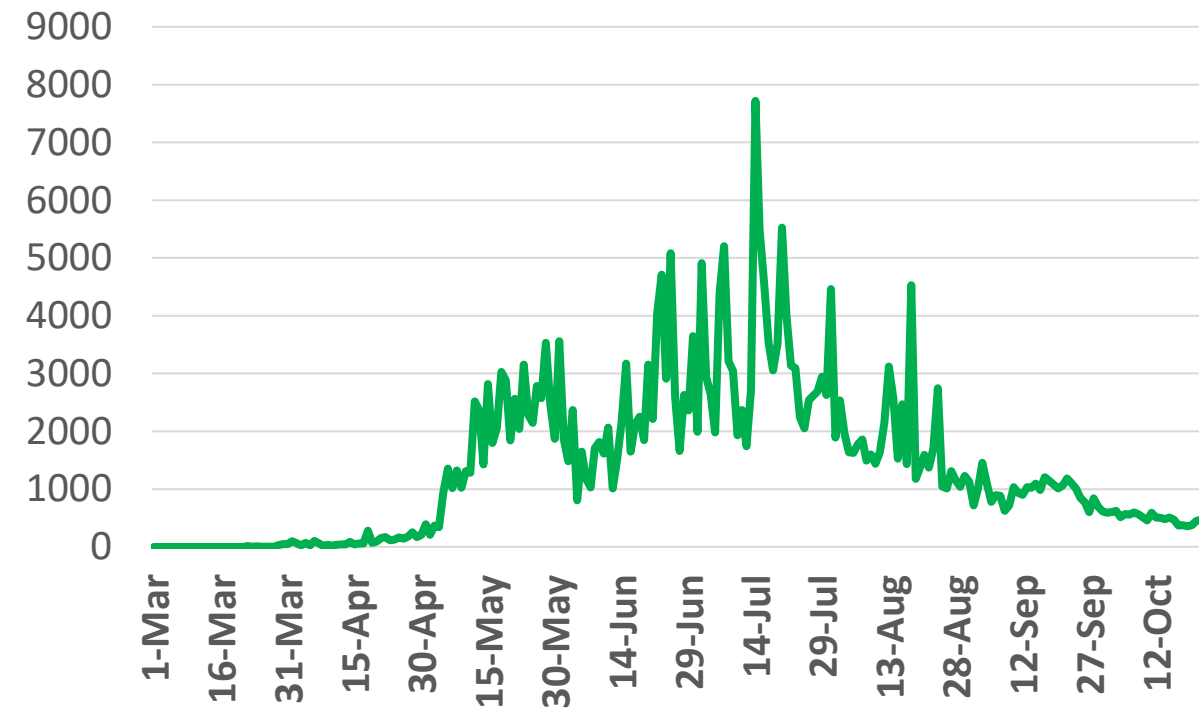
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE



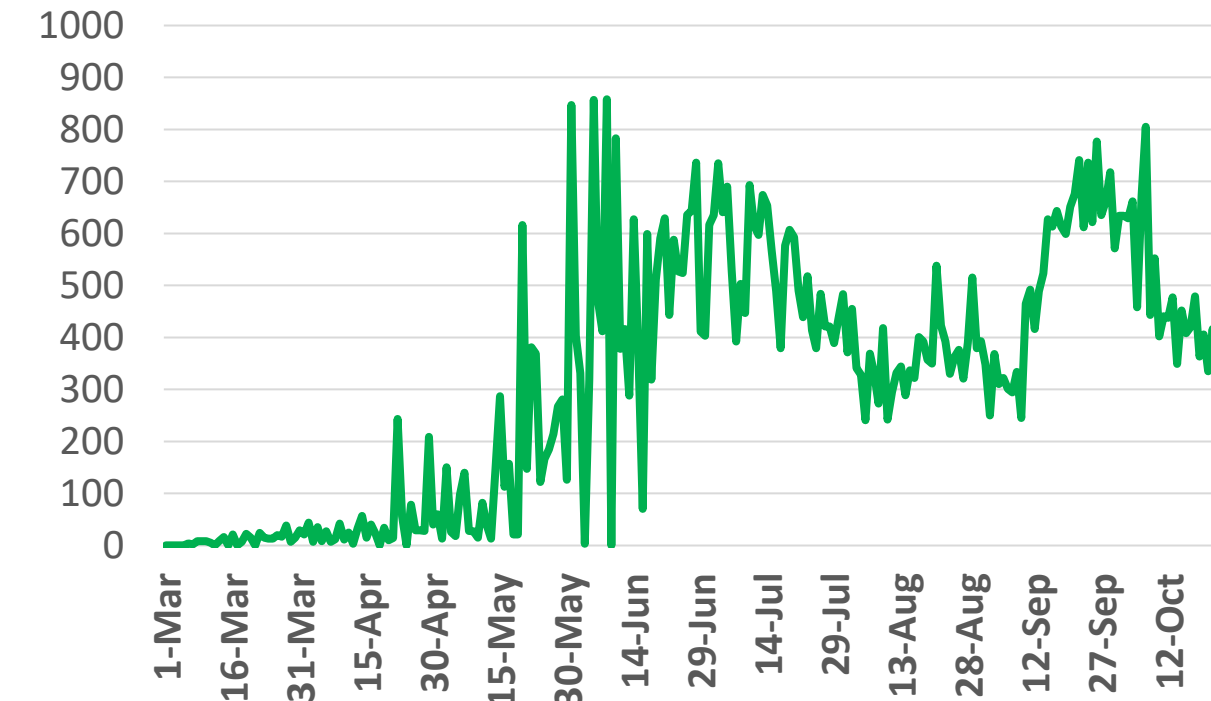
Source : National Emergency Crisis and Disaster Management Authority

KSA



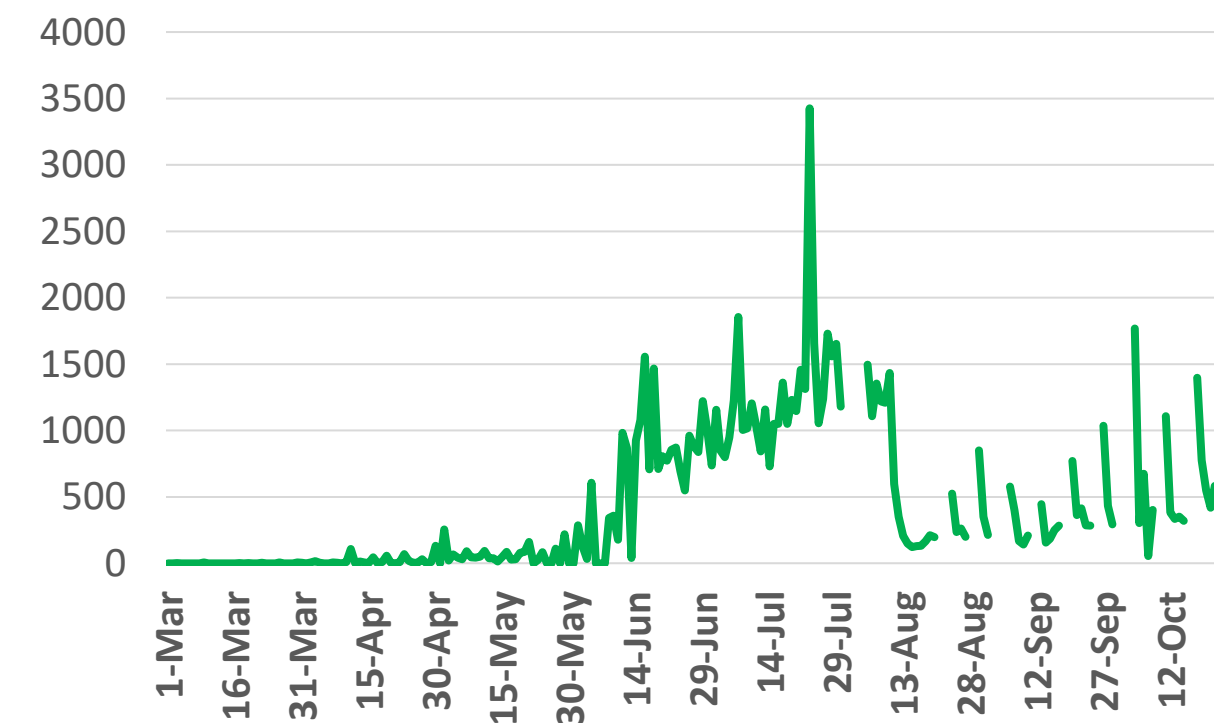
Source : KSA ministry of health

Bahrain



Source : Bahrain ministry of health

Oman



Source : Oman ministry of health

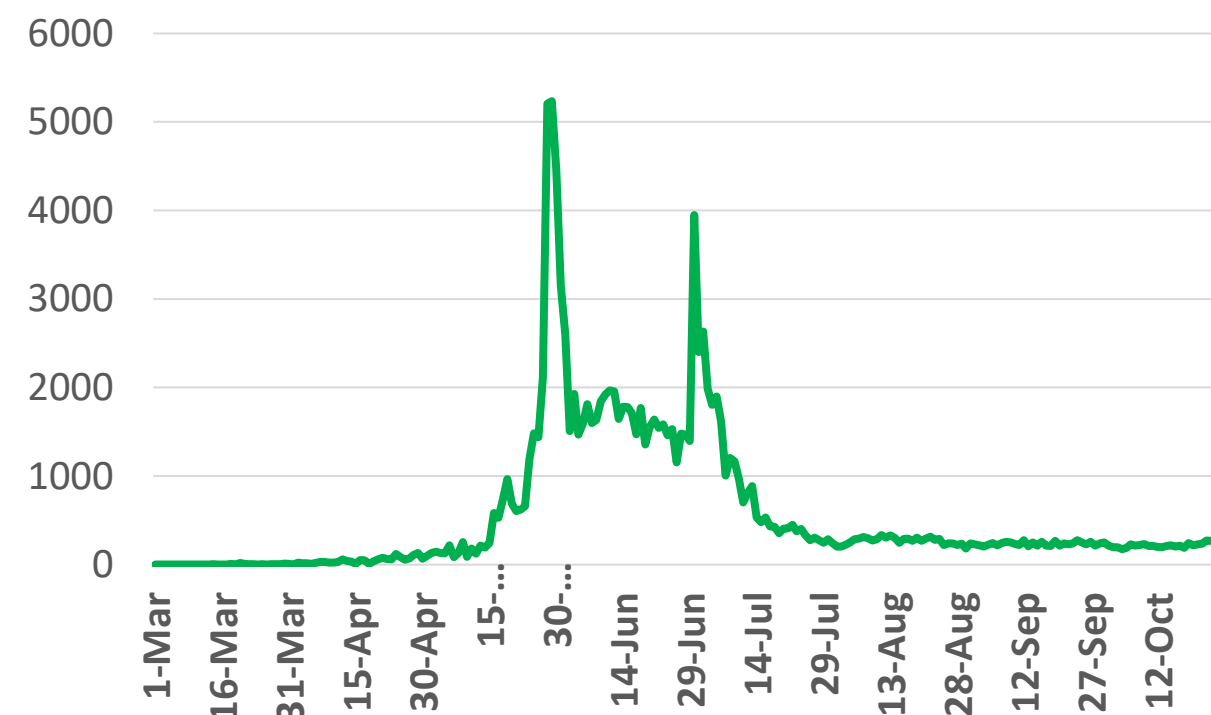
Kuwait

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Source : Kuwait ministry of health

Qatar



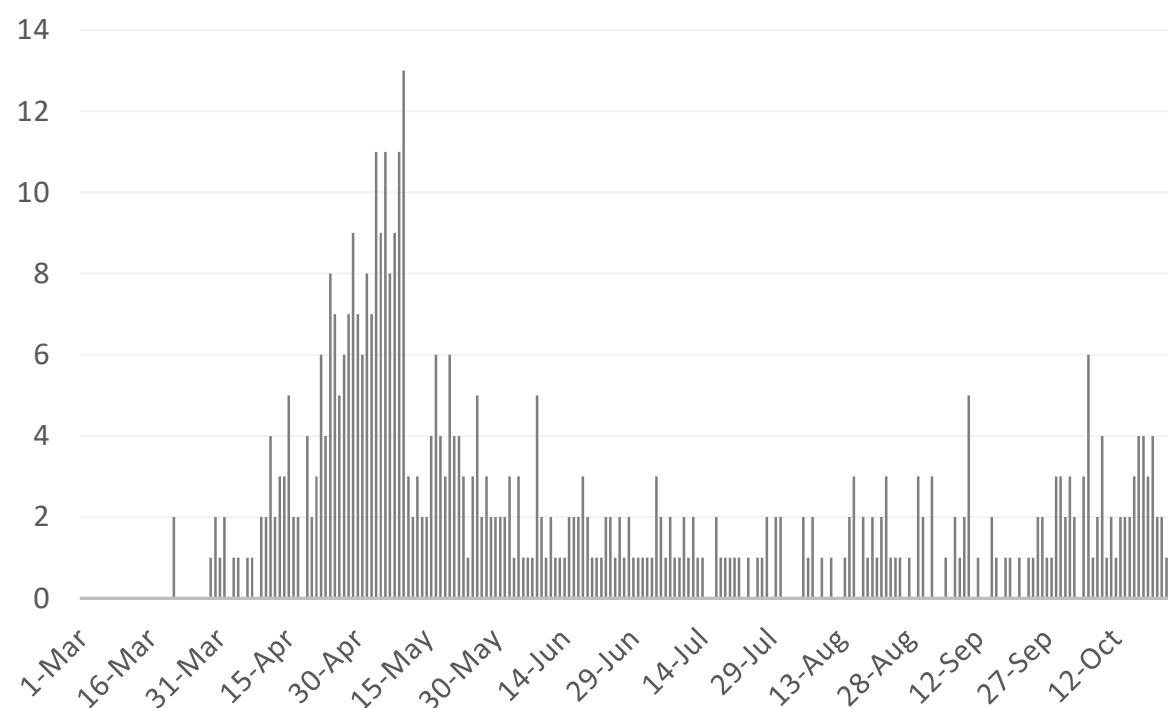
Source : Qatar ministry of health

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*No announced statistic data on weekends and official holidays.



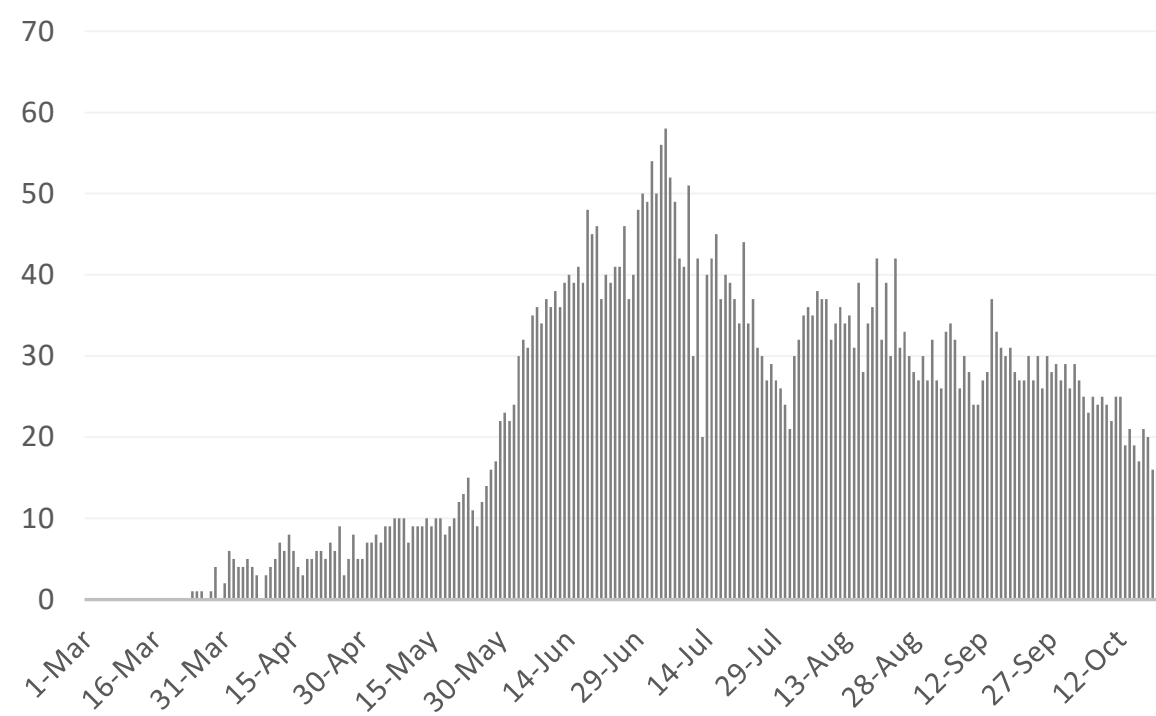
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



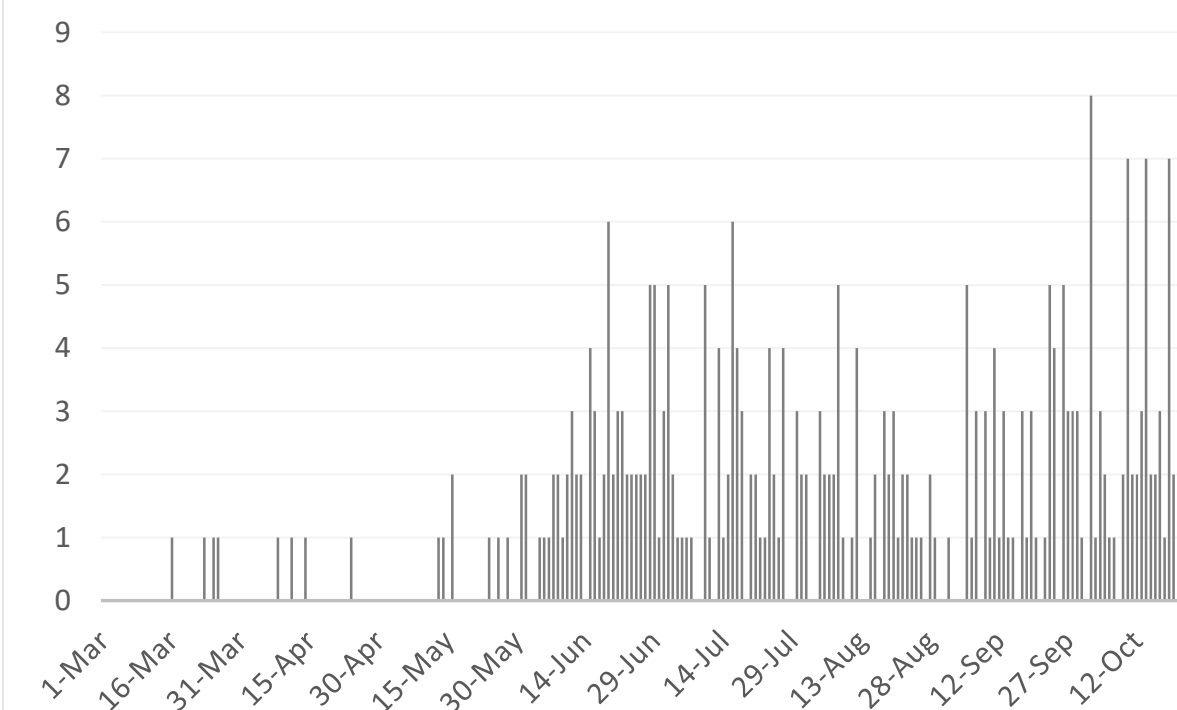
Source : National Emergency Crisis and Disaster Management Authority

KSA



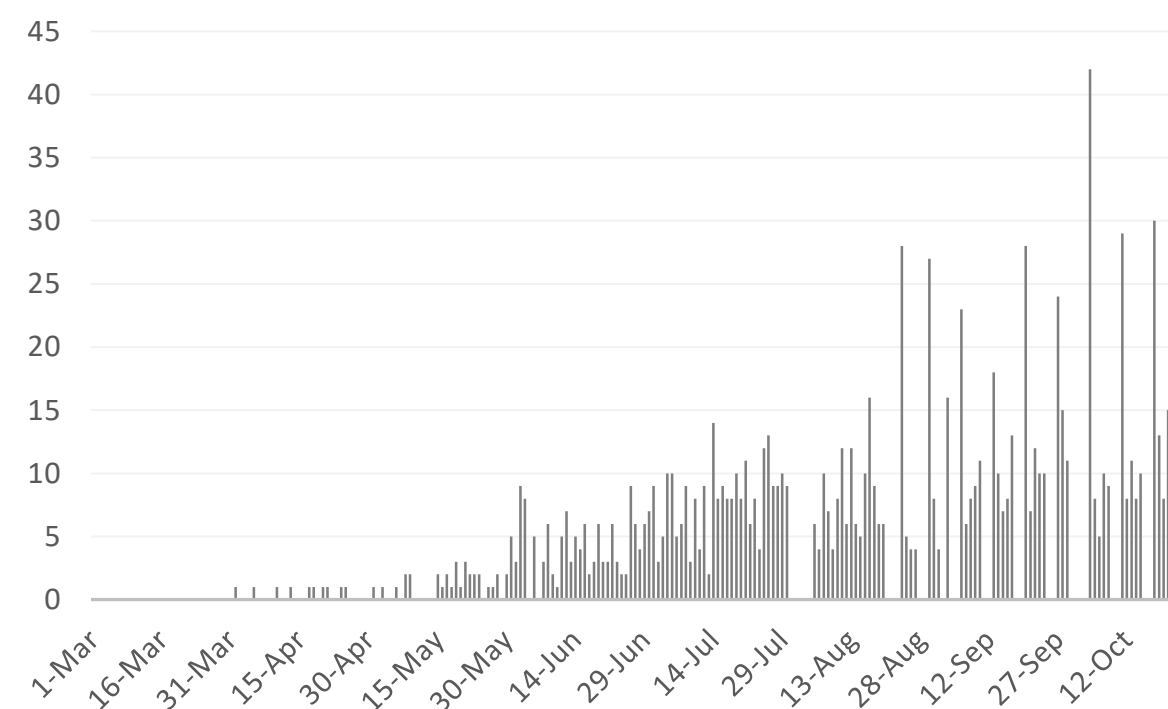
Source : KSA ministry of health

Bahrain



Source :WHO

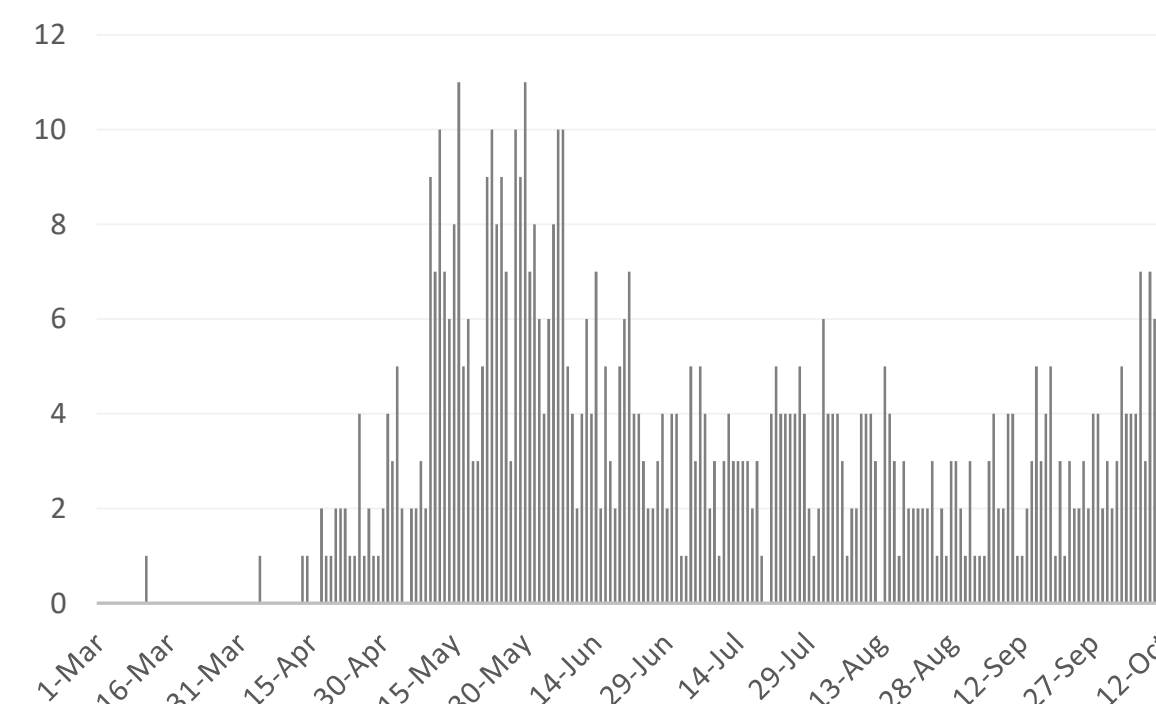
Oman



Source :Oman ministry of health

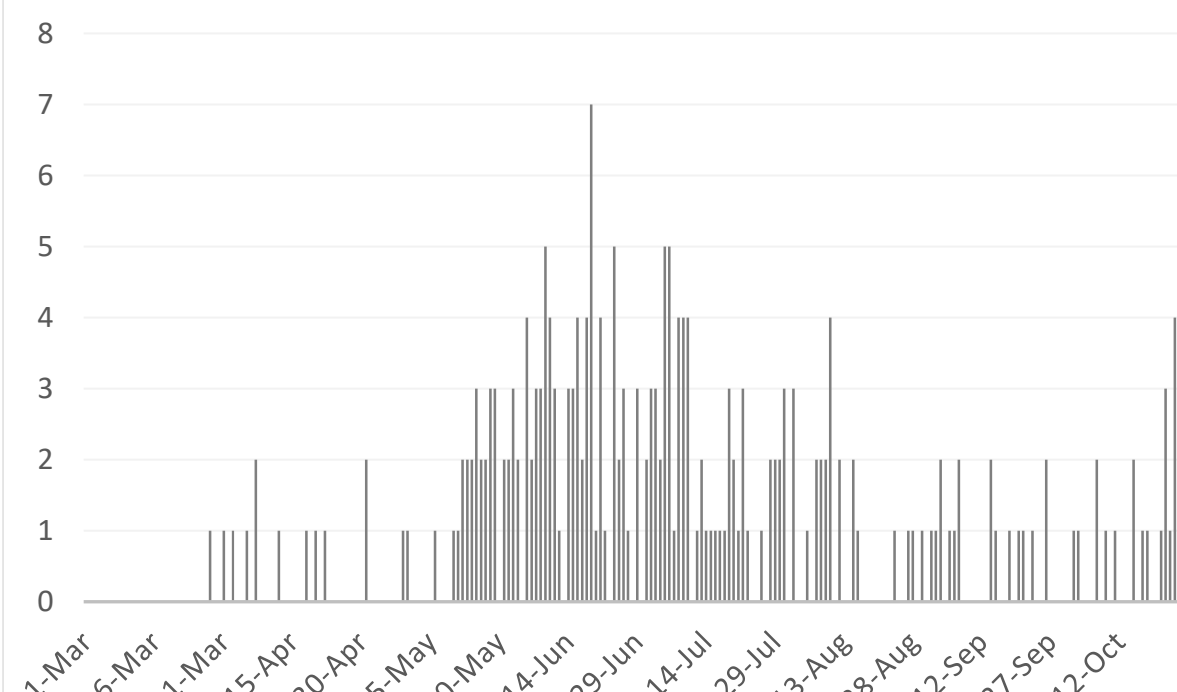
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

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*No announced statistic data on weekends and official holidays.





Article 1

Published

Impact of COVID-19 Mitigation Measures on the Incidence of Preterm Birth: A National Quasi-Experimental Study

October 13, 2020 [The Lancet](#)

This paper reported the impact of COVID-19 mitigation measures on the incidence of preterm birth implemented in a stepwise fashion on March 9, March 15, and March 23, 2020.

- In the Netherland, a national quasi-experimental study was conducted with data on all singleton babies who had undergone neonatal blood spot screening program (2010-2020). Data were provided by the National Institute for Public Health and the Environment as extracted from Praeventis, which is a national database containing data from all babies that have undergone neonatal blood spot screening. Data were extracted from Praeventis included calendar week of birth, gestational age, birth weight, gender, and four-digit postcode.
- 1,599,547 singleton neonates were included in the analysis. Implementation of the March 9 measures was consistently associated with substantial reductions in preterm birth in the 2 month, 3 month, and 4 month time windows surrounding implementation \pm 2 months [n=531,823; Odds Ratio (OR) - 0.77; 95% CI: 0.66-0.91]; \pm 3 months [n=796,531; OR-0.85; 95% CI: 0.73-0.98]; \pm 4 months [n=1,066,872; OR-0.84; 95% CI: 0.73-0.97]. No significant change in preterm birth was observed for measures implemented on March 15 and 23.
- Effect modification and sensitivity analyses were performed only for the March 9 COVID-19 mitigation measures and only for the overall incidence of preterm birth. Although the reductions in preterm birth predominantly occurred in neighborhoods of high socioeconomic status (SES), effect modification by SES was not statistically significant.
- These results confirm evidence from earlier studies indicated **that substantial reductions in preterm births occurred following the national introduction of COVID-19 mitigation measures.** International collaborative efforts are needed to gather evidence from across the globe to further substantiate these findings and to study the underlying mechanisms.





PUBLIC HEALTH RESPONSE

Article 2

Unnecessary Obstacles to COVID-19 Mass Testing

Published

October 16, 2020 [The Lancet](#)

- In the United Kingdom (UK), it is uncertain if an effective COVID-19 vaccine will be available within a year. The alternate way to restore the normal life that COVID-19 has overturned for many people is whole population testing about once per week with integrated contact tracing. The best and inexpensive tests for rapid roll out might be nonproprietary PCR and loop-mediated isothermal amplification (LAMP) protocols. The UK government has decided to provide the first generation in house assays for public health laboratories as an interim measure and gradual migration to a commercial alternative.
- Government needs to reconsider the commitment to unspecified commercial contracts that cannot provide 10 million tests/day needed for weekly testing. Rapid tests although essential in airports and other public places are not suitable for weekly whole population testing. Self-collected samples analyzed in a laboratory can provide reliable, same-day online results, trigger household isolation, and contact tracing.
- RT-PCR and RT-LAMP can be almost as sensitive as quantitative PCR, and false positives can be eliminated by a confirmatory test. Cost-benefit evaluation of both tests on self-taken saliva samples compared with rapid point of care (POC) nasal swab tests can be carried out during roll out of organized population screening that should expand as rapidly as the supply of kits, equipment, and reagents permits. As population screening expands, the ongoing comparison of RT-PCR and RT-LAMP against commercial alternatives will identify the best screening tests.
- University and independent labs can contribute to the roll out and evaluation of screening in their city, amplifying the capacity of the lighthouse labs while local RT-LAMP testing facilities are being established. They can provide expertise, trained volunteers as well as extra PCR machines.





Article 3

COVID-19 Recovery: Potential Treatments for Post-Intensive Care Syndrome

Published

October 12, 2020 [The Lancet](#)

- In this article, the authors recommended unifying post-COVID-19 research aims with those of post-intensive care syndrome (PICS) research and propose a new approach to its management by repurposing drugs that are approved, inexpensive, and safe.

Panel: Considerations for research

Post-intensive care syndrome (PICS) often occurs after prolonged critical illnesses, such as COVID-19-associated acute respiratory distress syndrome, and involves persistent inflammation, immunosuppression, and catabolism.

Substantial cardiovascular morbidity and mortality accompany PICS, even in young, fit populations without traditional cardiovascular risk factors.

The harms of potent anti-inflammatory drugs that are used to counter chronic cardiovascular disease and fibrosis are unquantified in PICS; further data could show whether these therapies offer some benefit.

Low-risk cardiometabolic and antithrombotic drugs might be beneficial and large international, multicentre trials are needed to formally test their efficacy.

Avoiding polypharmacy while prognostically enriching the trial population (and so increasing the study's signal to noise ratio) could be done through the use of clinical characteristics or cardiovascular and immune biomarkers to select patients more appropriate for specific trials.

Study designs should involve optimising discharge therapy before patients start any new trial drug and account for the fact that many survivors of critical illness already take one or more of the drugs of interest.

Involving individuals with PICS to help guide research priorities is crucially important to ensure that research remains patient-centred.





Article 4

Published

Taking Pandemic Sequelae Seriously: from the Russian Influenza to COVID-19 Long-Haulers

October 12, 2020 [The Lancet](#)

- During COVID-19 pandemic, a comprehensive, persistent, and new category of patients are emerging known as COVID-19 long-haulers. These patients do not require critical care; however, the chief complaint included fatigue, hallucinations, brain fog, delirium, memory loss, tachycardia, numbness and tingling, and shortness of breath. Unfortunately, many long-haulers report having their experience of physiological suffering disbelieved or dismissed by the physicians.
- Regarding Russian influenza, when veteran physicians recalled the diverse forms, a standard classification was found in the medical dictionary (1889) that highlighted the pulmonary and gastric forms of the disease. Therefore, nervous symptoms of the Influenza came as a surprise to many physicians and discussion of typical cases became a hot topic.
- Elements of the response to COVID-19 long-haulers contrast with the sympathy shown for Russian influenza convalescents (1890) and engagement of a wide range of physicians with the nervous symptoms of Influenza. This engagement can be explained by the fact that during 1890, differentiation between medical specialities, and family and hospital practice were flexible than they are today. An ear, nose, and throat physician could pronounce on nervous complaints that would now be considered the area of neuropsychiatrists.
- Russian influenza and the historical accounts of the sequelae even as COVID-19 long-haulers look to digital, patient-centred, and activist forums for support and validation in the present. Post COVID-19 rehabilitation and outpatient care is being rolled out in many countries. World Health Organization (WHO) has been pooling data about the long-term effects of COVID-19 and sharing advice on rehabilitation.



THANK YOU

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