

SCIENTIFIC RESEARCH MONITORING ON COVID-19

20 OCTOBER 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 532)

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

Timing, Complications, and Safety of Tracheotomy in Critically Ill Patients with COVID-19

Public Health Response

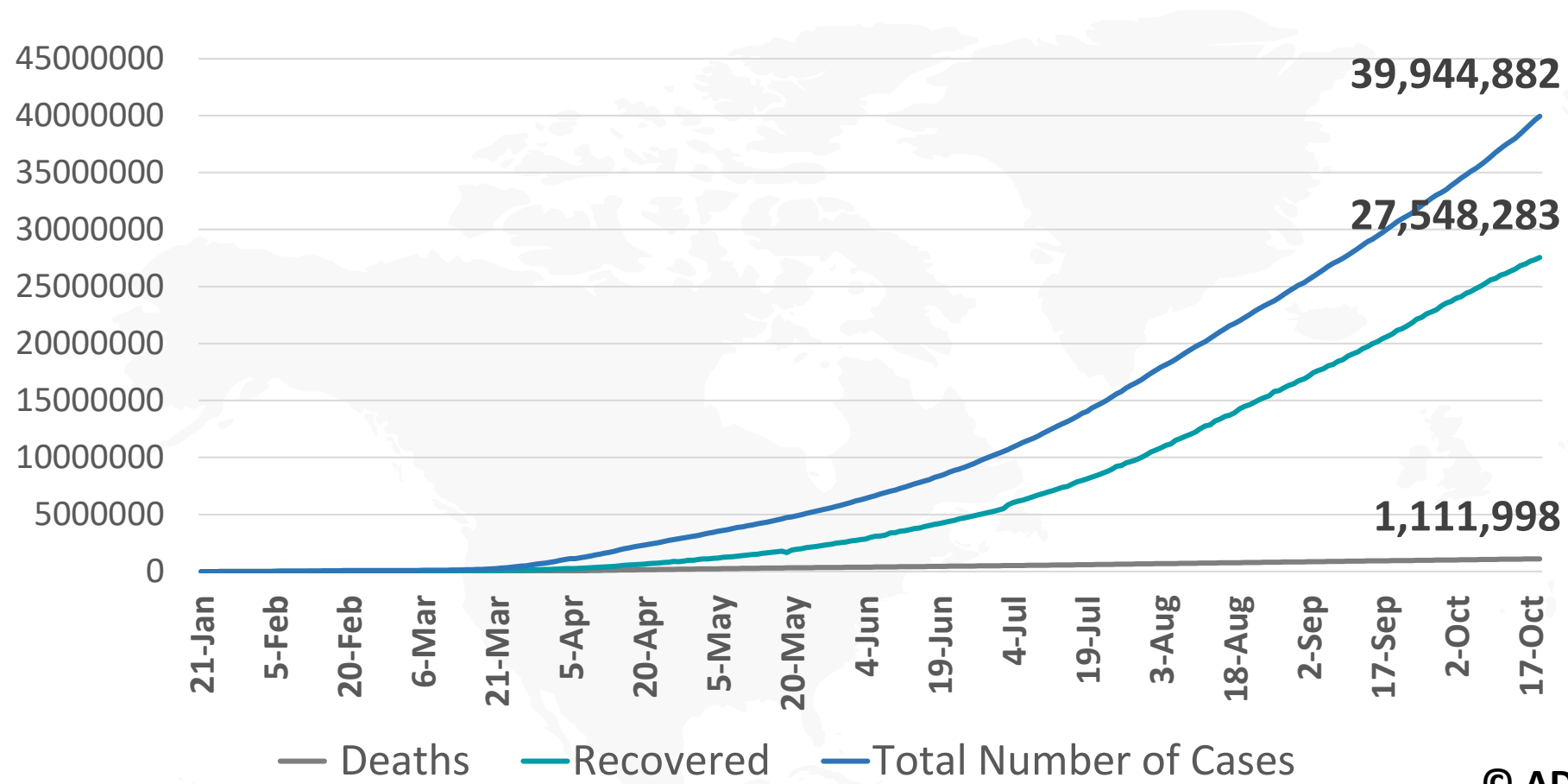
Answering Key Questions About COVID-19 Vaccines

Vaccine

Post approval Vaccine Safety Surveillance for COVID-19 Vaccines in the US



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)

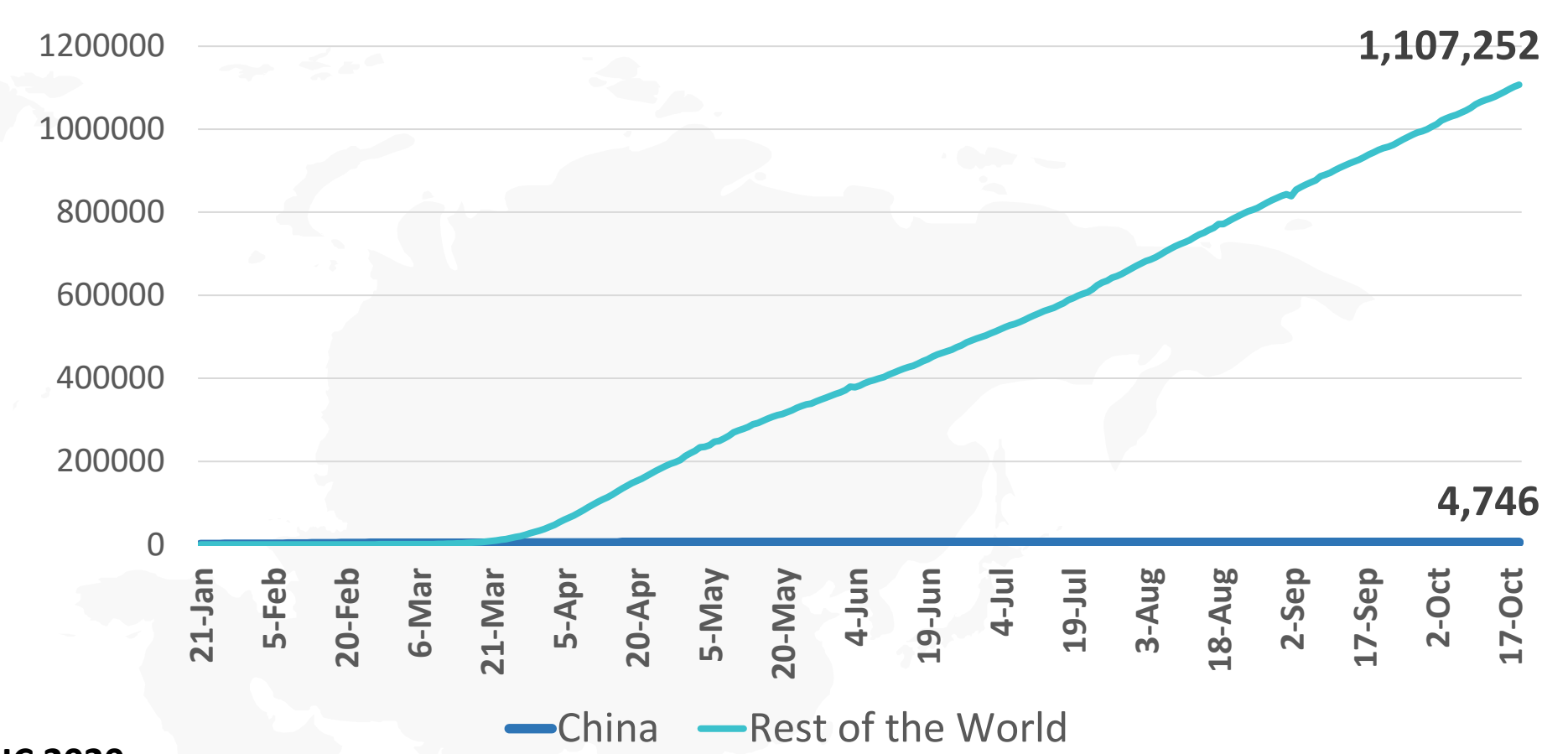


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

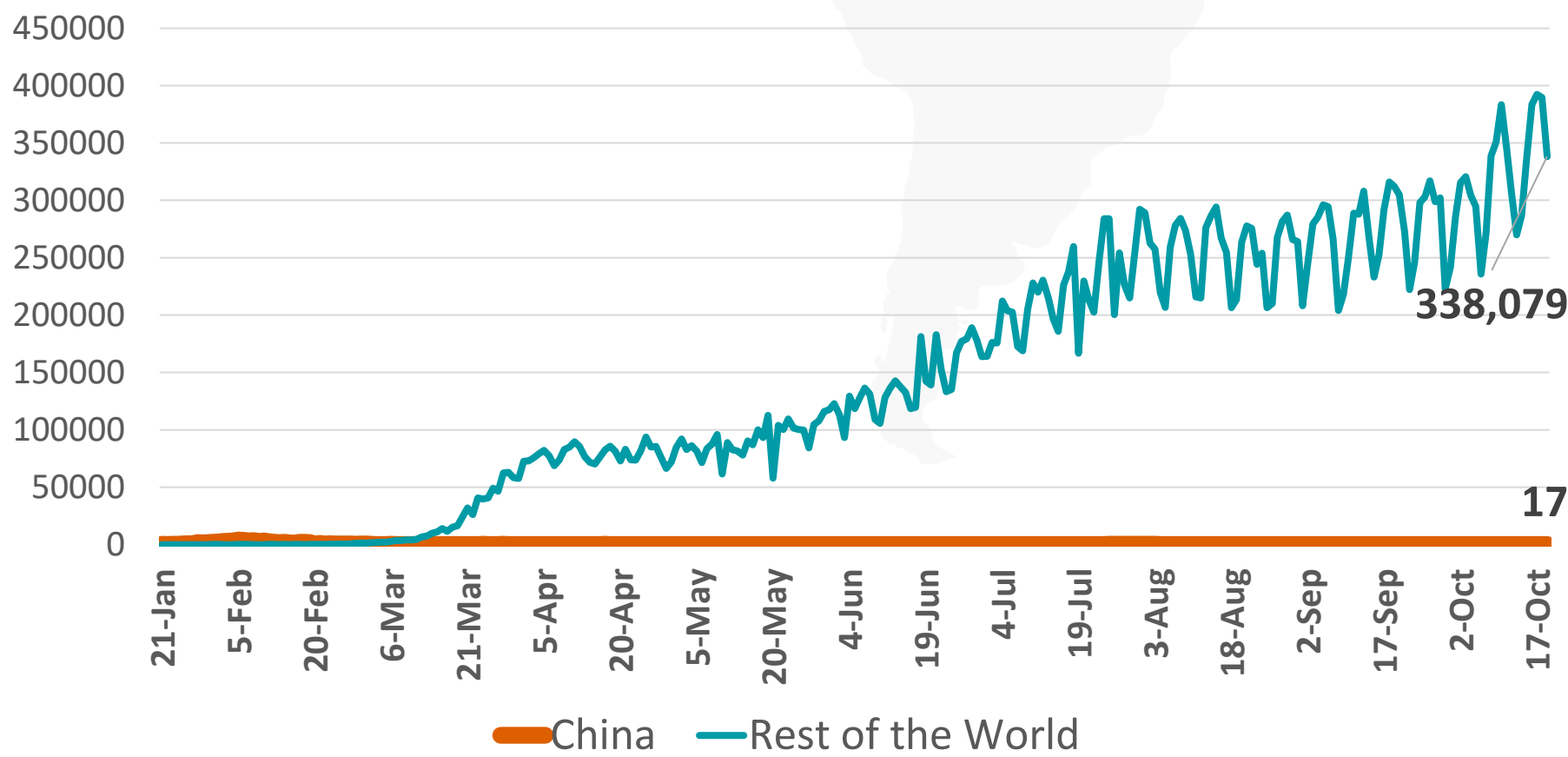


Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)

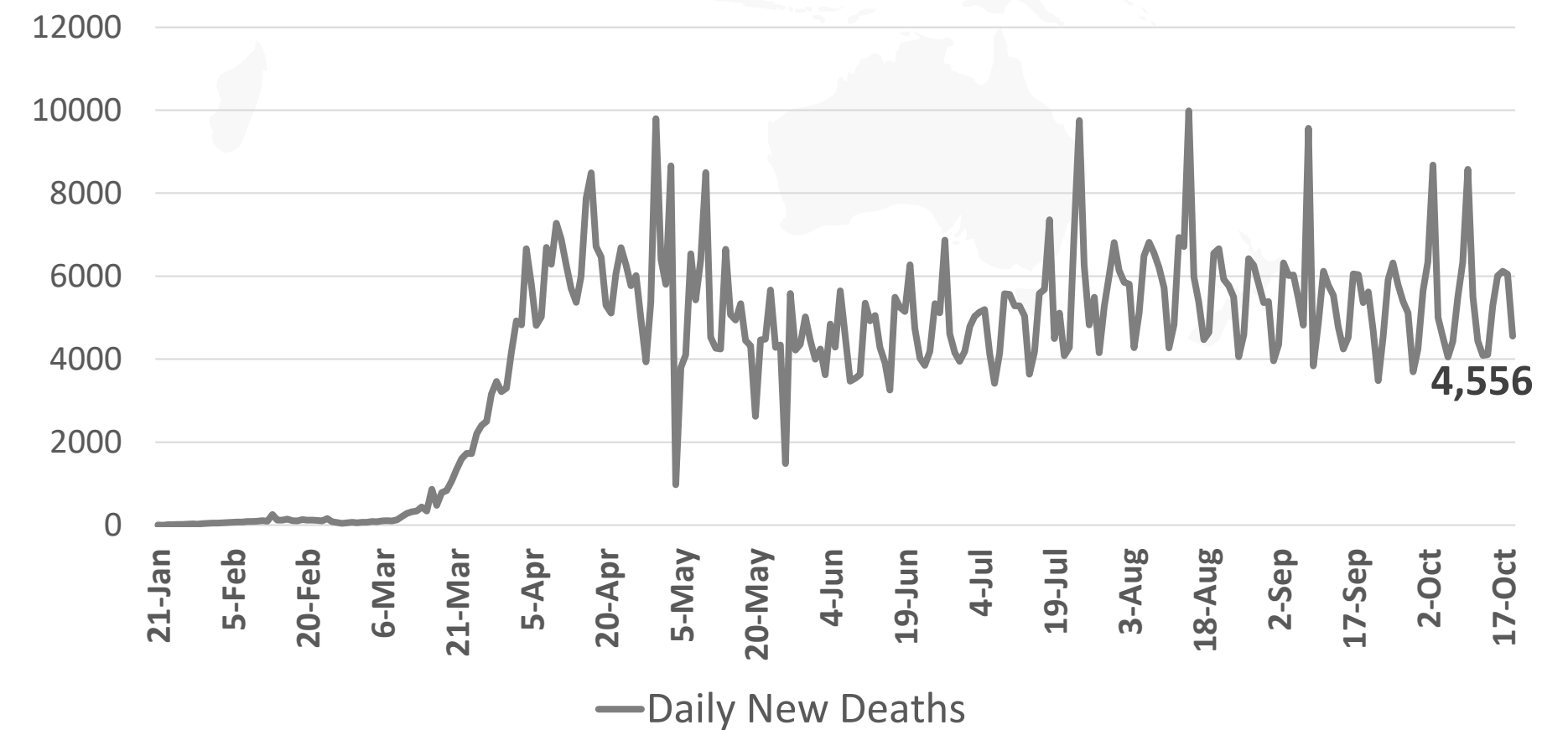
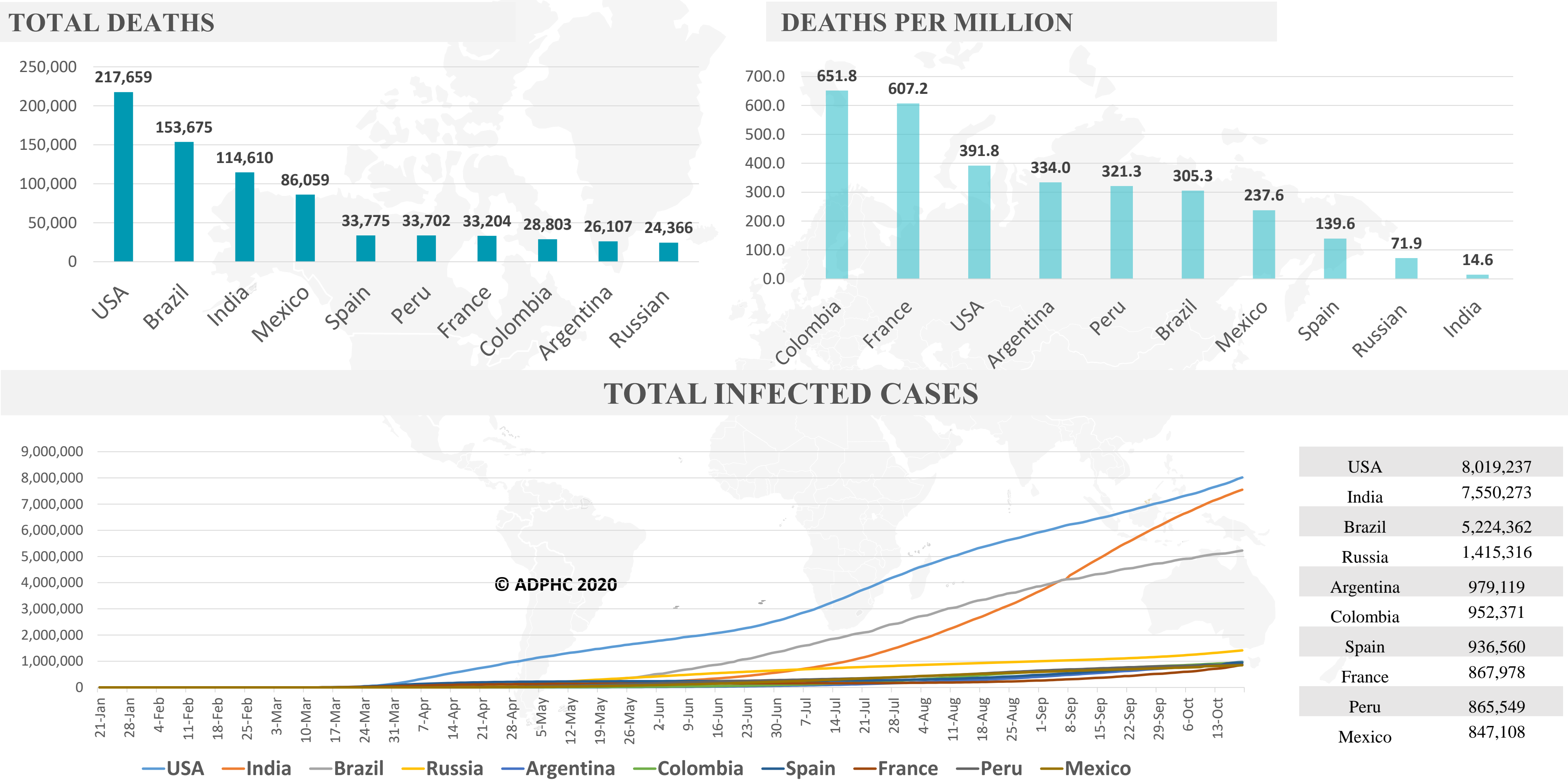
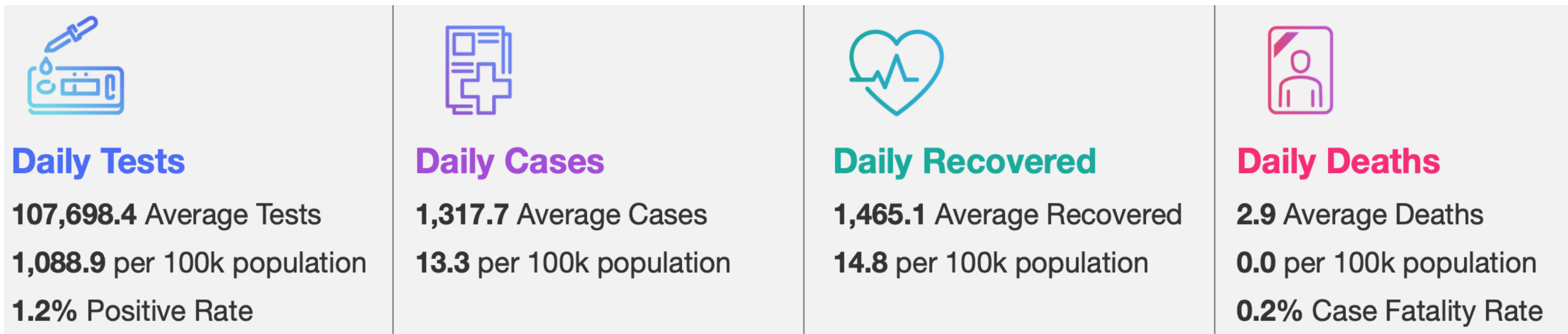


Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19



USA	8,019,237
India	7,550,273
Brazil	5,224,362
Russia	1,415,316
Argentina	979,119
Colombia	952,371
Spain	936,560
France	867,978
Peru	865,549
Mexico	847,108

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

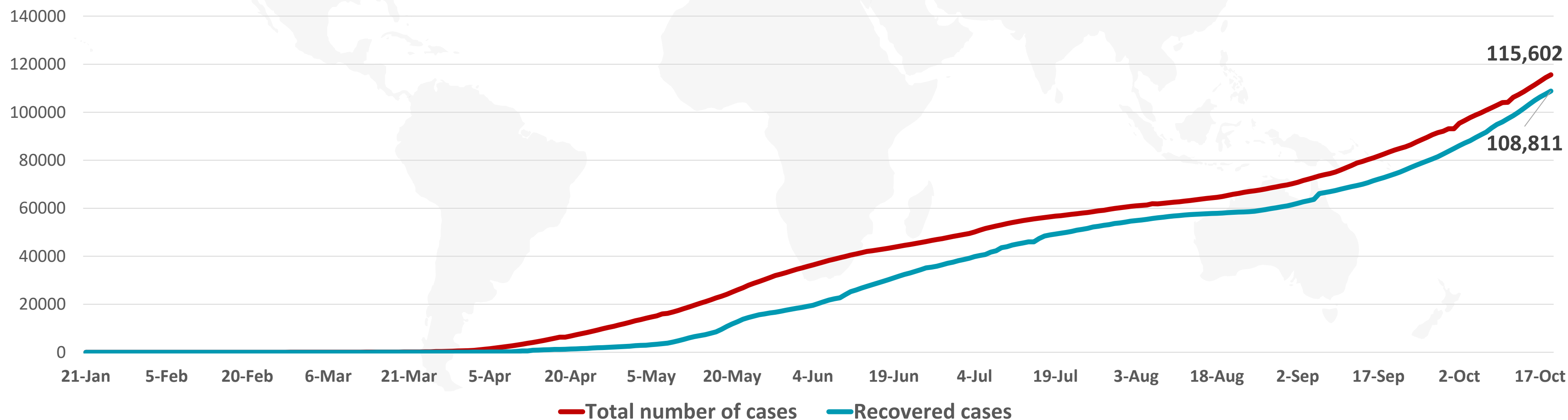
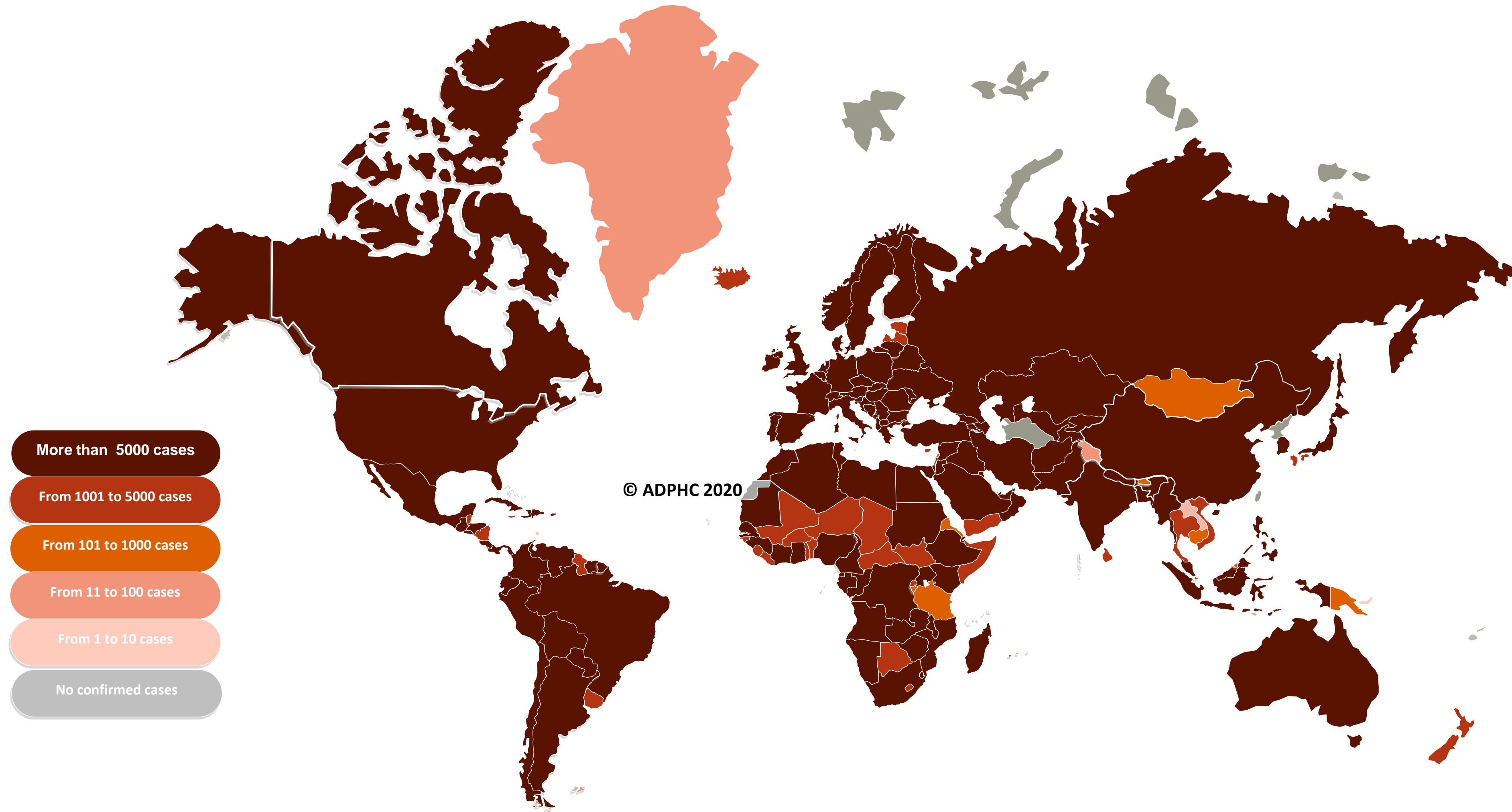


Figure 7A : Global Distribution of COVID-19 Cases



More than 5000 cases

From 1001 to 5000 cases

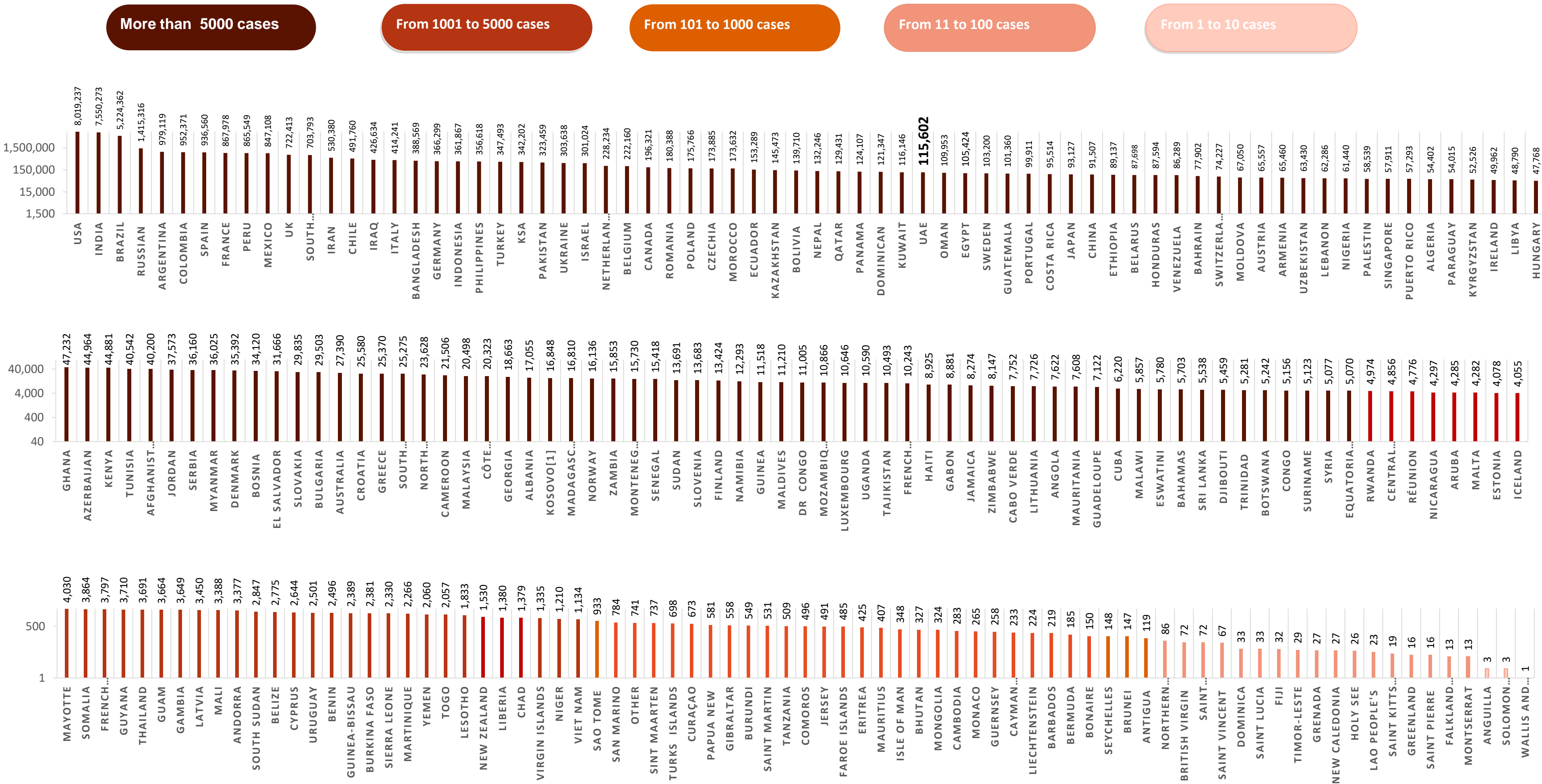
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

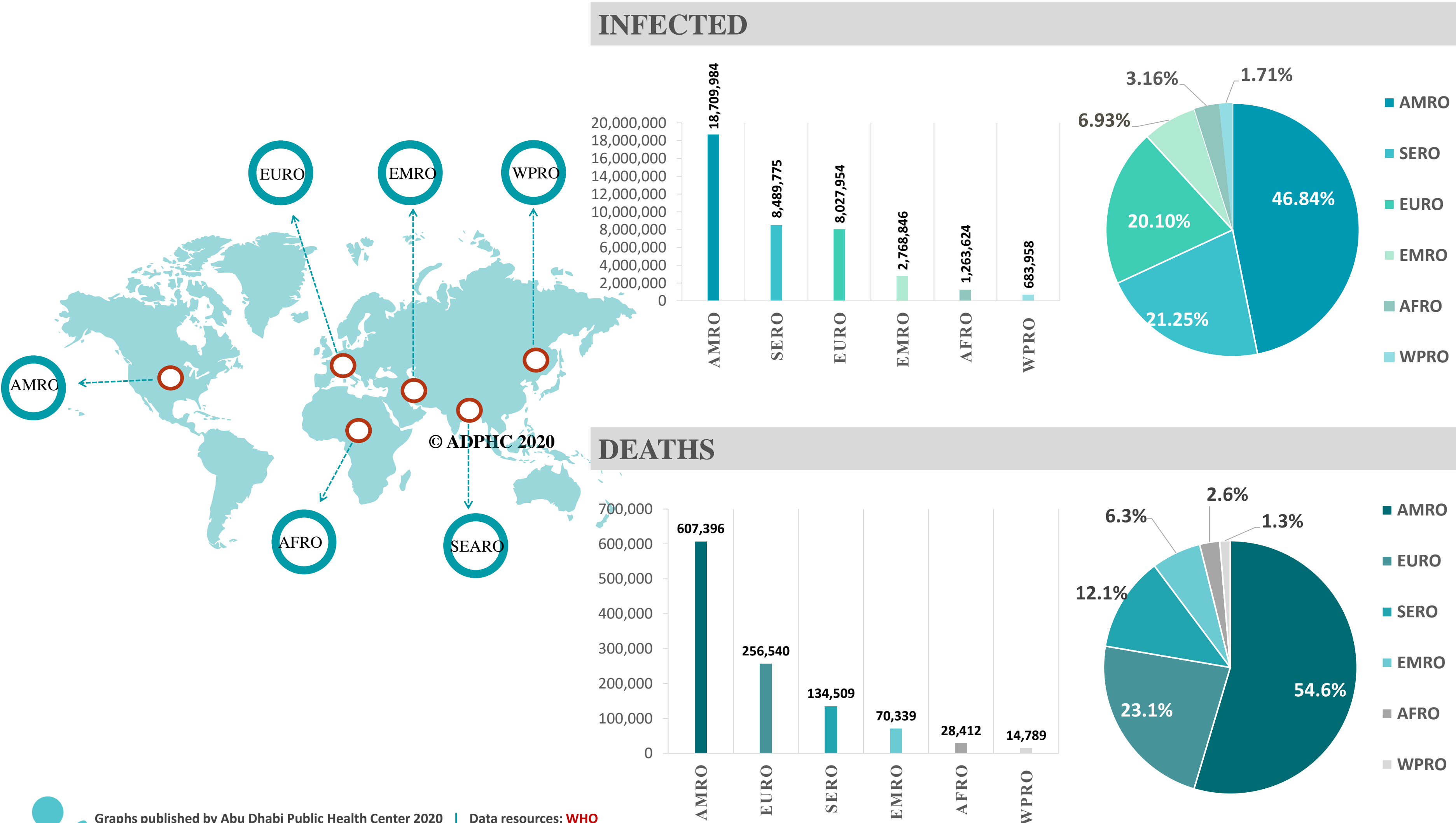
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



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



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



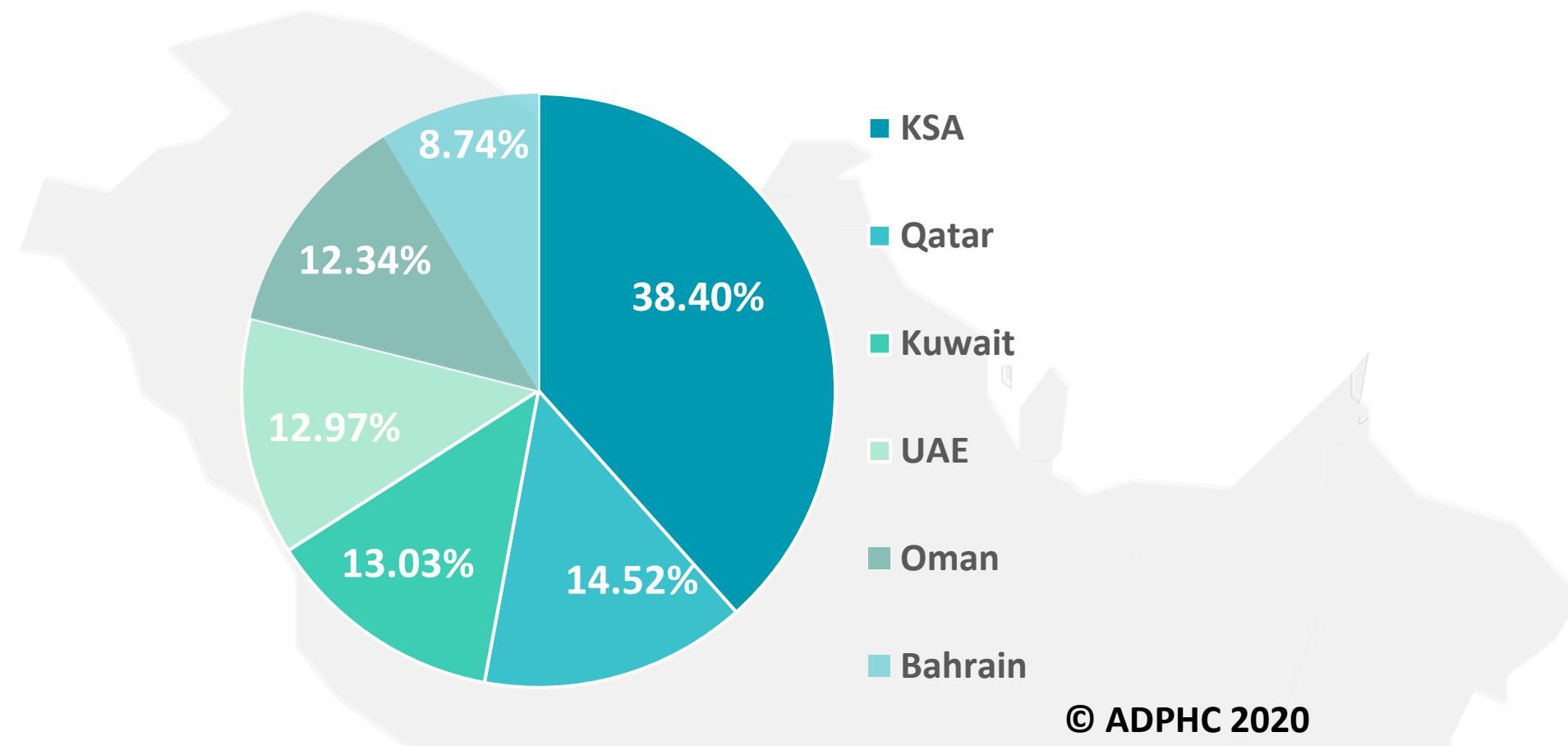
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: [WHO](#)

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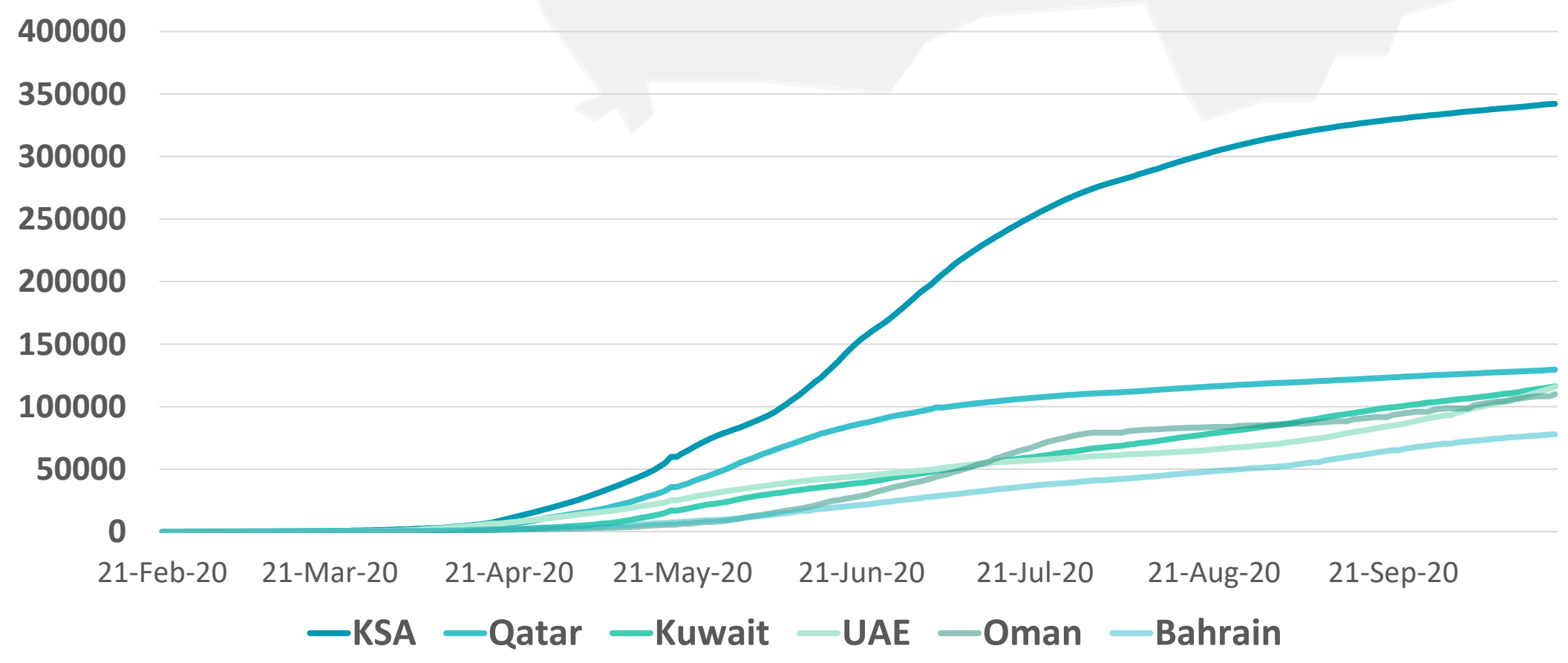
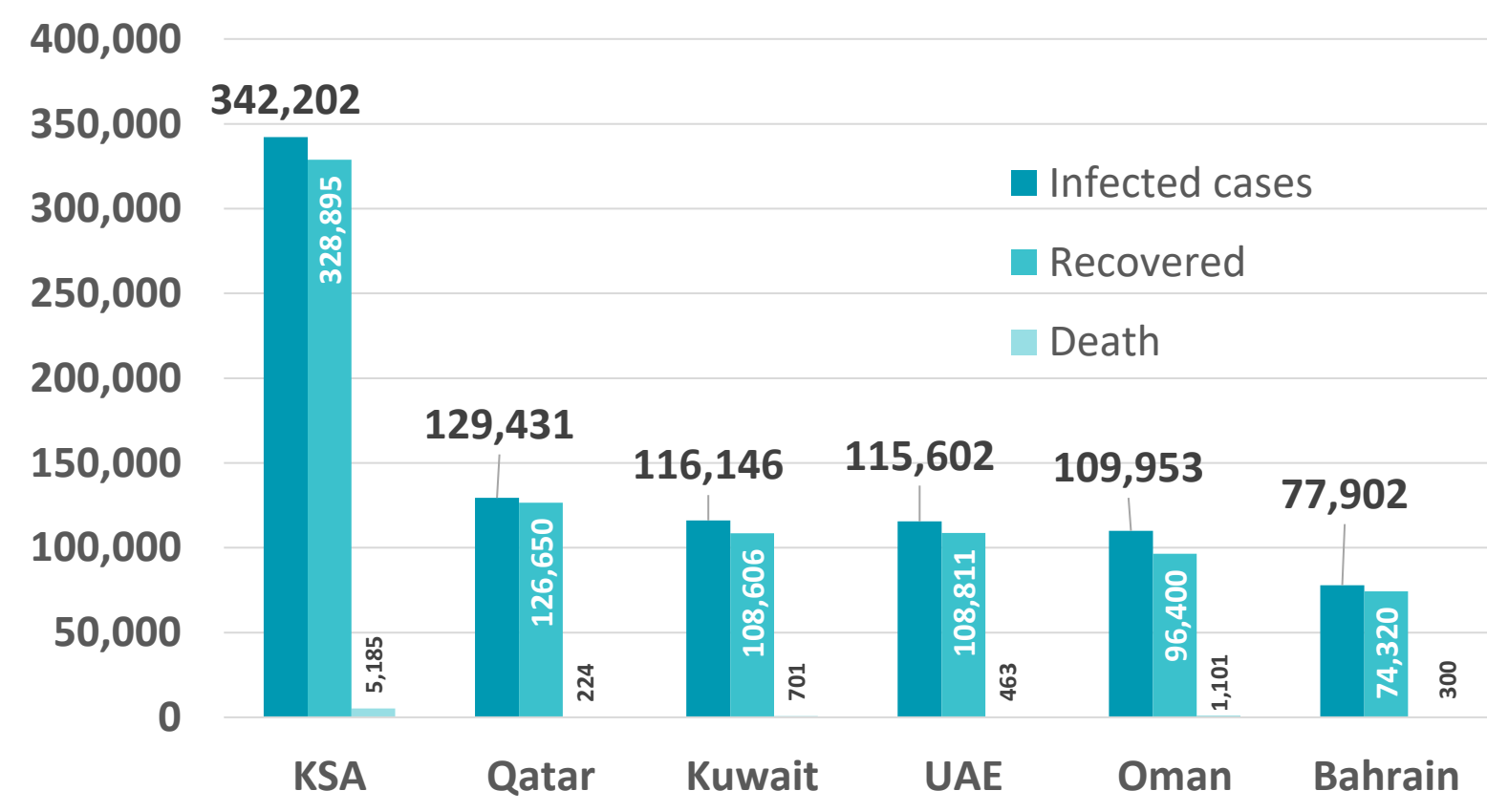
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Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

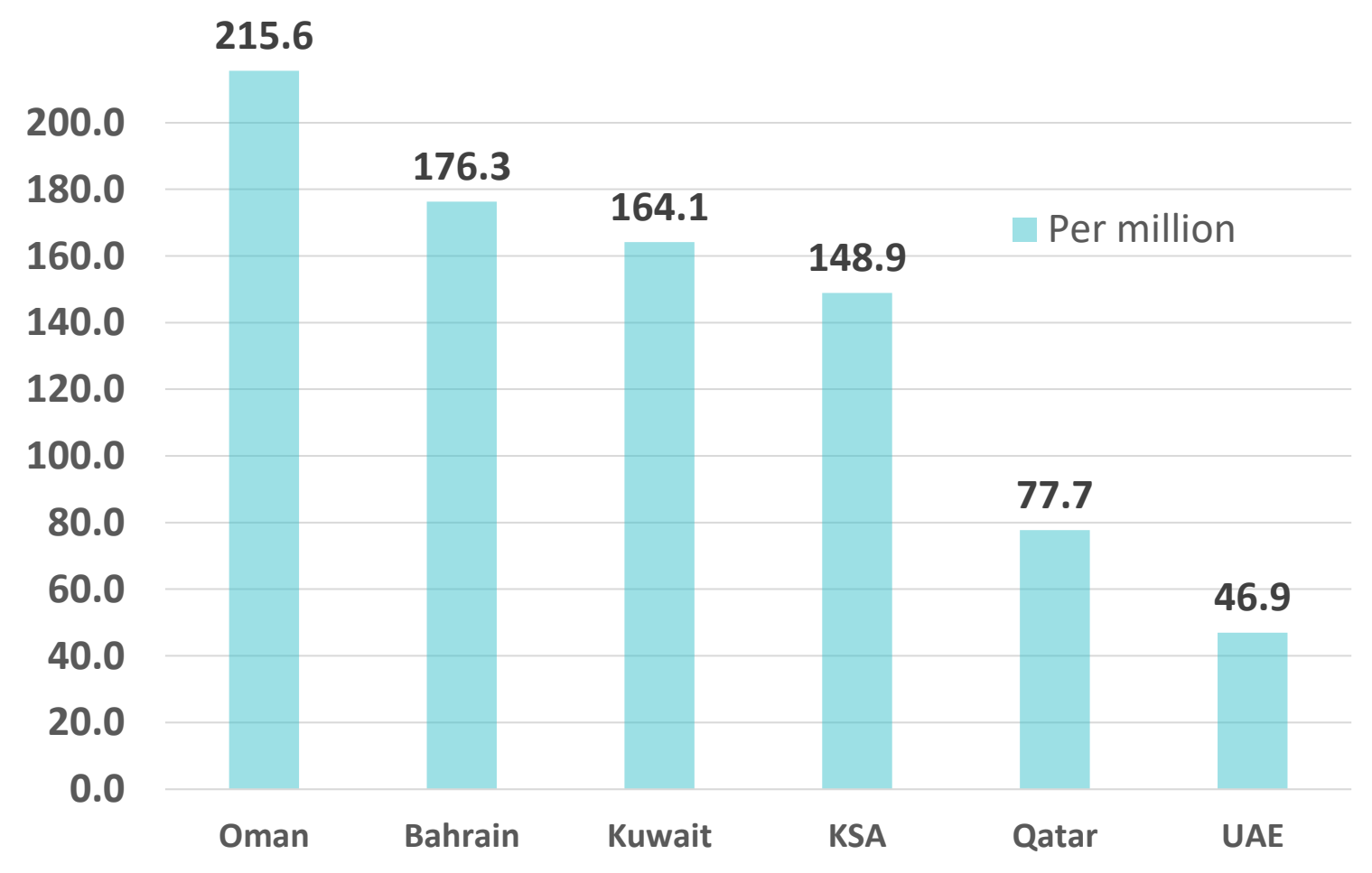
TOTAL NUMBER OF INFECTED CASES



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



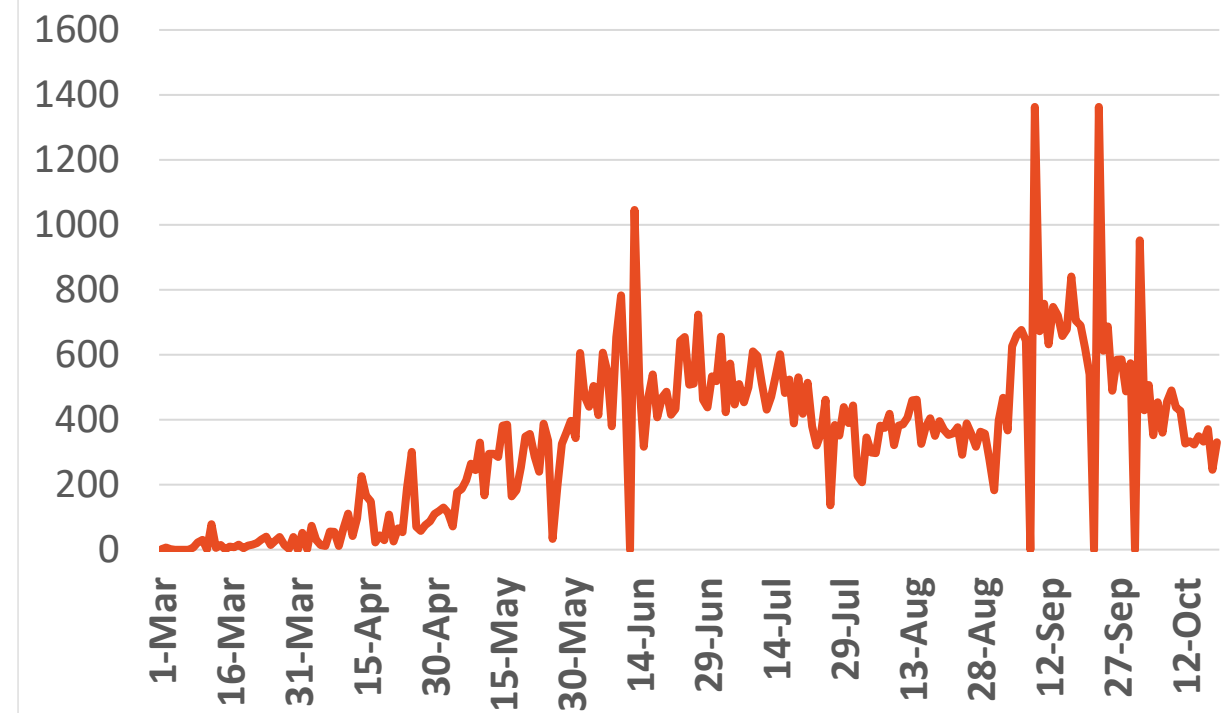
Source : National Emergency Crisis and Disaster Management Authority

KSA



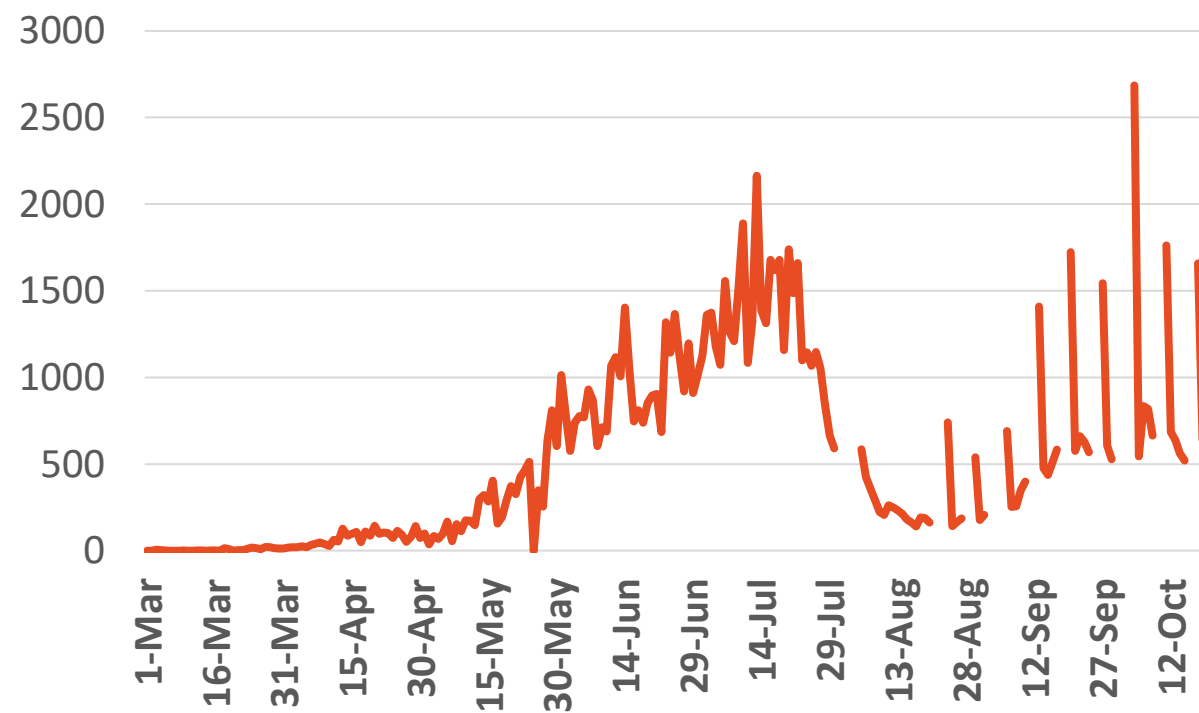
Source : KSA ministry of health

Bahrain



Source :WHO

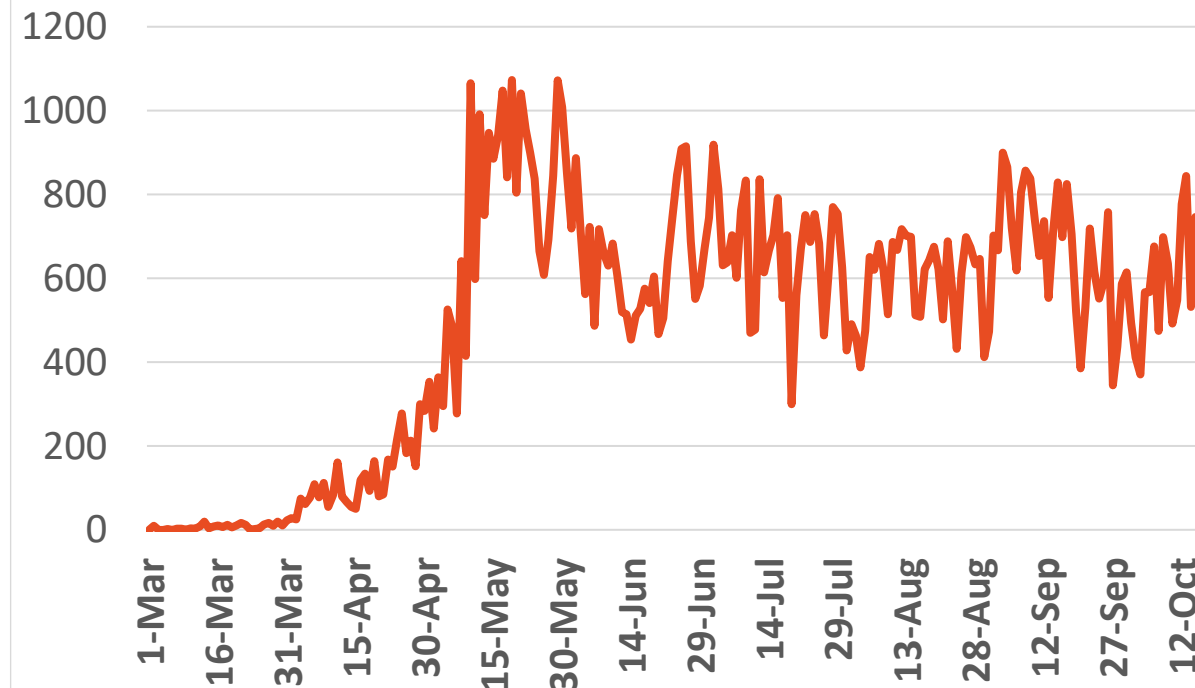
Oman



Source :Oman ministry of health

Kuwait

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Source : Kuwait ministry of health

Qatar



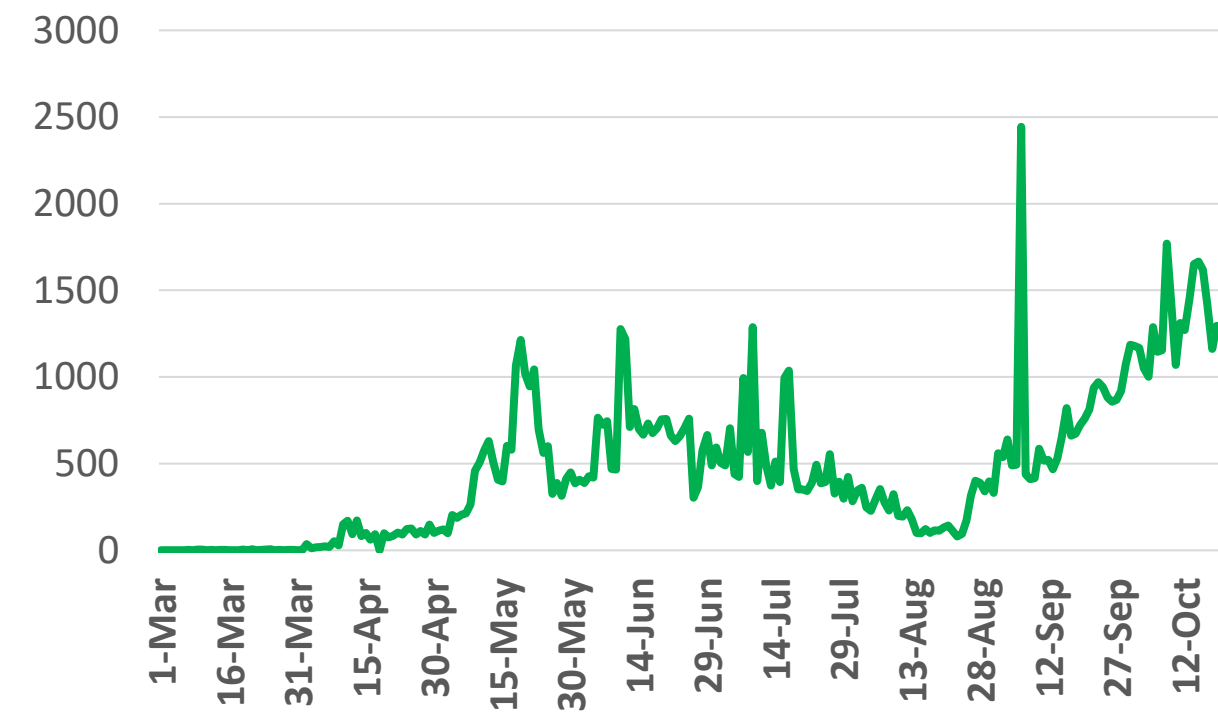
Source : Qatar ministry of health

*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 October

*No announced statistic data on weekends and official holidays.

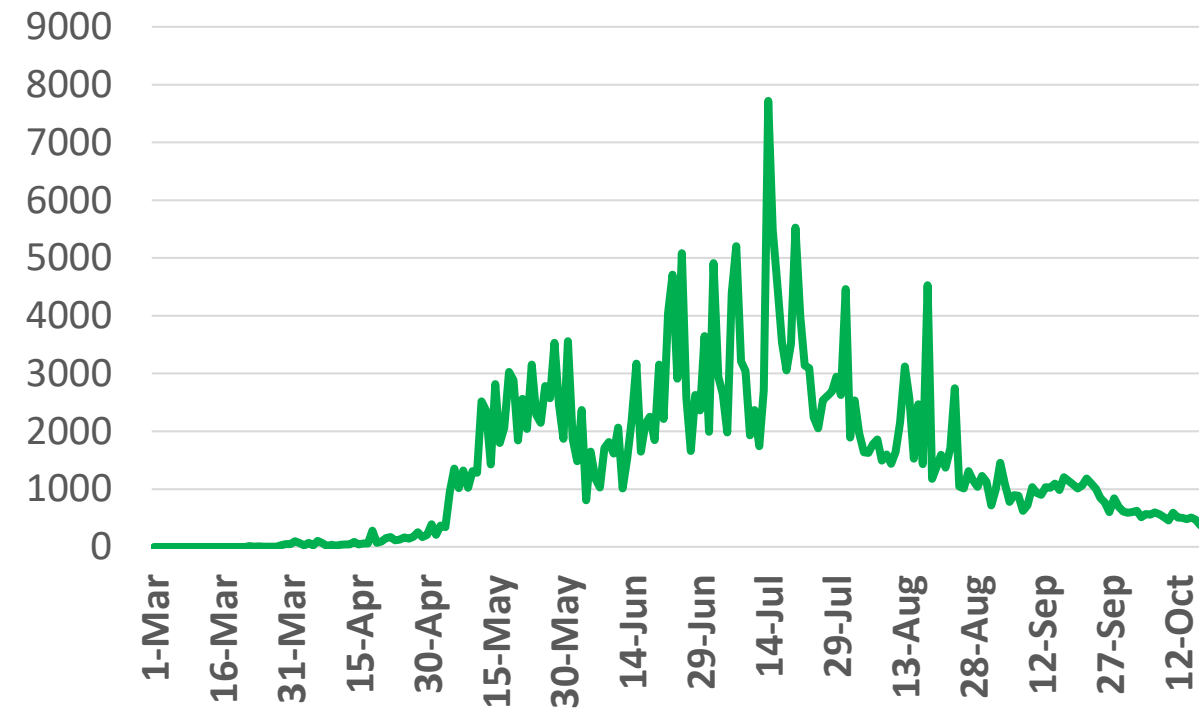
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE



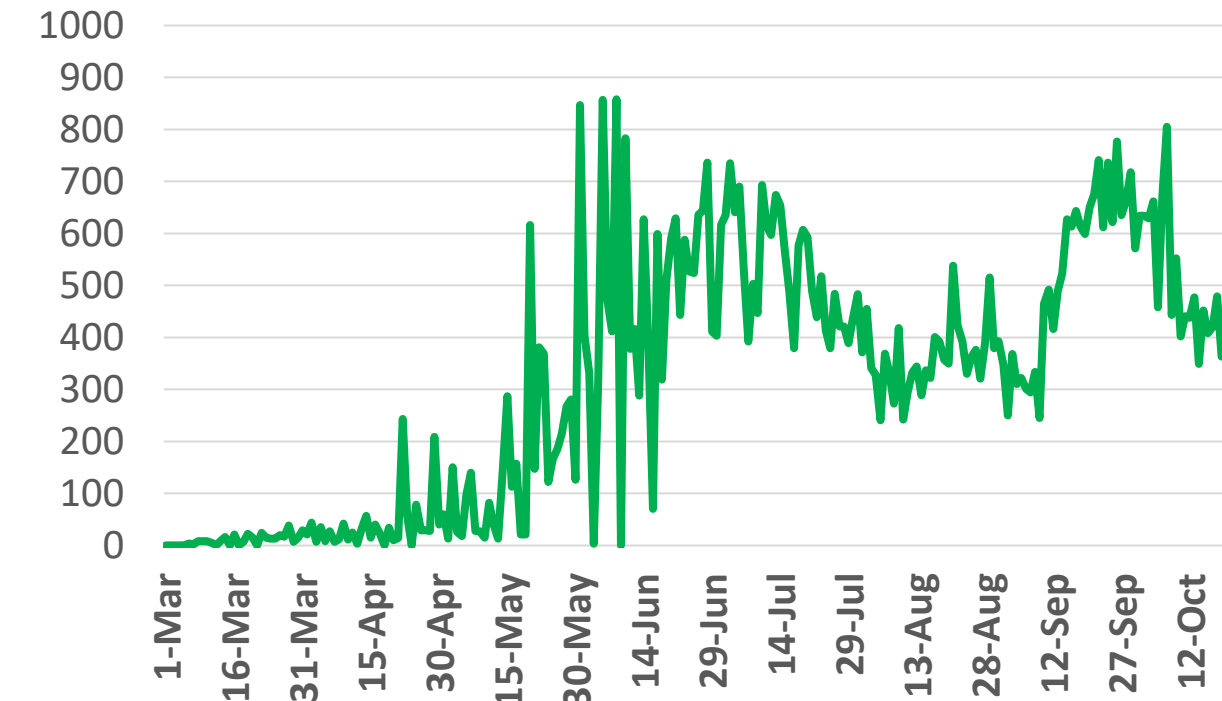
Source : National Emergency Crisis and Disaster Management Authority

KSA



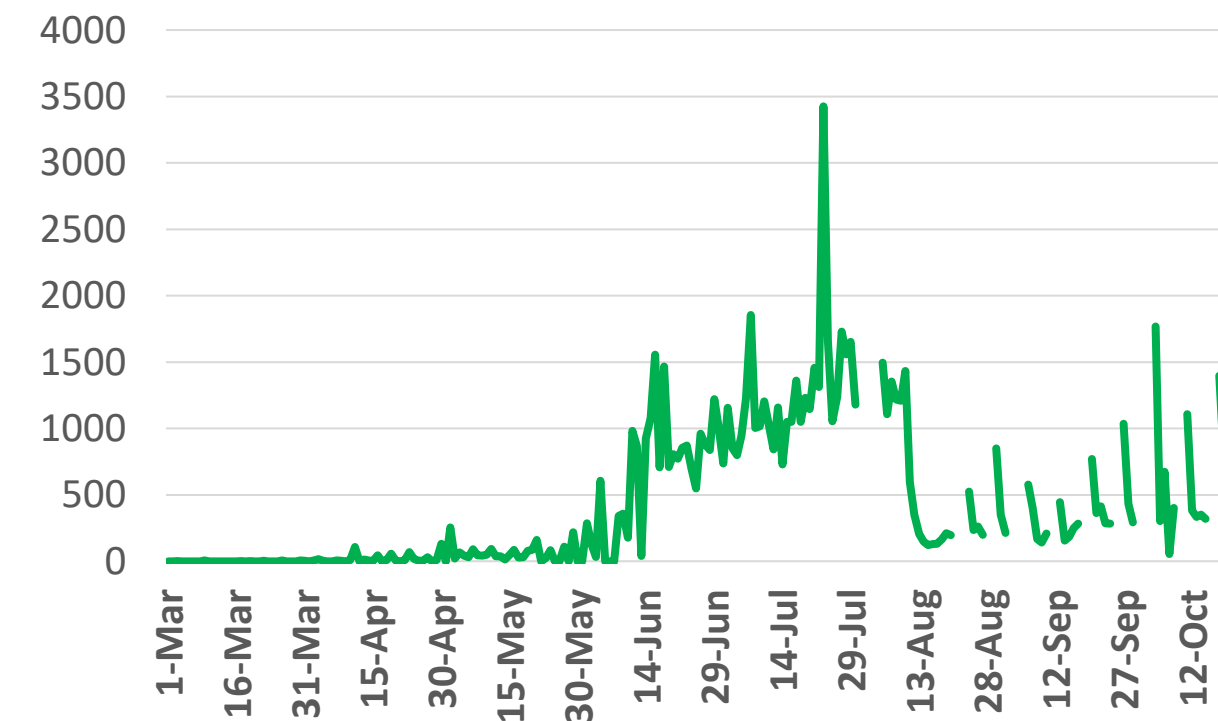
Source : KSA ministry of health

Bahrain



Source : Bahrain ministry of health

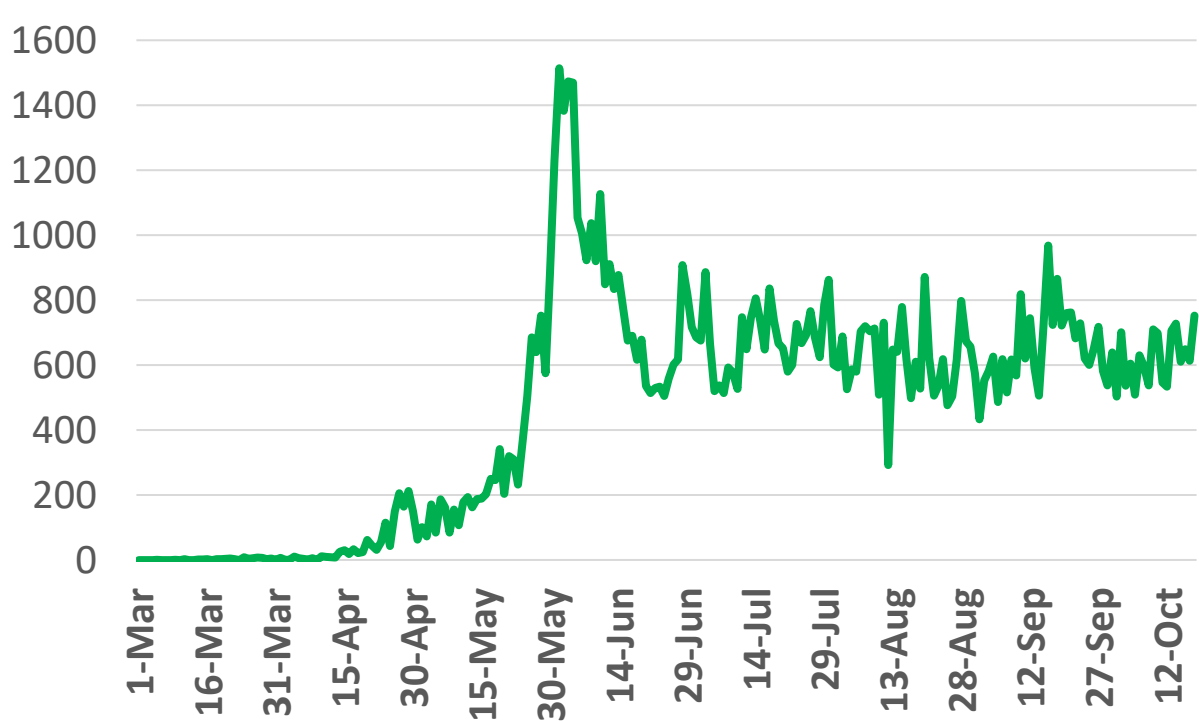
Oman



Source : Oman ministry of health

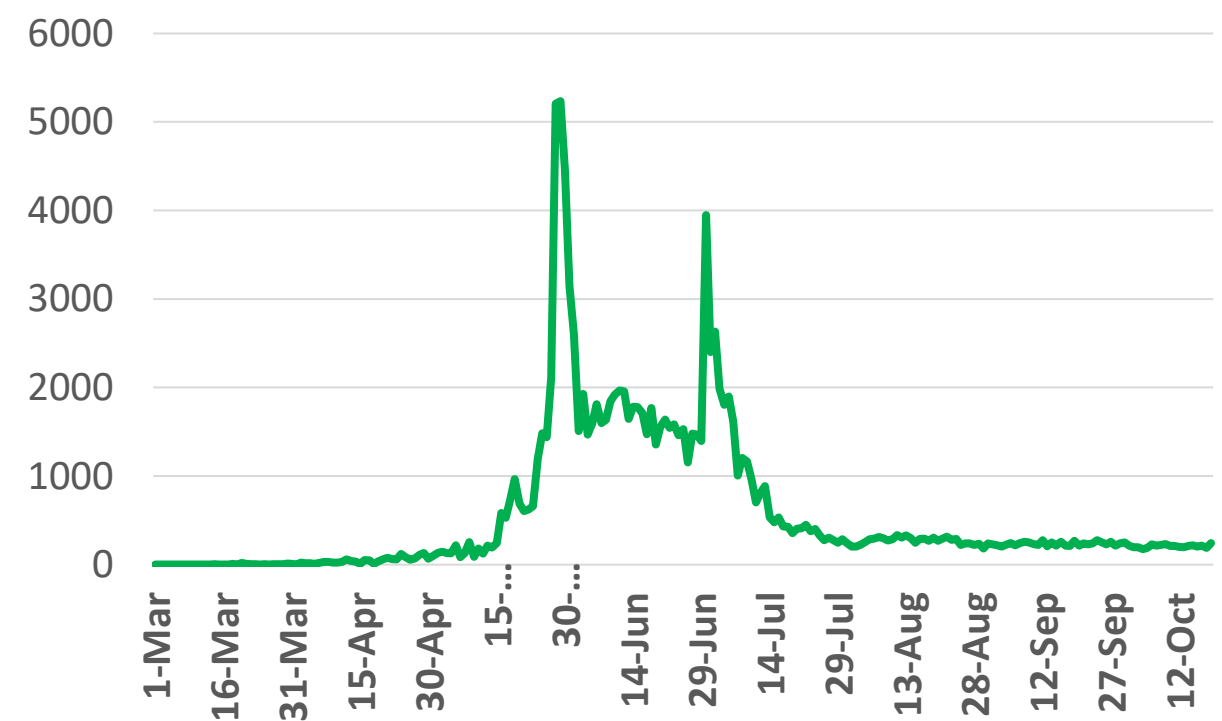
Kuwait

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Source : Kuwait ministry of health

Qatar



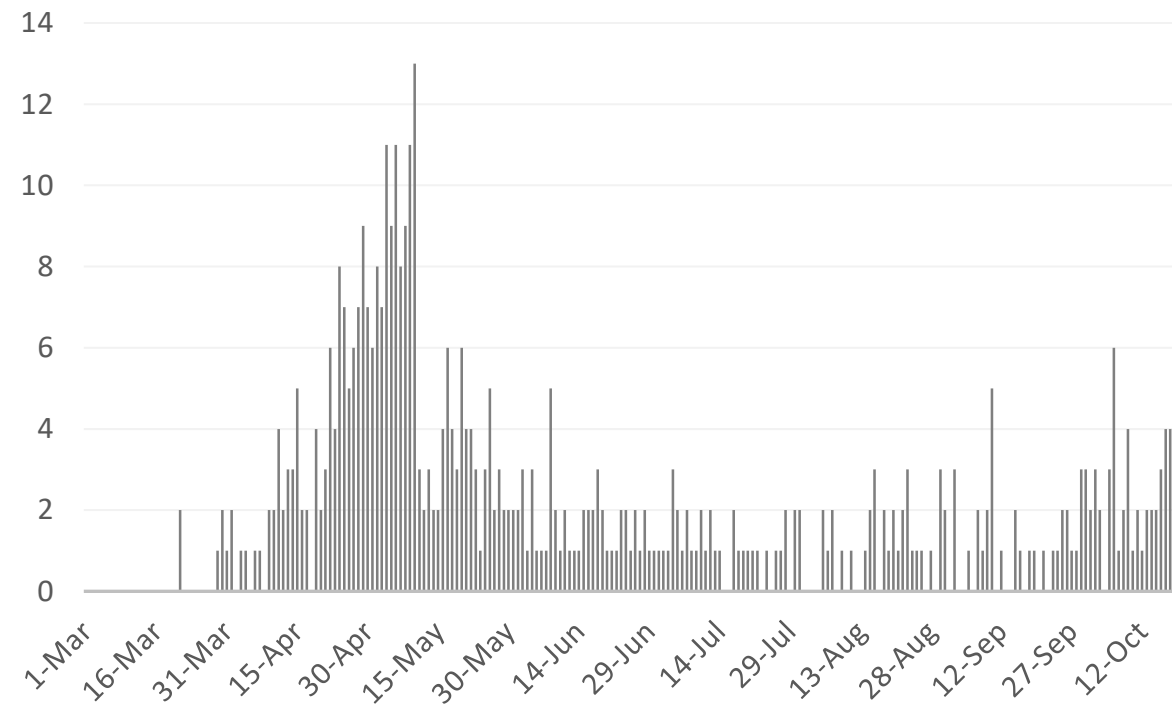
Source : Qatar ministry of health

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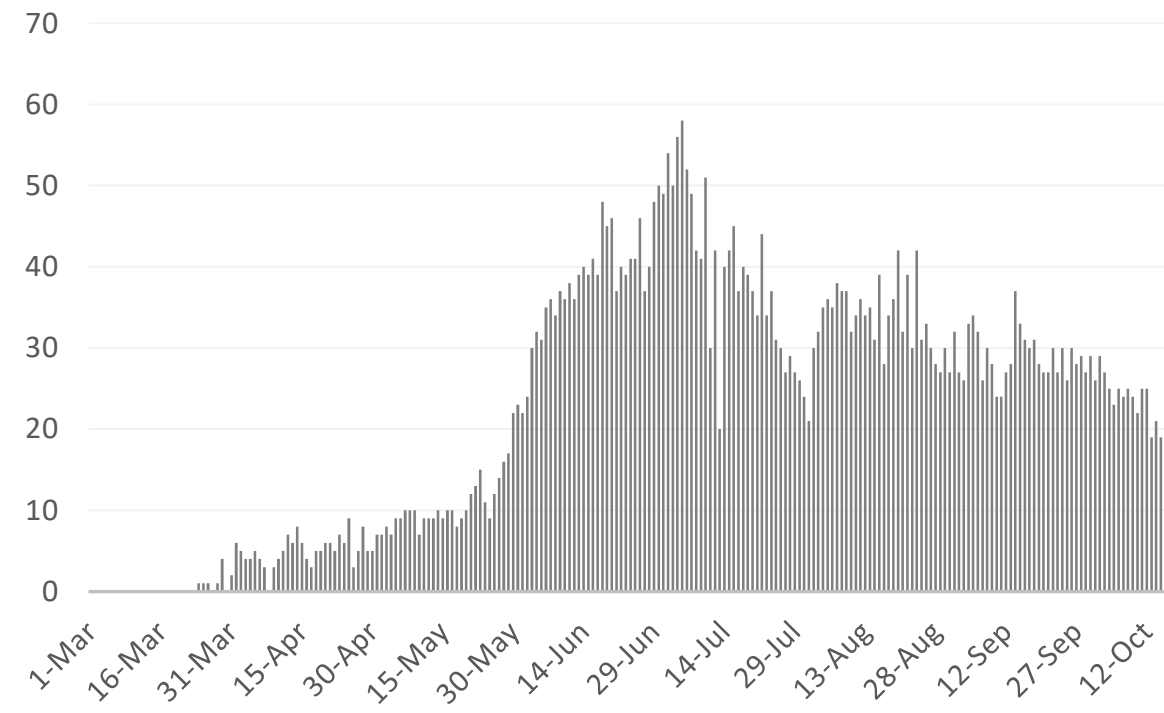
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



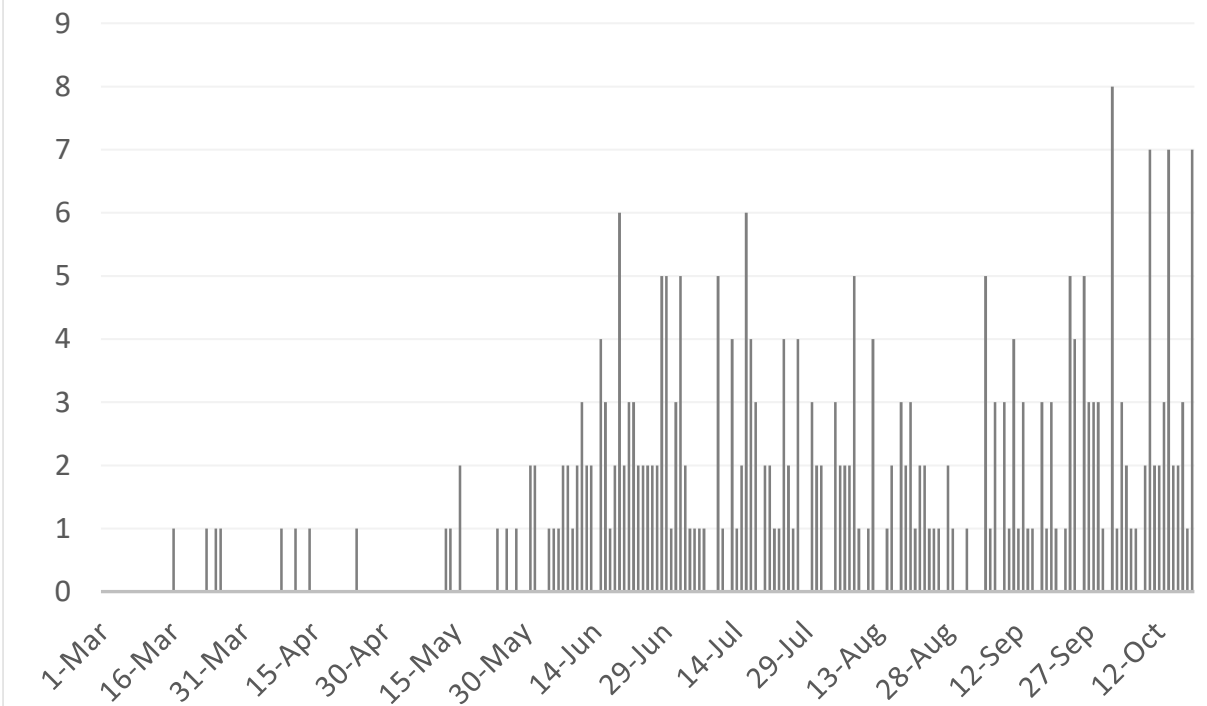
Source : National Emergency Crisis and Disaster Management Authority

KSA



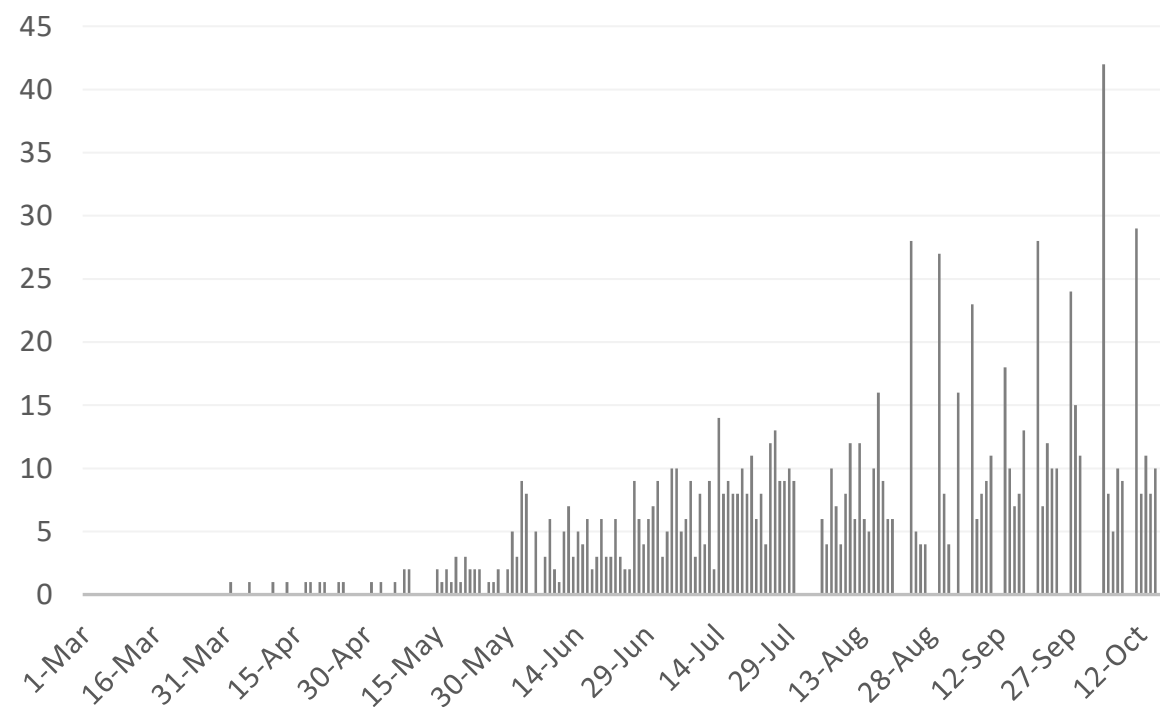
Source : KSA ministry of health

Bahrain



Source :WHO

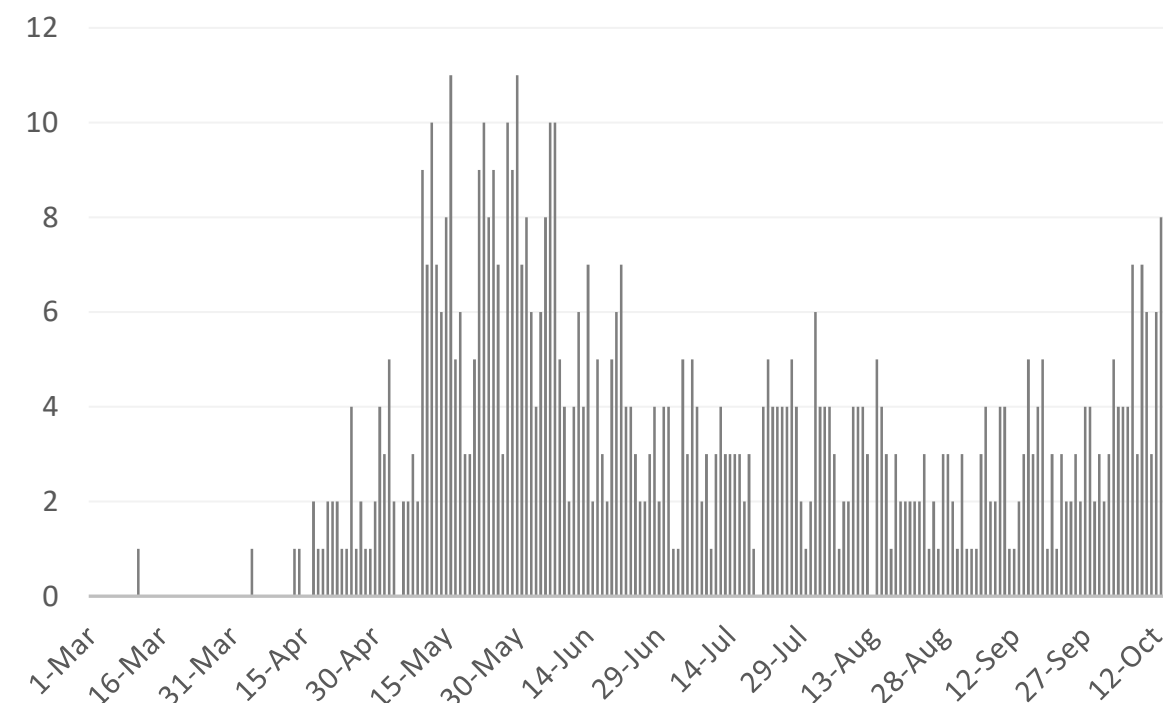
Oman



Source :Oman ministry of health

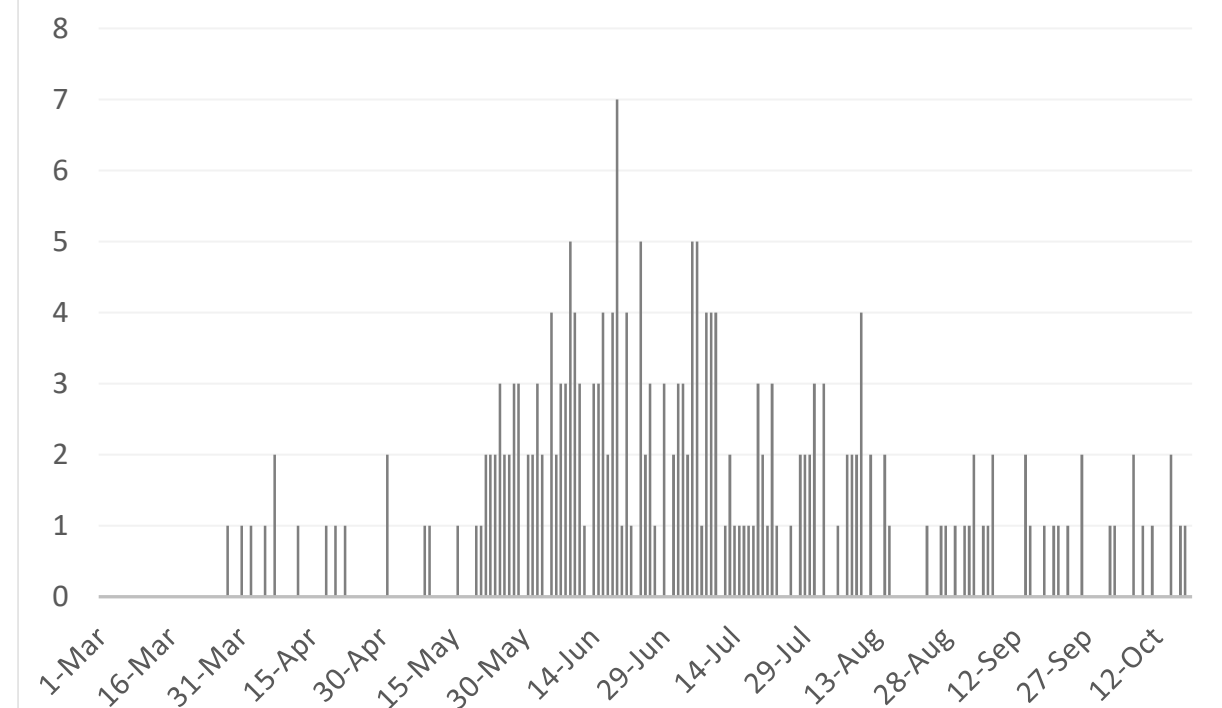
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

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Article 1

Timing, Complications, and Safety of Tracheotomy in Critically Ill Patients with COVID-19

Published

October 08, 2020 [JAMA](#)

- In Spain, a prospective cohort study (between March 16 and April 10, 2020), was conducted with patients (n=50) diagnosed with COVID-19 admitted to the intensive care unit (ICU) that required tracheotomy. Demographic and clinical characteristics, comorbidities, and laboratory variables were recorded. Tracheotomy was carried out, following recommended criteria for use of personal protective equipment (PPE). Infections in the surgeons were monitored weekly by RT-PCR of nasopharyngeal swab samples.
- The median length of intubation at the time of tracheotomy was 9 days. Early and late tracheotomy, was carried out for 32 (64%) and 18 (36%) patients, respectively. Forty-six (92%) tracheotomies were carried out with sub thyroid access using a combination of electrocautery, cold instruments, and the tracheal protocol was adequately achieved for 40 (80%) patients. Postoperative complications included minor diffuse bleeding in 6 (12%) patients that were resolved with conservative management.
- **The successful weaning rate was higher in the early tracheotomy as compared with the late tracheotomy group; however, the difference was not statistically significant** [adjusted HR (aHR) - 2.55; 95% CI: 0.96 - 6.75]. Mean (SD) time of invasive mechanical ventilation (IMV) was shorter in the early tracheotomy as compared with late tracheotomy group [18 (5.4) vs. 22.3 (5.7) days]. Adequate PPE was worn, and no infection was identified, in surgeons 4 weeks after the last tracheotomy.
- These findings suggest that with the use of a standardized protocol to minimize risk of spread of COVID-19, early bedside surgical tracheotomy may be a safe strategy for reducing time of Invasive Mechanical Ventilation, sparing ICU beds during this pandemic.



Answering Key Questions About COVID-19 Vaccines

Published

October 16, 2020 [JAMA](#)

- In the United States (US), Food and Drug Administration (FDA) guidance set as an expectation for licensure during COVID-19 pandemic that a vaccine would prevent disease in at least 50% of people who are vaccinated. FDA has a long track record of licensing vaccines that have protected people against diseases. However, the FDA could make an unapproved vaccine available through an Emergency Use Authorization (EUA). This authorization requires the FDA to determine a product may be effective, and that benefits are likely to outweigh risks.
- Different groups of people may have different responses to vaccination. It is necessary to evaluate the characteristics of people included in the trial and determine if they are similar to patients in the practice setting. Different vaccines are likely to perform and be used differently. Physicians need to be aware of any differences between vaccines, including doses as well as safety and efficacy.
- A vaccine that protects against developing the disease may not prevent transmission to others. The duration of naturally occurring immunity to COVID-19 is unknown and may disappear with time. Therefore, the likely duration of protection by new vaccines is unknown.
- It is very common that vaccination is associated with mild adverse events like soreness at the injection site, fever, fatigue, and myalgias. However, serious reactions, including unexplained neurologic or inflammatory reaction would raise issues. Comparing rates of adverse events between vaccine and placebo recipients might help to determine if a signal is vaccine-related, but for a few rare events, it may be undetermined.



Article 3

Published

October 16, 2020 [JAMA](#)

Post Approval Vaccine Safety Surveillance for COVID-19 Vaccines in the US

- In the United Kingdom (UK), people from marginalized groups (e.g. black men) are more likely to be detained than more privileged groups (e.g. white men) under Mental Health Act (1983). Legal safeguards are in place for detention in health care settings through the tribunal and appeal process in the Mental Health Act. It is unethical to detain individuals without a legal system in place. However, no similar legal or appeal system is in place for those detained under the public health measures sanctioned in response to COVID-19.
- During this pandemic, public health measures make it possible to place people at home in full detention with isolation and to place the entire communities in partial detention through the lockdown. It is crucial that proper legal safeguards are put in place to make sure such detentions are properly scrutinized. These should not be left for the government and the law enforcement agencies to exercise unchecked especially in view of their likely disproportionate impact to the marginalized groups.
- Safeguards need to be confirmed for those detained by the public health response to COVID-19. The measures that include external scrutiny from the community leaders might increase trust in the public health response and result in higher levels of compliance with the public health restrictions. Health care providers should ensure that interventions are properly balanced against people's rights to various freedoms and that proper legal safeguards are in place to prevent the exercising of unchecked power.





Continued

eTable. Safety Surveillance Systems Preparing for COVID-19 Vaccine Safety Monitoring in the US^a

Safety surveillance system	Agency	Population	Total No. of individuals, millions	Near real-time capabilities
Passive surveillance				
VAERS	CDC-FDA	All	320	Signal identification
Enhanced passive surveillance				
NHSN	CDC	Healthcare personnel in >33 000 facilities (acute care, long-term care facilities)	-	Signal identification, signal refinement
Smartphone and web-based reporting	CDC	Early vaccine recipients	-	Signal identification, signal refinement
DoD	DoD	Active duty and reserve personnel	1.5	Signal identification, signal refinement
IHS	IHS	American Indian/Alaskan Native	2.6 (574 tribes)	Signal identification, signal refinement
Active surveillance				
VSD	CDC	Insured children and adults	11.3	Signal identification, signal refinement, signal evaluation
VA	VA	Veterans, older adults	6.4	Signal identification, signal refinement, signal evaluation
CMS	FDA-CMS	Adults ≥65 y	50-55	Signal identification, signal refinement, signal evaluation
Clinical consultation				
CISA	CDC	All	-	NA
DoD	DoD	Active duty and reserve personnel	-	NA



THANK YOU

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