

# SCIENTIFIC RESEARCH MONITORING ON COVID-19

10 OCTOBER 2020

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# SCIENTIFIC RESEARCH MONITORING ON COVID-19

## (ISSUE 251)

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



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**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](mailto:PHP@adphc.gov.ae)

# RESEARCH UPDATES

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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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## Diagnosis

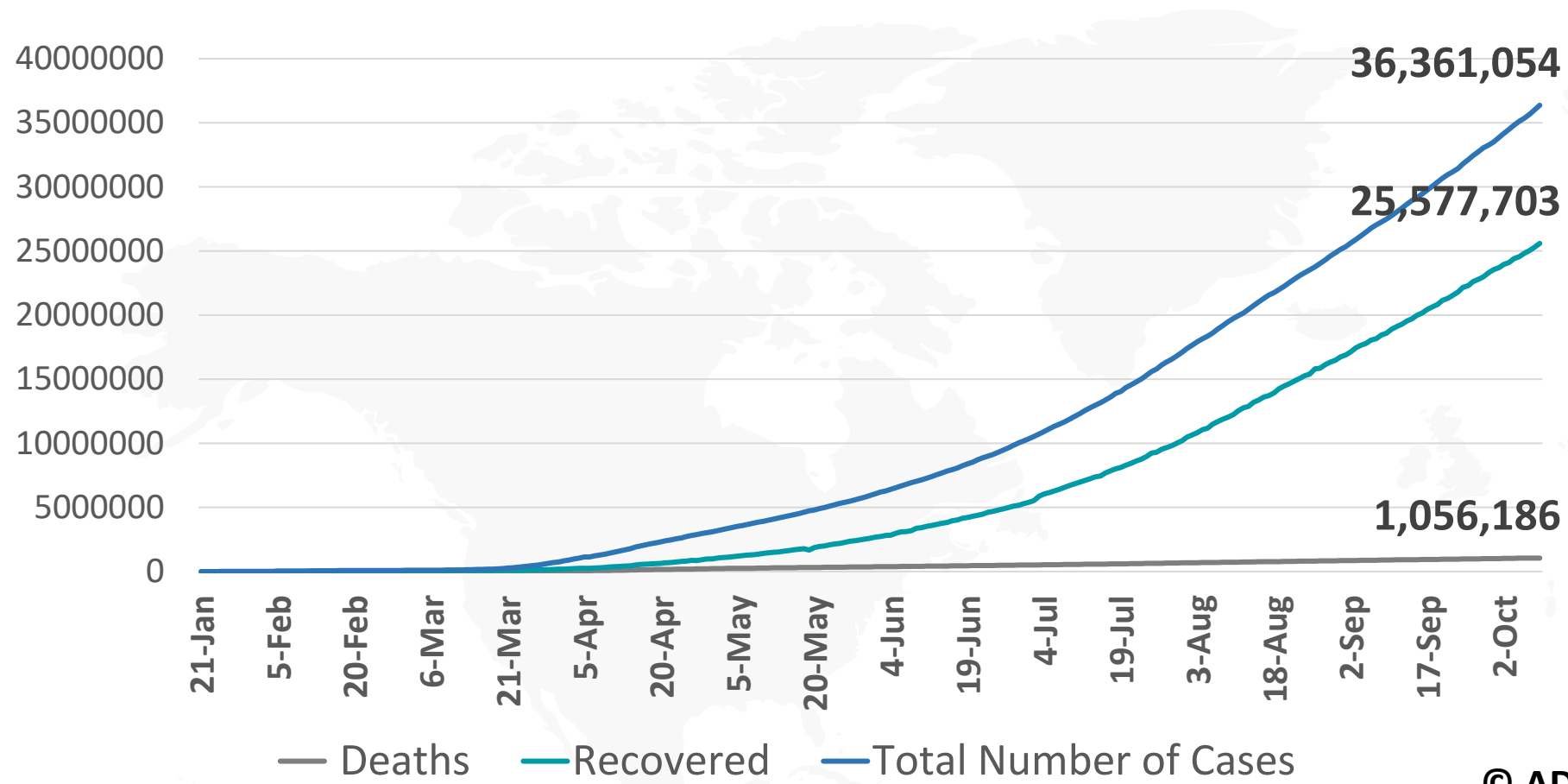
**Cerebrospinal Fluid Leak After  
Nasal Swab Testing for  
Coronavirus Disease 2019**

## Transmission

**Risk of COVID-19 During Air  
Travel**

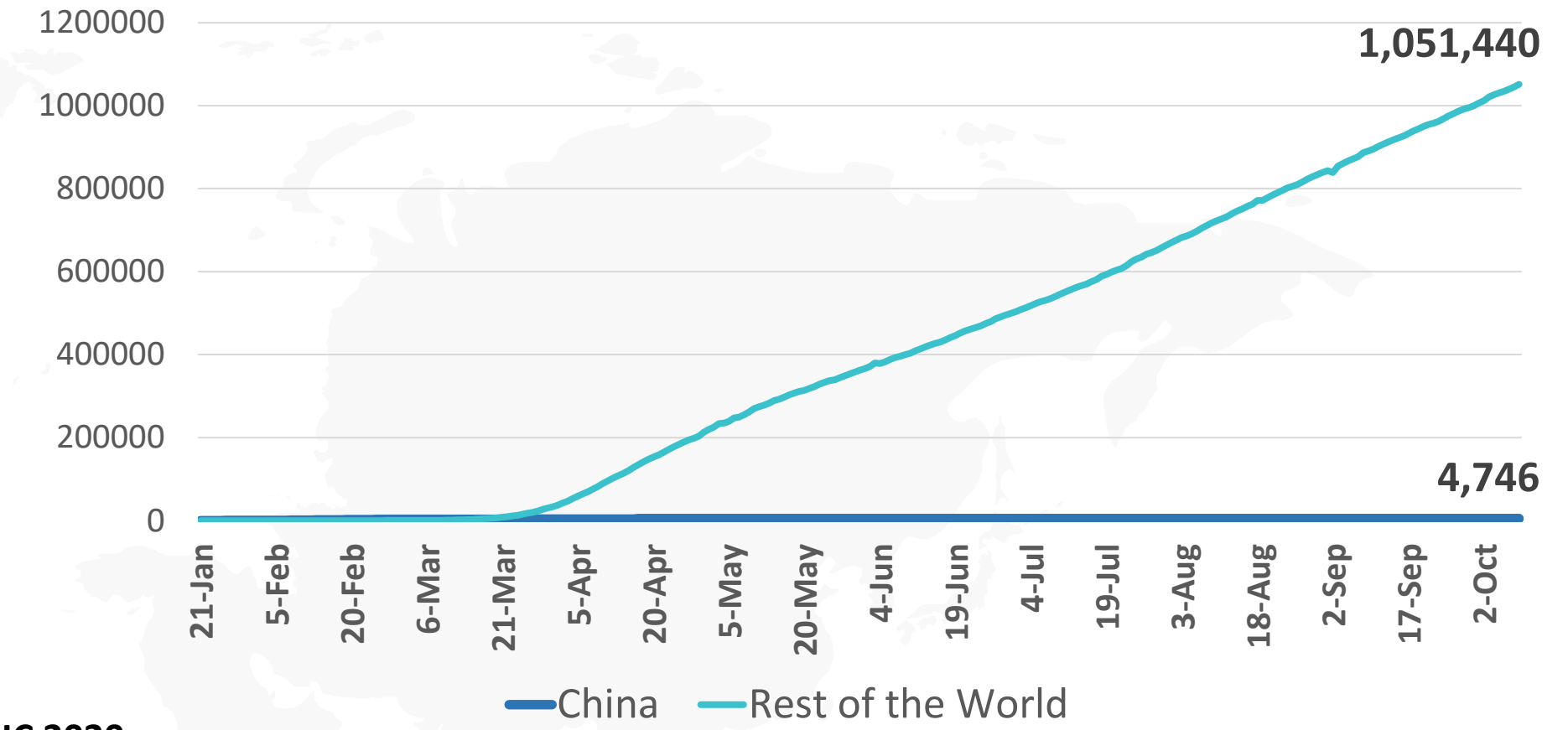


**Figure 1: Total Number of Infected, Recovered, and Death Cases**

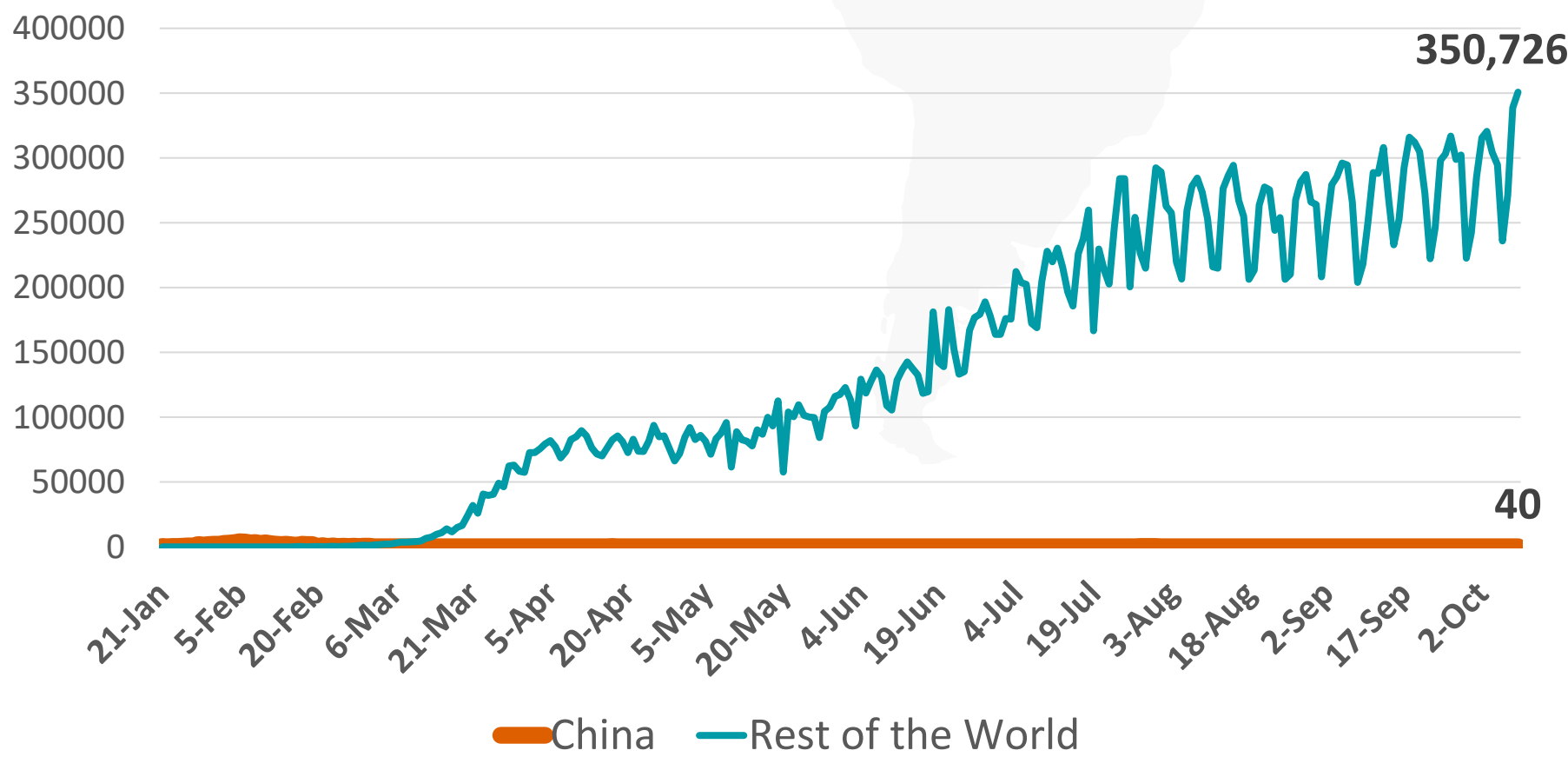


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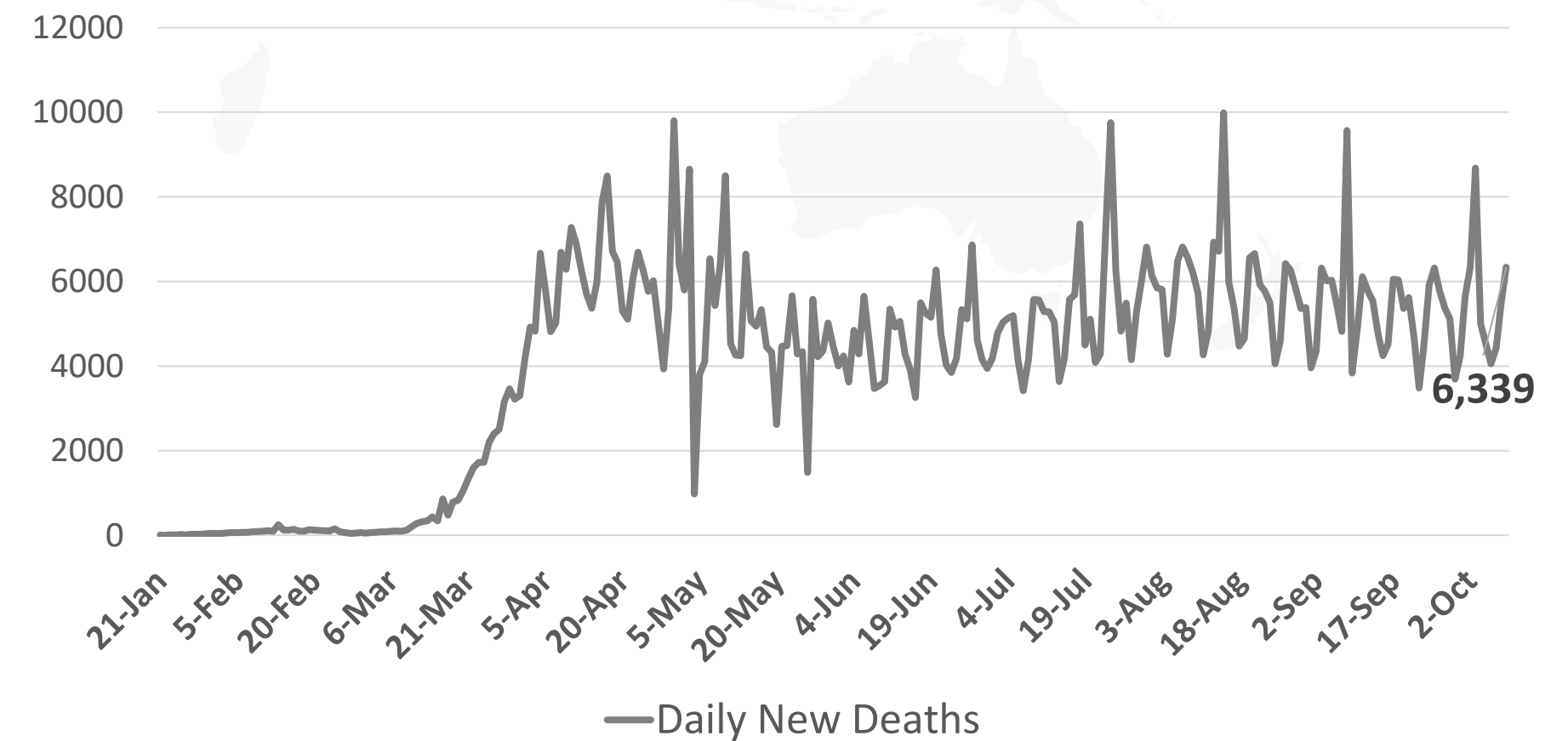
**Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)**



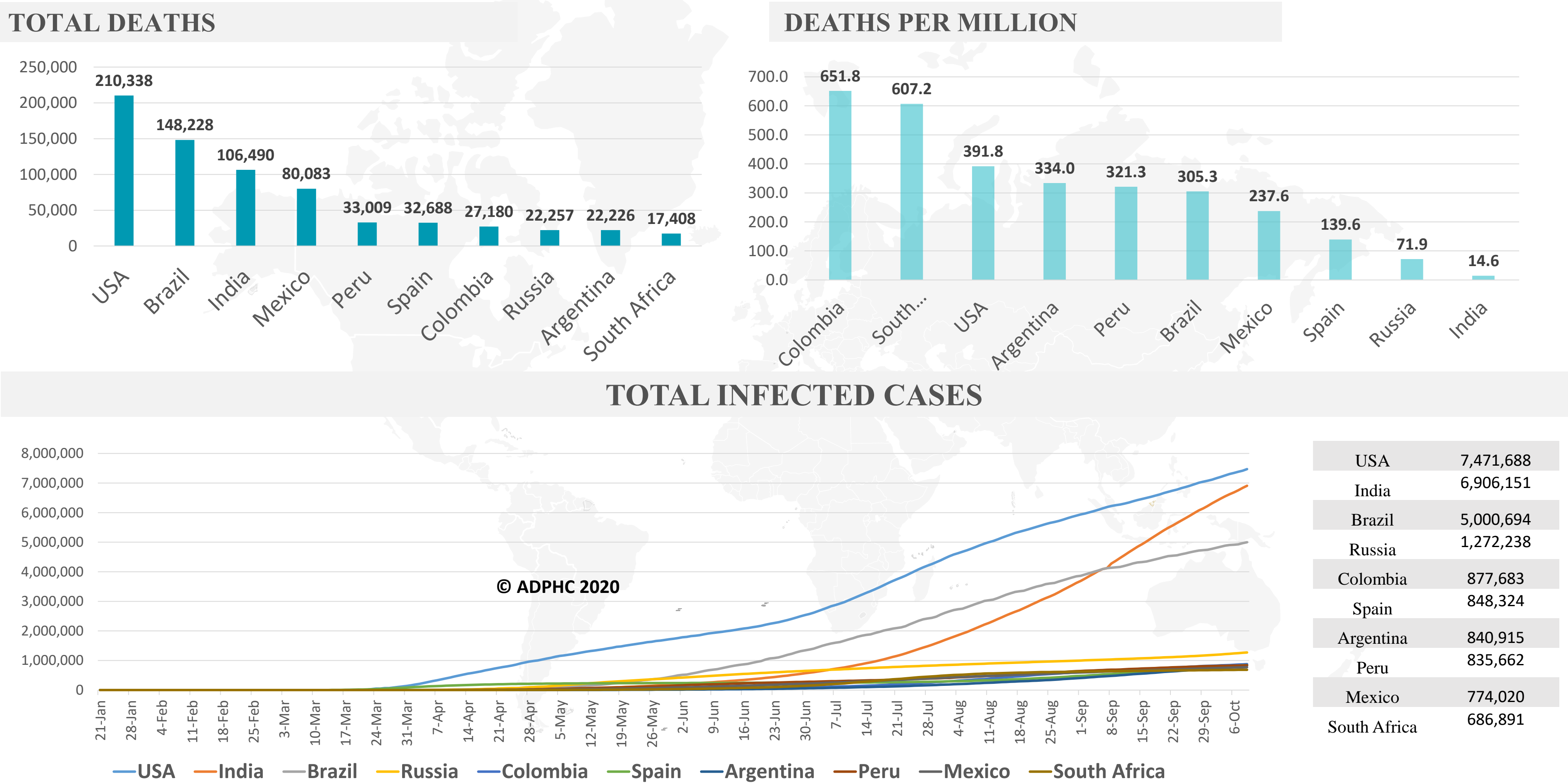
**Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)**



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



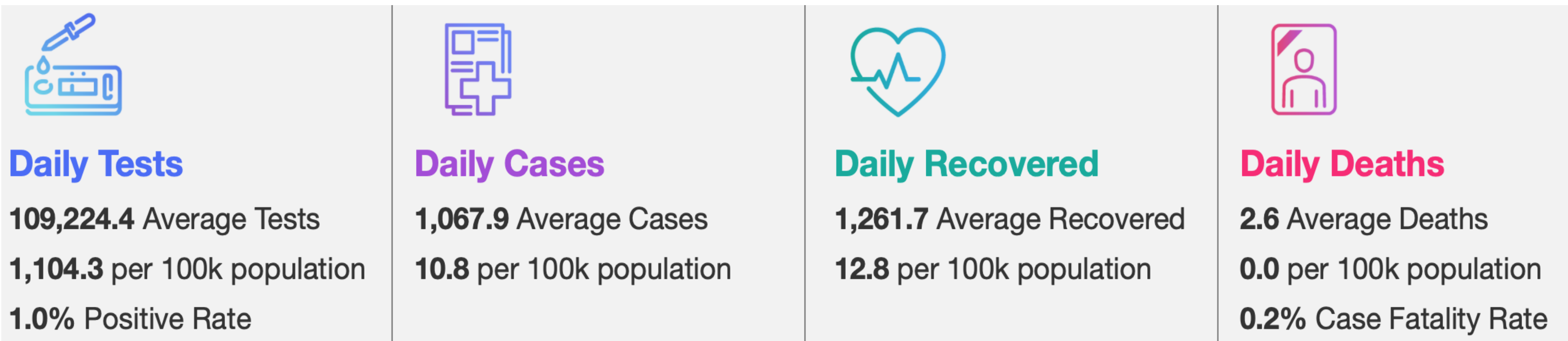
## Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19



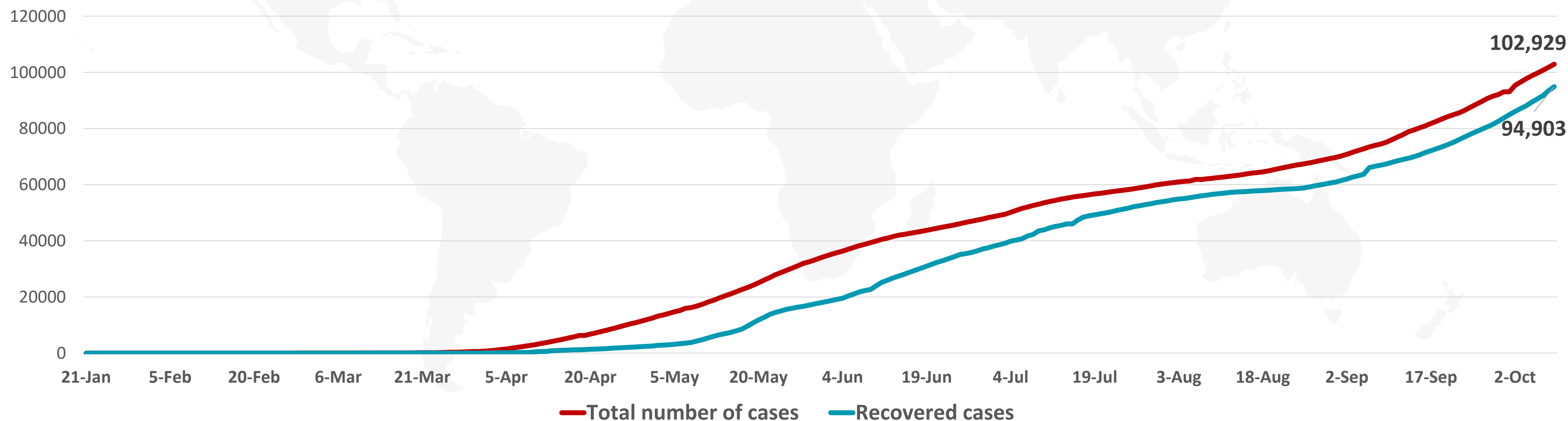
USA	7,471,688
India	6,906,151
Brazil	5,000,694
Russia	1,272,238
Colombia	877,683
Spain	848,324
Argentina	840,915
Peru	835,662
Mexico	774,020
South Africa	686,891



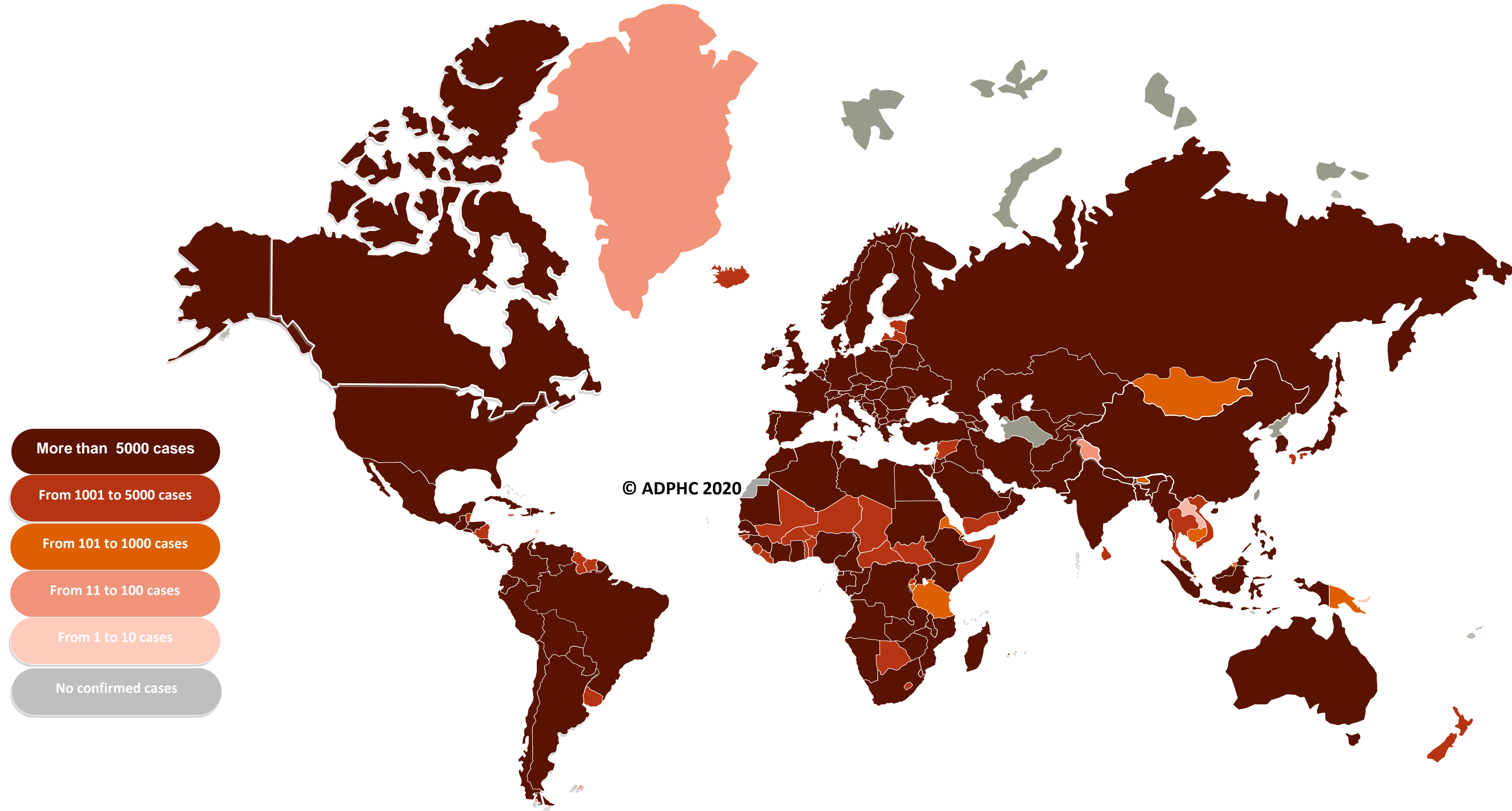
**Figure 6: COVID-19 Status in the UAE** (Federal Competitiveness and Statistics Authority Dashboard)



## 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

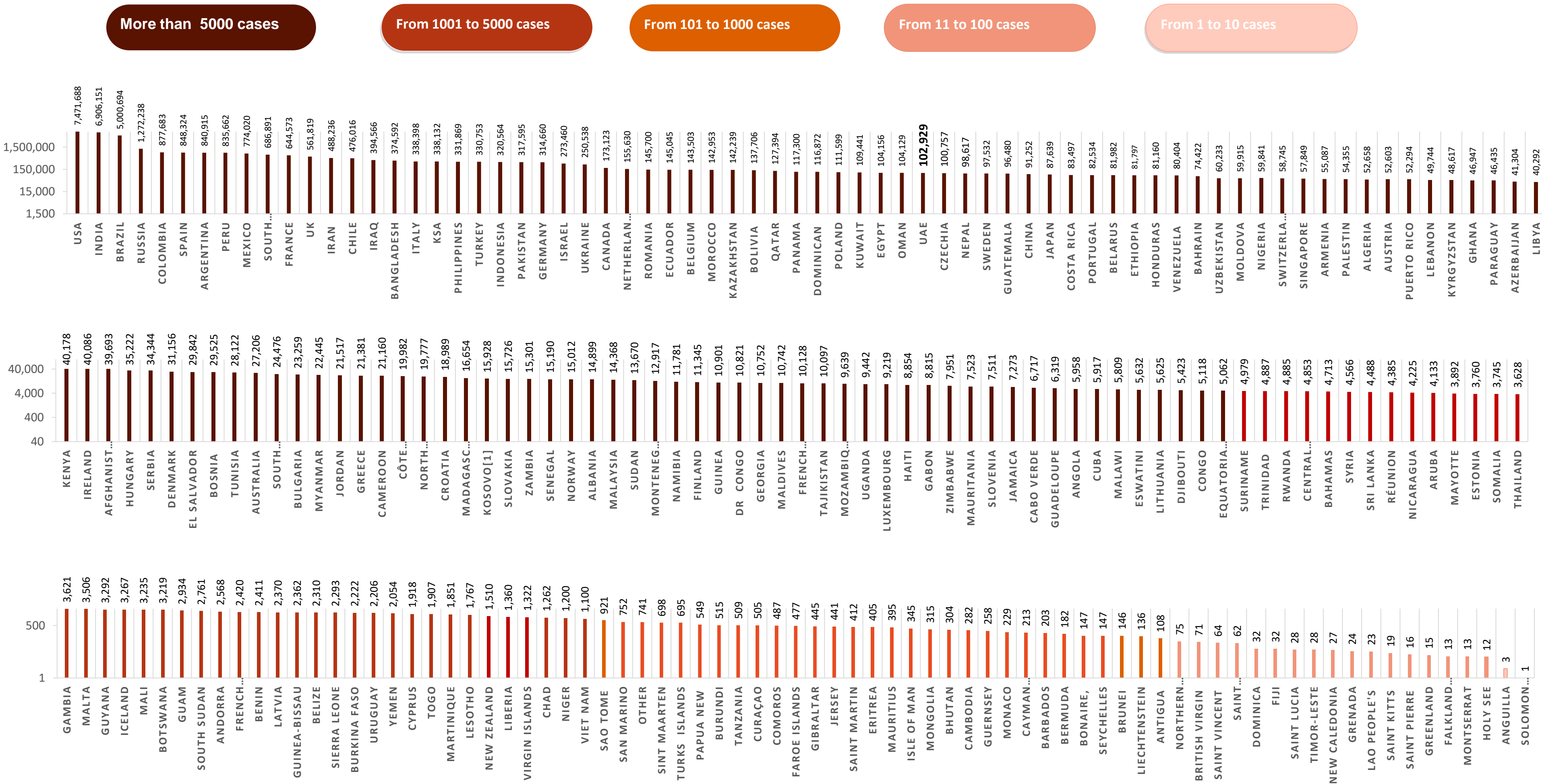
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

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



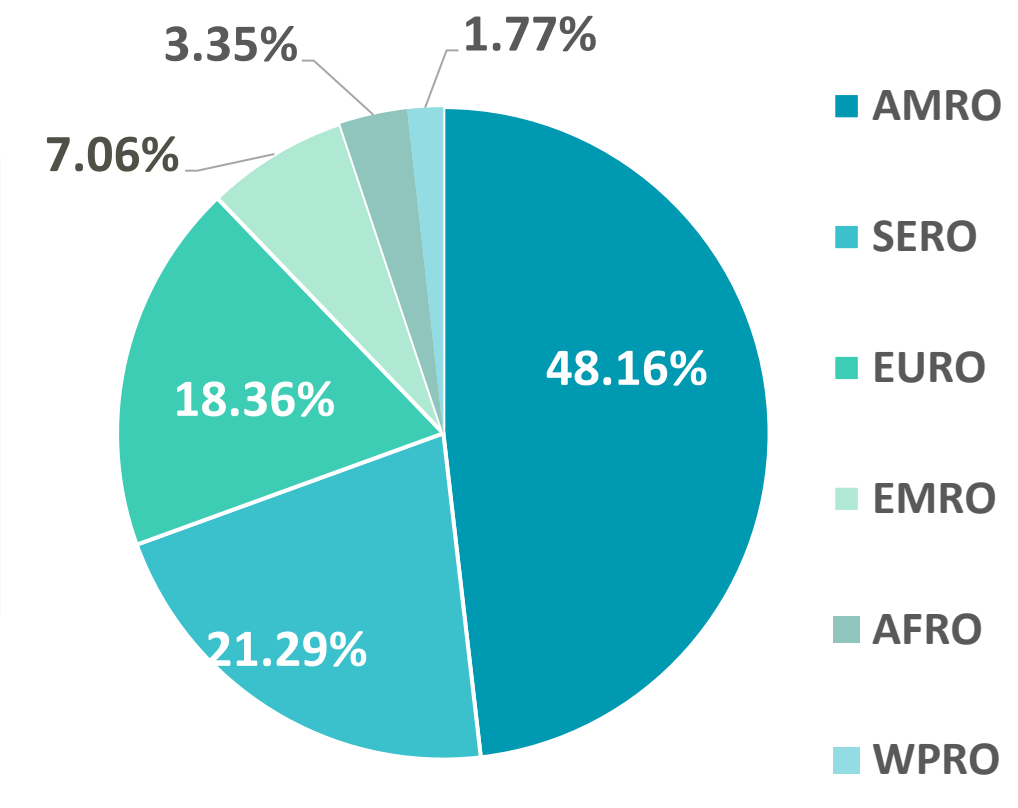
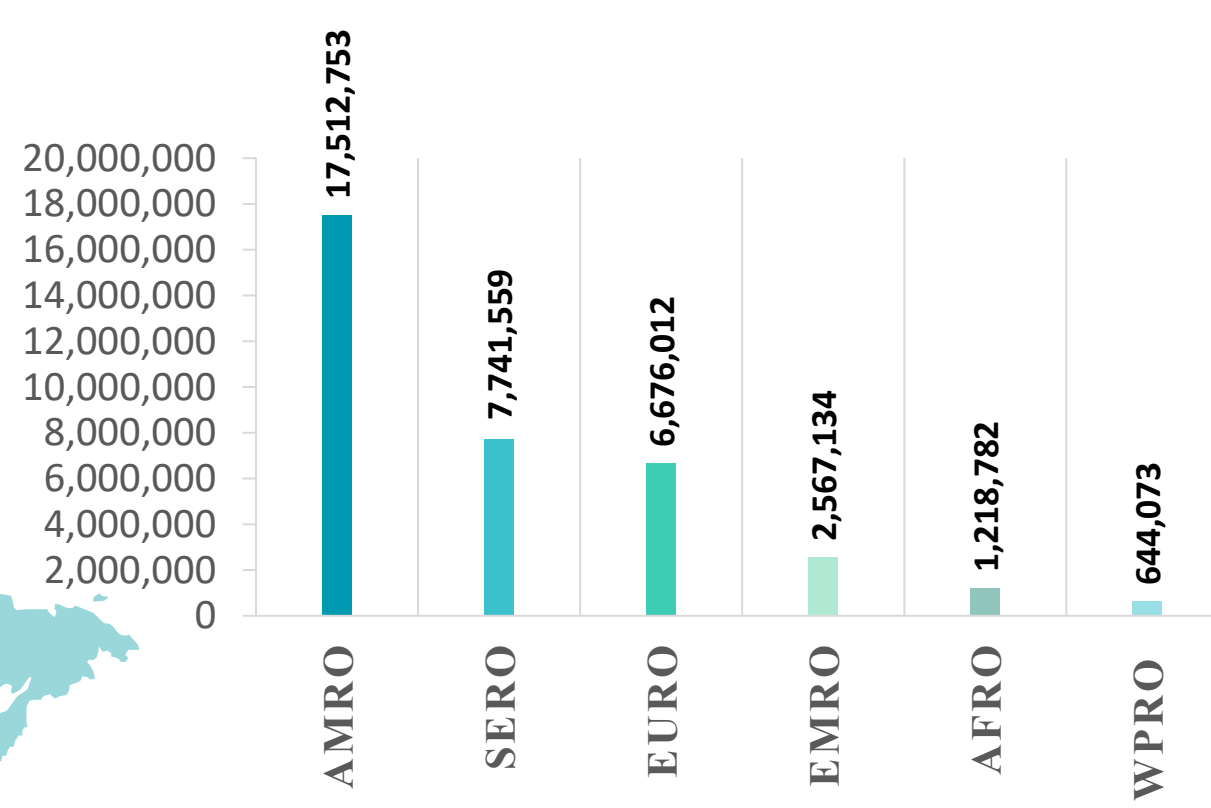
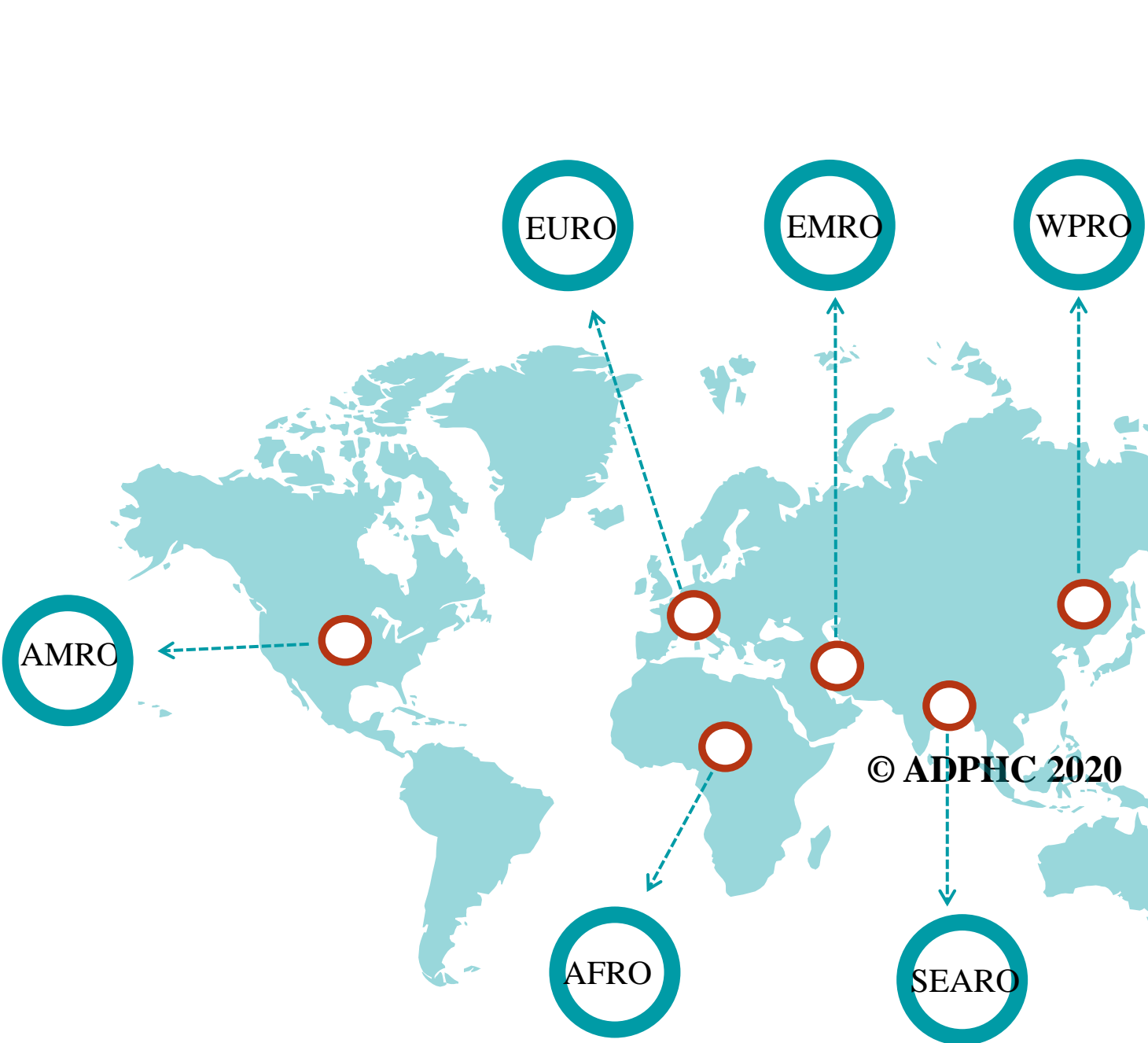
Other\*: includes cases and deaths reported under the international conveyance(Diamond Princess)



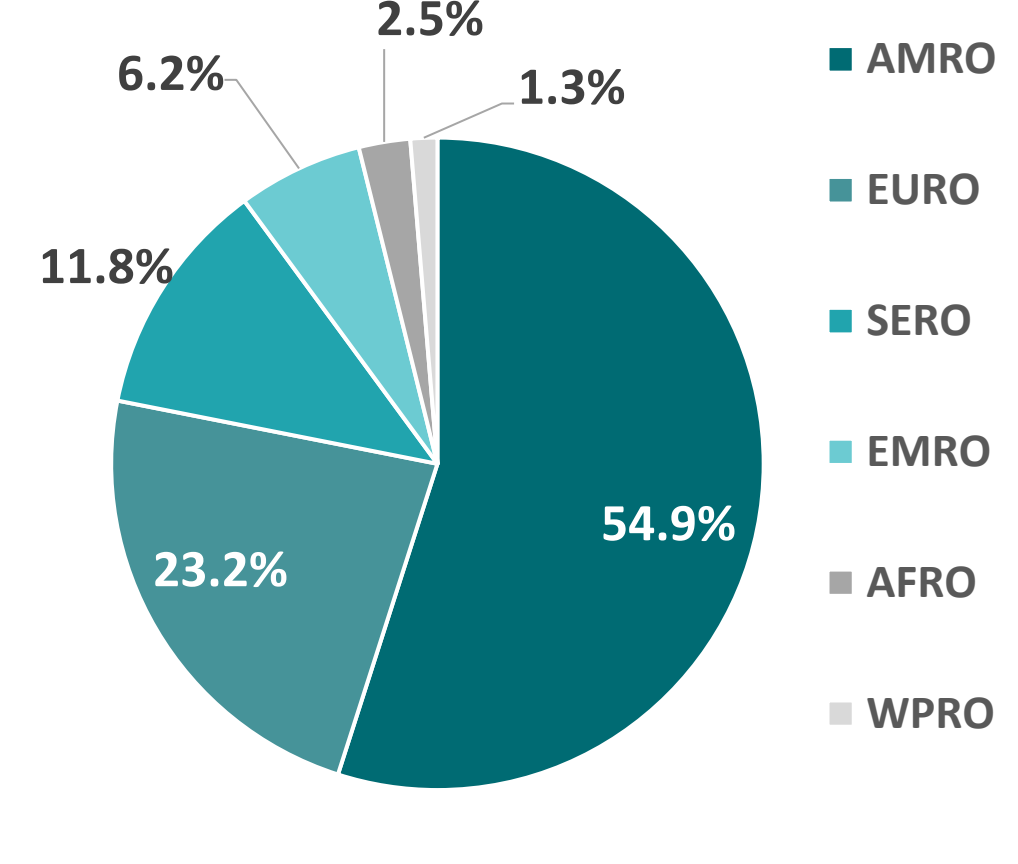
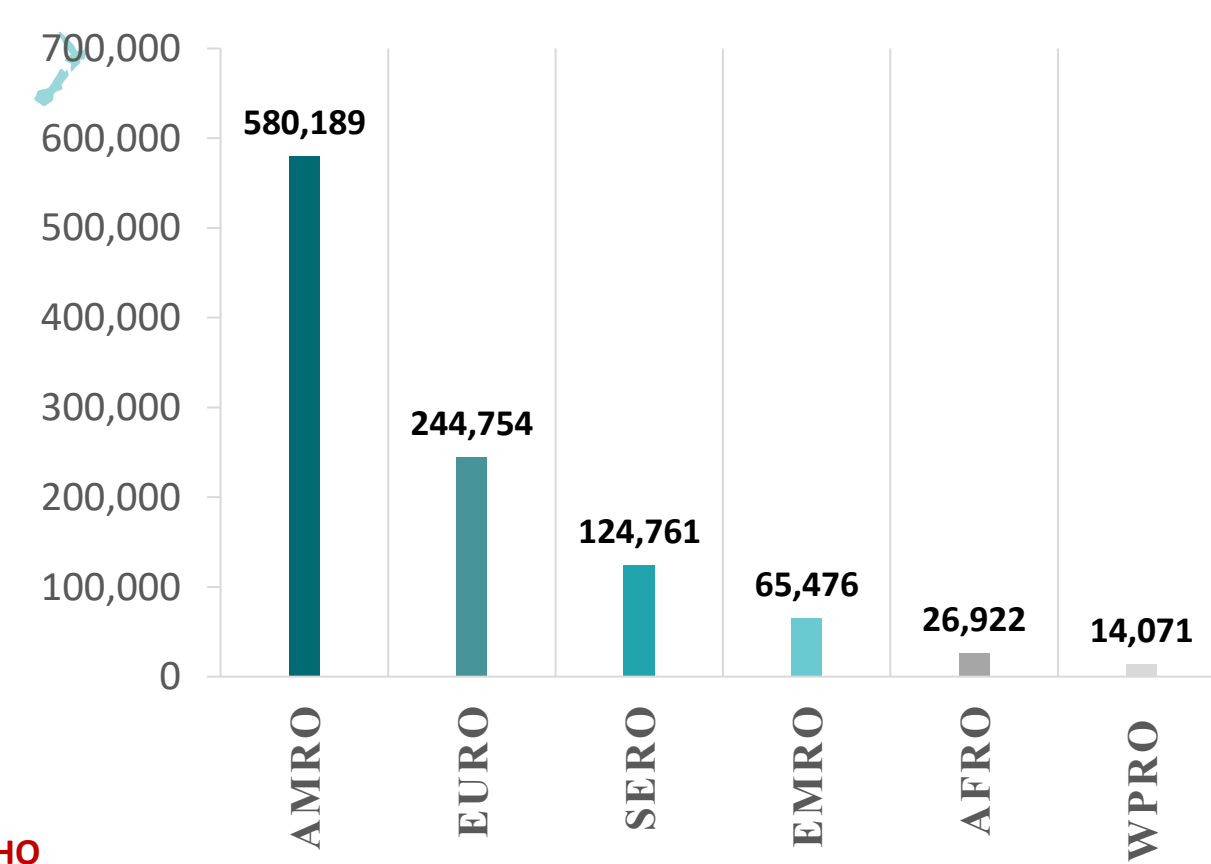


Figure 8: Global Distribution of COVID-19 Cases per Region

## INFECTED

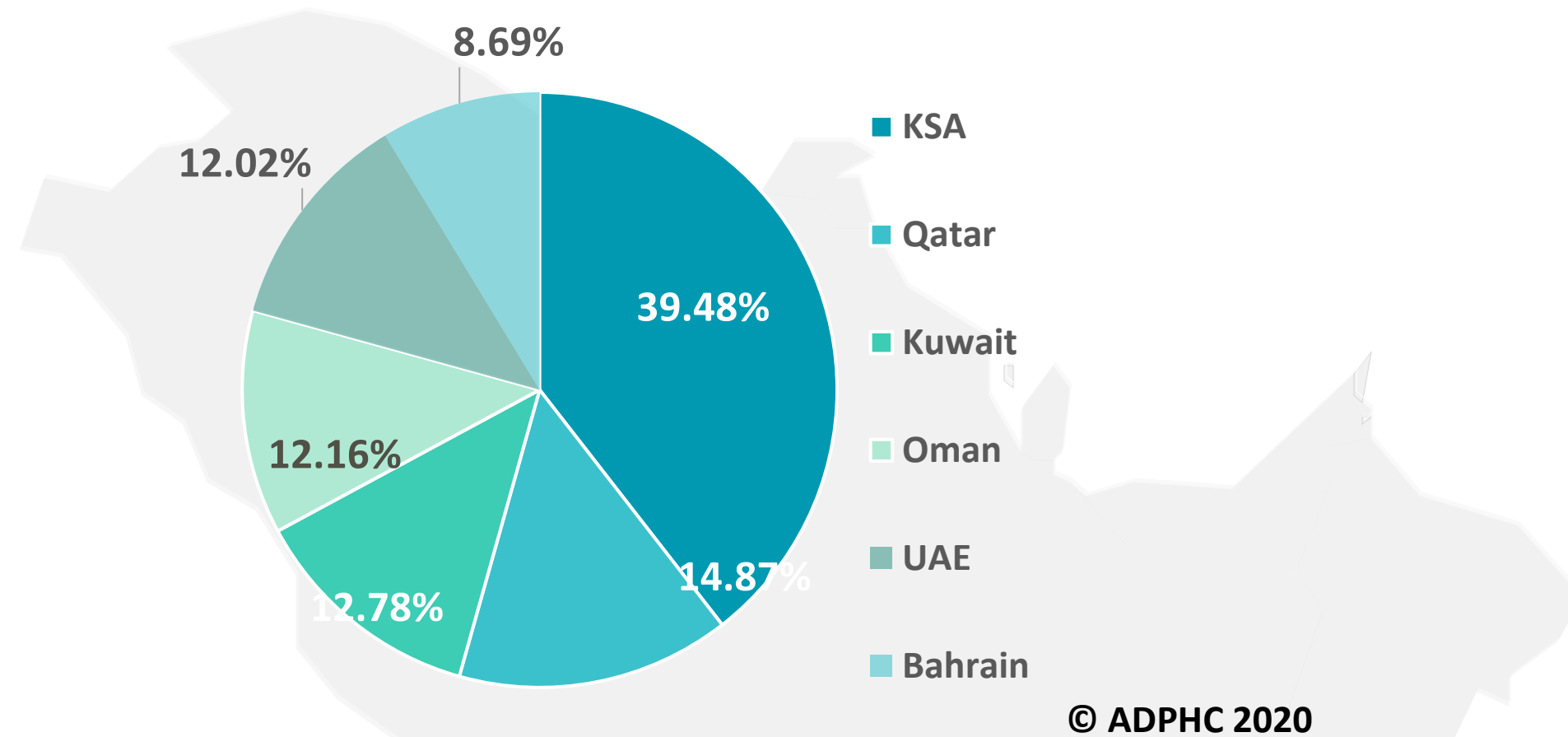


## DEATHS

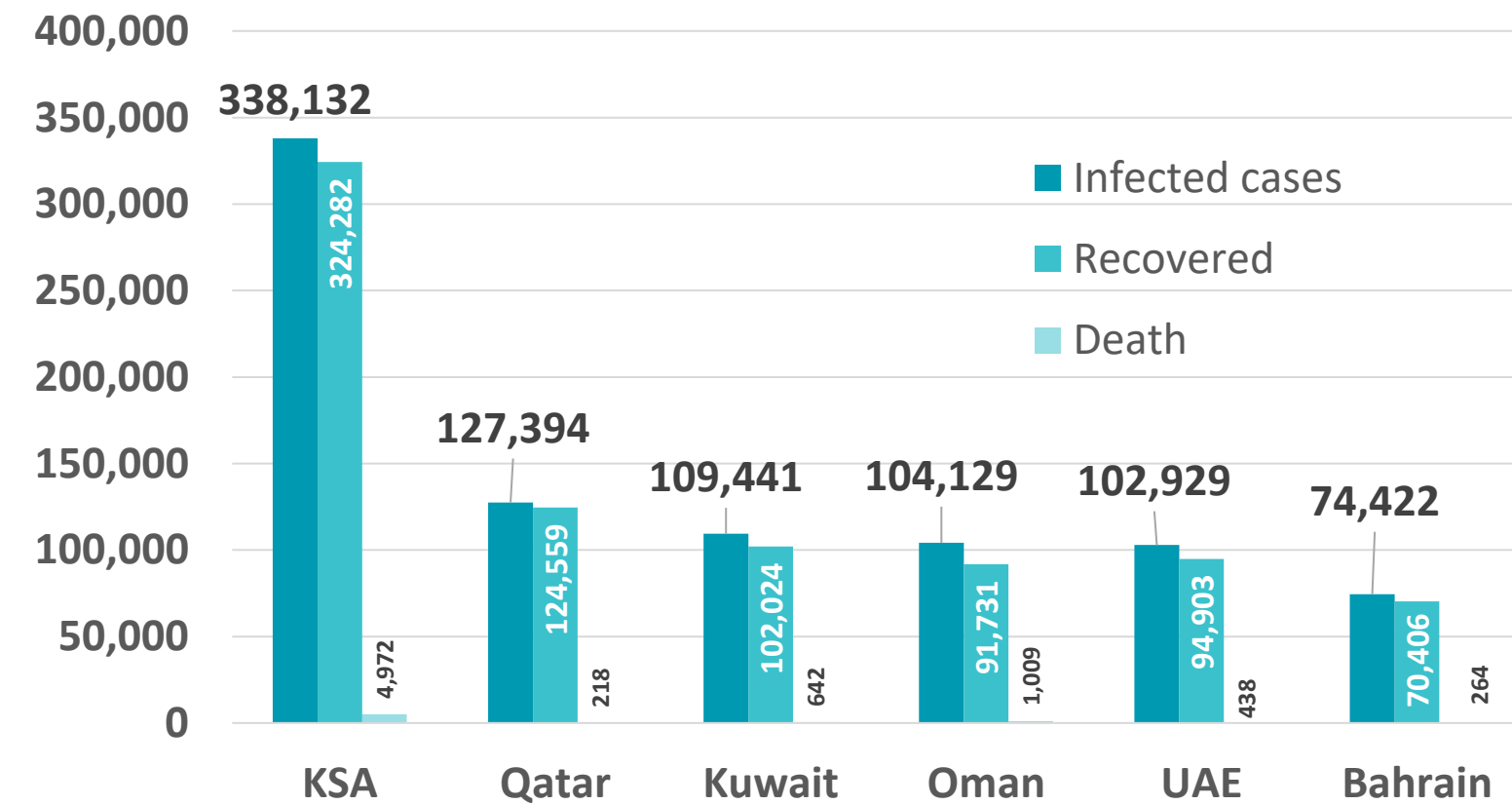


## Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

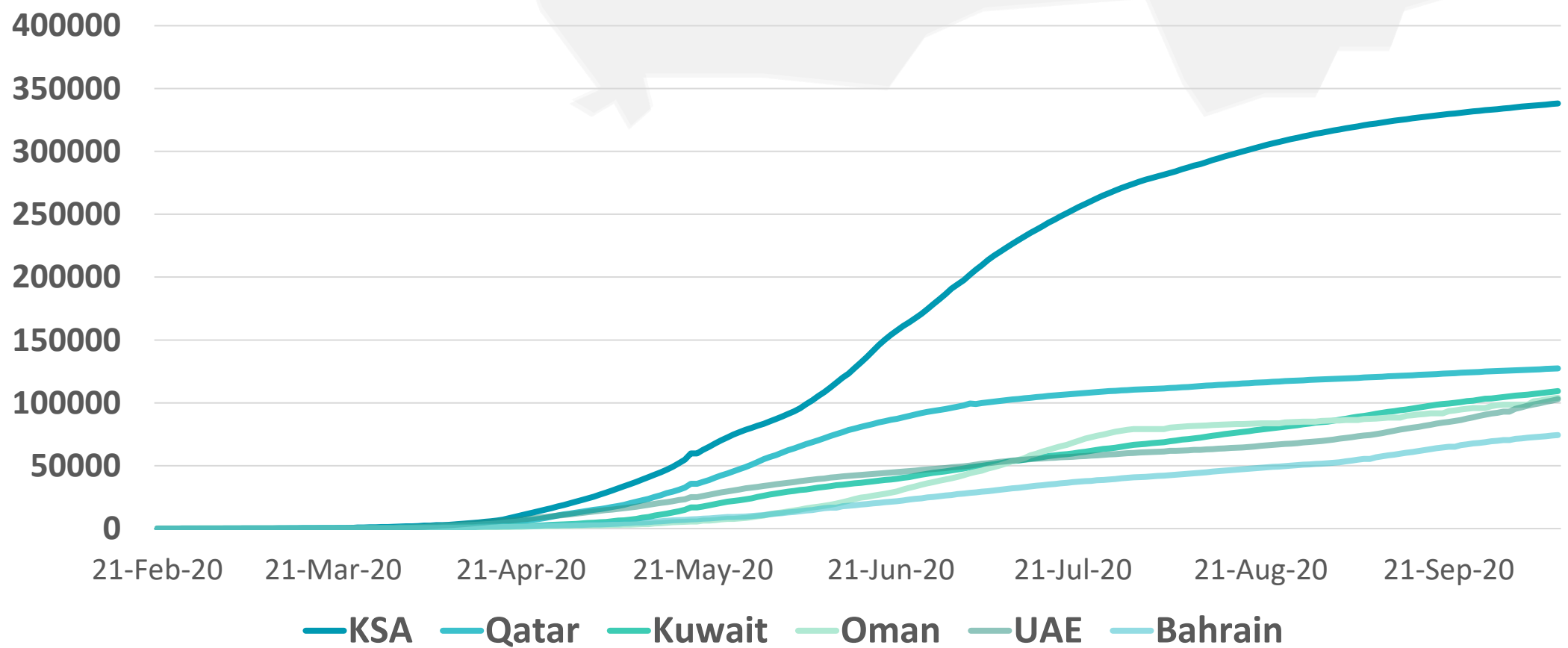
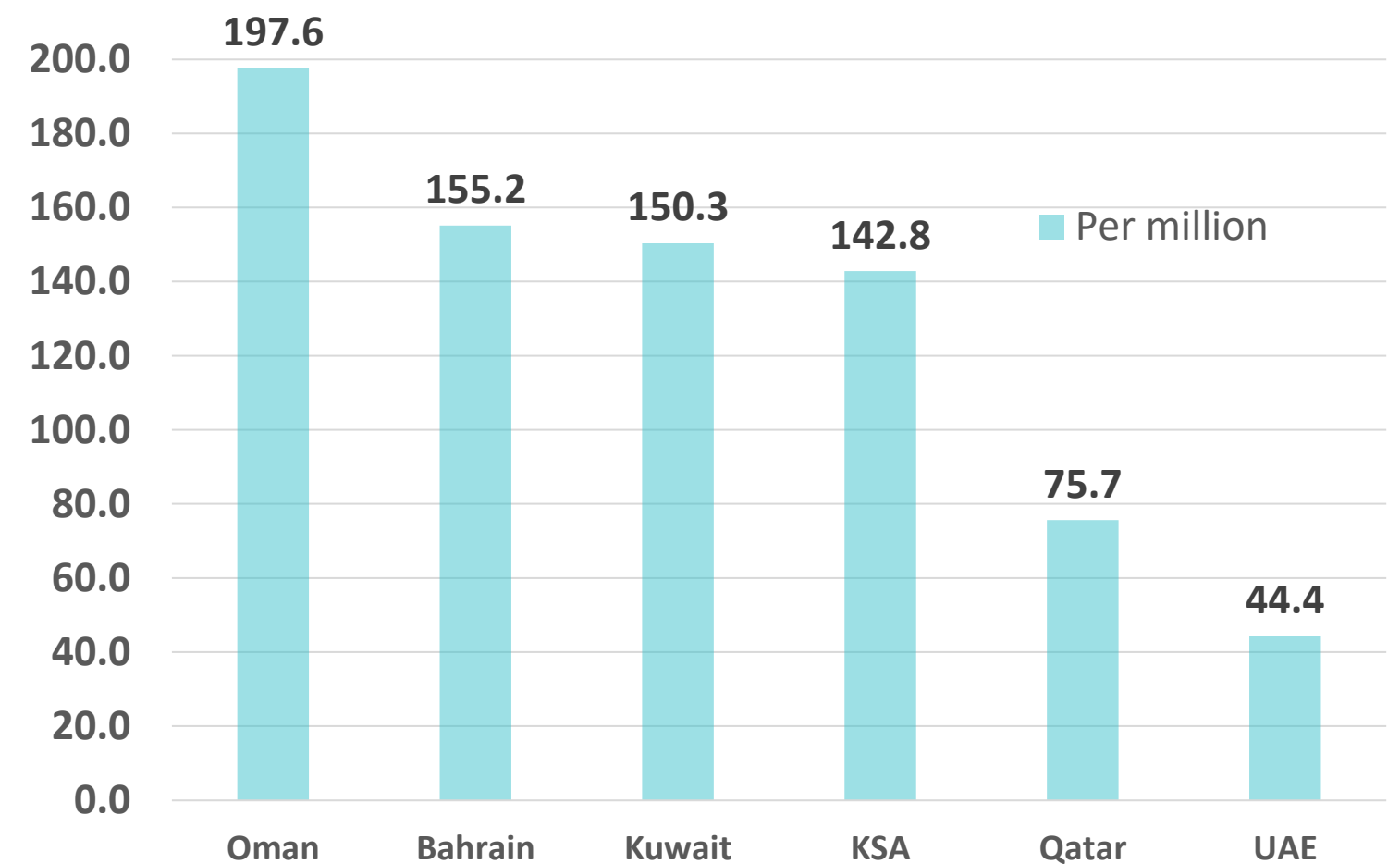
### TOTAL NUMBER OF INFECTED CASES



### TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



### DEATHS PER MILLION



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

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

### UAE



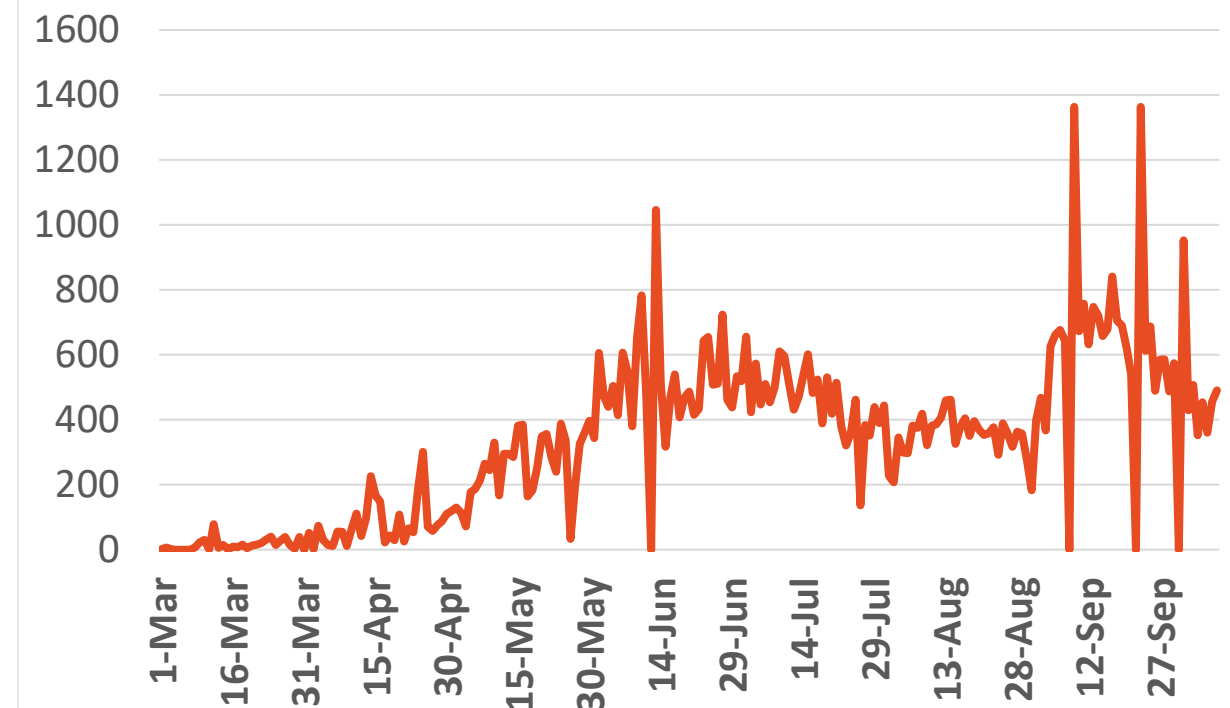
Source : National Emergency Crisis and Disaster Management Authority

### KSA



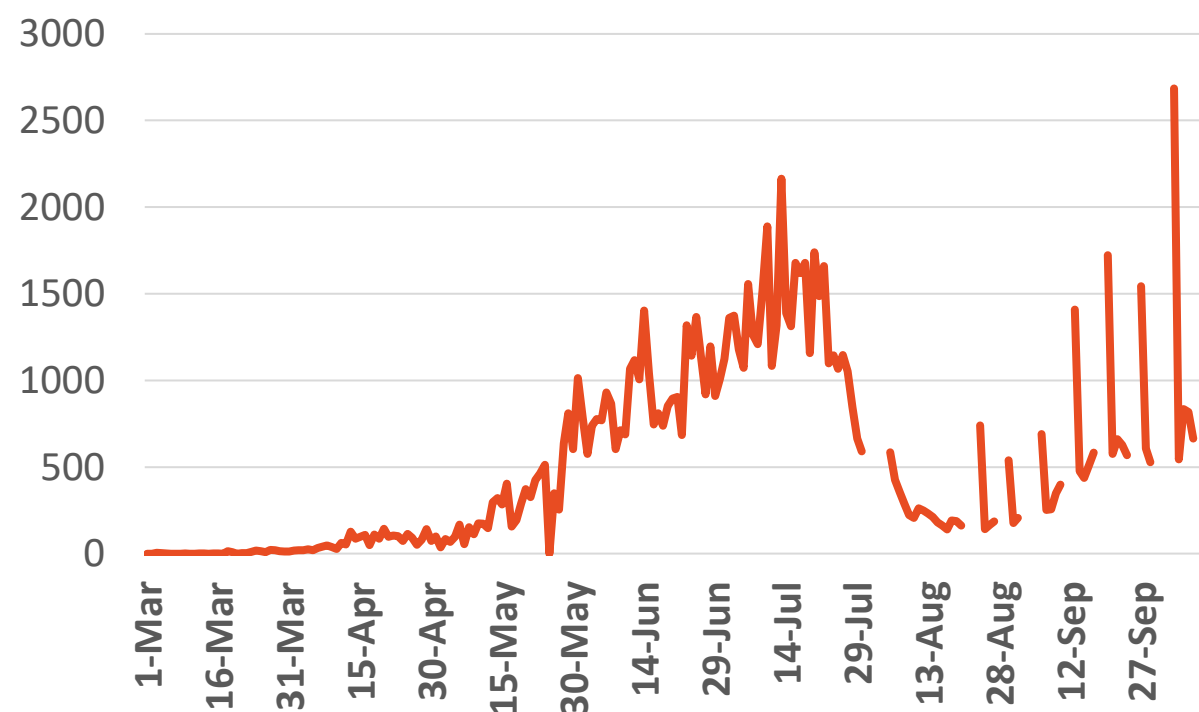
Source : KSA ministry of health

### Bahrain



Source :WHO

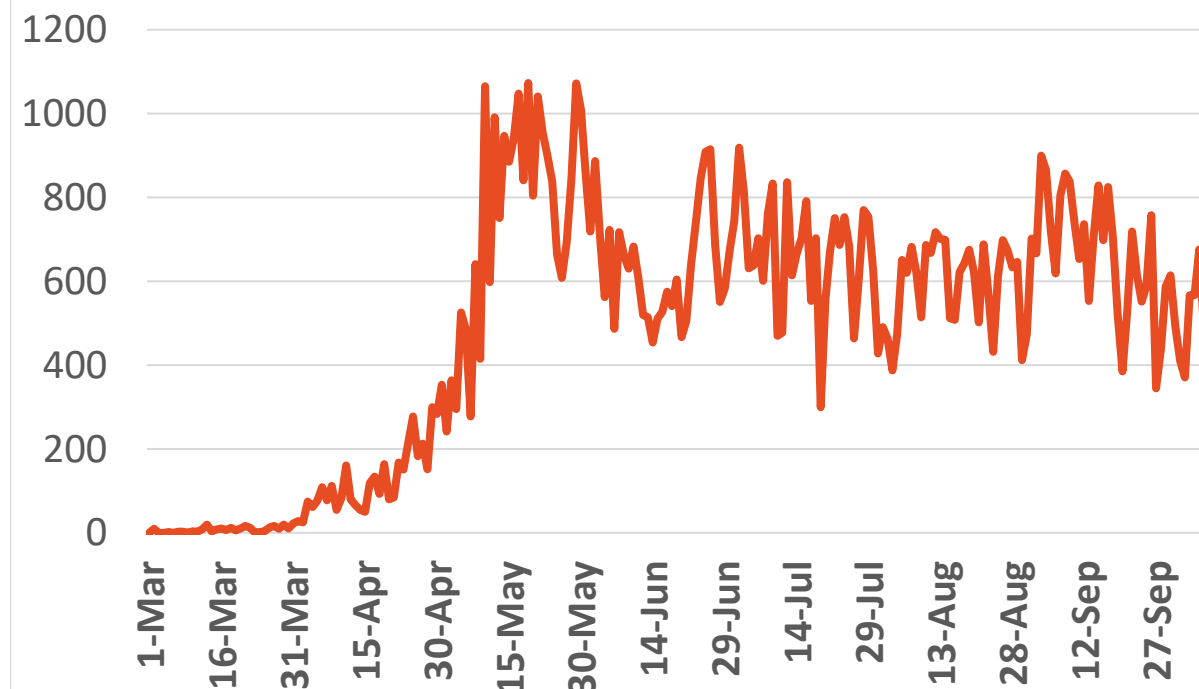
### Oman



Source :Oman ministry of health

### Kuwait

© ADPHC 2020



Source : Kuwait ministry of health

### Qatar



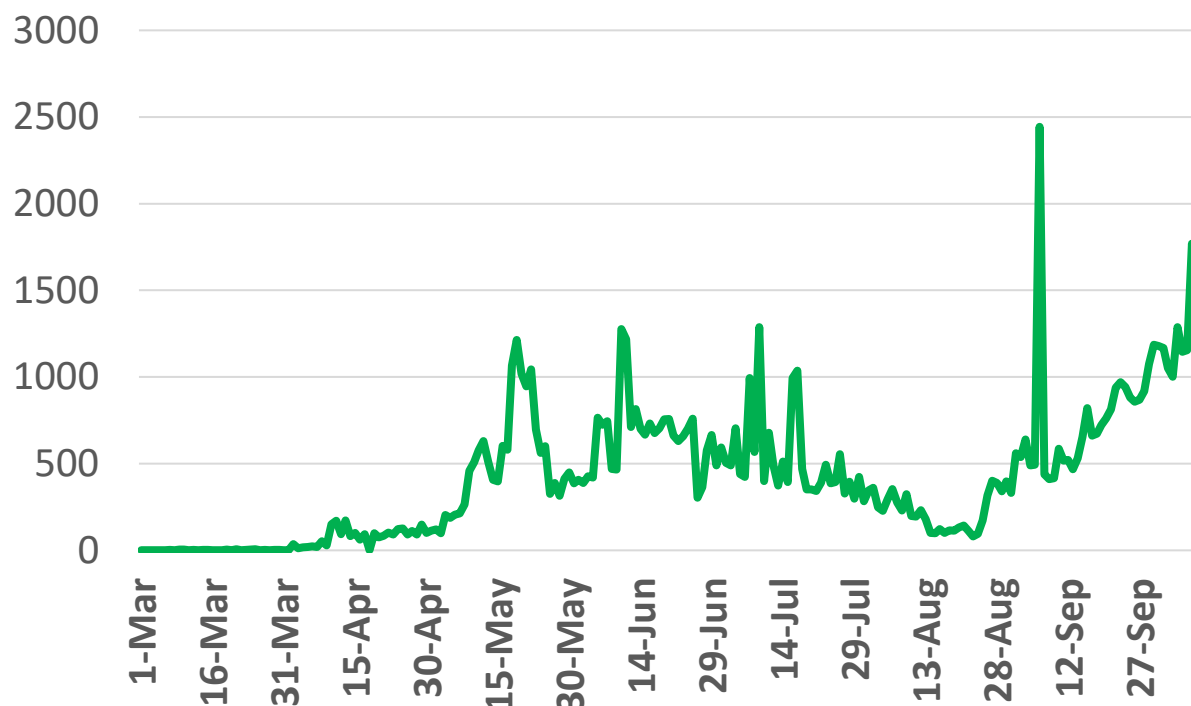
Source : Qatar ministry of health

\*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 October  
\*No announced statistic data on weekends and official holidays.



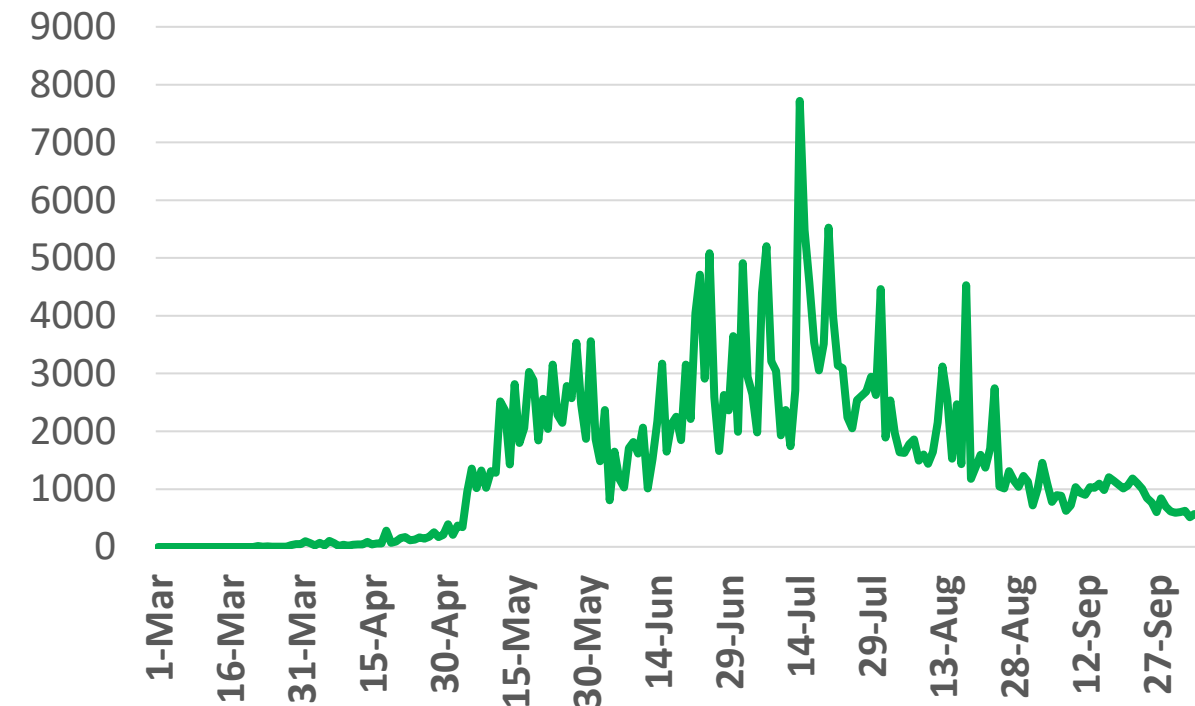
**Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries**

## UAE



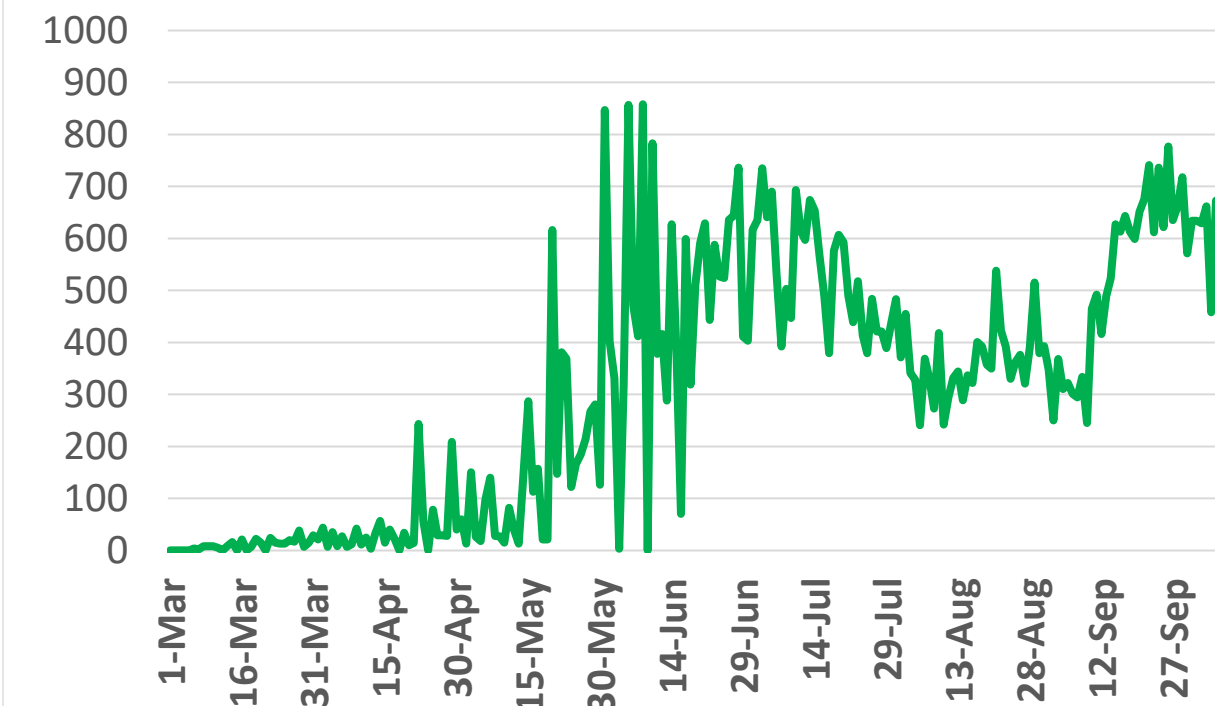
Source : National Emergency Crisis and Disaster Management Authority

## KSA



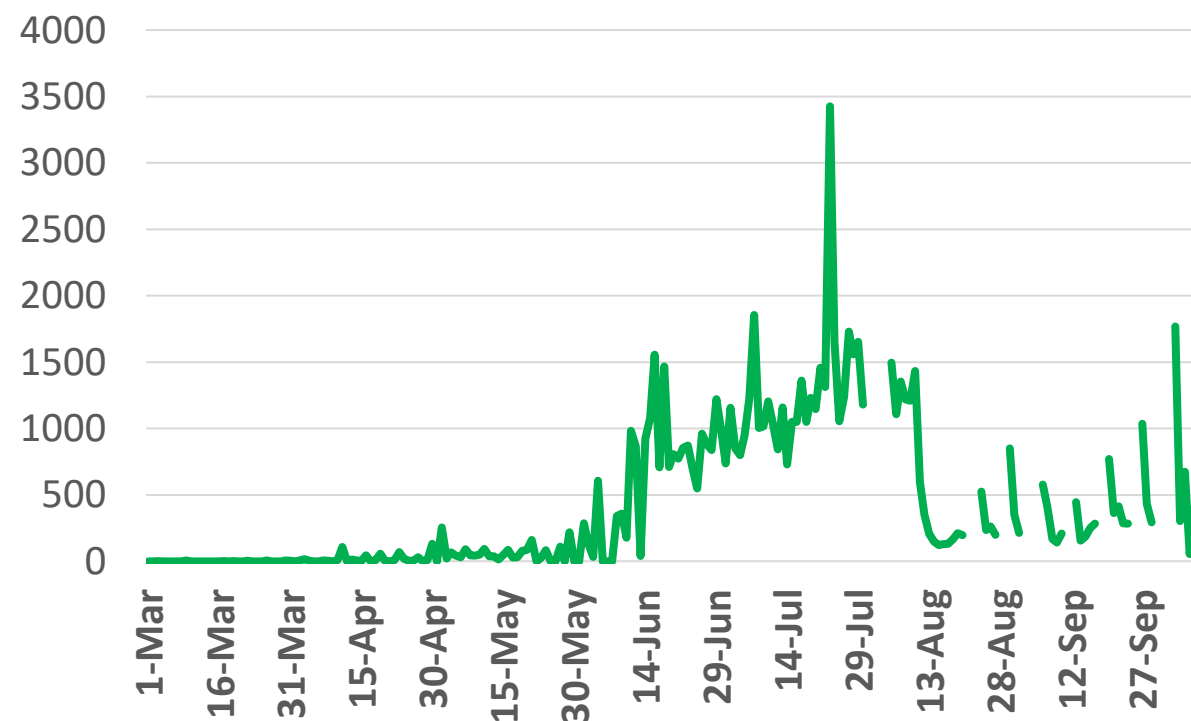
Source : KSA ministry of health

## Bahrain



Source : Bahrain ministry of health

## Oman



Source : Oman ministry of health

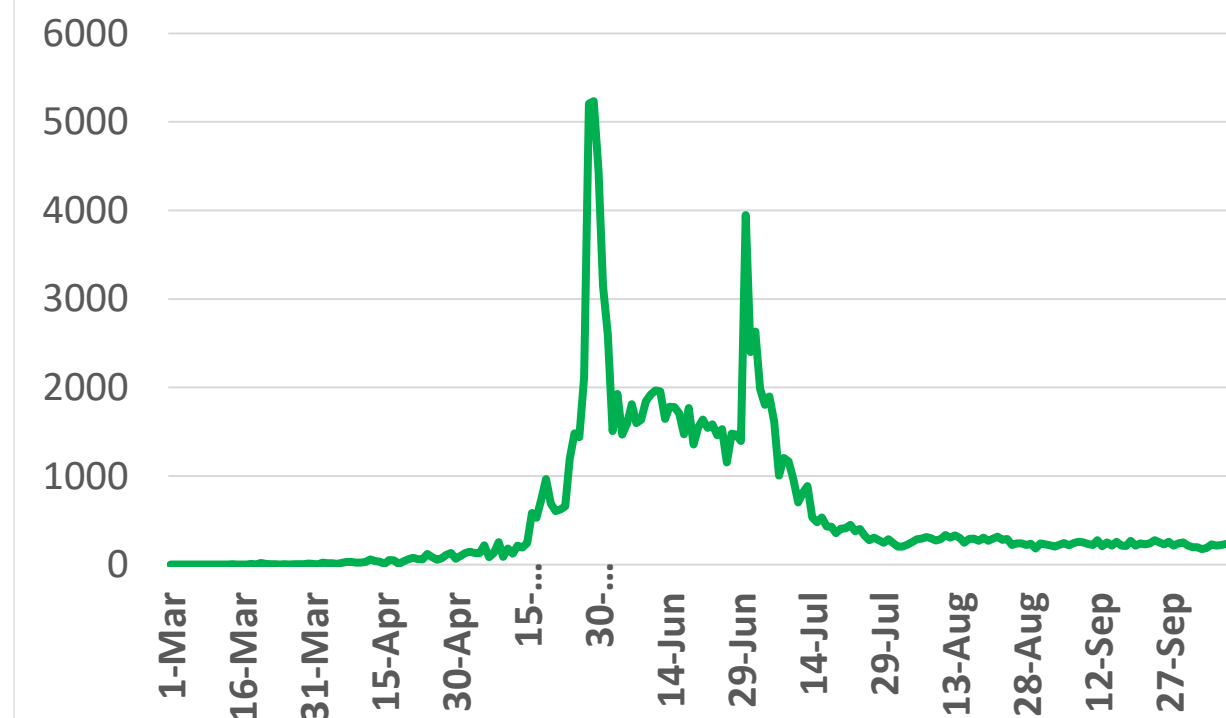
## Kuwait

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Source : Kuwait ministry of health

## Qatar



Source : Qatar ministry of health

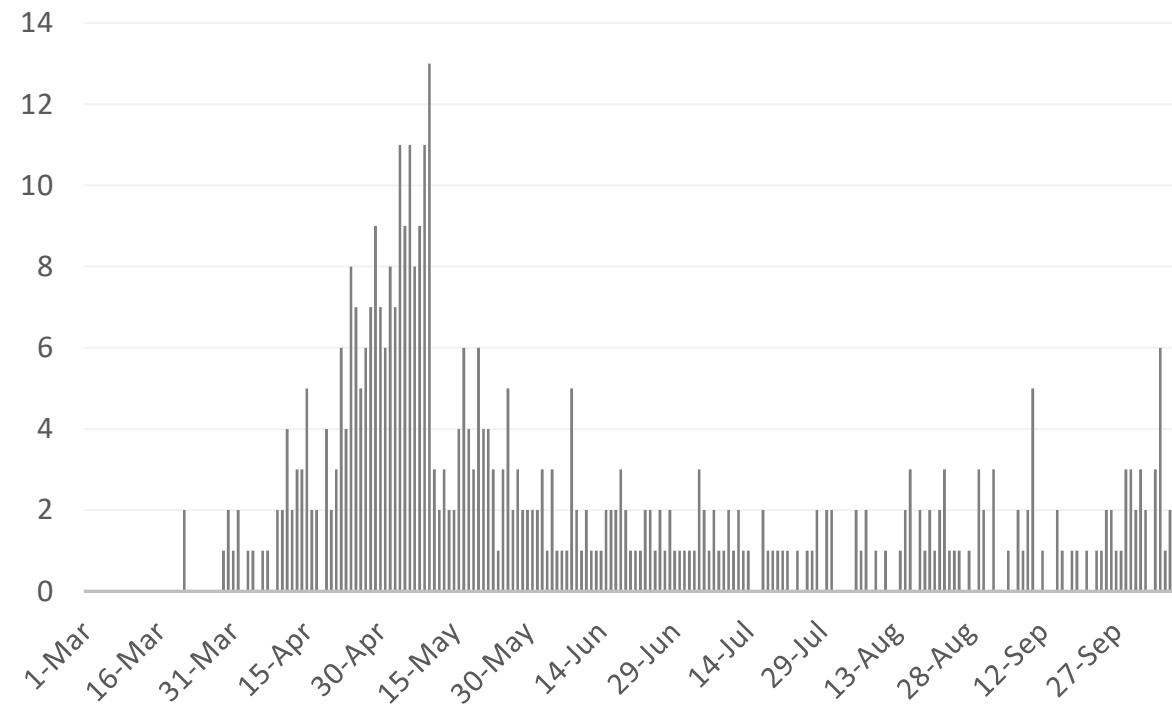
\*No announced statistic data from 31 July to 4 August, 21,23,28,30 August 2, 4, 5,11,12,18,19,25,26,30 September,1,2,9 & 10 October  
\*No announced statistic data on weekends and official holidays.





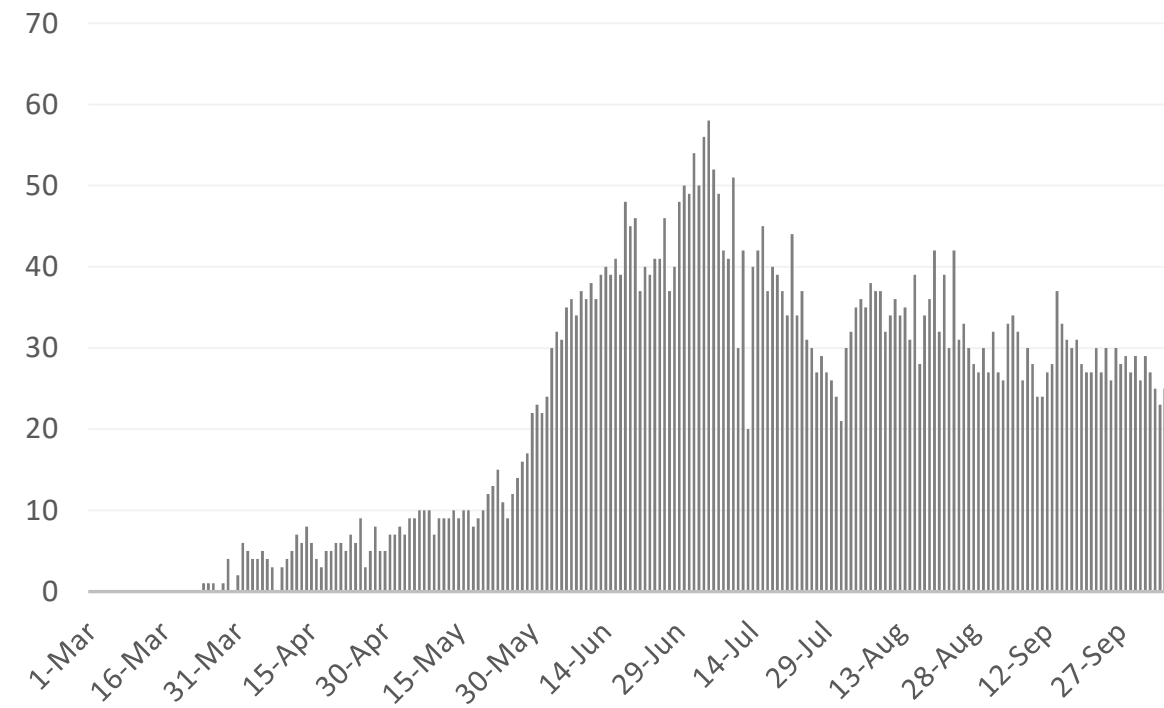
## Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

### UAE



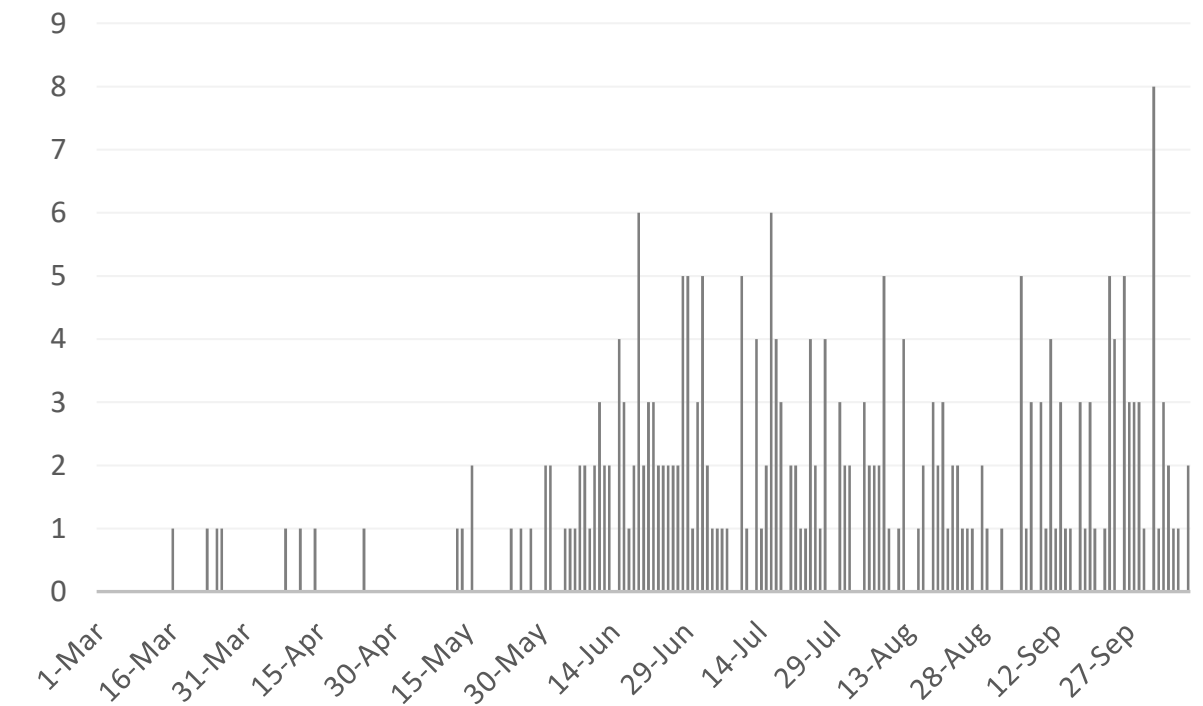
Source : National Emergency Crisis and Disaster Management Authority

### KSA



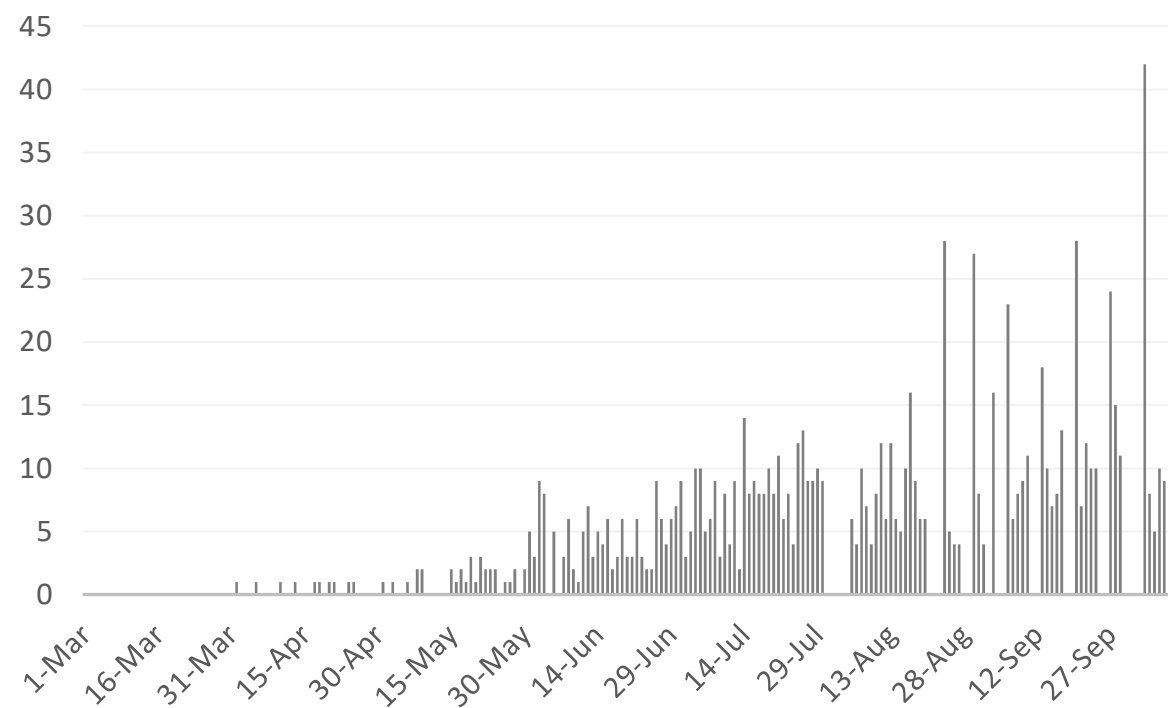
Source : KSA ministry of health

### Bahrain



Source :WHO

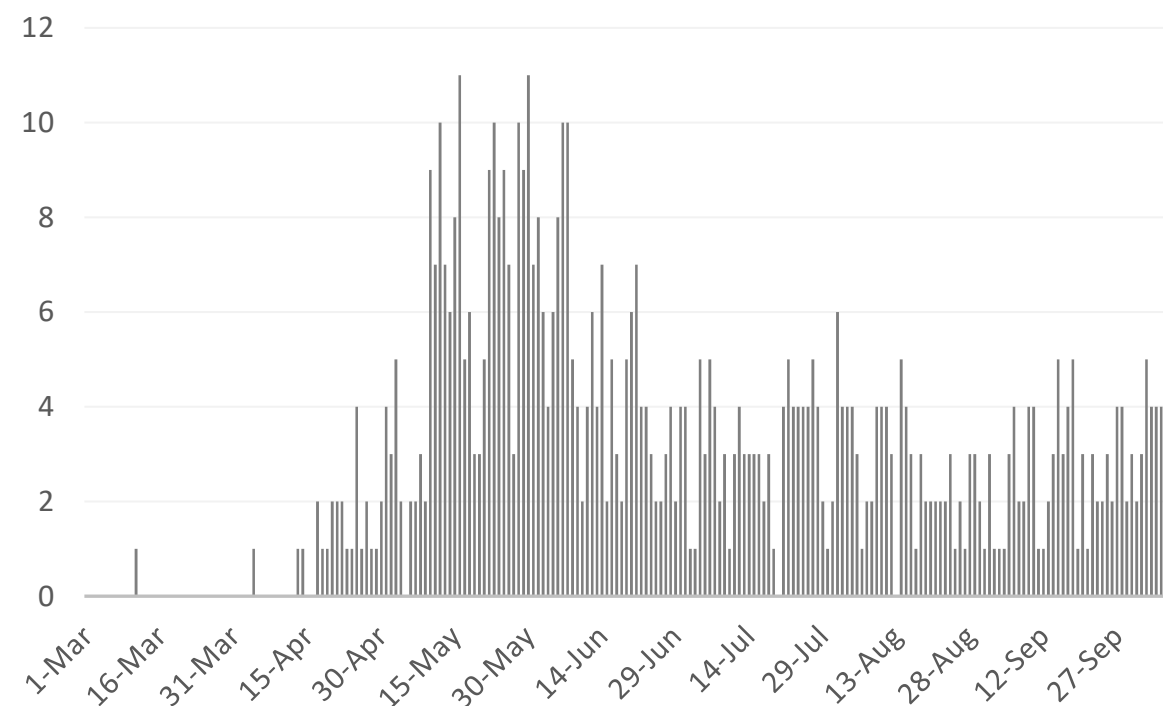
### Oman



Source :Oman ministry of health

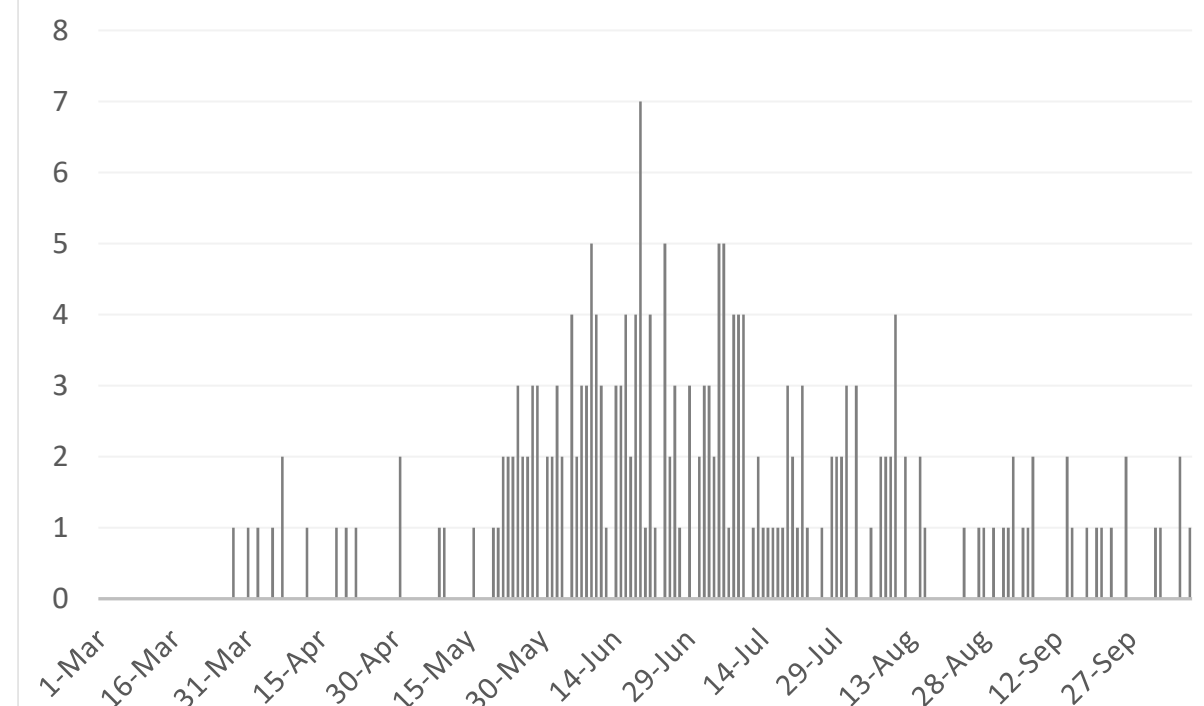
### Kuwait

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Source : Kuwait ministry of health

### Qatar



Source : Qatar ministry of health

\*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 October  
\*No announced statistic data on weekends and official holidays.





# DIAGNOSIS

## Article 1

# Cerebrospinal Fluid Leak After Nasal Swab Testing for Coronavirus Disease 2019

Published

October 1, 2020, [JAMA](#)

- In the United States (US), a female patient in her 40s (who had a medical history for idiopathic intracranial hypertension and removal of nasal polyps 20 years ago) presented with **unilateral rhinorrhea, metallic taste, headache, neck stiffness, and photophobia**. For an elective hernia repair, she had recently completed nasal swab testing for COVID-19. A 1.8 cm encephalocele was identified by computed tomography (CT) and magnetic resonance imaging (MRI). The nasal drainage tested positive for  $\beta 2$  transferrin (a marker for brain fluid leakage).
- Idiopathic intracranial hypertension is a risk factor for meningocele formation. It was anticipated that nasal swab itself did not cause any injury to the bony base of the skull; however, the invasive test caused injury to the patient's pre-existing encephalocele. This case of iatrogenic cerebrospinal fluid (CSF) leak from nasal swab testing, shows that prior surgical intervention or any pathology that distorts normal nasal anatomy might increase the risk of adverse events associated with nasal testing for respiratory pathogens.
- During this pandemic, as the number of daily nasal swab specimen collection procedures increase, it is essential to properly train health care providers and the general public to safely perform swab testing. Alternative methods to nasal screening should be considered for patients with any defects or history of surgery in the base of the skull.





## Article 2

# Risk of COVID-19 During Air Travel

Published

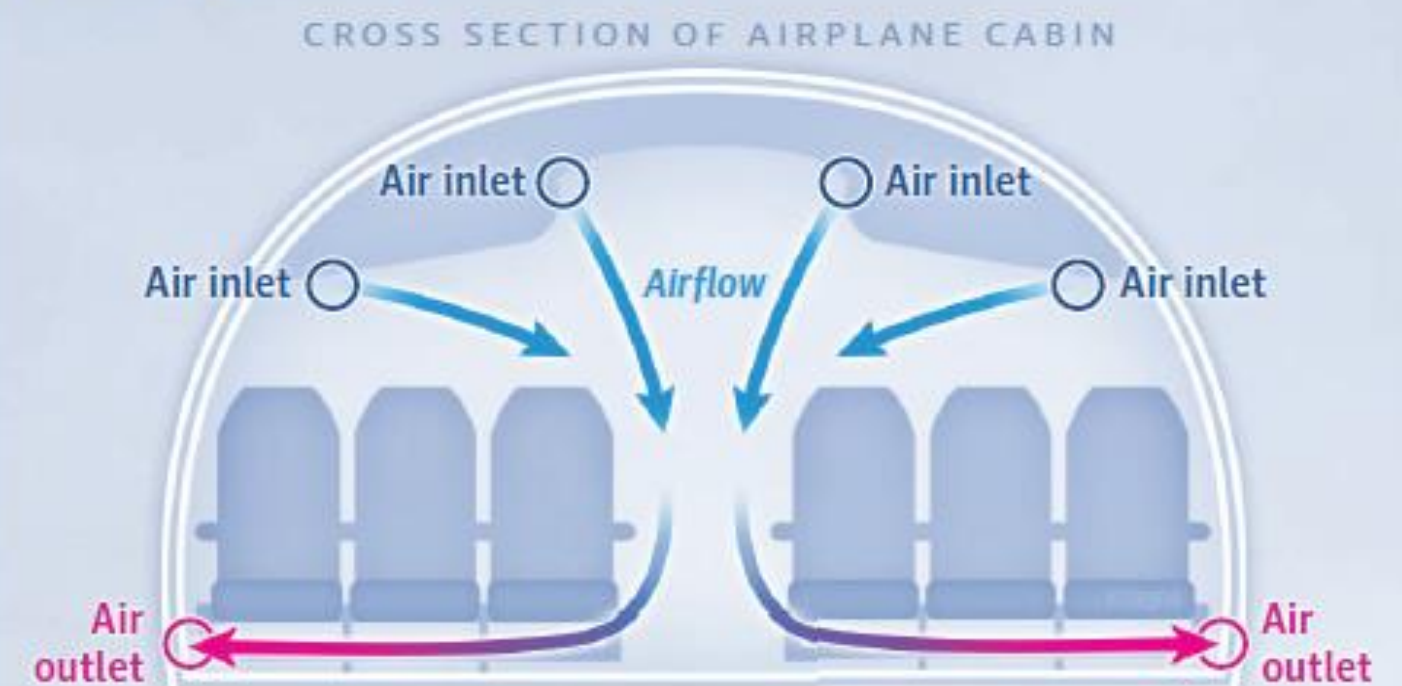
October 1, 2020, [JAMA](#)

- In the aircraft, air enters the cabin from overhead inlets and flows downwards toward floor level outlets and airflow is much faster than normal indoor buildings. In the cabin air enters and leaves at the same seat row or nearby rows. There is little airflow forward and backwards between rows that make it less likely to spread respiratory particles between rows. Furthermore, seat backs provide a physical barrier, and most passengers remain seated with little face to face contact.
- Necessary steps are being taken at the airports, and onboard such as temperature testing enhanced cleaning and disinfection, maintain physical distancing, wearing face masks, adjustment of food and beverage service to reduce contact, limiting exposure of crew members to infection, facilitation of contact tracing in the event that a passenger develops infection etc.

### Air travel and COVID-19

The risk of contracting COVID-19 during air travel is low. Modern airplanes maintain clean air by circulating a mix of fresh air and air recycled through HEPA filters, the same type of air filters used in hospital operating rooms.

Air enters the cabin from overhead air inlets and flows downward toward floor level outlets at the same seat row or nearby rows. There is little airflow forward and backward between rows.



✓ Stay seated whenever possible, and follow crew instructions





# THANK YOU

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