

# SCIENTIFIC RESEARCH MONITORING ON COVID-19

**16 SEPTEMBER 2020**

For accessing the full series of published scientific reports please visit the following link:  
<https://www.doh.gov.ae/ar/covid-19/Healthcare-Professionals/Scientific-Publication>

# SCIENTIFIC RESEARCH MONITORING ON COVID-19

## (ISSUE 227)

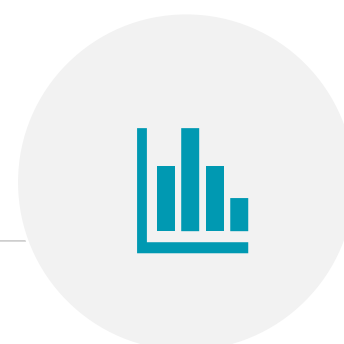


Abu Dhabi Public Health Center (ADPHC) is gathering the latest scientific research updates and trends on coronavirus disease (COVID-19) in a daily report. The report provides summaries on breakthrough or updated research on COVID-19 to allow health care professionals and public health professionals get easy and fast access to information.

Click on icon to view content



**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](mailto: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).

Click on icon to view content

## Treatment

Understanding Clinical Decision-Making During the COVID-19 Pandemic: A Cross-Sectional Worldwide Survey

## Treatment

Hydrocortisone Likely to Reduce Need for Organ Support Interventions in Critically Ill COVID-19 Patients

## Transmission

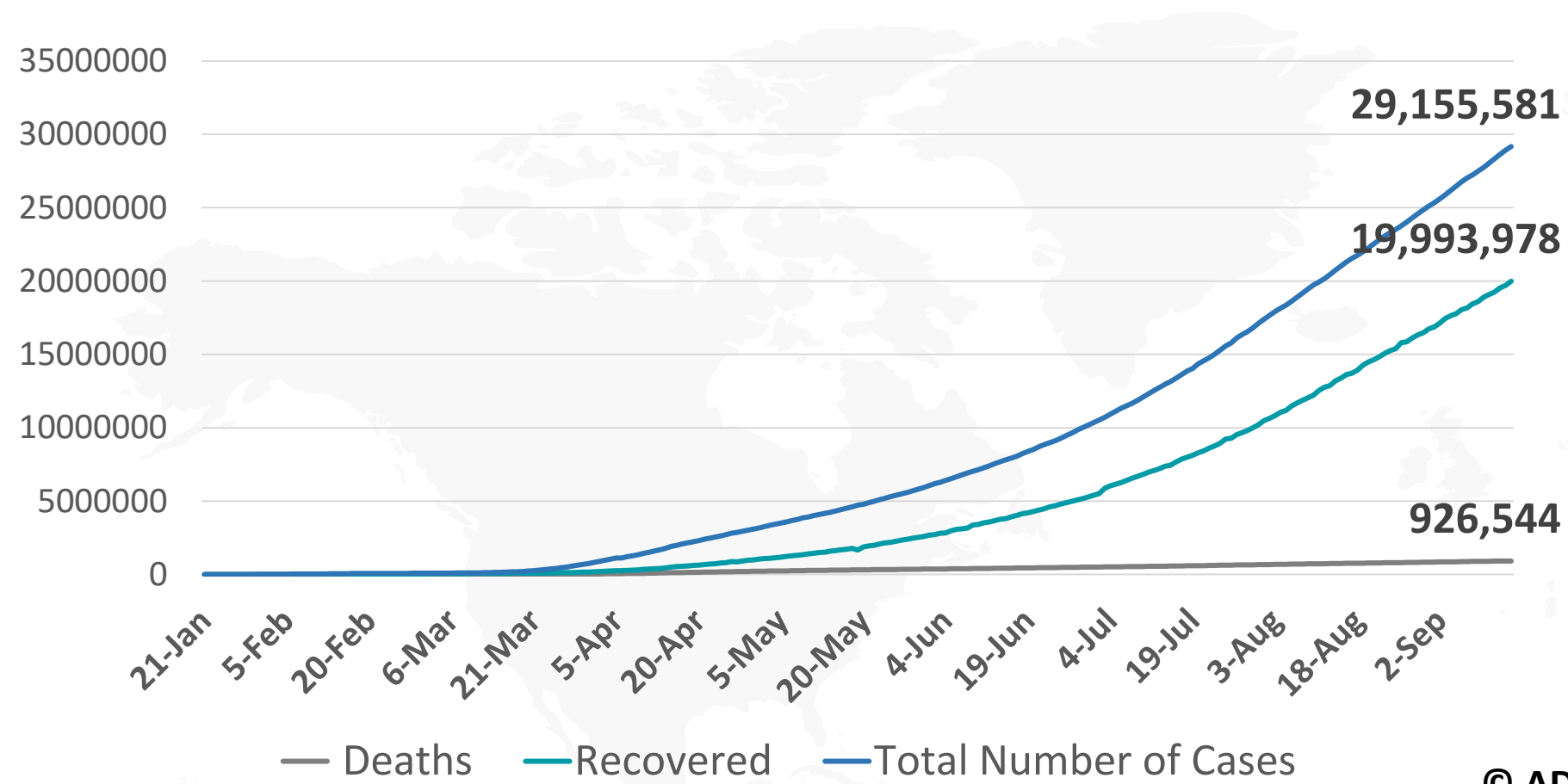
Investigation of SARS-CoV-2 Outbreaks in Six Care Homes in London, April 2020

## Vaccine

Current State of Vaccine Development and Targeted Therapies for COVID-19: Impact of Basic Science Discoveries

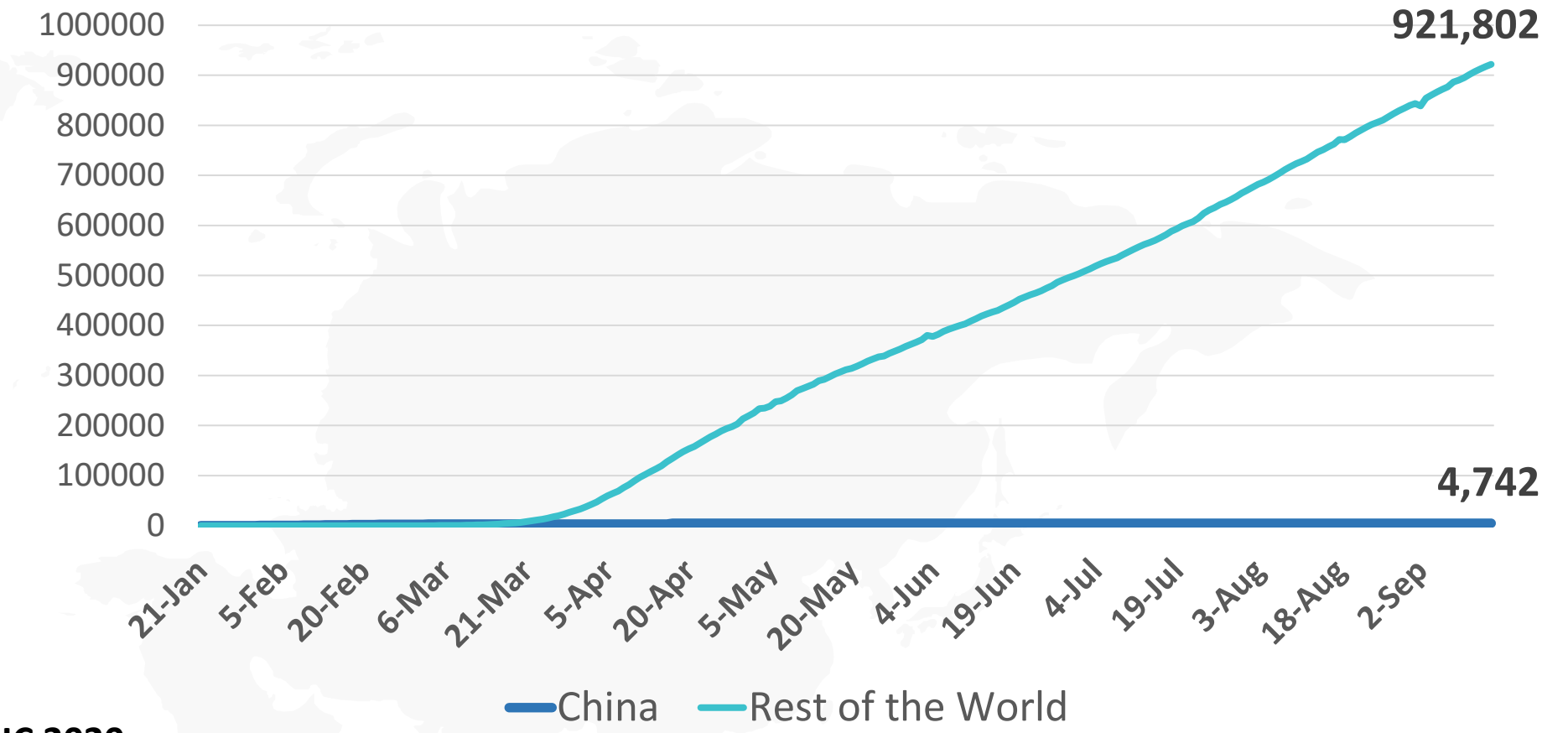


**Figure 1: Total Number of Infected, Recovered, and Death Cases**

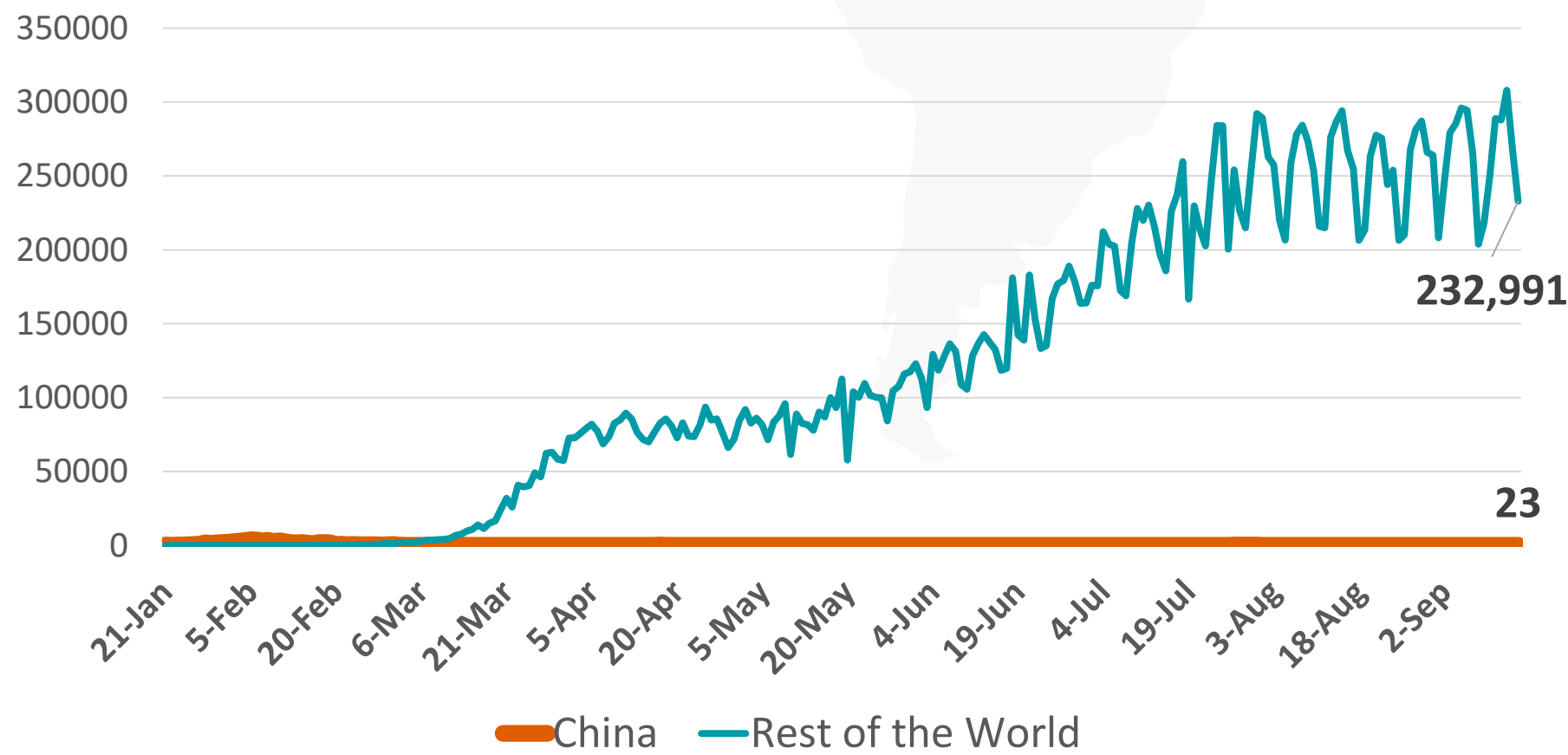


© ADPHC 2020

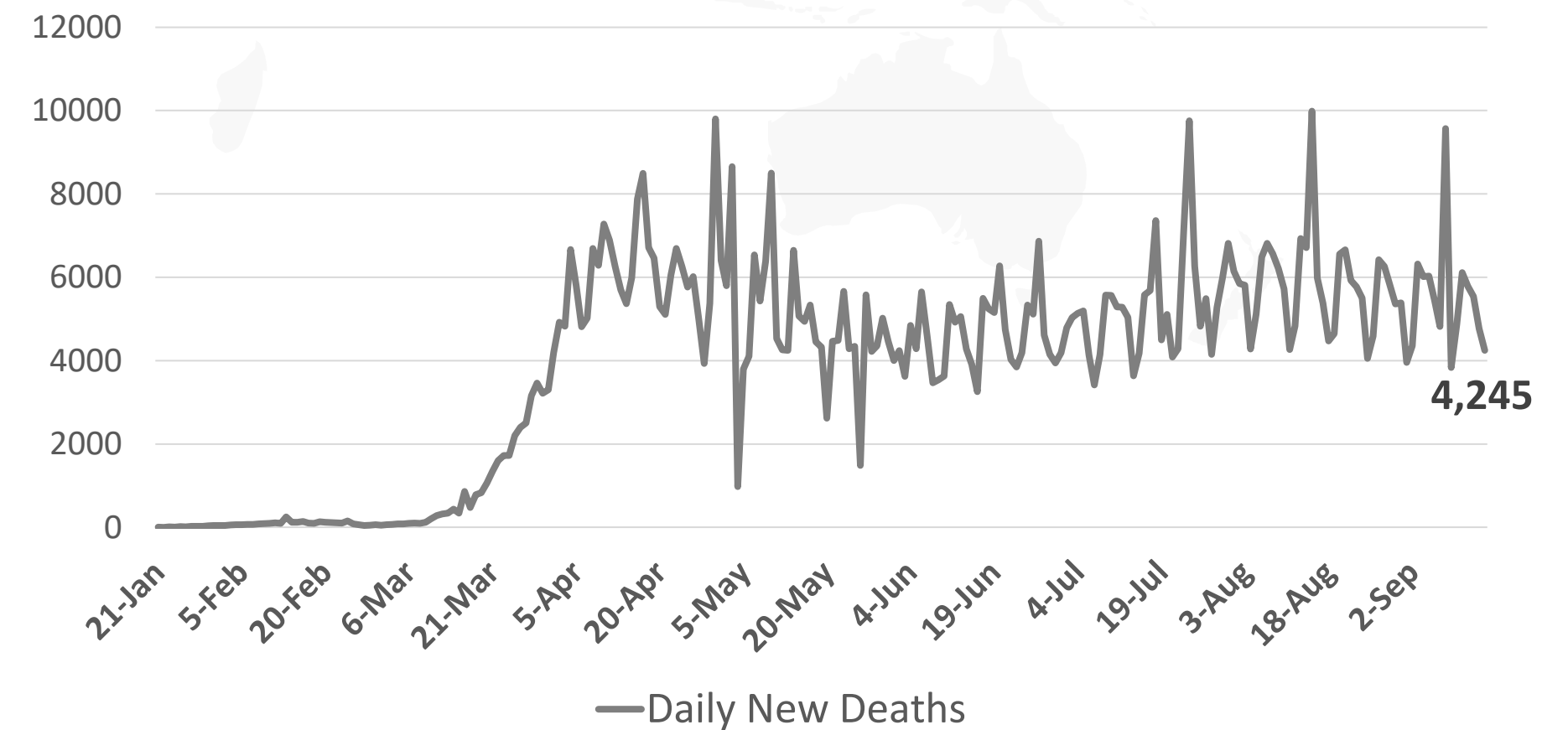
**Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)**



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

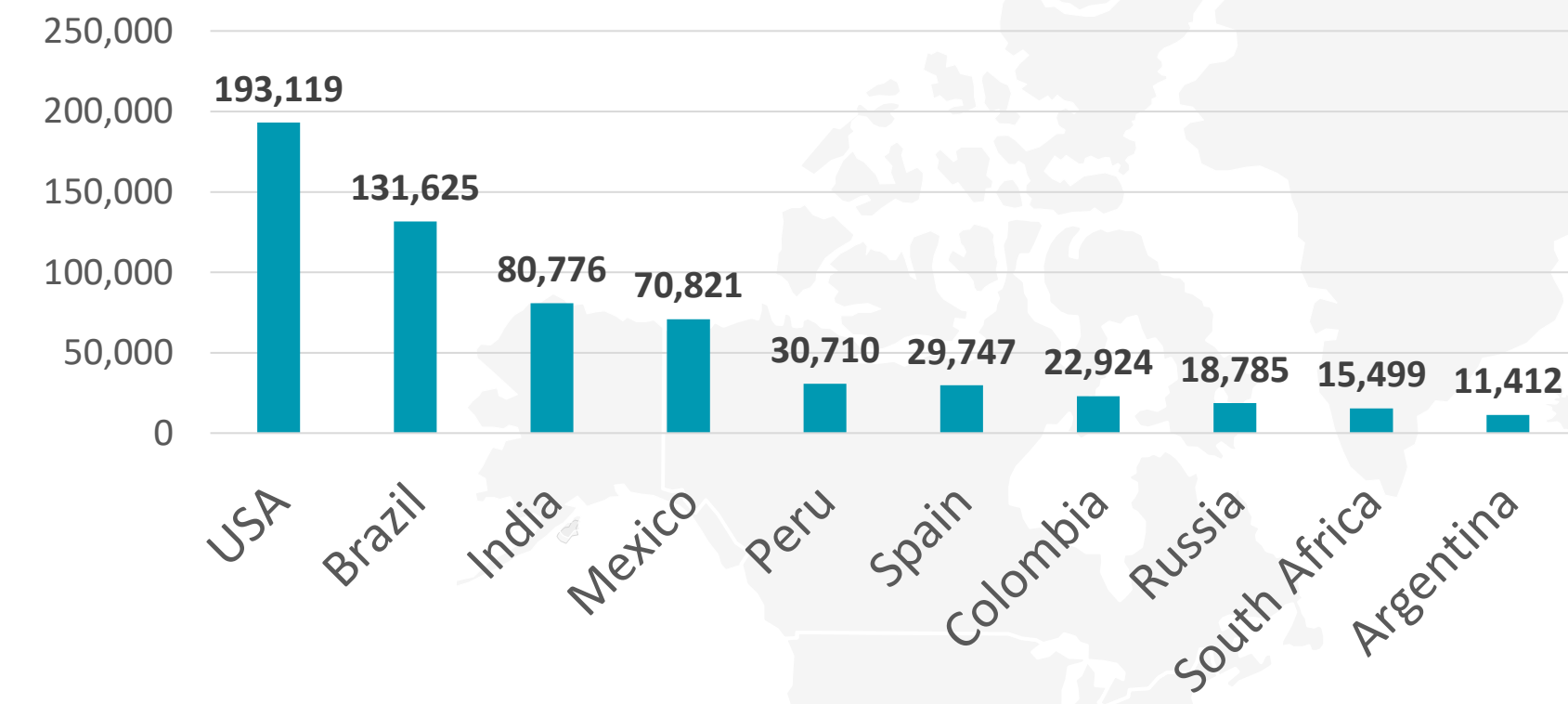


**Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)**

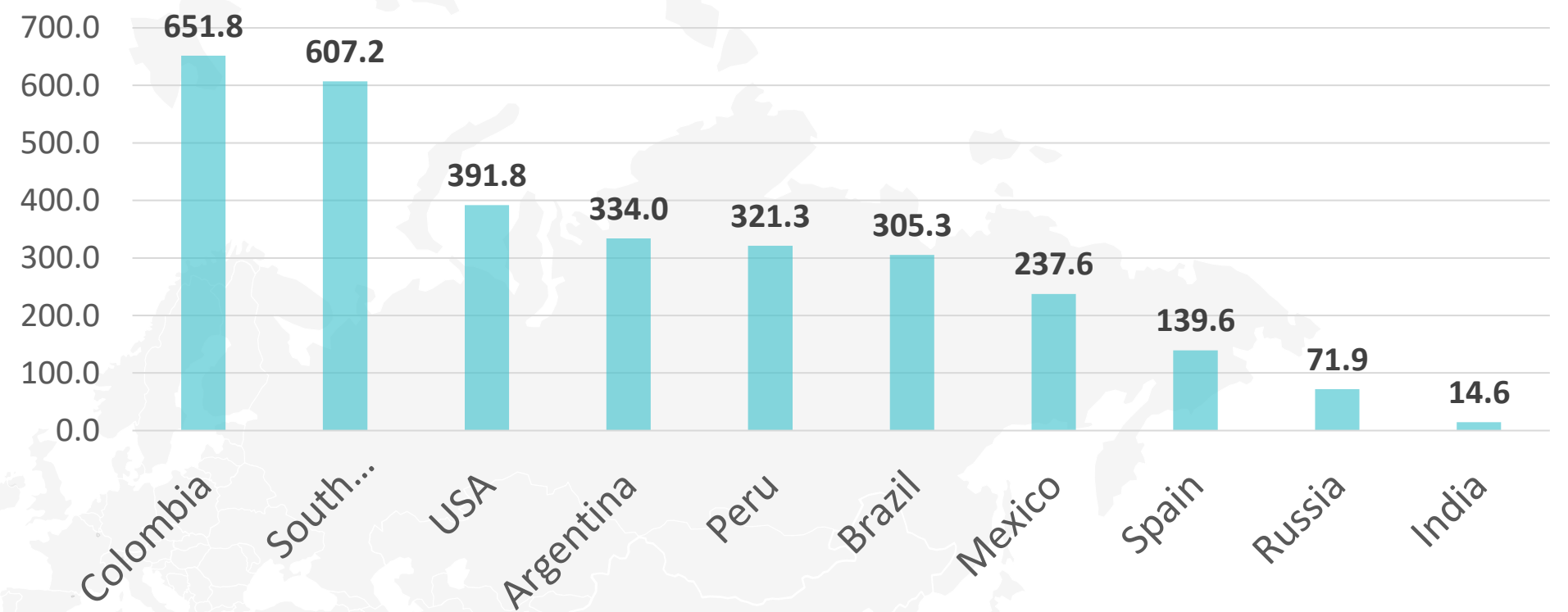


## Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

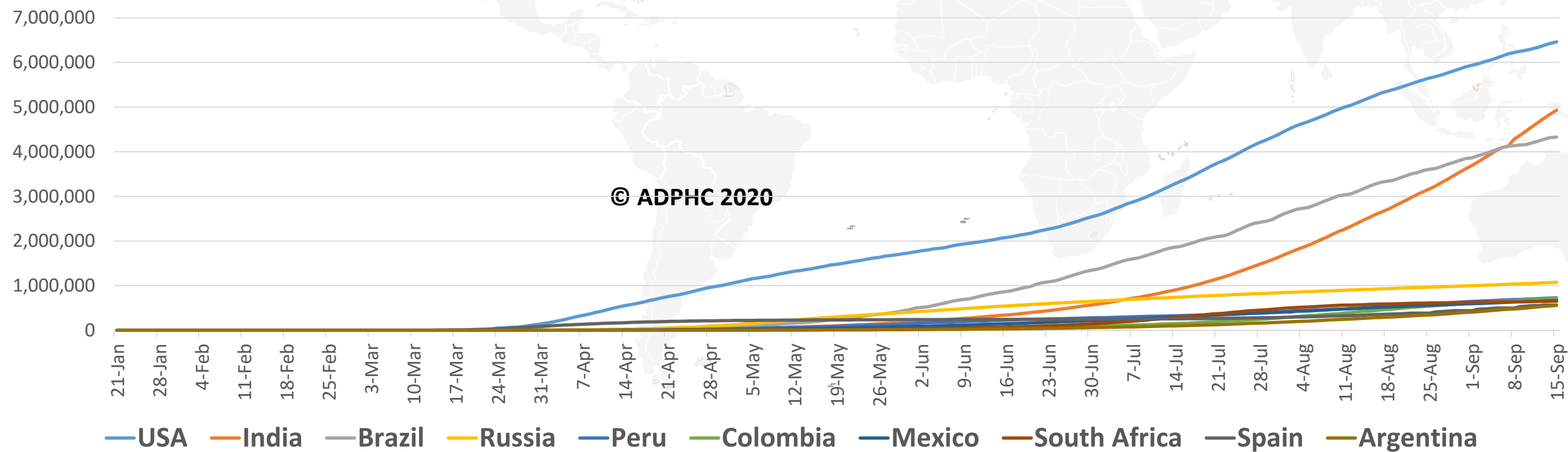
### TOTAL DEATHS



### DEATHS PER MILLION

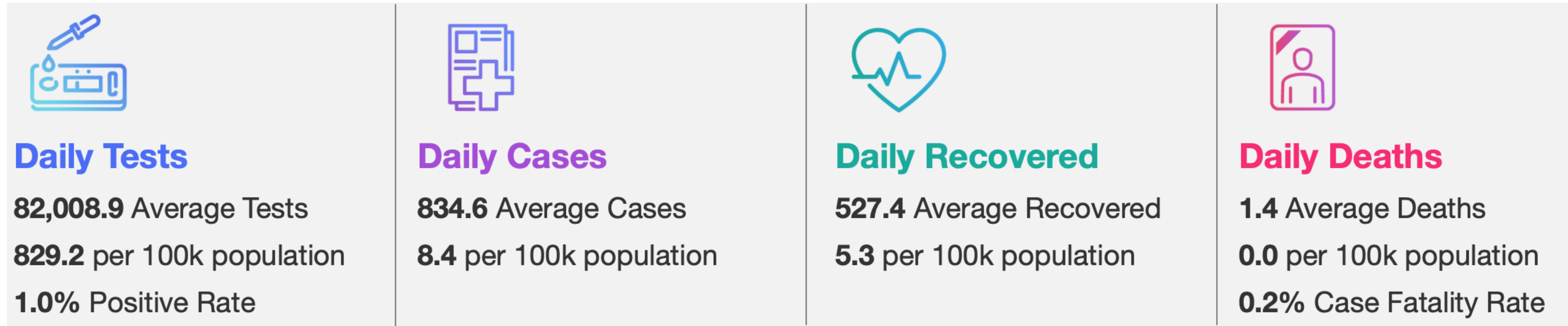


### TOTAL INFECTED CASES

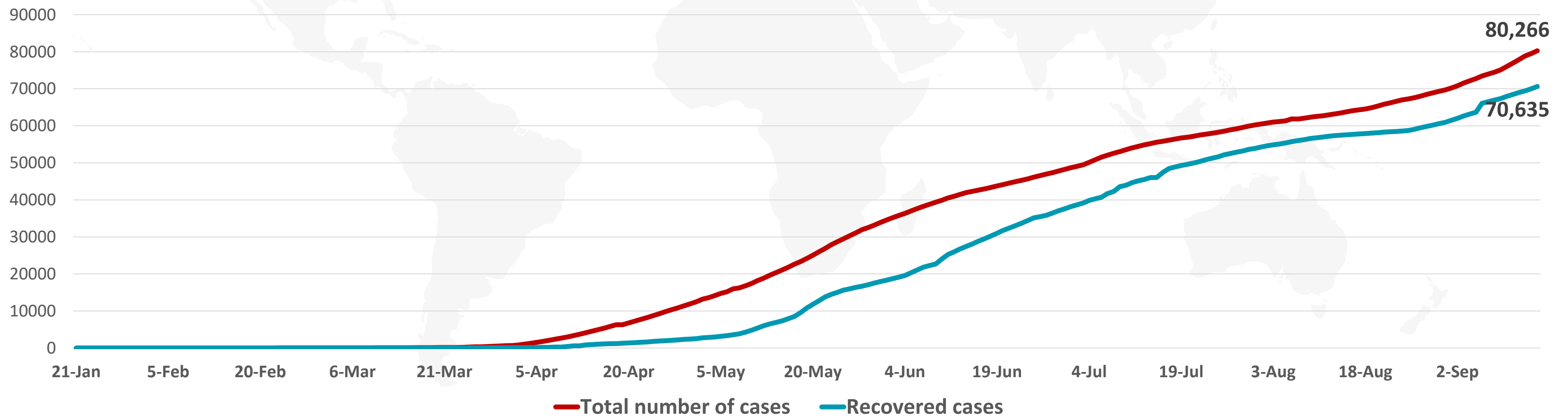


USA	6,462,135
Brazil	4,930,236
India	4,330,455
Russia	1,073,849
Peru	729,619
Colombia	716,319
Mexico	668,381
South Africa	650,749
Spain	566,326
Argentina	555,537

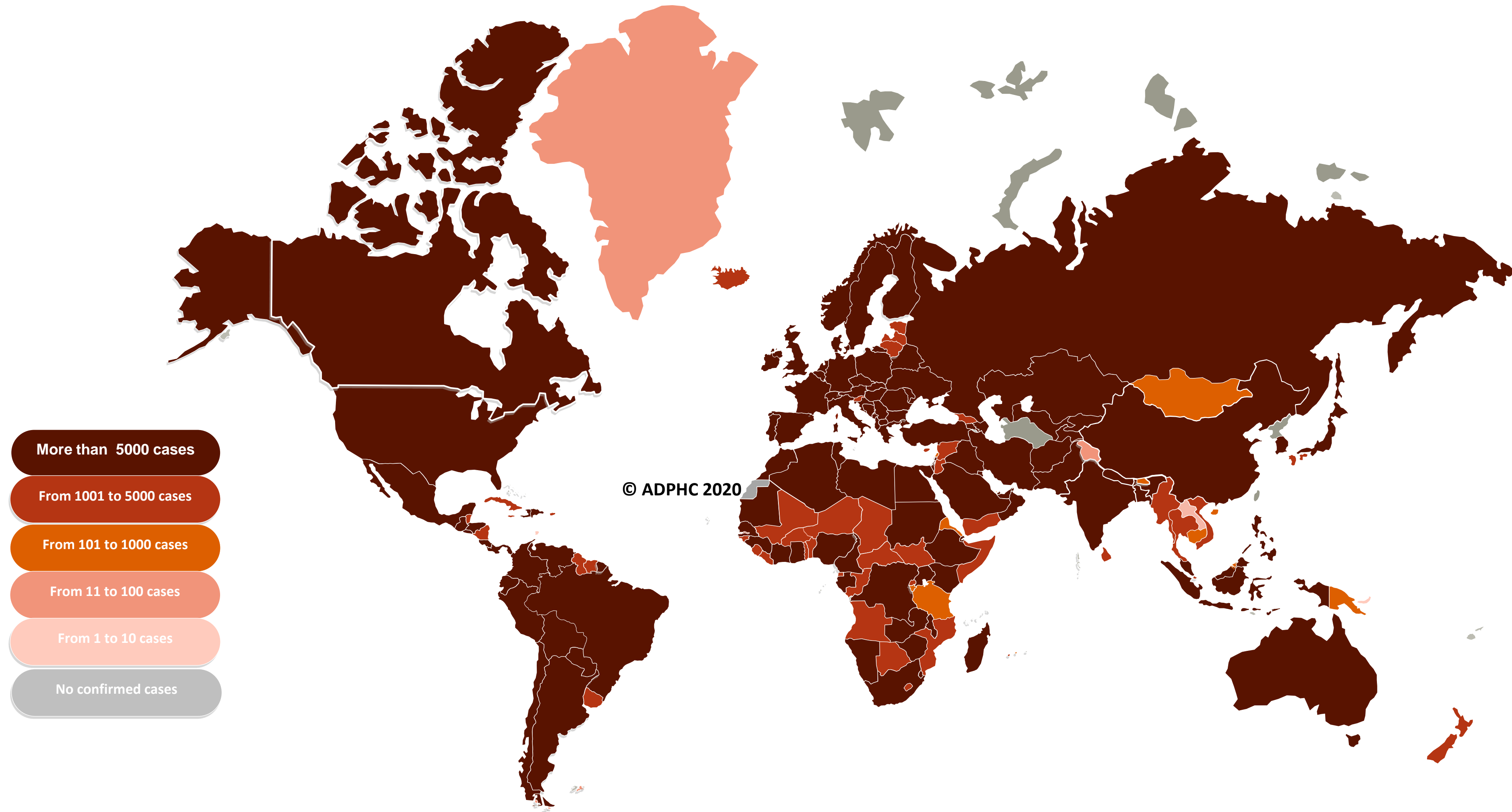
**Figure 6: COVID-19 Status in the UAE** (Federal Competitiveness and Statistics Authority Dashboard)



## 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

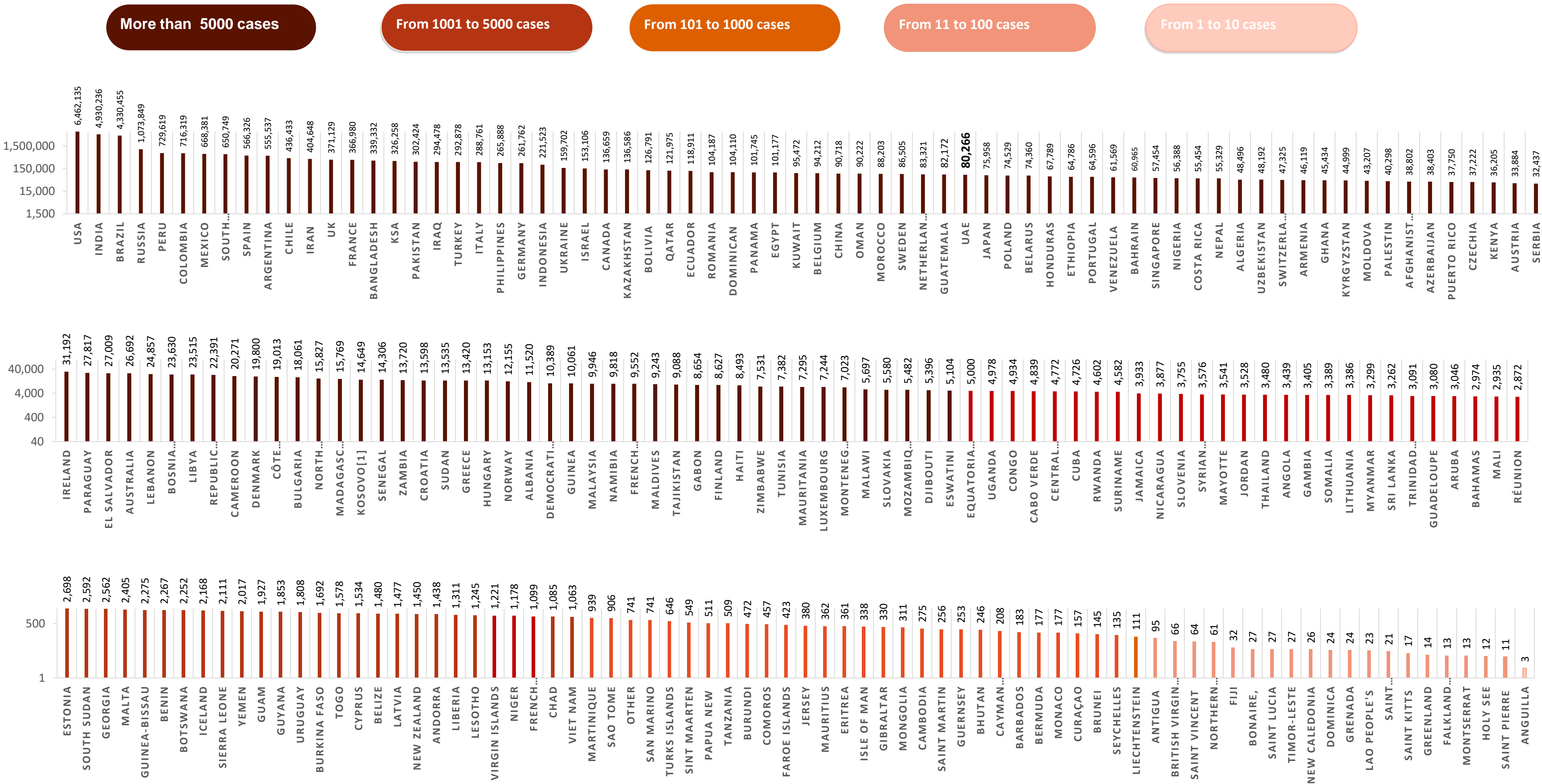
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

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



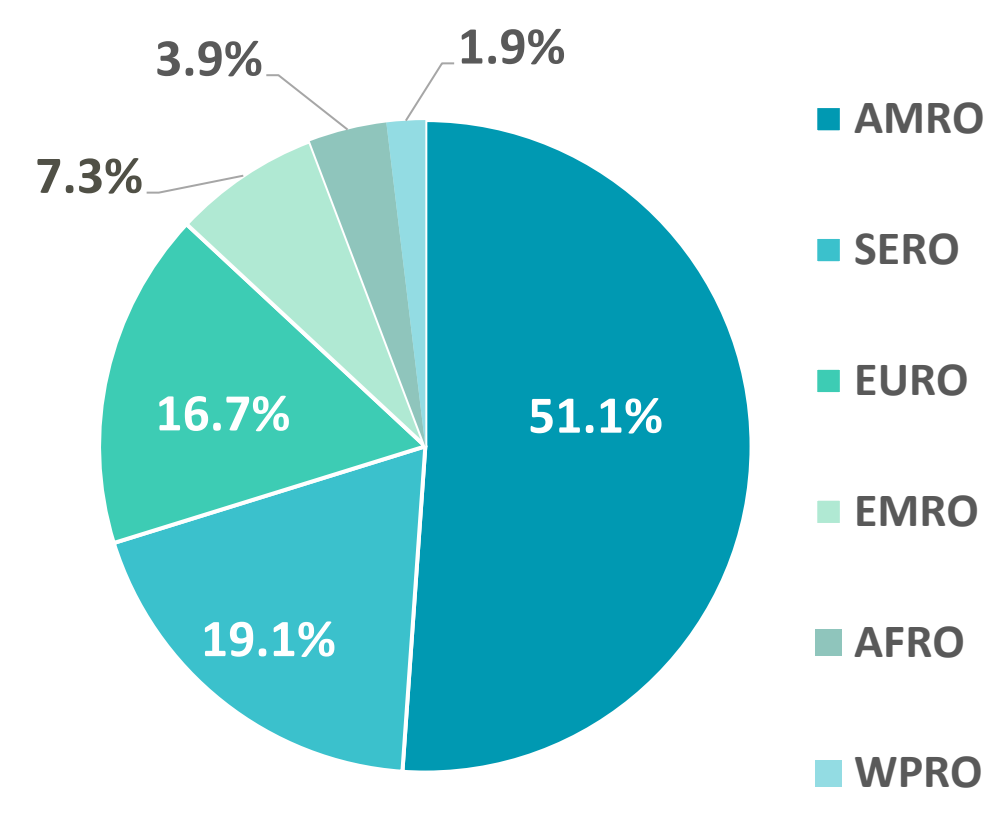
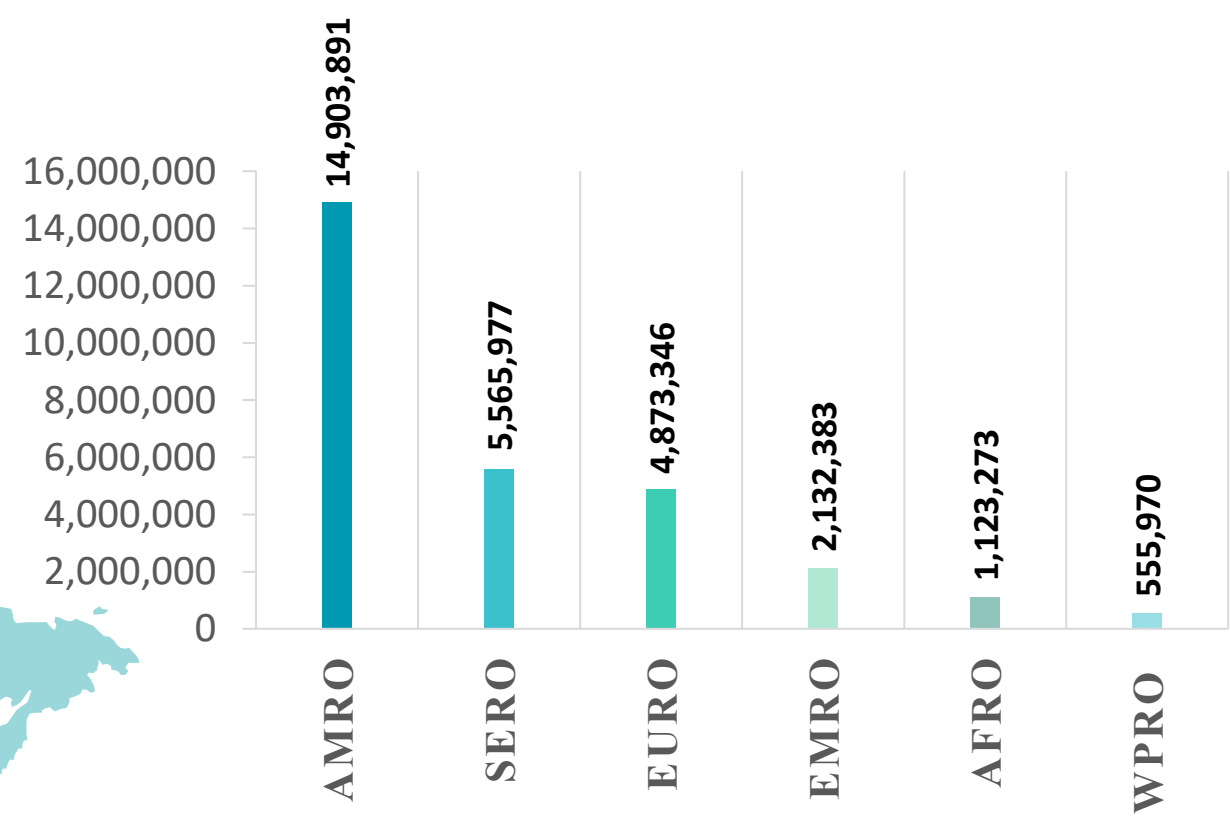
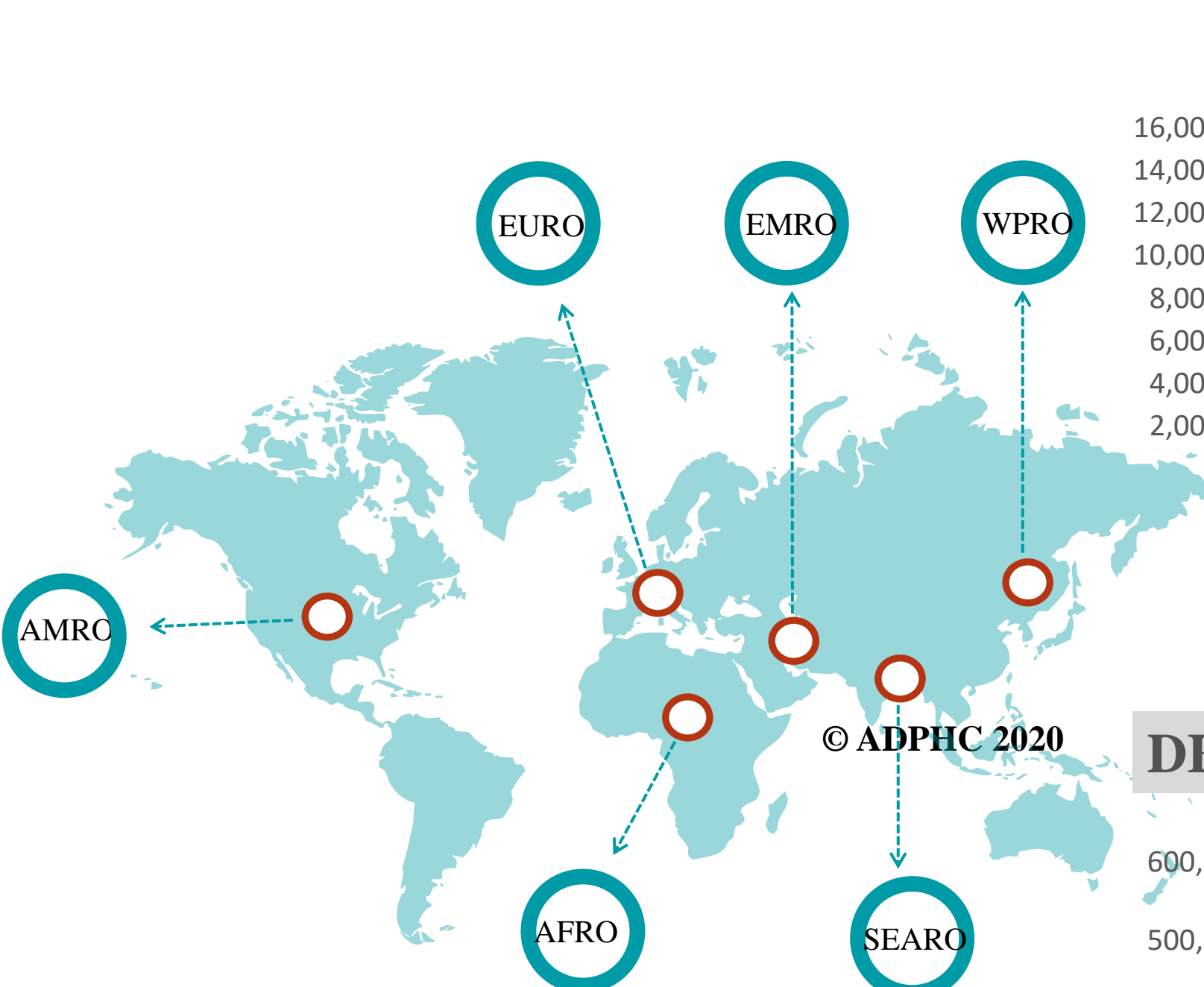
Other\*: includes cases and deaths reported under the international conveyance(Diamond Princess)



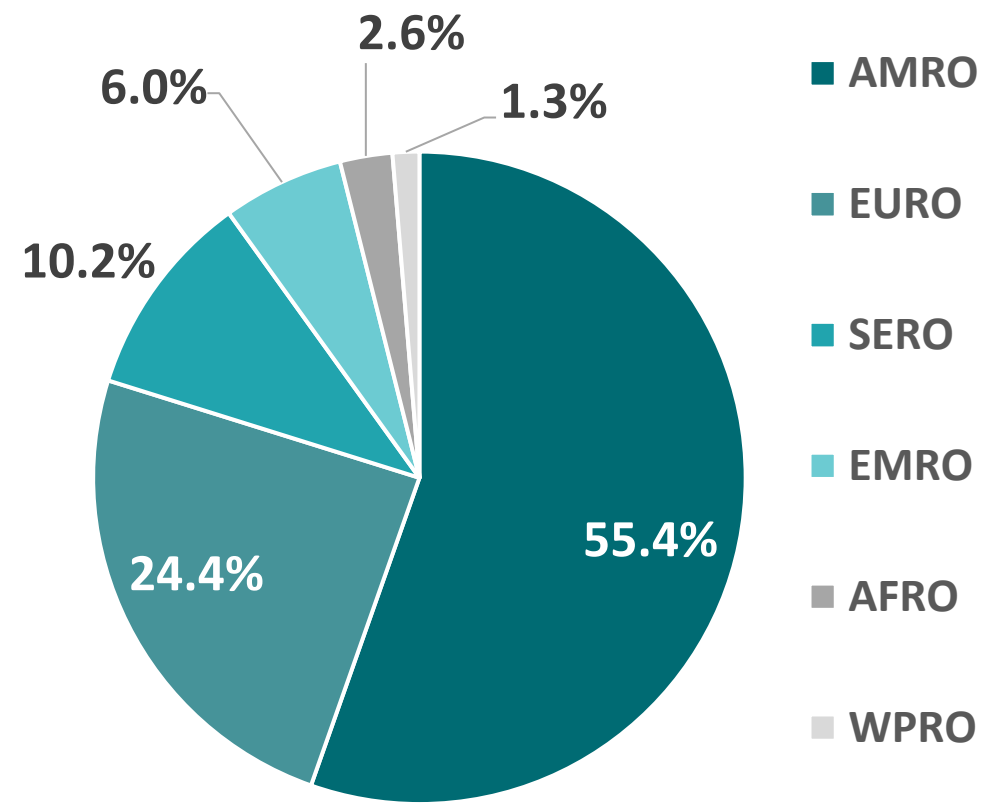
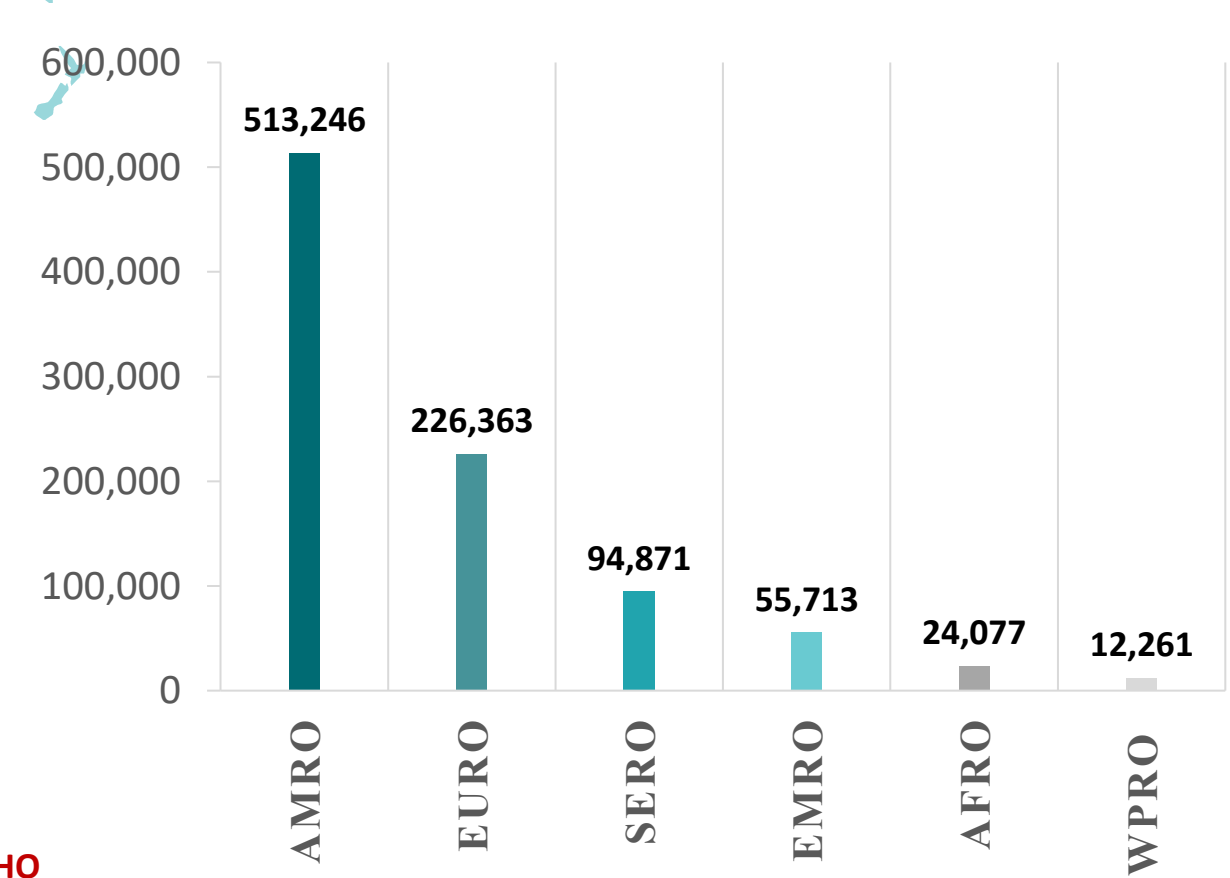


Figure 8: Global Distribution of COVID-19 Cases per Region

## INFECTED

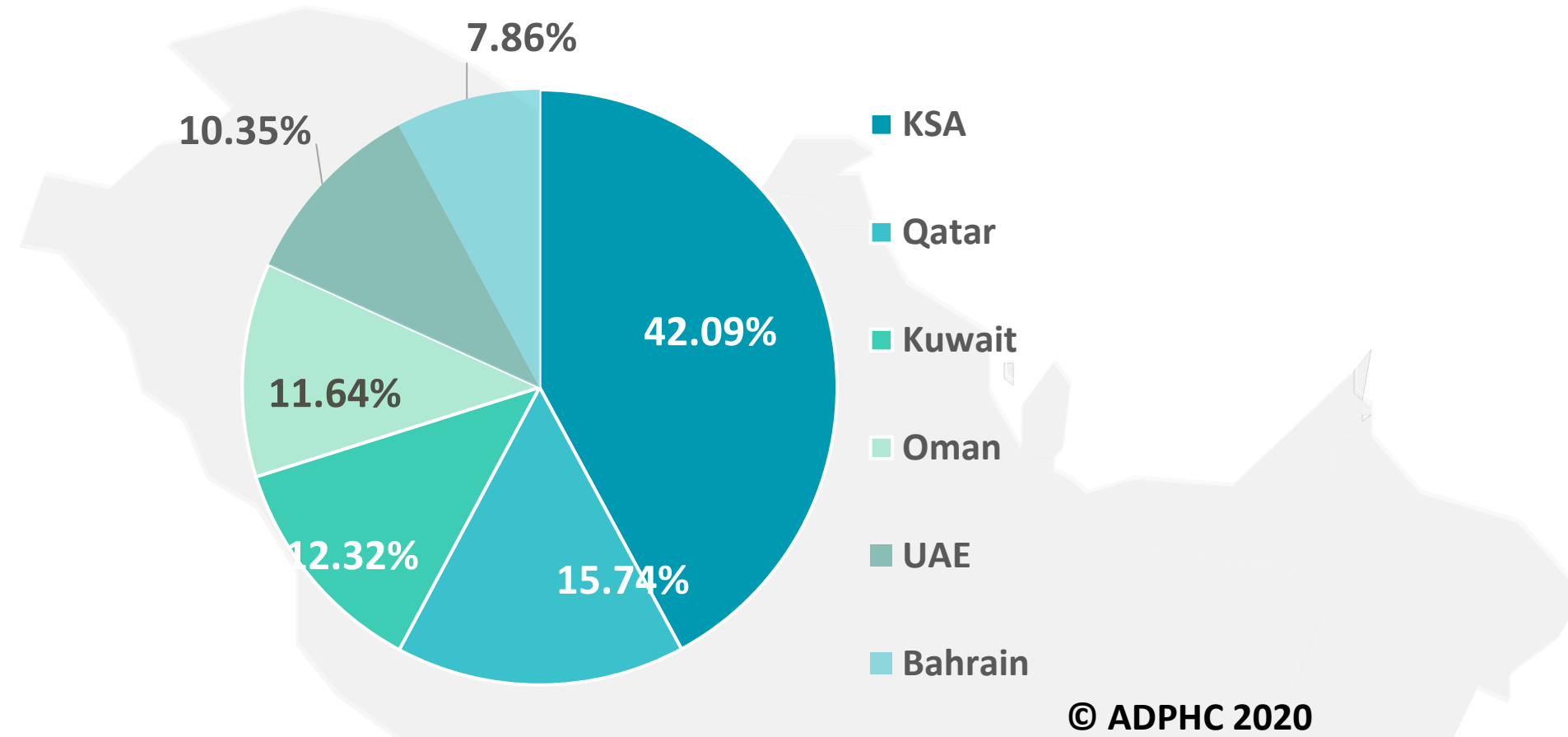


## DEATHS

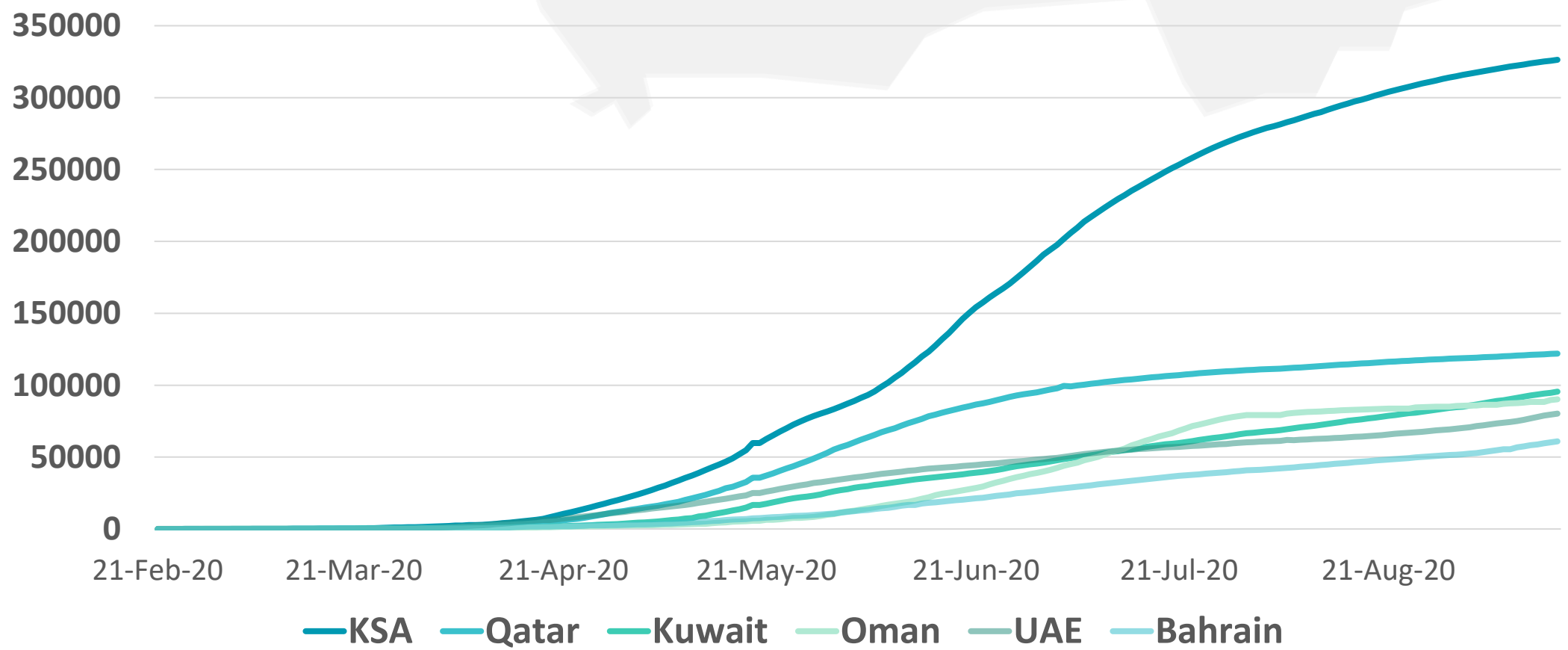
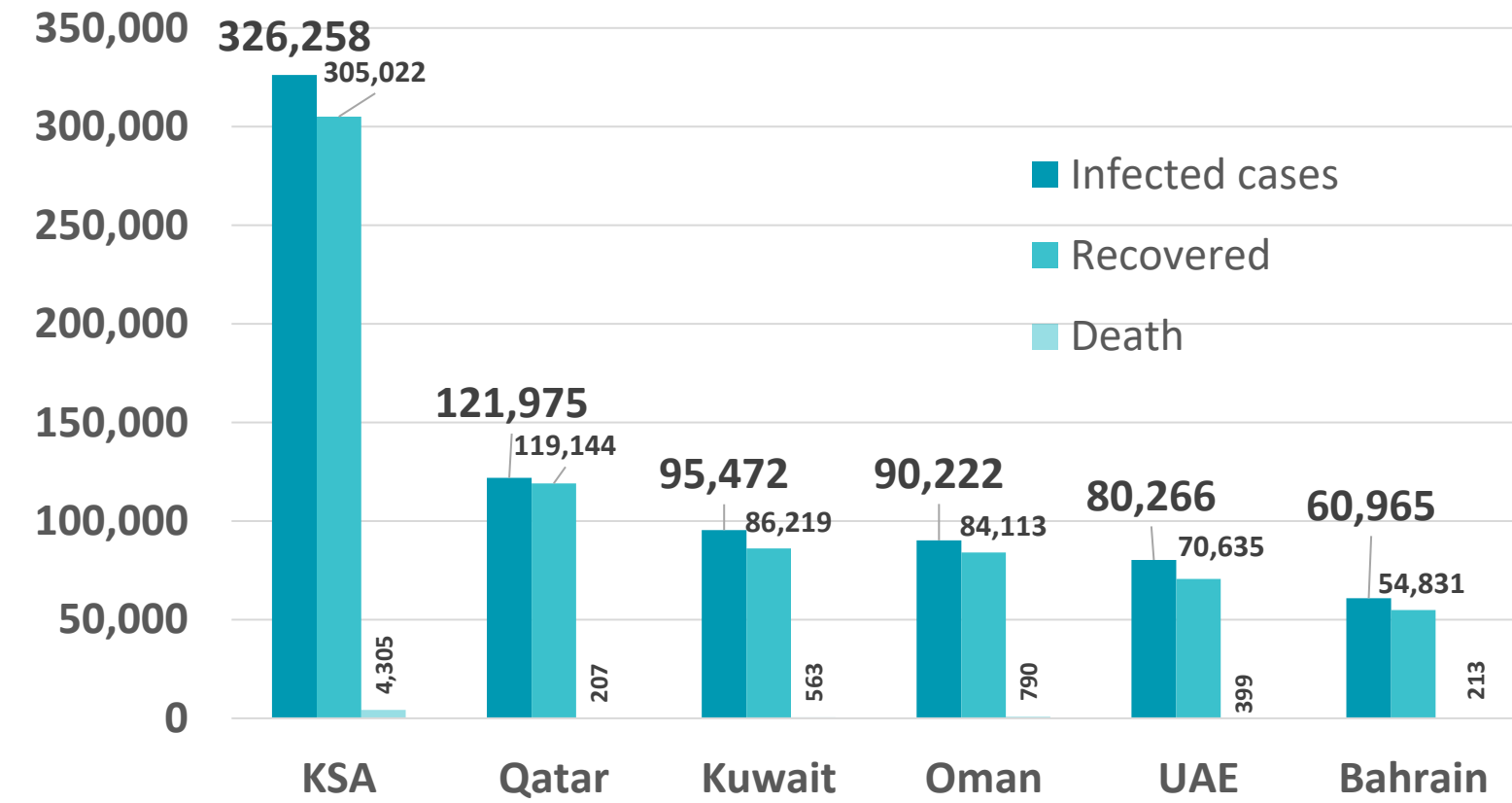


## Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

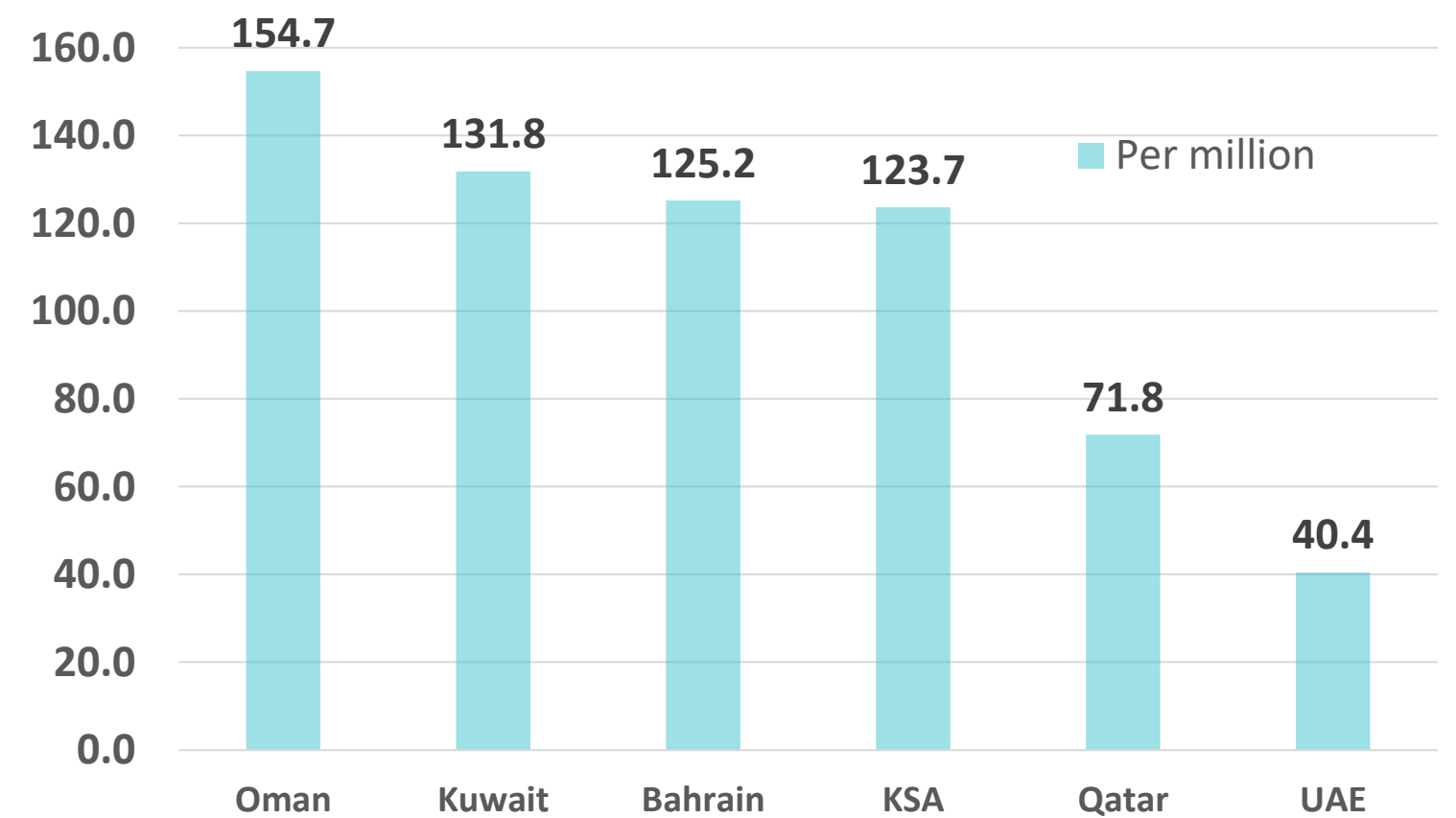
### TOTAL NUMBER OF INFECTED CASES



### TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



### DEATHS PER MILLION



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

© ADPHC 2020  
This document was developed by Abu Dhabi Public Health Center - ADPHC. The document is and shall remain the property of ADPHC and may only be used for the purposes for which it was intended. Unauthorized use or reproduction of this document is prohibited.

مركز أبوظبي للصحة العامة © 2020  
هذه الوثيقة مملوكة لمركز أبوظبي للصحة العامة، ولا يجوز استخدامها لغير الأغراض المخصصة لها. ويحظر استخدام أو إعادة إنتاج هذه الوثيقة بدون إذن

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

### UAE



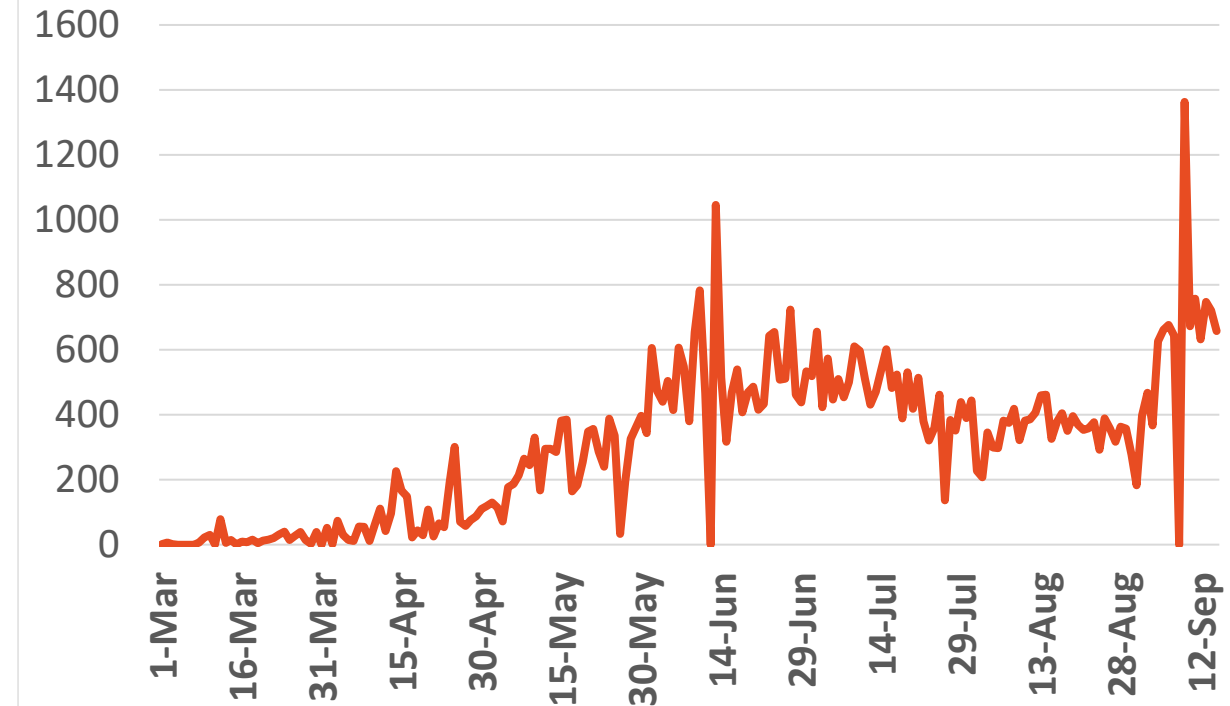
Source : National Emergency Crisis and Disaster Management Authority

### KSA



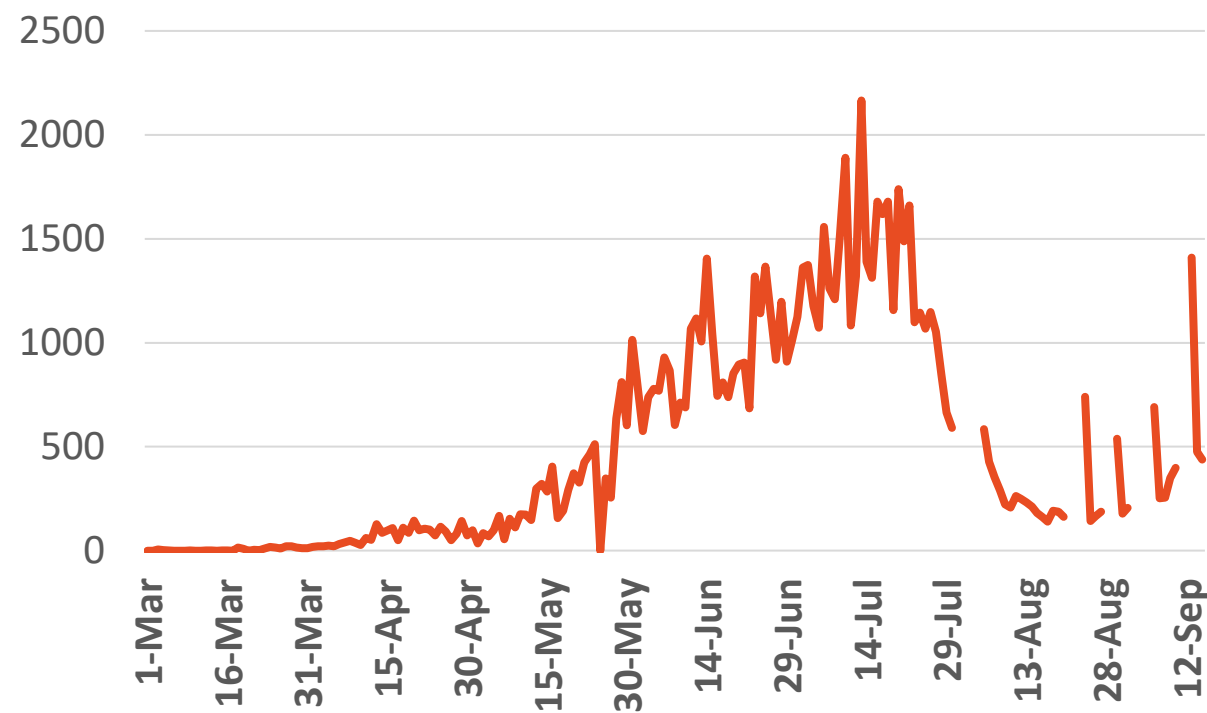
Source : KSA ministry of health

### Bahrain



Source :WHO

### Oman

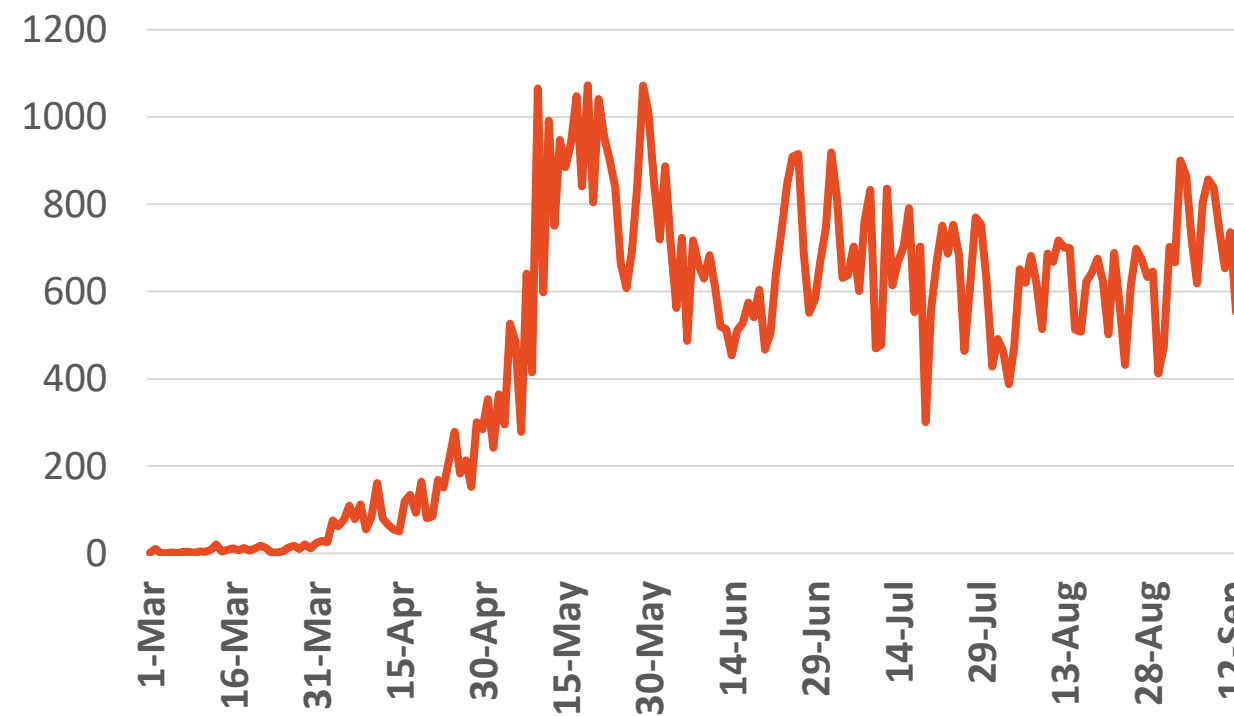


Source :Oman ministry of health

\*No announced statistic data from 31 July to 4 August, 21 to 23 August & from 28 to 30 August, 2, 4, 5, 11 & 12 September  
\*No announced statistic data on weekends and official holidays.

### Kuwait

© ADPHC 2020



Source : Kuwait ministry of health

### Qatar



Source : Qatar ministry of health



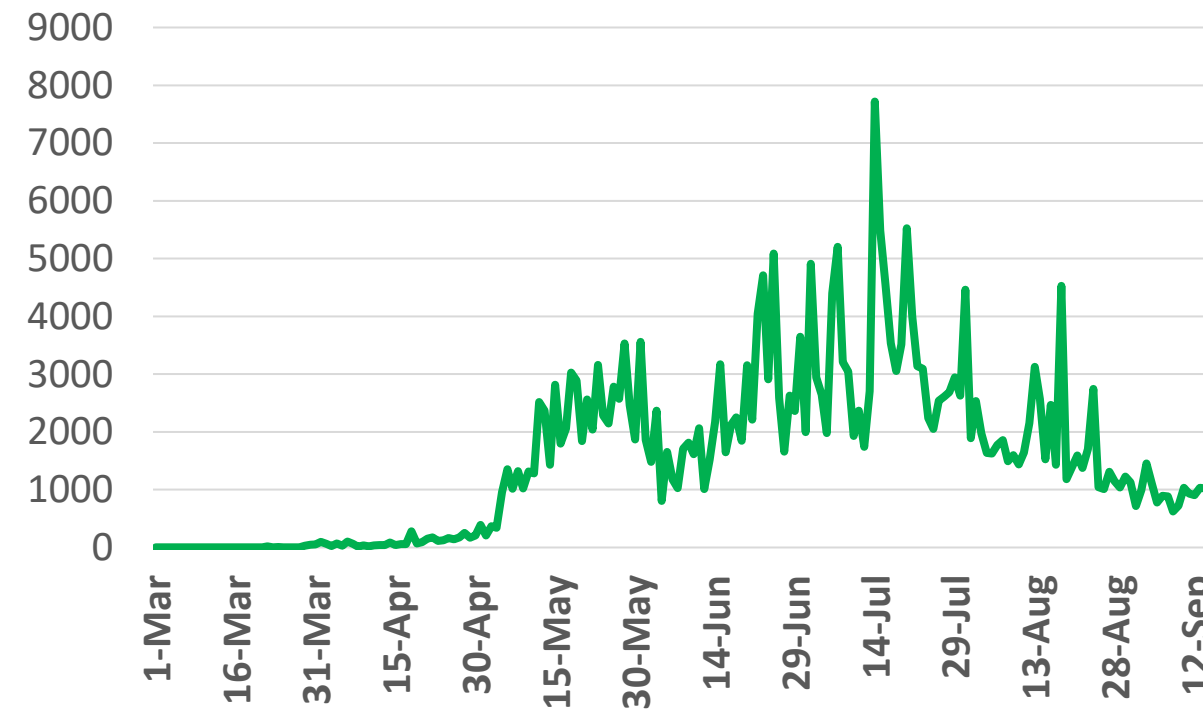
**Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries**

## UAE



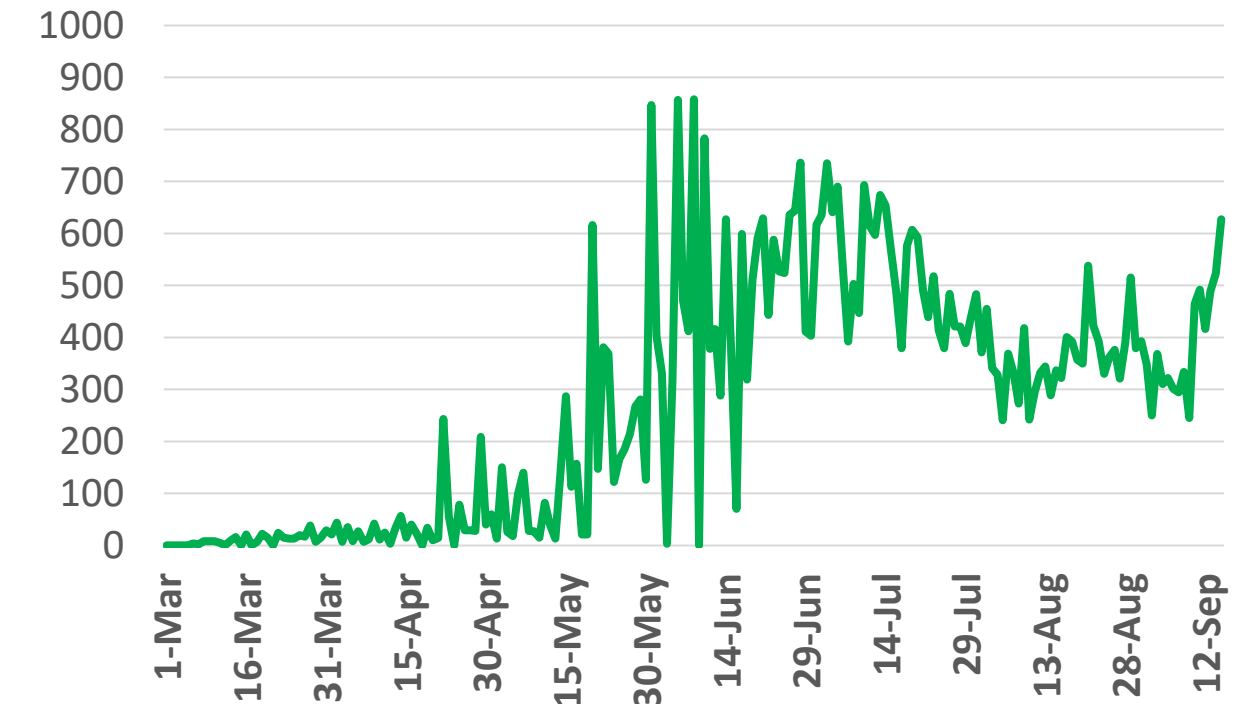
Source : National Emergency Crisis and Disaster Management Authority

## KSA



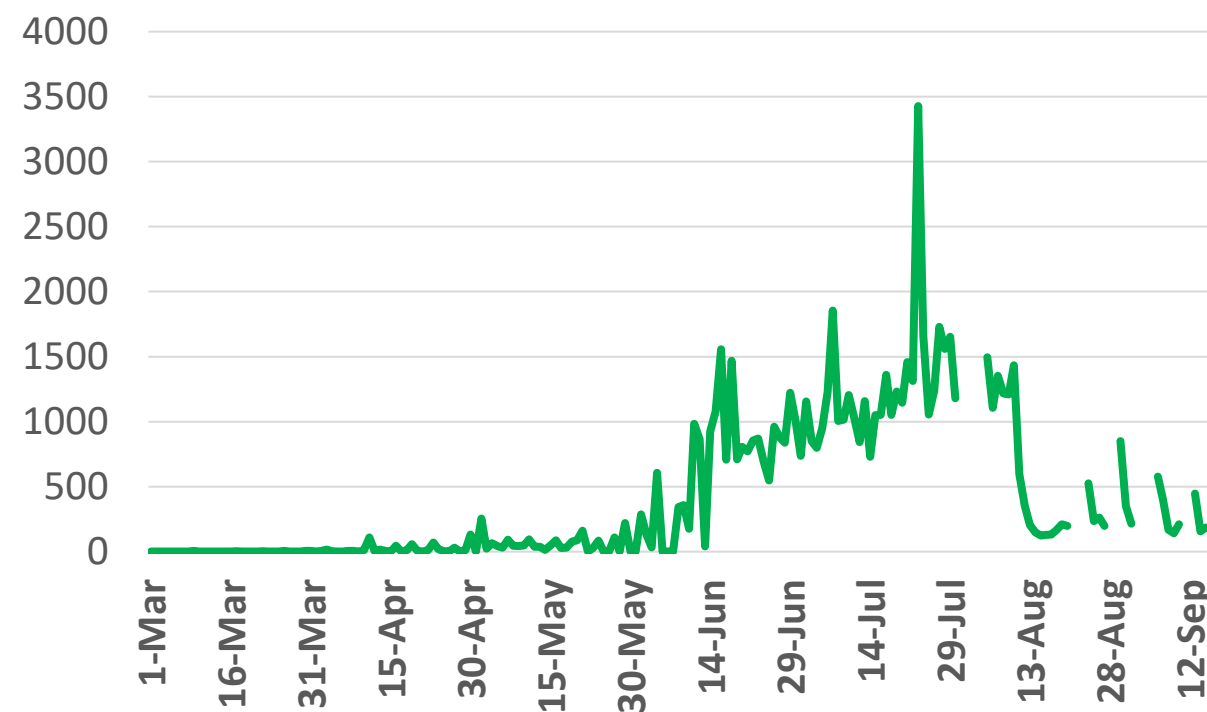
Source : KSA ministry of health

## Bahrain



Source : Bahrain ministry of health

## Oman



Source : Oman ministry of health

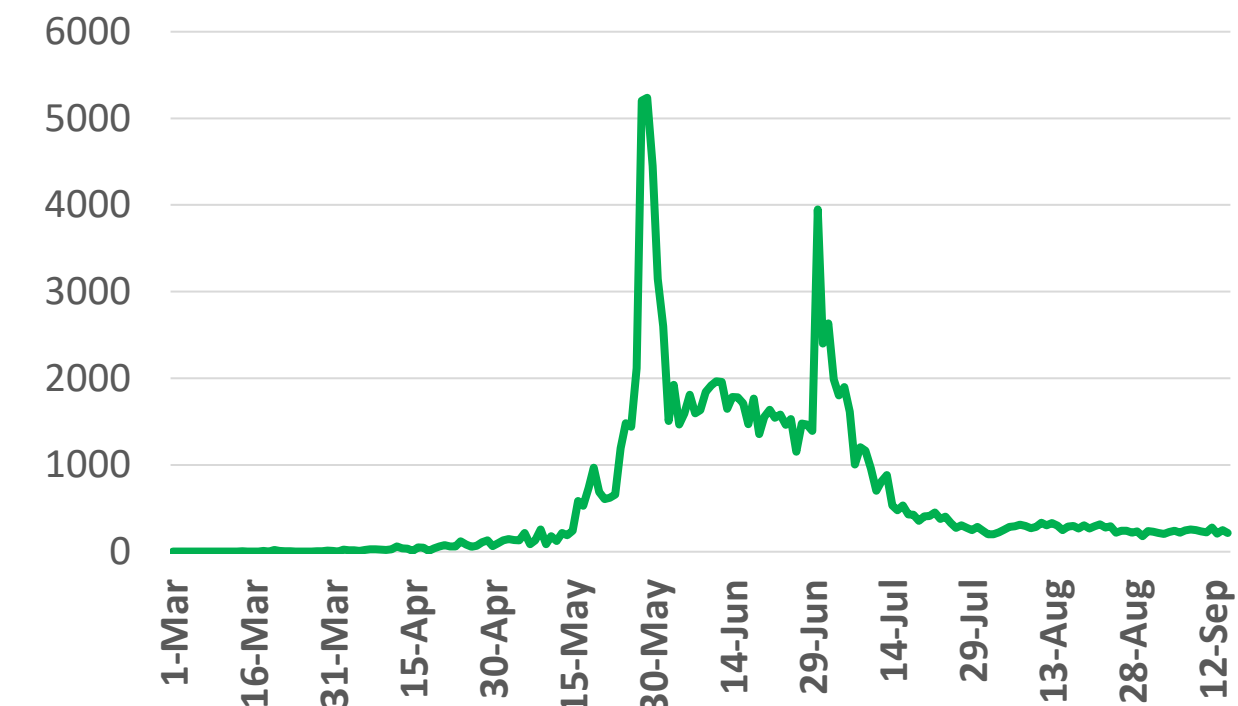
## Kuwait

© ADPHC 2020



Source : Kuwait ministry of health

## Qatar



Source : Qatar ministry of health

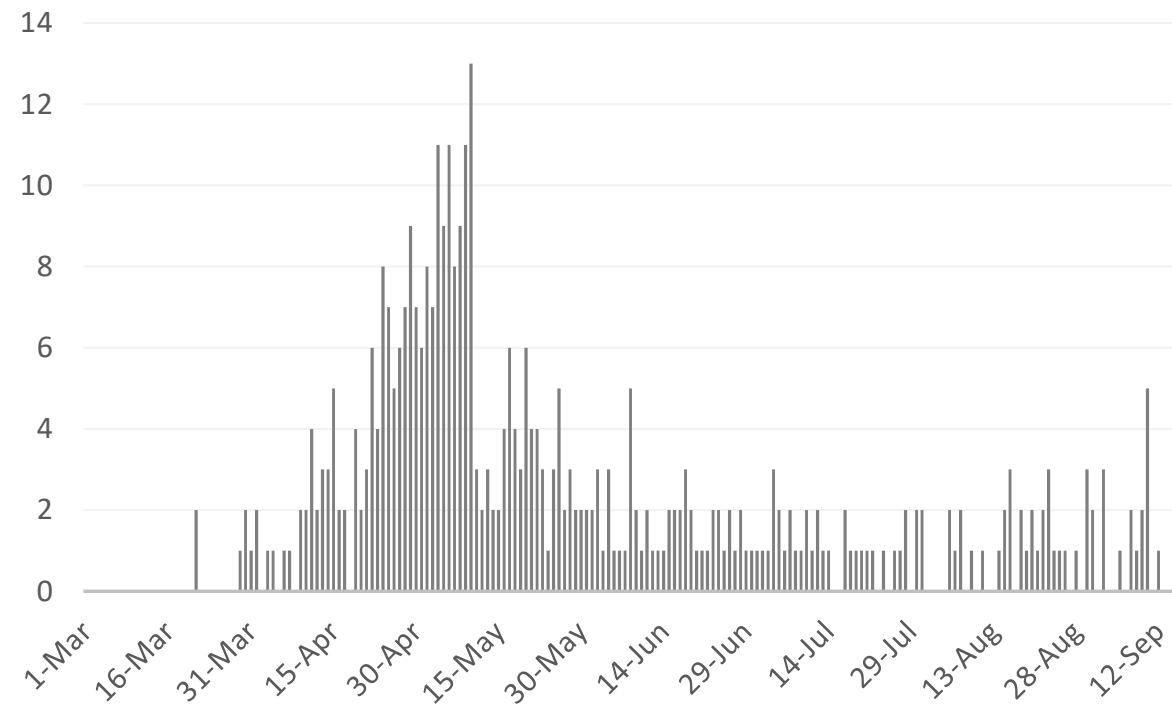
\*No announced statistic data from 31 July to 4 August, 21 to 23 August & from 28 to 30 August, 2, 4, 5, 11 & 12 September

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



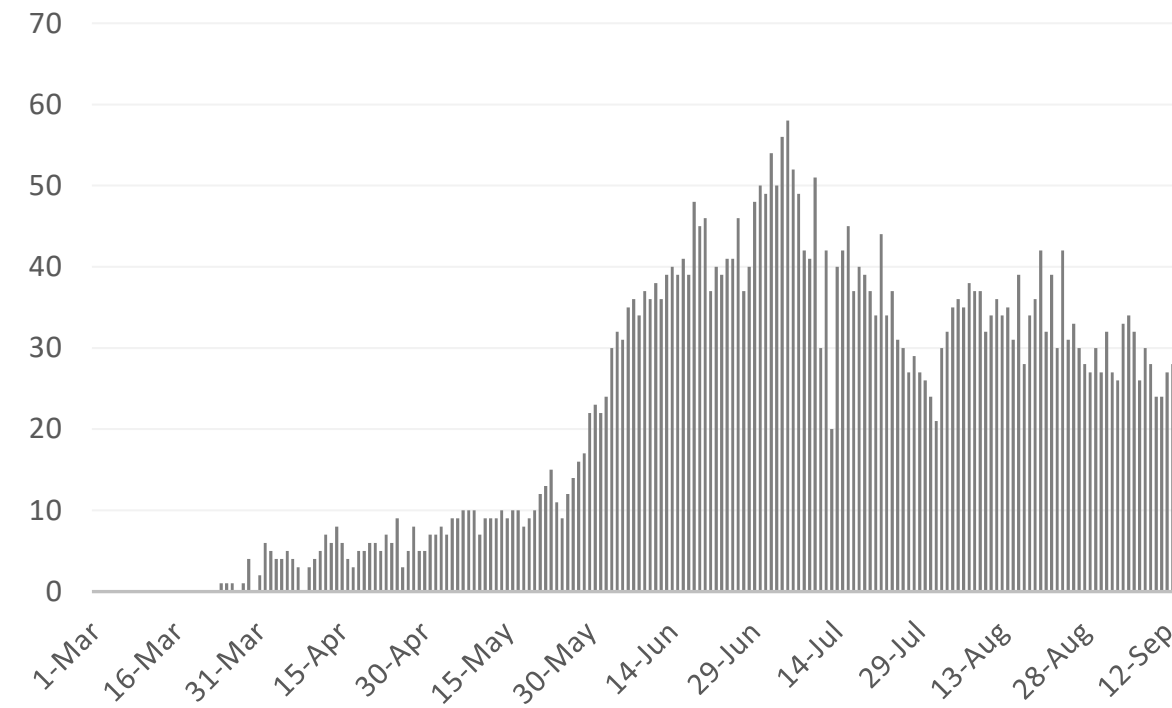
## Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

### UAE



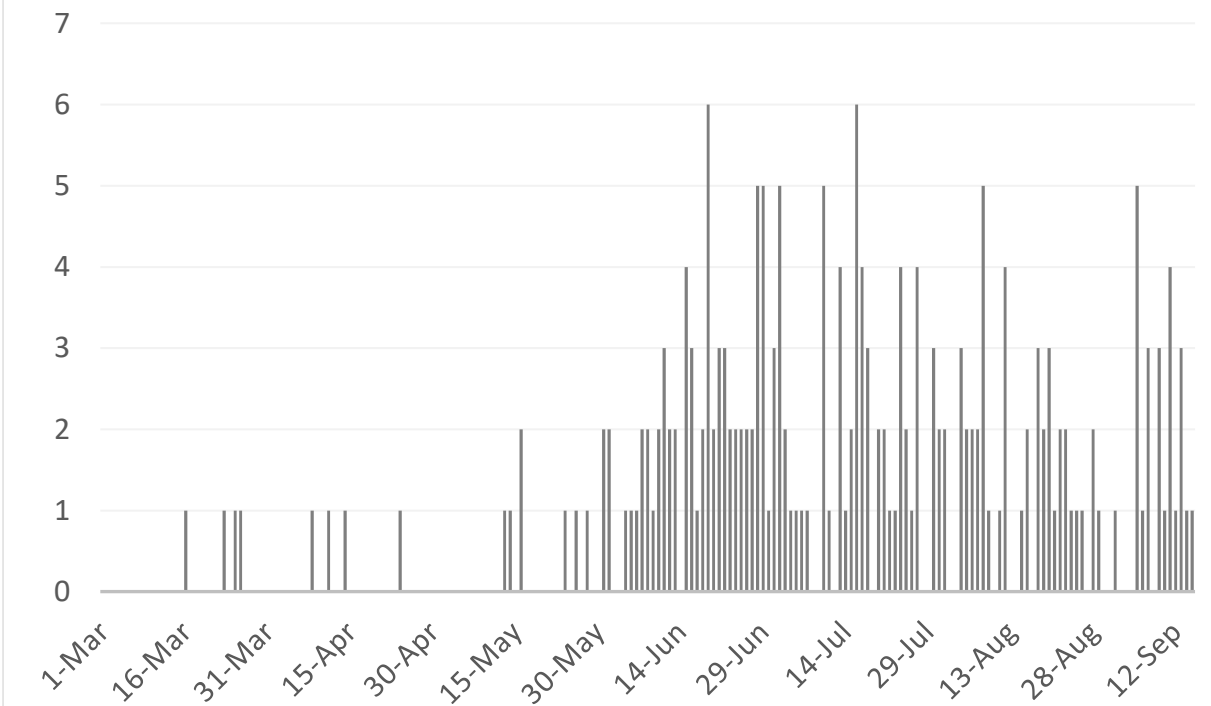
Source : National Emergency Crisis and Disaster Management Authority

### KSA



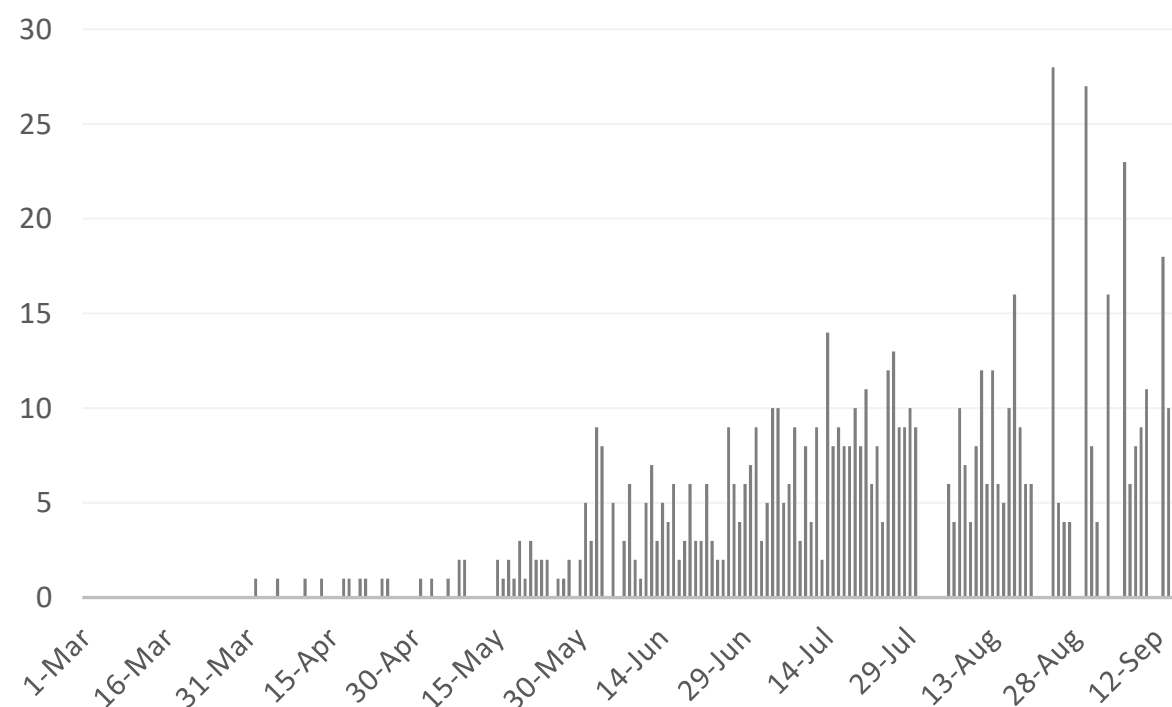
Source : KSA ministry of health

### Bahrain



Source :WHO

### Oman



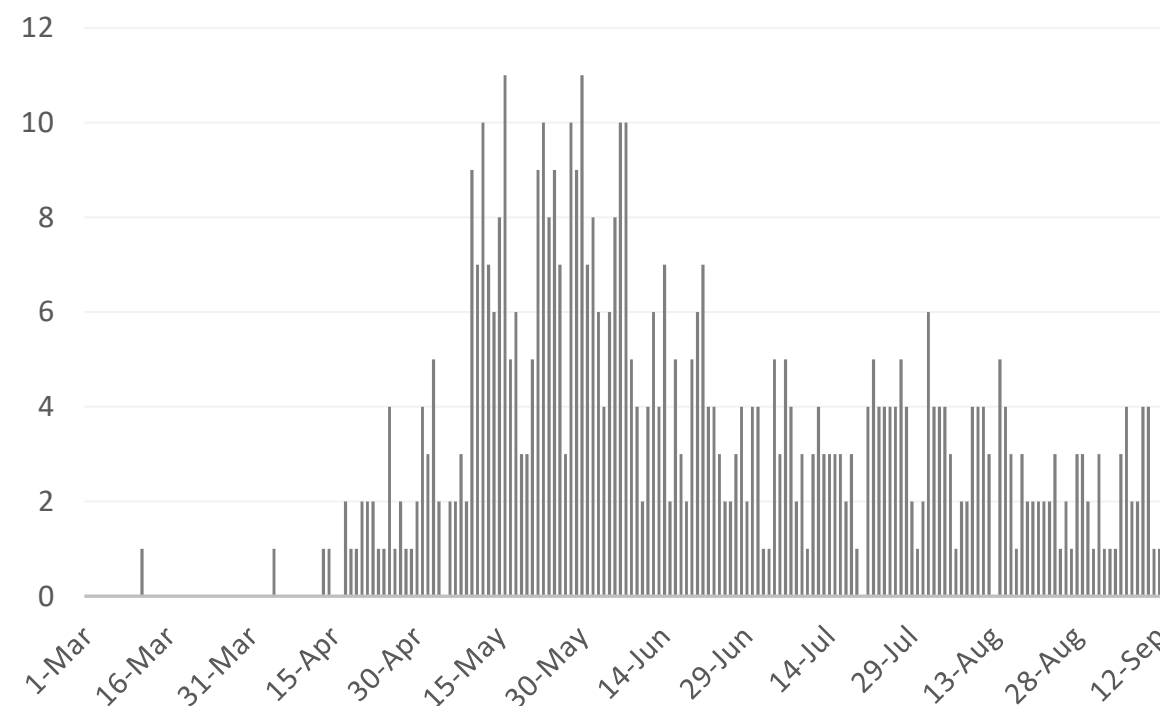
Source :Oman ministry of health

\*No announced statistic data from 31 July to 4 August, 21 to 23 August & from 28 to 30 August, 2, 4, 5, 11 & 12 September

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

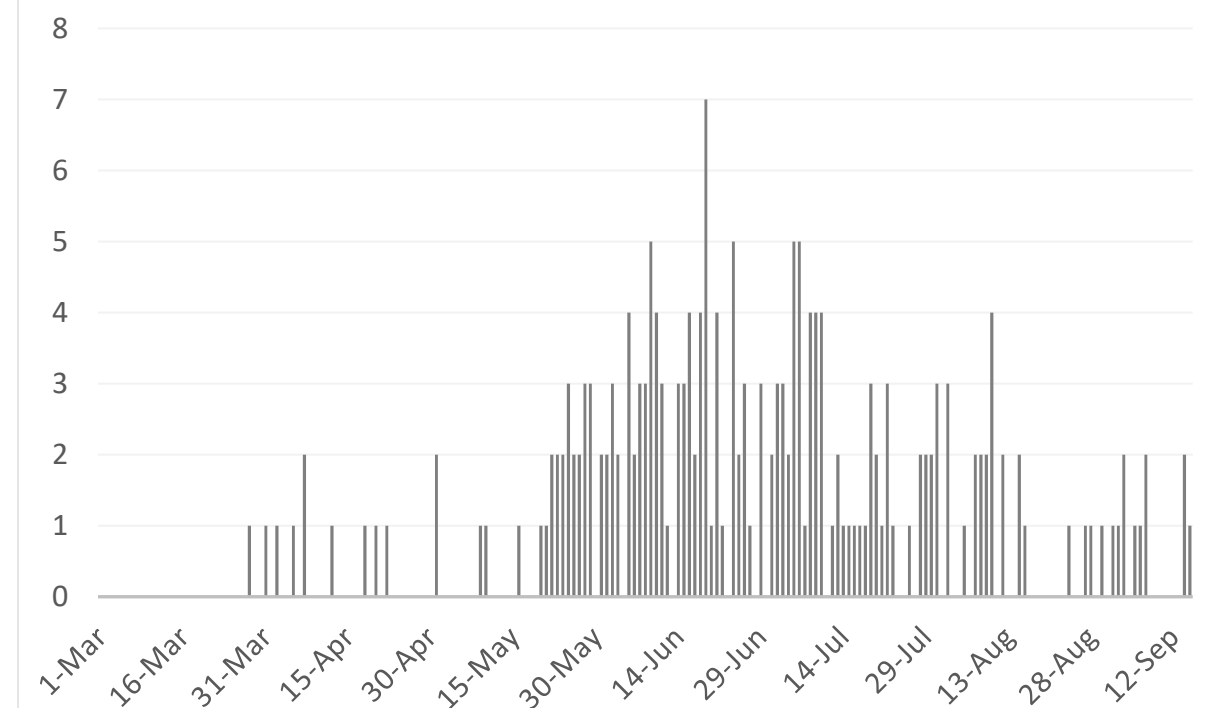
### Kuwait

© ADPHC 2020



Source : Kuwait ministry of health

### Qatar



Source : Qatar ministry of health





## Article 1

# Understanding Clinical Decision-Making During the COVID-19 Pandemic: A Cross-Sectional Worldwide Survey

Published

08 September 2020, [The Lancet](#)

- This cross-sectional worldwide survey aimed to identify the therapeutic aggressiveness drivers during the first week of the COVID-19 pandemic.
- The survey was conducted from April 12 to 19, 2020, and it recruited 852 physicians from 44 different specialities and 29 countries who managed patients diagnosed with COVID-19.
- The results of the study revealed that the heterogeneity of therapeutic decisions increased as the clinical scenario worsened. Factors associated with aggressive therapeutic decisions were higher self-perceived expertise, perceived quality of COVID-19 publications, and female sex.
- On the other hand, Latin American and North American origin, Infectious Diseases speciality, lower confidence in the treatments chosen, and has published articles indexed in PubMed as the first-author were associated with the utilization of less aggressive therapies.
- A diversity of factors, for example, quality of publications, and perceived expertise, geographic origin, gender, the implication in medical research, and speciality influenced the process. Awareness of the factors that leaves an impact on an individual's decision-making process during a new and extreme health emergency will support us to deliver better care to patients and to accelerate the set-up of clinical trials for the next pandemic.





## Article 2

# Hydrocortisone Likely to Reduce Need for Organ Support Interventions in Critically Ill COVID-19 Patients

Published

02 September 2020, [JAMA](#)

- The REMAP-CAP randomized clinical trials are adaptive trials designed to test several COVID-19 interventions in 121 sites in eight countries. In the hydrocortisone study, critically ill patients with COVID-19 (384 out of 403), completed the open-label randomized trial in three groups:
  - Fixed-dose hydrocortisone (137).
  - Shock-dependent (146).
  - No cortisone (101).
- The primary outcome was organ support-free days, defined as days alive and free of ICU-based respiratory or cardiovascular support within 21 days. The mean for organ support-free days was:
  - 11.5 days for the fixed-dose hydrocortisone group.
  - 9.5 days for the shock-dependent hydrocortisone group.
  - 6 days for the no-hydrocortisone group.
- In the Bayesian analysis, there was a 93% probability of superiority for the fixed-dose hydrocortisone group, over the no-hydrocortisone group and an 80% probability of superiority of shock-dependent dosing of hydrocortisone over no hydrocortisone.
- The trial was stopped early because of publication of the positive results from the RECOVERY trial on June 16, 2020, because the investigators believed that there was no longer a clinical equipoise, and hydrocortisone should not be withheld from critically ill COVID-19 patients.
- A meta-analysis, published simultaneously with this study, confirms the benefit of corticosteroids for severe COVID-19 infection.

**Article 4**

# Investigation of SARS-CoV-2 outbreaks in six care homes in London, April 2020

**Published**09 September 2020, [The Lancet](#)

- This descriptive study aimed to assess SARS-CoV-2 positivity in residents and staff at the care homes and followed them daily for two weeks.
- This study examined differences in outcomes based on the SARS-CoV-2 positivity, viral load and recovery of infectious virus as per the timing and presence or absence of symptoms.
- The study utilized whole-genome sequence (WGS) analyses to inform on the likely transmission routes of infection.
- The findings of the study suggested that Asymptomatic SARS-CoV-2 positive residents and staff are likely to be acting as potential reservoirs for local infection and transmission within care homes.
- Further research studies are needed in future to evaluate whether infected residents or staff develop protective antibodies against SARS-CoV-2.





**Article 5****Current State of Vaccine Development and Targeted Therapies  
for COVID-19: Impact of Basic Science Discoveries****Published**05 September 2020, [NIH](#)

- This review article discusses specific anti-viral therapy and vaccines that are being developed for the treatment and prevention of COVID-19.
- Targeted therapies, such as the use of antibodies to prevent virus entry, nucleotide analogues to prevent viral replication, and inhibitors of proteases to prevent virion formation, among others, are being tested for their clinical efficacy.
- Likewise, complete sequencing of the SARS-CoV-2 and identification of its structural and non-structural proteins have enabled the development of RNA, DNA, and peptide-based vaccines as well attenuated viral vaccines to investigate the host immune responses.
- Some of the clinical impacts of the basic science discoveries are amply evident on the rapid pace of progress in developing certain anti-viral therapies and vaccines against SARS-CoV-2.



# THANK YOU

 ADPHCAE  ADPHC\_AE  ADPHC\_AE  ADPHC.AE  ADPHC-AE  056 2312171