

# SCIENTIFIC RESEARCH MONITORING ON COVID-19

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# SCIENTIFIC RESEARCH MONITORING ON COVID-19

## (ISSUE 202)

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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**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).

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## Clinical feature

**Clinical Characteristics and Risk Factors Associated with COVID-19 Severity in Patients with Haematological Malignancies in Italy: A Retrospective, Multicentre, Cohort Study**

## Public Health Response

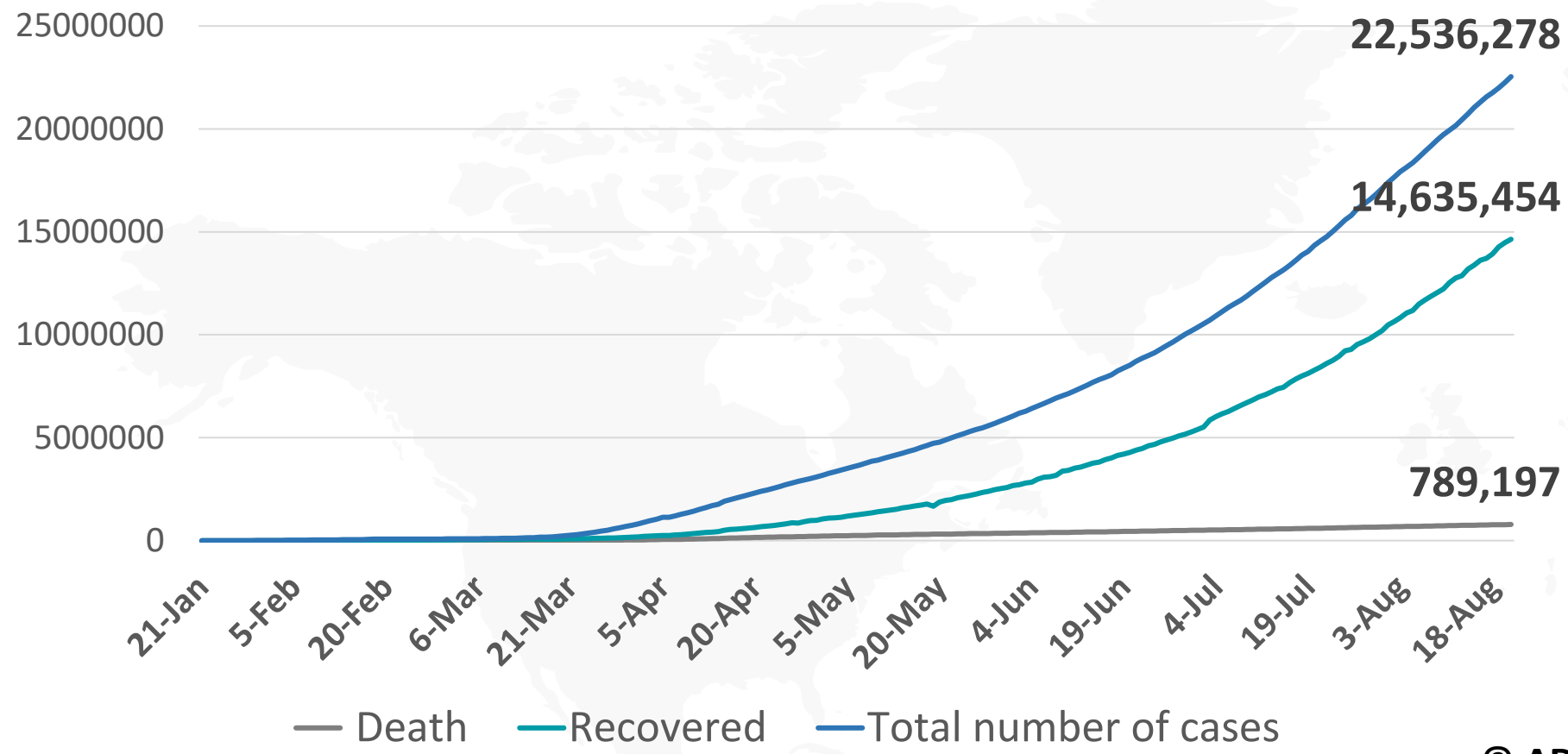
**Clarifying the Sweeping Consequences of COVID-19 in Pregnant Women, Newborns, and Children With Existing Cohorts**

## Epidemiology

**Excess Mortality from COVID-19 in an English Sentinel Network Population**

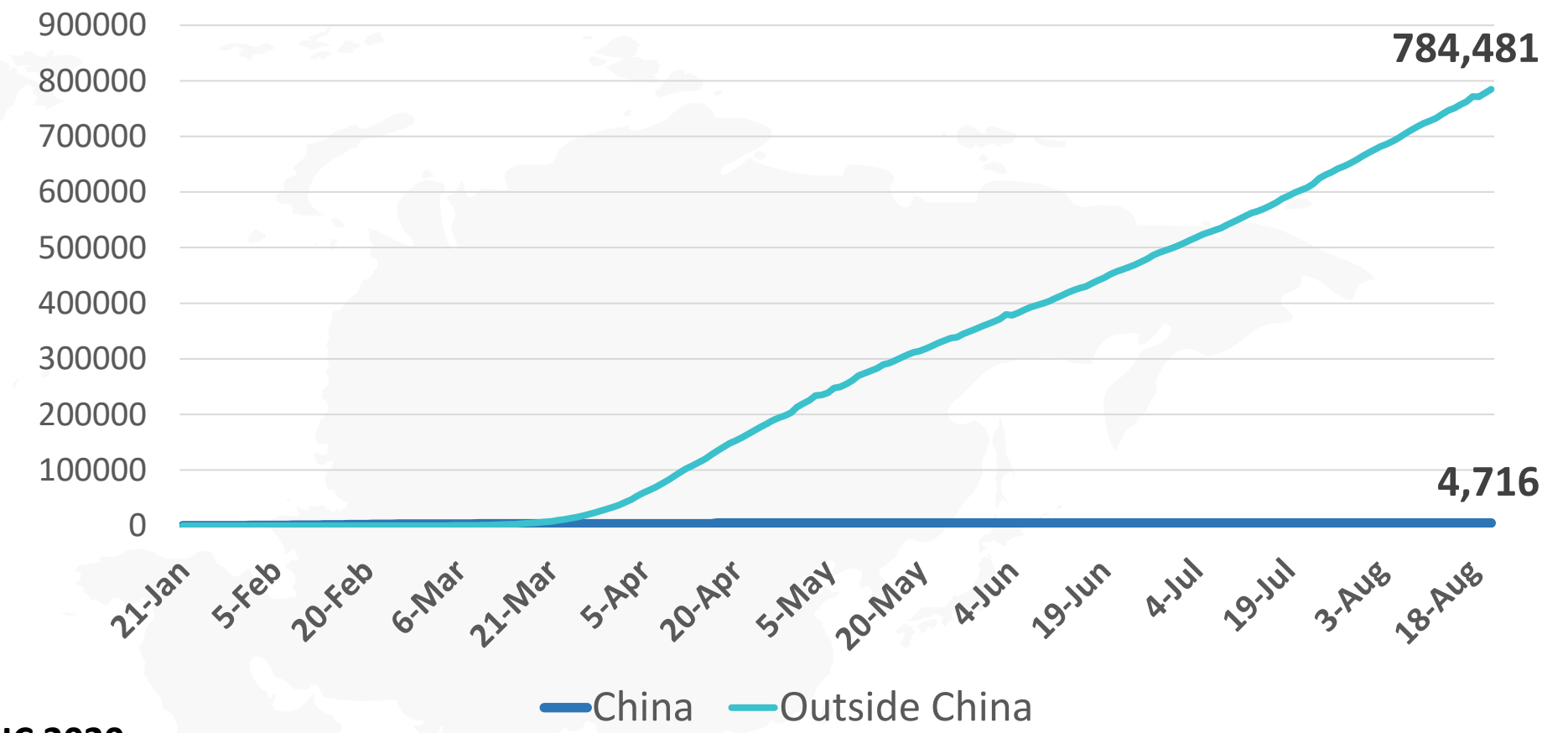


**Figure 1: Total Number of Infected, Recovered, and Death Cases**



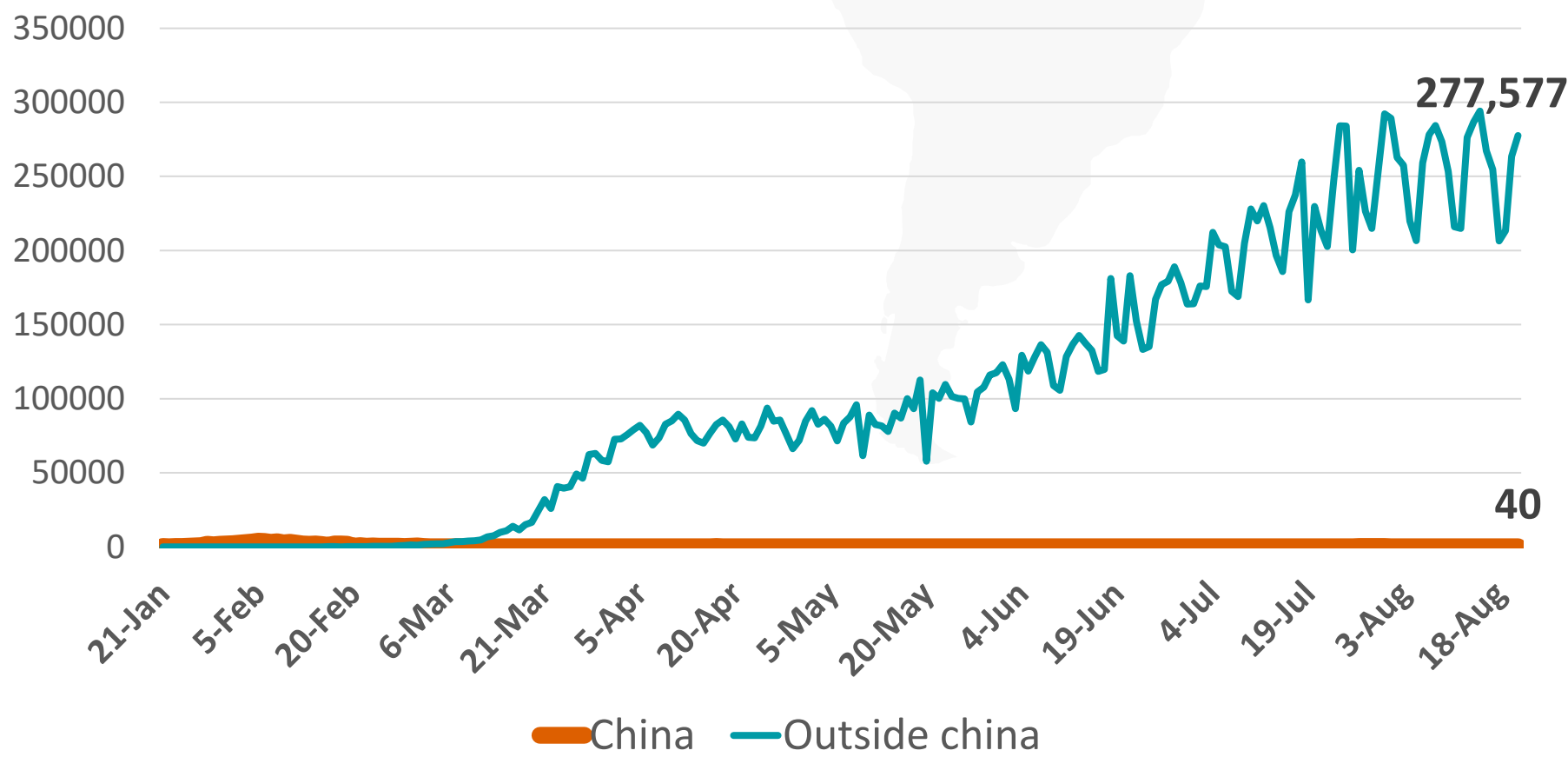
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**Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)**



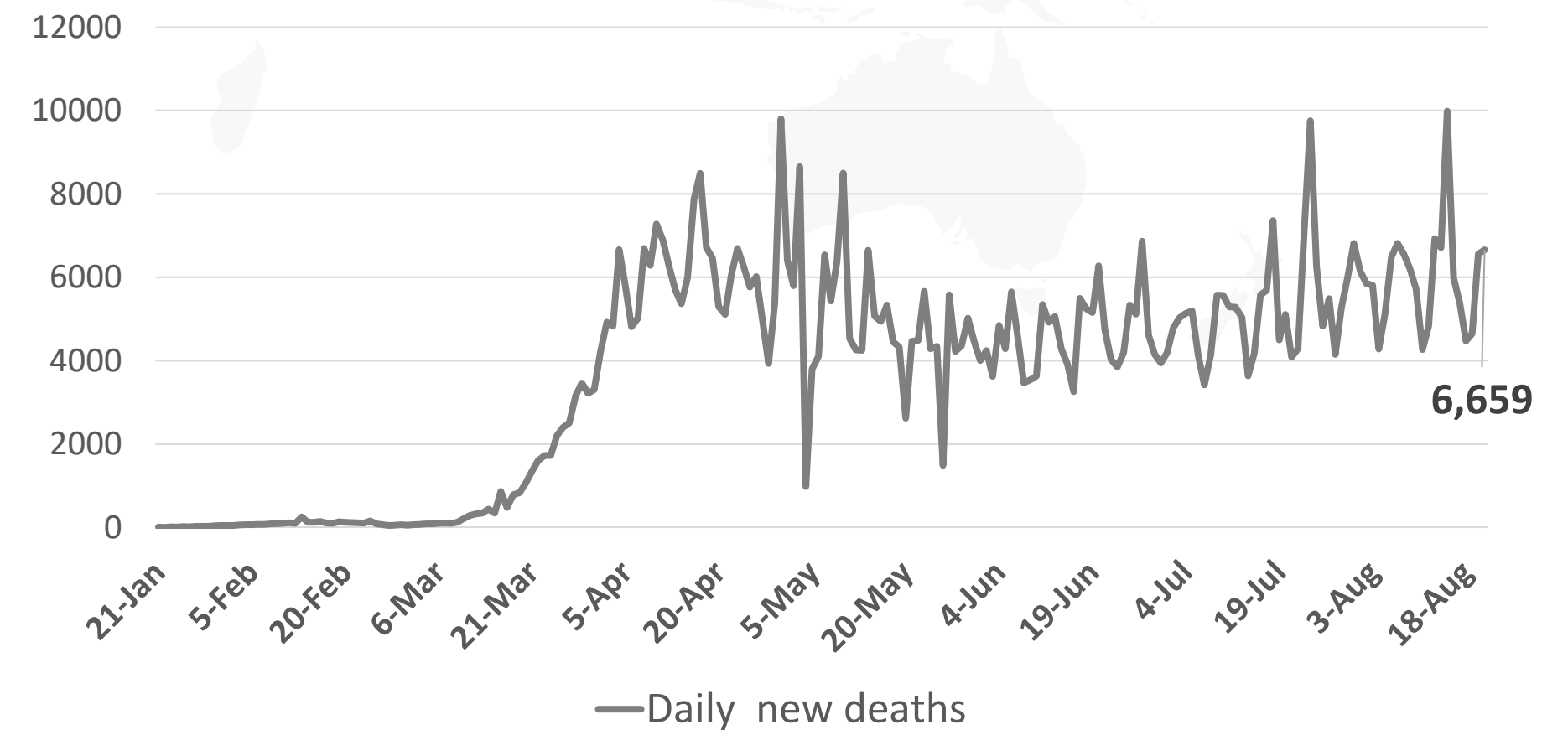
China Outside China

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



China Outside China

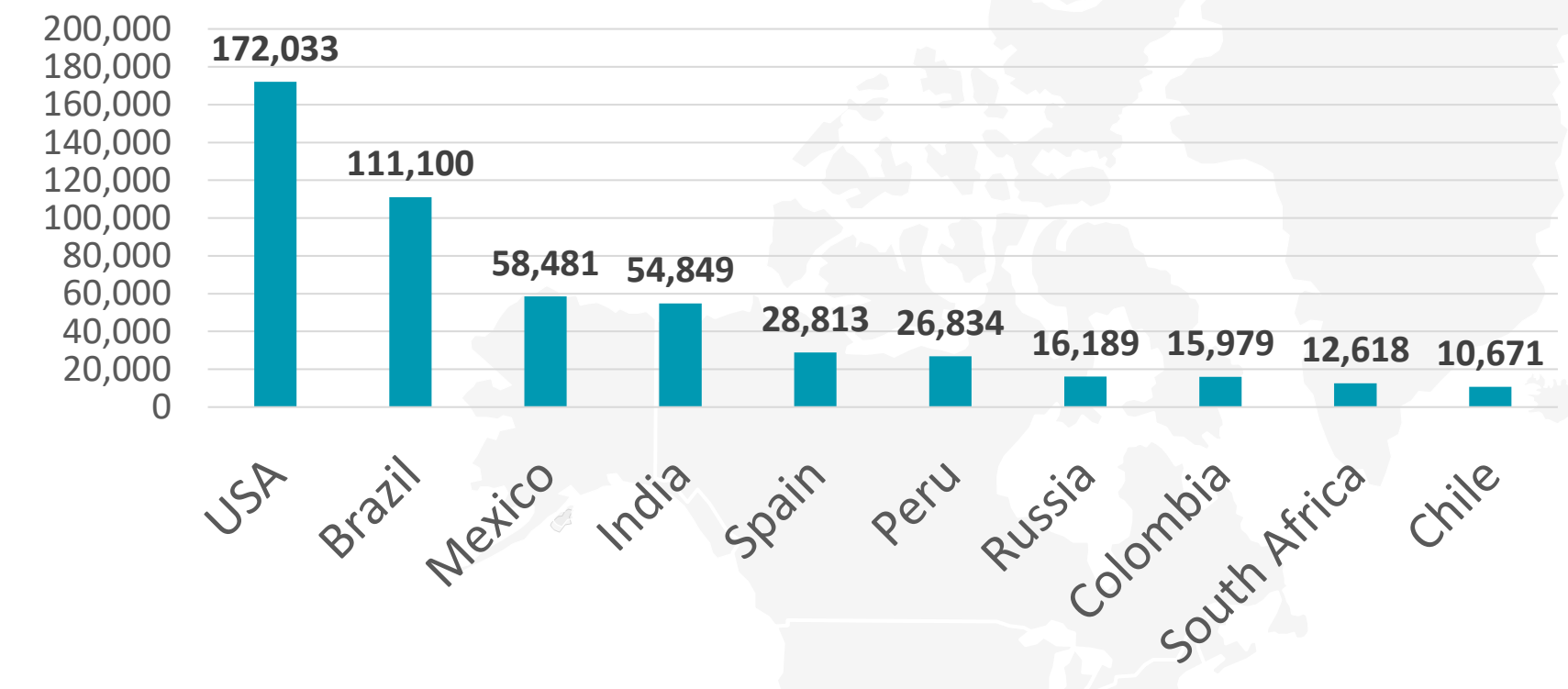
**Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)**



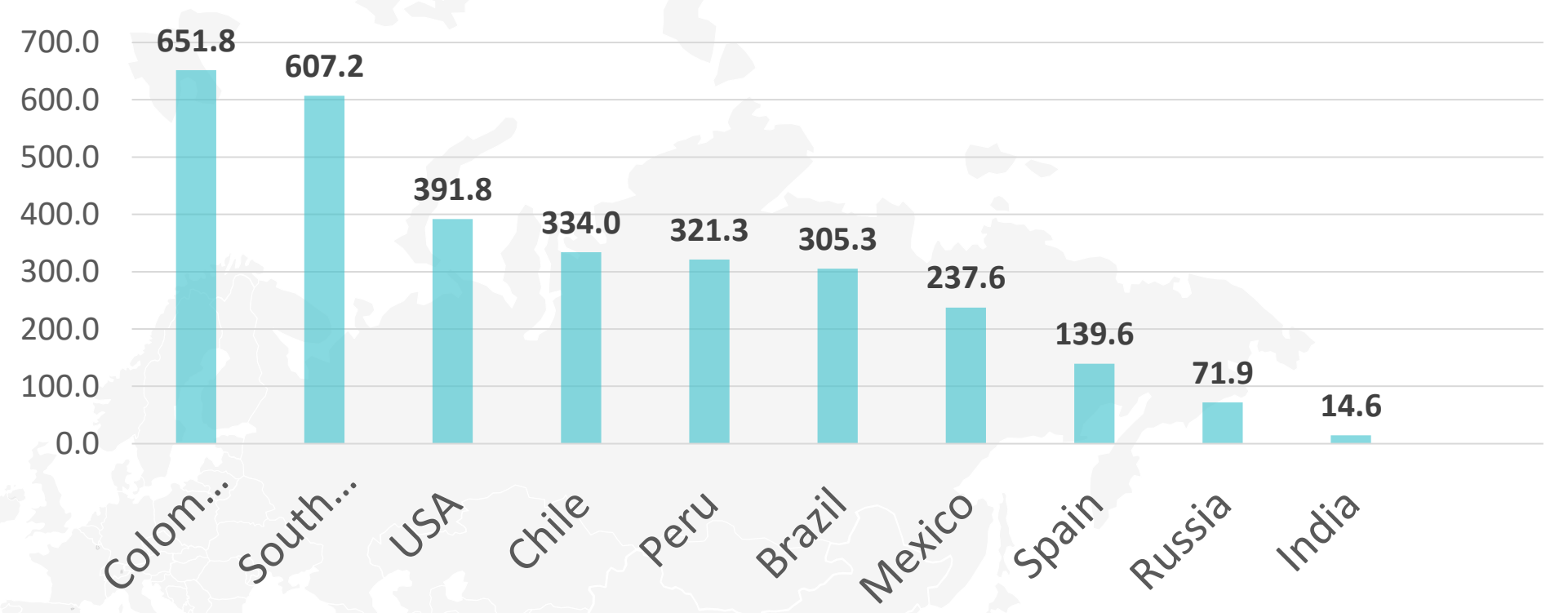
Daily new deaths

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

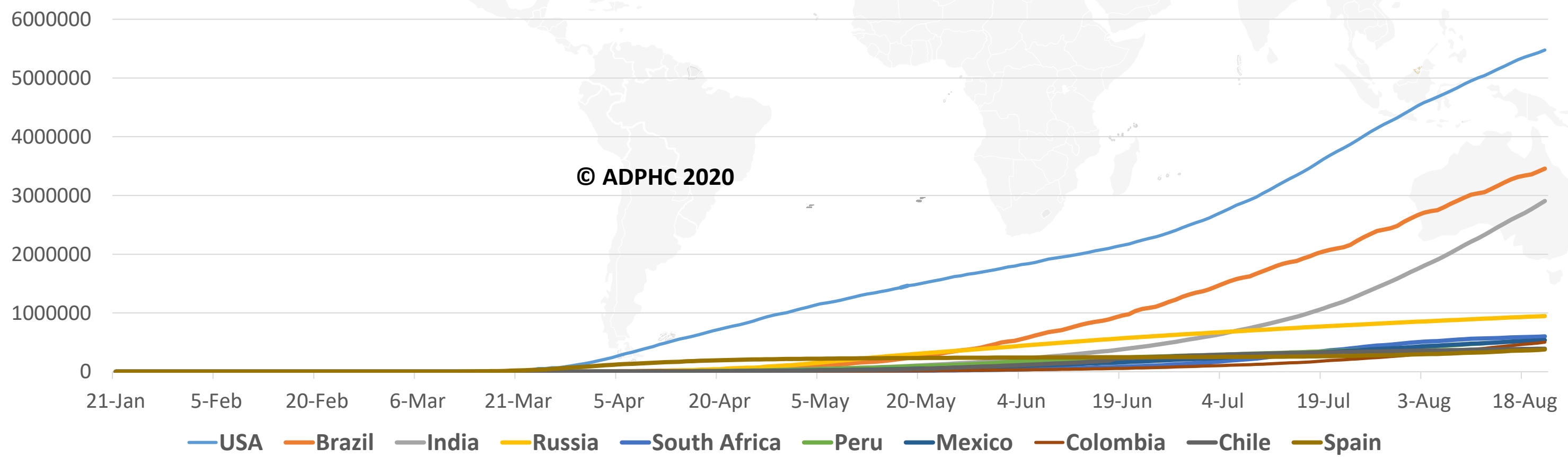
### TOTAL DEATHS



### DEATHS PER MILLION



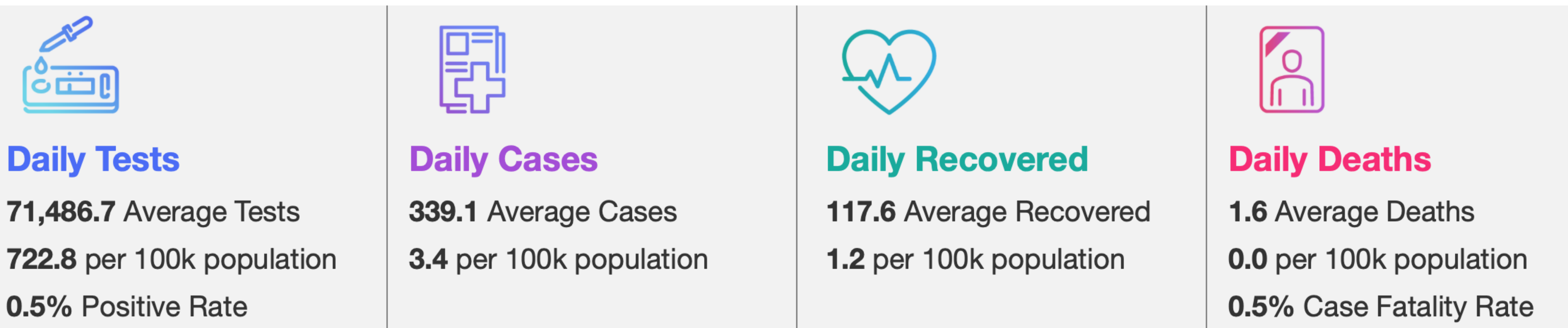
### TOTAL INFECTED CASES



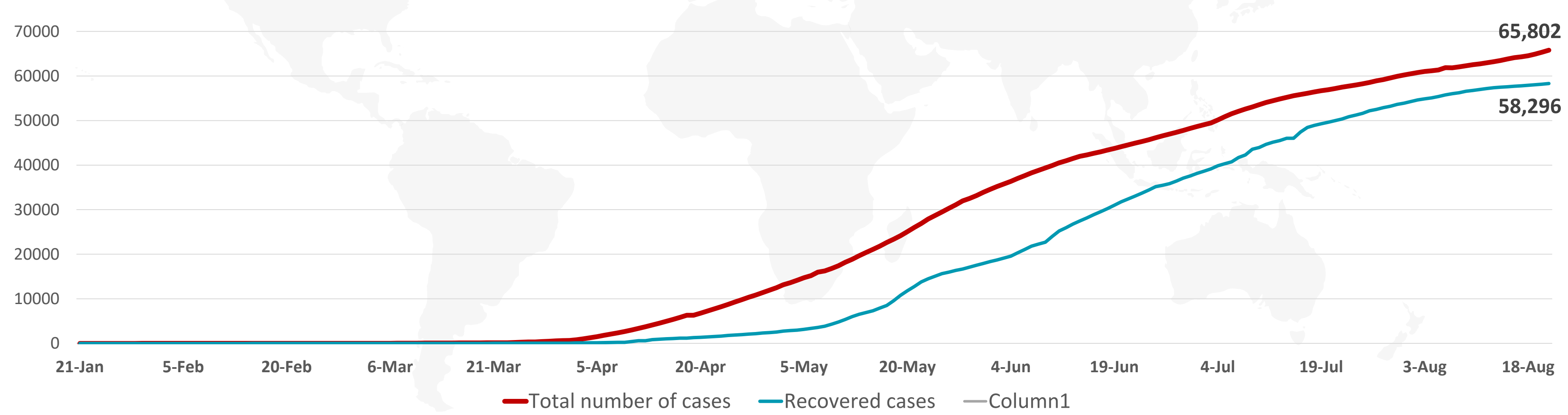
<b>USA</b>	5,477,305
<b>Brazil</b>	3,456,652
<b>India</b>	2,905,823
<b>Russia</b>	946,976
<b>South Africa</b>	599,940
<b>Peru</b>	558,420
<b>Mexico</b>	537,031
<b>Colombia</b>	502,178
<b>Chile</b>	391,849
<b>Spain</b>	377,906



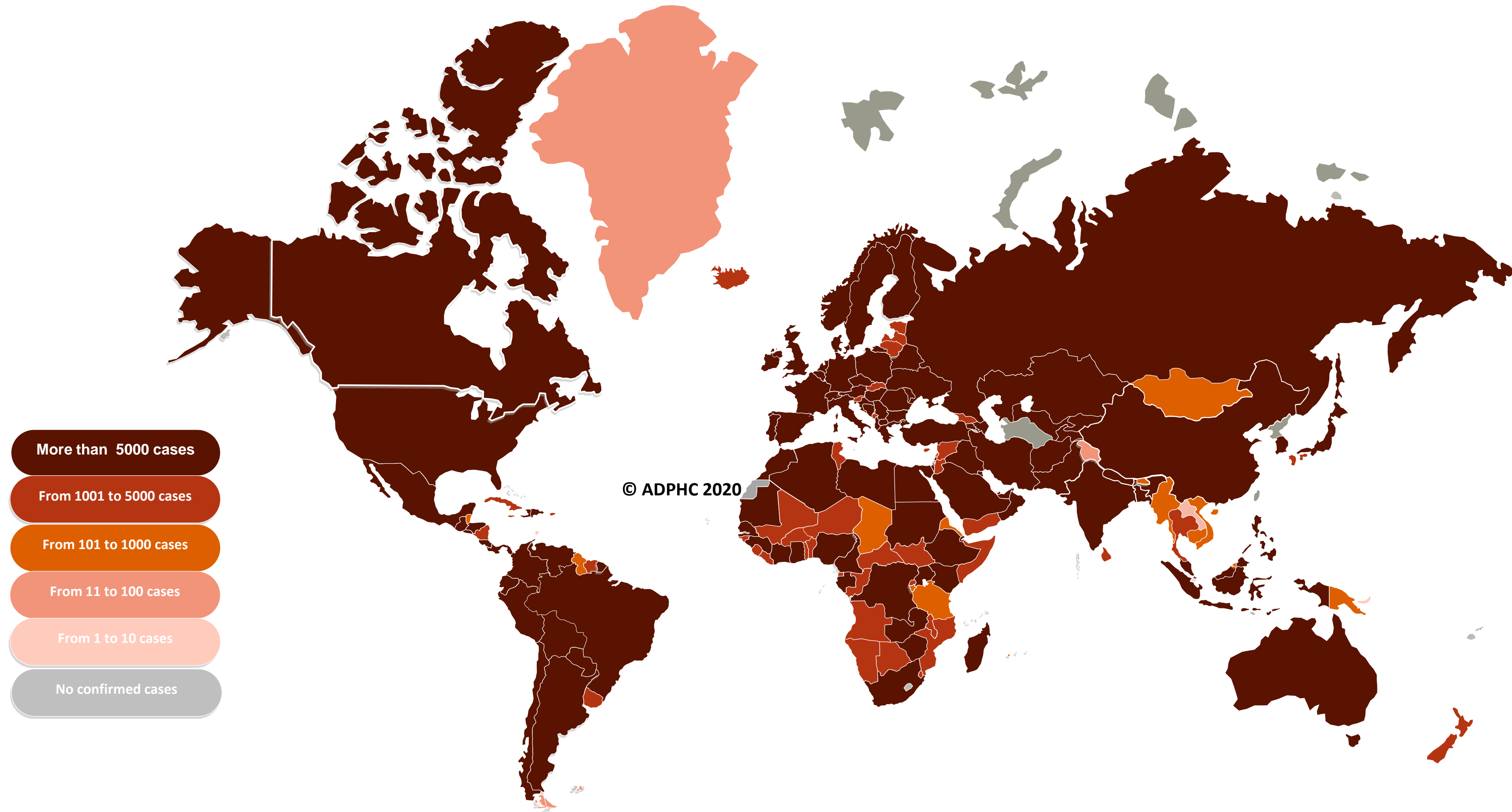
**Figure 6: COVID-19 Status in the UAE** (Federal Competitiveness and Statistics Authority Dashboard)



## 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

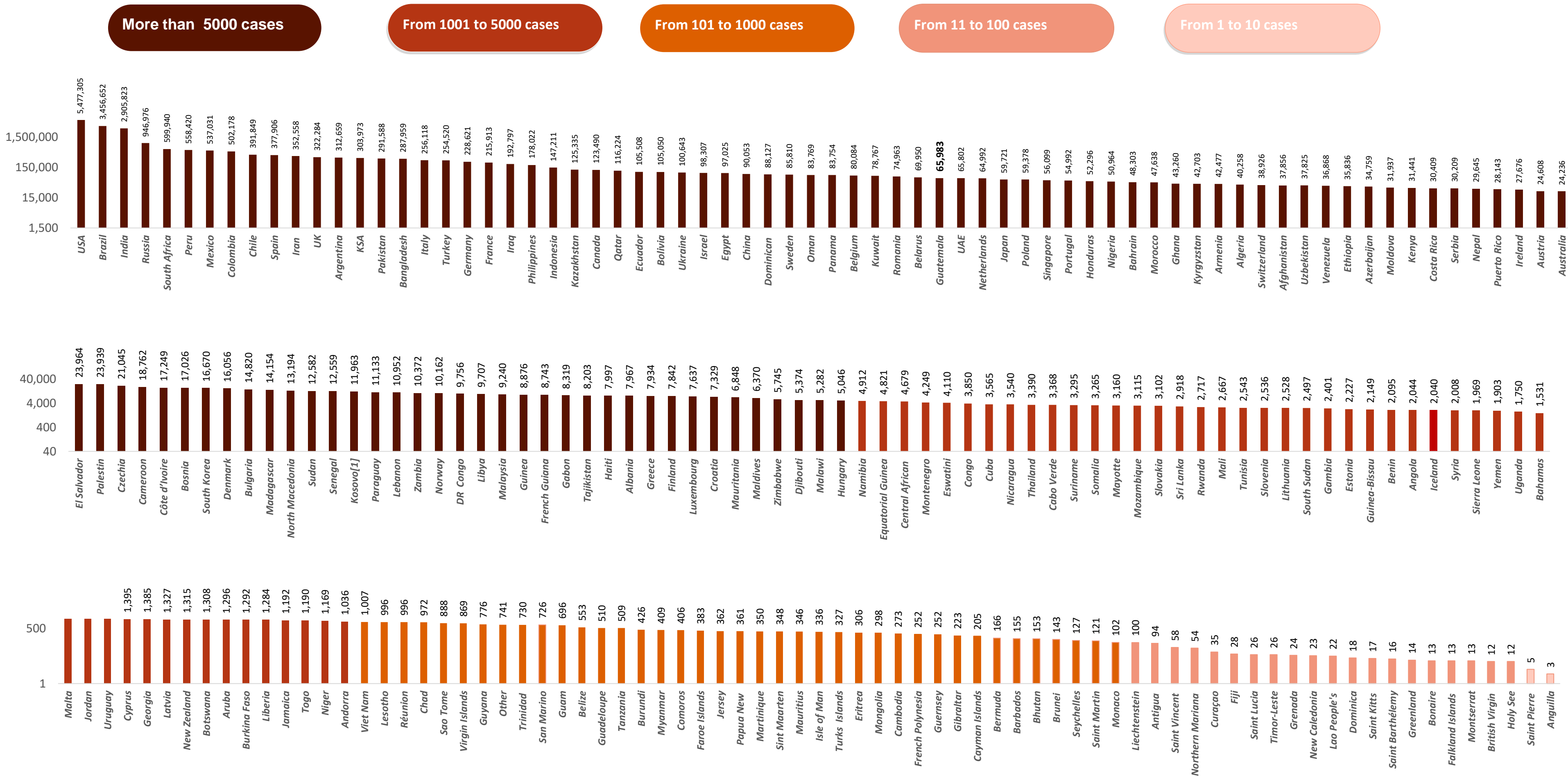
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

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

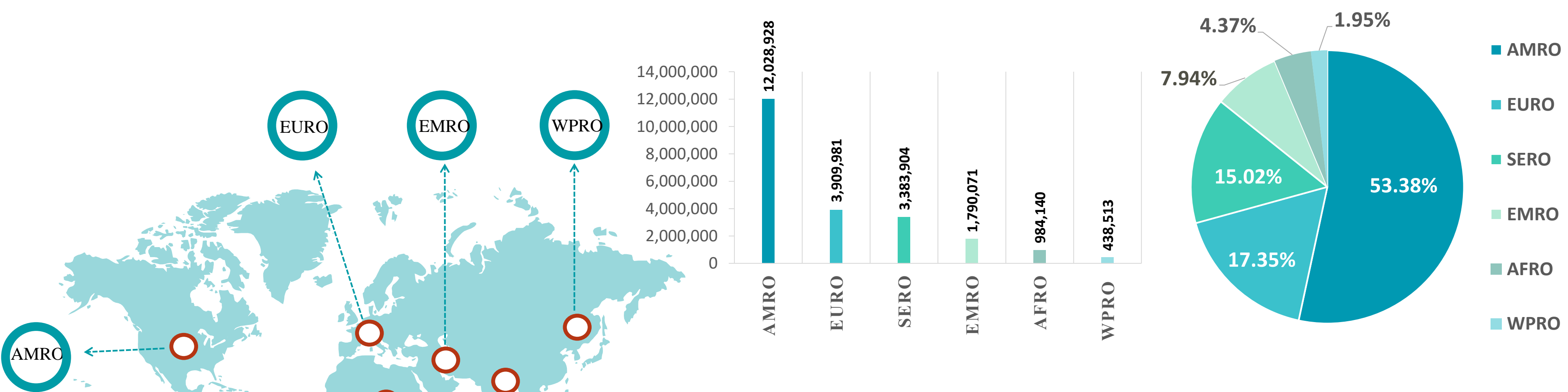


Other\*: includes cases and deaths reported under the international conveyance(Diamond Princess)

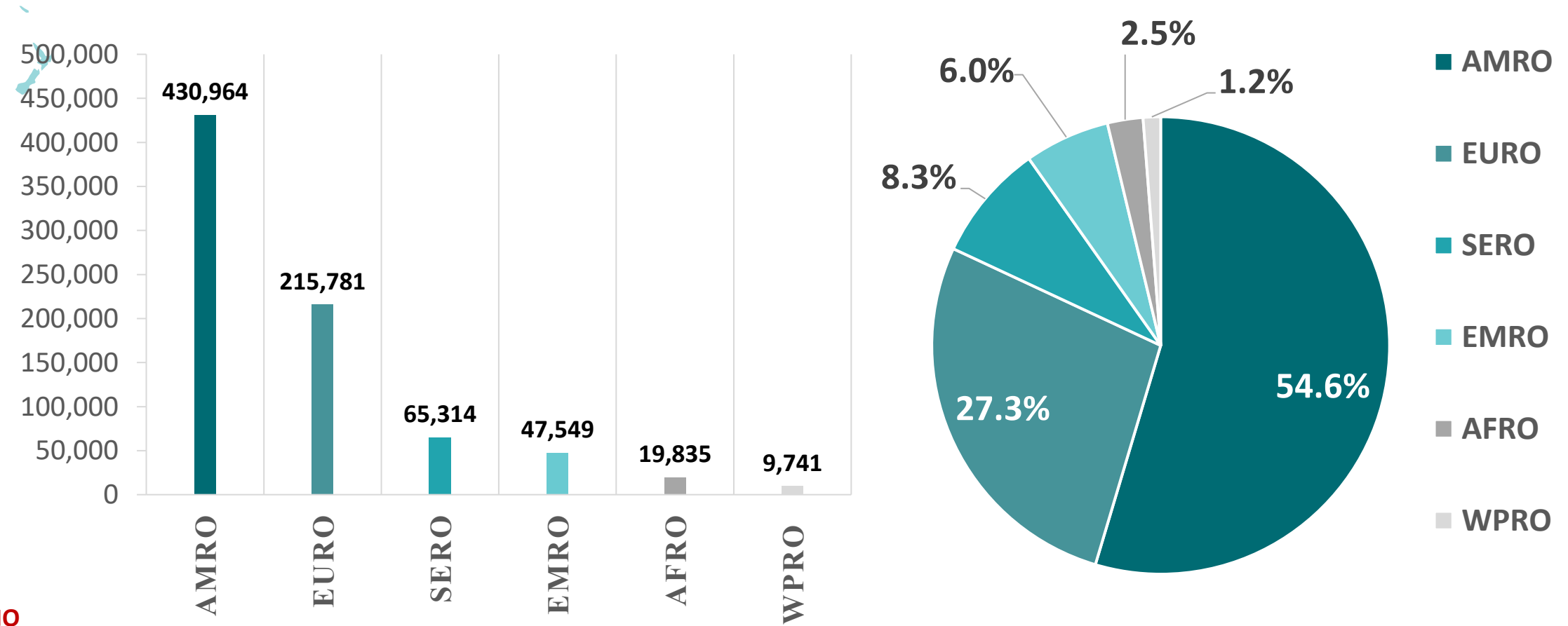


Figure 8: Global Distribution of COVID-19 Cases per Region

## INFECTED

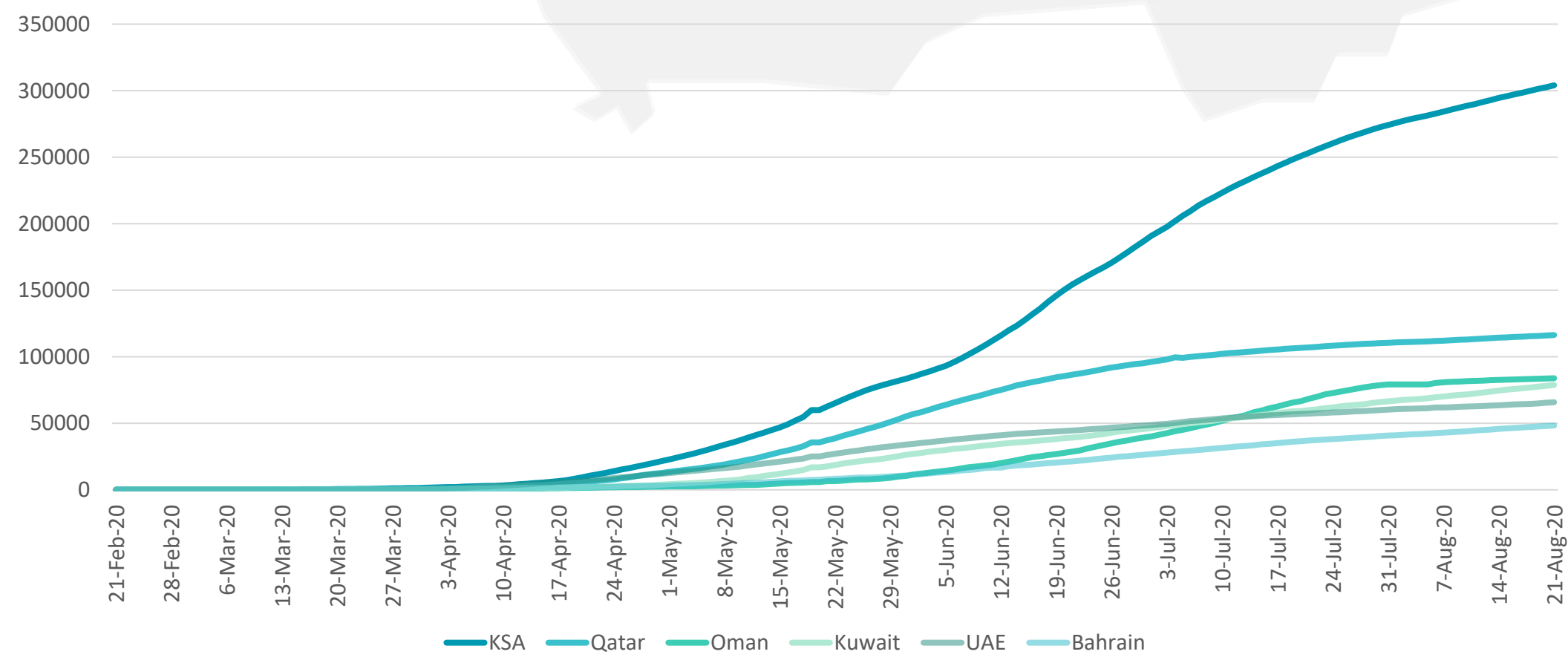
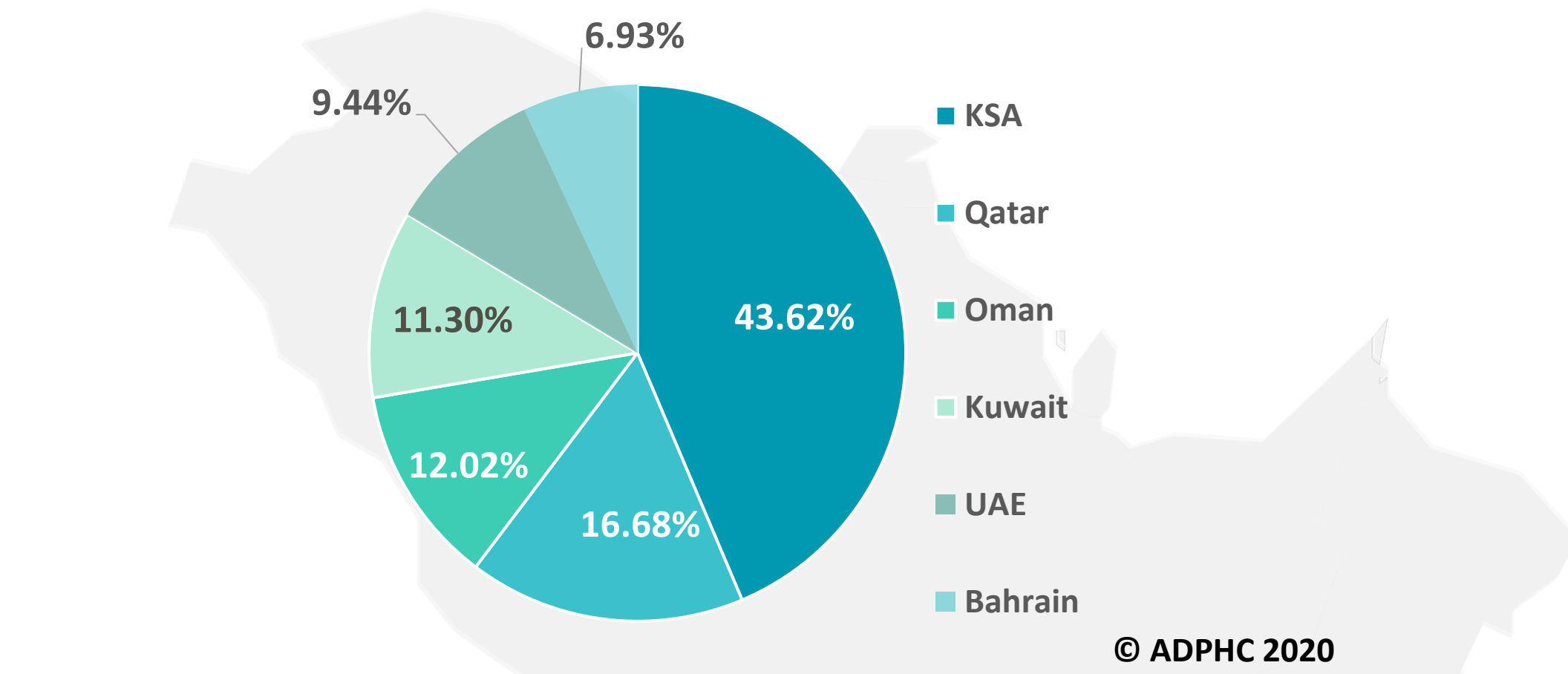


## DEATHS

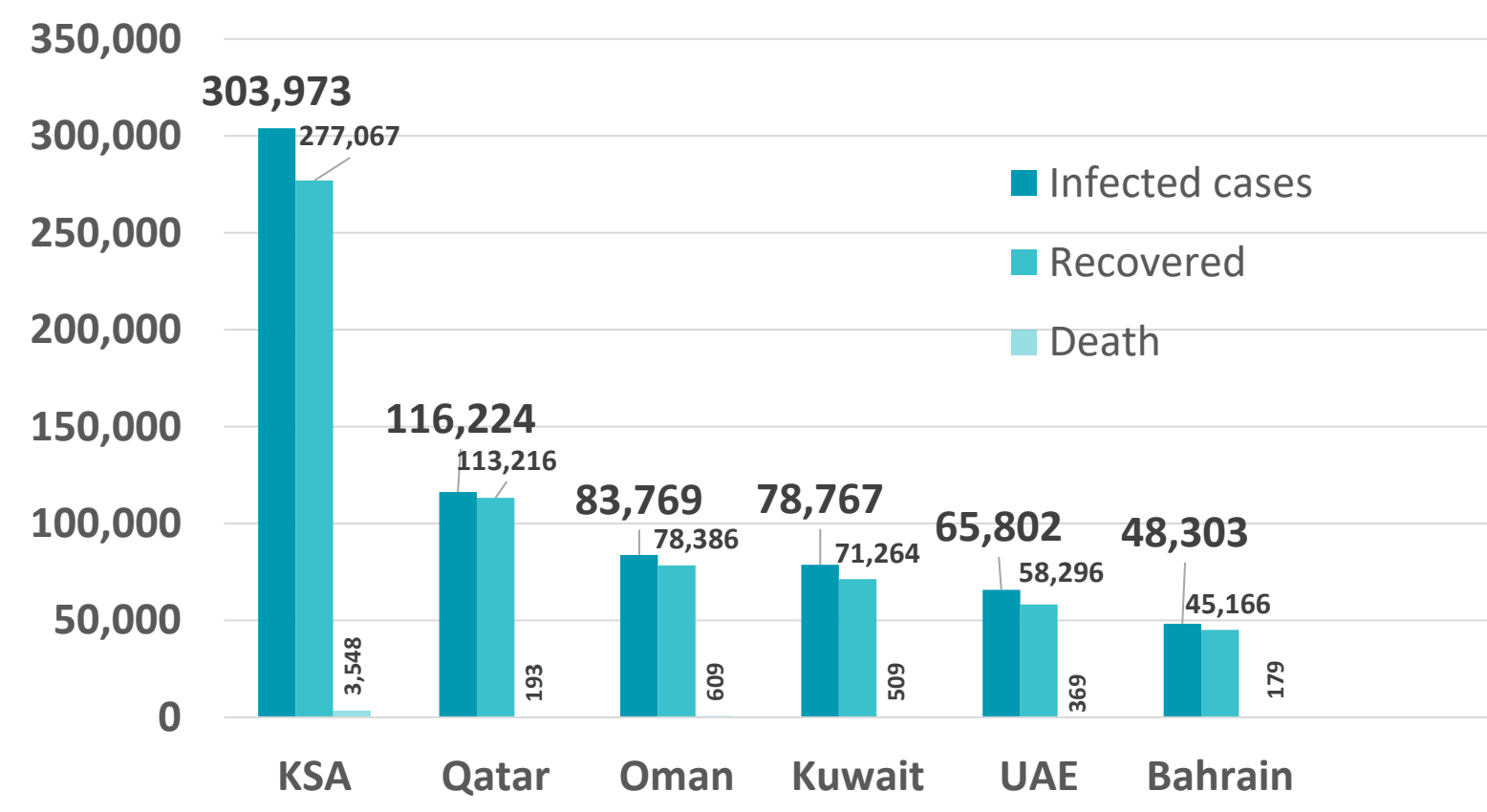


## Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

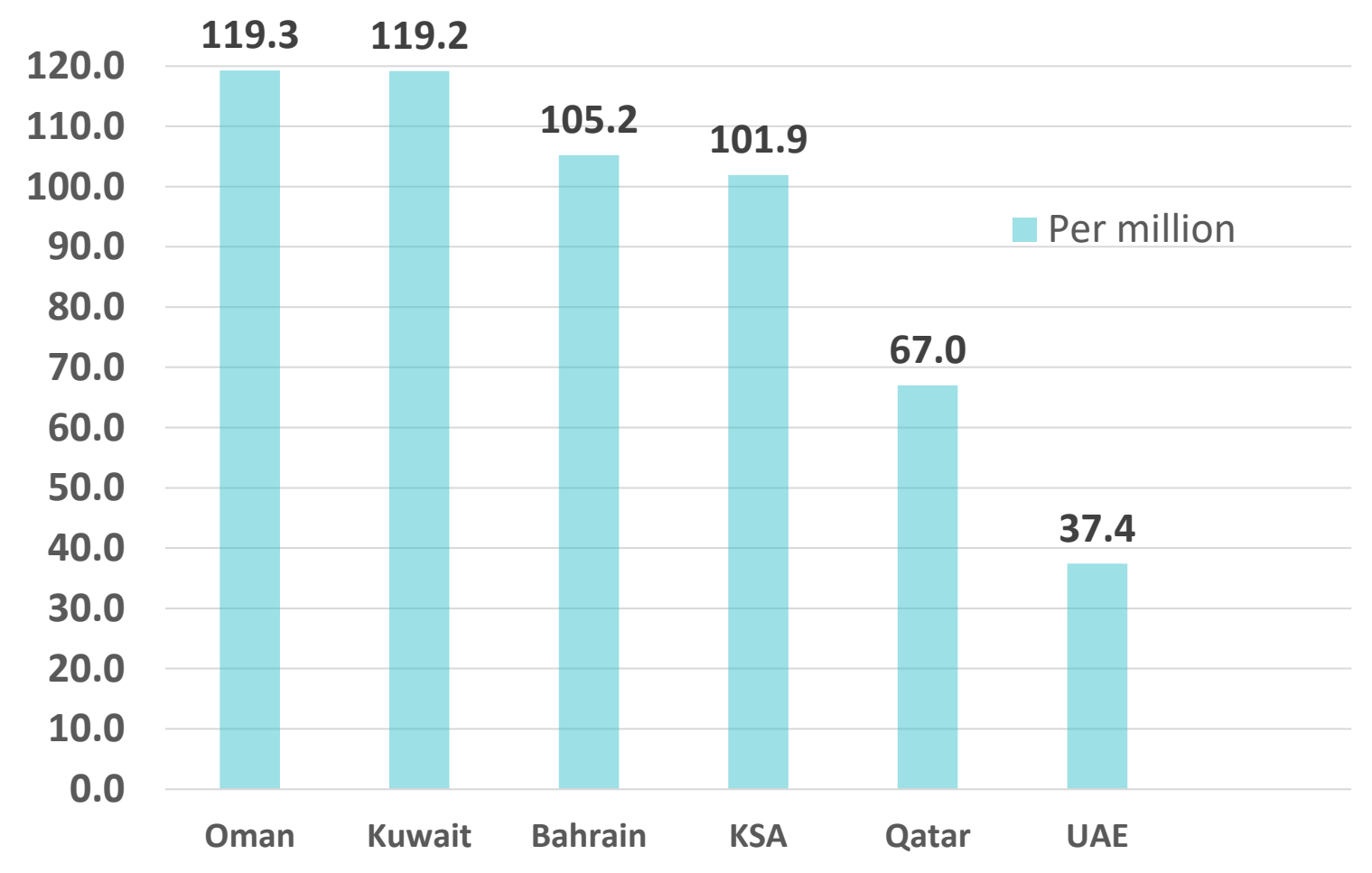
### TOTAL NUMBER OF INFECTED CASES



### TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



### DEATHS PER MILLION



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

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

### UAE



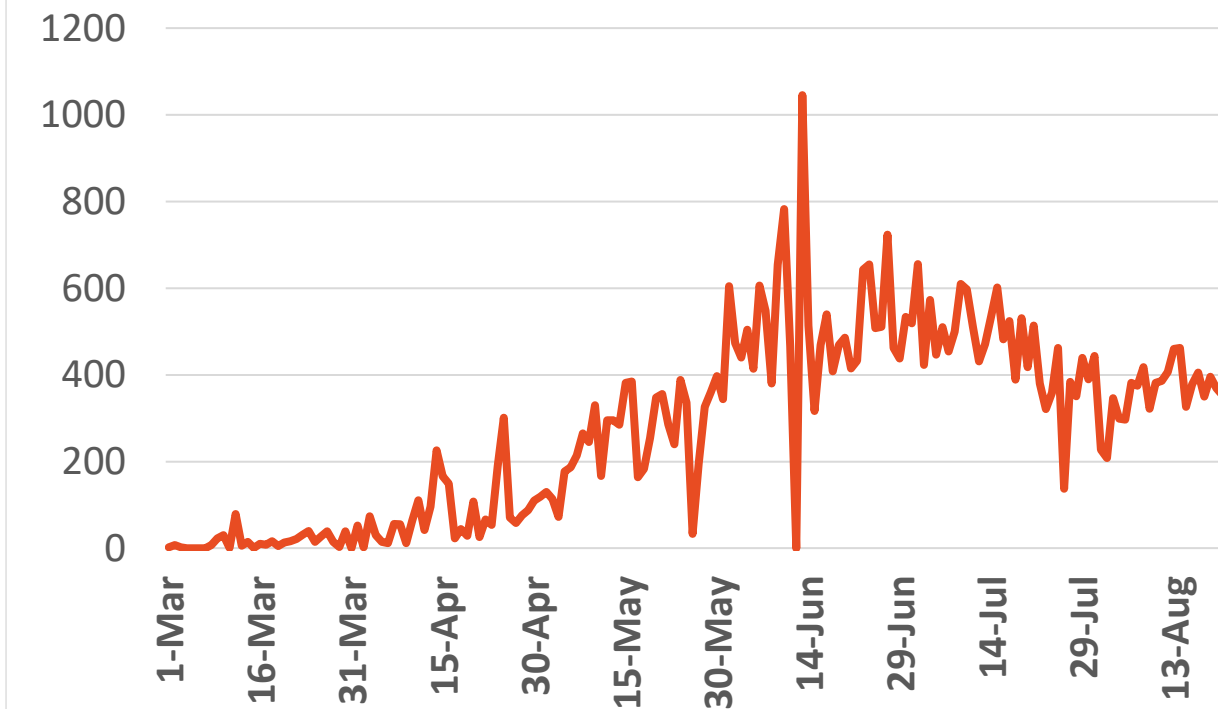
Source : National Emergency Crisis and Disaster Management Authority

### KSA



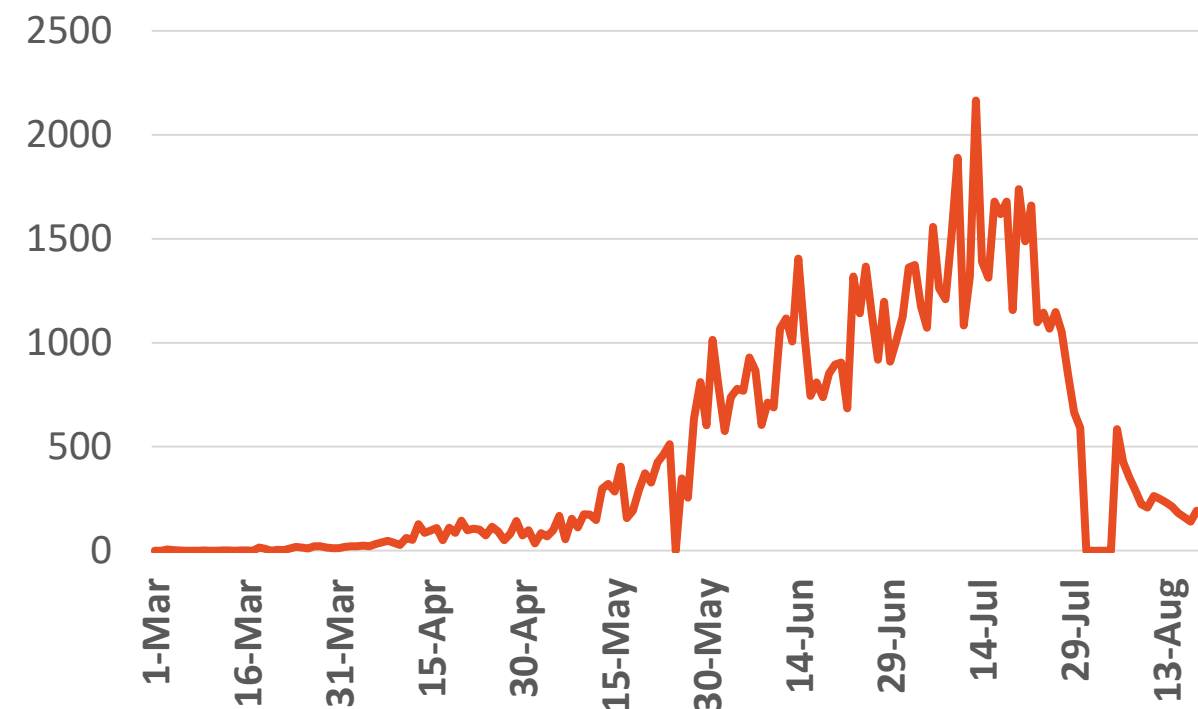
Source : KSA ministry of health

### Bahrain



Source :WHO

### Oman

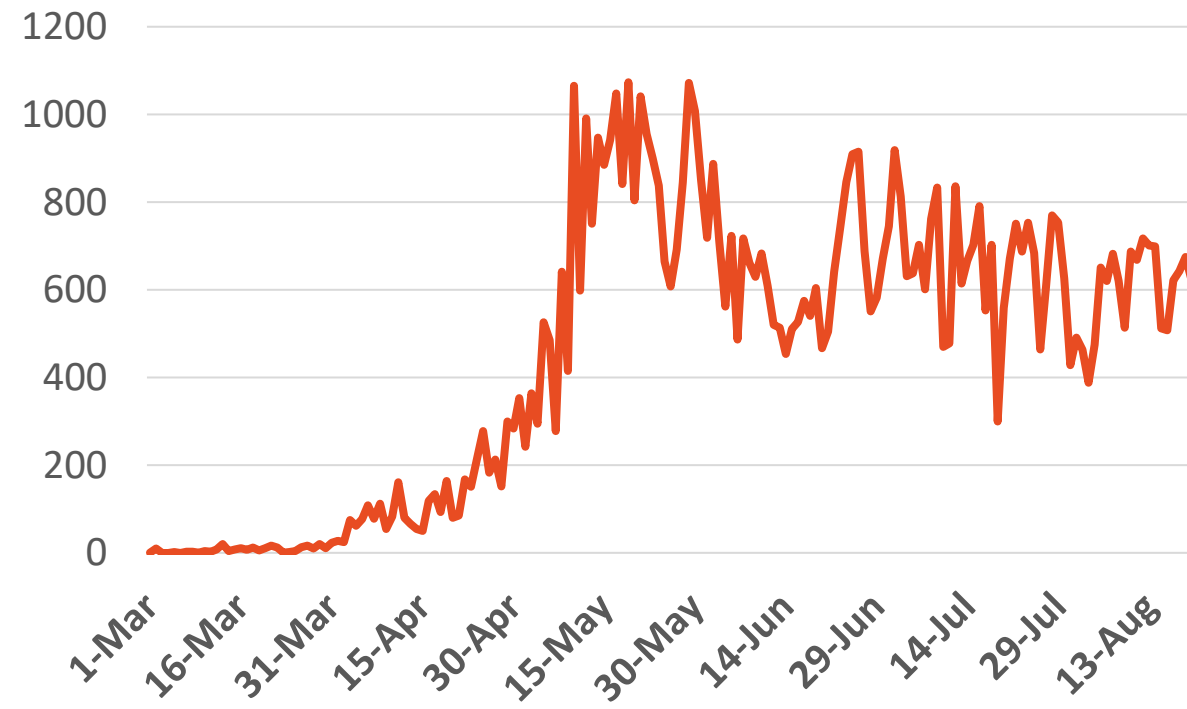


Source :Oman ministry of health

No announced statistic data from 31 July to 4 August

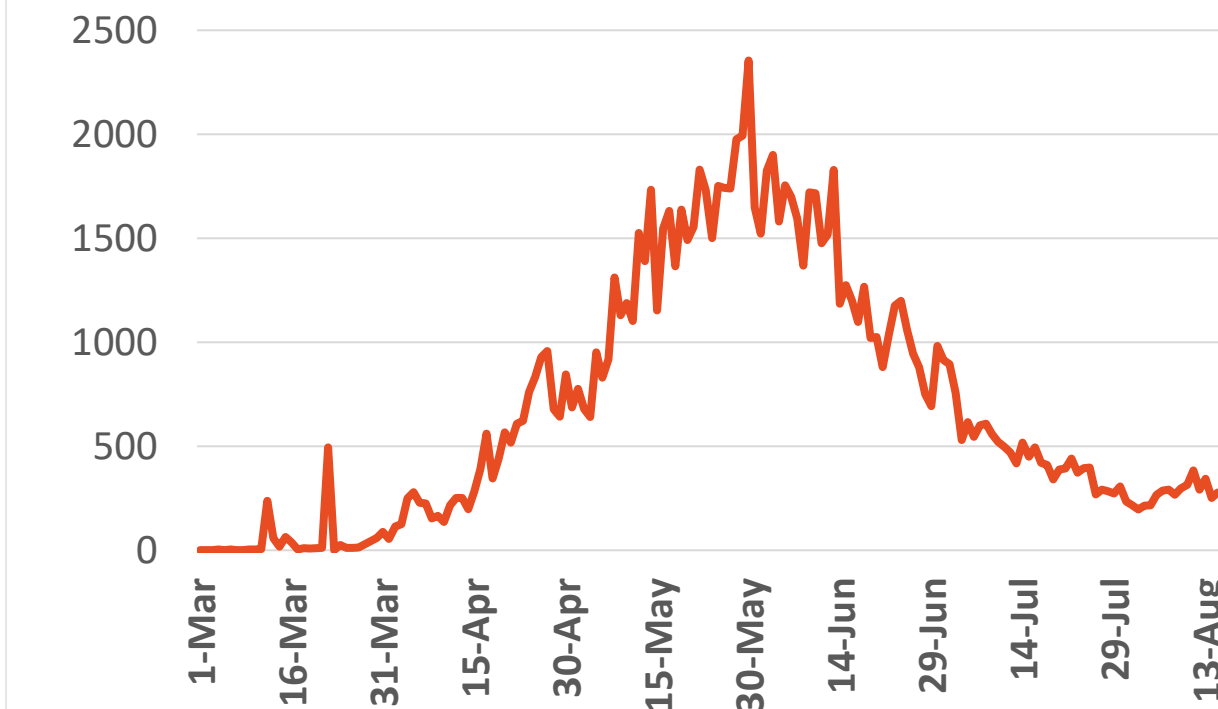
### Kuwait

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Source : Kuwait ministry of health

### Qatar



Source : Qatar ministry of health



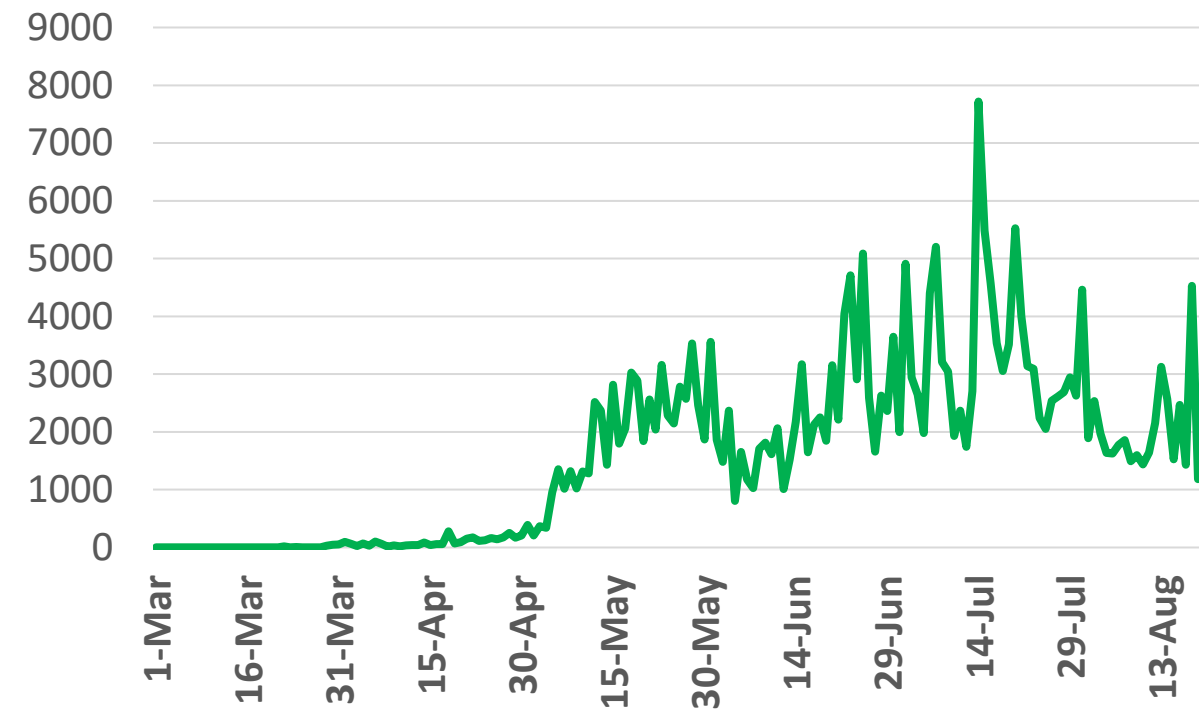
## Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

### UAE



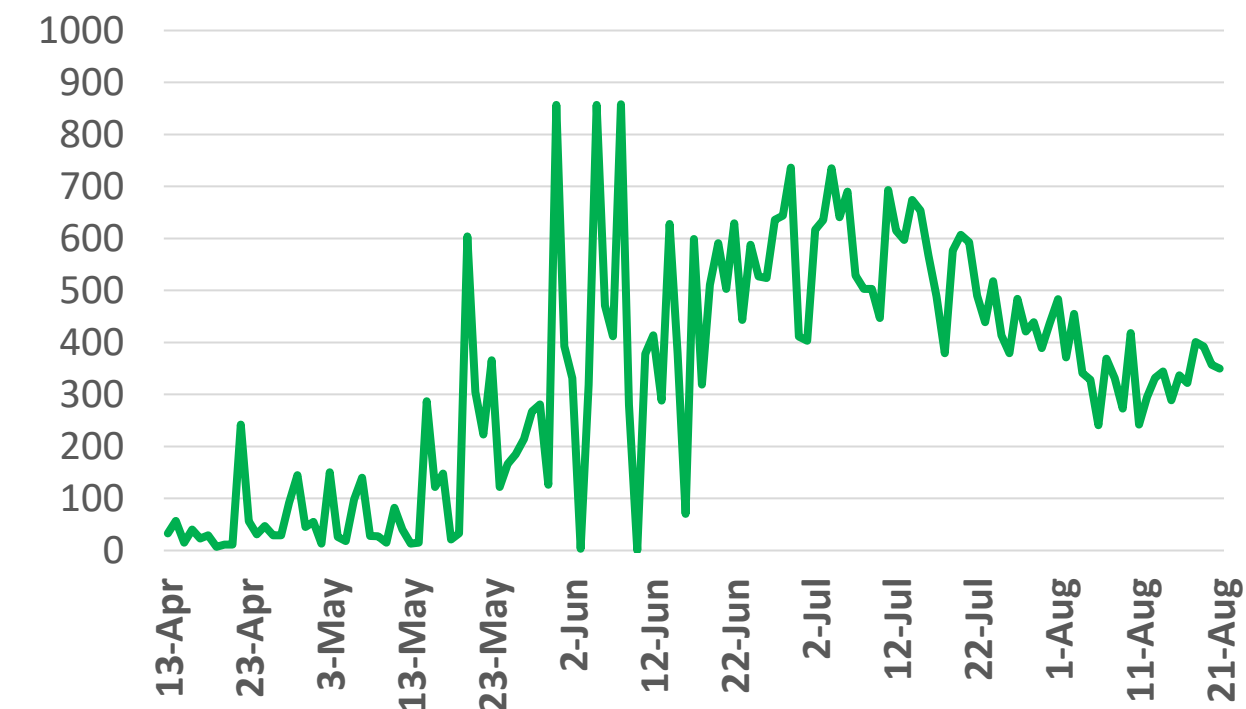
Source : National Emergency Crisis and Disaster Management Authority

### KSA



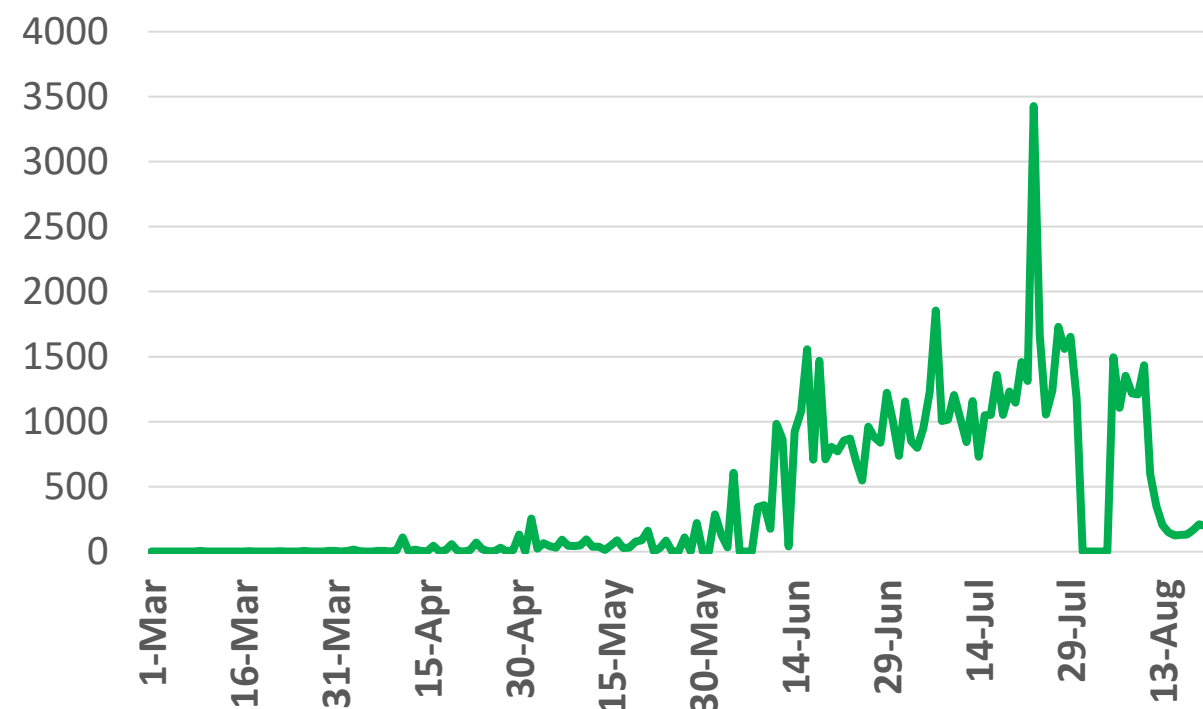
Source : KSA ministry of health

### Bahrain



Source : GCCStat

### Oman



Source : Oman ministry of health

\*No announced statistic data from 31 July to 4 August

### Kuwait

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Source : Kuwait ministry of health

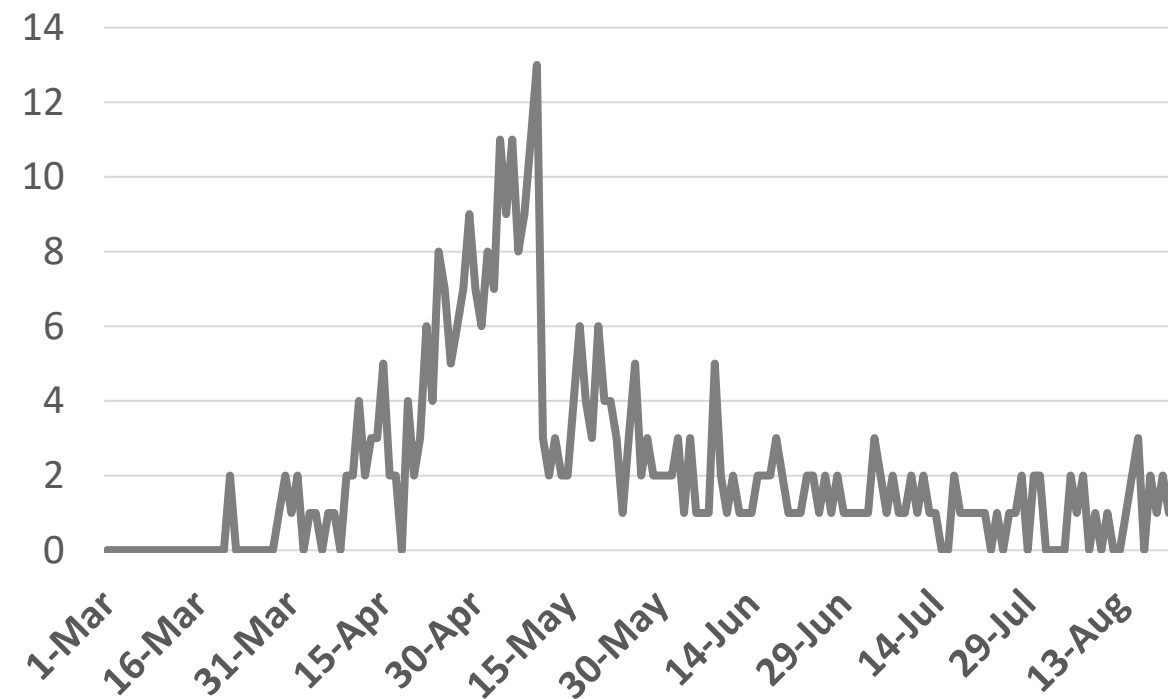
### Qatar



Source : Qatar ministry of health

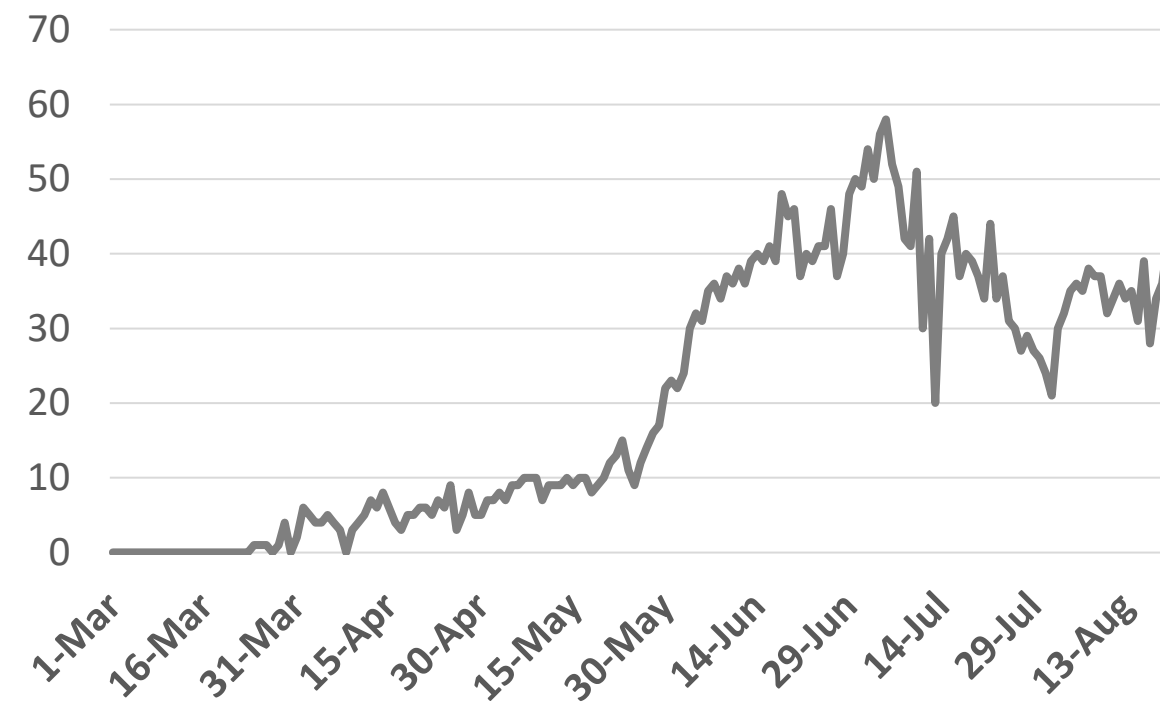
## Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

### UAE



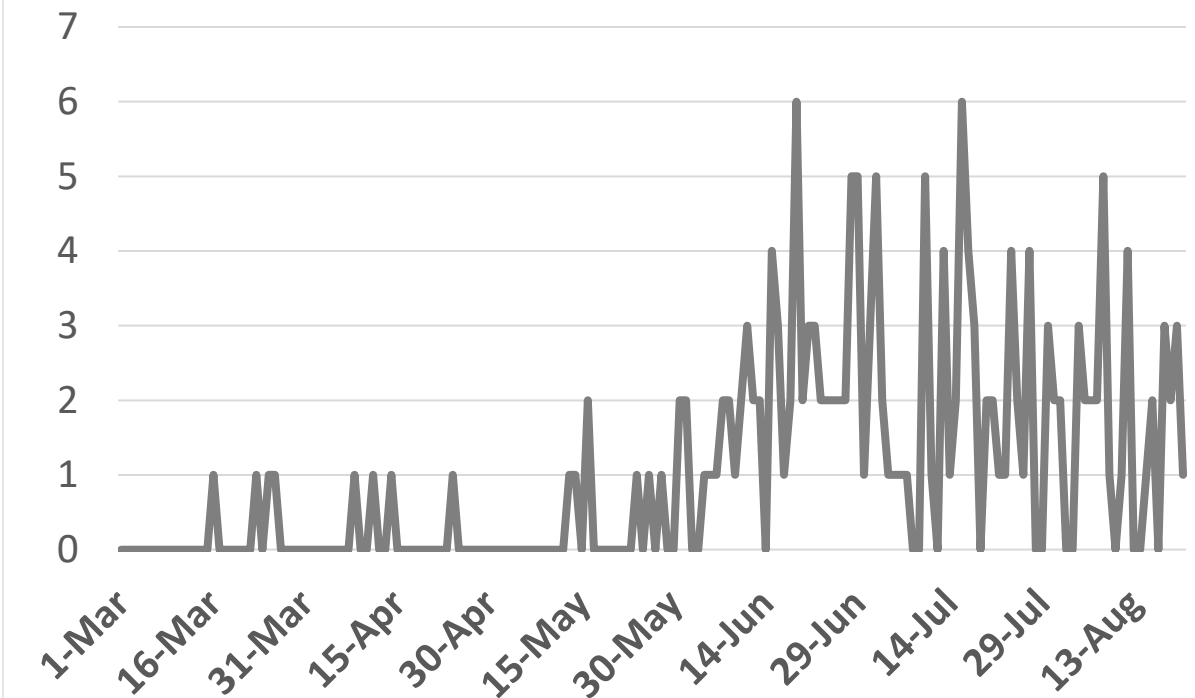
Source : National Emergency Crisis and Disaster Management Authority

### KSA



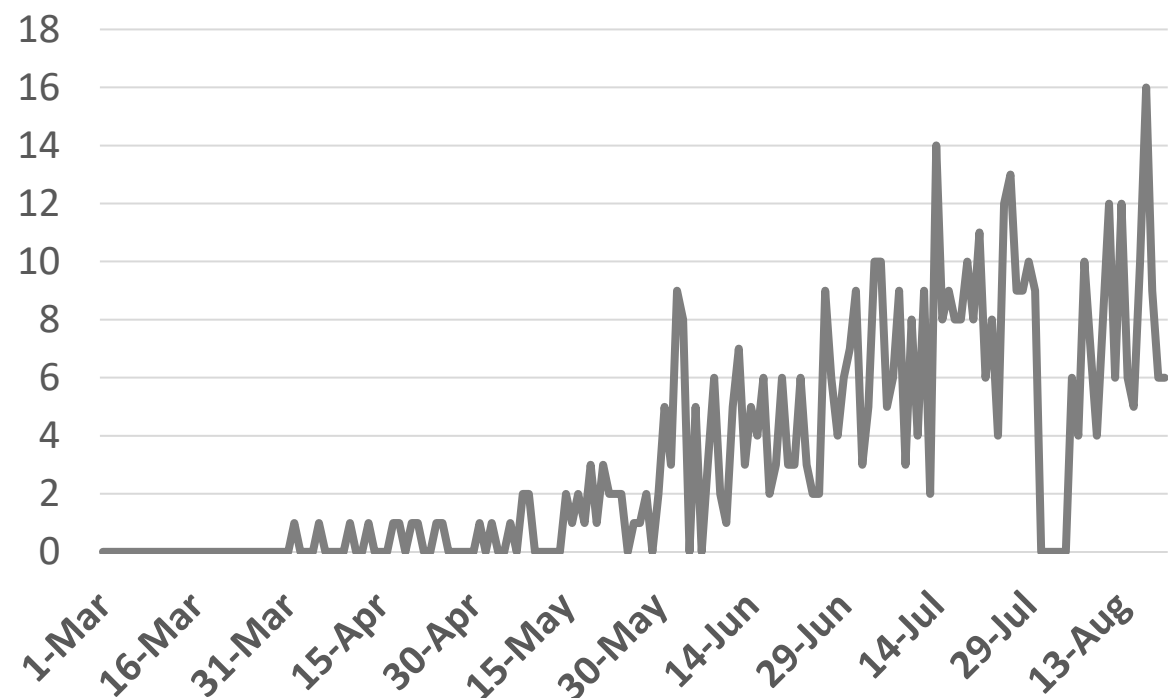
Source : KSA ministry of health

### Bahrain



Source :WHO

### Oman

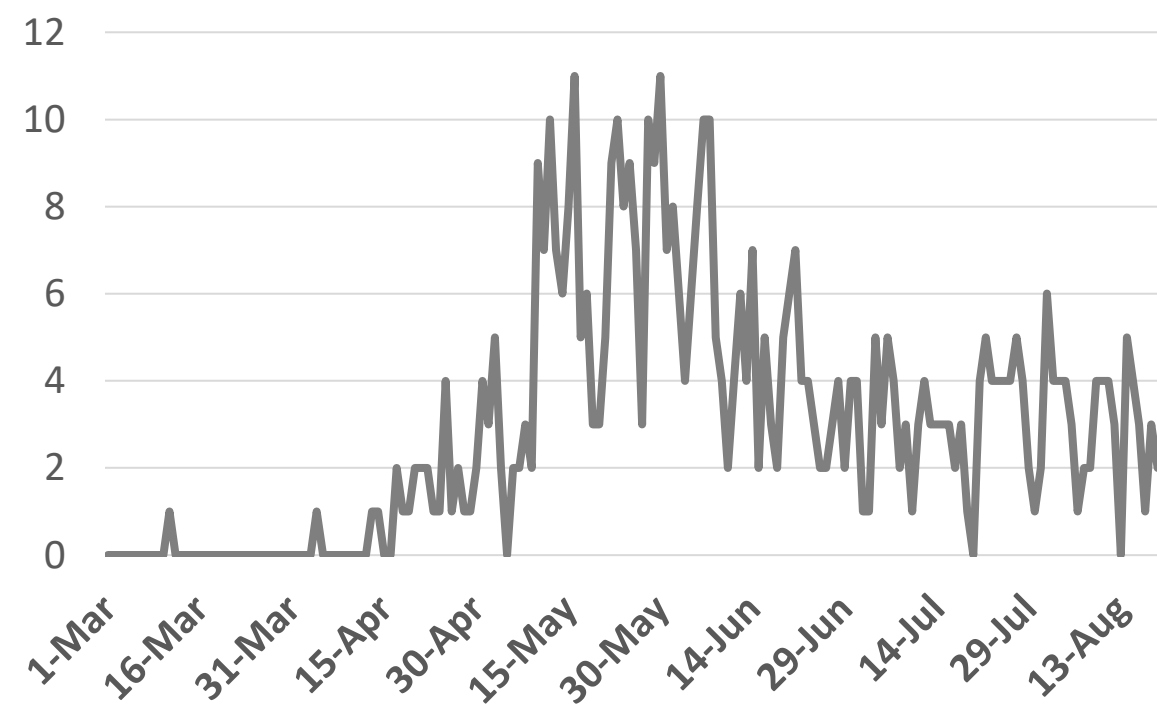


Source :Oman ministry of health

\*No announced statistic data from 31 July to 4 August

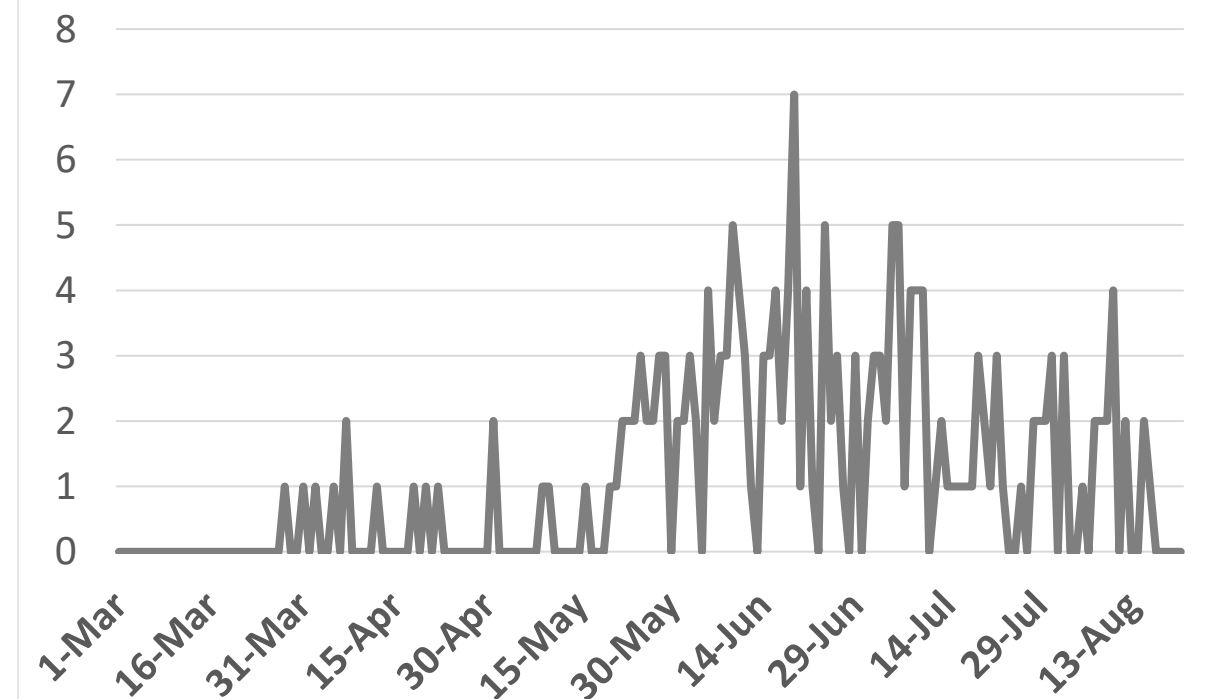
### Kuwait

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Source : Kuwait ministry of health

### Qatar



Source : Qatar ministry of health



## Article 1

Published

# Clinical Characteristics and Risk Factors Associated with COVID-19 Severity in Patients with Haematological Malignancies in Italy: A Retrospective, Multicentre, Cohort Study

13 August 2020 [THE LANCET](#)

This study adds to the evidence that patients with hematological malignancies have worse outcomes than both the general population with COVID-19 and patients with hematological malignancies without COVID-19. The high mortality among patients with hematological malignancies hospitalized with COVID-19 highlights the need for aggressive infection prevention strategies, at least until effective vaccination or treatment strategies are available.

## Background

The Italian Hematology Alliance on COVID-19 aimed to collect data from adult patients with hematological malignancies who required hospitalization for COVID-19.

## Methodology

This multicenter, retrospective, cohort study included adult patients (aged  $\geq 18$  years) with a diagnosis of a WHO-defined hematological malignancy admitted to 66 Italian hospitals between Feb 25 and May 18, 2020, with laboratory-confirmed and symptomatic COVID-19 (data cut off was June 22, 2020). The primary outcome was mortality and evaluation of potential predictive parameters of mortality. We calculated standardized mortality ratios between observed death in the study cohort and, expected death by applying stratum-specific mortality rates of the Italian population with COVID-19 and an Italian cohort of 31 993 patients with hematological malignancies without COVID-19 (data up to March 1, 2019). Multivariable Cox proportional hazards model, was used to identify factors associated with overall survival. This study is registered with ClinicalTrials.gov, NCT04352556, and the prospective part of the study is ongoing.

## Conclusion

- A total of 536 patients were enrolled with a median follow-up of 20 days +, 85 (16%) of whom were managed as outpatients.
- 440 (98%) of 451 hospitalized patients completed their hospital course (were either discharged alive or died).
- 198 (37%) of 536 patients died. When compared with the general Italian population with COVID-19, the standardized mortality ratio was 2.04 in our whole study cohort and 3.72 (2.86–4.64) in individuals younger than 70 years.
- When compared with the non-COVID-19 cohort with hematological malignancies, the standardized mortality ratio was 41.3.
- Older age (hazard ratio 1.03); progressive disease status (HR 2.10, ); diagnosis of acute myeloid leukemia (HR: 3.49), indolent non-Hodgkin lymphoma (HR: 2.19), aggressive non-Hodgkin lymphoma (HR: 2.56), or plasma cell neoplasms (HR: 2.48), and severe or critical COVID-19 (HR: 4.08) **were associated with worse overall survival.**





## Article 2

# Clarifying the Sweeping Consequences of COVID-19 in Pregnant Women, Newborns, and Children with Existing Cohorts

Published

10 August 2020 [JAMA Pediatrics](#)

This paper emphasizes the need to understand the outcome of COVID-19 on pregnant women, infants, and children, including vulnerable and minority groups. The outcomes must cover those with and without infections, who will both bear the burdens of altered health services, psychosocial stress, and economic downturn. The authors emphasize the need for evidence to strengthen preventive measures and understand the consequences of infection, chemoprophylaxis, vaccination, and treatment.

The authors posed the following relevant questions:

- what are the burdens of COVID-19 to the mother and fetus?
- What is the mode of transmission of COVID-19 from pregnant moms to the baby?
- What is the best method of delivery for pregnant women to prevent COVID transmission, is it c-section or normal delivery?
- Is breastfeeding recommended in women with newly born babies? What are the long-term complications of fetal development and child health?

## Public Health Message

- Mega cohorts are extremely valuable; therefore, it is crucial to reconfigure existing large international birth cohorts. Many have provided real data critical to understanding this pandemic and model mitigation strategies for the next one as its unique footprint emerges. This would provide a sustainable infrastructure to minimize adverse outcomes associated with the current pandemic for mothers and infants over the coming decades while maximizing knowledge to help address the inevitable pandemics to come.



## Article 3

# Excess Mortality from COVID-19 in an English Sentinel Network Population

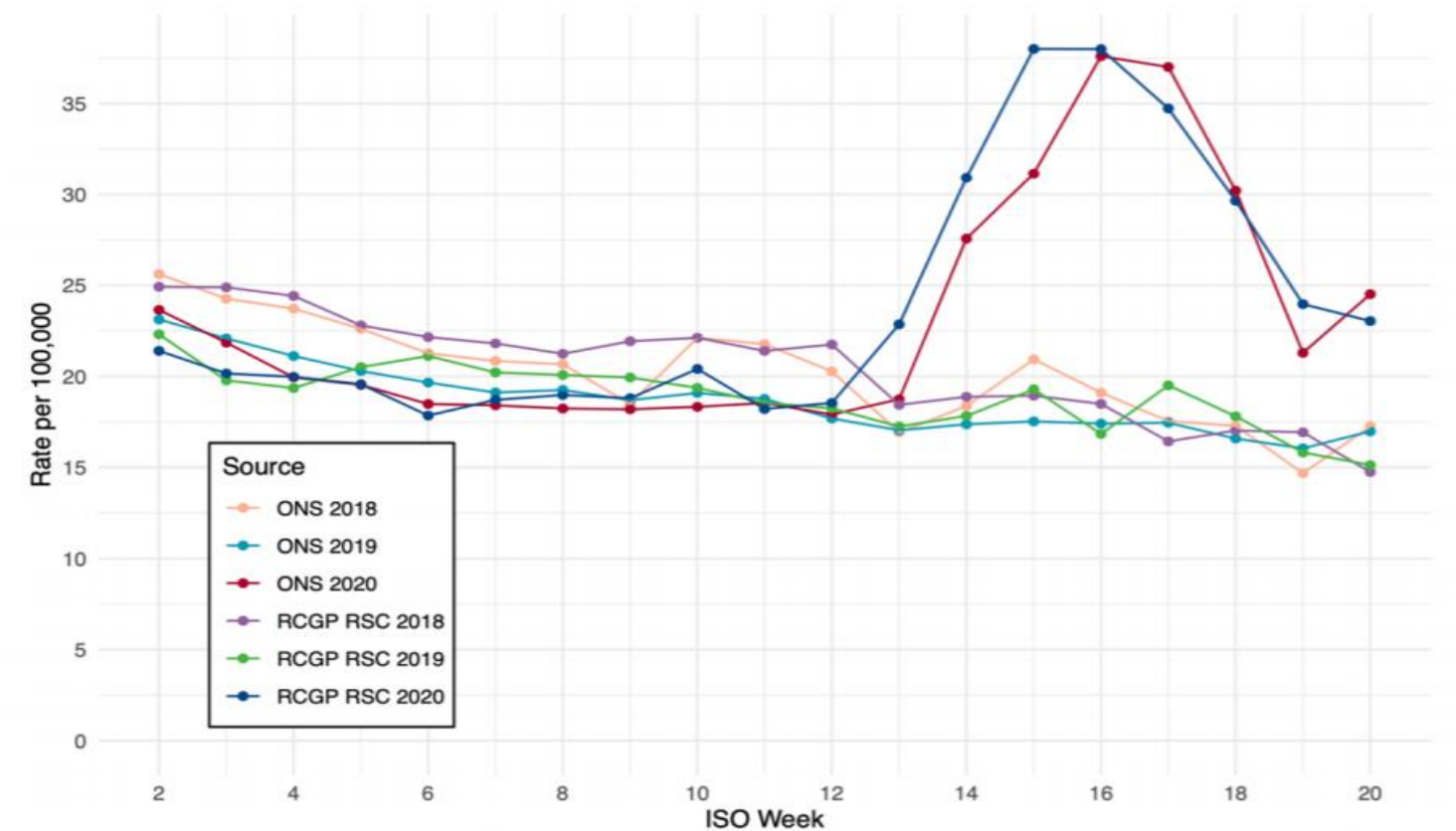
Published

04 August 2020 [THE LANCET](#)

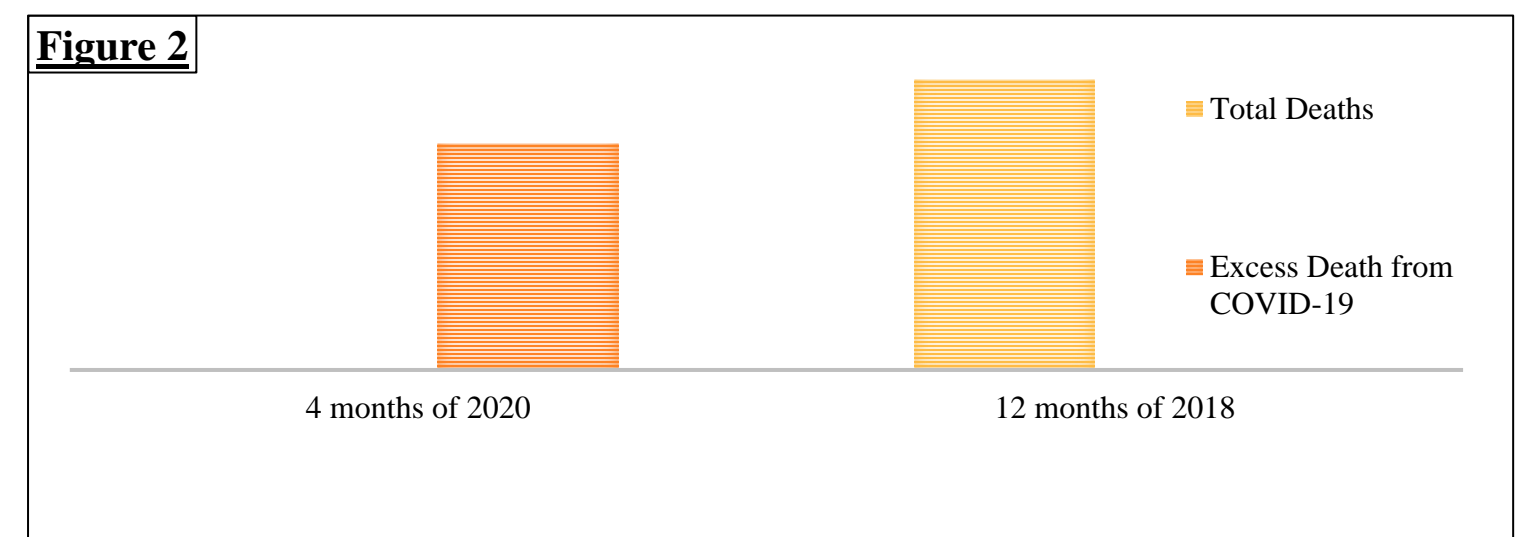
- This editorial is based on a cohort study that discusses mortality rate caused by COVID-19 pandemic in part of the UK.
- The data of 4.41 million patients were obtained from RCGP<sup>1</sup> Research & Surveillance Center and compared to those from ONS<sup>2</sup> where 1,573,648 person-years were at risk.
- According to mortality data of previous years a total of 6069 deaths were anticipated to occur in 2020.
- Due to the COVID-19 risk, a total of 17130 deaths were observed in 2020.
- The mortality rate was observed in weeks 2 to 20 in 2018, 2019 and 2020 (**Figure 1**).

## Conclusion

- In one-third of 2020, COVID-19 causes an excess mortality risk that resulted in an increase in death rate by three-quarters of the deaths anticipated in the previous year (**Figure 2**).



**Figure 1:** Mortality rates across all ages for weeks 2 to 20 of 2018, 2019 and 2020 comparing the RCGP<sup>1</sup> and the ONS<sup>2</sup>.



<sup>1</sup> Oxford-Royal College of General Practitioners, UK

<sup>2</sup> Office of National Statistics



# THANK YOU

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