

# SCIENTIFIC RESEARCH MONITORING ON COVID-19

7 JULY 2020

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<https://www.doh.gov.ae/ar/covid-19/Healthcare-Professionals/Scientific-Publication>

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

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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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# HIGHLIGHTS

All articles presented in this report represents the authors' views and not necessarily represents Abu Dhabi Public Health Center views or directions.

## Today's Research Updates

### Mental Health

**Prevalence of and Risk Factors Associated with Mental Health Symptoms Among the General Population in China During the Coronavirus Disease 2019 Pandemic**

### Transmission

**Exaggerated Risk of Transmission of COVID-19 by Fomites**

### Epidemiology

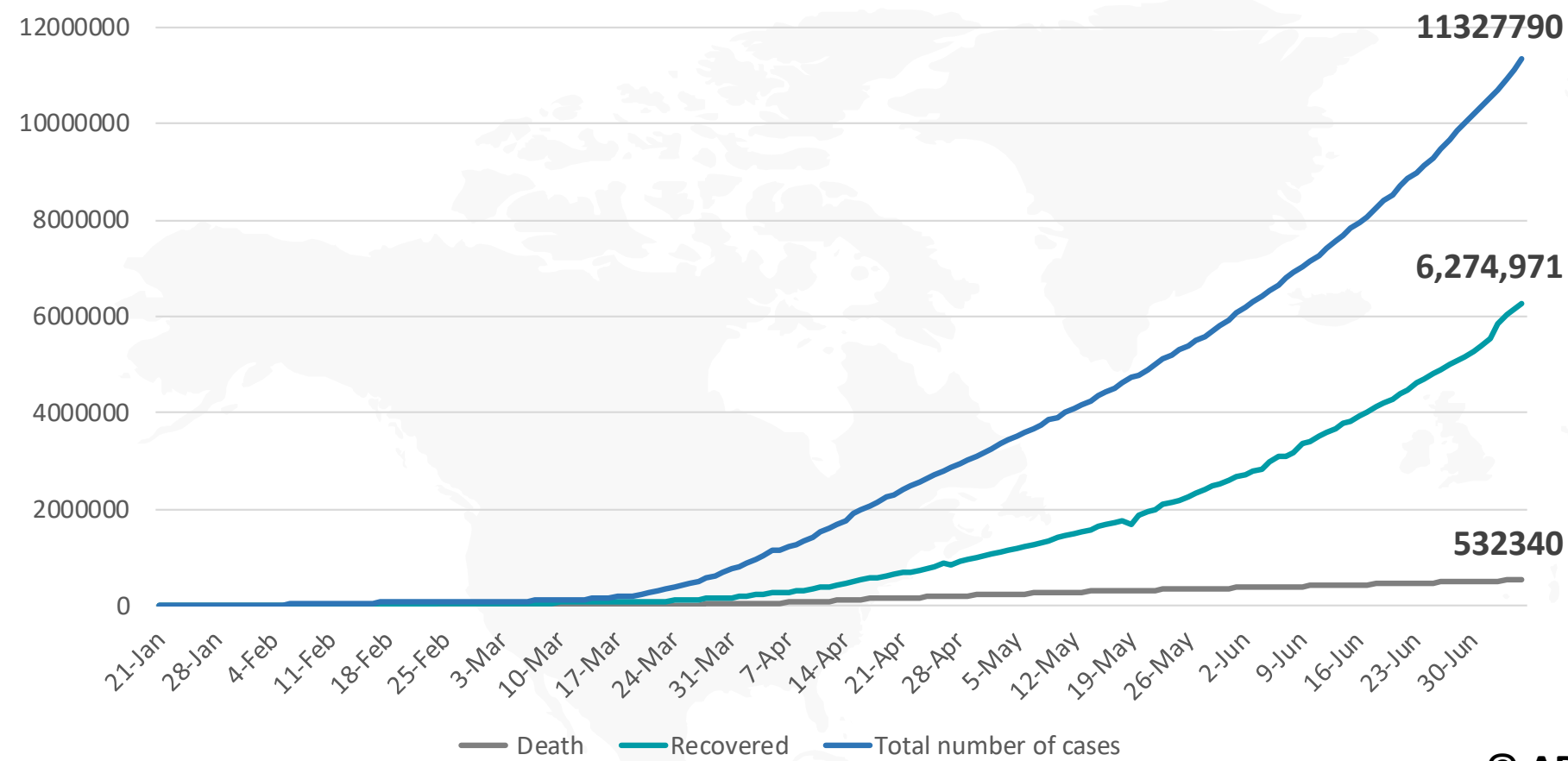
**Prevalence of SARS-CoV-2 in Spain (ENE-COVID): A Nationwide, Population-Based Sero-Epidemiological Study**



- COVID-19 has changed our life: disinfectants, hand sanitizers, and personal protective equipment (PPE) have become tools in the fight against virus transmission. Most of these products contain chemicals. [A webinar is being held tomorrow during which speakers will share the preliminary analysis of the chemical impact \[of using these products\]](#) and outline recommendations to ensure the safety of chemical products being used to stop the spreading of the virus.
- As a major United Nations forum prepares to assess progress towards a fairer future for people and the planet, UN Secretary-General António Guterres has warned that each of the Goals of the 2030 Agenda for Sustainable Development; is being impacted by the COVID-19 pandemic.

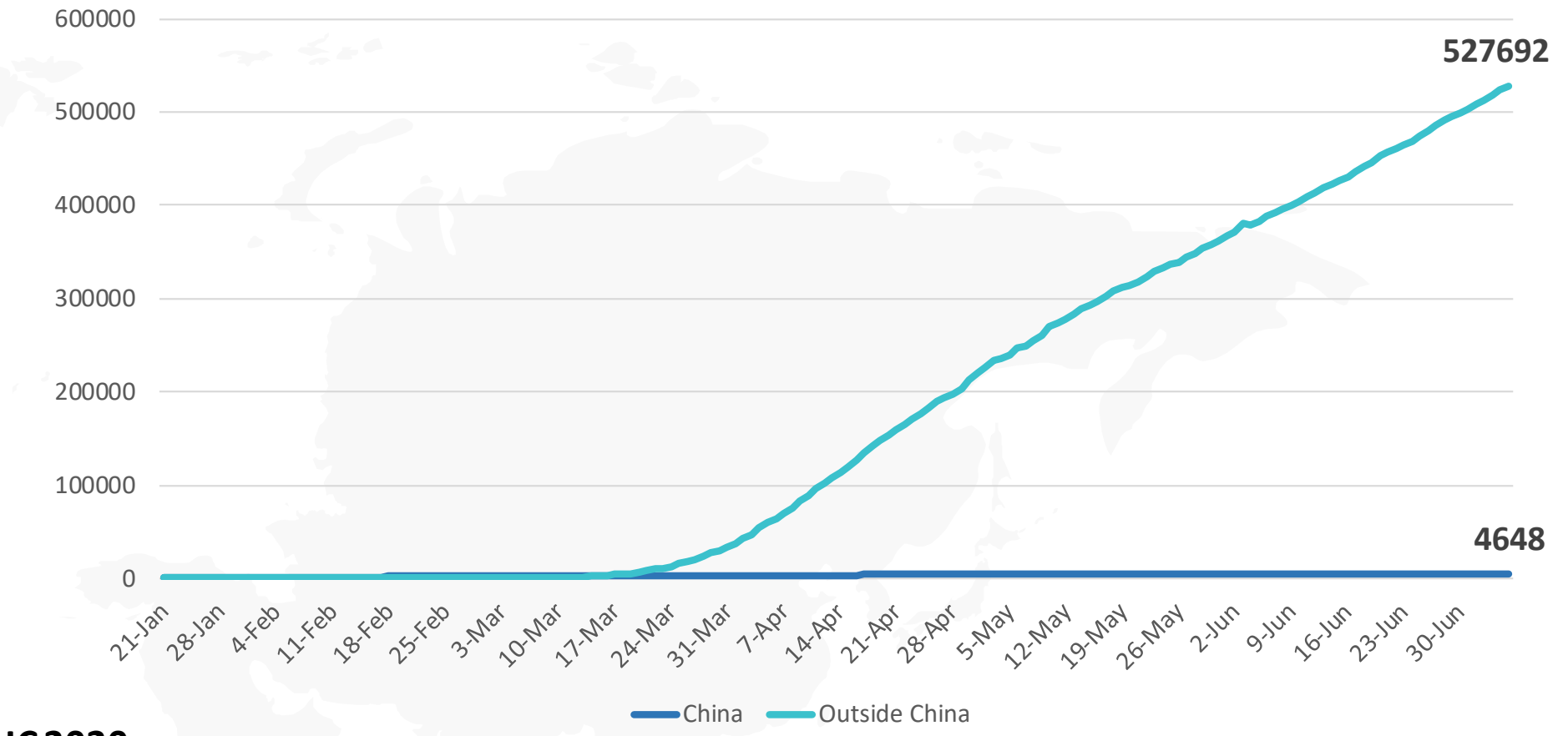


**Figure 1: Total number of infected, recovered, and death cases**

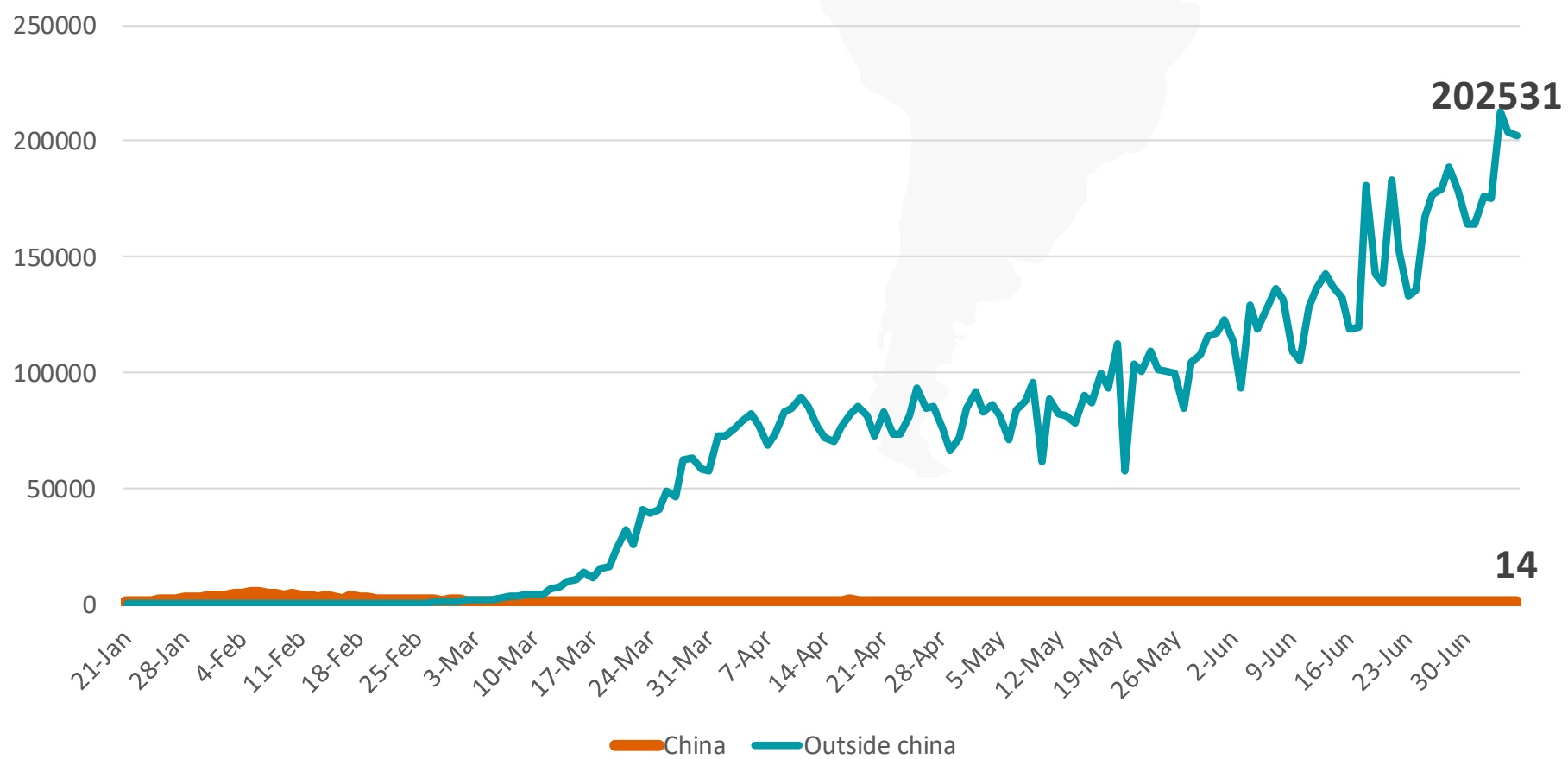


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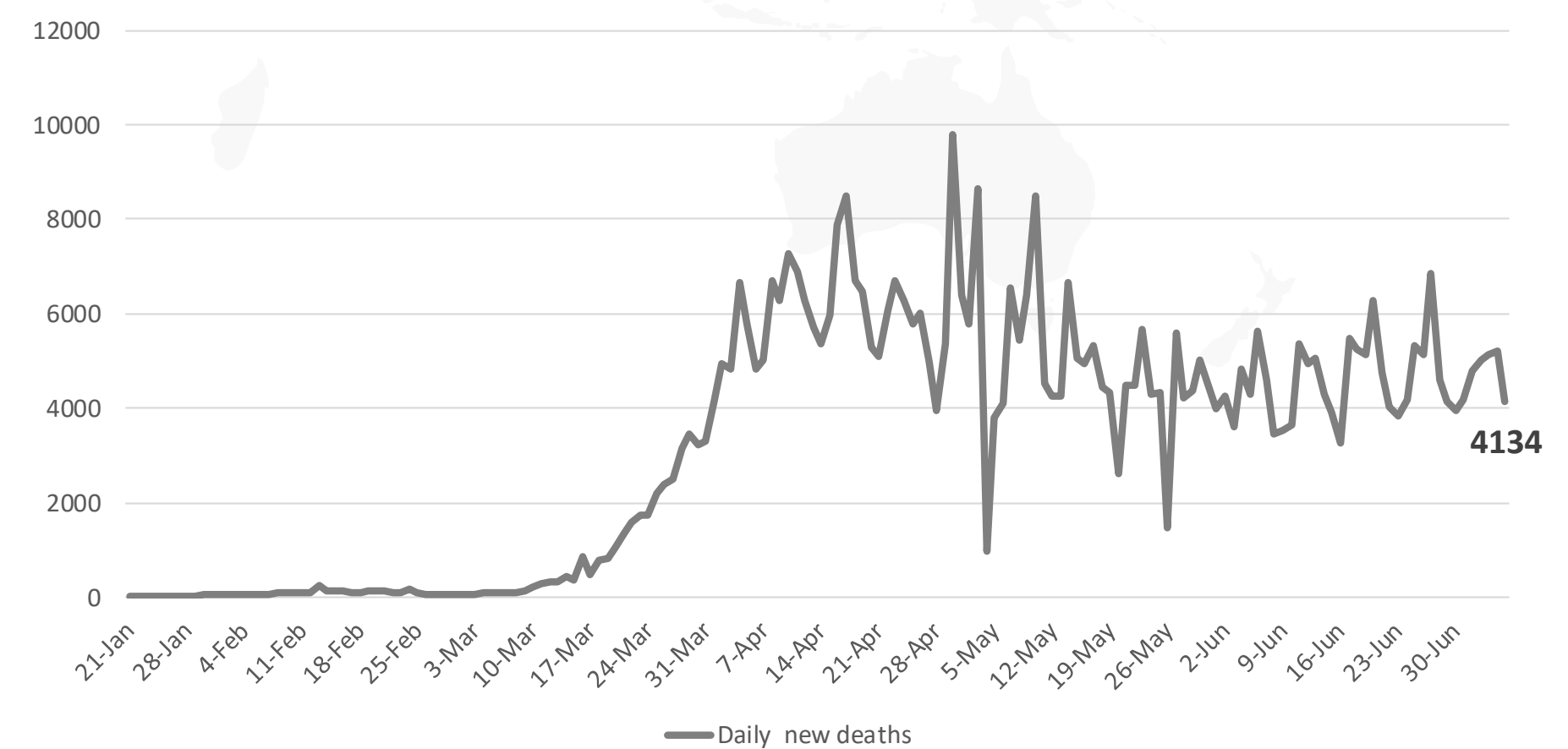
**Figure 3: Total number of death due to COVID-19 (china and the result of the world )**



**Figure 2: Daily new infected COVID-19 cases (china and the rest of the world )**

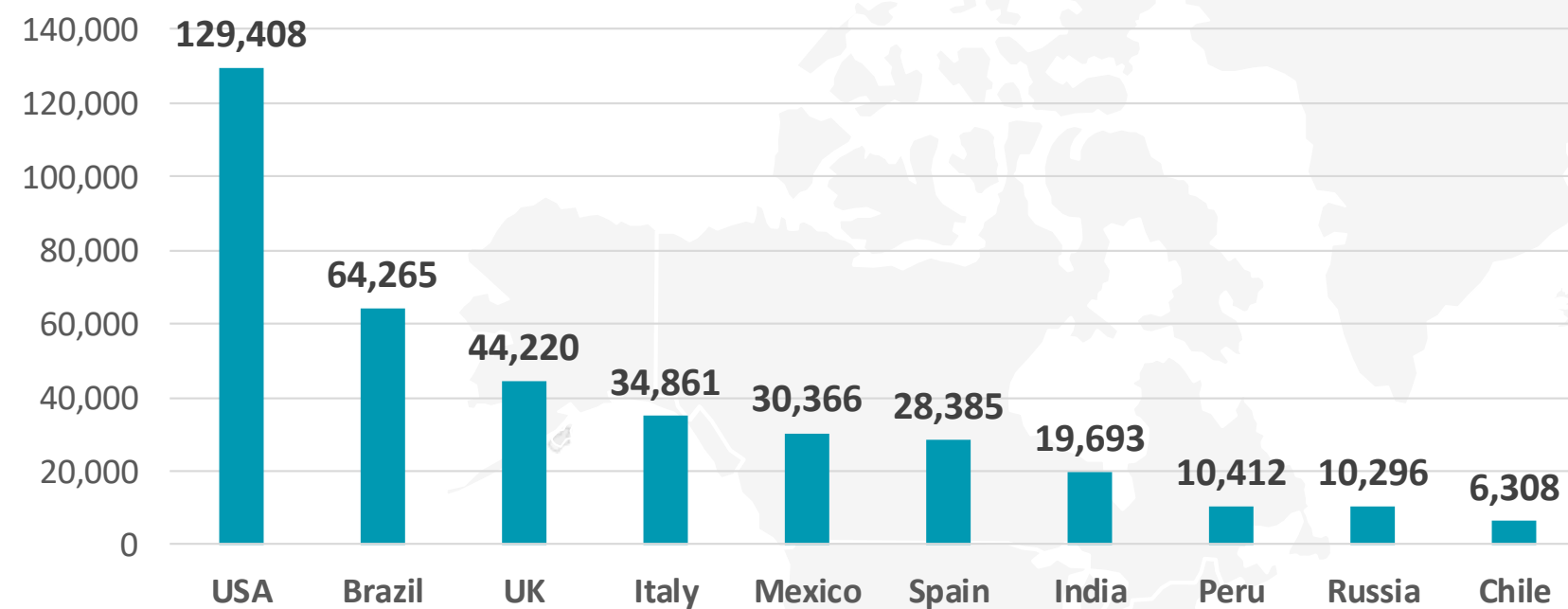


**Figure 4: Global daily new deaths due to COVID-19 ( china and rest world)**

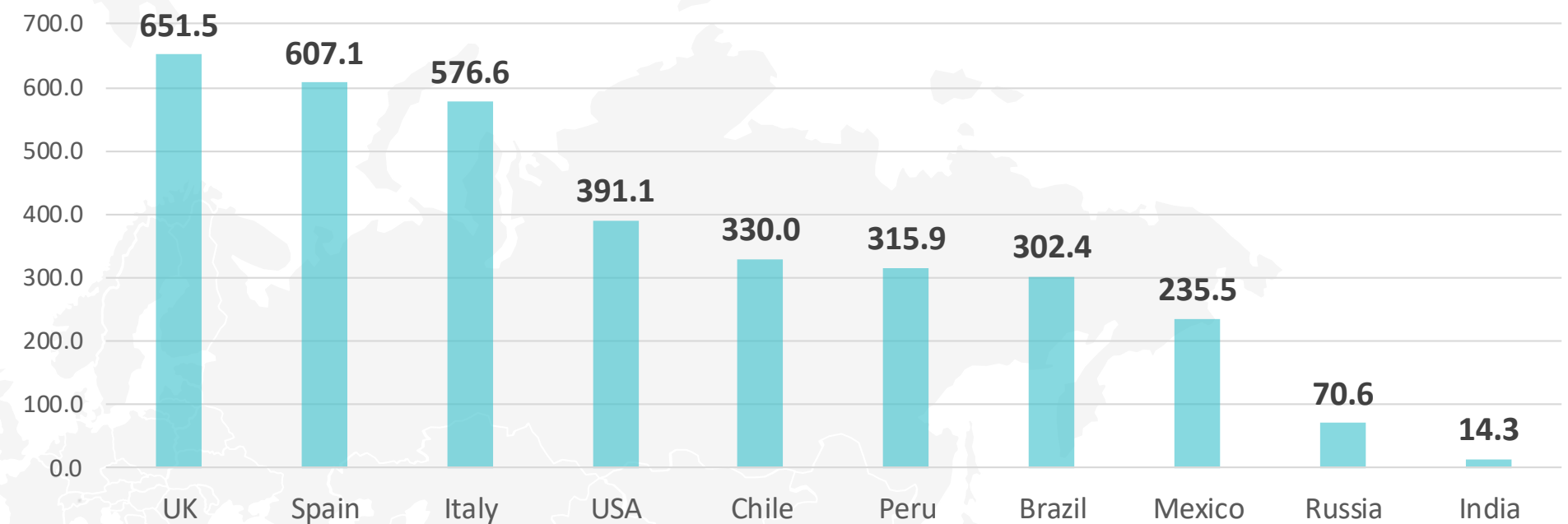


## Figure 3: Top 10 countries in the total number of cases due to COVID-19

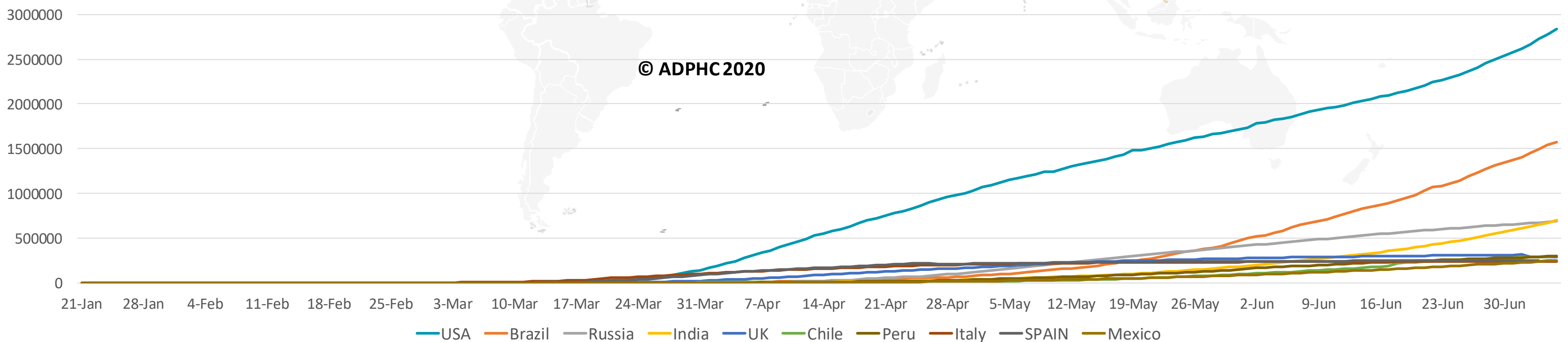
### TOTAL DEATHS



### DEATHS PER MILLION



### TOTAL INFECTED CASES



**Figure 5: Total number of infected and recovered due to COVID-19 reported by the UAE**

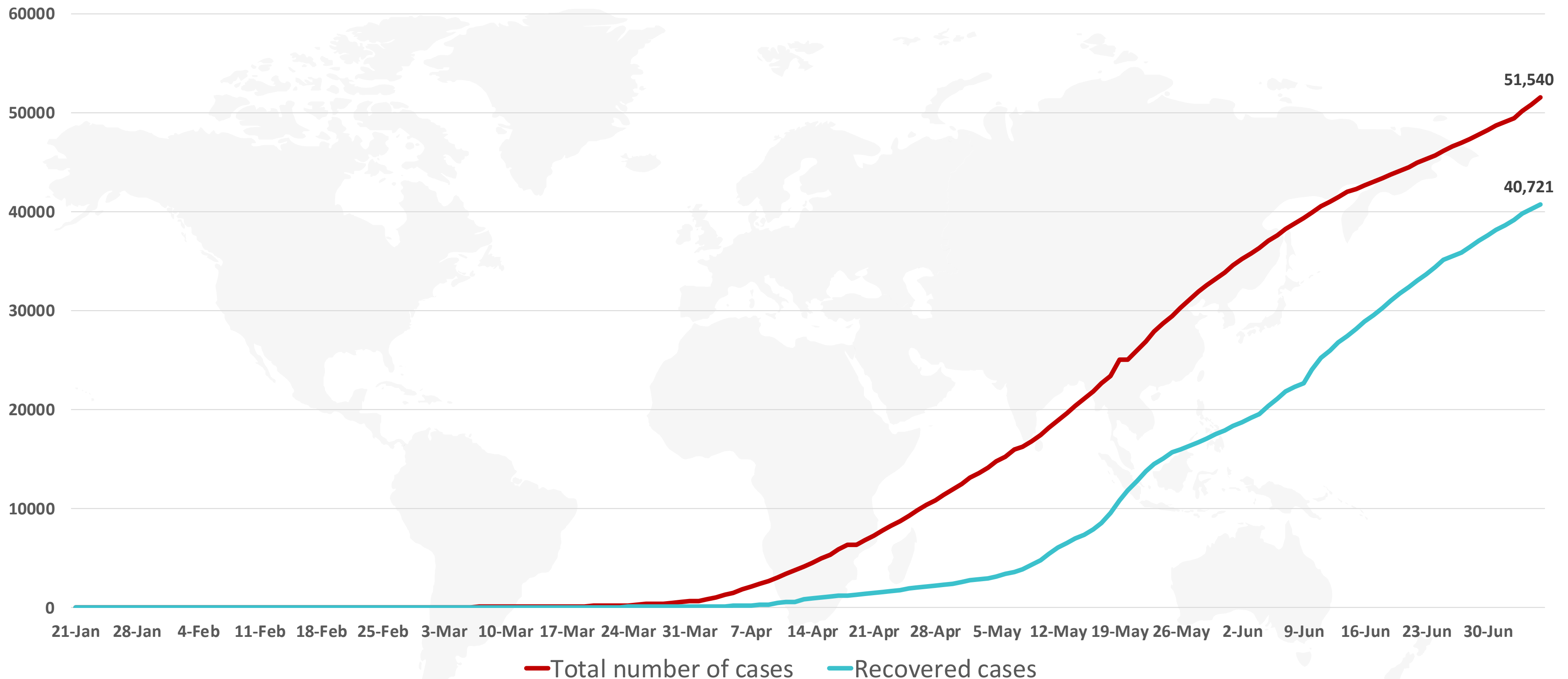
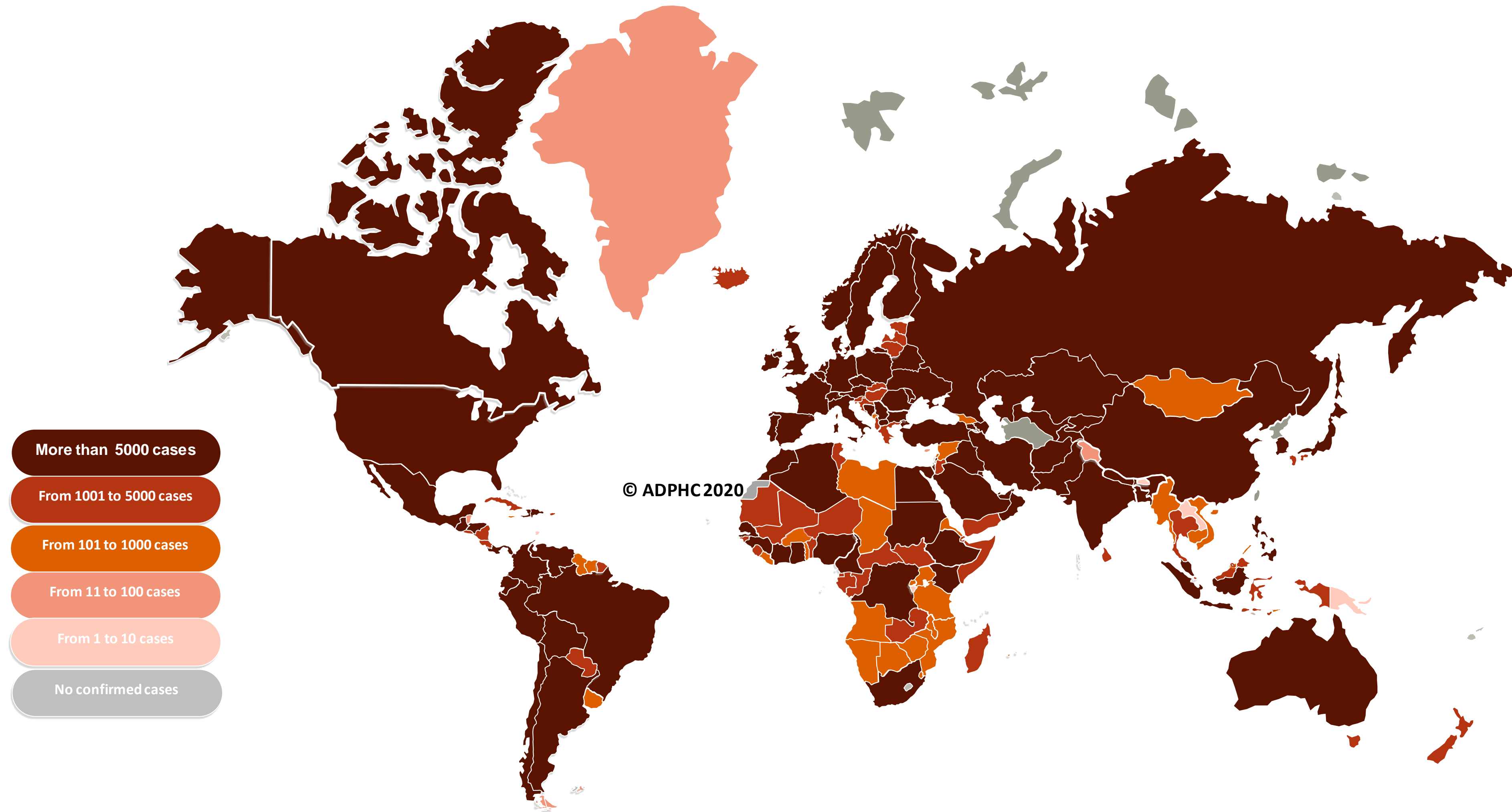


Figure 7A : Global distribution of COVID-19 cases



More than 5000 cases

From 1001 to 5000 cases

From 101 to 1000 cases

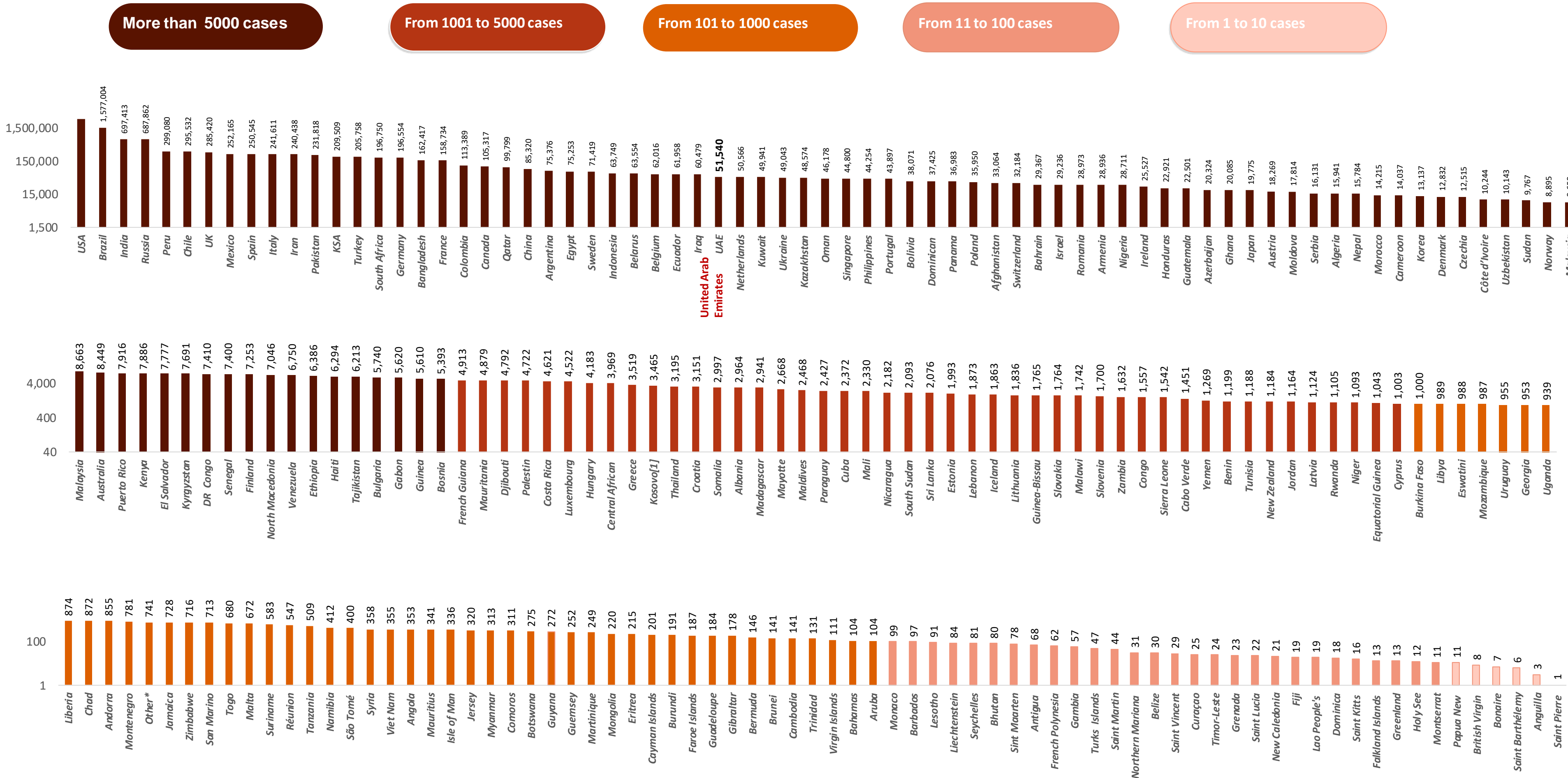
From 11 to 100 cases

From 1 to 10 cases

No confirmed cases



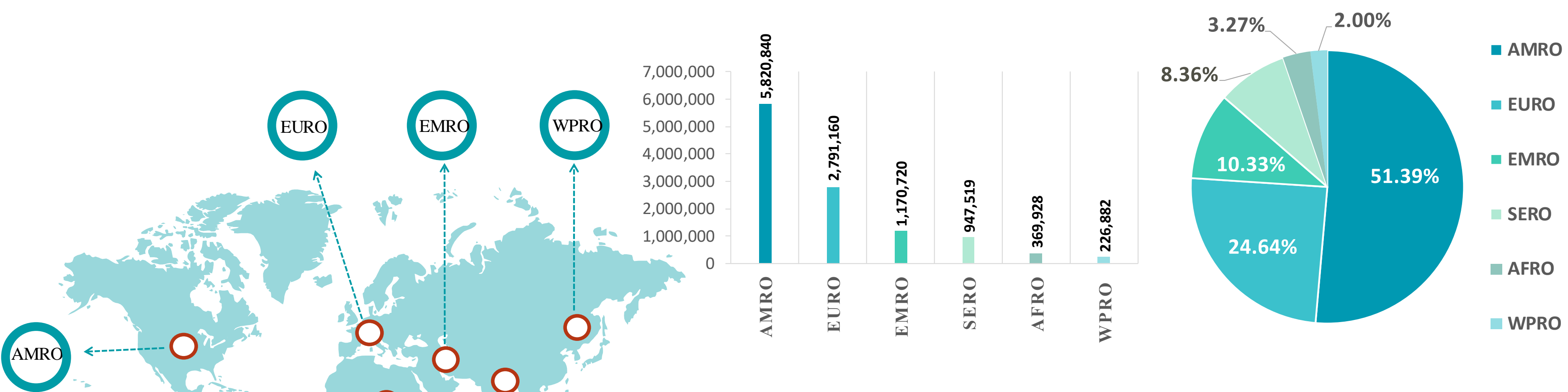
## Figure 7B: Bar chart illustrate the global distribution of COVID19 cases



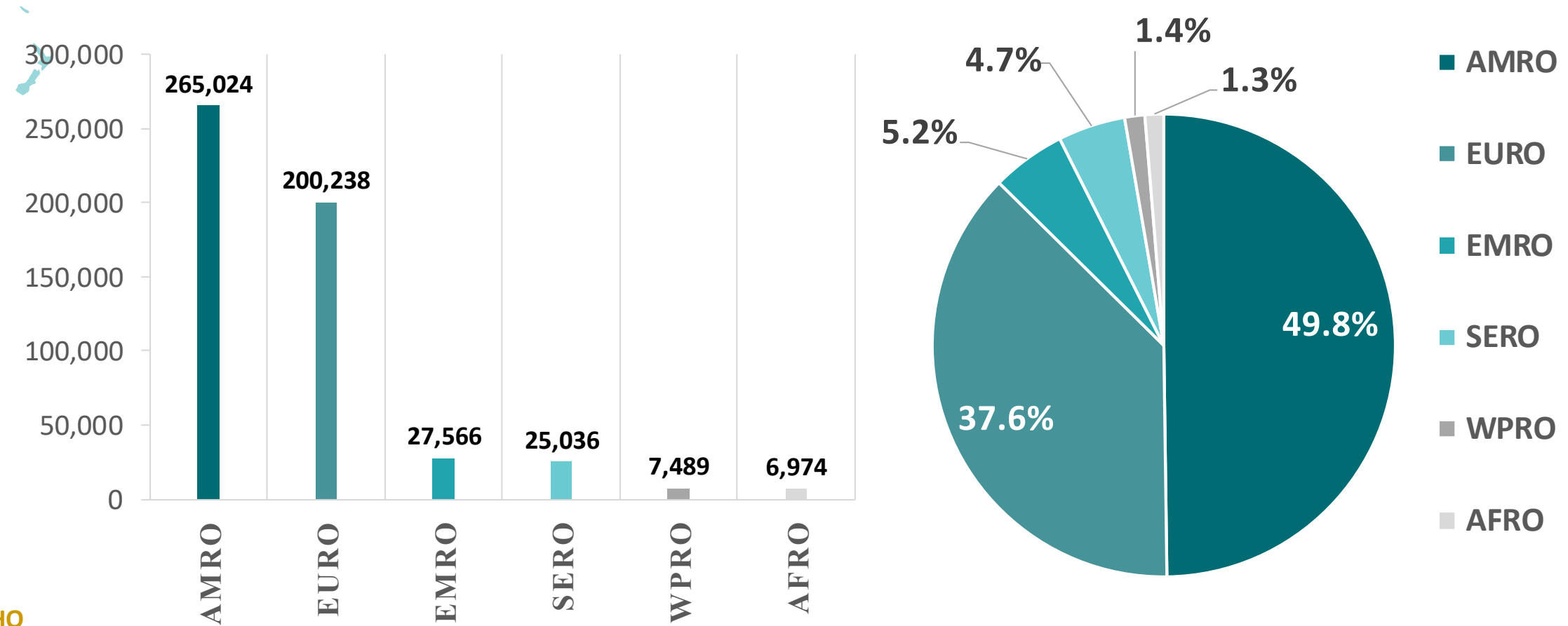
Other\*: includes cases and deaths reported under the international conveyance(Diamond Princess)

Figure 8: illustrate the Global distribution of COVID19 cases per region

## INFECTED

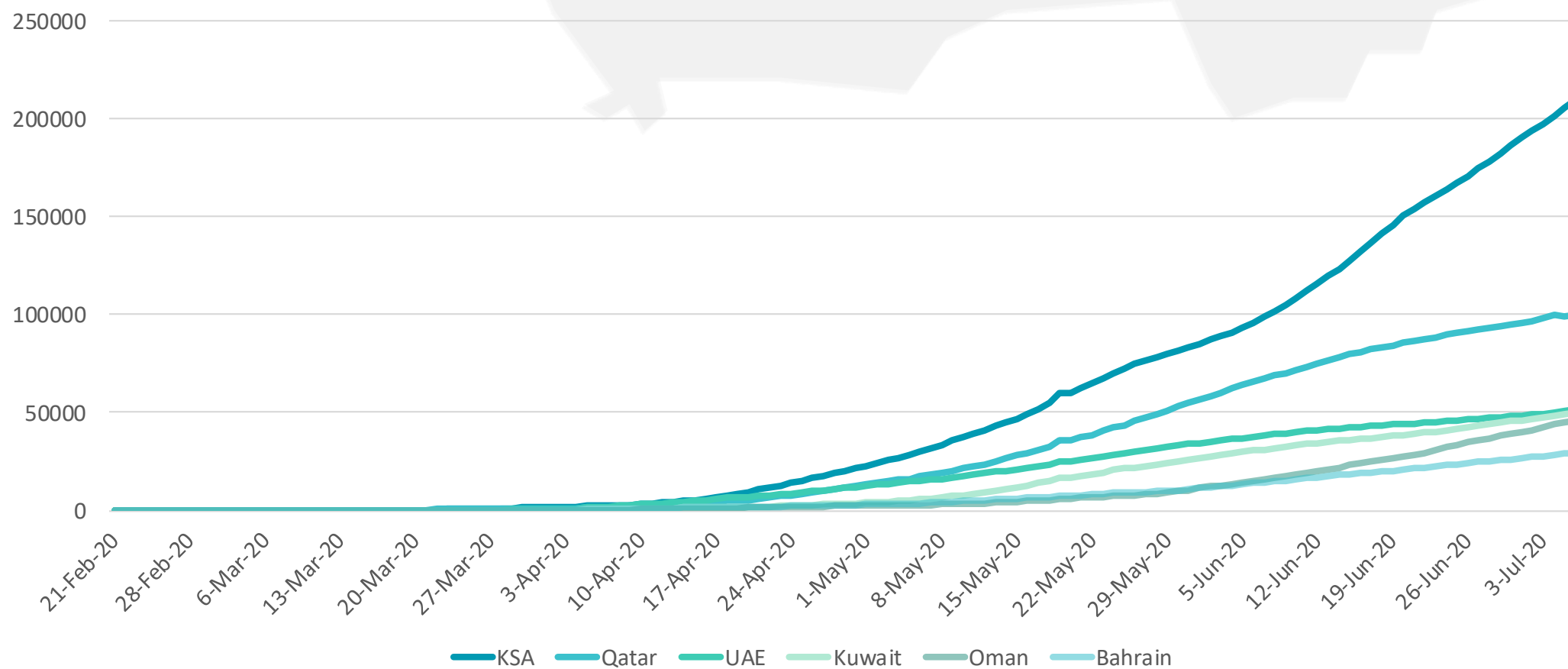
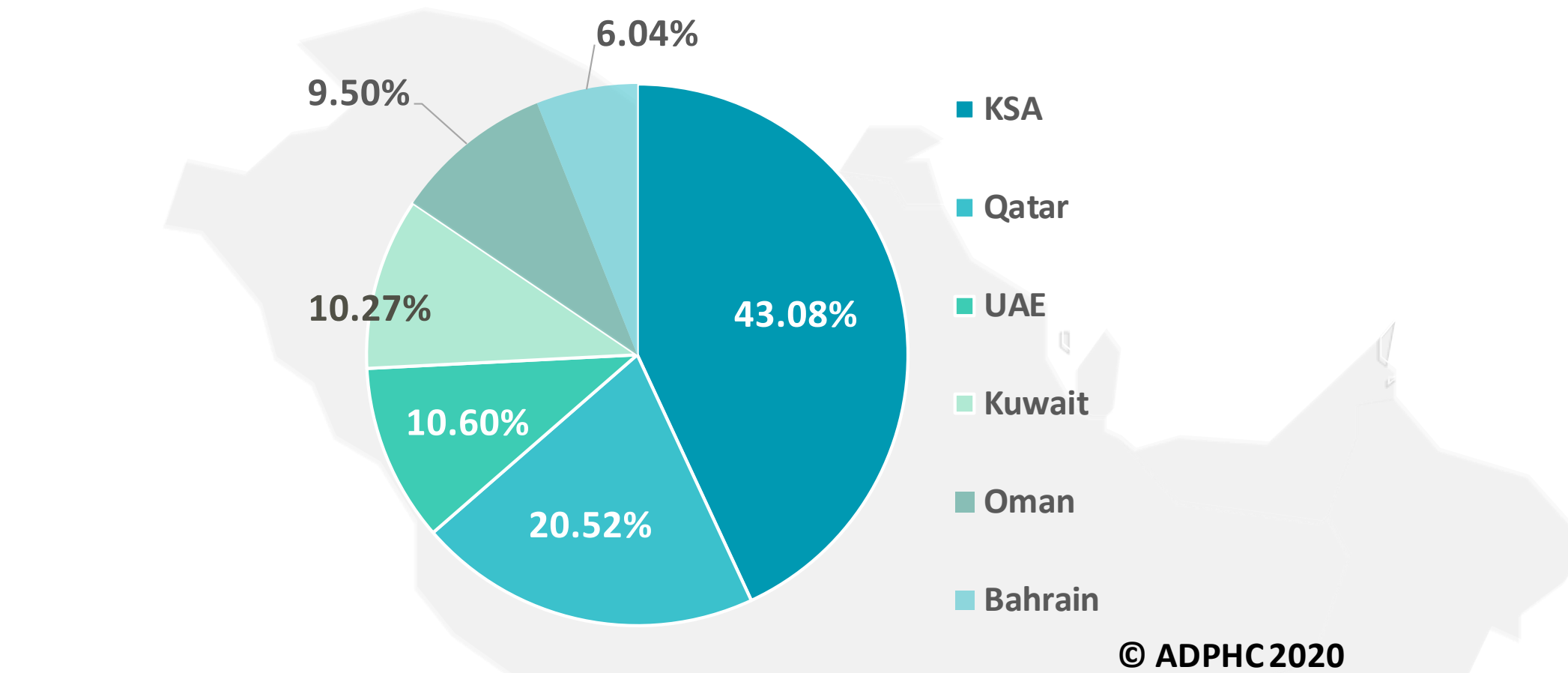


## DEATH

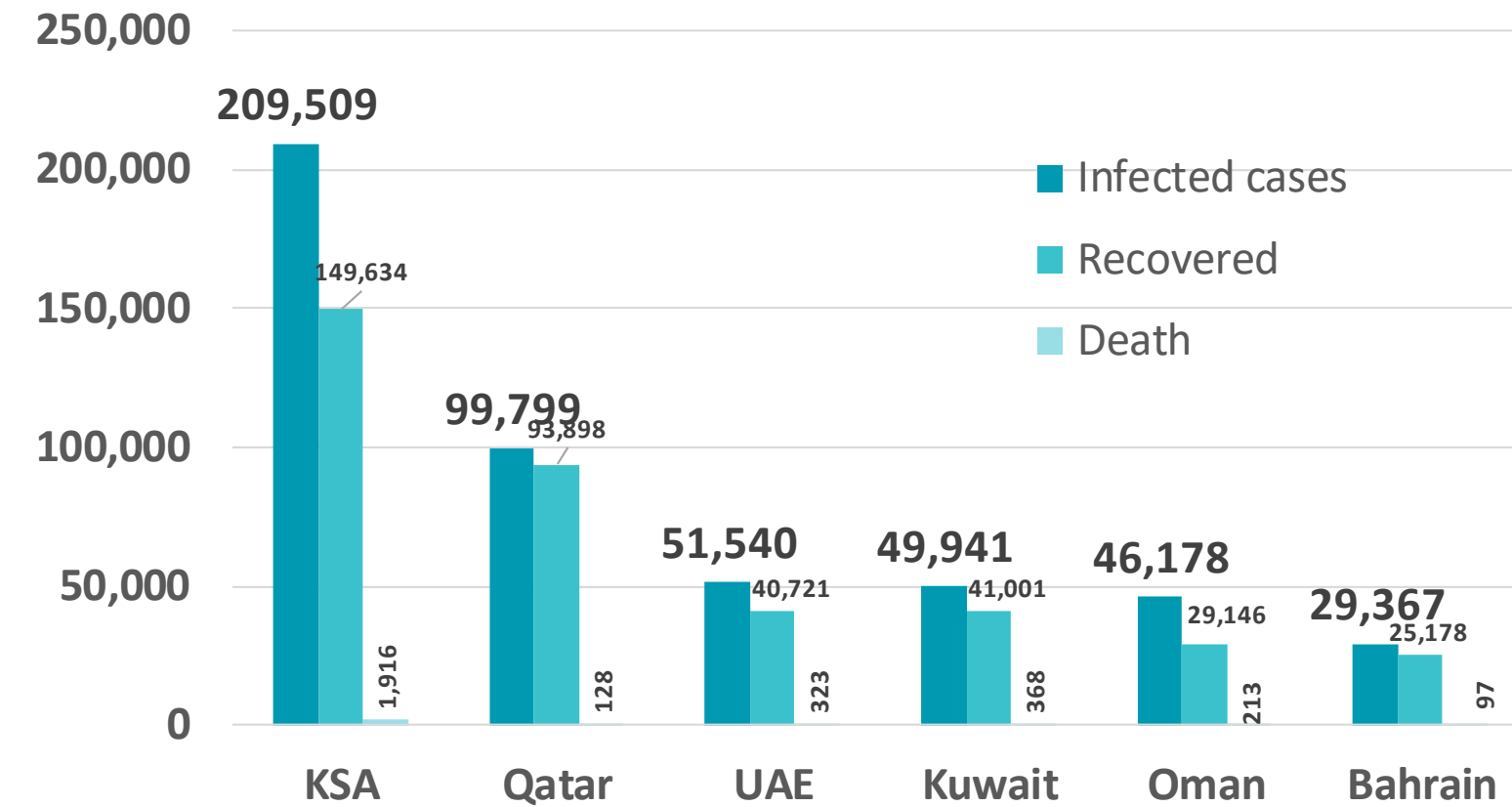


## Figure 9: Comparative analysis of the distribution of COVID19 cases in GCC countries

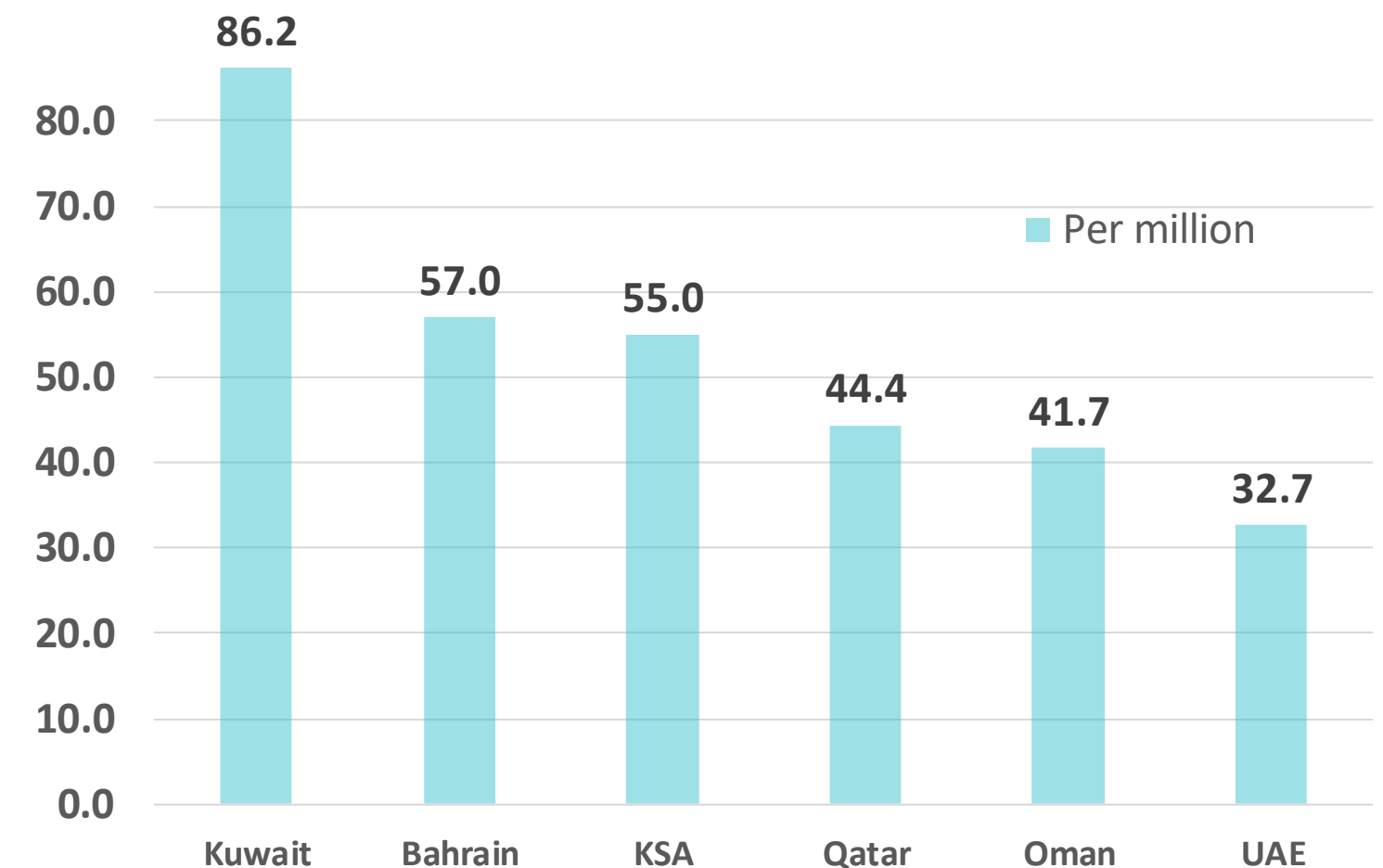
### TOTAL NUMBER OF INFECTED CASES



### TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



### DEATH PER MILLION



Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: [WHO](https://www.who.int)

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

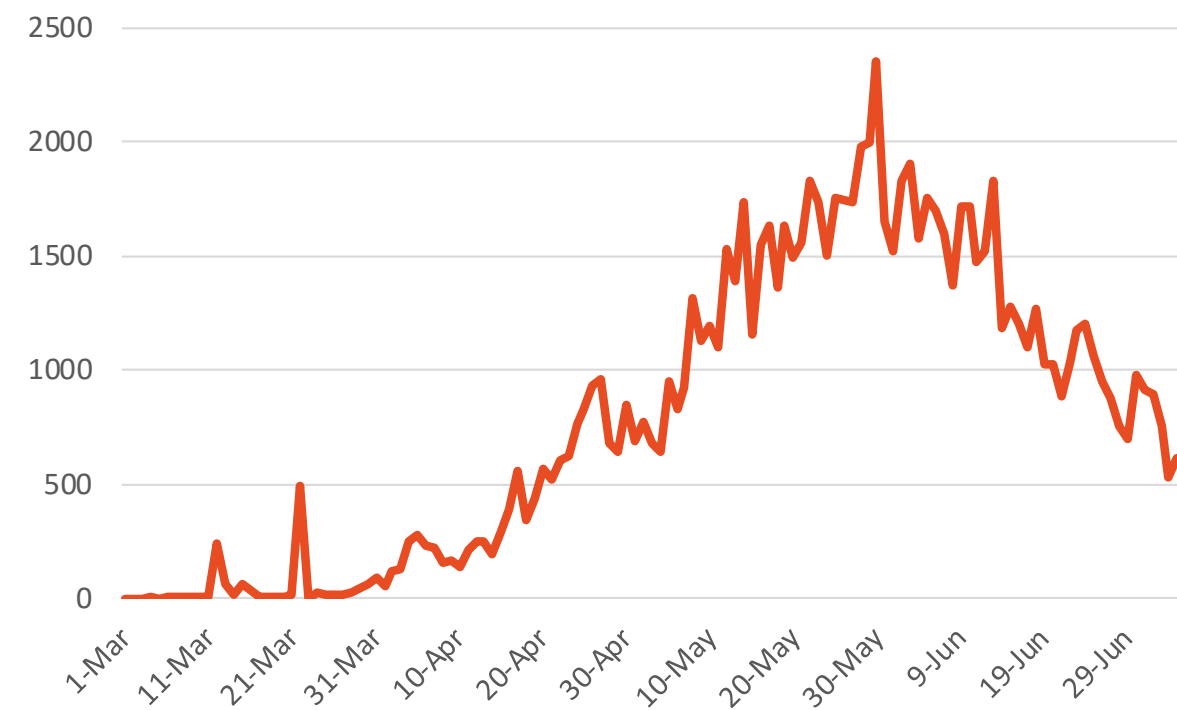
**Figure 10: Comparative analysis of the distribution of COVID19 new cases in GCC countries**

## KSA



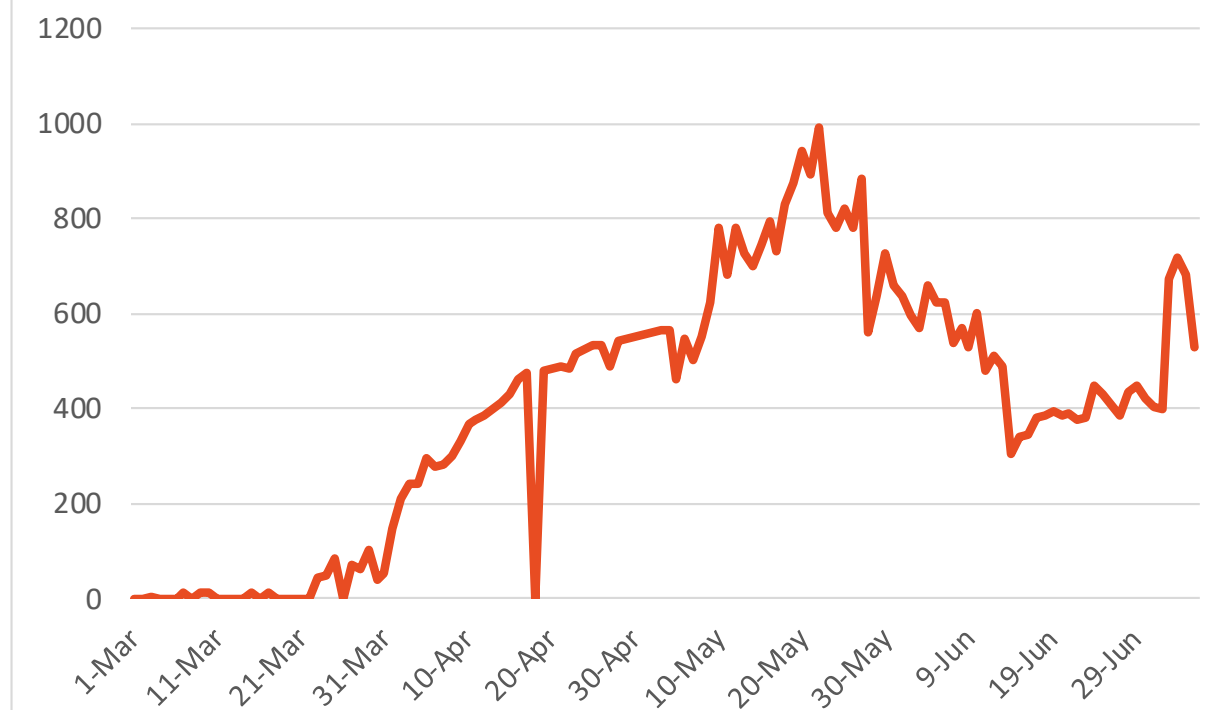
Source : KSA ministry of health

## Qatar



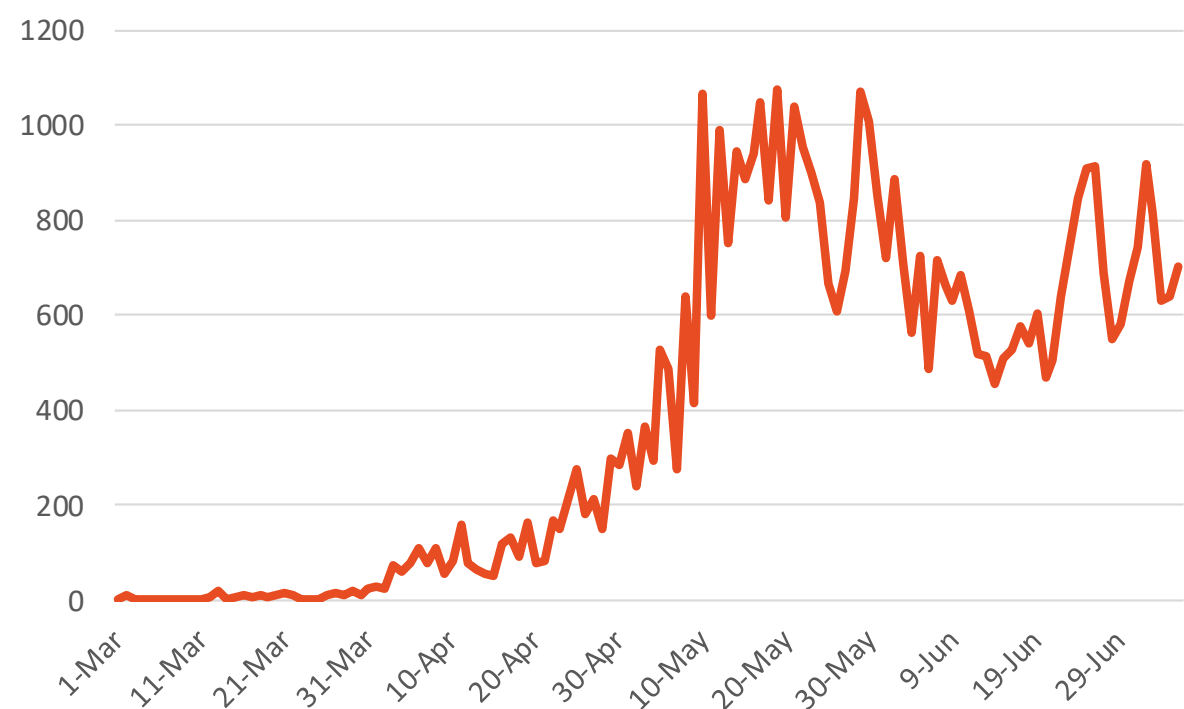
Source : Qatar ministry of health

## UAE



Source : National Emergency Crisis and Disaster Management Authority

## Kuwait



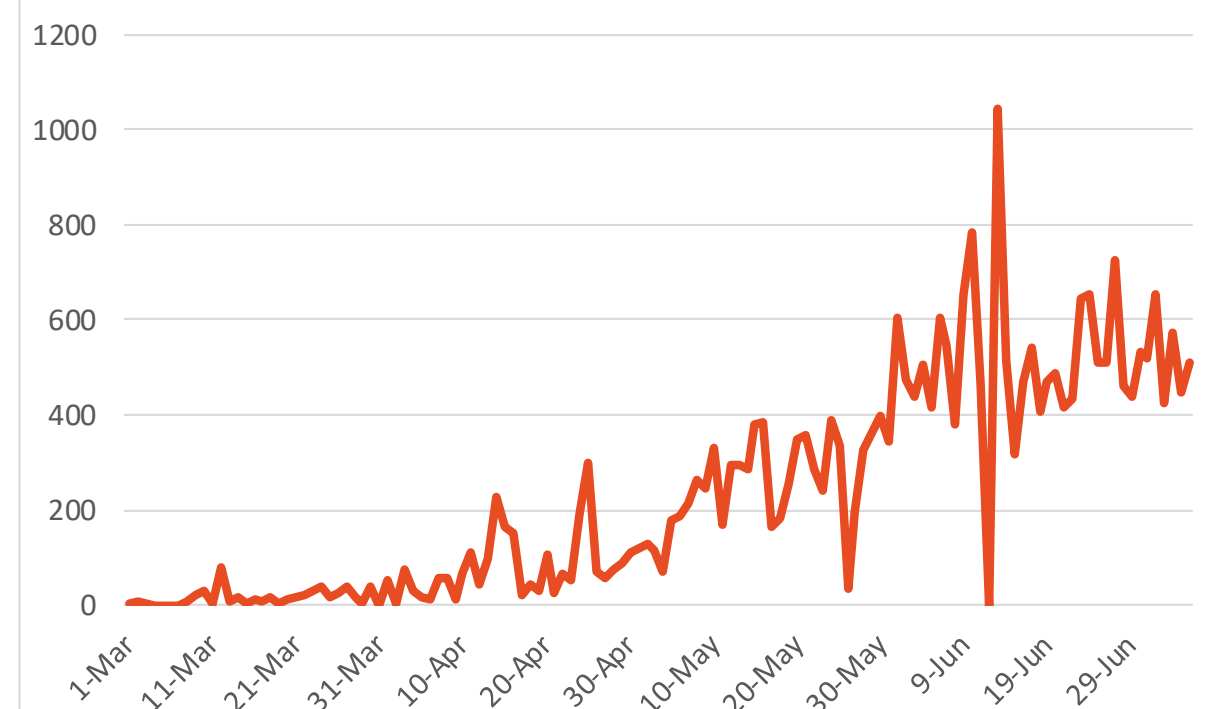
Source : Kuwait ministry of health

## Oman © ADPHC 2020



Source : Oman ministry of health

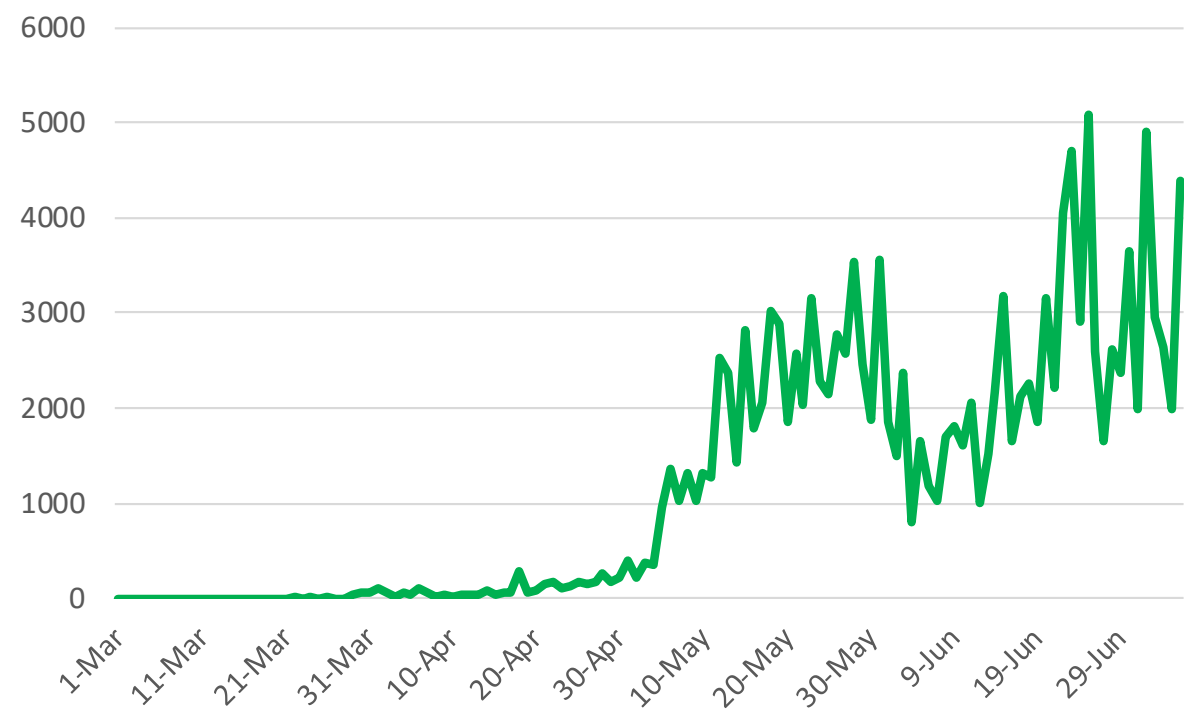
## Bahrain



Source : WHO

**Figure 11: Comparative analysis of the distribution of COVID19 newly recovered cases in GCC Countries**

## KSA



Source : [KSA ministry of health](#)

## Qatar



Source : [Qatar ministry of health](#)

## UAE



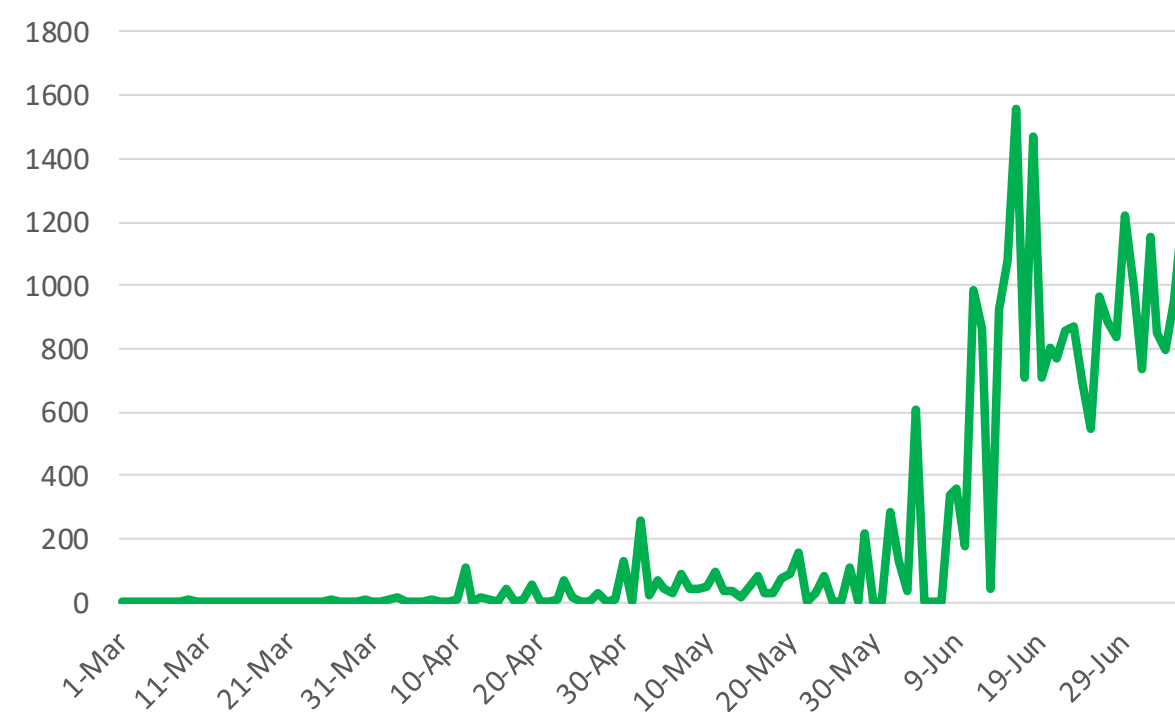
Source : [National Emergency Crisis and Disaster Management Authority](#)

## Kuwait



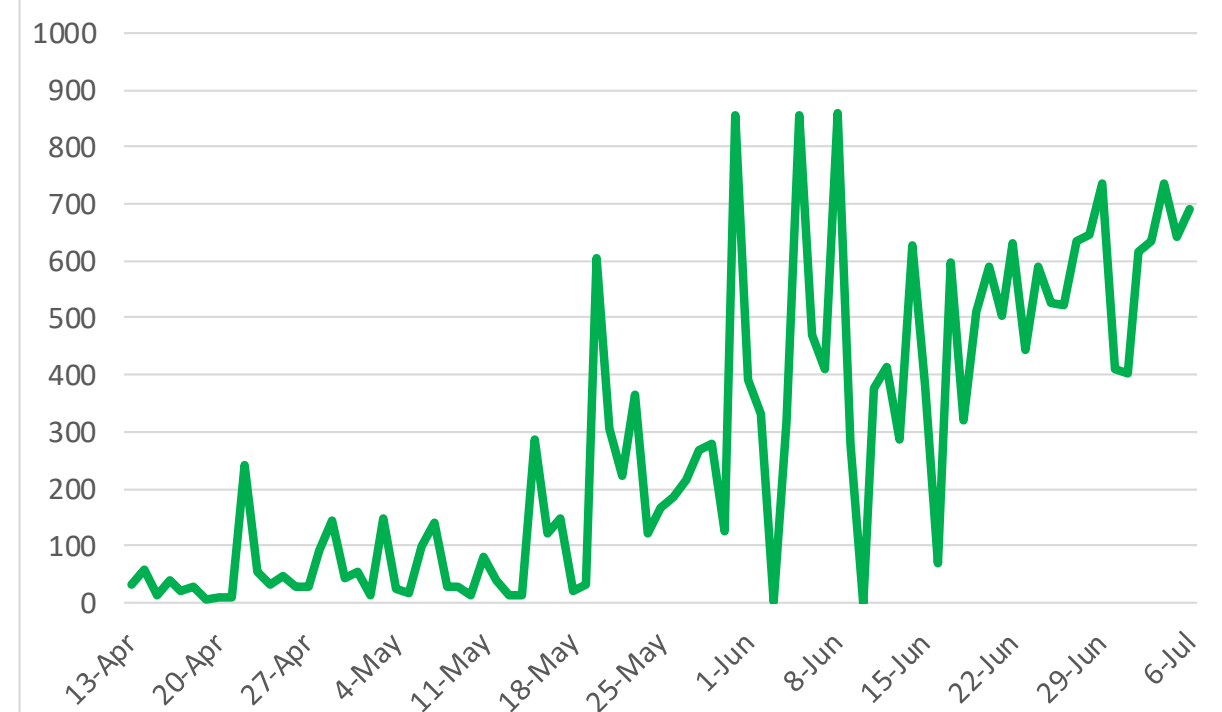
Source : [Kuwait ministry of health](#)

## Oman © ADPHC 2020



Source : [Oman ministry of health](#)

## Bahrain



Source : [GCCStat](#)

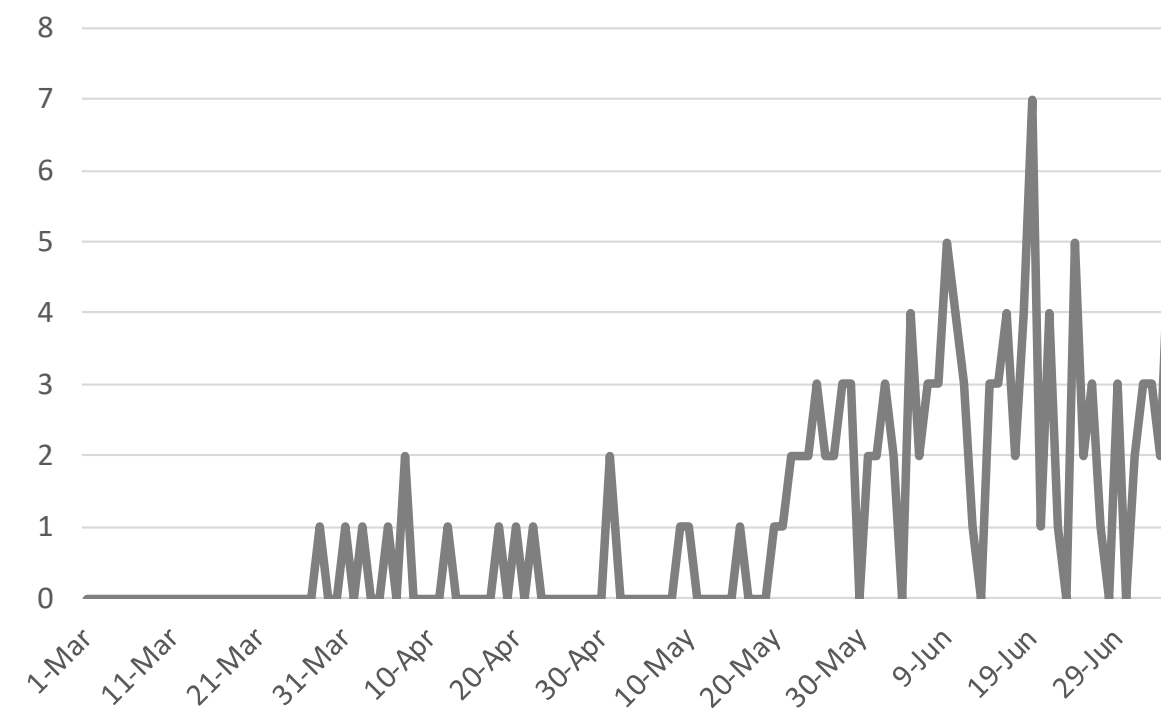
**Figure 12: Comparative analysis of the distribution of COVID19 newly death cases in GCC countries**

## KSA



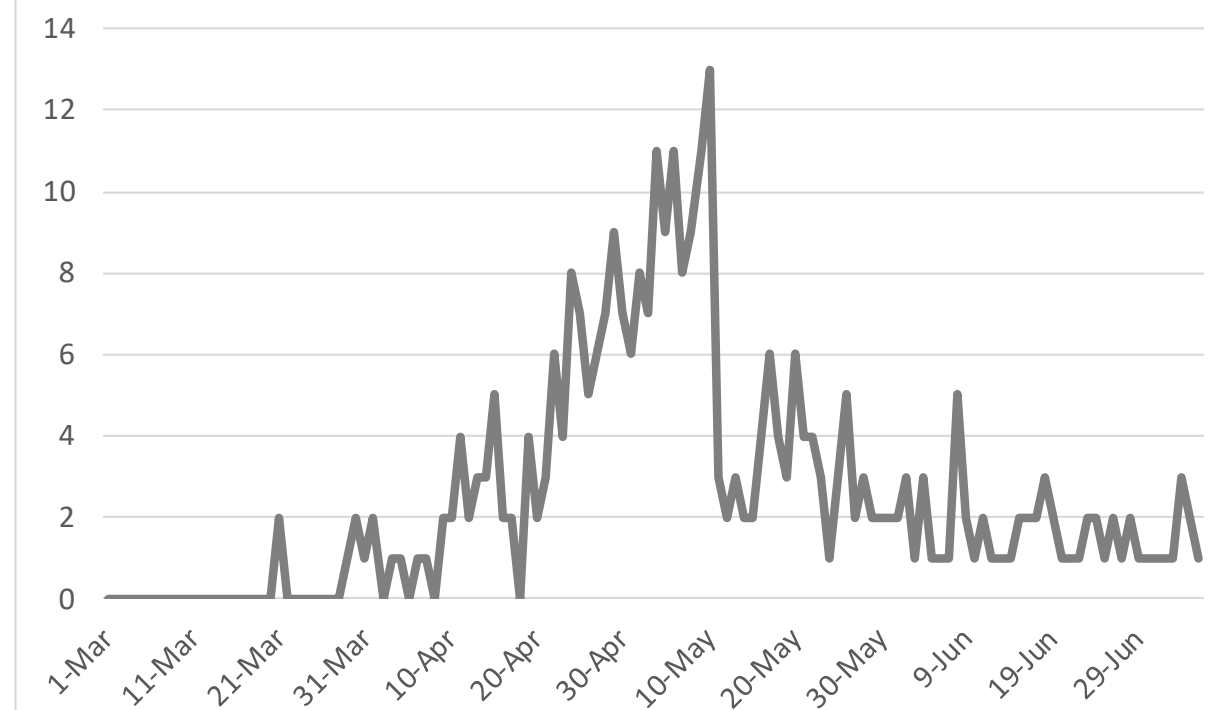
Source : KSA ministry of health

## Qatar



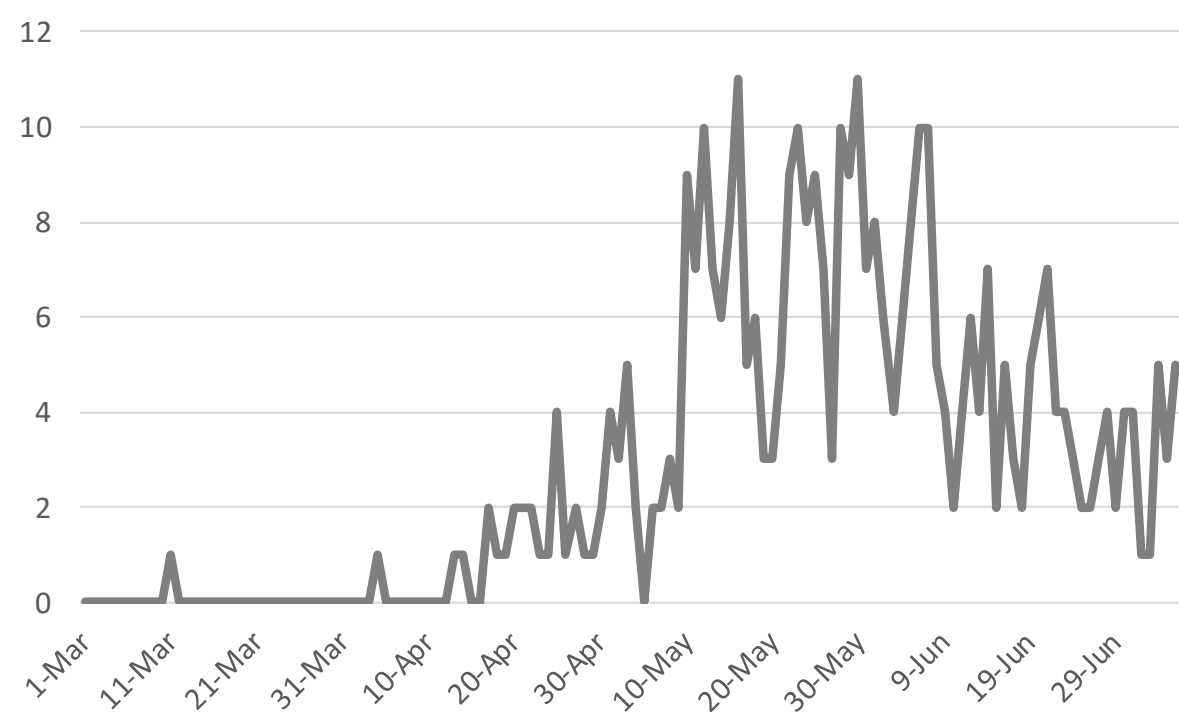
Source : Qatar ministry of health

## UAE



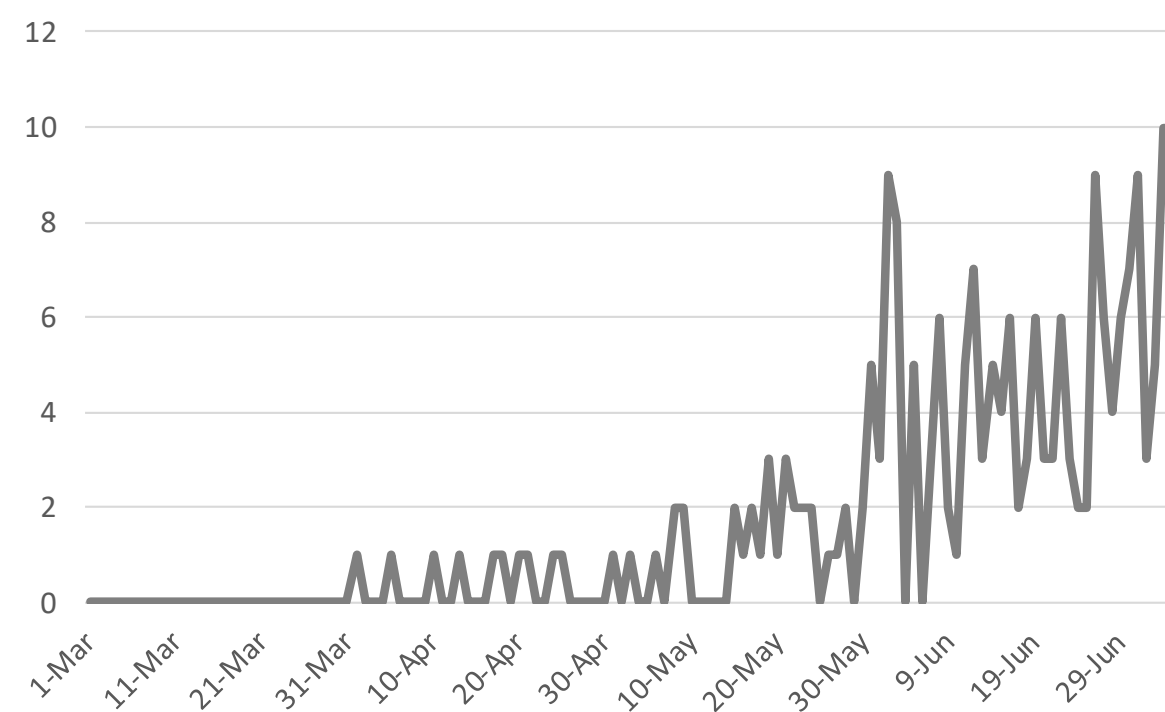
Source : National Emergency Crisis and Disaster Management Authority

## Kuwait



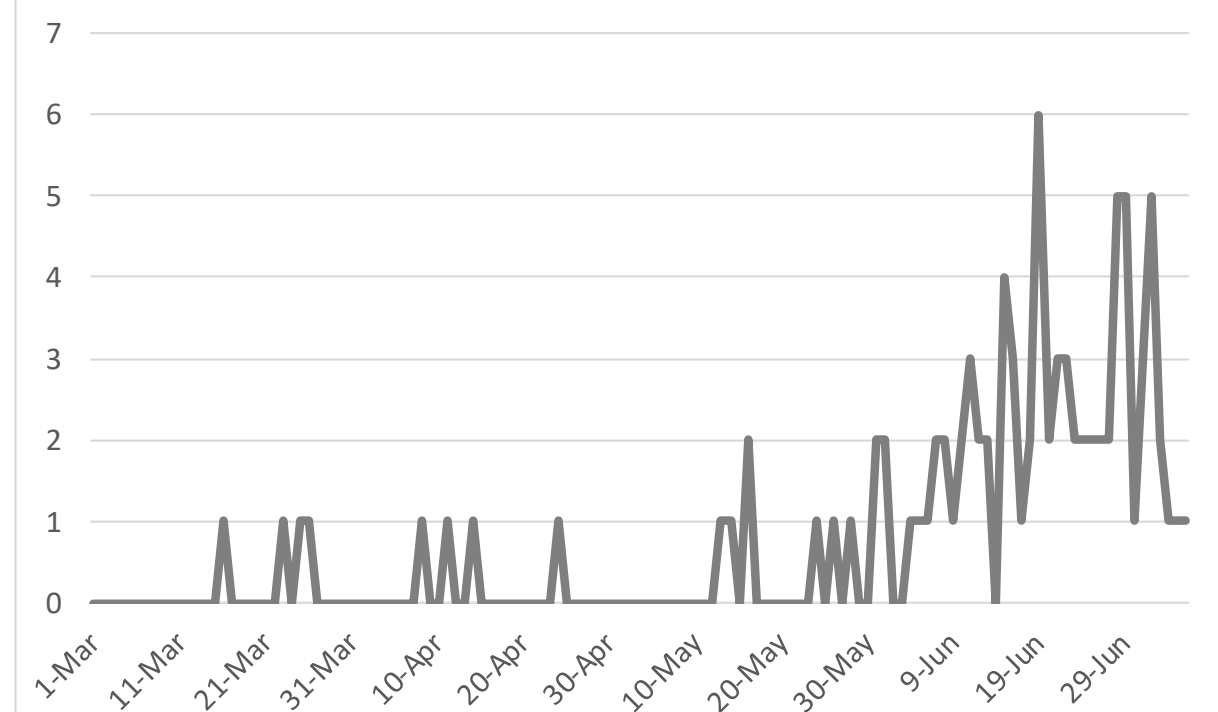
Source : Kuwait ministry of health

## Oman © ADPHC 2020



Source :Oman ministry of health

## Bahrain



Source :WHO



## Article 1:

Published

# Prevalence of and Risk Factors Associated With Mental Health Symptoms Among the General Population in China During the Coronavirus Disease 2019 Pandemic

01 July 2020 [The JAMA](#)

A cross sectional study was conducted to assess the mental health factors associated with COVID-19 in China.

### Survey Findings:

- The survey completed by 56 679 participants across all 34 province-level regions in China found:
  - 27.9% of participants had symptoms of depression.
  - 31.6% had symptoms of anxiety
  - 29.2% had symptoms of insomnia
  - 24.4% had symptoms of acute stress during the outbreak.
- Factors independently associated with negative mental health outcomes included:
  - Confirmed or suspected COVID-19 (2 to 3 times more likely to report mental health symptoms)
  - A relative with confirmed or suspected COVID-19.
  - Occupational exposure risks, living in Hubei province, and experiencing quarantine and delays in returning to work.

This is the first study that systematically investigated prevalence of, and factors associated with mental health symptoms (depression, anxiety, insomnia, and acute stress) by standardized rating scales among the general population in China. These findings suggest that COVID-19 pandemic may have severe mental health repercussions, therefore population-specific mental health interventions are urgently needed to meet demand during this outbreak.

Table 1. Descriptive Statistics of Demographic Characteristics and Epidemic-Related Information for the Total Sample (continued)

Factors	Participants, No. (%)
Are any of your family members or friends frontline workers?	
Yes	17 587 (31.0)
No	39 092 (69.0)
Have you come in close contact with patients infected with COVID-19? <sup>b</sup>	
Yes	219 (0.4)
No	56 460 (99.6)
Are you in Hubei province now?	
Yes	2352 (4.1)
No	54 327 (95.9)
Have you been to Hubei province in the past 2 mos?	
Yes	2452 (4.3)
No	54 227 (95.7)
Have you ever experienced quarantine?	
Centralized	587 (1.0)
Home	15 867 (28.0)
None	40 225 (71.0)
Are you back to work now?	
Work at home	7427 (13.1)
Work not at home	29 498 (52.0)
Not back to work	19 754 (34.9)
Are you likely to be exposed to other people at work?	
Exposed to patients infected with COVID-19	2904 (5.1)
Exposed to patients with other diseases	1597 (2.8)
Exposed to general people	19 740 (34.8)
Not at work, work at home, or without exposure to people at work	28 734 (50.7)
Missing values	3704 (6.5)

## Article 2: Exaggerated Risk of Transmission of COVID-19 by Fomites

Published

03 July 2020 [The LANCET](#)

**This commentary discusses the risk of Covid-19 transmission by fomites – objects and materials which are likely to carry infection, such as clothes, utensils, and furniture.**

### Background

- Scientific studies have reported that SARS-CoV2 can survive on different surfaces between 2 to 6 days depending on the nature of the surface.

### What this article describe?

- The author of this commentary (professor of Microbiology, Biochemistry and Molecular Genetics, New Jersey Medical School - Rutgers University, Newark), states that “none of these studies present scenarios akin to real-life situations”.
- All the studies used a higher concentration of infectious virus particles in the laboratory settings, which are a lot higher than those in droplets in real-life situations.
- One study reported the survival of virus for 4 days and used 1 million (10<sup>6</sup>) infectious virus particles.
- Another study reported survival of virus for 3 days in aerosols or droplets used 10<sup>5</sup>–10<sup>7</sup> infectious virus particles per ml.

- The author stated that he did not find measurements of coronavirus quantities in aerosol droplets from patients; however, the amount of influenza virus RNA in aerosols has been measured, with a concentration equivalent to 10-100 viral particles in a droplet.
- A previous study in which the authors tried to mimic actual conditions in which a surface might be contaminated by a patient, no viable SARS-CoV was detected on surfaces.

### Conclusion

- Disinfecting surfaces regularly and use of gloves are reasonable precautions especially in hospitals.
- The chance of transmission through surfaces is limited, and only in instances where an infected person coughs or sneezes on the surface, and someone else touches that surface soon after (within 1-2 hours).
- Fomites that have not been in contact with an infected carrier for many hours do not pose a measurable risk of transmission in non-hospital settings.





## Article 3:

Published

### Prevalence of SARS-CoV-2 in Spain (ENE-COVID): A Nationwide, Population-Based Sero-Epidemiological Study

July 2020 [THE LANCET](#)

- Spain is one of the countries most affected by COVID-19 pandemic. This study aimed to estimate the seroprevalence of SARS-CoV-2 infection in Spain. Investigators selected 61000 participants (household residents) who were invited to participate in a survey on history of symptoms between April 27 and May 11, 2020. Patients received a point-of-care antibody test, and immunoassay testing.
- Investigators adjusted for the prevalence of IgG antibodies. Results of the test were used to calculate a seroprevalence range maximizing either specificity (positive for both tests) or sensitivity (positive for either test). Authors reported that seroprevalence was 5.0% by the point-of-care test and 4.6% by immunoassay, with a specificity–sensitivity range of 3.7% (both tests positive) to 6.2% (either test positive), with no differences by sex and lower seroprevalence in children younger than 10 years (<3.1%).
- In 7273 individuals with anosmia or at least three symptoms, seroprevalence ranged from 15.3% to 19.3%. Around a third of seropositive participants were asymptomatic, ranging from 21.9% to 35.8%. Only 19.5% of symptomatic participants who were seropositive by both the point-of-care test and immunoassay reported a previous PCR test.
- The study concluded that the majority of the Spanish population is seronegative to SARS-CoV-2 infection, even in hotspot areas. Most PCR-confirmed cases have detectable antibodies, but a substantial proportion of people with symptoms compatible with COVID-19 did not have a PCR test and at least a third of infections determined by serology were asymptomatic by sex.



# THANK YOU

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