

# SCIENTIFIC RESEARCH MONITORING ON COVID-19

**27 OCTOBER 2020**

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# SCIENTIFIC RESEARCH MONITORING ON COVID-19

## (ISSUE 538 )

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

[Slide 3](#)



### 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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## VACCINE

**Scientific and Ethical Principles Underlying Recommendations from the Advisory Committee on Immunization Practices for COVID-19 Vaccination Implementation**

## Epidemiology

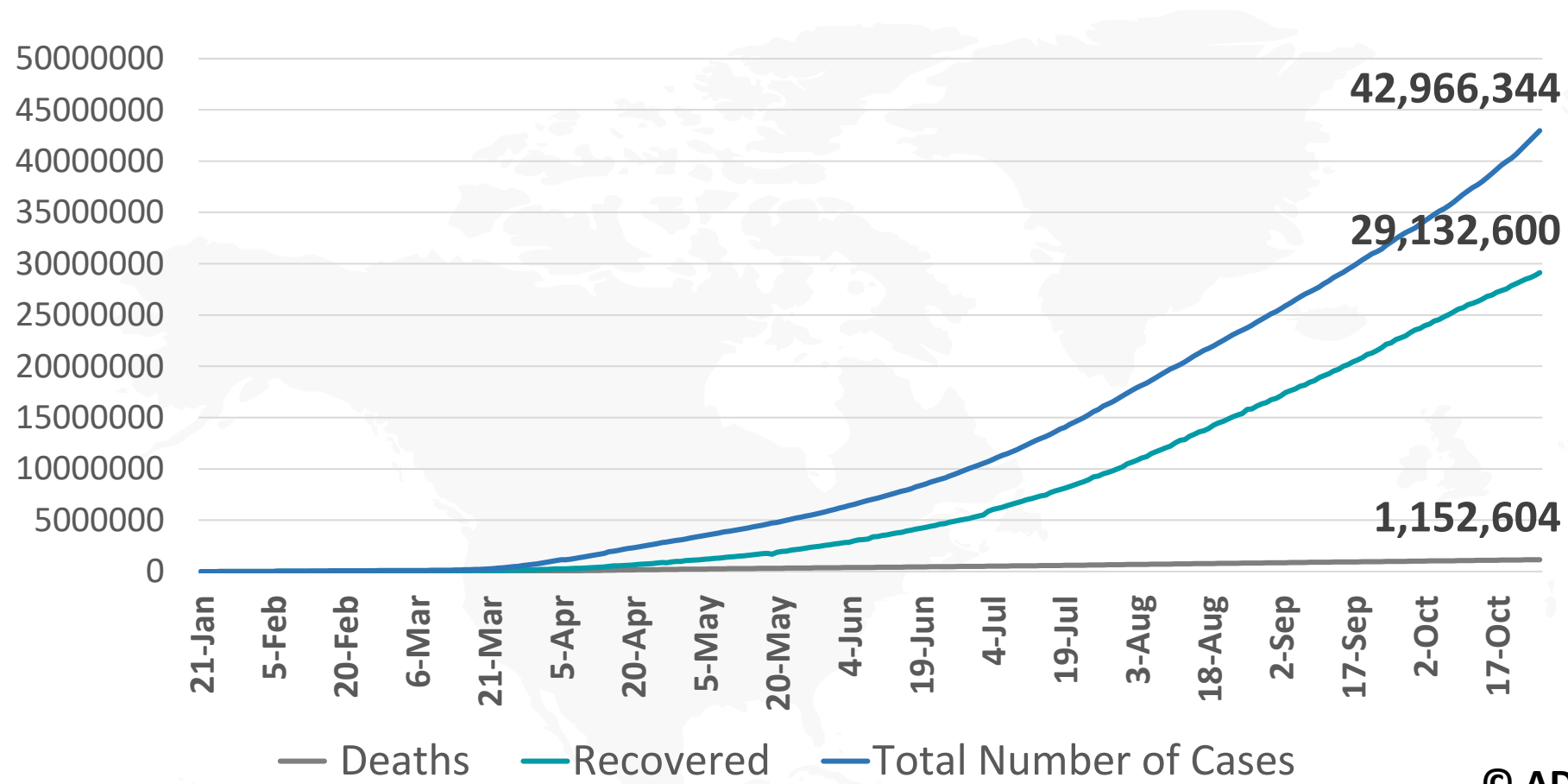
**Seropositive Prevalence of Antibodies Against SARS-CoV-2 in Wuhan, China**

## Mental Health

**Factors Associated with Mental Health Disorders Among University Students in France Confined During the COVID-19 Pandemic**

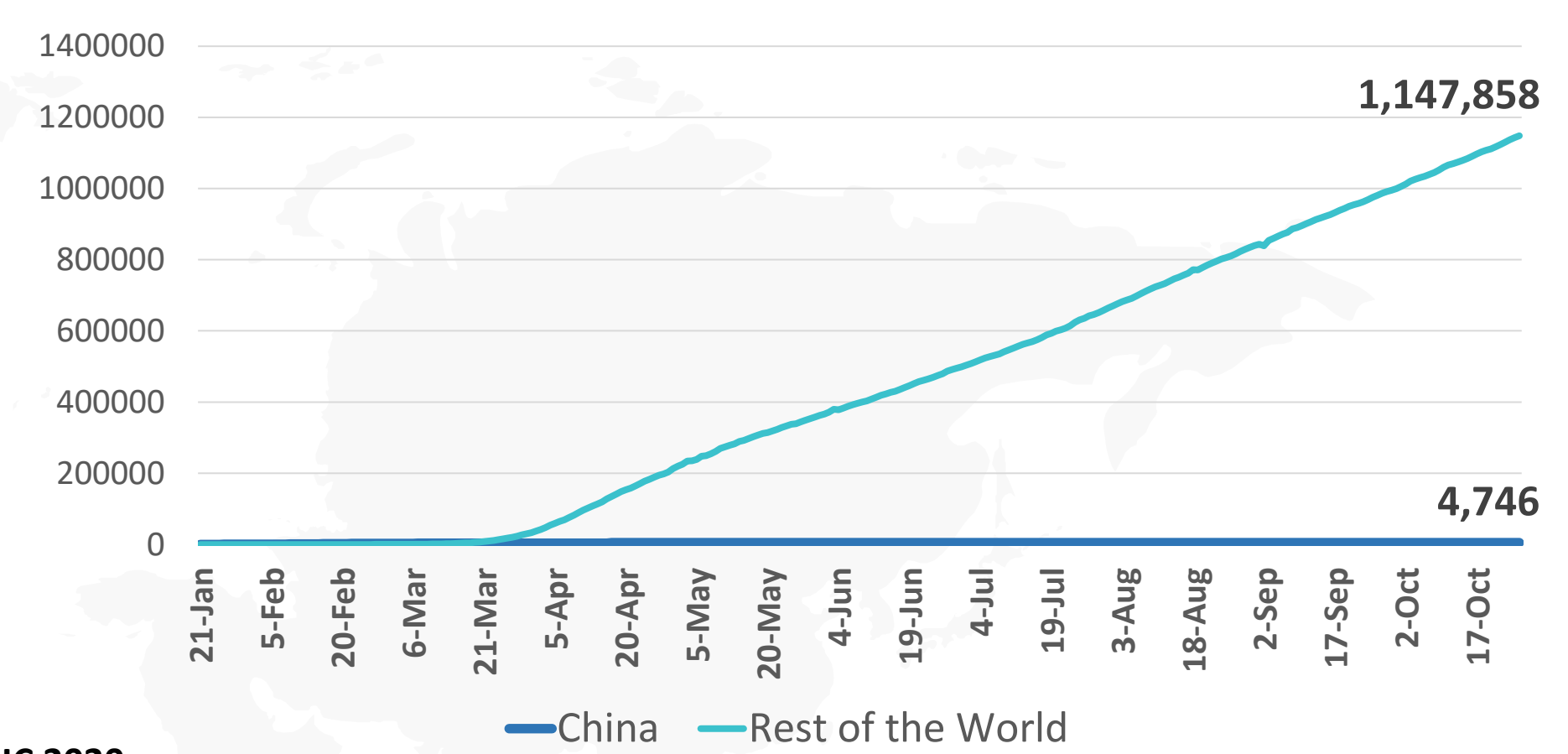


**Figure 1: Total Number of Infected, Recovered, and Death Cases**

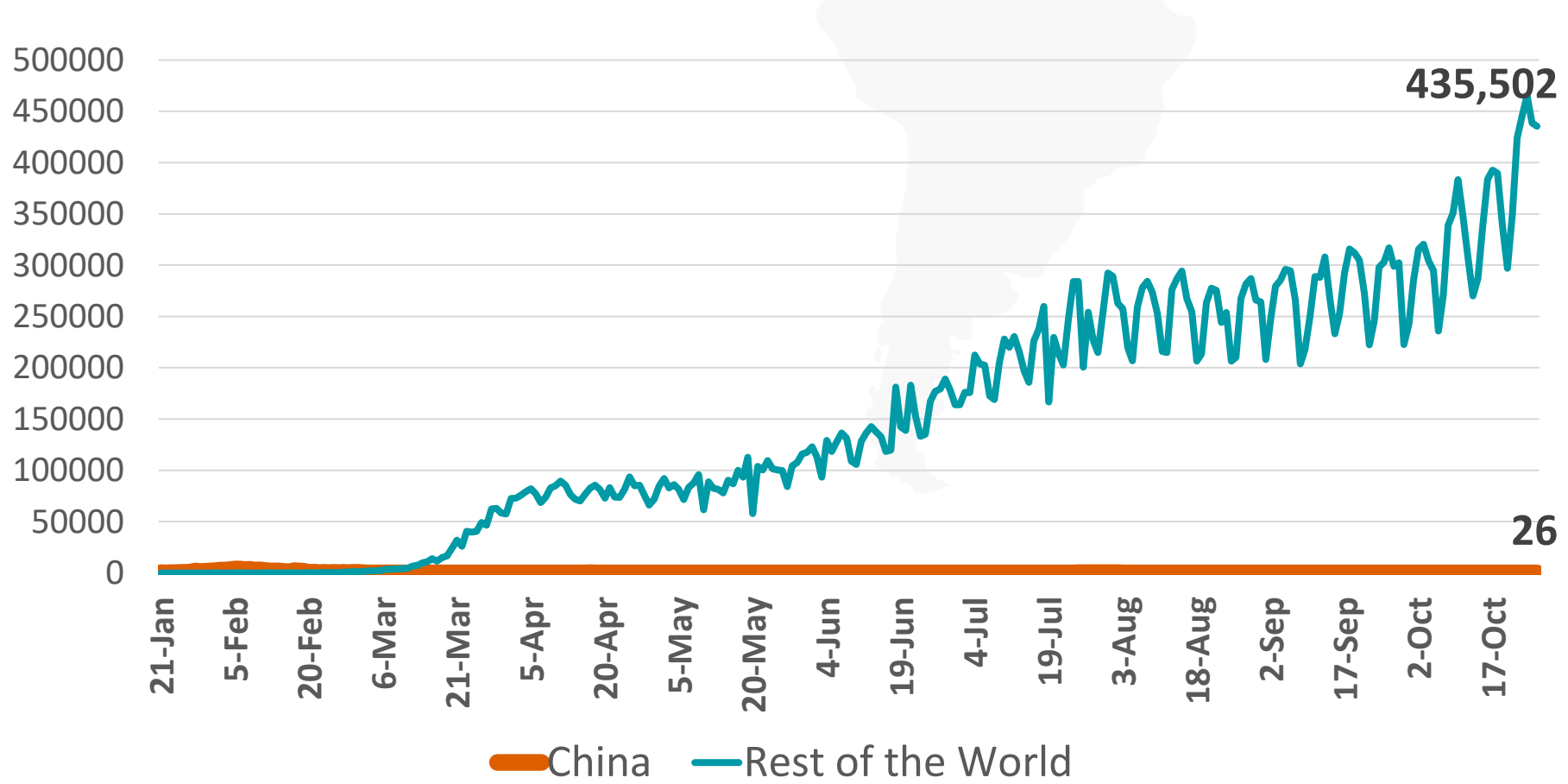


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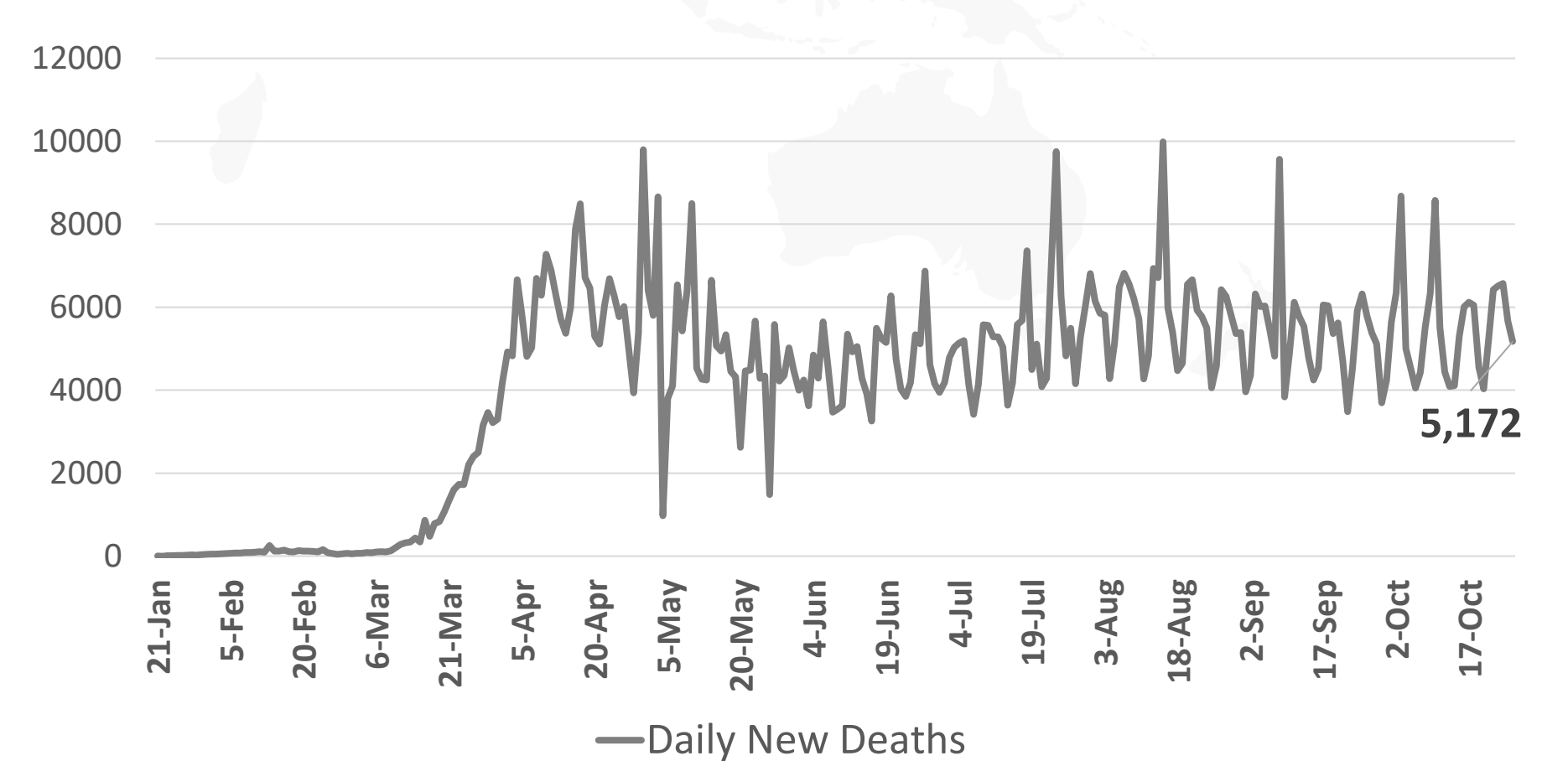
**Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)**



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

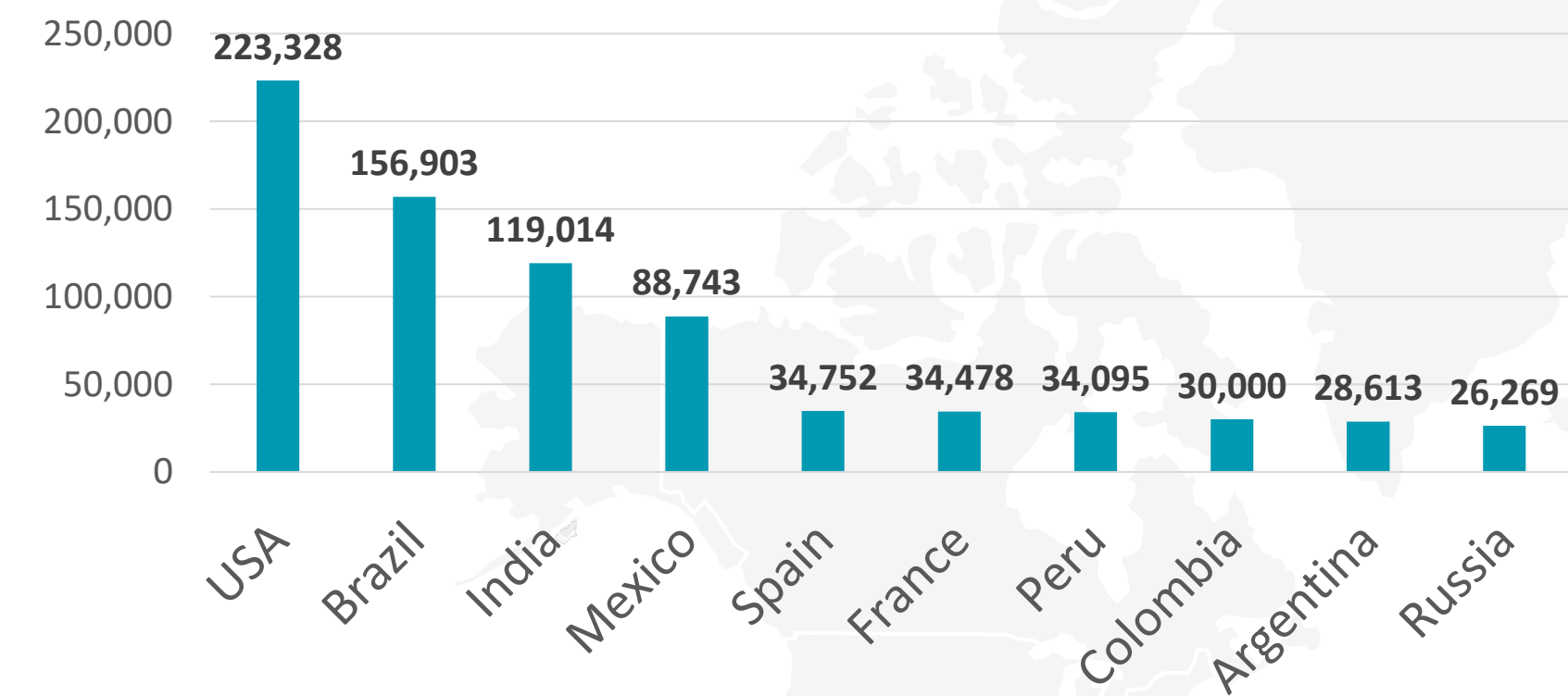


**Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)**

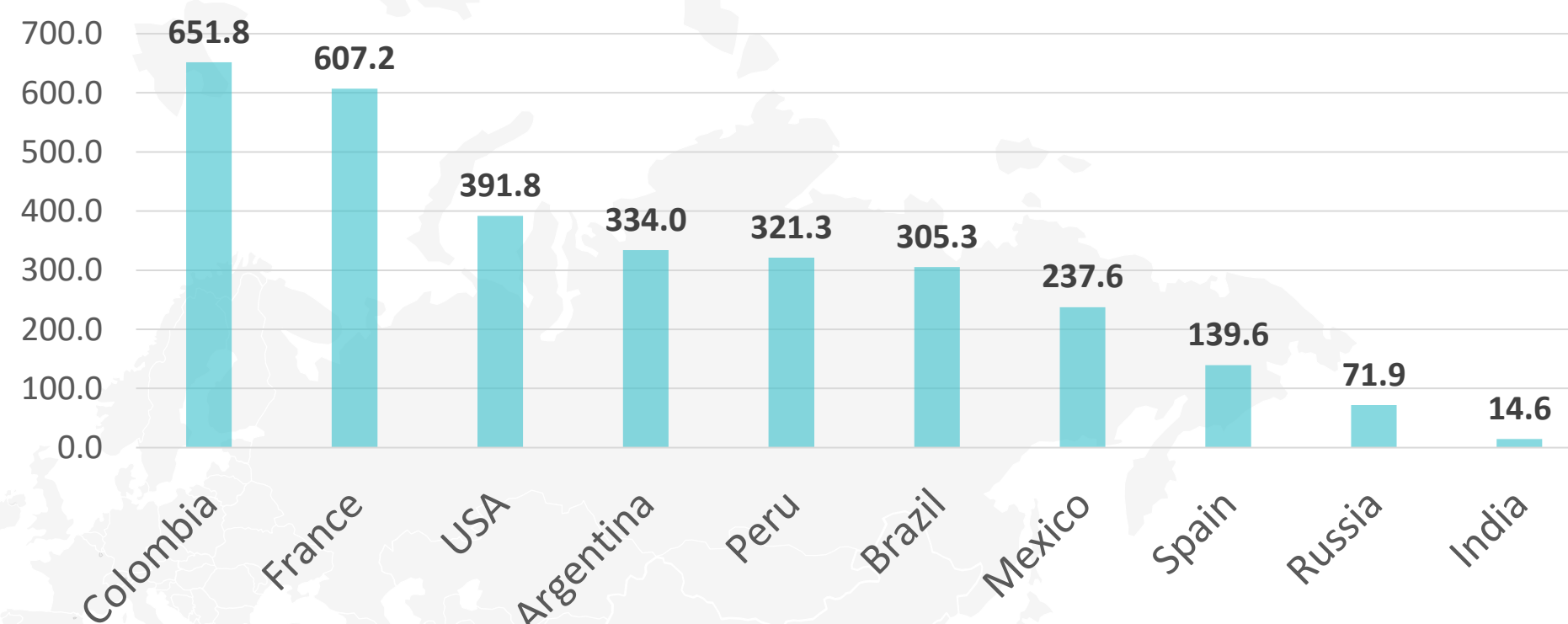


## Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

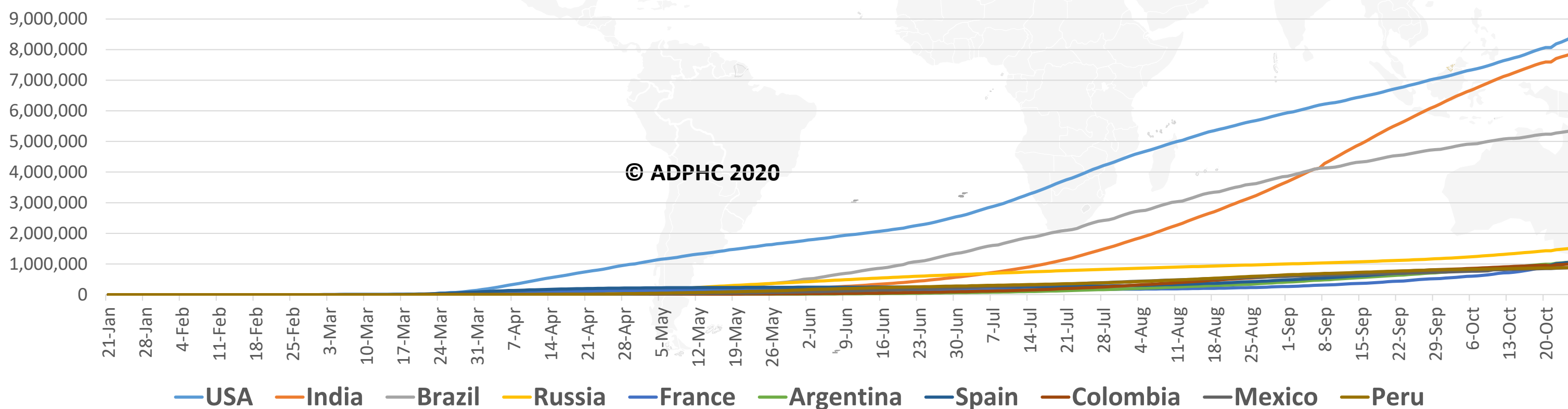
### TOTAL DEATHS



### DEATHS PER MILLION

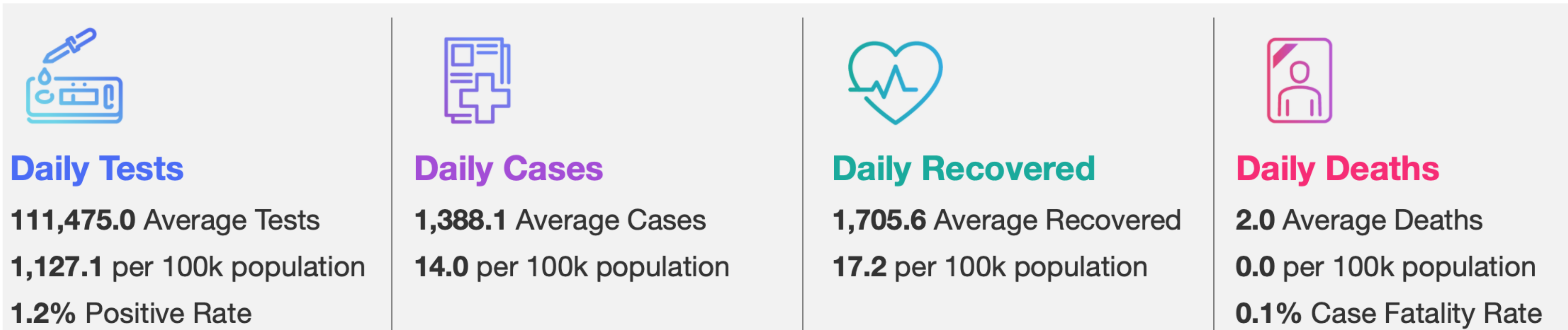


### TOTAL INFECTED CASES

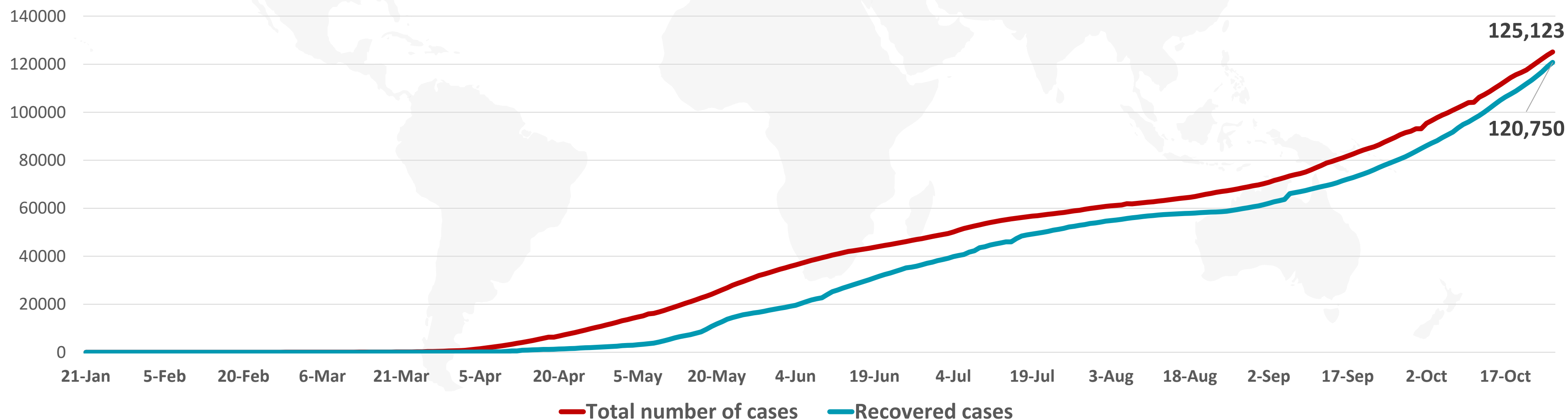


USA	8,485,747
India	7,909,959
Brazil	5,380,635
Russia	1,531,224
France	1,107,952
Argentina	1,081,336
Spain	1,046,132
Colombia	1,007,711
Mexico	886,800
Peru	886,214

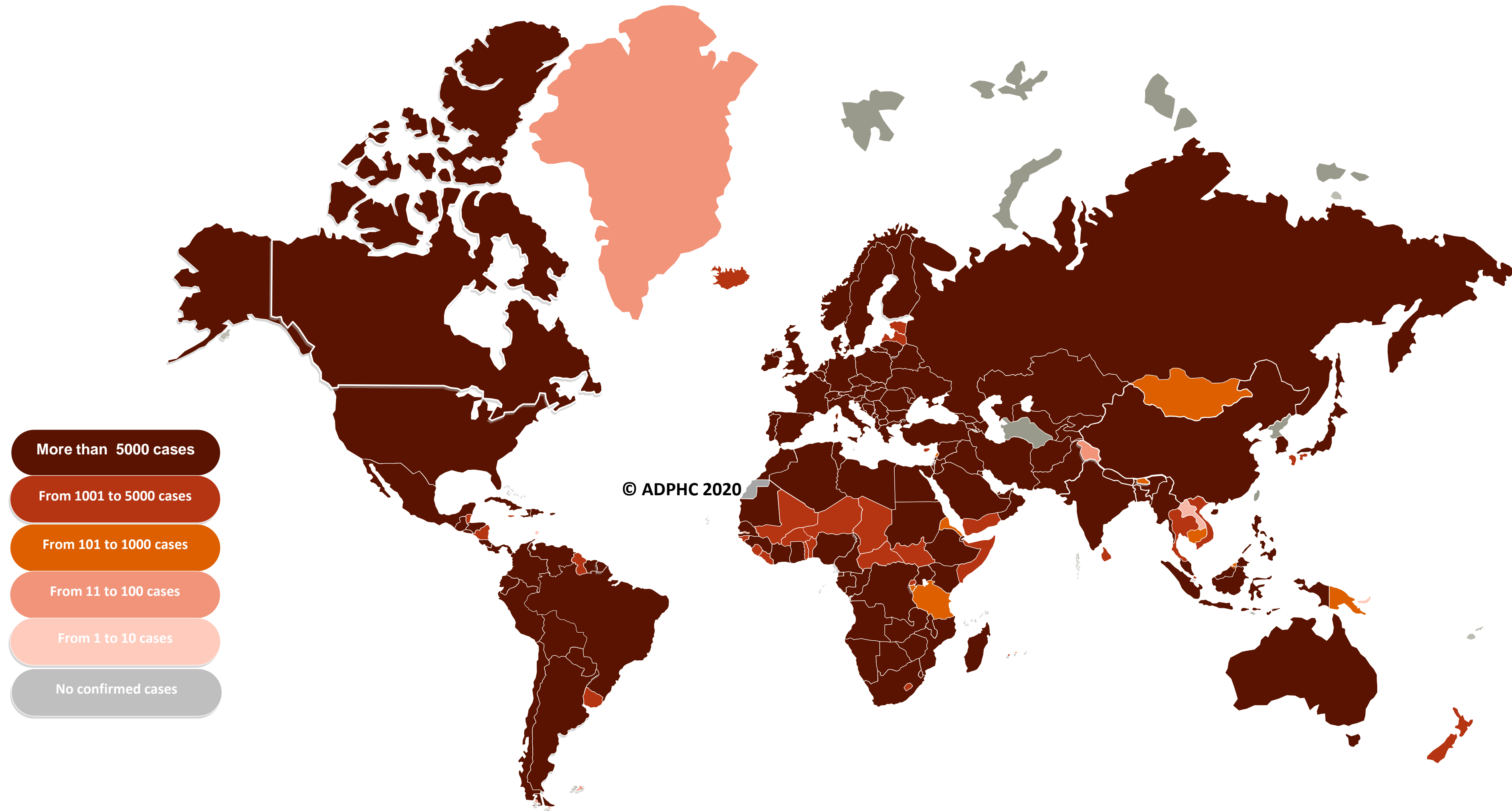
**Figure 6: COVID-19 Status in the UAE** (Federal Competitiveness and Statistics Authority Dashboard)



## 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

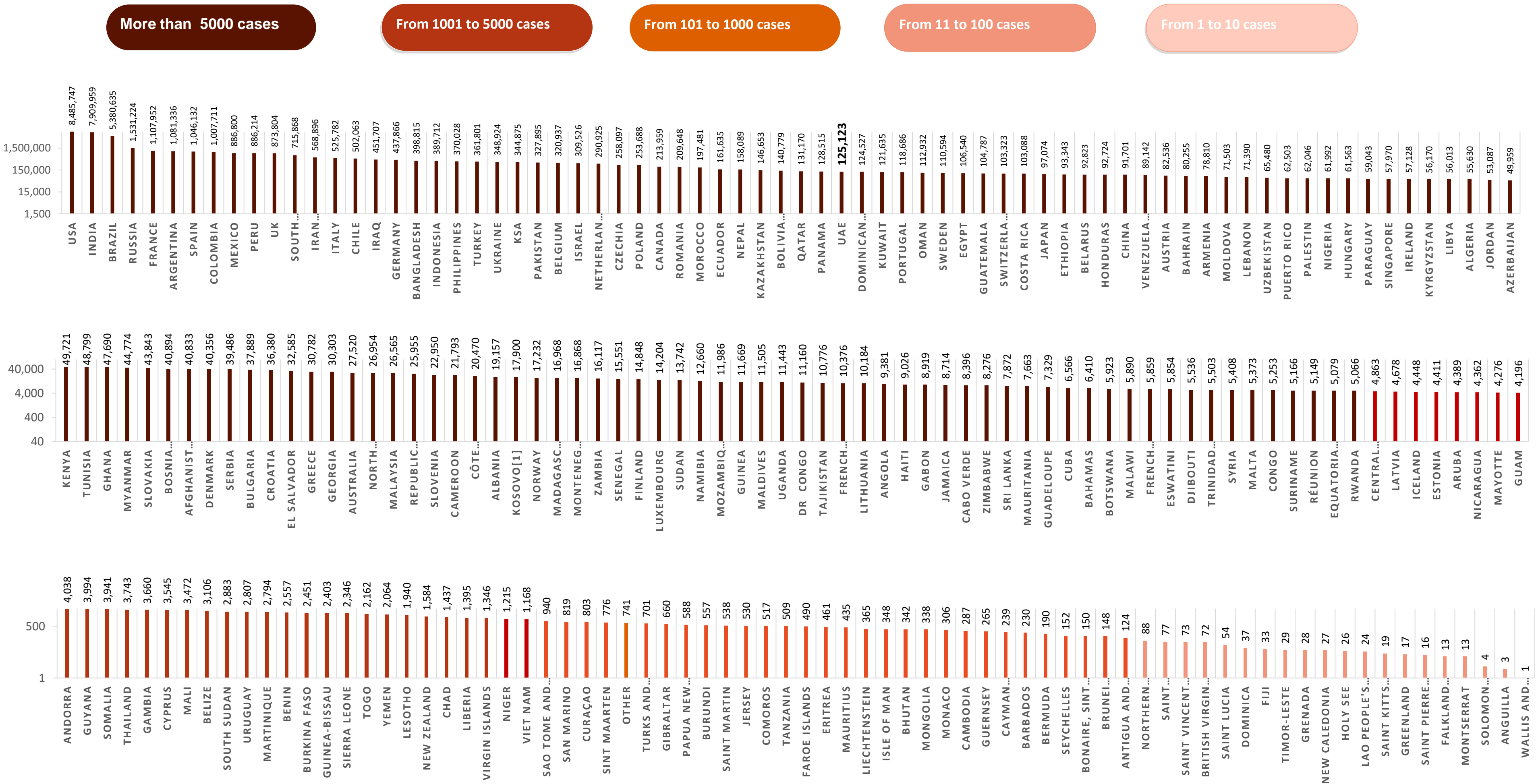
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

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

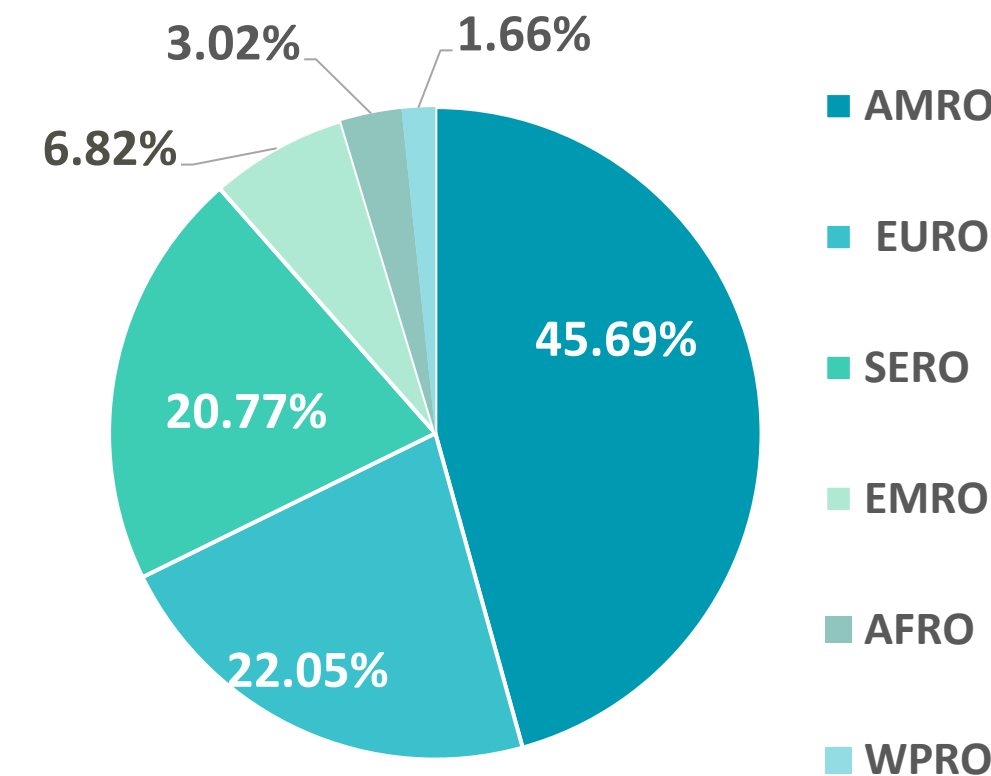
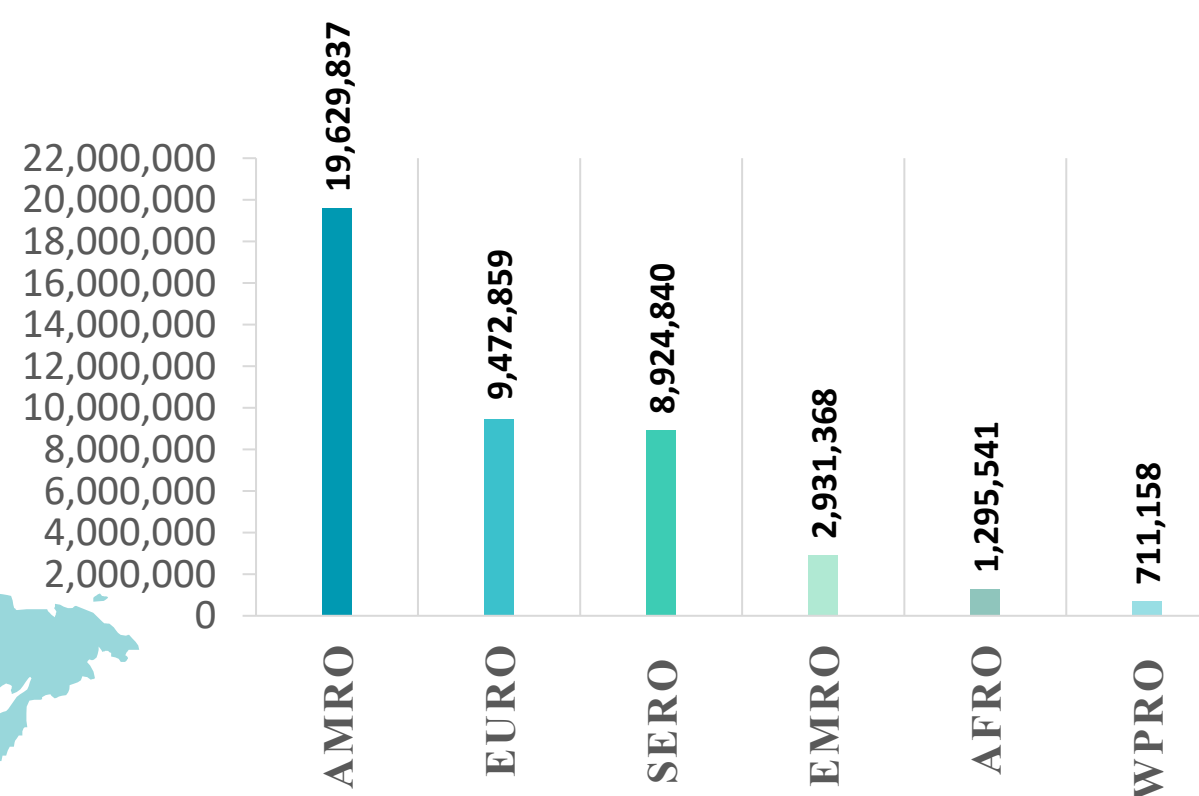
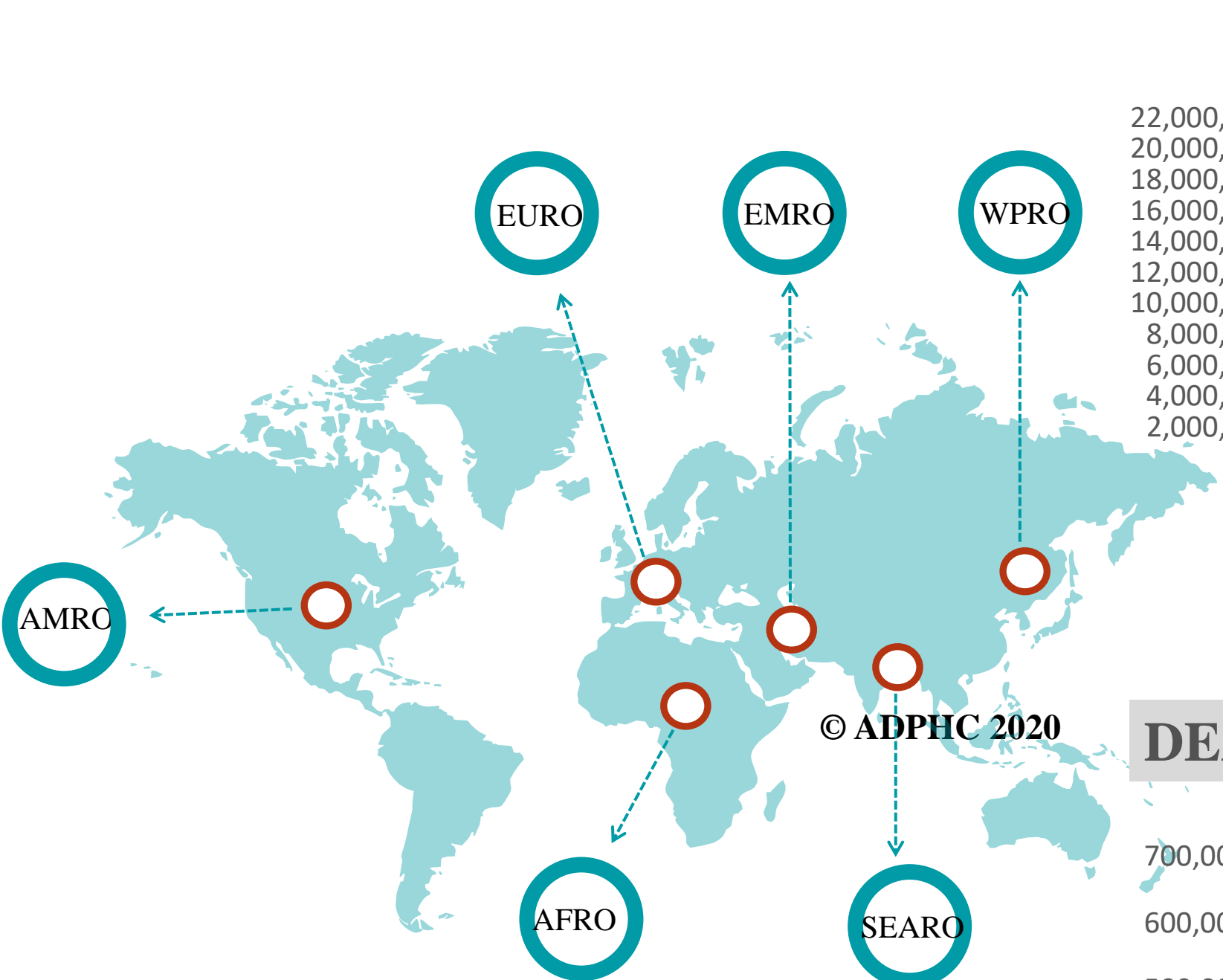


Other\*: includes cases and deaths reported under the international conveyance (Diamond Princess)

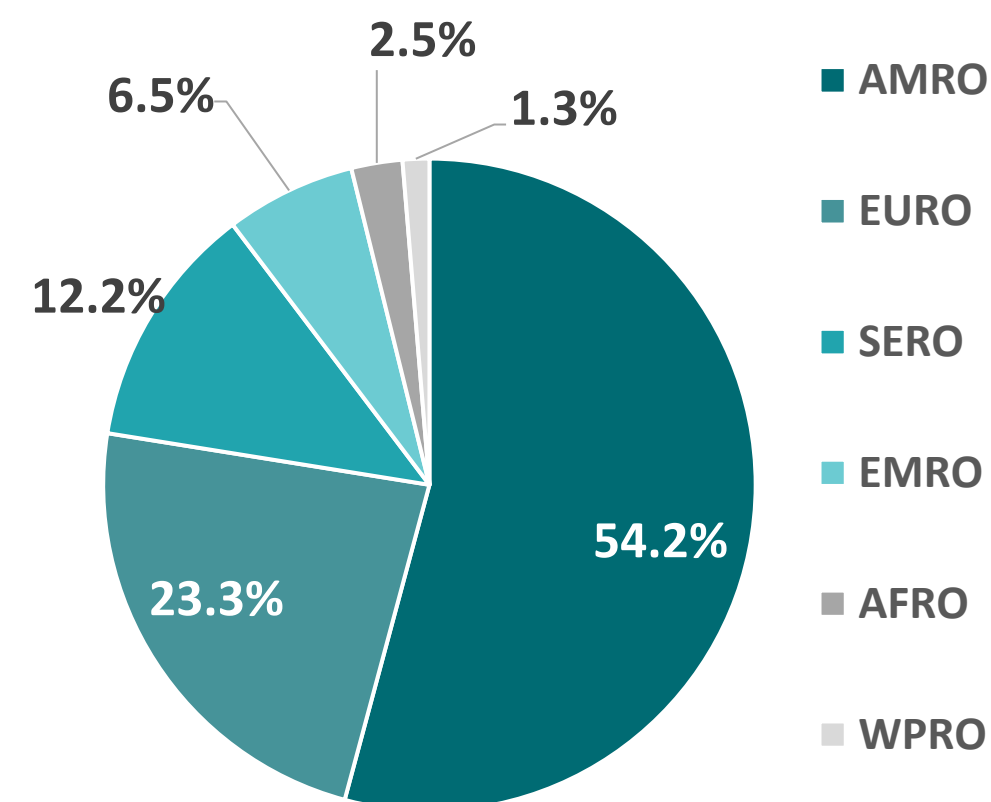
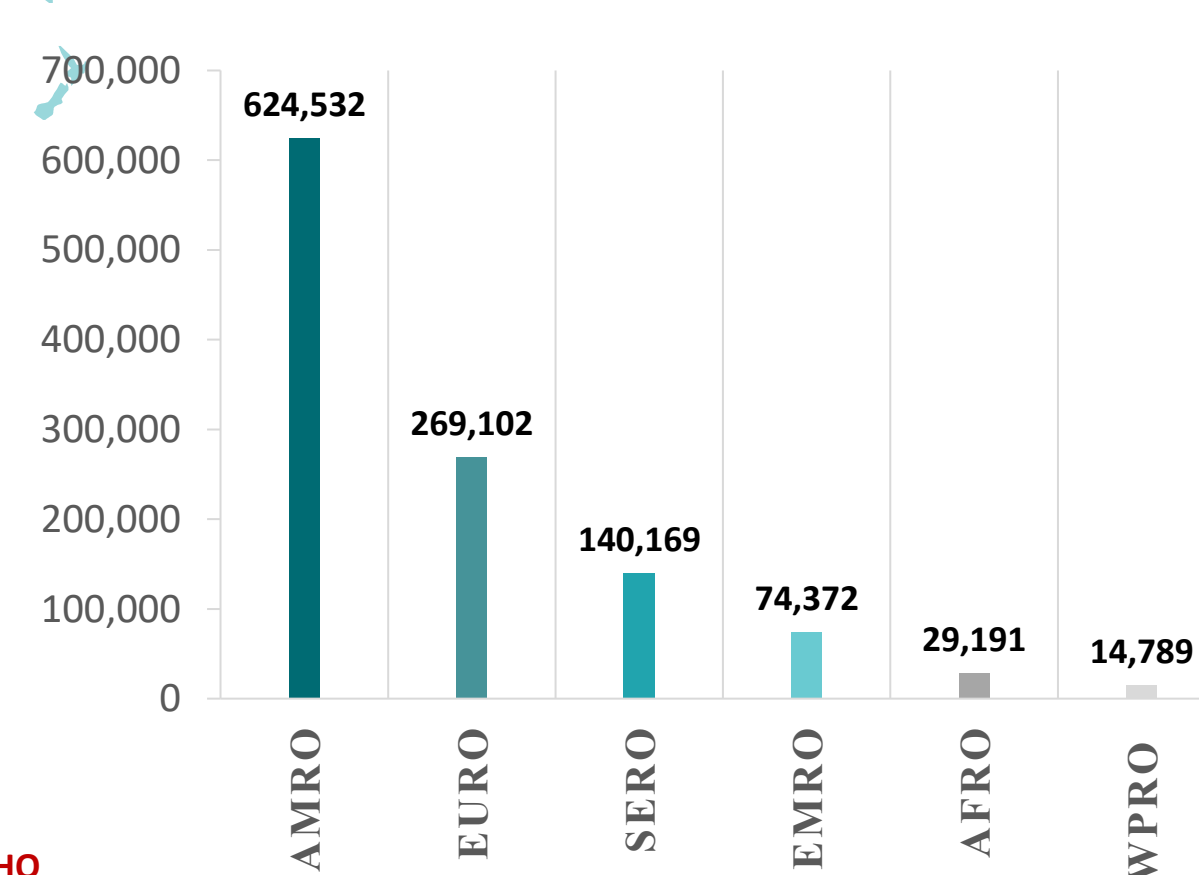


## Figure 8: Global Distribution of COVID-19 Cases per Region

### INFECTED

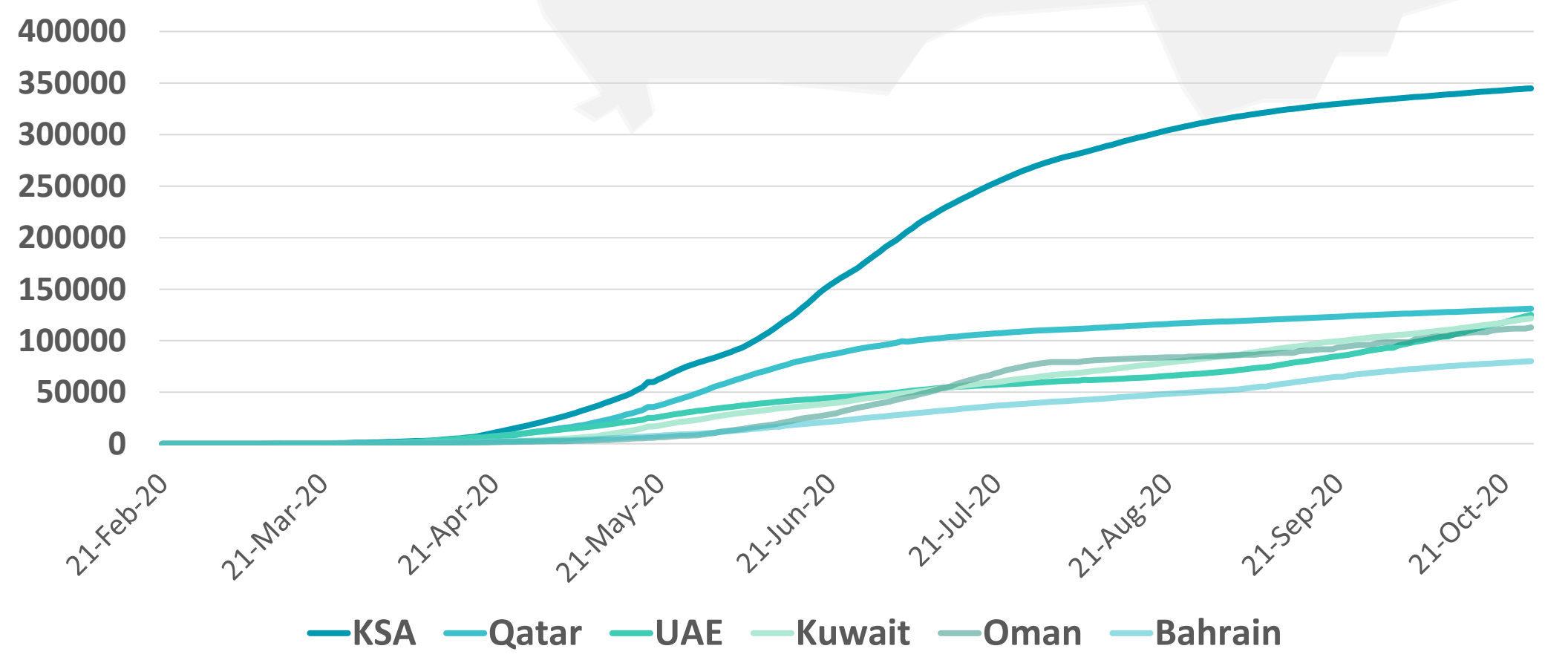
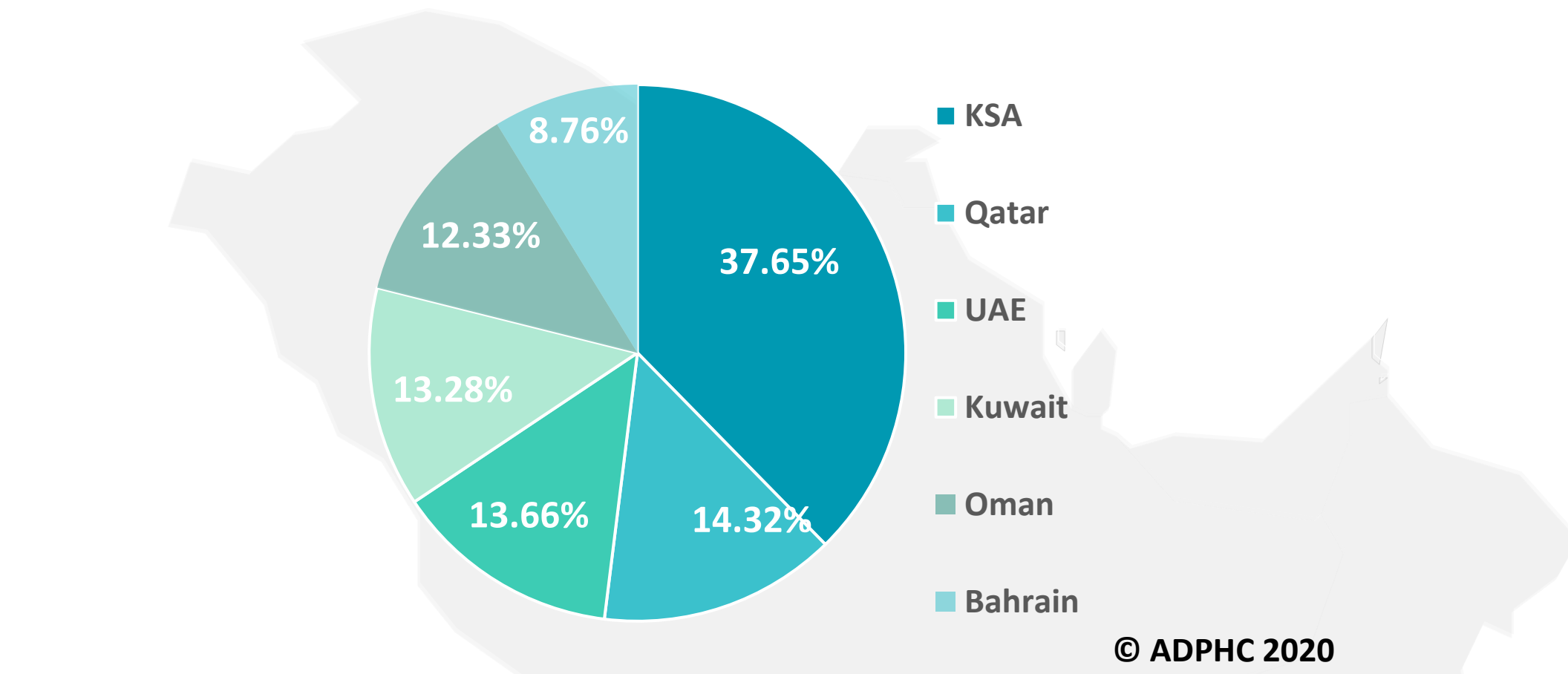


### DEATHS

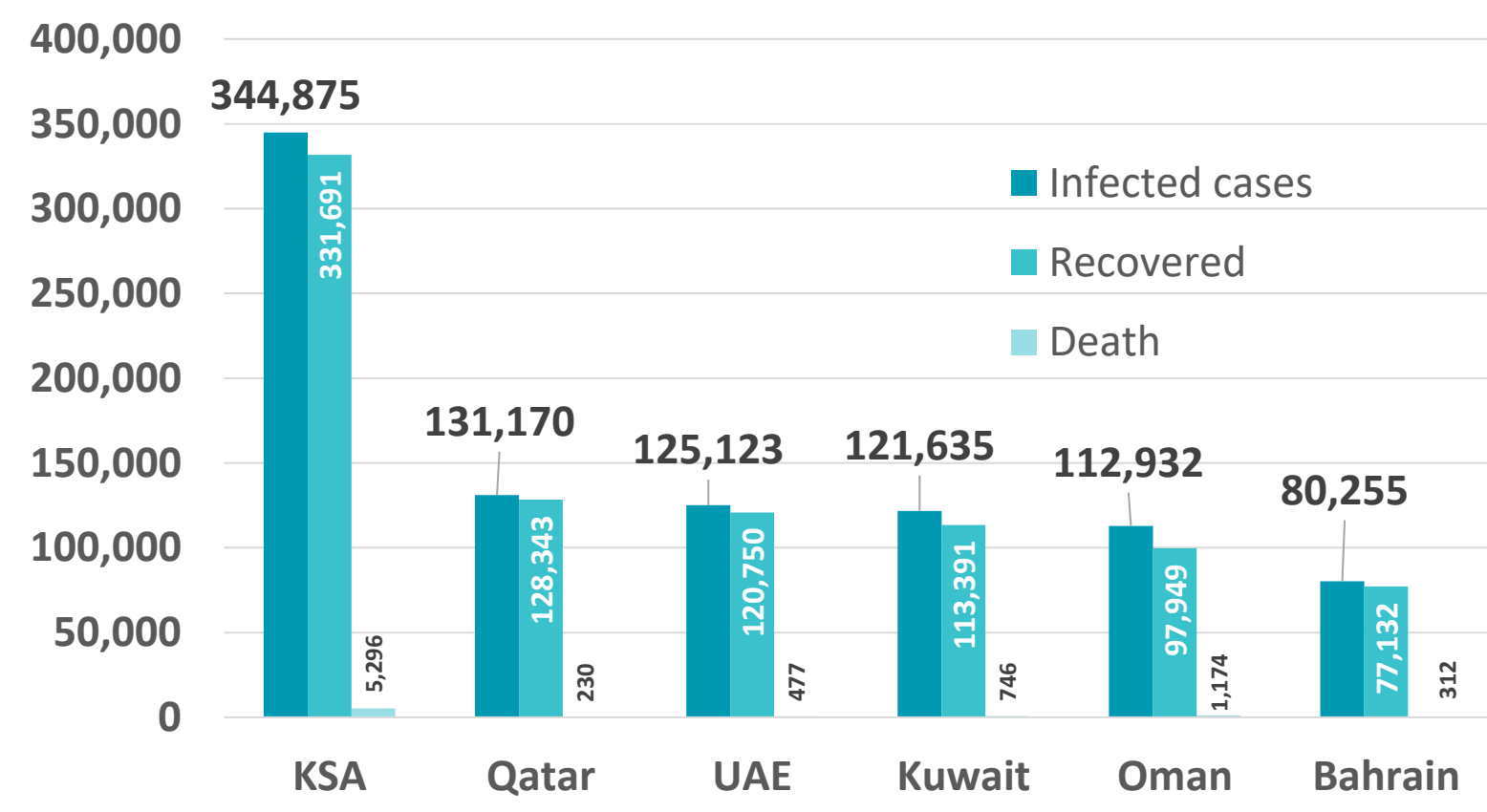


## Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

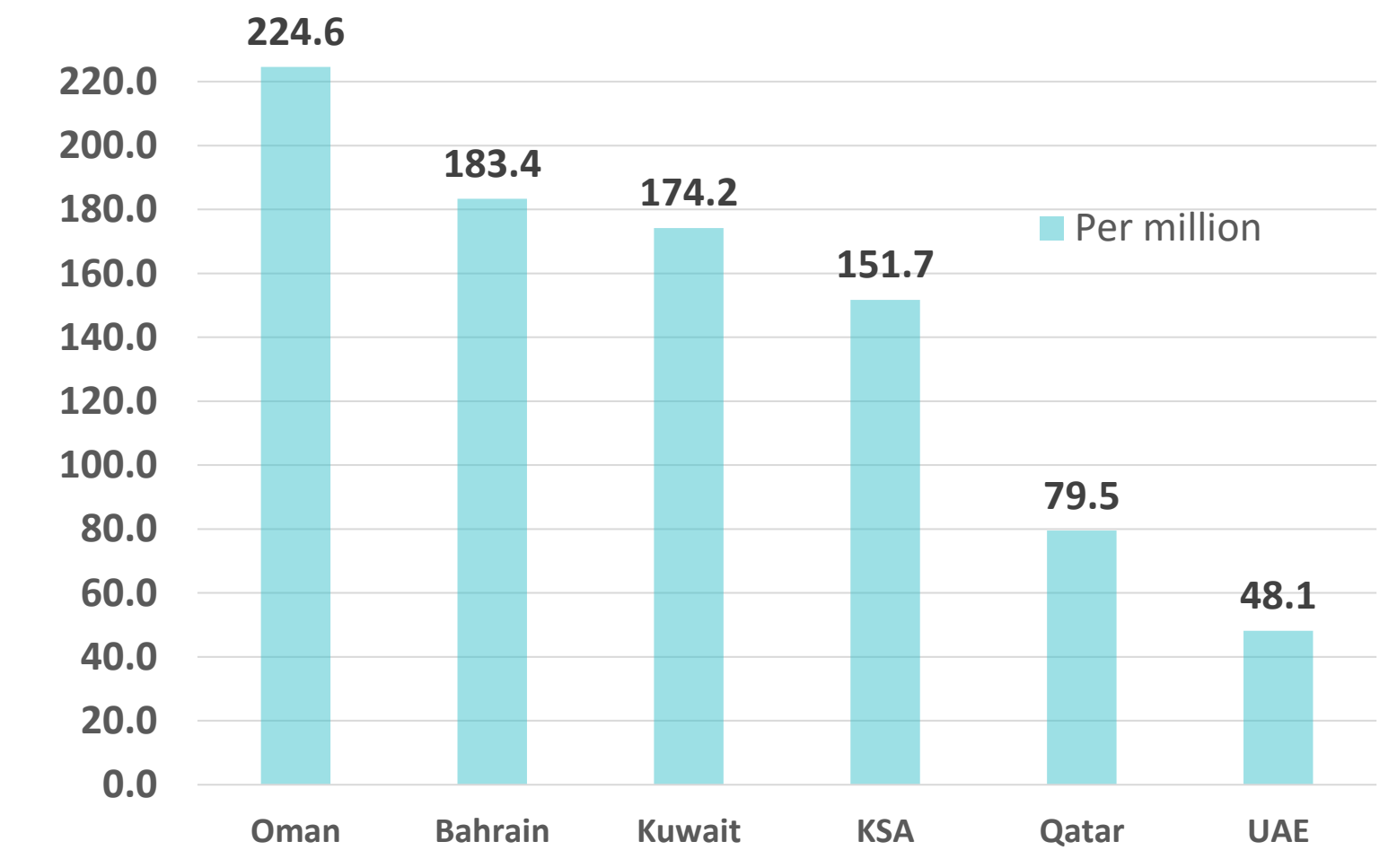
### TOTAL NUMBER OF INFECTED CASES



### TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



### DEATHS PER MILLION



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

### UAE



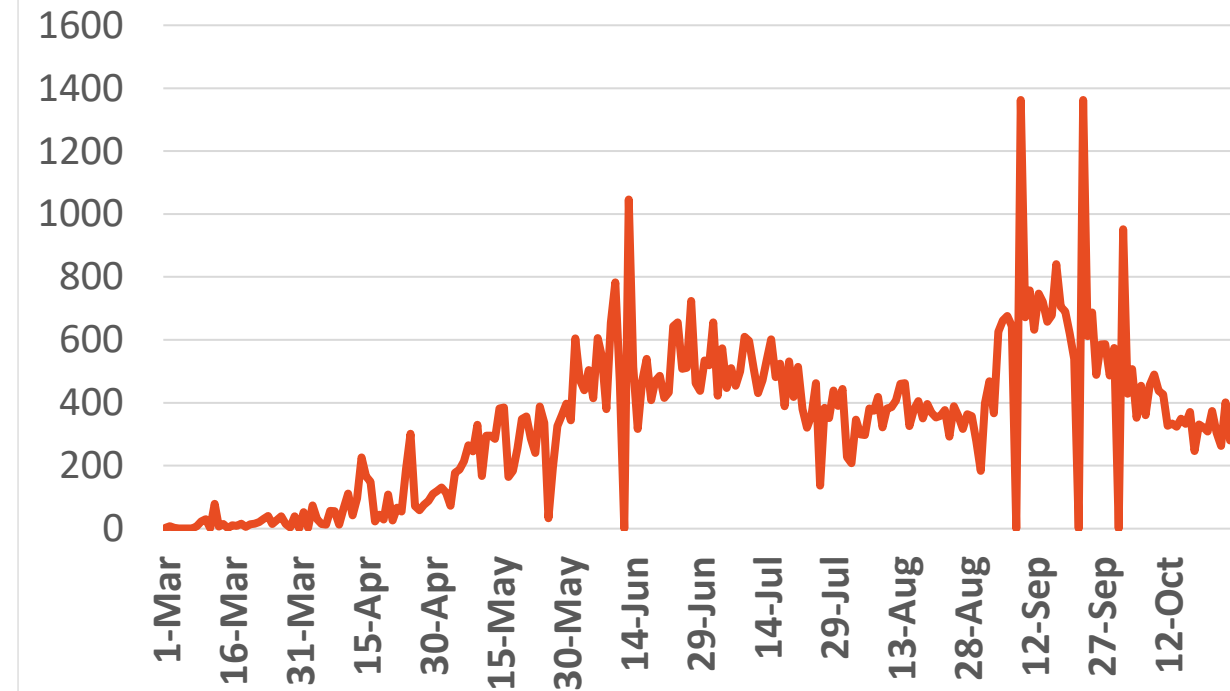
Source : National Emergency Crisis and Disaster Management Authority

### KSA



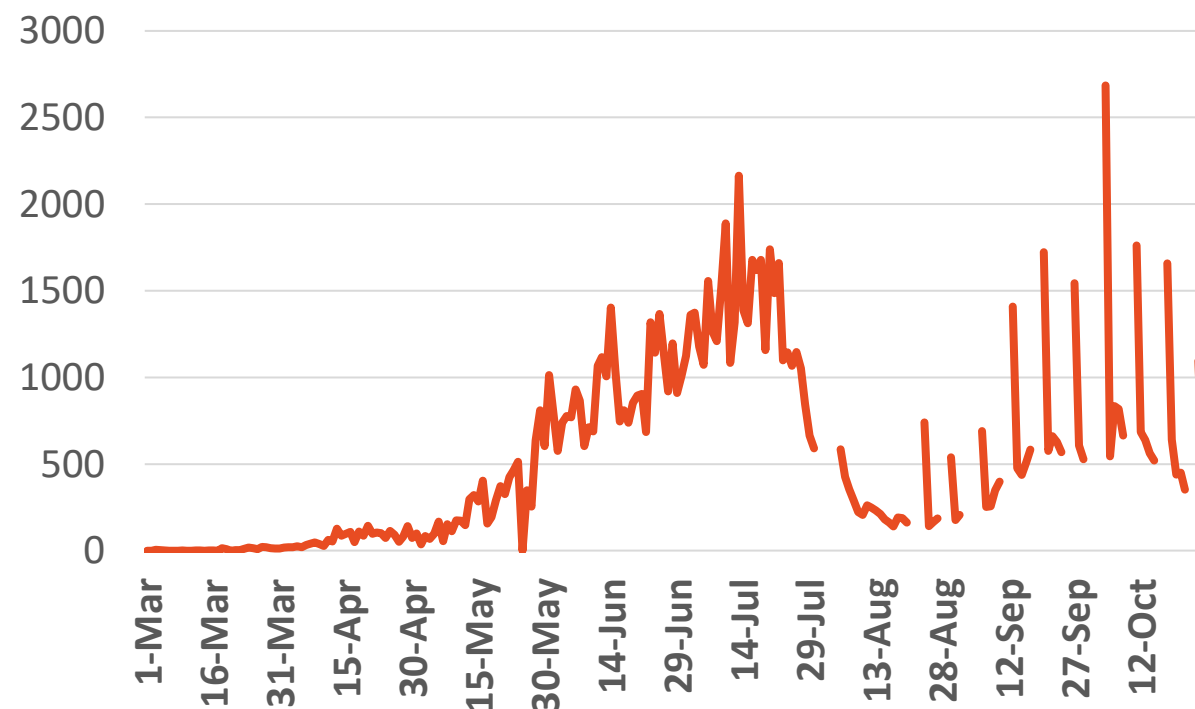
Source : KSA ministry of health

### Bahrain



Source :WHO

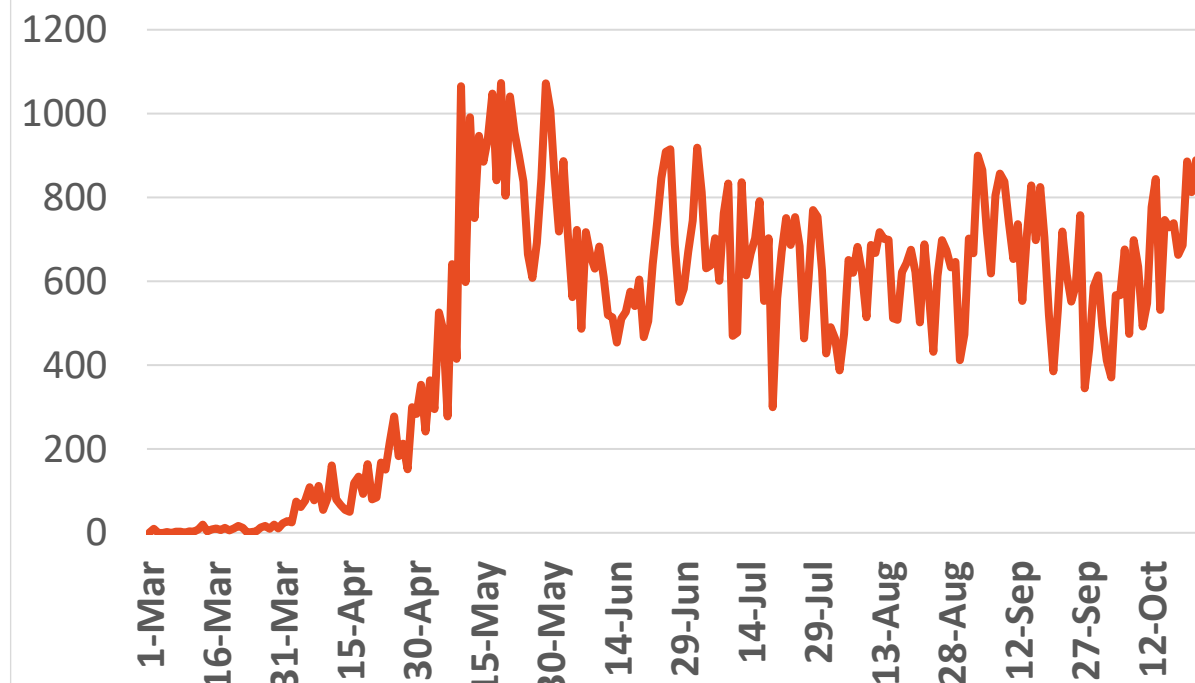
### Oman



Source :Oman ministry of health

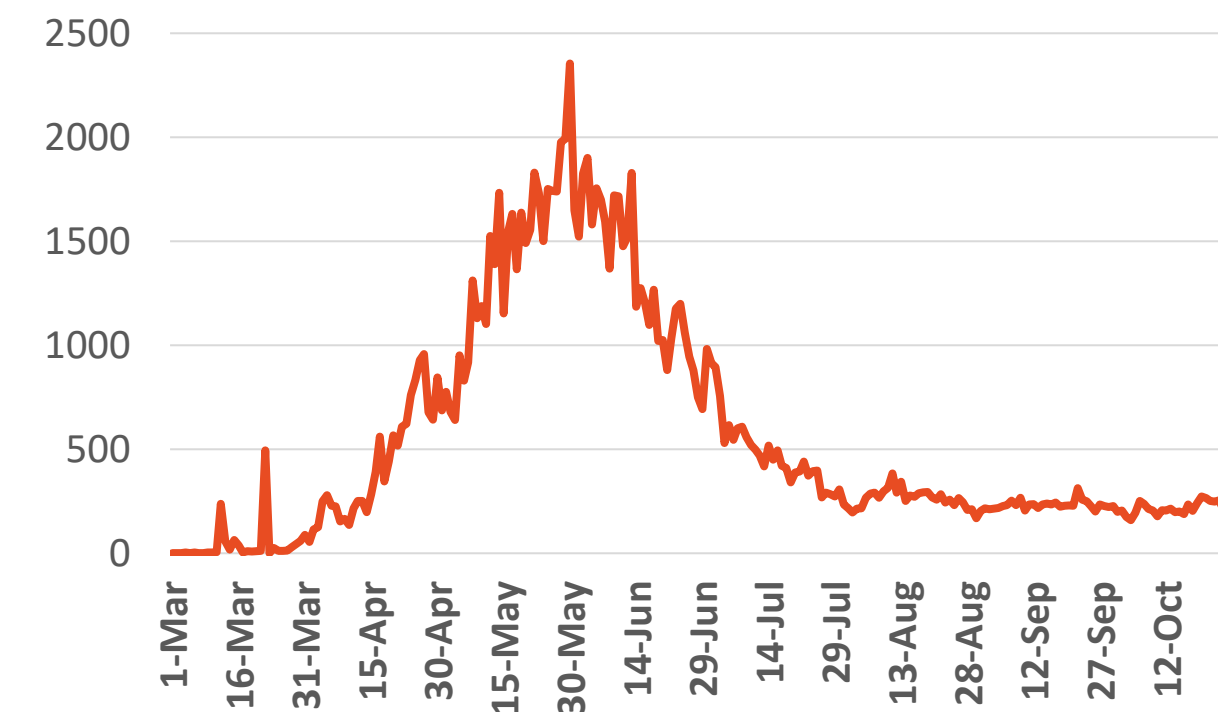
### Kuwait

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Source : Kuwait ministry of health

### Qatar



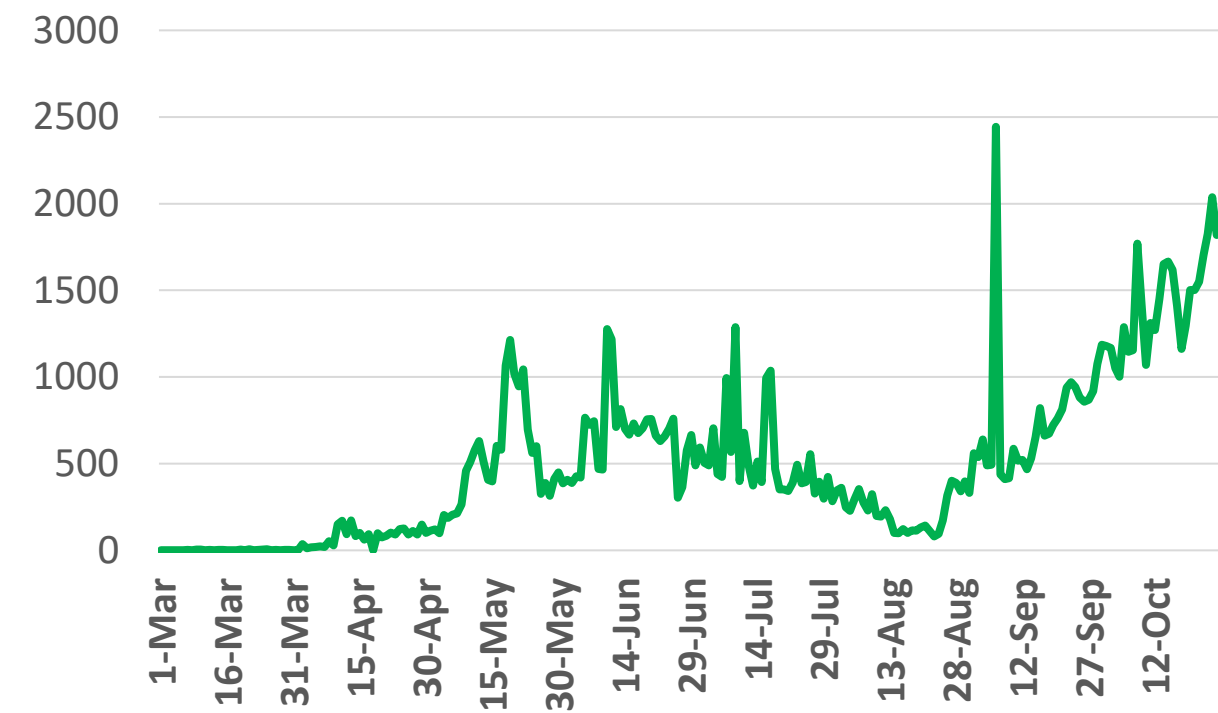
Source : Qatar ministry of health

\*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,1,2,9,10,16,17,23 & 24 October  
\*No announced statistic data on weekends and official holidays.



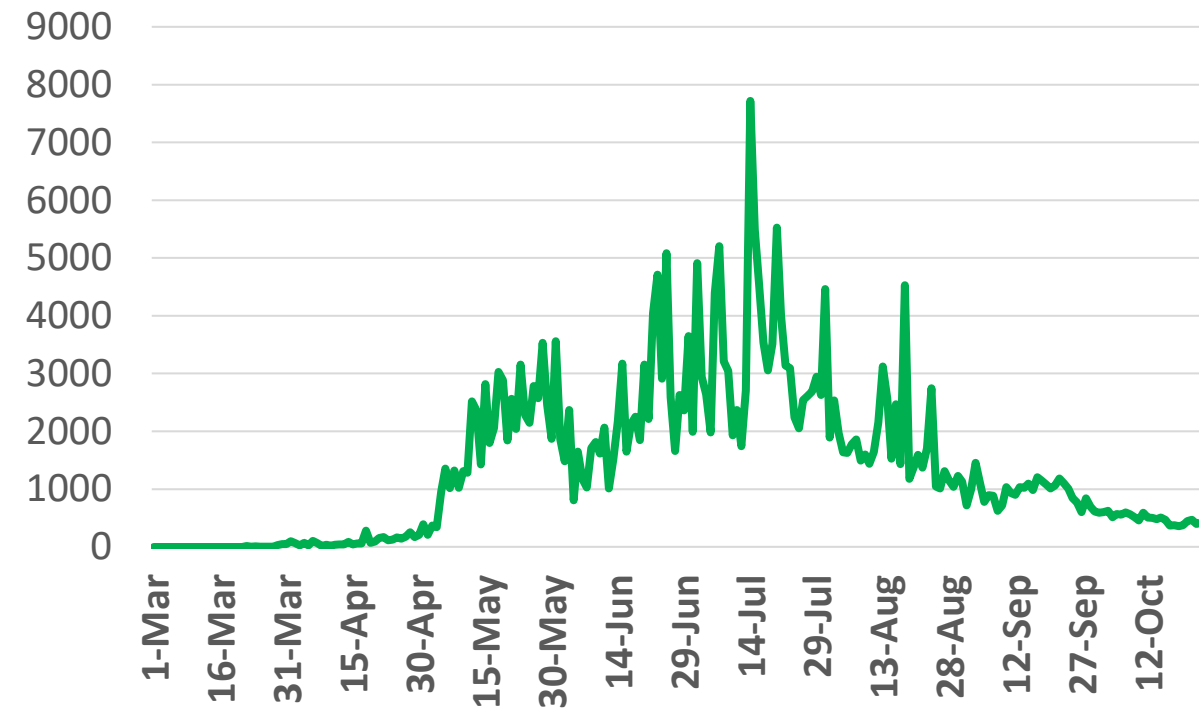
**Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries**

## UAE



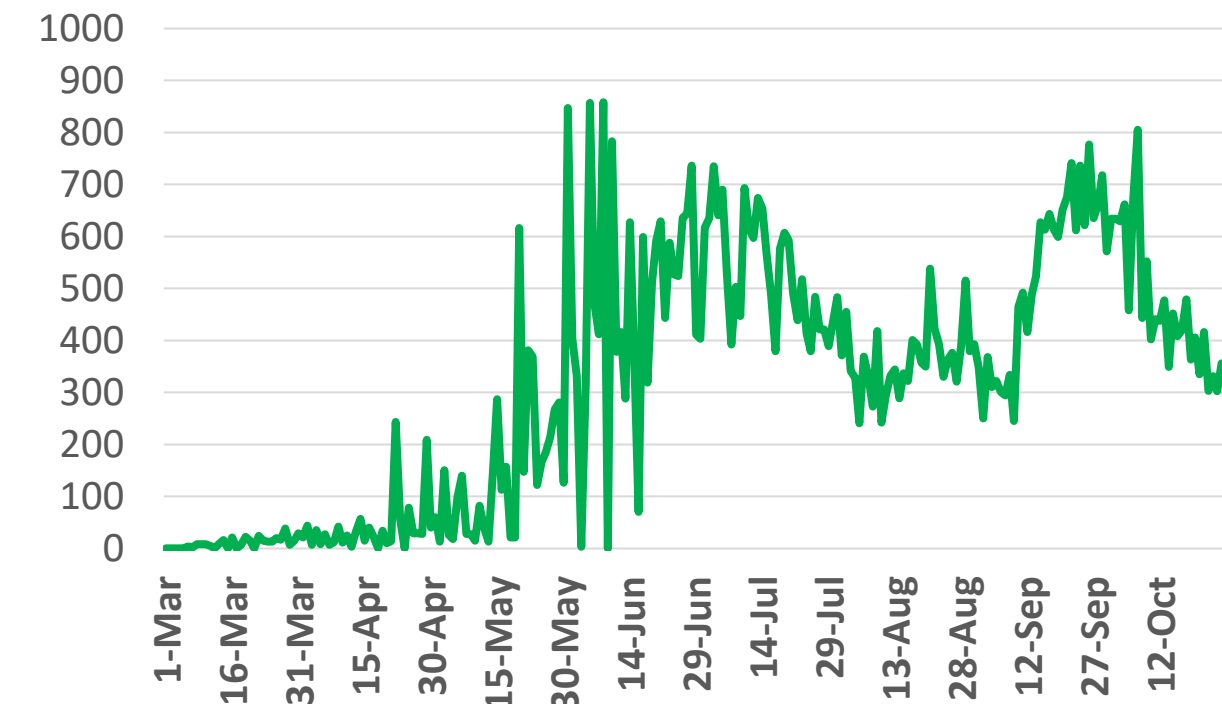
Source : National Emergency Crisis and Disaster Management Authority

## KSA



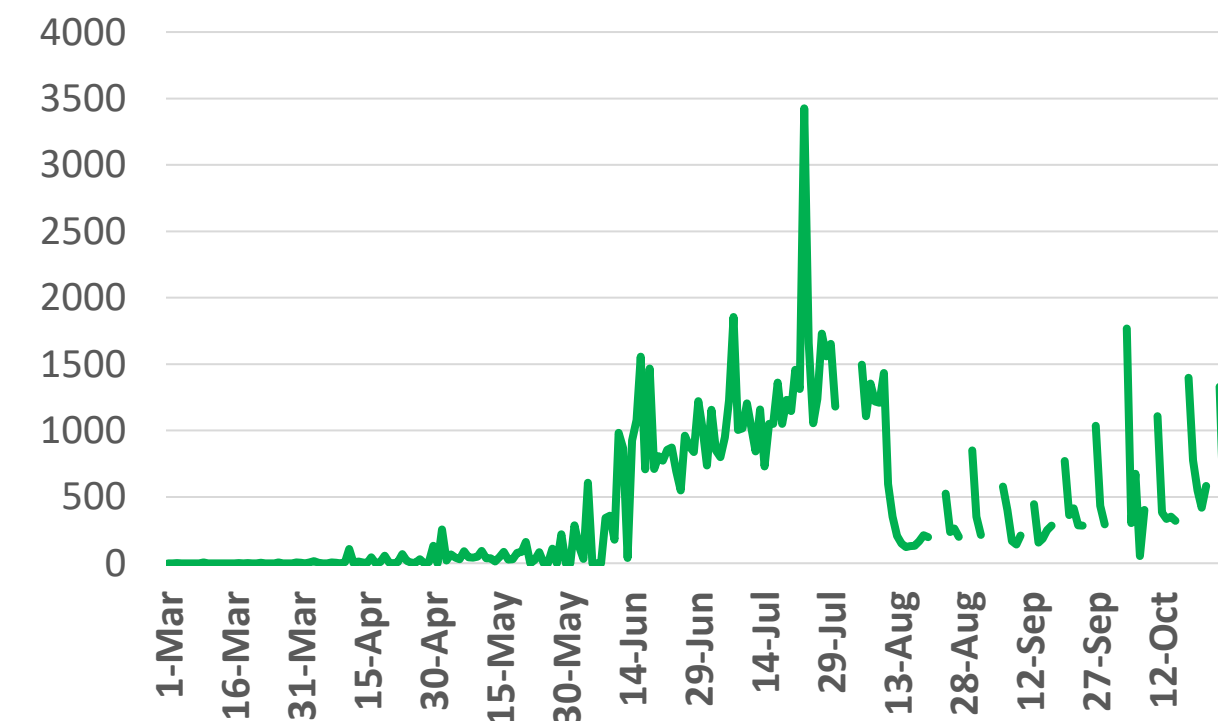
Source : KSA ministry of health

## Bahrain



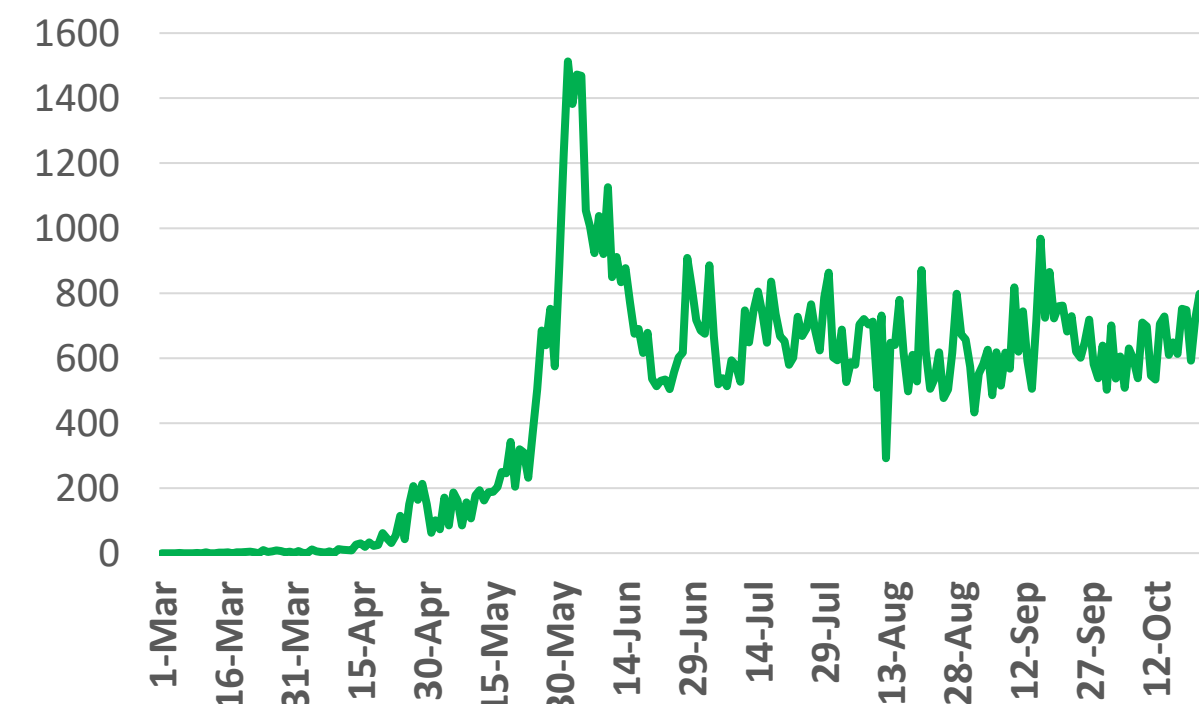
Source : Bahrain ministry of health

## Oman



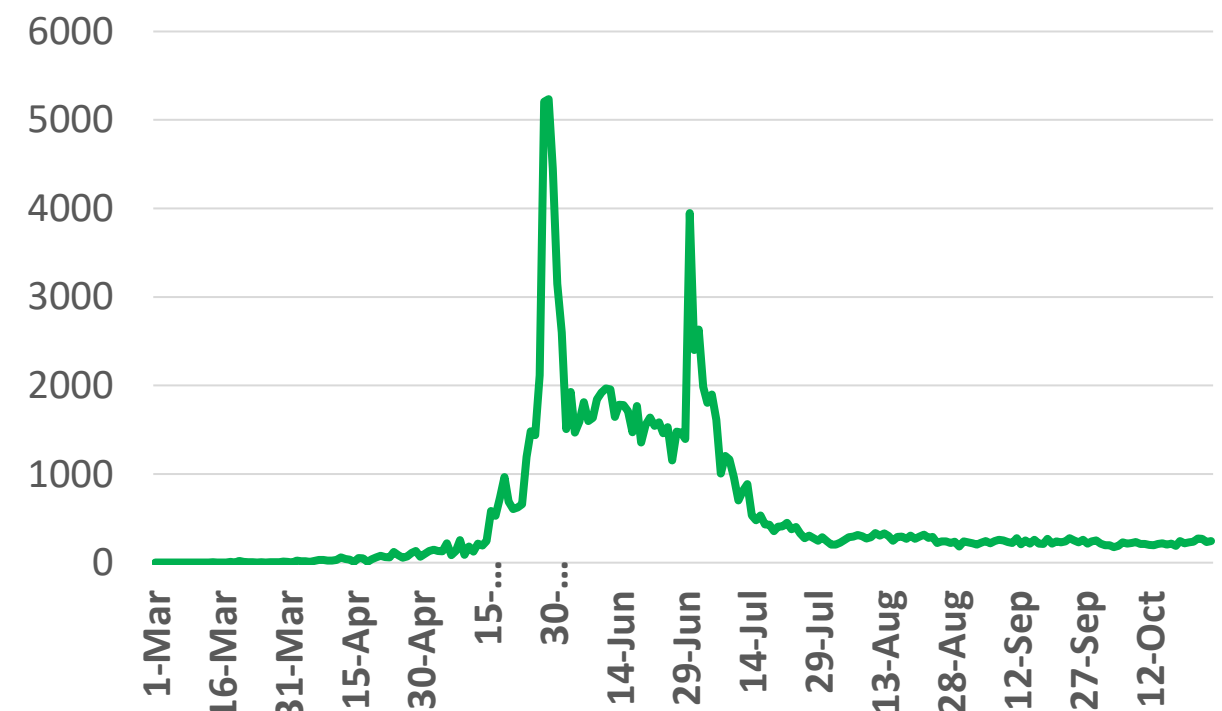
Source : Oman ministry of health

## KUWAIT © ADPHC 2020



Source : Kuwait ministry of health

## Qatar



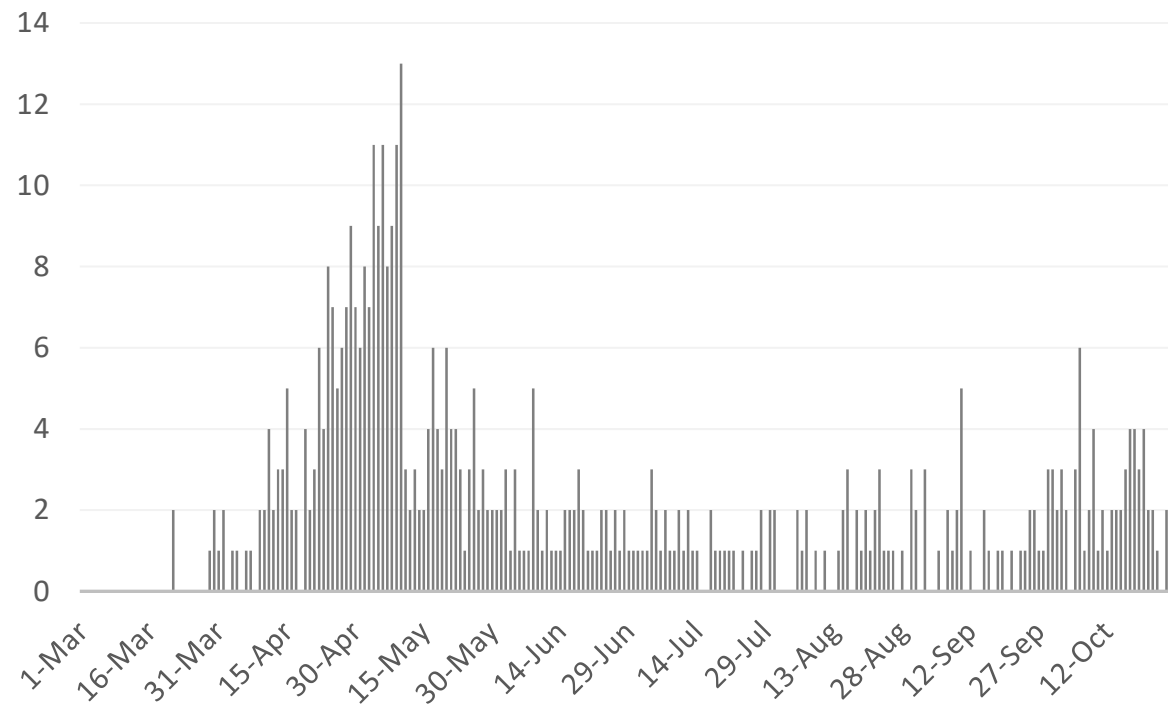
Source : Qatar ministry of health

\*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 1,2,9,10,16 & 17,23 & 24 October  
\*No announced statistic data on weekends and official holidays.



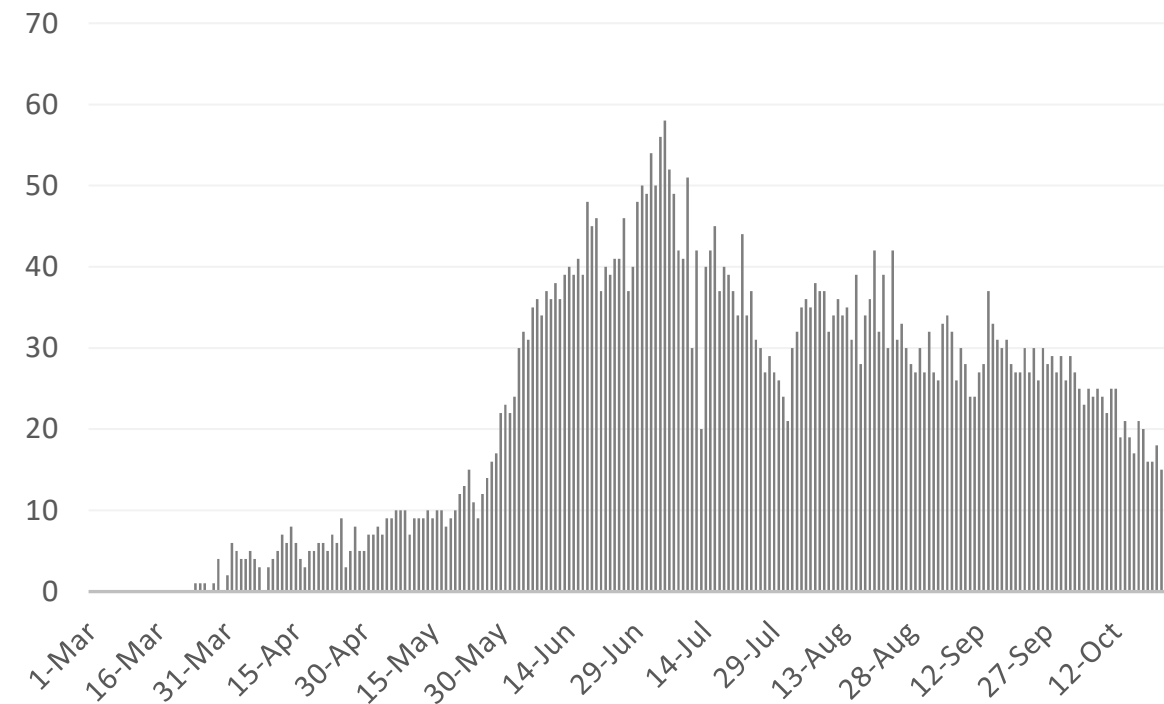
## Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

### UAE



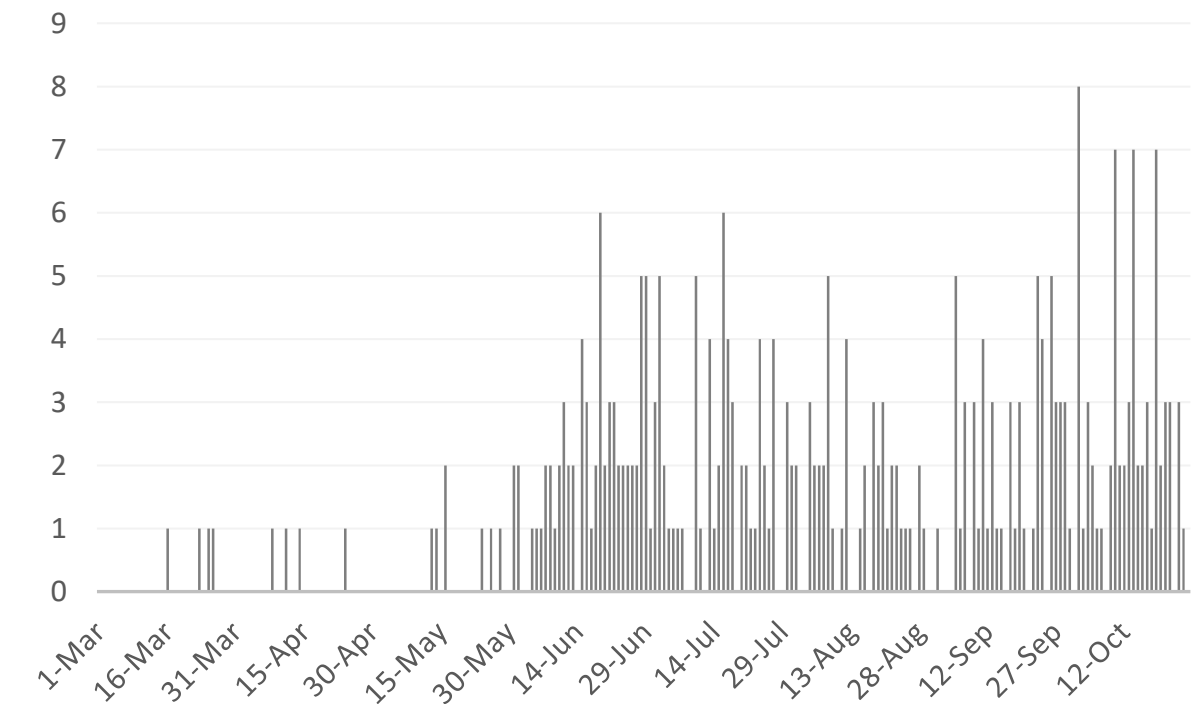
Source : National Emergency Crisis and Disaster Management Authority

### KSA



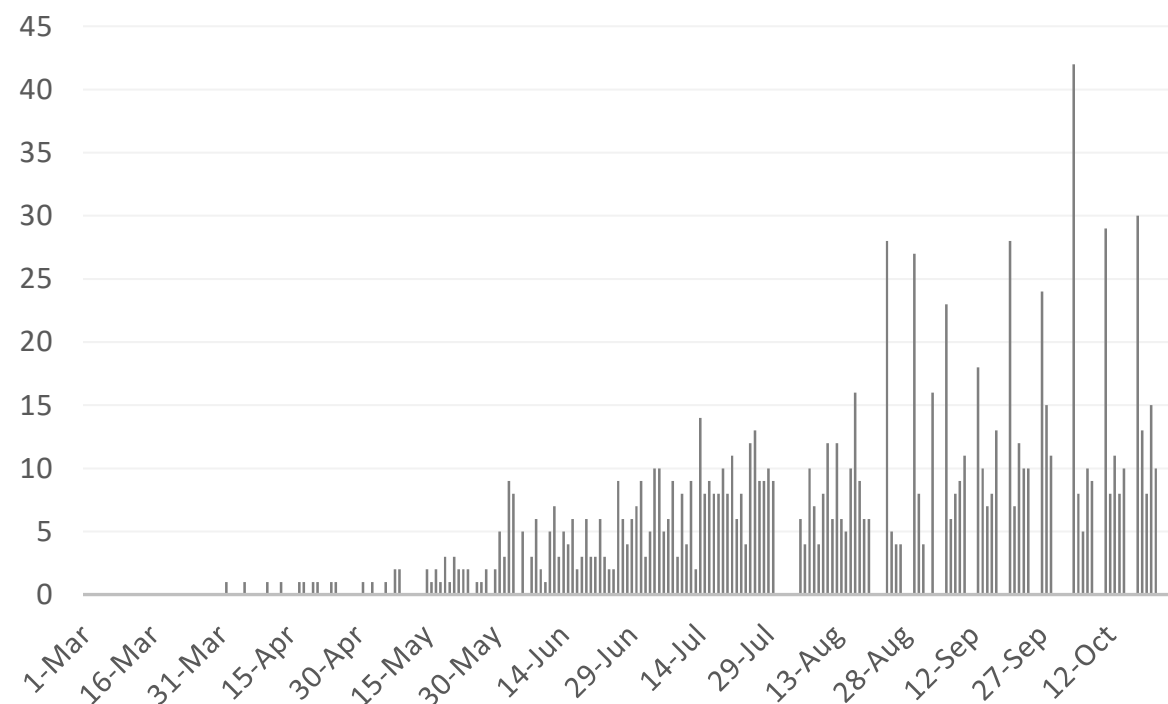
Source : KSA ministry of health

### Bahrain



Source :WHO

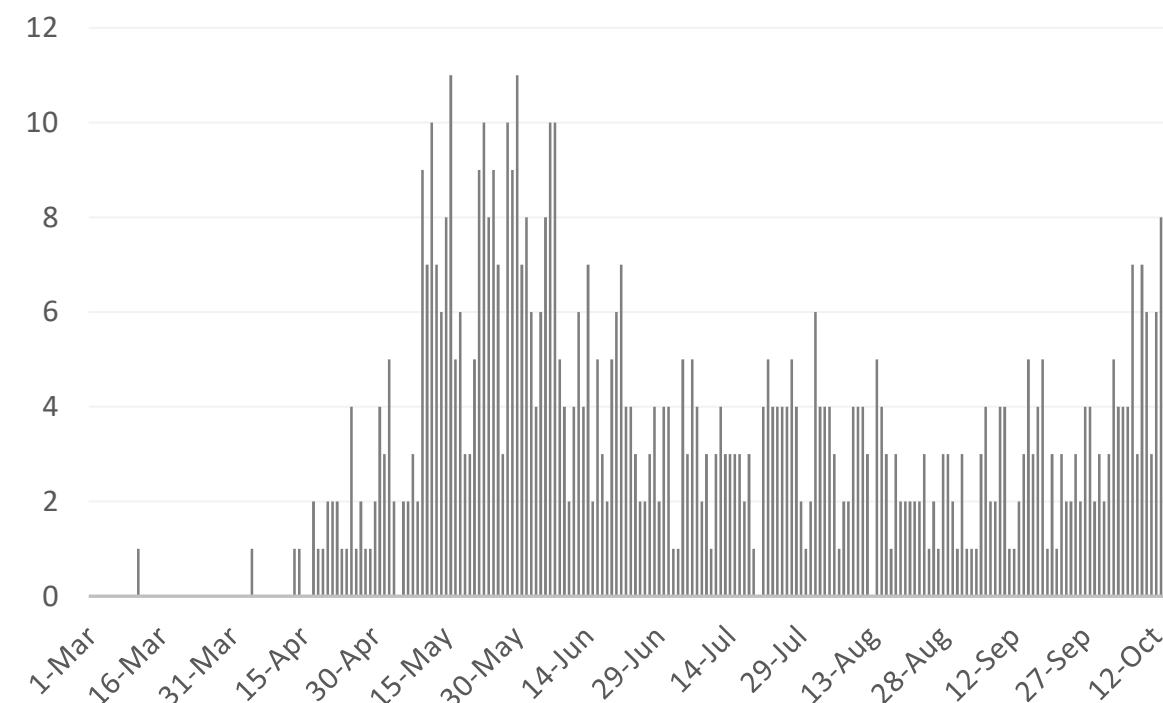
### Oman



Source :Oman ministry of health

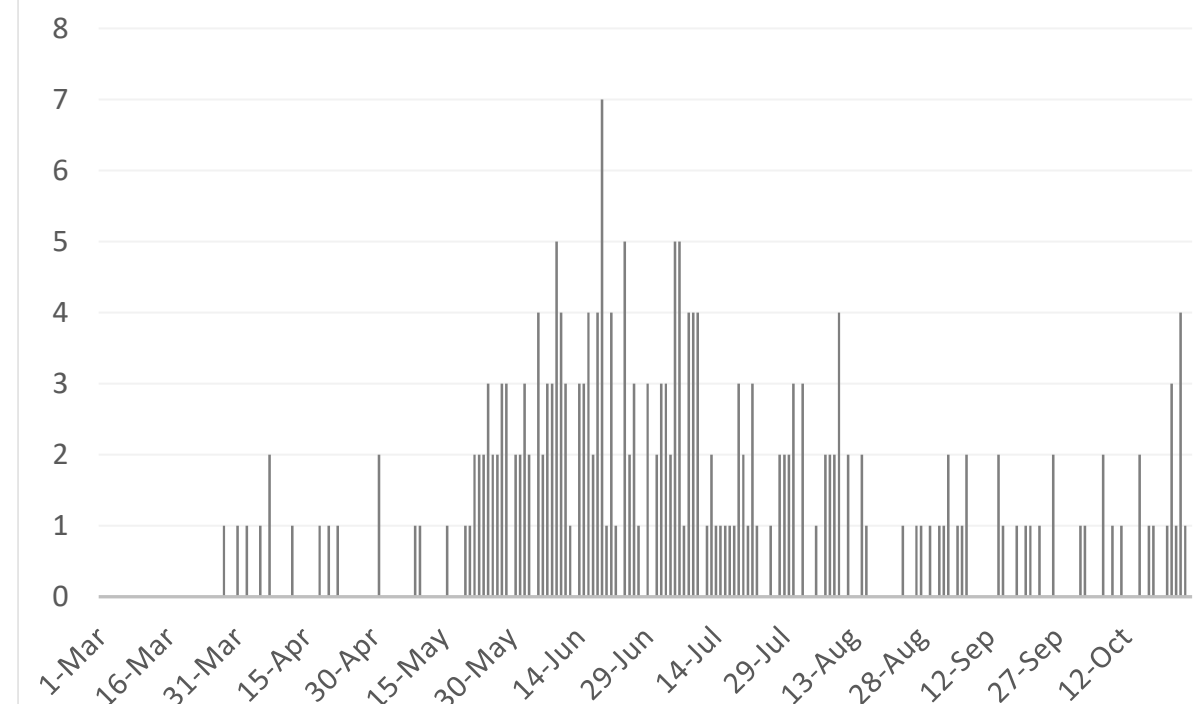
### Kuwait

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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,1,2,9,10,16 &17,23 &24 October  
\*No announced statistic data on weekends and official holidays.



## Article 1

Published

# Scientific and Ethical Principles Underlying Recommendations from the Advisory Committee on Immunization Practices for COVID-19 Vaccination Implementation

October 22, 2020 [JAMA](#)

- In the United States (US), the Advisory Committee on Immunization Practices (ACIP) has held public meetings since June 2020 to lay the groundwork for recommendations for vaccines. The development of recommendations sticks to a rigorous and transparent process. Grading of Recommendations Assessment, Development, and Evaluation (GRADE) methods facilitate a standardized approach to evaluate scientific evidence. The Evidence to Recommendations framework evaluates factors including feasibility and acceptability. Therefore, the ACIP aims to provide national vaccine recommendations that are both evidence-based and implementable.
- The Centers for Disease Control and Prevention (CDC), health care facilities, and state and local health departments that have already begun implementation planning depend on the ACIP for guidance. Nevertheless, the ACIP will not make recommendations before phase 3 efficacy and safety data are available for review, GRADE analysis, and synthesis. The ACIP will make recommendations for the use of licensed vaccines based on ethical principles, scientific evidence, and logistical feasibility, using a transparent process that puts safety first.



## Continued

Key principle	Elements	Rationale	Implications for phased approach to implementation
Transparency	Maximize benefits and minimize harms	Decrease morbidity, mortality, transmission, and outbreaks; essential for response and/or functioning of society	Early phases prioritize (1) reducing burden of COVID-19 disease in populations at high risk for exposure, morbidity or mortality and (2) preserving functioning of society
	Equity	Address disproportionate burden of COVID-19 disease in some racial/ethnic minority groups	Strategies for implementation that reduce, rather than increase, health disparities in each phase of vaccine distribution
	Justice	Commit to remove unjust and avoidable barriers to good health and well-being that disproportionately affect most disadvantaged populations	Outreach strategies that ensure equal opportunity to access vaccine (and overcome barriers to access) in each phase of vaccine distribution
	Fairness	Commit to fair stewardship in the distribution of a scarce resource; consistent implementation for all groups, populations, and communities	Interventions must intentionally ensure that affected groups, populations, and communities are treated fairly, while also acknowledging: <ul style="list-style-type: none"> <li>• Increased risk of exposure of “frontline” workers, and</li> <li>• Characteristics of individual vaccines (eg, transport, storage and handling) may affect consistency of the application of this principle for different vaccine candidates</li> </ul>

Abbreviations: ACIP, Advisory Committee on Immunization Practices; COVID-19, coronavirus disease 2019.





## Article 2

# Seropositive Prevalence of Antibodies Against SARS-CoV-2 in Wuhan, China

Published

October 23, 2020 [JAMA](#)

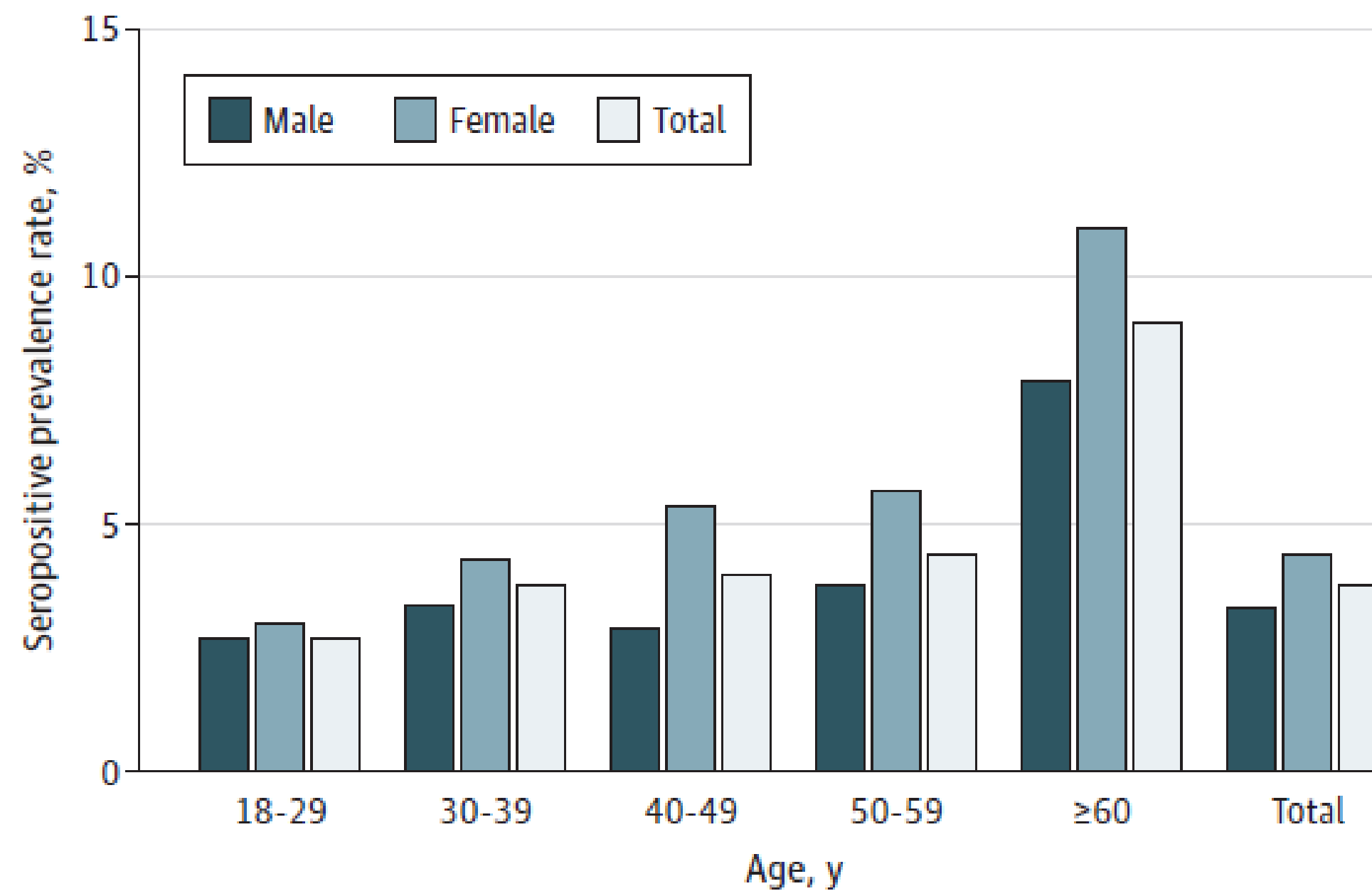
- In China, a cross-sectional study was conducted (from March 27 to May 26, 2020) in Tongji Hospital of Huazhong University of Science and Technology. Adult participants (n=35,040) aged  $\geq 18$  years who had no history of COVID-19, were enrolled in this study. Demographic information including age, gender, and residential area, were collected. The participants were screened for SARS-CoV-2 infection by serological tests for IgM and IgG antibodies to SARS-CoV-2 and by RT-PCR tests for SARS-CoV-2 RNA.
- The overall seropositivity rate was 3.9%. The seropositive prevalence in the urban area was higher as compared with suburban and rural areas (4.4% vs. 2.9%;  $p < 0.001$ ). Furthermore, women had higher seropositive prevalence than men (4.4% vs. 3.3%;  $p < 0.001$ ). Seropositive prevalence was associated with increasing age with the highest rates among participants aged  $\geq 60$  years (9.2%).
- In this study, women had a higher seropositive prevalence than men which is consistent with the study conducted by Pan et al. (2020) showing that female individuals had higher rates of confirmed cases as compared with male. Regarding residential area, these study findings are also consistent with Pan (2020) study. The seropositive prevalence was also significantly higher among older participants than other age groups. It is possible that elderly people had higher rates of comorbidity that might accelerate SARS-CoV-2 infection and increase the severity of COVID-19.





## Continued

Figure. Severe Acute Respiratory Syndrome Coronavirus 2 Seropositive Prevalence by Sex and Age Group





## Article 3

Published

# Factors Associated with Mental Health Disorders Among University Students in France Confined During the COVID-19 Pandemic

October 23, 2020 [JAMA](#)

- In France, a cross-sectional study was conducted (from April 17 to May 4, 2020) with students (n=69,054) during COVID-19 quarantine. To reach students, the French Ministry of Higher Education, Research, and Innovation asked 82 universities to send an email to the students offering them the opportunity to participate in this study by completing an online survey. The rates of self-reported suicidal thoughts and severe distress (using the 22 item Impact of Events Scale-Revised), stress (10 items Perceived Stress Scale), anxiety (20 items State-Trait Anxiety Inventory), and depression (13-item Beck Depression Inventory) were evaluated.
- The prevalence of suicidal thoughts were 11.4%, severe distress (22.4%), high level of perceived stress (24.7%), severe depression (16.1%), and high level of anxiety (27.5%). Nearly half (42.8%) of the students reported at least one mental health outcome. Risk factors associated with at least one outcome - female [Odds Ratio (OR) - 2.10; 95% CI: 2.02-2.19], loss of income [OR - 1.28; 95% CI: 1.22-1.33], low quality housing [OR - 2.30; 95% CI: 2.06-2.57], history of psychiatric follow up [OR - 3.28; 95% CI: 3.09-3.48], symptoms compatible with COVID-19 [OR - 1.55; 95% CI: 1.49-1.61], weak sense of integration [OR - 3.63; 95% CI: 3.35-3.92], low quality of social relations [OR - 2.62; 95% CI: 2.49-2.75], and low quality of the information received [OR - 1.56; 95% CI: 1.49-1.64].
- These findings suggest that students' mental health is a public health problem that has become more critical in the context of a pandemic. Special attention needs to be paid to female students as well as students with a history of psychiatric follow-up. It is important to maintain contact with students to ensure good quality housing, provide basic needs, allow them to maintain social ties, and give them adequate information. Measures promoting access to care need to be encouraged.



# THANK YOU

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