

# SCIENTIFIC RESEARCH MONITORING ON COVID-19

**17 AUGUST 2020**

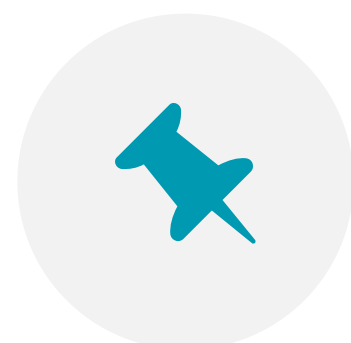
For accessing the full series of published scientific reports please visit the following link:  
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# SCIENTIFIC RESEARCH MONITORING ON COVID-19

## (ISSUE 197)

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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Report



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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 Features

**An Inactivated Virus  
Candidate Vaccine to Prevent  
COVID-19**

## Public Health Response

**The Great Coronavirus  
Pandemic of 2020 - 7 Critical  
Lessons**

## Public Health

**COVID-19's Impact on  
Australia's Health Research  
Workforce**

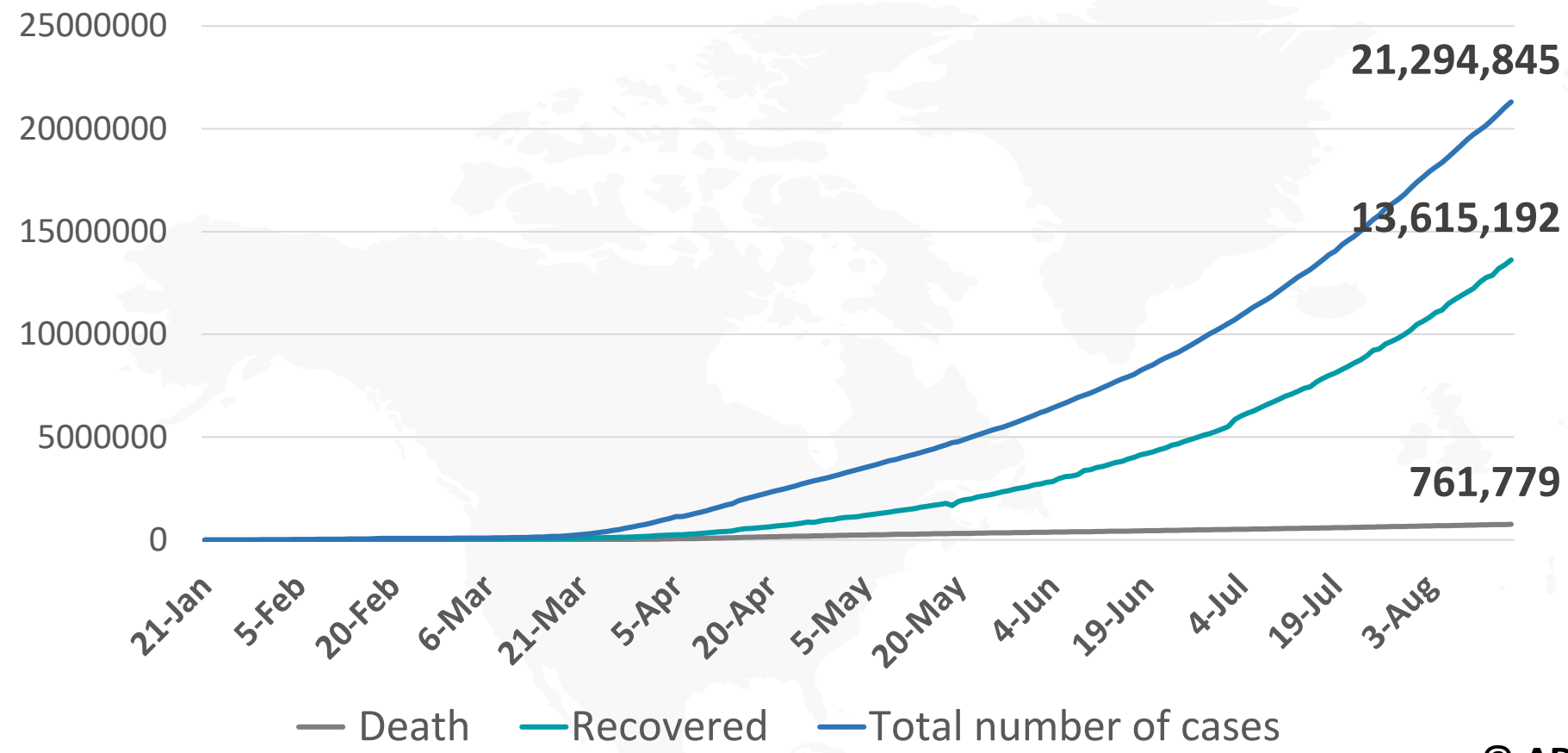




- WHO Director-General Dr Tedros expressed his gratitude to the Government of South Africa for welcoming the WHO experts that will be supporting the Ministry of Health and other agencies in their response to COVID-19.
- South Africa is stepping up hygiene in health facilities to protect against COVID-19 with support provided through the UHC Partnership as part of WHO's overall COVID-19 response.
- **This is the final daily COVID-19 Situation Report.** Beginning tomorrow, we will begin publishing the COVID-19 Weekly Epidemiological Update which will focus on analysis and interpretation of the evolving epidemiological situation.

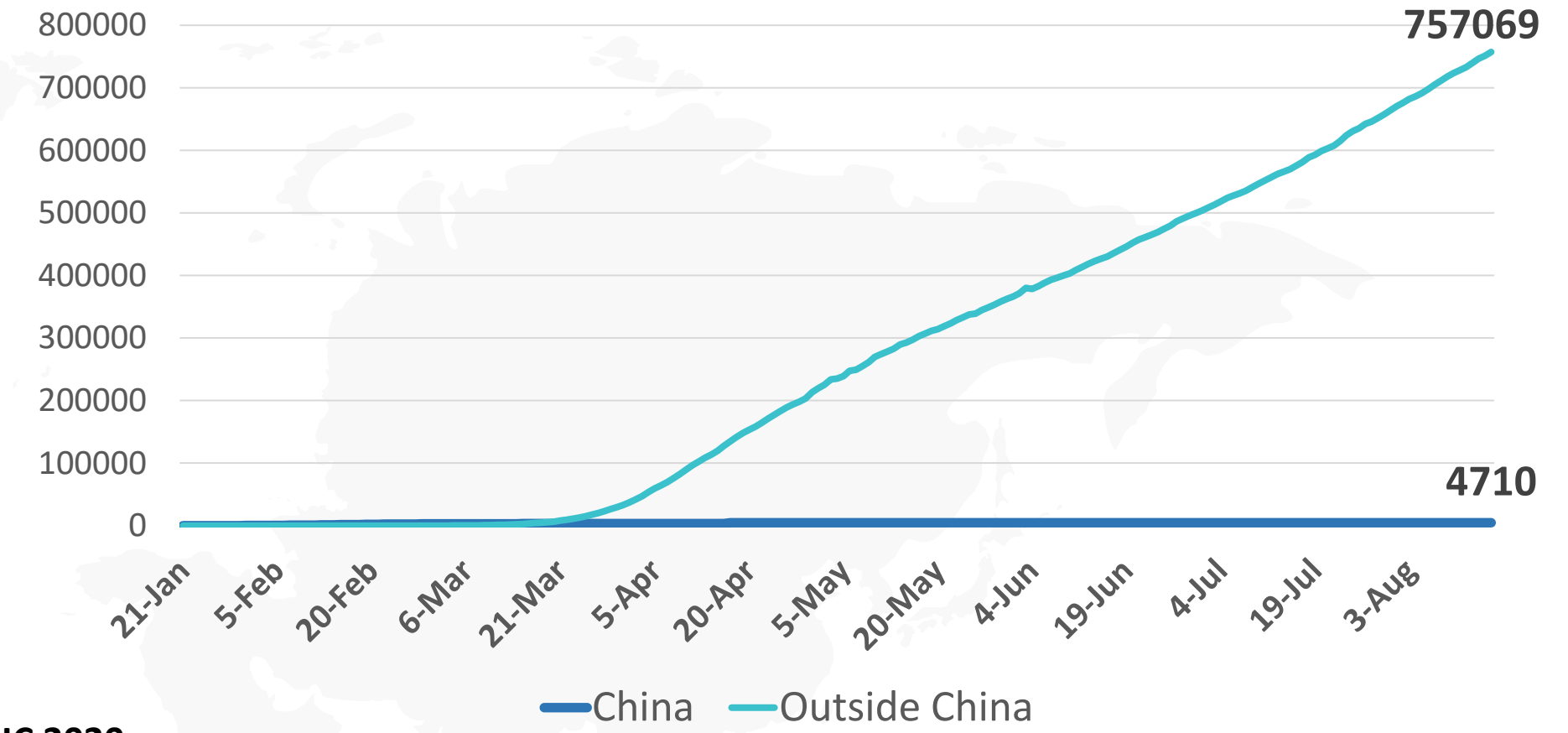


**Figure 1: Total Number of Infected, Recovered, and Death Cases**



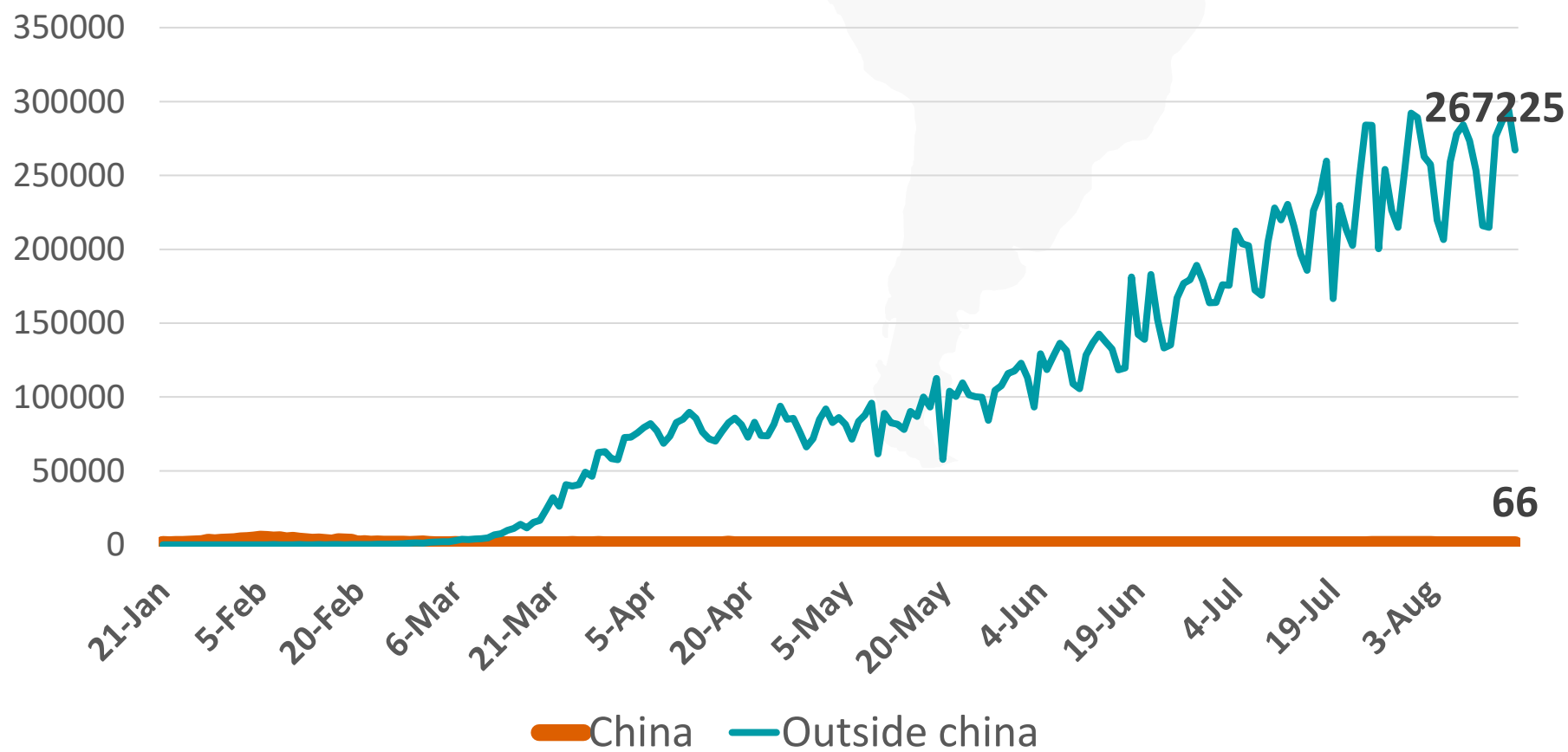
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**Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)**



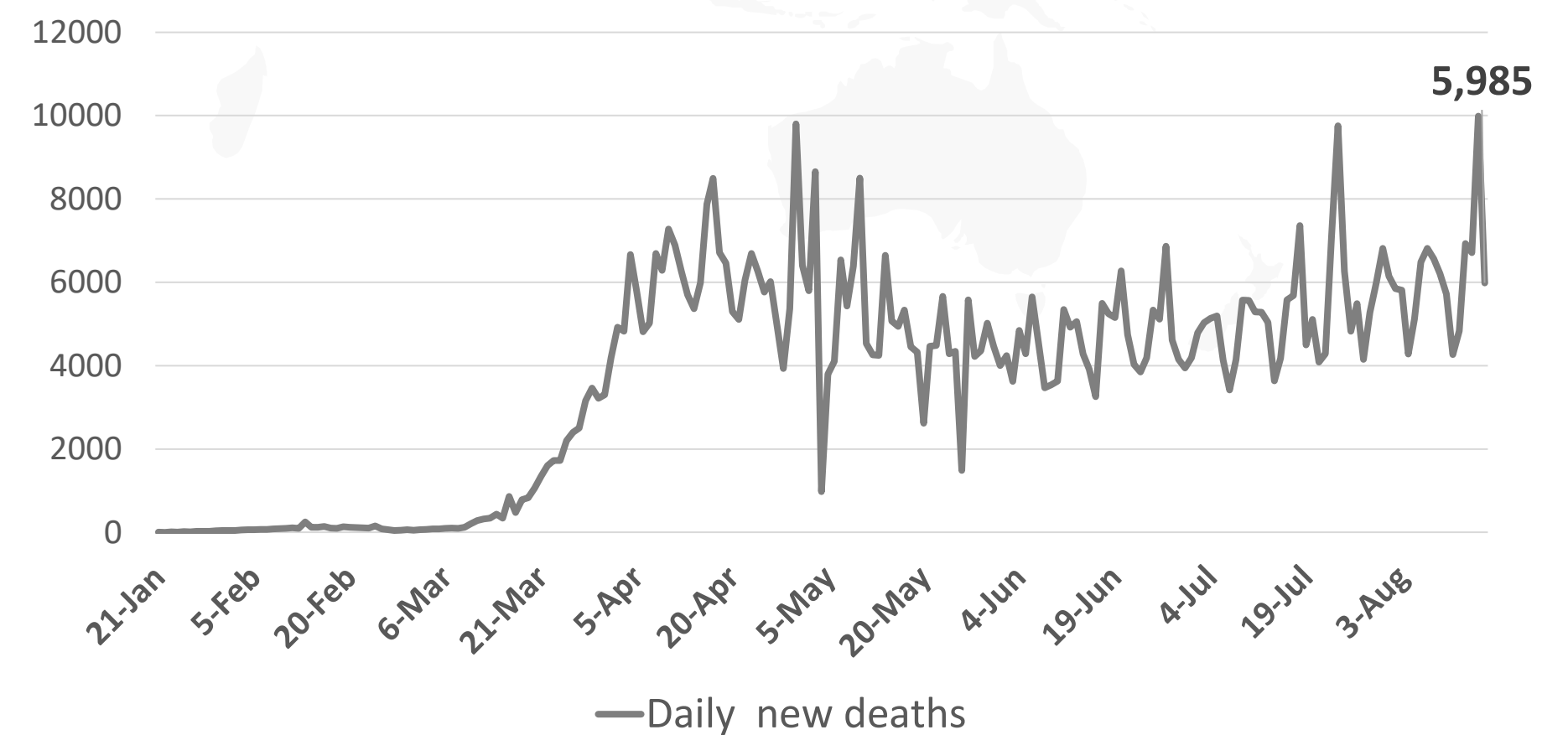
China Outside China

**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)**

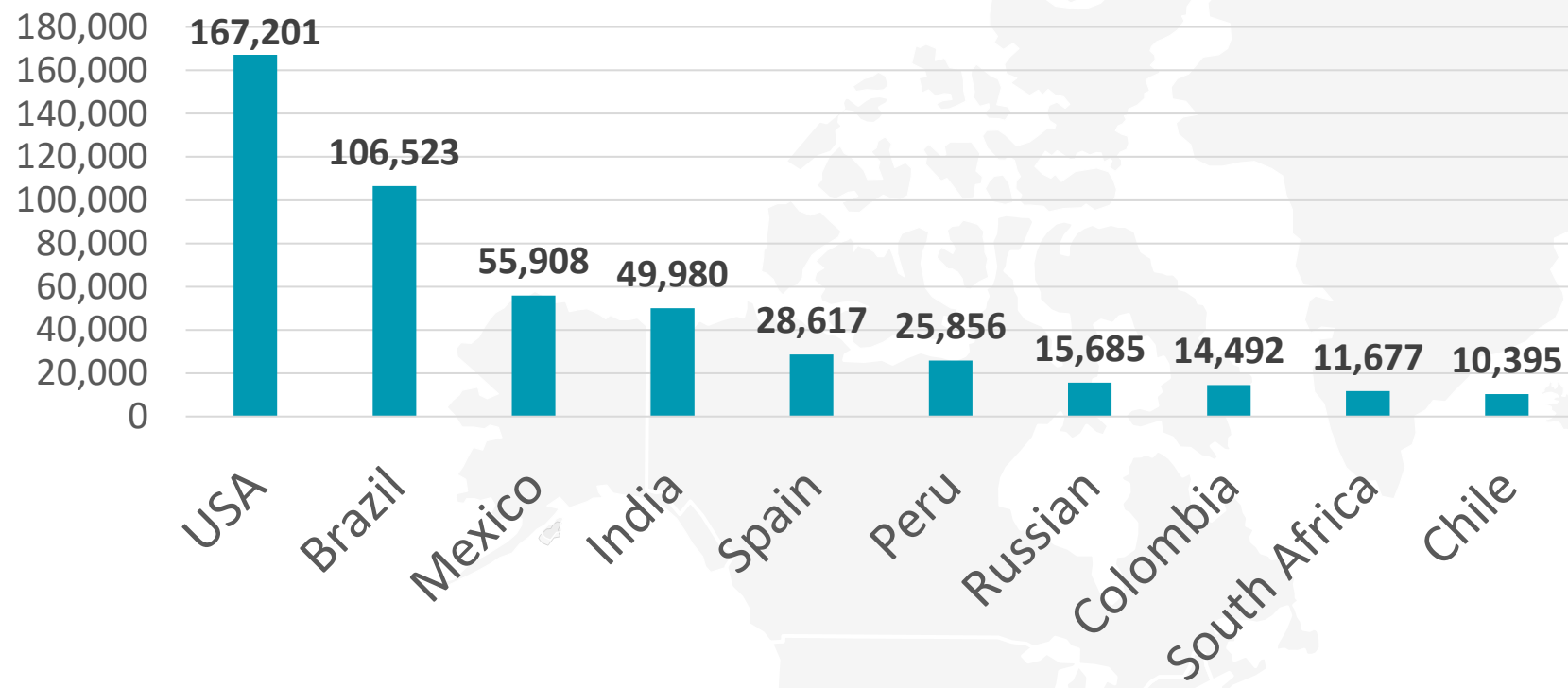


Daily new deaths

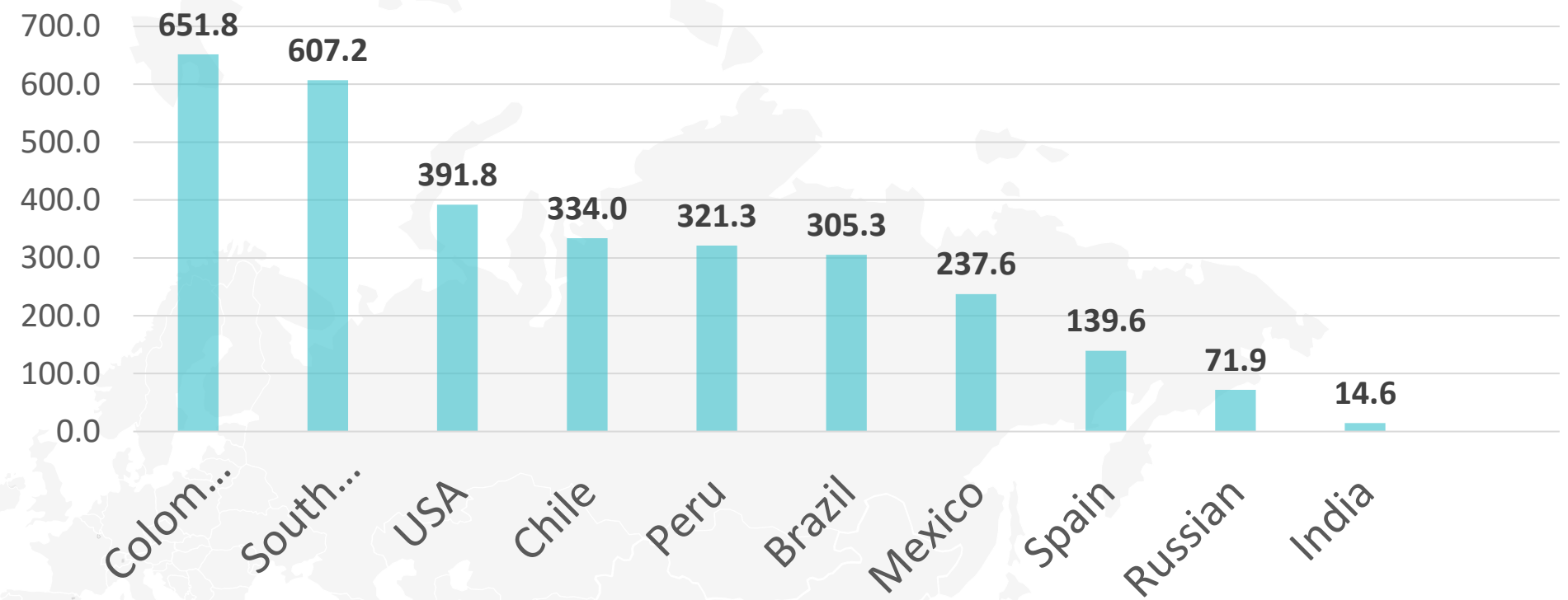


## Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

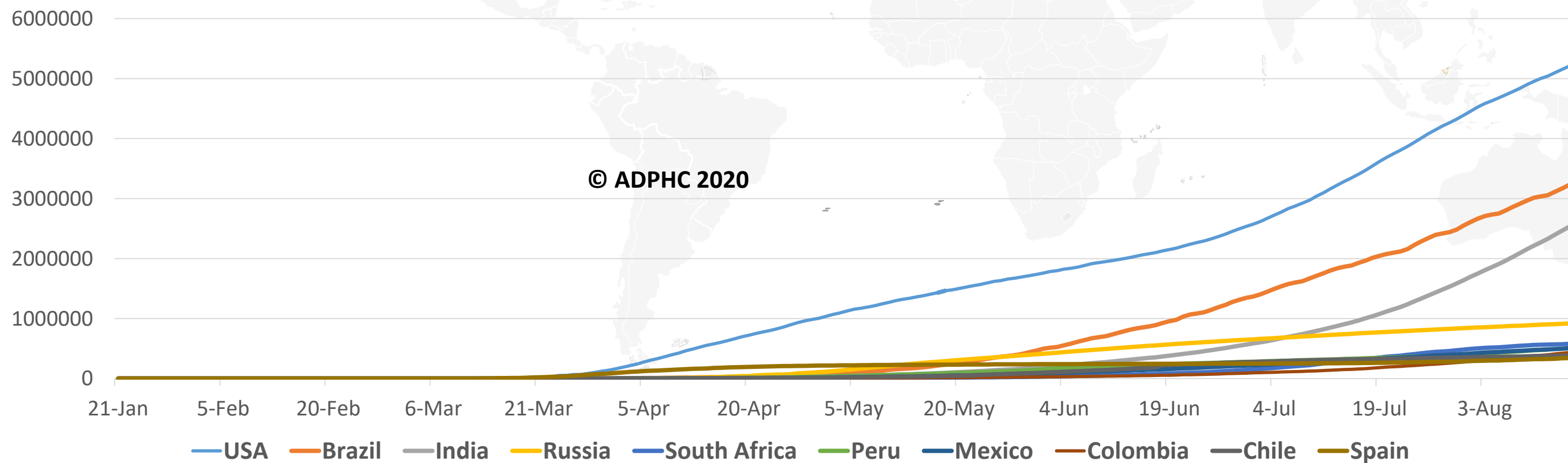
### TOTAL DEATHS



### DEATHS PER MILLION

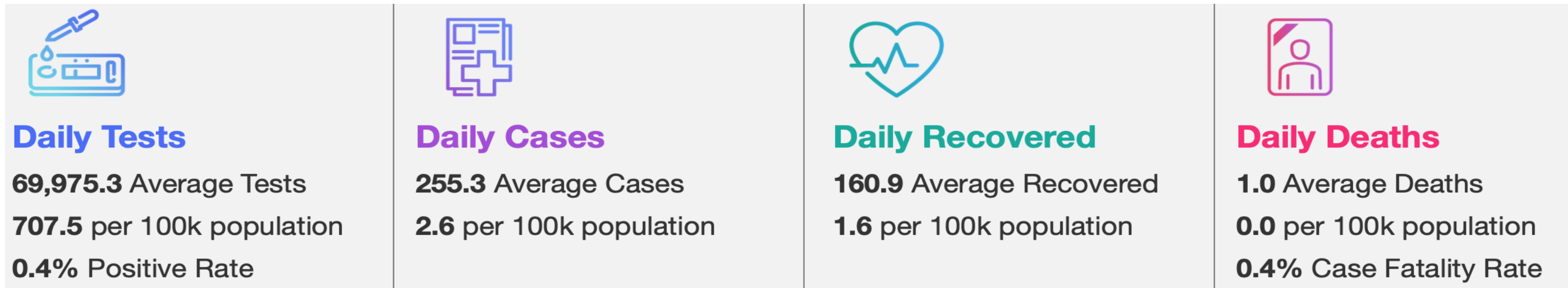


### TOTAL INFECTED CASES

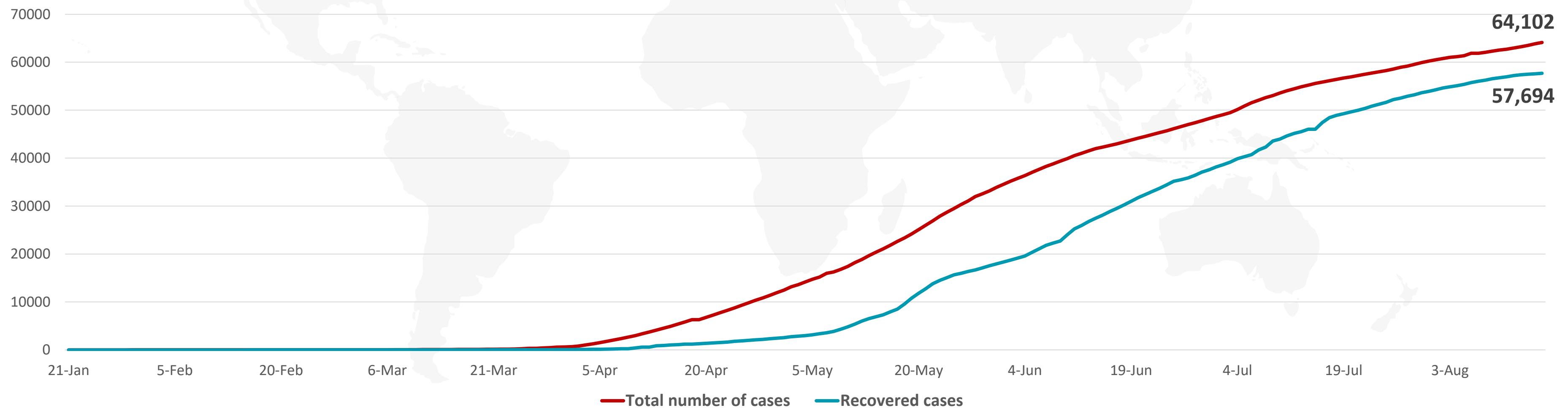


USA	5,258,565
Brazil	3,275,520
India	2,589,682
Russia	922,853
South Africa	583,653
Peru	516,296
Mexico	511,369
Colombia	445,111
Chile	383,902
Spain	342,813

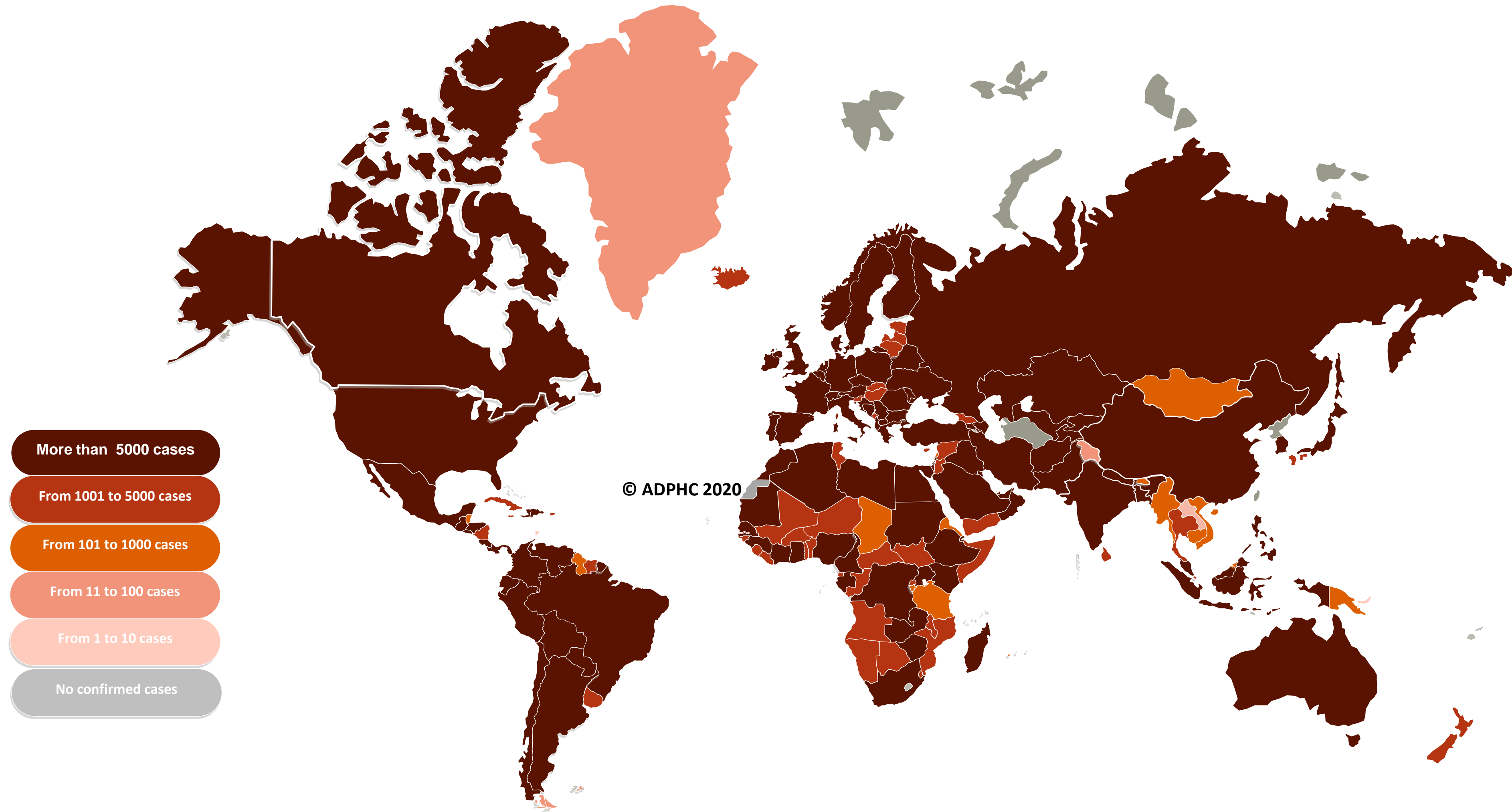
**Figure 6: COVID-19 Status in the UAE** (Federal Competitiveness and Statistics Authority Dashboard)



## TOTAL NUMBER OF INFECTED AND RECOVERED CASES DUE TO COVID-19 REPORTED BY THE UAE

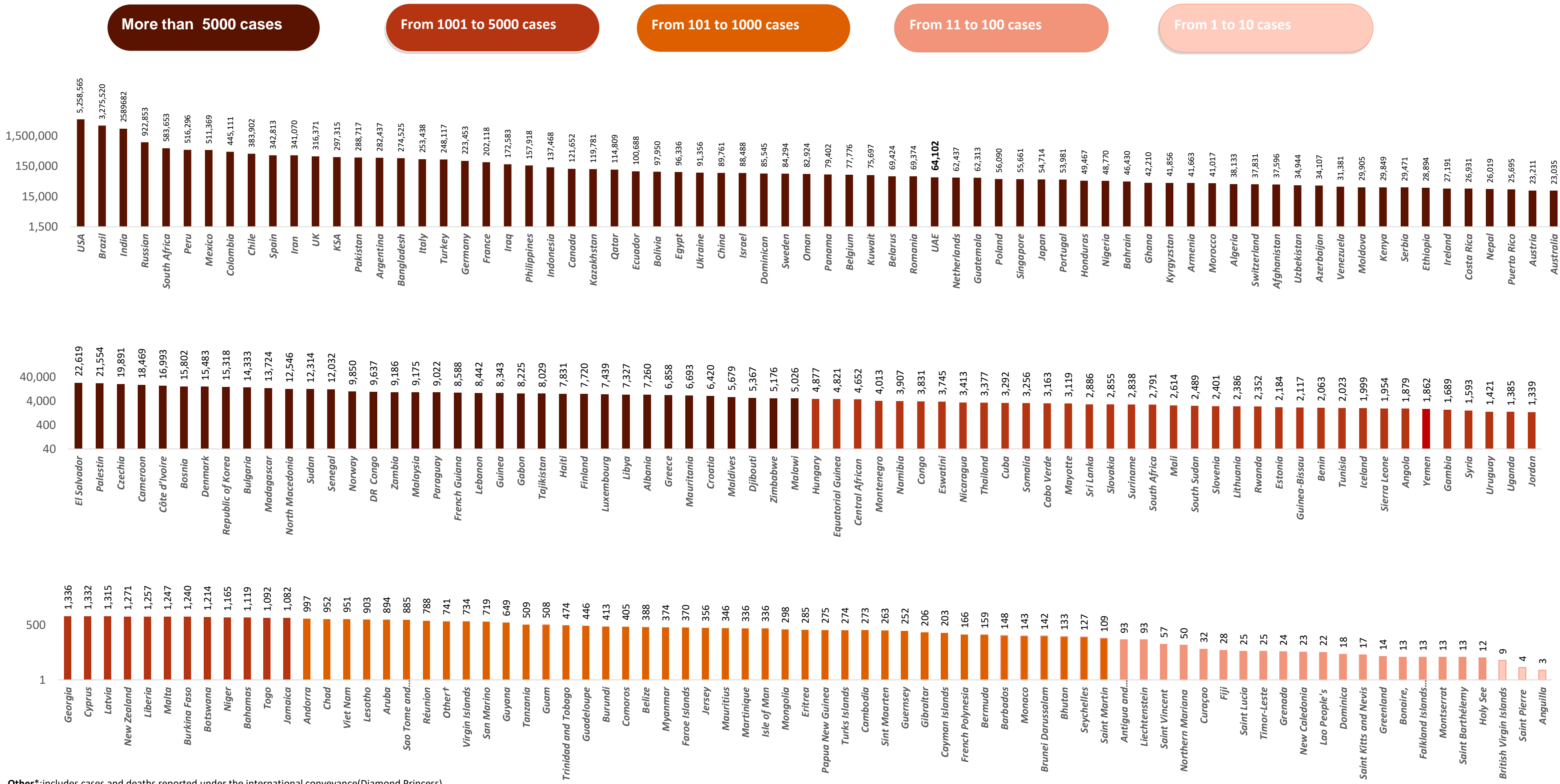


## Figure 7A : Global Distribution of COVID-19 Cases



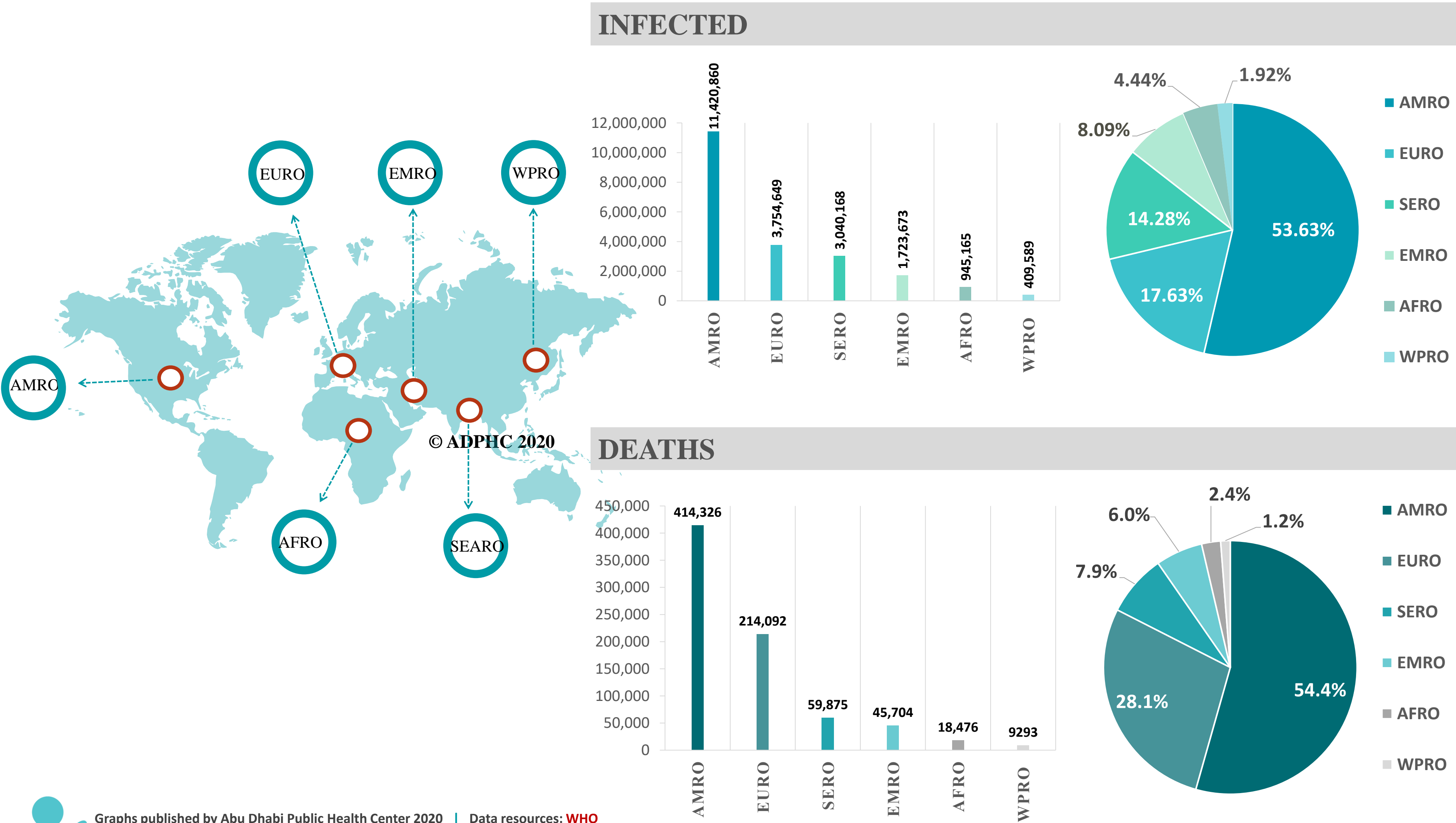


## Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



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

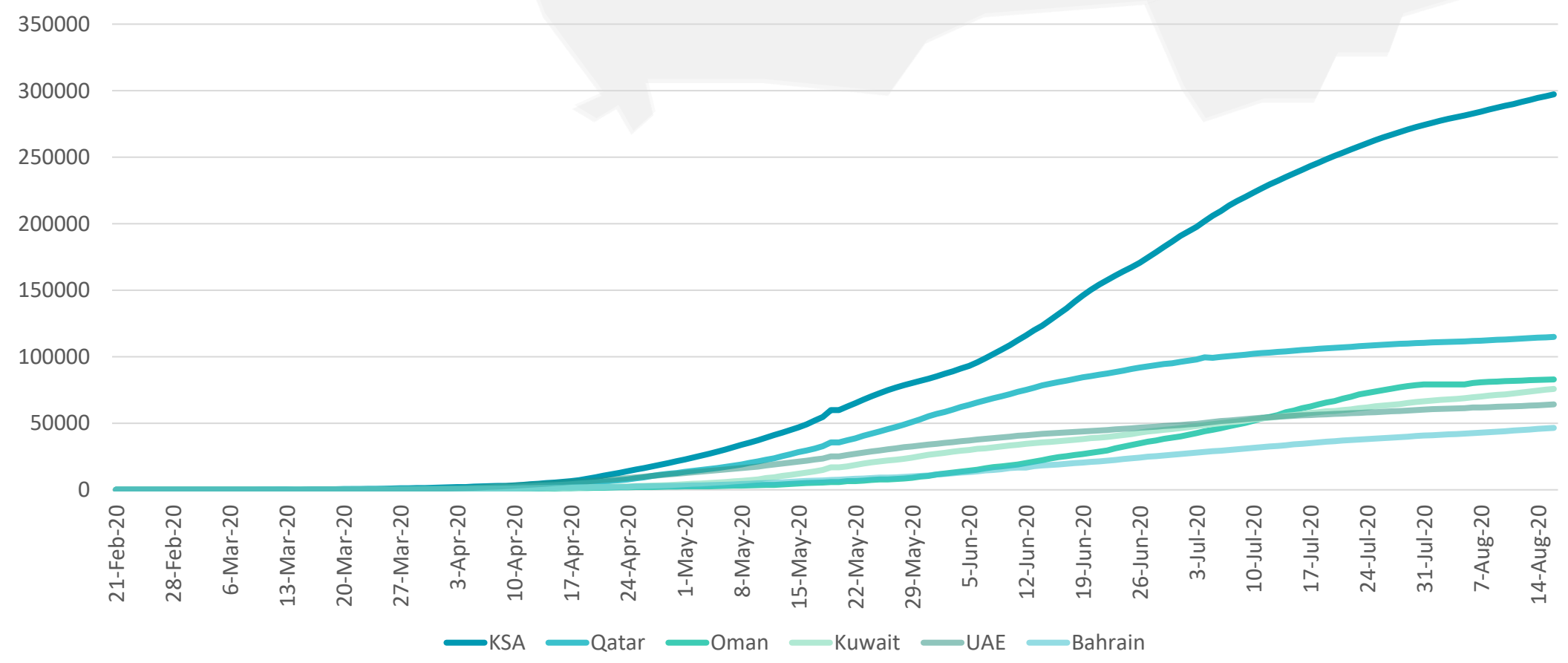
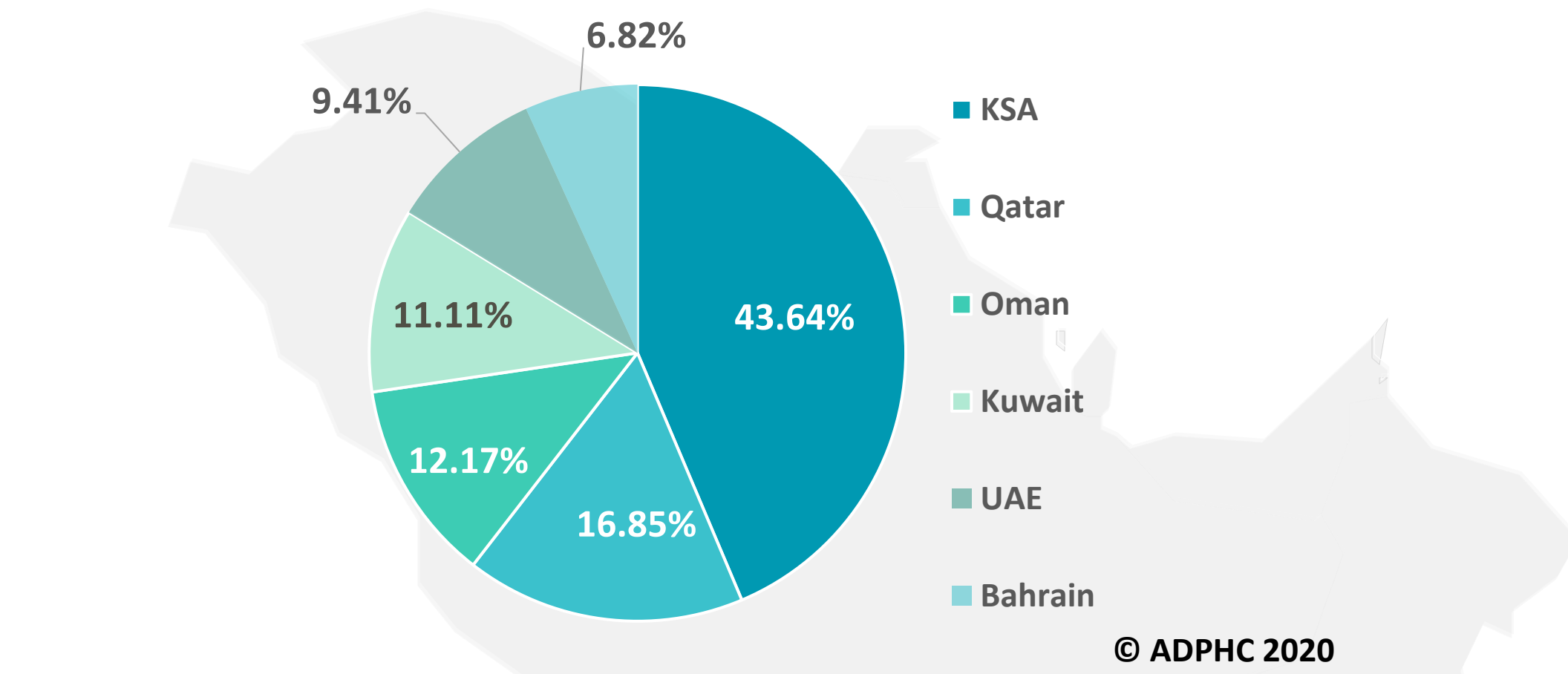
Figure 8: Global Distribution of COVID-19 Cases per Region



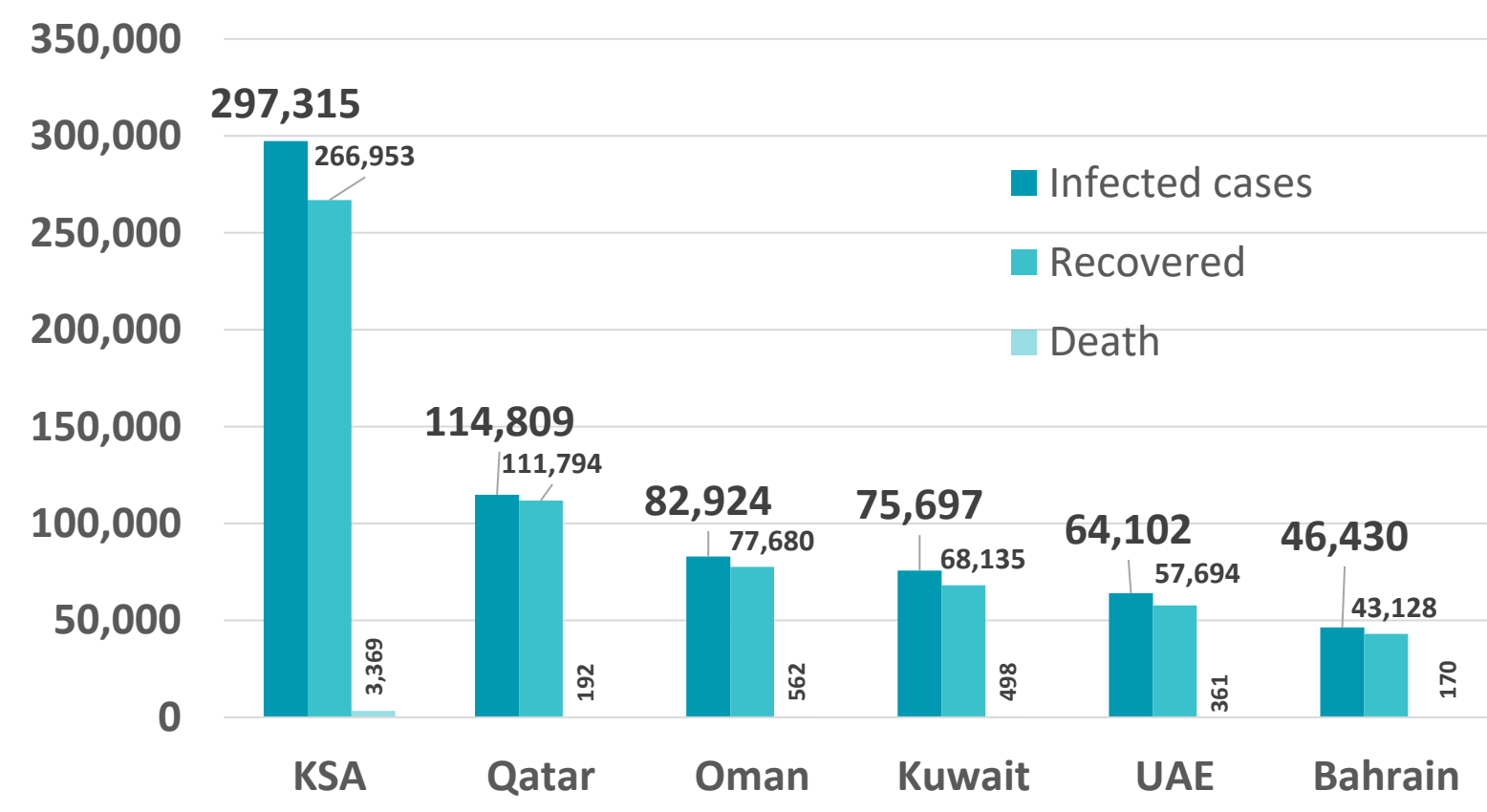
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: [WHO](#)

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

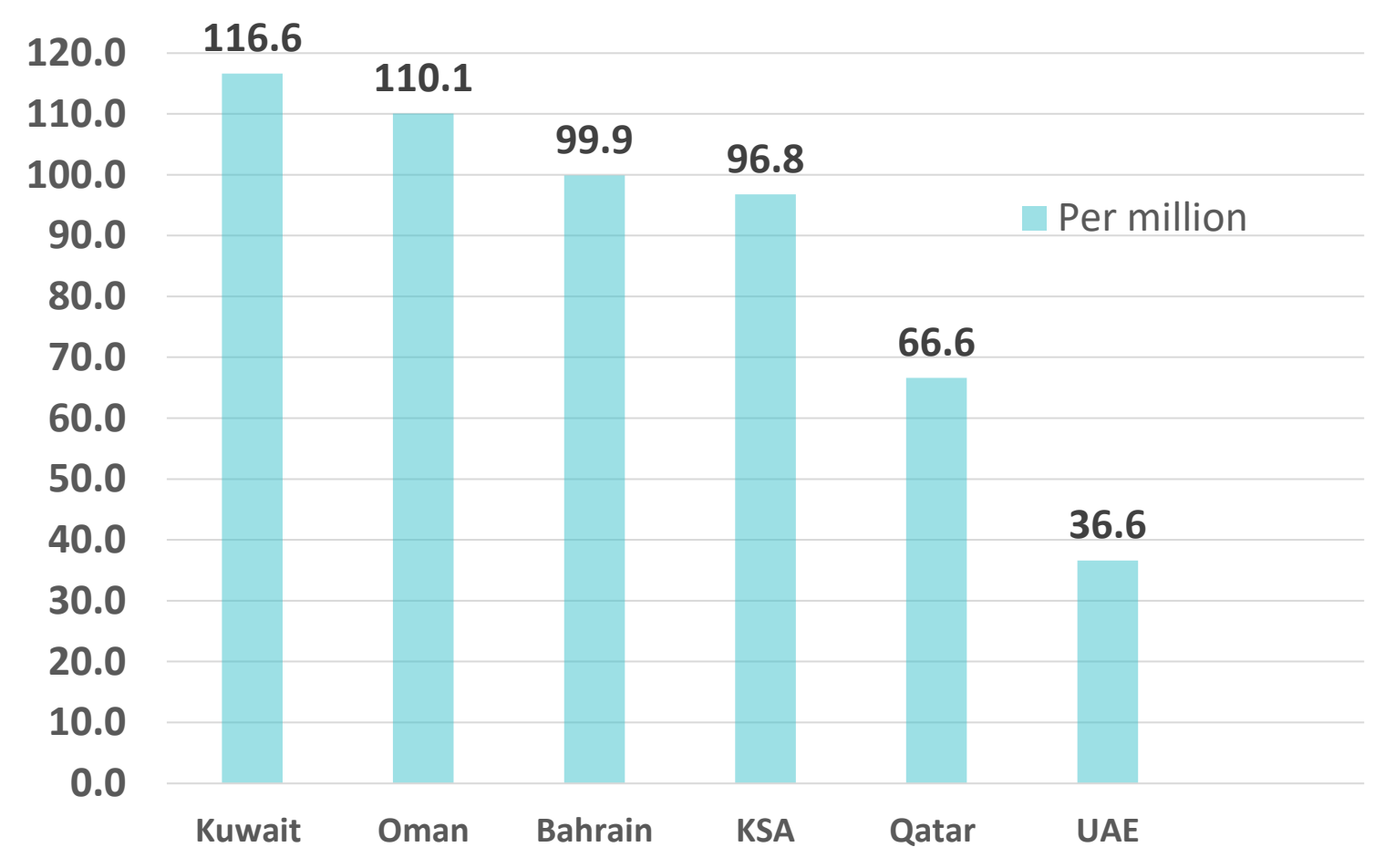
### TOTAL NUMBER OF INFECTED CASES



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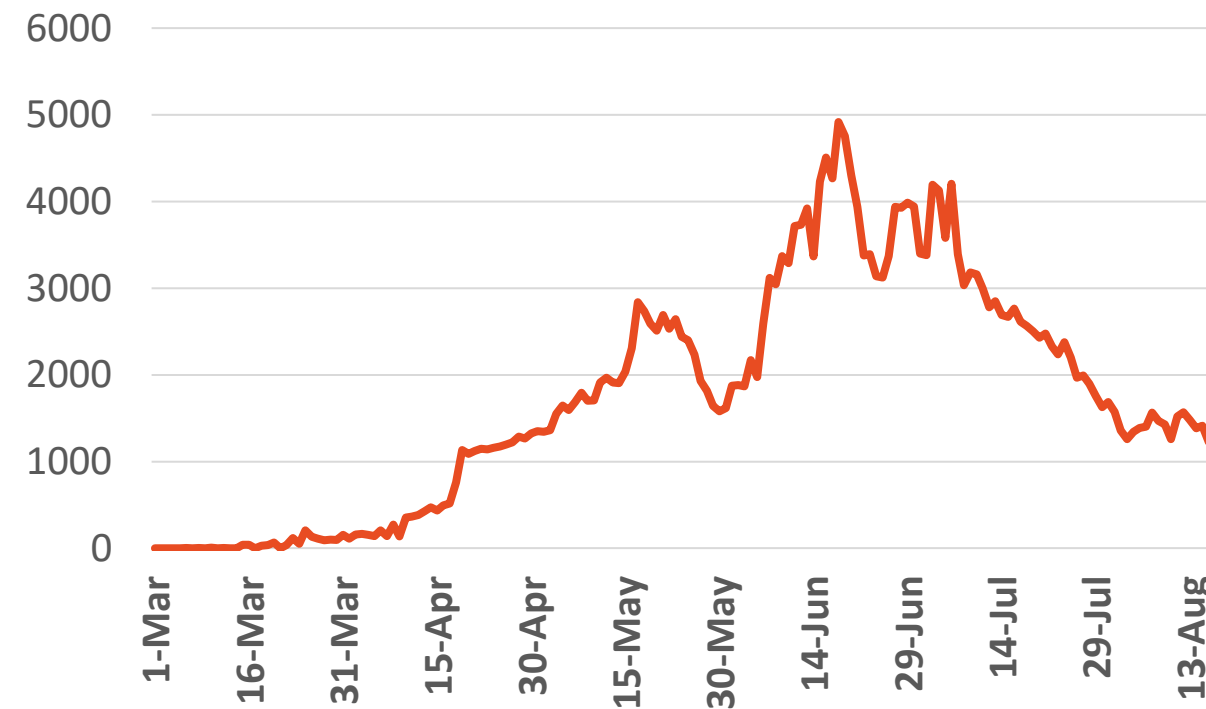
## Figure 10: Comparative Analysis of the Distribution of COVID-19 New Cases in GCC Countries

### UAE



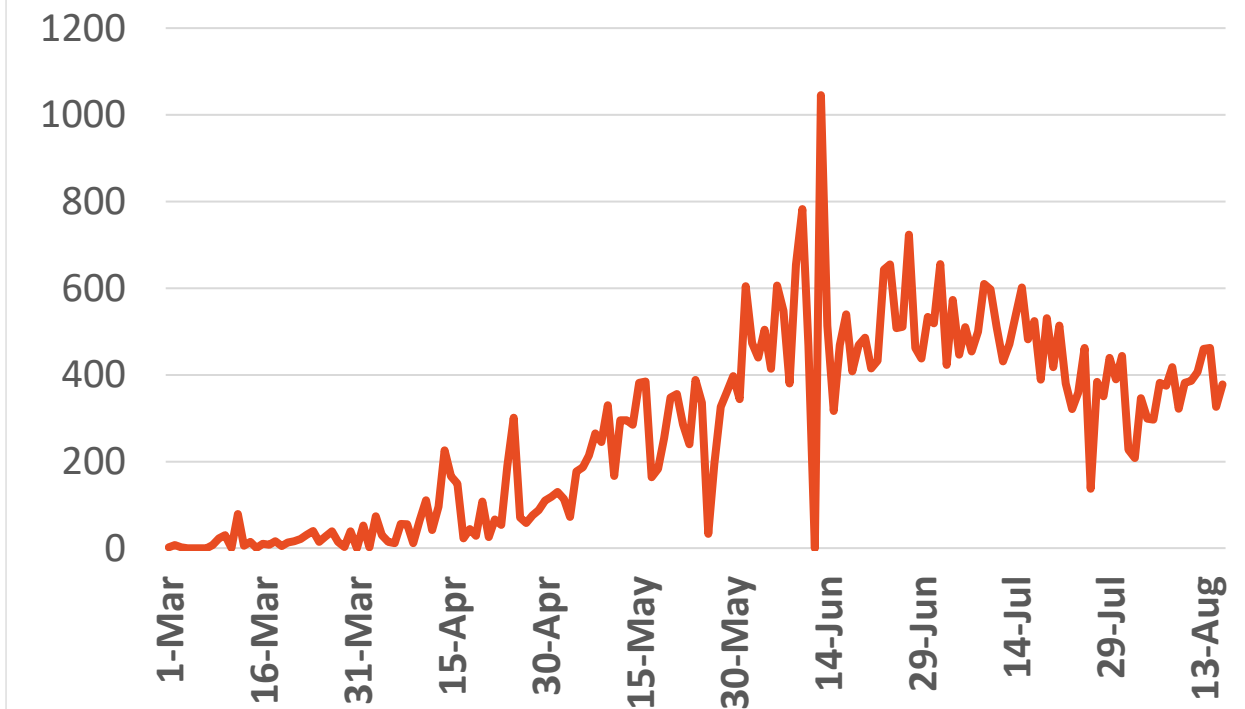
Source : National Emergency Crisis and Disaster Management Authority

### KSA



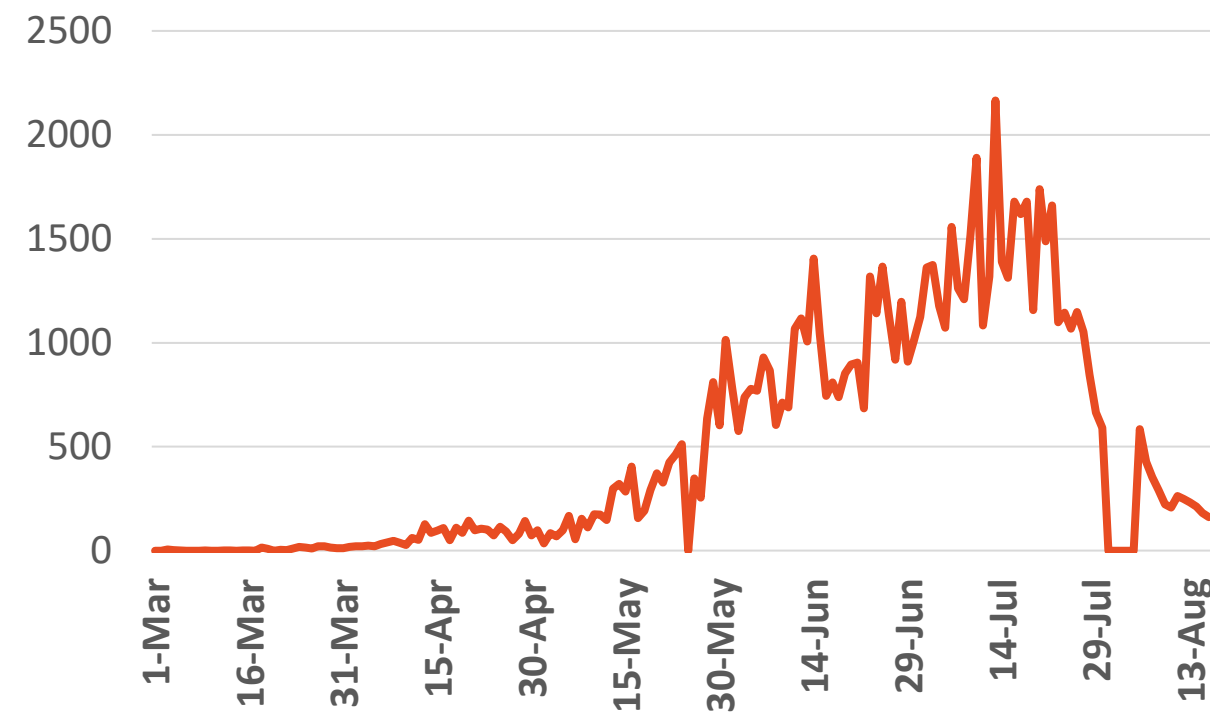
Source : KSA ministry of health

### Bahrain



Source :WHO

### Oman

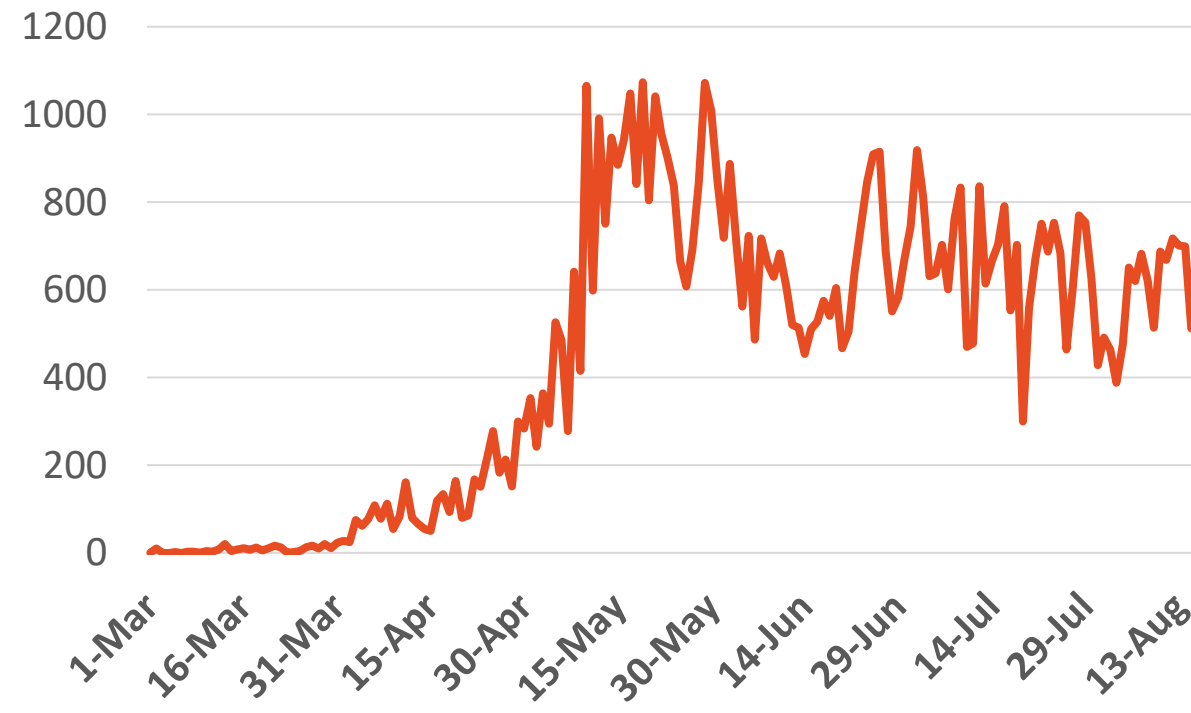


Source :Oman ministry of health

No announced statistic data from 31 July to 4 August

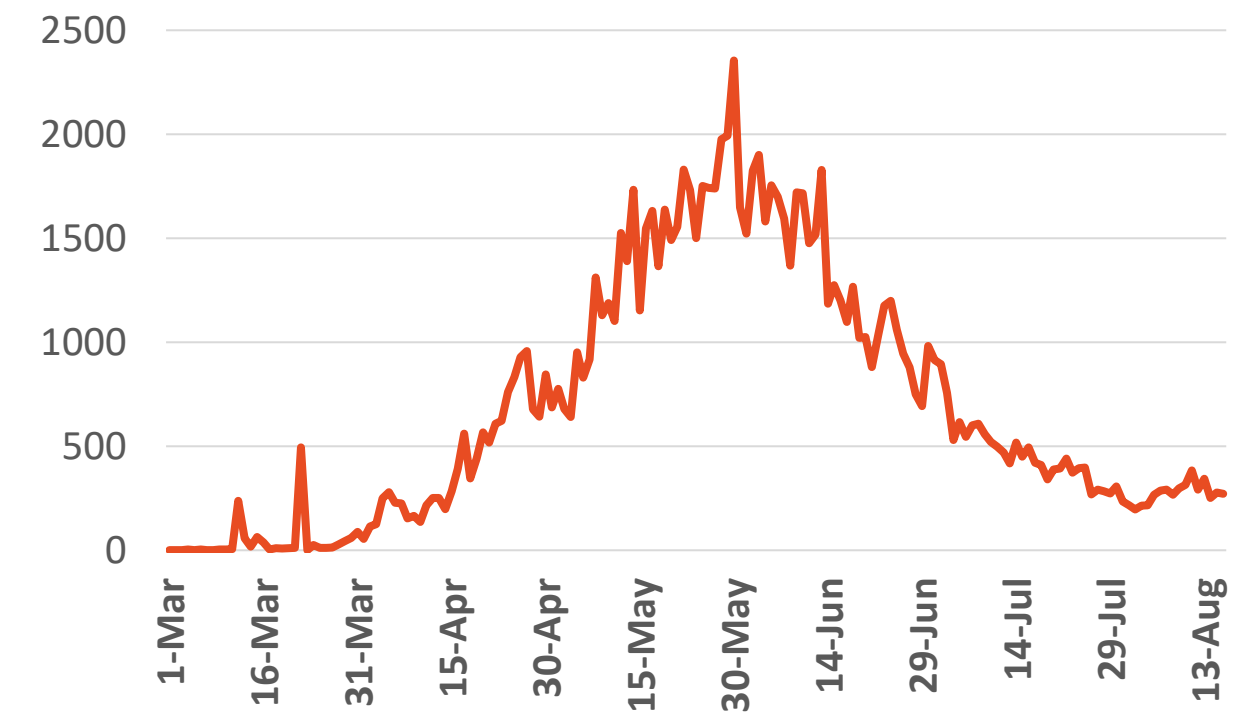
### Kuwait

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Source : Kuwait ministry of health

### Qatar



Source : Qatar ministry of health





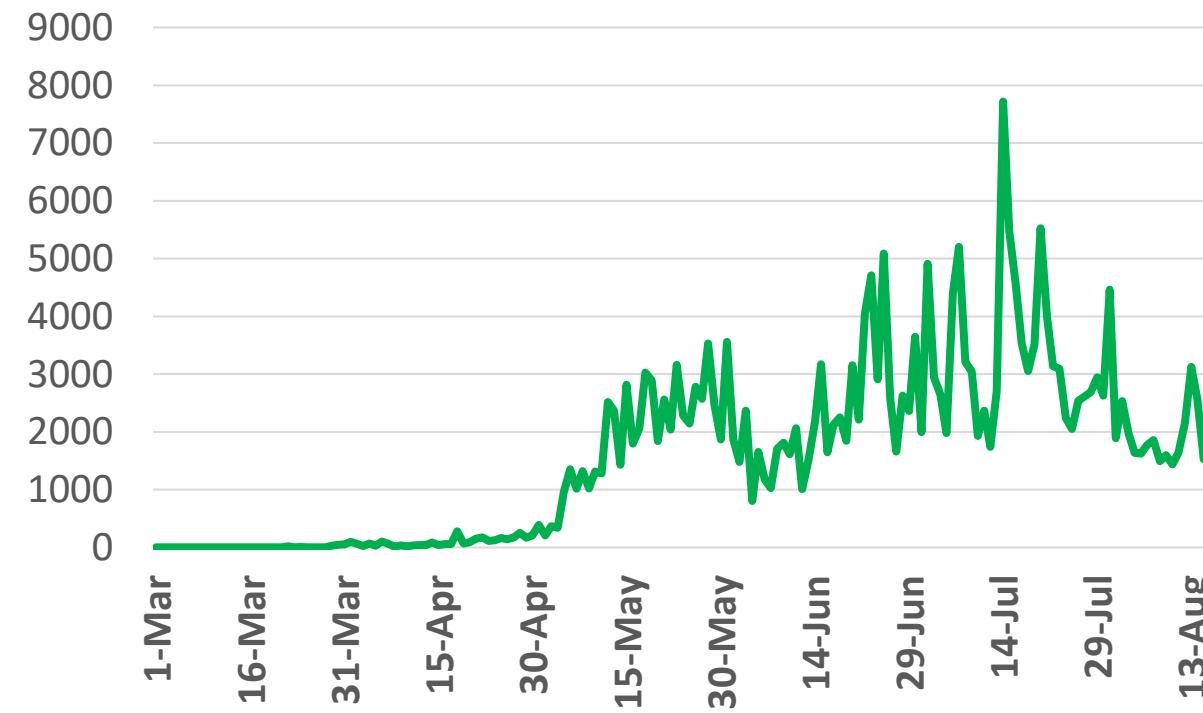
## Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

### UAE



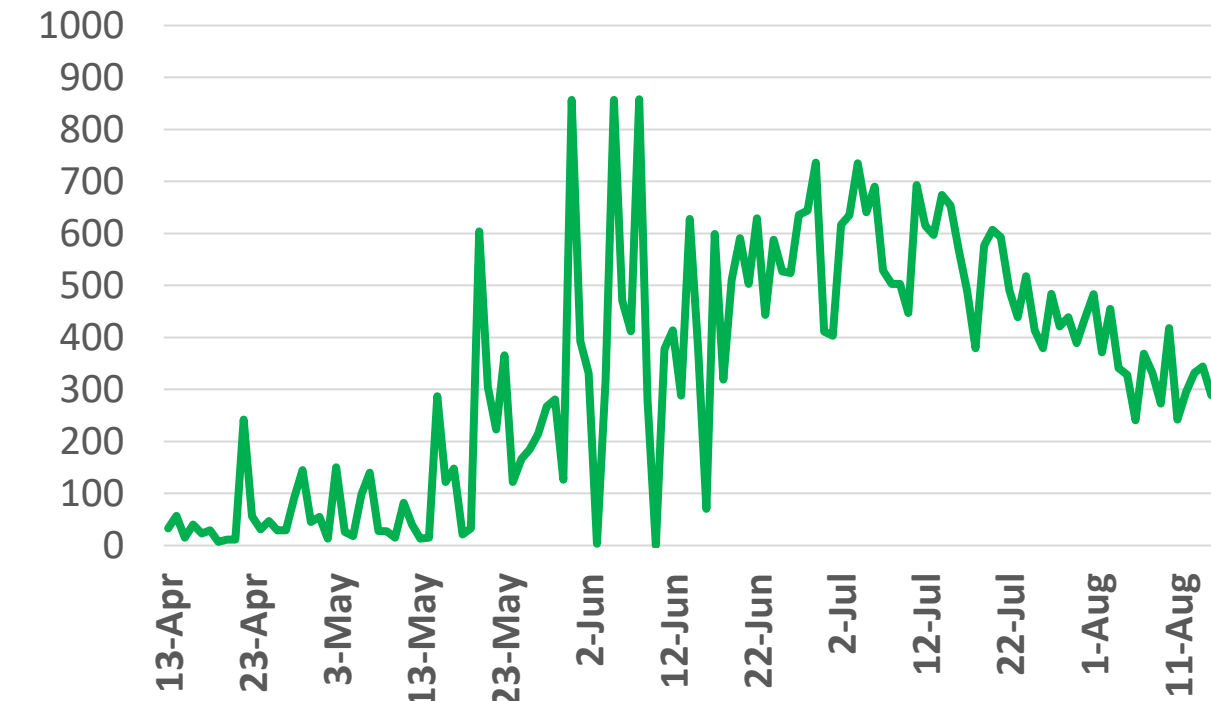
Source : National Emergency Crisis and Disaster Management Authority

### KSA



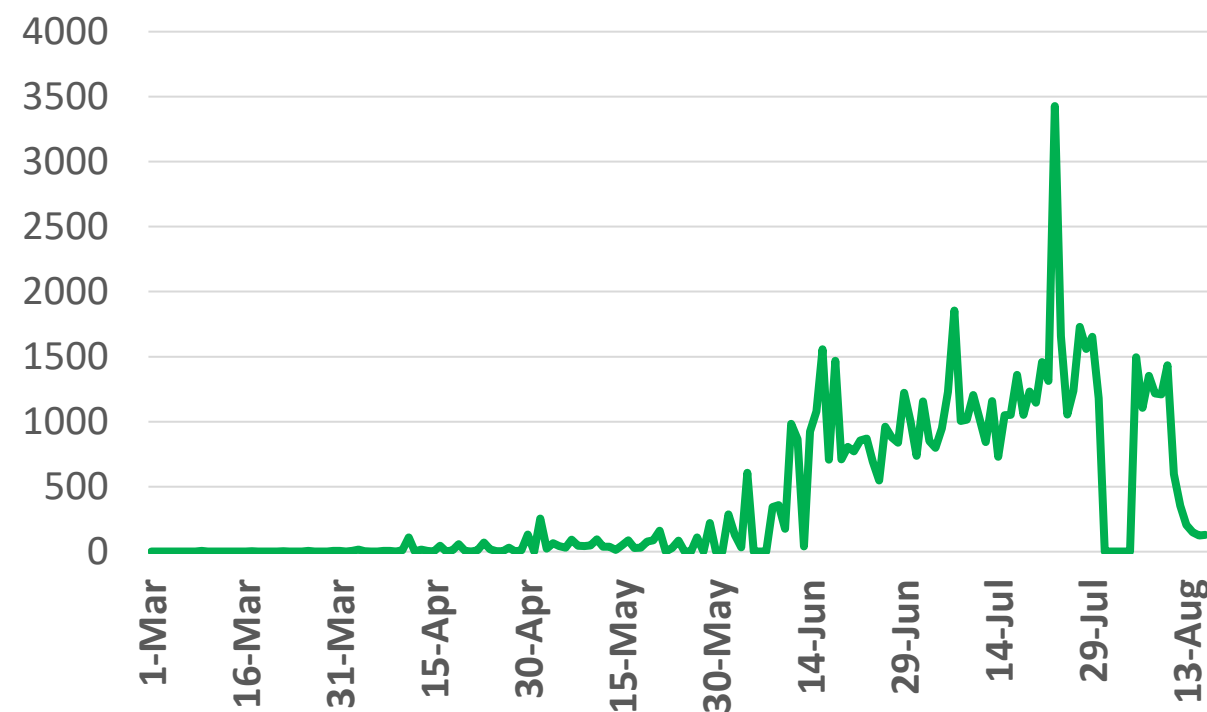
Source : KSA ministry of health

### 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

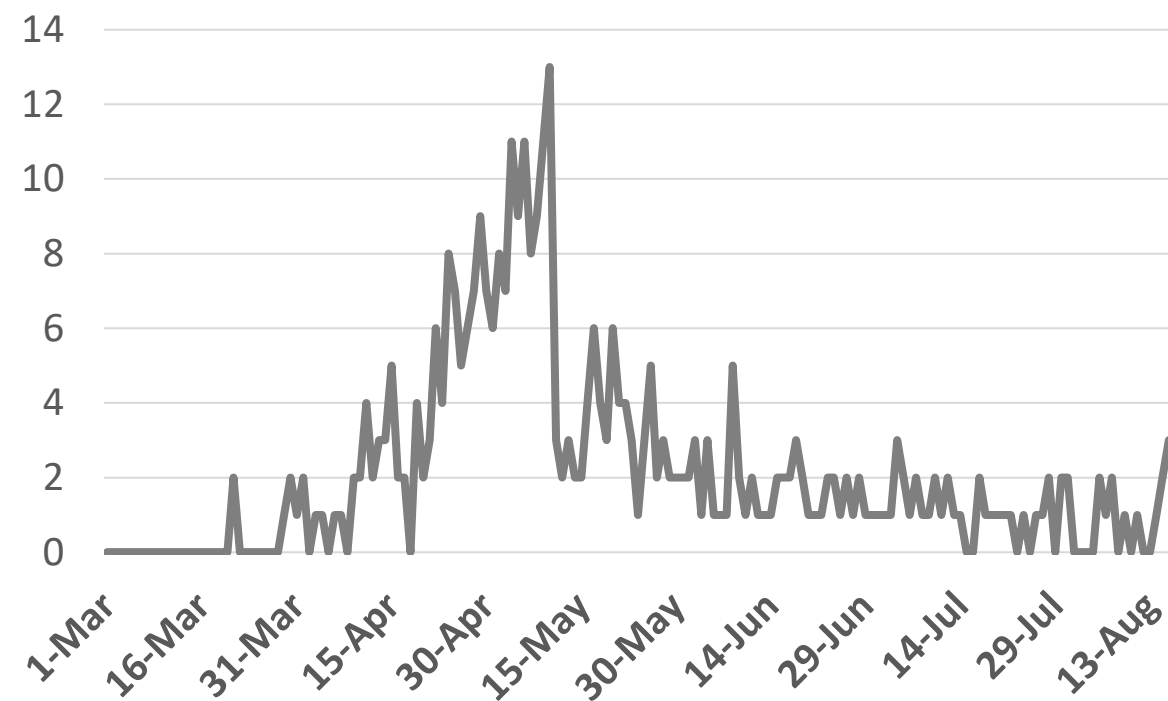


Source : Qatar ministry of health



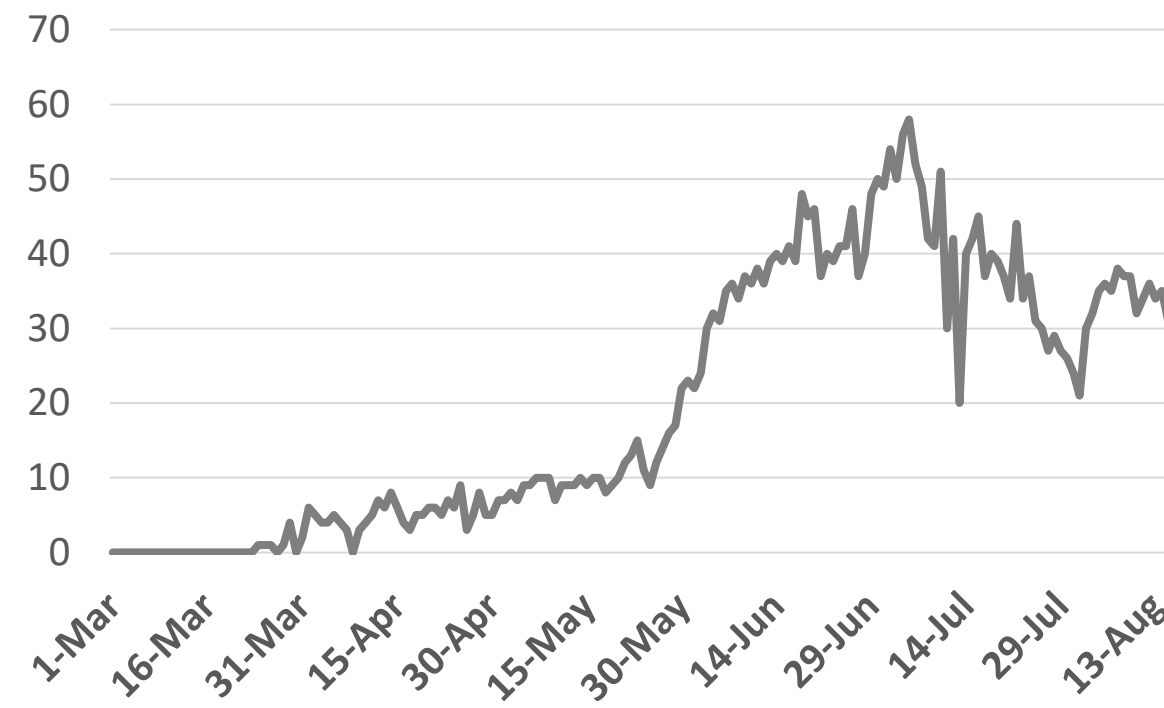
## Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

### UAE



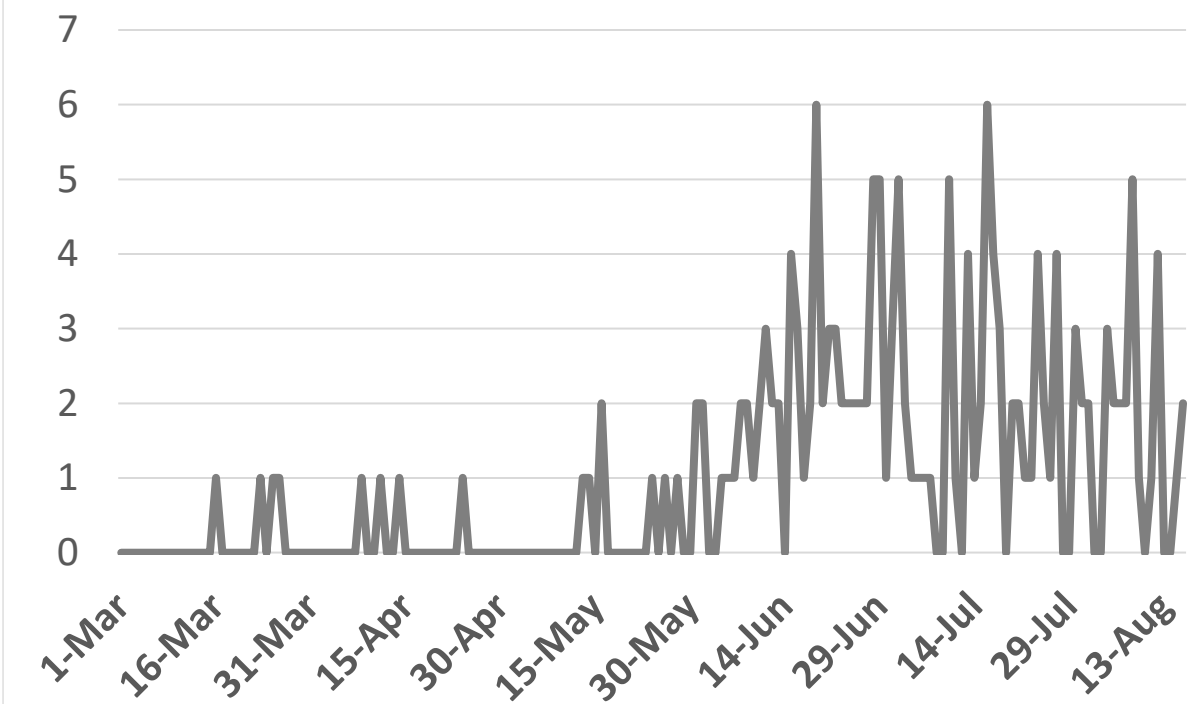
Source : National Emergency Crisis and Disaster Management Authority

### KSA



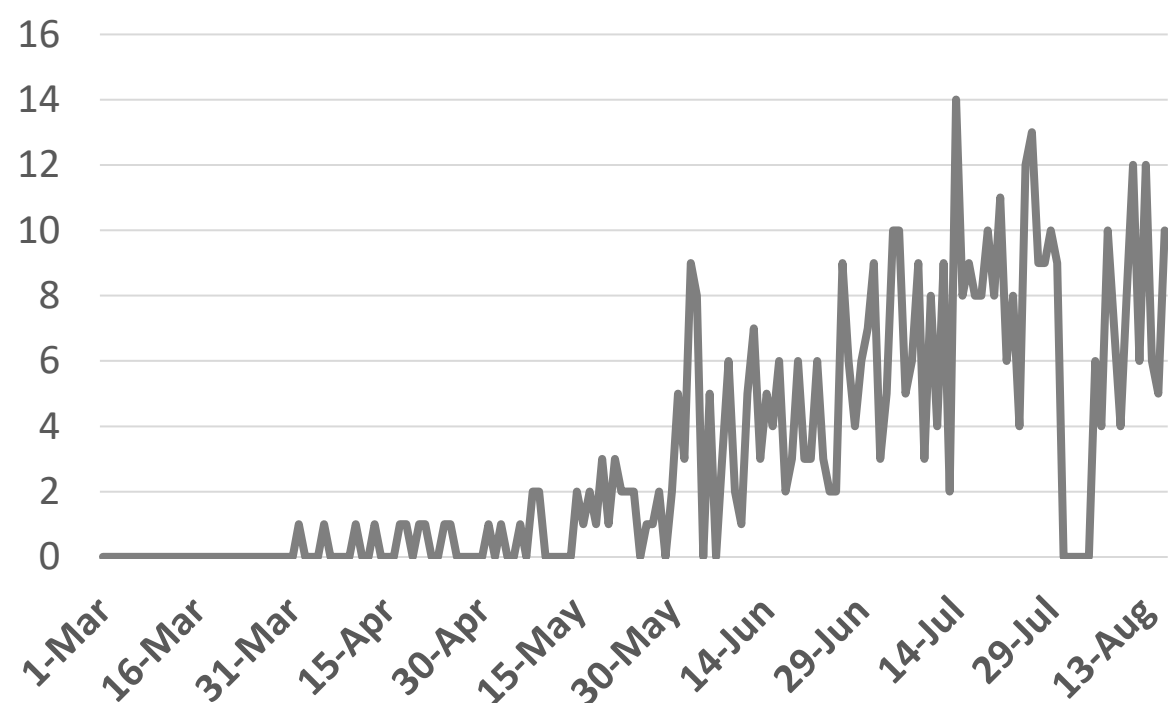
Source : KSA ministry of health

### Bahrain



Source :WHO

### Oman

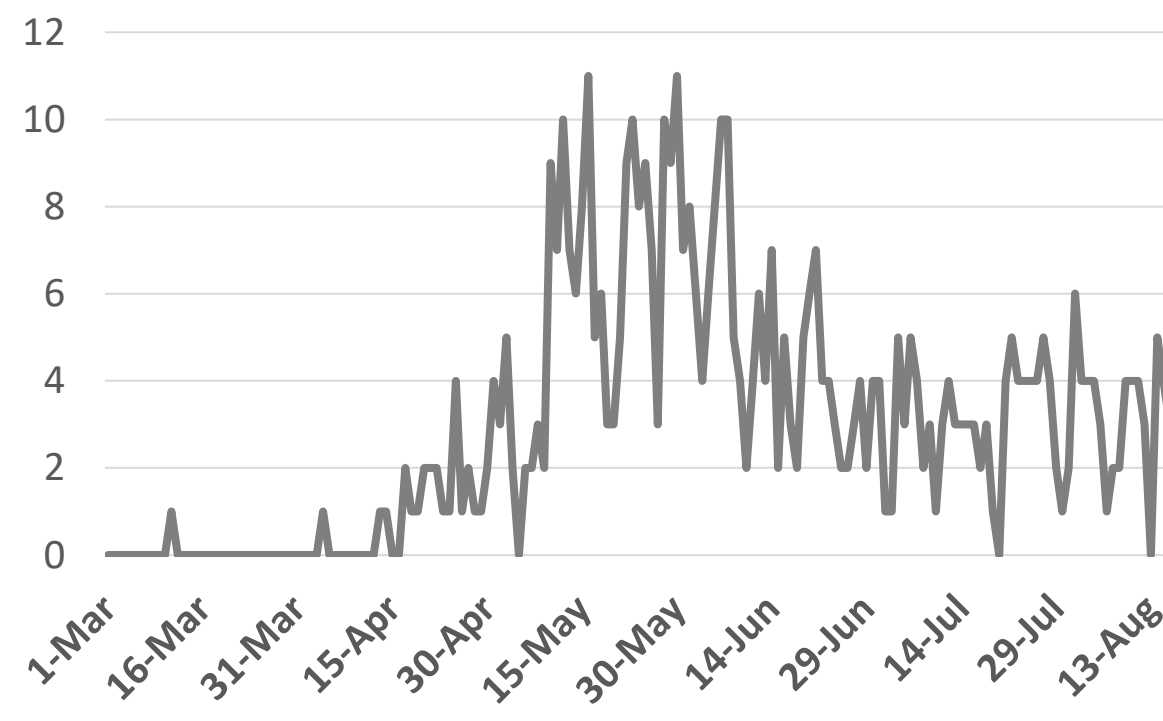


Source :Oman ministry of health

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

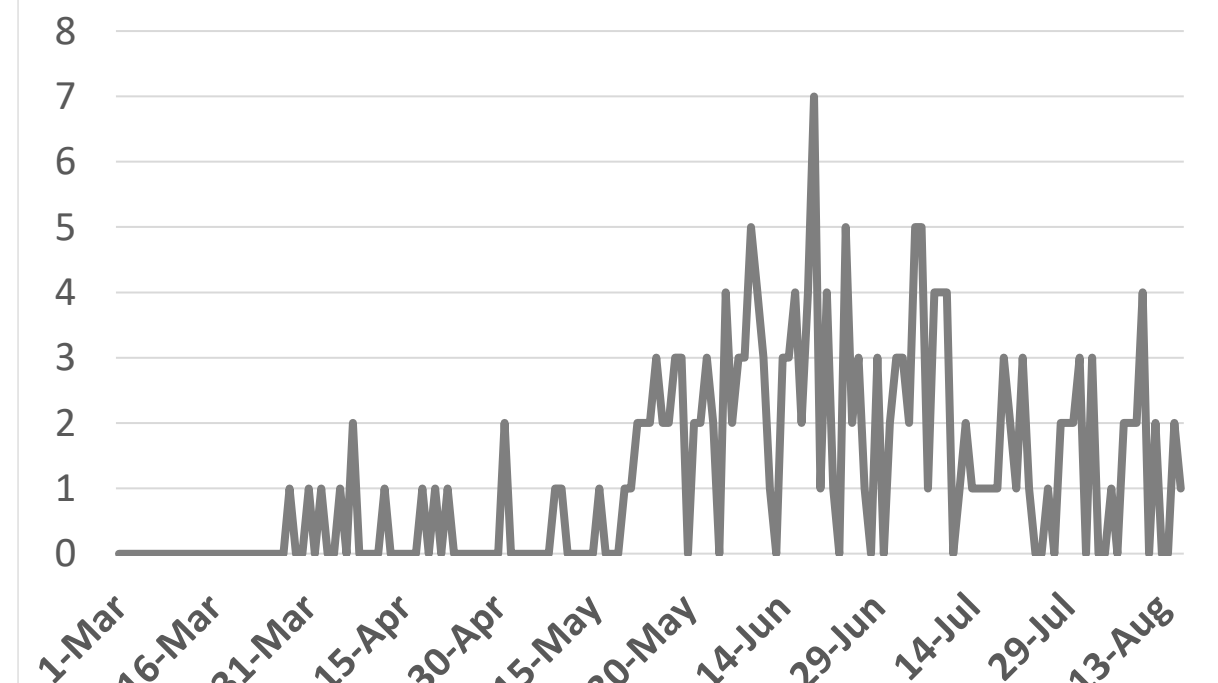
### Kuwait

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Source : Kuwait ministry of health

### Qatar



Source : Qatar ministry of health

## Article 1

## An Inactivated Virus Candidate Vaccine to Prevent COVID-19

Published

13 August 2020 [JAMA](#)

- This editorial discusses the preliminary findings from phase 1 and 2 randomized, double-blind, active-controlled clinical trials of an inactivated vaccine manufactured by Sinopharm, against SARS-CoV-2 that was conducted by Xia and colleagues (2020).
- This preliminary report indicates that the inactivated virus candidate vaccine, was tolerated, safe, and produced neutralizing antibodies at 14 days after booster vaccination. Participants in the phase 1 trial randomized to aluminum hydroxide (alum) only and low, medium, and high vaccine doses on days 0, 28, and 56, seven-day adverse reactions occurred in 12.5%, 20.8%, 16.7%, and 25.0% respectively. In the phase 2 trial, participants randomized to the medium dose, seven-day adverse reactions occurred in 6.0% and 14.3% who received injections on days 0 and 14 vs. alum only, and 19.0% and 17.9% who received injections on days 0 and 21 vs. alum only respectively. The most common adverse events were injection site pain, followed by fever, both of which were self-limited and mild. For the phase 1 trial, the geometric mean titers of neutralizing antibodies at day 14 after three injections were 316, 206, and 297 in the low, medium, and high dose groups respectively. In the phase 2 trial, the geometric mean titers of neutralizing antibodies in the vaccine groups at day 14 after two injections were 121 vs. 247 respectively.
- The local and systemic adverse reactions were not significantly different between the vaccine and the active control (alum) groups, thus suggesting the adjuvant was responsible for the reactogenicity observed in the vaccine groups. These interim data are of interest; given the urgent global need for protective COVID-19 vaccines.





## Article 2

## The Great Coronavirus Pandemic of 2020 - 7 Critical Lessons

Published

13 August 2020 [JAMA](#)

1. The key element of pandemic preparedness is a strong health system to rapidly detect, assess, report, and respond to the outbreaks. The International Health Regulations that govern pandemic response require all countries to have core health system capacities such as surveillance, laboratories, human resources, and risk communication.
2. **The pandemic has taught us that leadership is important.** Possibly the key indicator of success in responding to COVID-19 has been governments achievement in gaining public's trust.
3. Science has enabled societies to understand the virus, its transmission, and public health interventions. Political leaders have broadcasted doubt about the value of science and have undermined public health agencies. The COVID-19 response will be suboptimal if political leaders fail to implement evidence-based policies or to convey consistent messages based on science.
4. The integrity of science is necessary but insufficient. Governments must invest in biomedical research and development not only during a health crisis but also during interpandemic periods.
5. COVID-19 increased long-standing systemic inequalities such, as access to health care. COVID-19 deaths disproportionately affected ethnic minorities including, African American and Native American individuals.
6. State laws have long authorized public health powers to test, trace, isolate, and quarantine. Public health laws are narrow and measured, requiring individual assessments of risk. Emergency health powers should be based on evidence and used only when there are no less restrictive alternatives.
7. Public and private partners joined with the WHO to launch the Access to COVID-19 Tools (ACT) Accelerator, a global collaboration to accelerate research and development, production, and equitable access to COVID-19 tests, treatments, and vaccines.





## Article 3 COVID-19's Impact on Australia's Health Research Workforce

Published

15 August 2020 [THE LANCET](#)

- During May 2020, all members on Research Australia's (a national alliance of health and medical research stakeholders) contact list were invited to participate a 10-minute online survey that included 52 items about research and employment and perceptions of the effect of COVID-19 on researchers' activities.
- 79.6% of the total participants (n=1,212) reported that their research was affected by the pandemic; furthermore, 9.7% indicated that it was likely to be affected in future. Commonly identified issues included participant recruitment (49.3%), an inability to do research remotely (51.2%), and interruptions to the provision of equipment, supplies, and materials (28.4%). Overall, 69.4% reported that their research to be affected after 2020 with the most anticipated effects identified as delays in achieving project milestones (88.7%), publications (80.9%), new funding (63.1%), reductions in overall funding (63.1%), and staff losses (45.8%).
- Participants from the university were less likely to have received extra funding related to COVID-19 from their institution [odds ratio (OR) - 0.32; 95% CI: 0.20-0.53] and more likely to have noticed an effect on higher degree research students [OR - 2.19; 95% CI: 1.61-2.99]. Relative to clinical researchers, public health researchers were less likely [OR - 0.76; 95% CI: 0.53-1.09], and basic science researchers were more likely [OR - 1.75; 95% CI: 1.18-2.60] to expect their research outcomes to be affected after 2020. Relative to early career researchers, mid-career researchers were more likely to expect their research outcomes to be affected after 2020 [OR - 1.73; 95% CI: 1.25-2.40).
- This survey has highlighted that without government funds, this pandemic will have substantial short term and long term consequences on research outcomes. These outcomes include a lower capacity to generate new products for industry, health services, and the community, and ensuring a workforce able to respond to future pandemics quickly.