

SCIENTIFIC RESEARCH MONITORING ON COVID-19

13 JULY 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 162)

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



WHO
Report



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

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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Epidemiology

**The implications of
Silent Transmission
for the Control of
COVID-19 Outbreaks**

Public Health Response

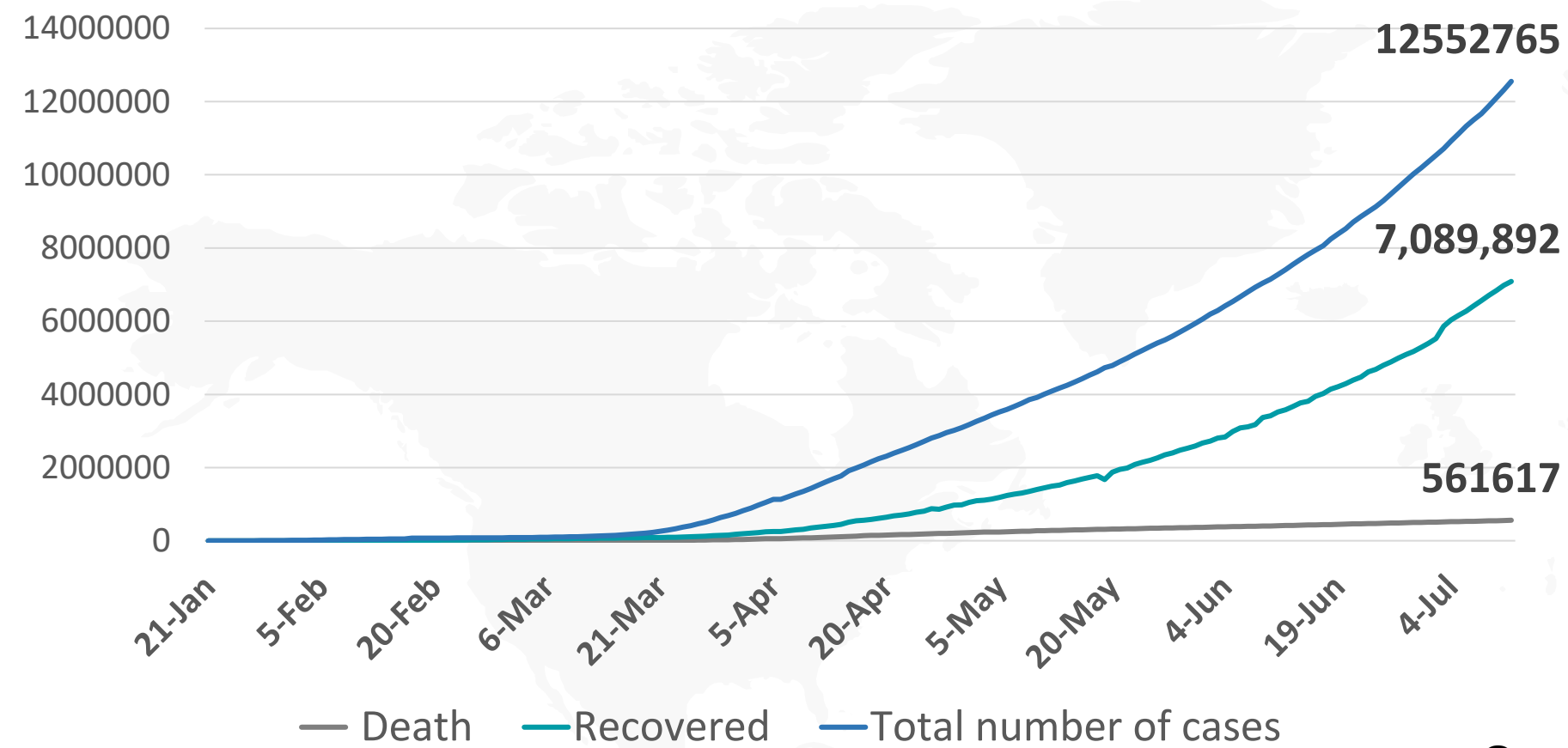
**COVID-19: The Worst
May Be Yet to Come**



- WHO has published an [Emergency Global Supply Chain System](#) (COVID-19) catalogue listing all medical devices, including personal protective equipment, medical equipment, medical consumables, single use devices, and laboratory and test-related devices, which may be requested through the COVID-19 Supply Portal. The catalogue represents an initial prioritized selection of items and are subject to constant review.
- WHO surveyed networks of laboratories to map out [Global Animal Laboratory Capacity](#) around the world to potentially help with accelerating vaccine and therapeutic evaluation.
- The WHO Regional Office for Africa calls for equitable access to future COVID-19 vaccines in Africa, as researchers around the world race to find effective protection against the virus.

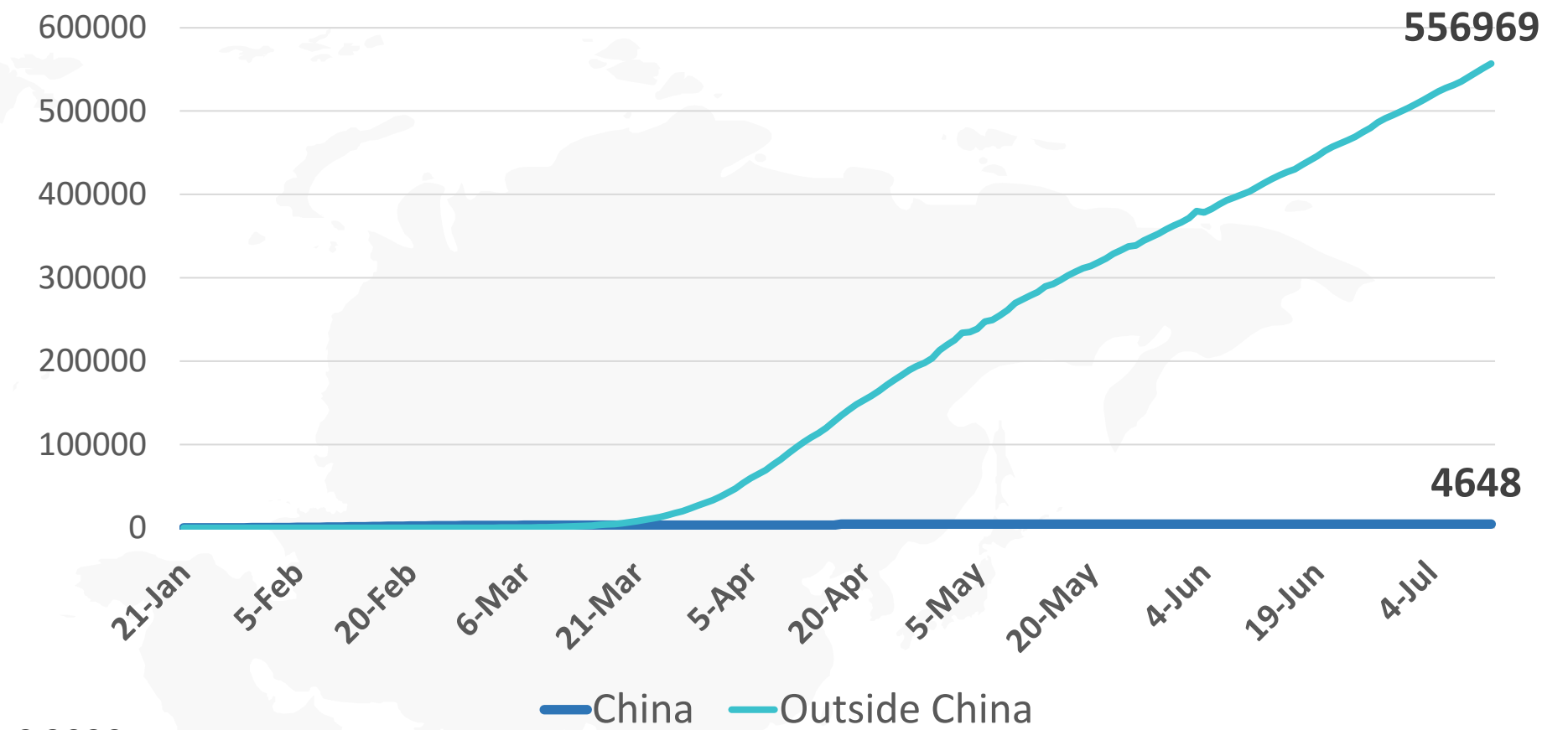


Figure 1: Total number of infected, recovered, and death cases



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



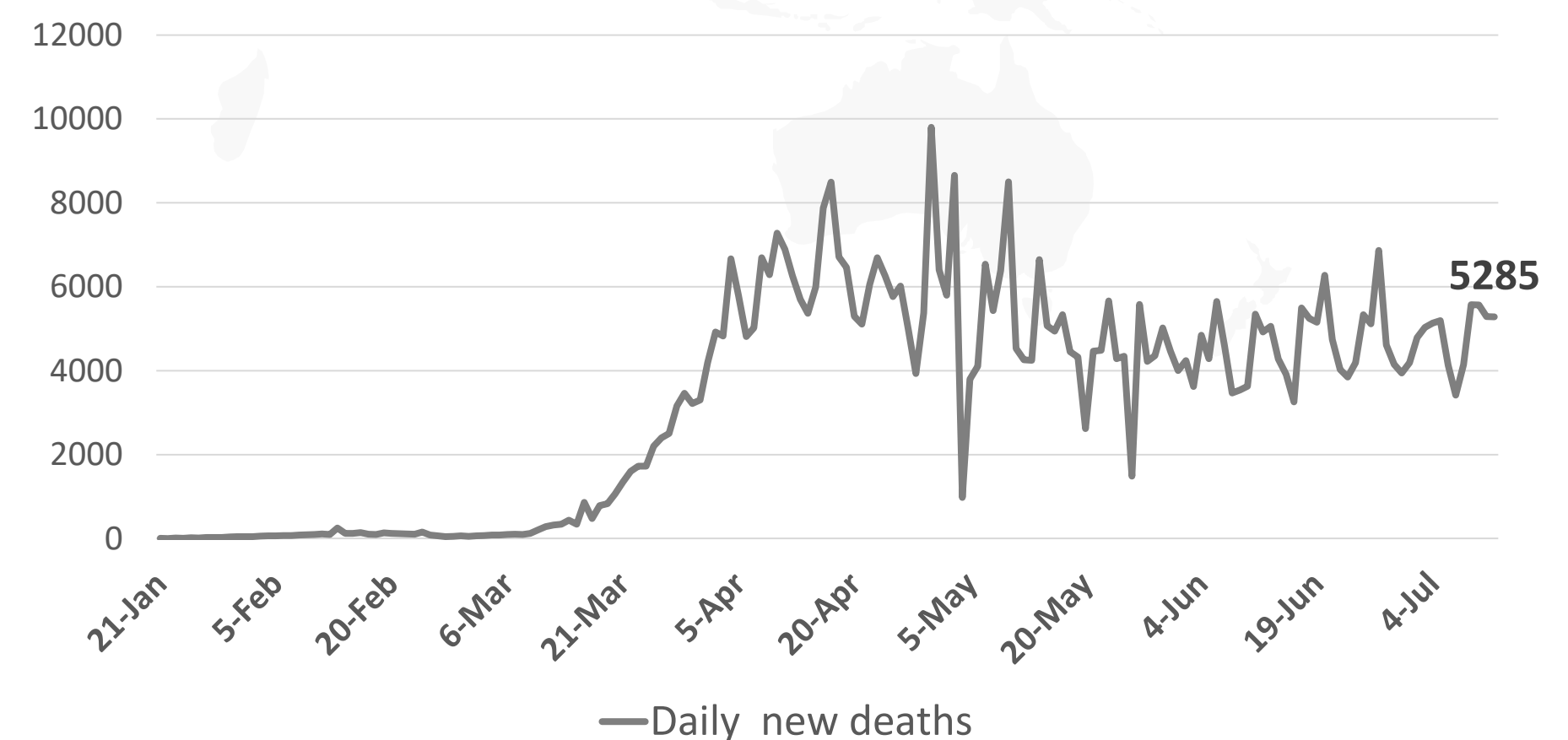
China Outside China

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



China Outside china

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



Daily new deaths

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

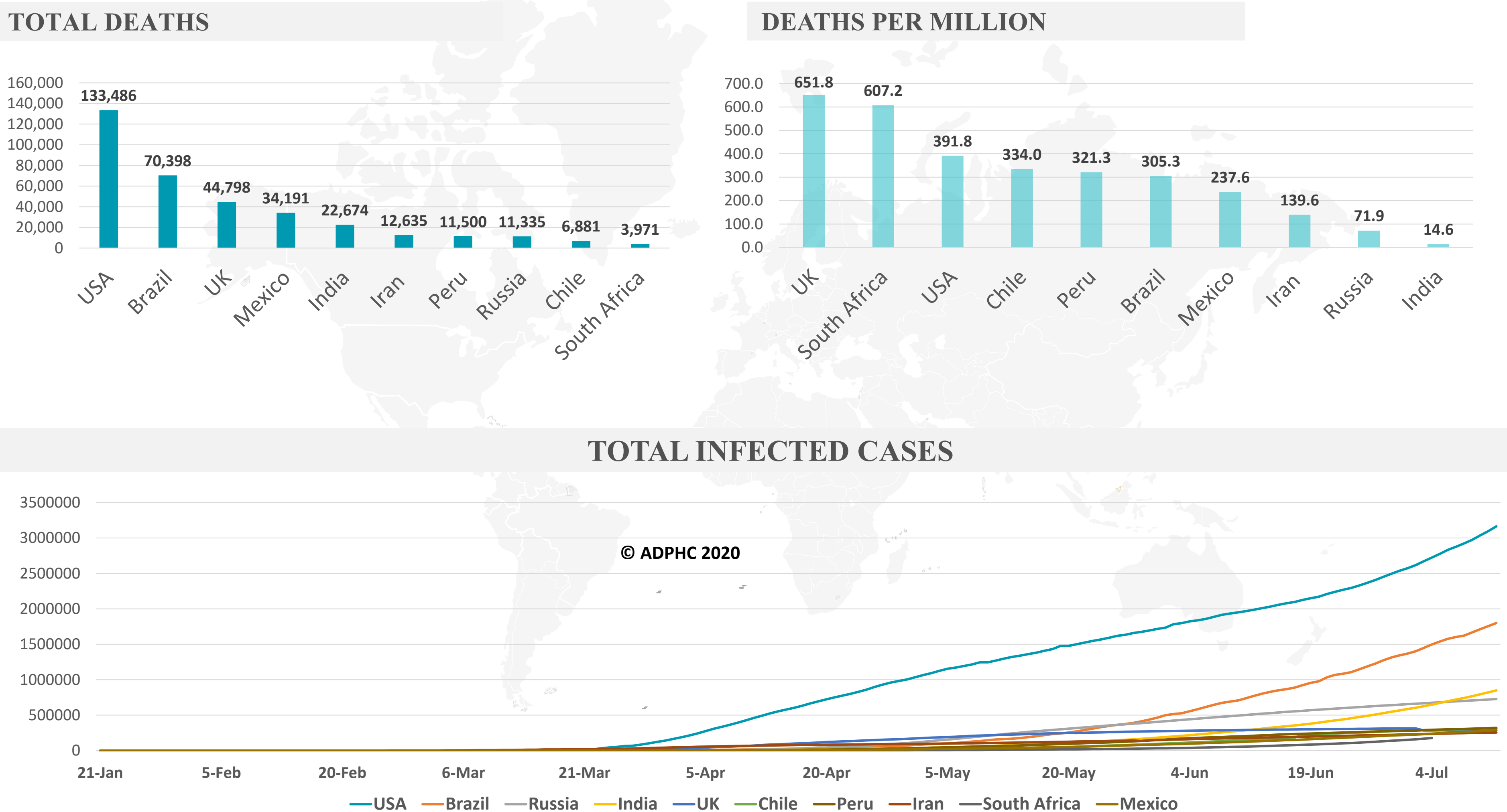
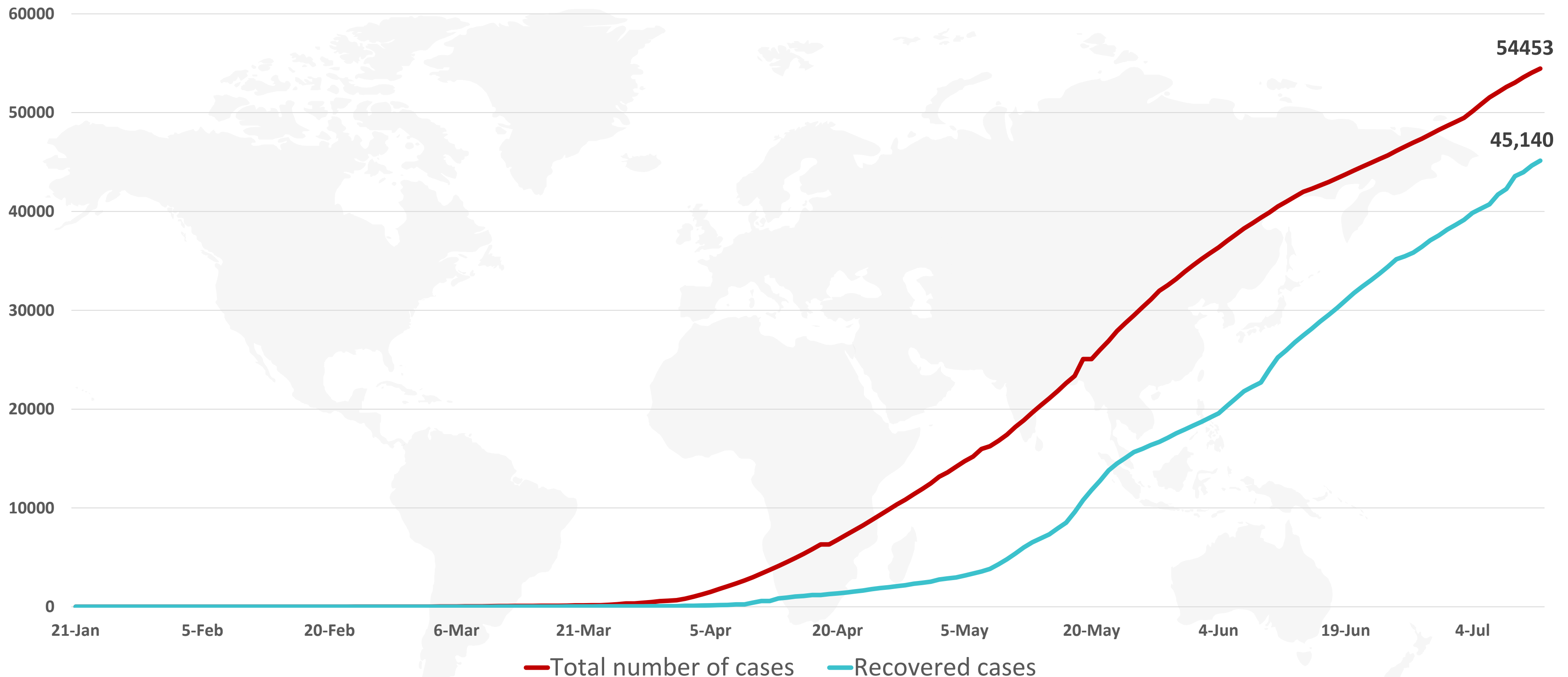
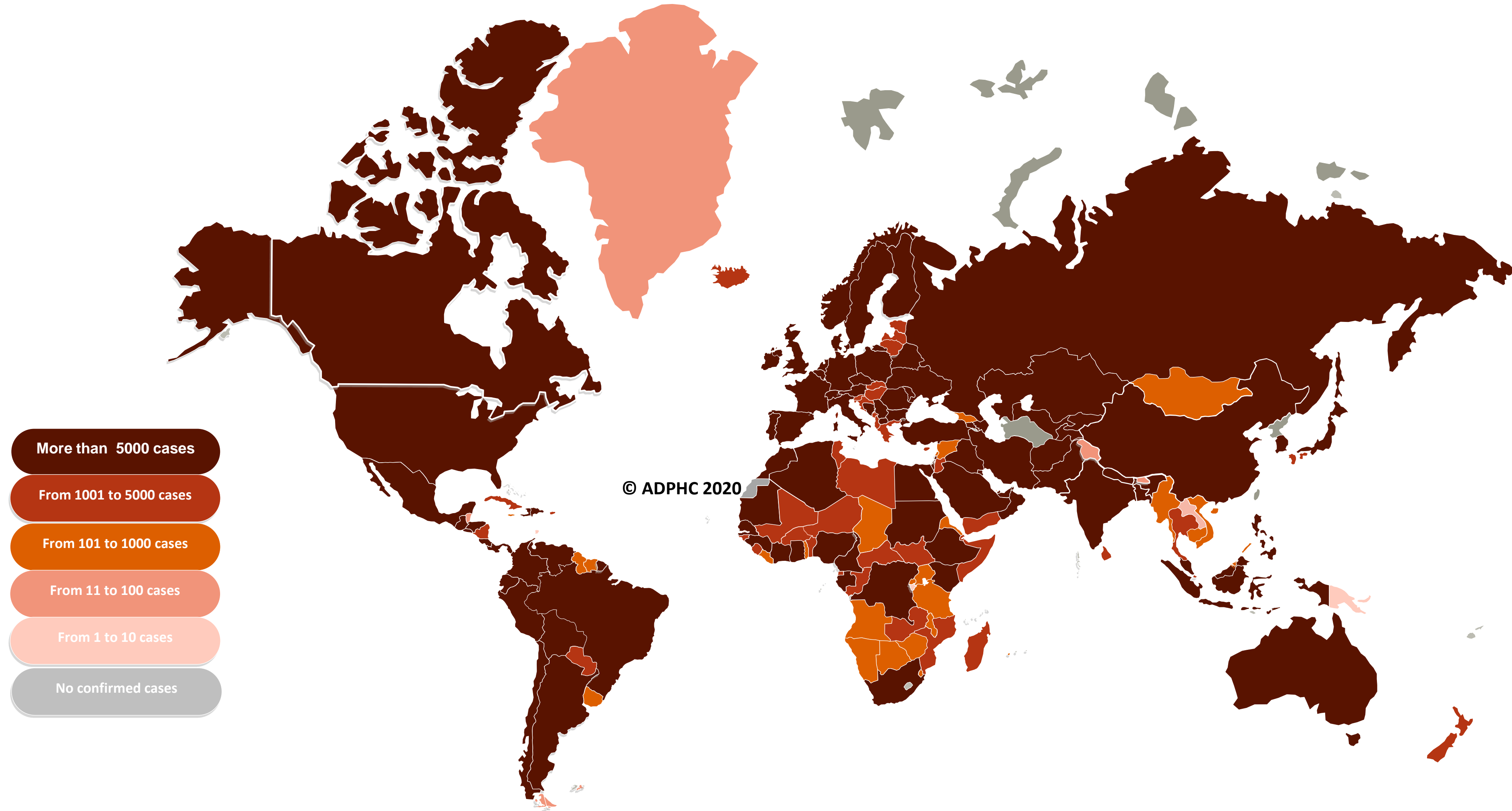


Figure 5: Total number of infected and recovered cases due to COVID-19 reported by the UAE



— Total number of cases — Recovered cases

Figure 7A : Global distribution of COVID-19 cases



More than 5000 cases

From 1001 to 5000 cases

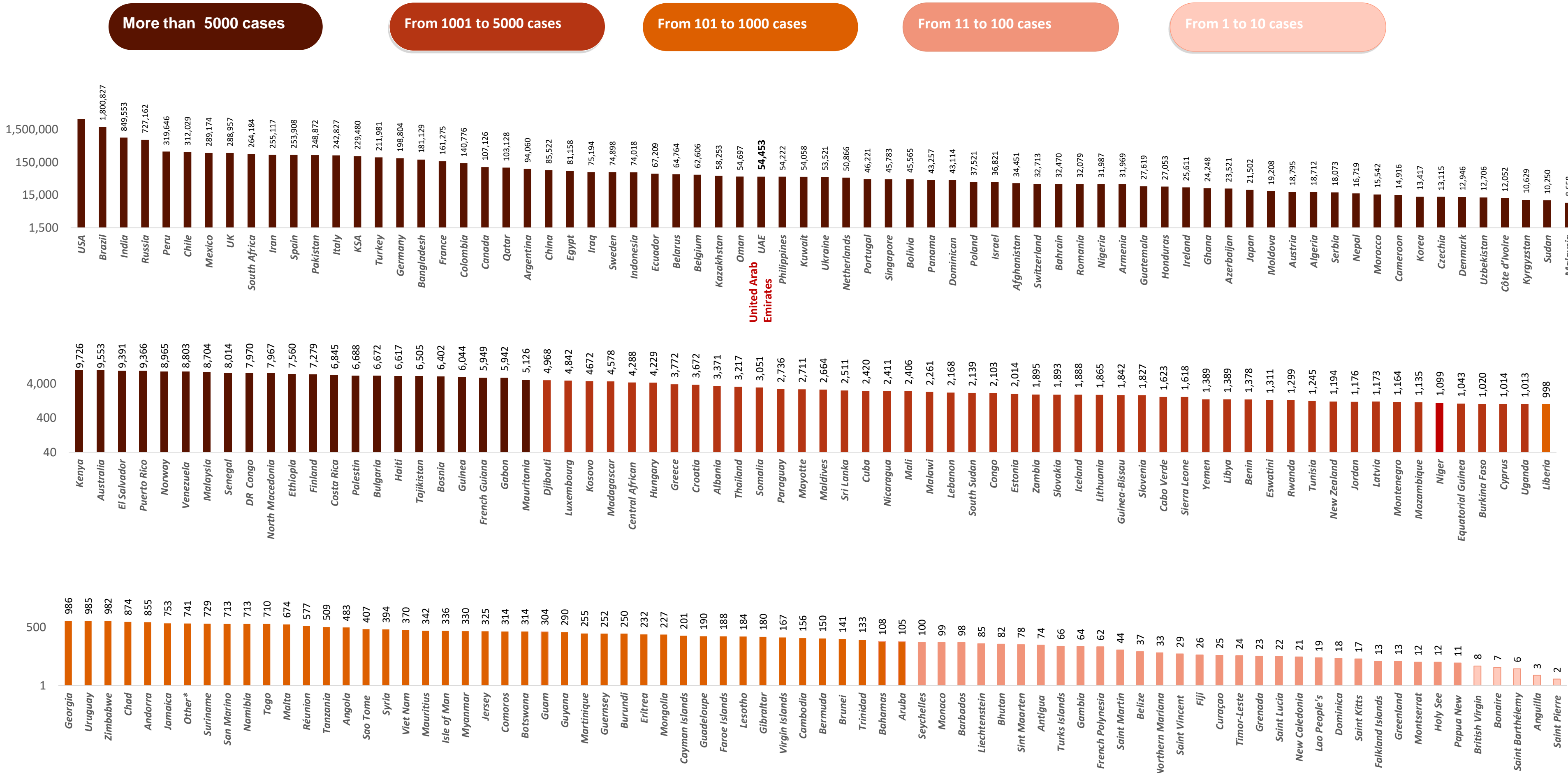
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

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

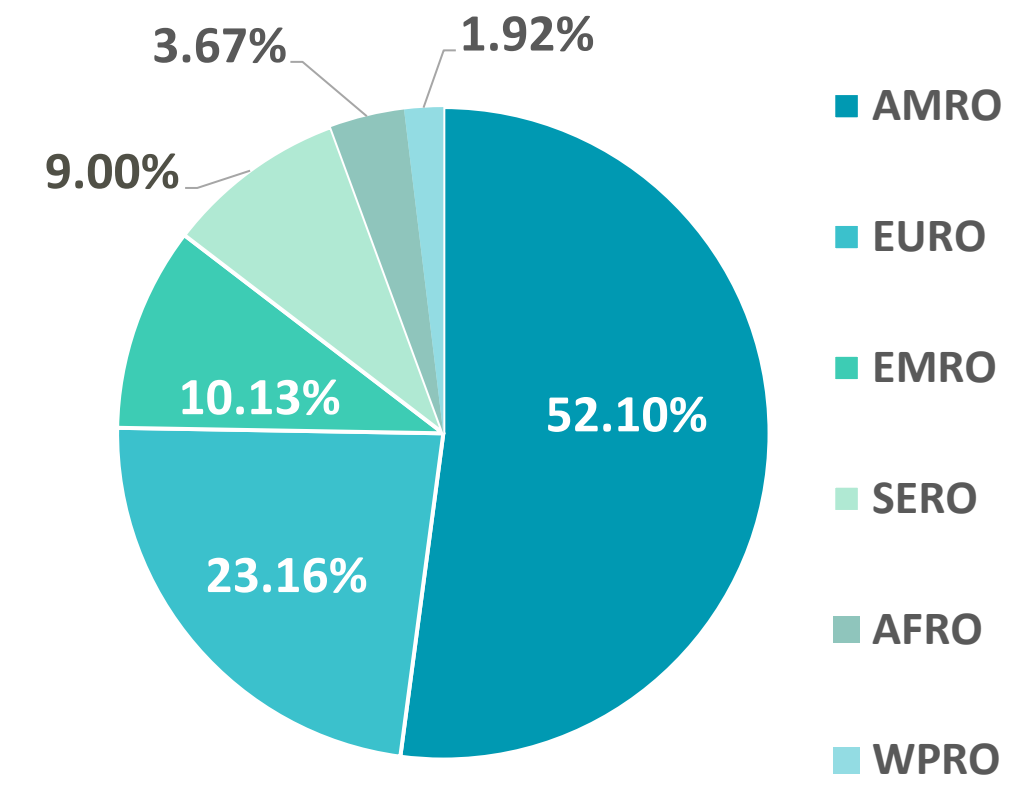
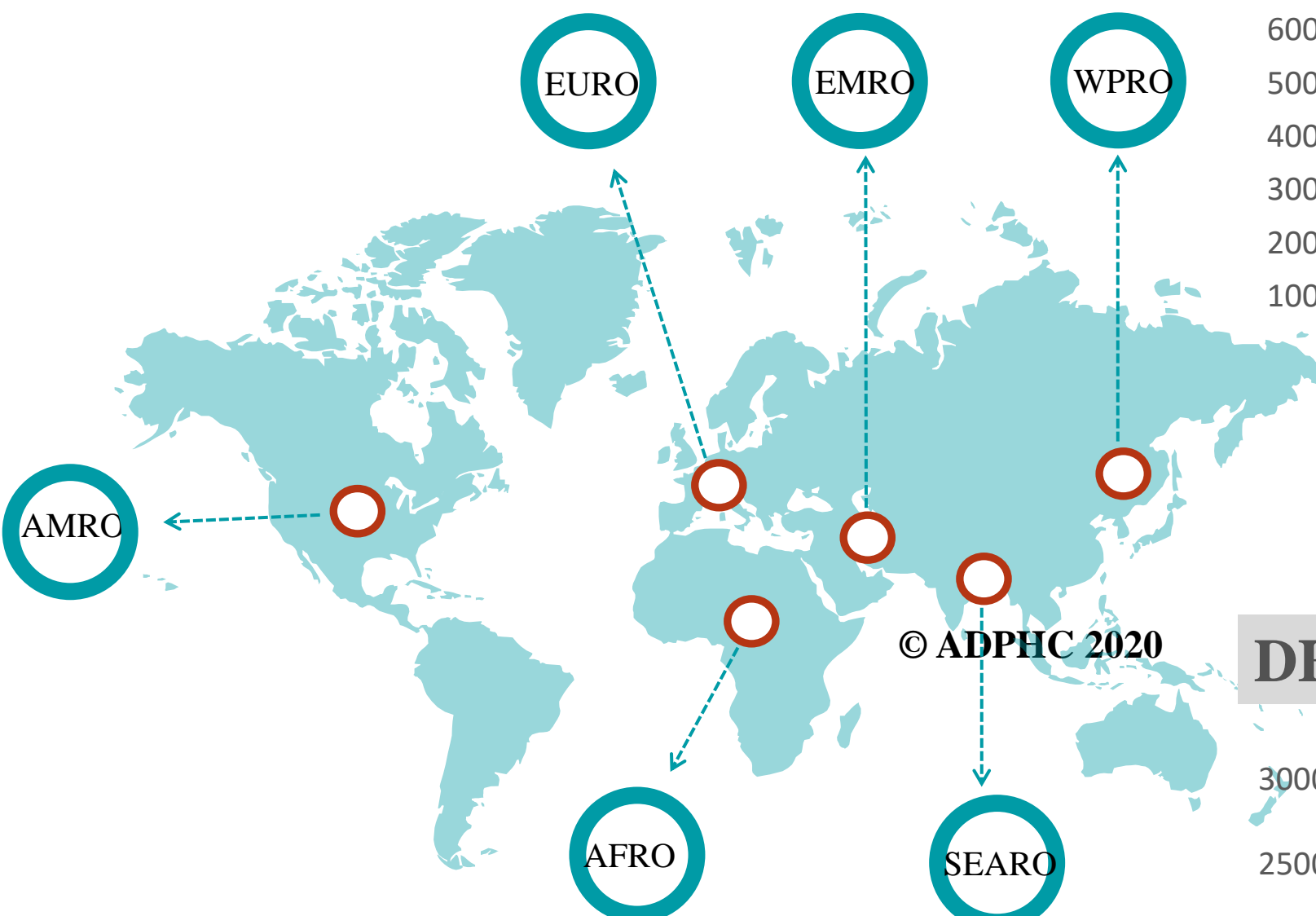


Other*: includes cases and deaths reported under the international conveyance (Diamond Princess)



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

INFECTED



DEATH

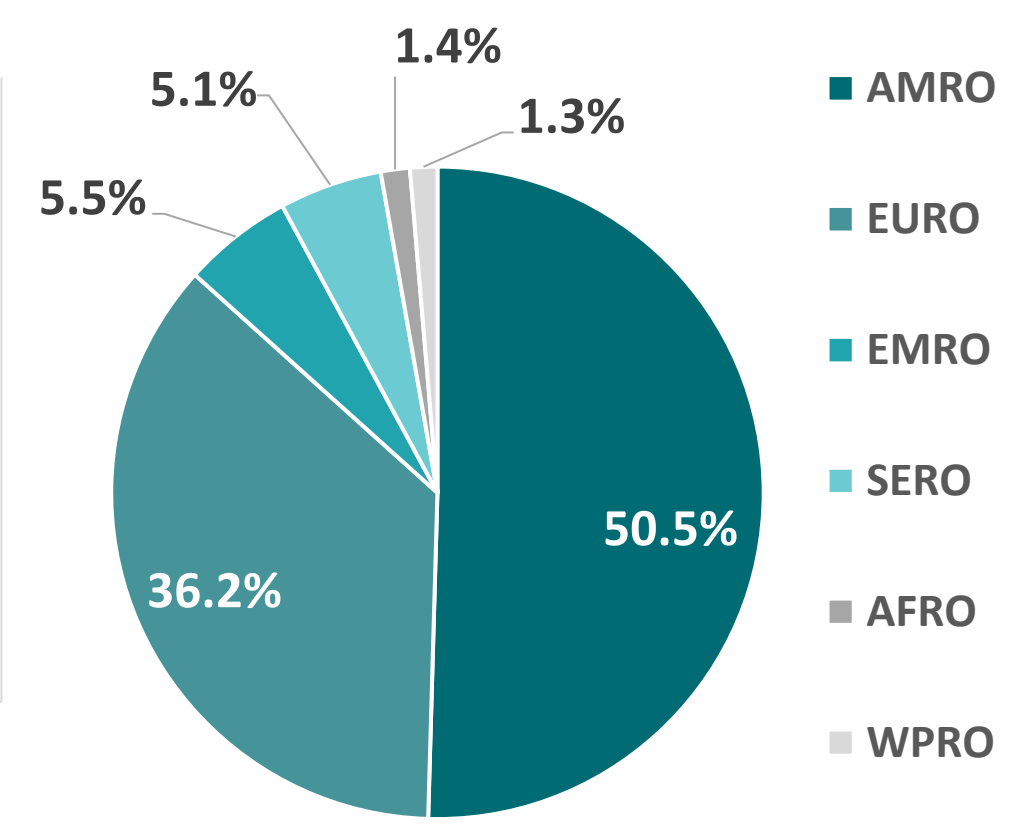
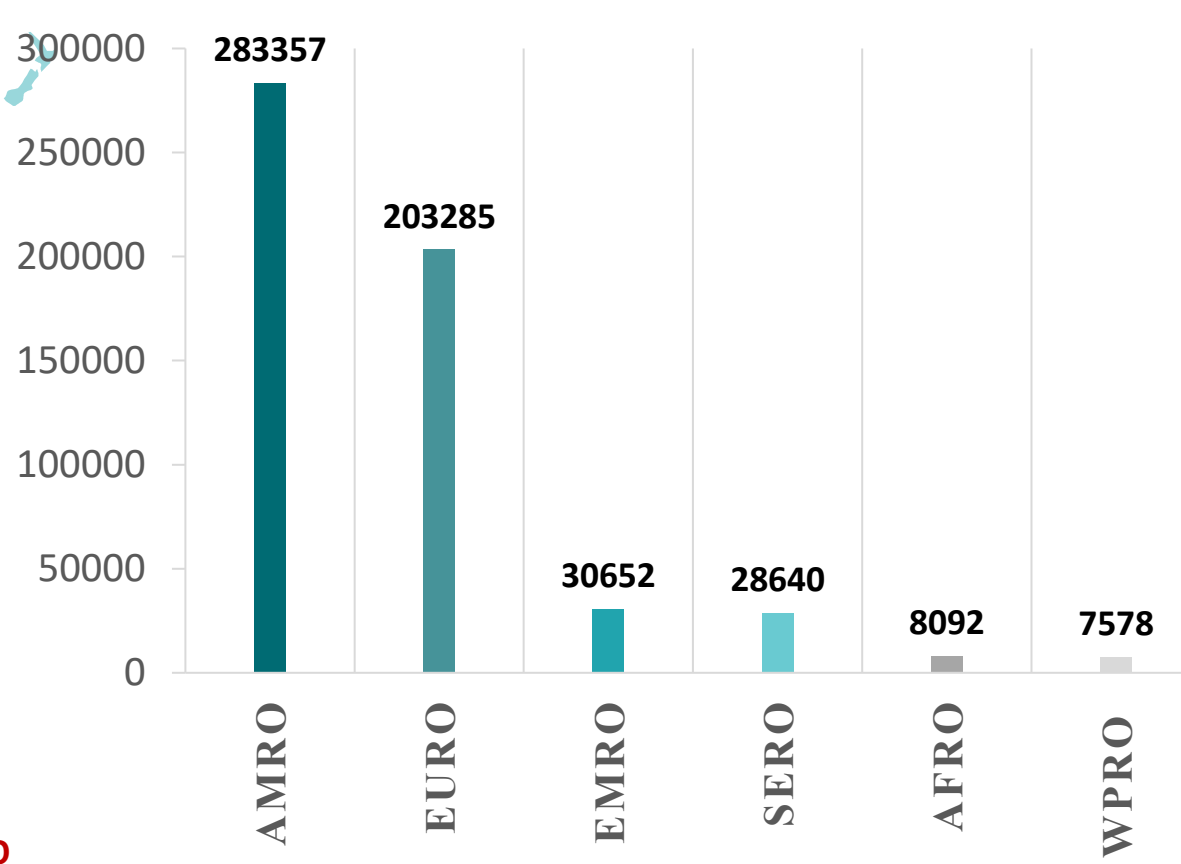
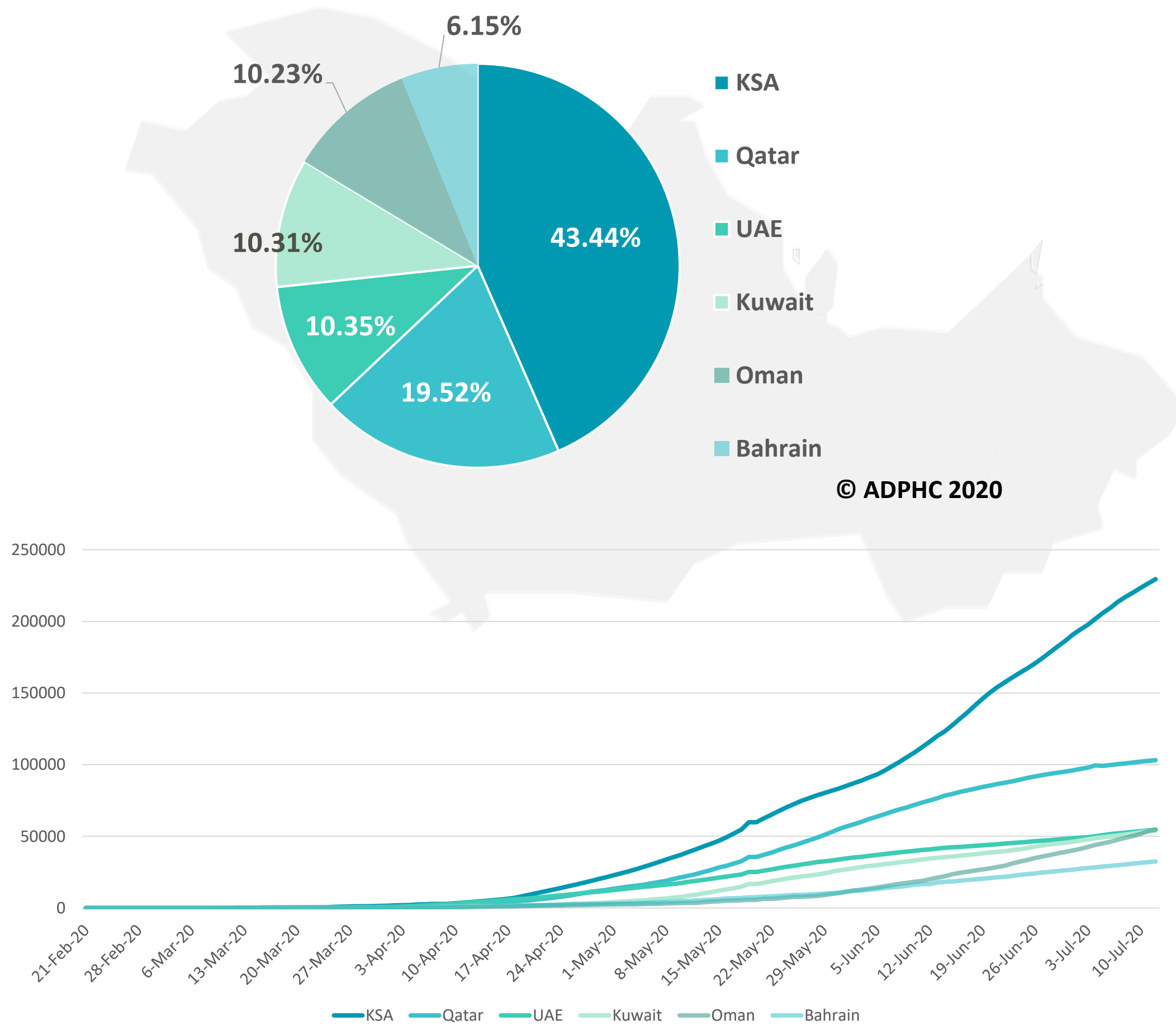
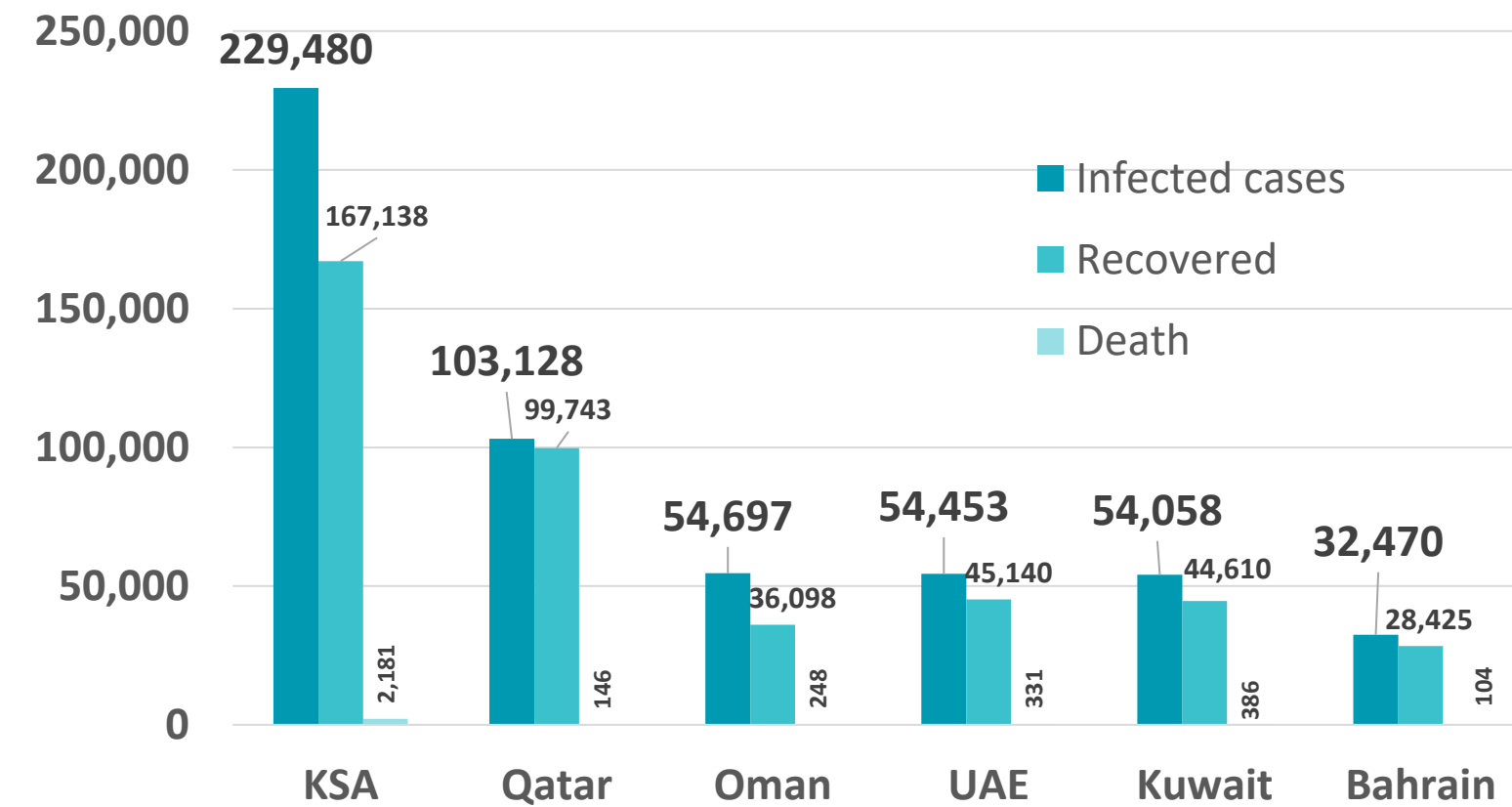


Figure 9: Comparative analysis of the distribution of COVID19 cases in GCC countries

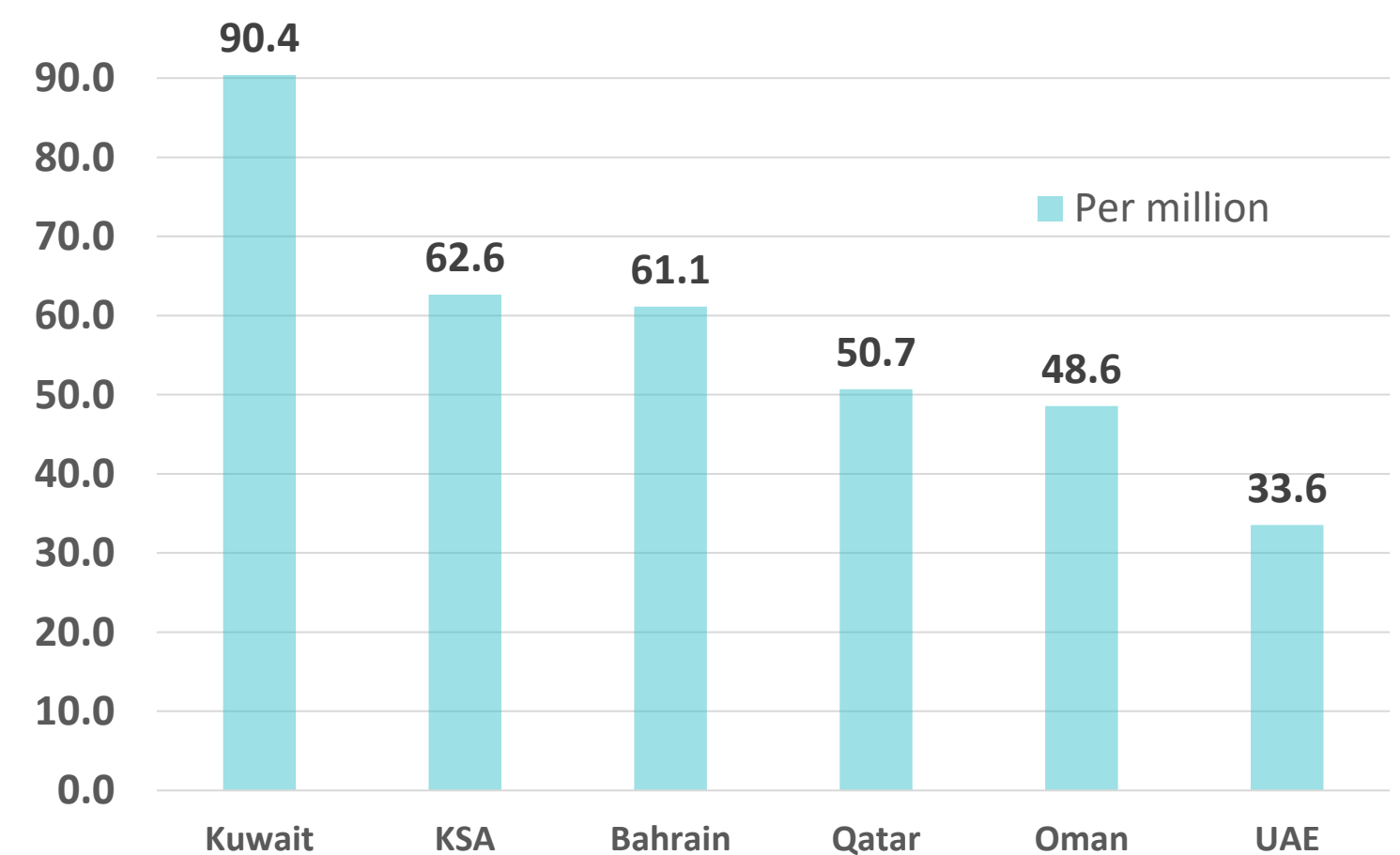
TOTAL NUMBER OF INFECTED CASES



TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATH PER MILLION



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

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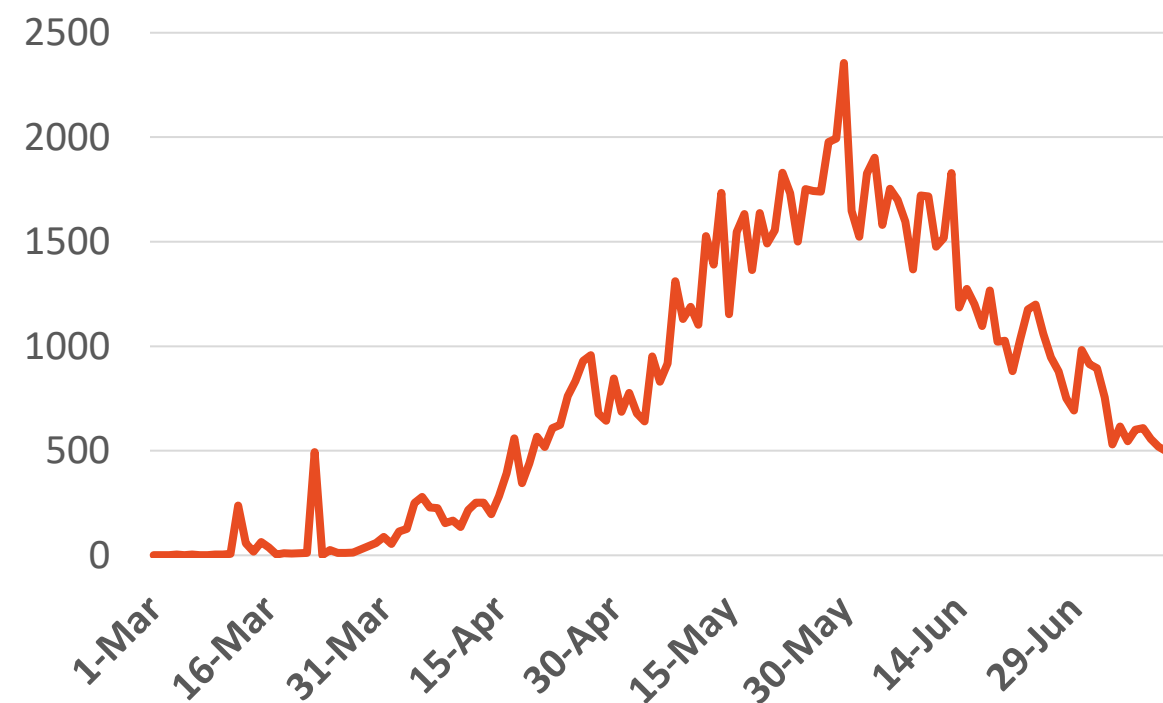
Figure 10: Comparative analysis of the distribution of COVID19 new cases in GCC countries

KSA



Source : KSA ministry of health

Qatar



Source : Qatar ministry of health

Oman



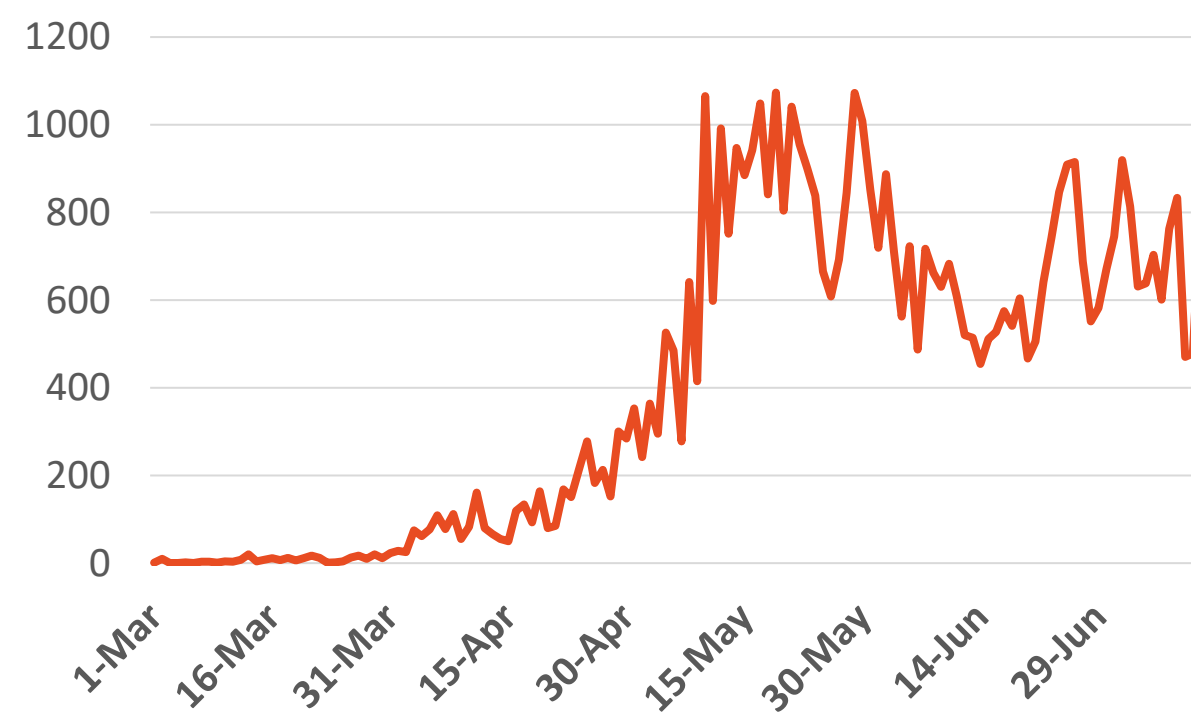
Source : National Emergency Crisis and Disaster Management Authority

UAE



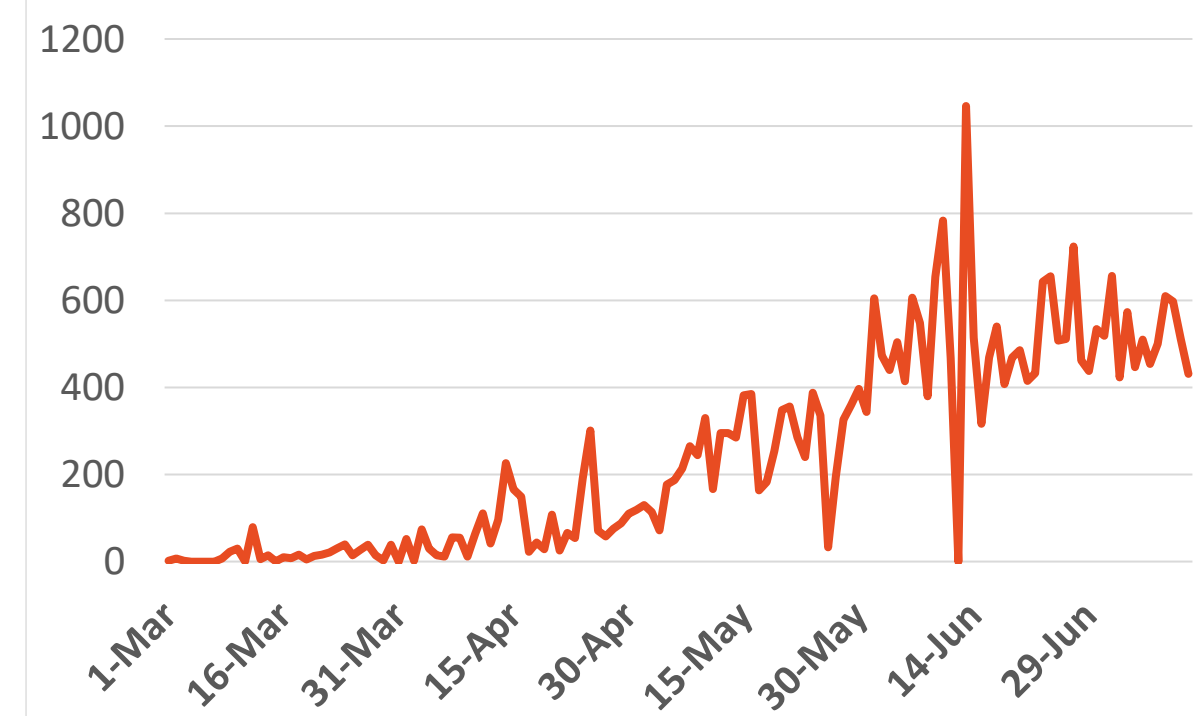
Source : Kuwait ministry of health

Kuwait © ADPHC 2020



Source :Oman ministry of health

Bahrain

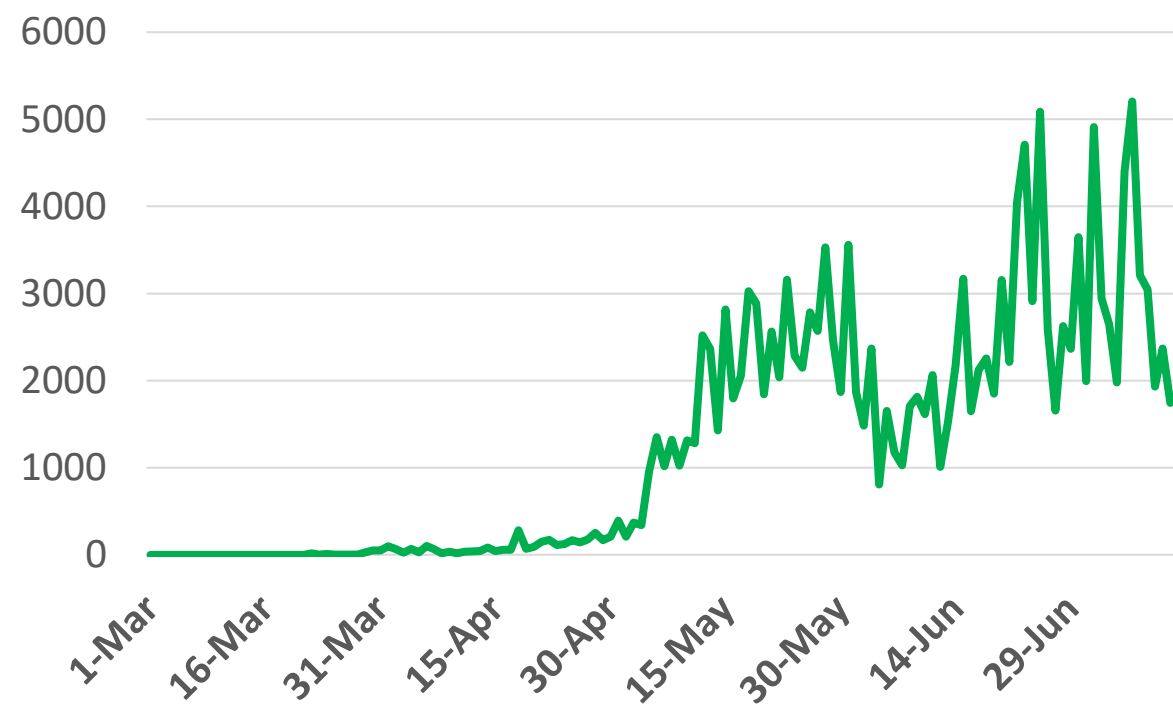


Source :WHO



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

KSA



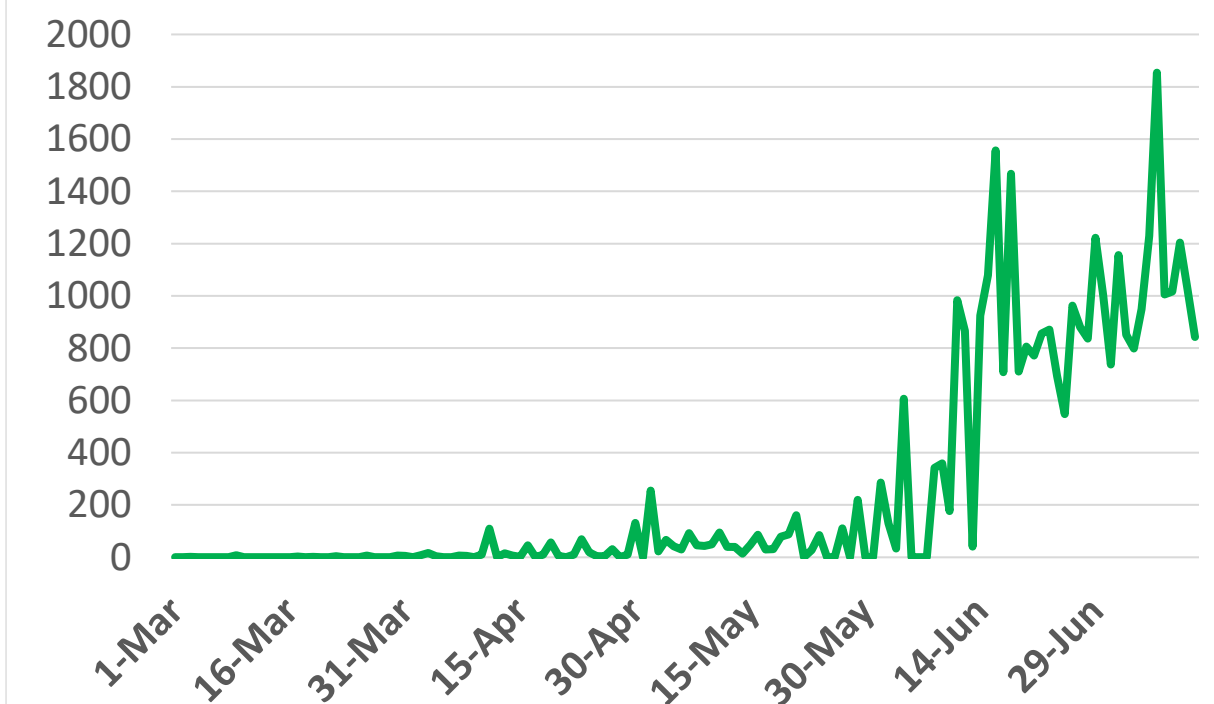
Source : KSA ministry of health

Qatar



Source : Qatar ministry of health

Oman



Source : National Emergency Crisis and Disaster Management Authority

UAE



Source : Kuwait ministry of health

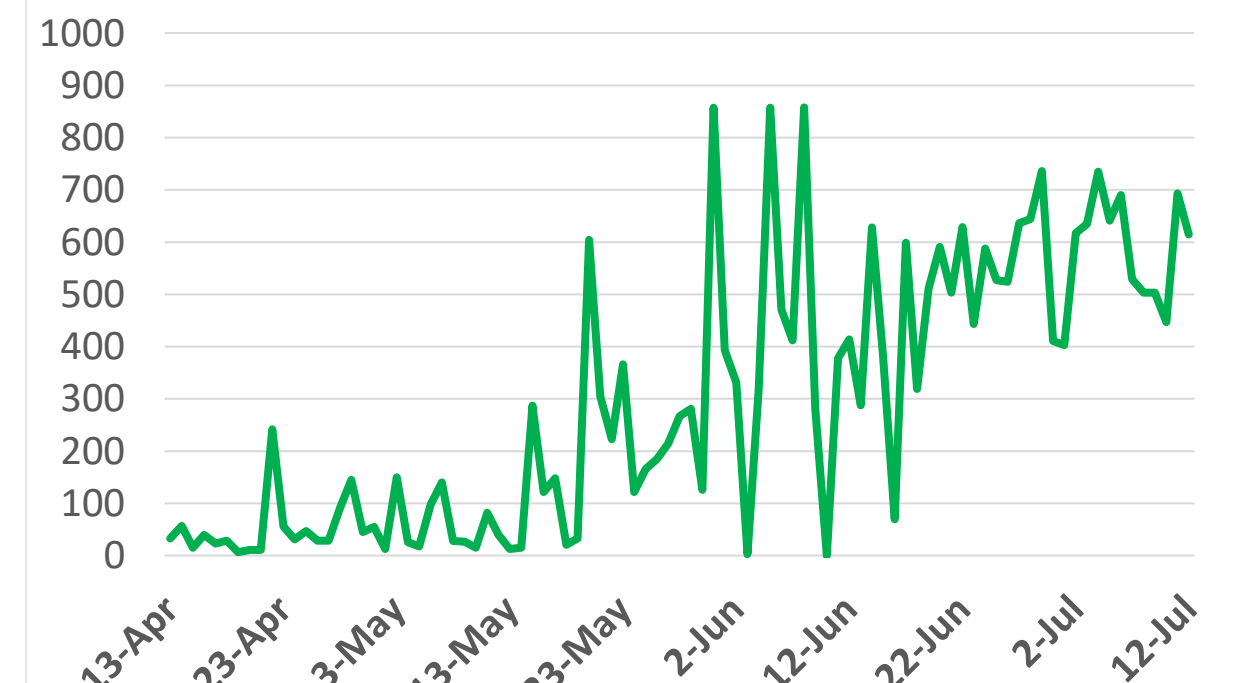
Kuwait

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Source : Oman ministry of health

Bahrain

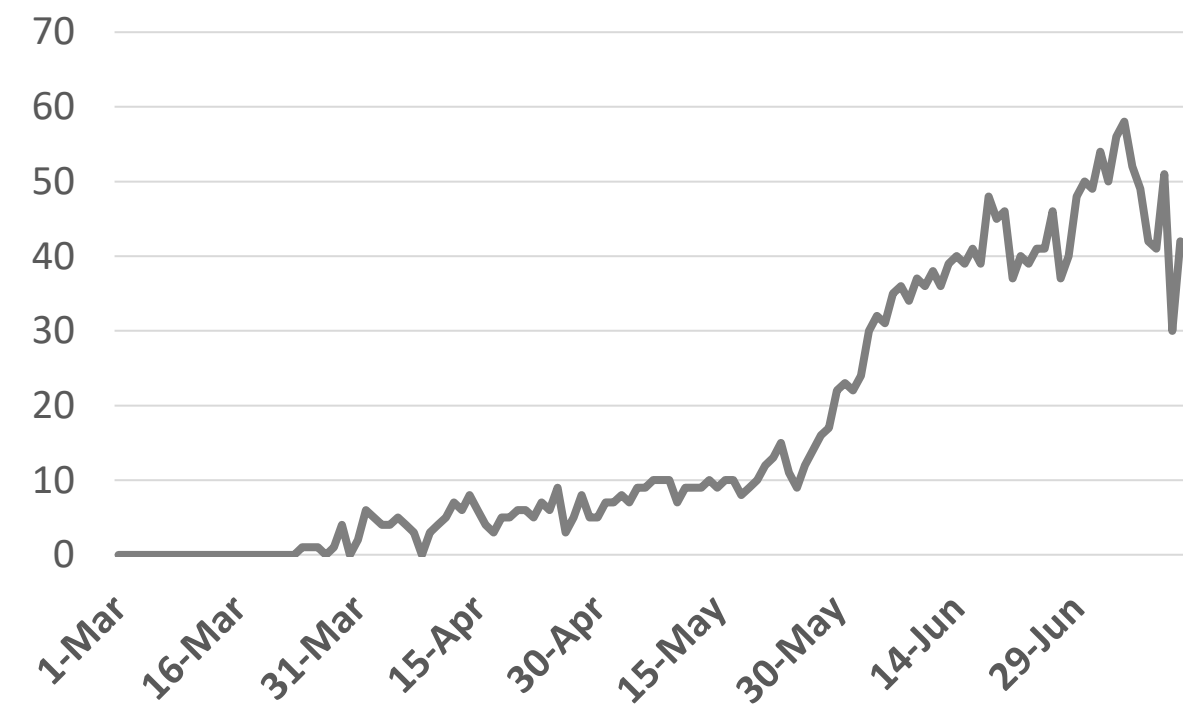


Source : GCCStat



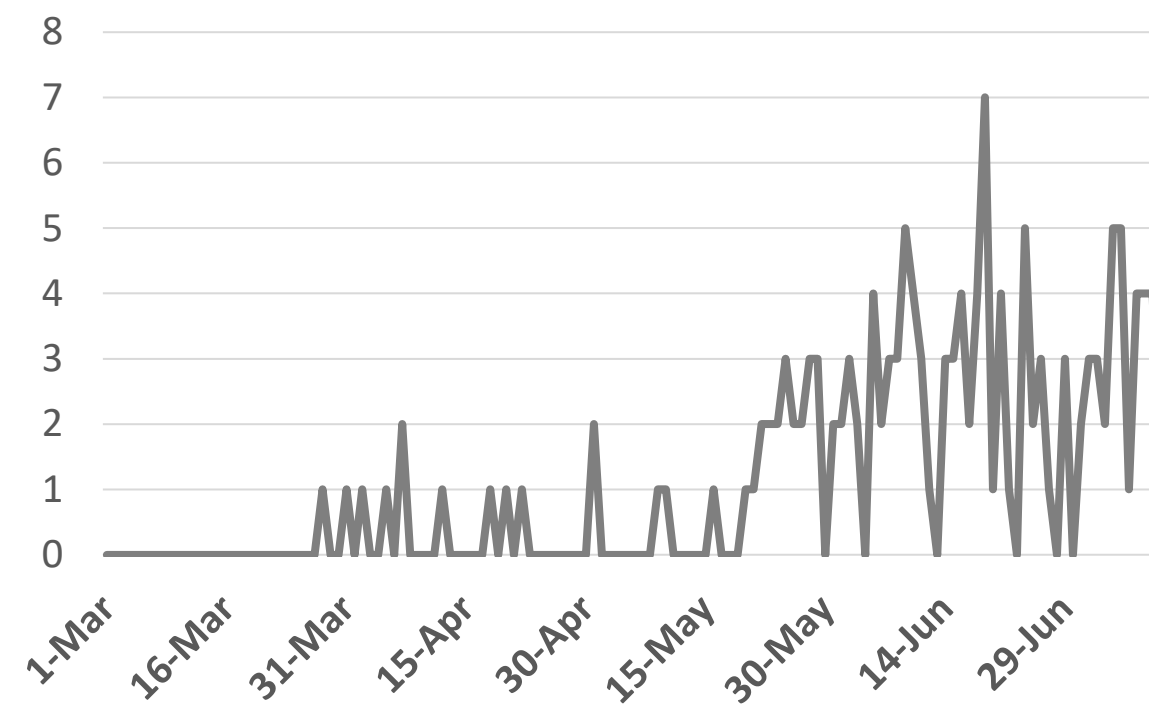
Figure 12: Comparative analysis of the distribution of COVID19 newly death cases in GCC countries

KSA



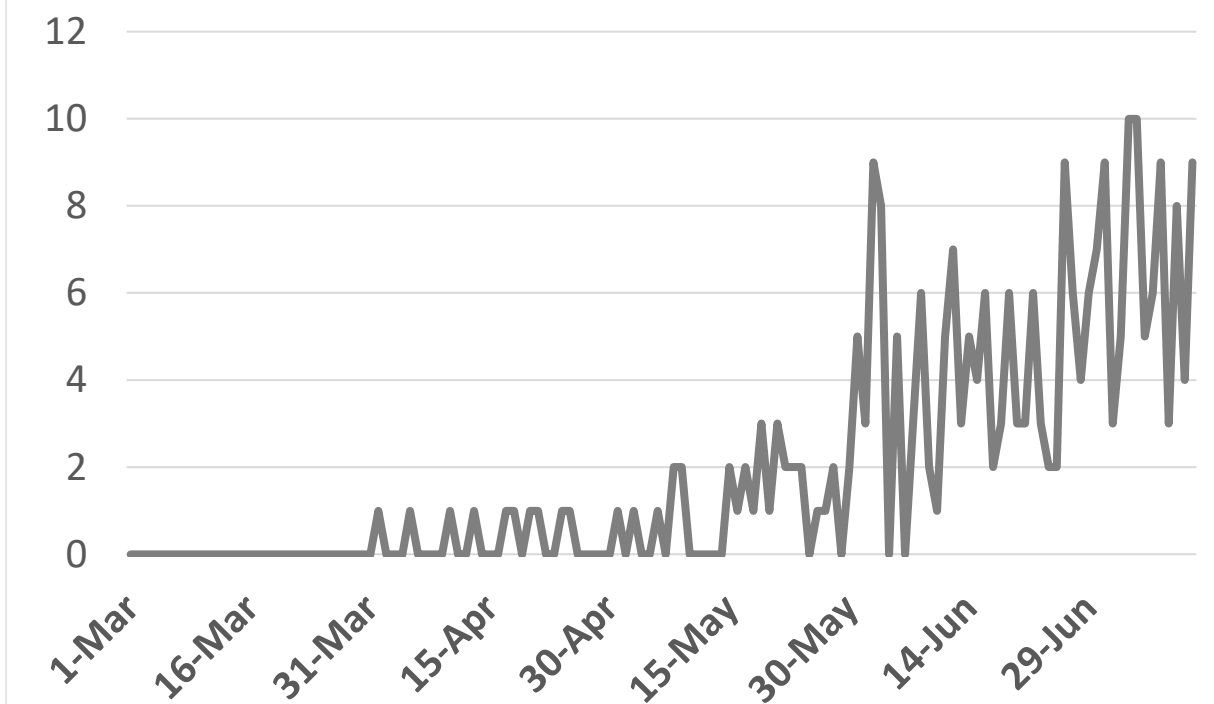
Source : KSA ministry of health

Qatar



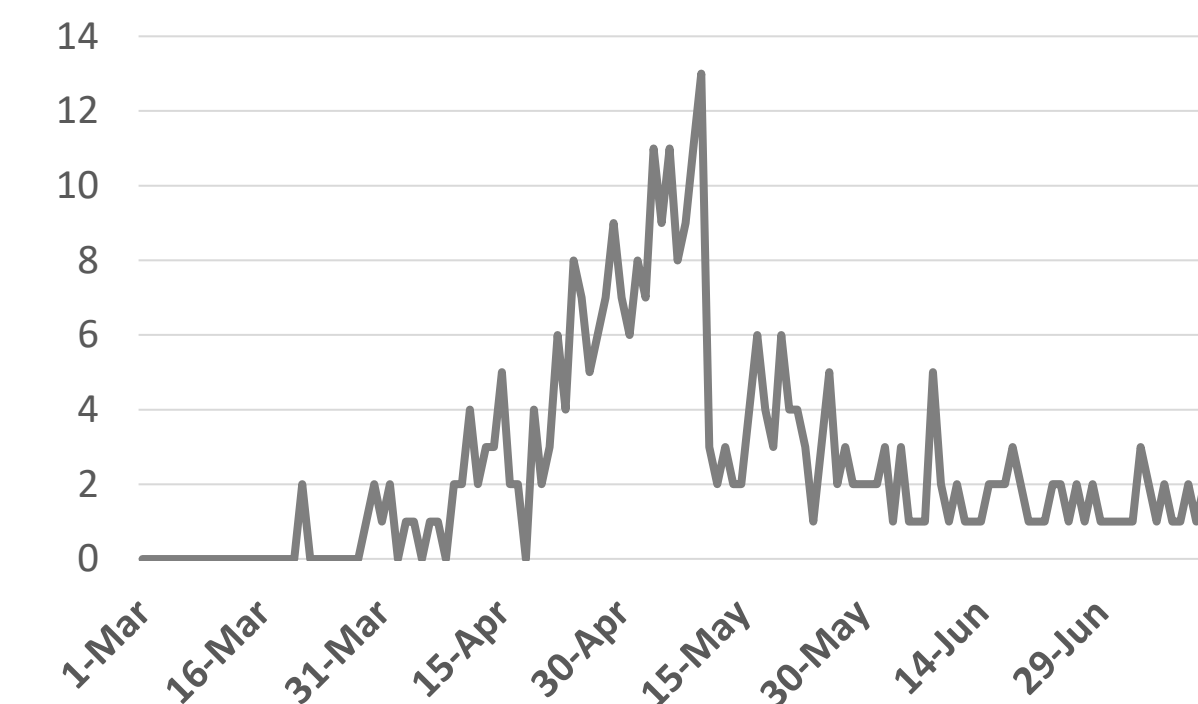
Source : Qatar ministry of health

Oman



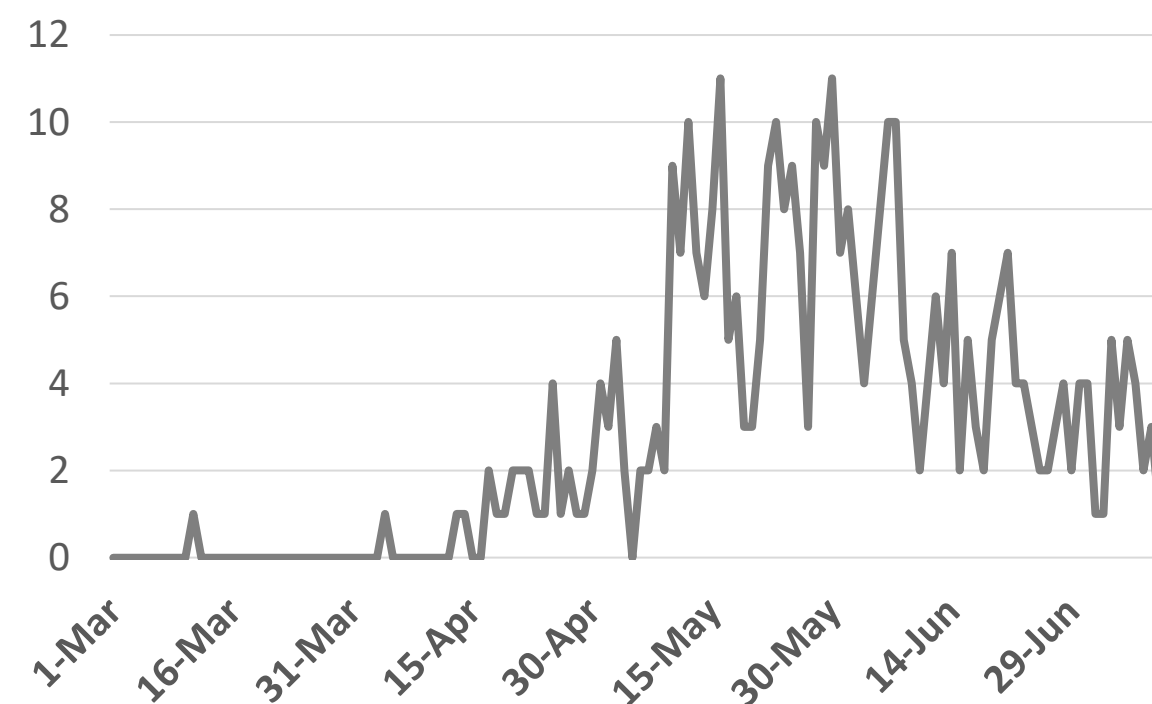
Source : National Emergency Crisis and Disaster Management Authority

UAE



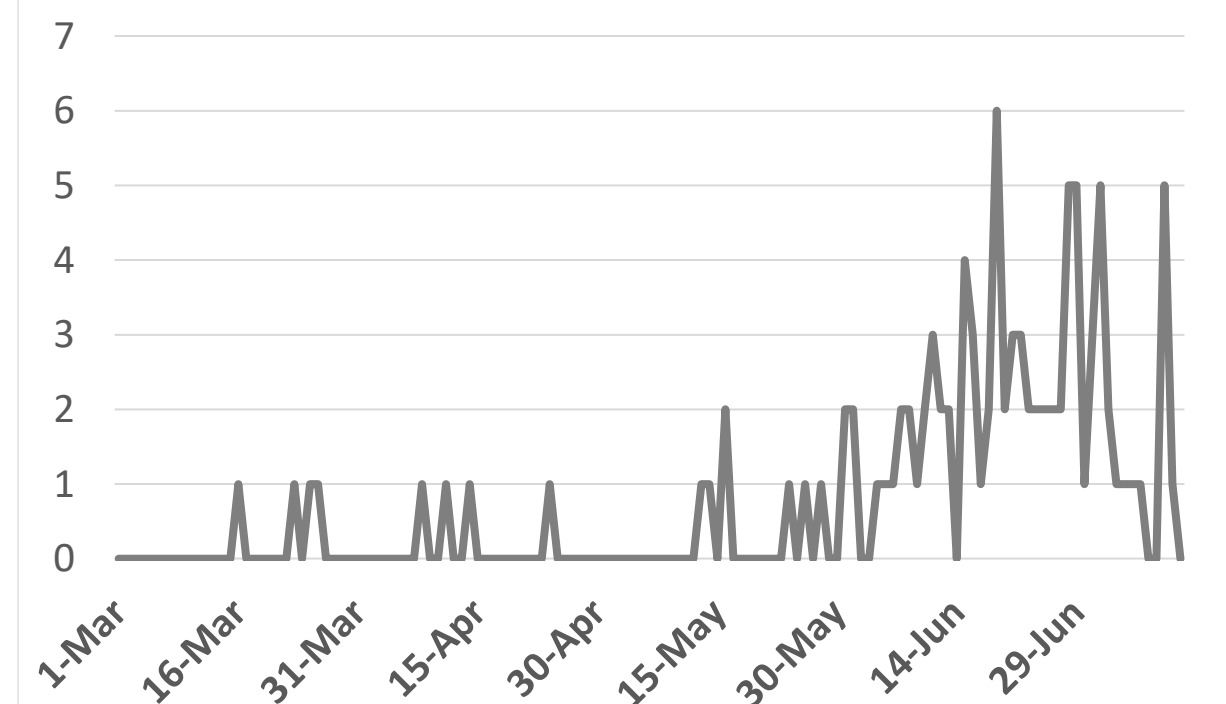
Source : Kuwait ministry of health

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Source :Oman ministry of health

Bahrain



Source :WHO



Article 1:

The Implications of Silent Transmission for the Control of COVID-19 Outbreaks

Published

1 July 2020 [PNAS](#)

This study used mathematical modelling to:

- Evaluate the contribution of presymptomatic and asymptomatic transmission based on recent individual level data regarding infectiousness prior to symptom onset and the asymptomatic proportion among all infections.
- Quantify the proportion of the attack rate attributable to transmission during presymptomatic, asymptomatic, and symptomatic stages.
- Identify the level of isolation required for symptomatic or silently infected individuals, to suppress the attack rate below 1%.

Results

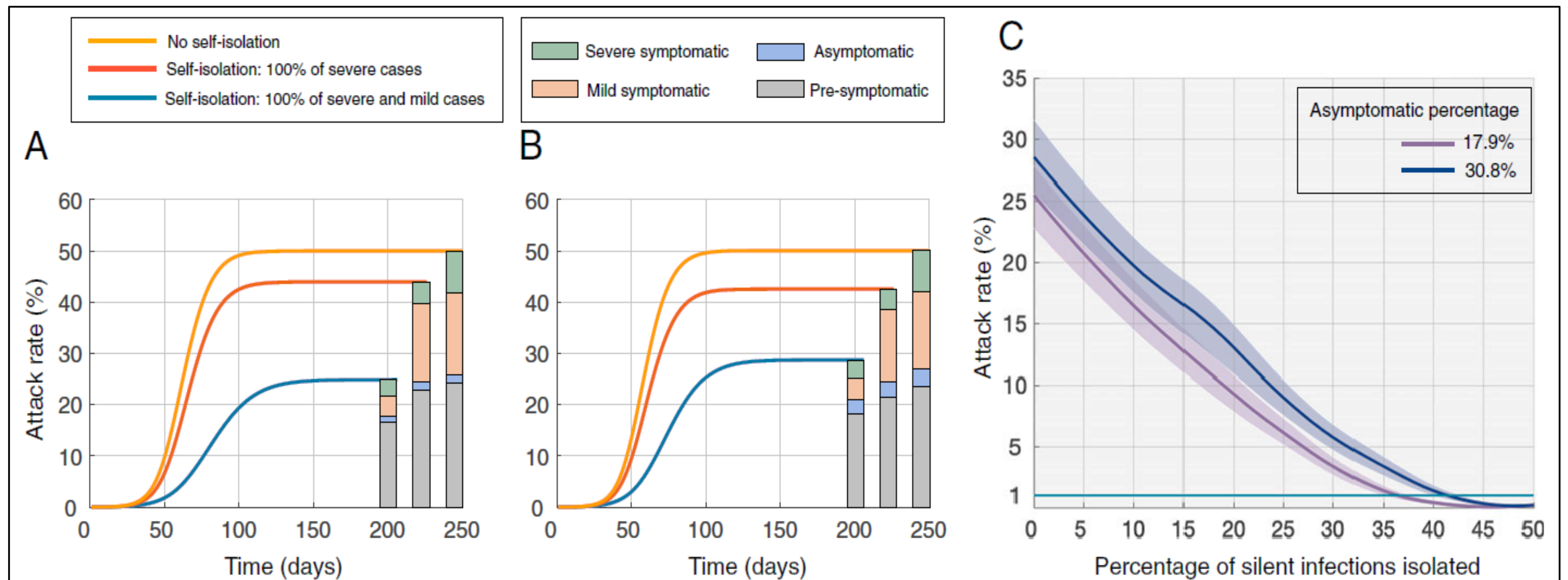
- Majority of transmission is attributable to people who are not exhibiting symptoms, either because they are still in the presymptomatic stage or the infection is asymptomatic (Fig. 1).
- When considering 17.9% of infections are asymptomatic, the presymptomatic stage and asymptomatic infections accounted for 48% and 3.4% of transmission, respectively (Fig. 1A).
- When considering 30.8% of infections are asymptomatic, the presymptomatic phase and asymptomatic infections account for 47% and 6.6% of transmission, respectively (Fig. 1B).
- Immediate isolation of all symptomatic cases is insufficient to achieve control (Fig. 1).
- Mean attack rates remain above 25% of the population when 17.9% of infections are asymptomatic and above 28% when 30.8% of infectious are asymptomatic.
- 33% and 42% detection and isolation of silent infections would be needed to suppress the attack rate below 1%, for asymptomatic proportions of 17.9% and 30.8%, respectively (Fig. 1C).



Continued

Discussion

Results indicate that silent disease transmission (presymptomatic and asymptomatic stages) are responsible for more than 50% of the overall attack rate in COVID-19 outbreaks. There is an urgent need to scale up testing of suspected cases without symptoms, and symptom-based surveillance must be supplemented by rapid contact-based surveillance that can identify exposed individuals prior to their infectious period.



Article 2: COVID-19: The Worst May Be Yet to Come

Published

8 July 2020 [The Lancet](#)

As much of Western Europe begins to ease countrywide lockdowns, globally the pandemic may still be in its infancy, with more than 160 000 new cases reported each day since June 25.

Africa

- Increasing COVID-19 cases in South Africa mean that the pandemic has a strong foothold in sub-Saharan Africa, which is particularly alarming as parts of Africa consider resuming internal air travel later this month.

America

- USA has the most new cases worldwide - 53 213 on July 4, and a total of 128 481 deaths, almost a quarter of the total deaths globally. These beacons of infection show the fragility of any progress.
- In Central and South America, Brazil has the highest number of COVID-19 cases, but Mexico, Columbia, Peru, Chile, and Argentina also have cases in the thousands.

Asia

- Early July 2020, Kazakhstan recorded the second highest number of new cases within Europe after Russia.
- Reporting is unreliable in Turkmenistan (no cases of COVID-19 reported and has yet to provide breakdowns to WHO).
- Iraq is struggling with oxygen shortages and Yemen faces the human catastrophe of COVID-19 in an unstable conflict zone.
- In India, after relaxation of a 3-month lockdown, cases are surging. Lockdown was not used effectively to increase capacity in the health-care system. With less than eight doctors per 10 000 population, using these resources efficiently will be crucial in the coming months.



Continued

MENA

- At the end of June, the Eastern Mediterranean region reached 1 million cases of COVID-19. Iran, Pakistan, and Saudi Arabia continue to report the highest number of infections. Most countries grapple with the challenging balance of suppressing the virus while trying to prevent the estimated 66% of the population who are either classified as poor or vulnerable to poverty being pushed into further destitution.
- The Gulf States are outliers. Saudi Arabia has implemented an essentially unlimited budget, expanding intensive care unit bed capacity and opening hundreds of ‘fever clinics’ to allow free access for patients with symptoms, and health-care workers are being retrained virtually.

Conclusion

- Two seroprevalence studies reveal an estimated seroprevalence of 5% nationally (10% in urban areas) and 10.8%, respectively, which means even if antibodies confer immunity, most of the global population remains susceptible to SARS-CoV-2.
- Five months after WHO declared the SARS-CoV-2 outbreak a global health emergency, the virus continues to beat a concerning and complex path. For much of the world, the worst may be yet to come.



THANK YOU

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