

SCIENTIFIC RESEARCH MONITORING ON COVID-19

4 SEPTEMBER 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 215)

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



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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Public health response

Long-Term Consequences of COVID-19: Research Needs

Public Health Response

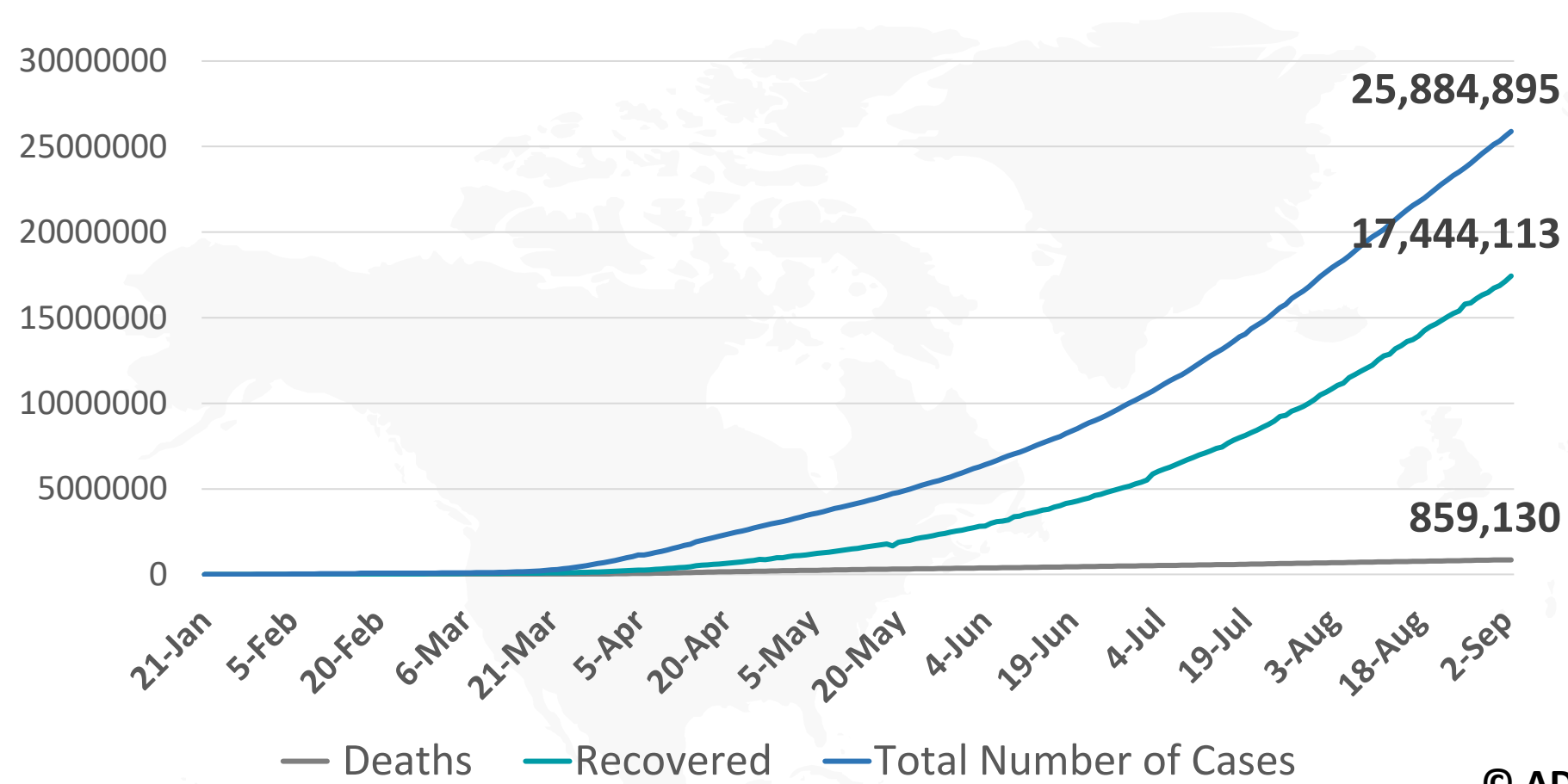
Bangladesh's COVID-19 Testing Criticized

Diagnosis

Salivary Detection of COVID-19



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)

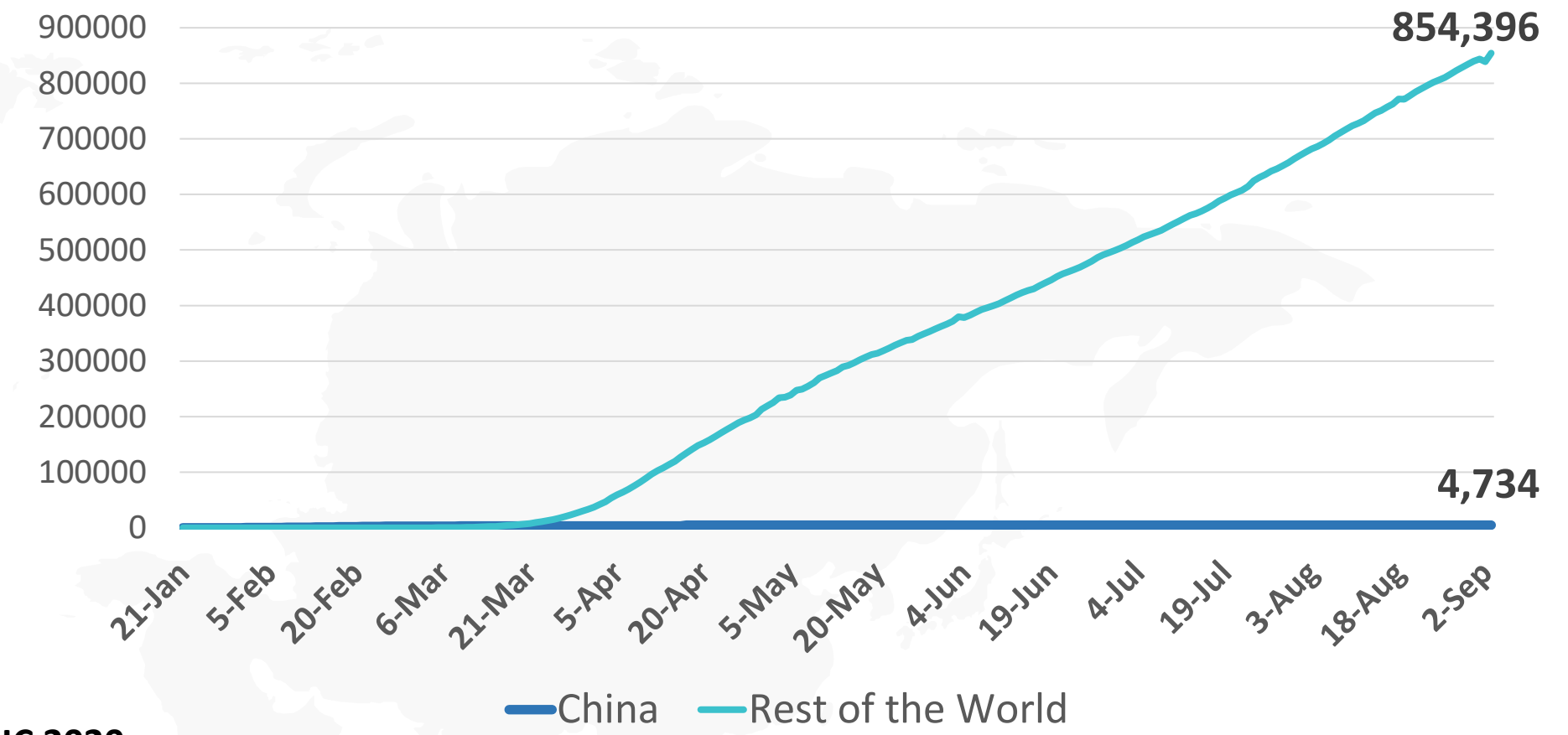


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

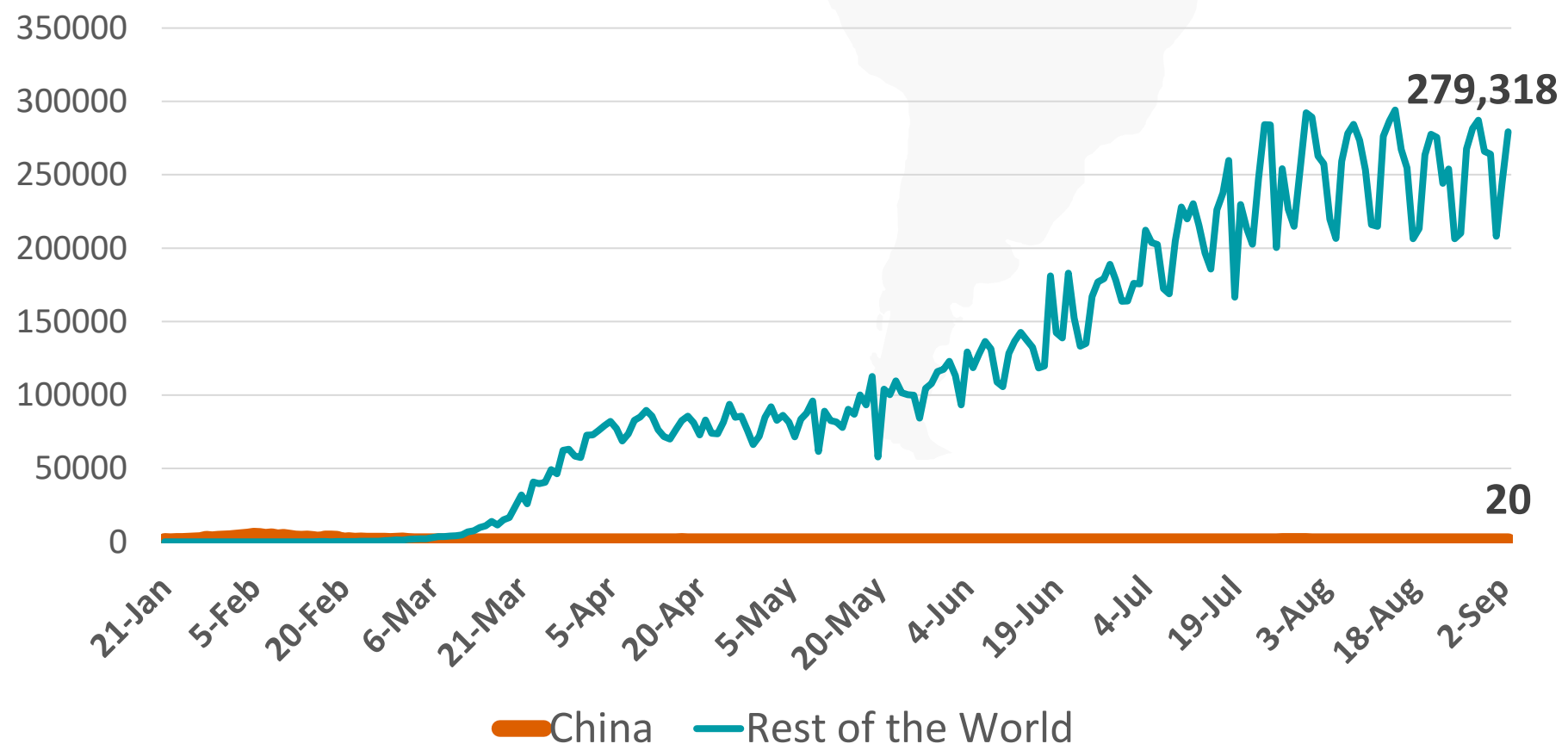


Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)

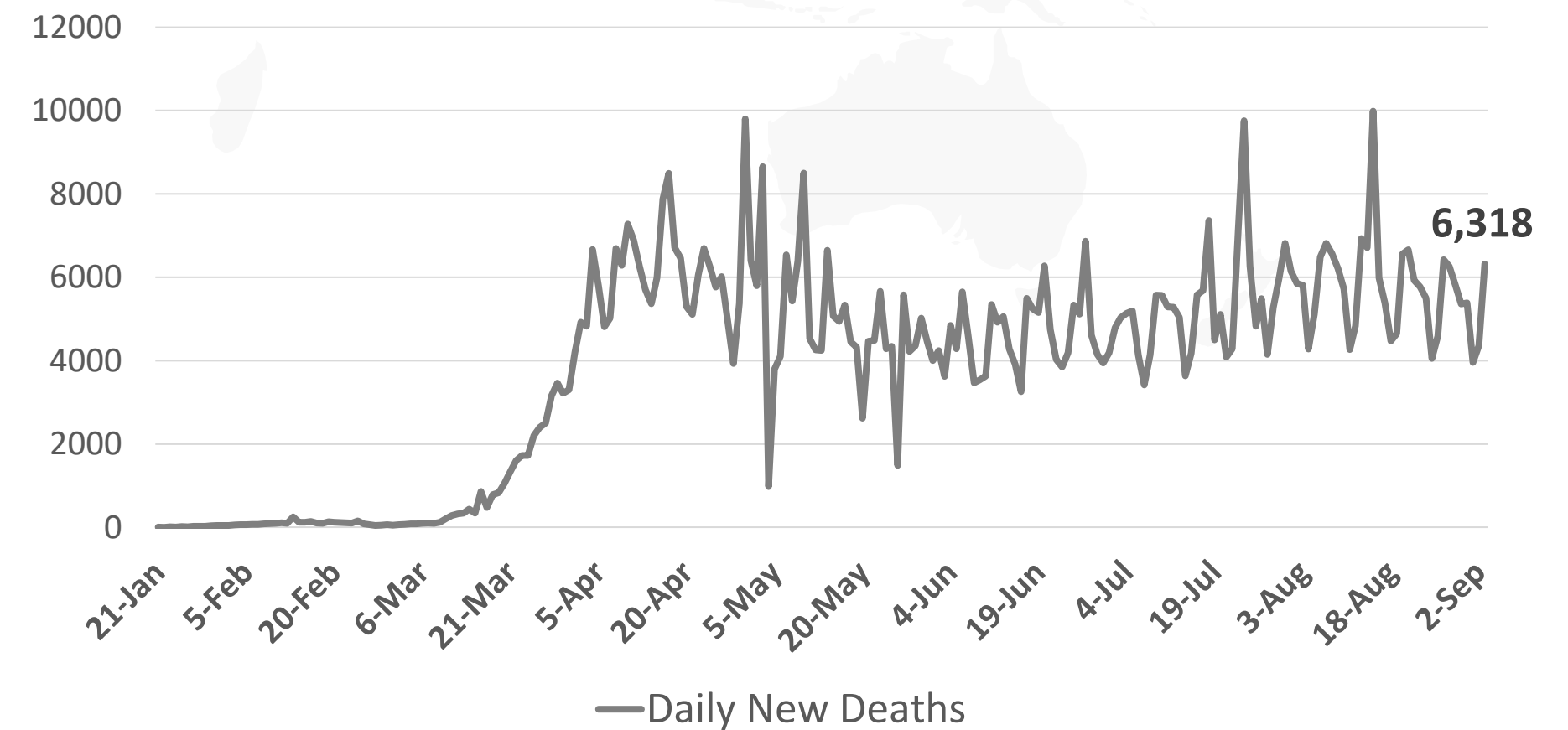
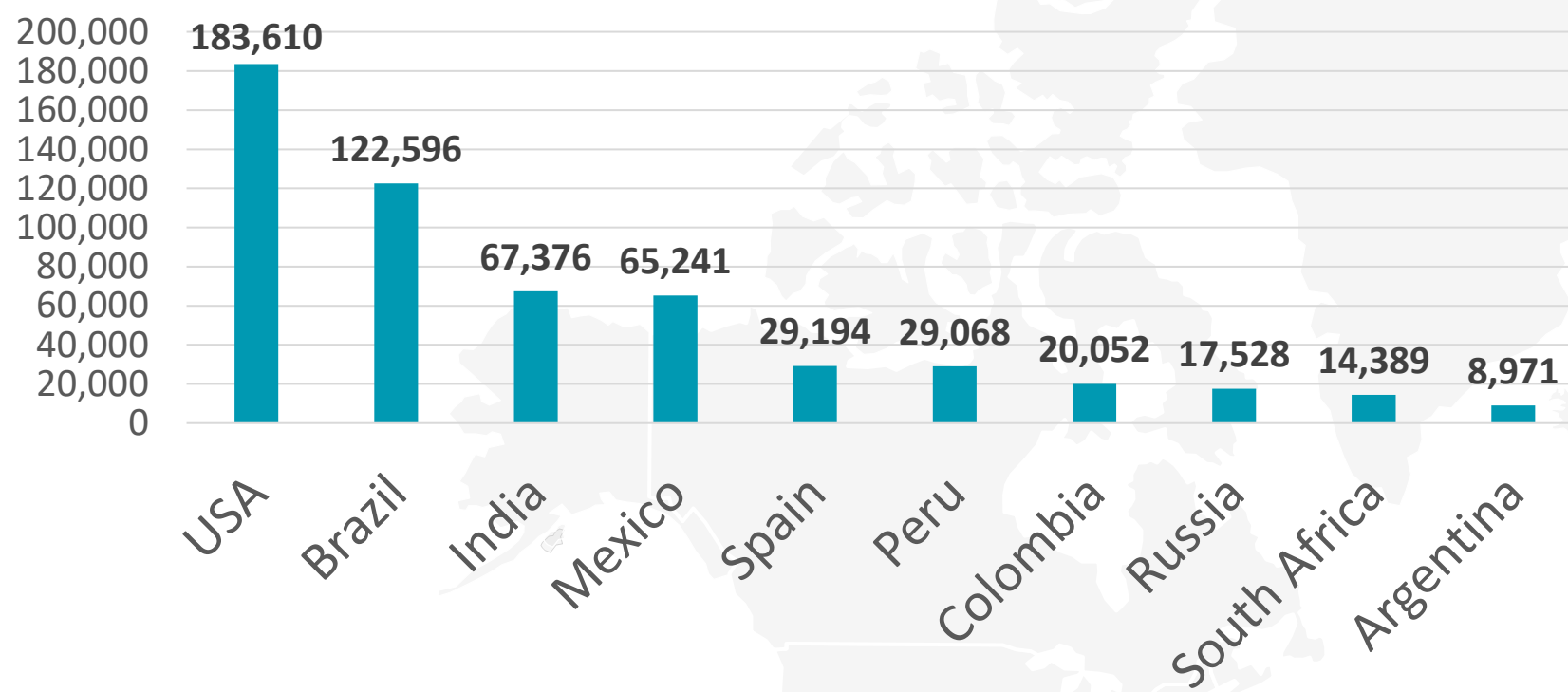
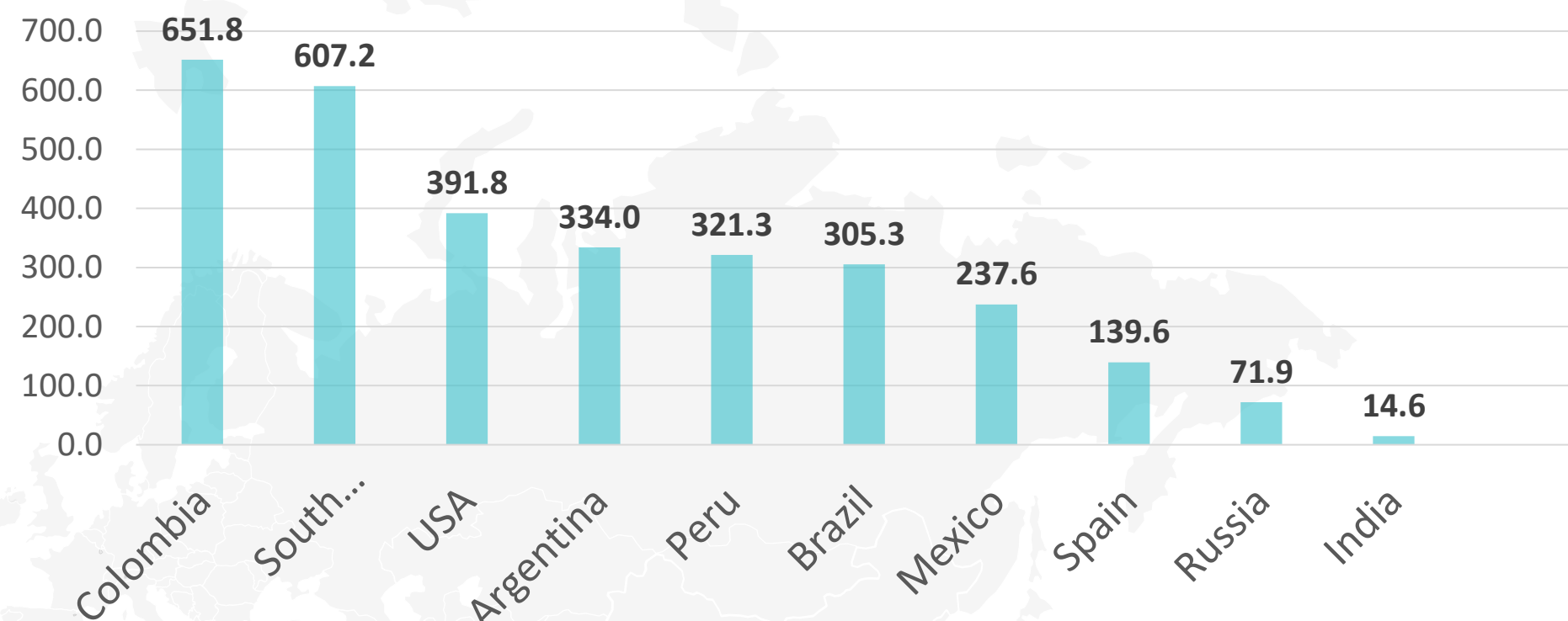


Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

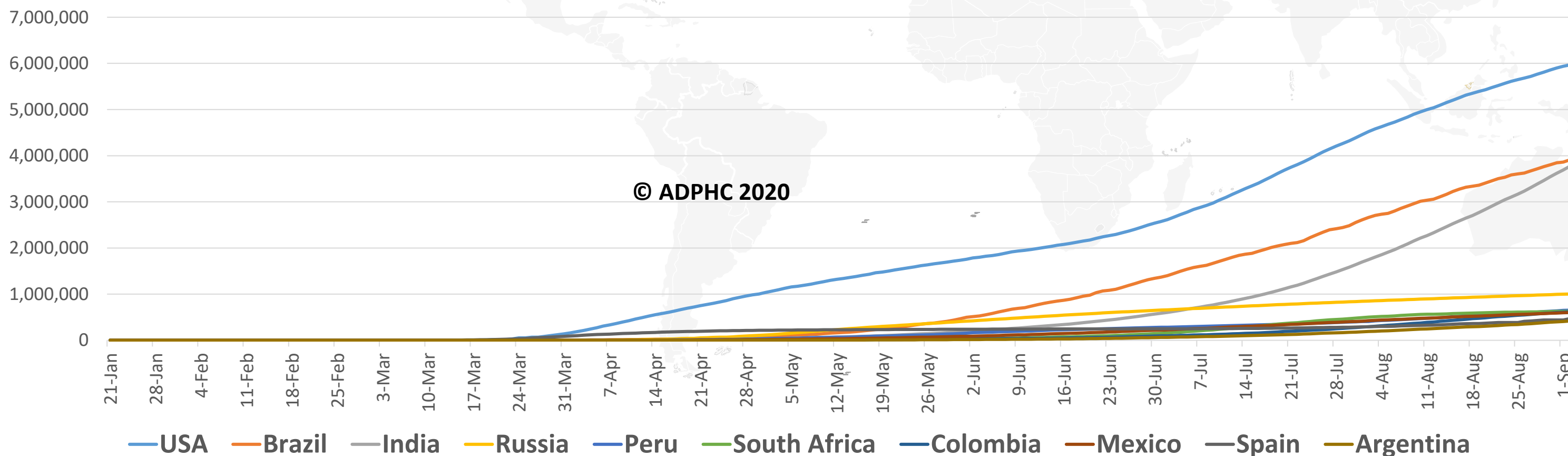
TOTAL DEATHS



DEATHS PER MILLION

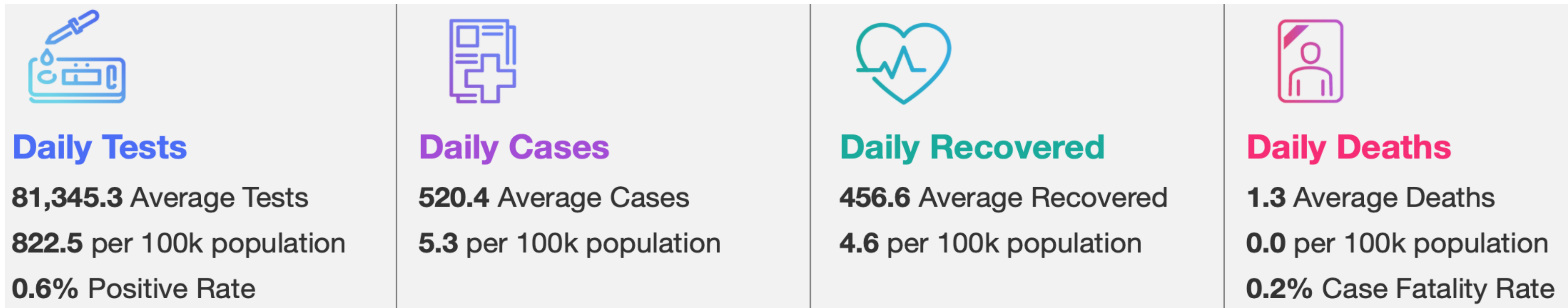


TOTAL INFECTED CASES



USA	6,011,042
Brazil	3,950,931
India	3,853,406
Russia	1,009,995
Peru	657,129
South Africa	630,595
Colombia	624,069
Mexico	606,036
Spain	479,554
Argentina	428,239

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

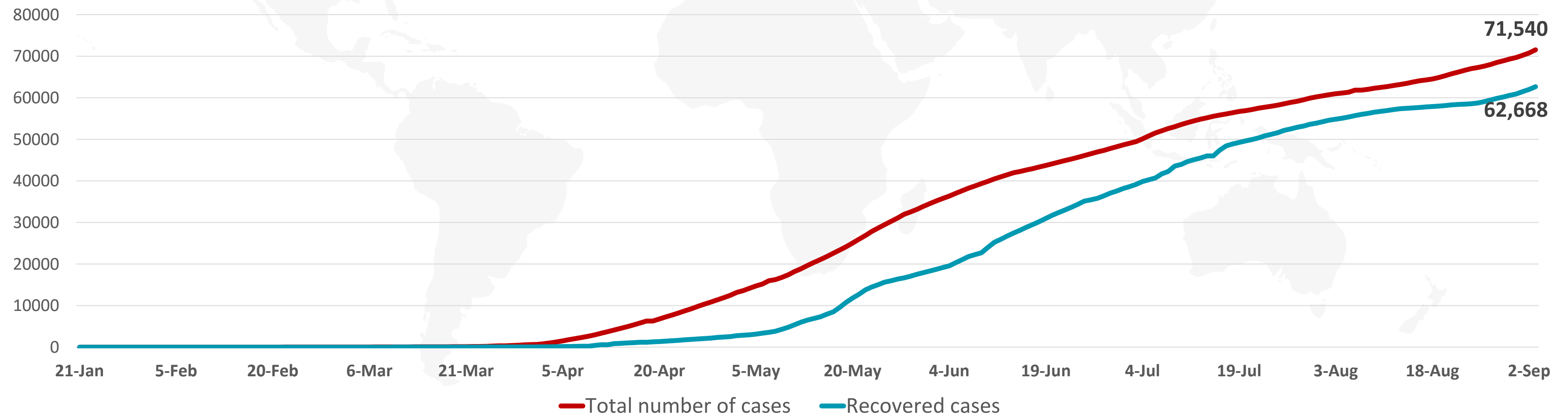
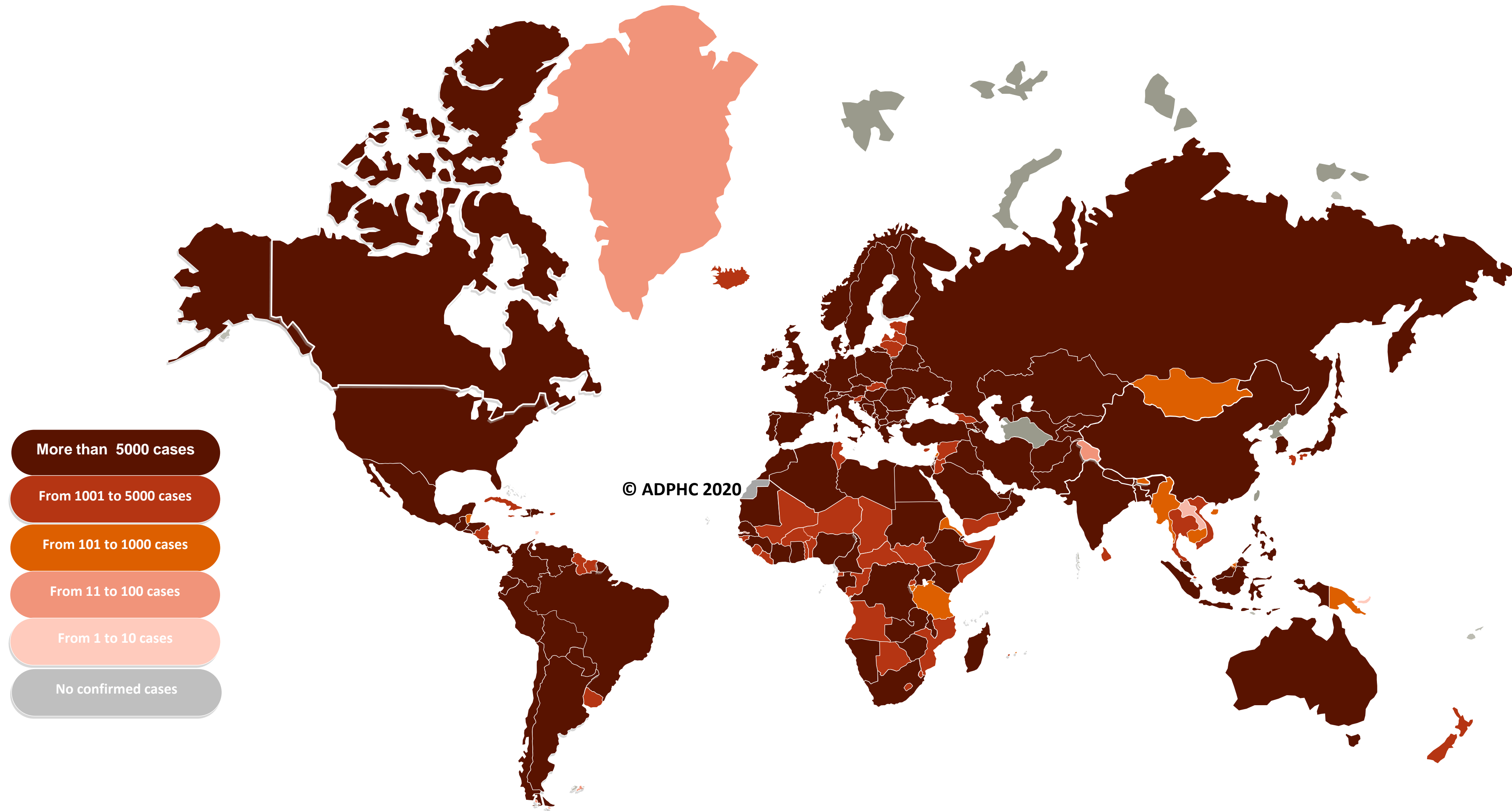


Figure 7A : Global Distribution of COVID-19 Cases



More than 5000 cases

From 1001 to 5000 cases

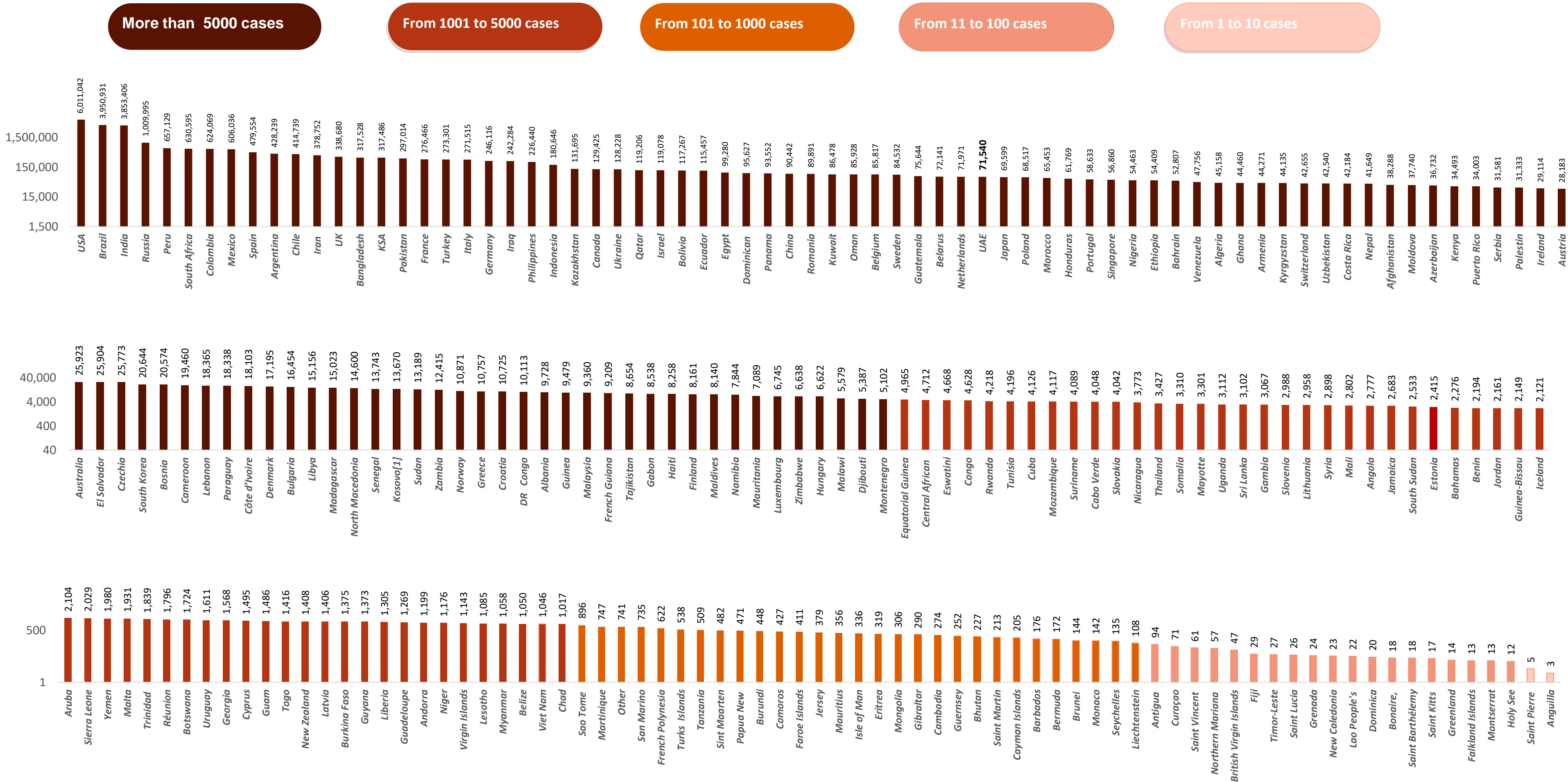
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

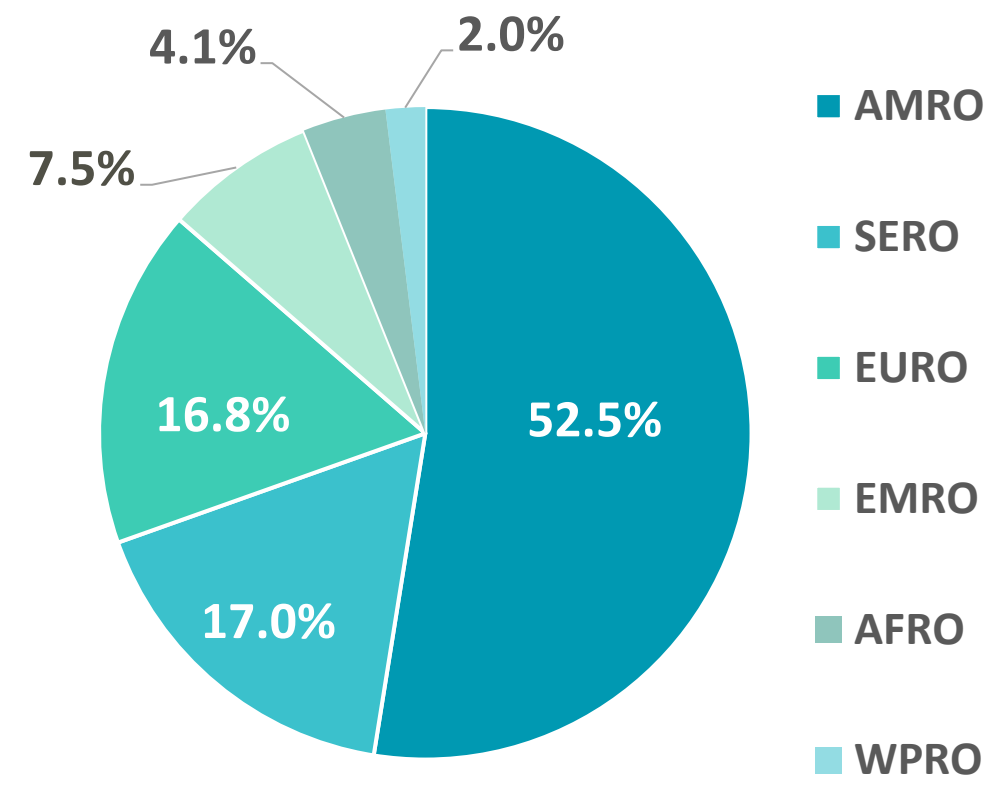
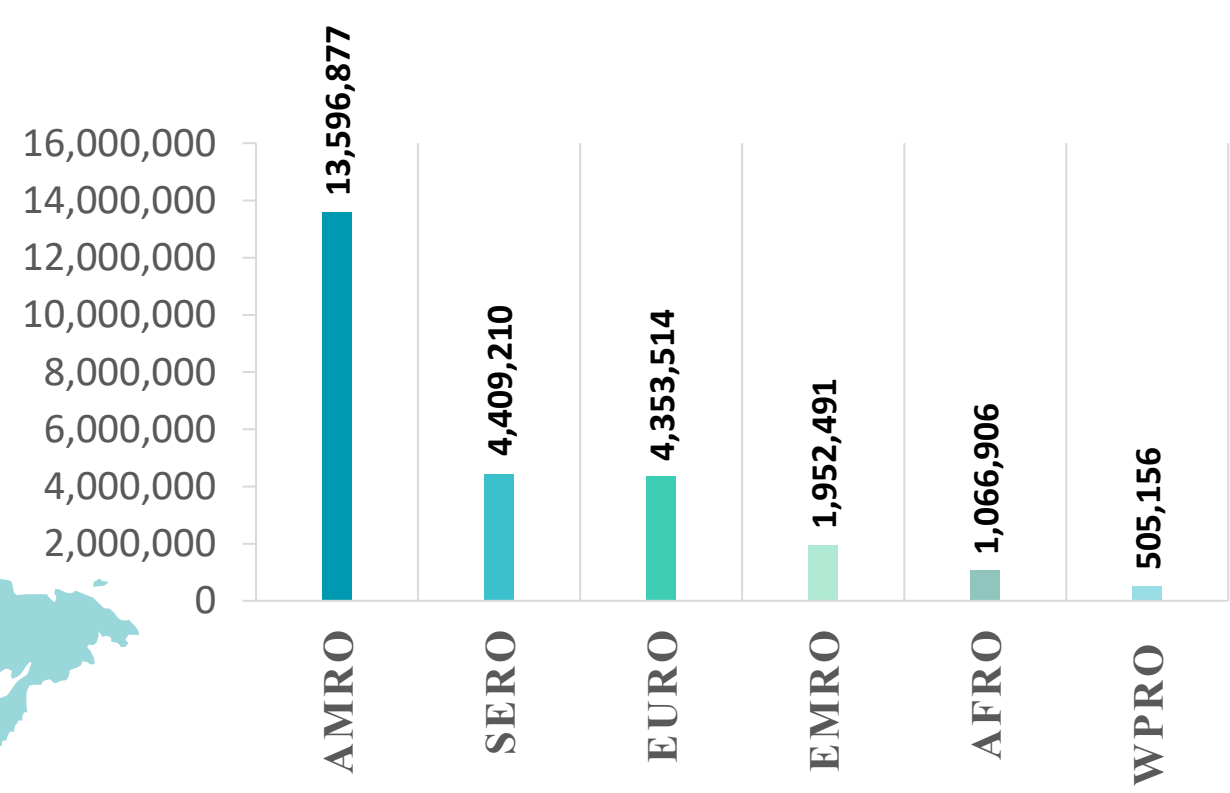
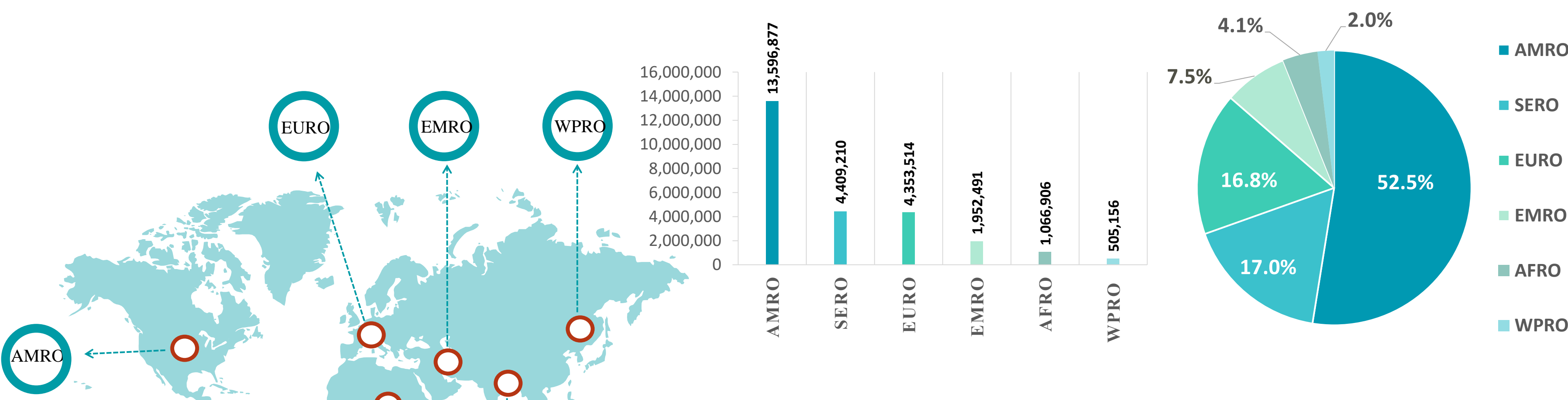
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



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

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

INFECTED



DEATHS

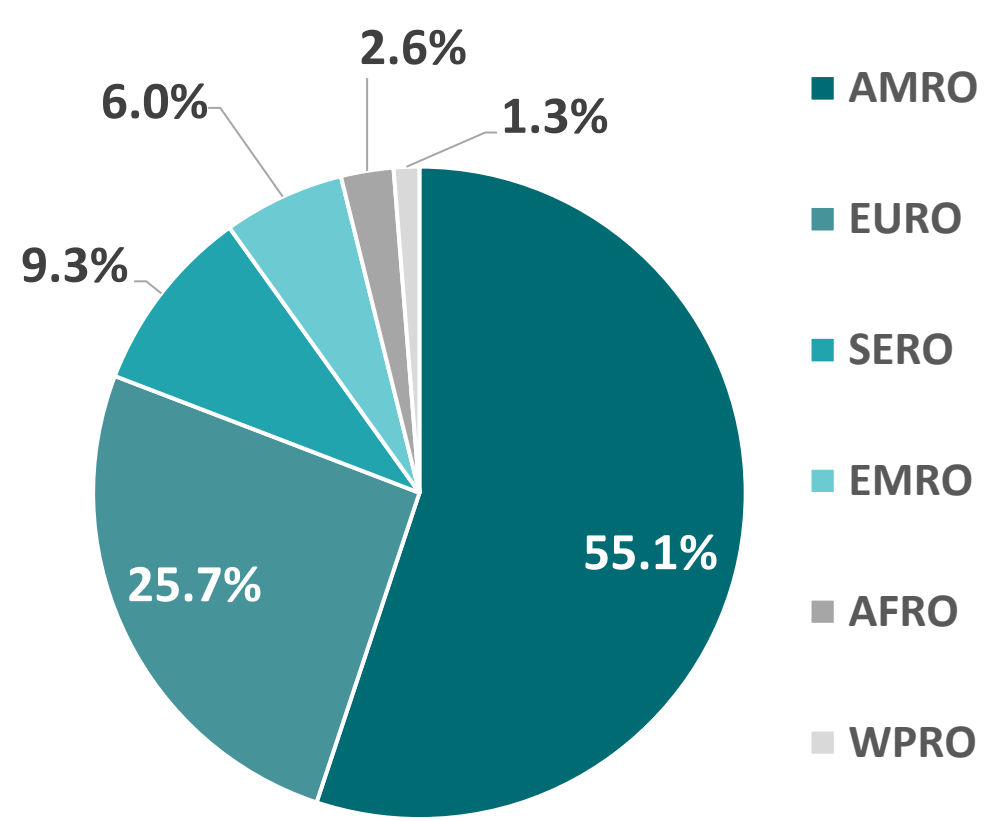
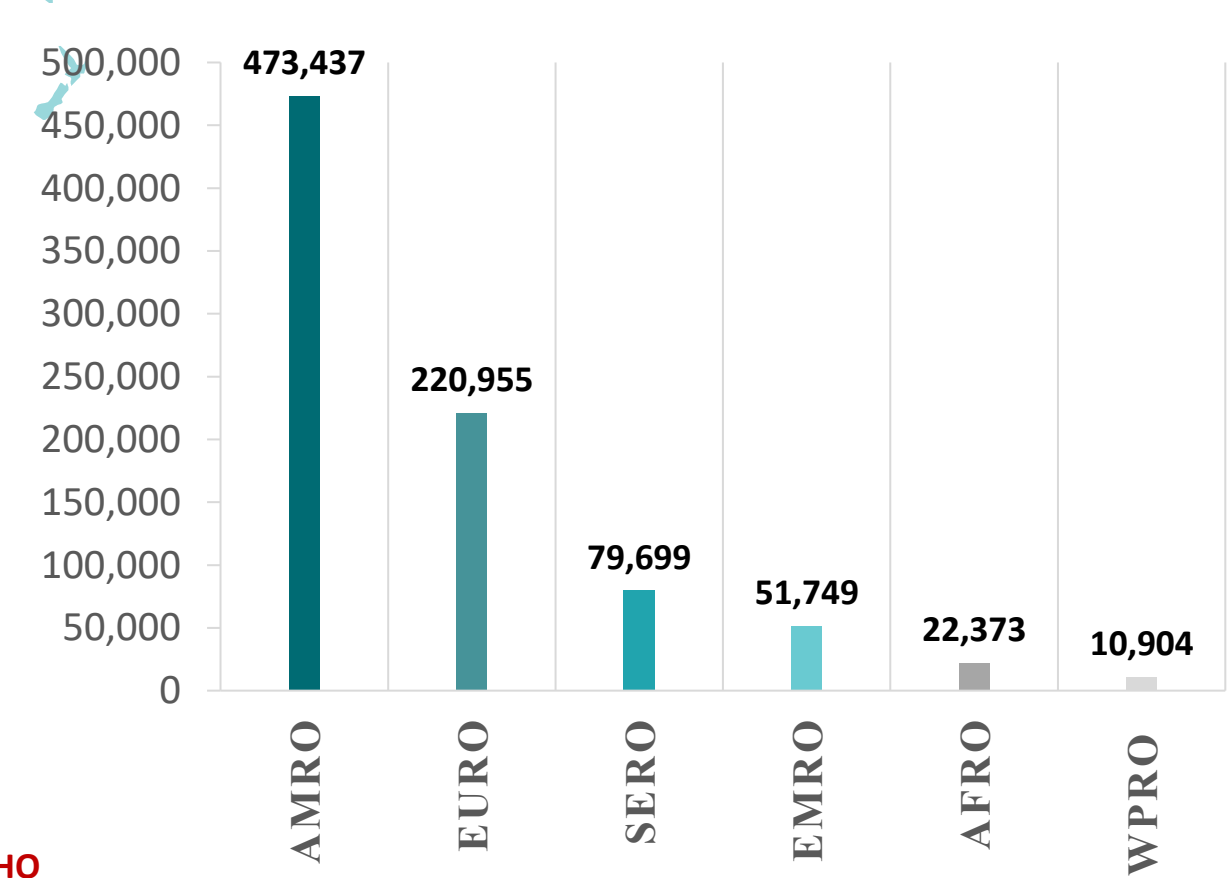
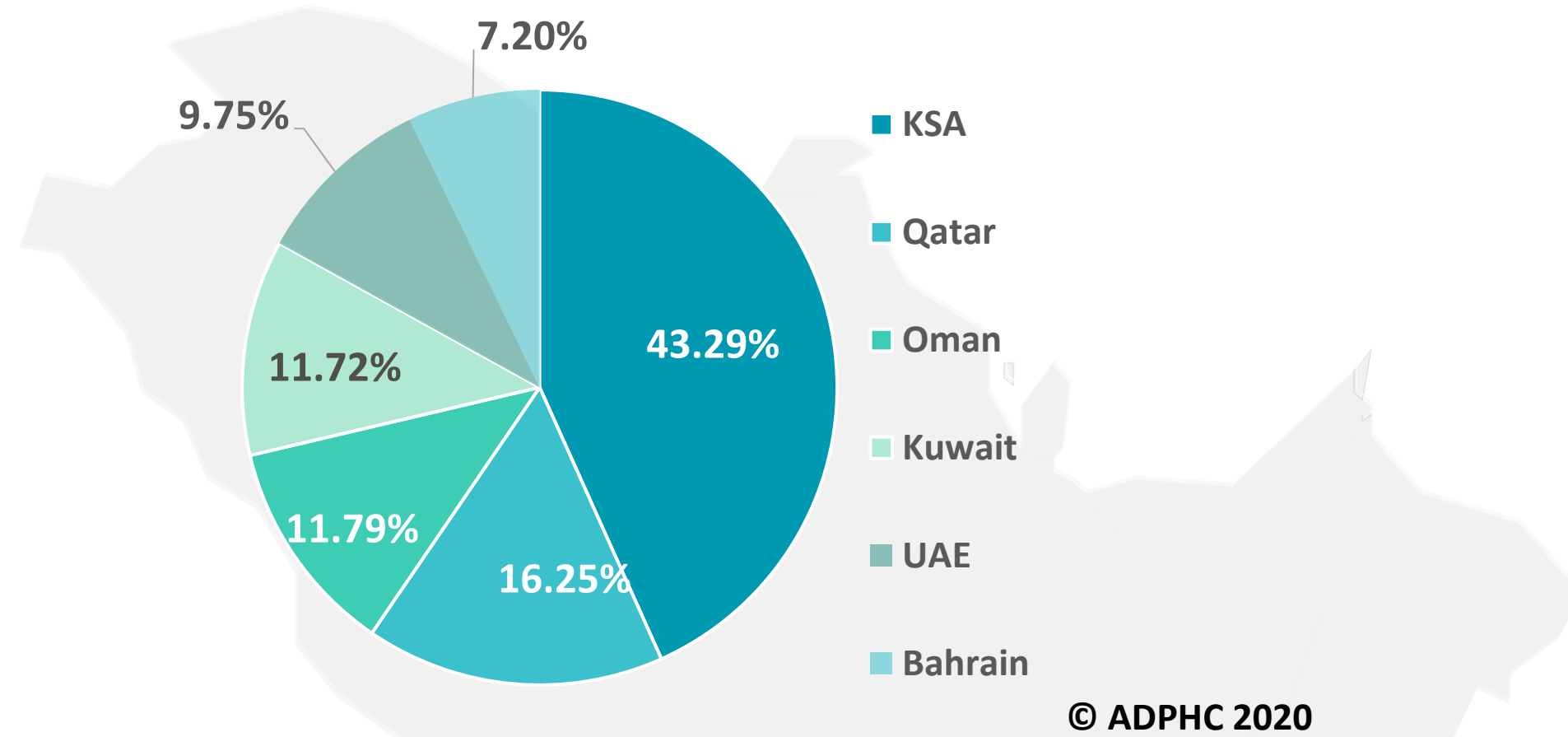
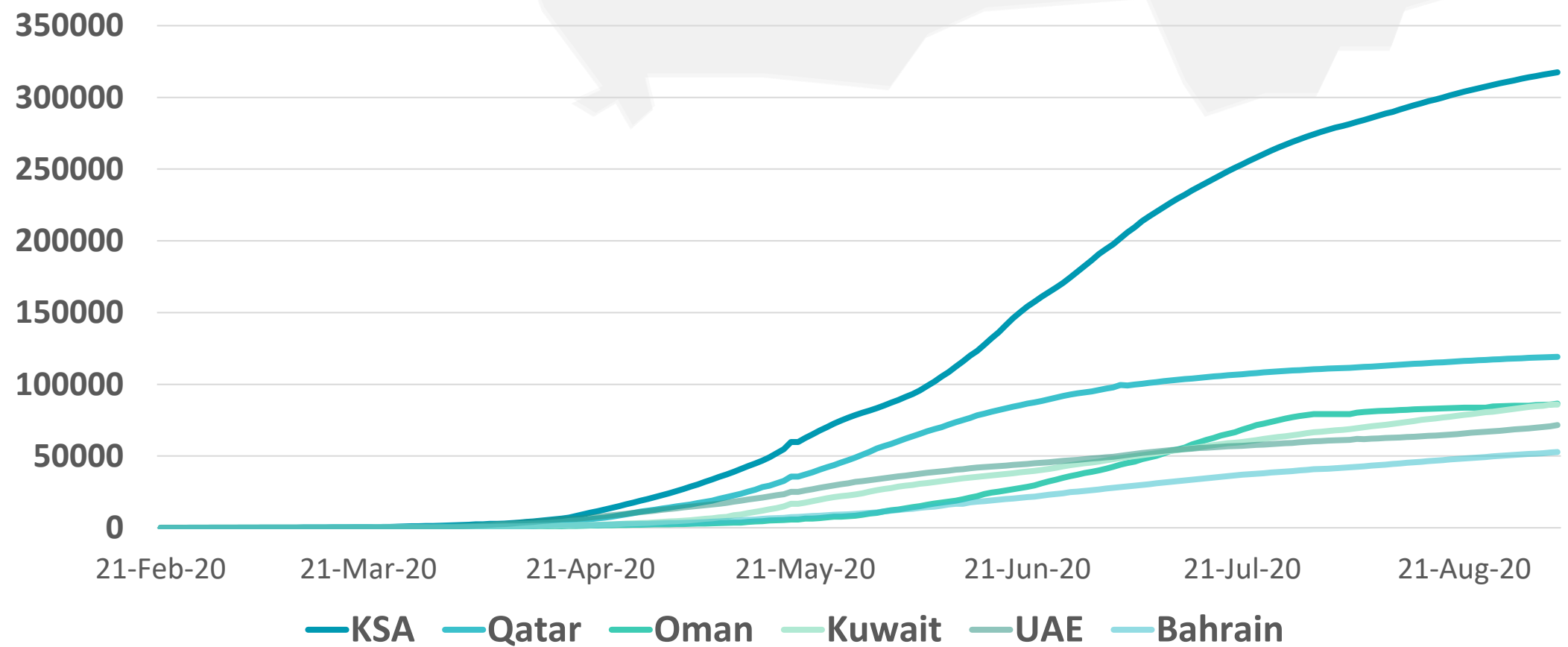
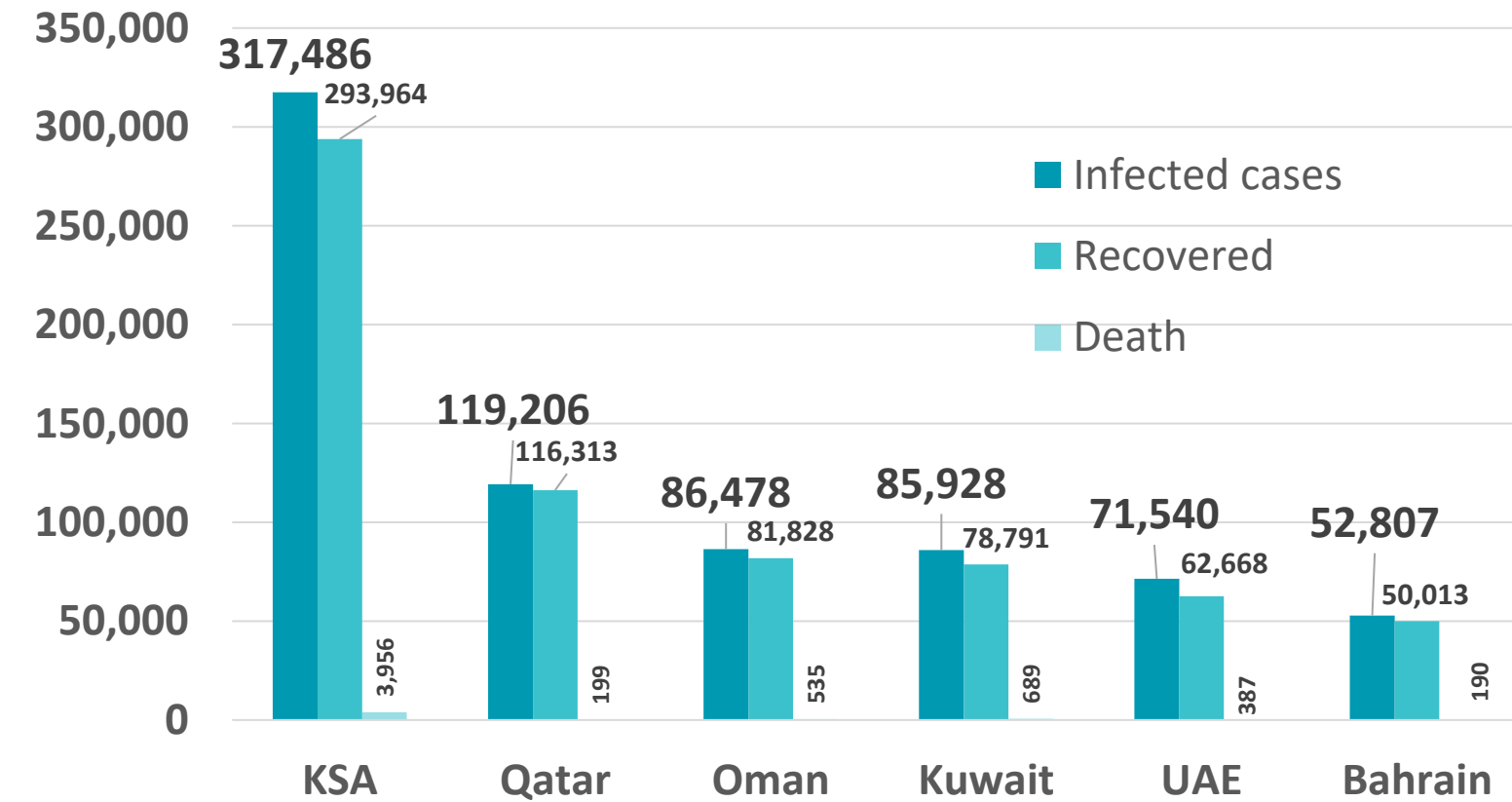


Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

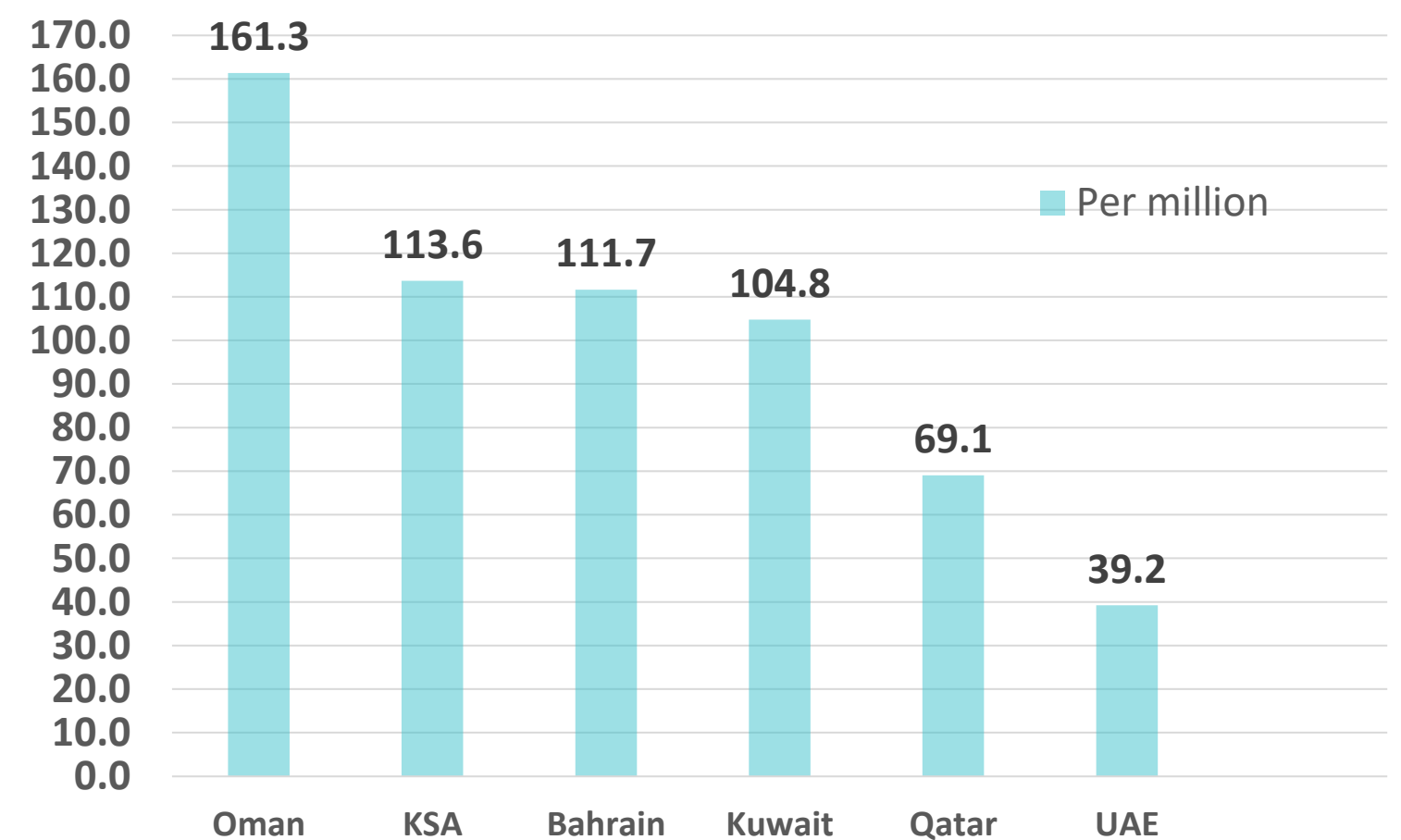
TOTAL NUMBER OF INFECTED CASES



TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATHS PER MILLION



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

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

UAE



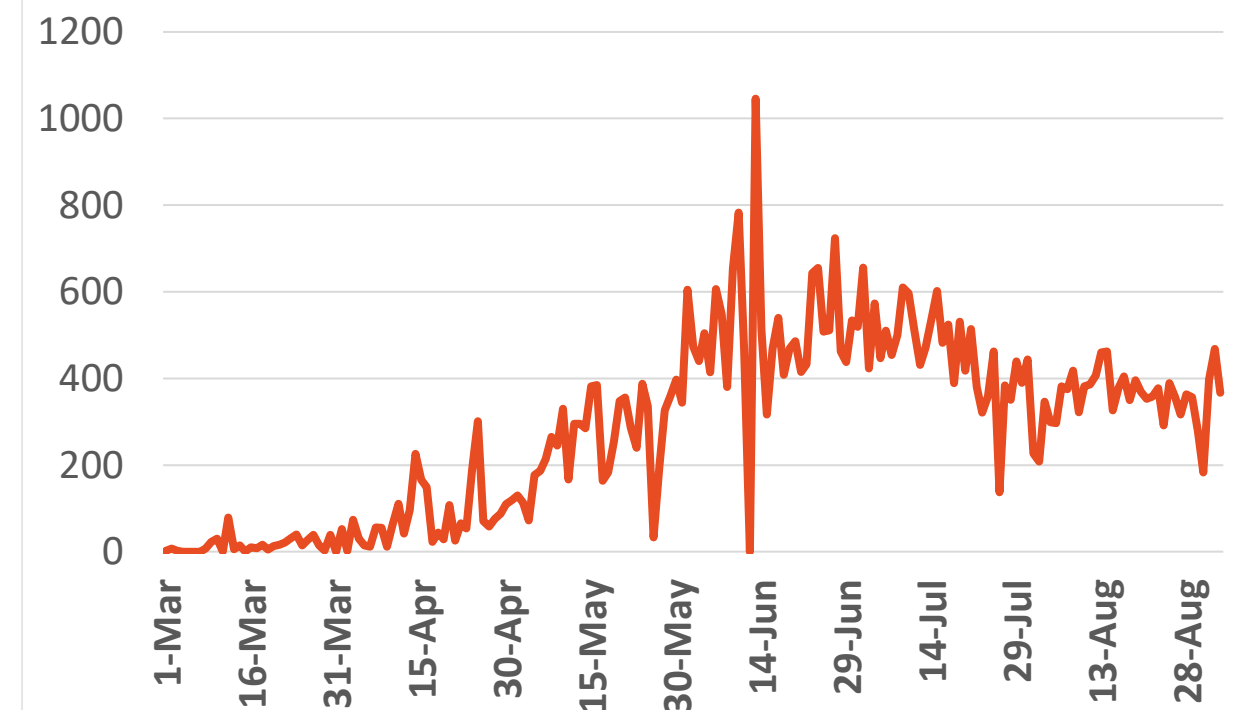
Source : National Emergency Crisis and Disaster Management Authority

KSA



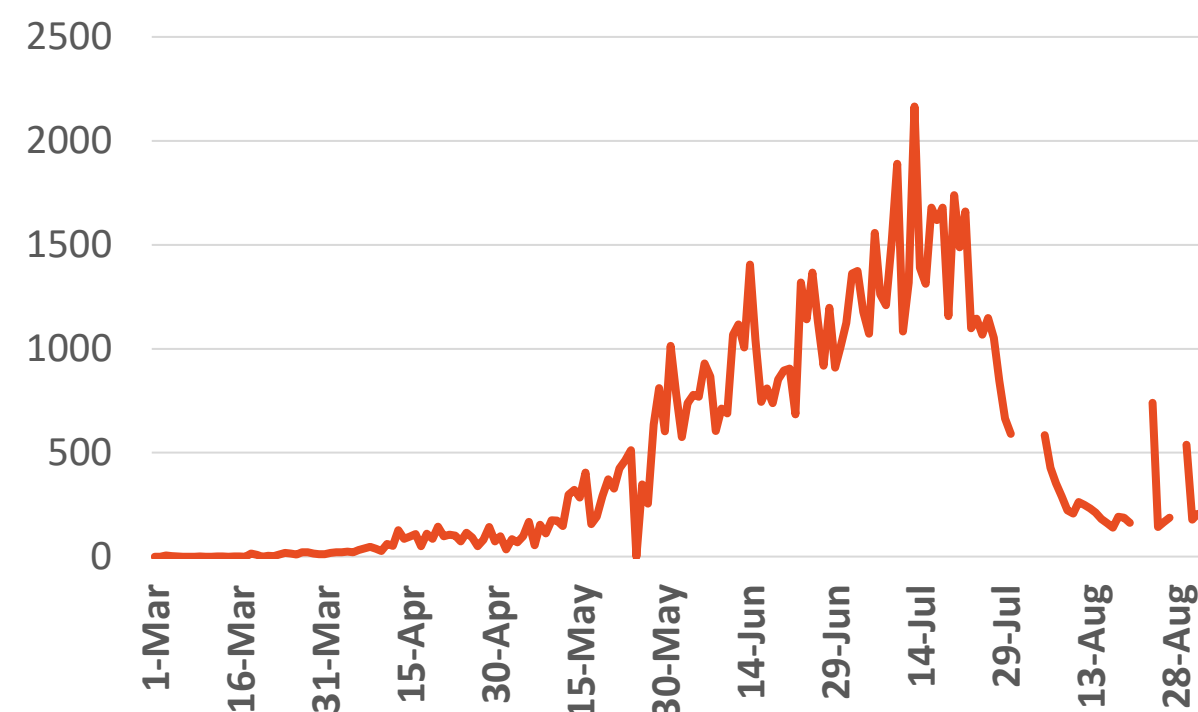
Source : KSA ministry of health

Bahrain



Source :WHO

Oman



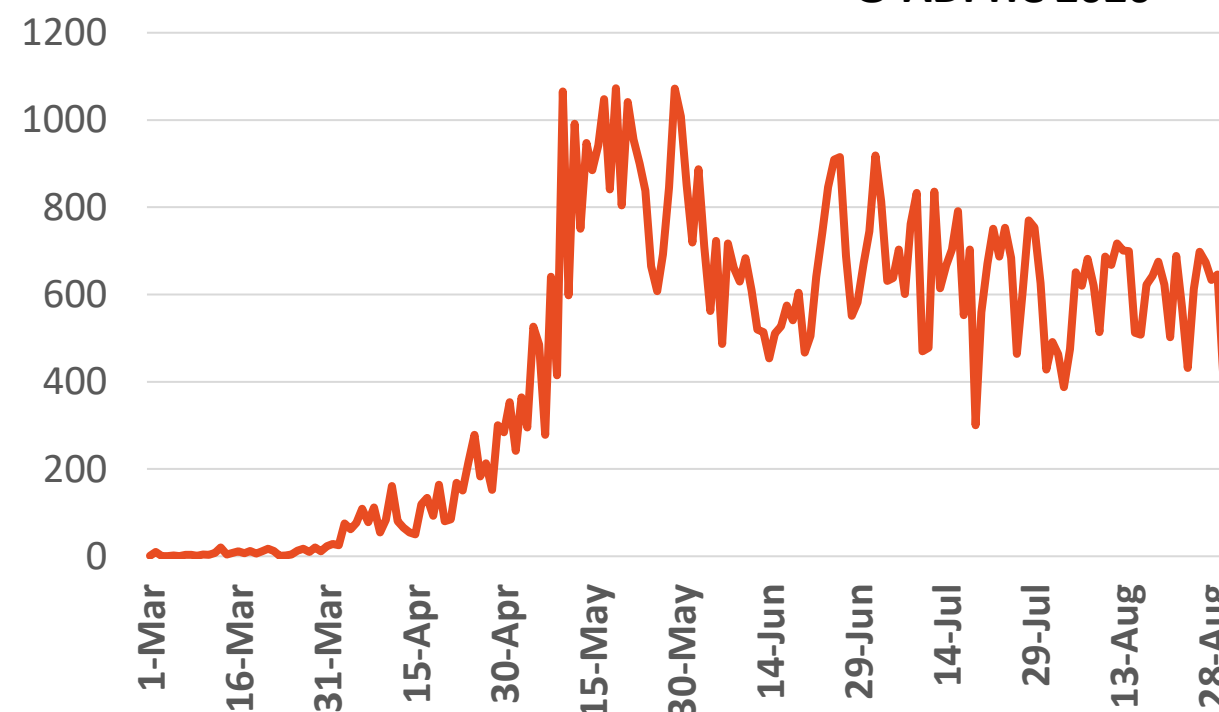
Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August, 21 to 23 August & from 28 to 30 August & 2 September

*No announced statistic data on weekends and official holidays.

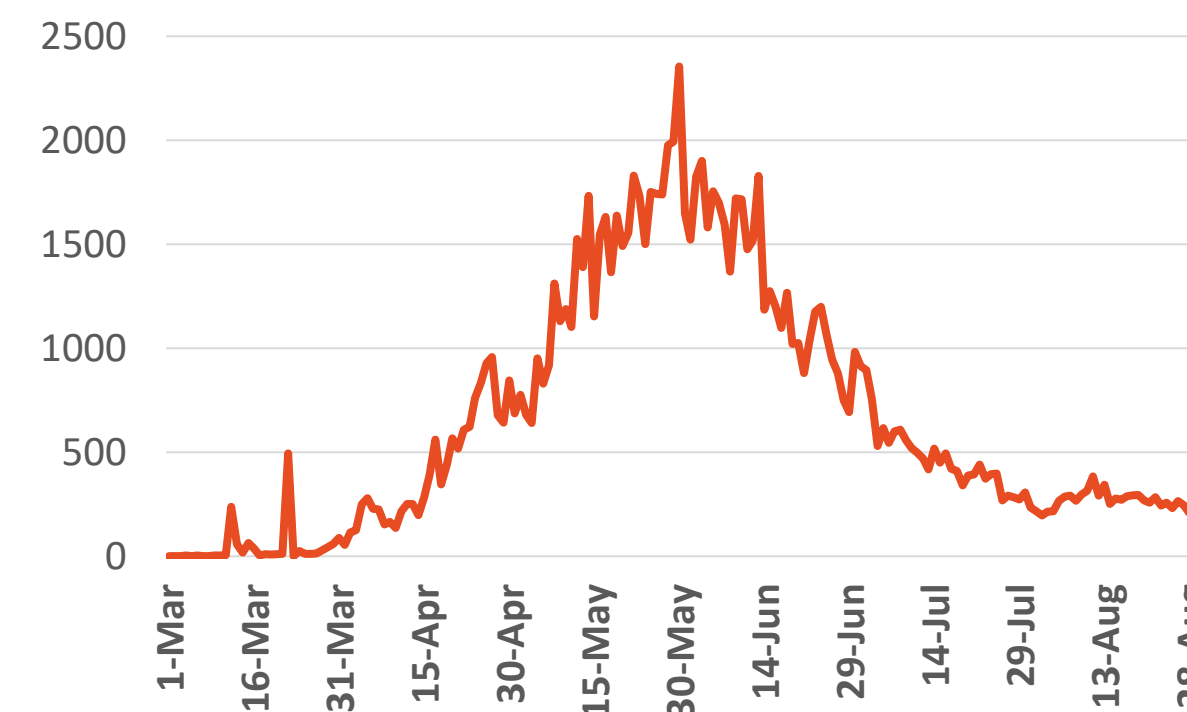
Kuwait

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Source : Kuwait ministry of health

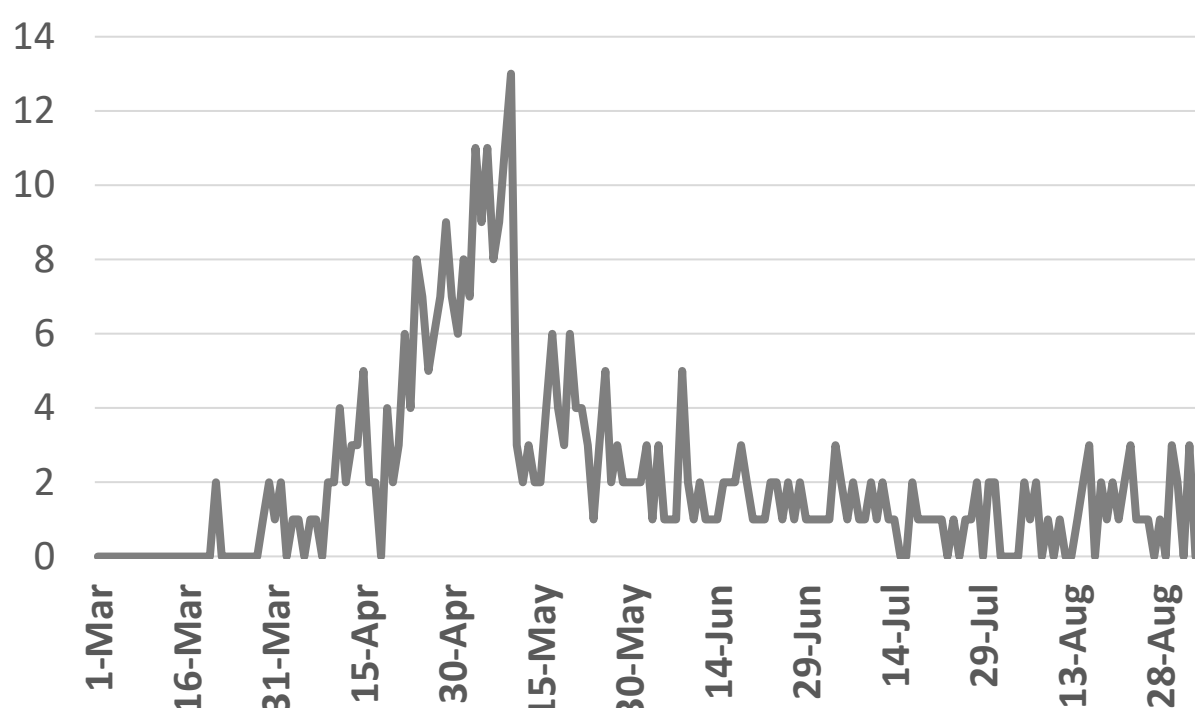
Qatar



Source : Qatar ministry of health

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

UAE



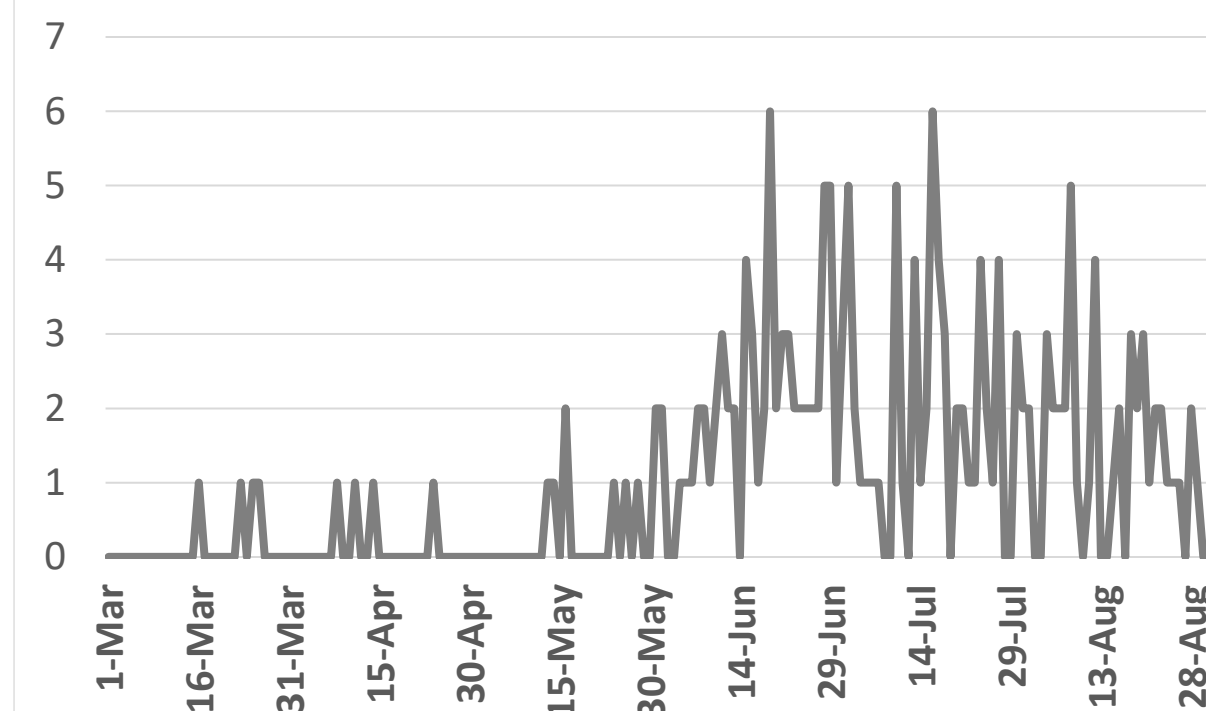
Source : National Emergency Crisis and Disaster Management Authority

KSA



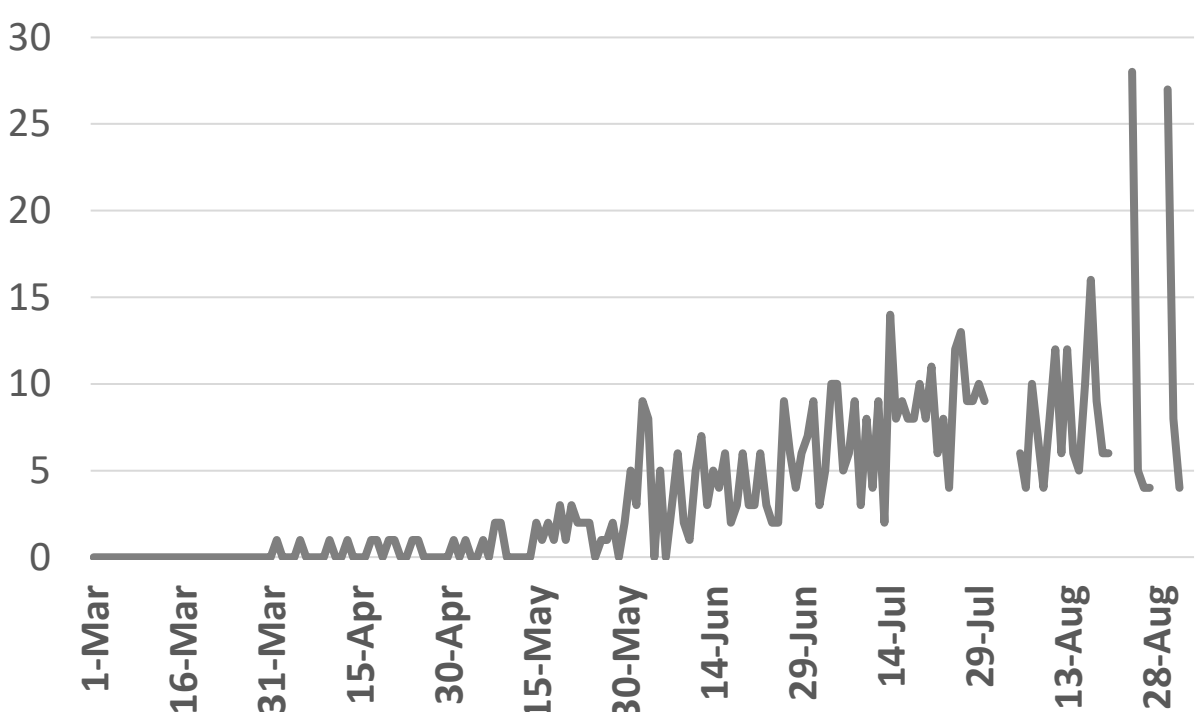
Source : KSA ministry of health

Bahrain



Source :WHO

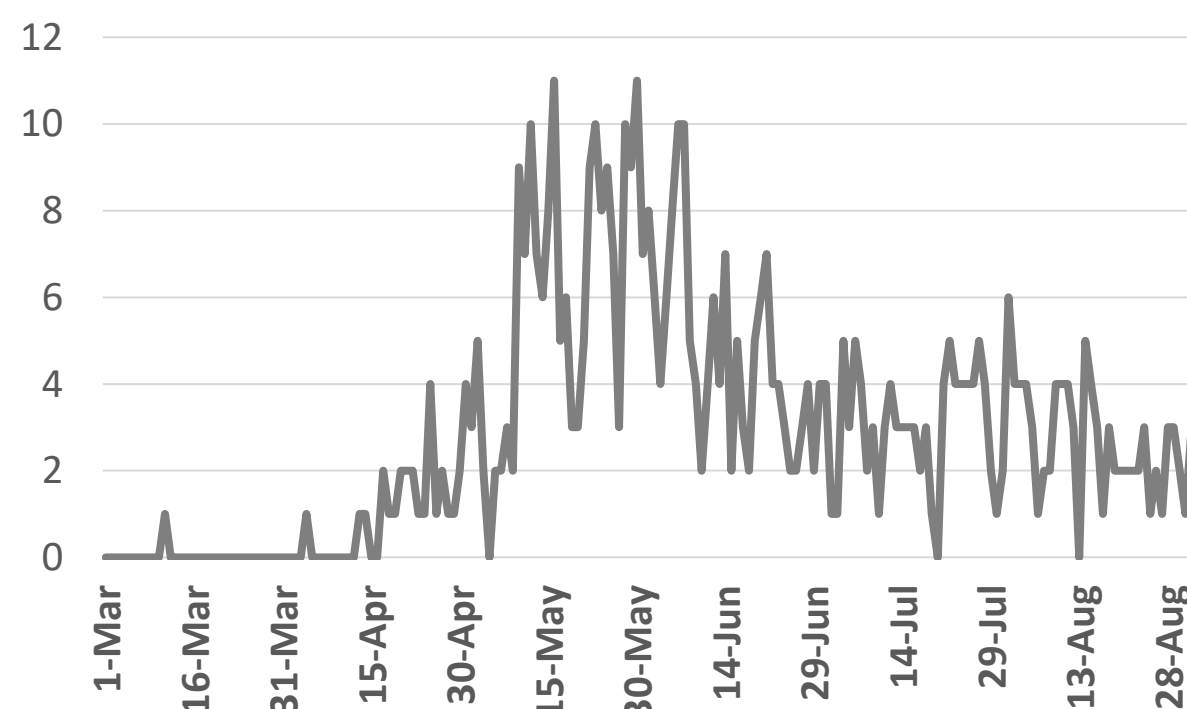
Oman



Source :Oman ministry of health

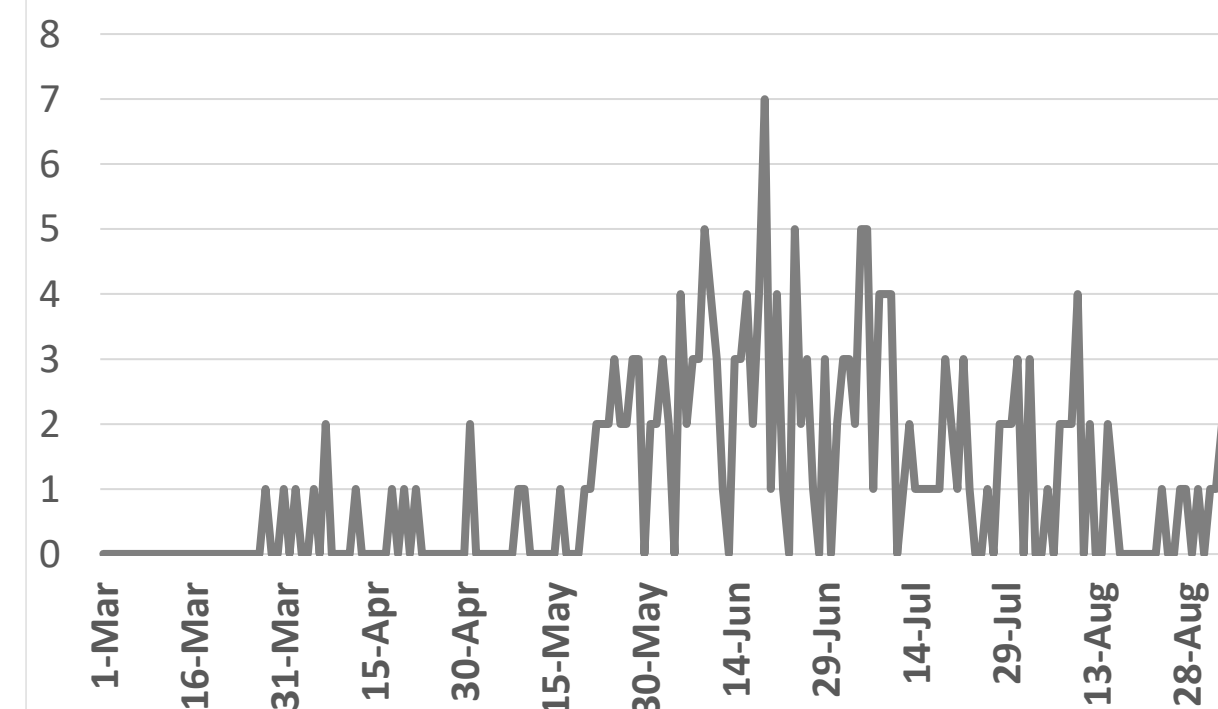
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

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*No announced statistic data on weekends and official holidays.



PUBLIC HEALTH RESPONSE

Article 1

Long-Term Consequences of COVID-19: Research Needs

Published

01 September 2020 [THE LANCET](#)

- The number of people affected by COVID-19 is unprecedented. The authors had good responses on the long term consequences of the disease to the patients and health care providers. The obvious way forward is in research. The authors compiled a list of questions based on their views and experience that they think should be answered.
- Multisite and multinational, projects are required because the description from a single site cannot determine between universal features and features of the local health system or the local population. Comparing data from different sites, we can learn which characteristics of the disease are universal and which are local.

Box 1: Long-term complaints of people recovering from acute COVID-19

Extreme fatigue
Muscle weakness
Low grade fever
Inability to concentrate
Memory lapses
Changes in mood
Sleep difficulties
Headaches
Needle pains in arms and legs
Diarrhea and bouts of vomiting
Loss of taste and smell
Sore throat and difficulties to swallow
New onset of diabetes and hypertension
Skin rash
Shortness of breath
Chest pains
Palpitations

Box 2: Questions on long term consequences of COVID-19 that can be answered by research

How can we help people with long term complaints? Physical therapy? Nutrition? Medications?
How many will need intensive reconditioning? Will it help?
How many will suffer from long term sequelae? Which sequelae?
How long will they suffer?
Can we predict during the acute disease which patients will develop long term consequences?
Are there features of the acute disease which predict long term consequences? Or underlying diseases which put patients at risk?
Are there management strategies of the acute disease related to the prevention (or exacerbation) of the long term consequences?
Will the people be infected again?
What is the contribution of social distancing and long isolation?
What is the time course of the immunological response in these patients? How does it differ from the time course in patients with no sequelae? Are there immunological patterns related to specific sequelae?
Is there an infectious or inflammatory explanation to the prolonged disease?
Are some of the manifestations explained by hypercoagulability?
Is there a genetic determinant to the prolonged disease?



Article 2

Bangladesh's COVID-19 Testing Criticized

Published

29 August 2020 [THE LANCET](#)

- In Bangladesh, public health experts have expressed their concern about government's decision to charge £1.80 (local currency 200 Taka) for COVID-19 test done at government facilities and £4.50 (local currency 500 Taka) for samples collected from home. This fee is increased to £32 per test (local currency 3,500 Taka) in the private sector. Charging people for tests is creating barriers, especially for the poor.
- Since this decision, testing rates have fallen to around 0.8 tests per 1000 people per day, with a low of 0.06 tests per 1000 people in August. On average, there are between 12,000 and 15,000 tests per day for a population of 168 million. Other barriers to testing include lack of confidence in the health care system, so people don't want to get tested because they don't want to get a result they don't trust. Furthermore, there is a delay to receive the results - sometimes it takes a week, other times it just doesn't come.
- If people are not getting tested; then there has to be a mechanism in place so that experts can understand the situation of the country. There is an urgent need to set up a sentinel surveillance system that would enable a better understanding of the virus at the community level to see where the infection is moving and to plan accordingly. Furthermore, there is an urgent need for a complete restructuring of the health care system including banning physicians who work in the public sector from supplementing their income with a private practice that has led to the neglect of patients in public facilities among other interventions.



Article 3

Salivary Detection of COVID-19

Published

28 August 2020 [ACP - Annals of Internal Medicine](#)

This prospective cohort study aims to compare saliva testing to swab testing in 1939 asymptomatic patients, high-risk persons and those with mild symptoms suggestive of coronavirus disease 2019 (COVID-19) at a centralized testing center in Ottawa, Canada. The patient had a paired testing from swab and saliva samples. The aim of this recruitment method was mimic the mass testing settings.

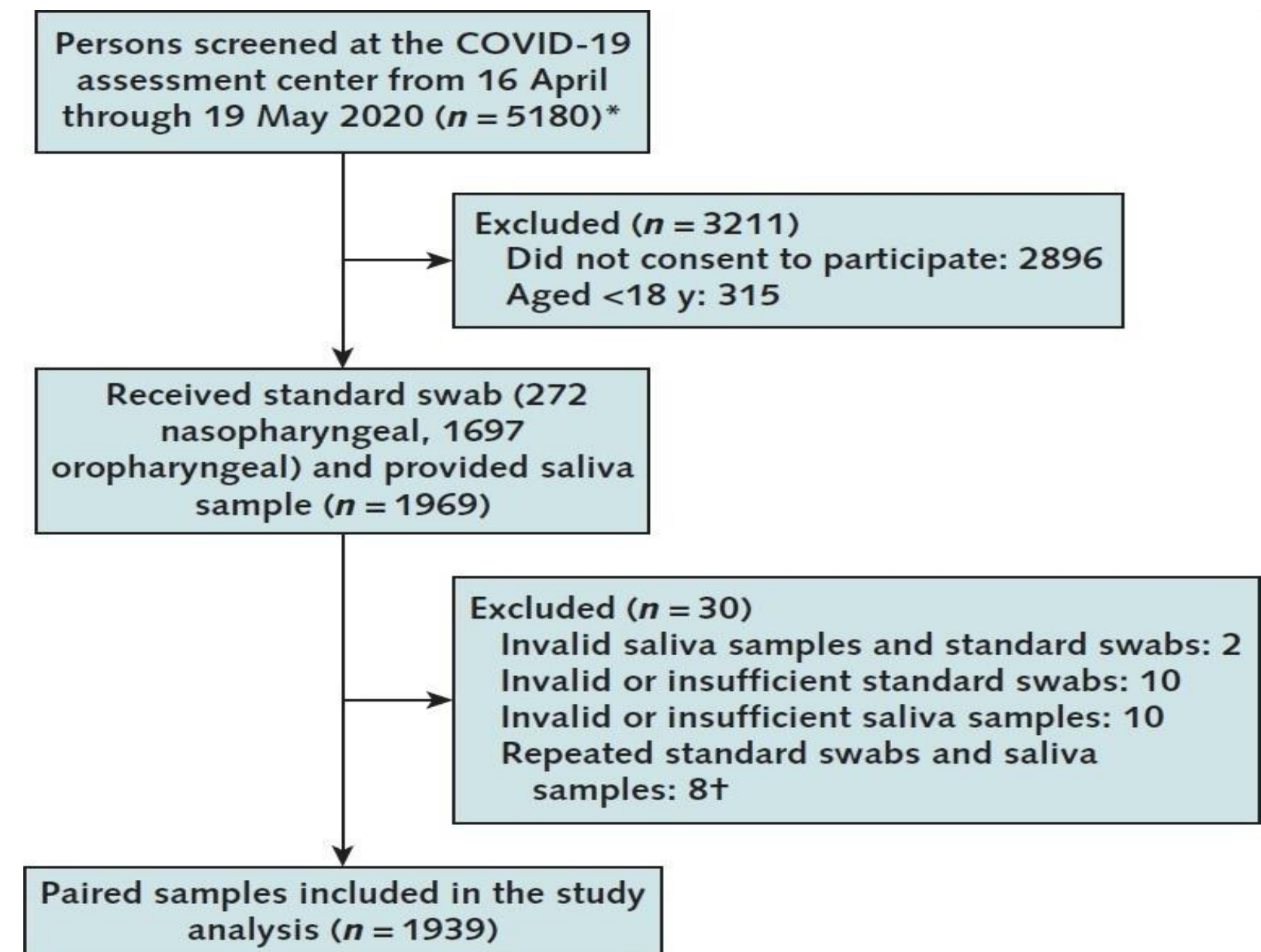
Findings

- Of the 1939 paired swab and saliva samples analyzed figure 1 SARS-CoV-2 *E* gene was detected in 70 samples
- 80.0% with swabs and 68.6% with saliva.
- Thirty-four participants (48.6%) tested positive for SARS-CoV-2 on both swab and saliva samples.
- Discordant test results were seen in 22 participants (31.4%) who tested positive with swab alone and in 14 (20%) who tested positive with saliva alone.
- Swabs were obtained from the nasopharynx in 35.7% of participants who tested positive with saliva alone, compared with 9.1% of participants who tested positive with swab alone.

Conclusion

The study found that nasopharyngeal and oropharyngeal swabs detected more COVID-19 cases than saliva testing among asymptomatic patients but at high risk or who were mildly symptomatic.

Figure. Study flow diagram.



- Salivary test has been proposed as an alternative because it does not require trained staff or personal protective equipment, can be done outside testing centers, and may be better tolerated in challenging or pediatric populations. Nonetheless, this study shows that saliva testing may be of particular benefit for remote, vulnerable, or challenging populations.

THANK YOU

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