

SCIENTIFIC RESEARCH MONITORING ON COVID-19

9 JULY 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 158)

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.

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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).

Transmission

It is Time to Address Airborne Transmission of COVID-19

Clinical Features

Asymptomatic SARS-CoV-2 Infection in Belgian Long-term Care Facilities

Vaccine

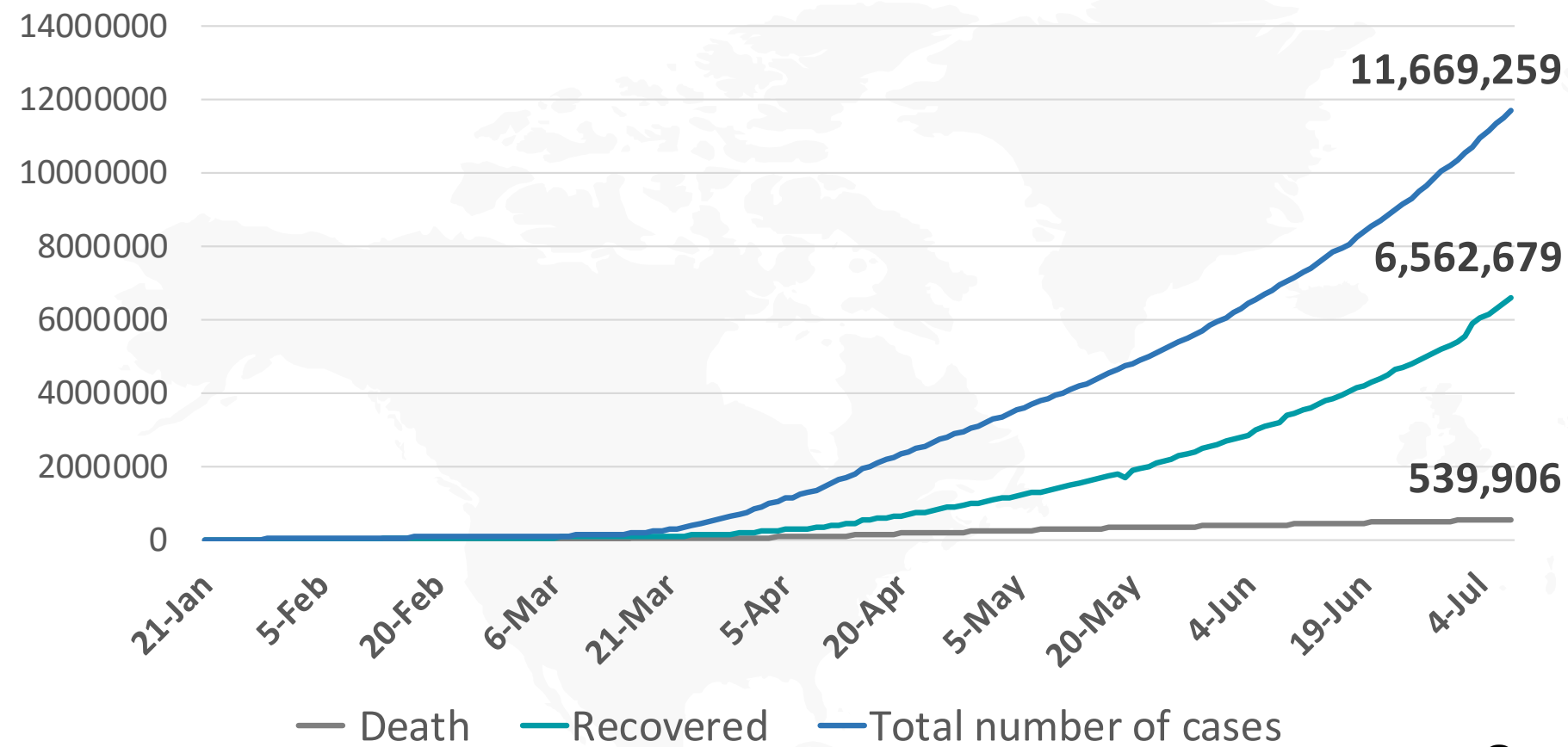
The Development of COVID-19 Vaccines – Safeguards Needed



- WHO experts will travel to China to work together with their Chinese counterparts to prepare scientific plans for identifying the zoonotic source of the SARS-COV-2 virus. The experts will develop the scope and terms of reference for a WHO-led international mission.
- WHO has delivered \$1.6 million worth of essential COVID-19 medical supplies and equipment to Afghanistan, a country with a health system facing severe challenges.
- Burkina Faso has resumed **polio vaccination campaigns under strict COVID-19 prevention measures.**
- As the region of the Americas reports **100,000 cases of COVID-19 a day**, the Director of the WHO Regional Office of the Americas, Dr Carissa F. Etienne, has called for strong coordination across countries, evidence to guide leaders' actions and for people to protect themselves and others.



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)

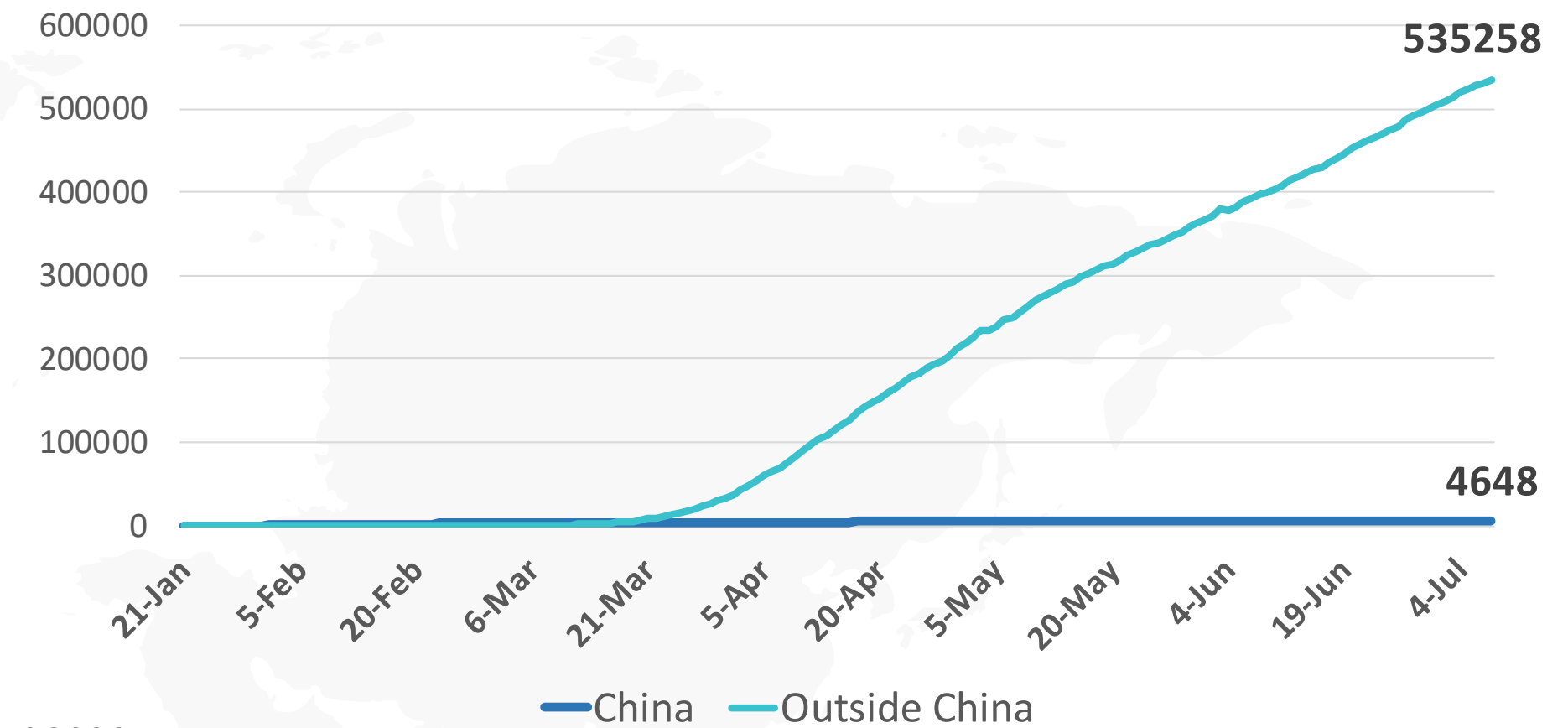


Figure 2: Daily new infected COVID-19 cases (china and the rest of the world)

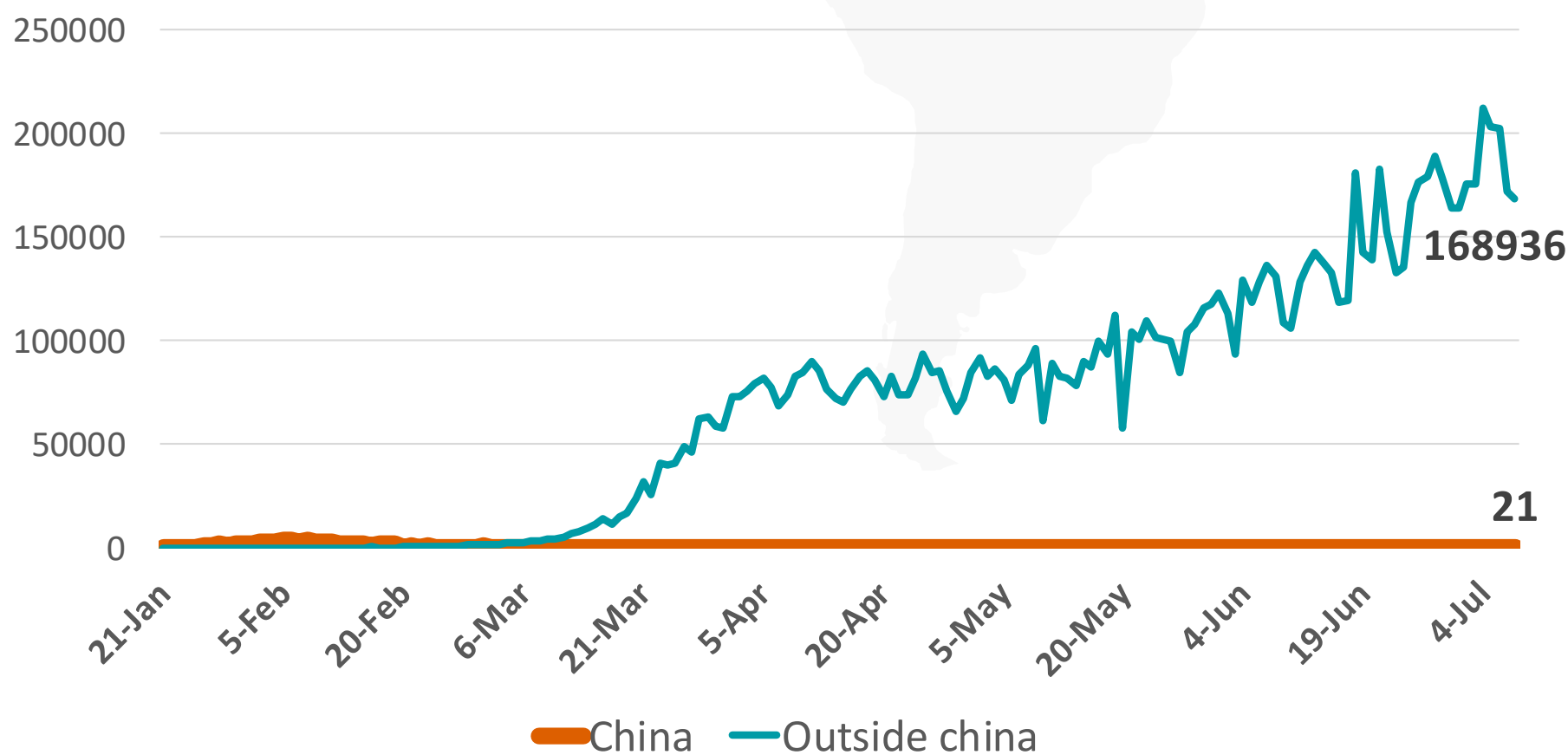


Figure 4: Global daily new deaths due to COVID-19 (china and rest world)

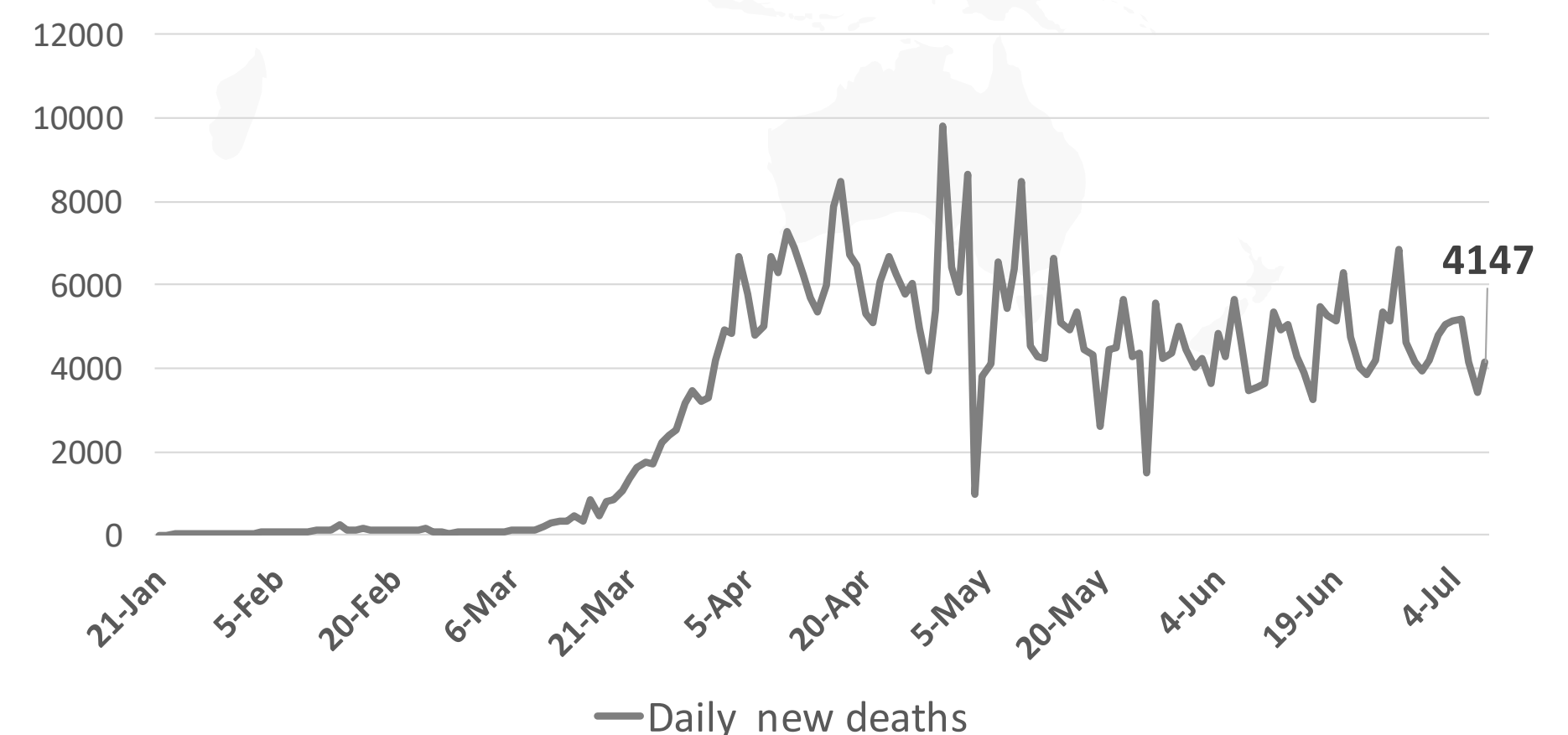


Figure 3: Top 10 countries in the total number of cases due to COVID-19

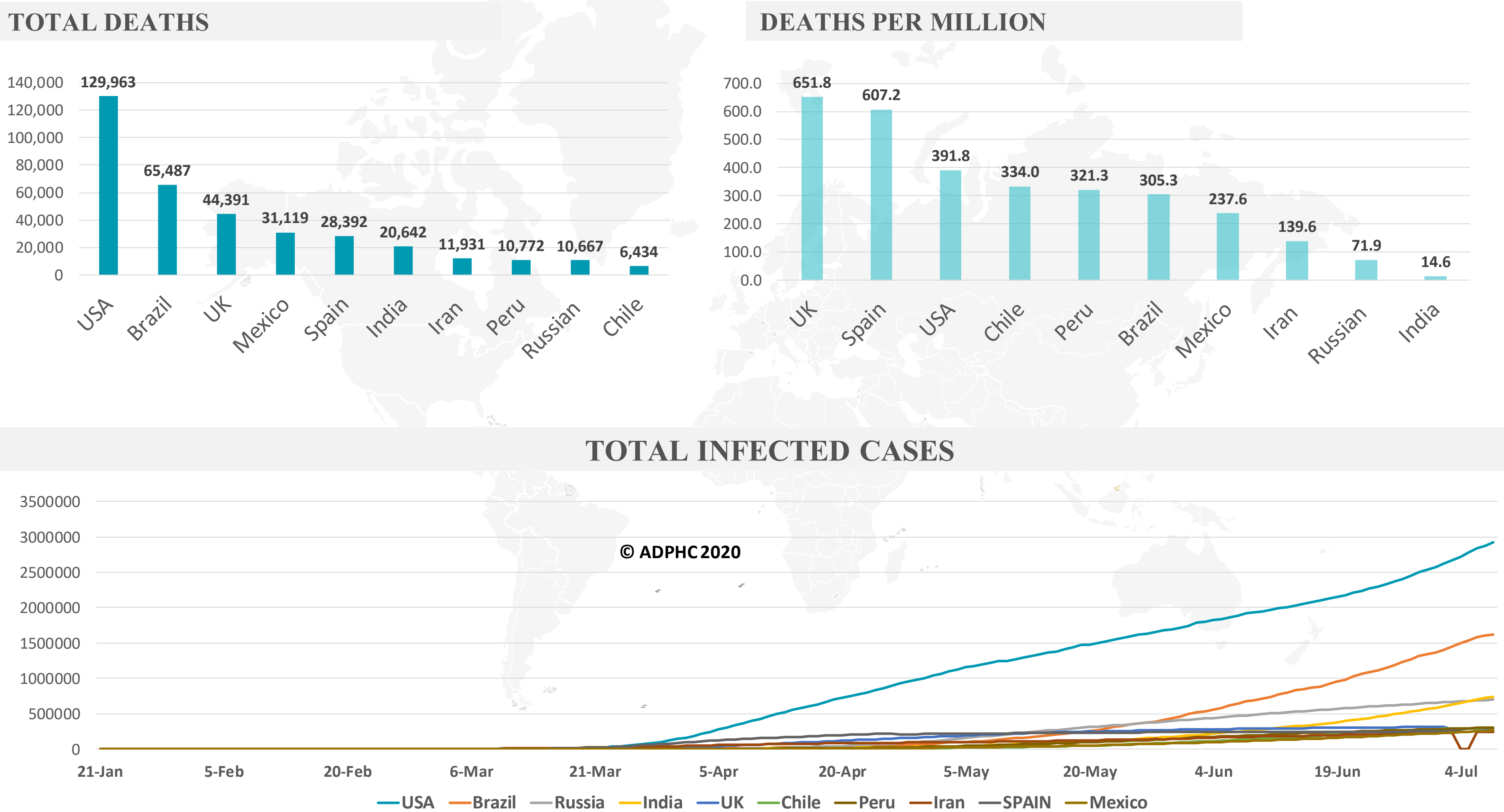


Figure 5: Total number of infected and recovered due to COVID-19 reported by the UAE

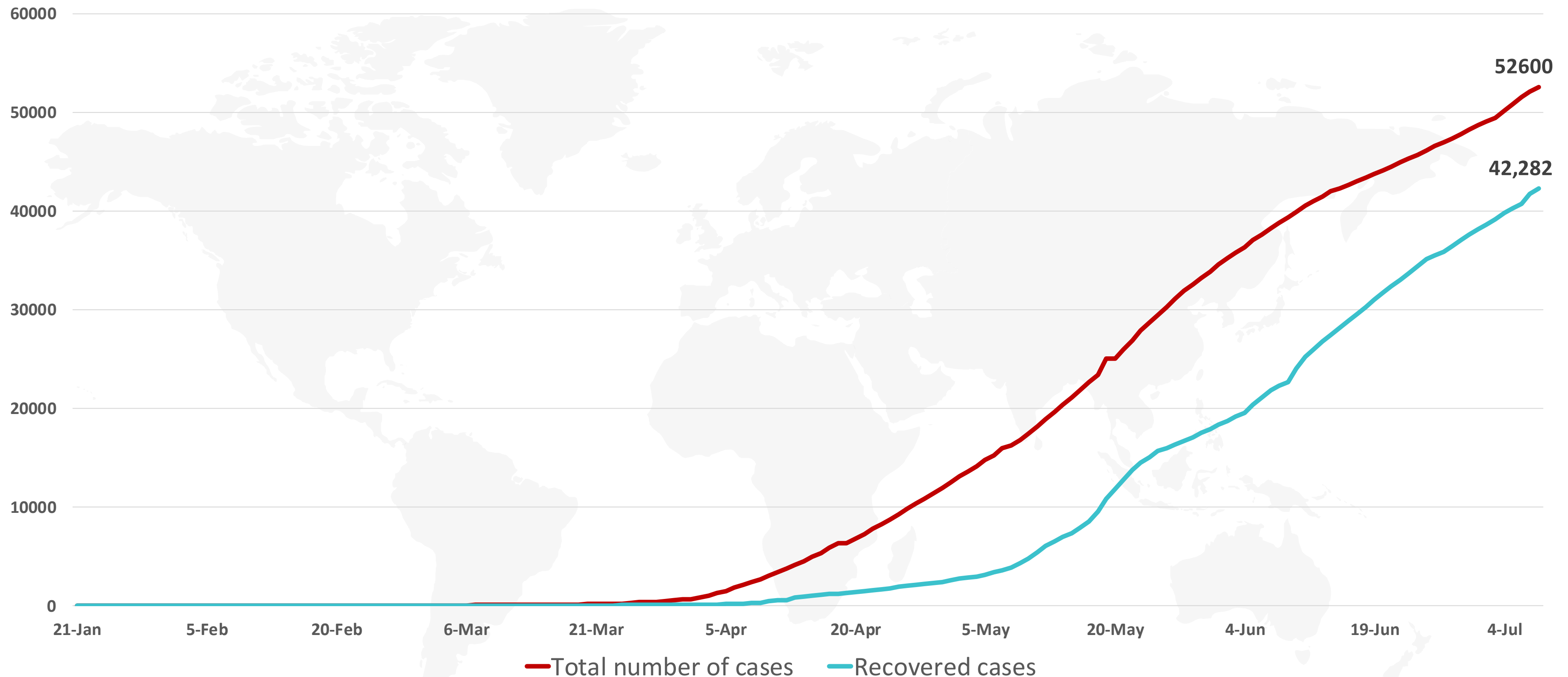
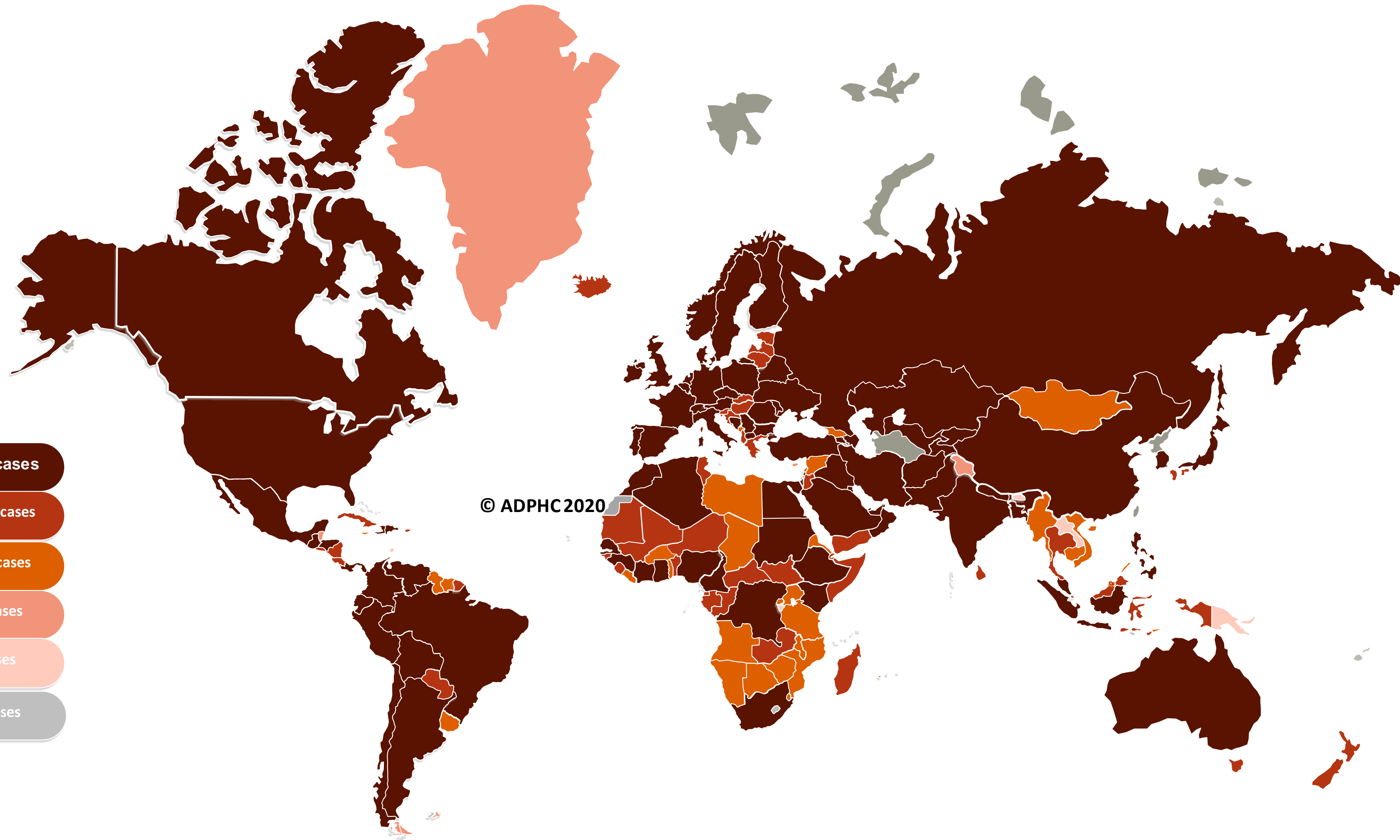


Figure 7A : Global distribution of COVID-19 cases



More than 5000 cases

From 1001 to 5000 cases

From 101 to 1000 cases

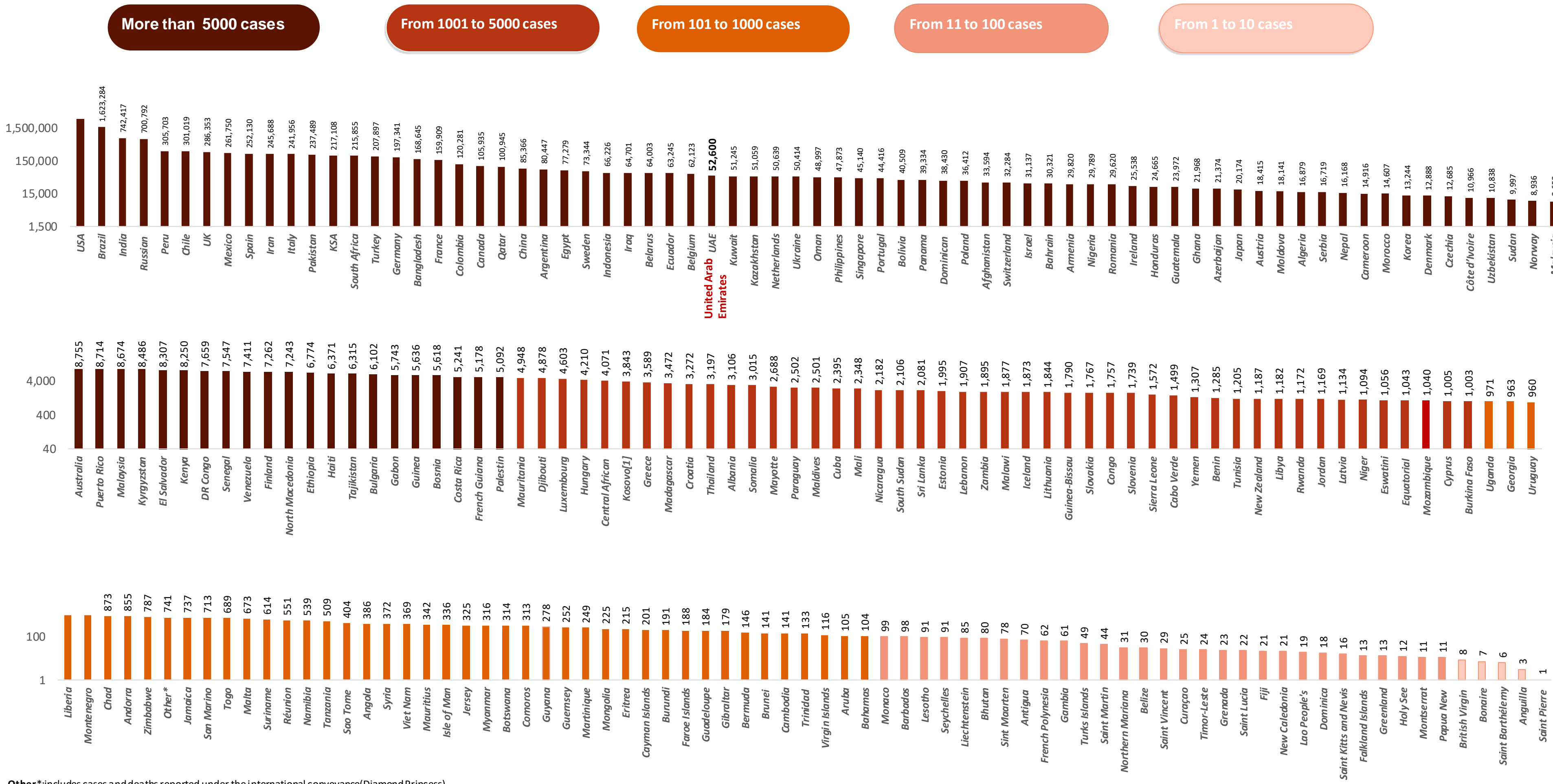
From 11 to 100 cases

From 1 to 10 cases

No confirmed cases



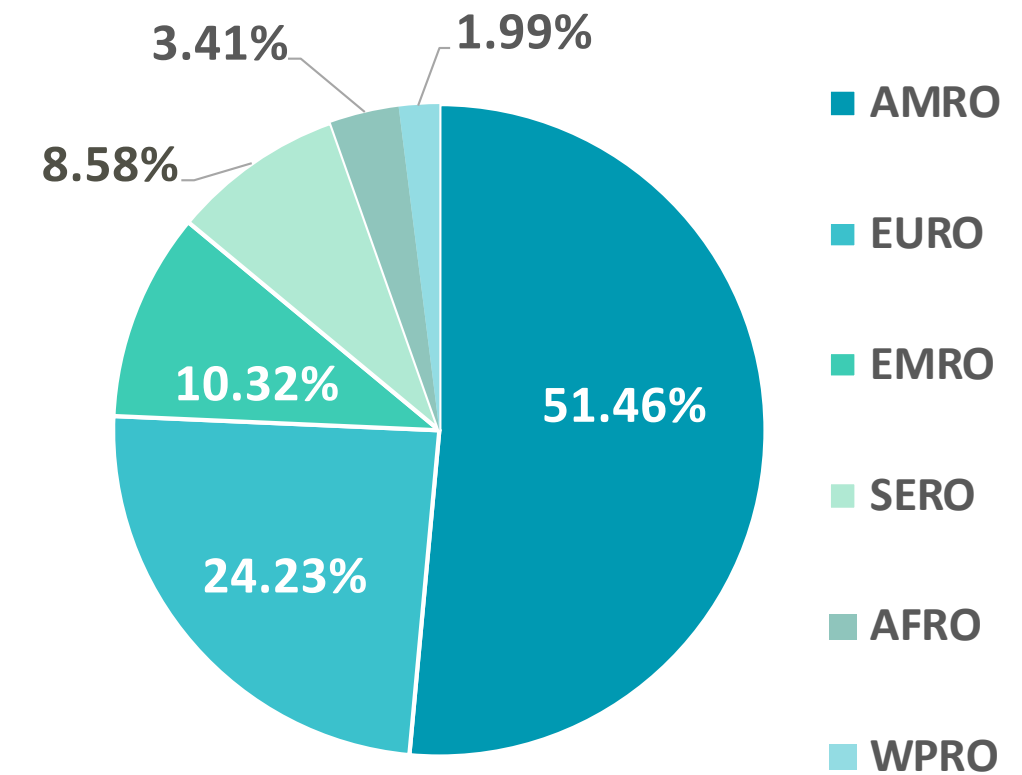
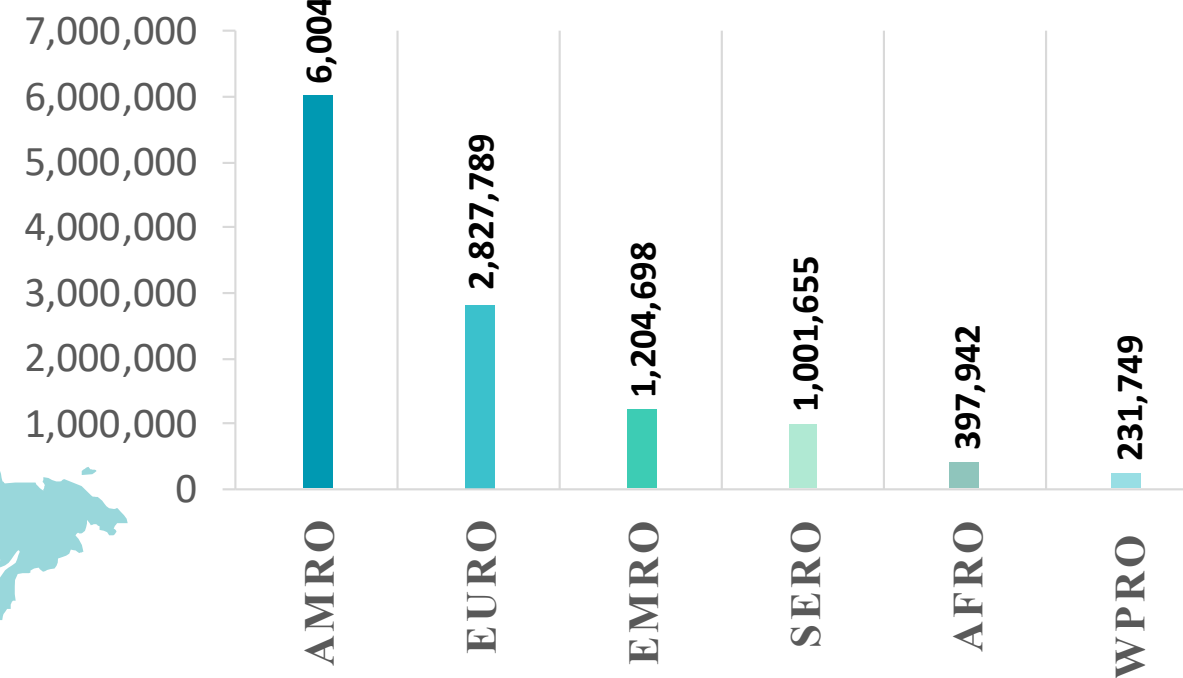
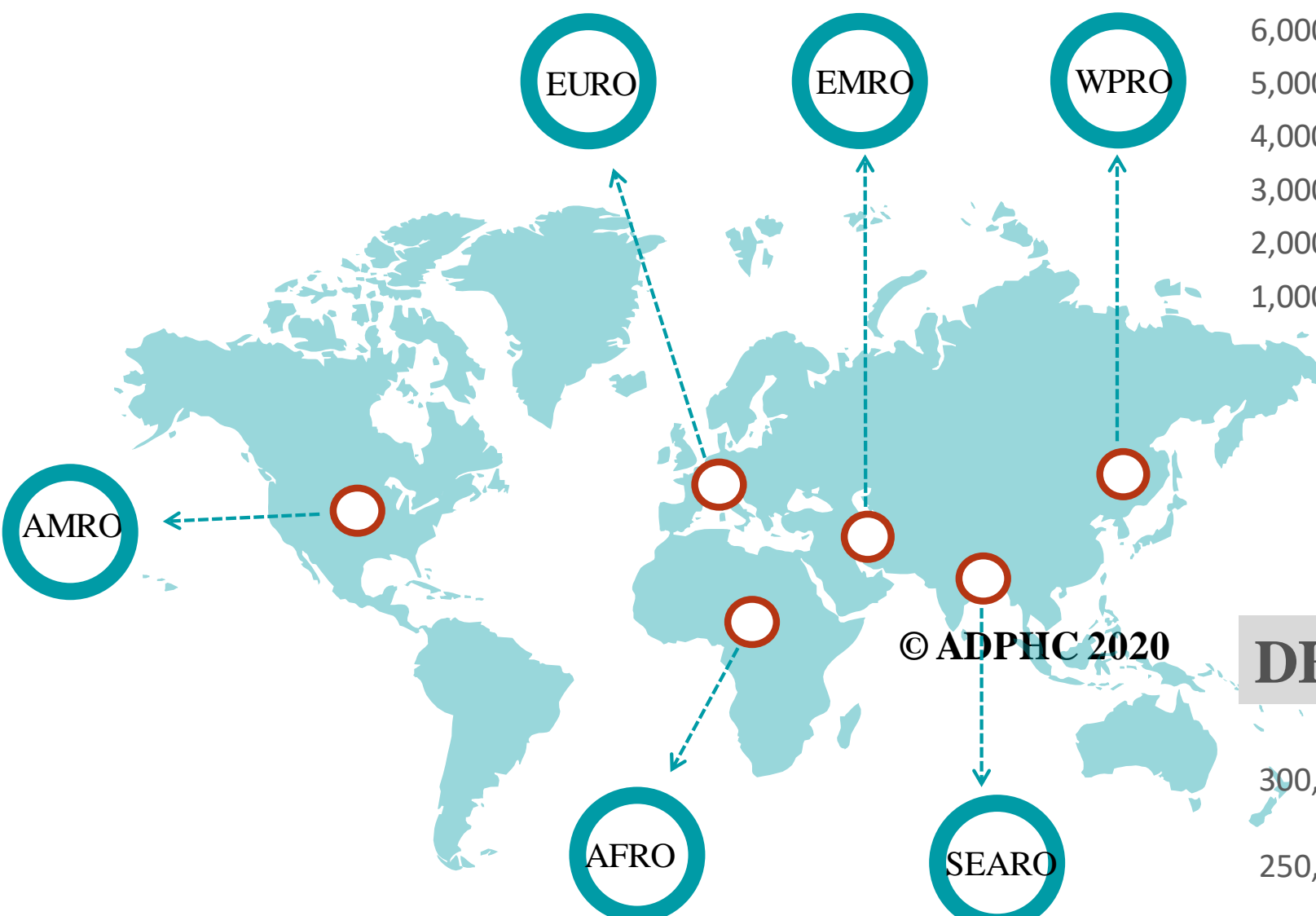
Figure 7B: Bar chart illustrate the global distribution of COVID19 cases



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

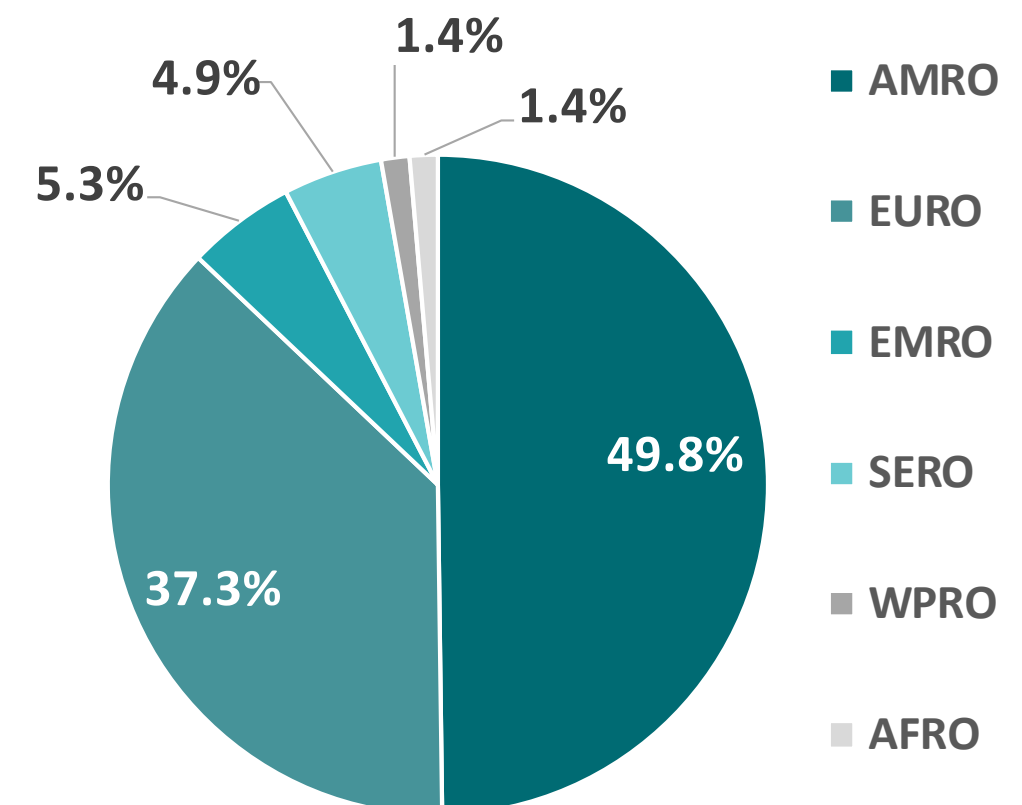
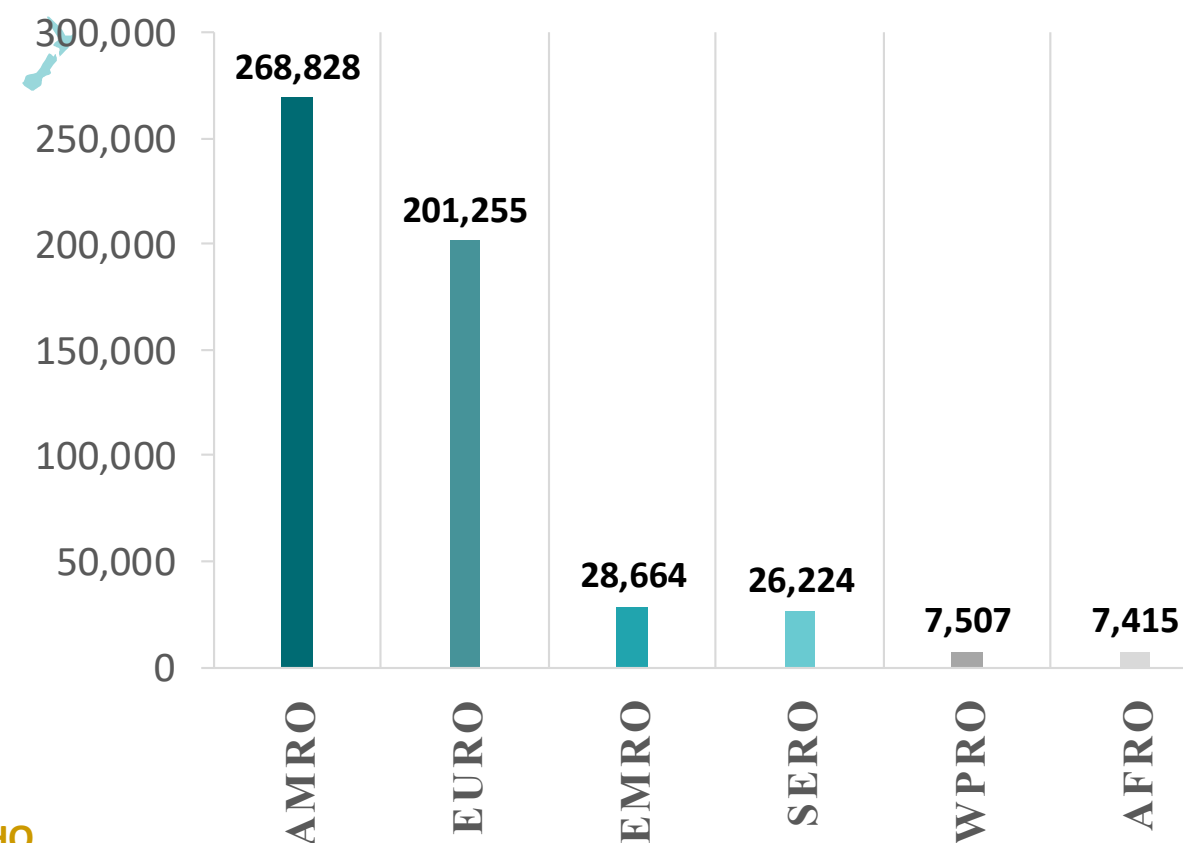
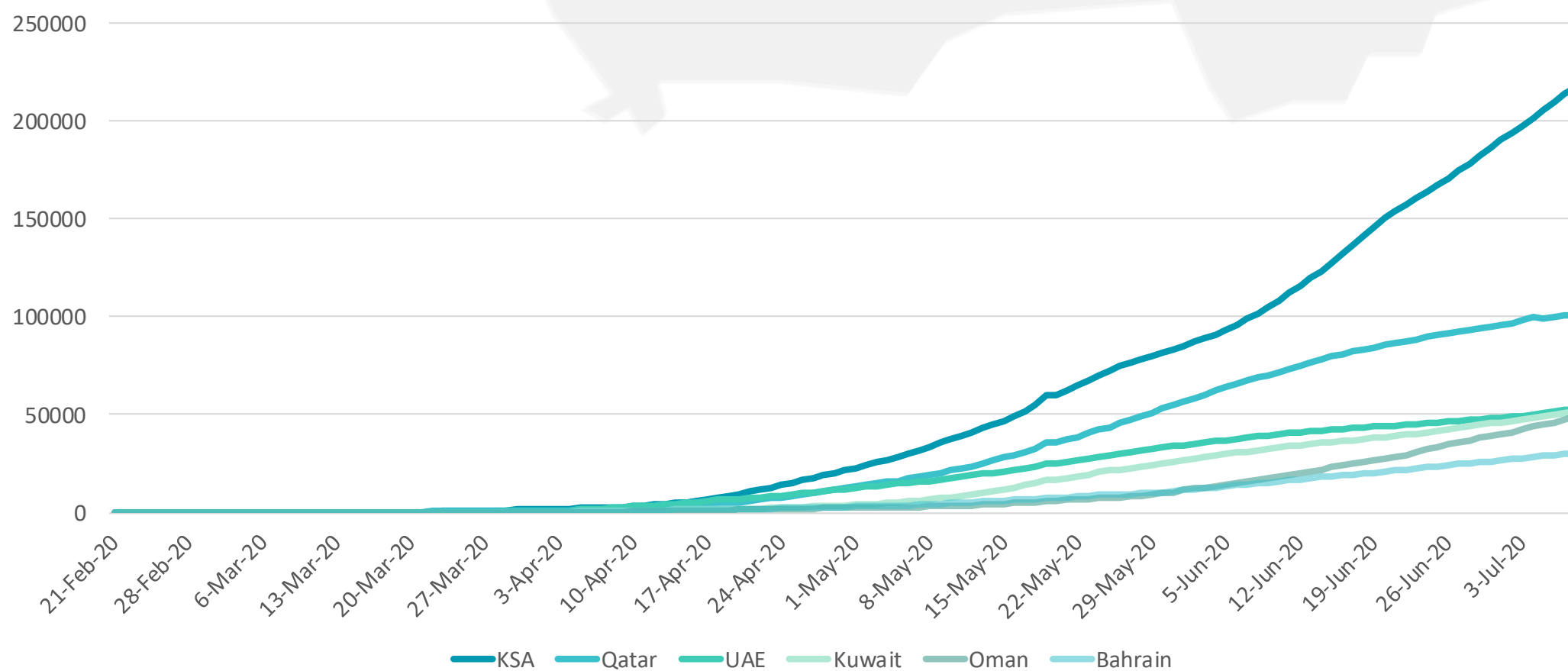
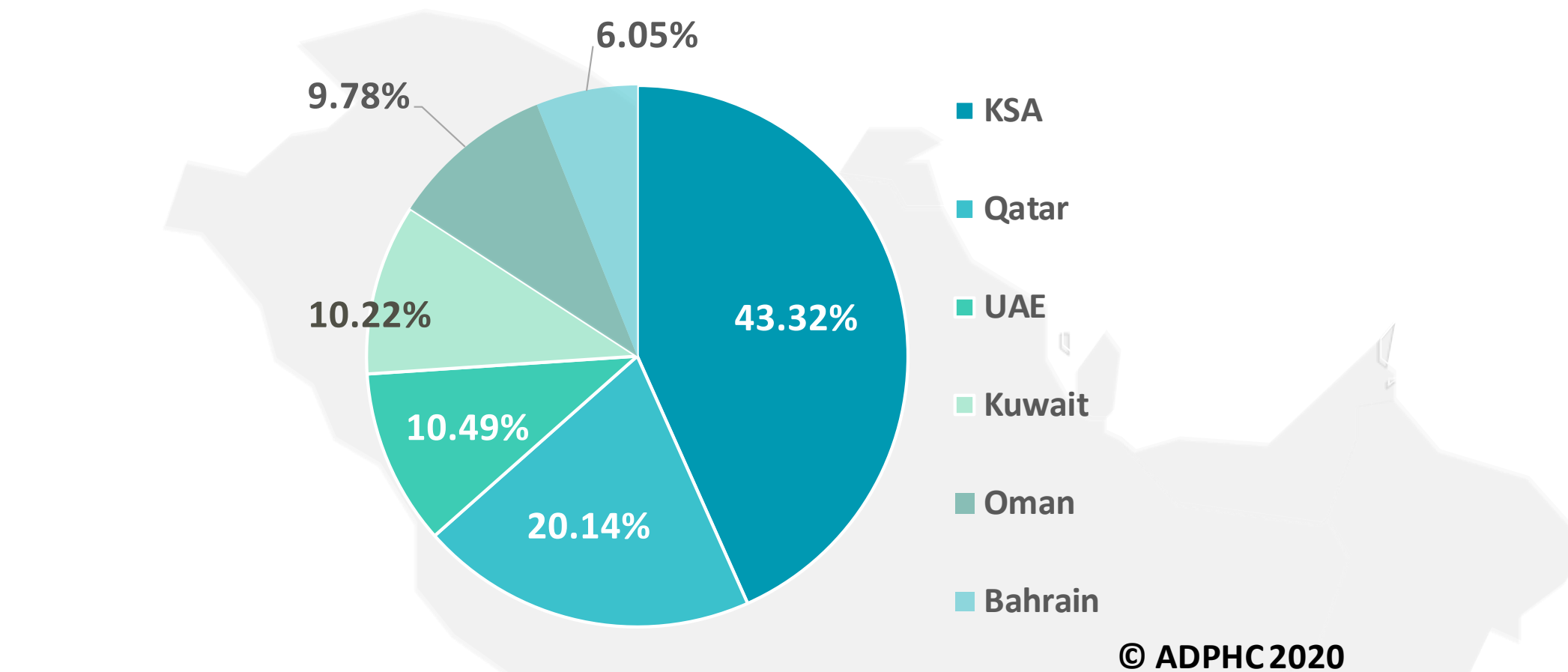
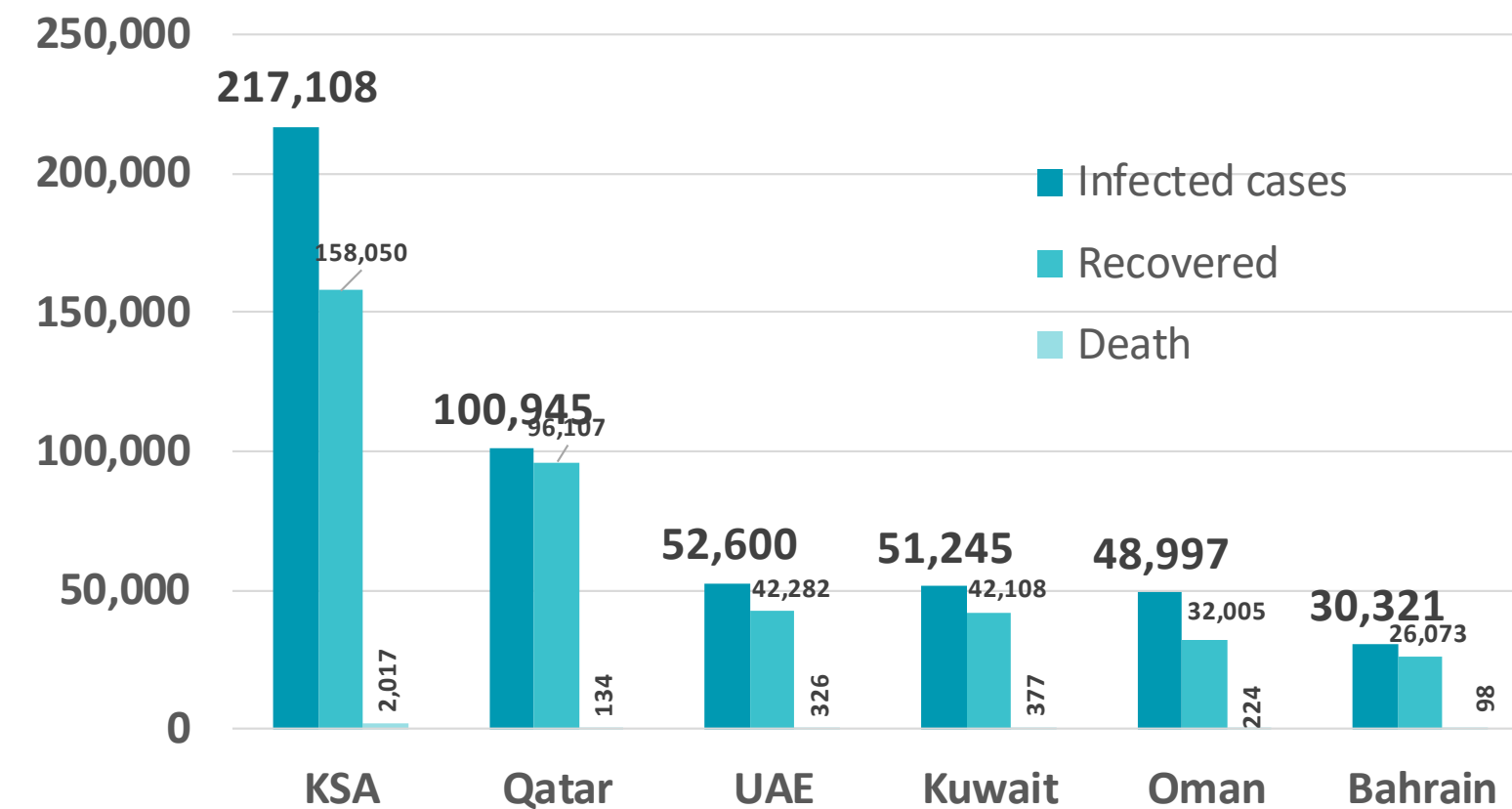


Figure 9: Comparative analysis of the distribution of COVID19 cases in GCC countries

TOTAL NUMBER OF INFECTED CASES



TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATH PER MILLION

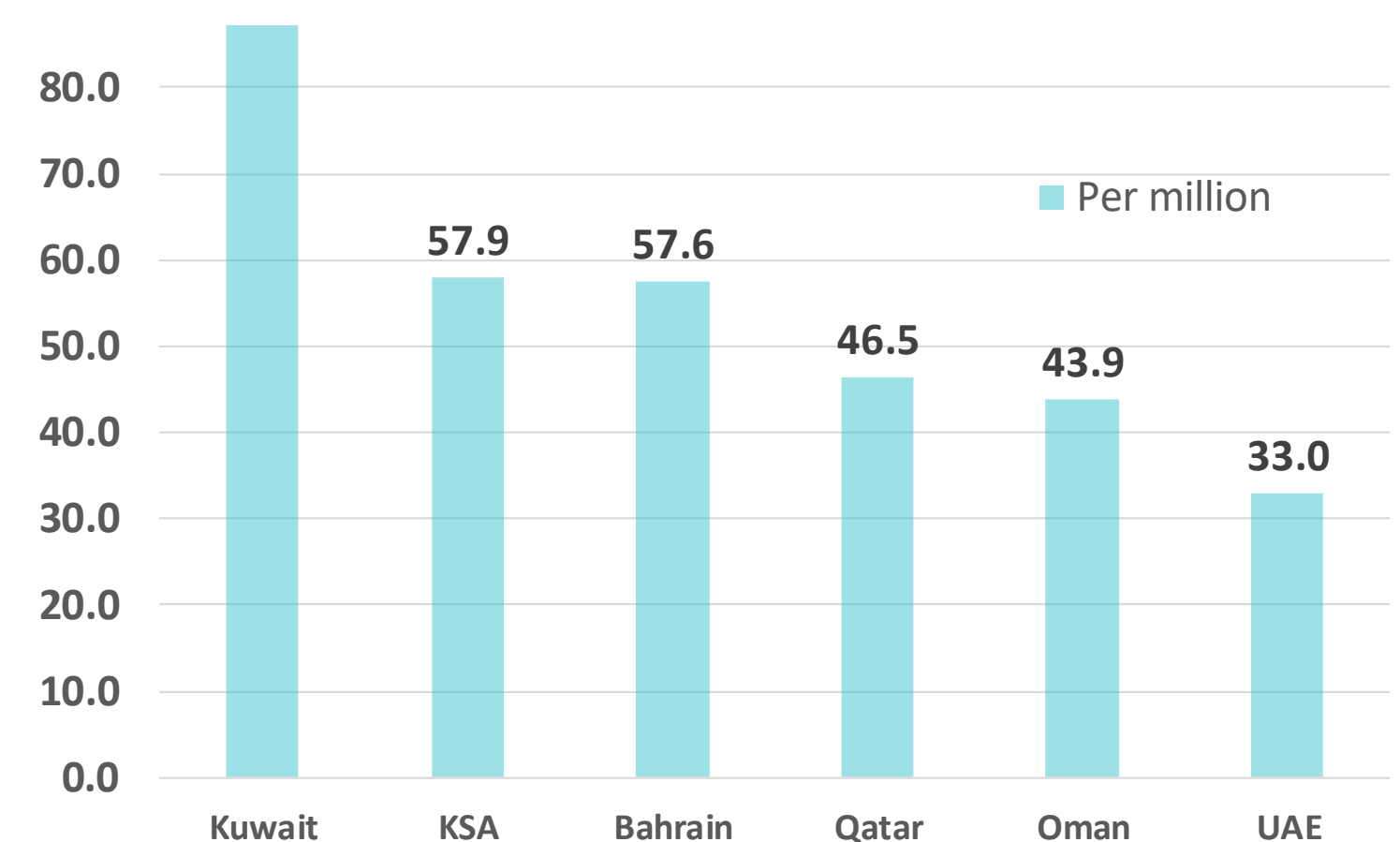


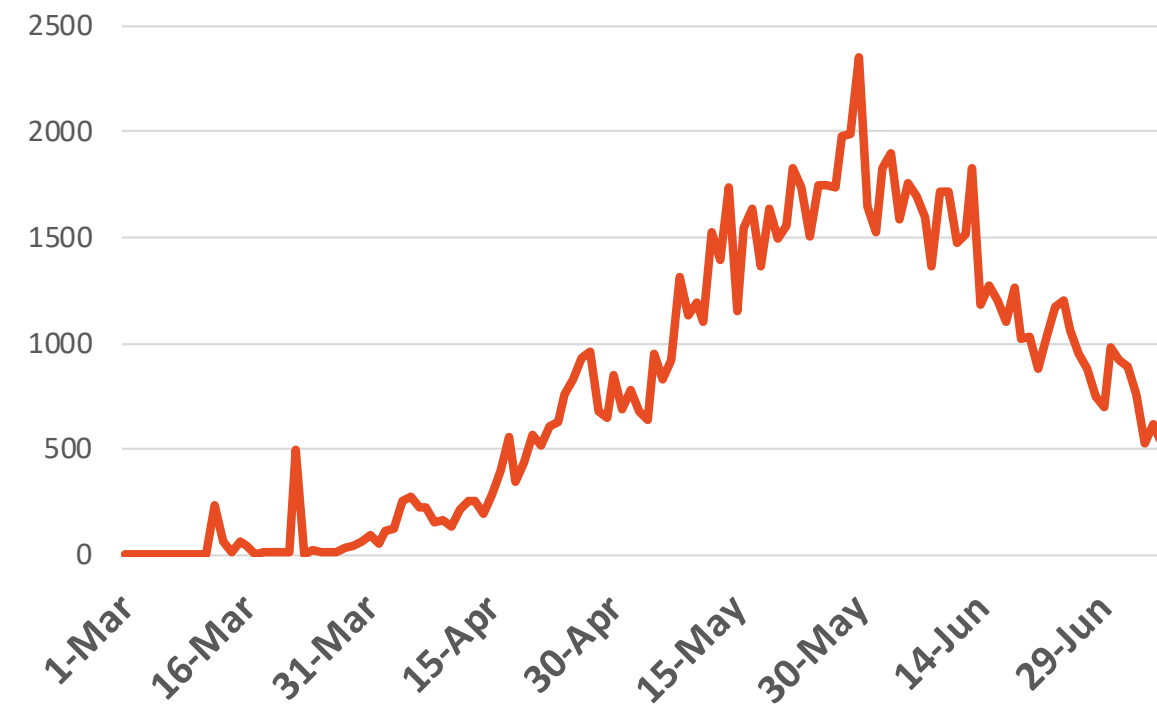
Figure 10: Comparative analysis of the distribution of COVID19 new cases in GCC countries

KSA



Source : KSA ministry of health

Qatar



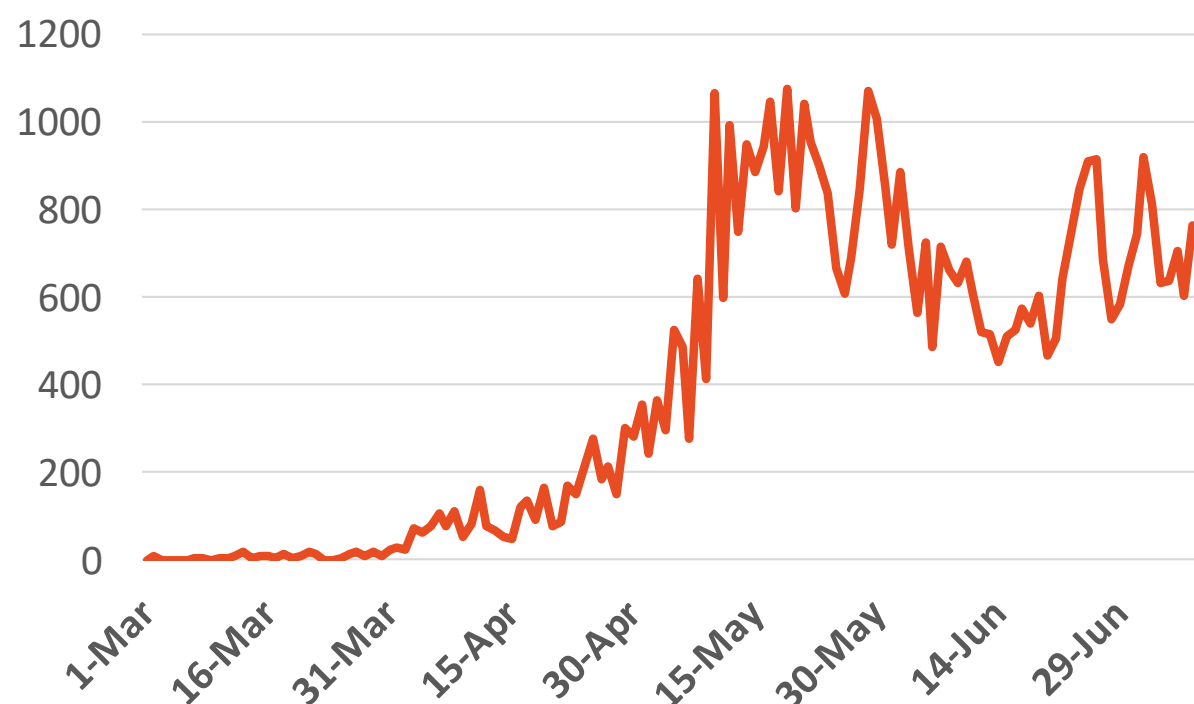
Source : Qatar ministry of health

UAE



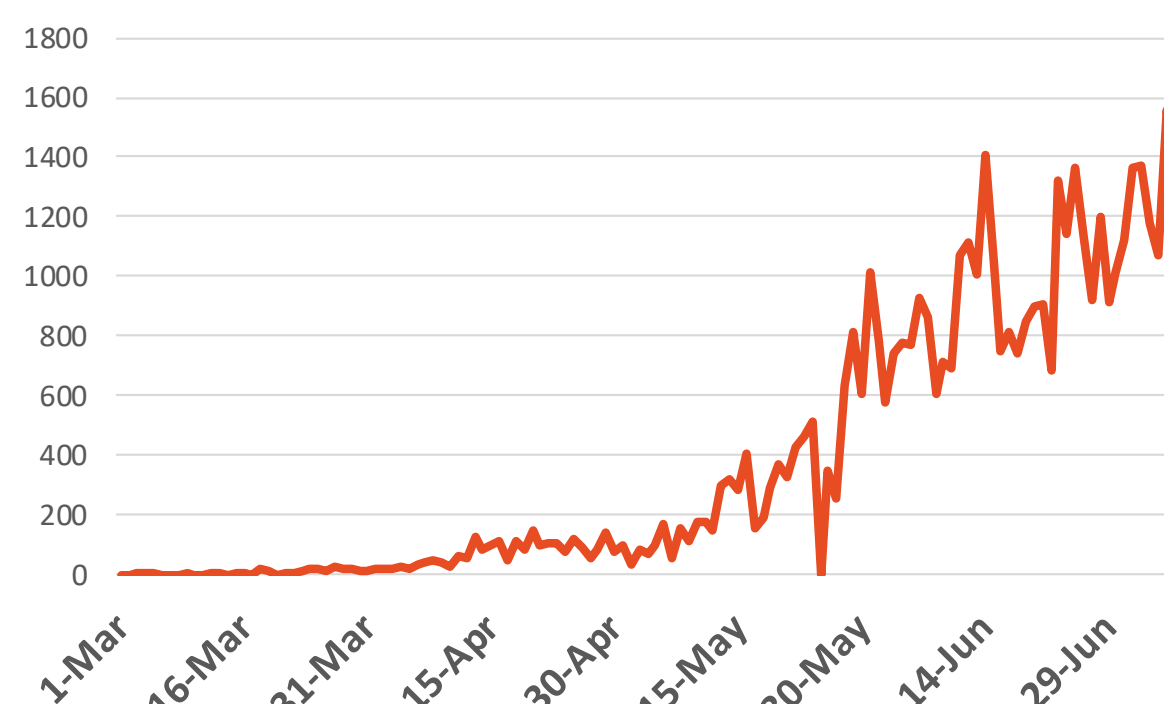
Source : National Emergency Crisis and Disaster Management Authority

Kuwait



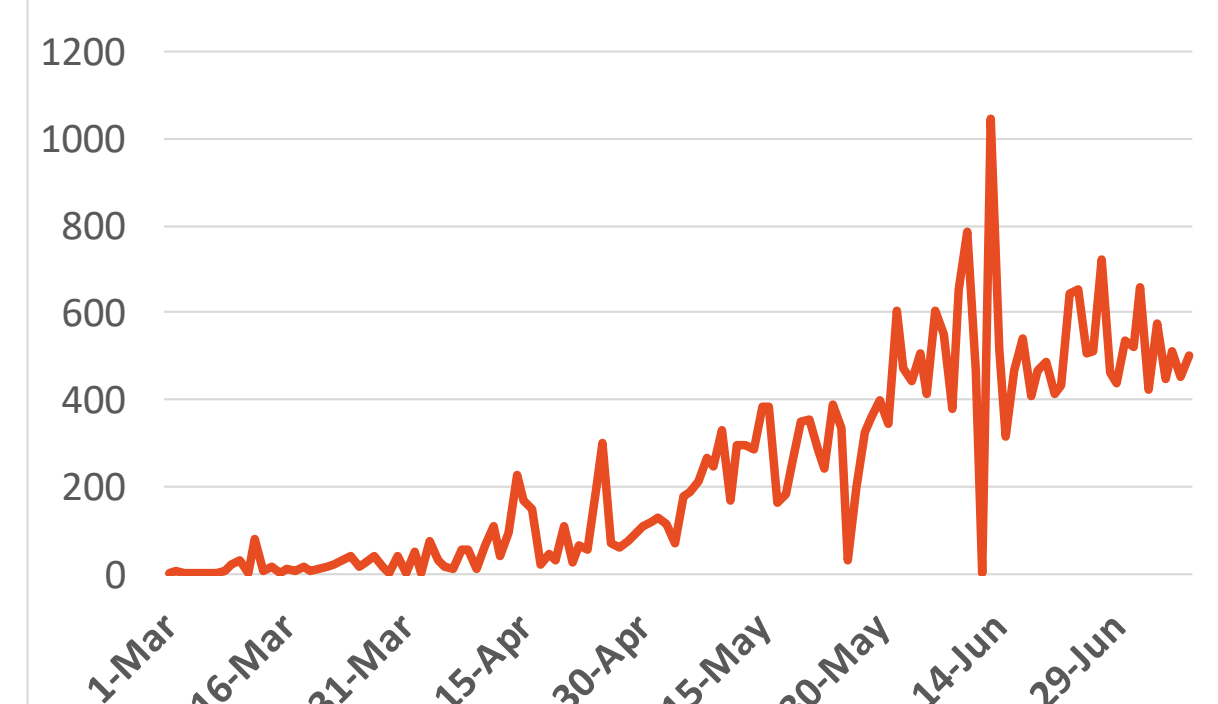
Source : Kuwait ministry of health

Oman © ADPHC 2020



Source : Oman ministry of health

Bahrain

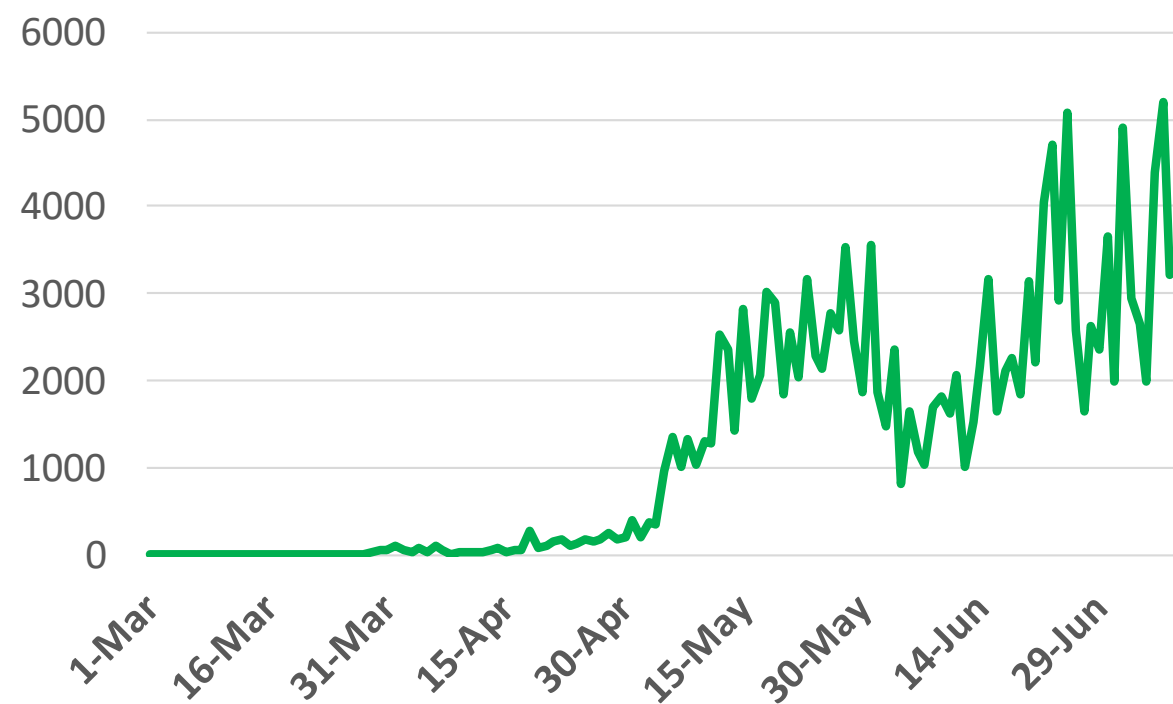


Source : WHO



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



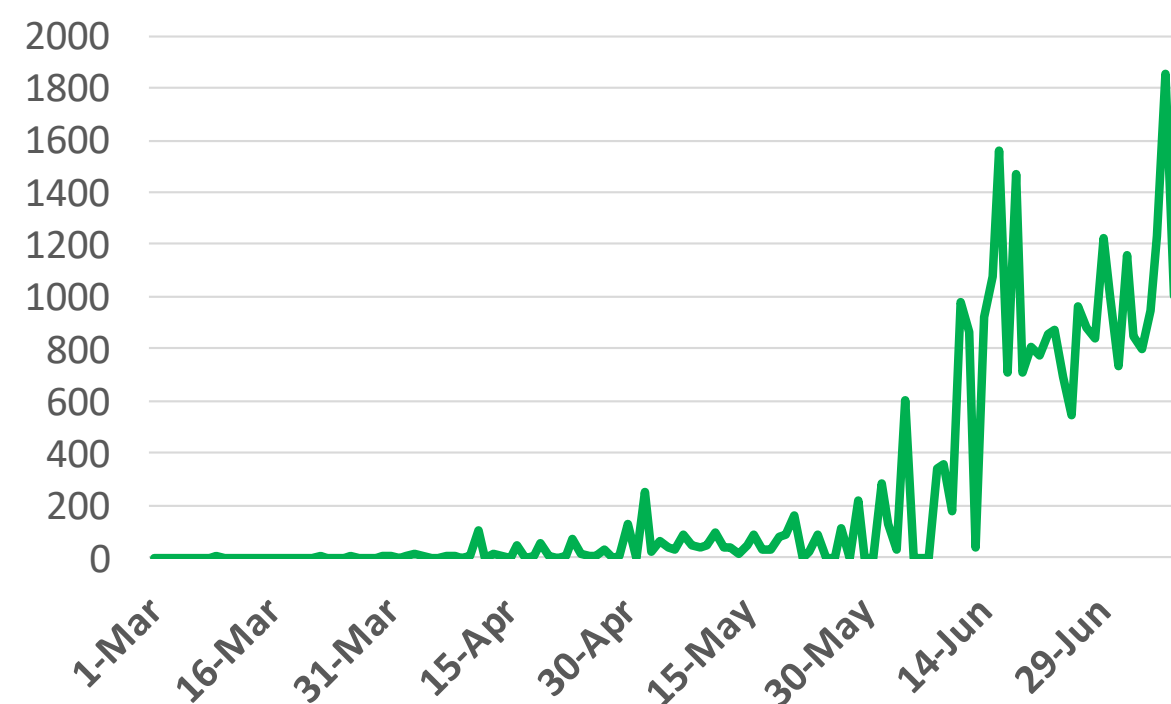
Source : National Emergency Crisis and Disaster Management Authority

Kuwait



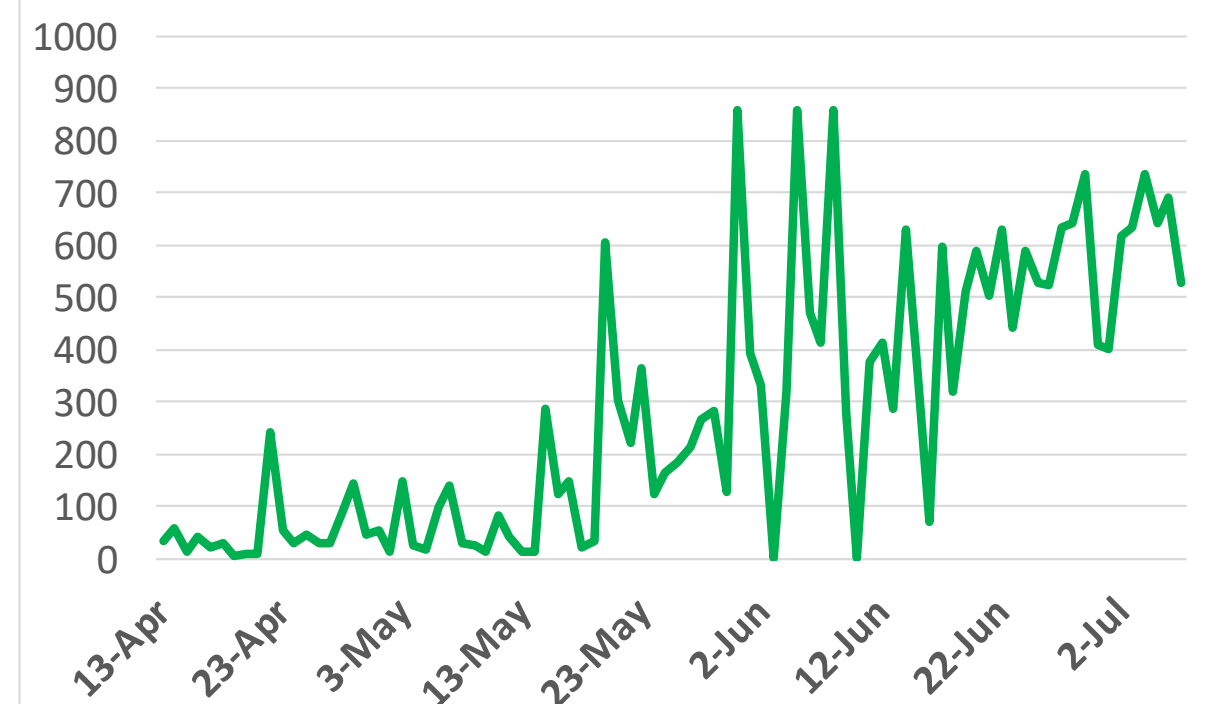
Source : Kuwait ministry of health

Oman © ADPHC 2020



Source : Oman ministry of health

Bahrain



Source : GCCStat

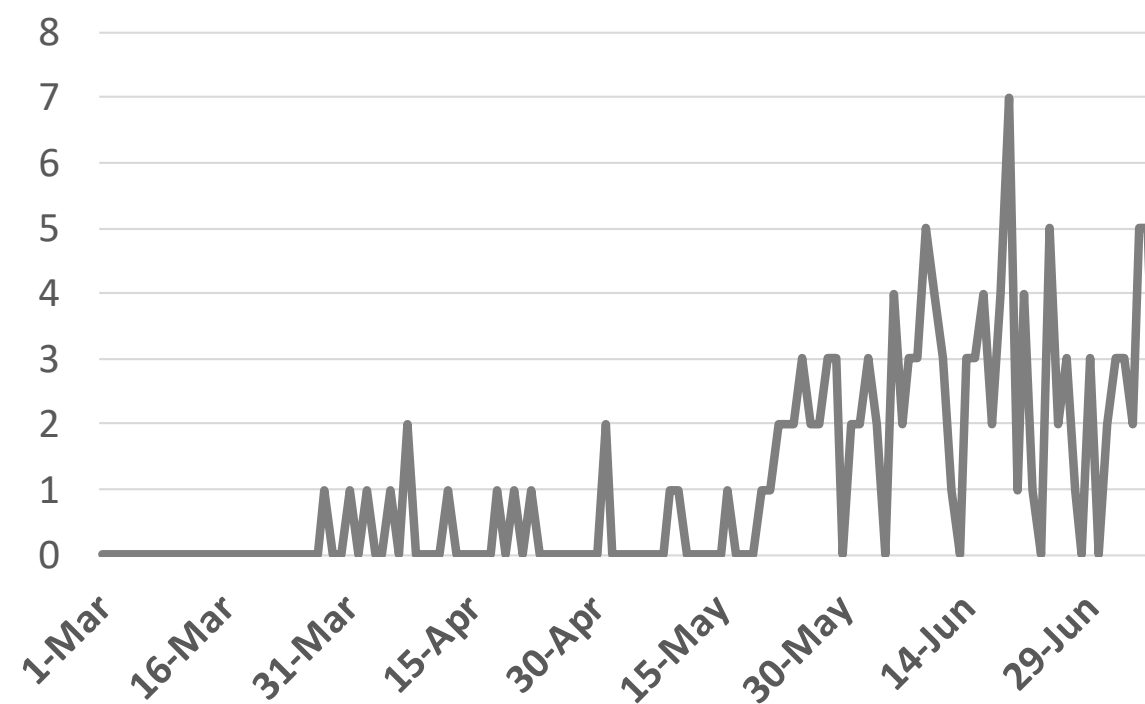
Figure 12: Comparative analysis of the distribution of COVID19 newly death cases in GCC countries

KSA



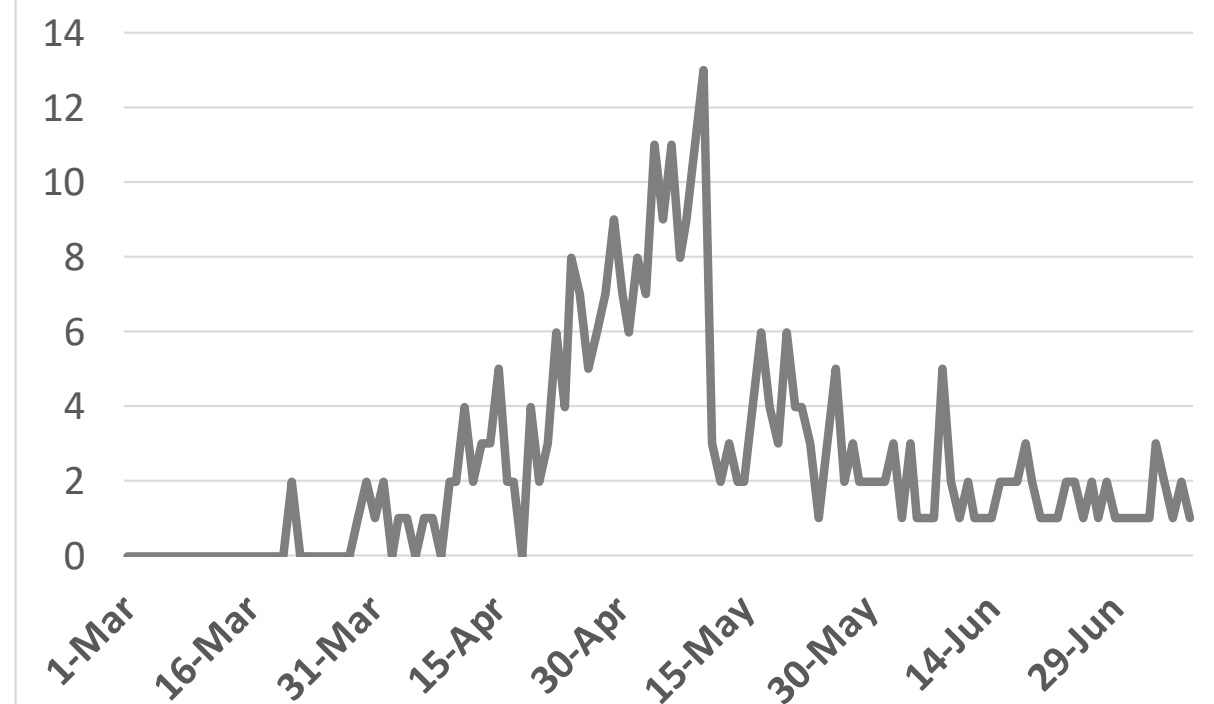
Source : KSA ministry of health

Qatar



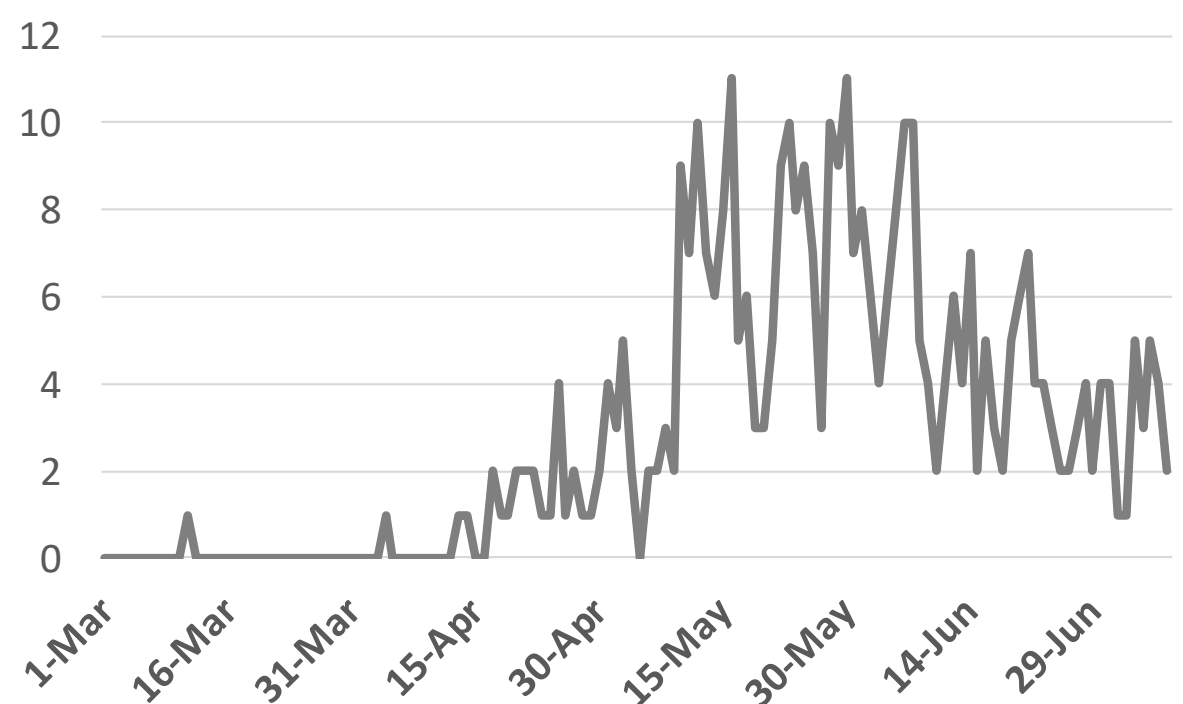
Source : Qatar ministry of health

UAE



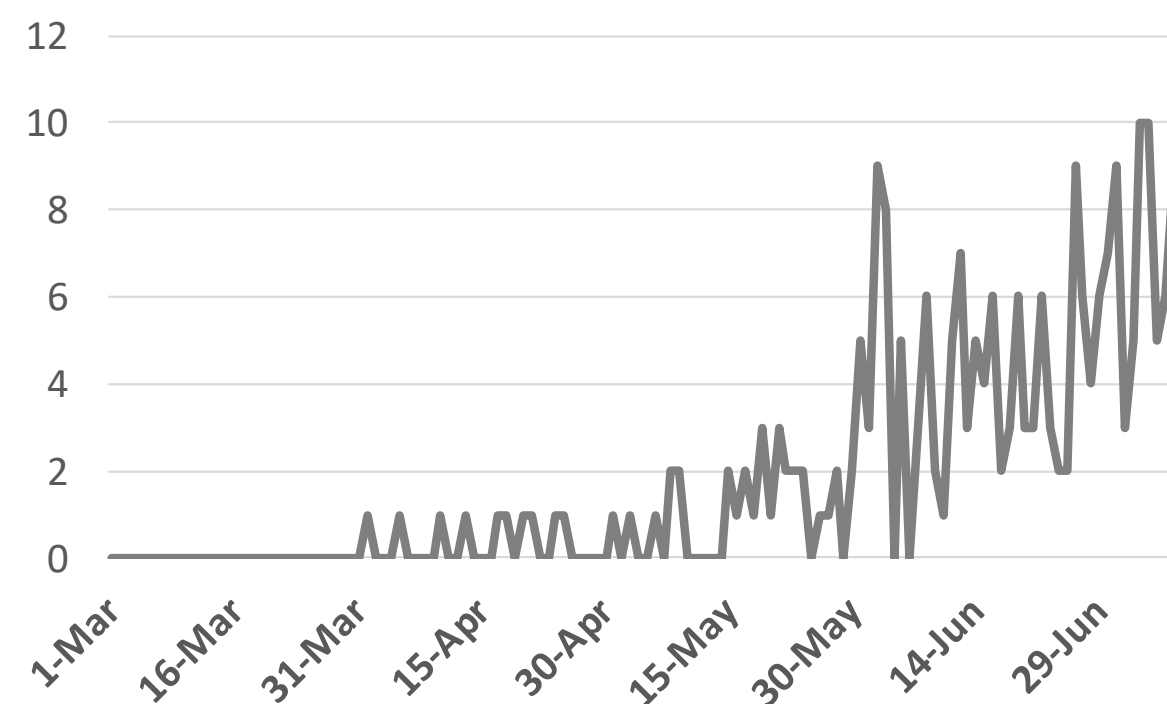
Source : National Emergency Crisis and Disaster Management Authority

Kuwait



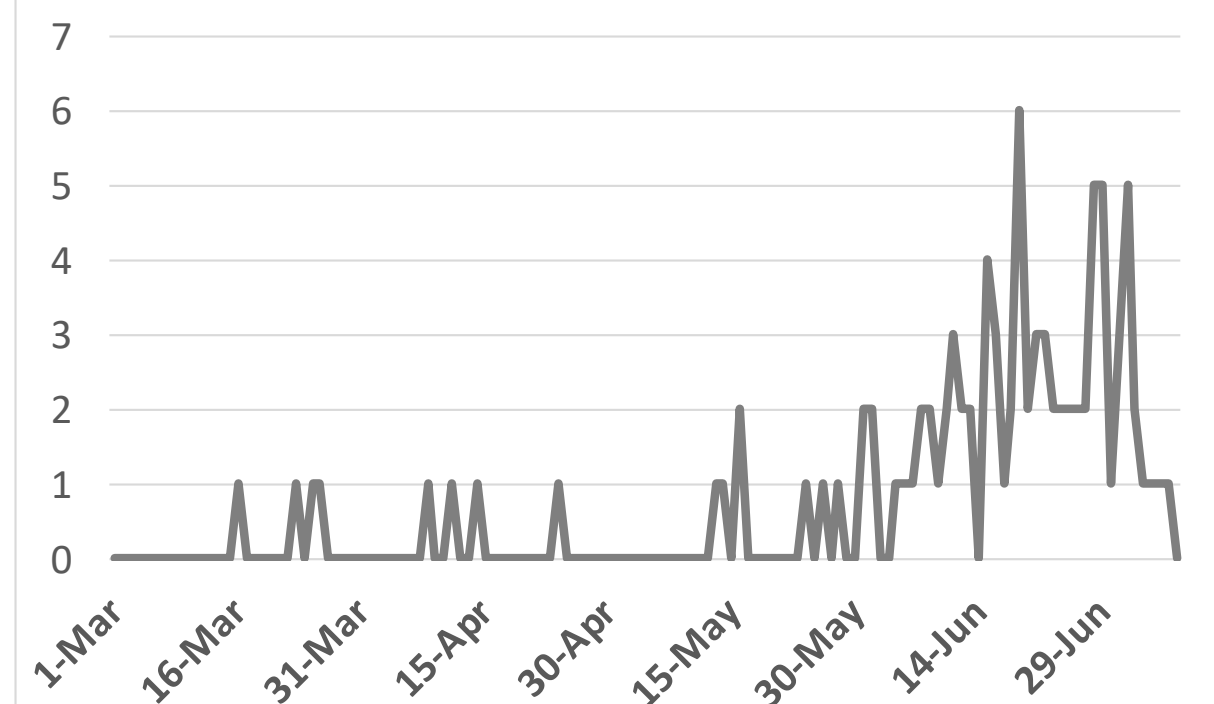
Source : Kuwait ministry of health

Oman © ADPHC 2020



Source :Oman ministry of health

Bahrain



Source :WHO



Article 1: It is Time to Address Airborne Transmission of COVID-19

Published

8 July 2020 in [Oxford University Press](#)

- Studies showed that viruses are released during exhalation, talking, and coughing in microdroplets which remain aloft in air. These droplets can impose exposure risk at distances beyond 1 to 2 m from an infected individual.
- Several retrospective studies conducted after the SARS-CoV-1 epidemic demonstrated that airborne transmission was the most likely mechanism explaining the spatial pattern of infections. It is likely that SARS-CoV-2 behaves similarly, and that transmission via airborne microdroplets. Viral RNA associated with droplets smaller than 5 μm has been detected in air.
- The World Health Organization (WHO), do not recognize airborne transmission except for aerosol-generating procedures performed in healthcare settings. The WHO recommends that hand washing, and social distancing are appropriate, however, in this commentary article, the authors suggested that these measures are insufficient to provide protection from virus-carrying respiratory microdroplets released into the air by infected people
- The authors of this commentary suggest additional measures to reduce transmission:
 - Provide sufficient and effective ventilation (supply clean outdoor air, minimize recirculating air) particularly in public buildings, workplace environments, schools, hospitals, and aged care homes
 - Supplement general ventilation with airborne infection controls such as local exhaust, high efficiency air filtration, and germicidal ultraviolet lights
 - Avoid overcrowding, particularly in public transport and public buildings.



Article 2: Asymptomatic SARS-CoV-2 Infection in Belgian Long-term Care Facilities

Published

3 July 2020 [THE LANCET](#)

This study analyzed data based on nasopharyngeal and oropharyngeal swabs collected from a mass testing campaign in long-term care facilities in Belgium in April to May 2020. The study summarized findings based on symptomatic status stratified by different age groups.

Results

- 280,427 people were tested, (51% residents and 49% staff). Median age was 42 years (IQR 31–52) for staff and 85 years (72–90) for residents.
- 8,343 (3.0%) people tested positive (2.1% of staff and 3.8% of residents).
- Asymptomatic COVID-19: 6,244 (74.8%, 95% CI 73.9–75.8) of 8343 people who tested positive (74.0%, 72.4–75.6 of staff and 75.3%, 74.1–76.5 of residents).
- Women showed higher odds of testing positive (adjusted OR, 1.2, 95% CI 1.1–1.2).
- Compared to asymptomatic, symptomatic were higher odds of testing positive (adjusted OR, 8.5, 8.0–9.0).

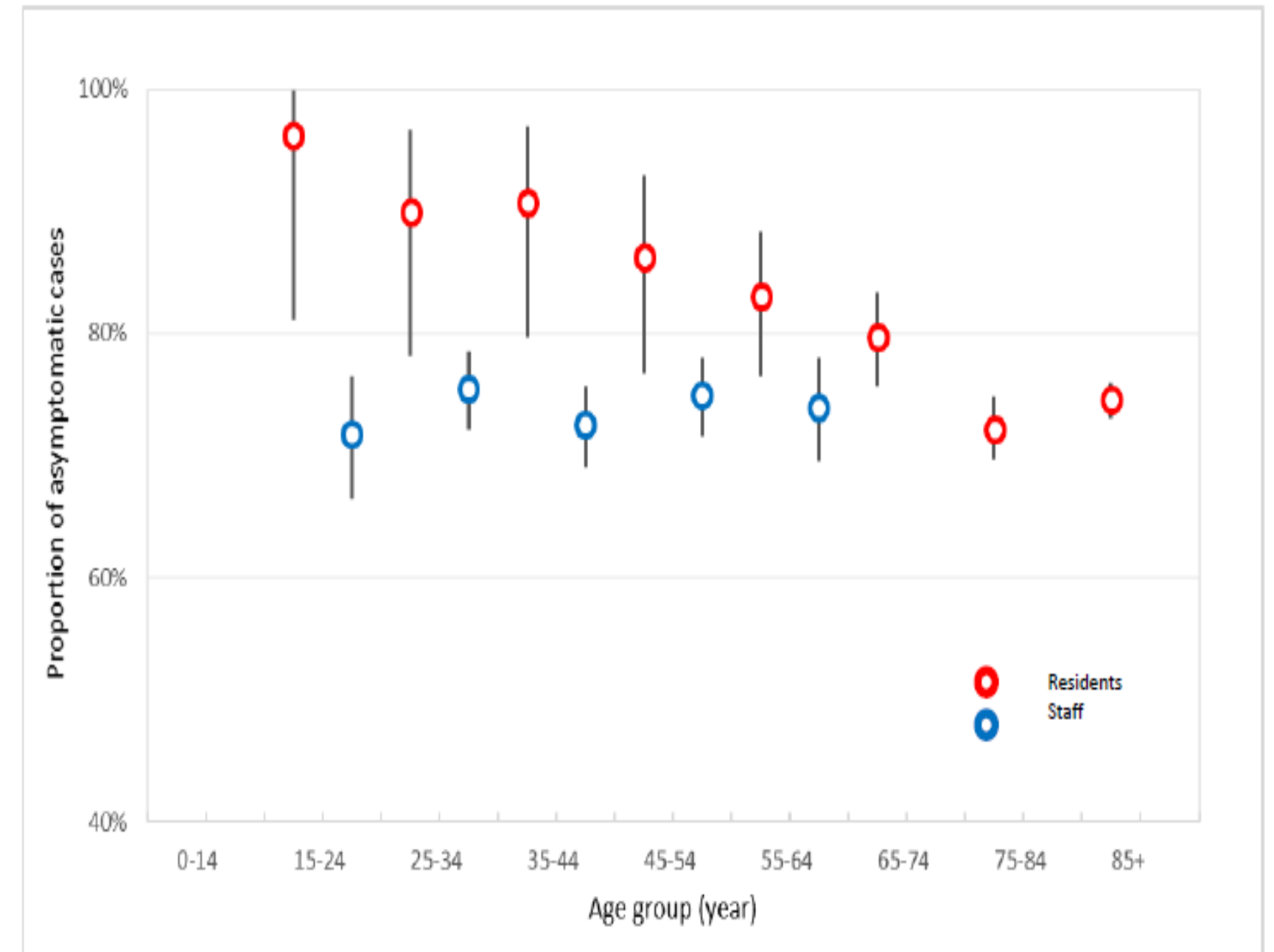


Figure 1. Estimated proportion of asymptomatic SARS-CoV-2 cases and 95% confidence interval for LTCF staff and residents, by age group.

- Figure shows the proportion of asymptomatic SARS-CoV-2 infection in Belgian long-term care facilities according age group in staff and residents.

- Table shows the adjusted OR of the association between age and being positive to COVID-19 according. Adjusted for group (staff or resident), gender and symptoms.

Conclusion

- Asymptomatic carriers of the virus could represent an important driver of transmission. Therefore, to further limit the spread of SARS-CoV-2, the study iterates the importance of widely applying extensive infection prevention and control measures (mass testing) as long as the epidemic is ongoing.

Age group	No. Positive	No. Negative	Odd ratio (95% CI)
0-14	2	798	Ref.
15-24	352	1 5114	7.0 (1.7-28.4)
25-34	786	35 559	6.2 (1.5-24.9)
35-44	765	36 059	5.9 (1.5-23.8)
45-54	825	38 799	6.0 (1.5-24.3)
55-64	595	34 227	5.1 (1.3-20.7)
65-74	449	13 050	12.0 (3.0-48.1)
75-84	1 210	28 552	14.2 (2.5-57.1)
85+	3 359	69 926	16.0 (4.0-64.2)



Article 3 : The Development of COVID-19 Vaccines – Safeguards Needed

Published

6 July 2020 [JAMA Network](#)

- With more than 200 vaccine candidates a need for structure method to assess safety. The US federal government has rapidly advanced 5 vaccine candidates.
- A survey conducted on 1056 individuals in the US found that only 49% reported that they are planning to receive a COVID-19 vaccine, 31% were uncertain, and 20% were not, with safety a major concern.
- The best response to such concerns is a transparent and rigorous approach to vaccine development and regulation, To help ensure the best possible decision-making and increase public confidence, regulators should be transparent about plans for 4 needed safeguards in COVID-19 vaccine development.
- **The main four safeguards are:**
 - Strong Evidence of Effectiveness, Including in Key Populations.
 - Strong Evidence of Safety, Including in Key Populations.
 - Informed Consent for Vaccine Use Prior to Approval.
 - Comprehensive Safety Monitoring Systems.
- As the US and other nations race to develop COVID-19 vaccines, these safeguards must be in place to reach the goal of developing a safe and effective vaccine to end the pandemic as quickly and as safely as possible, while earning and keeping public trust and confidence.



THANK YOU

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