

SCIENTIFIC RESEARCH MONITORING ON COVID-19

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 201)

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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Diagnosis

SARS-CoV-2 PCR Testing of Skin for COVID-19 Diagnostics

Public Health Response

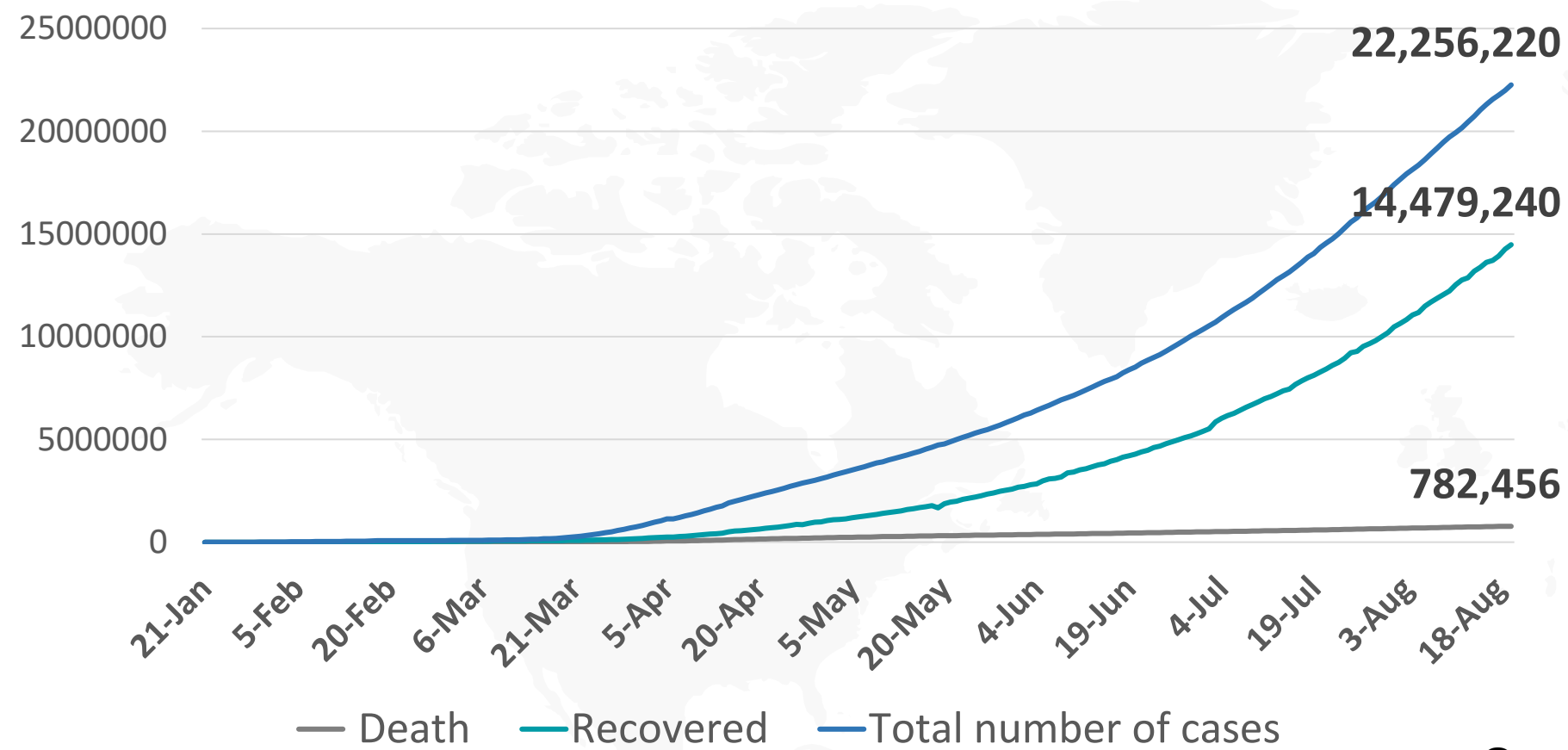
Successful Elimination of Covid-19 Transmission in New Zealand

Public Health Response

COVID-19 in Canada: Experience and Response

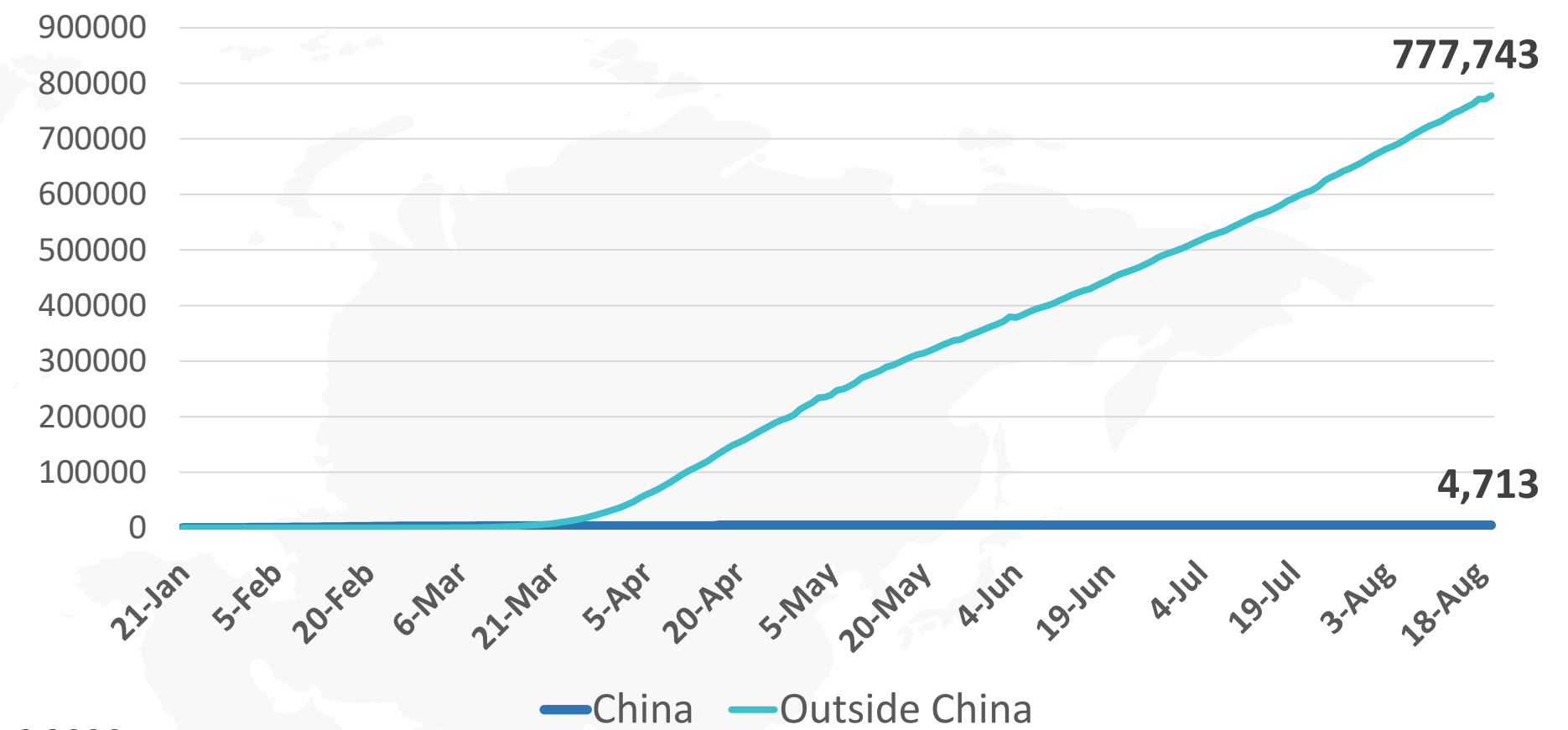


Figure 1: Total Number of Infected, Recovered, and Death Cases



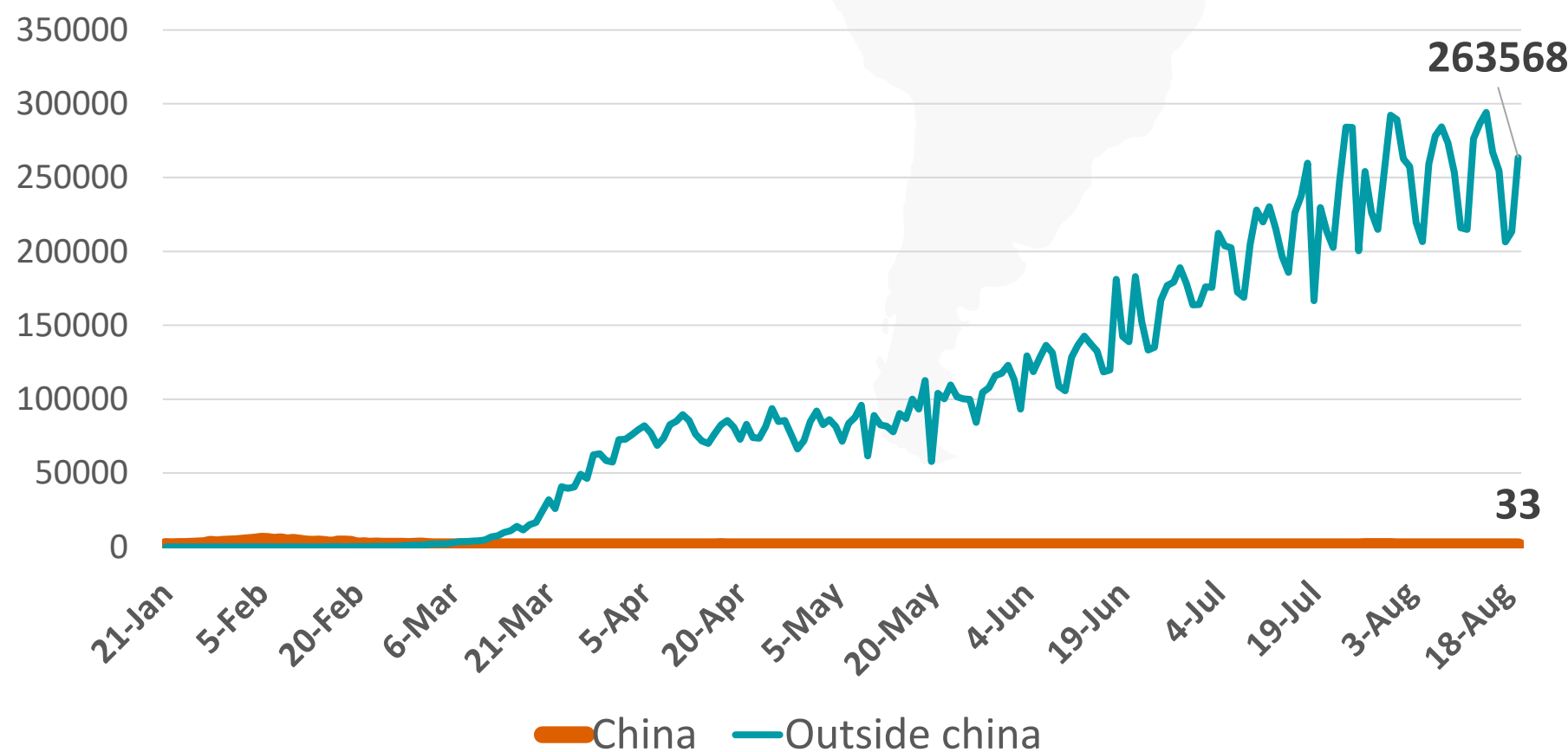
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Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)



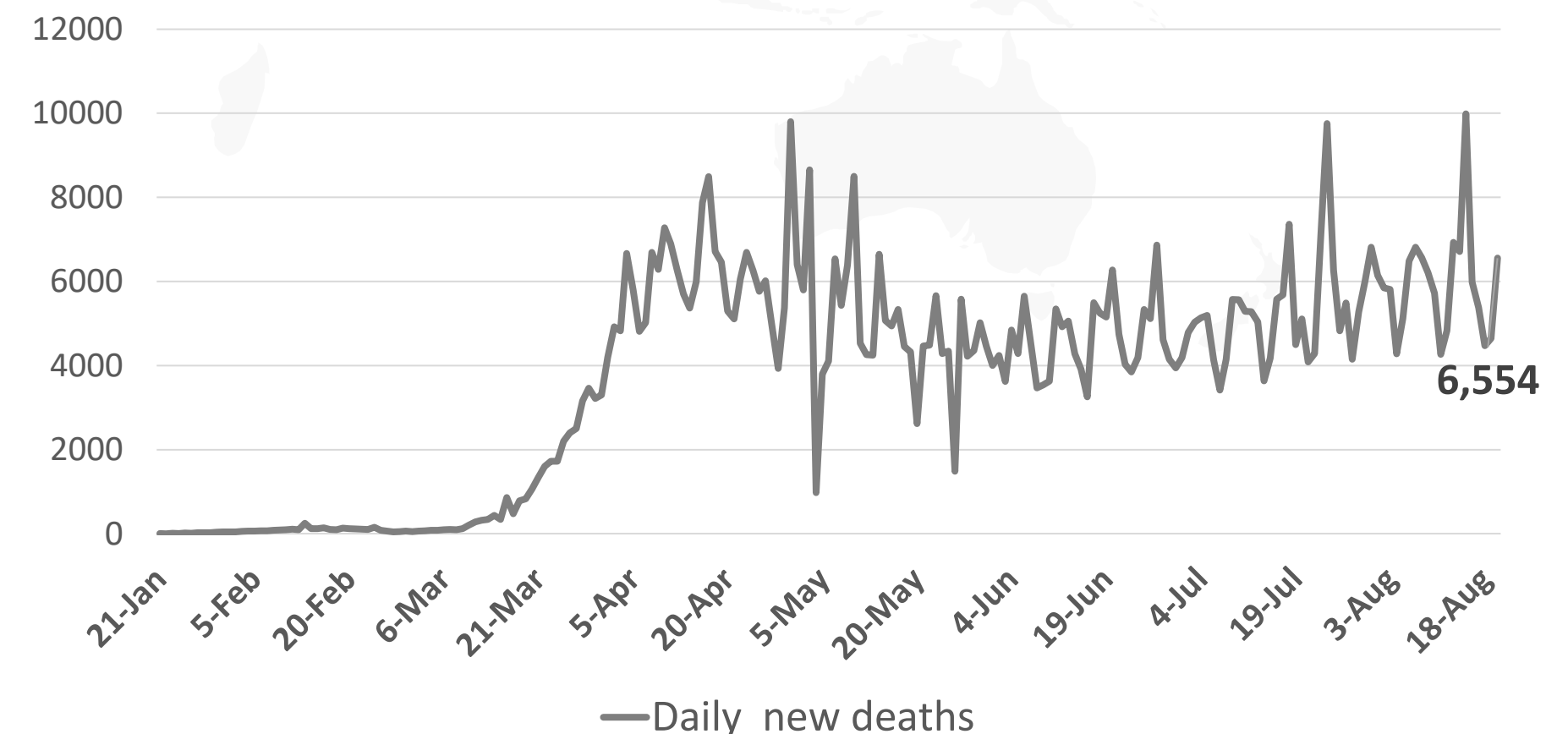
China Outside China

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



China Outside china

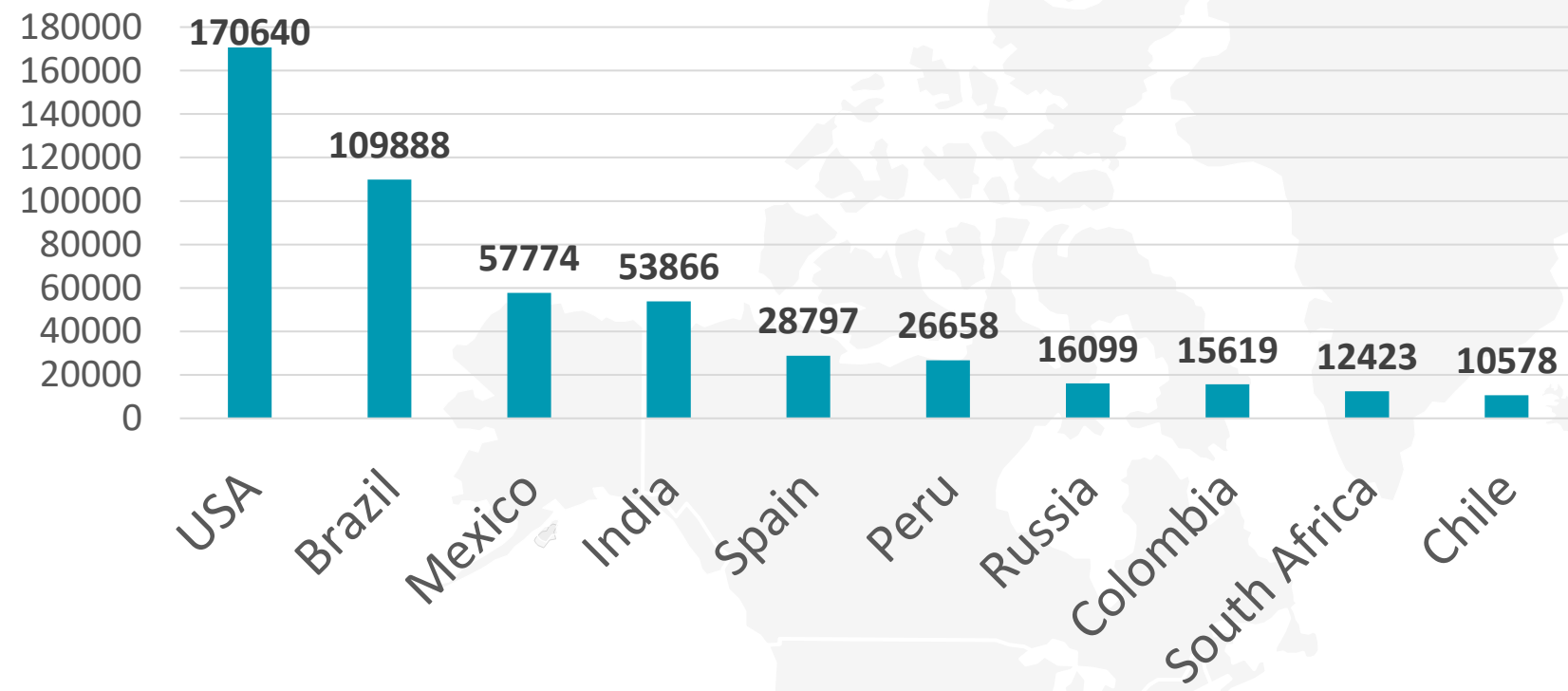
Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)



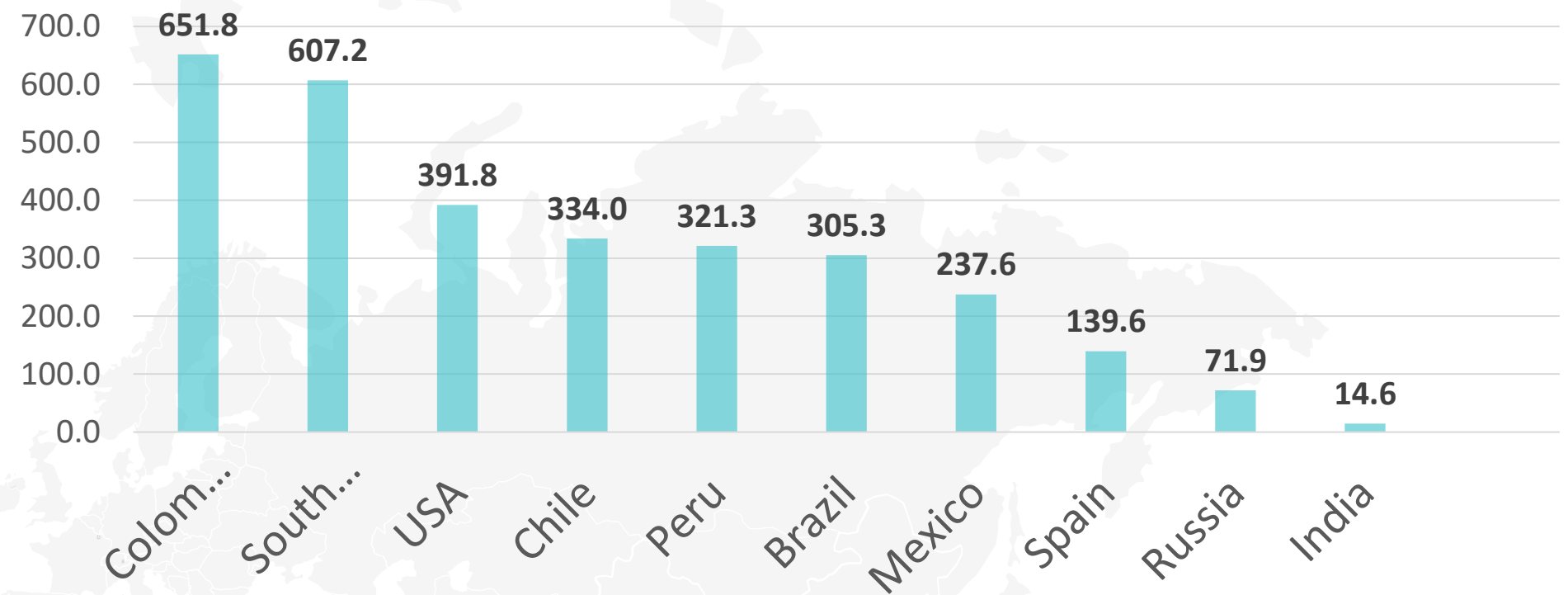
Daily new deaths

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

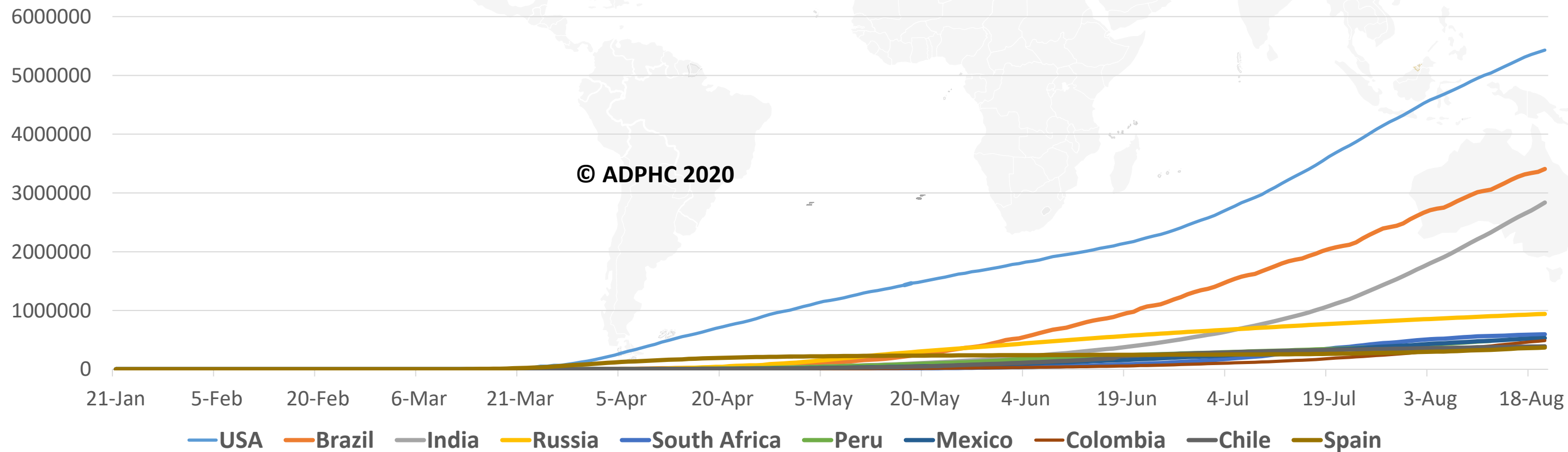
TOTAL DEATHS



DEATHS PER MILLION

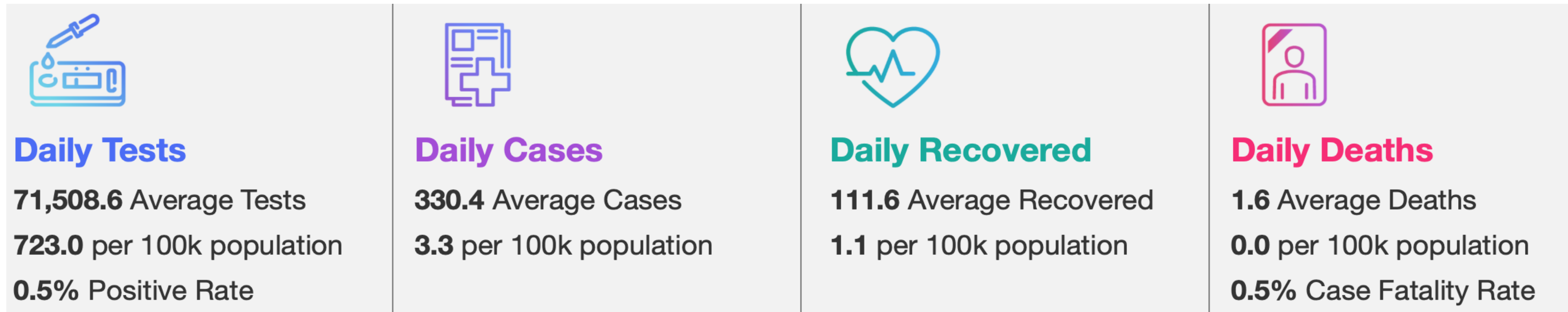


TOTAL INFECTED CASES



USA	5431046
Brazil	3407354
India	2836925
Russia	942106
South Africa	596060
Peru	549321
Mexico	531239
Colombia	489122
Chile	390037
Spain	370867

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

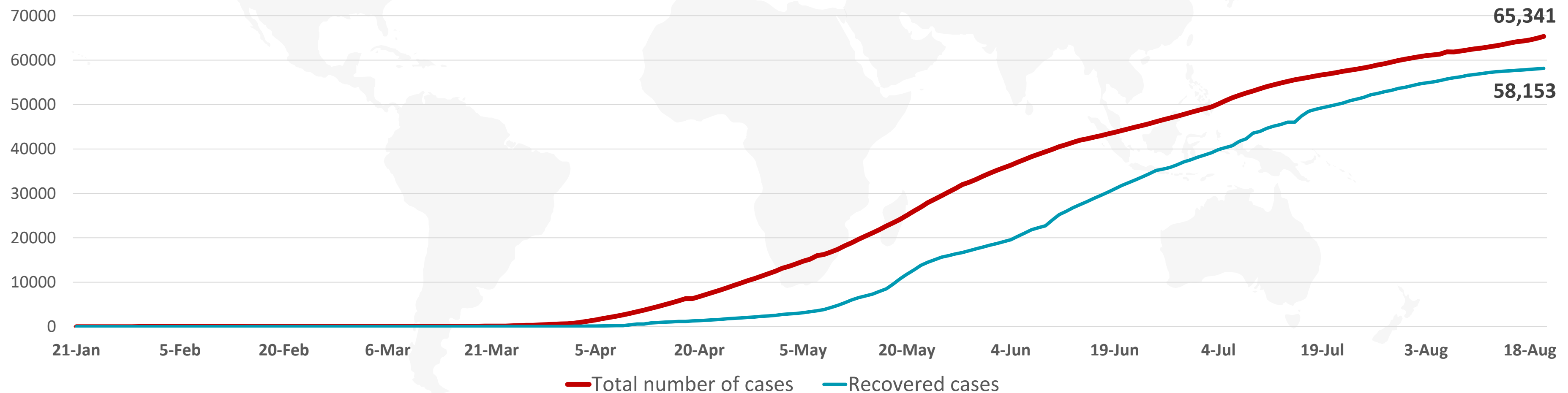


Figure 7A : Global Distribution of COVID-19 Cases

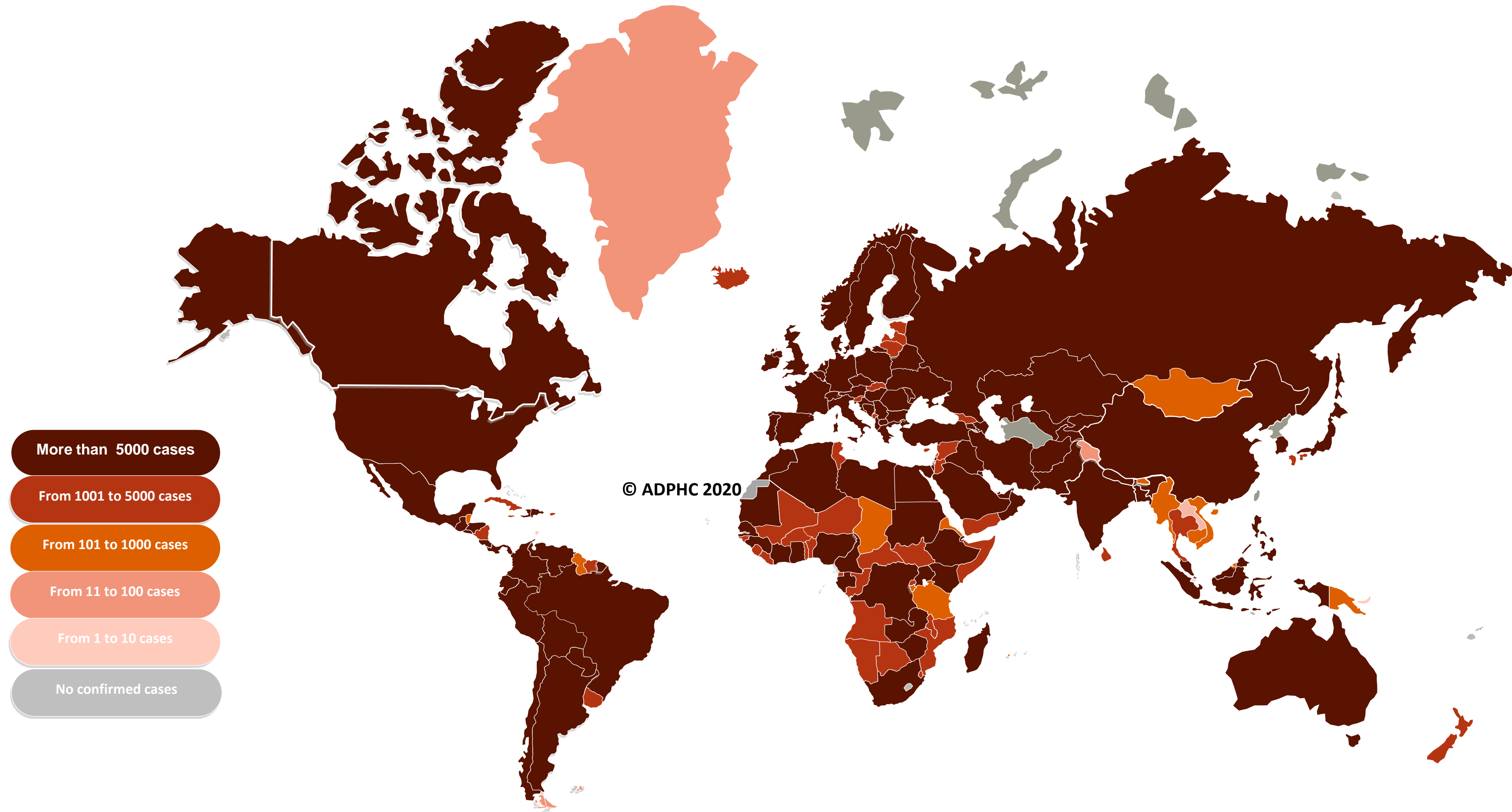
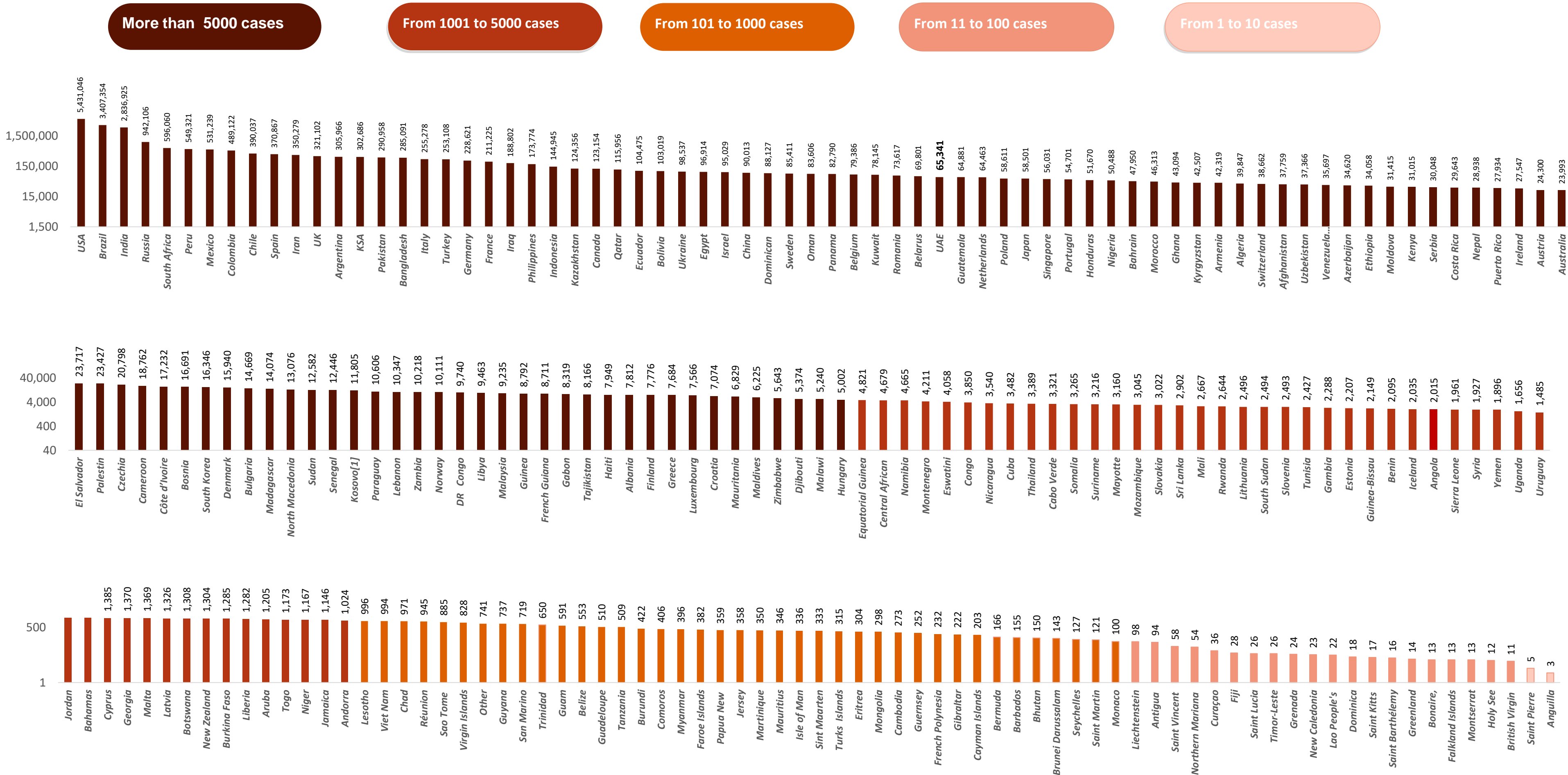


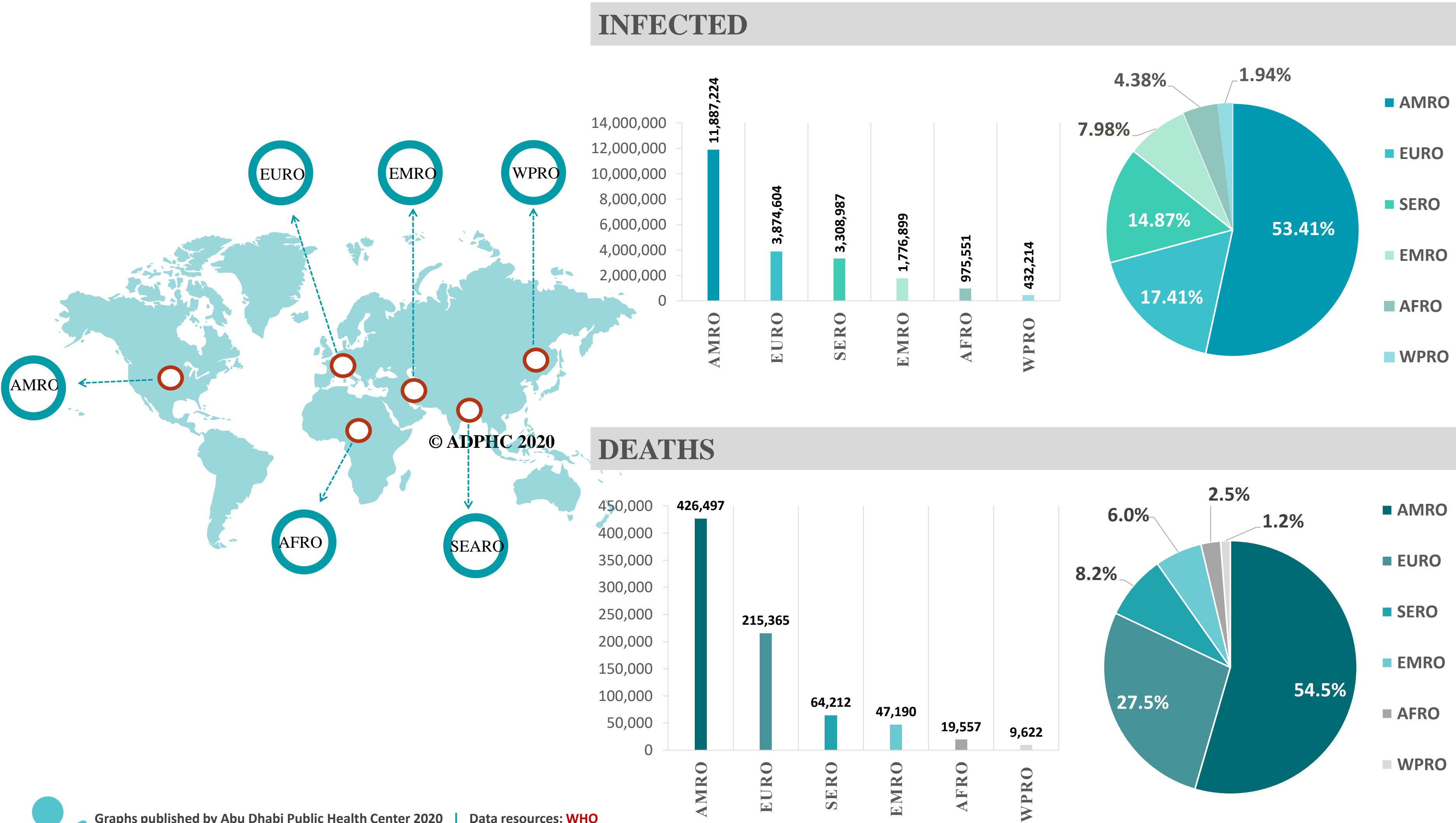
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



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



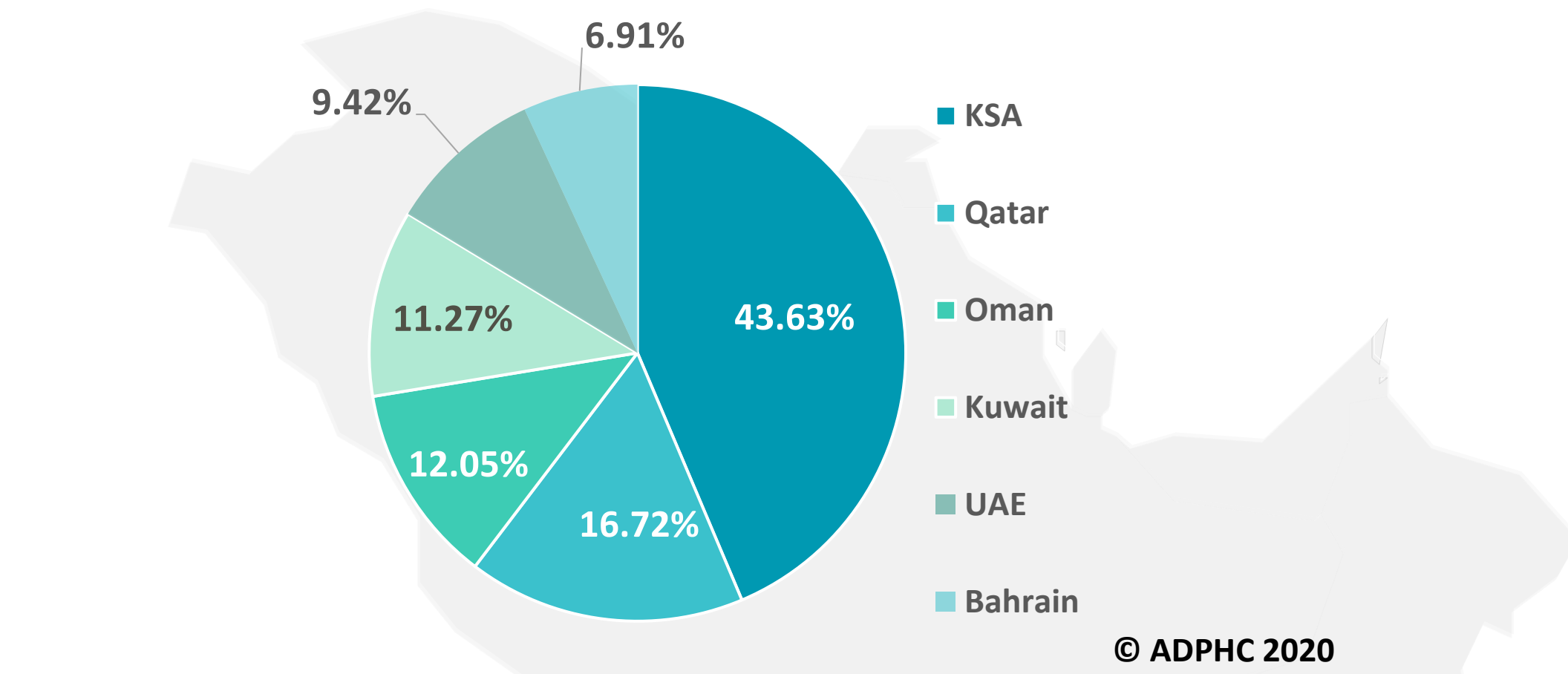
Figure 8: Global Distribution of COVID-19 Cases per Region



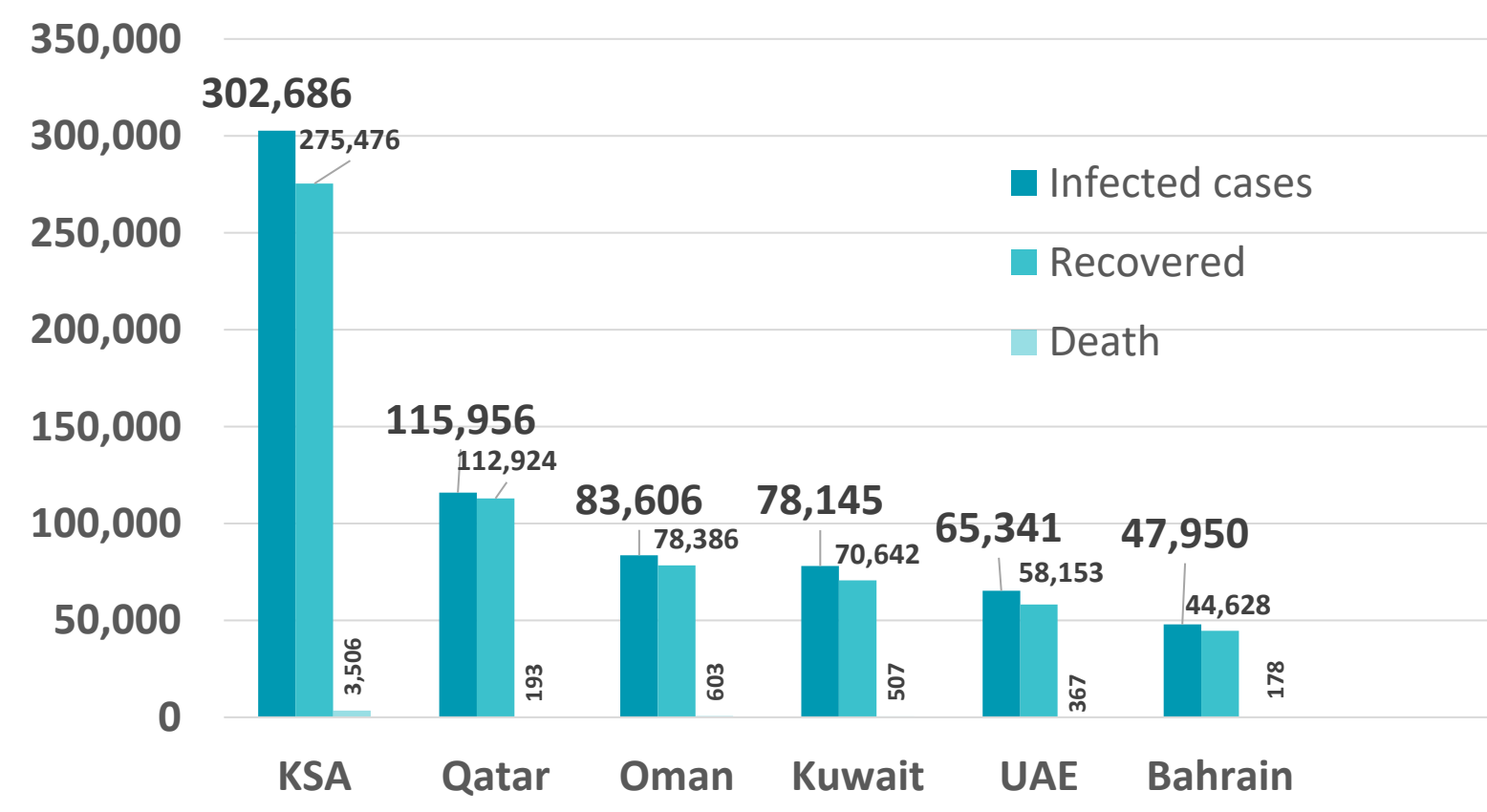
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: [WHO](#)

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

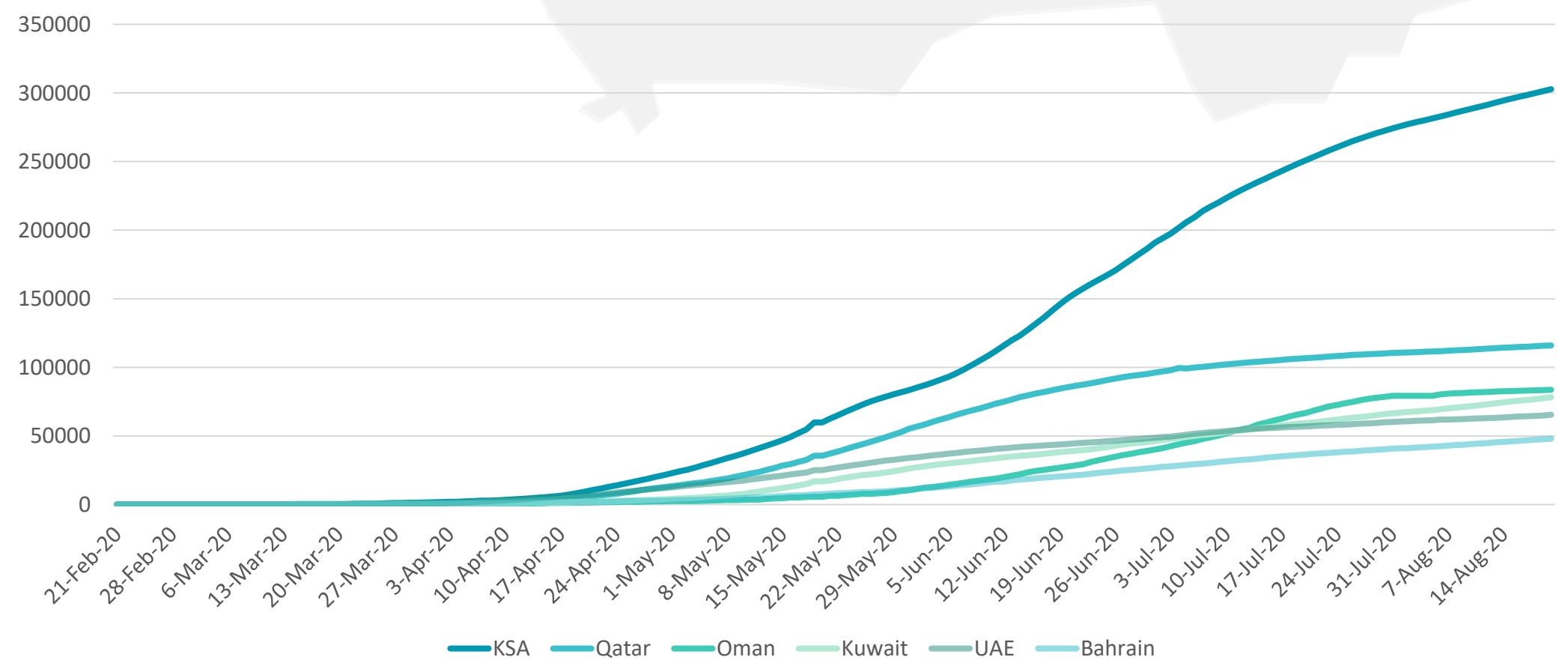
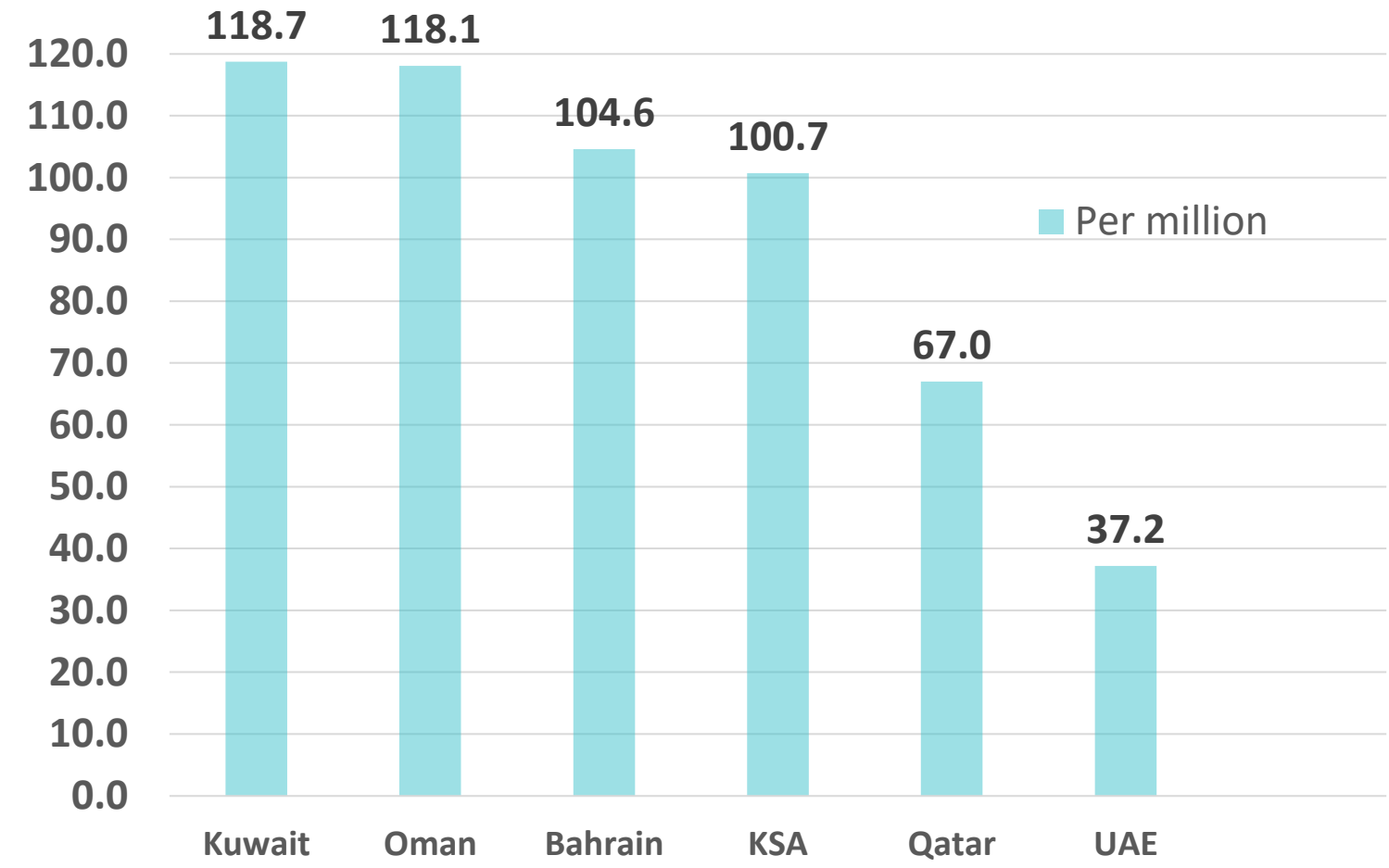


Figure 10: Comparative Analysis of the Distribution of COVID-19 New Cases in GCC Countries

UAE



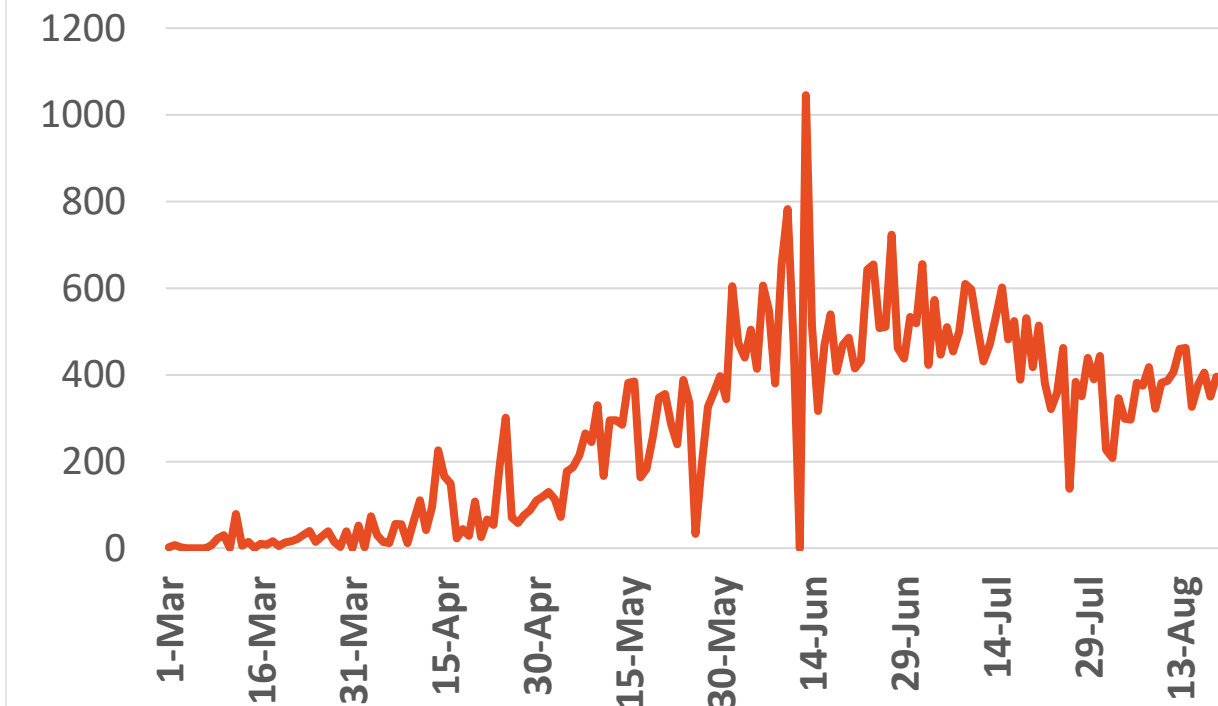
Source : National Emergency Crisis and Disaster Management Authority

KSA



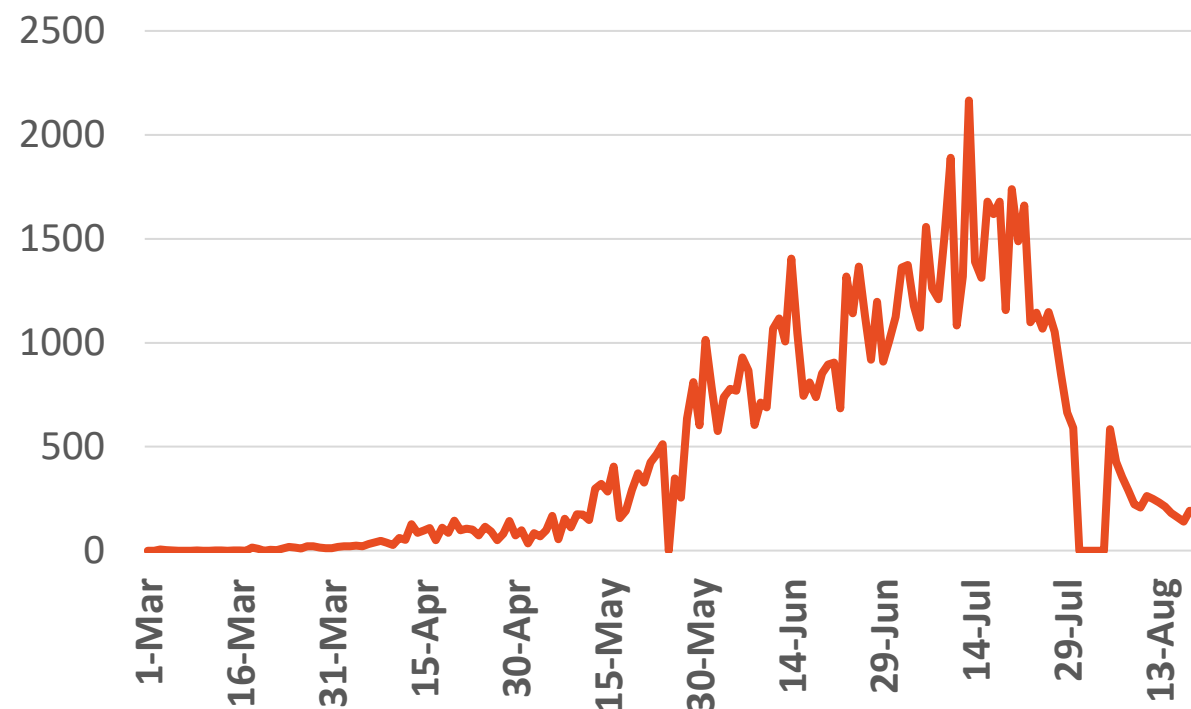
Source : KSA ministry of health

Bahrain



Source :WHO

Oman

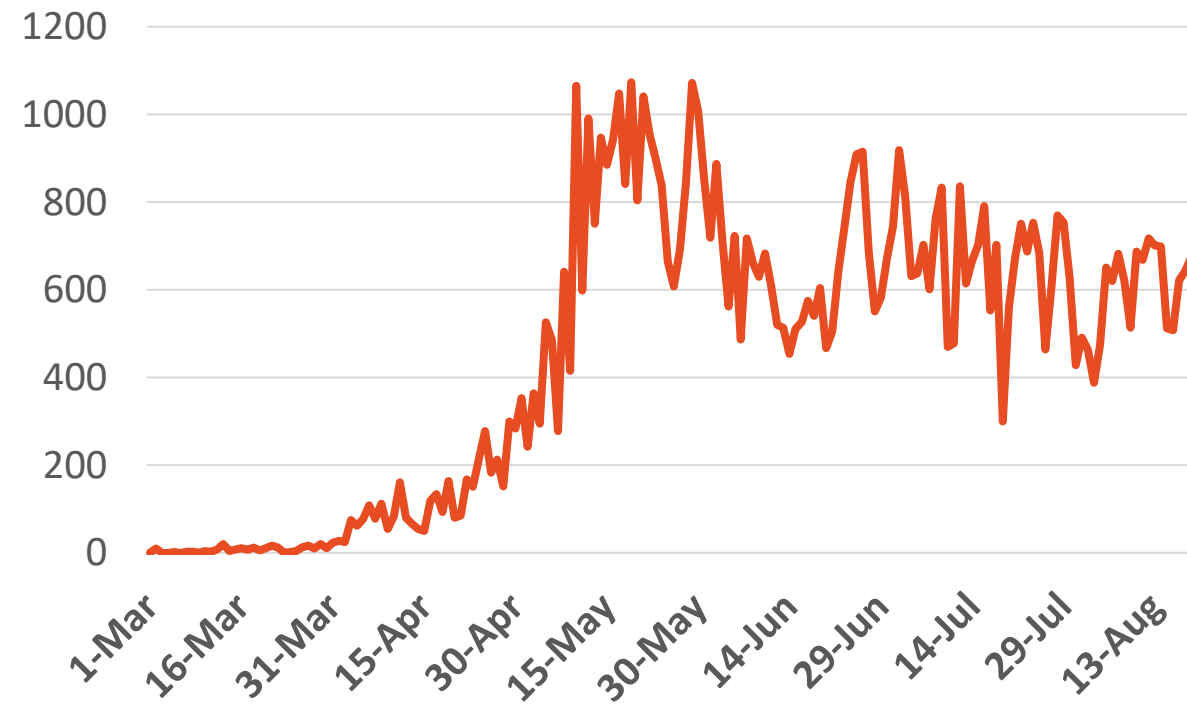


Source :Oman ministry of health

No announced statistic data from 31 July to 4 August

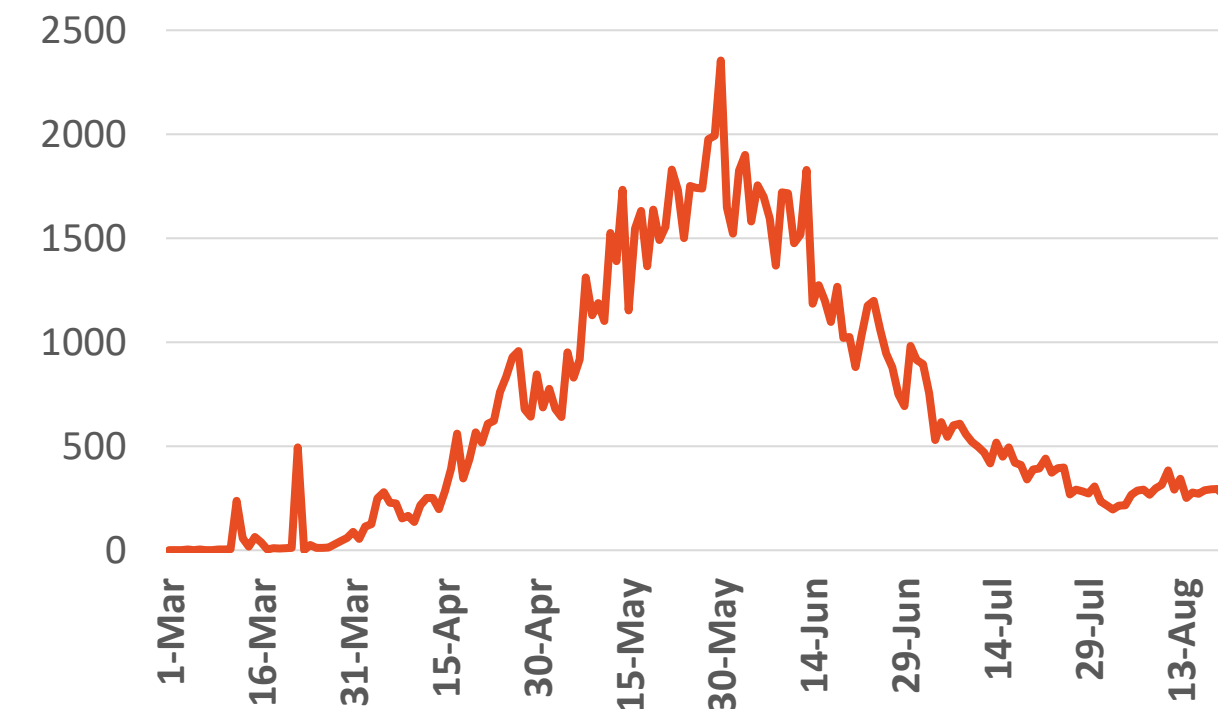
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health



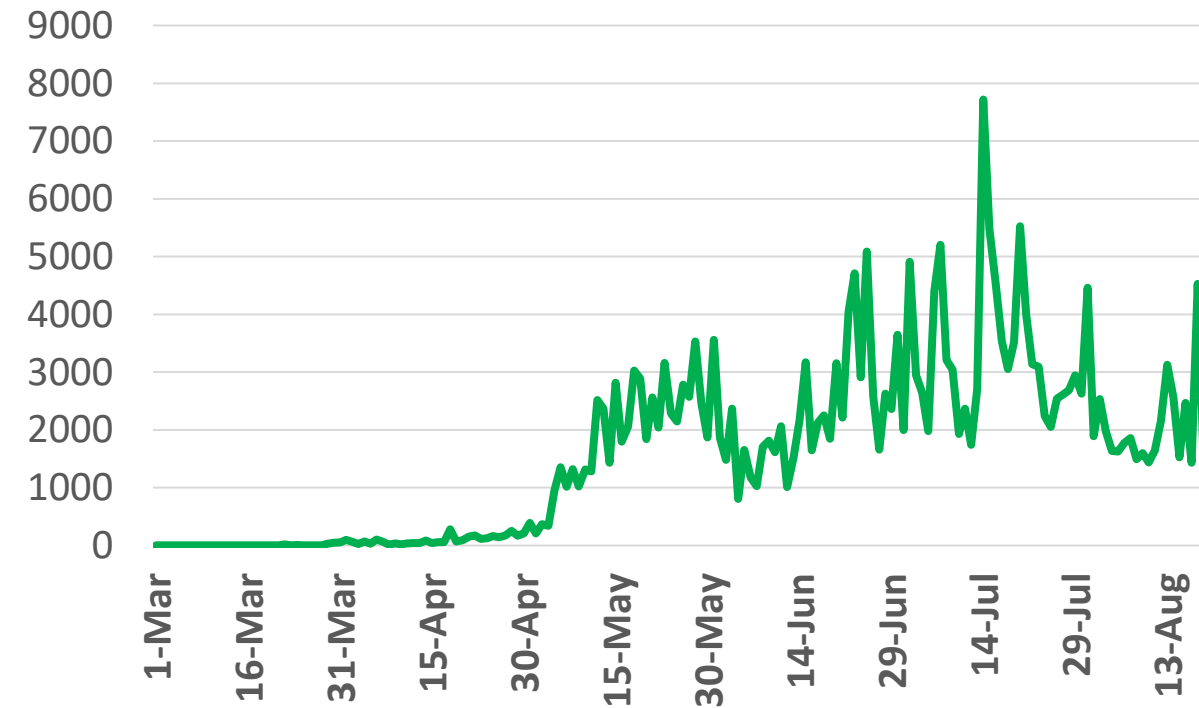
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE



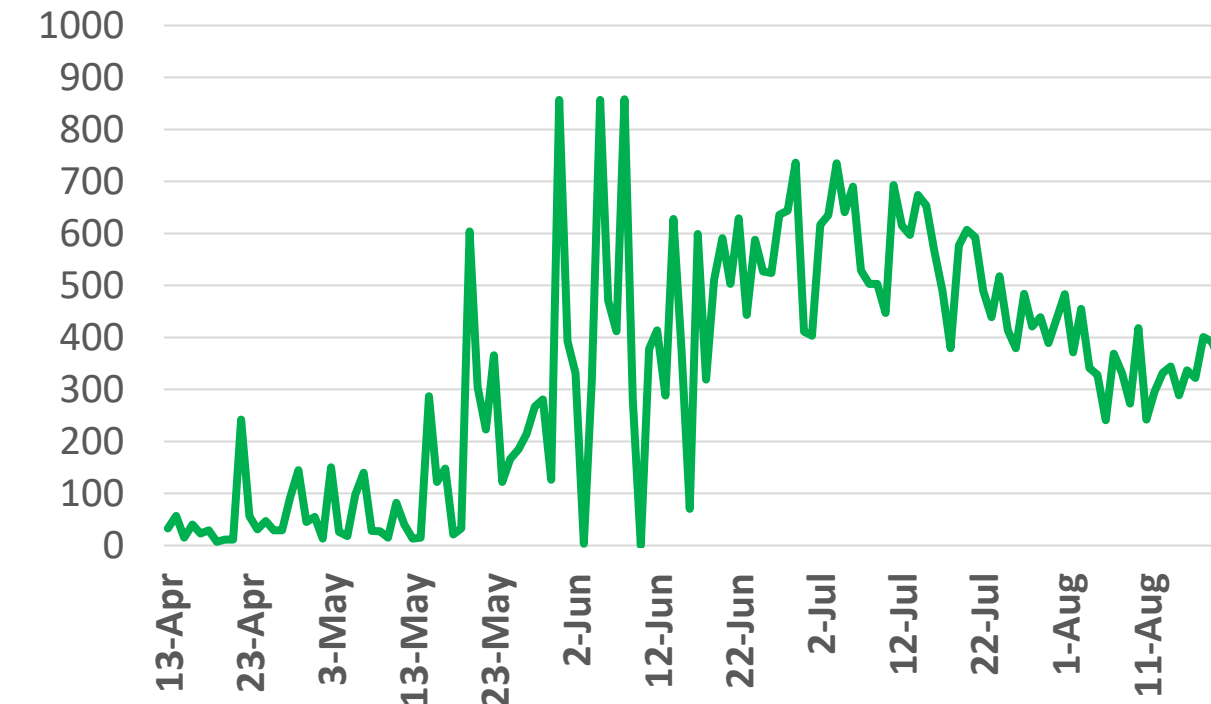
Source : National Emergency Crisis and Disaster Management Authority

KSA



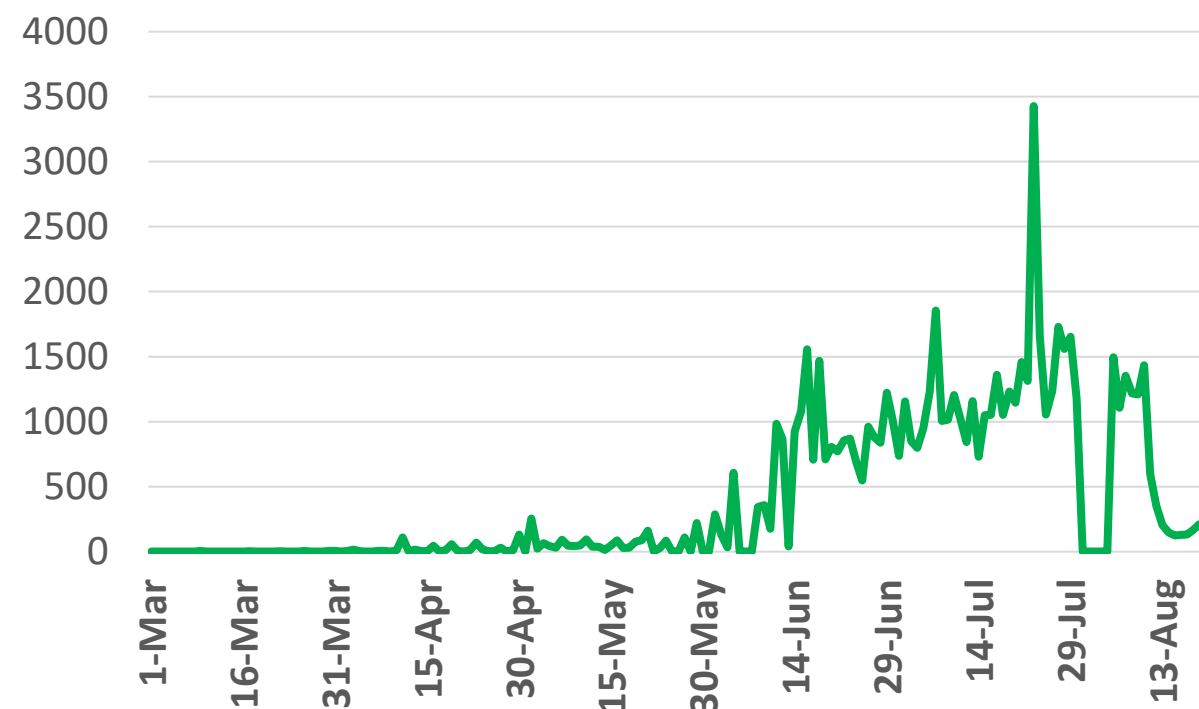
Source : KSA ministry of health

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

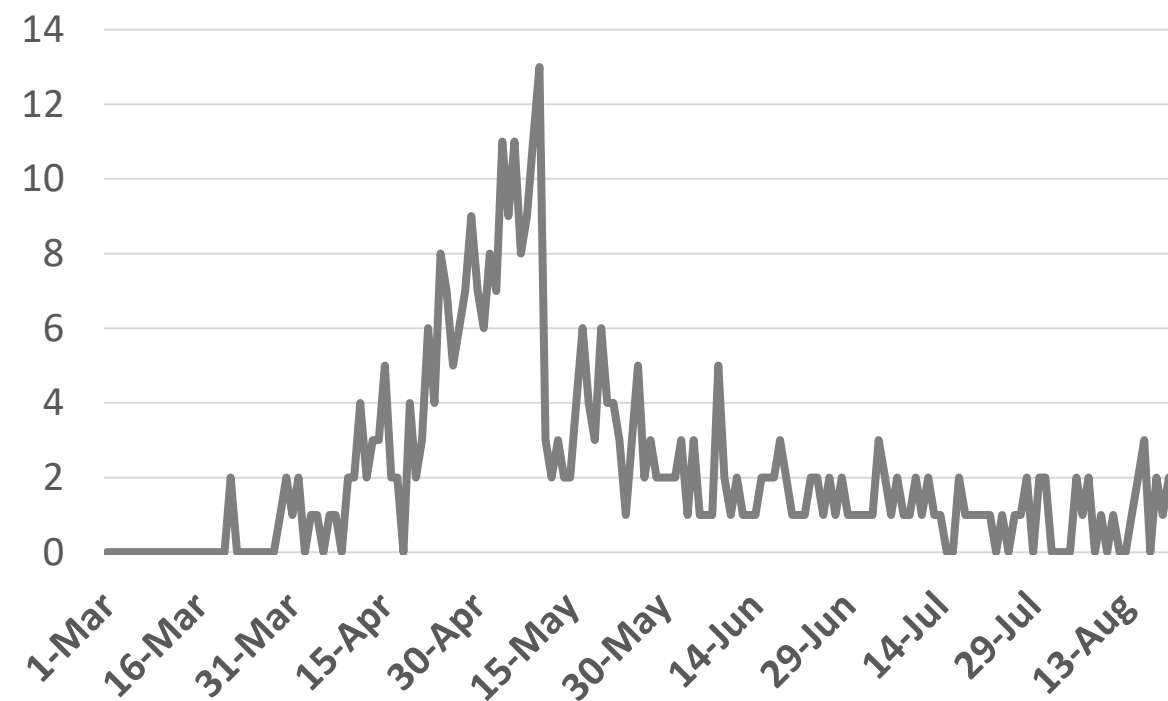
Qatar



Source : Qatar ministry of health

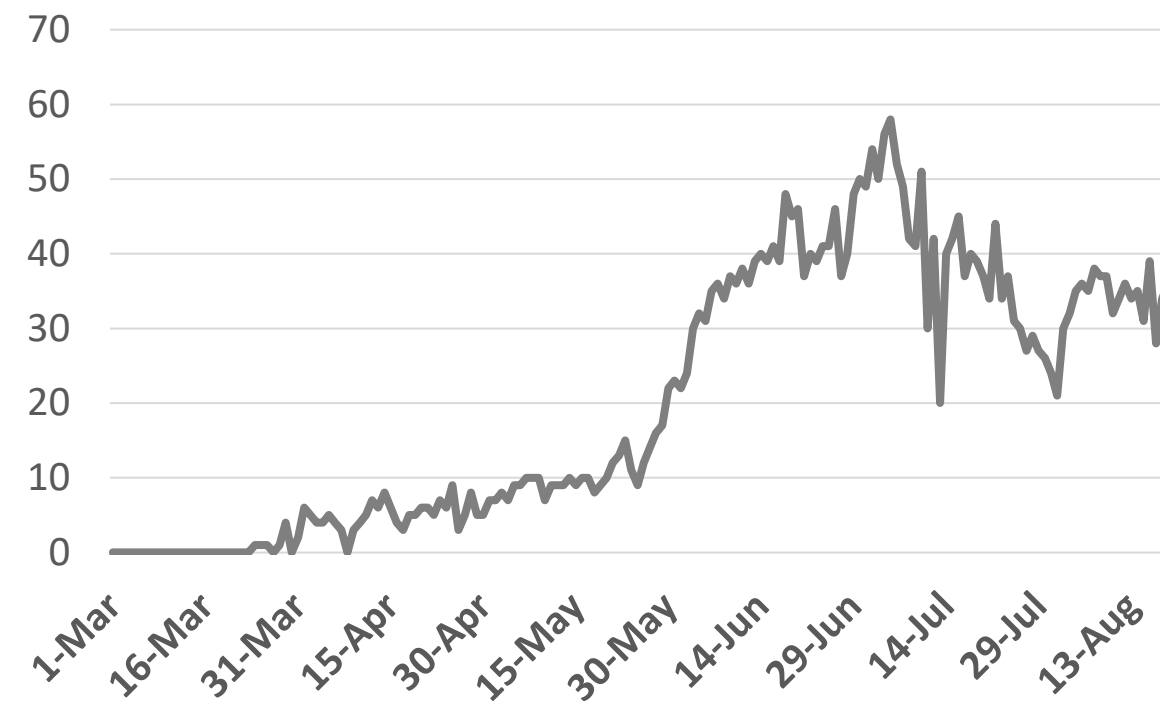
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



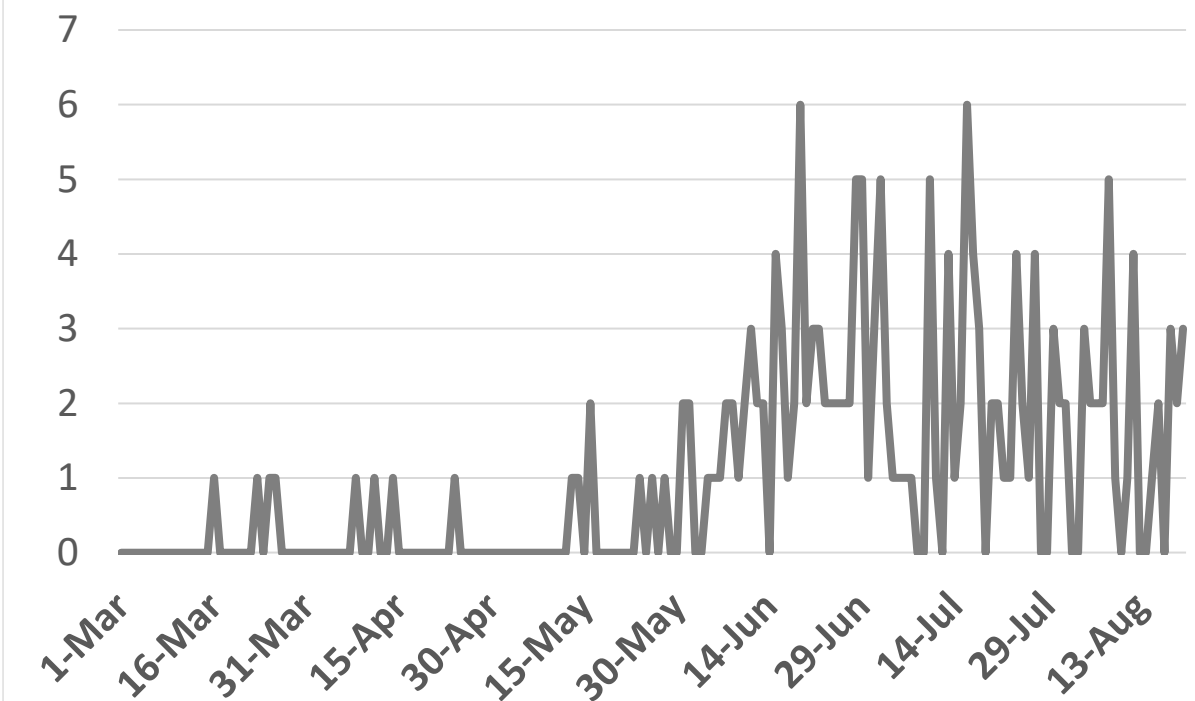
Source : National Emergency Crisis and Disaster Management Authority

KSA



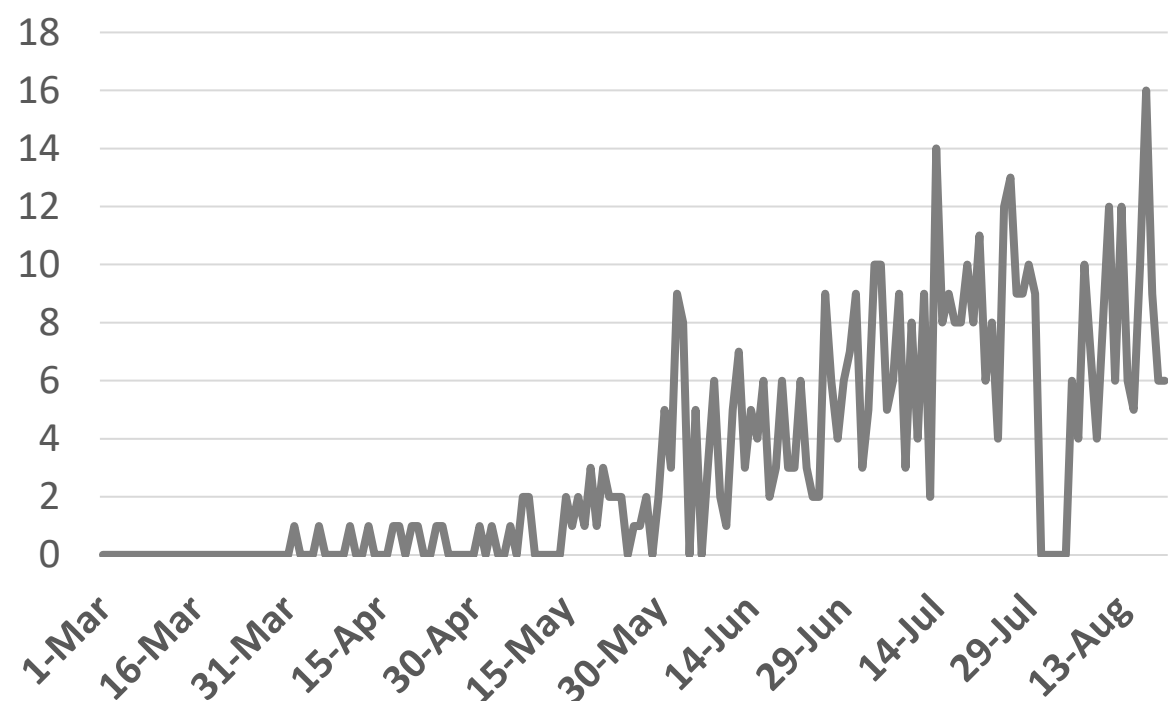
Source : KSA ministry of health

Bahrain



Source :WHO

Oman

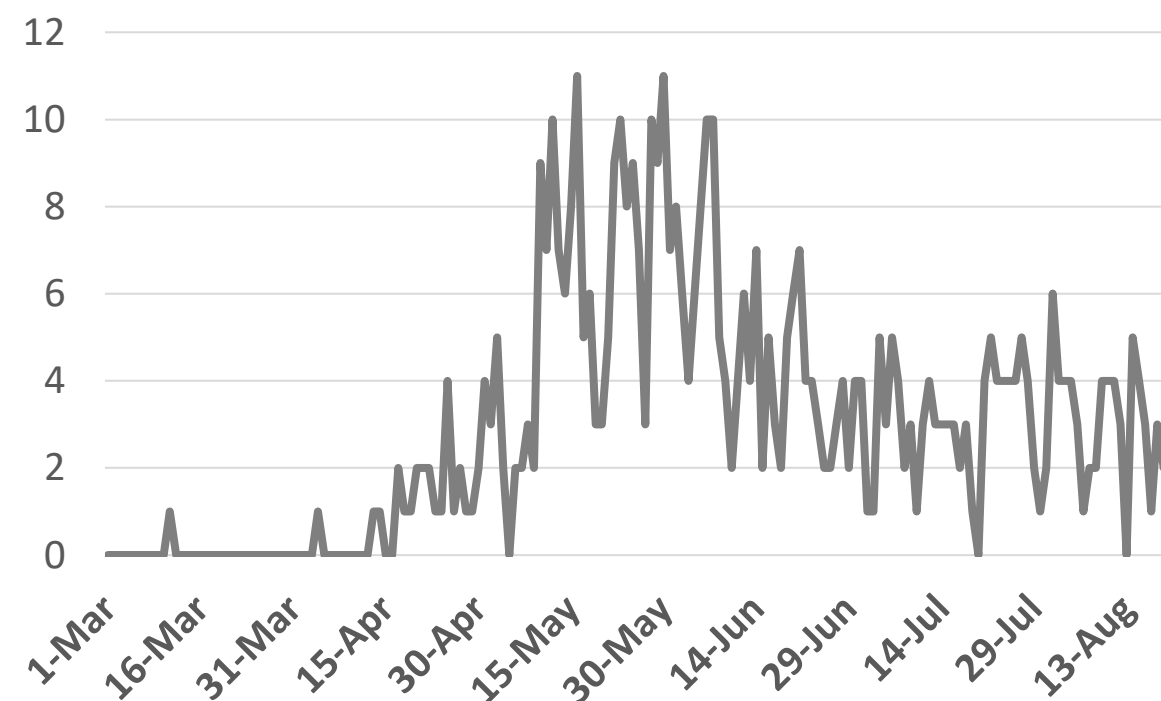


Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August

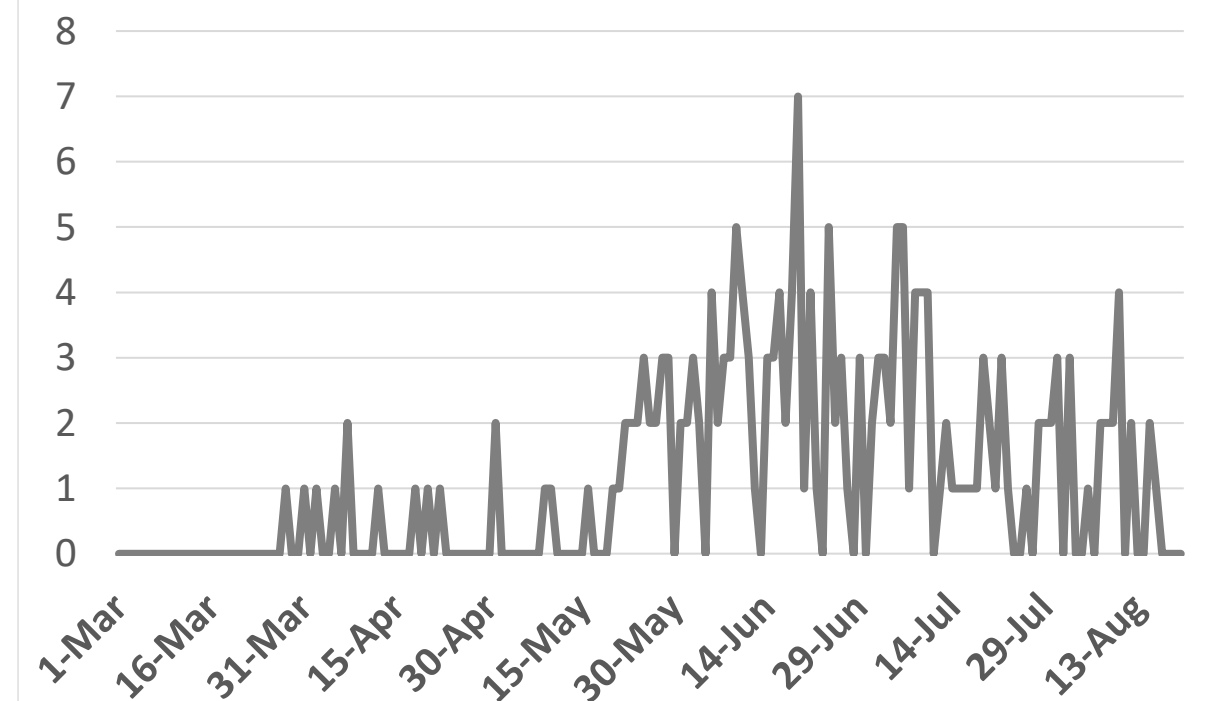
Kuwait

© ADPHC 2020



Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

Article 1 SARS-CoV-2 PCR Testing of Skin for COVID-19 Diagnostics

Published

13 August 2020 [THE LANCET](#)

- Over the past few months, different cutaneous manifestations, have been described in patients with COVID-19. Previously, researchers detected SARS-CoV-2 in endothelial cells of cutaneous chilblain lesions in seven pediatric patients with negative nasopharyngeal swabs.
- This report investigates the case of an 81-year-old woman, with a temperature of up to 39°C and a generalized rash (macular eruption), increased in inflammatory markers (C-reactive protein was 248 mg/L), and negative syphilis testing (this testing usually is done with this type of skin lesions). A SARS-CoV-2 PCR was negative.
- After 6 weeks, rash gradually improved serology tests against anti-SARS-CoV-2 antibodies were negative. however, PCR testing of the skin using established methods detected SARS-CoV-2 at low copy numbers.
- The use of SARS-CoV-2 PCR testing of skin biopsy samples as an additional diagnostic tool, helps to shed light on the actual prevalence of COVID-19 in the general population.
- This report suggests that diagnostic methods should be in close relation to the presented symptom of the patient. If the patient shows dermatological symptoms (lesions, rash), then the SARS-CoV-2 PCR testing of skin should be applied. Alternatively, if the patient shows respiratory symptoms, then SARS-CoV-2 Test for the respiratory system should be applied.





Article 2

Successful Elimination of COVID-19 Transmission in New Zealand

Published

07 August 2020 [THE NEJM](#)

After initial descriptions of an outbreak in Wuhan, China, were shared, reports in late January 2020 confirmed that COVID-19 was almost certain to become a serious pandemic.

Public Health Response

- New Zealand began implementing its pandemic influenza plan in earnest in February, which included preparing hospitals for an influx of patients. We also began instituting border-control policies to delay the pandemic's arrival.

First COVID-19 Case

- New Zealand's first Covid-19 case was diagnosed on February 26. That same week, the WHO–China Joint Mission's report showed that SARS-CoV-2 was behaving more like (SARS) than like influenza, which suggested that containment was possible.

Elimination Strategy

- By mid-March, the plan switched to an elimination strategy since it was clear that community transmission was occurring with lack of sufficient testing and contact-tracing capacity to contain the virus. Stringent countrywide lockdown (Alert Level 4) on March 26. After 5 weeks, and with the number of new cases declining rapidly. The lockdown was extended for additional 2 weeks (alert level 3), resulting in a total of 7 weeks.

Post Elimination Stage

In early May, the last known Covid-19 case was identified. On June 8, the government declared the pandemic (Level 1) 103 days after the first identified case. New Zealand is now in the post-elimination stage, which comes with uncertainties like future outbreaks. Public life has returned to near normal. Many parts of the domestic economy are operating at pre-COVID levels. Planning for quarantine-free travel from jurisdictions that have eliminated Covid-19. New Zealand needs to plan to respond to resurgences with a range of control measures, including mass masking, which hasn't been part of their response to date.

Lessons from New Zealand's Pandemic Response

- Total case count (1569) and deaths (22) have remained low, with the lowest mortality (4 per 1 million).
- Rapid, science-based risk assessment linked to early, decisive government action was critical.
- Implementing interventions at various levels (border-control, community-transmission, case-based control) were effective.
- Prime Minister Jacinda Ardern provided empathic leadership and effectively communicated key messages to the public, which resulted in high public confidence and adherence.





Article 3

COVID-19 in Canada: Experience and Response

Published

10 August 2020 [JAMA](#)

As of July 13, 2020, Canada has documented 107 861 cases of coronavirus disease 2019 (COVID-19) (286 per 100 000 people) and 8787 COVID-19–related deaths.

Public Health Response

- Rates of new cases and deaths peaked in early May and have been declining steadily, with many regions reporting no cases or fewer new cases; yet some low-grade community transmission has persisted. Canada reported fewer than 400 new cases per day. Canadian provinces have primarily determined strategies for containment and mitigation. The provincial public health authorities worked to set policies and recommendations and to implement services such as testing and contact tracing.
- Waiting to gradually open the economy until there was a sustained reduction in the number of new cases.
- Travel restrictions were imposed. They limited incoming international flights to 4 cities, closed the land border with the US for the first time since Canada was founded. US citizens who were travelling to Alaska were only allowed. Canadian citizens, essential workers were allowed entry. A 14-day self-quarantine was implemented, requiring everyone who entered the country. Interprovincial travel was discouraged.

The Strategy

- Physical distancing was the key measure that helped to control the epidemic. By late March, the closing of schools, universities, public playgrounds, and nonessential businesses was mandatory. Social interactions were actively discouraged, with fines issued.
- The federal and provincial governments encouraged everyone except essential workers to stay at home but it was not mandatory.
- Masks were not initially recommended until June, and then were mandated in some provinces.
- Testing and tracing capacity was increased.

Lessons from Canada's Pandemic Response

- The acute health care systems in Canada were able to manage patient volumes without being overwhelmed.
- the long-term care (LTC) facilities residents were not protected. Approximately 80% of COVID-19–related deaths in Canada involved persons living in LTC facilities because of significant structural deficiencies and weak infection prevention and control practice.
- Infection rates were highest in places where people live and work in close quarters (migrant farmworkers, factory workers, and low-income multigenerational families).



THANK YOU

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