

SCIENTIFIC RESEARCH MONITORING ON COVID-19

4 OCTOBER 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 245)

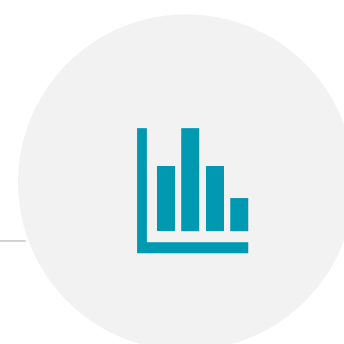


Abu Dhabi Public Health Center (ADPHC) is gathering the latest scientific research updates and trends on coronavirus disease (COVID-19) in a daily report. The report provides summaries on breakthrough or updated research on COVID-19 to allow health care professionals and public health professionals get 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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Clinical Features

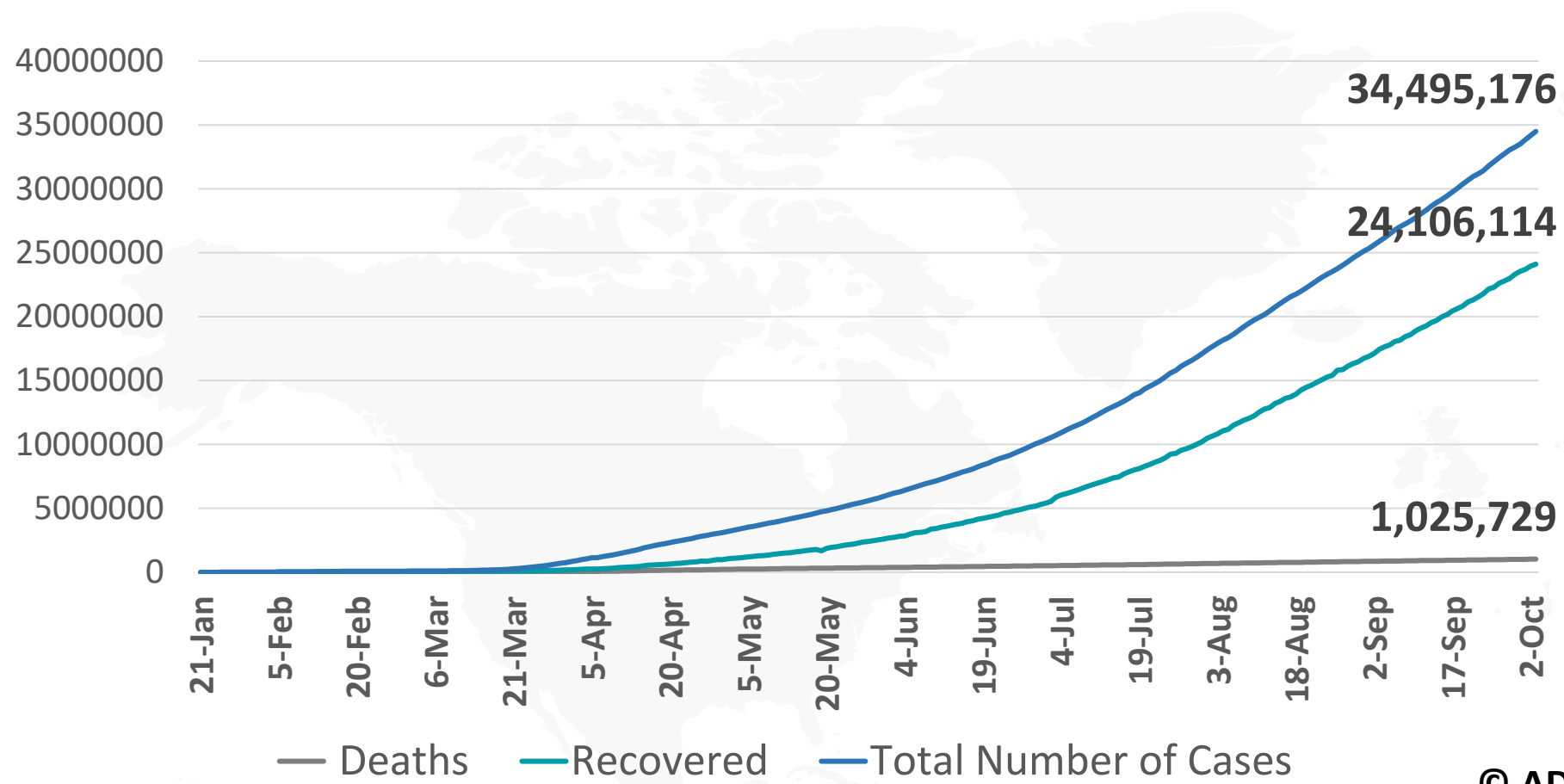
Decarceration and Community Re-Entry in the COVID-19 Era

Vaccine

Safety and Immunogenicity of SARS-CoV-2 mRNA-1273 Vaccine in Older Adults



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)

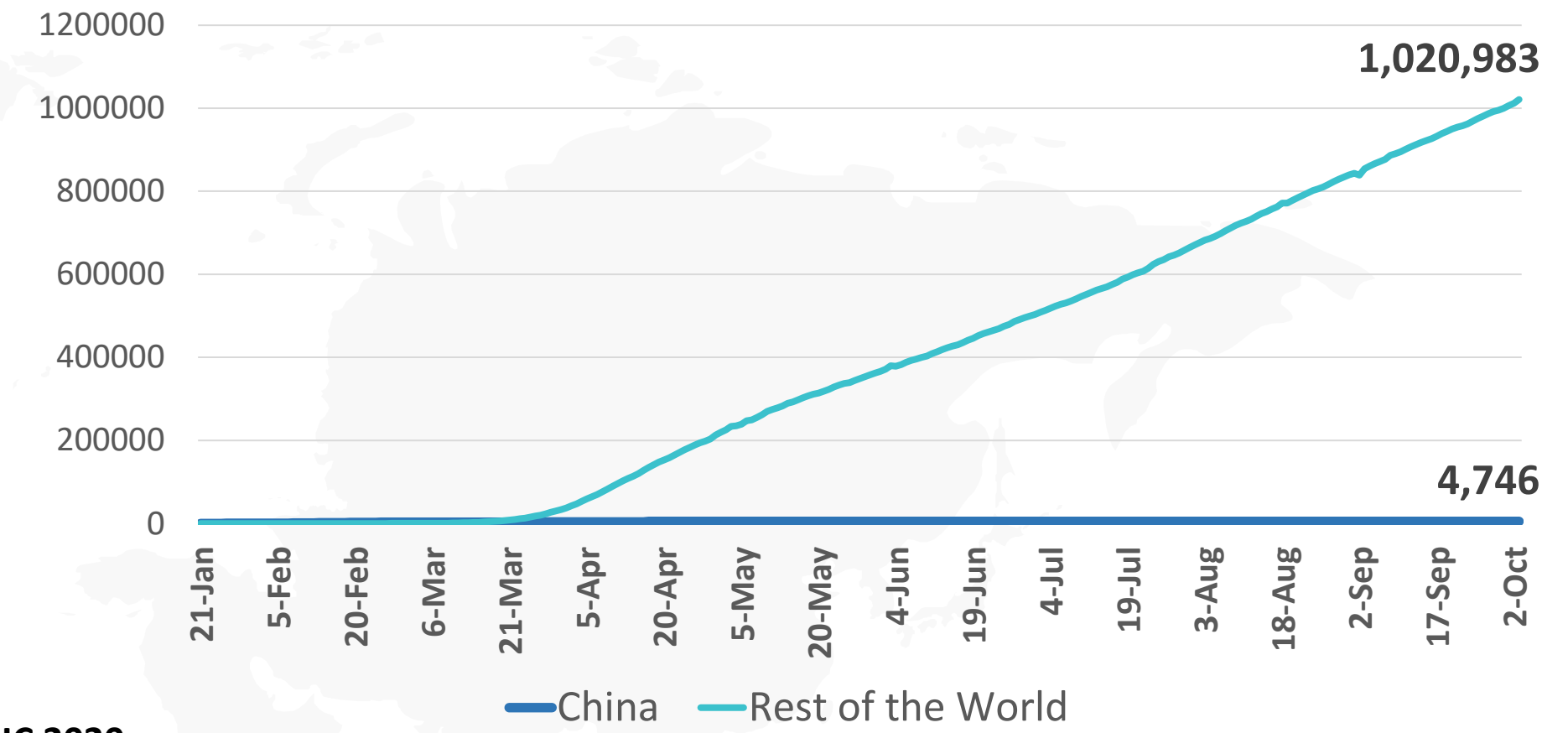


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

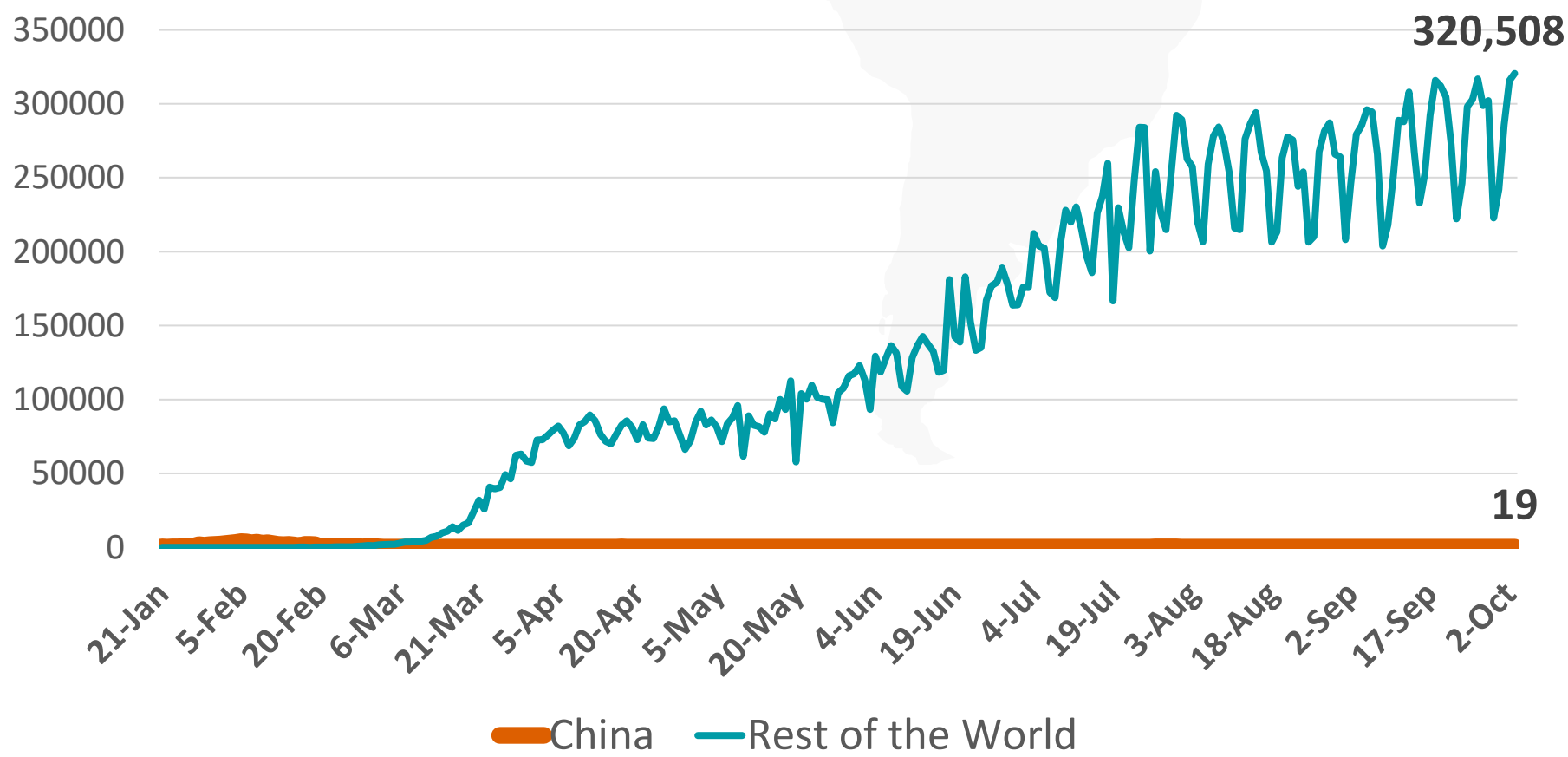


Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)

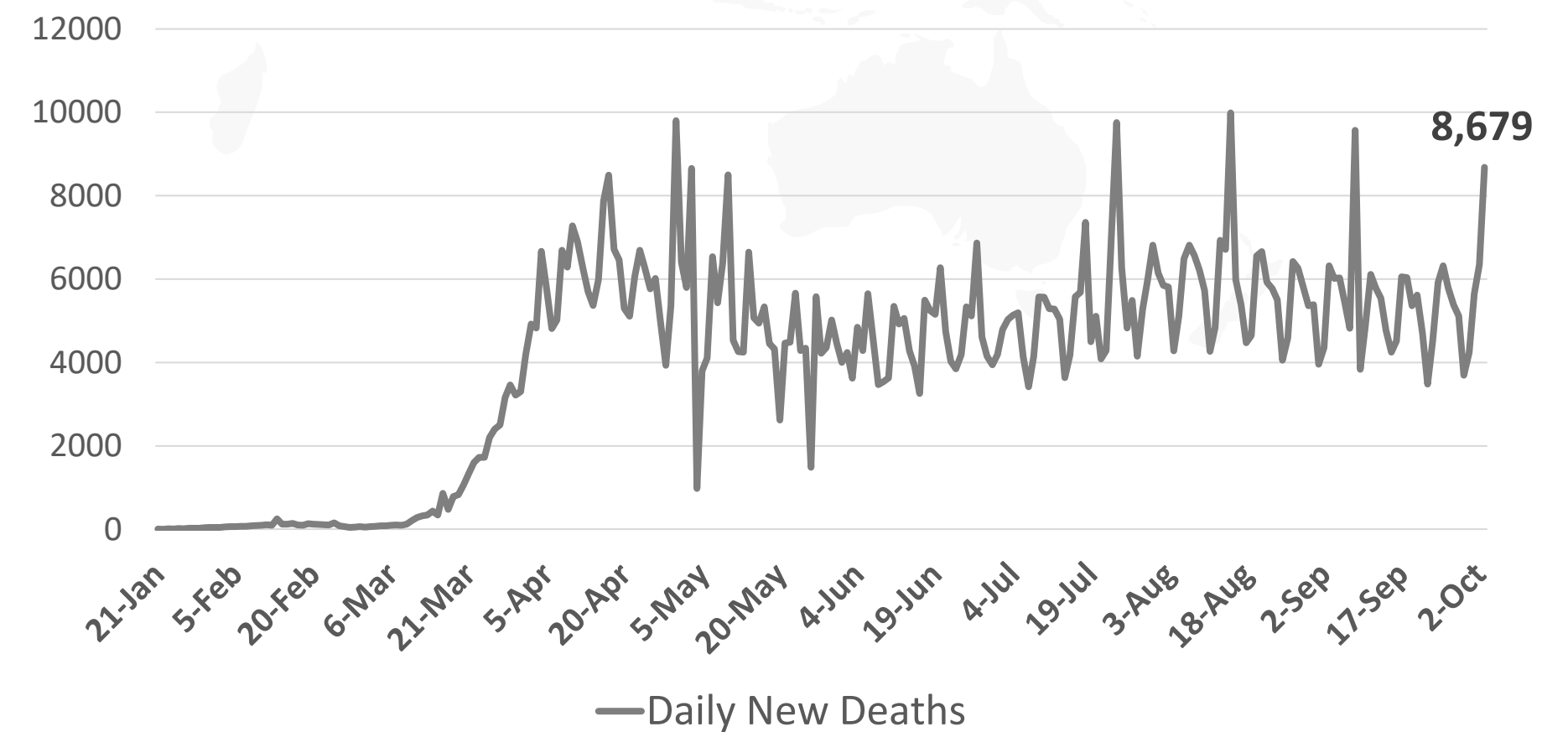
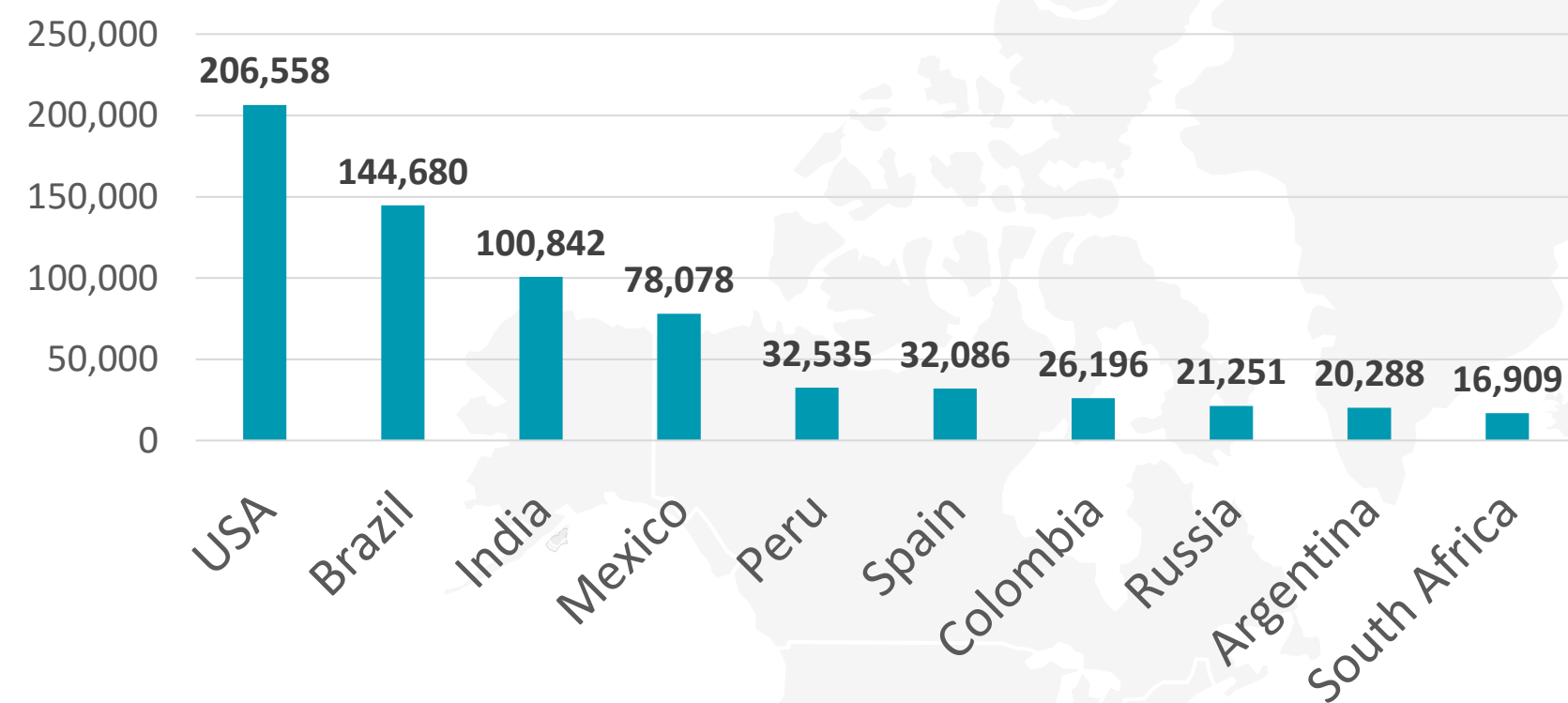
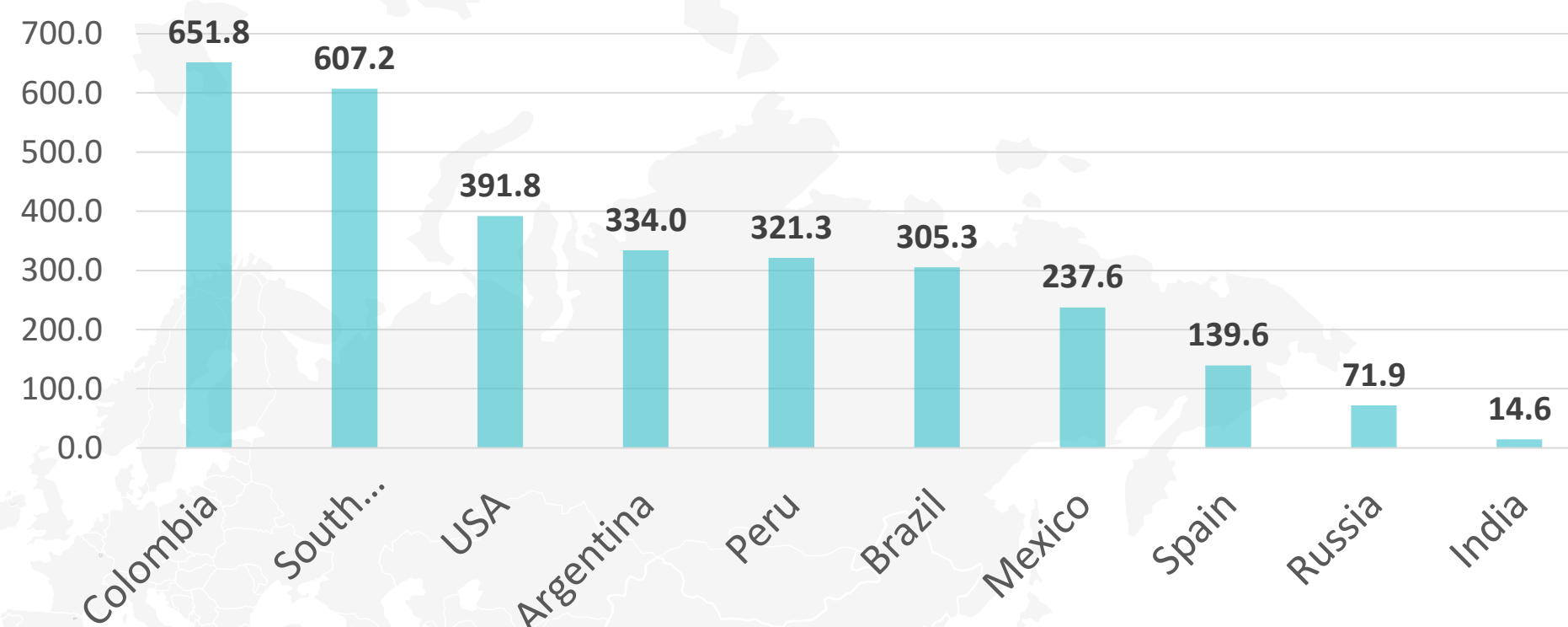


Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

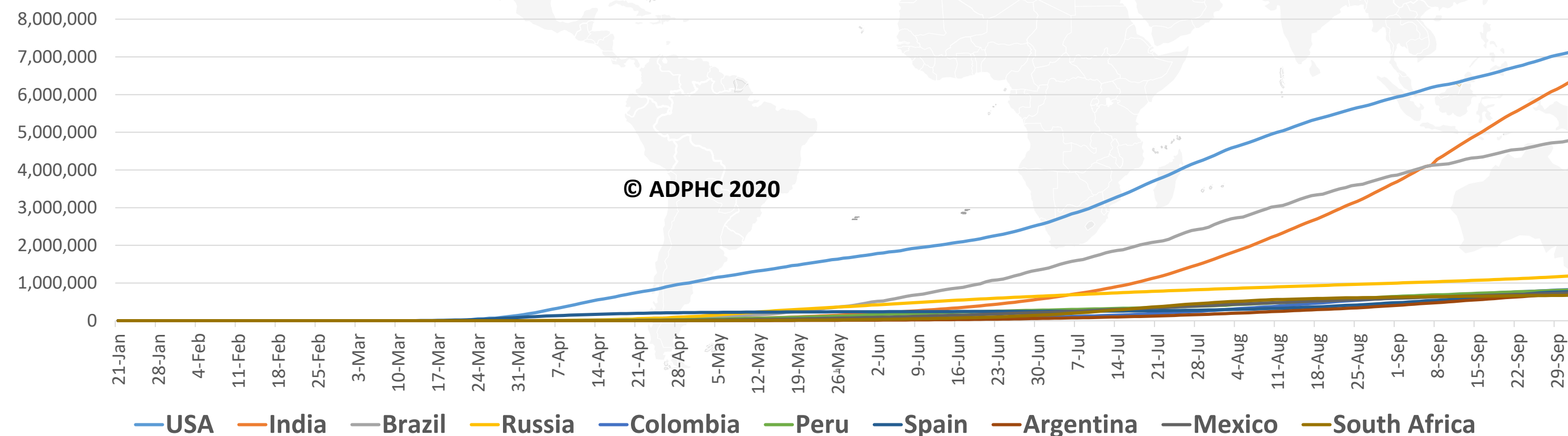
TOTAL DEATHS



DEATHS PER MILLION

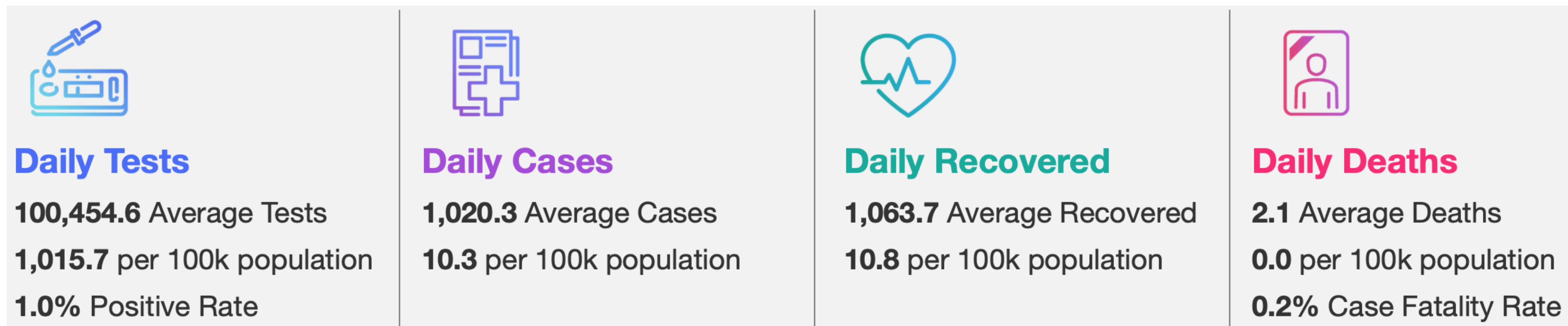


TOTAL INFECTED CASES



USA	7,206,769
India	6,473,544
Brazil	4,847,092
Russia	1,204,502
Colombia	835,339
Peru	818,297
Spain	789,932
Argentina	765,002
Mexico	748,315
South Africa	676,084

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

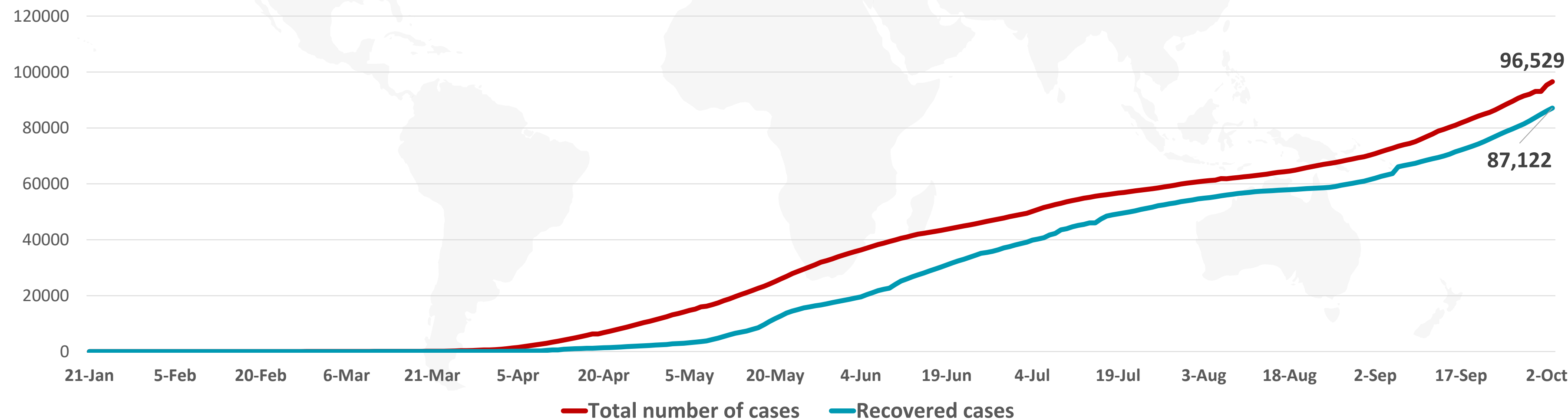


Figure 7A : Global Distribution of COVID-19 Cases

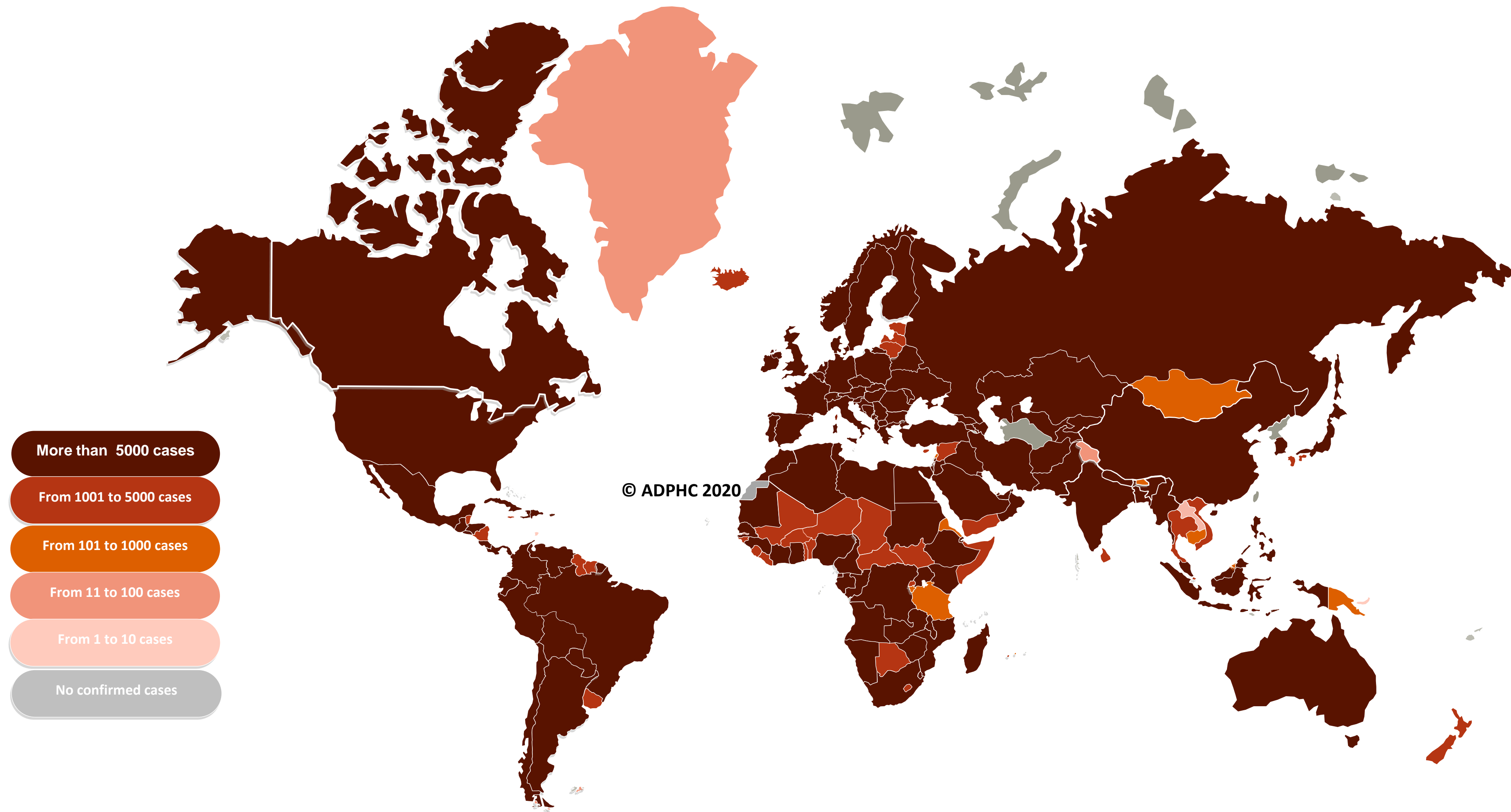
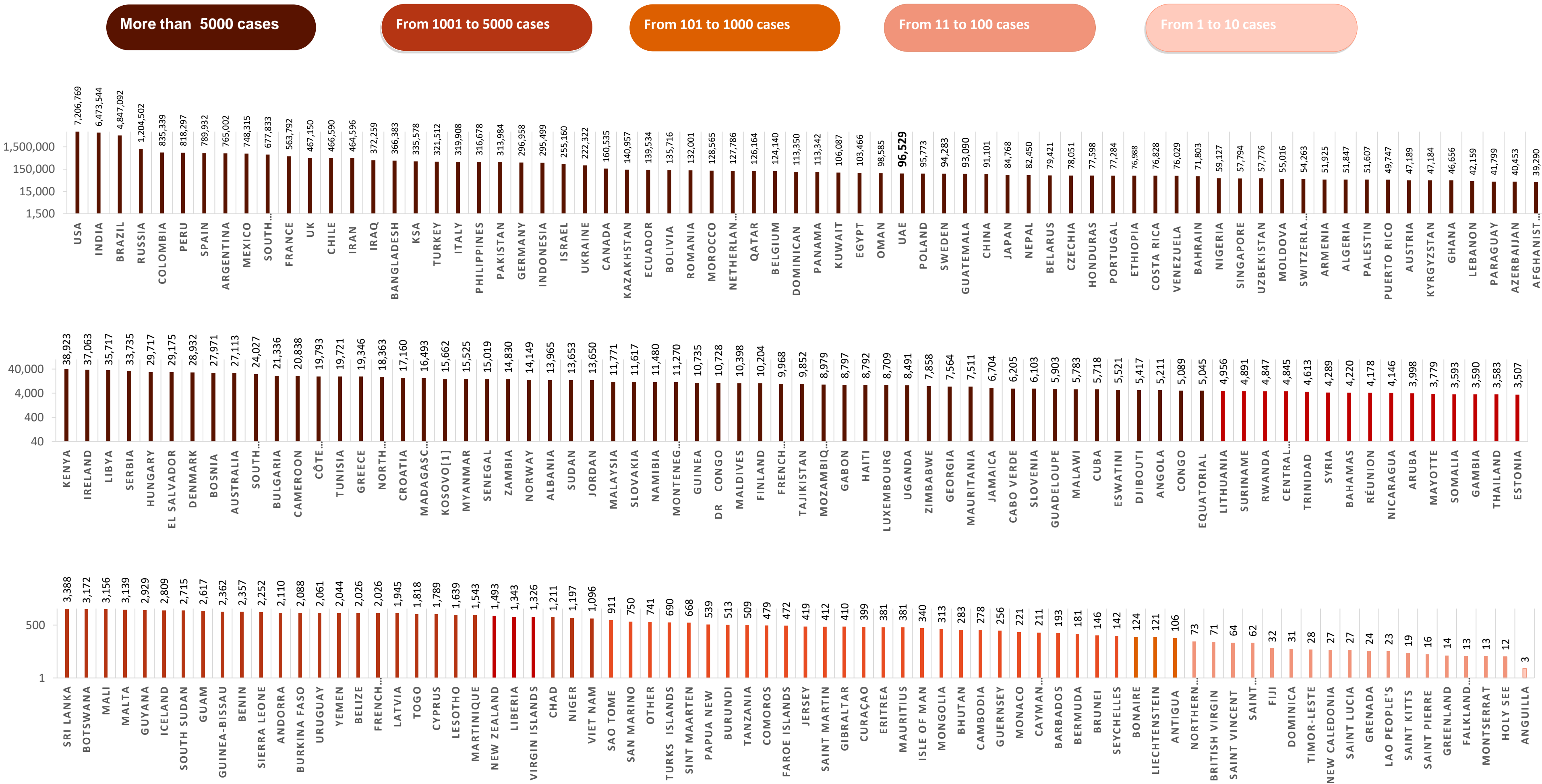


Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases

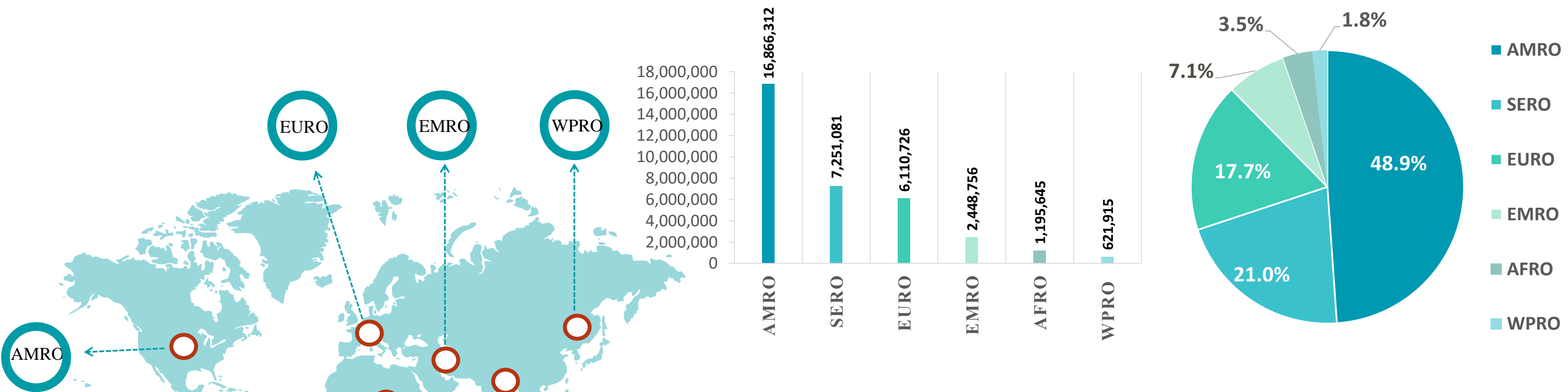


Other*: includes cases and deaths reported under the international conveyance(Diamond Princess)



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

INFECTED



DEATHS

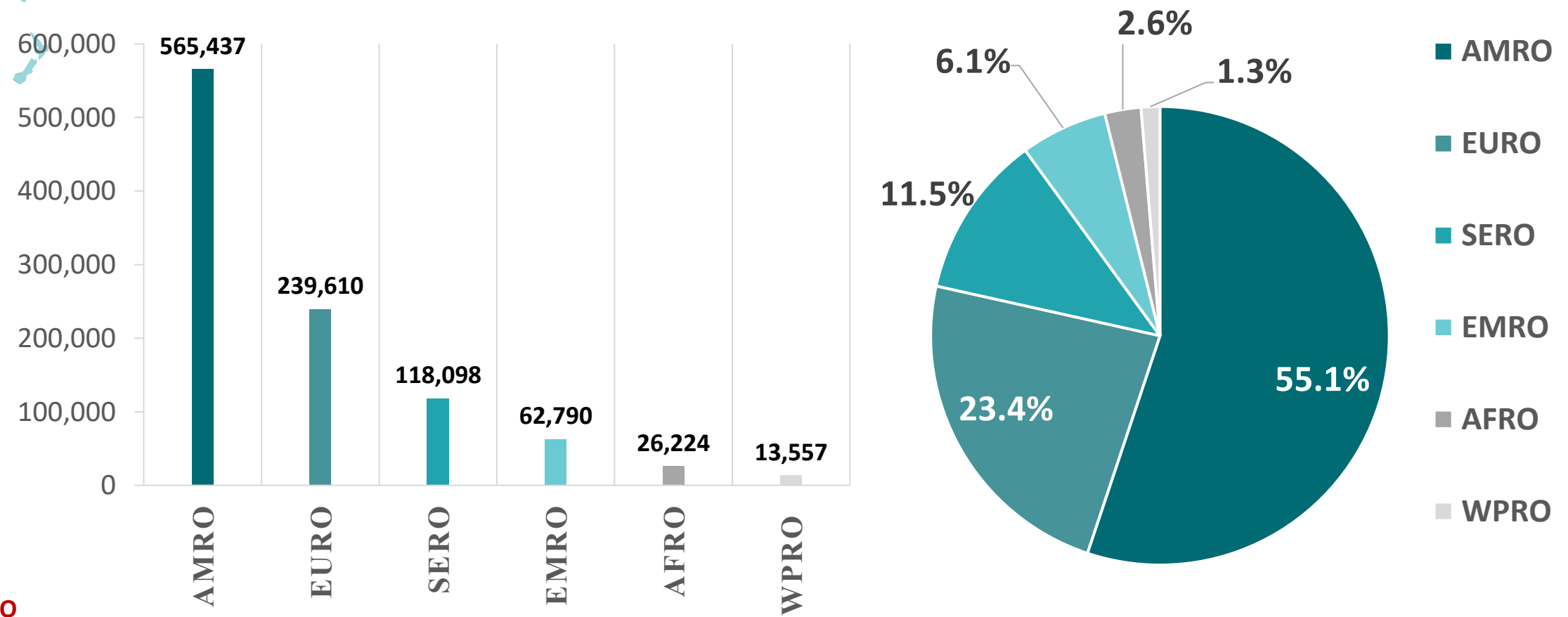
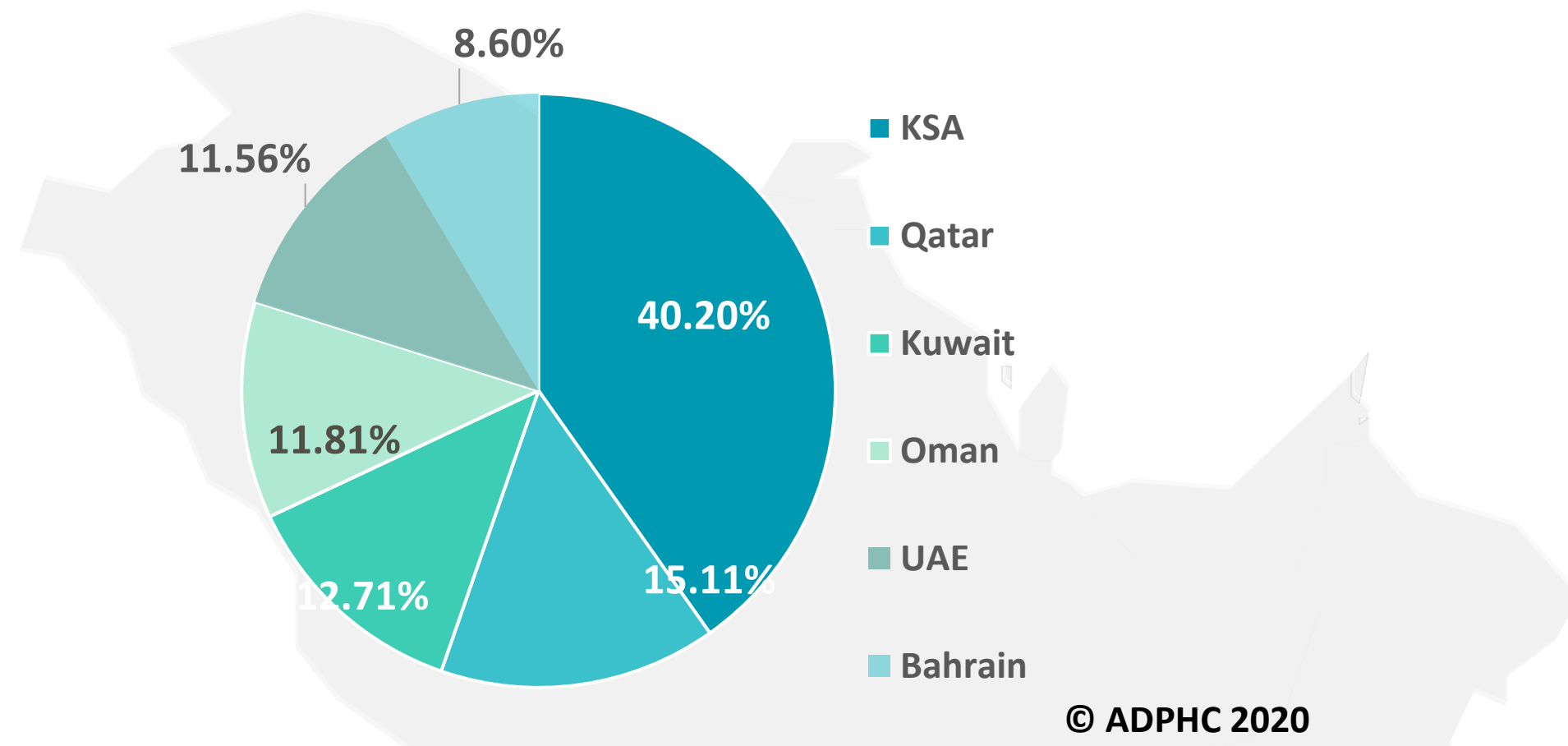
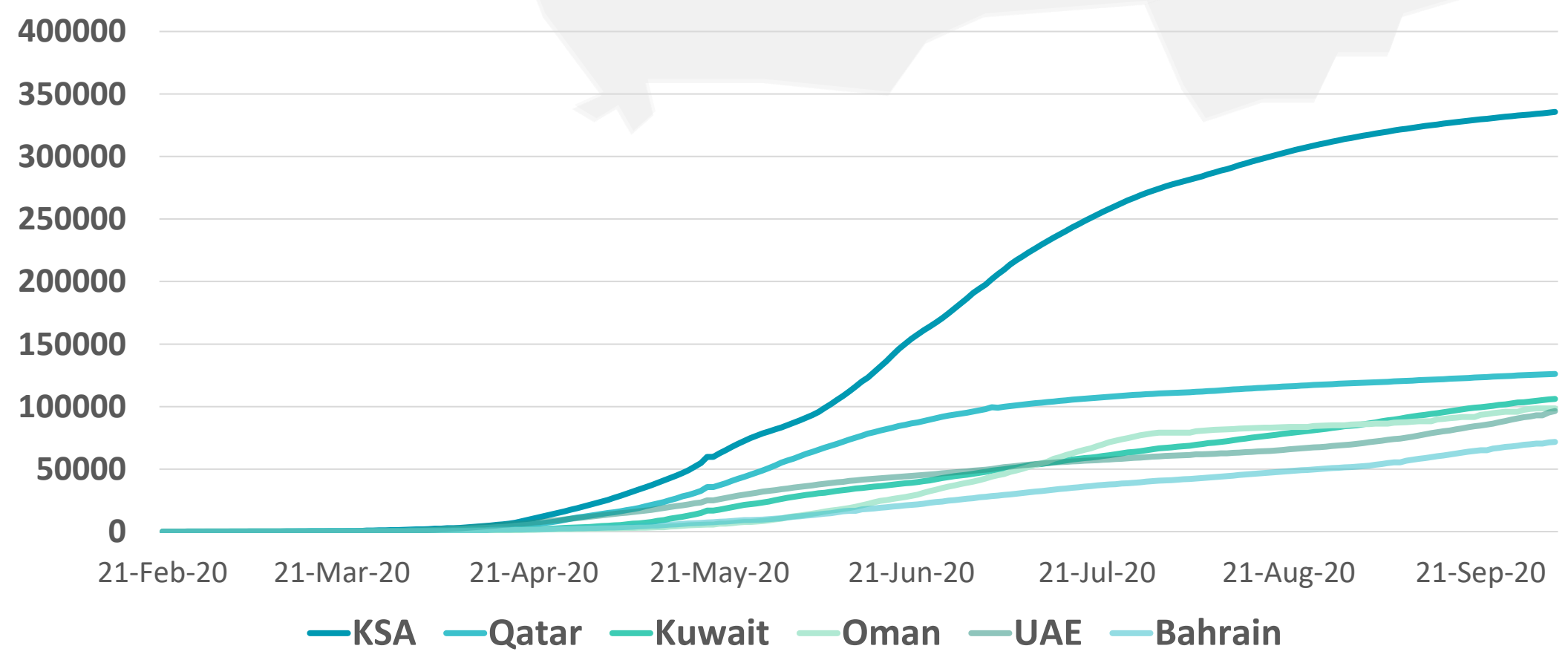
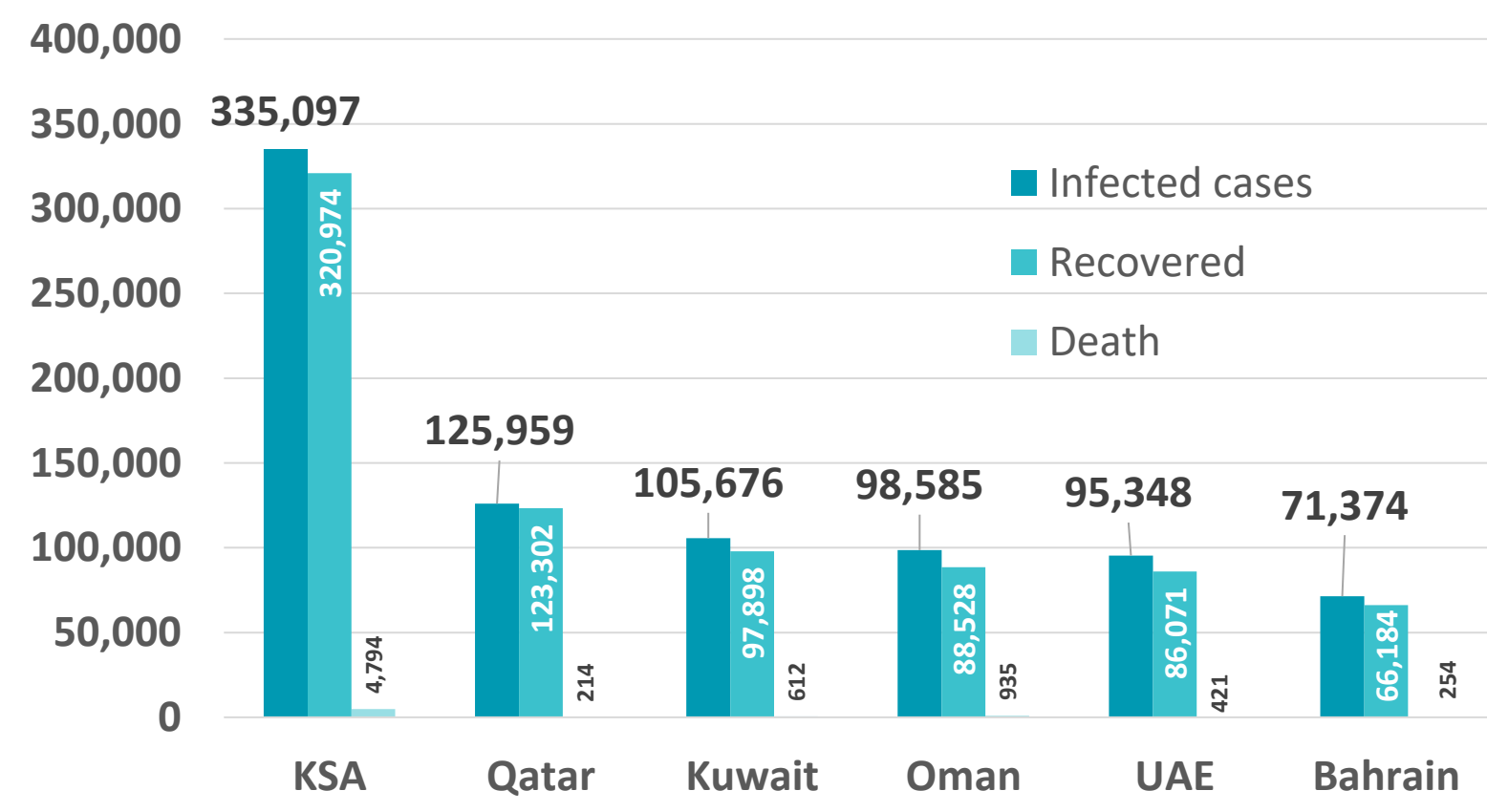


Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

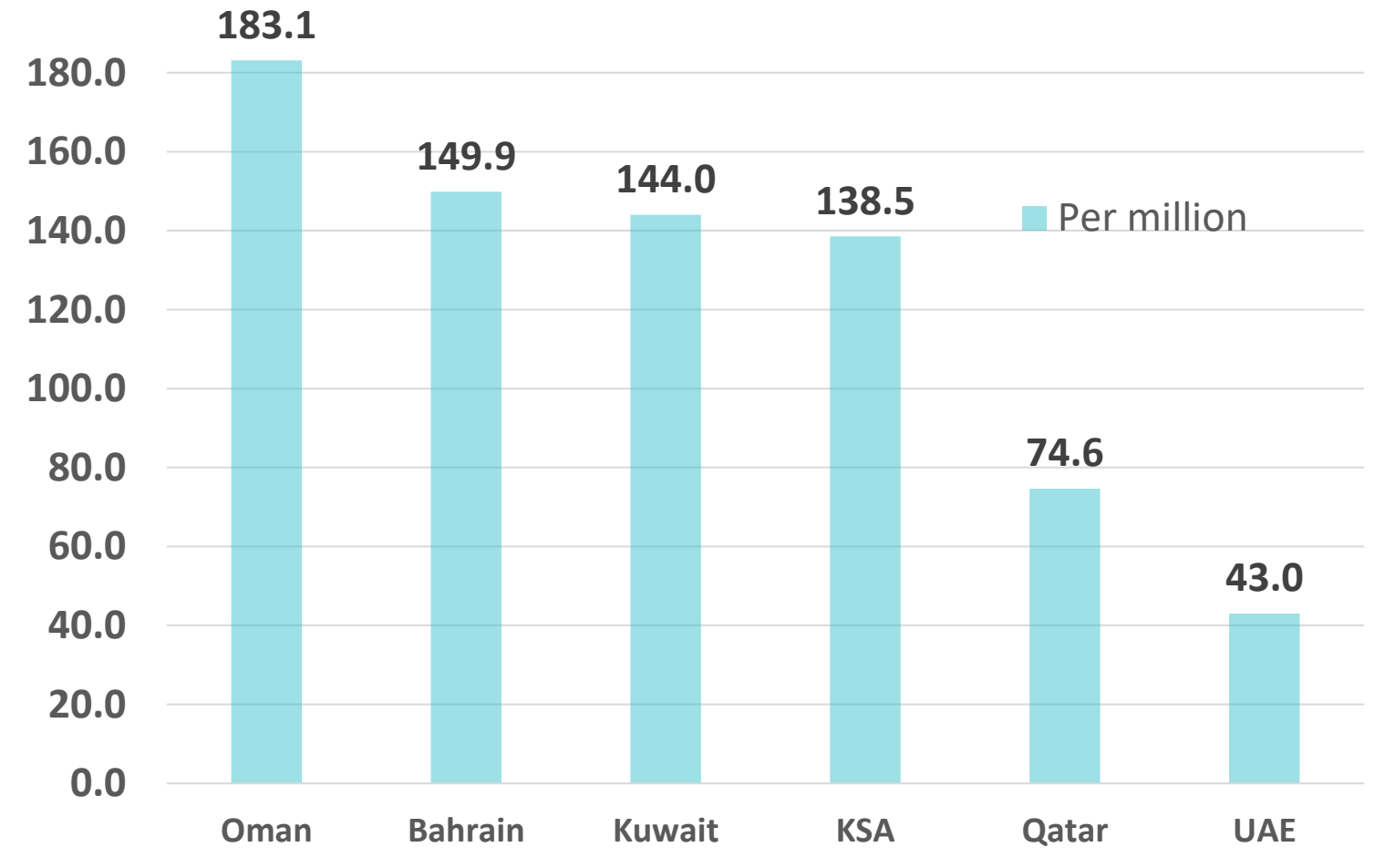
TOTAL NUMBER OF INFECTED CASES



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



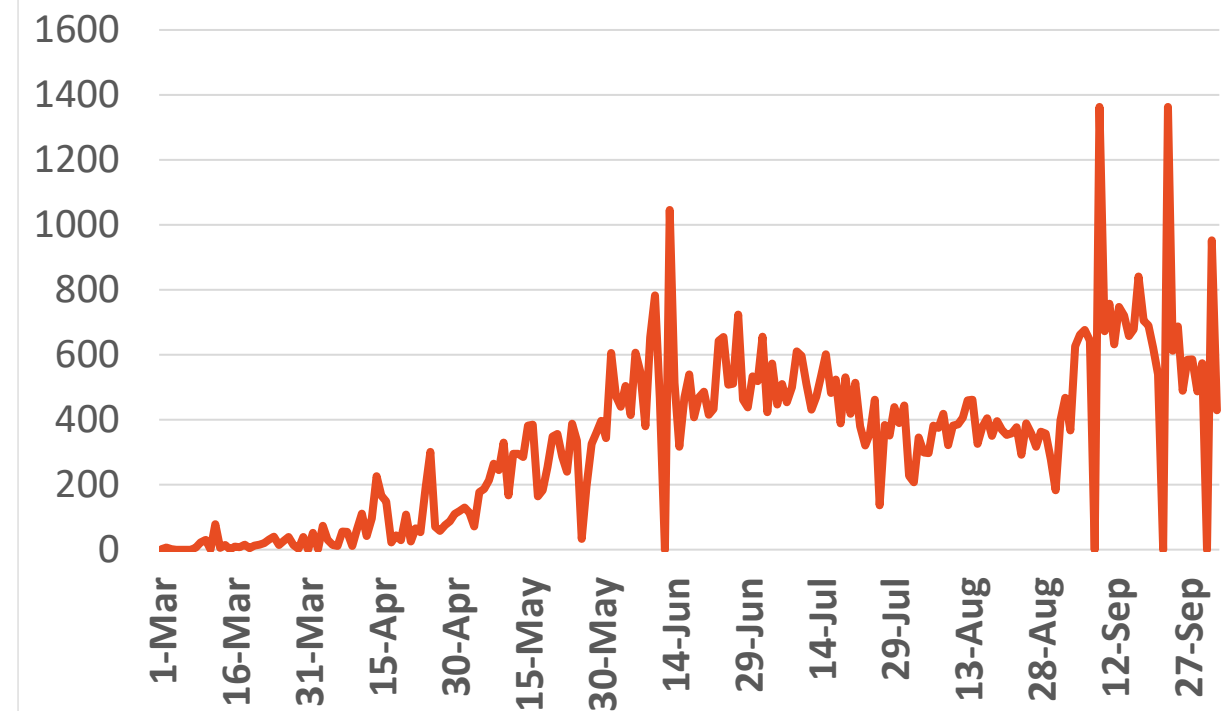
Source : National Emergency Crisis and Disaster Management Authority

KSA



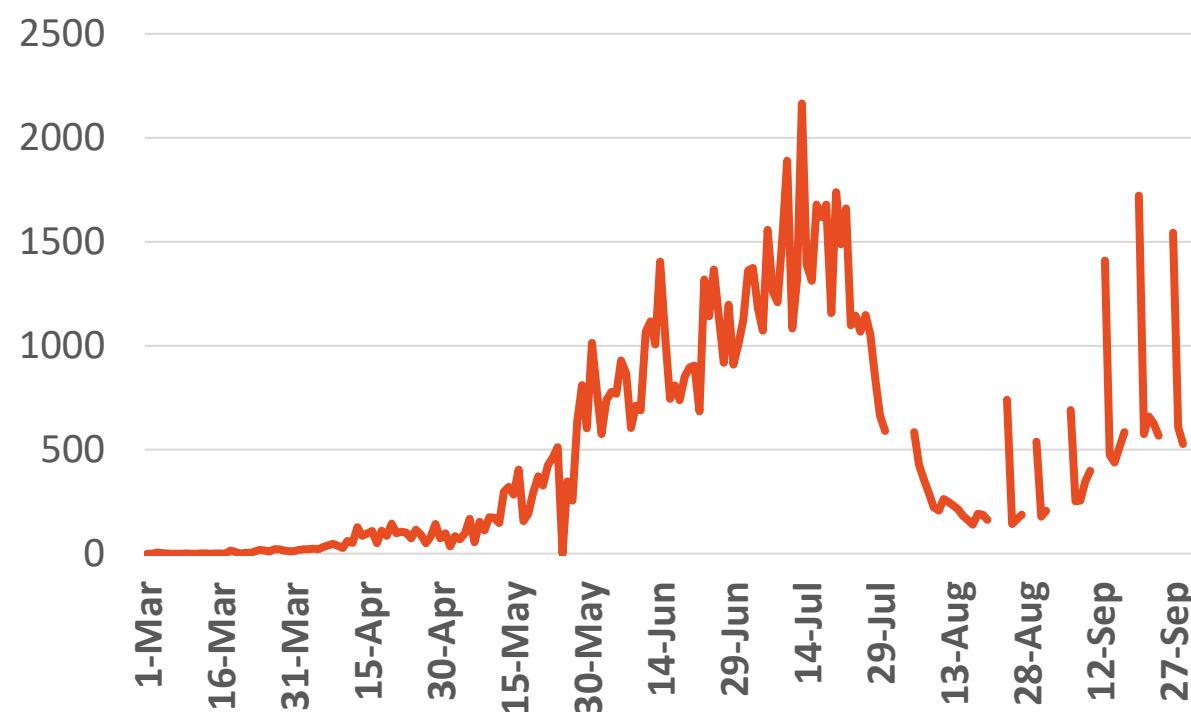
Source : KSA ministry of health

Bahrain



Source :WHO

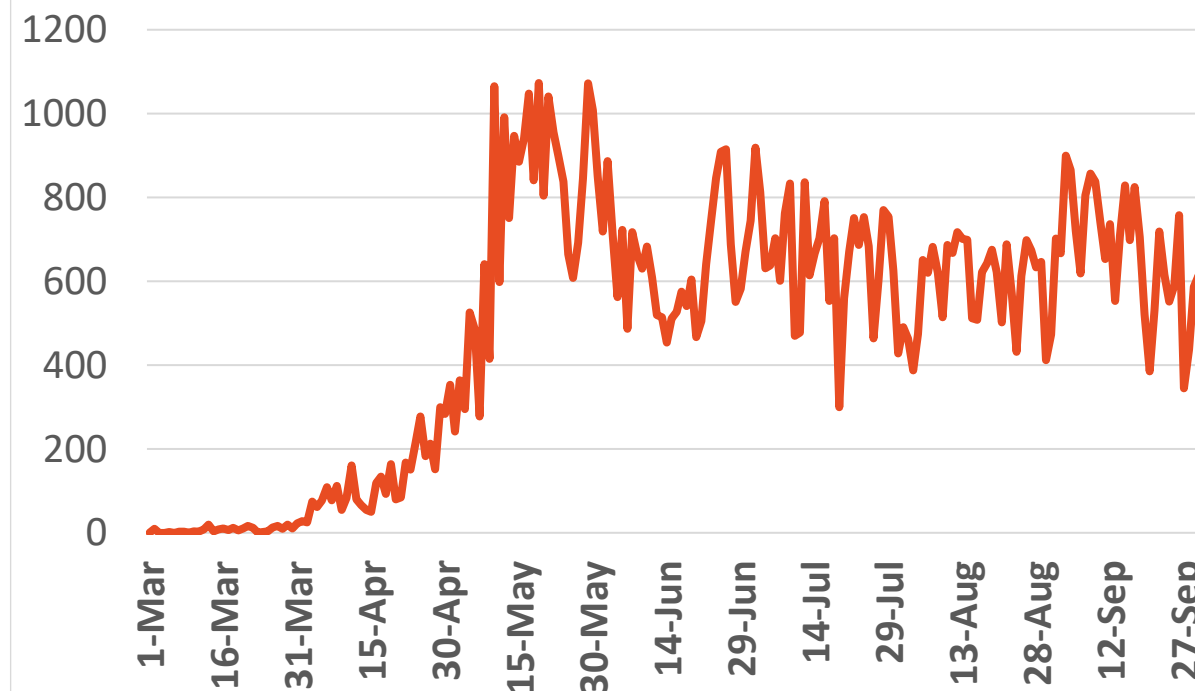
Oman



Source :Oman ministry of health

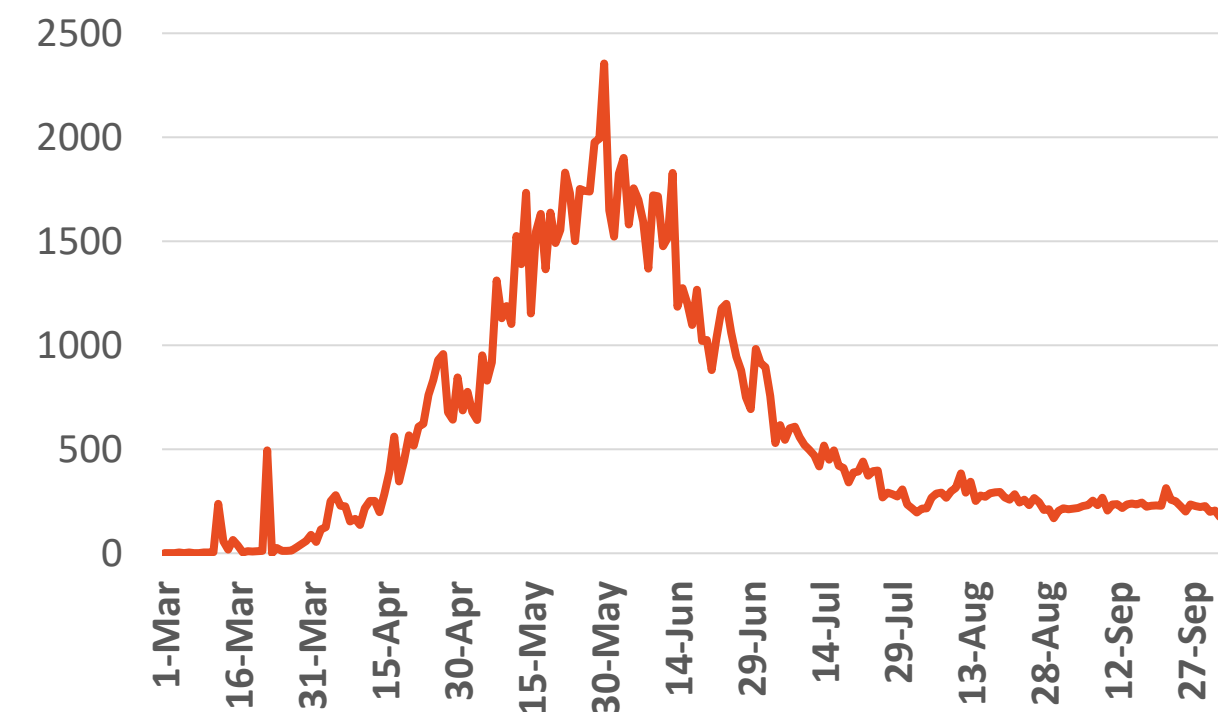
Kuwait

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Source : Kuwait ministry of health

Qatar



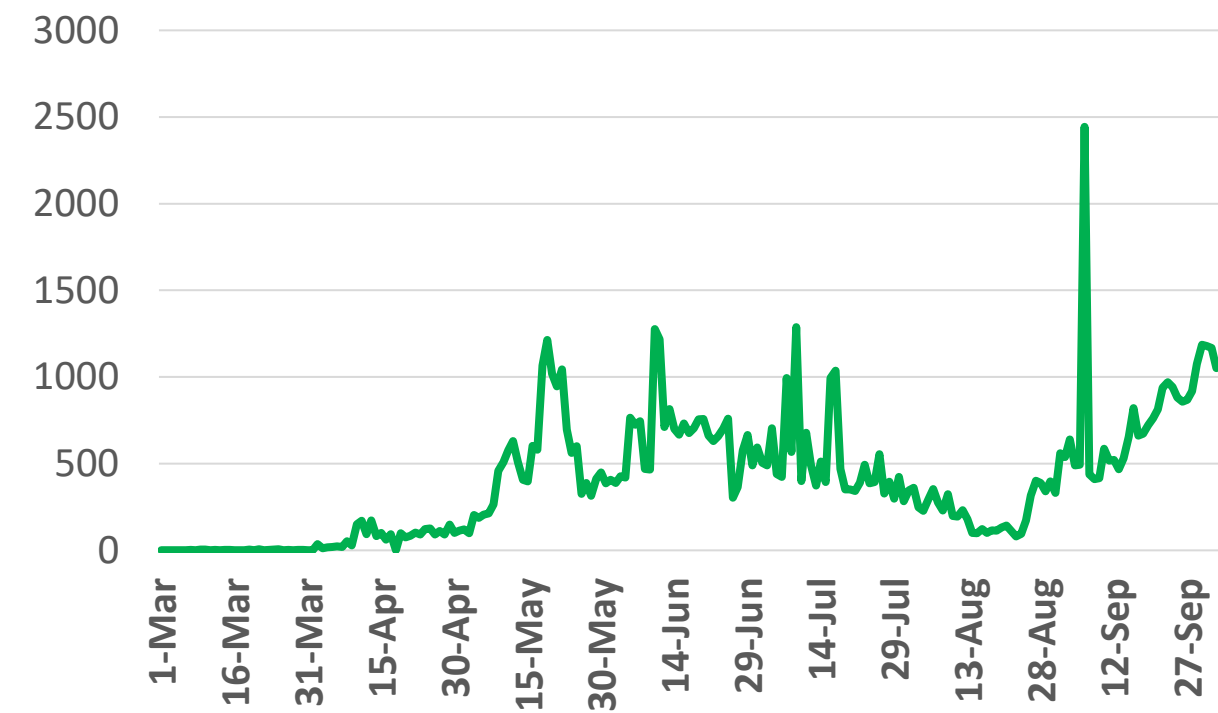
Source : Qatar ministry of health

*No announced statistic data from 31 July to 4 August, 21,23,28,30 August 2, 4, 5,11,12,18,19,25 ,26,30 September & 1,2 October
*No announced statistic data on weekends and official holidays.



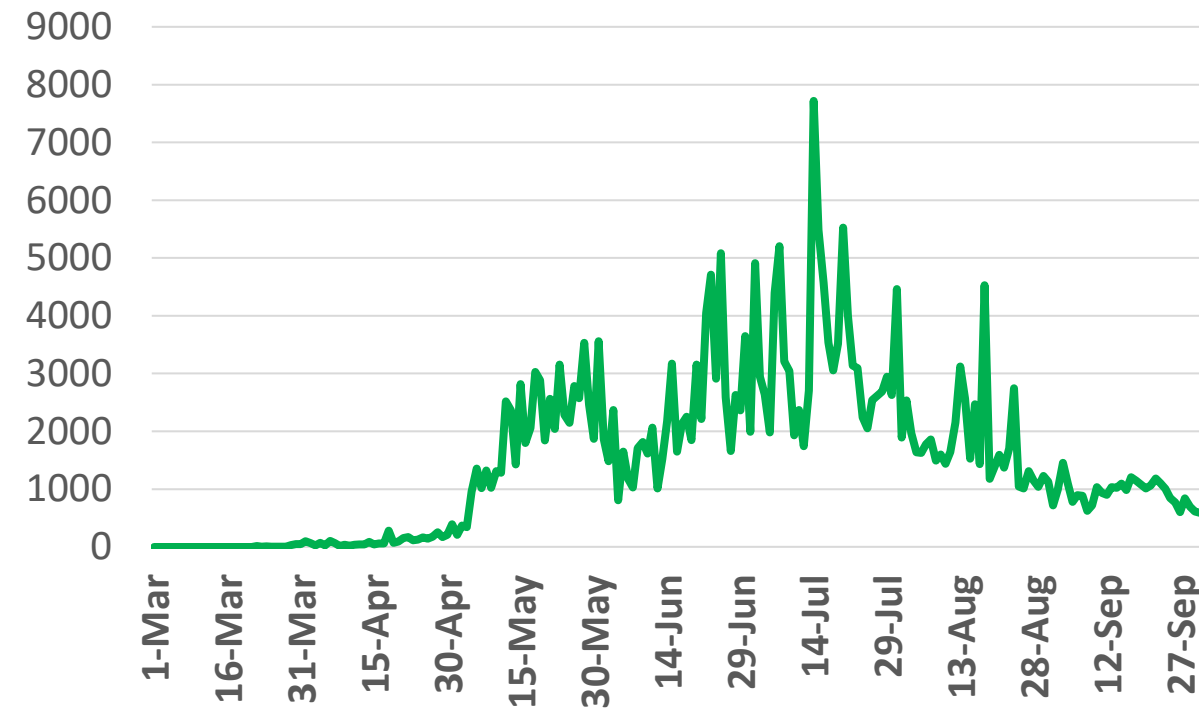
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE



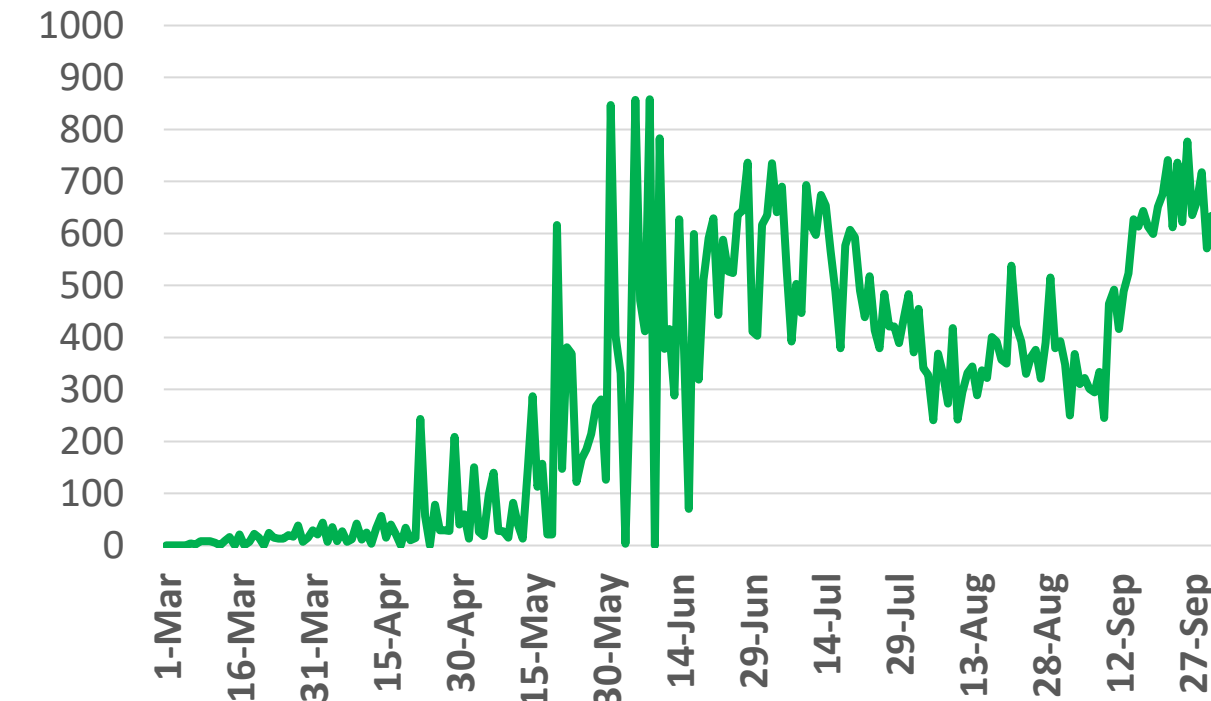
Source : National Emergency Crisis and Disaster Management Authority

KSA



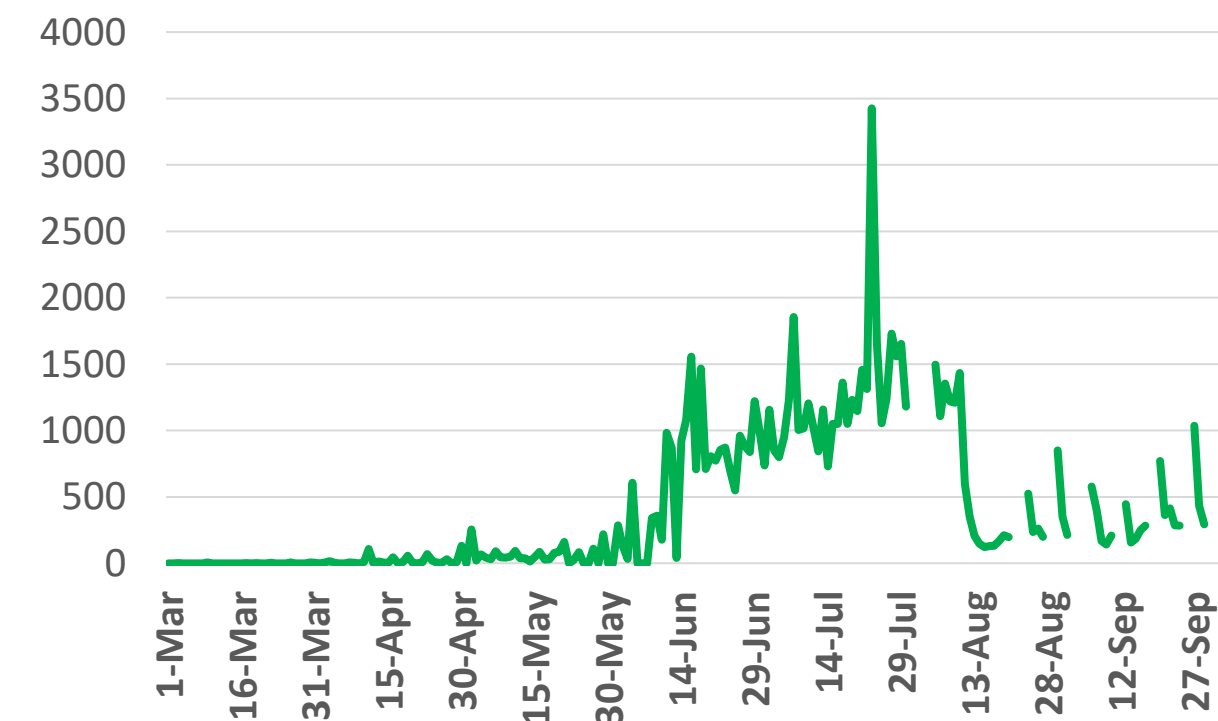
Source : KSA ministry of health

Bahrain



Source : Bahrain ministry of health

Oman



Source : Oman ministry of health

Kuwait

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Source : Kuwait ministry of health

Qatar



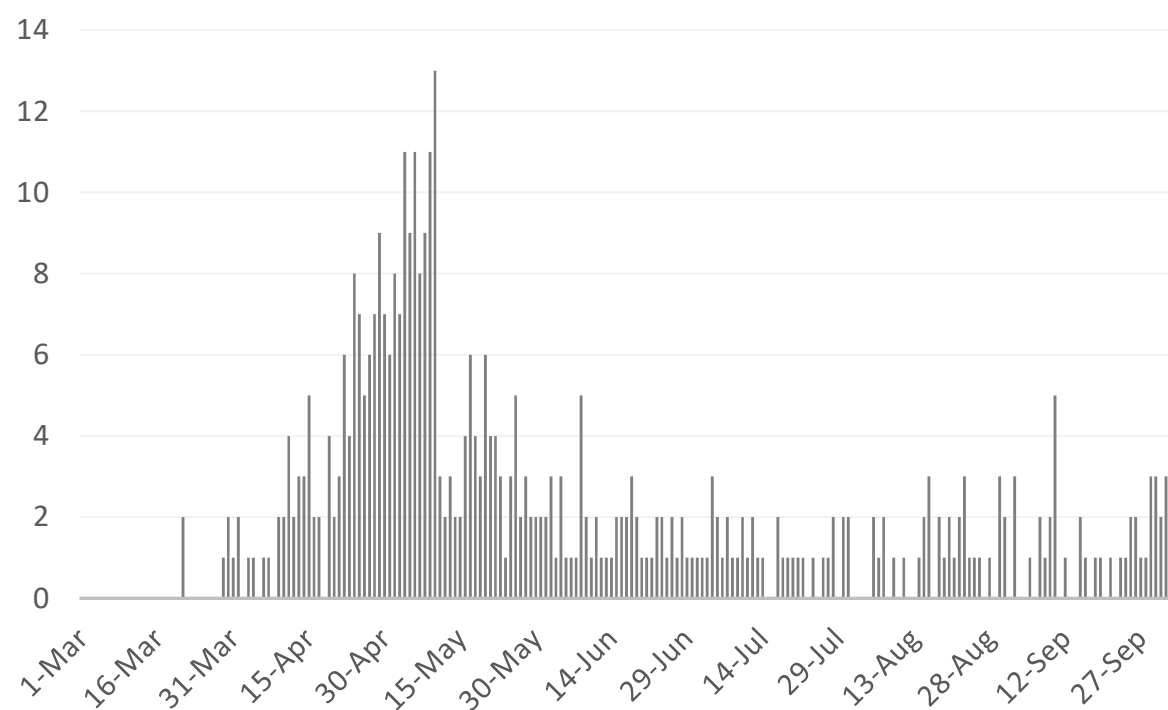
Source : Qatar ministry of health

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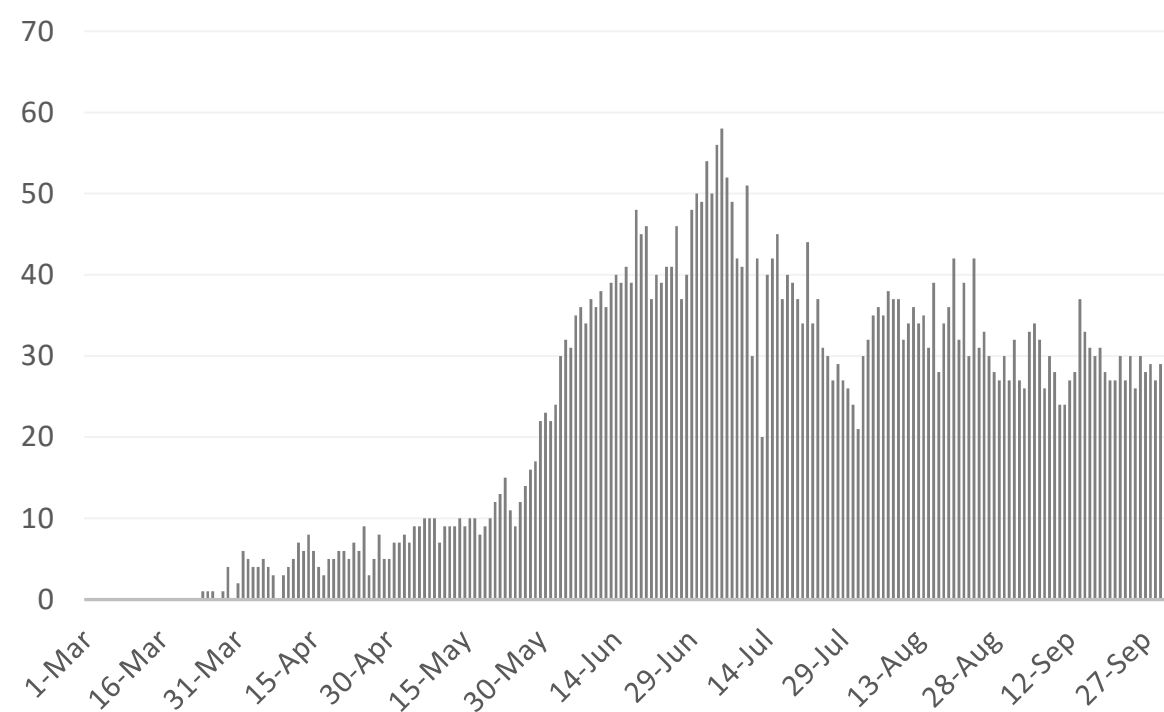
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



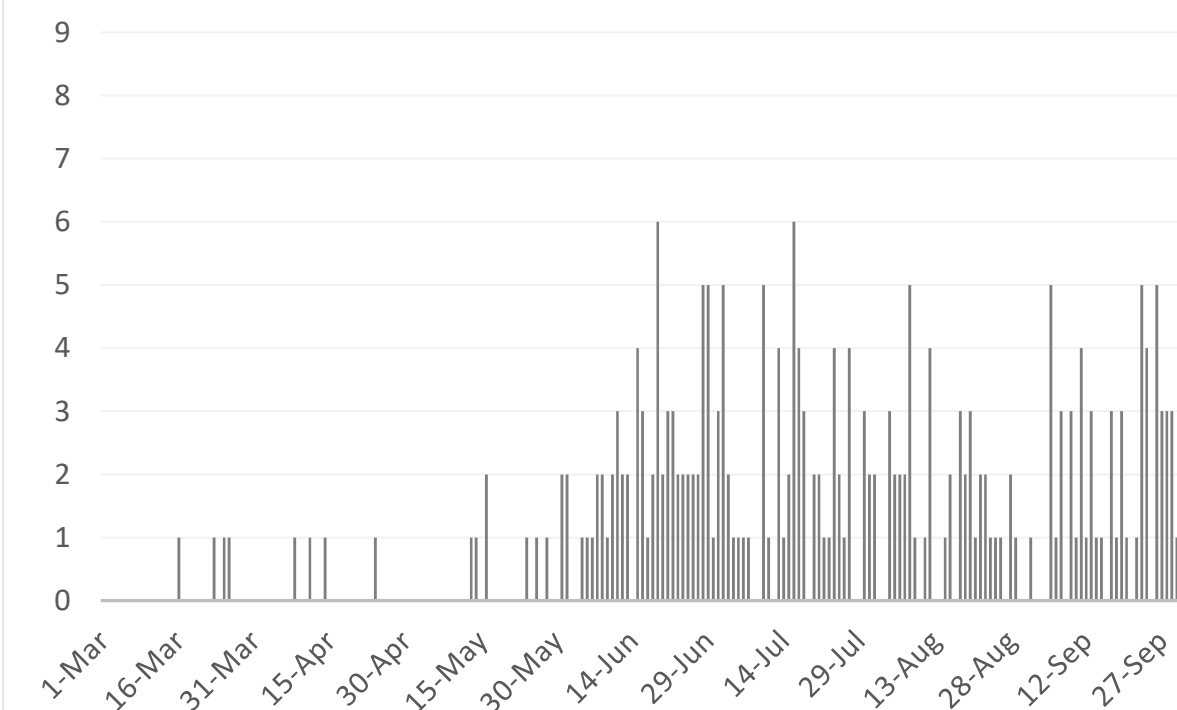
Source : National Emergency Crisis and Disaster Management Authority

KSA



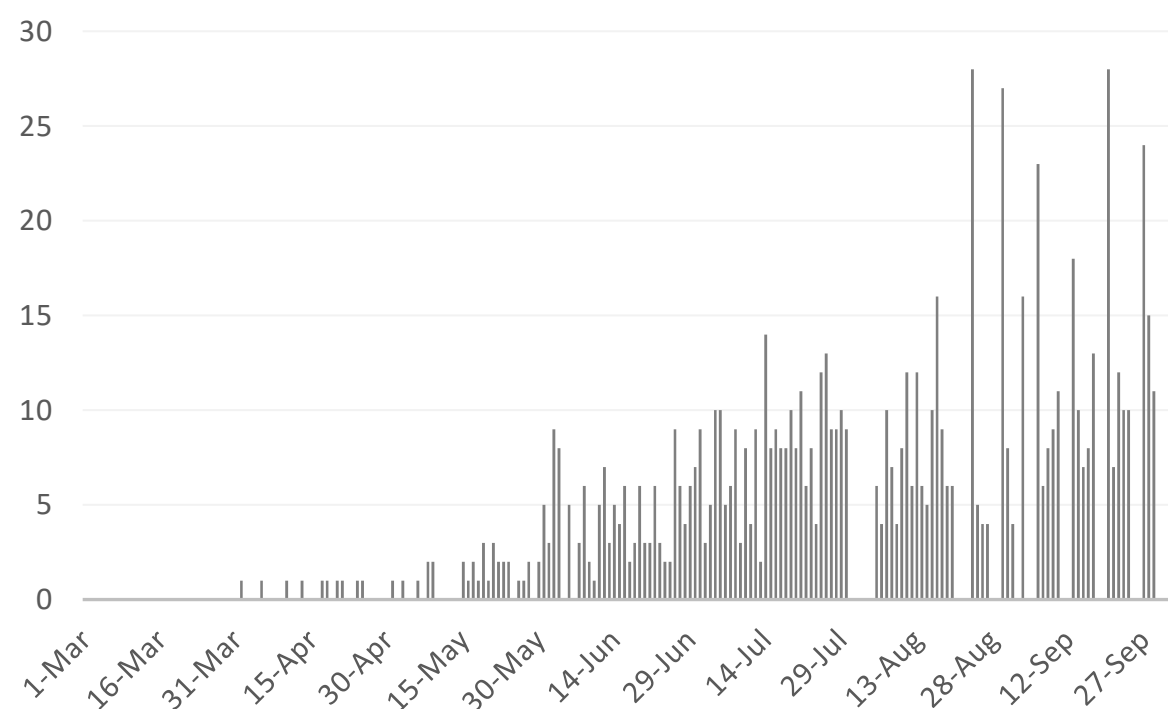
Source : KSA ministry of health

Bahrain



Source :WHO

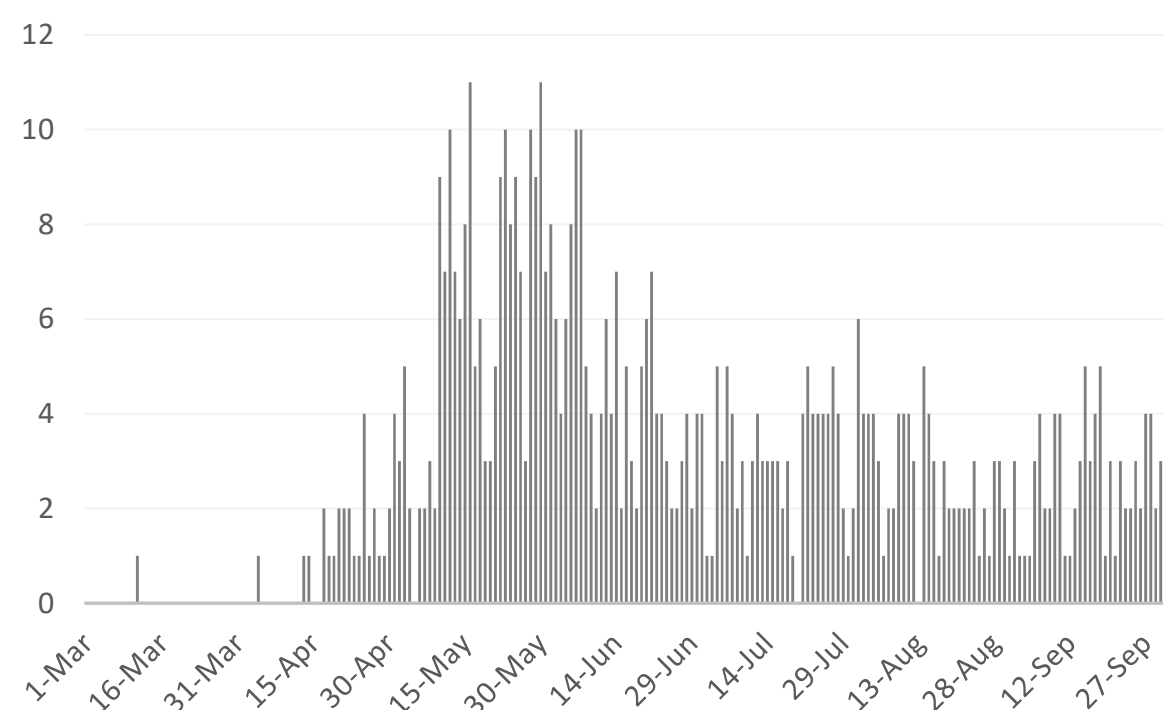
Oman



Source :Oman ministry of health

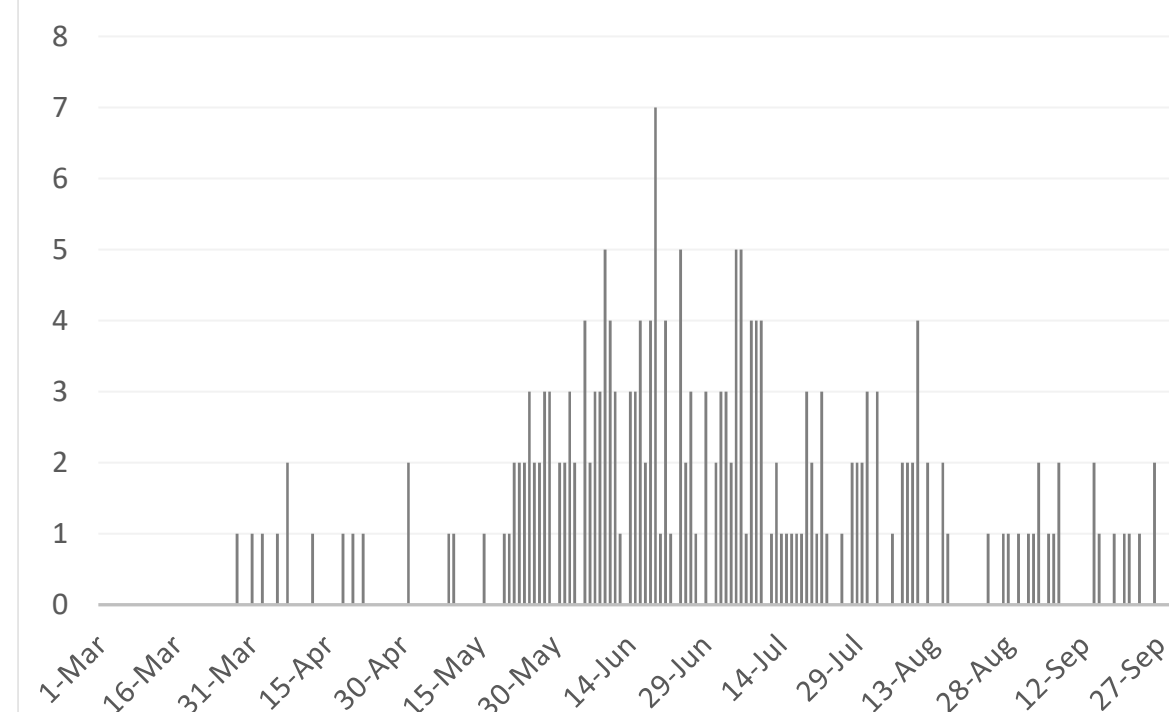
Kuwait

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Source : Kuwait ministry of health

Qatar



Source : Qatar ministry of health

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PUBLIC HEALTH RESPONSE

Article 1

Published

September 29, 2020 [THE LANCET](#)

Decarceration and Community Re-Entry in the COVID-19 Era

- In the United States, in response to the increasing number of COVID-19 outbreaks in the correctional facilities, public health experts, civil rights attorneys, and advocacy groups have made an urgent appeal for prison depopulation. Many jurisdictions have restricted admission, accelerated release of individuals in pretrial detention or people convicted of nonviolent offences, and from immigration detention centers. Incarcerated individuals > 55 years are especially at risk of severe COVID-19; however, political leaders have neglected this group in prison depopulation efforts. Many of them have served several years in prison for violent crimes committed during young adulthood, and when released, they have the lowest re-offence rates.
- Those who were imprisoned previously often have individual, familial, and community disruptions resulting from mass incarceration and they can endure structural violence during their re-entry and reintegration process that intensifies social injustice. Furthermore, community re-entry is complicated by unemployment and the economic downturn caused by this pandemic. These challenges call for significant investments that support re-entry, including the provision of stable housing, ensuring food security, and access to quality medical care and other public services.

Panel: Community re-entry and reintegration policies in the COVID-19 era

Enhancing public health

- Re-entry support approaches that involve less person-to-person contact
- Avoidance of group activities
- Education of preventive interventions
- Hygiene and disinfection strategies
- Viral screening and instituting quarantine and isolation protocols when indicated, particularly at halfway houses or other dormitory-style living environments

Removing structural vulnerabilities

- Stable housing
- Food security
- Access to other public services
- Expanding job opportunities
- High-quality early education
- Enhancing residential mobility

Reducing health inequities

- Access to quality medical care
- Enrolment (or re-enrolment) in Medicaid, including individuals with pre-existing conditions
- Increase access to mental health services
- Effective treatment for substance use disorder

Permanent reductions in jail and prison populations

- Reduce incarceration to levels of other industrialised countries



Article 1

Safety and Immunogenicity of SARS-CoV-2 mRNA-1273 Vaccine in Older Adults

Published

September 29, 2020 [The New England Journal of Medicine](#)

- This article reports the preliminary safety and immunogenicity data for the mRNA-1273 vaccine (in an expansion of the phase 1 trial) among 40 healthy participants who were 56 years of age or older, who were enrolled between April 16 and May 12 2020.
- The trial was conducted at Kaiser Permanente Washington Health Research Institute in Seattle, the Emory University School of Medicine in Atlanta, and the National Institute of Allergy and Infectious Diseases (NIAID) Vaccine Research Center in Bethesda, Maryland.
- These participants were age-stratified into two sub-groups of 56 - 70 years and ≥ 71 years. Within each age sub-group, participants received either 25 μg or 100 μg of the vaccine. The vaccine was administered twice on day 1 and day 29 of the study.
- Follow-up visits were scheduled 7 and 14 days after the administration of each dose of vaccine and on day 57.

Table 1. Characteristics of the Participants at Baseline.*

Characteristic	Age of 56–70 Years		Age of ≥ 71 Years		All Participants (N=40)
	25- μg Dose (N=10)	100- μg Dose (N=10)	25- μg Dose (N=10)	100- μg Dose (N=10)	
Sex — no. (%)					
Male	3 (30)	5 (50)	8 (80)	3 (30)	19 (48)
Female	7 (70)	5 (50)	2 (20)	7 (70)	21 (52)
Age — yr	65.8 \pm 4.5	63.8 \pm 4.3	72.8 \pm 1.2	72.6 \pm 1.1	68.7
Race or ethnic group — no. (%) [†]					
Asian	0	0	1 (10)	0	1 (2)
White	10 (100)	10 (100)	9 (90)	10 (100)	39 (98)
Hispanic or Latino	0	0	1 (10)	0	1 (2)
Body-mass index [‡]	25.4 \pm 2.5	23.7 \pm 2.3	24.8 \pm 3.5	26.0 \pm 3.5	25.0 \pm 3.0

* Plus-minus values are means \pm SD.

[†] Race or ethnic group was reported by the participants, who could select more than one category.

[‡] The body-mass index is the weight in kilograms divided by the square of the height in meters.

Continued

- No serious adverse events were reported, and no pre-specified trial-halting rules were met. §Solicited adverse events were predominantly mild or moderate in severity and most frequently included fatigue, chills, headache, myalgia, and pain at the injection site. Such adverse events were dose-dependent and were more common after the second immunization.
- Seroconversion was defined as an increase from baseline in the antibody titer by a factor of 4 or more.
- The 100- μ g dose induced higher binding- and neutralizing-antibody titers than the 25- μ g dose. These findings support the continued evaluation of the 100- μ g dose level and two-dose regimen in a large phase 3 trial with a more diverse population to ascertain the safety and efficacy of the mRNA-1273 vaccine and to assess its level of protection against Covid-19.
- The vaccine elicited a strong CD4 cytokine response involving type 1 helper T cells. §Important limitations of this study include the small numbers of participants and the limited ethnic diversity. In addition, at the time of this interim report, the long-term durability of immunogenicity could not be assessed.
- *Important limitations of this study include the small numbers of participants and the limited ethnic diversity. In addition, at the time of this interim report, the long-term durability of immunogenicity could not be assessed.*



THANK YOU

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