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Scientific Research Monitoring on COVID-19

13 June 2020

For accessing the full series of published scientific reports please visit the following link:

<https://www.doh.gov.ae/ar/covid-19/Healthcare-Professionals/Scientific-Publication>

Summary on COVID19



SARS-COV2 virus

- The virus have been sequenced and found to be similar to MERS-CoV and SARS-CoV. Research revealed that the virus originated in a bat reservoir.
- New designation for the disease and the virus: COVID-19 and SARS-COV2.
- Two strain have been identified for SARS-COV2 (L type (more aggressive) and S type .and 3 cluster groups.

Transmission

- Transmission from human to human has been confirmed. Incubation period ranges from 5 days and can reach up to 14 days.
- Suggested human-to-human transmission occurs through droplets, contact and fomites, similar to Severe Acute Respiratory Syndrome (SARS).

Clinical features and outcome

- Non-specific and the disease presentation can range from no symptoms (asymptomatic) to severe pneumonia and death.
- Highest risk for severe disease and death include people aged over 60 years and those with underlying conditions
- Pregnant women infected with SARS-COV2 may experience symptoms similar to those of non-pregnant adults. No evidence suggests transmission from mother to newborn if infected late in pregnancy.

Therapies and vaccination

- Efforts currently in developing therapies for this virus focus on previously known medications and vaccination for MERS-CoV and SARS-CoV. In addition to other type of medication.
- Also more therapies are currently under investigation including immunomodulatory, antimalarial and others.
- Vaccination are under clinical trial stage in many countries around the world.

Summary on COVID19 (Cont.)

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COVID19 in figure

- 80% of laboratory confirmed patients have had mild to moderate disease
- 13.8% have severe disease.
- 6.1% are critical
- Children account for 2.4% of all reported cases.(less than 19 years) data from china

Today's Highlights



All articles presented in this report represent the authors' views and not necessarily represent Abu Dhabi Public Health Center views or directions.

Scientific Research

- **Public Health Response:** article that discusses how the Spanish flu have impacted humanity and what to expect from COVID19 pandemic.
- **Vaccine:** update on a conference hosted by a vaccine alliance , that gives more updates on how to ensure access to vaccine by everyone.



WHO Daily Report 12 June 2020

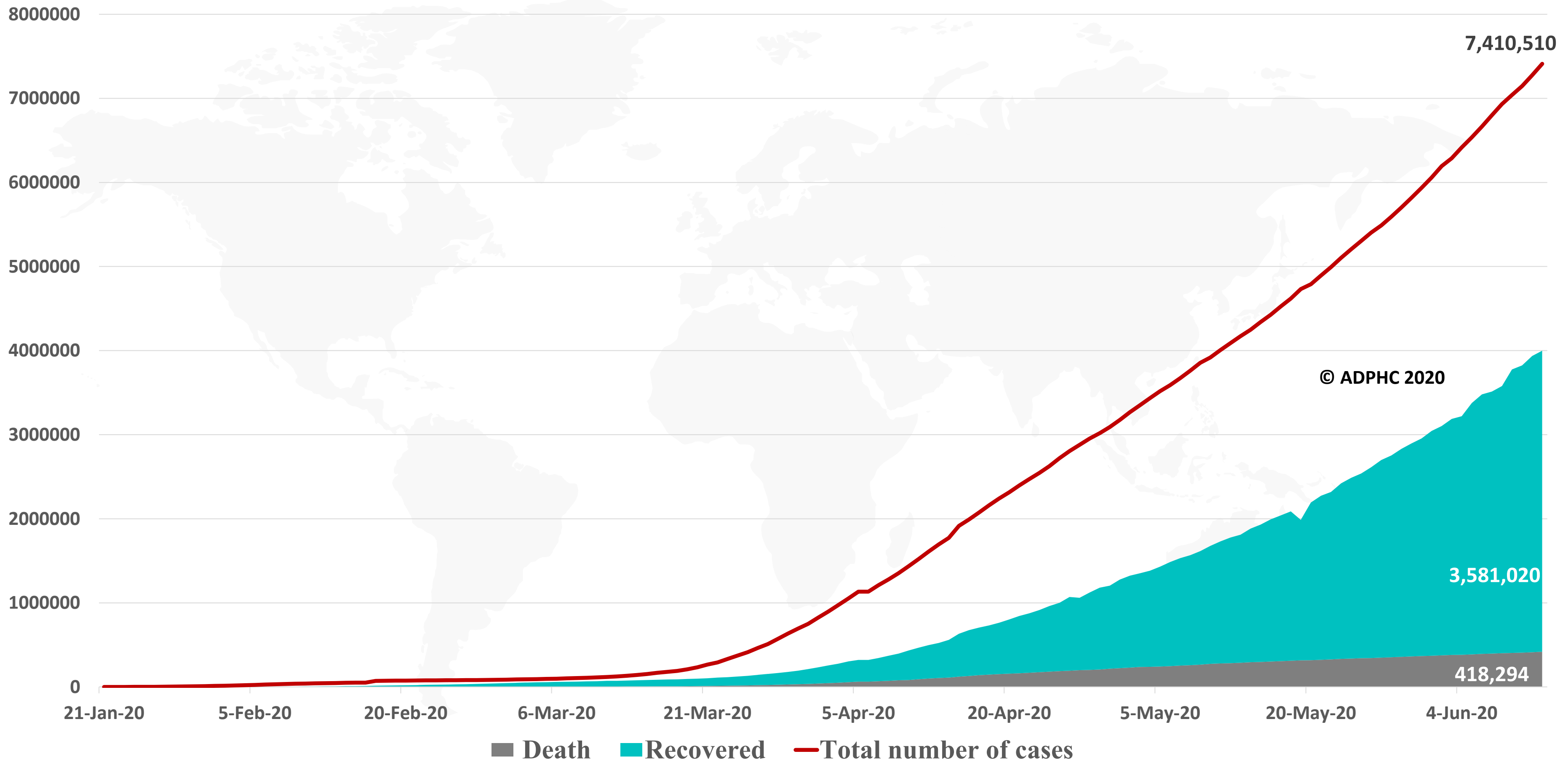
➤ **WHO has published:**

1. Advice Guidance on the Use of chest imaging for acute care of adult patients with suspected COVID-19 infection.
 2. ‘Asks’ to the private sector to protect stakeholders and businesses to prepare response activities for for the COVID-19 with regards to supply chain and financial support.
- Canada has agreed to contribute over the US \$5 million to the WHO Regional Office to support COVID-19 response activities.
- COVID’s frontline stories, personal sacrifices, and inspirations from doctors and nurses in the Republic of the Congo have been shared.

Epidemiology



Figure 1: Total number of infected, recovered, and death cases (January 21st to Jun 12, 2020)



Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](#), [John Hopkins University](#)



Figure 2: Daily new infected COVID-19 cases reported between (January 21 to Jun 12, 2020).



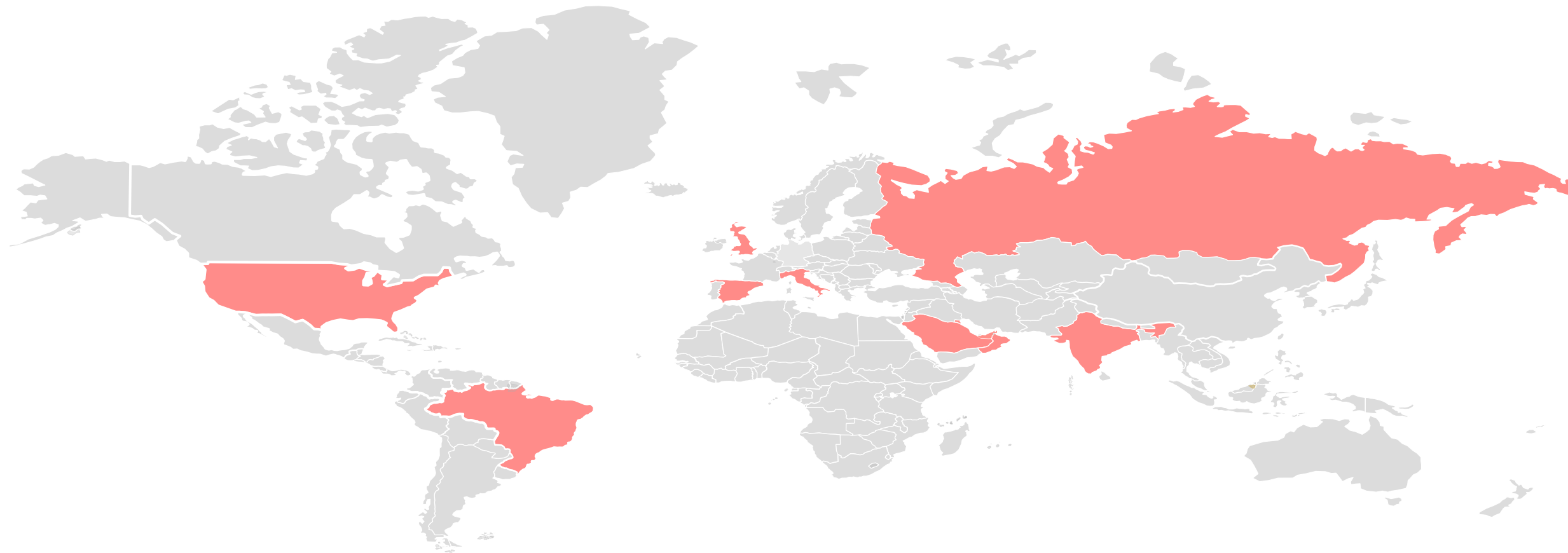
Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](#)

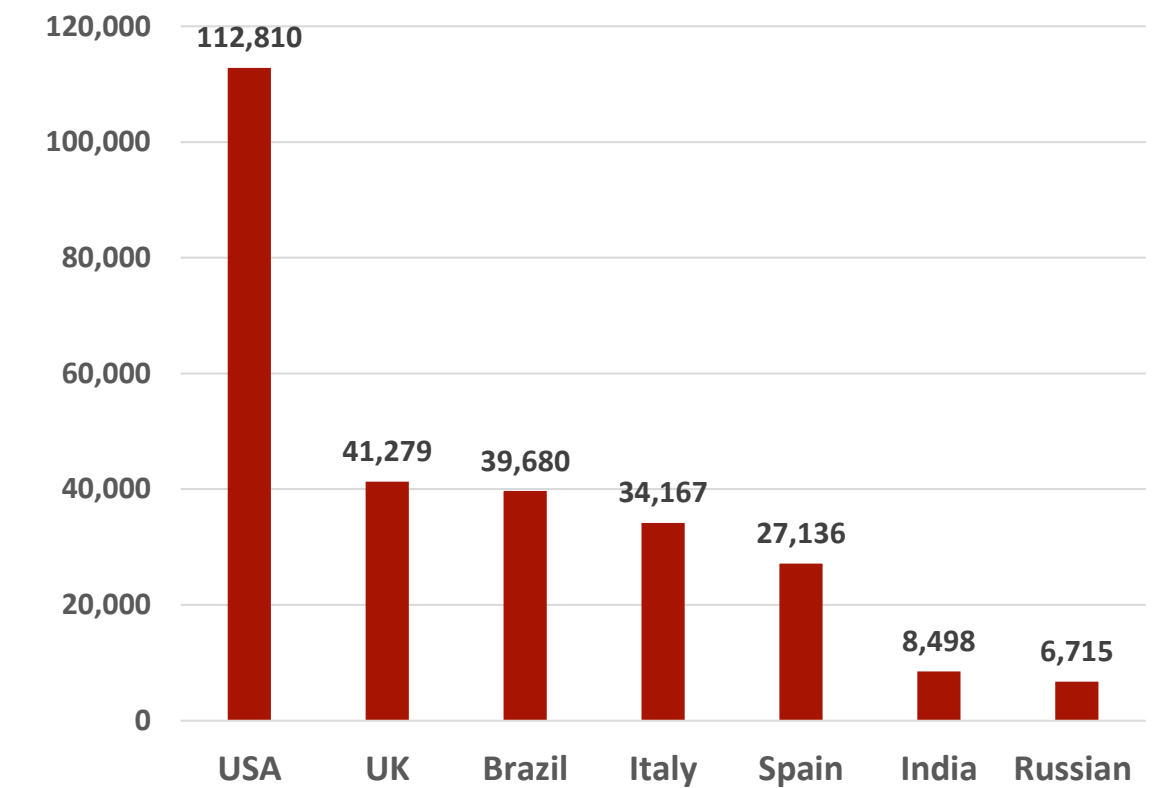
Epidemiology



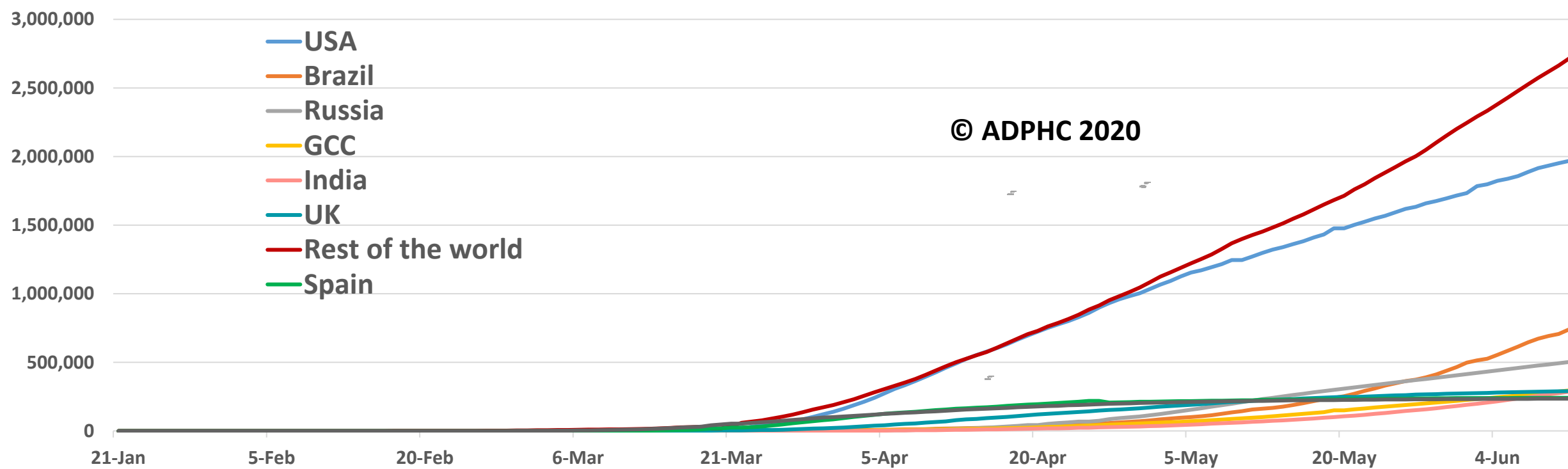
Figure 3 : Top 7 countries in the total number of cases due to COVID-19 (January 21 to Jun 12, 2020).



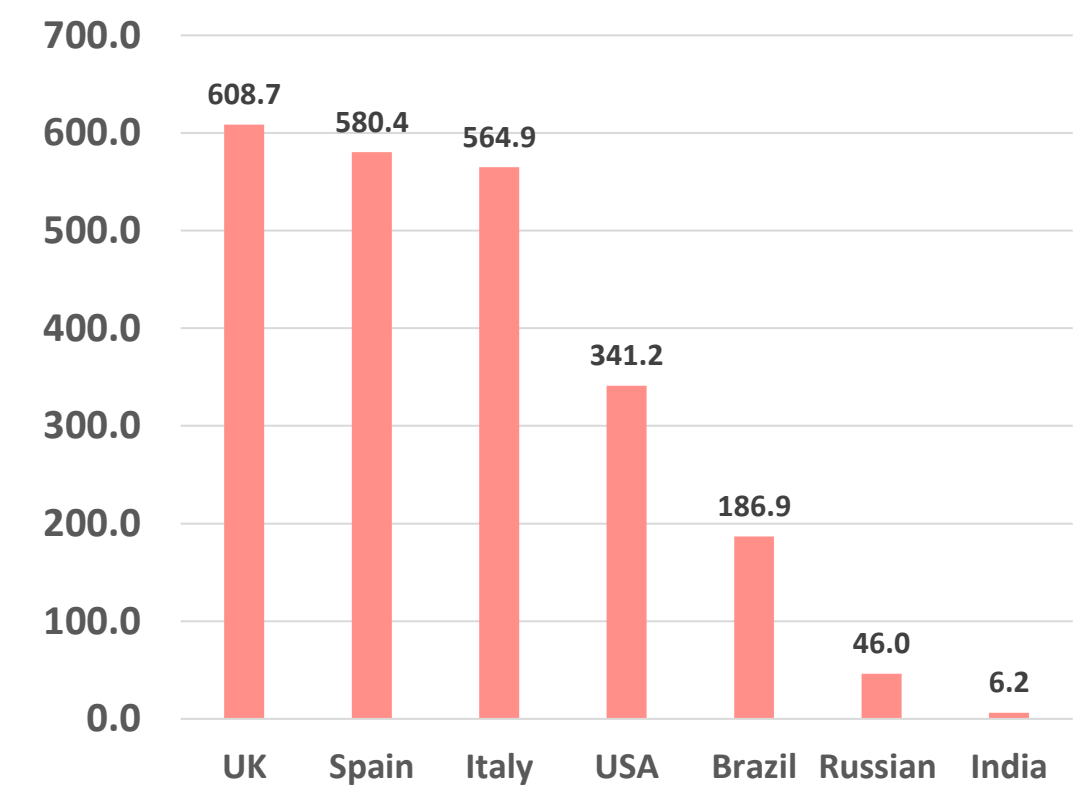
TOTAL DEATHS



TOTAL INFECTED CASES



DEATHS PER MILLION



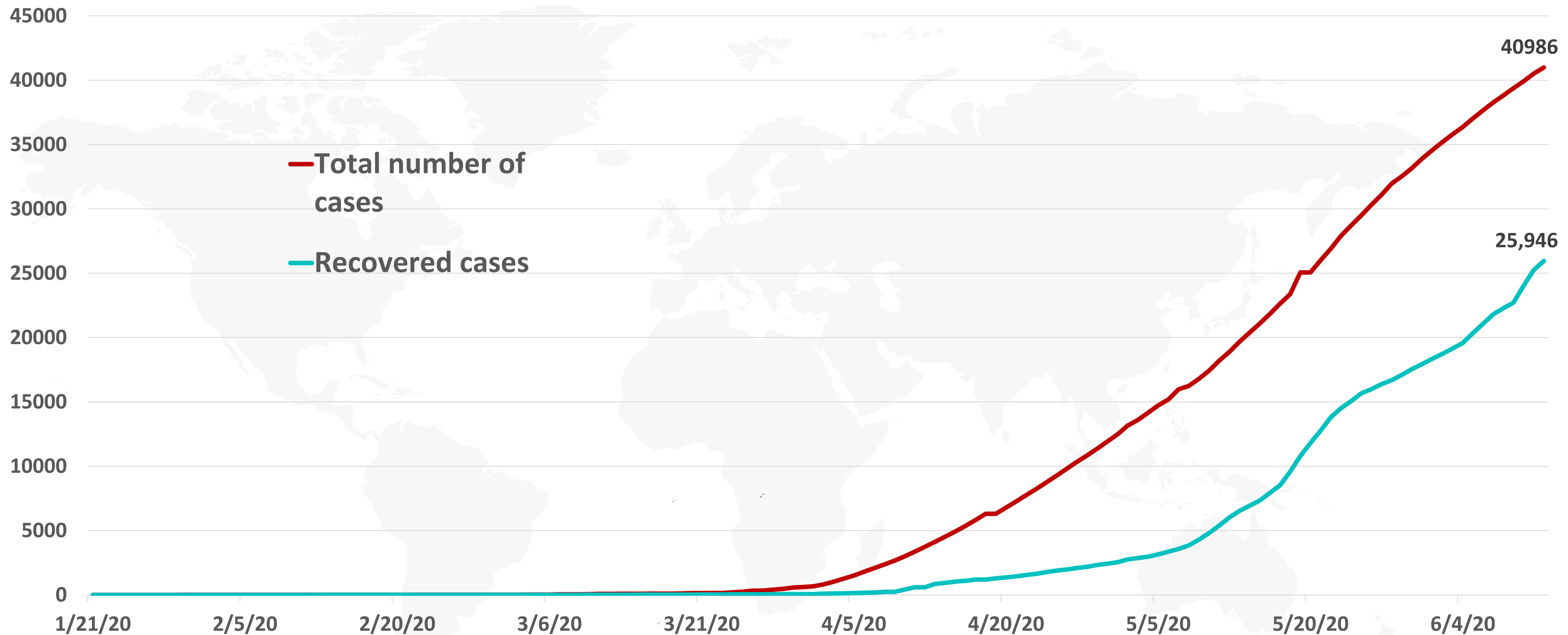
Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](https://www.who.int/)

Epidemiology



Figure 4: Total number of COVID-19 infected and recovered cases in UAE over time



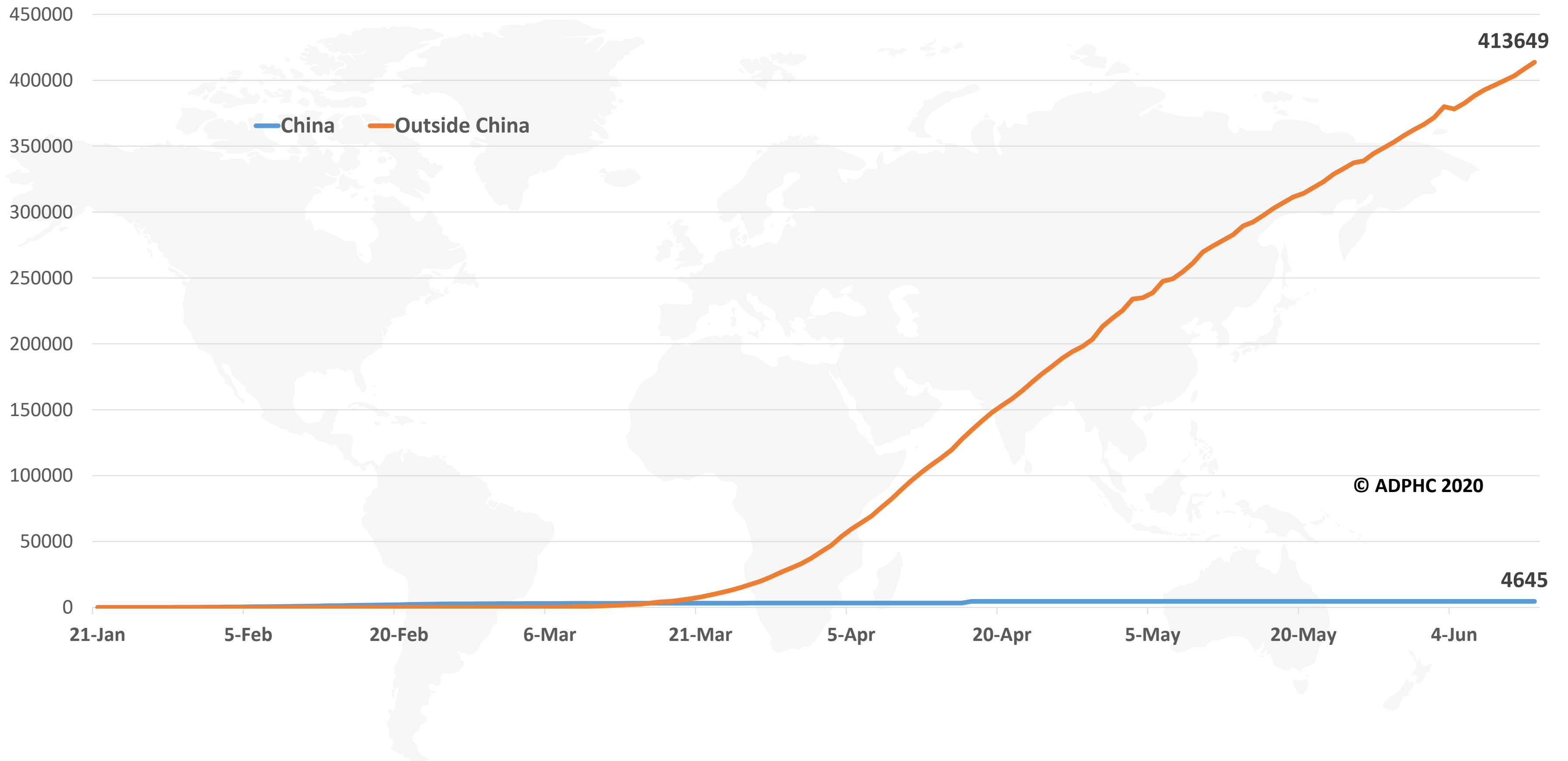
Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](#), [John Hopkins University](#)

Epidemiology



Figure 5: Total number of death due to COVID-19 reported by China and the rest of the world (January 22 to Jun 12, 2020).



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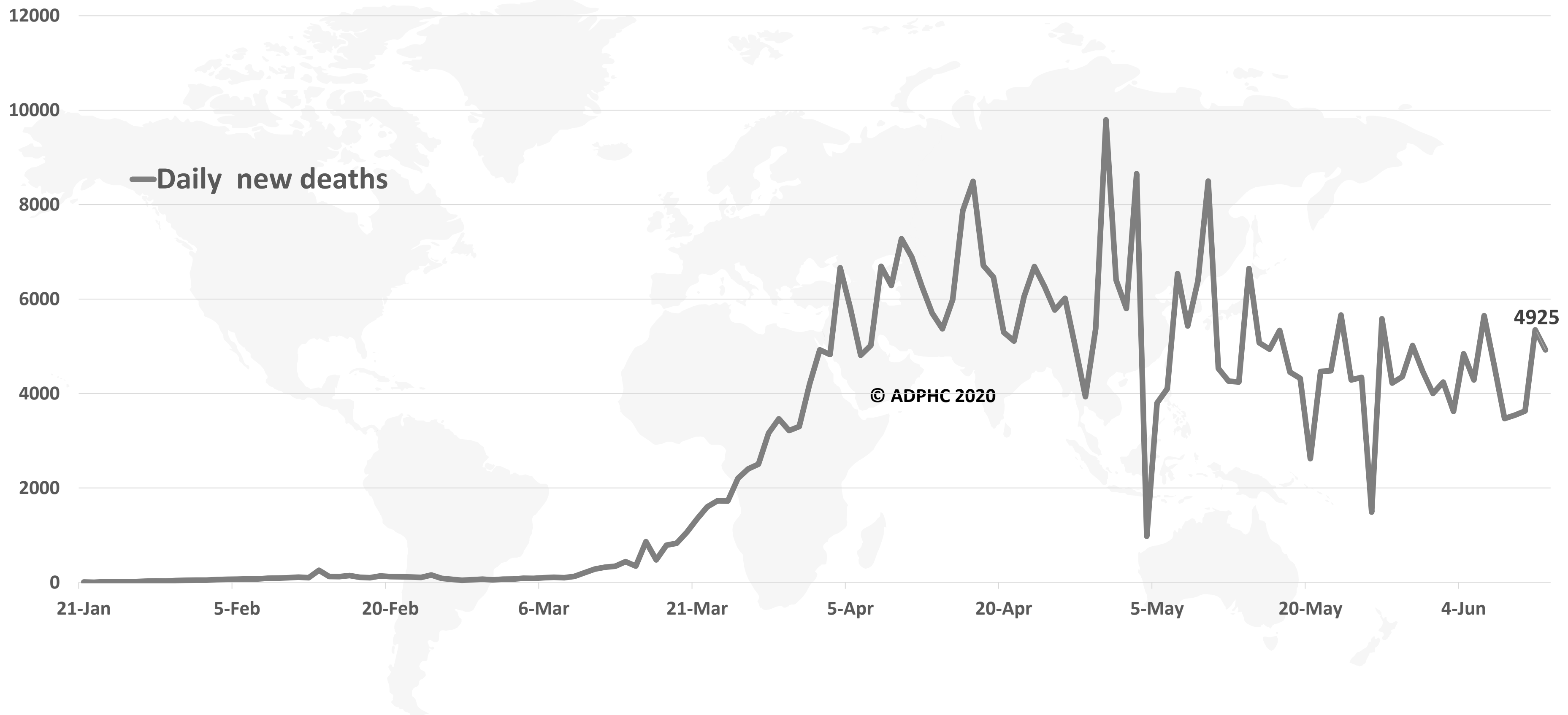
Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](https://www.who.int)

Epidemiology



Figure 6: Global daily new deaths due to COVID-19 (January 22 to Jun 12 2020).



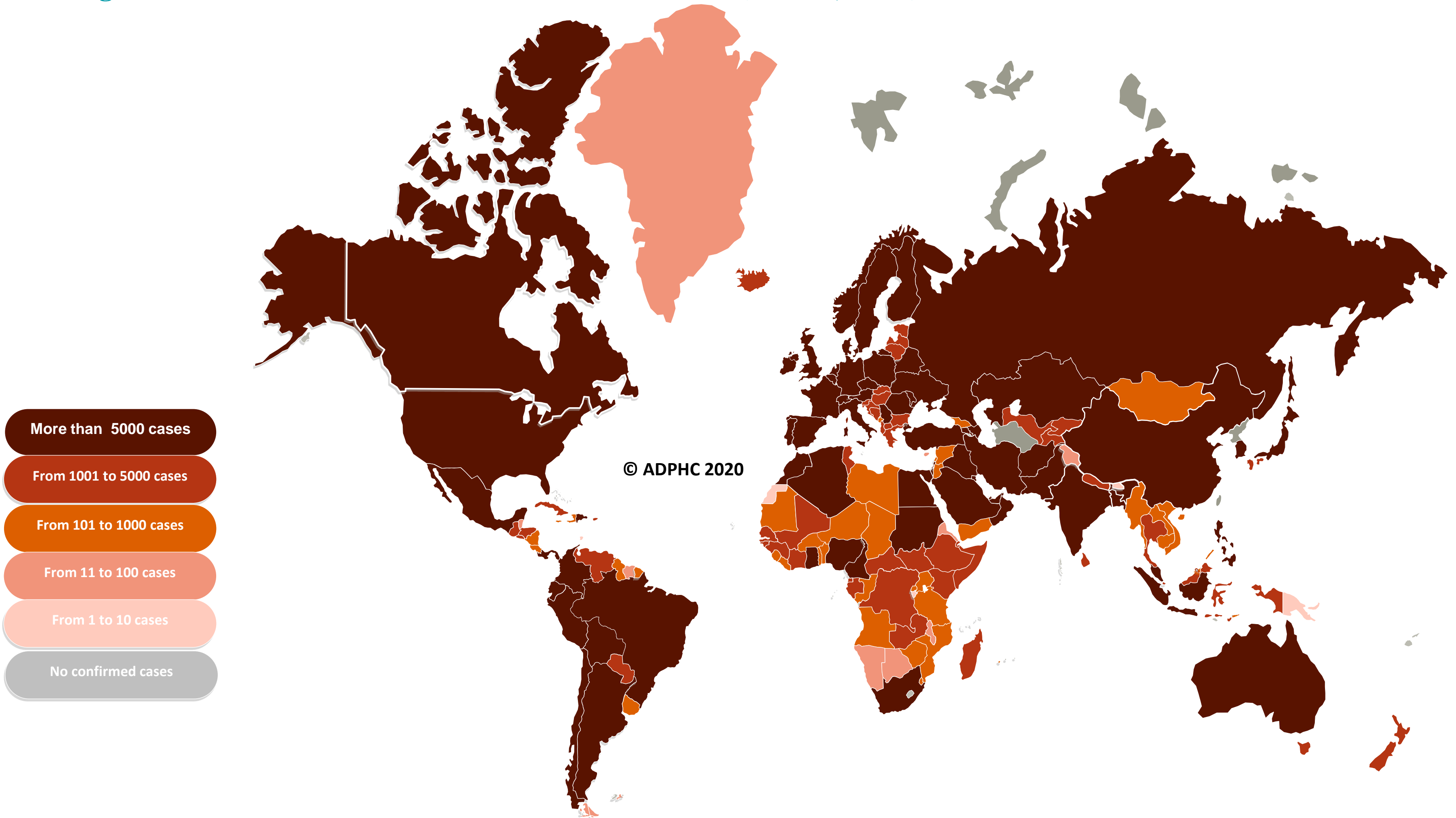
Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](https://www.who.int/)

Epidemiology



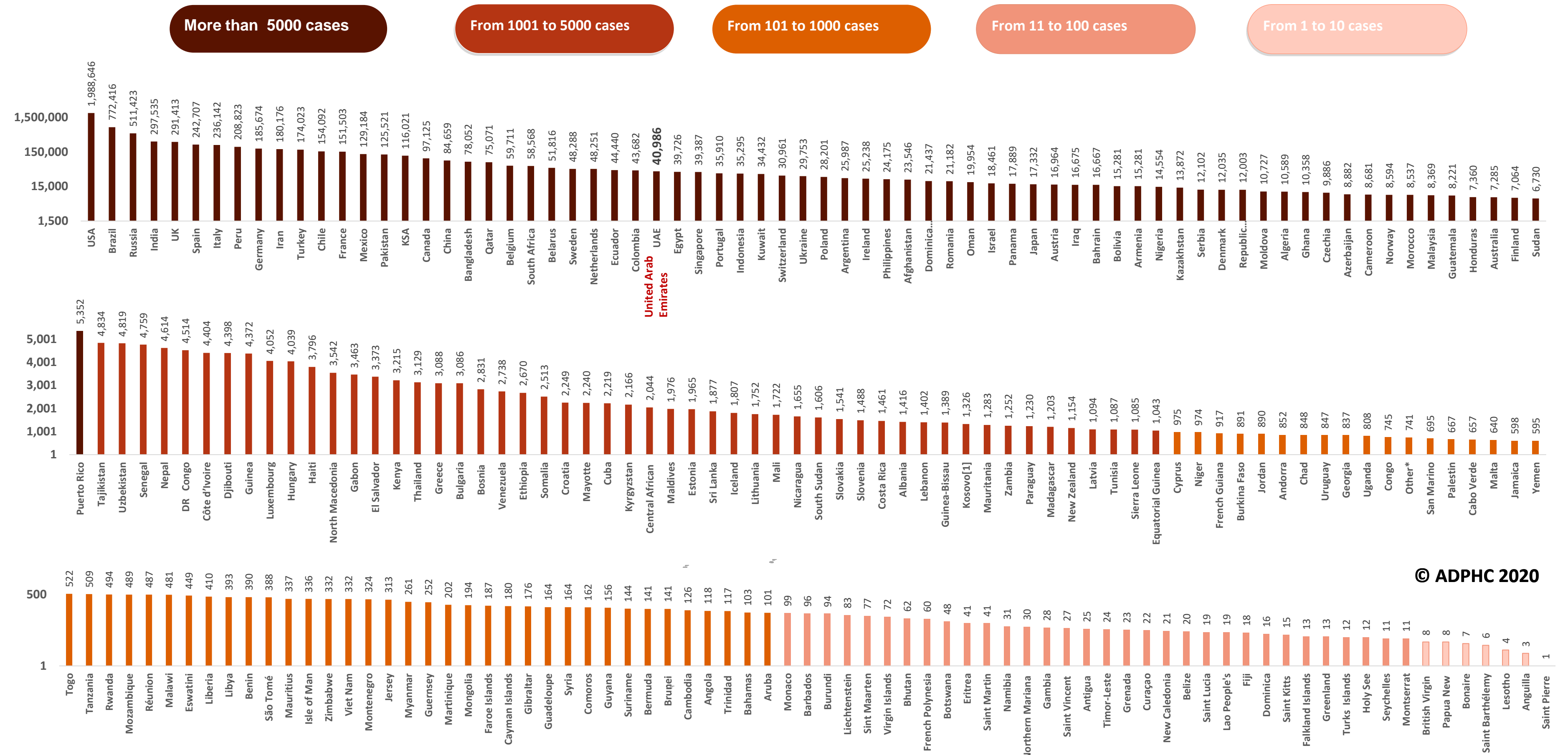
Figure 7a : Global distribution of COVID-19 cases (Jun 12, 2020).



Map chart published by Abu Dhabi Public Health Center 2020.



Figure 7B: Bar chart illustrate the global distribution of COVID19 cases Jun 12, 2020)



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

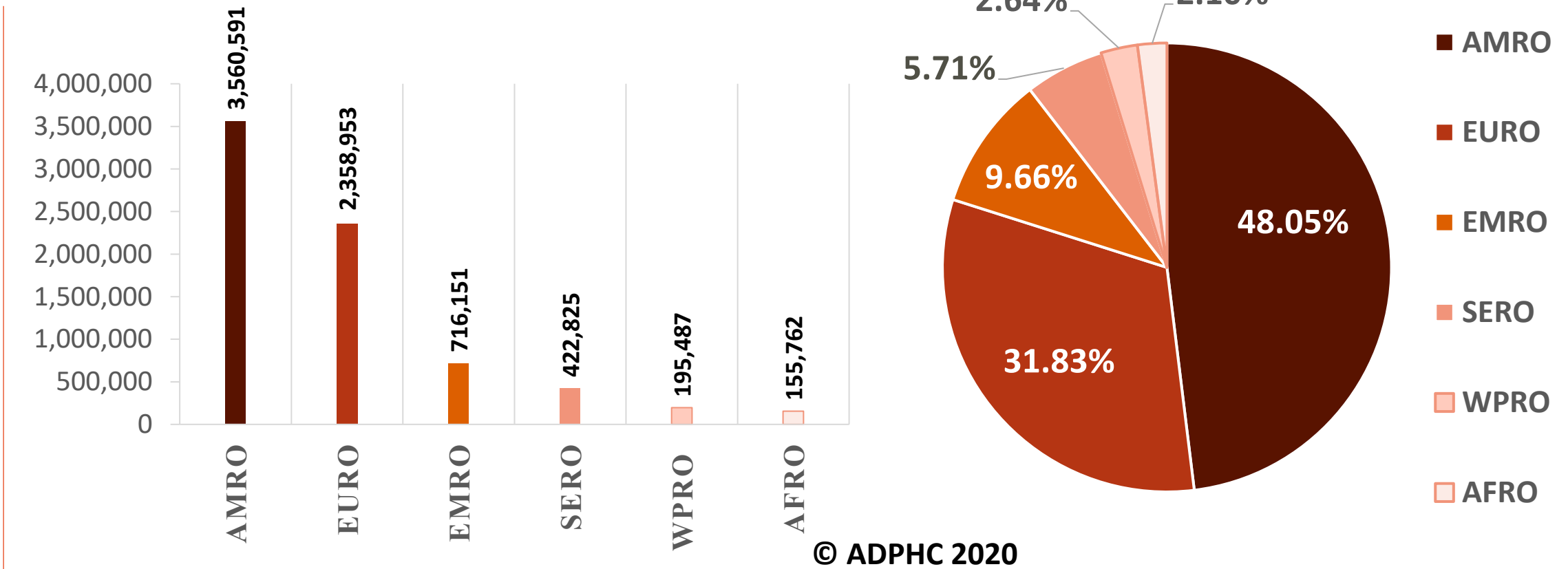
Map chart published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](https://www.who.int/)

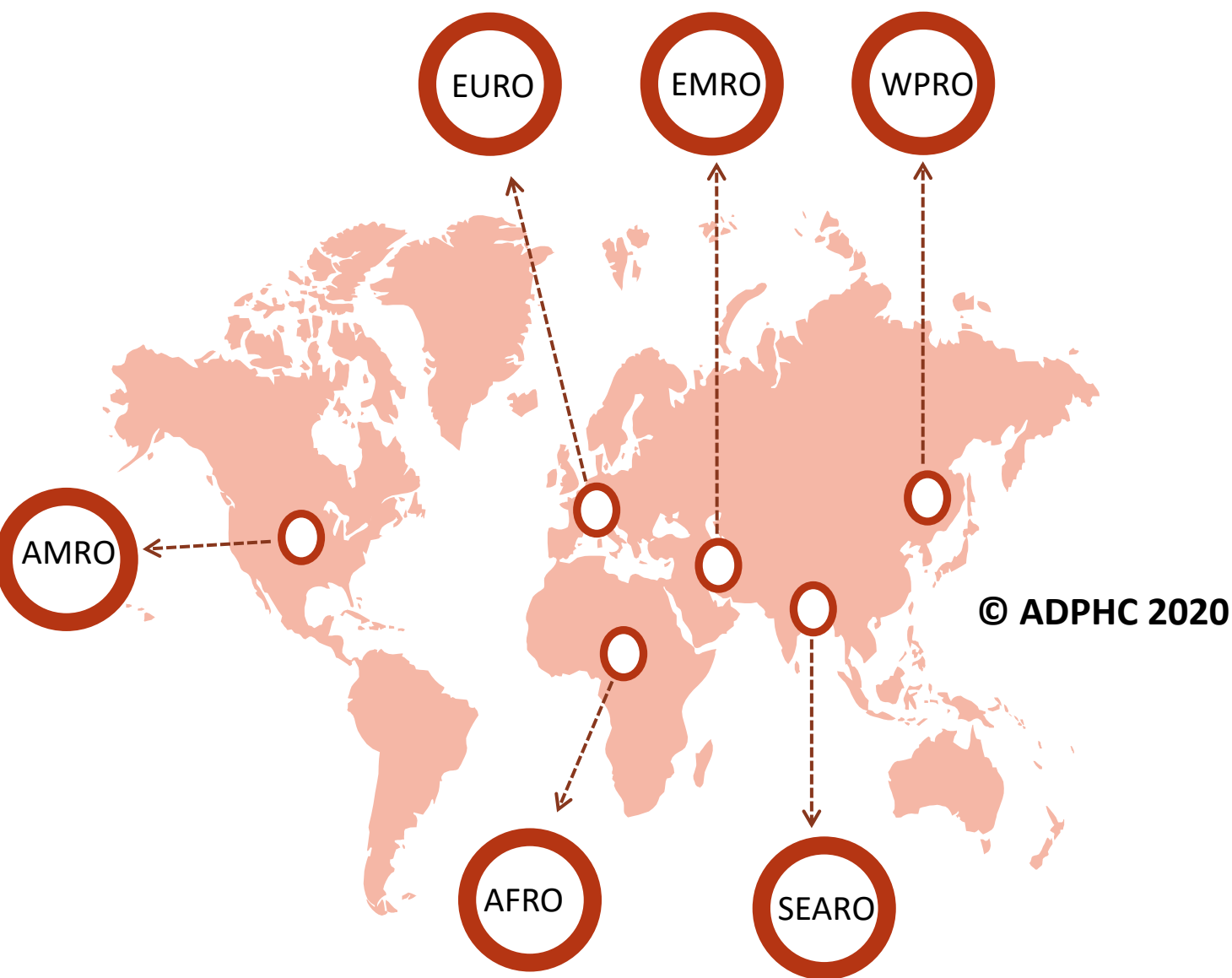
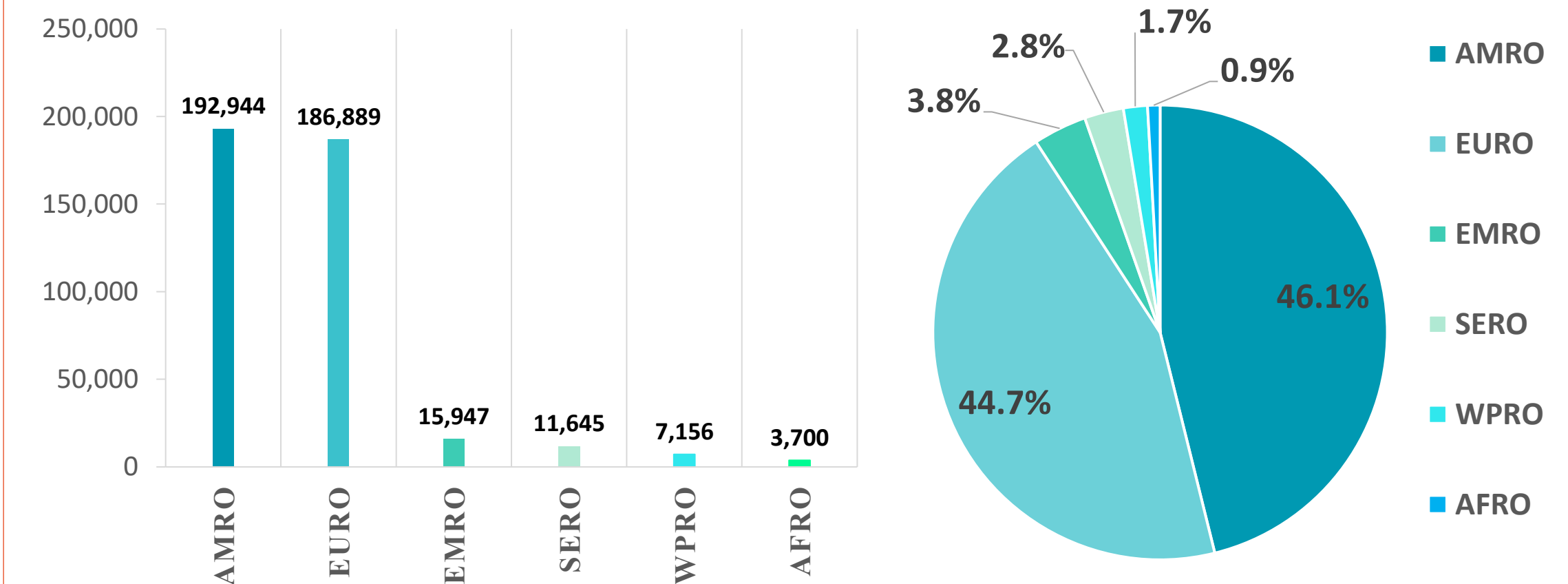


Figure 8: illustrate the Global distribution of COVID19 cases per region (Jun 11, 2020)

INFECTED



DEATH



Map chart published by Abu Dhabi Public Health Center 2020.

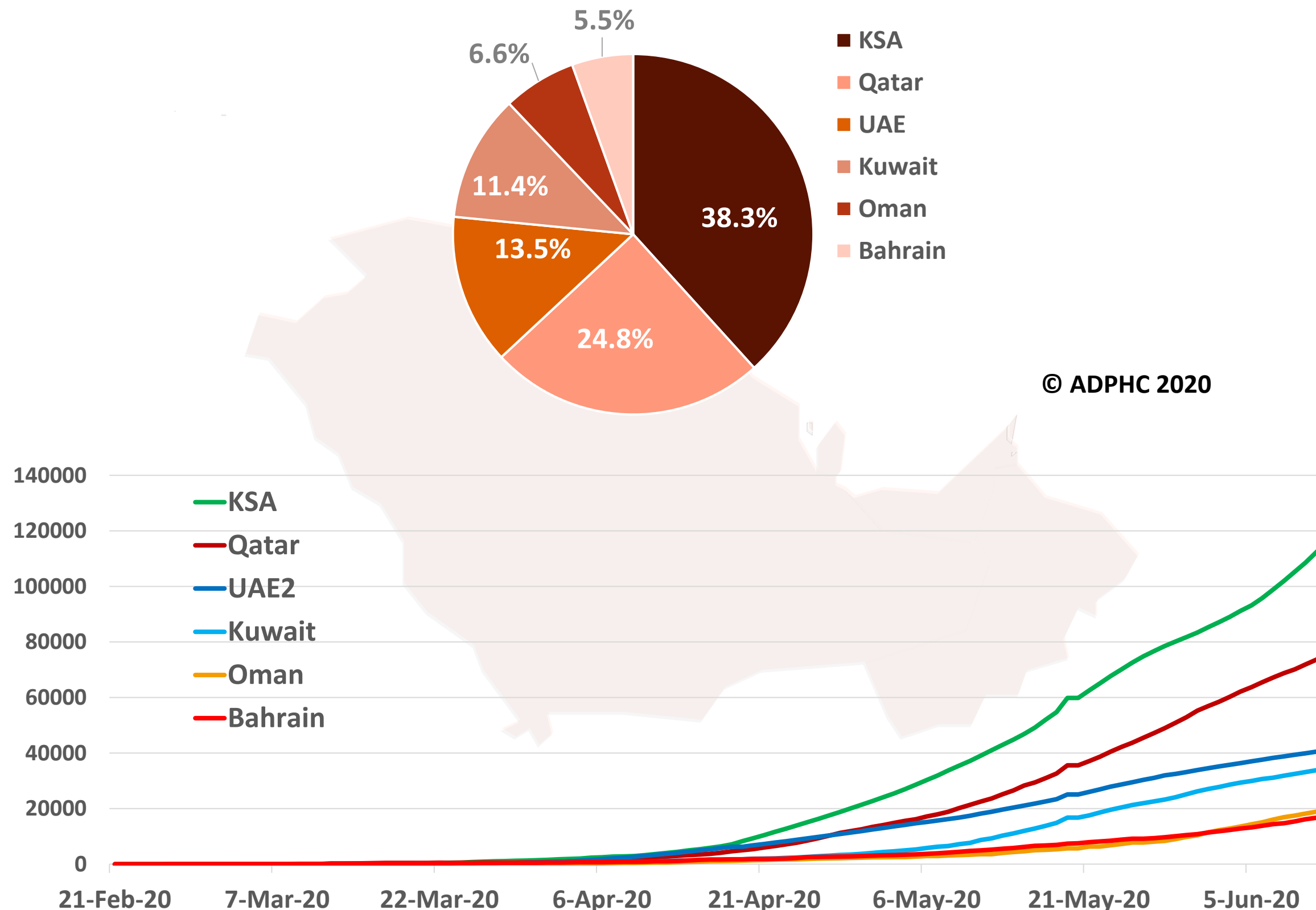
Data resources: [WHO](https://www.who.int/)

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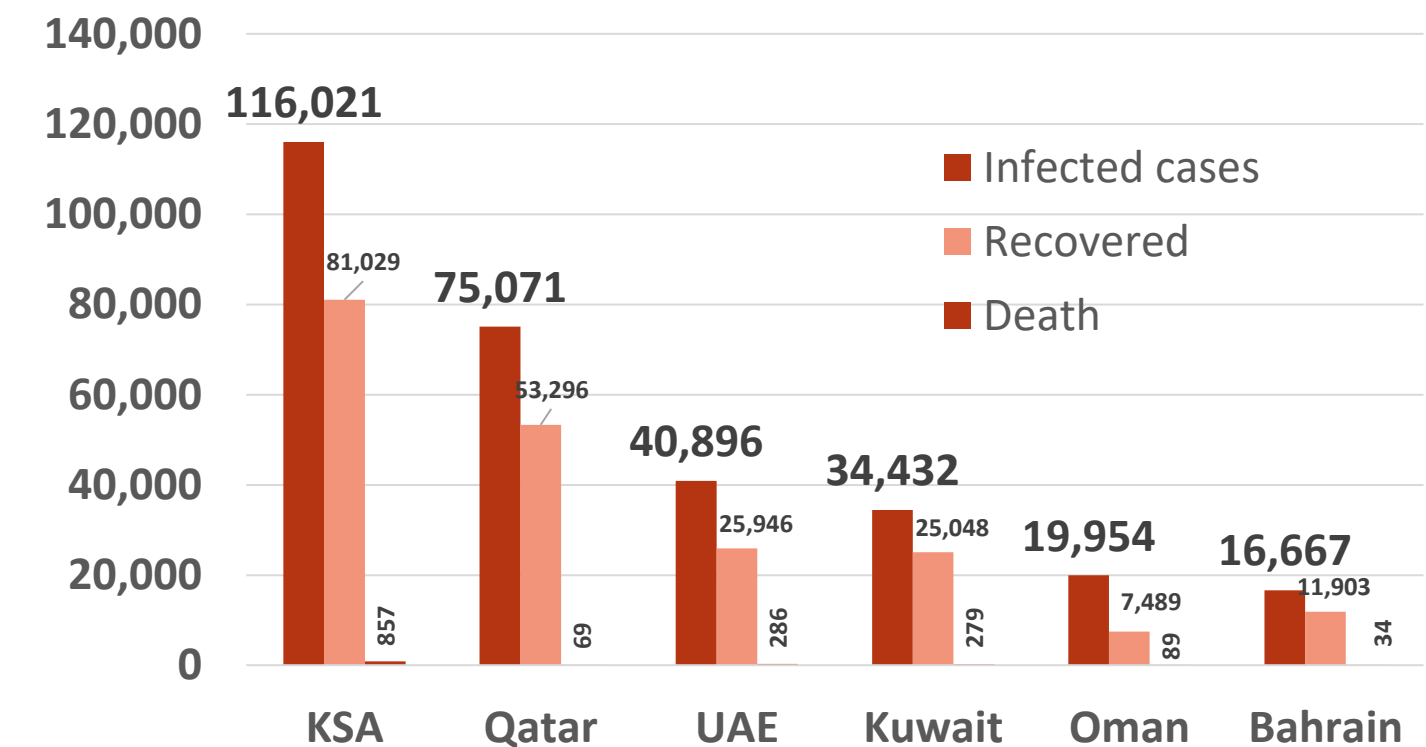
Figure 9: Comparative analysis of the distribution of COVID19 cases in GCC countries (Jun 12, 2020)

TOTAL NUMBER OF INFECTED CASES

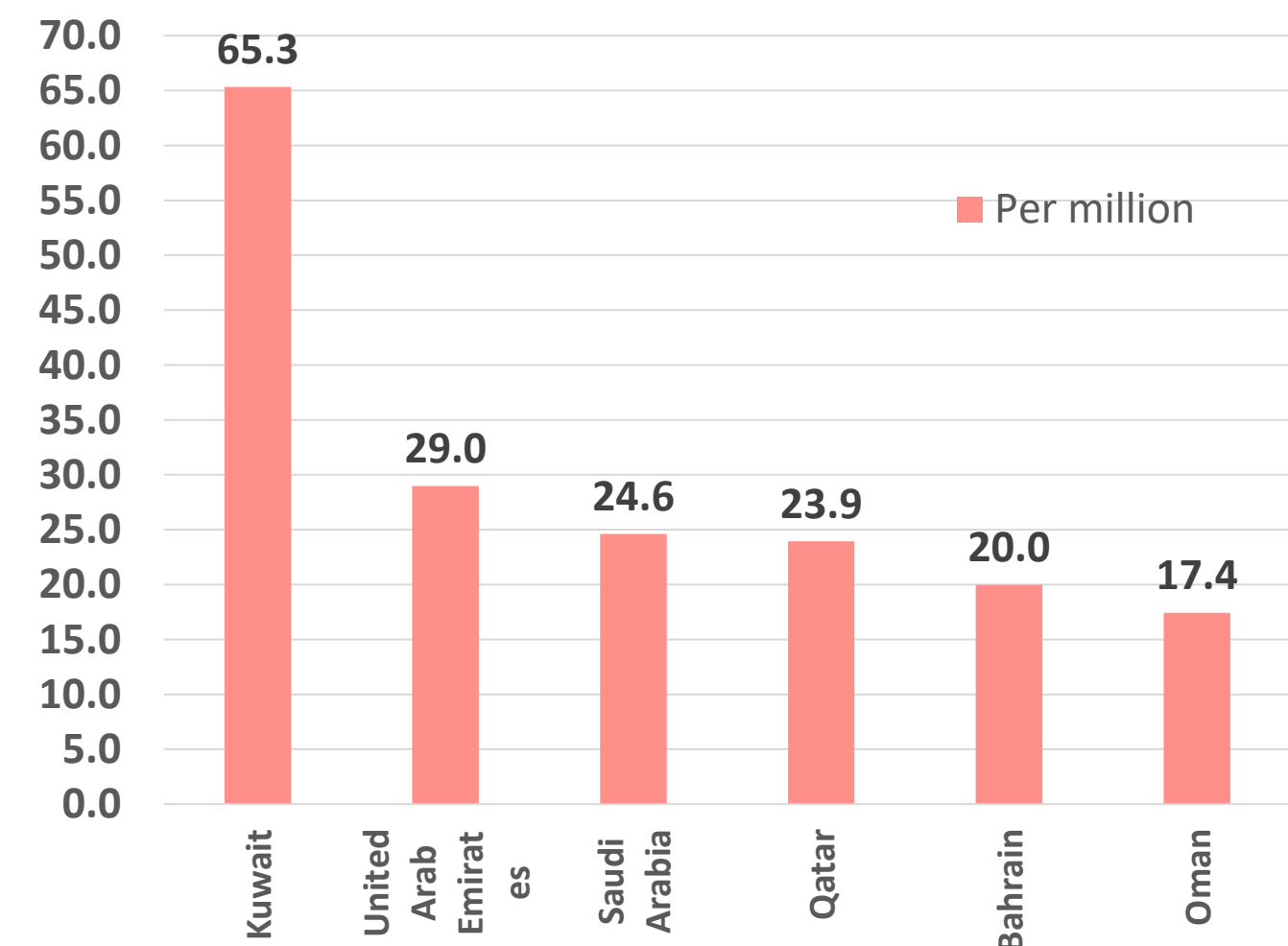


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Total number of infected, recovered and Deaths



Death per million



charts published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](#), [John Hopkins University](#)

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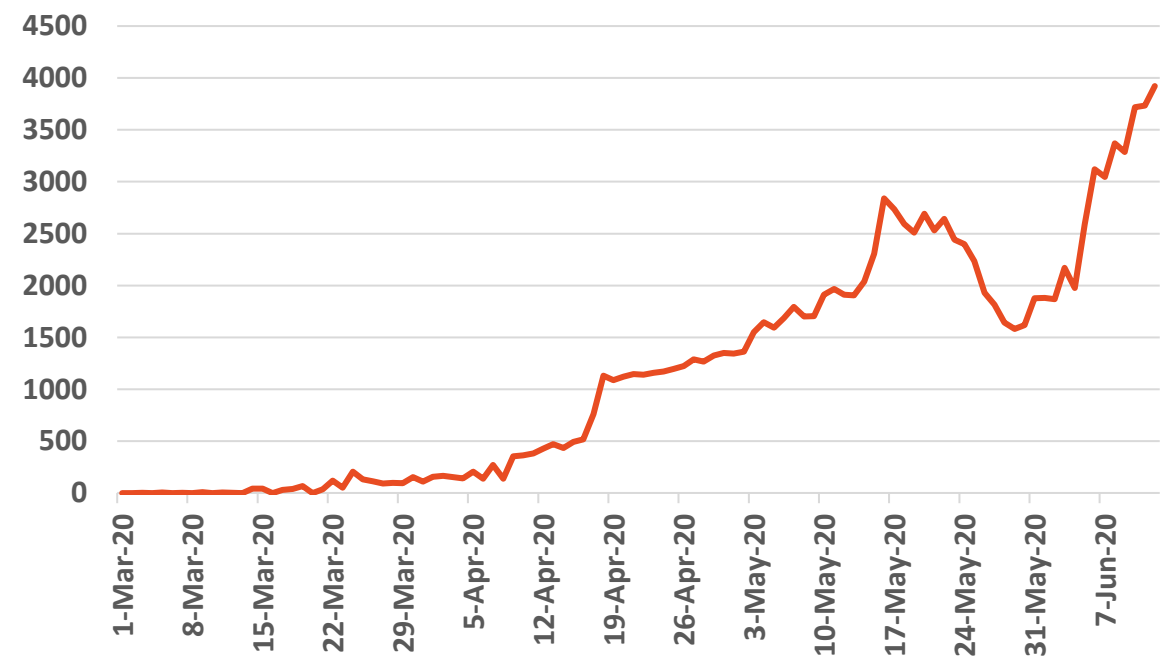
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Epidemiology



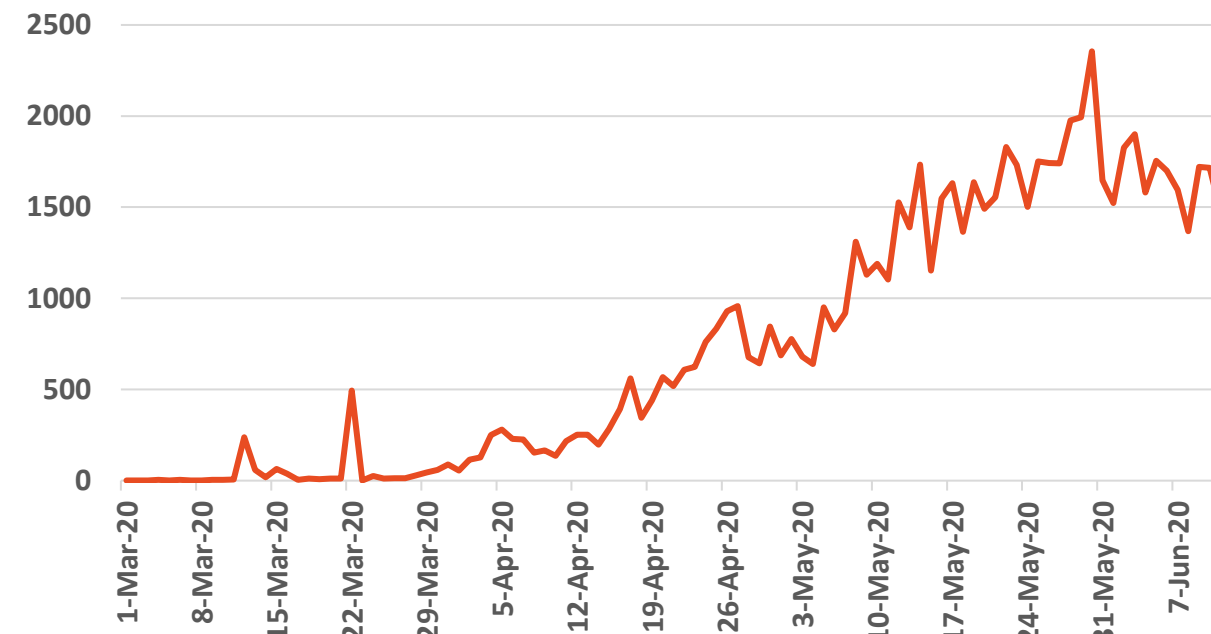
Figure 10: Comparative analysis of the distribution of COVID19 new cases in GCC countries (June 12, 2020)

KSA



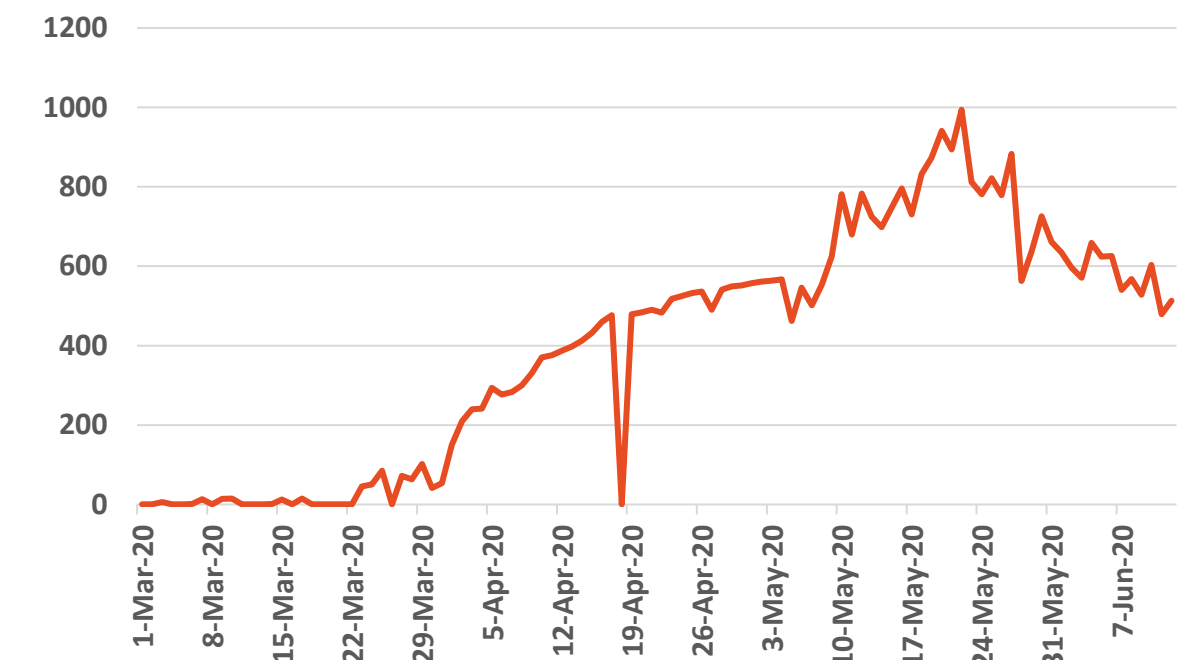
Source : KSA ministry of health

Qatar



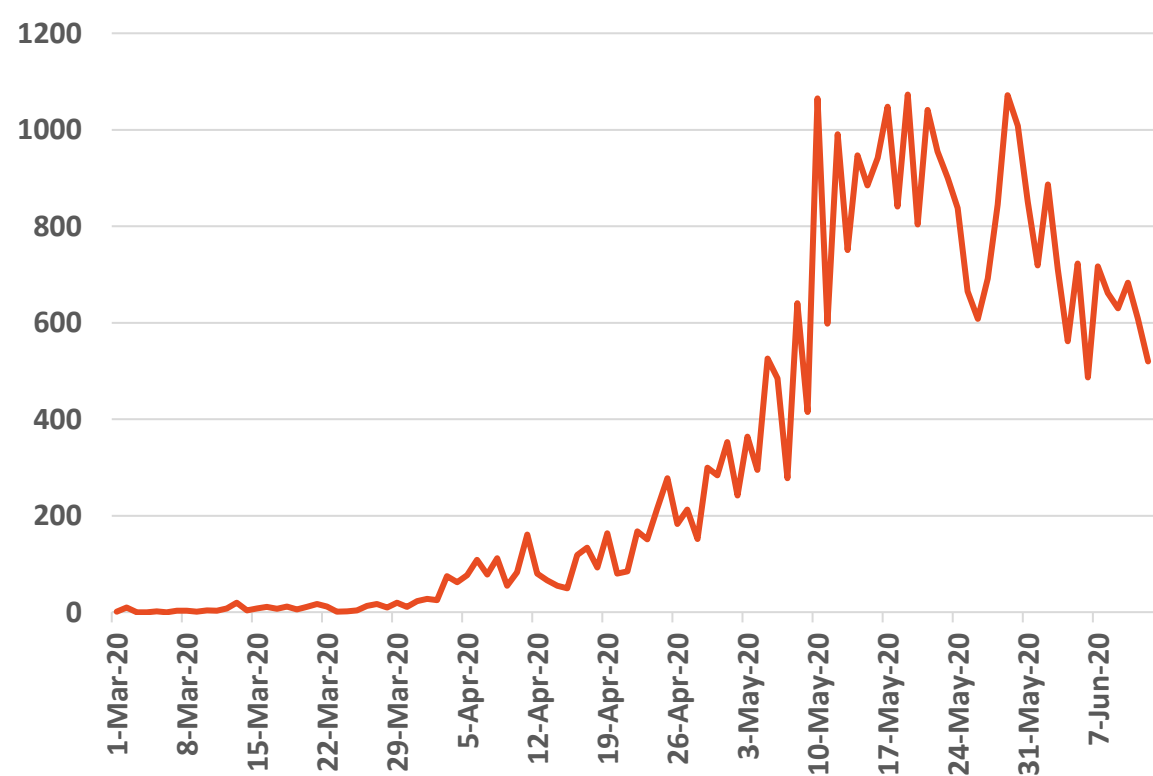
Source : Qatar ministry of health

UAE



Source : National Emergency Crisis and Disaster Management Authority

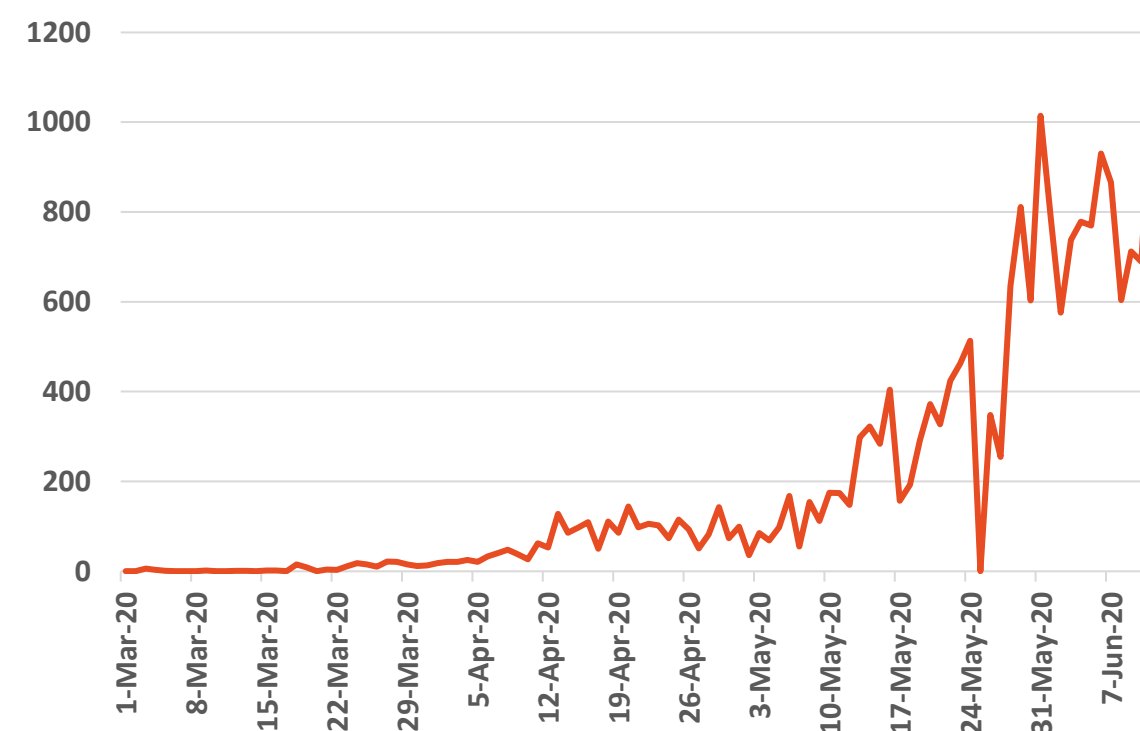
Kuwait



Source : Kuwait ministry of health

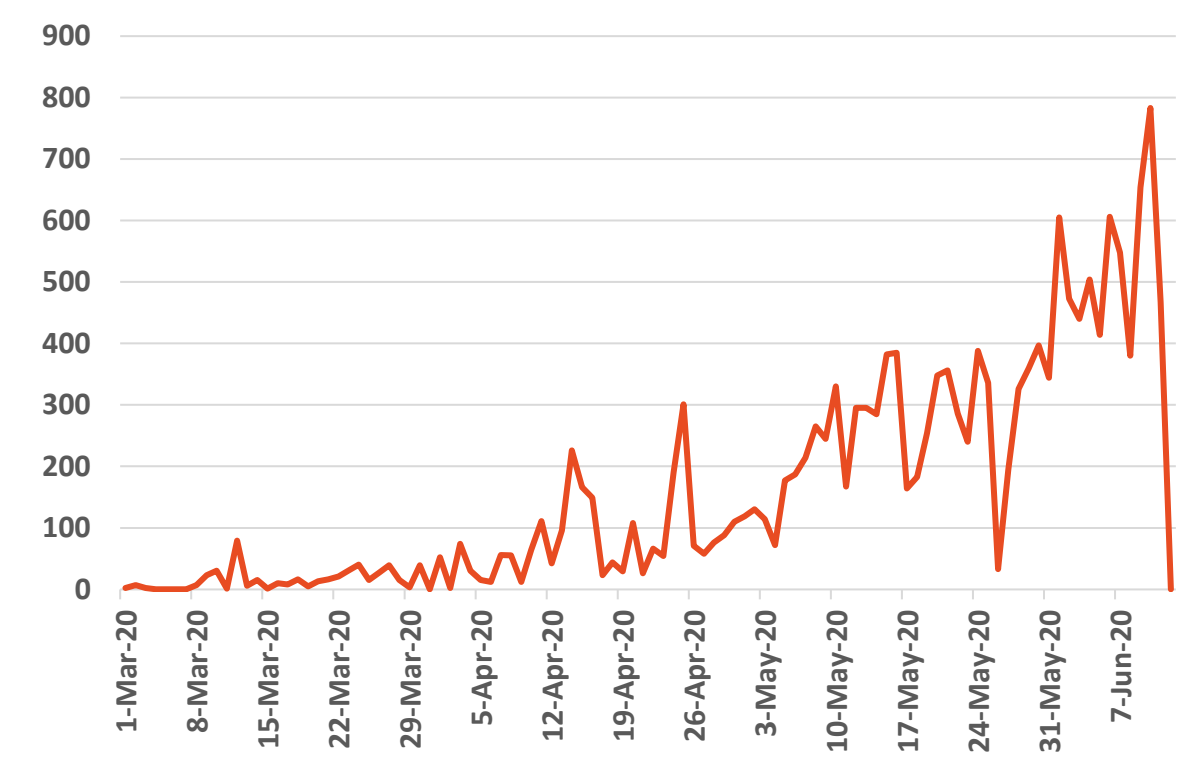
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Oman



Source :Oman ministry of health

Bahrain



Source :WHO

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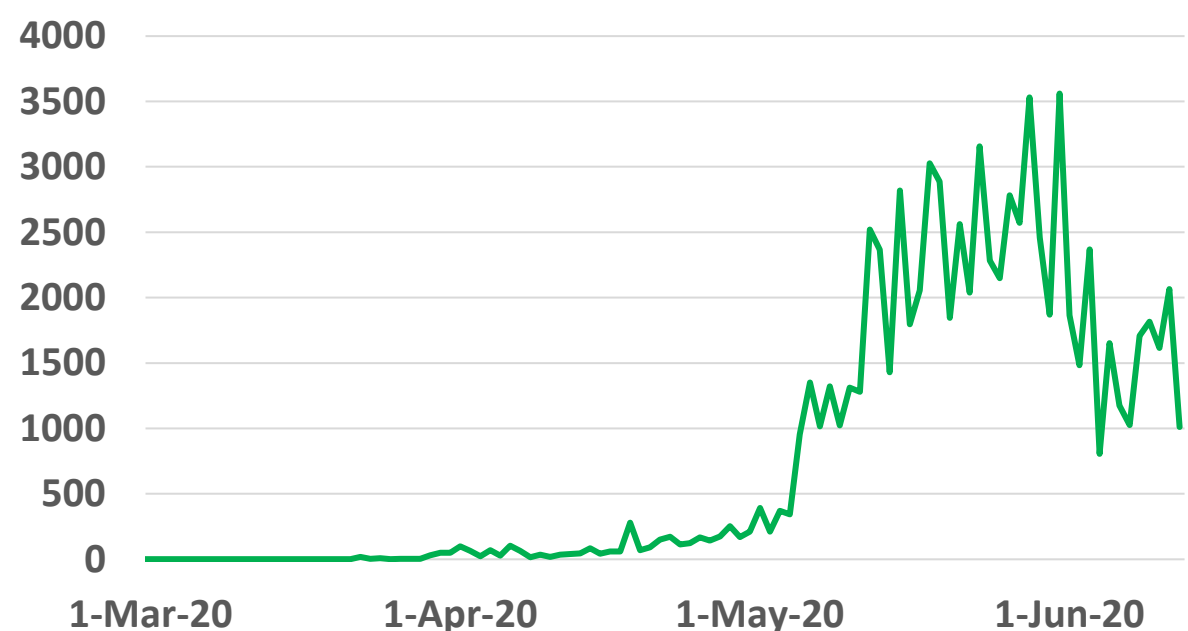
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Epidemiology



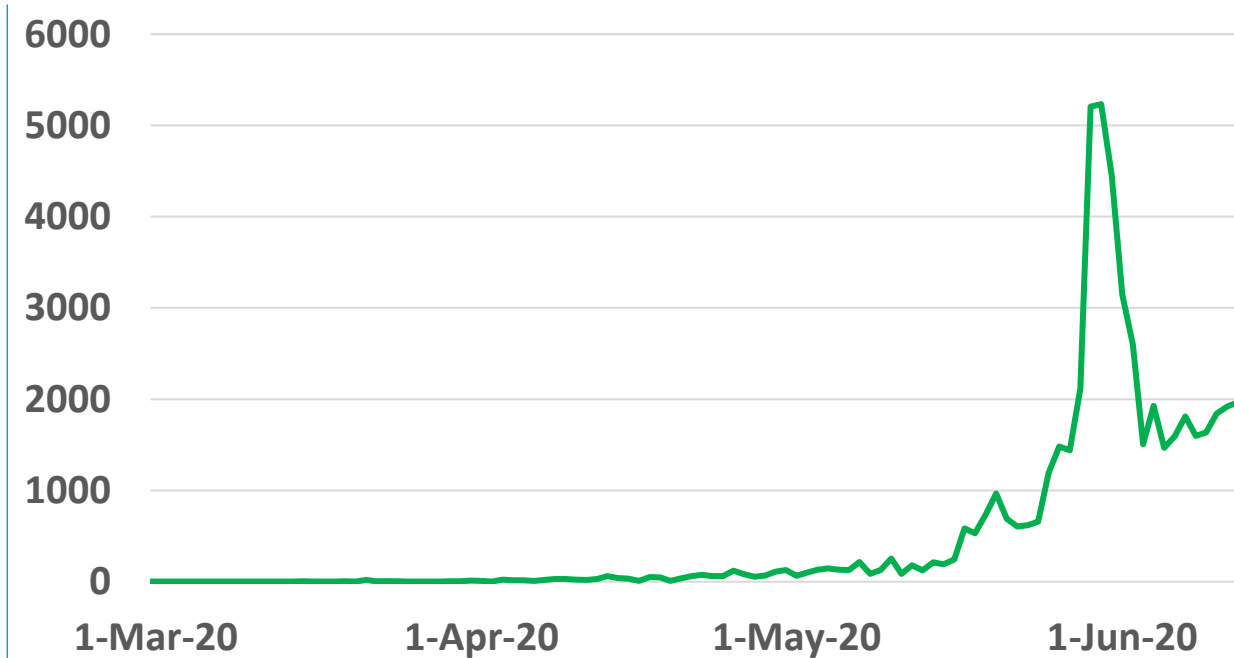
Figure 11 : Comparative analysis of the distribution of COVID19 newly recovered cases in GCC countries (June 12, 2020)

KSA



Source : KSA ministry of health

Qatar



Source : Qatar ministry of health

UAE



Source : National Emergency Crisis and Disaster Management Authority

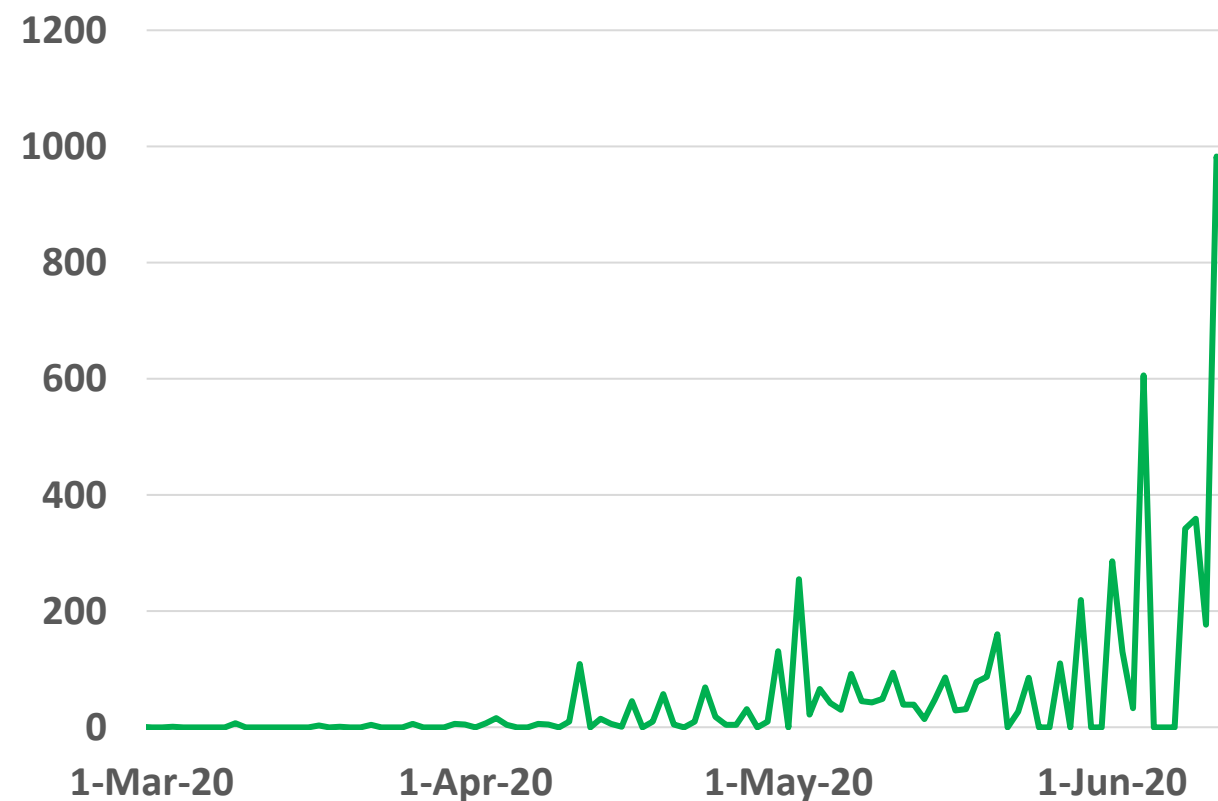
Kuwait



Source : Kuwait ministry of health

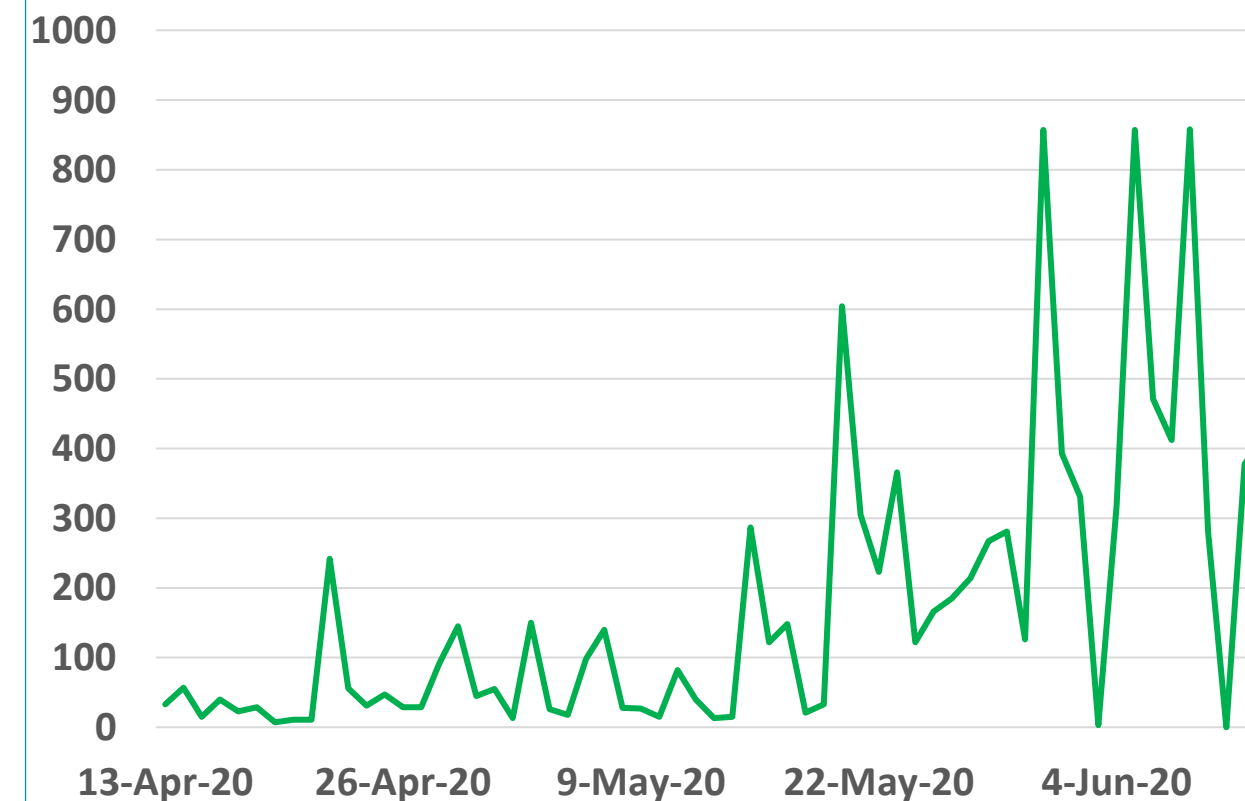
Oman

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Source : Oman ministry of health

Bahrain



Source : GCCStat

Epidemiology



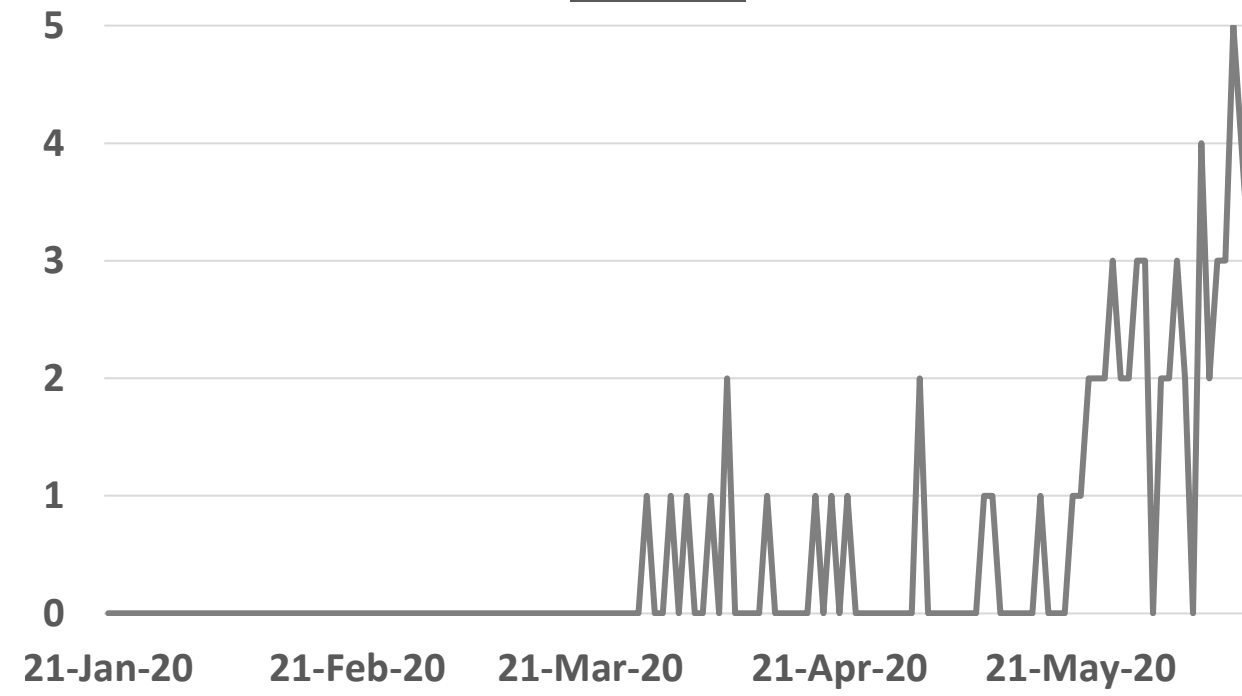
Figure 12: Comparative analysis of the distribution of COVID19 newly death cases in GCC countries (June 12, 2020)

KSA



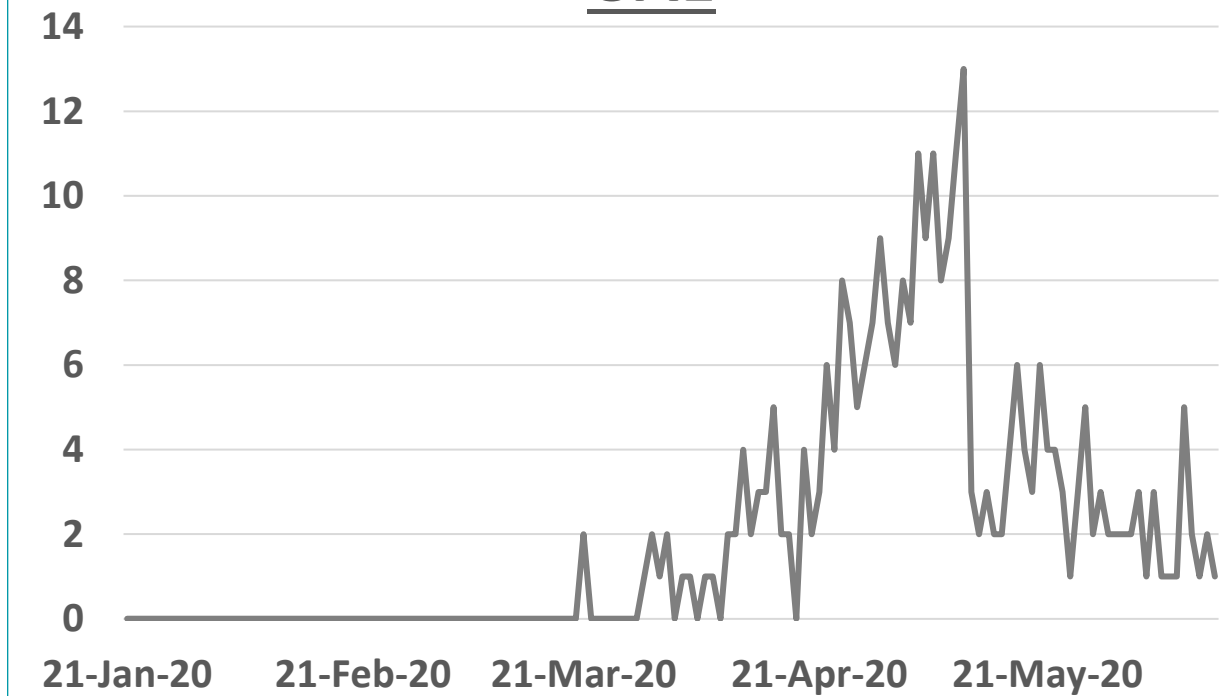
Source : KSA ministry of health

Qatar



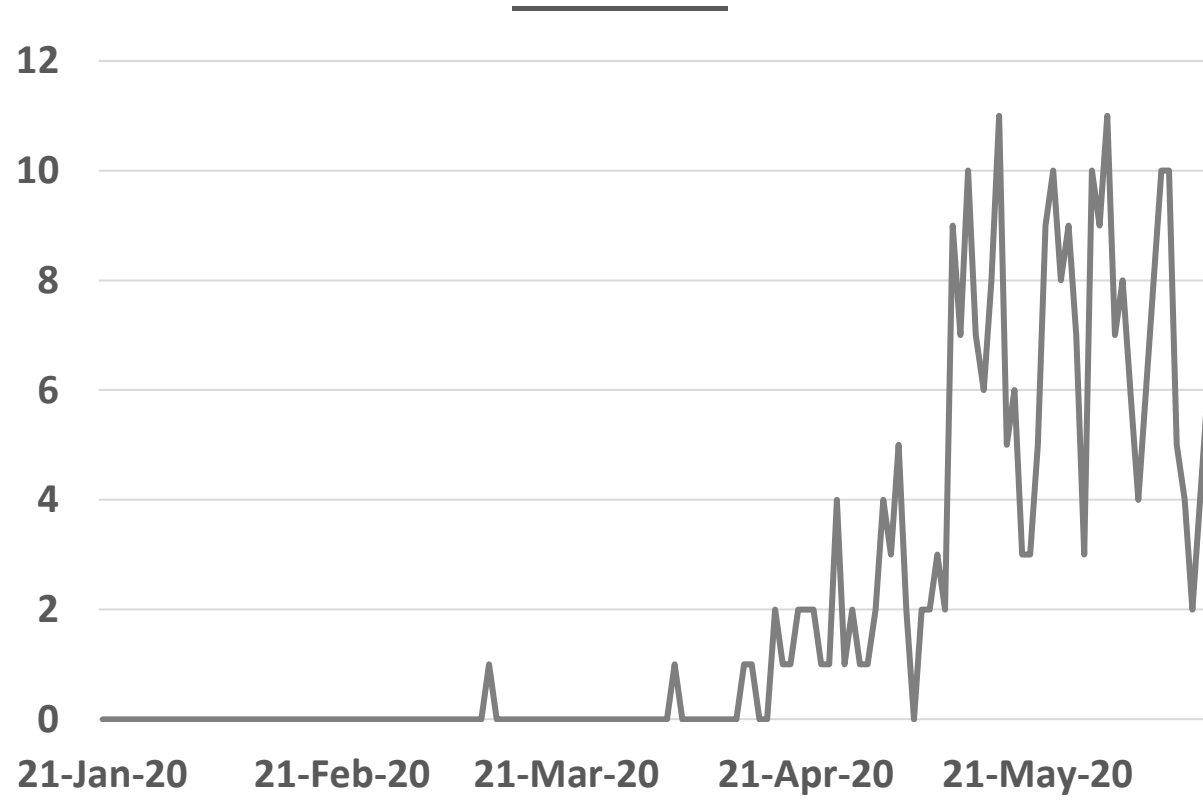
Source : Qatar ministry of health

UAE



Source : National Emergency Crisis and Disaster Management Authority

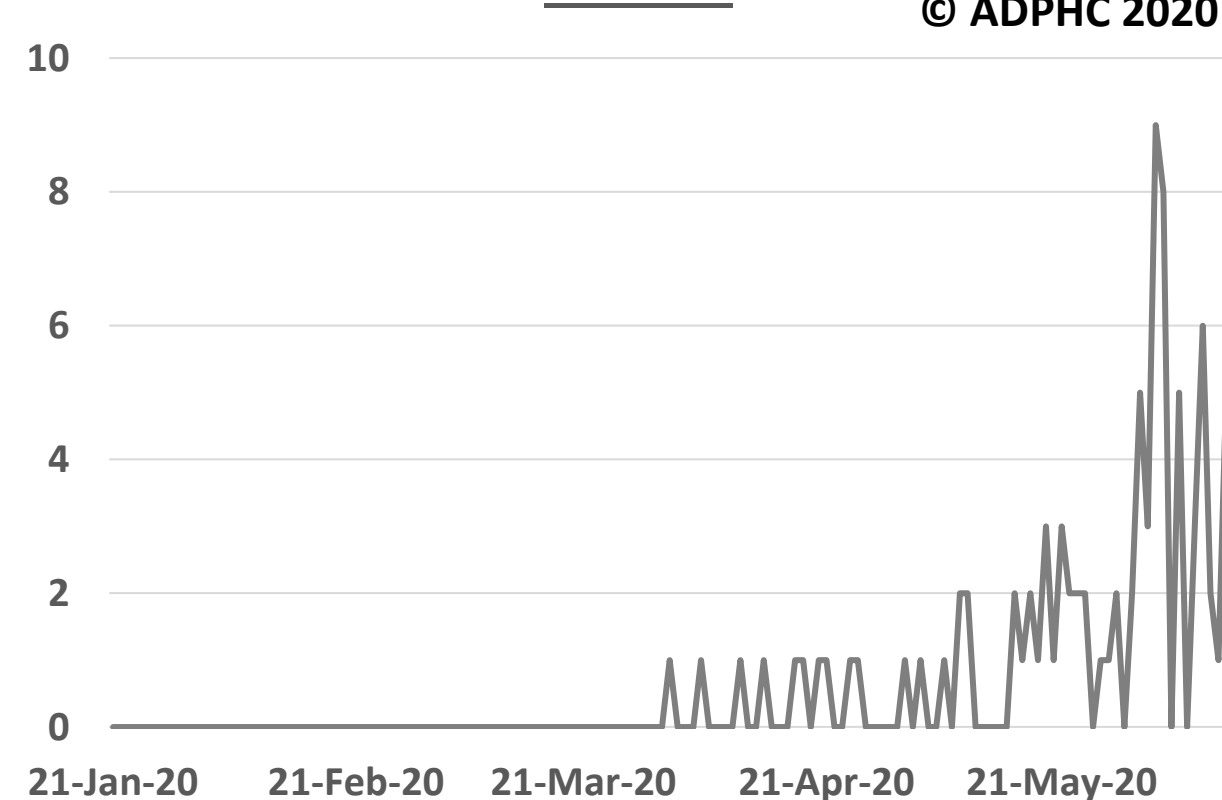
Kuwait



Source : Kuwait ministry of health

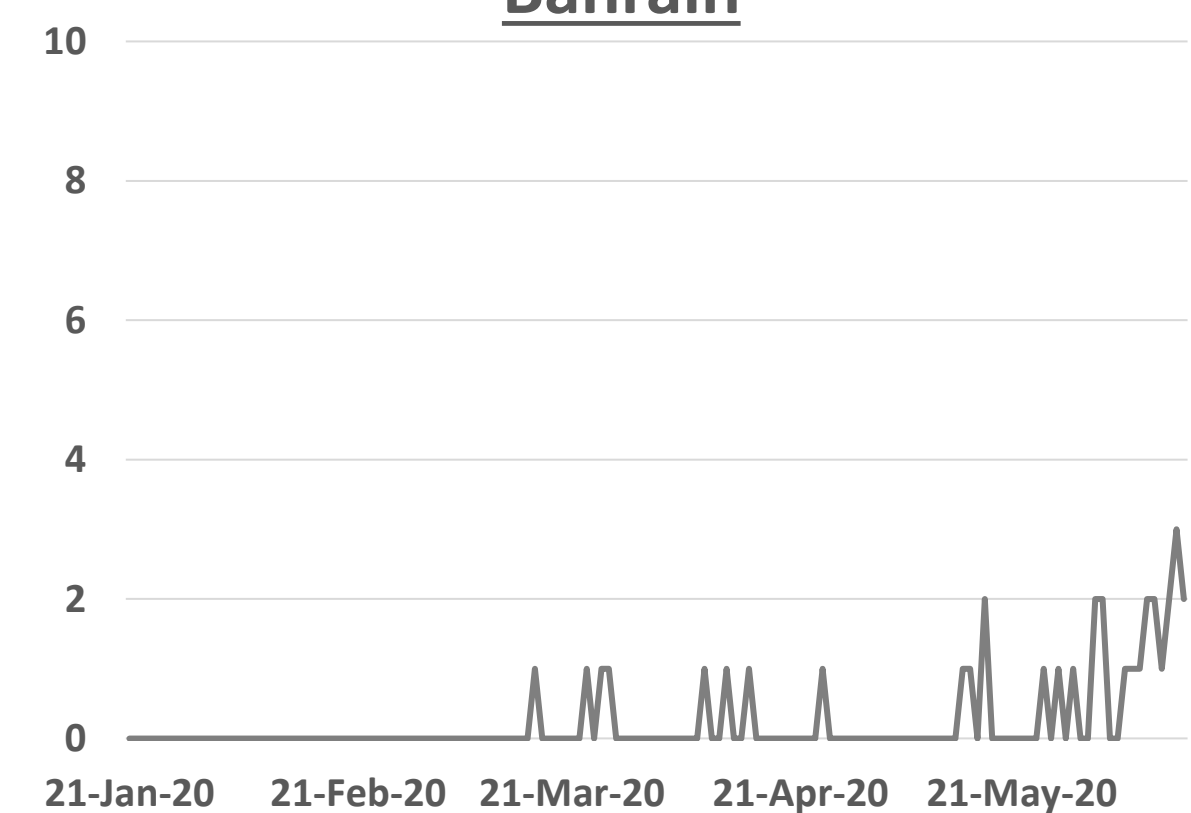
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Source :Oman ministry of health

Bahrain



Source :WHO



Public Health response

Article 1: Offline: COVID-19—what we can expect to come

Published : June 13, 2020 in [the lancet](#)

Summary:

- this article summarize a book authored by Mark Honigsbaum a historian of epidemics in the London university titled as the *The Pandemic Century*, he has included a new chapter on COVID-19.
- He offers his judgments about how countries have responded to what he calls “China’s Chernobyl moment”.
- The article gives summary on how the Spanish flu in 1918 which killed more than 50 million to 100 million people have led to reshape of the modern world , as it helped to end the World war 1, have gained respect of certain specialties like virology, re-sculpted human populations among many other
- The 1920s saw a period of flourishing economic growth. Why? The author speculates that the pandemic left behind a smaller but healthier population. Fertility rebounded.
- the author concluded that it would be a mistake to think that simply knowing the identity of a pathogen and the etiology of a disease is sufficient to bring an epidemic under control”. Despite these pleas for more modesty, he concludes his survey of pandemics with the comment that, “It is to be hoped that, after Covid-19, no one will be foolish enough to make the same mistake again”



Article 2: COVID-19 vaccines for all?

Published: June 13, 2020 [in the lancet](#)

Summary:

- If an effective COVID-19 vaccine is developed, how will it get to everyone in need?
- The article reports on the initiatives being planned to ensure equitable access, and their shortcomings.
- the Gavi, the Vaccine Alliance have hosted a conference for countries to fund the COVID19 vaccine . List of the main point below:
- Faster development of vaccine if left entirely to the market, too little vaccine will be produced, too late. **By guaranteeing to buy large volumes of** specific candidates before they are licensed, the new fund will encourage manufacturers to make investments in production capacity.
- An internal white paper on COVID-19 **by the Bill & Melinda Gates Foundation** estimates that production, procurement, and delivery Of COVID-19 vaccines to low-income and middle-income countries would cost up to \$74 billion in grants. This would help to “reduce the likelihood of ... only the wealthiest [benefiting] from the vaccine”.
- Europe are currently working to supply vaccine manufacturing for COVID19 for their countries.
- Harvard economist proposed that US shall invest **on \$70 billion** in vaccine manufacturing capacity of the most promising vaccines so to **pay in advance** for vaccine candidate around \$100 dollar per person. The economist argue that this approach is not expensive **compared to the \$370 billion lost each month from lock down.**
- There was a proposal for middle income countries and other countries with out vaccine development capacity, that they has an incentive to talk about equitable access, even if they have enough money to get to the front of the line once a vaccine is available for export.
- After the conference, Gavi announced that five of the six original donors to the first Advance Market Commitment (AMC)—Italy, the UK, Norway, Canada, and the Bill & Melinda Gates Foundation— will move their share of money, **amounting to \$177.5 million, remaining in the pneumococcal fund** to the Gavi Covax AMC. Gates **added \$100 million in fresh money**, while **Saudi Arabia**, Germany, and a few others brought the total to **\$567 million** in assured resources for the new fund.
- **AstraZeneca was the first vaccine manufacturer to sign up to the new fund, offering a guarantee of 300 million doses of the vaccine it is developing in collaboration with the University of Oxford, and on a no-profit basis.**