

ABU DHABI PUBLIC
HEALTH CENTRE

مركز أبوظبي
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Scientific Research Monitoring on COVID-19

17 May 2020

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.
- SARS-COV2 stay viable in aerosol for hours and in surface up to 3 days.
- Two strain have been identified for SARS-COV2 (L type (more aggressive) and S type .

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).
- Isolation is the best measure to control transmission.

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. No evidence of transmission through breast milk.

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.
- WHO forum held 11-12 Feb 2020 to mobilize research on COVID19 vaccinations and therapies.

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)



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

- **Clinical features and transmission:** a review in Kawasaki disease and Kawasaki like illness during the COVID19 era.
- **Public Health response:** Article discuss how the decision shall be made when a country decide to reopen school during the pandemic.



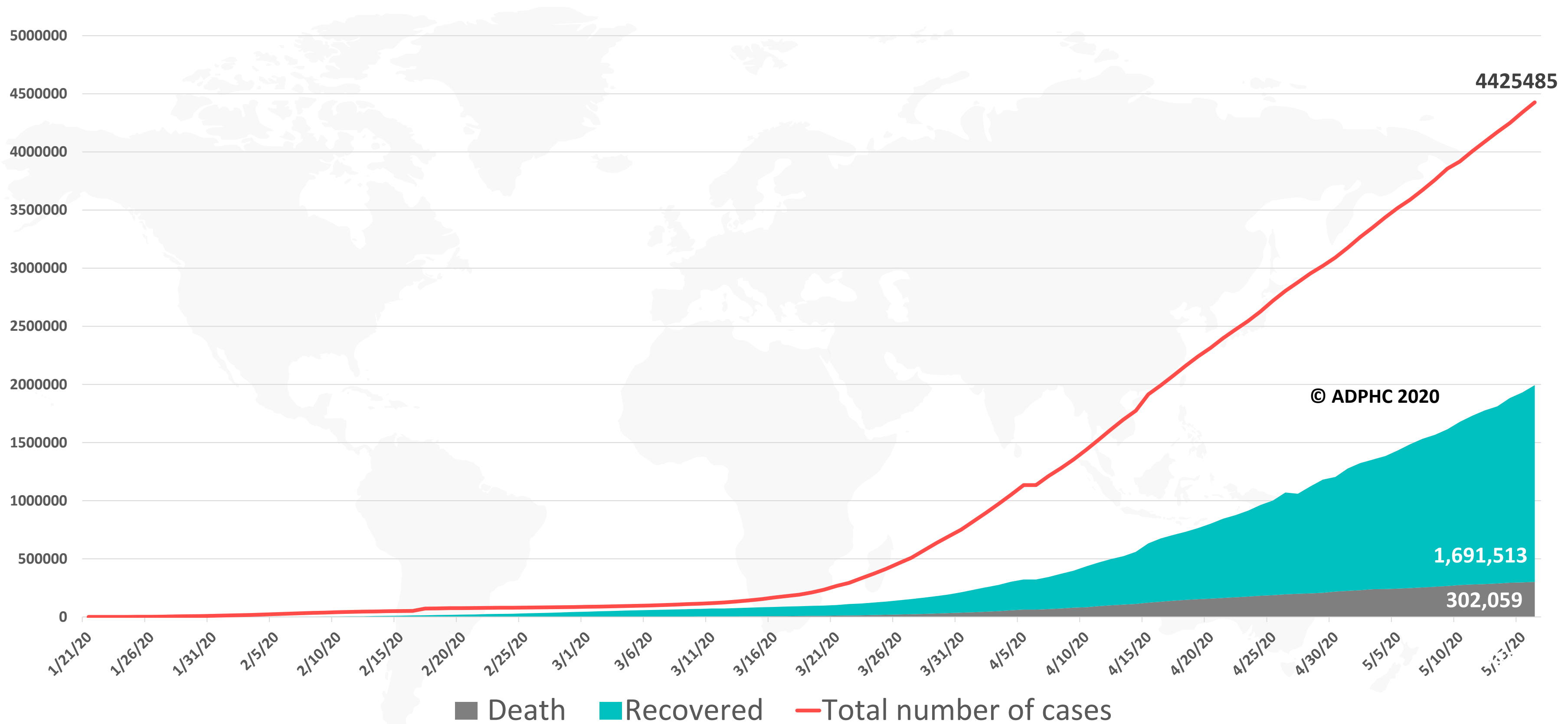
WHO daily report 16 May 2020

- WHO has published a new scientific brief on “**Multisystem inflammatory syndrome in children and adolescents with COVID-19**”, given the reported clusters of children and adolescents who require admission to intensive care units with a multisystem inflammatory condition. There is an urgent need for **collecting standardized data describing epidemiology**,.
- WHO Director-General Dr Tedros, in his media briefing, highlighted the need to “unleash **clinical presentations, severity, and outcomes** the full power of science, to deliver innovations that are scalable, usable, and benefit everyone, everywhere, at the same time”.
- WHO has published new guidance on “[Cleaning and disinfection of environmental surfaces in the context of COVID-19](#)”, intended for healthcare professionals, public health professionals and health authorities that are developing and implementing cleaning and disinfection policies and standard operating procedures.
- WHO and UNICEF have published a document on frequently asked questions (FAQs) about immunization in the context of the COVID-19 pandemic. These FAQs accompany WHO’s Guiding principles for immunization activities during the COVID-19 pandemic.

Epidemiology



Figure 1: Total number of infected, recovered, and death cases (January 21st to May 16, 2020)

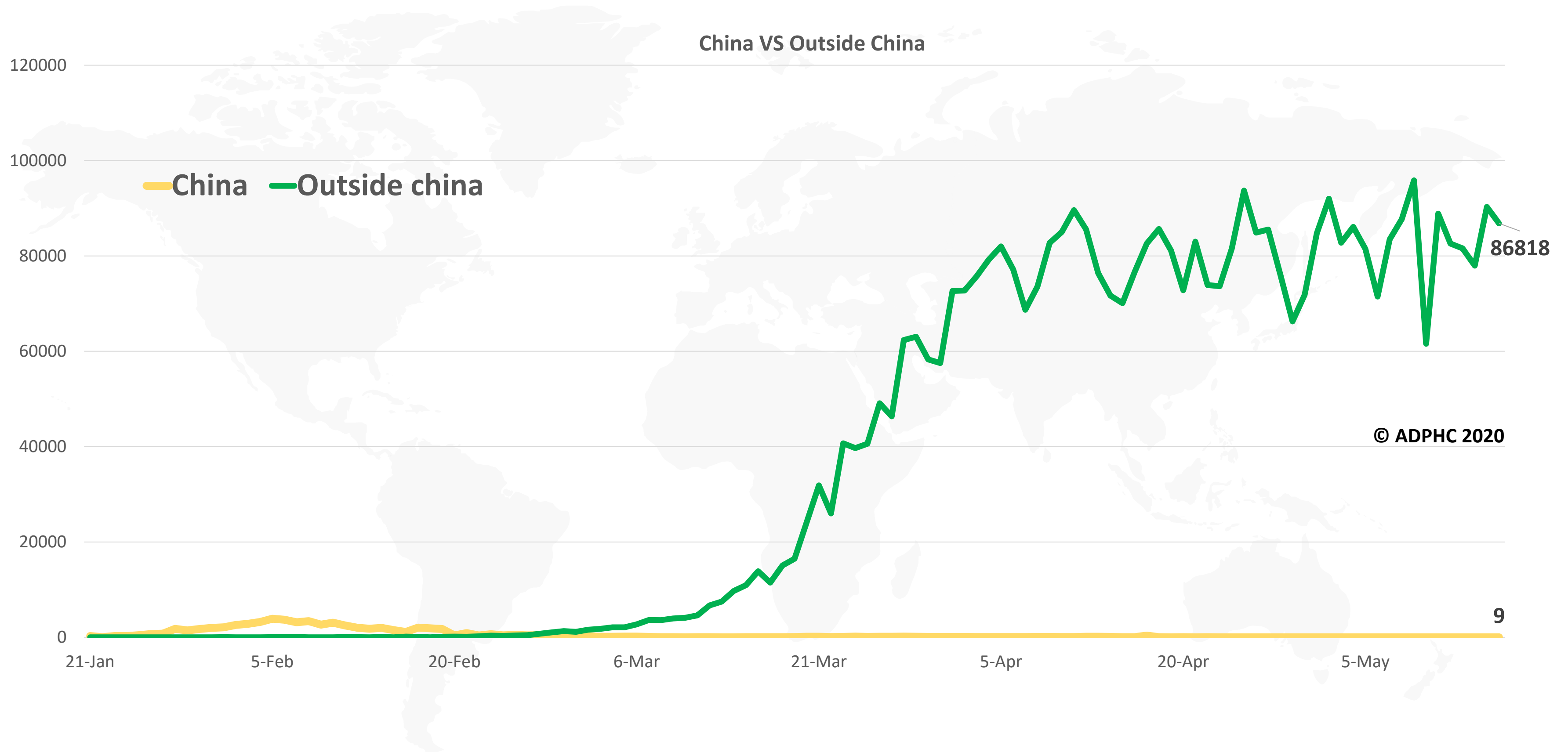


Line graph published by Abu Dhabi Public Health Center 2020.

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



Figure 2: Daily new infected COVID-19 cases reported between (January 21 to May 16, 2020).



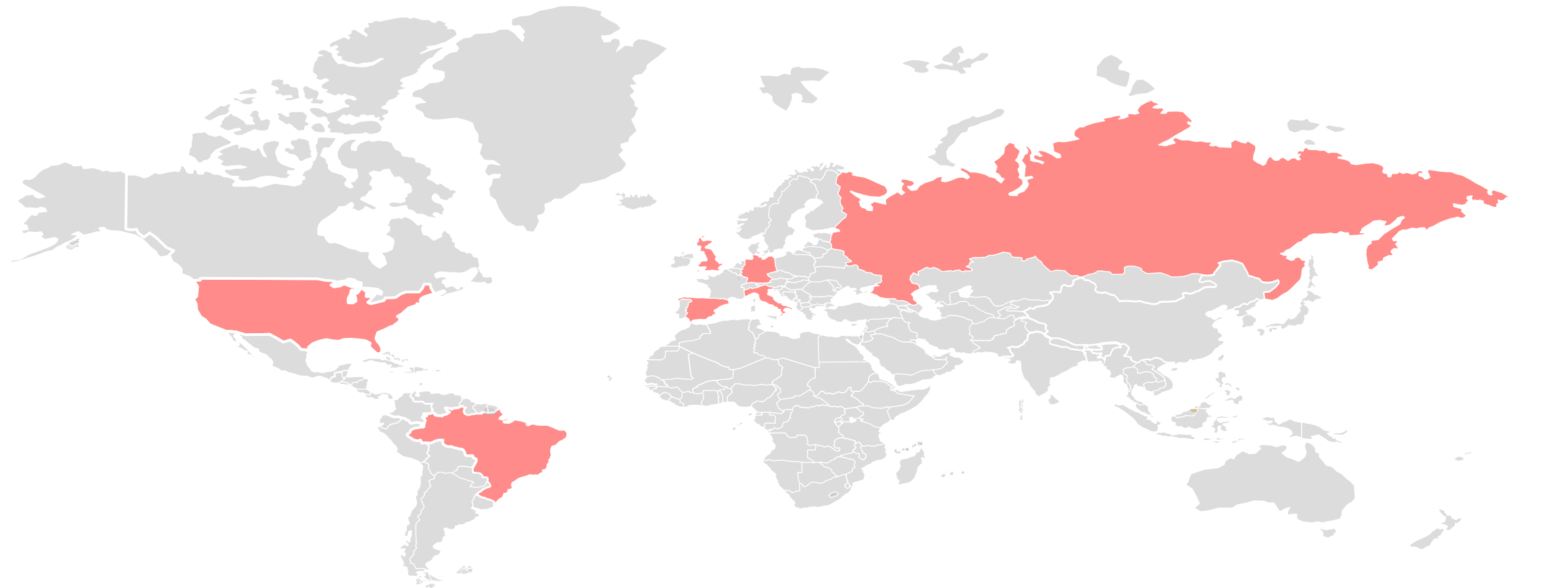
Line graph published by Abu Dhabi Public Health Center 2020.

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

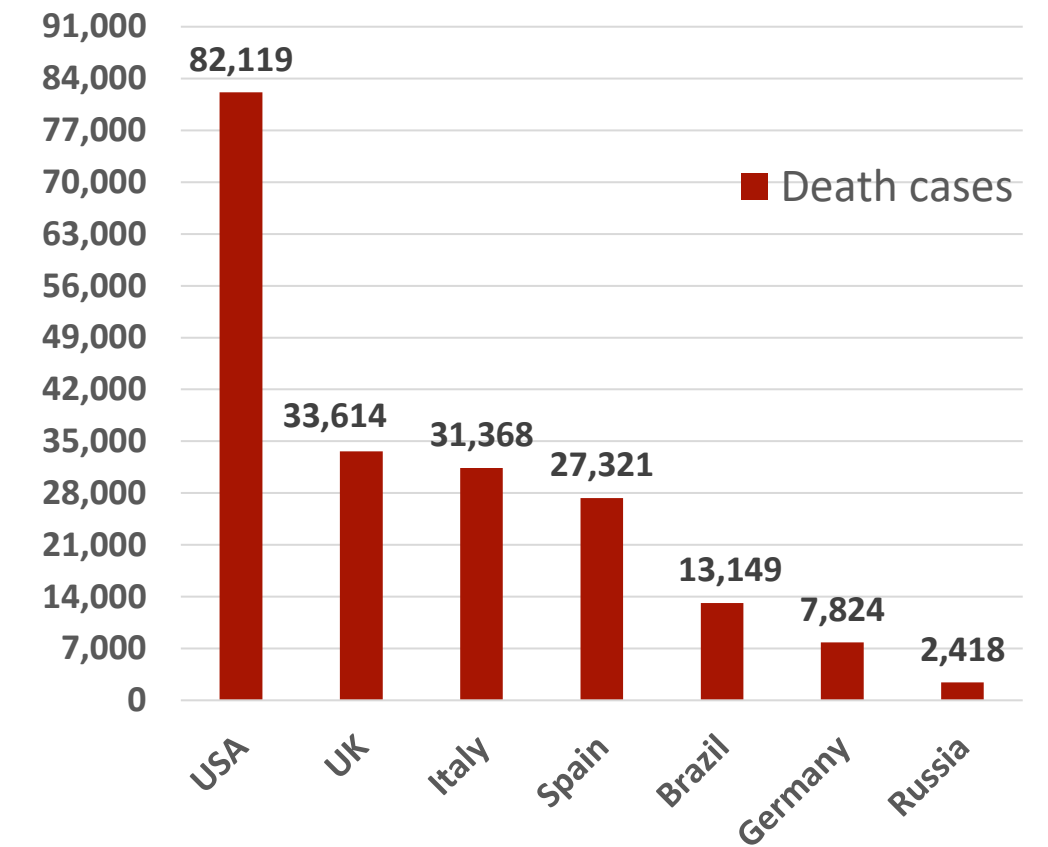
Epidemiology



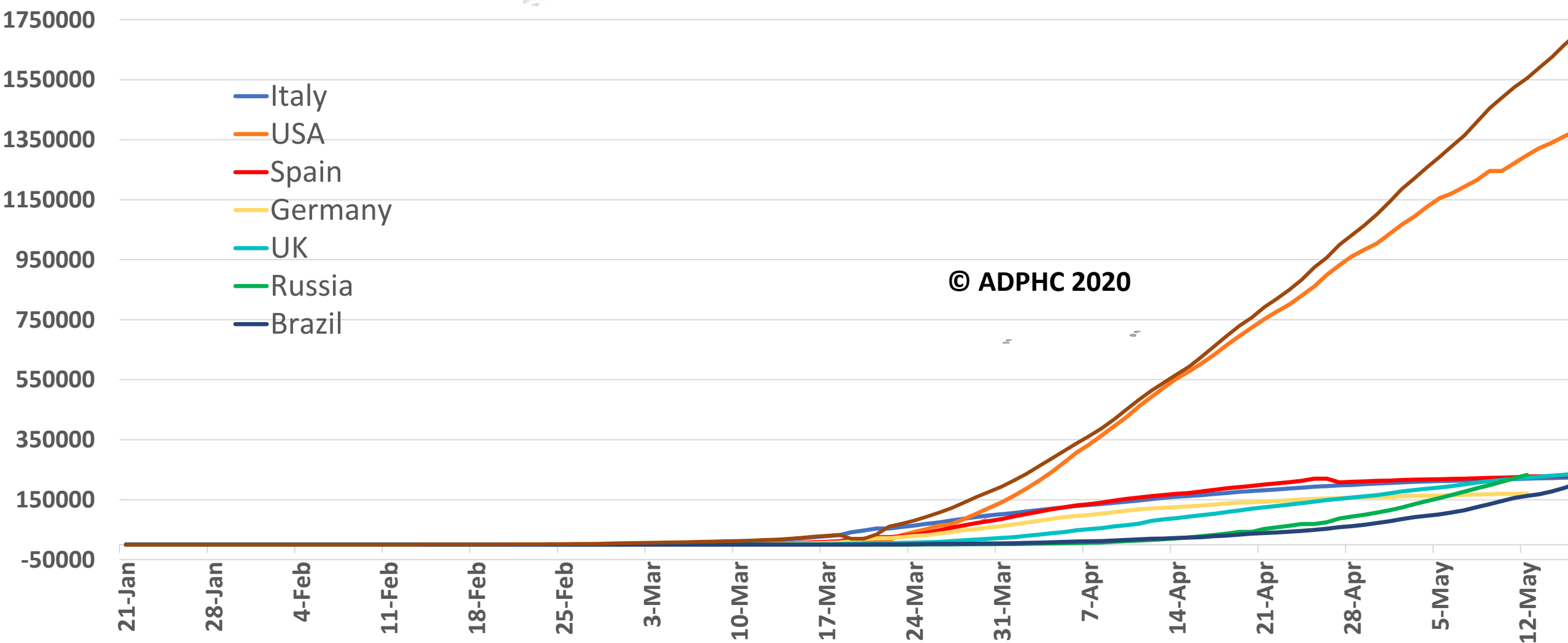
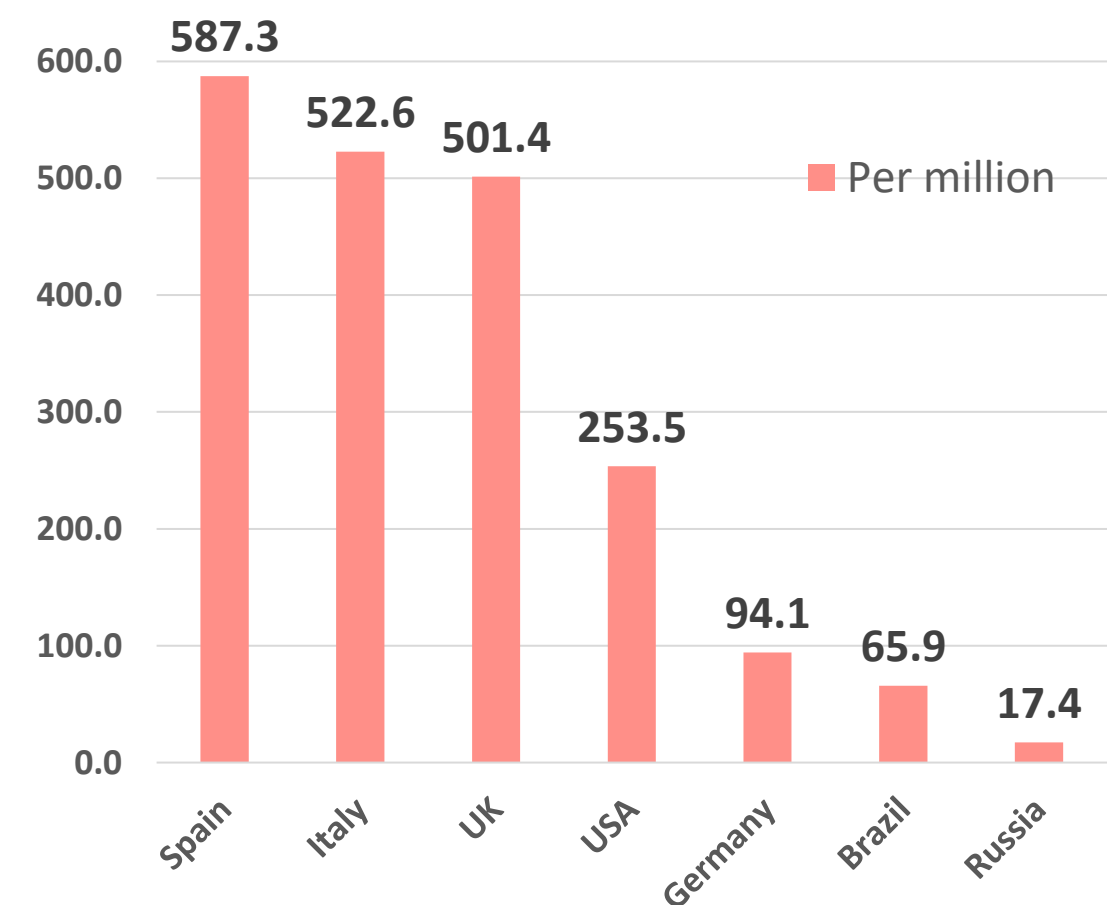
Figure 3 : Top 7 countries in the total number of cases due to COVID-19 (January 21 to May 16, 2020).



TOTAL DEATHS



DEATHS PER MILLION

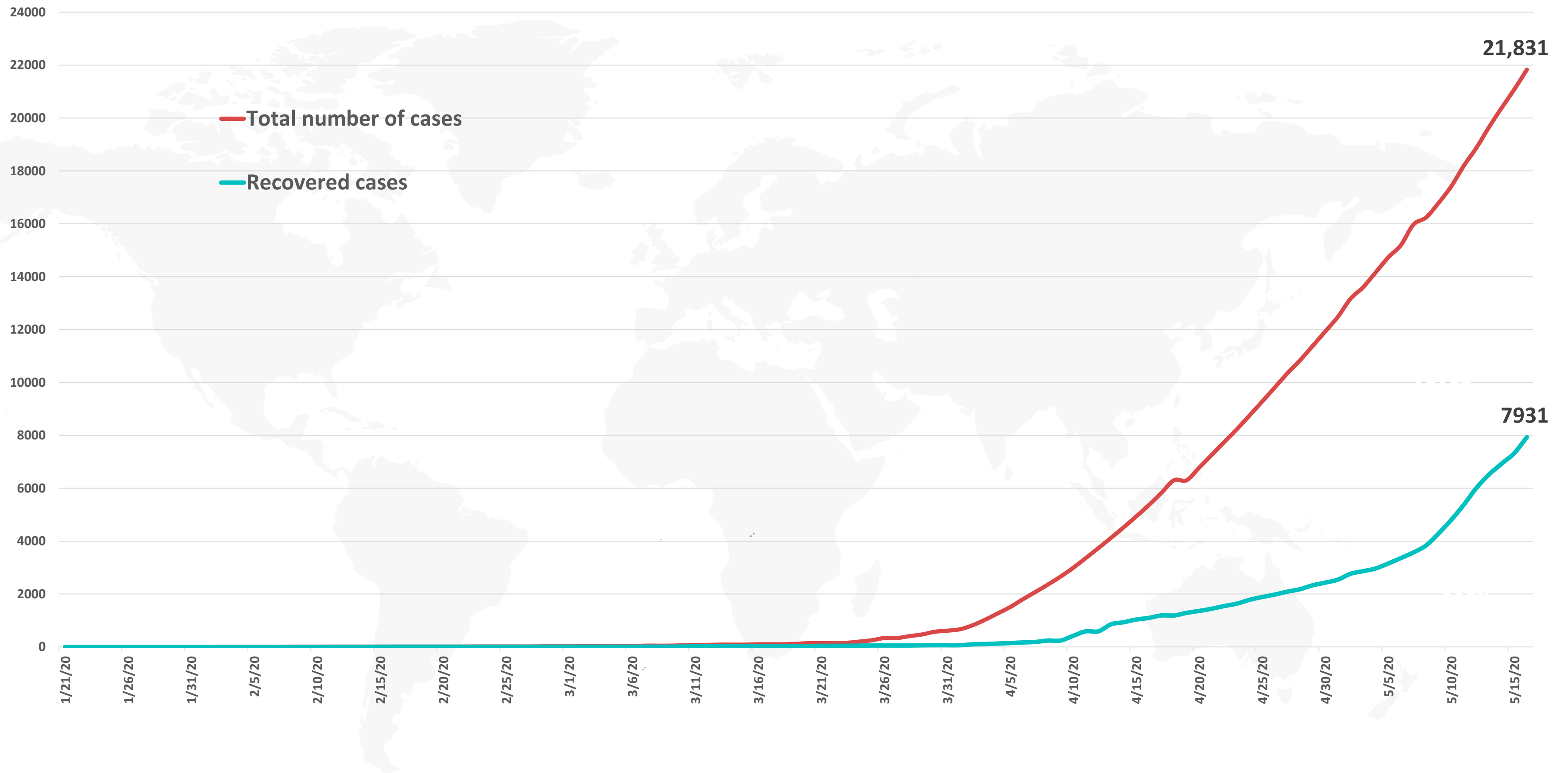


Line graph published by Abu Dhabi Public Health Center 2020.

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



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



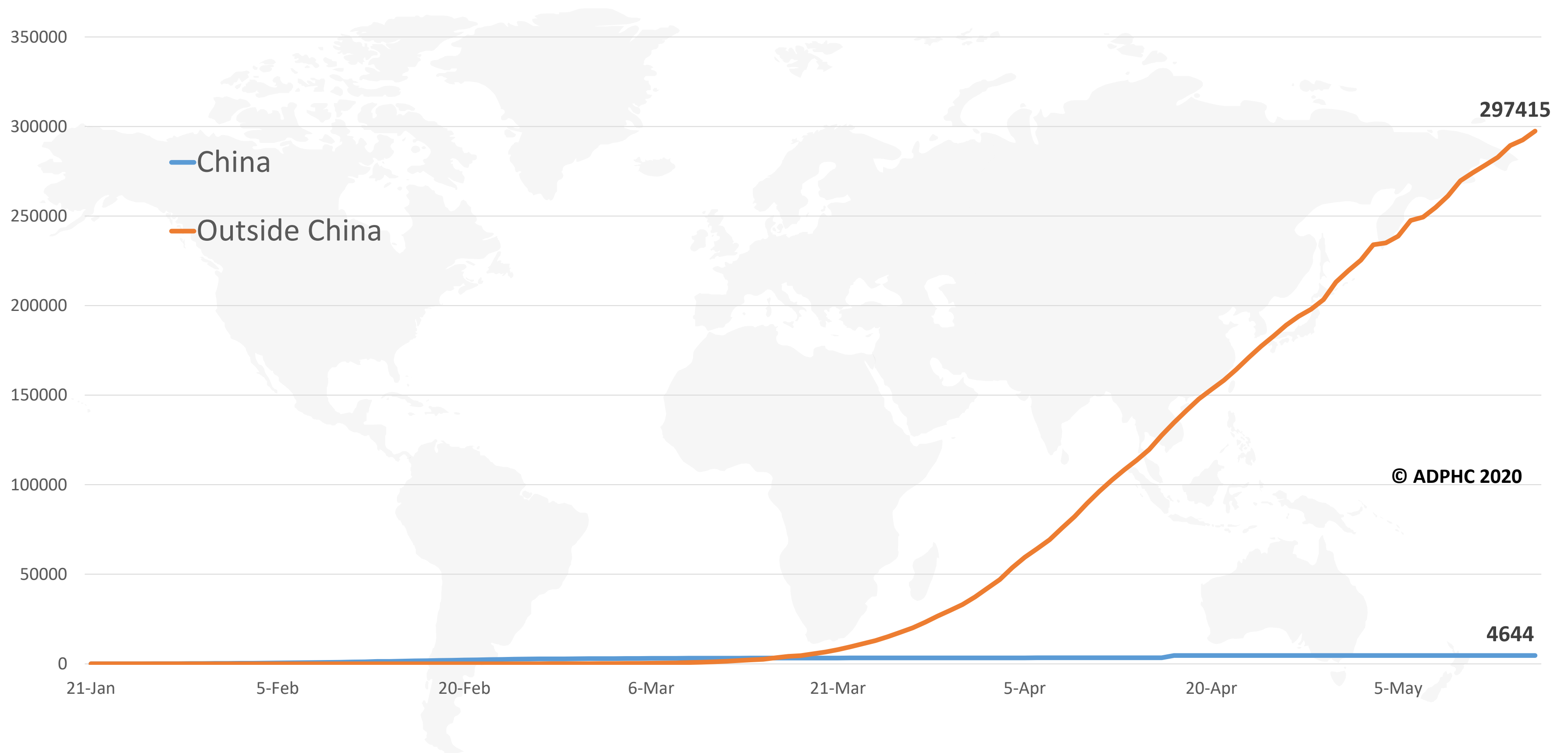
Line graph published by Abu Dhabi Public Health Center 2020.

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 May 16, 2020).



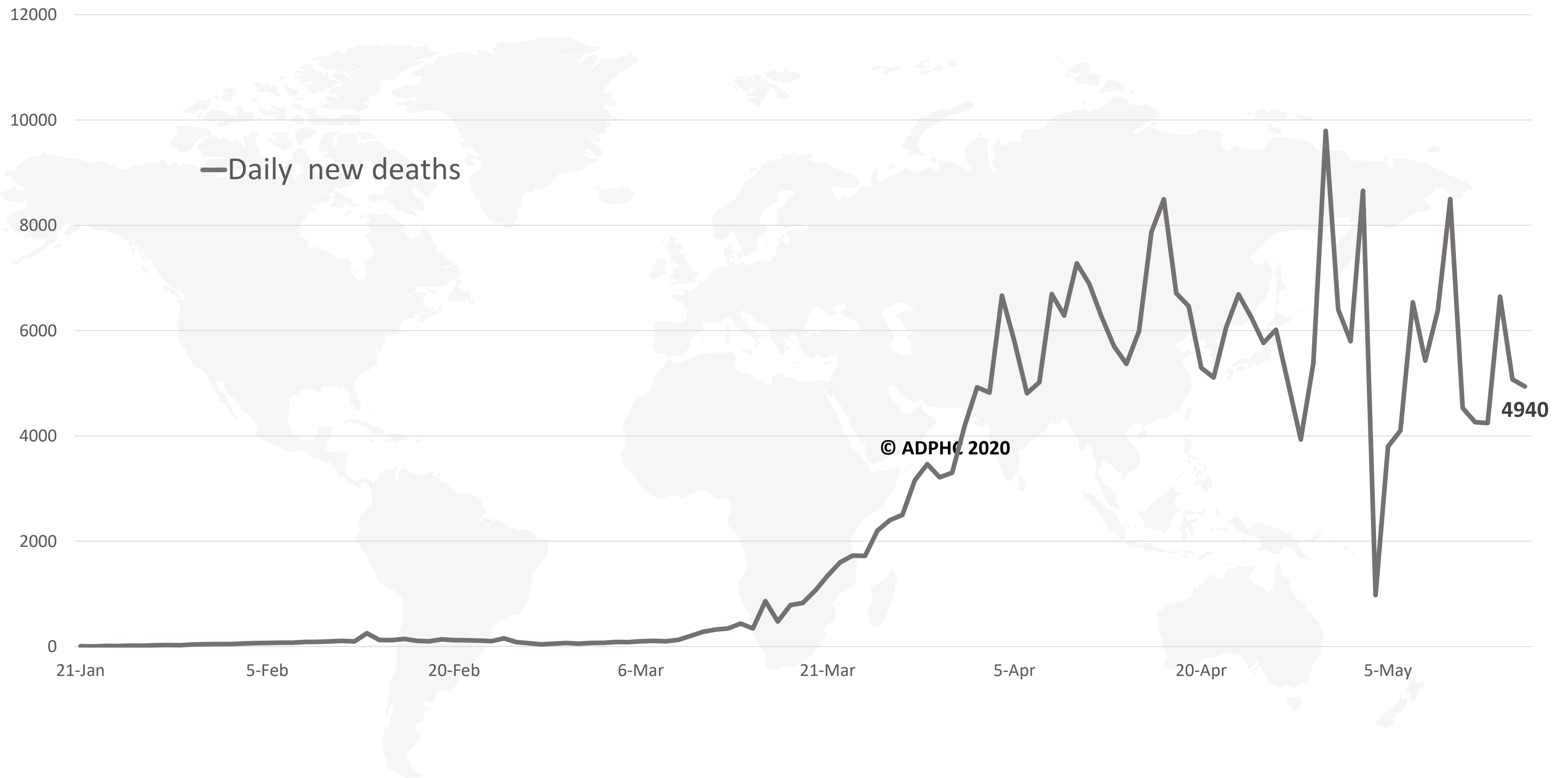
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Line graph published by Abu Dhabi Public Health Center 2020.

Data resources: [WHO](#)



Figure 6: Global daily new deaths due to COVID-19 (January 22 to May 16, 2020).



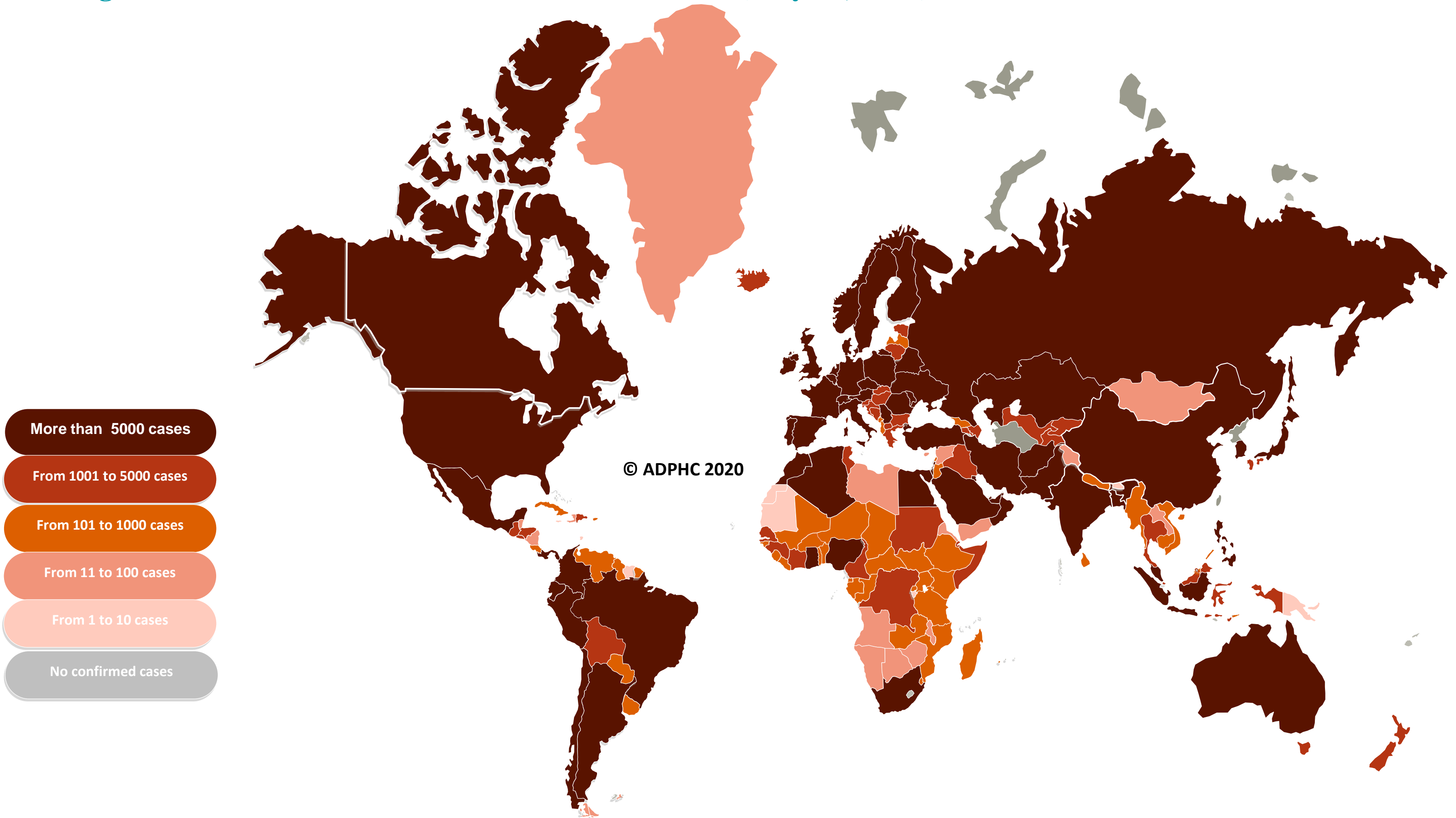
Line graph published by Abu Dhabi Public Health Center 2020.

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

Epidemiology



Figure 7a : Global distribution of COVID-19 cases (May 16, 2020).

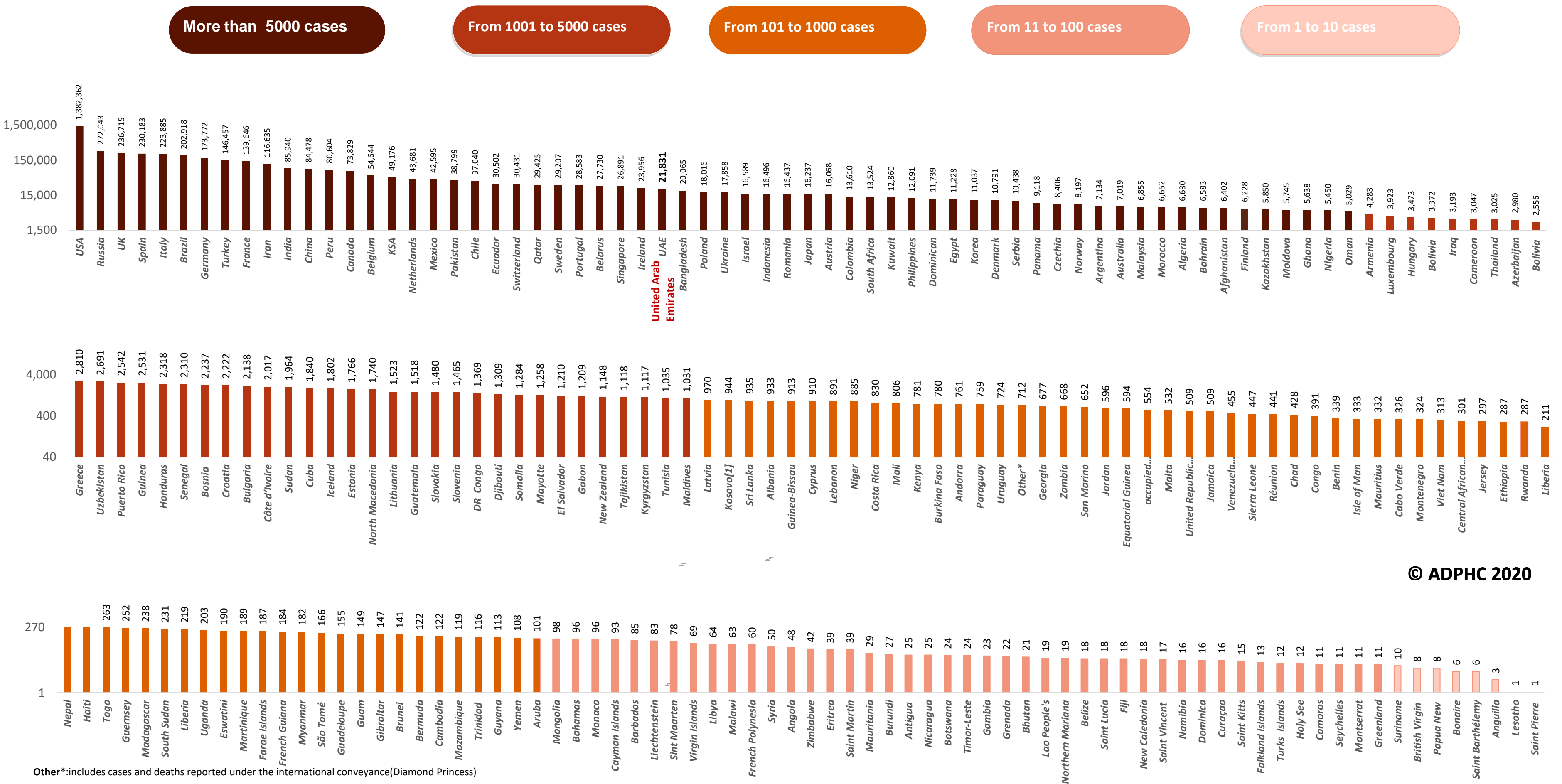


Map chart published by Abu Dhabi Public Health Center 2020.

Epidemiology



Figure 7B: Bar chart illustrate the global distribution of COVID19 cases May 15, 2020)



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Map chart published by Abu Dhabi Public Health Center 2020.

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

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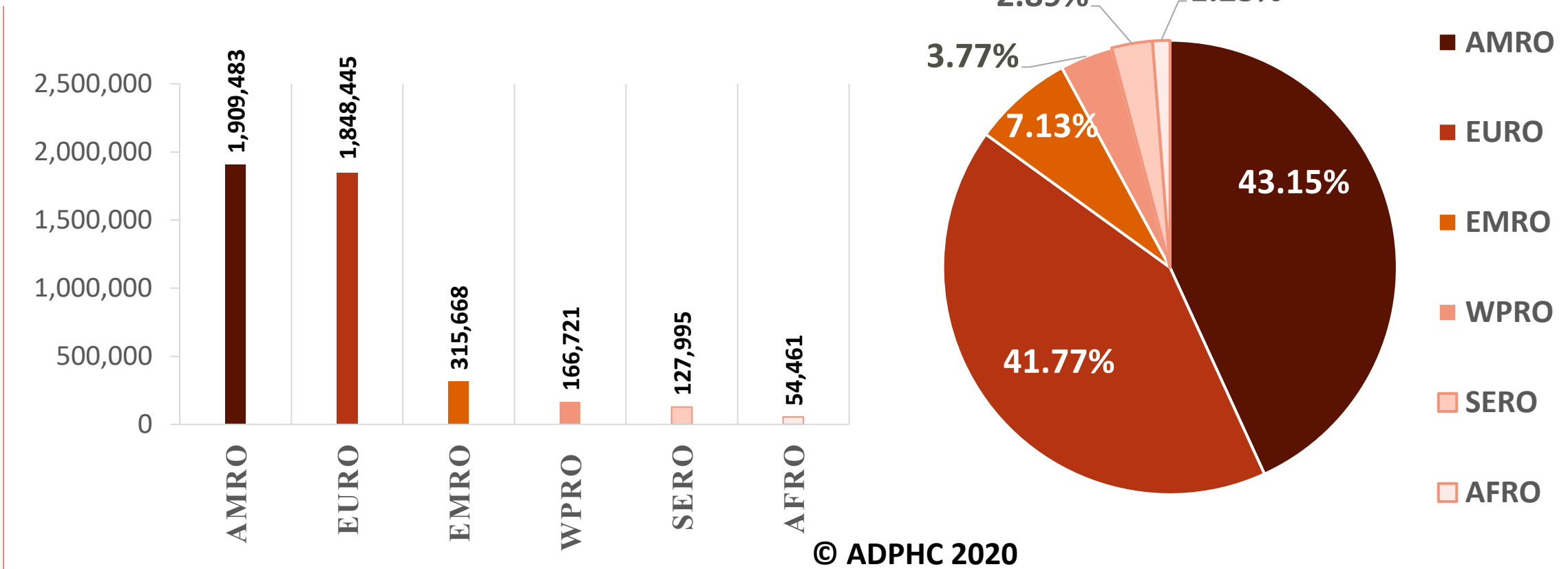
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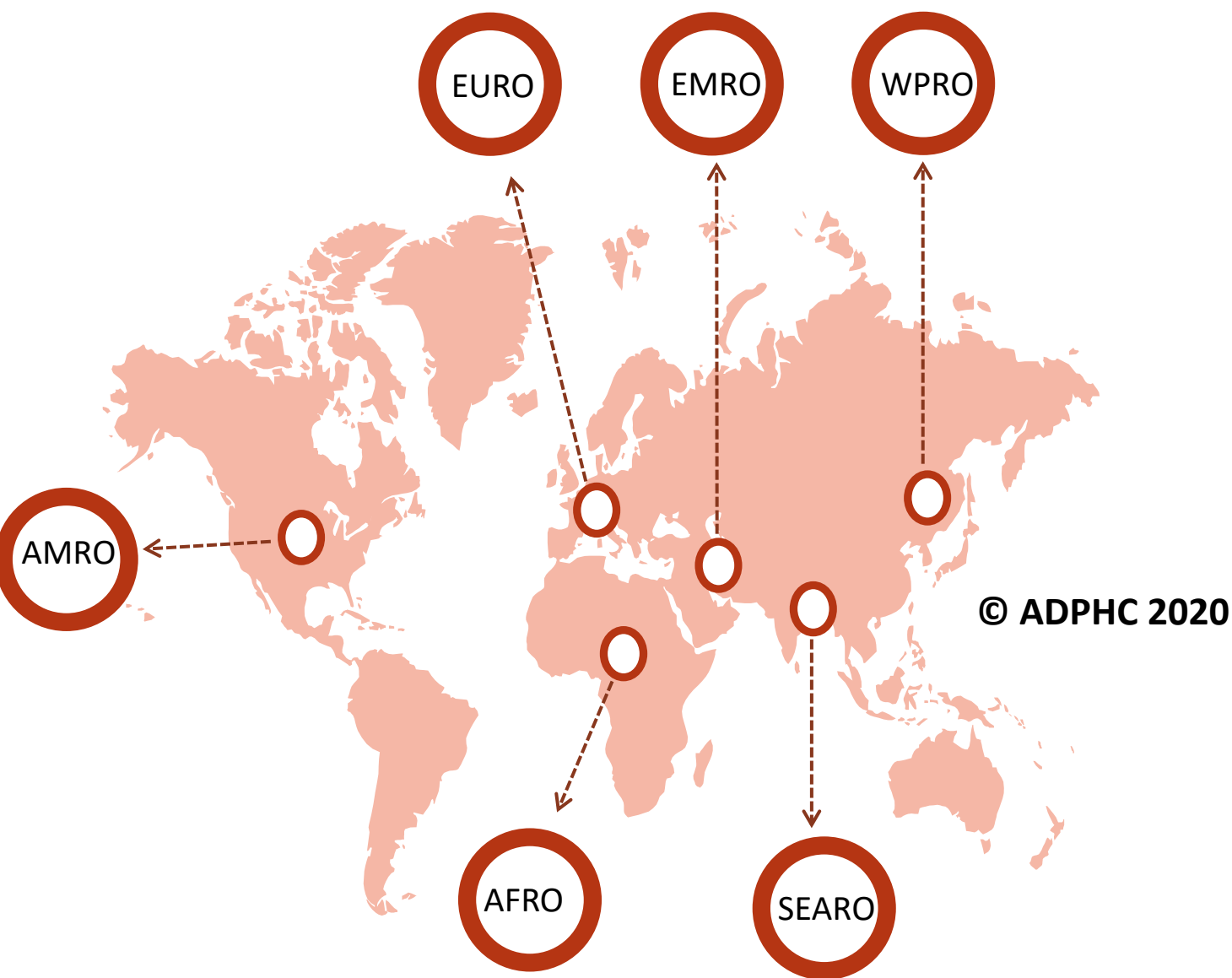
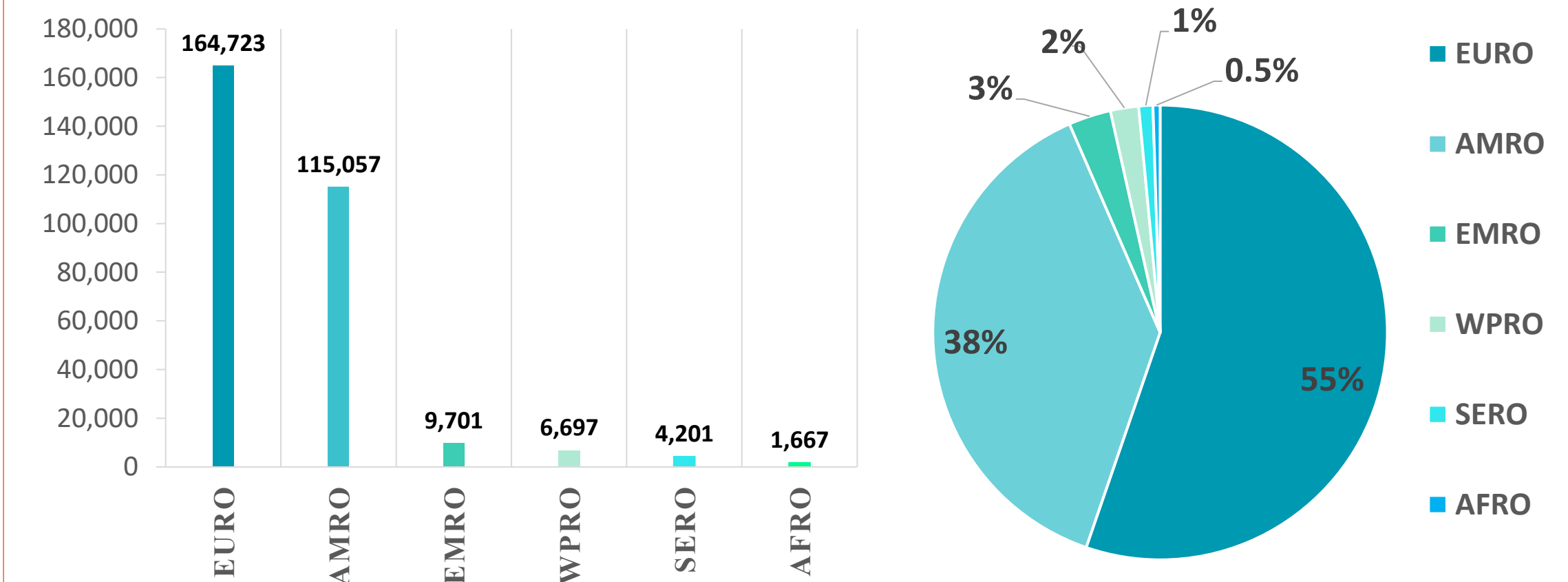


Figure 8: illustrate the Global distribution of COVID19 cases per region (May 16, 2020)

INFECTED



DEATH



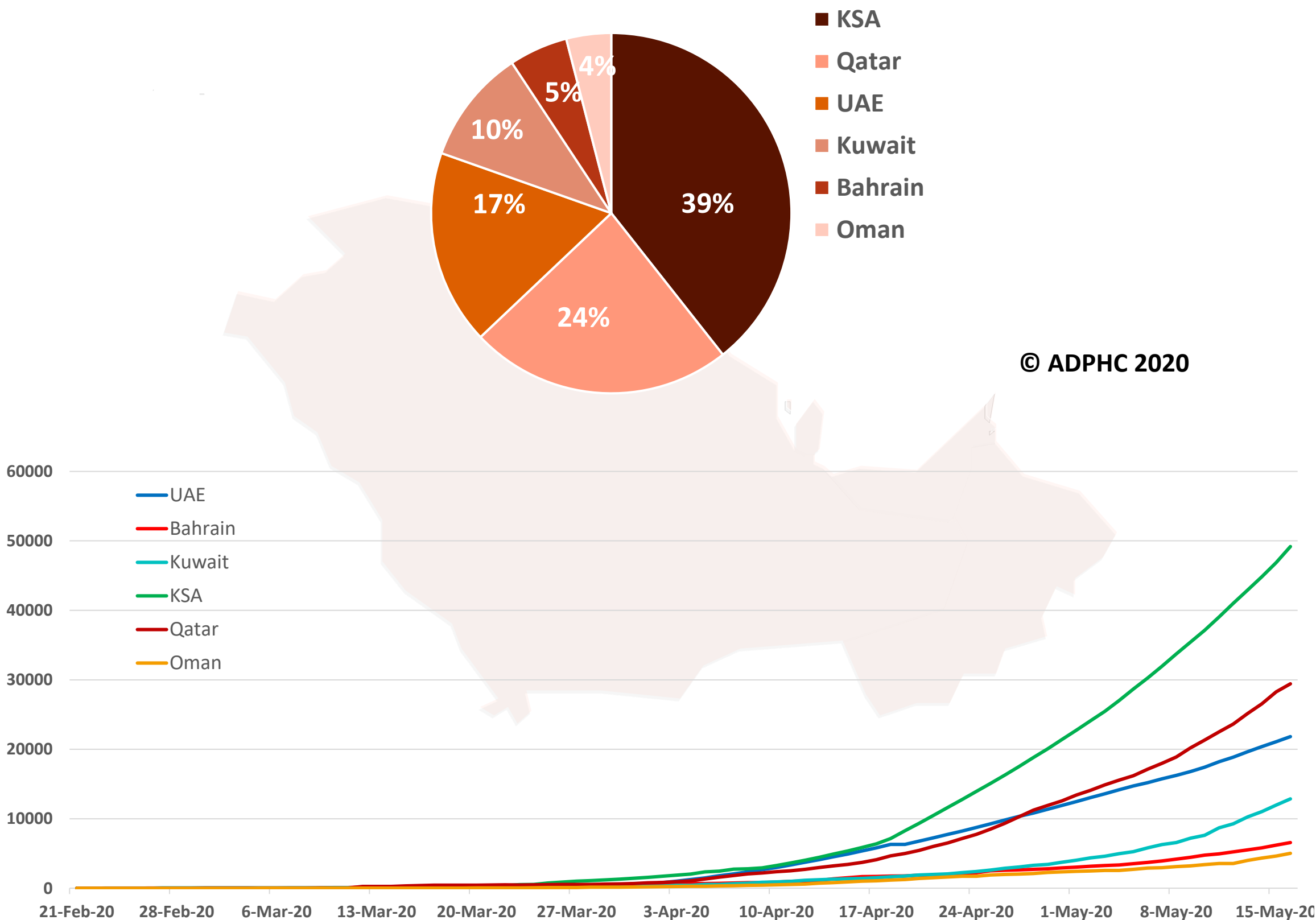
Map chart published by Abu Dhabi Public Health Center 2020.

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

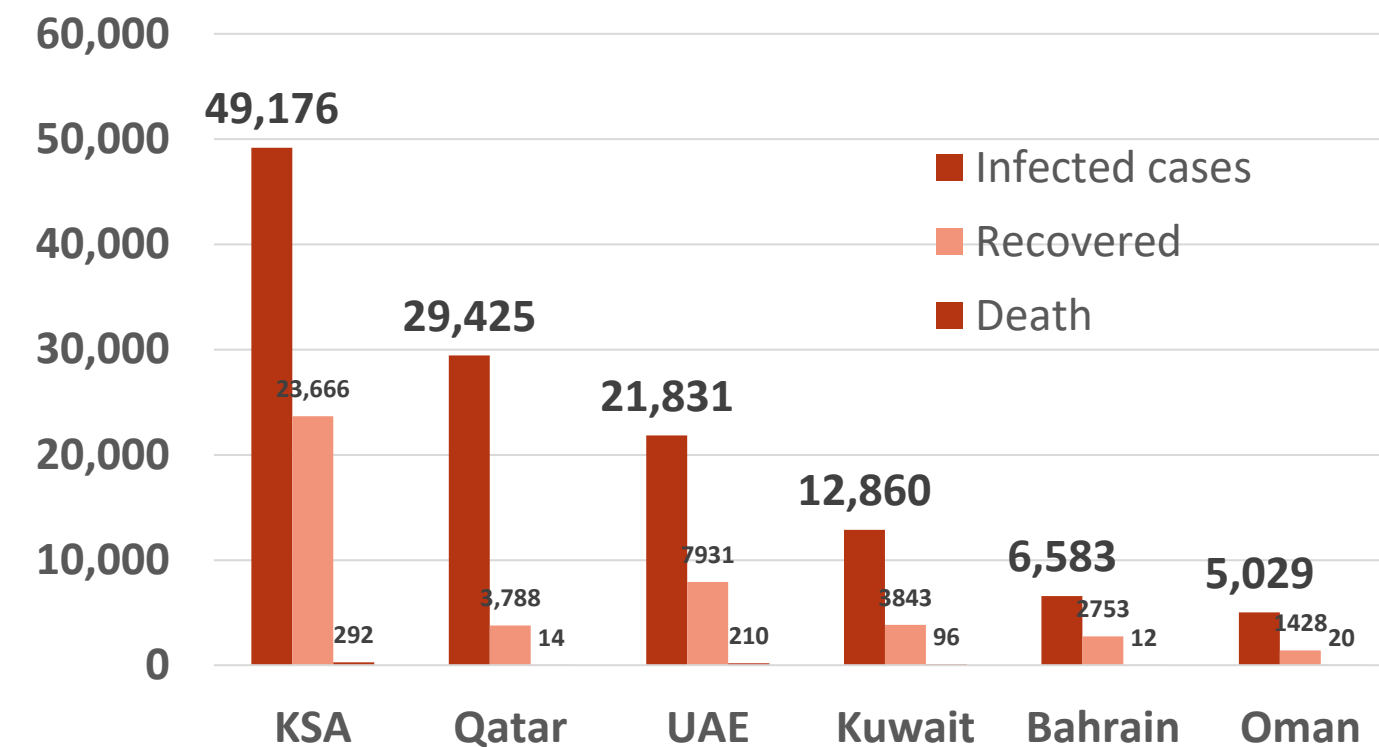


Figure 9: Comparative analysis of the distribution of COVID19 cases in GCC countries (May 16, 2020)

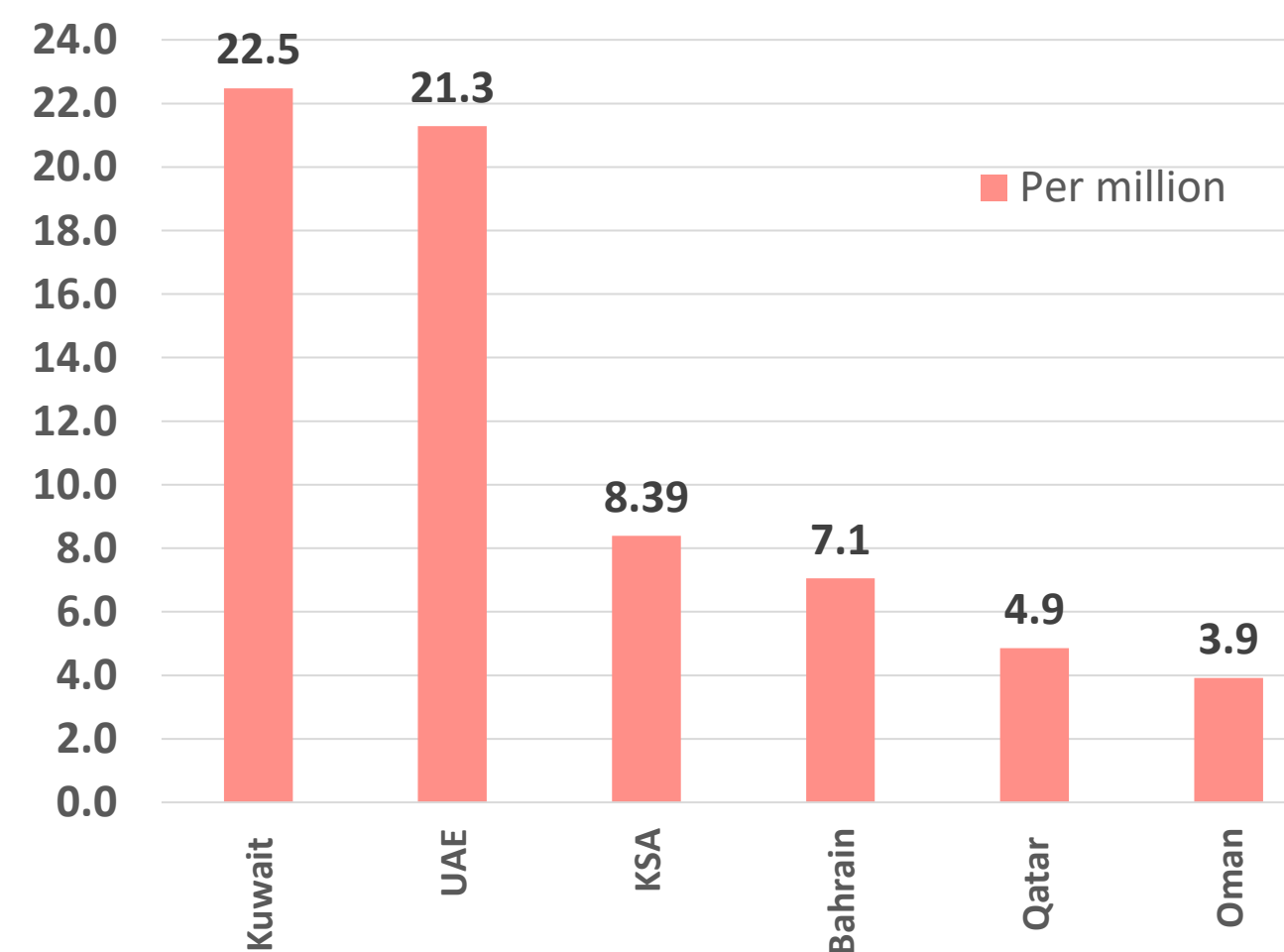
TOTAL NUMBER OF INFECTED CASES



Total number of infected, recovered and Deaths



Death per million



charts published by Abu Dhabi Public Health Center 2020.

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

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Clinical Feature and Transmission

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ABOUT THE KAWASKI DISEASE

Kawasaki disease is a rare acute pediatric vasculitis (Inflammation of the vessels) occur mostly in children younger than 5 Years. The most serious complication of Kawasaki disease is coronary arteritis and aneurysm formation which occurs in a third of untreated patients.

THE ETIOLOGY of this condition is unknown. it could be a result from overreaction of immunes system against viral infection.

COMPLICATIONS Between 10 and 40%, and in some series up to 70%, of patients develop coronary artery aneurysm or stenosis.

MAS is Macrophage activation syndrome is a rare and potentially fatal complication of Kawasaki disease (KD) causing an over-whelming inflammatory reaction due to an uncontrolled and dysfunctional immune response.

KDSS Kawasaki disease shock syndrome which causes hemodynamic instability.

TREATMENT is IVIG and Aspirin

CHILDREN WITH KAWASAKI LIKE ILLNESS during covid19 era; case preliminary definition*

Children and adolescents 0–19 years of age with fever > 3 days AND two of the following

- Rash or bilateral conjunctivitis or rash signs (oral, hands or feet).
- Hypotension or shock.
- Features of myocardial dysfunction, coronary abnormalities
- Evidence of coagulopathy (by PT, PTT, elevated d-Dimers).
- Acute gastrointestinal problems

AND Elevated markers of inflammation.

Consider this syndrome in children with features of **typical or atypical Kawasaki disease or toxic shock syndrome.**

AND No other obvious microbial cause of inflammation AND Evidence of COVID-19 (RT-PCR, antigen test or serology positive), or likely contact with patients with COVID-19.

*Now called Multisystem inflammatory syndrome in children and adolescents with COVID-1

Kawasaki Like Illness In COVID19 era

Links to published research:

Publication 1:
Published: May 12, 2020
[Click here](#)

Publication 2:
Published: May 13, 2020
[Click here](#)

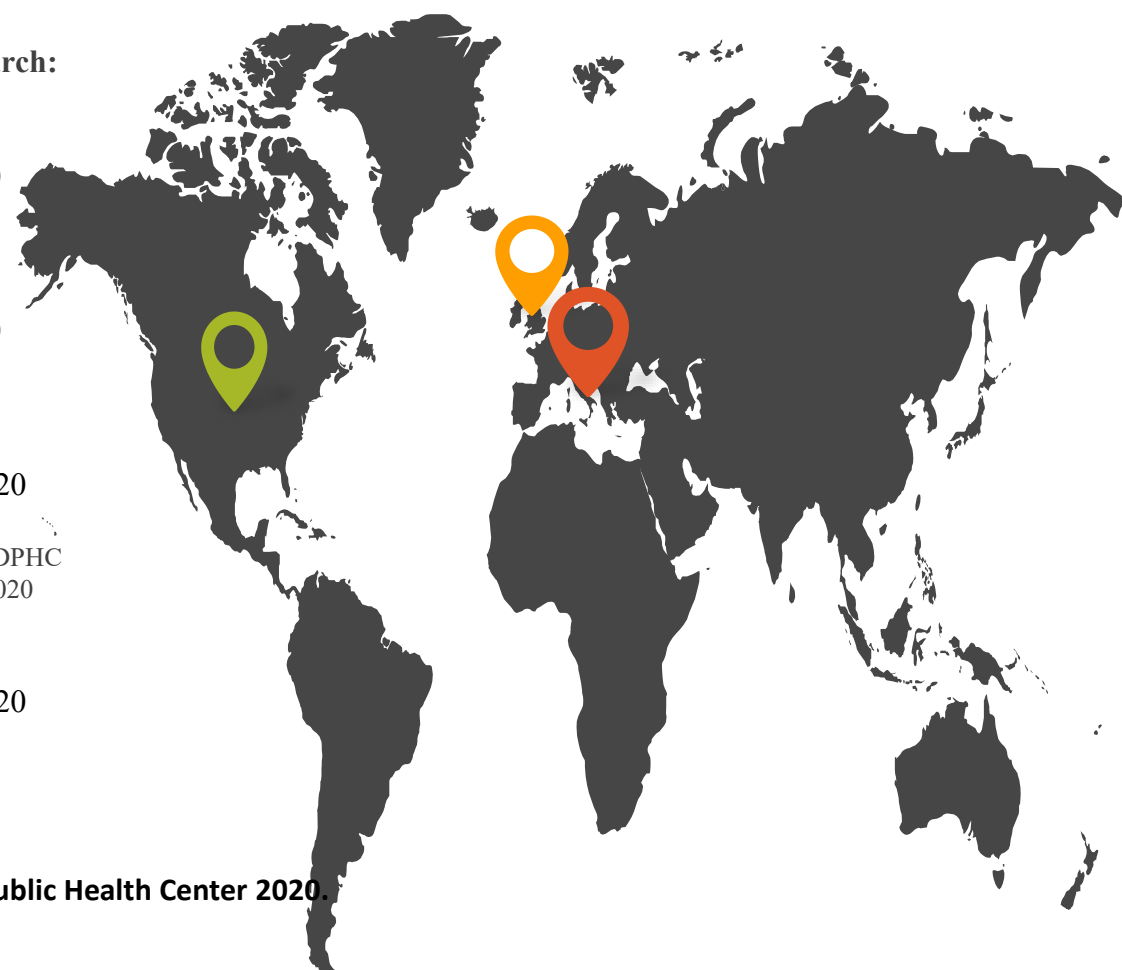
Publication 3
Published: March 13, 2020
[Click here](#)

*previously summarized on ADPHC Scientific Report in 16.May.2020

Press Release 4:
Published: March 13, 2020
[Click here](#)

Resouce5: [Click here](#).

Published by Abu Dhabi Public Health Center 2020



10
CASES
In Italian study

28
CASES
In UK study

100
CASES
reported in
NY

CHILDREN WITH KAWASAKI LIKE ILLNESS ARE :

OLDER in age (average above 5 years).

COMPLICATIONS present more often.

SARS-COV2 found to be linked in most cases (either positive PCR, Antibody tests or positive contact).

COUNTRIES' ACTION:

NY OFFICIAL recommends testing for SARS-COV2 in these children.

UK NHS ISSUED an alert on April 25,2020 & studies to explore the extent of the emerging syndrome in the national level are ongoing in the UK.

INTERNATIONAL discussions are underway to standardize approaches to the investigation and management of these children, including treatment strategies to prevent long-term adverse outcomes such as coronary artery aneurysms. WHO have published case definition and reporting platform to monitor the disease.



Article 2: School Reopening - The Pandemic Issue That Is Not Getting Its Due

Published: May 12, 2020 in [the JAMA](#)

Summary:

- In the United States, during COVID-19 pandemic, there are some states provisionally plan on opening workplaces; however, most of the states are giving no consideration to reopen schools. Many have already canceled rest of the school year, and all are planning for the fall semester. Regarding summer learning loss, children are losing an average of 1 to 3 months in varying subjects. Some estimate that there will be a 9 to 12 month loss when they return to school during fall semester and this will be aggravated if distance learning continues.
- An expert task force that includes epidemiologists, infectious disease experts, educational scientists, and child psychologists focus exclusively on school closure should be convened immediately to help inform states and counties that are struggling to make urgent decision regarding the fall semester. The panel should review the state regarding horizontal transmission among children and their families, as well as feasibility of distance learning and psychological implications of children while stay at home.
- The recommendations should be developmentally framed, taking into account children's needs and cognitive abilities. Utilizing existing and emerging data, recommendations should be made scientifically to help states make the crucial decision as soon as possible.