



# Scientific Research Monitoring on COVID-19

7 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



# Todays' Highlights

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

## Scientific Research

- **Treatment:** RECOVERY trial; one of the big UK trials on COVID19 therapy have released its preliminary results of the HCQ and found non- beneficial effect on COVID19 patient.
- **Public Health response: the Lancet** Editorial criticizing the Public health response in Russia regarding the management of COVID19 response, it elaborated on the PPE shortage and lack of clear leadership.
- **Management:** article provides a recommendation of how to care of positive pregnant women with COVID19.



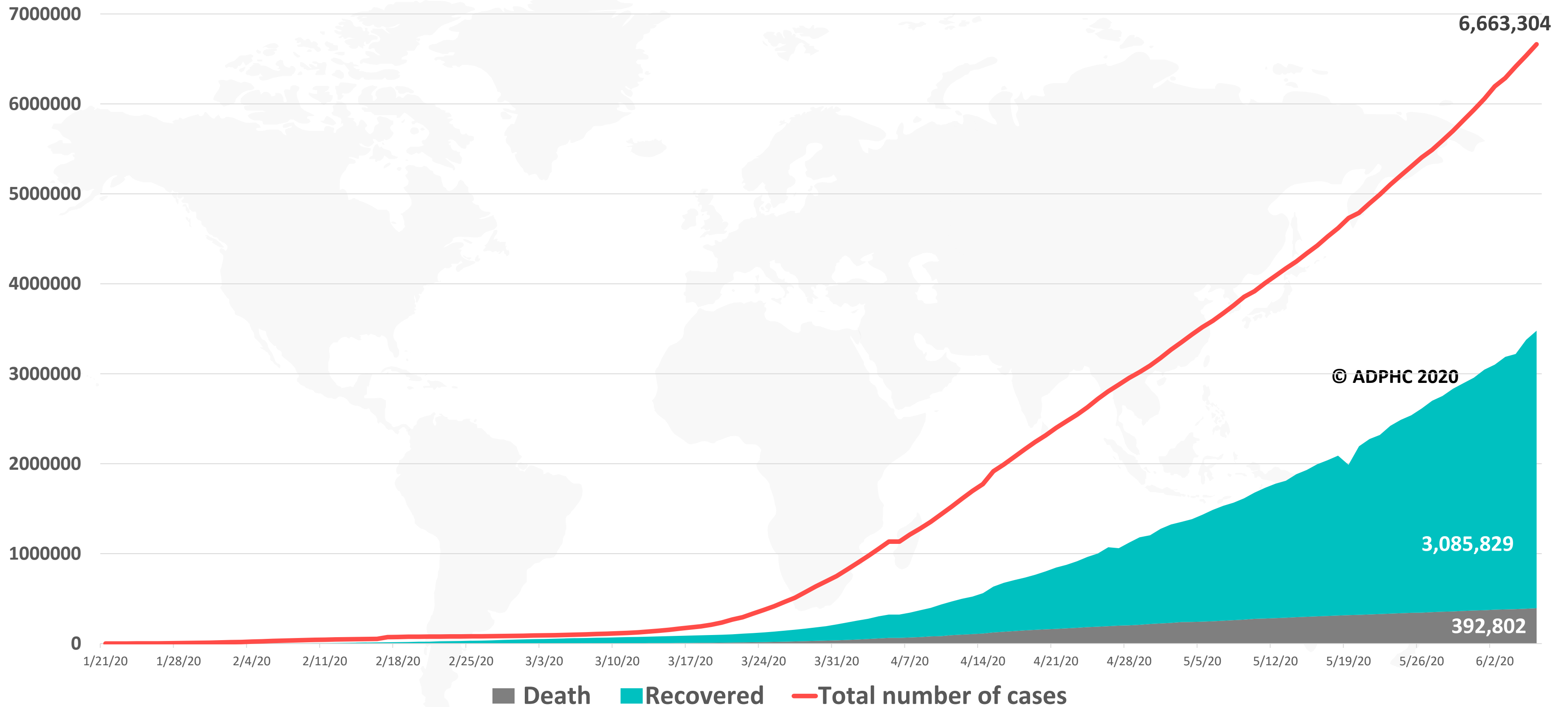
## WHO Daily Report 6 June 2020

- Community health mobilizers are on the frontlines of Angola's COVID-19 response, increasing awareness of COVID-19 among the general population by conducting home visits and social mobilization campaigns in local markets and other busy communal areas.
- WHO has published an updated interim guidance on [Key planning recommendations for mass gatherings in the context of COVID-19](#), which reflects the evolution of the pandemic and the most recent WHO recommendations on COVID-19. The guidance provides advice to host governments, health authorities and event organizers on containing COVID-19 risks associated with a mass gathering, and on mitigating the likelihood of strain on health services.
  - WHO recommends that any decision to restrict, modify, postpone, cancel or proceed with a mass gathering should be based on a rigorous risk assessment, based on three main considerations:
    - 1- Normative and epidemiological context in which the event takes place.
    2. Risk factors associated with the event: (including the characteristics of the venue, the number and key features of the participants (and their expected interactions), the duration of the event, and the capacity of the health system to detect and manage COVID-19 cases, among others.
    3. Prevention and control measures: this area focuses on the capacity that host governments, health authorities and event organizers have to apply actions that mitigate the risk identified in step 2, above. Prevention and control measures can be applied throughout the event's timeline – in the planning phase, operational phase, and post-event phase.

# Epidemiology



Figure 1: Total number of infected, recovered, and death cases (January 21<sup>st</sup> to Jun 6, 2020)

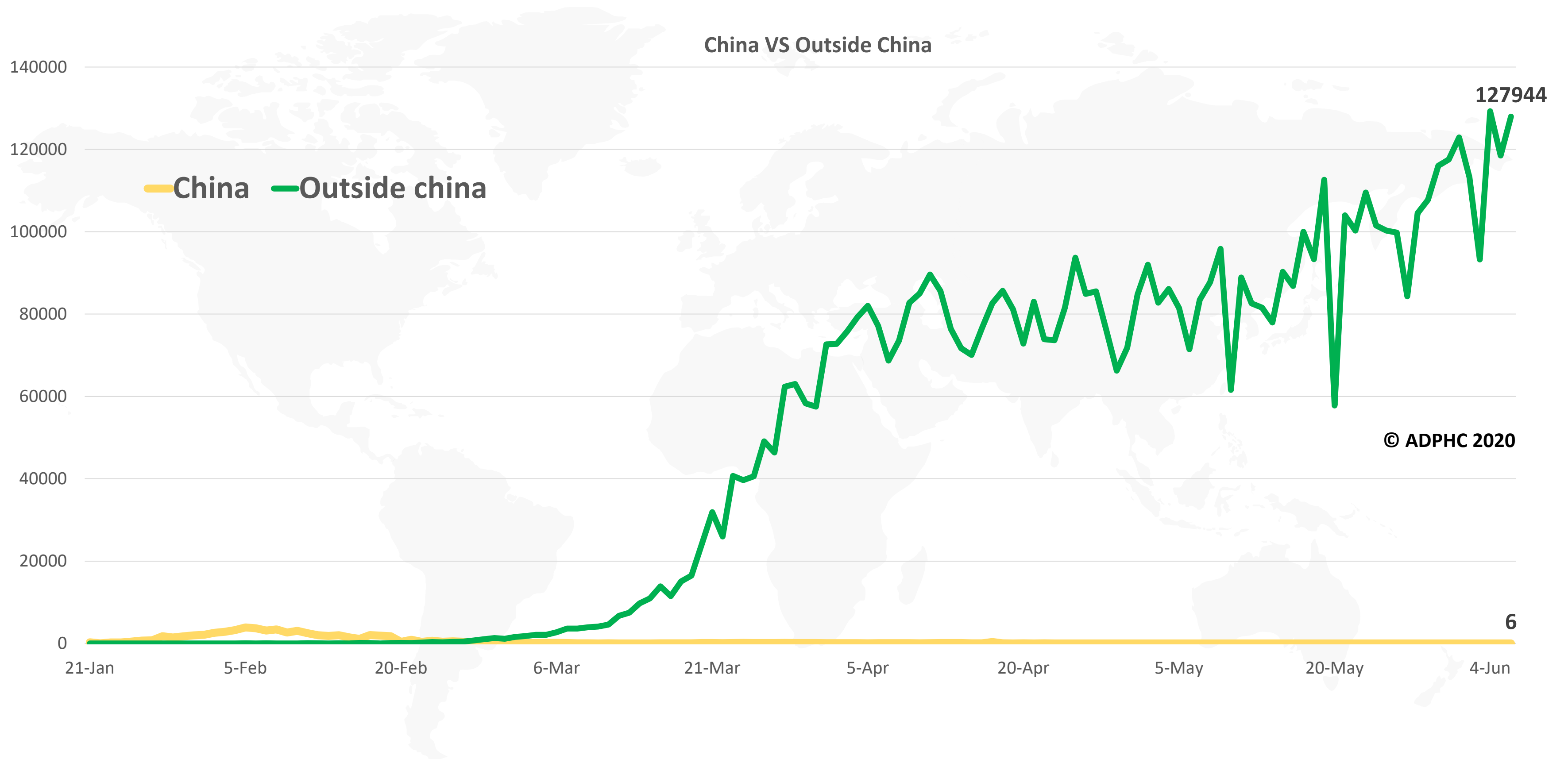


Line graph published by Abu Dhabi Public Health Center 2020.

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



**Figure 2: Daily new infected COVID-19 cases reported between (January 21 to Jun 6, 2020).**



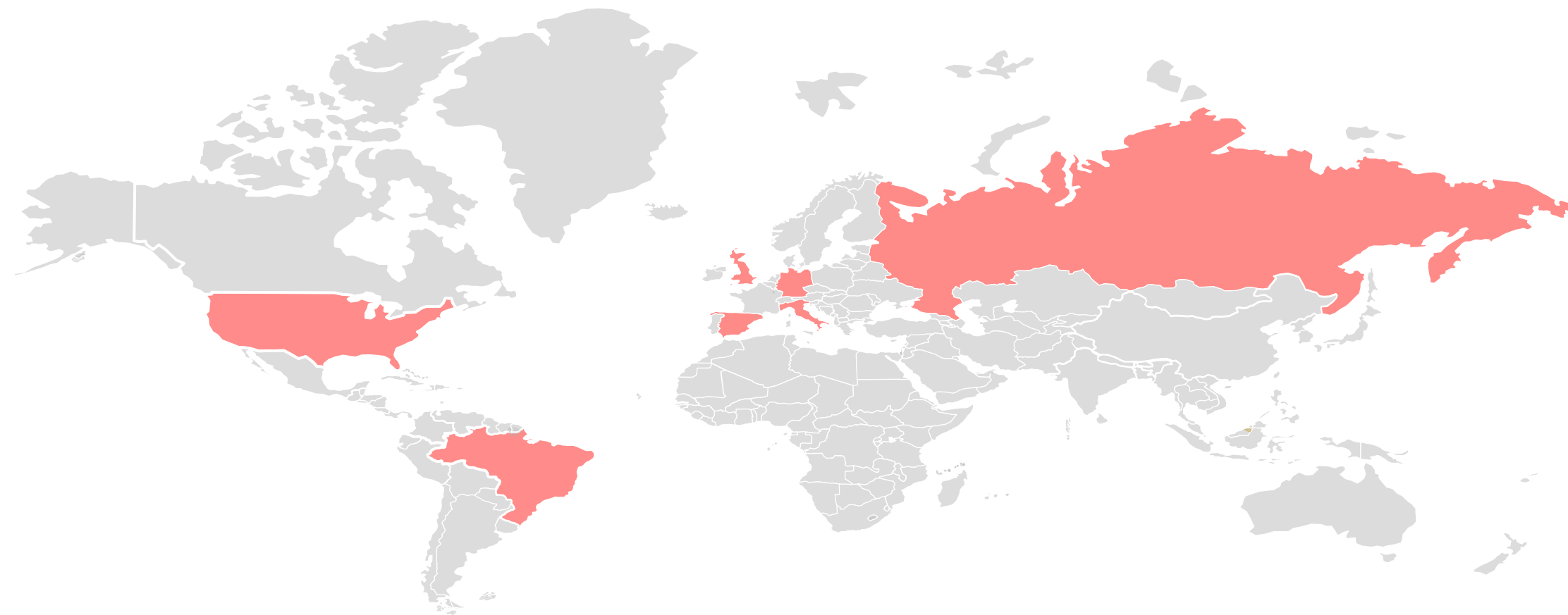
Line graph published by Abu Dhabi Public Health Center 2020.

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

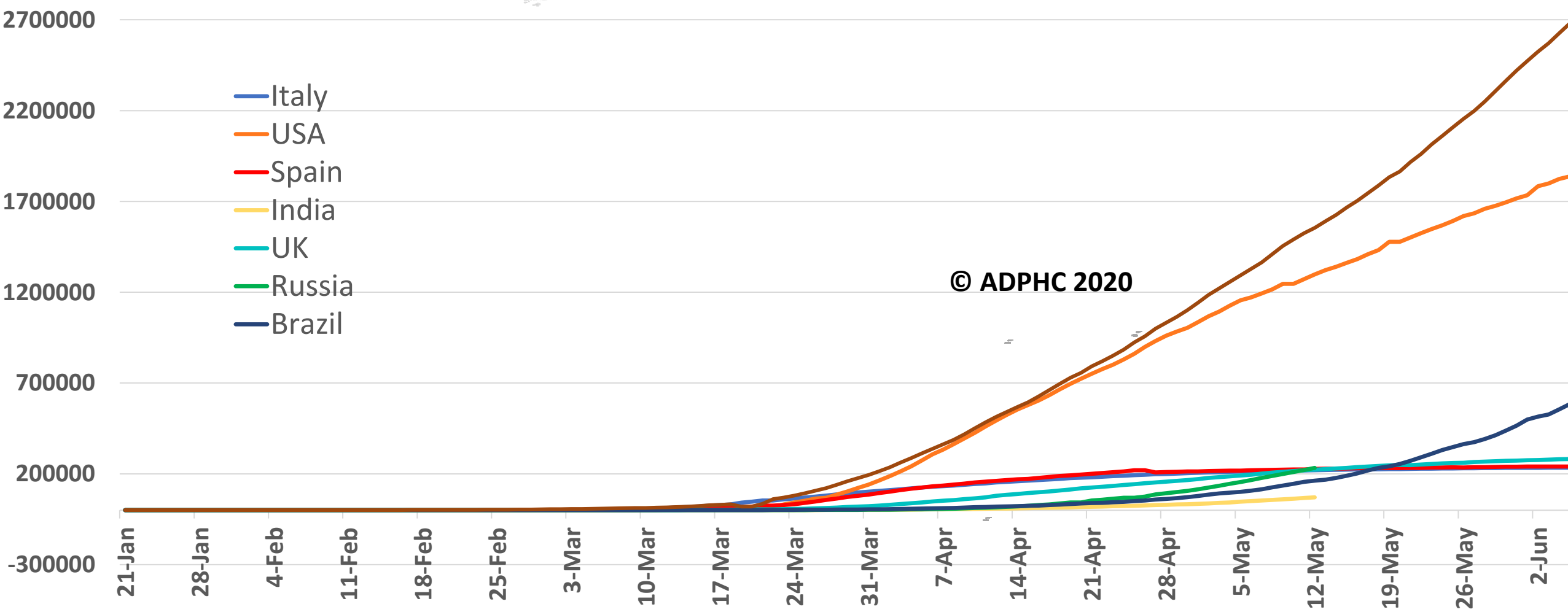
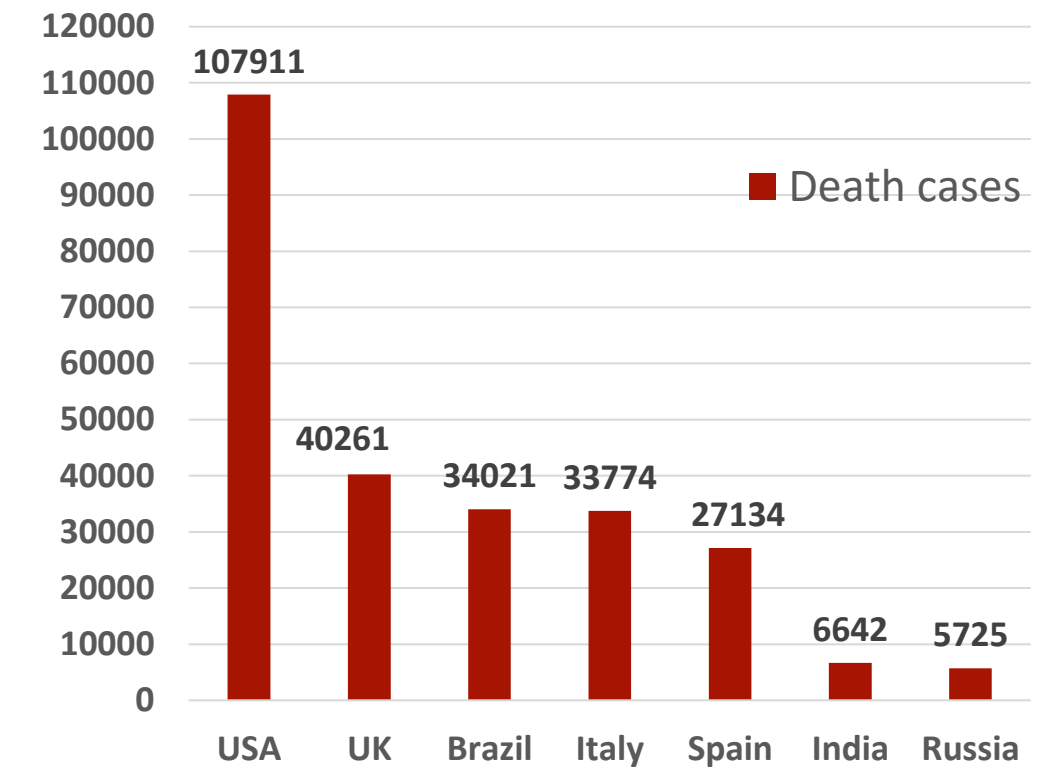
# Epidemiology



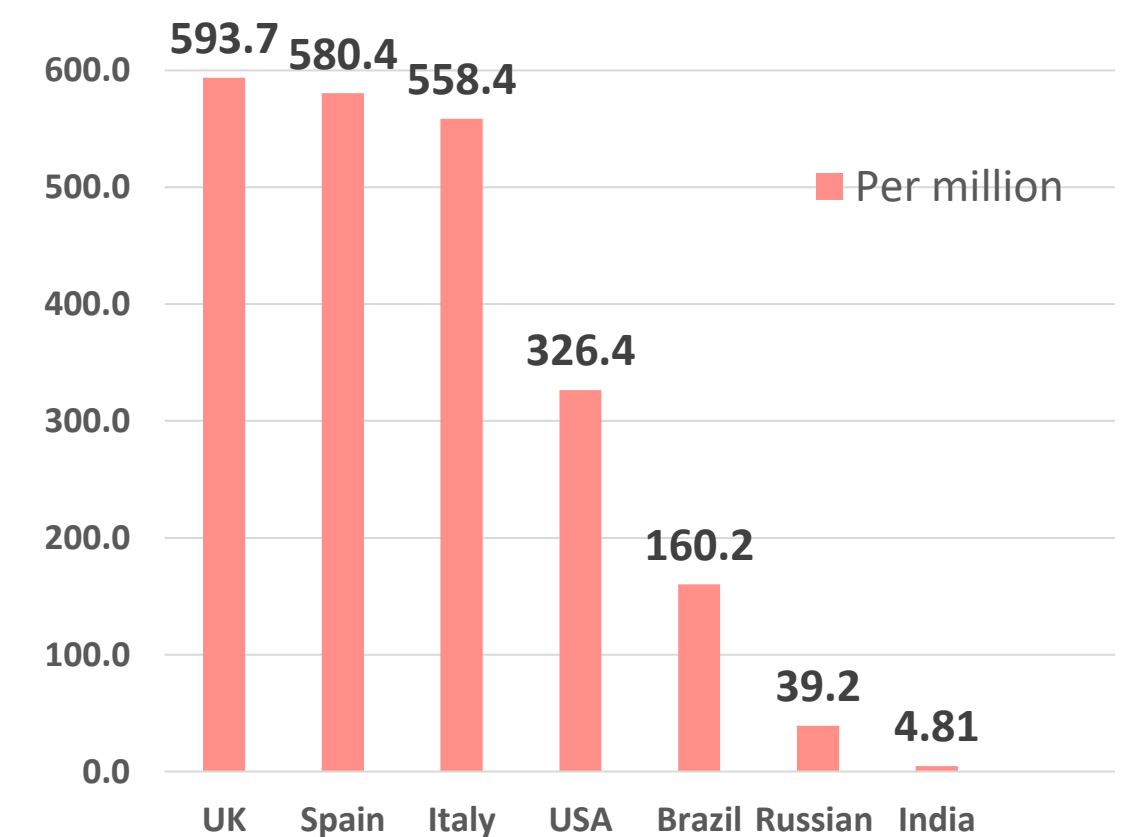
Figure 3 : Top 7 countries in the total number of cases due to COVID-19 (January 21 to Jun 6, 2020).



## TOTAL DEATHS



## DEATHS PER MILLION



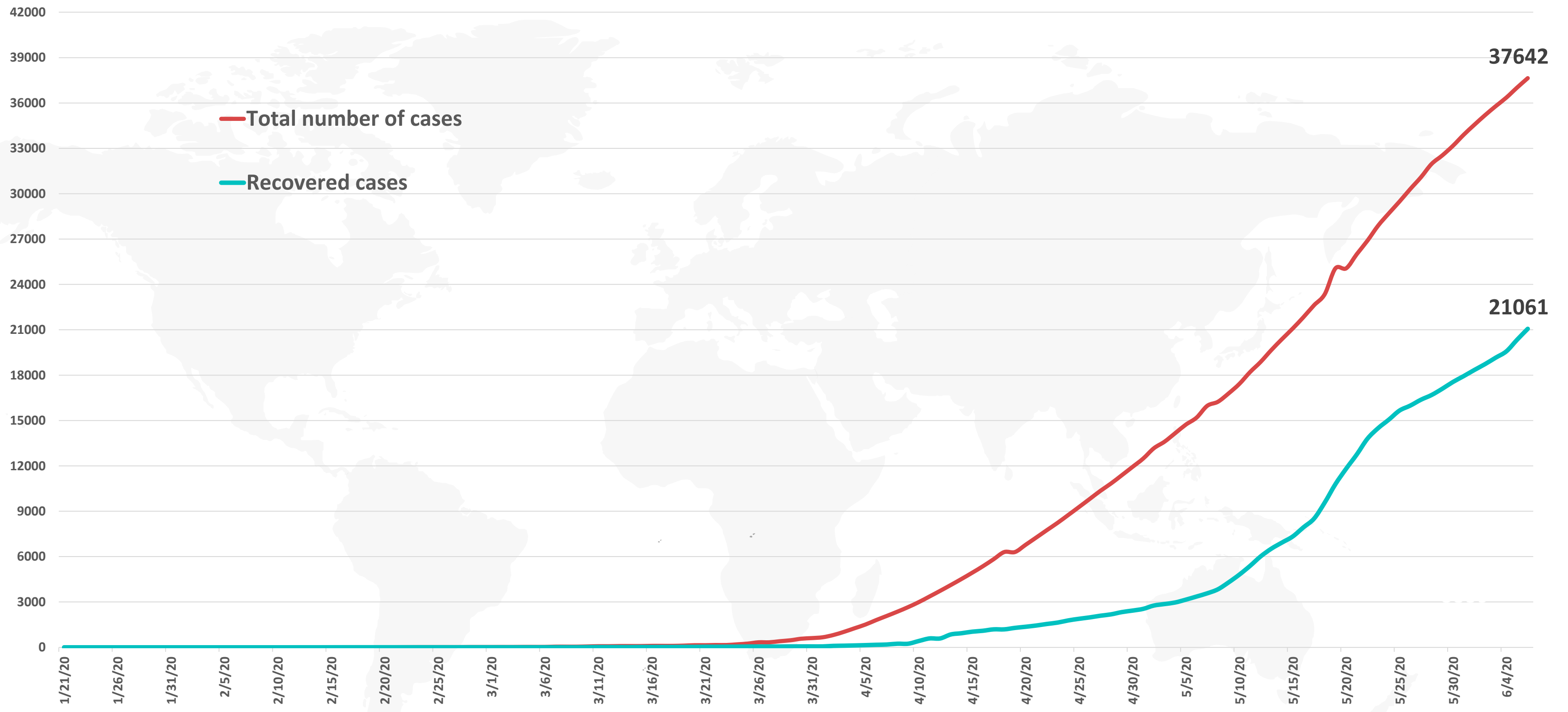
Line graph published by Abu Dhabi Public Health Center 2020.

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





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



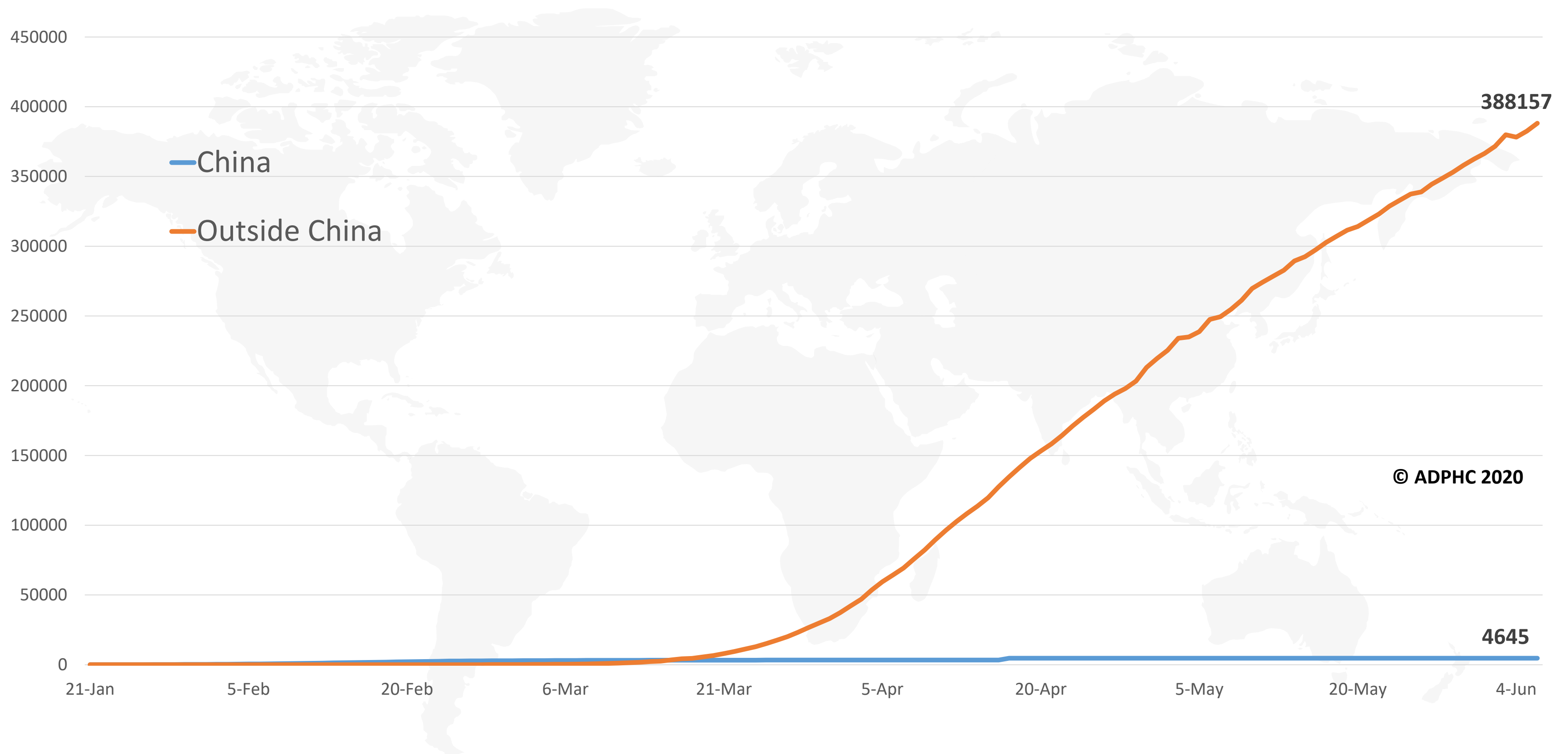
Line graph published by Abu Dhabi Public Health Center 2020.

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 Jun 6, 2020).**



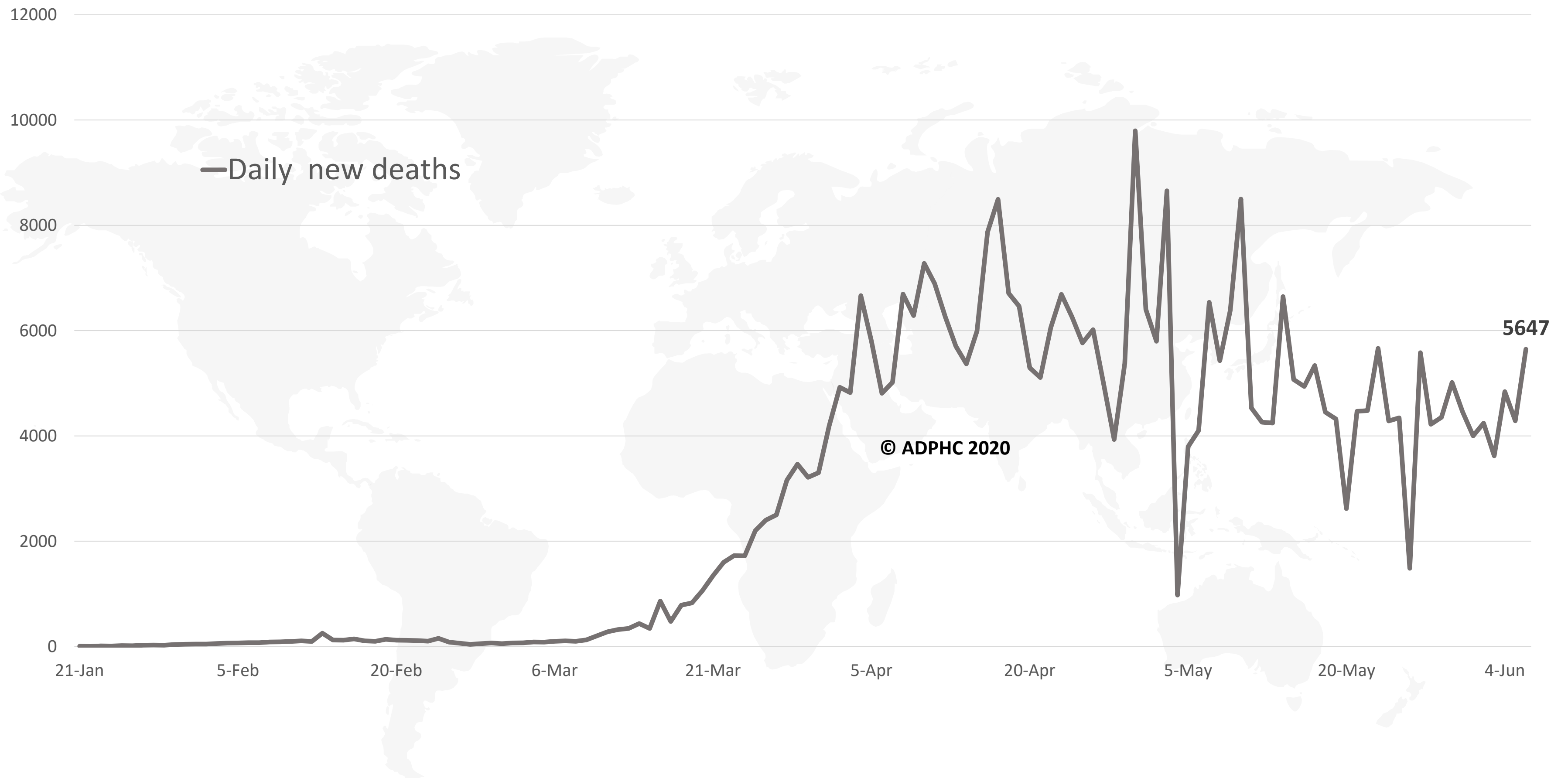
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Line graph published by Abu Dhabi Public Health Center 2020.

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



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



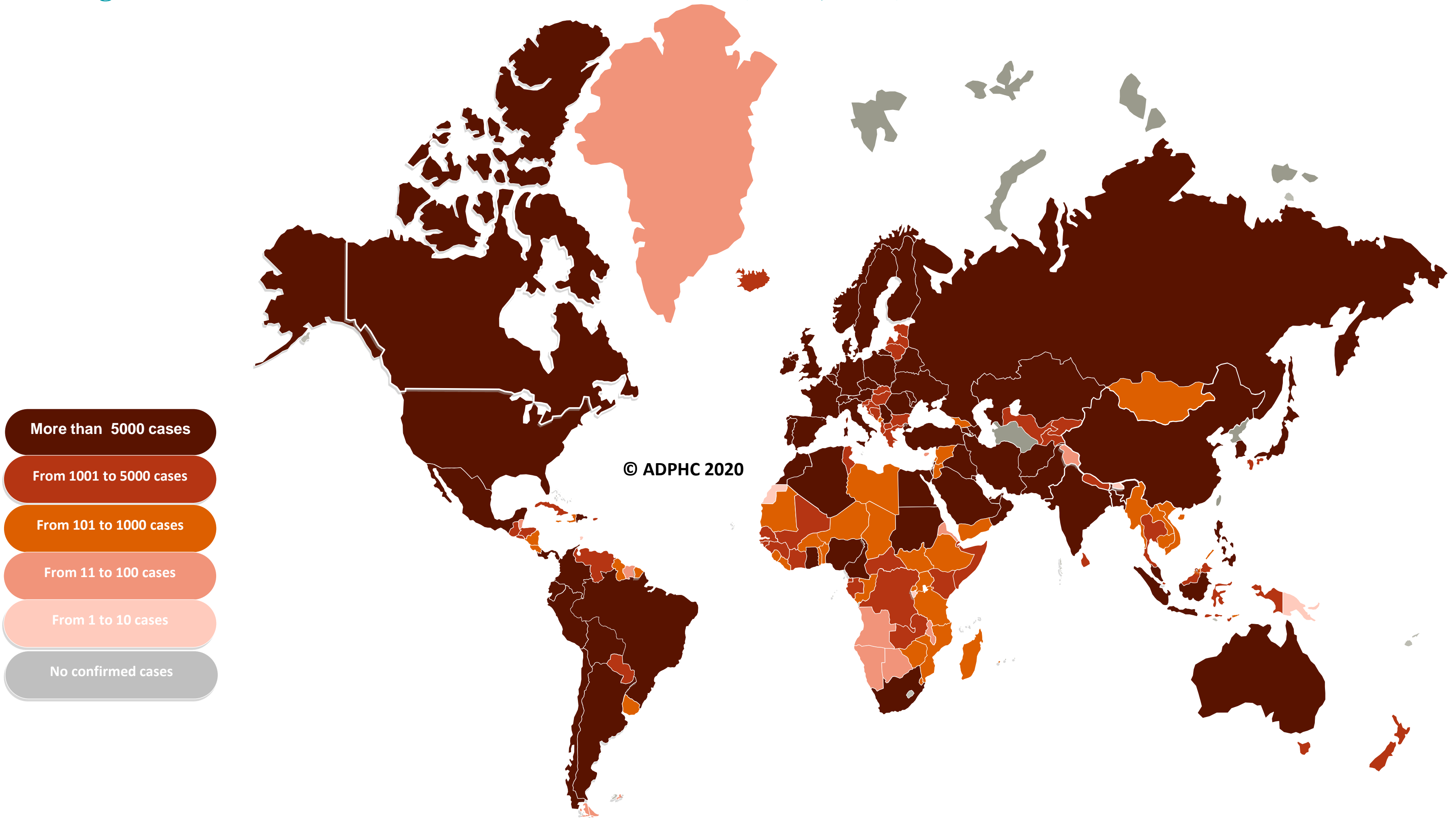
Line graph published by Abu Dhabi Public Health Center 2020.

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

# Epidemiology



Figure 7a : Global distribution of COVID-19 cases (Jun 6, 2020).

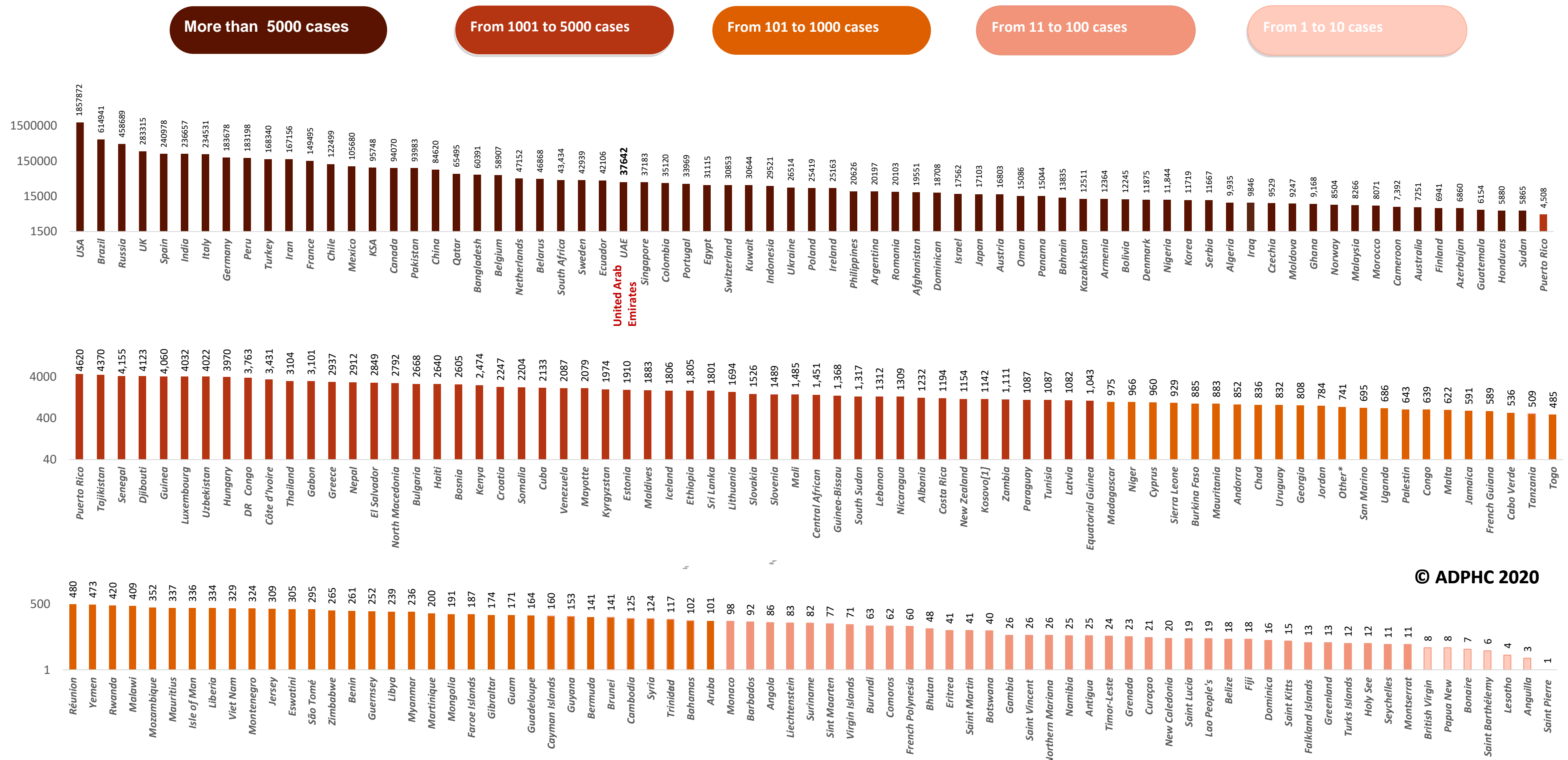


Map chart published by Abu Dhabi Public Health Center 2020.

# Epidemiology



Figure 7B: Bar chart illustrate the global distribution of COVID19 cases Jun 6, 2020)



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/)

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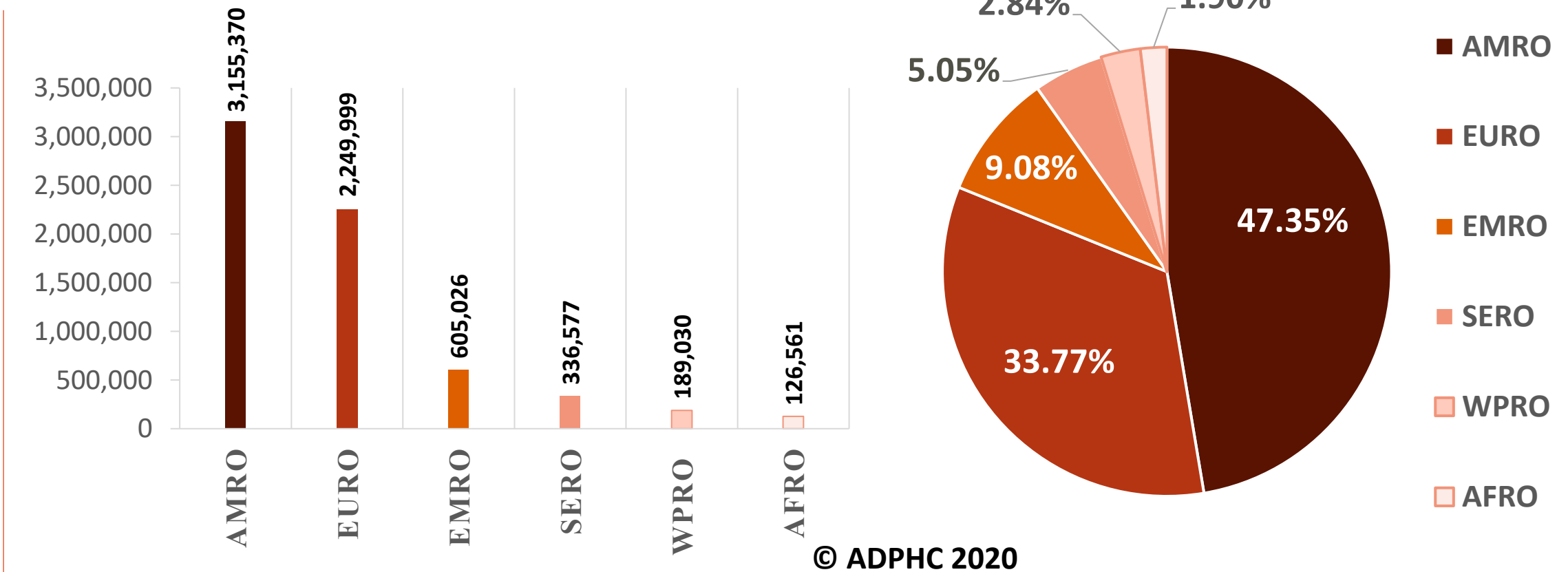
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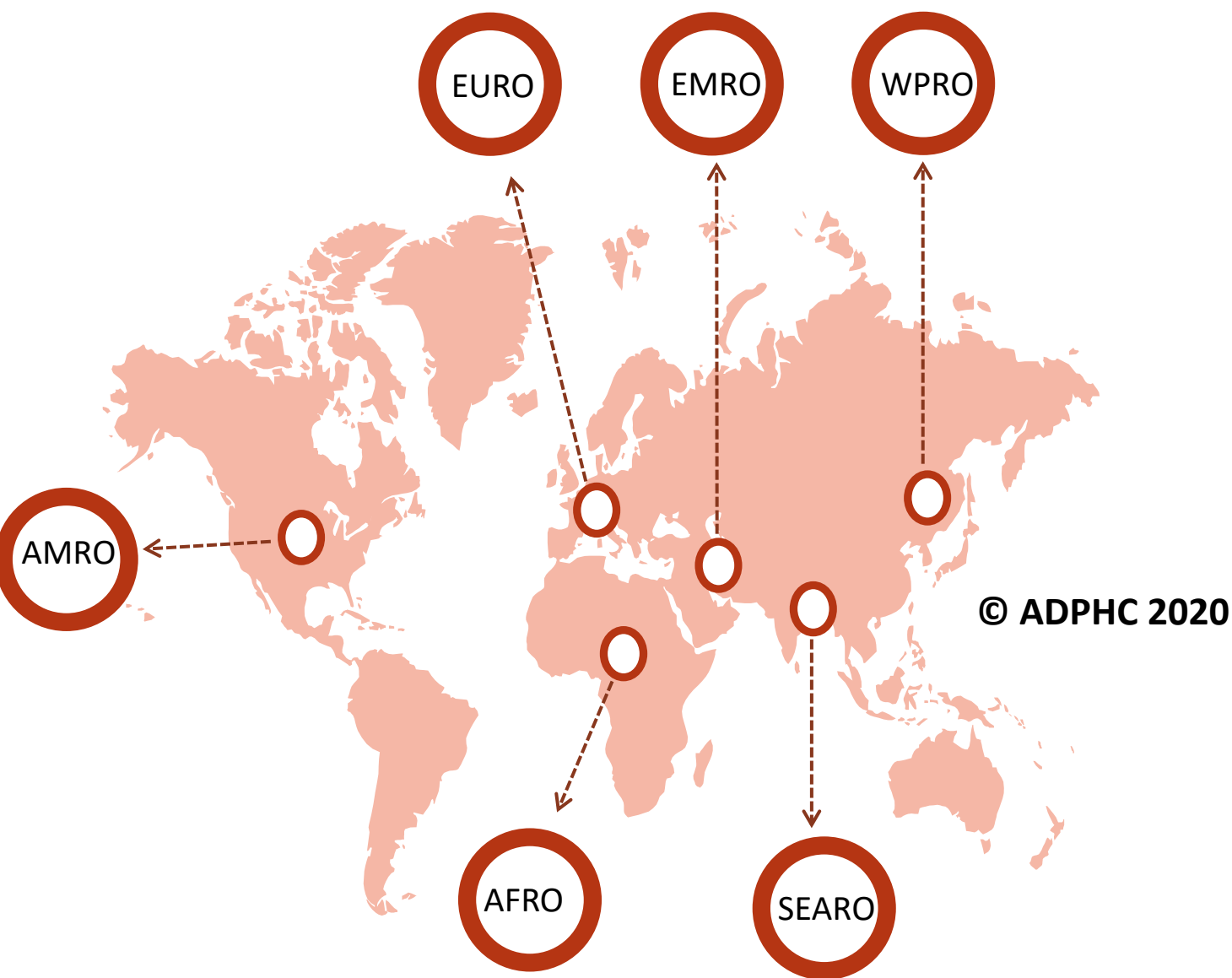
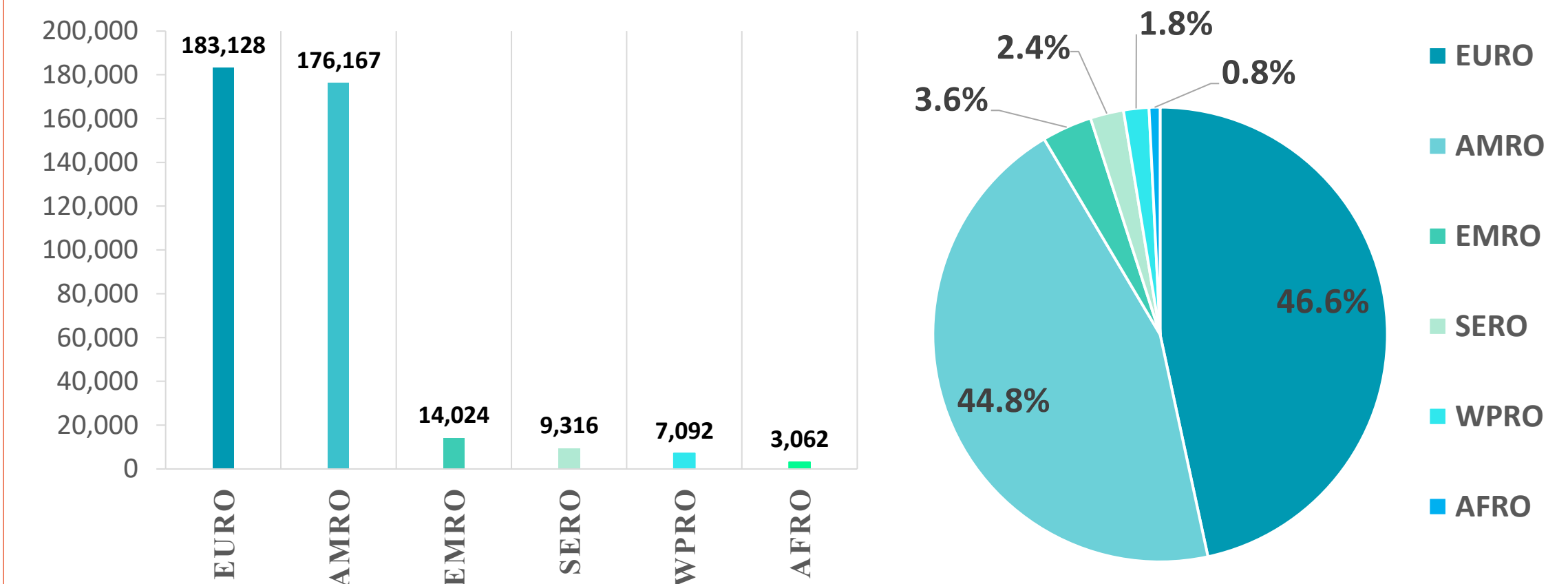


Figure 8: illustrate the Global distribution of COVID19 cases per region (Jun 6, 2020)

## INFECTED



## DEATH



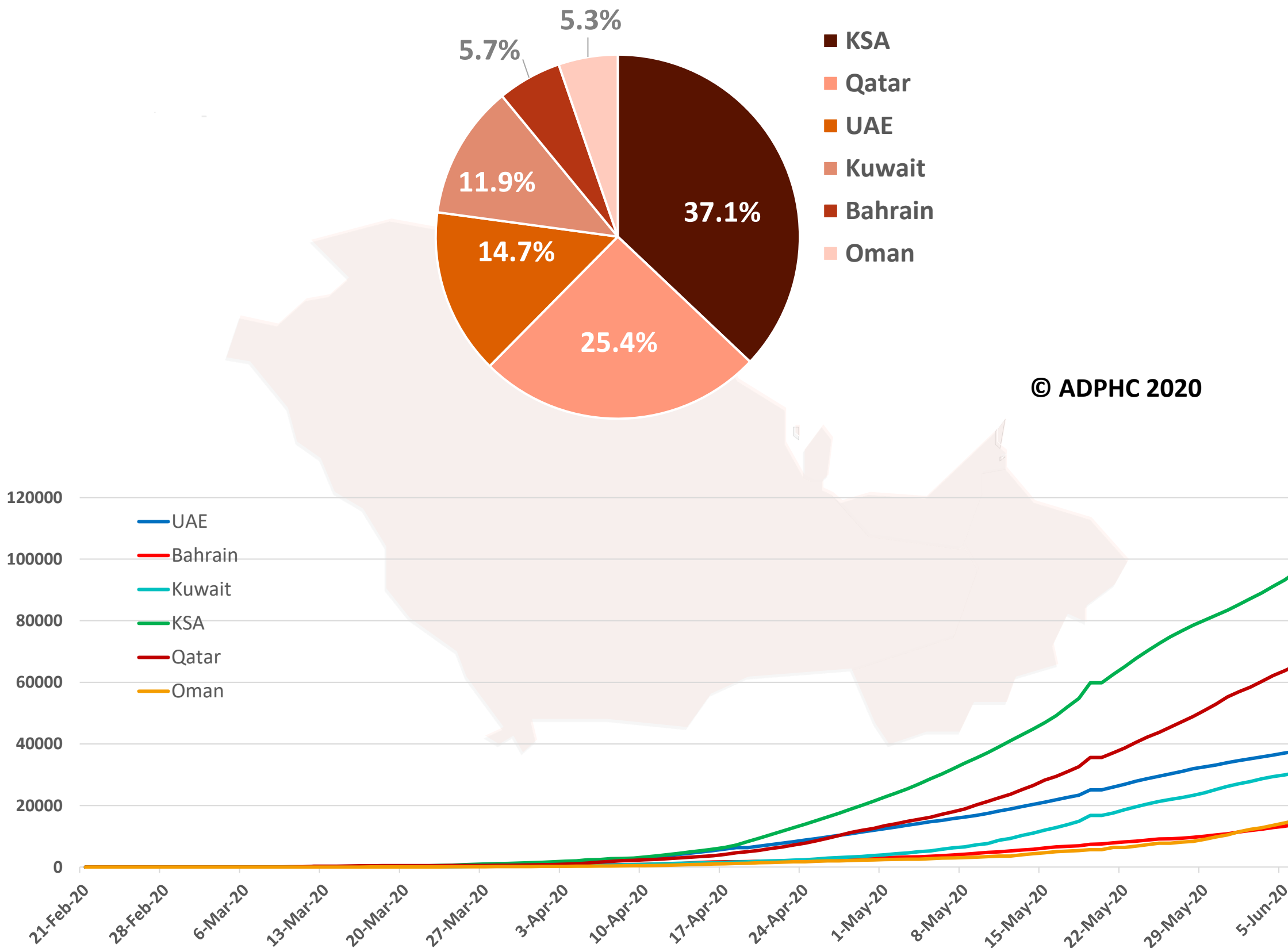
Map chart published by Abu Dhabi Public Health Center 2020.

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

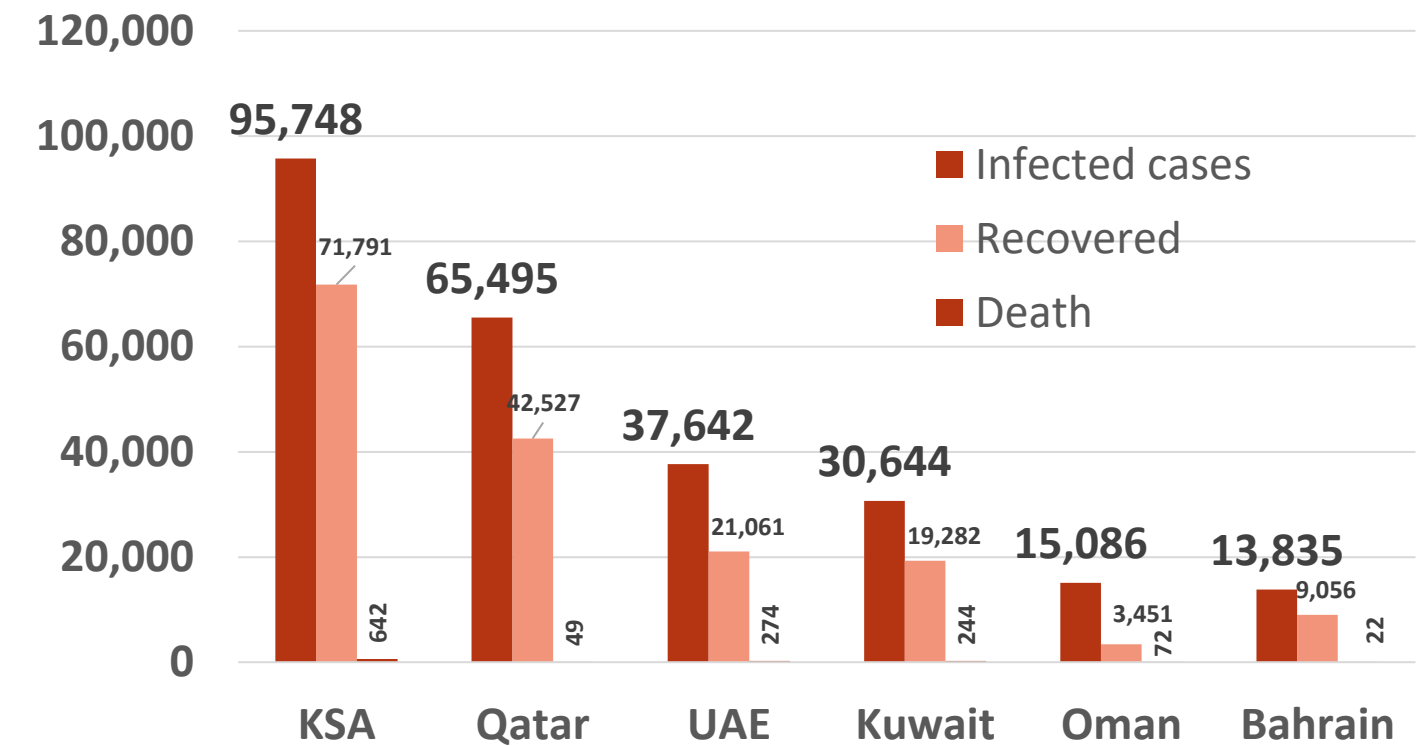


**Figure 9: Comparative analysis of the distribution of COVID19 cases in GCC countries (Jun 6, 2020)**

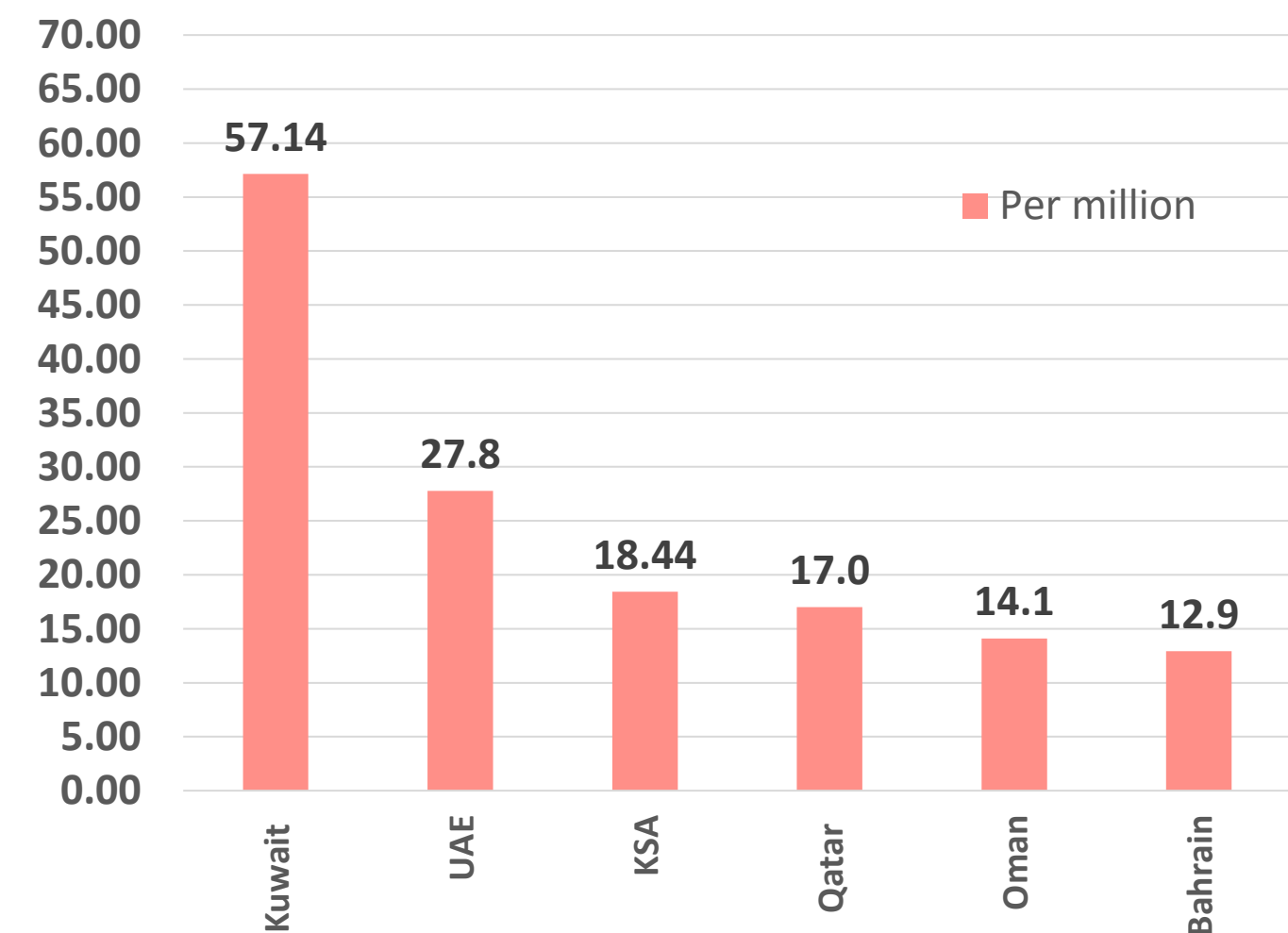
## TOTAL NUMBER OF INFECTED CASES



## 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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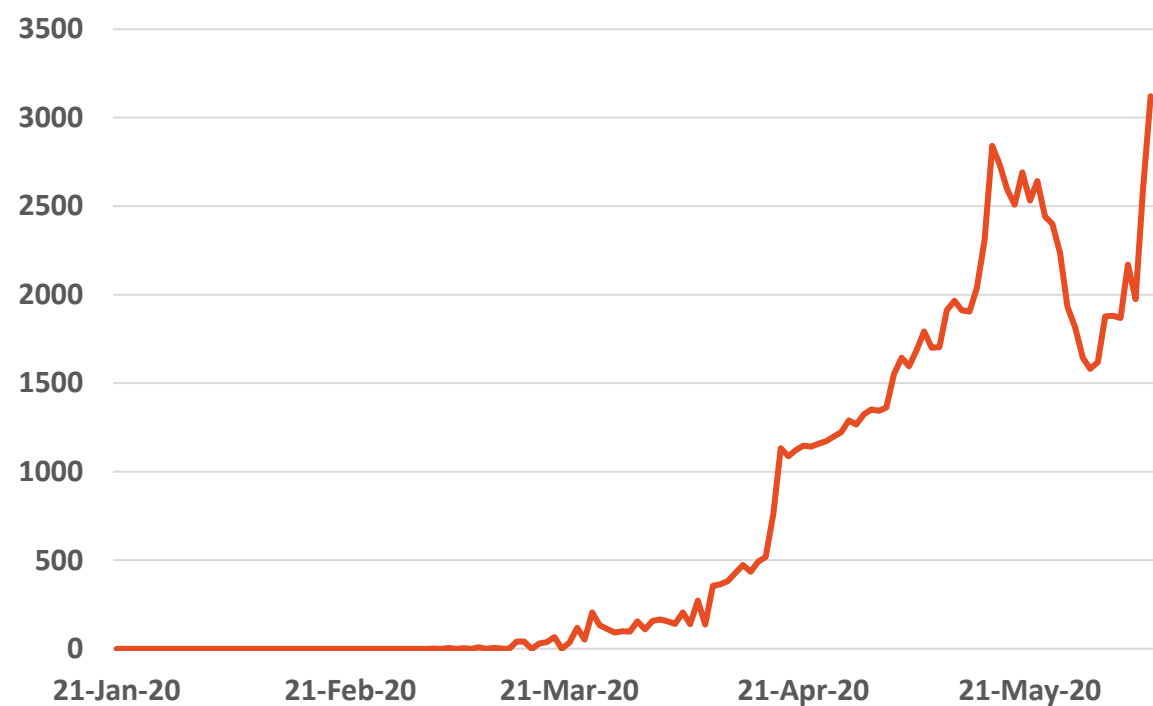
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# Epidemiology



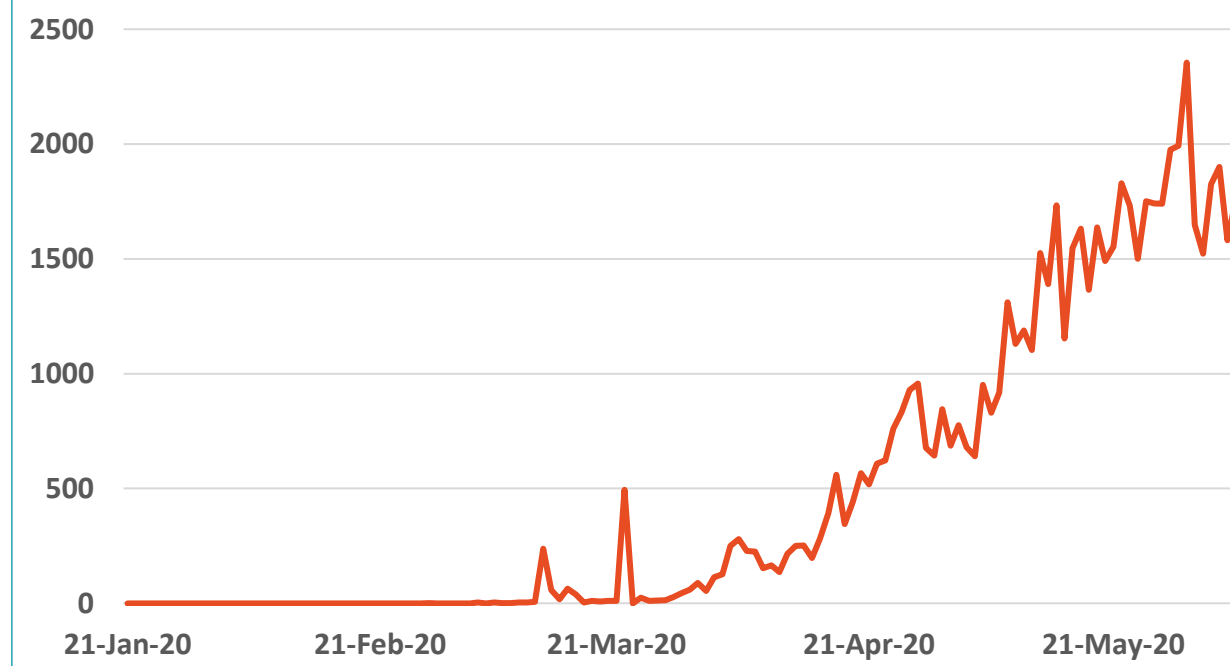
**Figure 10: Comparative analysis of the distribution of COVID19 new cases in GCC countries (June 6, 2020)**

## KSA



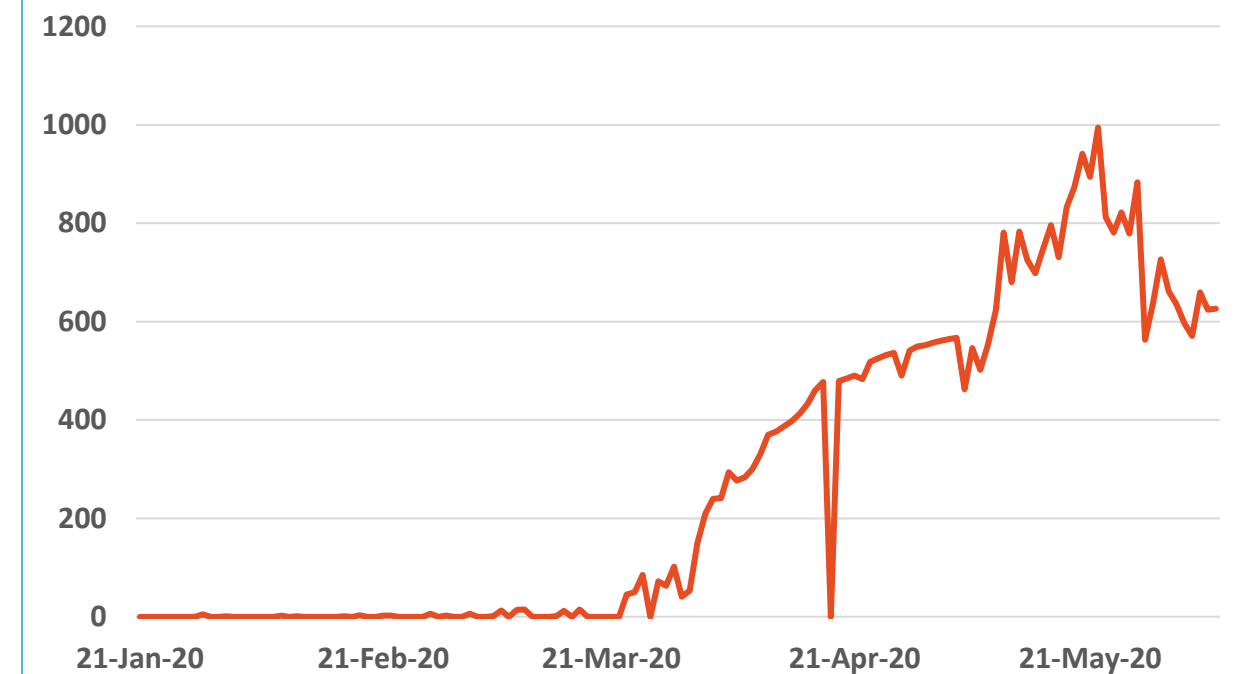
Source : KSA ministry of health & GCCStat

## Qatar



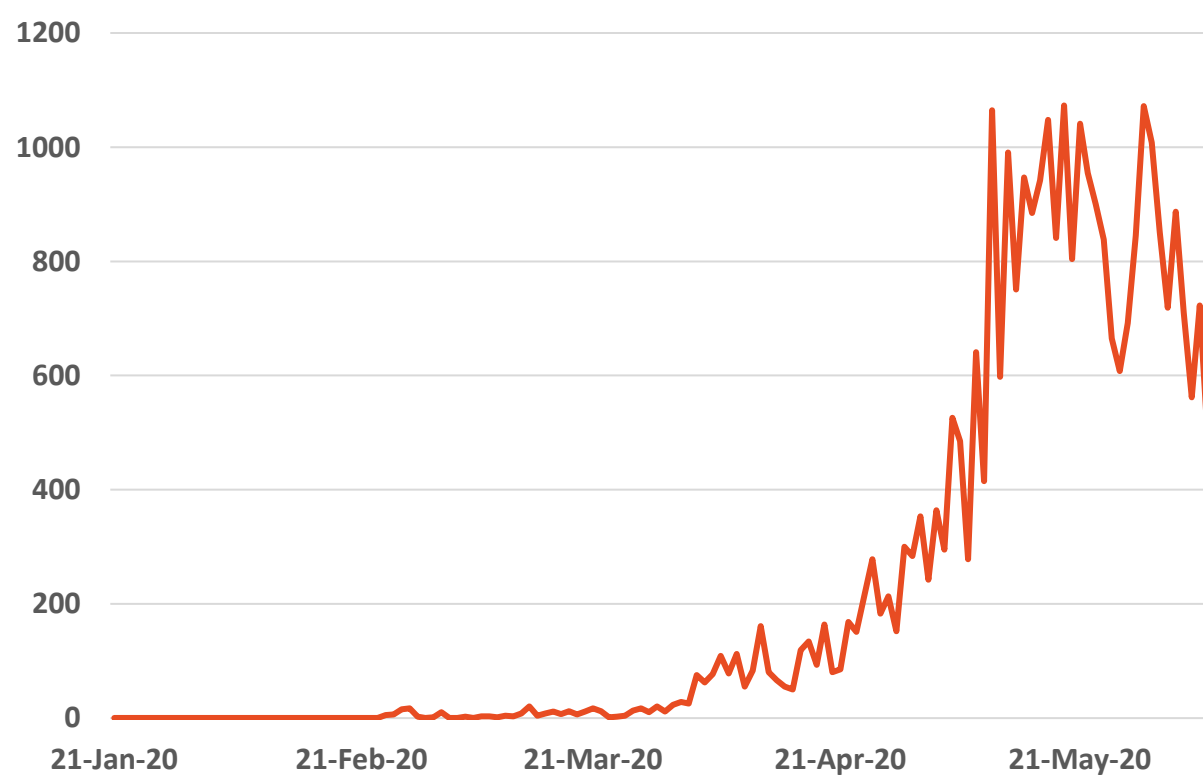
Source : Qatar ministry of health & GCCStat

## UAE



Source : UAE ministry of health & GCCStat

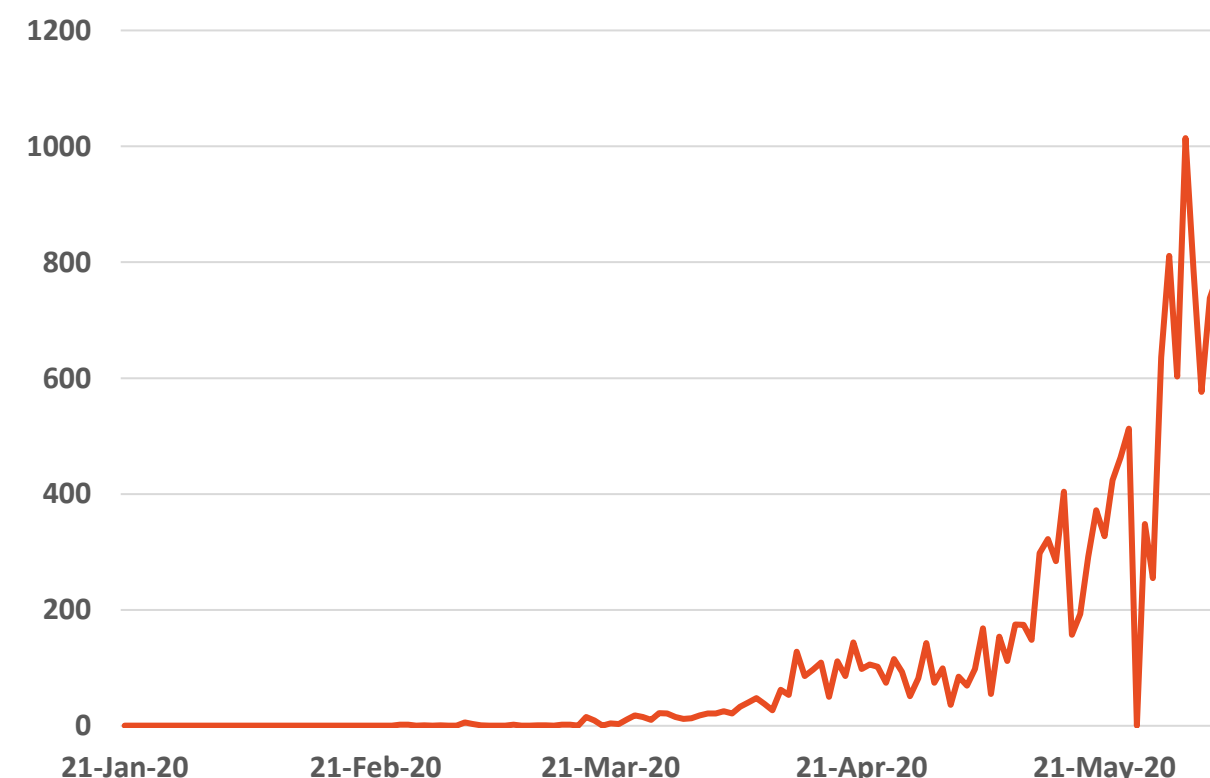
## Kuwait



Source : Kuwait ministry of health & GCCStat

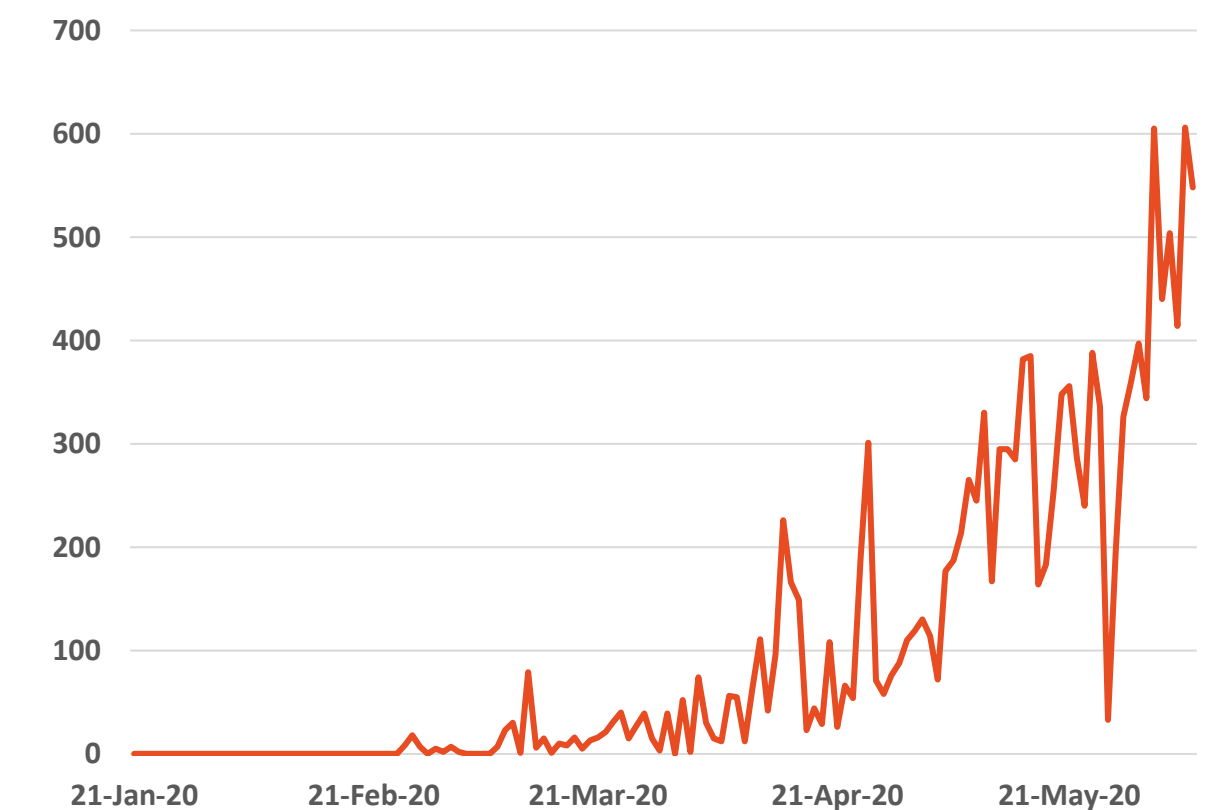
## Oman

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Source : Oman ministry of health & GCCStat

## Bahrain



Source : WHO & GCCStat



# Epidemiology



**Figure 11 : Comparative analysis of the distribution of COVID19 newly recovered cases in GCC countries (June 6, 2020)**

## KSA



Source : KSA ministry of health & GCCStat

## Qatar



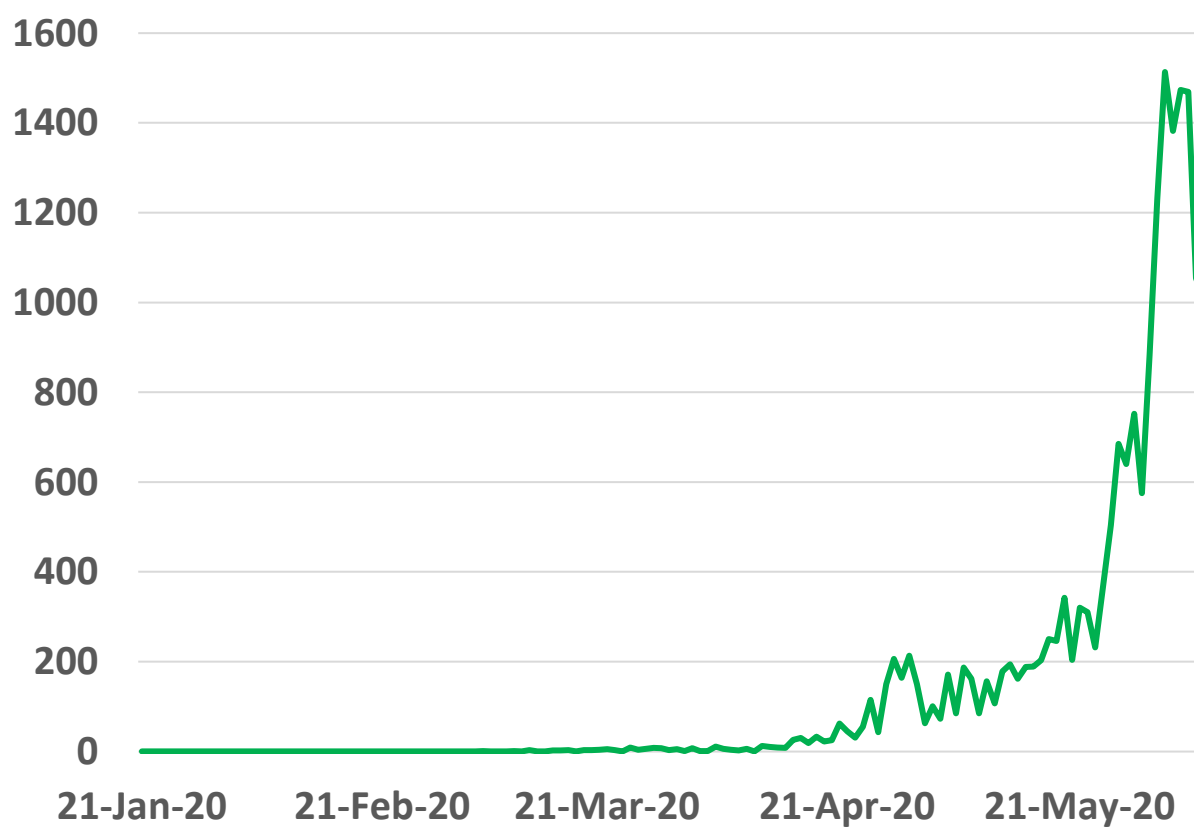
Source : Qatar ministry of health & GCCStat

## UAE



Source : UAE ministry of health & GCCStat

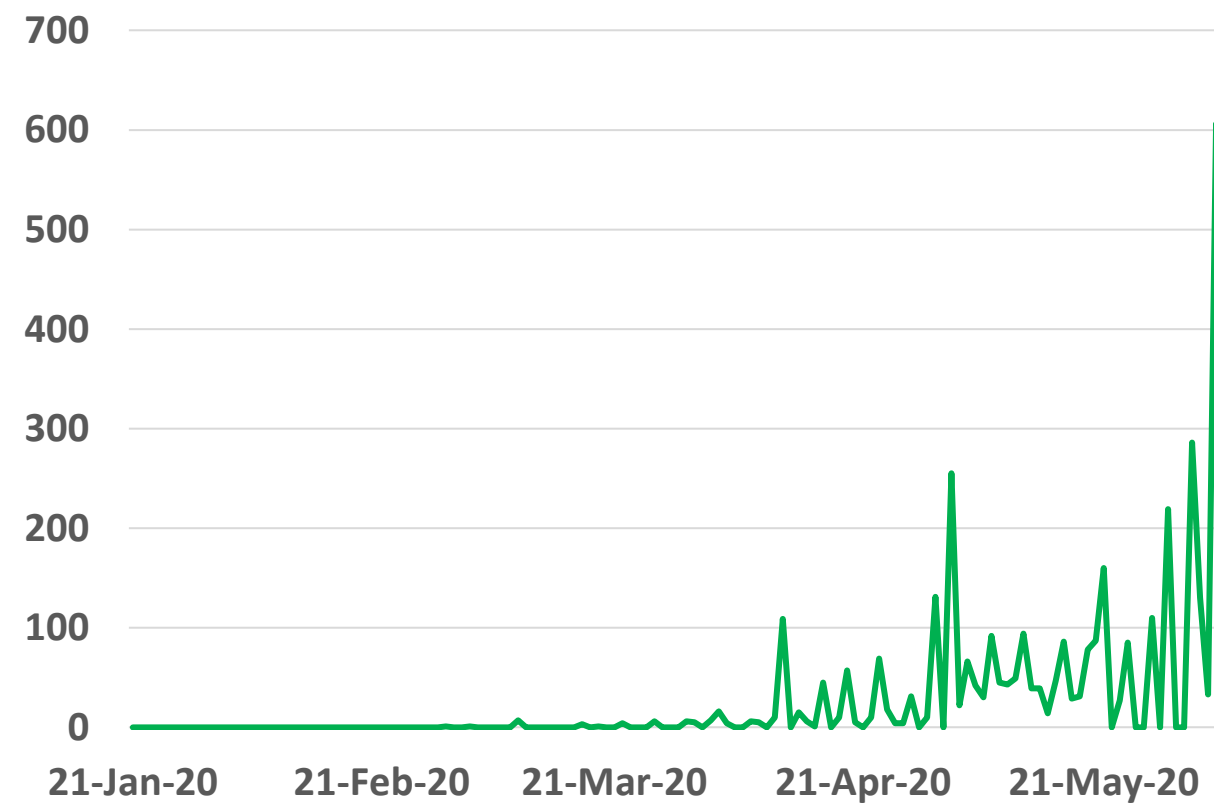
## Kuwait



Source : Kuwait ministry of health & GCCStat

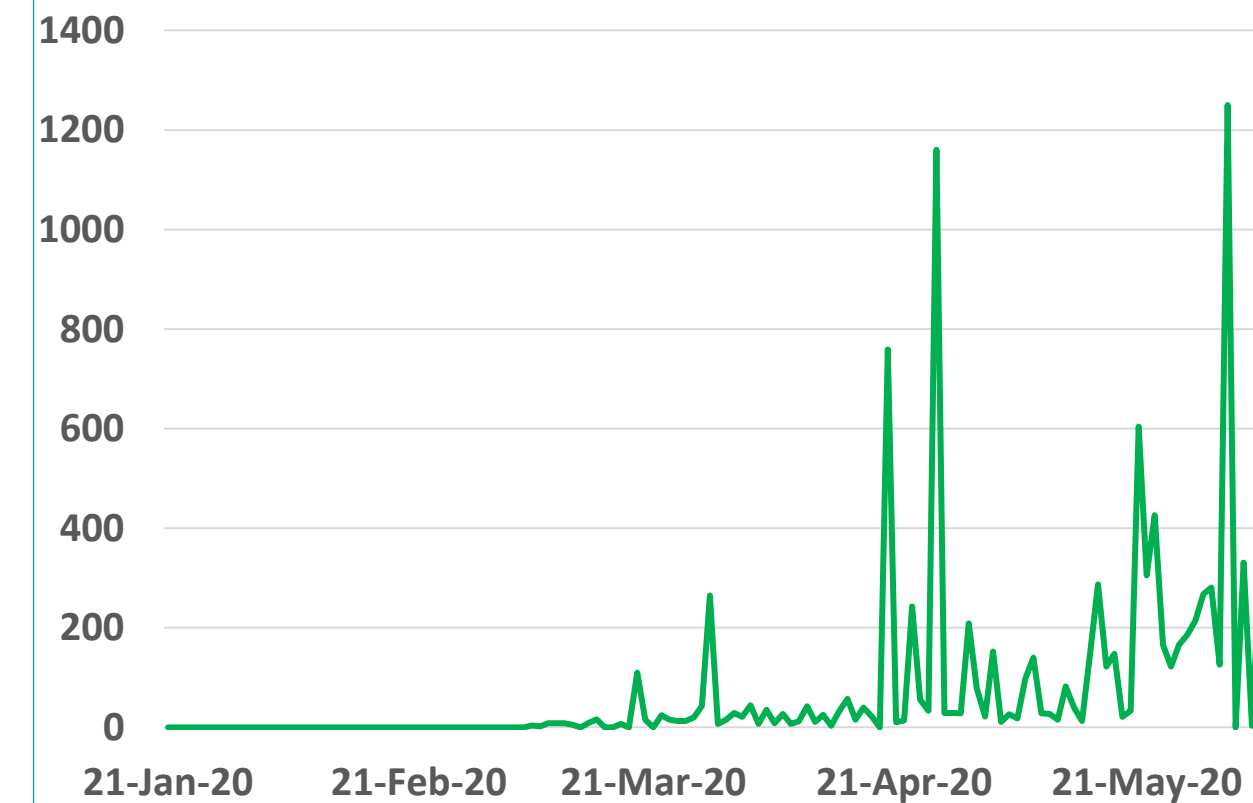
## Oman

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Source : Oman ministry of health & GCCStat

## Bahrain



Source : WHO & GCCStat

# Epidemiology



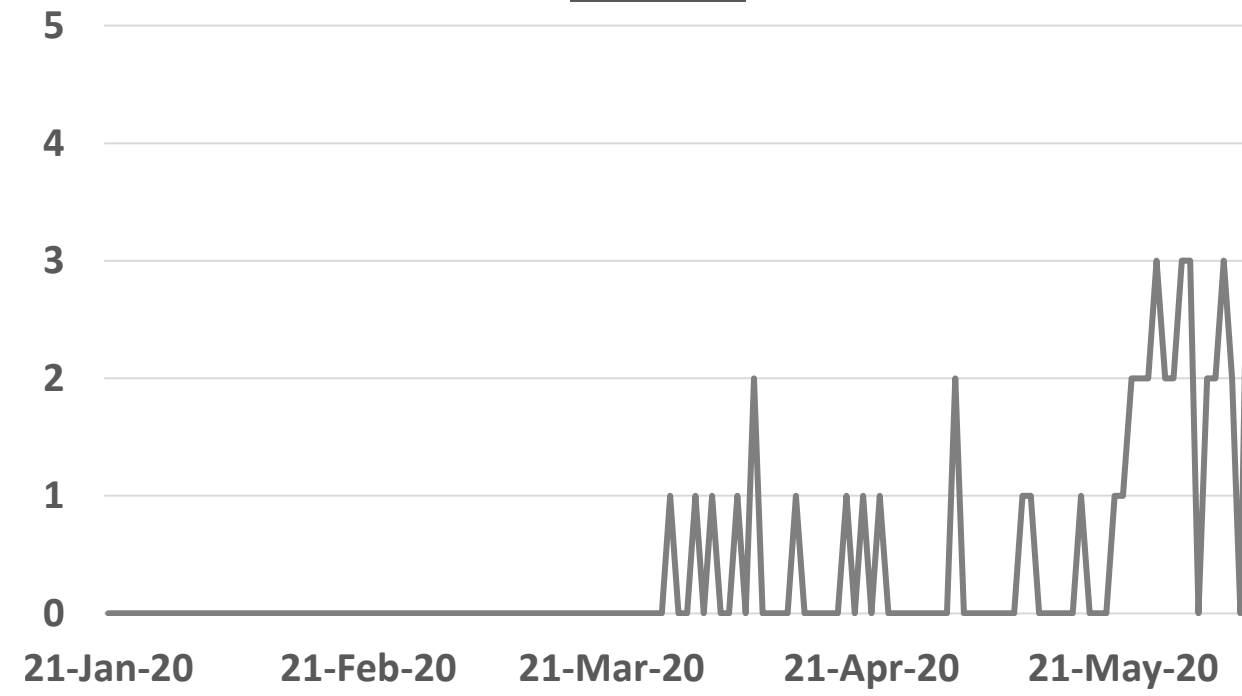
**Figure 12: Comparative analysis of the distribution of COVID19 newly death cases in GCC countries (June 6, 2020)**

## KSA



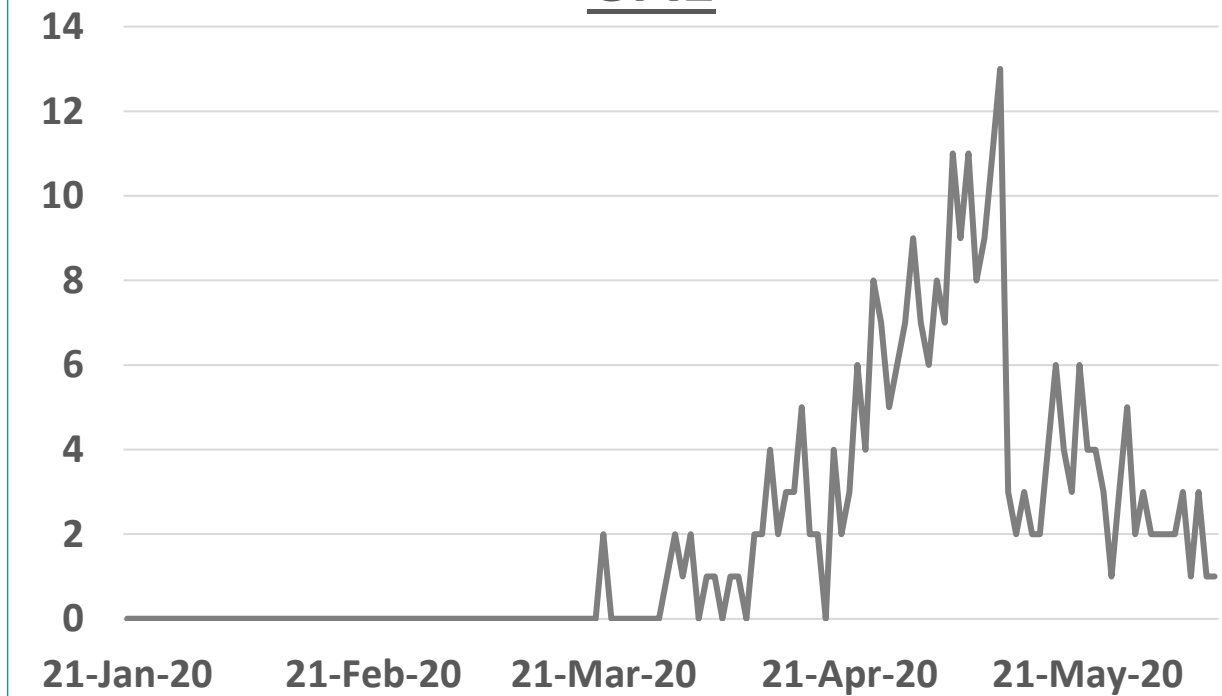
Source : KSA ministry of health & GCCStat

## Qatar



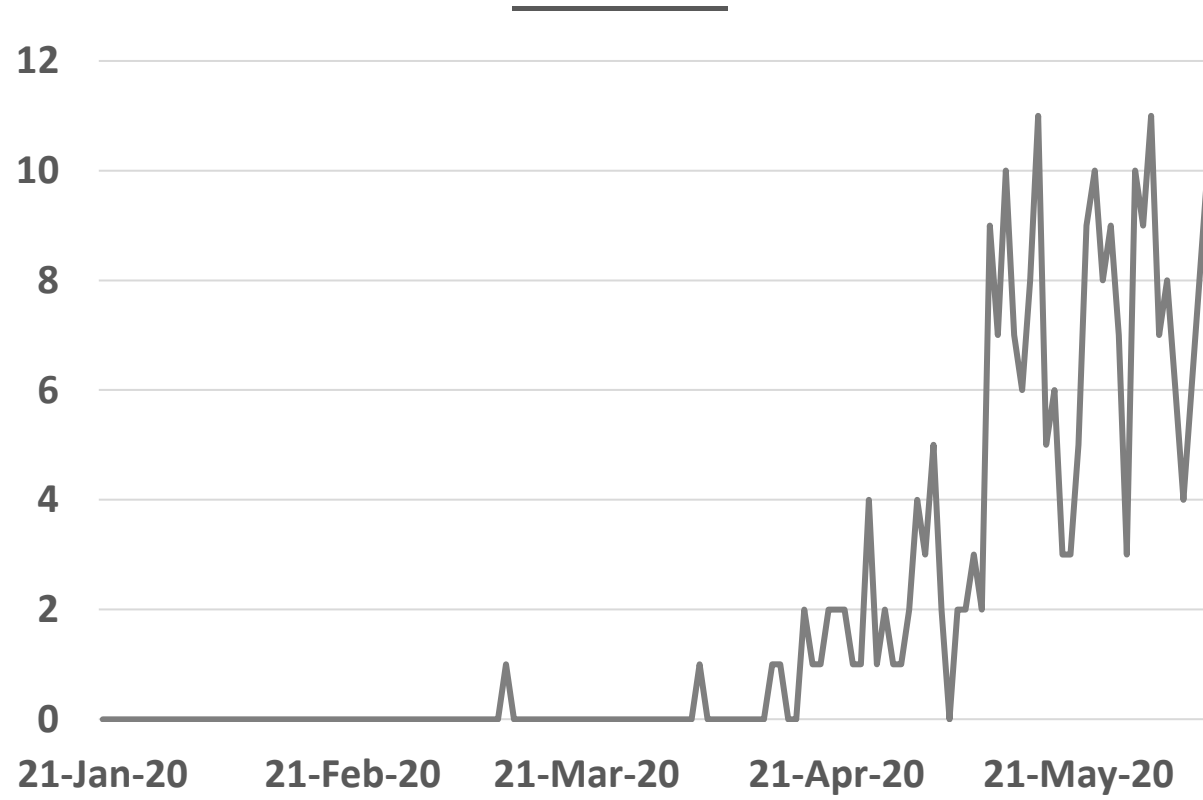
Source : Qatar ministry of health & GCCStat

## UAE



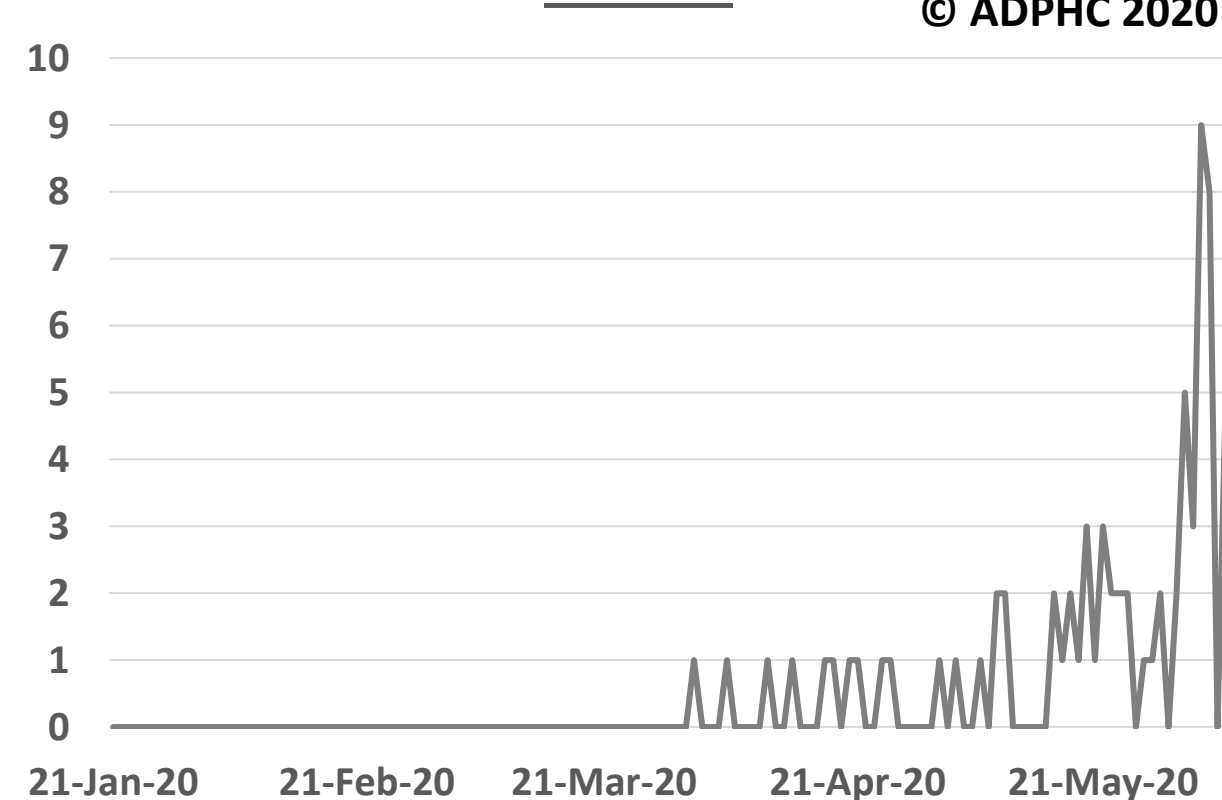
Source : UAE ministry of health & GCCStat

## Kuwait



Source : Kuwait ministry of health & GCCStat

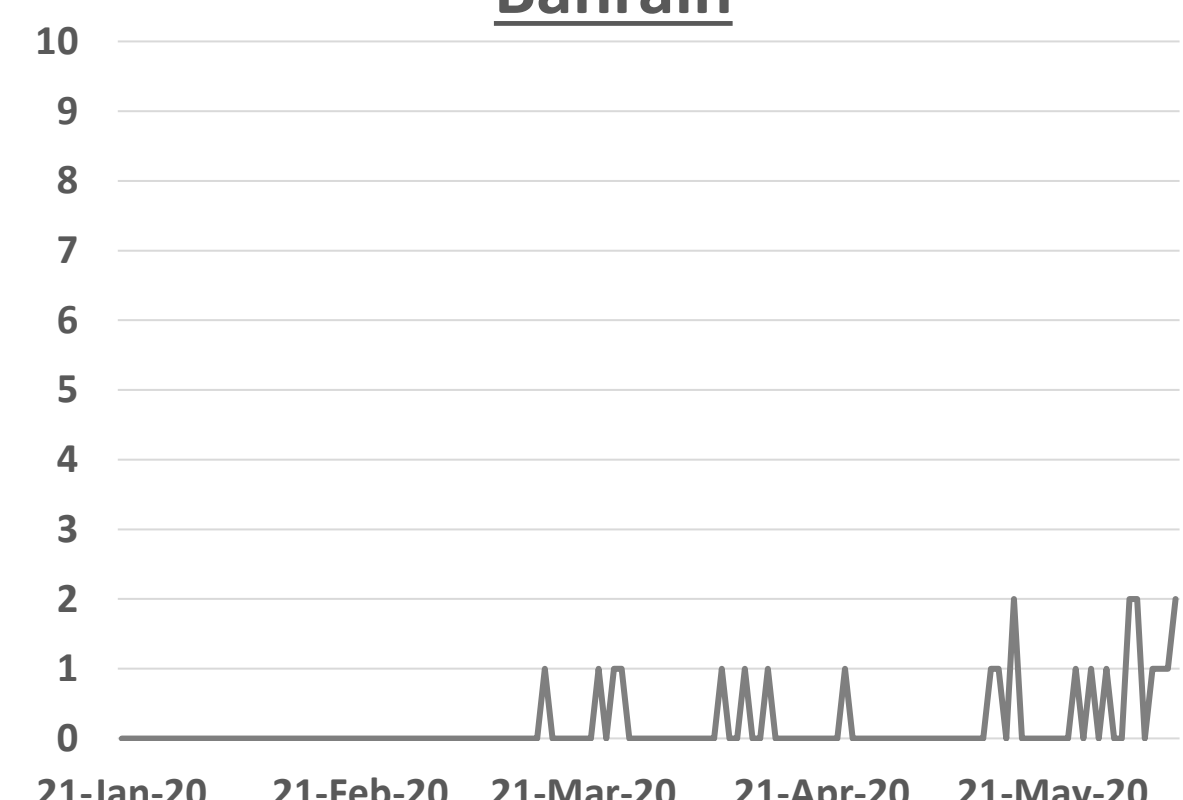
## Oman



Source : Oman ministry of health & GCCStat

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## Bahrain



Source : WHO & GCCStat



# Treatment

## **Article 1: Statement from the Chief Investigators of the Randomized Evaluation of COVID-19 therapy (RECOVERY) Trial on hydroxychloroquine, 5 June 2020**

**Published: June 5, 2020 in [RECOVERY trial website](#).**

### **Summary:**

- The RECOVERY trial is a randomized clinical trial aiming to test a range of potential drugs for COVID-19, including hydroxychloroquine. This clinical trial is based on the UK.
- The principle investigators of HCQ arm have decided to release the results earlier in response to a request from the UK Medicines and Healthcare Products Regulatory Agency (MHRA). The independent Data Monitoring Committee recommended the chief investigators review the unblinded data on the hydroxychloroquine arm of the trial .

### **Preliminary results were as below :**

- “ A total of 1542 patients were randomised to hydroxychloroquine and compared with 3132 patients randomised to usual care alone. There was no significant difference in the primary endpoint of 28-day mortality (25.7% hydroxychloroquine vs. 23.5% usual care; hazard ratio 1.11 [95% confidence interval 0.98-1.26]; p=0.10). There was also no evidence of beneficial effects on hospital stay duration or other outcomes.”
- As a results, the Principle investigator of the trial have decided to stop enrolling participants to the hydroxychloroquine arm of the RECOVERY trial with immediate effect.

# Public health response



## Article 2: Salient lessons from Russia's COVID-19 outbreak

Published: June 6, 2020 in [the lancet](#)

### Summary:

- Russia has retained a vast public health system although it is outdated. Testing capacity is extensive and was scaled up quickly. The large testing program explains increase in number of cases. Health care personnel admit that the official number still underestimated although many countries have large numbers of cases. Many explanations in terms of death have been put forward for the relatively low mortality rate.
- There have been noticeable deficit of personal protective equipment (PPE) throughout the health care system. Health workers in Russia are 16 times more likely to die from COVID-19 (7% of all COVID-19 death) than other countries. Health workers report having been discouraged from highlighting PPE shortages. Furthermore, there have been problems with ventilators which are old and low quality, a situation that indicates Russia's vast but weak health system.
- Quality of health care varies considerably across many regions that have different levels of preparation and equipment. For instance, in some regions in Russia, there is capacity for fewer than 1000 tests a day among a population of more than 3 million. Regionalization and delegation ( lack of clear leadership) have led to a problem with overall public health messaging, a consistent feature of countries struggling to manage their COVID-19 outbreaks.
- There are many distinctive factors that play an important role in the epidemic in Russia but lack of political leadership has become a common indicator of countries that have mostly suffered.



# Management

## Article 3: Caring for Women Who Are Planning a Pregnancy, Pregnant, or Postpartum During the COVID-19 Pandemic

Published: June 5, 2020 in [the JAMA](#)

### Summary:

the article give a summary of current literature of pregnant women infected with covid19 and their outcome. The article also mention the below recommendation for care of positive confirmed COVID19 pregnant women.

#### Box. Recommendations for Care of Pregnant Women Confirmed or Suspected to Have Coronavirus Disease 2019 (COVID-19)

##### Recommendations

- Place a mask on the patient on presentation and isolate in a single-person room with the door closed. Airborne isolation rooms should be used for aerosolizing procedures (ACOG, CDC, SMFM, SOAP).
- Consider separating patients with COVID-19 in one area of the obstetric unit and using a designated team of trained clinicians in these areas (SMFM, SOAP).
- Weigh benefits and risks of magnesium sulfate for fetal neuroprotection or for preeclampsia/intrapartum seizure prophylaxis given potential maternal respiratory depression (SMFM, SOAP).
- Consider adjusting antenatal corticosteroid use for fetal maturation, given the risk of worsening patient outcomes with corticosteroid use in patients with COVID-19 (eg, offer antenatal steroids for patients <34 weeks' gestation, weigh risks and benefits and individualize decisions for ≥34 weeks' gestation) (ACOG, SMFM, SOAP).
- Consider early epidural analgesia to mitigate the risks associated with general anesthesia in the setting of an urgent cesarean delivery (SMFM, SOAP).
- Do not alter delivery timing or mode (eg, cesarean delivery, operative vaginal delivery) due to patients' COVID-19 infection status. However, for women with COVID-19 in the third trimester, it may be reasonable to attempt to postpone delivery to decrease risk of neonatal transmission (ACOG).
- Consider temporary separation of mothers with confirmed COVID-19 from their newborns (ACOG, AAP, CDC).
- Determination of whether to temporarily separate a mother with known or suspected COVID-19 should be made on a case-by-case basis, using shared decision-making (ACOG, CDC).

- If temporary separation is chosen, mothers who intend to breastfeed should practice hand and breast hygiene and express their milk. Expressed milk can be fed to the newborn by a healthy caregiver (ACOG, AAP, CDC, SMFM, SOAP).
- If separation is not chosen, use other measures to reduce risk of infection, such as physical barriers and face mask use by the mother (AAP, CDC).
- Mothers who choose to feed at the breast should wear a face mask and practice hand and breast hygiene before each feeding (AAP, ACOG, CDC, SMFM, SOAP).
- Newborns born to mothers with confirmed COVID-19 at the time of delivery should be considered to have suspected COVID-19 and be isolated from healthy newborns (AAP, ACOG, CDC).
- Newborns born to mothers with confirmed or suspected COVID-19 at the time of delivery should be tested 24 hours after birth for SARS-CoV-2 and, if negative, again at approximately 48 hours if testing capacity is available (AAP, CDC).

##### Professional Organization Resources

American Academy of Pediatrics (AAP) [initial guidance](#) and [FAQs](#)

American College of Obstetricians and Gynecologists (ACOG) [practice advisory](#) and [FAQs](#)

Centers for Disease Control and Prevention (CDC)

Society for Maternal-Fetal Medicine (SMFM) and Society for Obstetric Anesthesia and Perinatology (SOAP)