

# SCIENTIFIC RESEARCH MONITORING ON COVID-19

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# SCIENTIFIC RESEARCH MONITORING ON COVID-19

## (ISSUE 340)

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.

Click on icon to view content



**Research**

No 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 [PHR@adphc.gov.ae](mailto:PHR@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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## Treatment

**Ivermectin and COVID-19**  
Emerging evidence about the use of this antiparasitic medicine to treat COVID-19

## Treatment

Lack of efficacy of standard doses of ivermectin in severe COVID-19 patients

## Treatment

**A Five-day Course Of Ivermectin For The Treatment Of COVID-19 May Reduce The Duration Of Illness**

## Summary

- Please review the [ADPHC scientific publication on 6.4.2020](#) available summary for a study showed that IVERMECTIN has antiviral action against the SARS CoV 2 clinical isolate **in vitro** with a single dose . The drug was able to control viral replication within 24-48 h.
- For in vivo studies:
  - There are multiple small trials and retrospective studies support the Use of IVERMECTIN in treating covid19.
  - Two trials from Bangladesh have been conducted to **study combination therapy** with poor evidence.
  - Under going trial titled: [Phase II Double-Blind Randomized Placebo-Controlled Trial of Combination Therapy to Treat COVID-19 Infection](#)

Location: United States, California

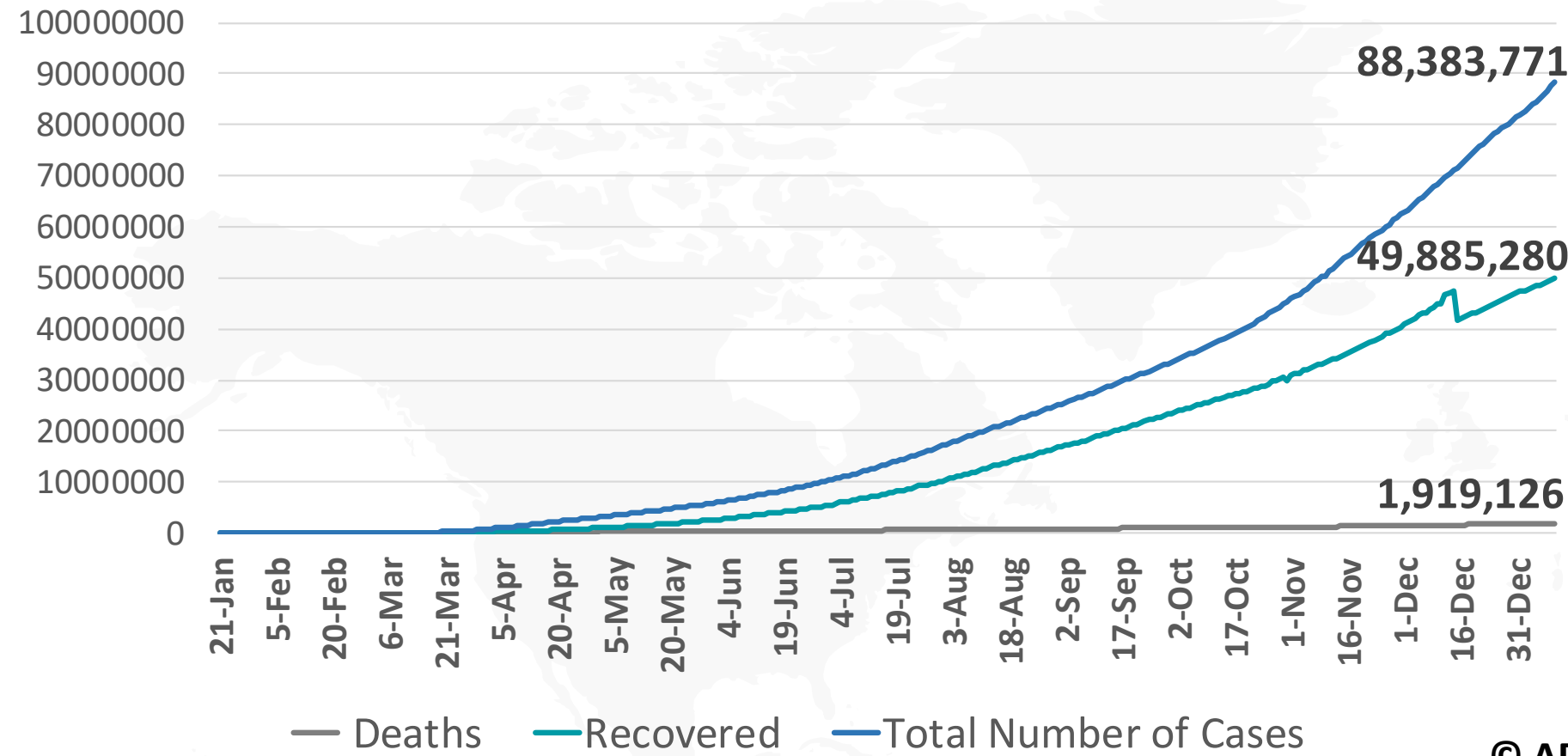
Principle investigator: **Thomas Borody, from Australia** and Jordan Daniels.

Intervention: Patients will be treated with a combination of Ivermectin, Doxycycline, Zinc, Vitamin D3 and Vitamin C.

Placebo: Placebo and Vitamin D3, Vitamin C, and Zinc.

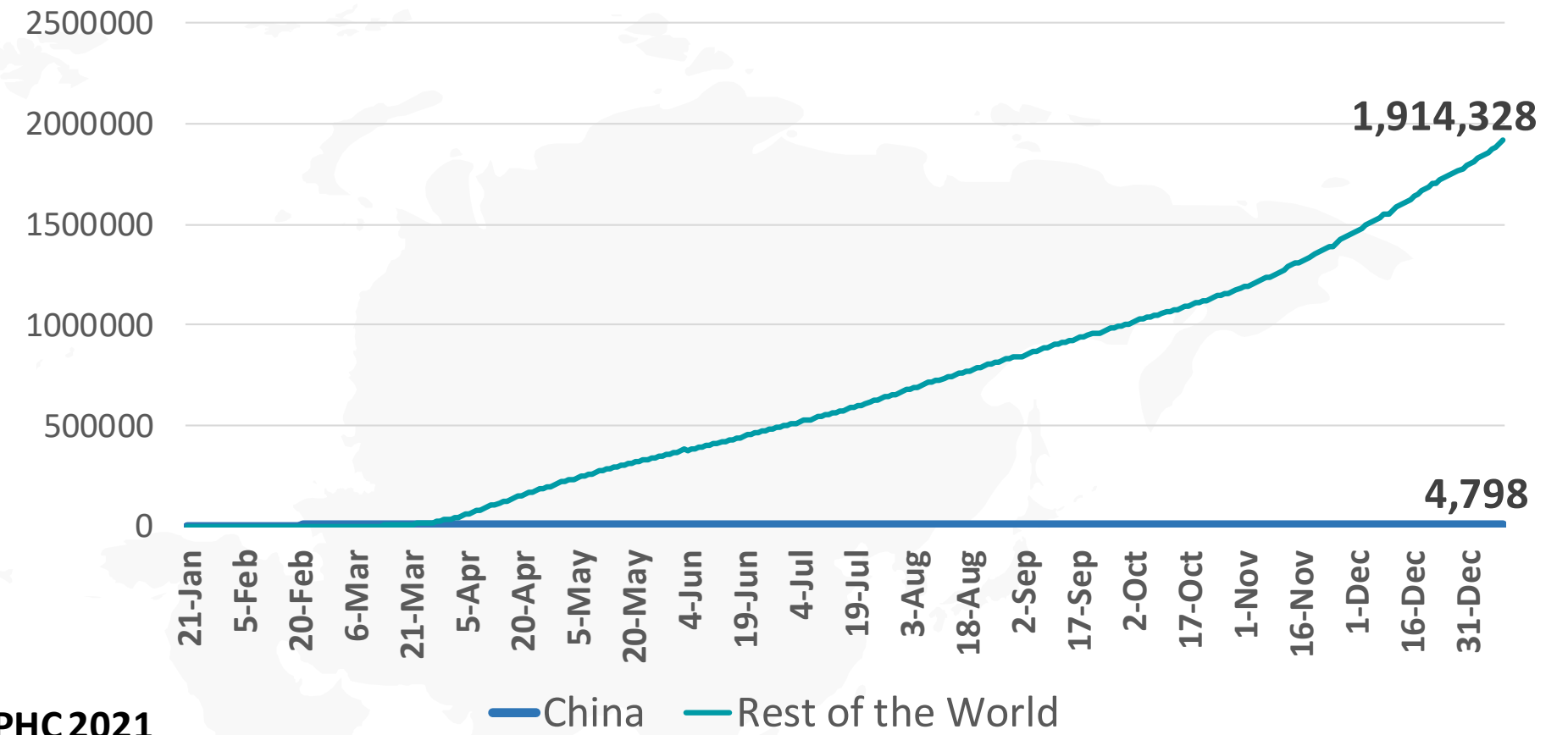
Estimated Primary Completion Date : May 2021

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



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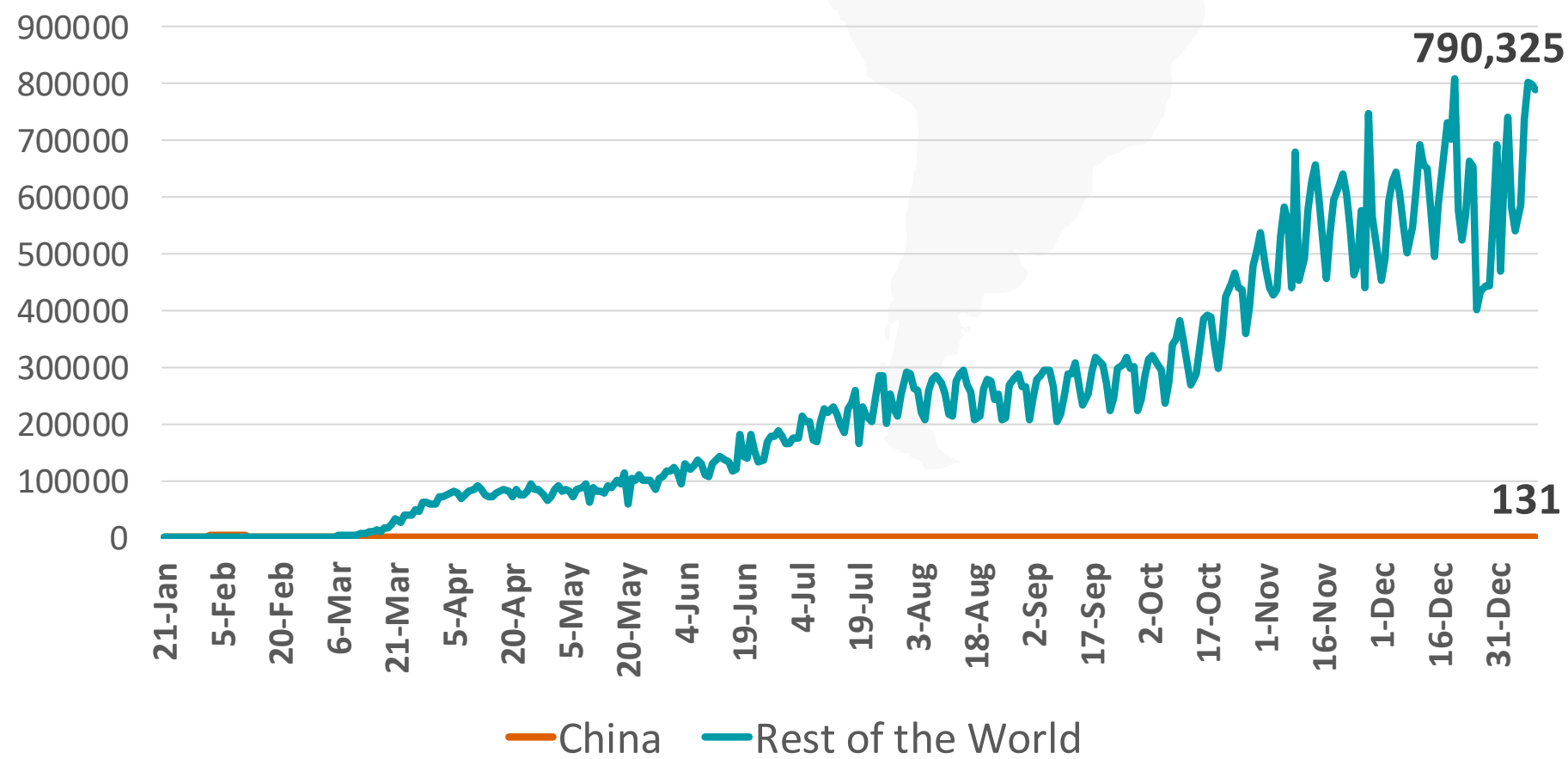
**Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)**



China Rest of the World

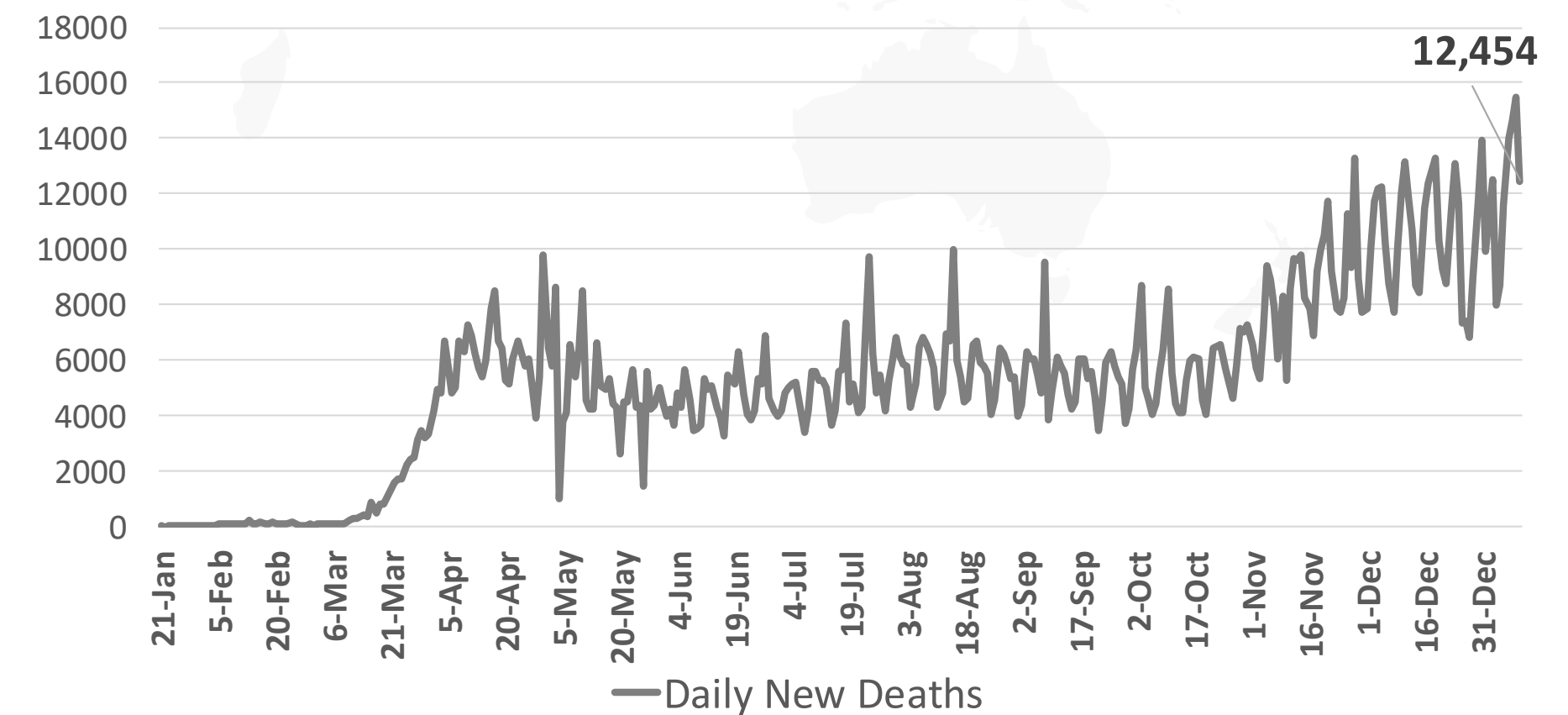
Note: the number of recovered cases in 31<sup>st</sup> October rechecked from 30 million to 29 million, and in 15<sup>th</sup> December rechecked from 47 million to 41 million in Johns Hopkins website

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



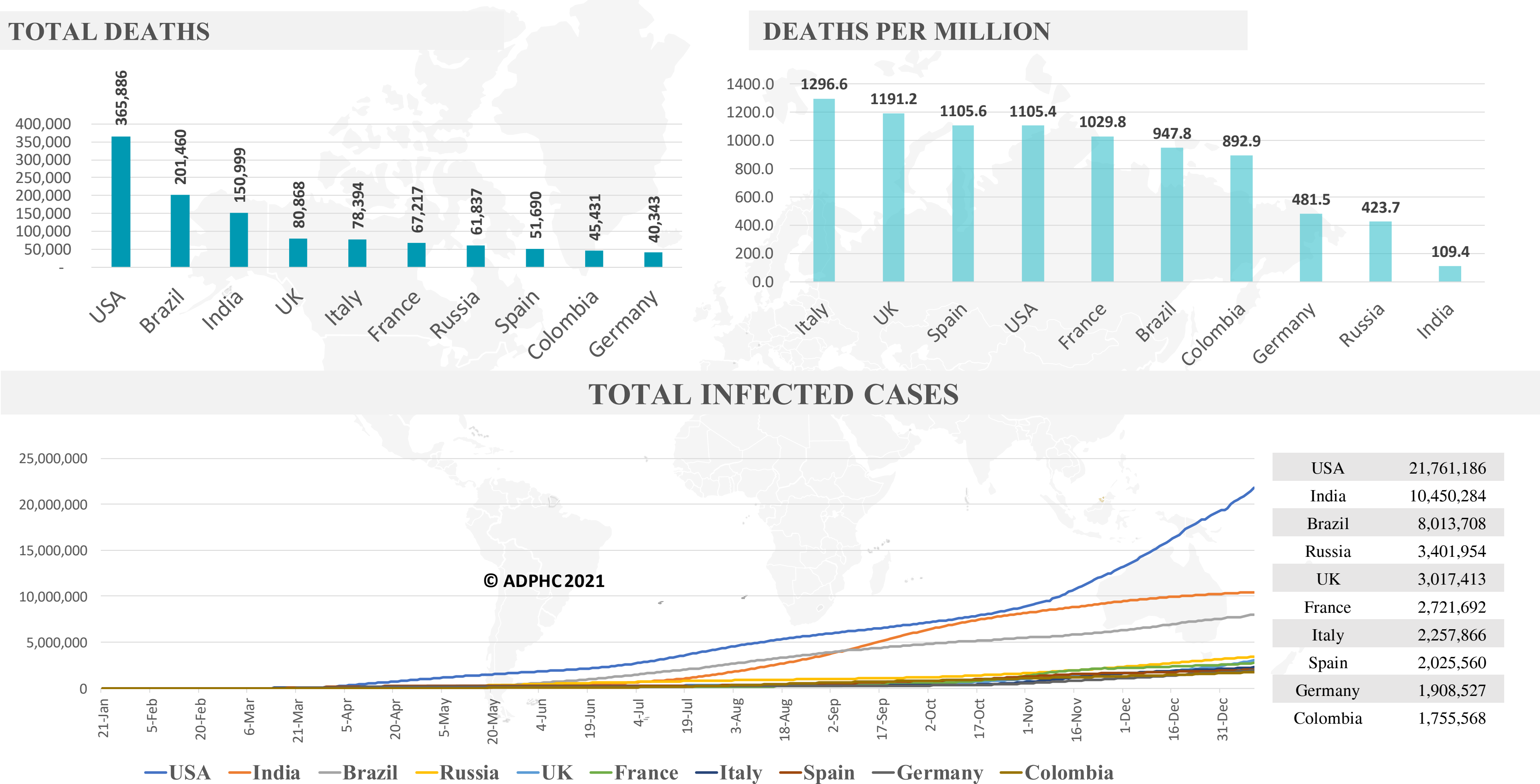
China Rest of the World

**Figure 4: Global Daily New Deaths Due to COVID-19**

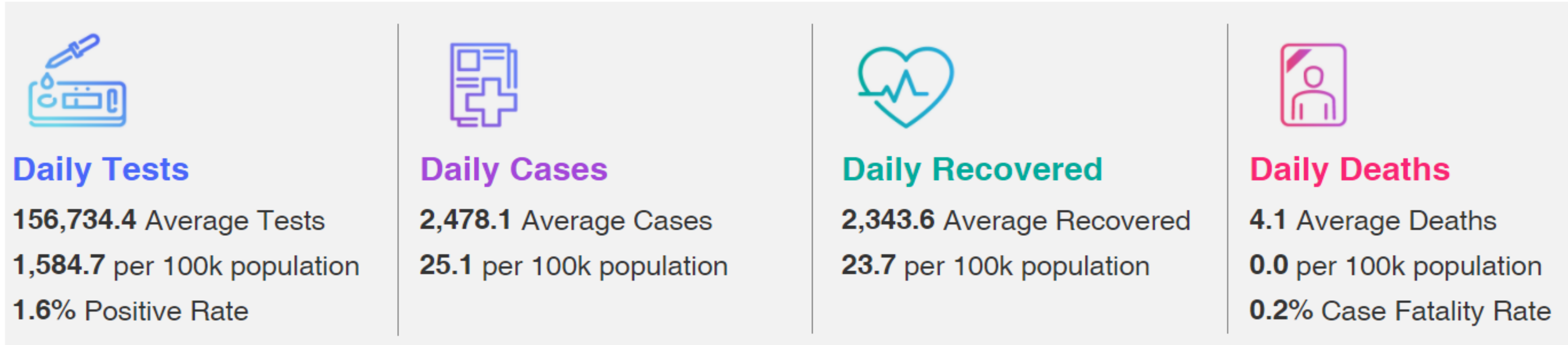


Daily New Deaths

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

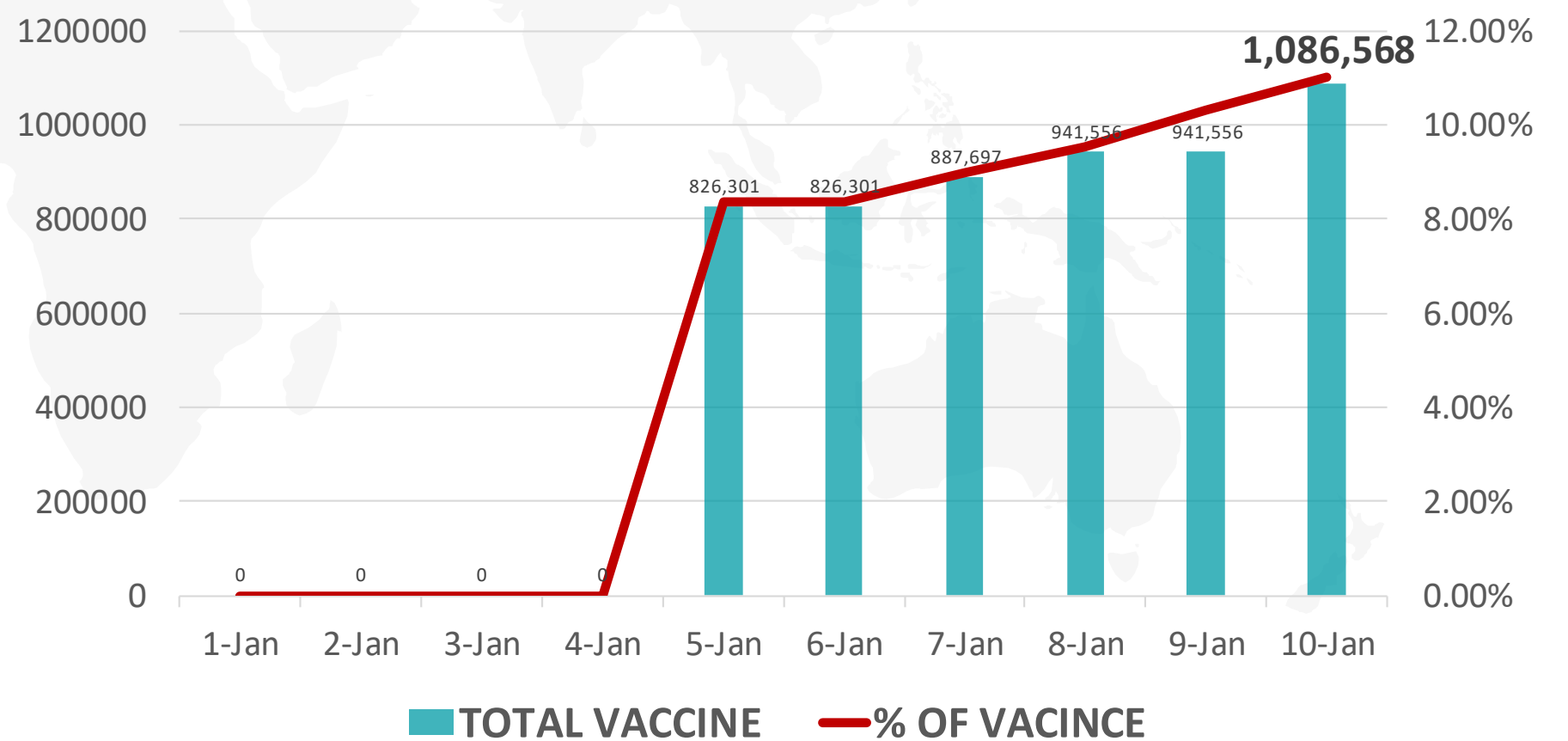
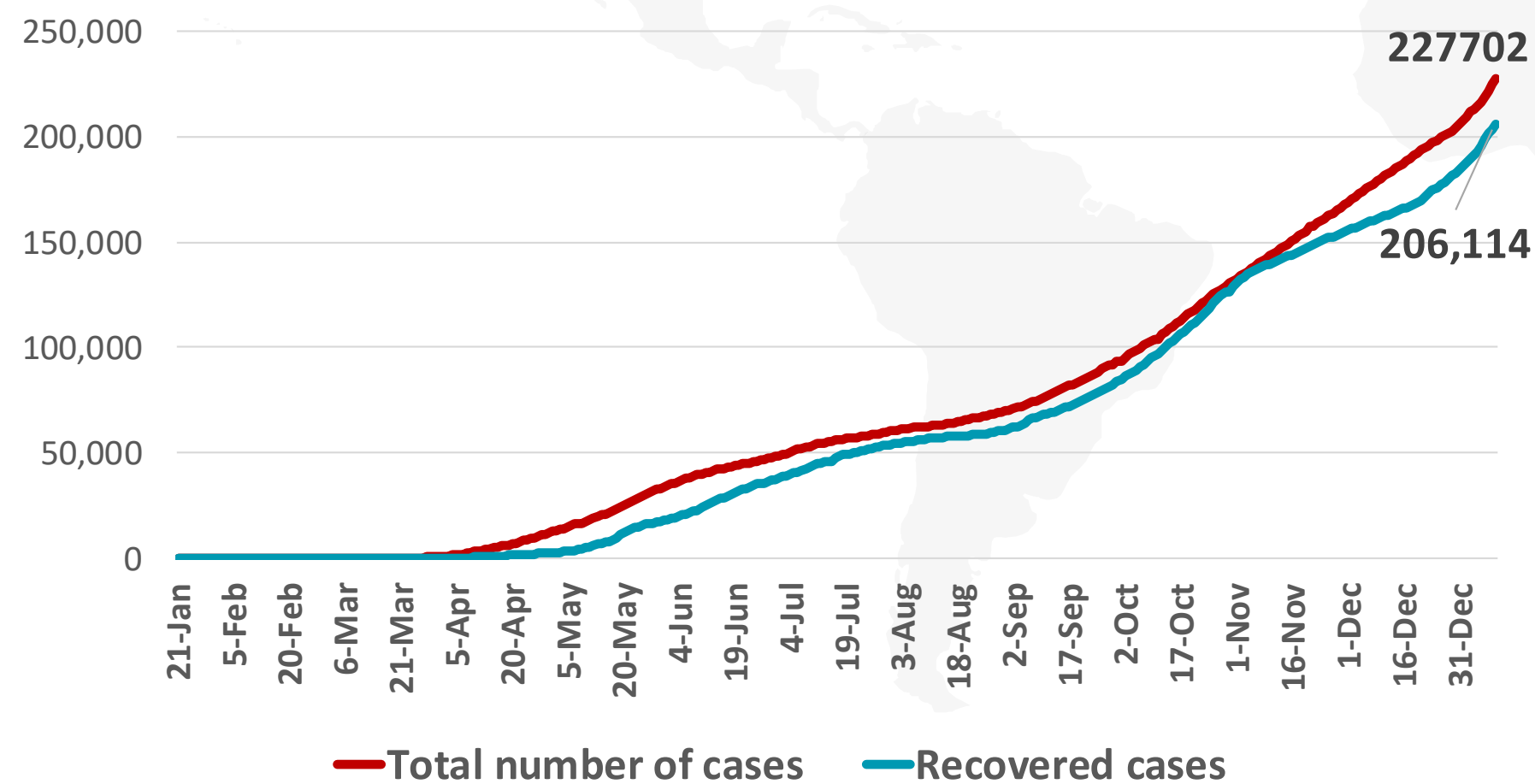


**Figure 6: COVID-19 Status in the UAE** (Federal Competitiveness and Statistics Authority Dashboard)

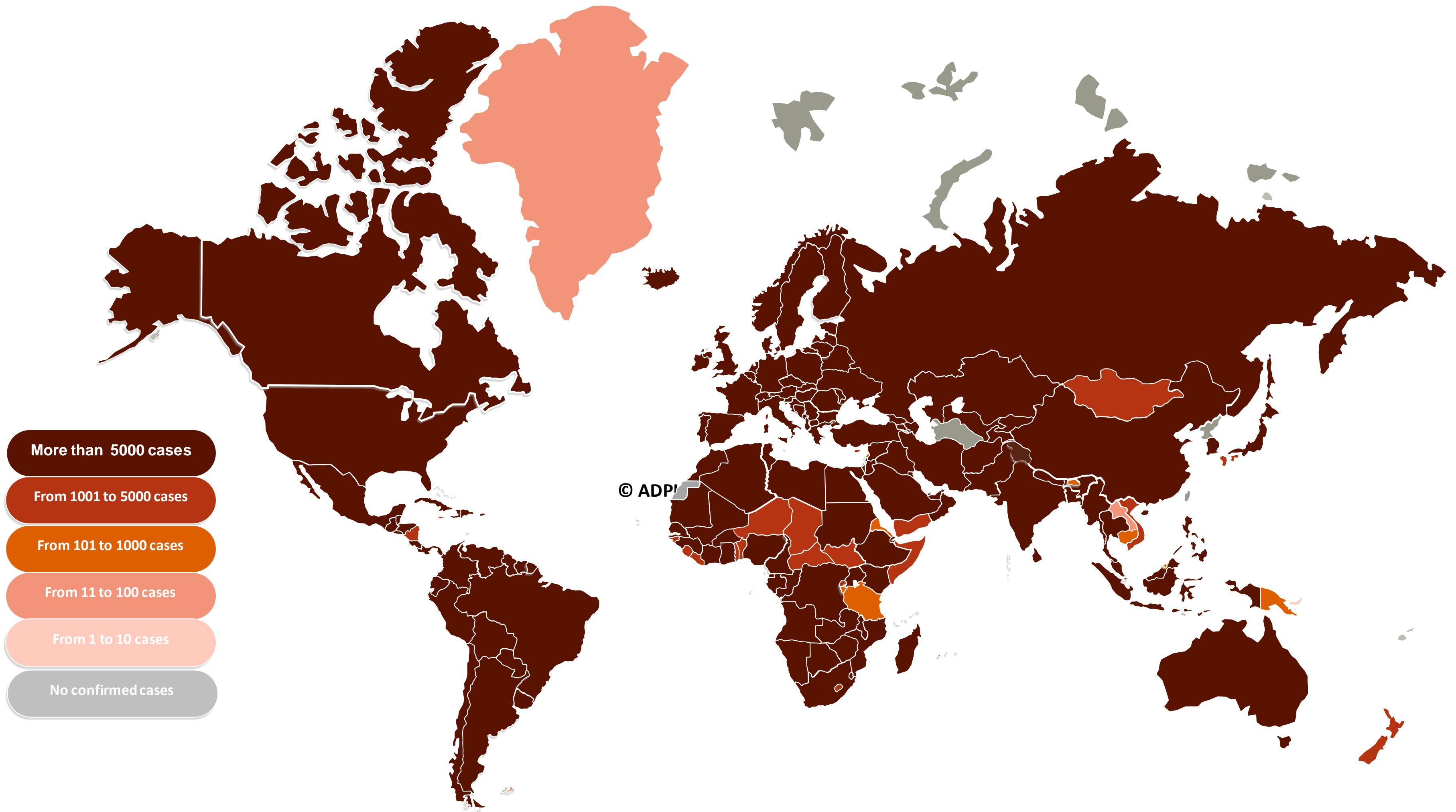


**Figure 6A: TOTAL Number Of Infected And Recovered Cases Due To Covid-19 Reported By The Uae**

**Figure 6 B: TOTAL NUMBER and Percentage of UAE population Vaccinated**



## Figure 7A : Global Distribution of COVID-19 Cases



More than 5000 cases

From 1001 to 5000 cases

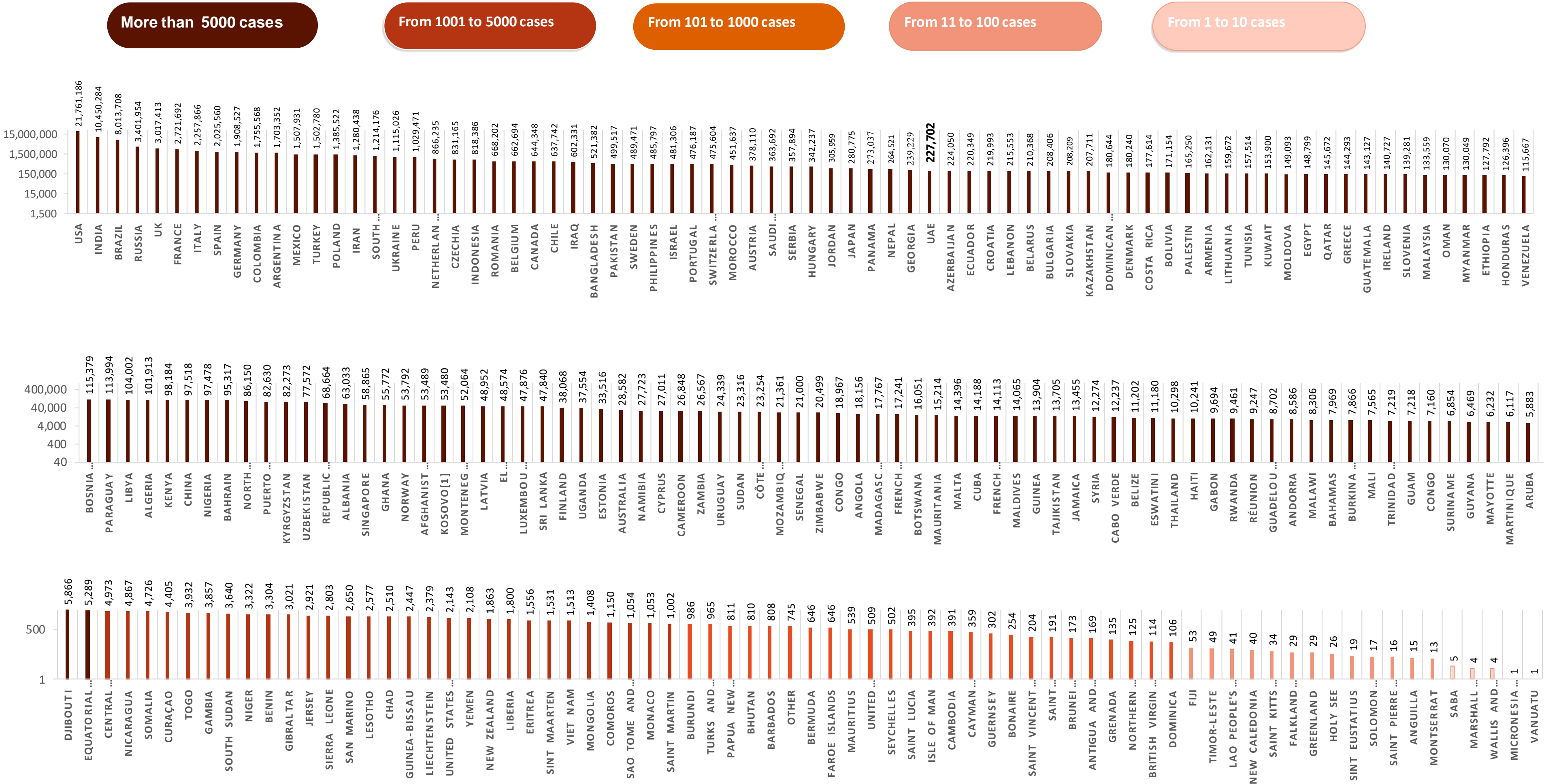
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

No confirmed cases

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



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

Graphs published by Abu Dhabi Public Health Center 2021 | Data resources: [WHO](#)

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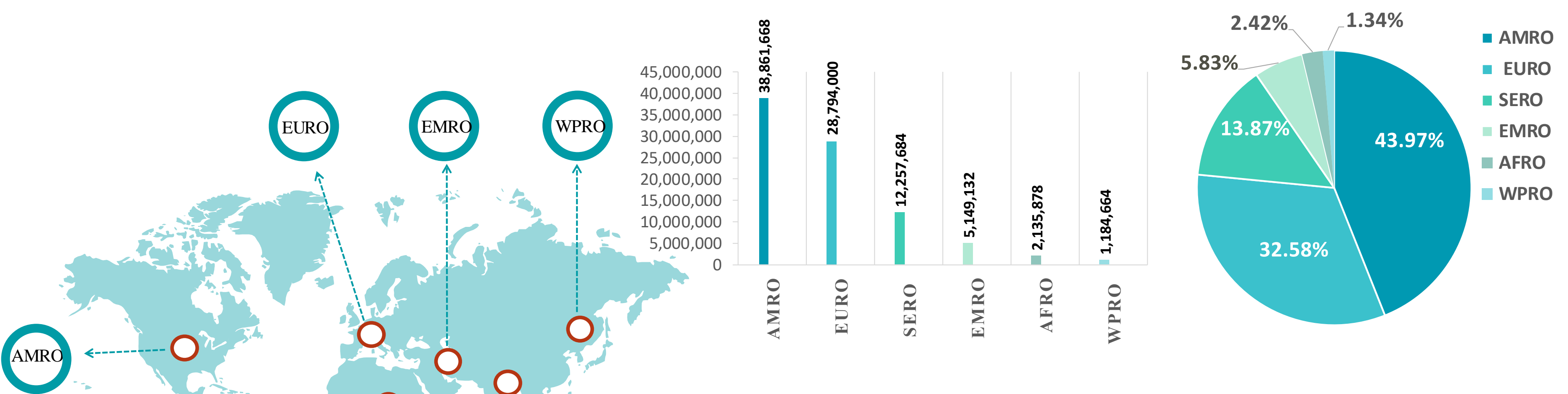
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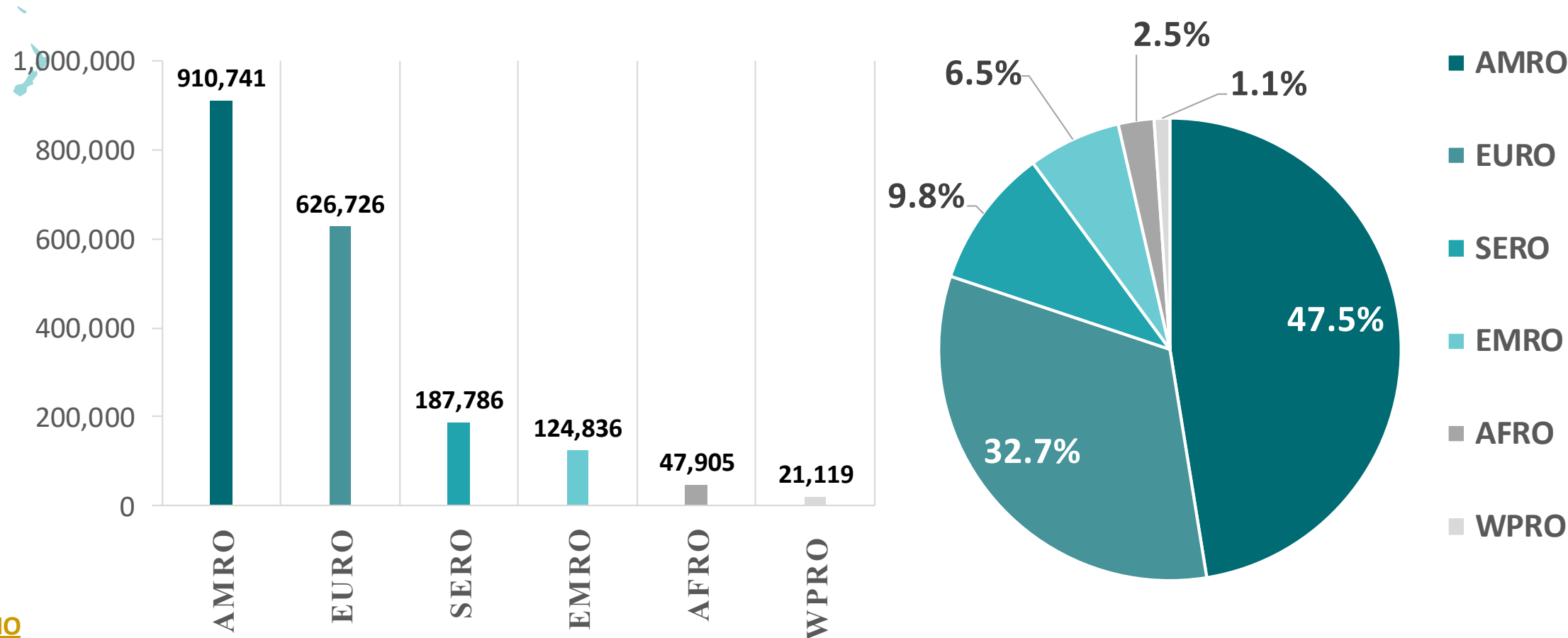


Figure 8: Global Distribution of COVID-19 Cases per Region

## INFECTED

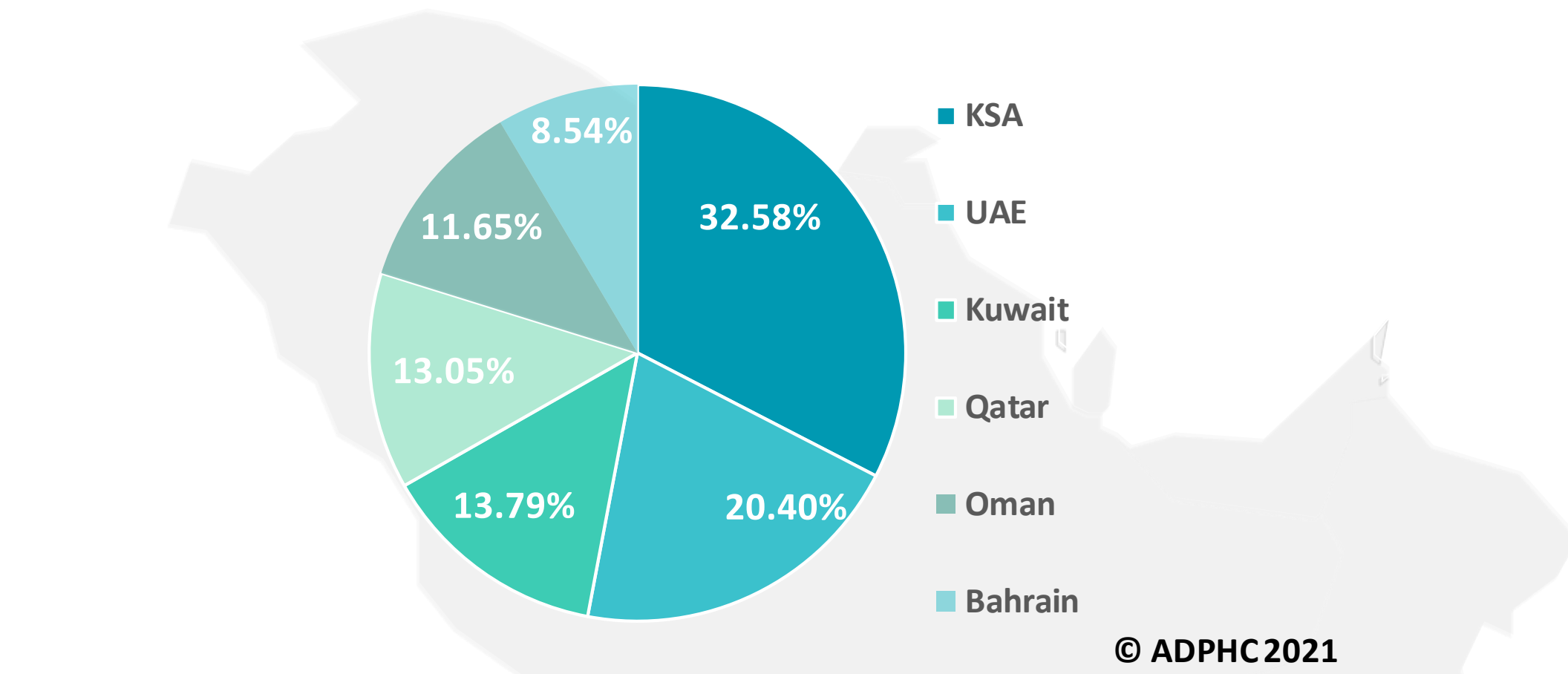


## DEATHS

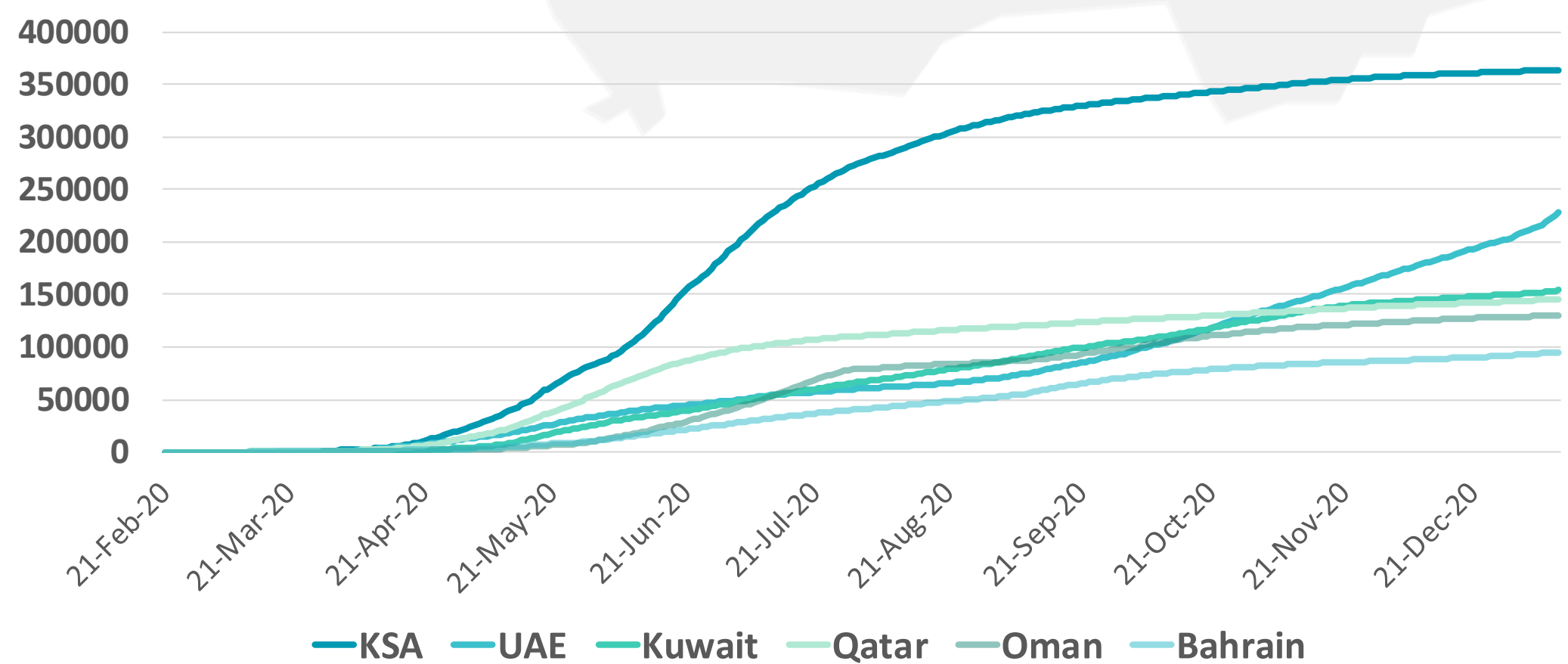
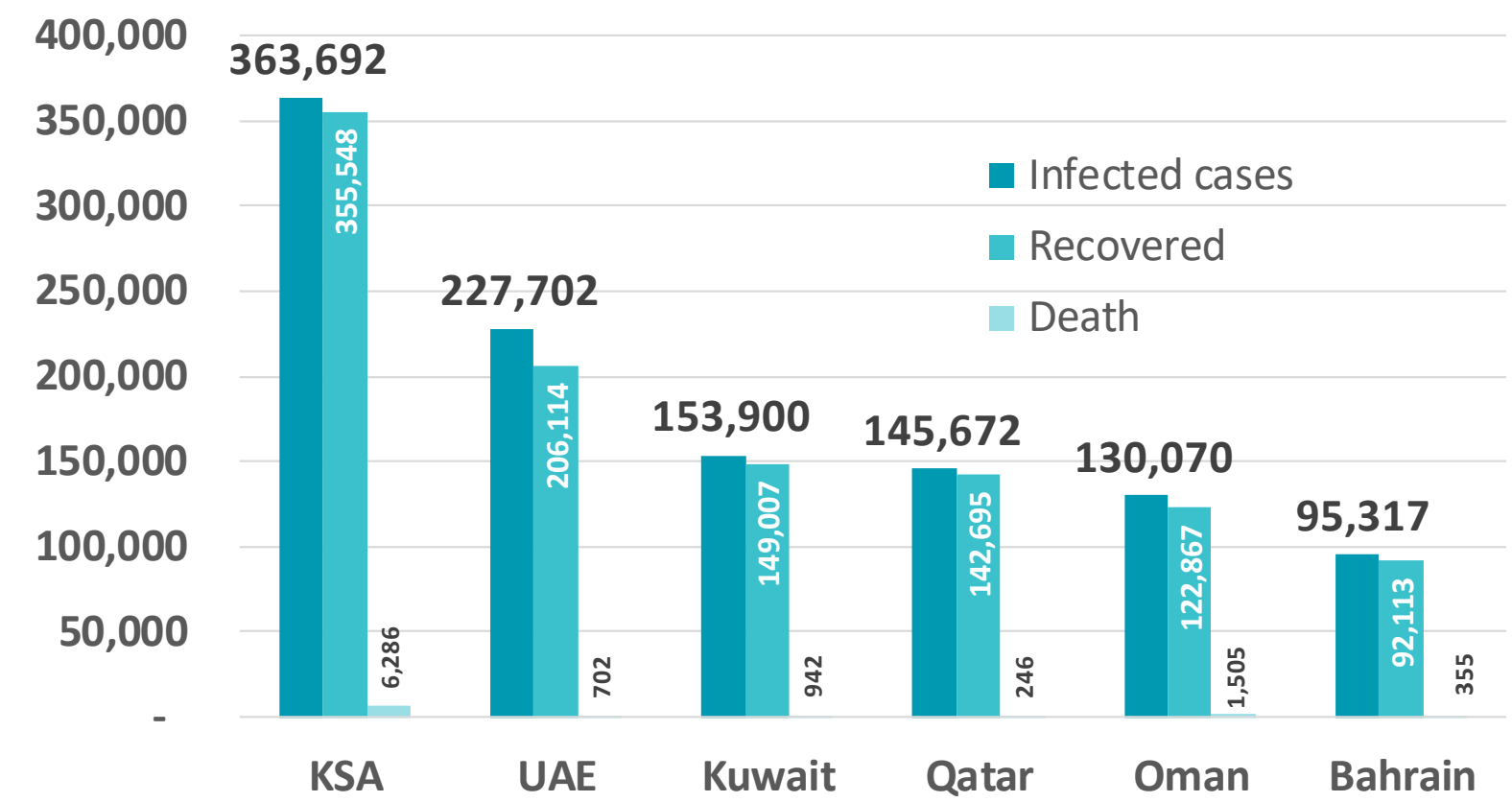


## Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

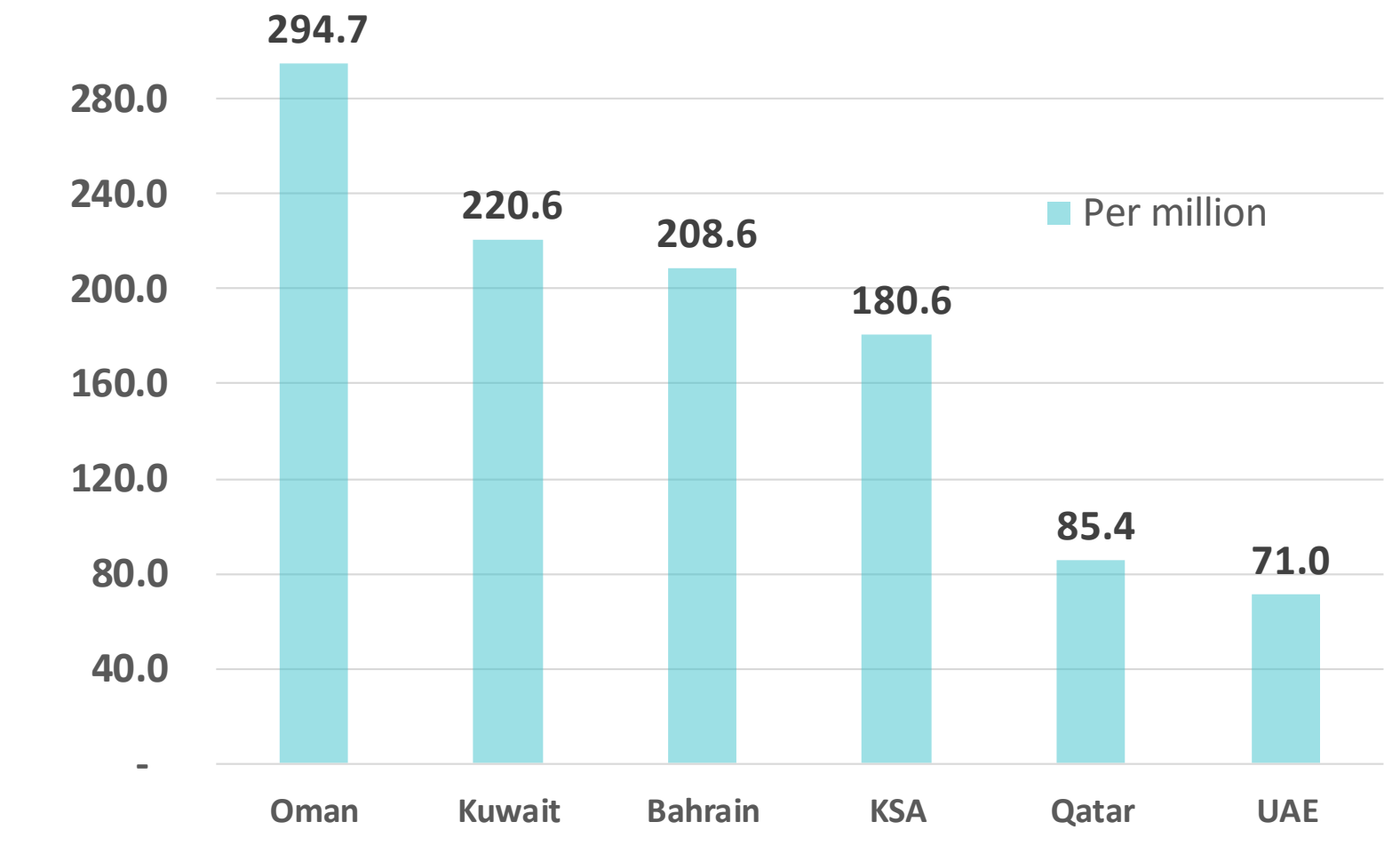
### TOTAL NUMBER OF INFECTED CASES



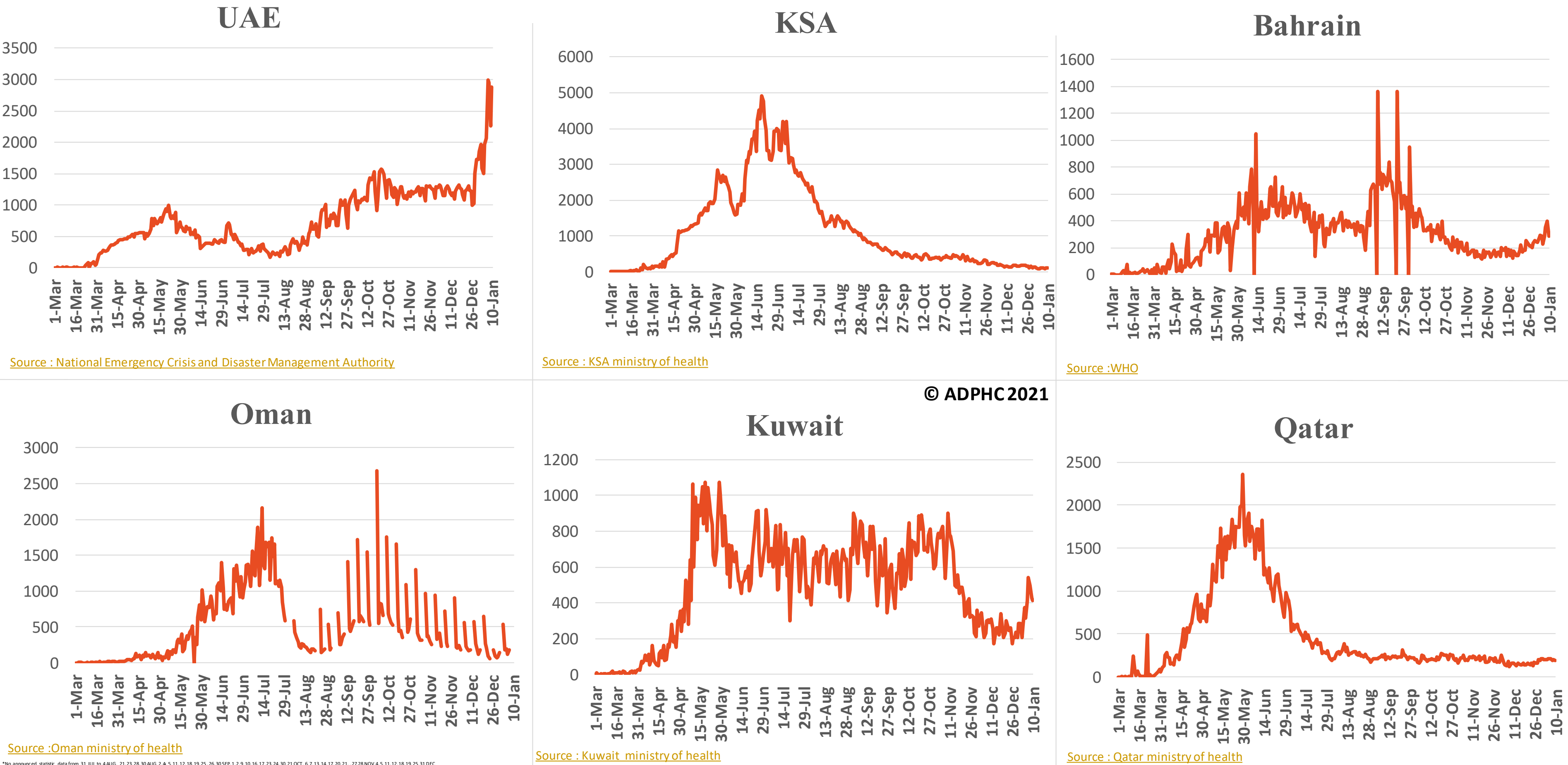
### TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



### DEATHS PER MILLION



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



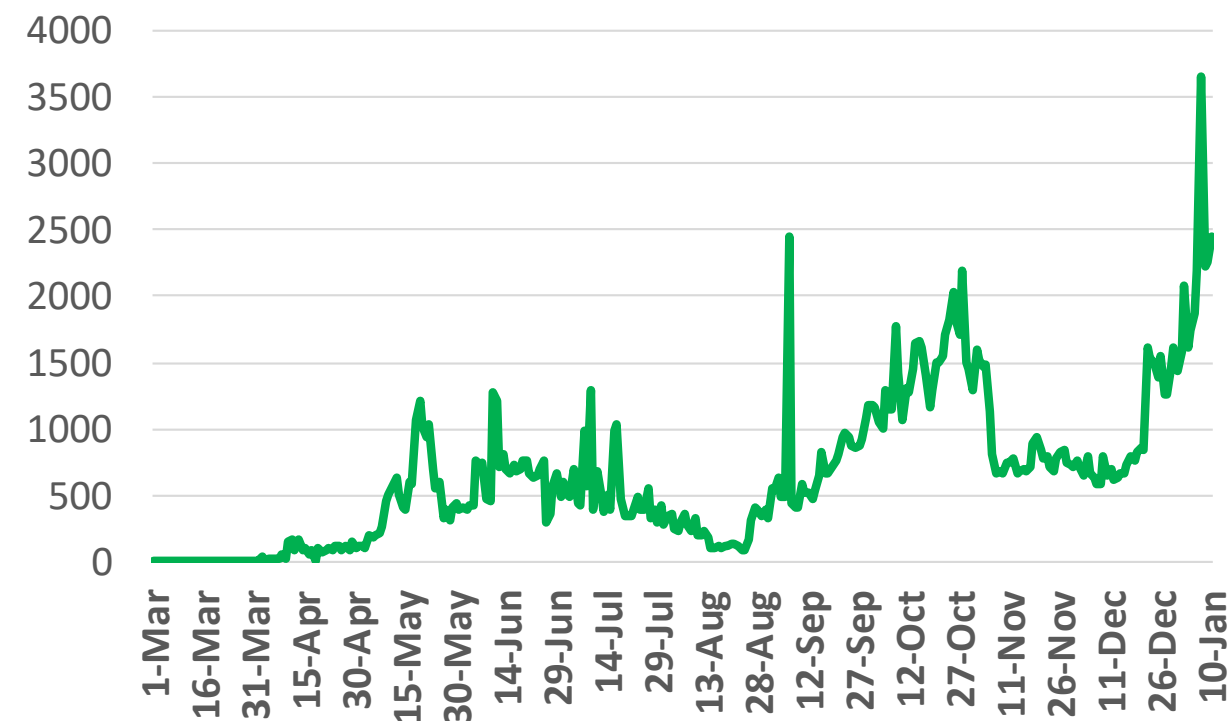
\*No announced statistic data from 31 Jul to 4 AUG, 21,23,28,30 AUG 2,4 5,11,12,18,19,25,26,30 SEP,1,2,9,10,16,17,23,24,30,21 OCT, 6,7,13,14,17,20,21, 27,28 NOV,4,5,11,12,18,19,25,31 DEC

\*No announced statistic data on weekends and official holidays.



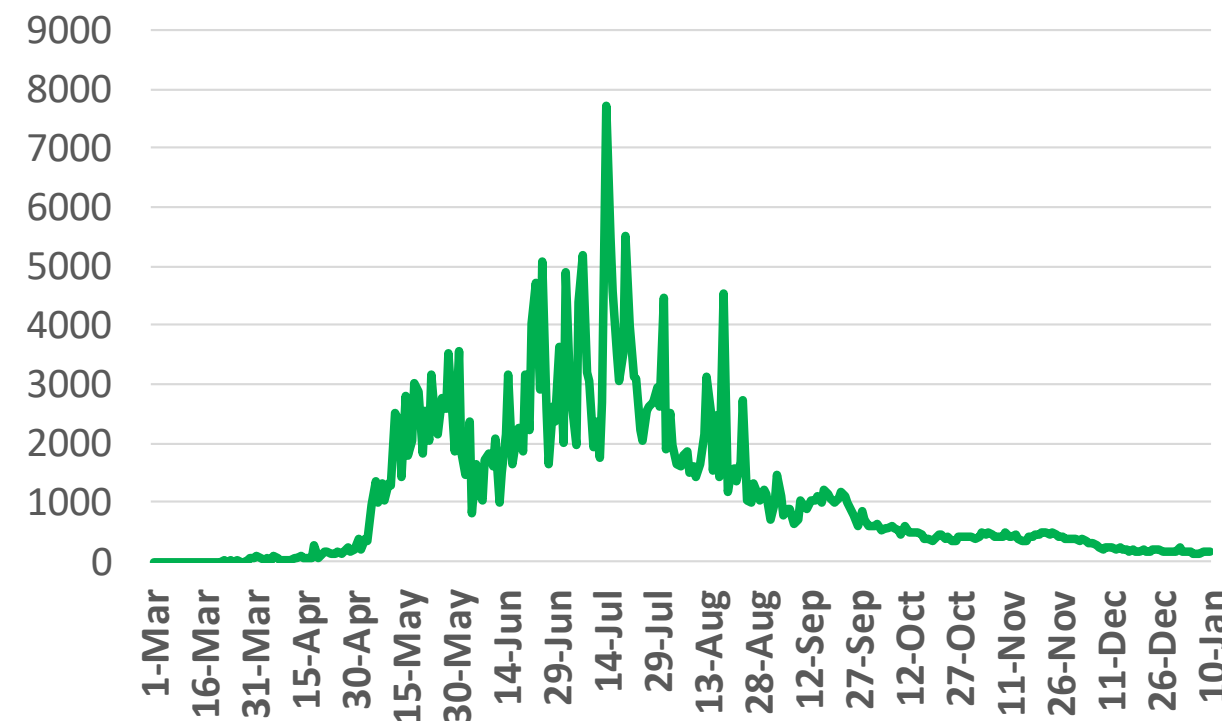
## Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

### UAE



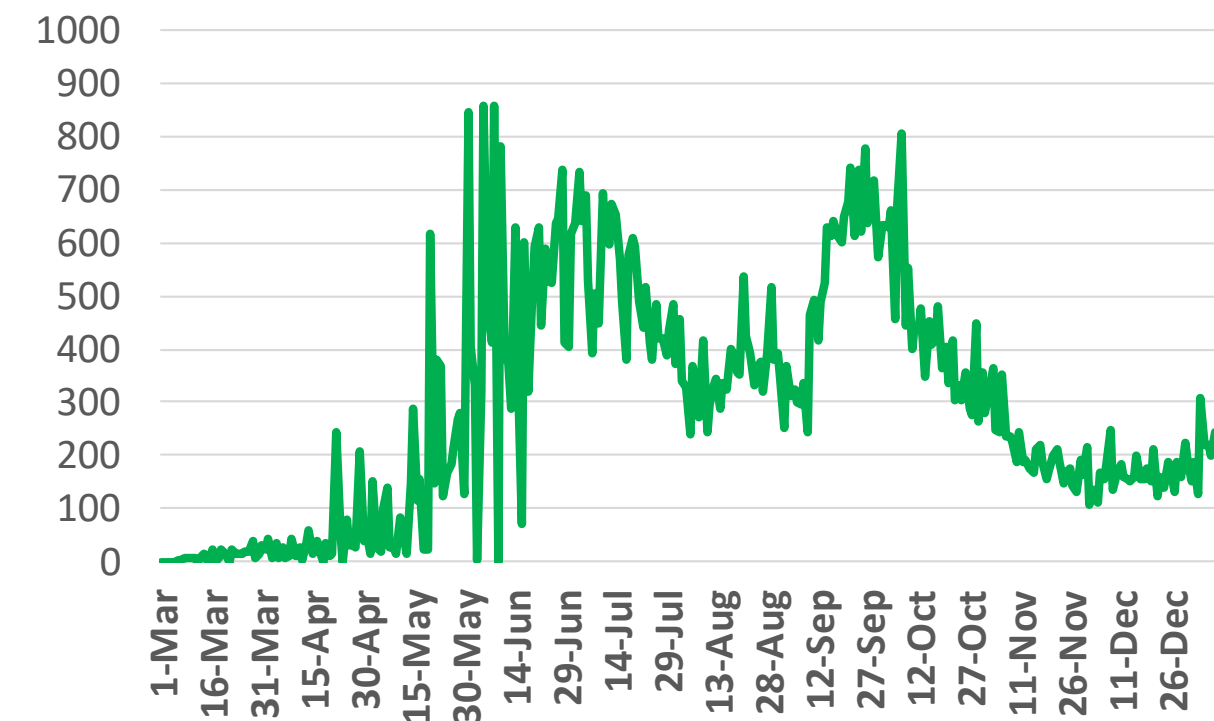
Source : National Emergency Crisis and Disaster Management Authority

### KSA



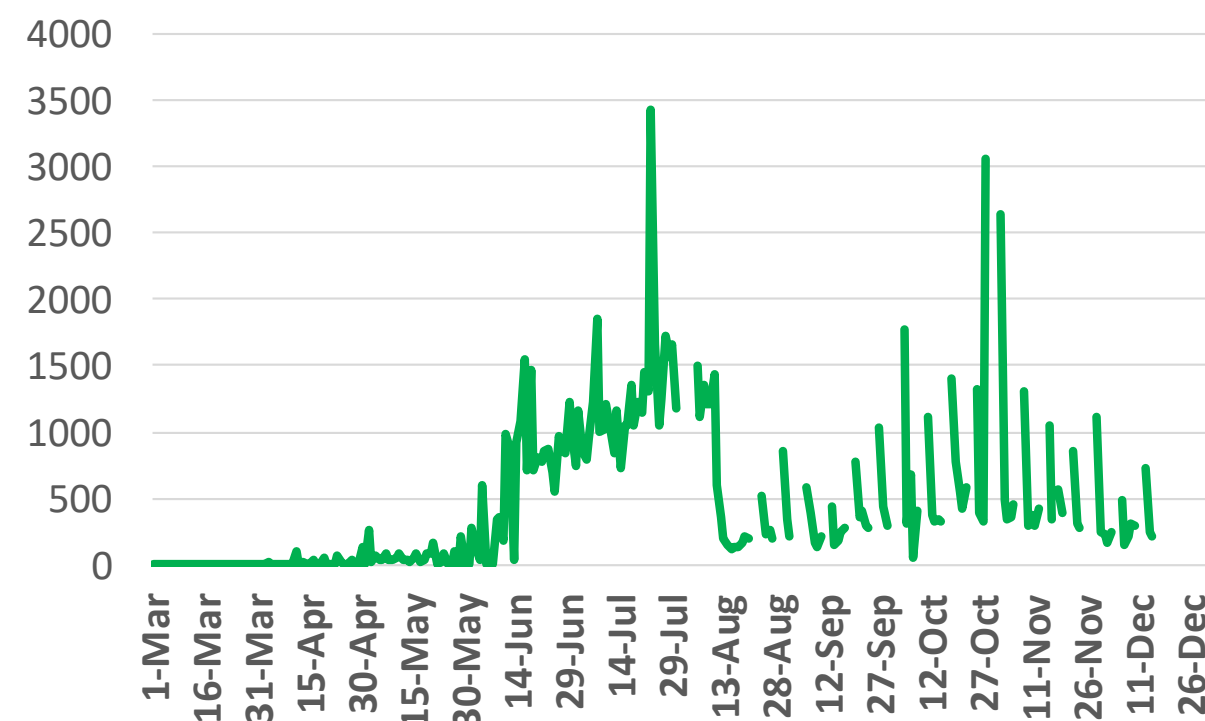
Source : KSA ministry of health

### Bahrain



Source : Bahrain ministry of health

### Oman



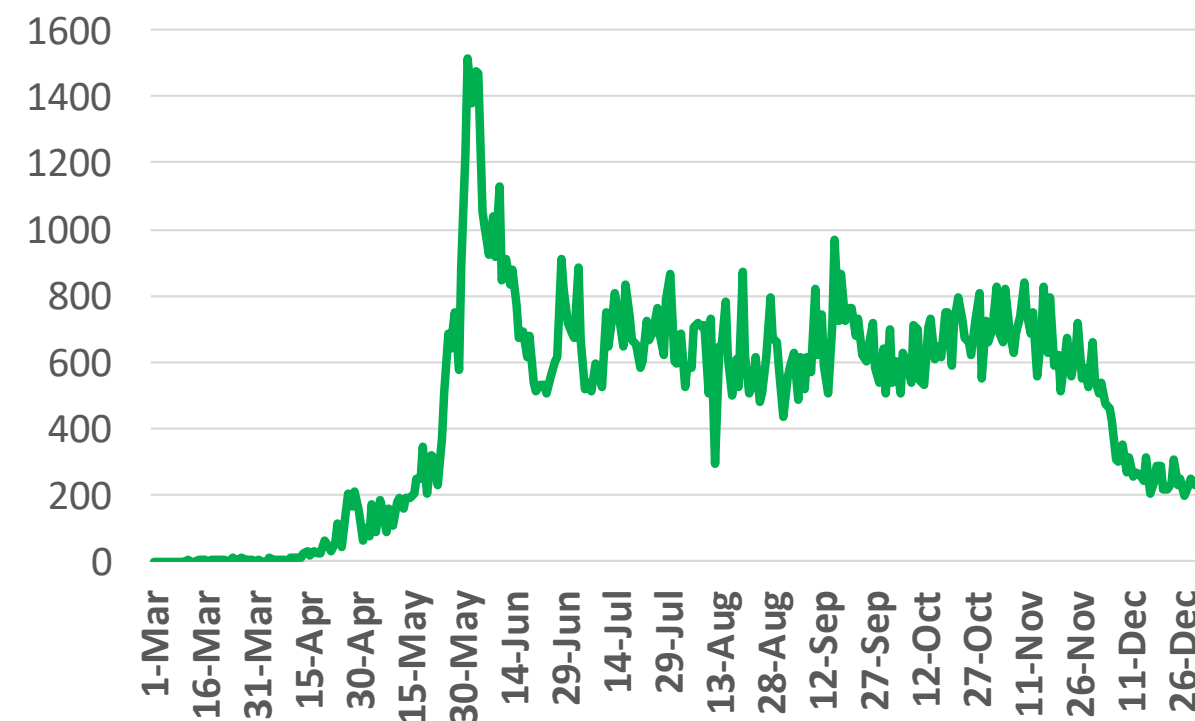
Source : Oman ministry of health

\*No announced statistic data from 31 JUL to 4 AUG, 21,23,28,30 AUG 2,4 5,11,12,18,19,25,26,30 SEP,1,2,9,10,16,17,23,24,30,21 OCT, 6,7,13,14,17,20,21,,27,28 NOV,4,5,11,12,18,19,25,31 DEC

\*No announced statistic data on weekends and official holidays.

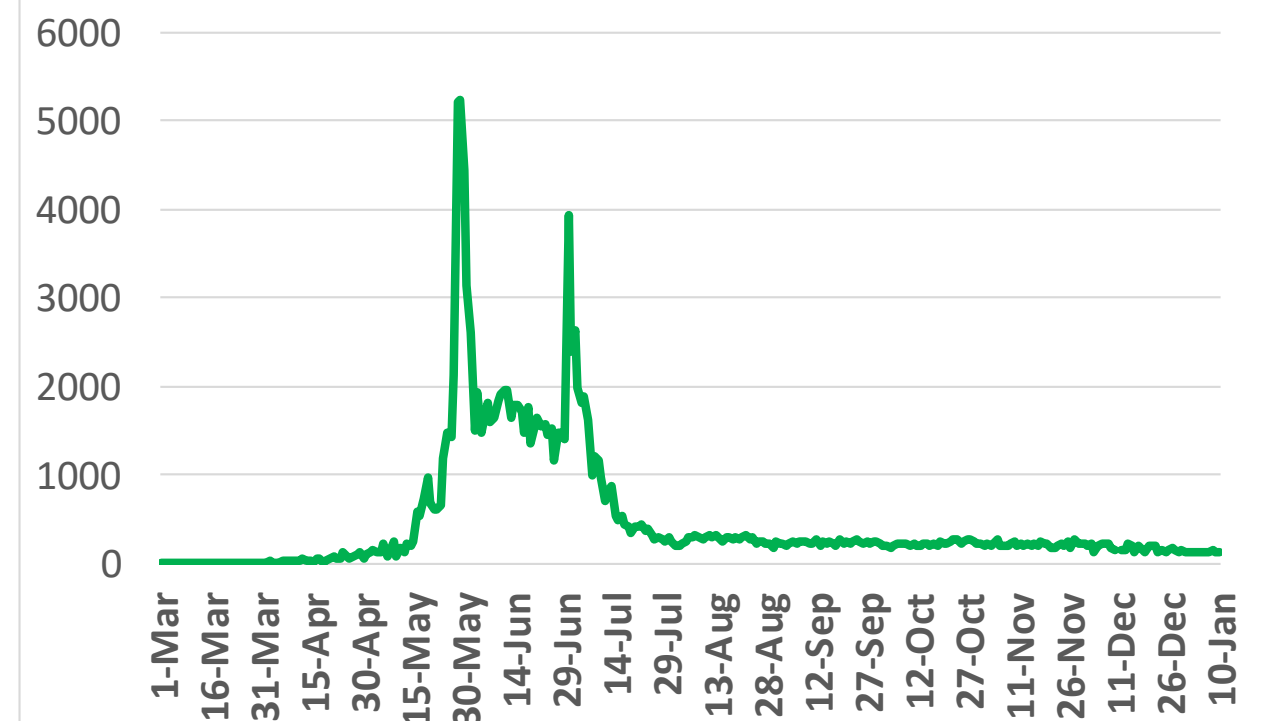
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### Kuwait



Source : Kuwait ministry of health

### QATAR



Source : Qatar ministry of health



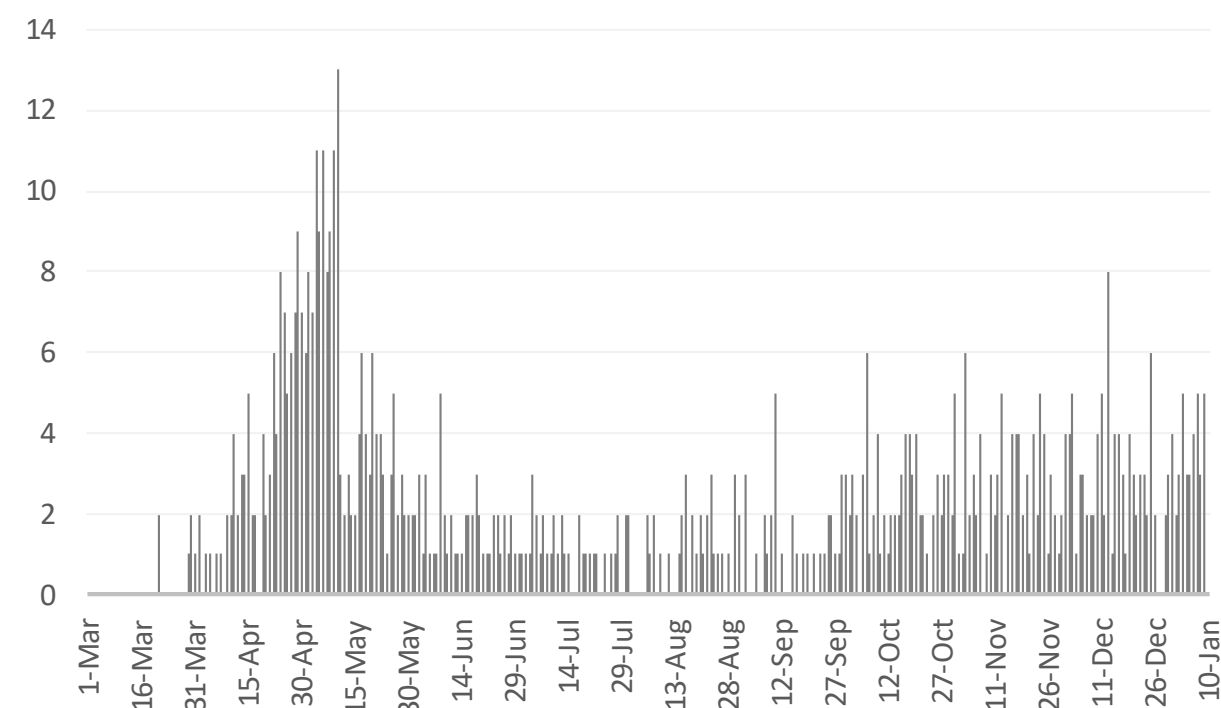
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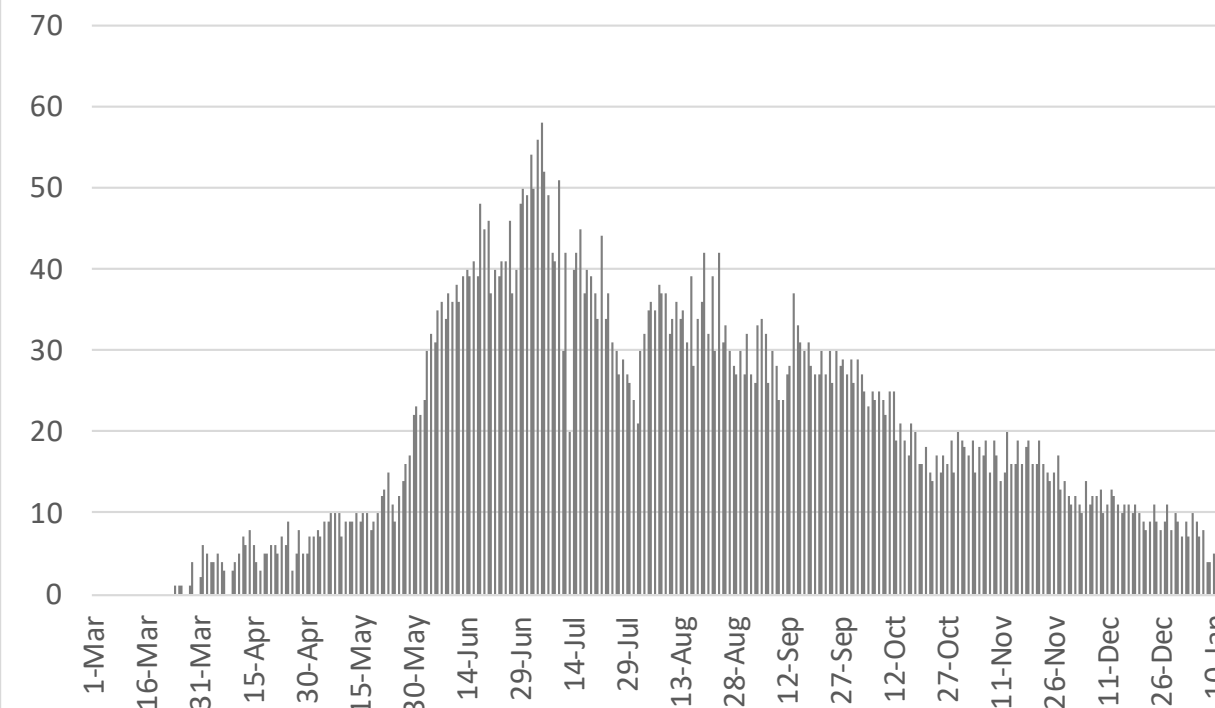
## Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

### UAE



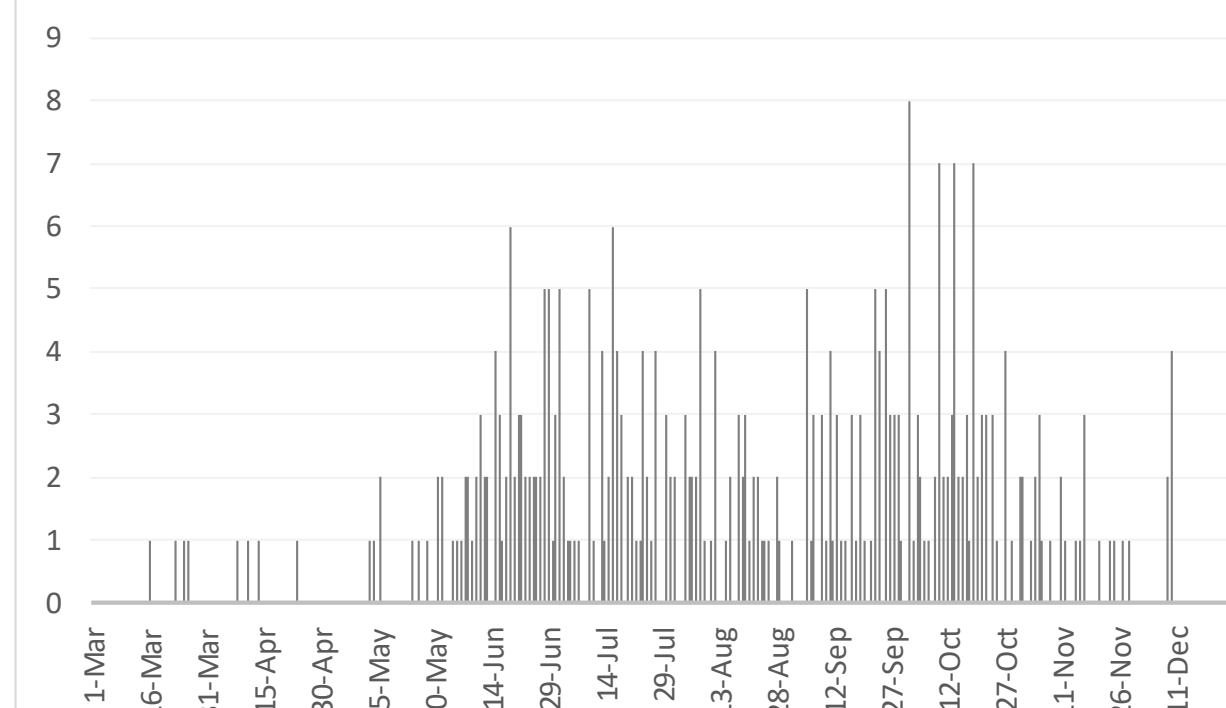
Source : National Emergency Crisis and Disaster Management Authority

### KSA



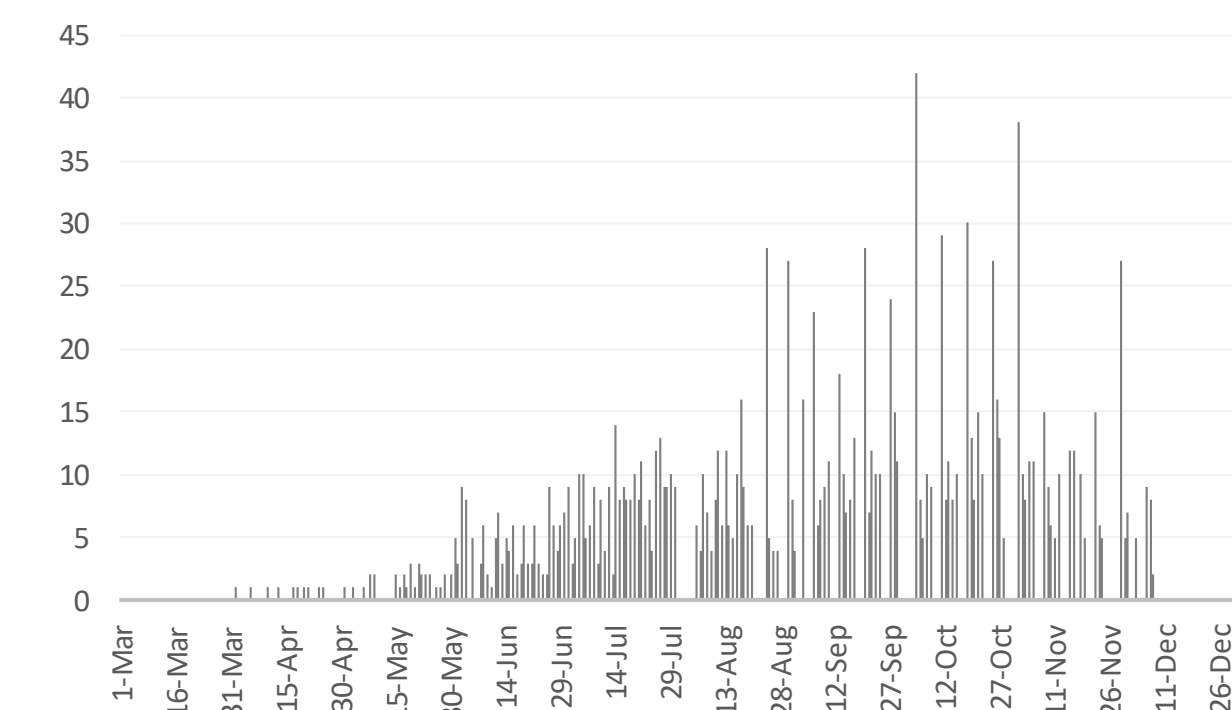
Source : KSA ministry of health

### Bahrain



Source :WHO

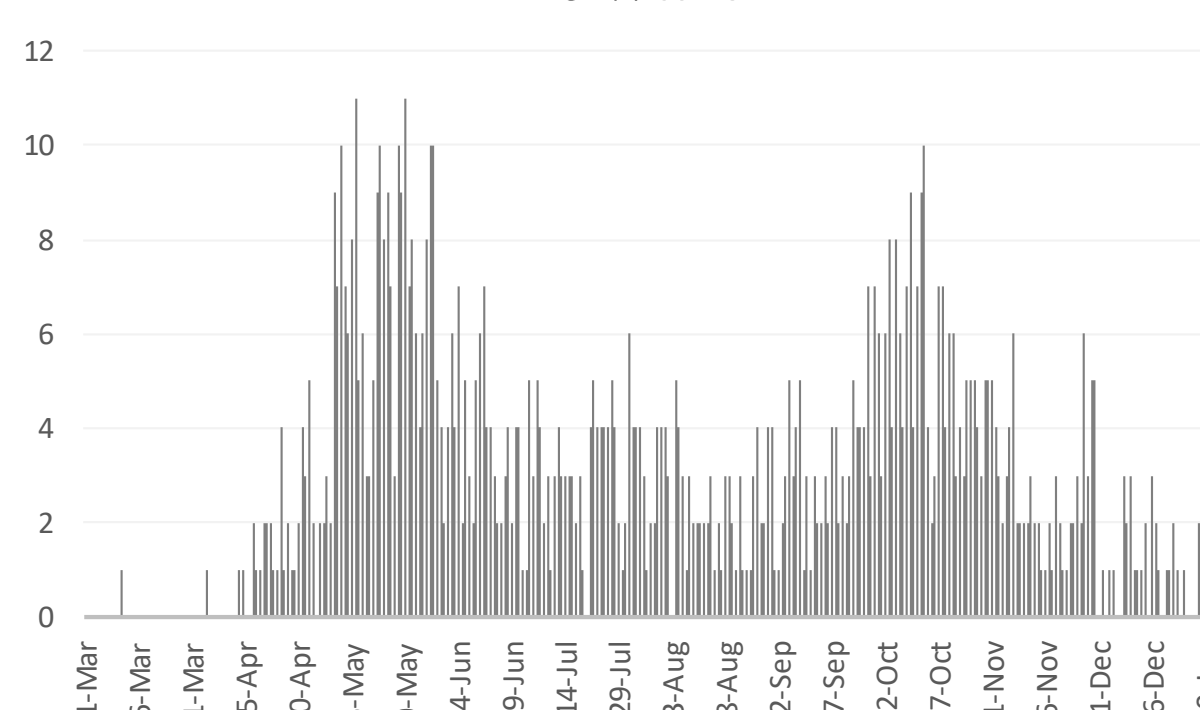
### Oman



Source :Oman ministry of health

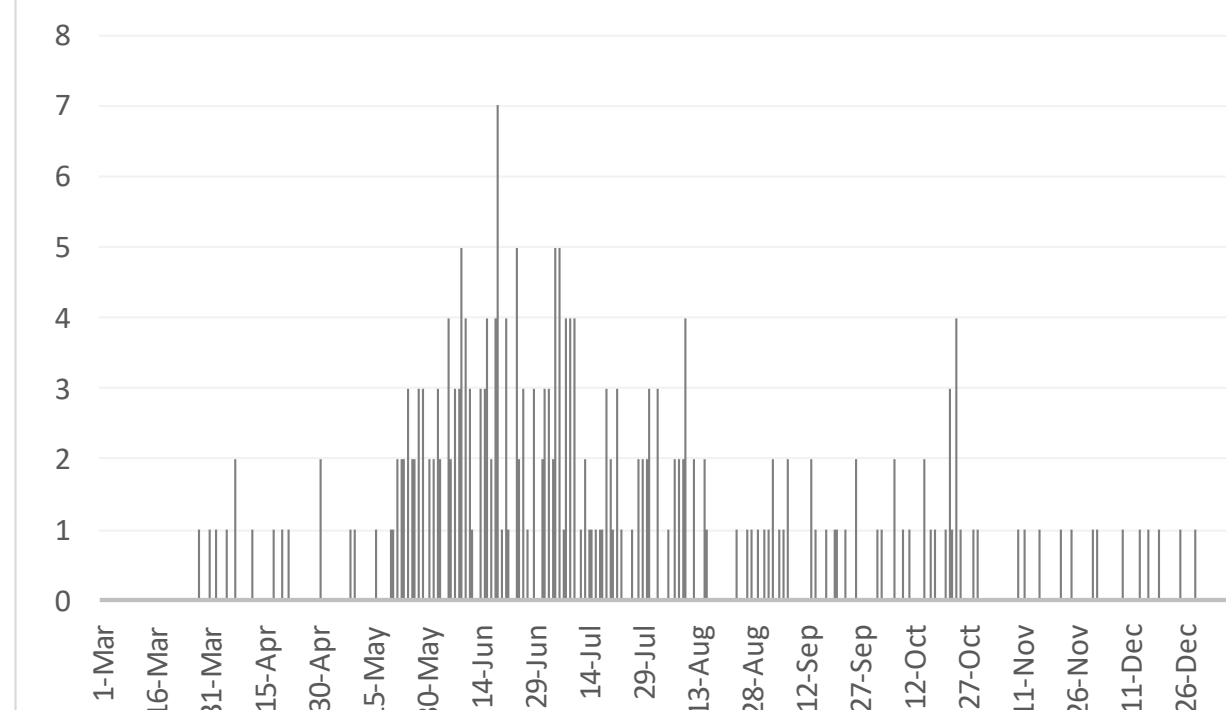
### Kuwait

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Source : Kuwait ministry of health

### Qatar



Source : Qatar ministry of health

\*No announced statistic data from 31 Jul to 4 AUG, 21,23,28,30 AUG 2,\* 5,11,12,18,19,25,26,30 SEP,1,2,9,10,16,17,23,24,30,21 OCT, 6,7,13,14,17,20,21, 27,28 NOV,4,5,11,12,18,19,25,31 DEC  
\*No announced statistic data on weekends and official holidays.



## Article 1

## Ivermectin and COVID-19

**Published**

Emerging evidence about the use of this antiparasitic medicine to treat COVID-19

[National Prescribing services, 3 September 2020](#)

STUDY TITLE AND AUTHERS	Type of study Country	Main results	Comments
Gorial et al <sup>11</sup> (pre-print)	Pilot observational study <b>Iraq</b>	Hospitalised patients (n = 16) with mild to moderate COVID-19 received a single dose of ivermectin 200 micrograms/kg on admission day as add-on treatment to hydroxychloroquine (HCQ) daily and azithromycin (AZT). The control group (n = 71) received HCQ and AZT only. All patients in the ivermectin group were cured compared to the controls (100% vs 97.2%). The mean time of hospital stay was significantly lower in the ivermectin group ( $7.62 \pm 2.75$ vs $13.22 \pm 5.90$ days, $p = 0.00005$ ).	The primary outcome was percentage of cured patients within 23 days. 'Cured' was defined by assessing the proportion of patients who were symptom-free and able to be discharged from hospital, with a normal body temperature for longer than 3 days, improvement of respiratory symptoms and two consecutive negative PCR test results from nasopharyngeal swabs at least 24 hours apart.





## Continued

STUDY TITLE AND AUTHERS	Type of study Country	Main results	Comments
Rajter et al <sup>12</sup> (pre-print)	Retrospective cohort study <b>United States</b>	Patients with confirmed SARS-CoV-2 infection who received at least one oral dose of ivermectin 200 micrograms/kg ( <b>n = 173</b> ) at any time during hospitalisation were compared to those who received usual care ( <b>n = 107</b> ). analysis showed lower mortality in the ivermectin group (15% vs 25.2%, OR 0.52, 95% CI 0.29-0.96, <b>p = 0.03</b> ). Mortality was also lower in patients (n = 75) with severe pulmonary disease treated with ivermectin (38.8% vs 80.7%, OR 0.15, CI 0.05-0.47, <b>p = 0.001</b> ) but there was <b>no significant difference in successful extubation rates (36.1% vs 15.4%, OR 3.11 (0.88-11.00), p = 0.07)</b> .	The primary outcome was all-cause in-hospital mortality. Patients were considered to be ‘survivors’ if they were discharged from hospital or if their status in hospital changed from active care to awaiting transfer to a skilled nursing facility. The latter outcome required that two consecutive nasopharyngeal swab specimens were negative for SARS-CoV-2, collected equal to or greater than 24 hours apart. The effect of ivermectin on viral load was not evaluated and any impact of confounding patient factors (eg. time from diagnosis to initiation of treatment, differences in medicines used for standard care) is unknown.





## Continued

STUDY TITLE AND AUTHERS	Type of study Country	Main results	Comments
Alam et al <sup>13</sup>	Observational/cross-sectional study <b>Bangladesh</b>	Patients with RT-PCR confirmed cases of SARS-CoV-2 (n = 100) were given a combination of ivermectin 200 mcg/kg as a single dose and doxycycline 100 mg daily for 10 days. After starting treatment, 50% of patients with mild to moderate cases showed symptomatic improvement between day 3 and 5. All 7 patients with severe symptoms had a reduction in their symptoms by 50% by the seventh day of treatment. Retesting was completed between 4 to 18 days after starting treatment and all patients tested negative.	There was no control group in this study.





## Continued

STUDY TITLE AND AUTHERS	Type of study Country	Main results	Comments
<a href="#">Chowdhury</a>	Randomized trial <b>Bangladesh</b>	compared ivermectin and doxycycline vs HCQ and AZT in patients with mild to moderate COVID-19 infection who had tested positive for SARS-CoV-2 using RT PCR. Patients (n = 116) were randomly assigned to receive either: <ul style="list-style-type: none"> <li>□ ivermectin 200 micrograms/kg as a single dose plus doxycycline 100 mg twice daily for 10 days (Group A), or</li> <li>□ HCQ 400 mg on day one then 200 mg twice daily for 9 days, then azithromycin 500 mg daily for 5 days (Group B).</li> </ul> In Group A (n = 60), the recovery to negative PCR was 100% with a mean recovery duration of 8.93 days. In Group B (n = 56), the recovery rate was 96.36% with a mean recovery duration of 9.33 days.	The difference between these groups was not statistically significant (p = 0.231).



## Article 2

# Lack of efficacy of standard doses of ivermectin in severe COVID-19 patients

Published

[PLOS one](#), 11 November 2020

A retrospective study compared a total of 13 severe COVID-19 patients receiving immunosuppressant therapy treated with IVM at 200 µg/kg, single dose and another 13 severe case on immunosuppressant WITH OUT IVM.

Period: March 2020.

Location : Spain, BARCELONA.

### Finding

a single dose of 200 µg/kg of IVM **did not improve** clinical and microbiological outcomes of patients with severe COVID-19, compared to a similar group of patients not receiving IVM. Although IVM may lack of in-vivo effect against SARS-CoV2, in our study the drug was given at late stages of the infection (median 12 days after the beginning of symptoms) and, most importantly, all patients received a standard (200 µg/kg) single dose of the drug, which could be below the IC50 values.



## Article 3

### Published

# A Five-day Course Of Ivermectin For The Treatment Of COVID-19 May Reduce The Duration Of Illness

[ELSEVIER](#), Published December 2, 2021

A randomized, double-blind, placebo-controlled trial was conducted to **determine the rapidity of viral clearance and safety of ivermectin** among adult SARS-CoV-2 patients.

Location: **Bangladesh**

The trial included 72 hospitalized patients in Dhaka, Bangladesh, who were assigned to one of three groups: oral ivermectin alone (12 mg once daily for 5 days), oral ivermectin in combination with doxycycline (12 mg ivermectin single dose and 200 mg doxycycline on day 1, followed by 100 mg every 12 h for the next 4 days), and a placebo control group.

Clinical symptoms of fever, cough, and sore throat were comparable among the three groups.

### Findings

**Virological clearance** was earlier in the 5-day ivermectin treatment arm when compared to the placebo group (9.7 days vs 12.7 days;  $p = 0.02$ ), but this was not the case for the ivermectin + doxycycline arm (11.5 days;  $p = 0.27$ ). There **were no severe adverse drug events recorded in the study**. A 5-day course of ivermectin was found to be safe and effective in treating adult patients **with mild COVID-19**. Larger trials will be needed to confirm these preliminary findings.



# THANK YOU

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