

SCIENTIFIC RESEARCH MONITORING ON COVID-19

28 FEBRUARY 2021

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(ISSUE 386)

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 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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Updates

First UAE Public Health Conference

Epidemiology

Epidemiological characterization of symptomatic and asymptomatic COVID-19 cases and positivity in subsequent RT-PCR tests in the United Arab Emirate

Epidemiology

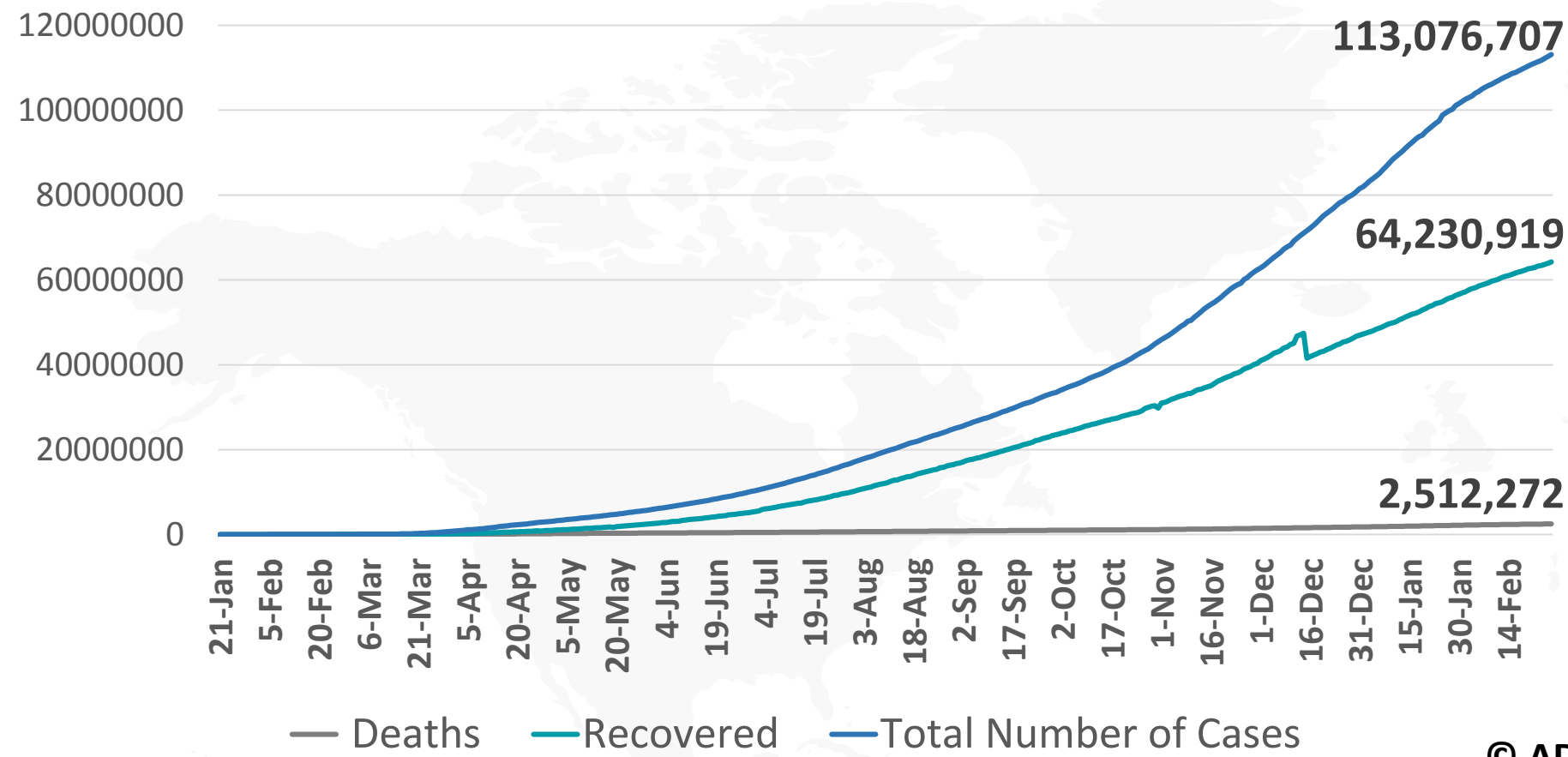
Seroprevalence of SARS-CoV-2 infection in the Emirate of Abu Dhabi, United Arab Emirates: a population-based study

Immunology

Descriptive Epidemiology of confirmed cases of COVID 19 in the Emirate of Abu Dhabi, United Arab Emirates (April March 2020)



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



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

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

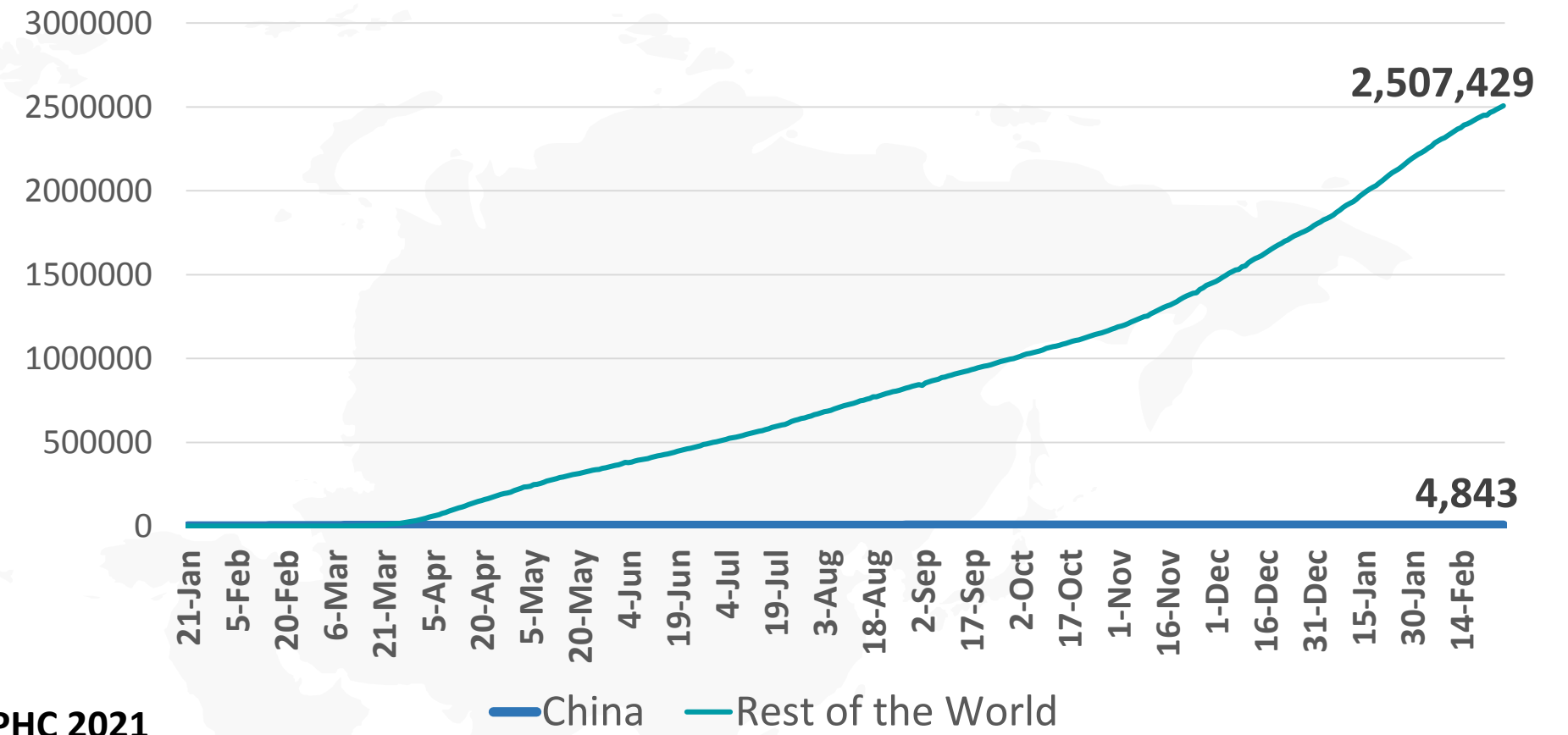


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

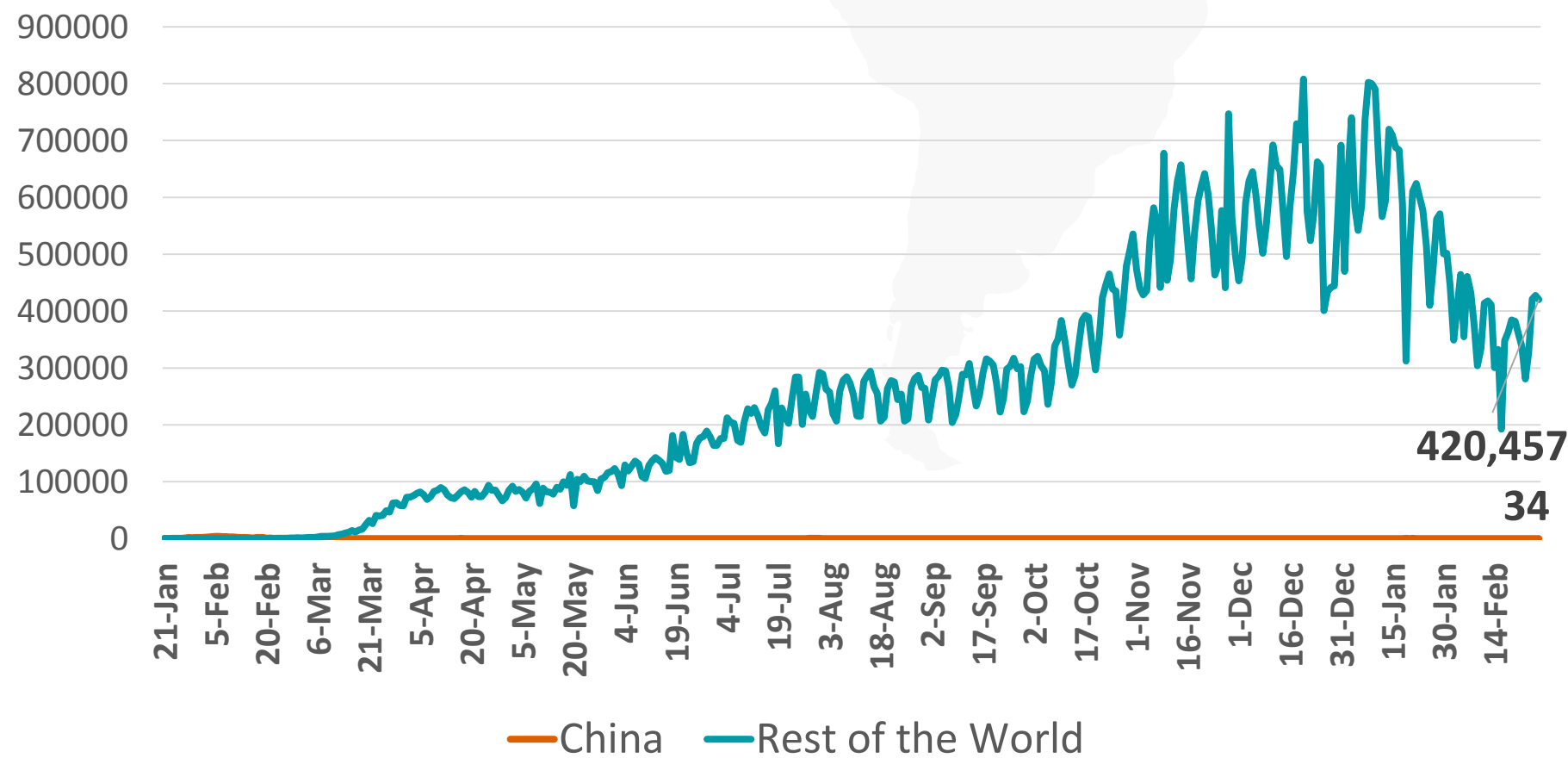


Figure 4: Global Daily New Deaths Due to COVID-19

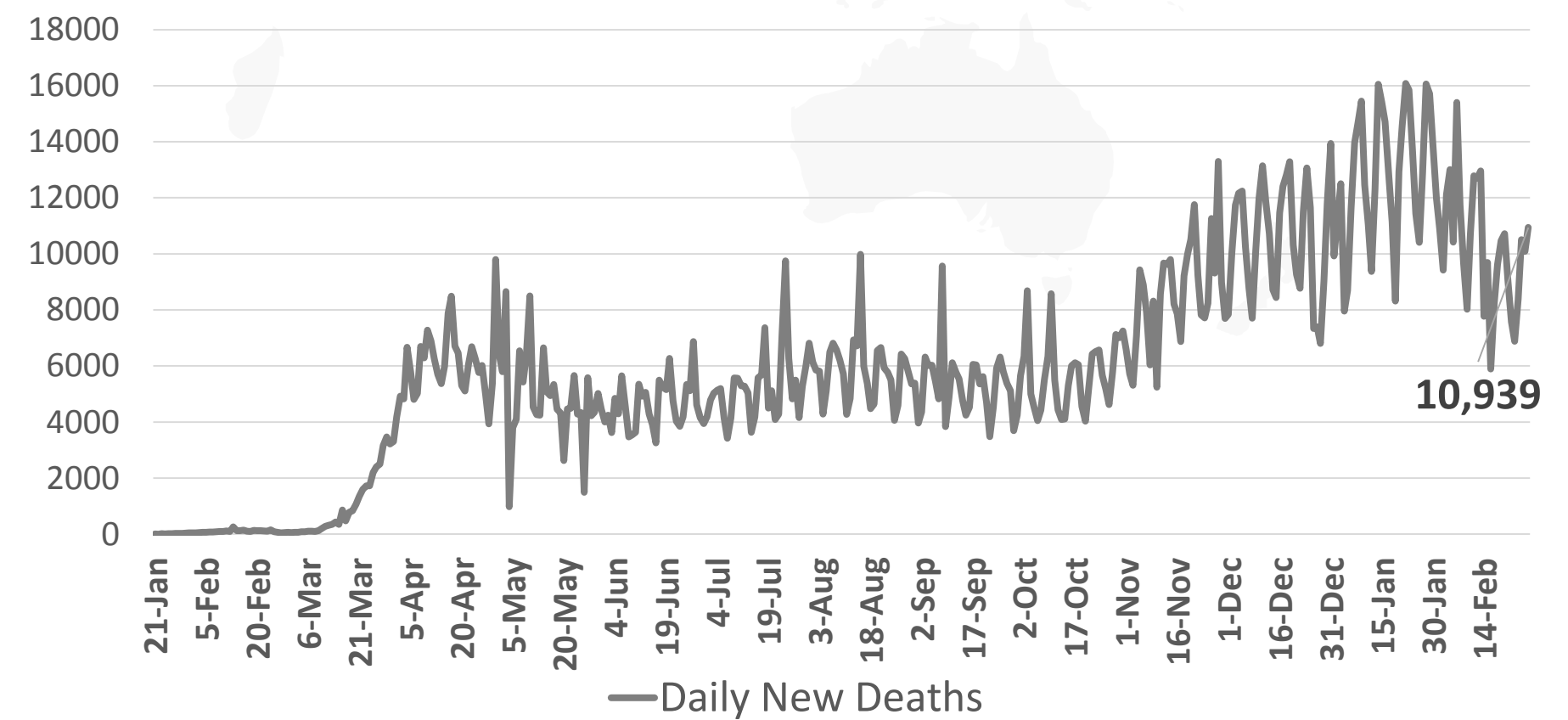


Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

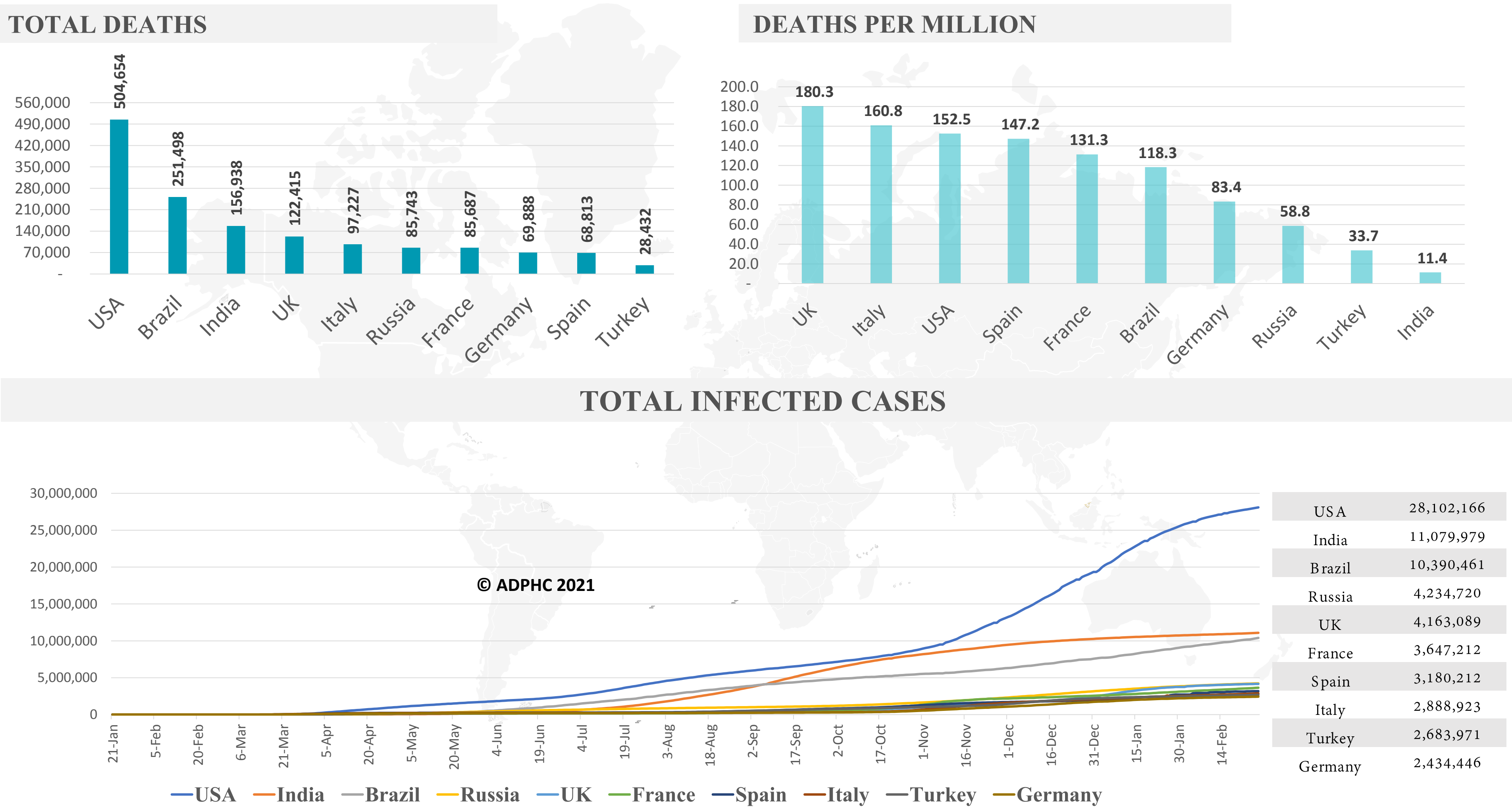


Figure 6: COVID-19 Status in the UAE (Federal Competitiveness and Statistics Authority Dashboard)

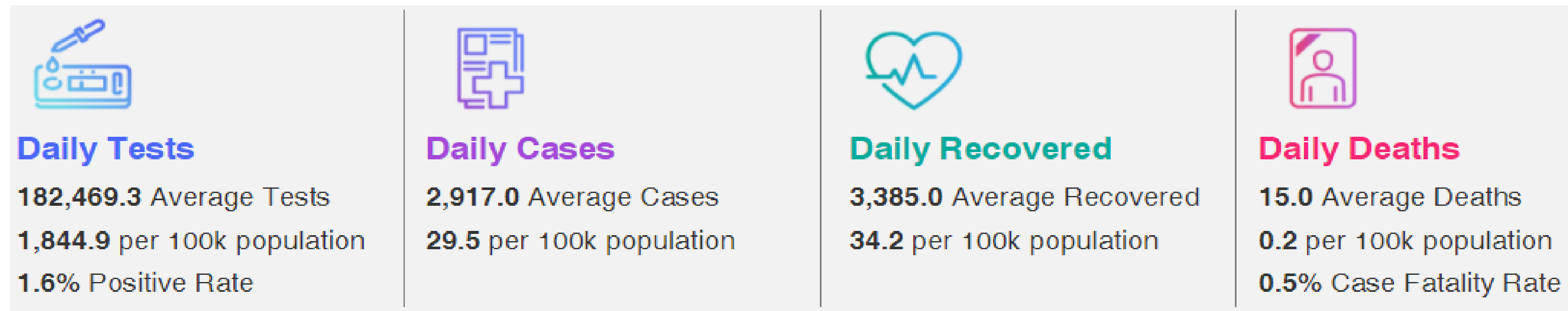


Figure 6A: TOTAL Number Of Infected And Recovered Cases Due To Covid-19 Reported By The UAE

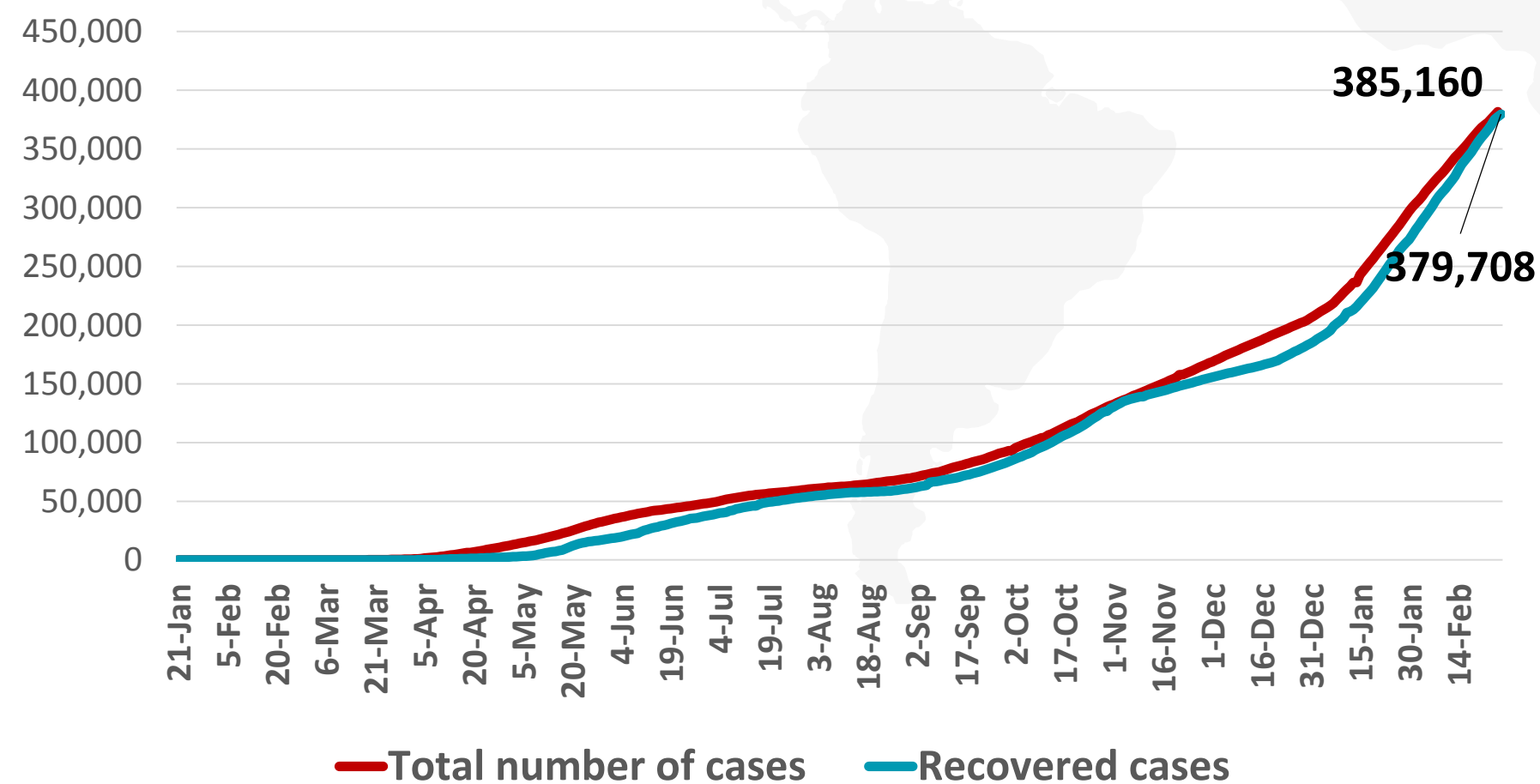


Figure 6 B: TOTAL NUMBER and Percentage of UAE population Vaccinated

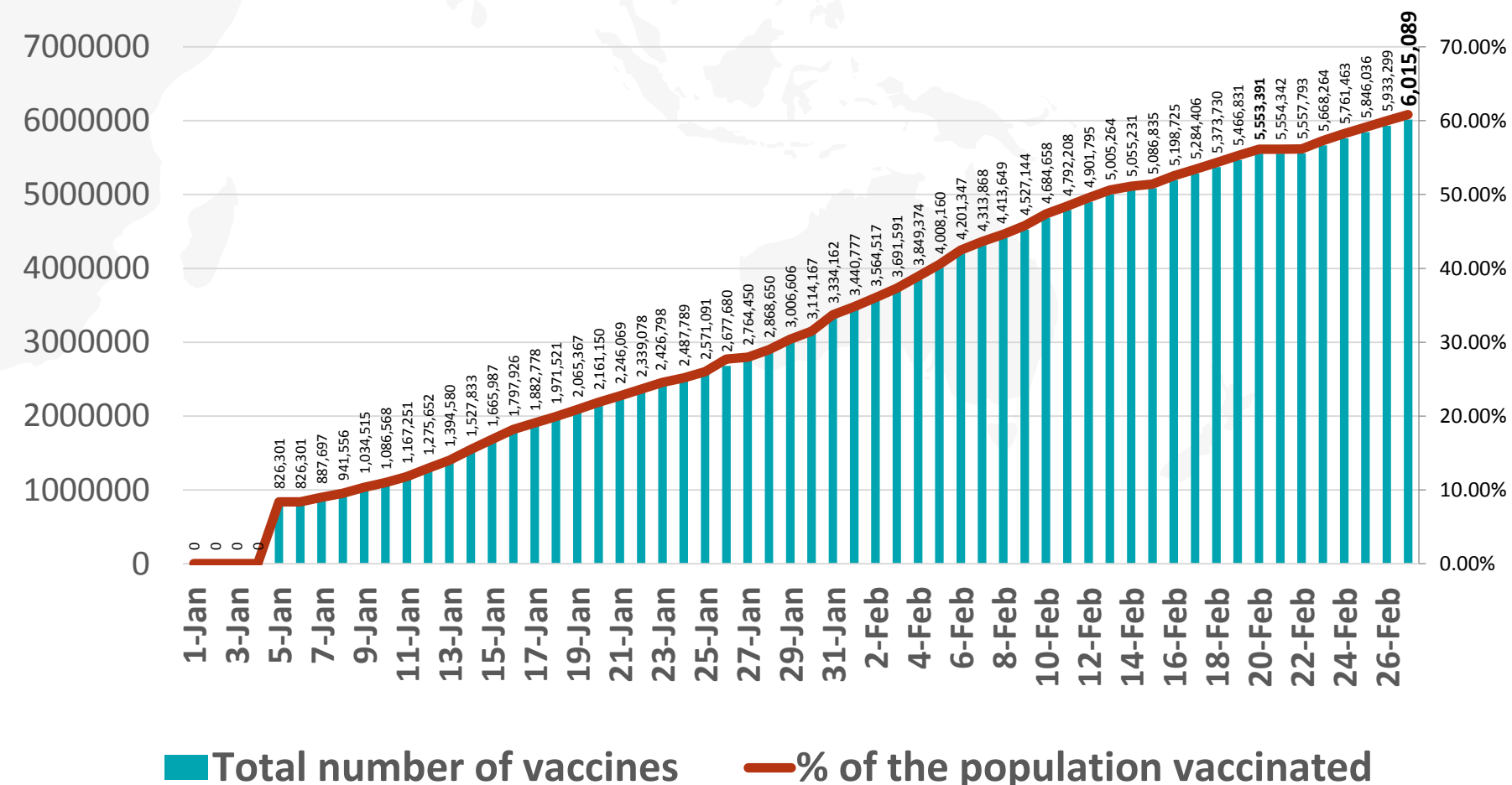
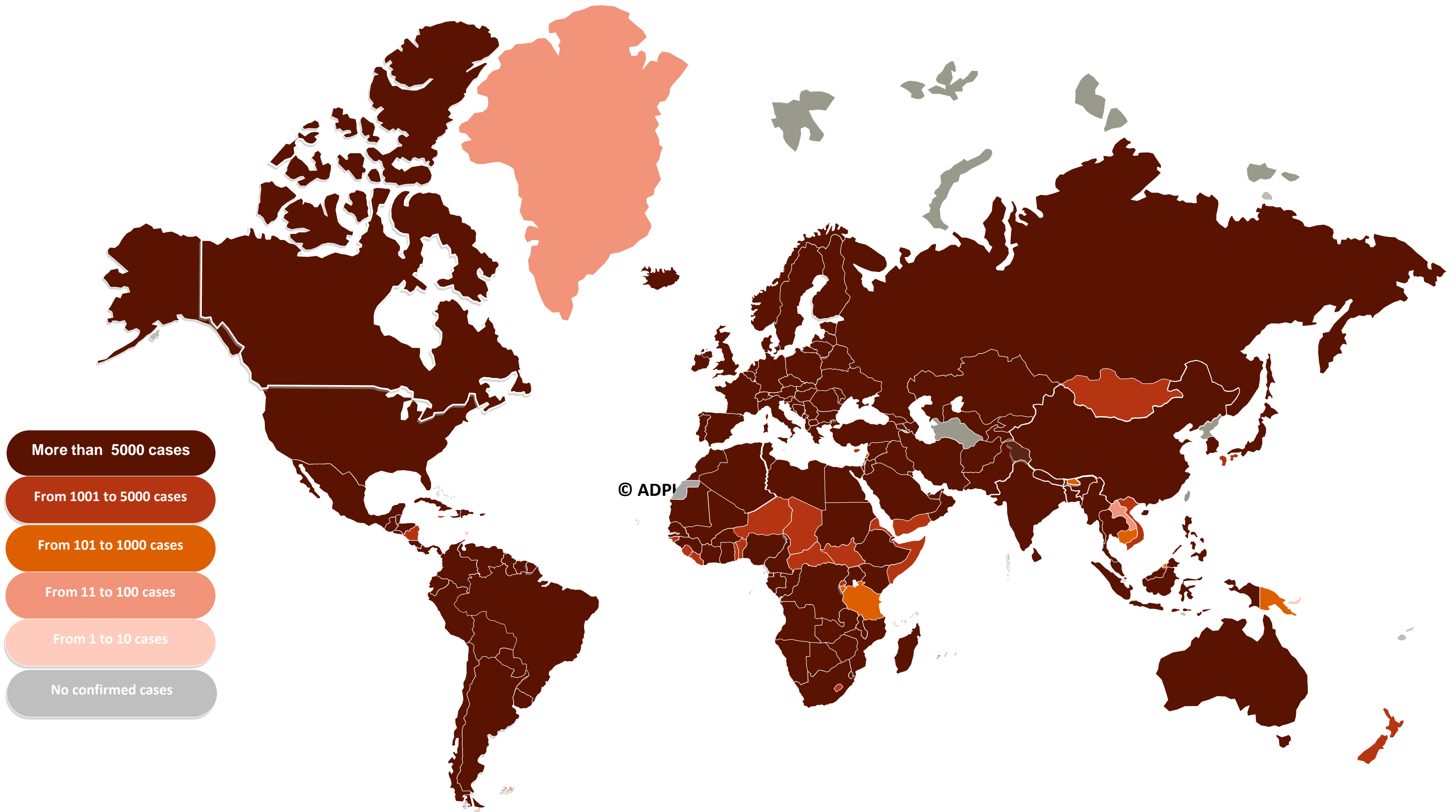


Figure 7A : Global Distribution of COVID-19 Cases



More than 5000 cases

From 1001 to 5000 cases

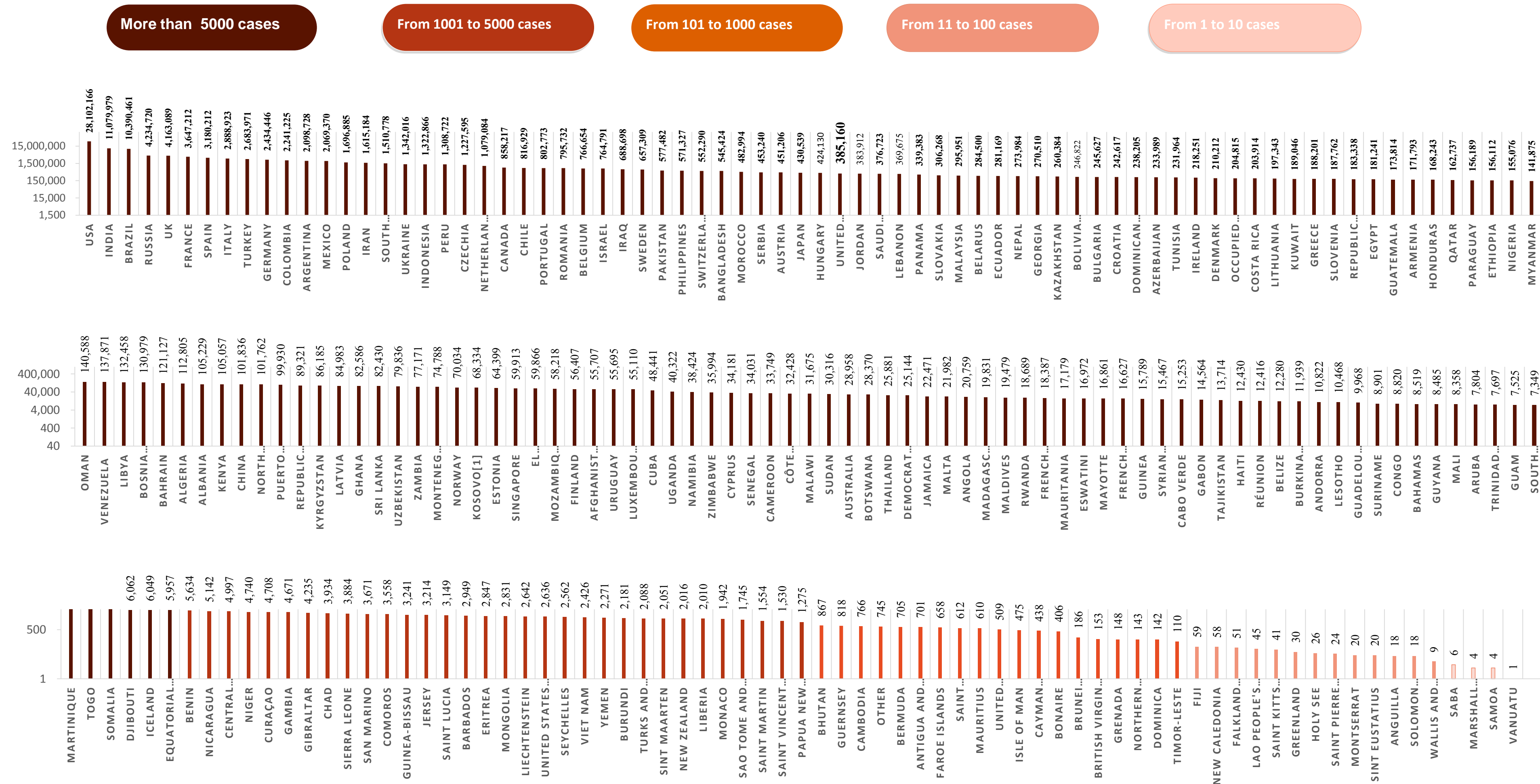
From 101 to 1000 cases

From 11 to 100 cases

From 1 to 10 cases

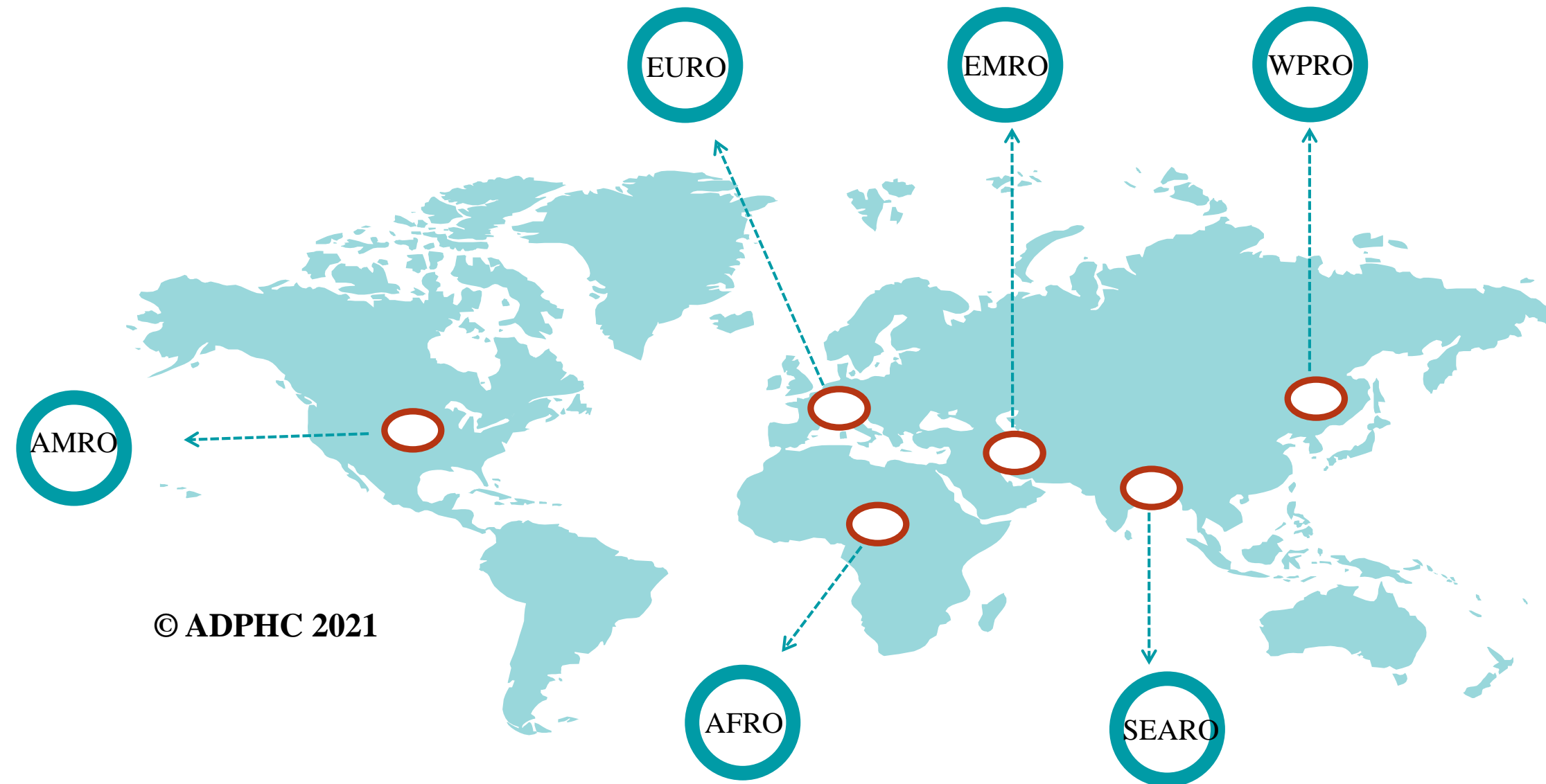
No confirmed cases

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

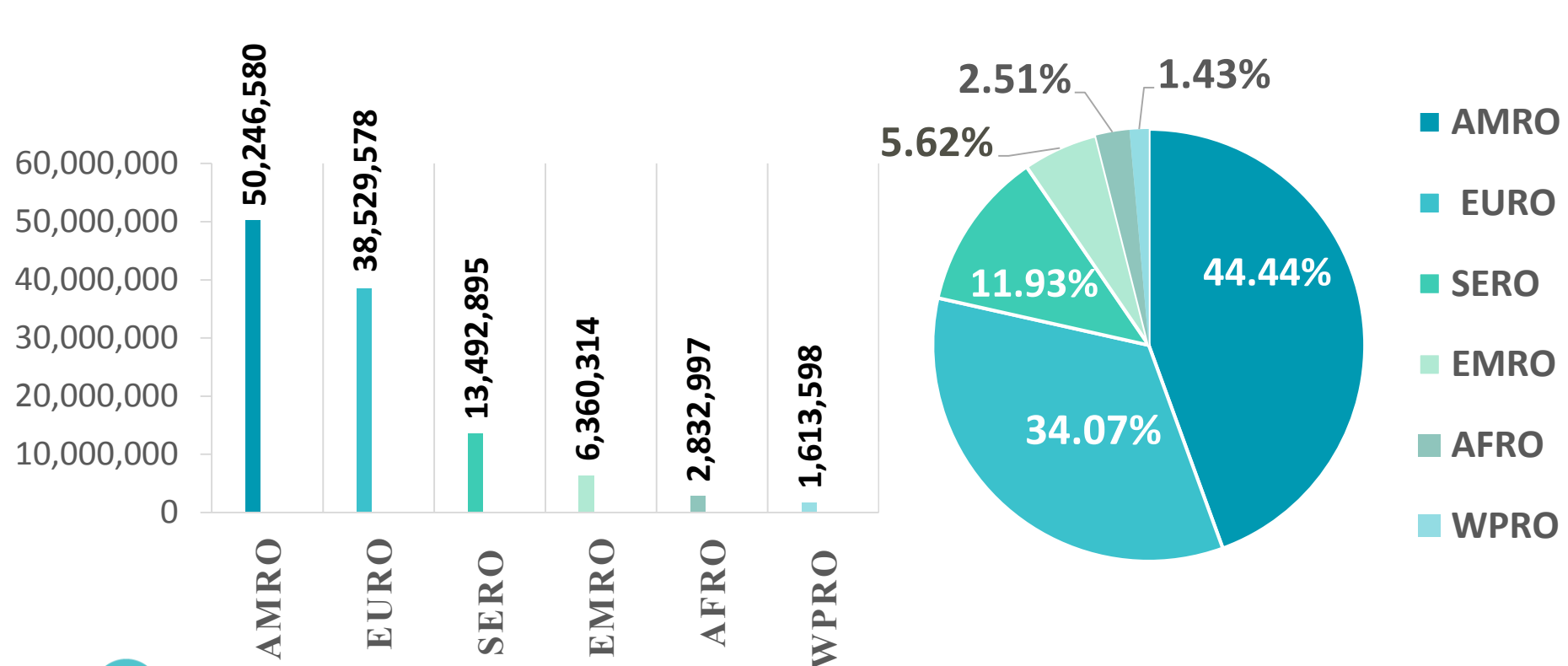


Other*: includes cases and deaths reported under the international conveyance(Diamond Princess)

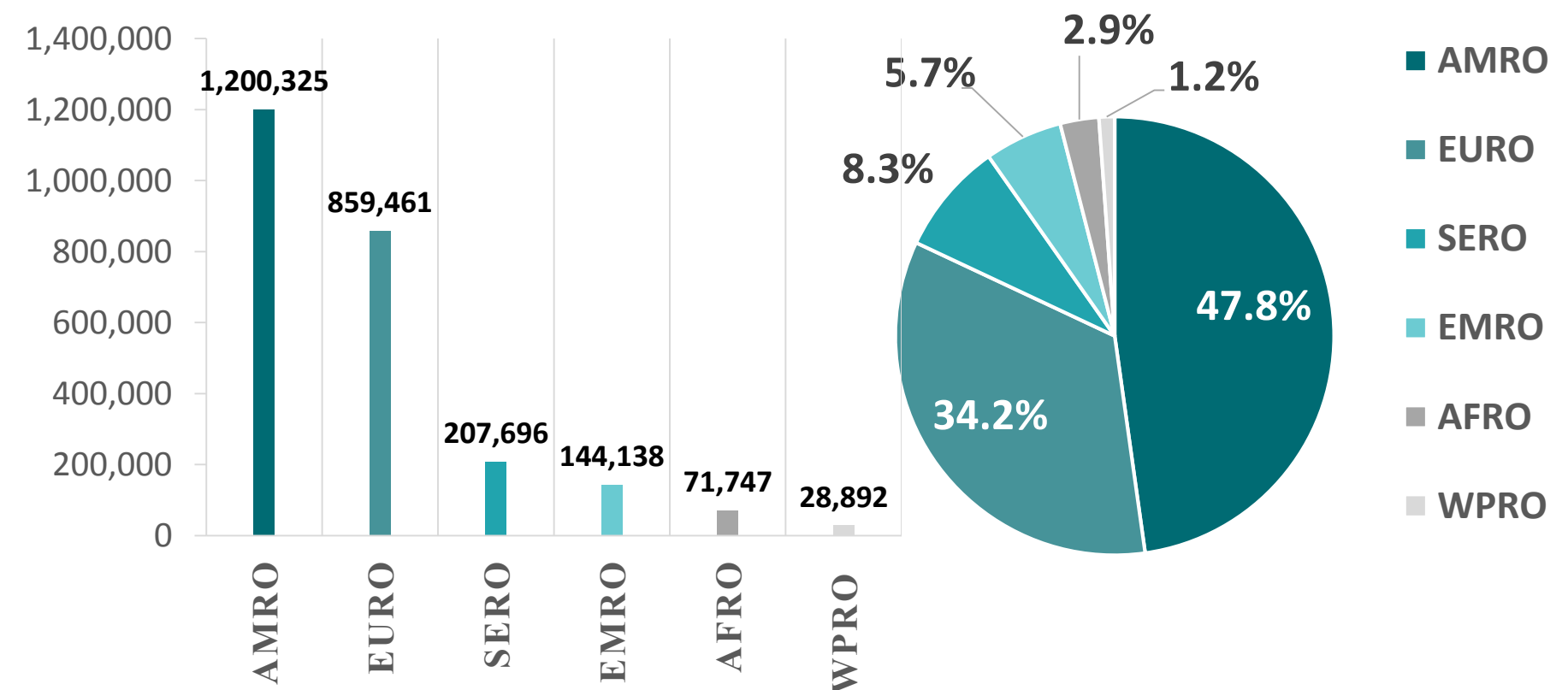
Figure 8: Global Distribution of COVID-19 Cases per Region



INFECTED



DEATHS



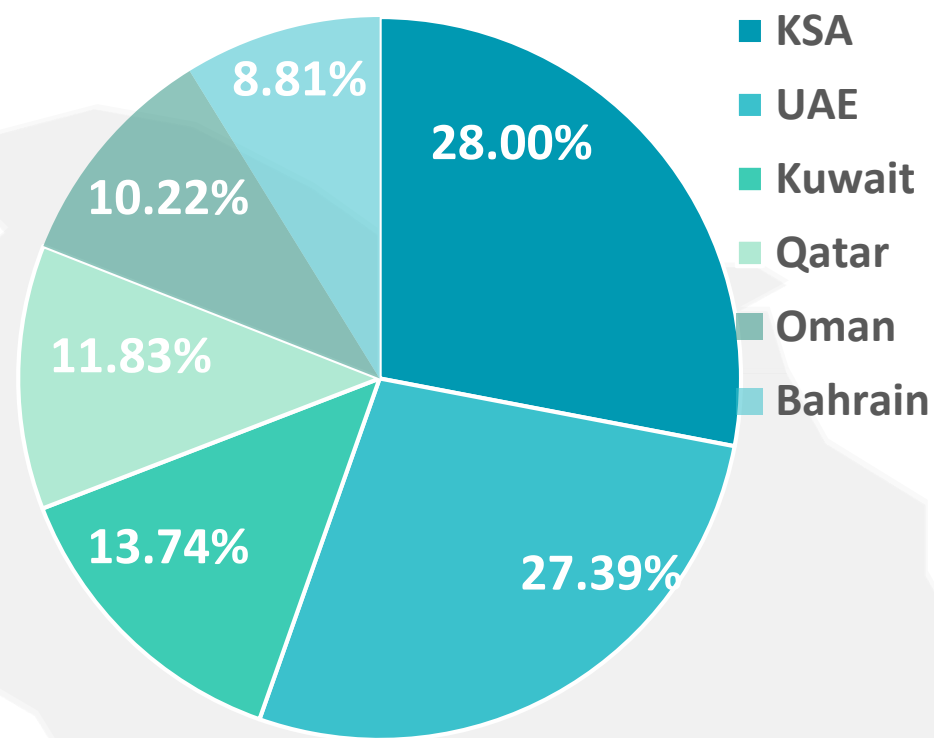
Graphs published by Abu Dhabi Public Health Center 2021 | Data resources: [WHO](#)

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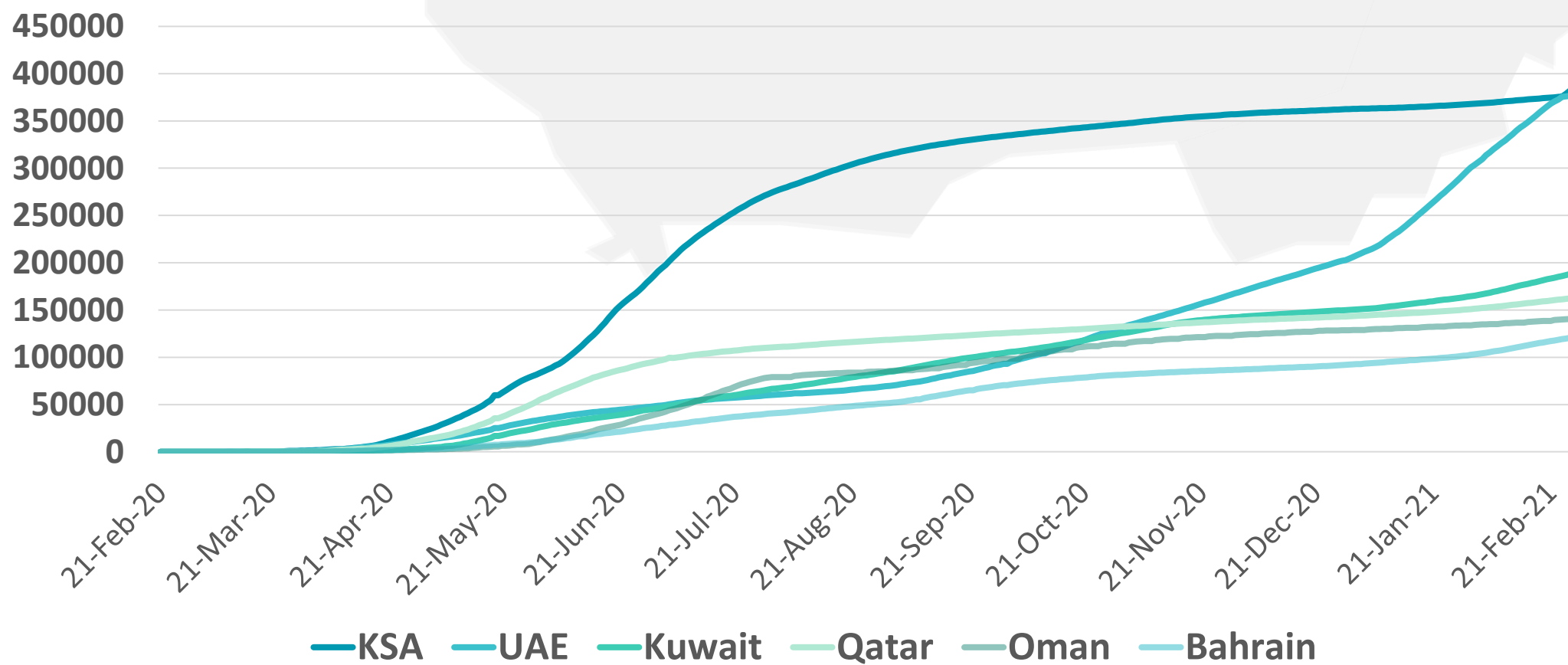
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Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

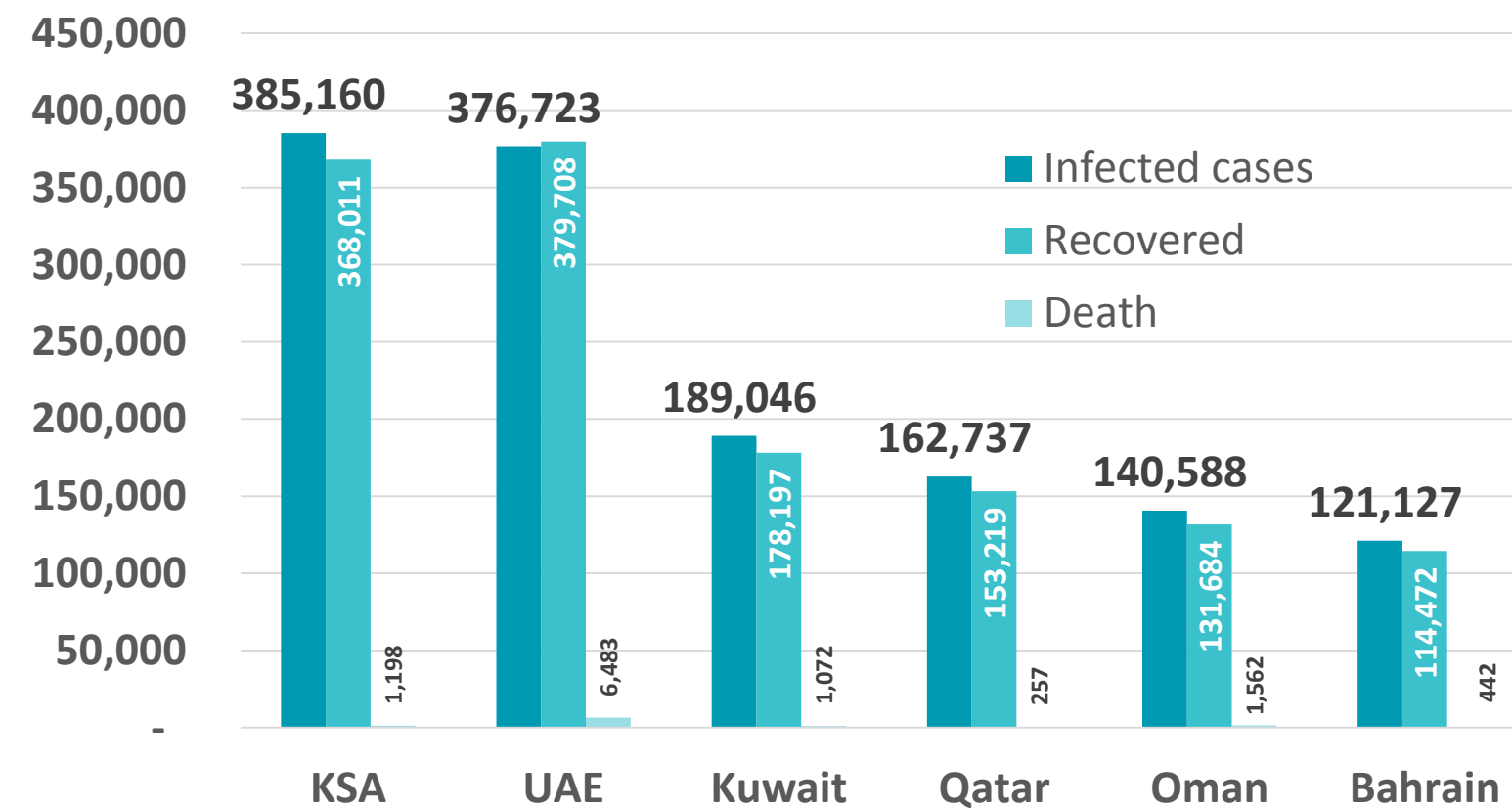
TOTAL NUMBER OF INFECTED CASES



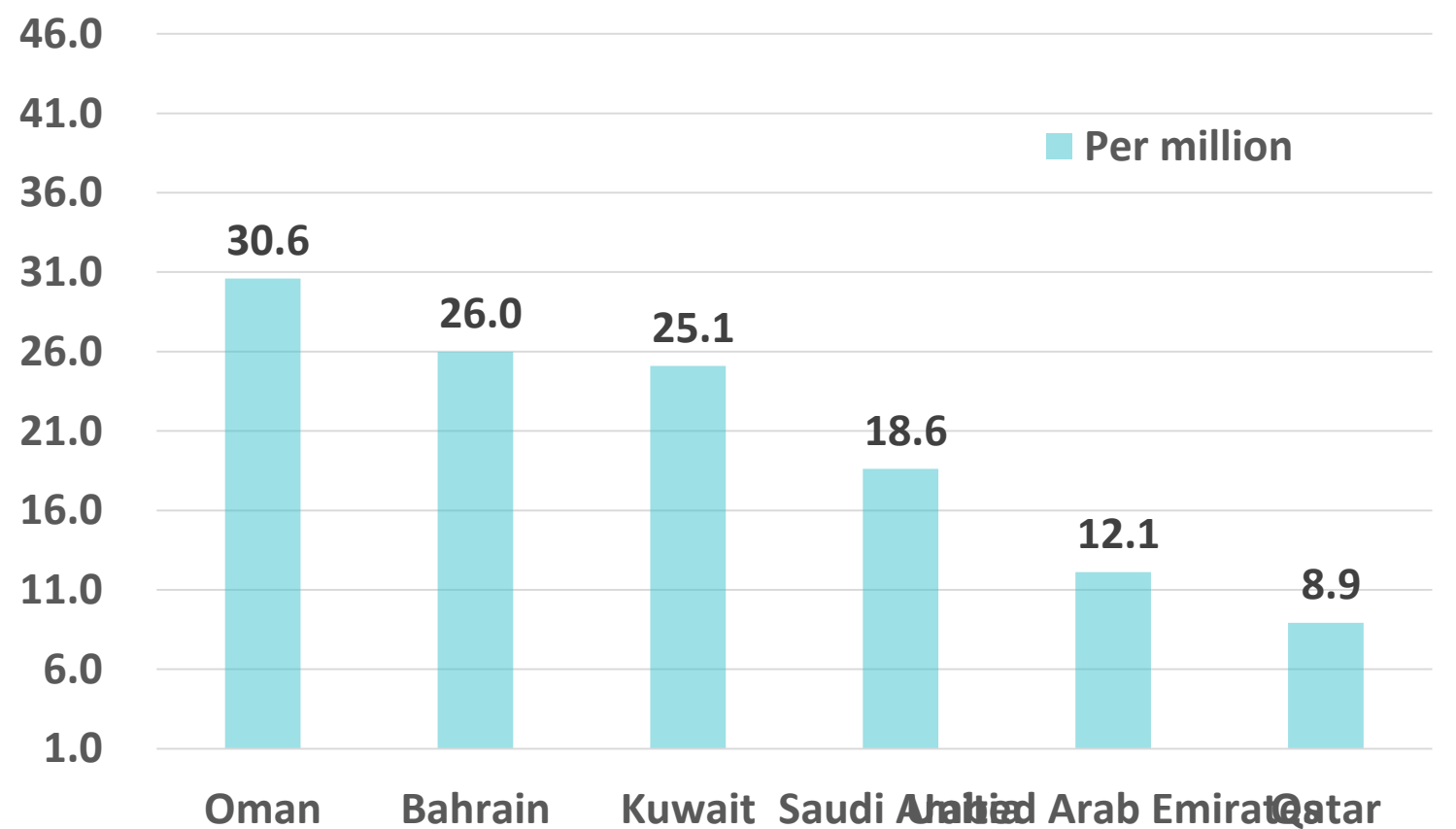
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TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



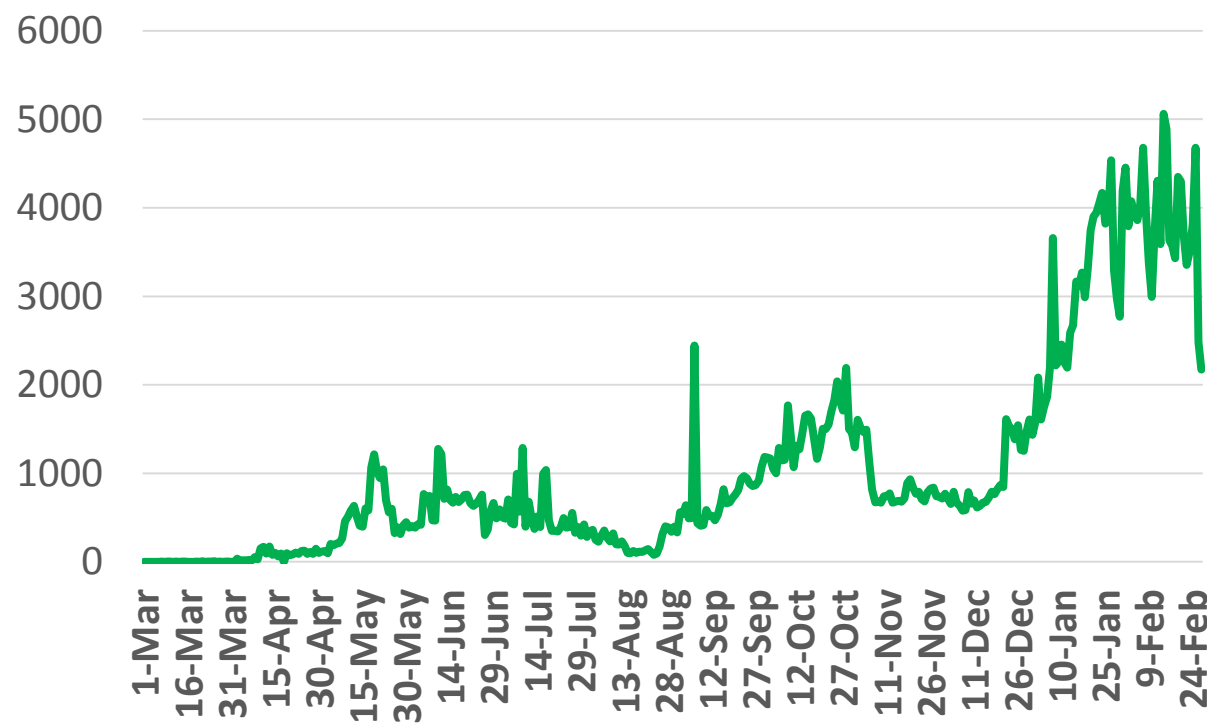
DEATHS PER MILLION



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

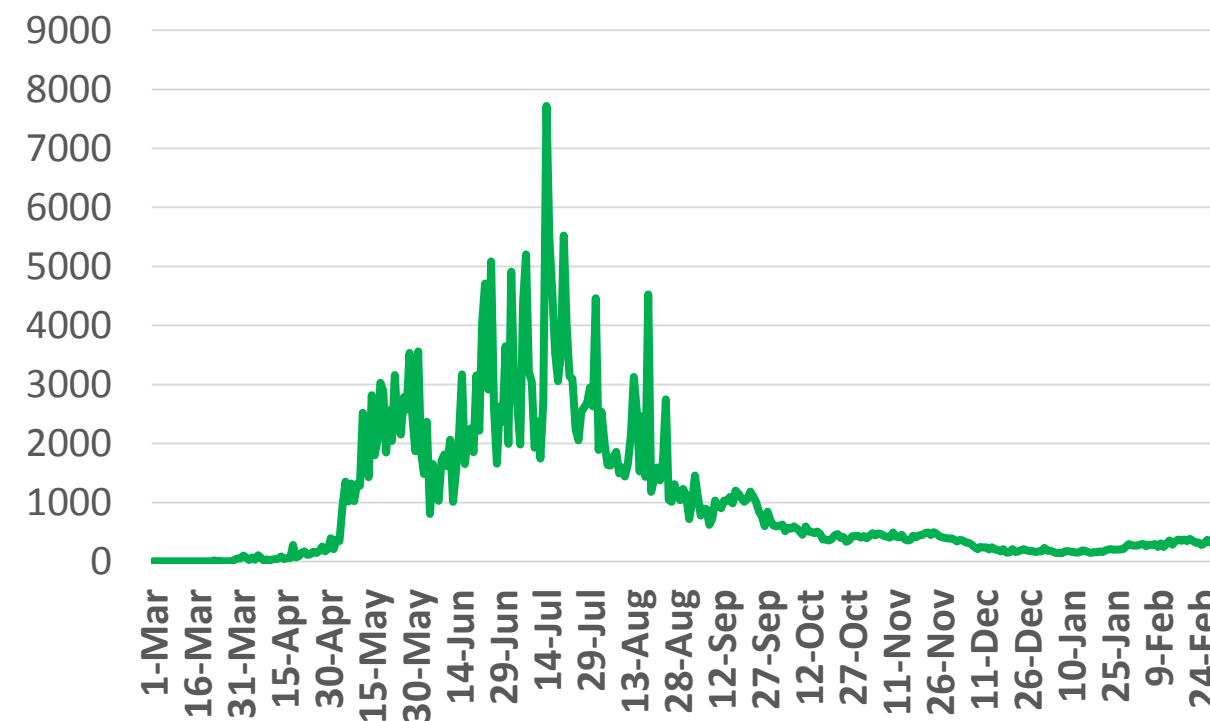
Figure 11: Comparative Analysis of the Distribution of COVID-19 Newly Recovered Cases in GCC Countries

UAE



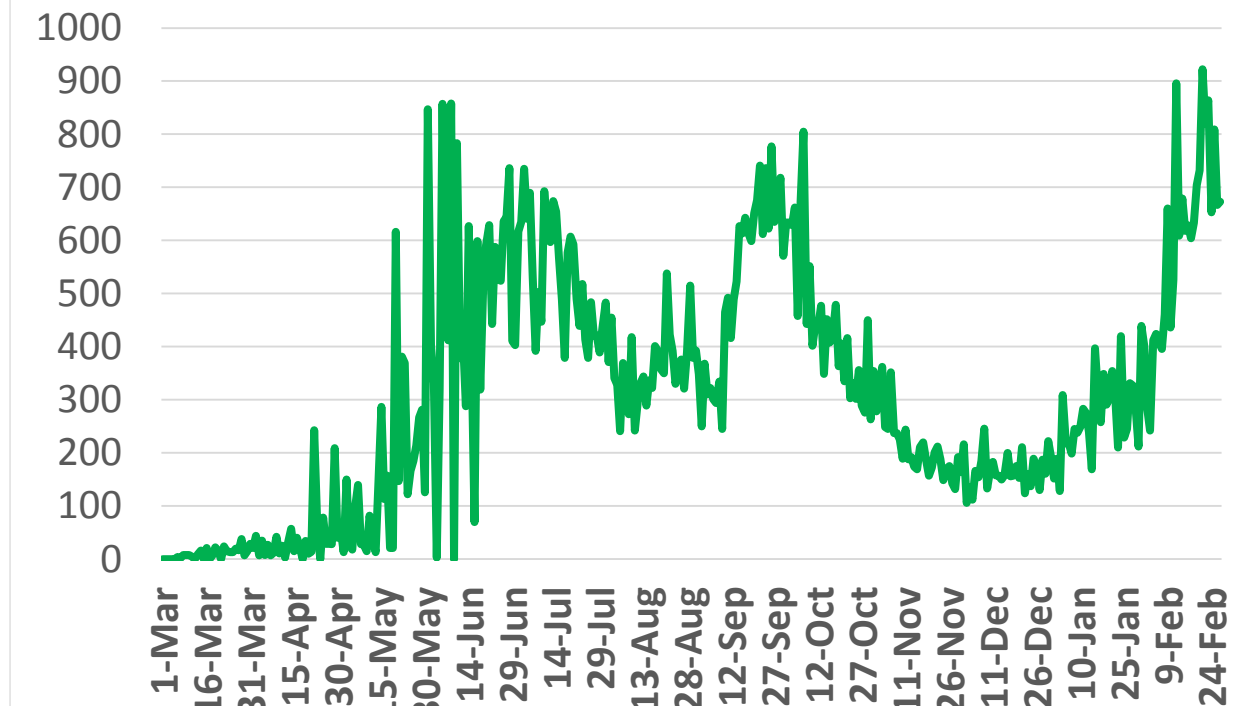
Source : National Emergency Crisis and Disaster Management Authority

KSA



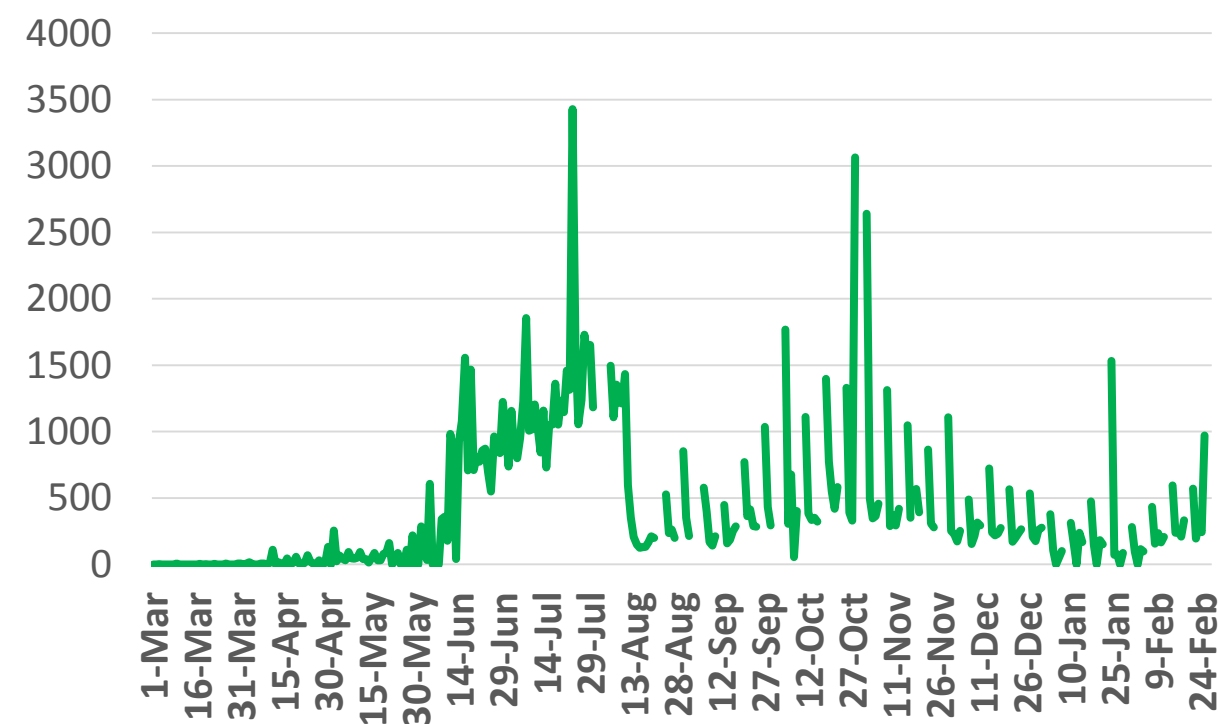
Source : KSA ministry of health

Bahrain



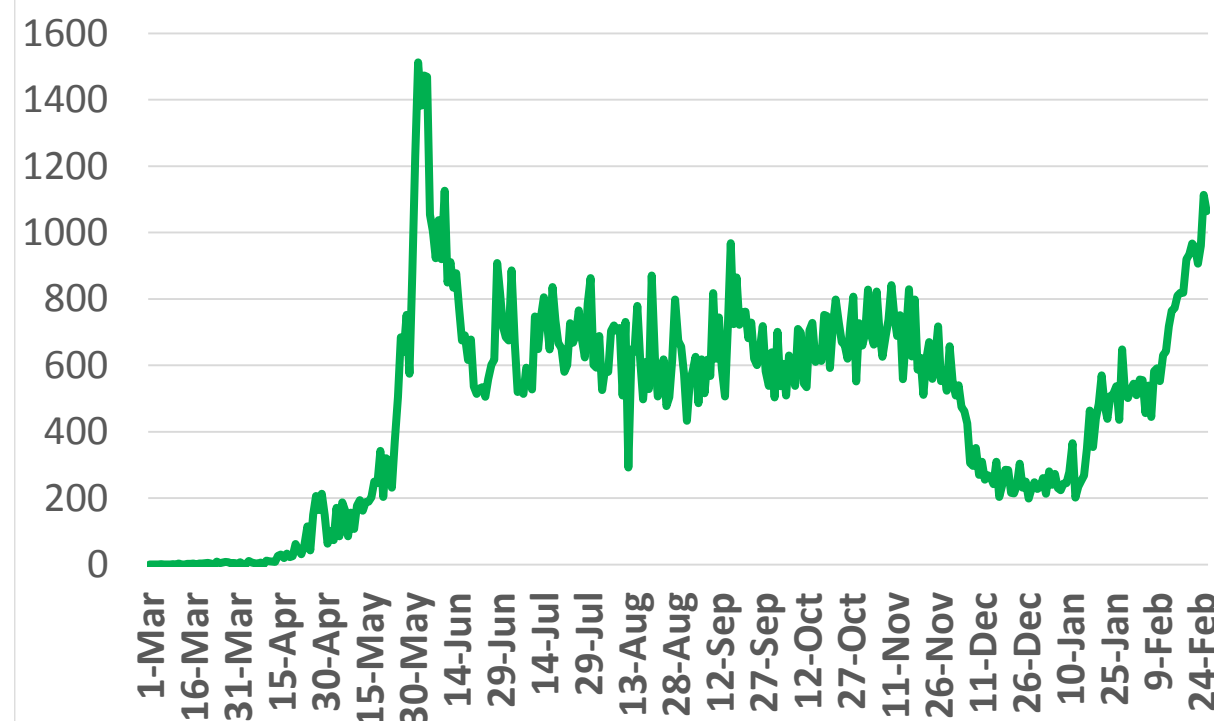
Source : Bahrain ministry of health

Oman



Source : Oman ministry of health

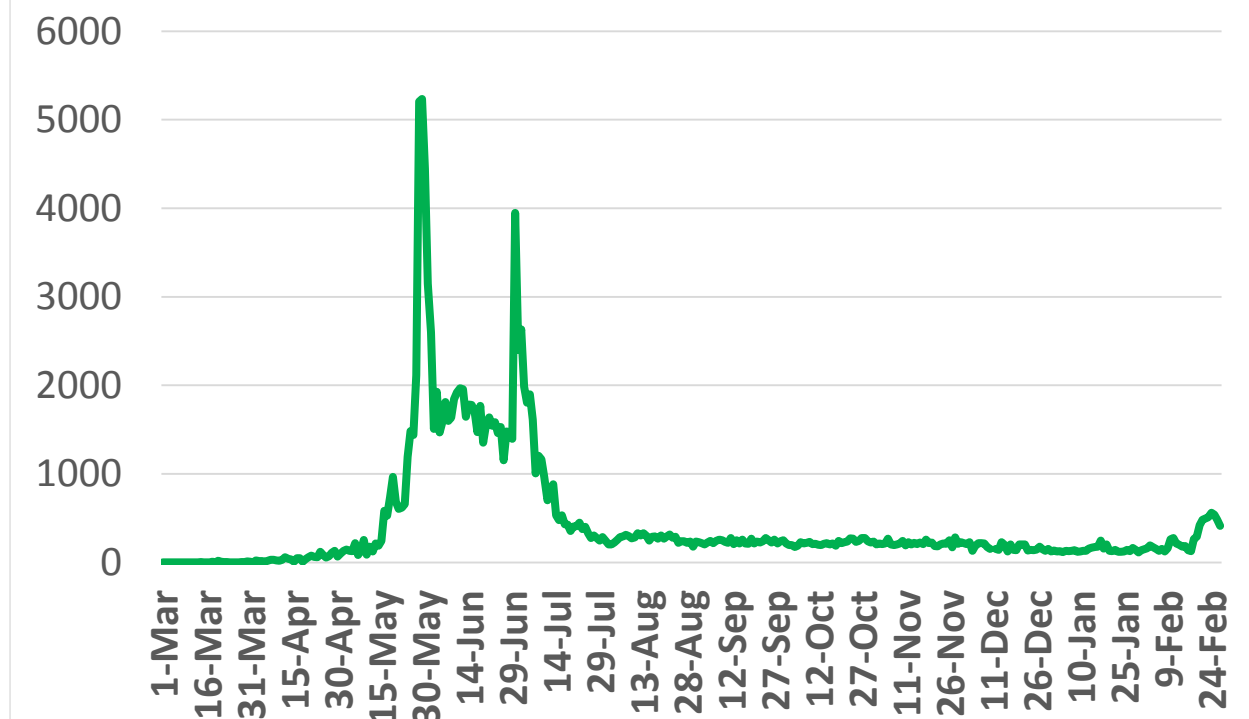
Kuwait



Source : Kuwait ministry of health

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QATAR



Source : Qatar ministry of health

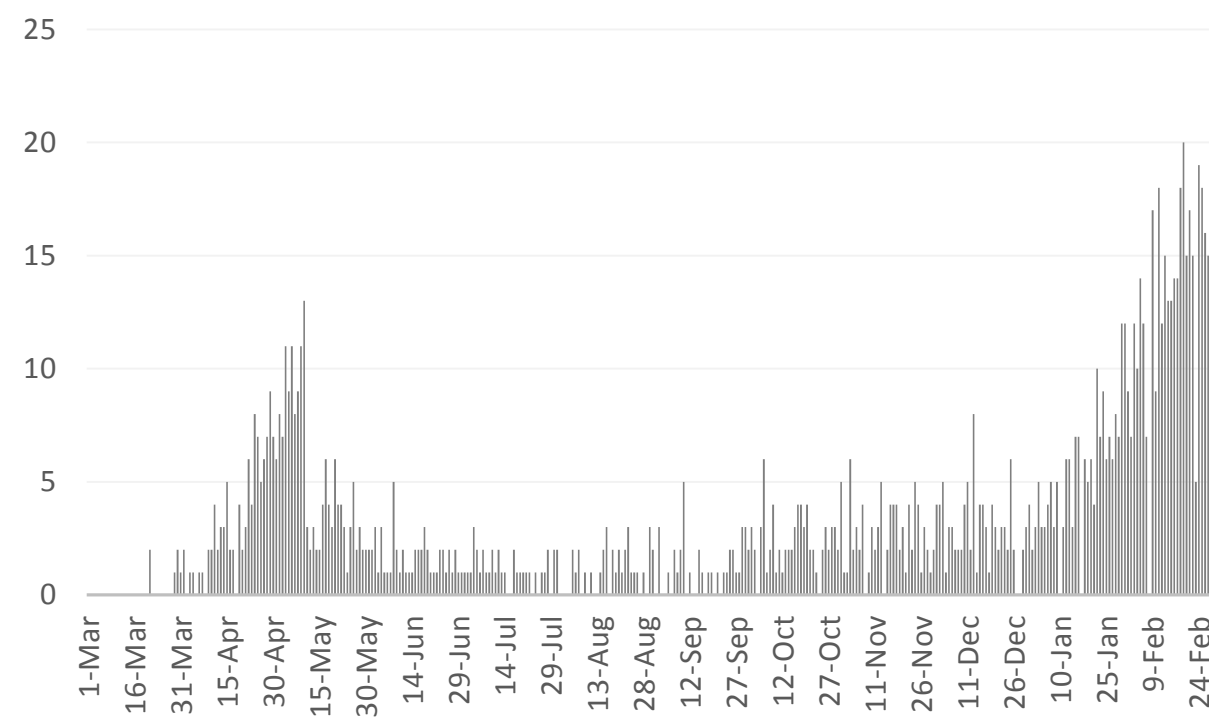
*No announced statistic data from 31 JUL to 4 AUG, 21,23,28,30 AUG 2,4,5,11,12,18,19,25,26,30 SEP,1,2,9,10,16,17,23,24,30 OCT, 6,7,13,14,17,20,21, 27,28 NOV,4,5,11,12,18,19,25,31 DEC 2020, 1,2,9,10,15,16,22,23,29,30 JAN, 5,5 FEB 2021

*No announced statistic data on weekends and official holidays.



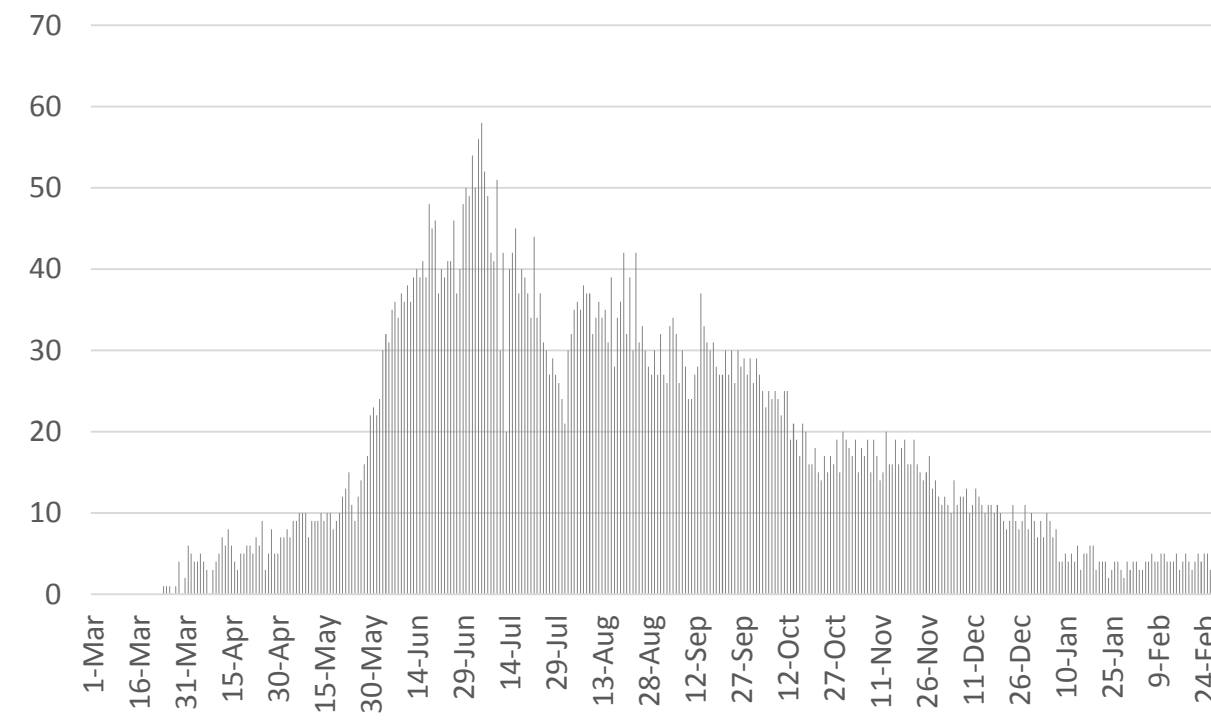
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries

UAE



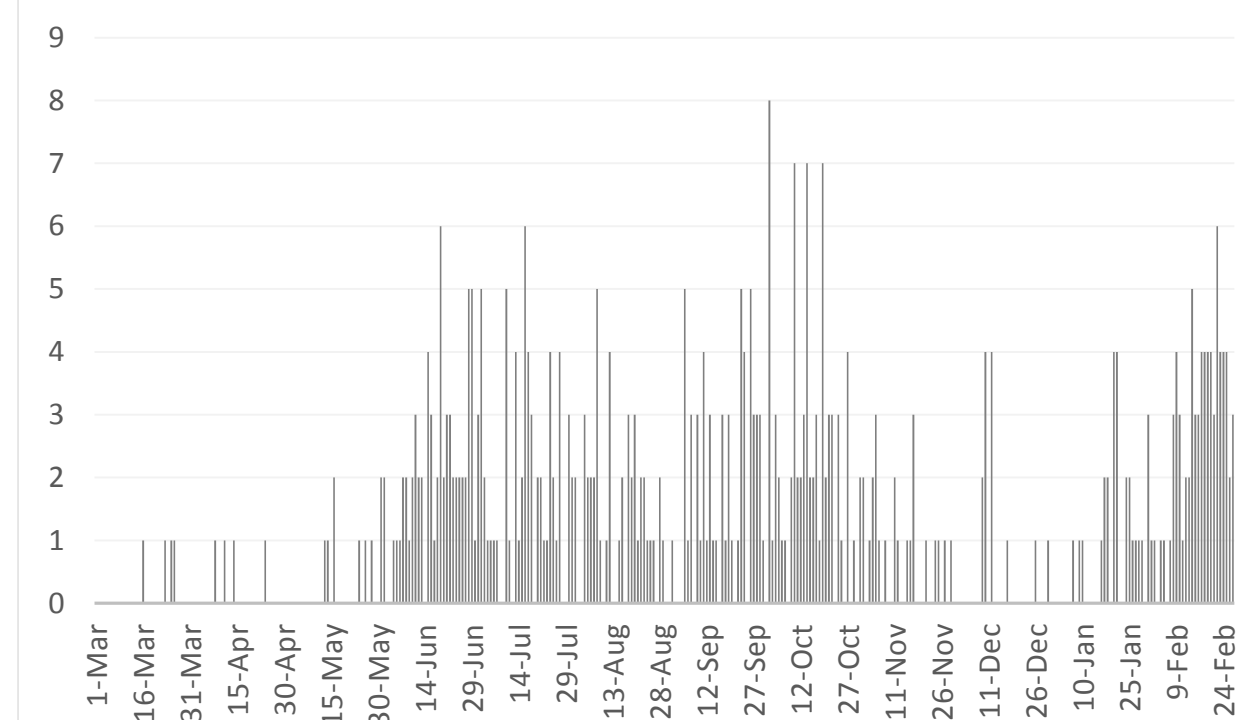
Source : National Emergency Crisis and Disaster Management Authority

KSA



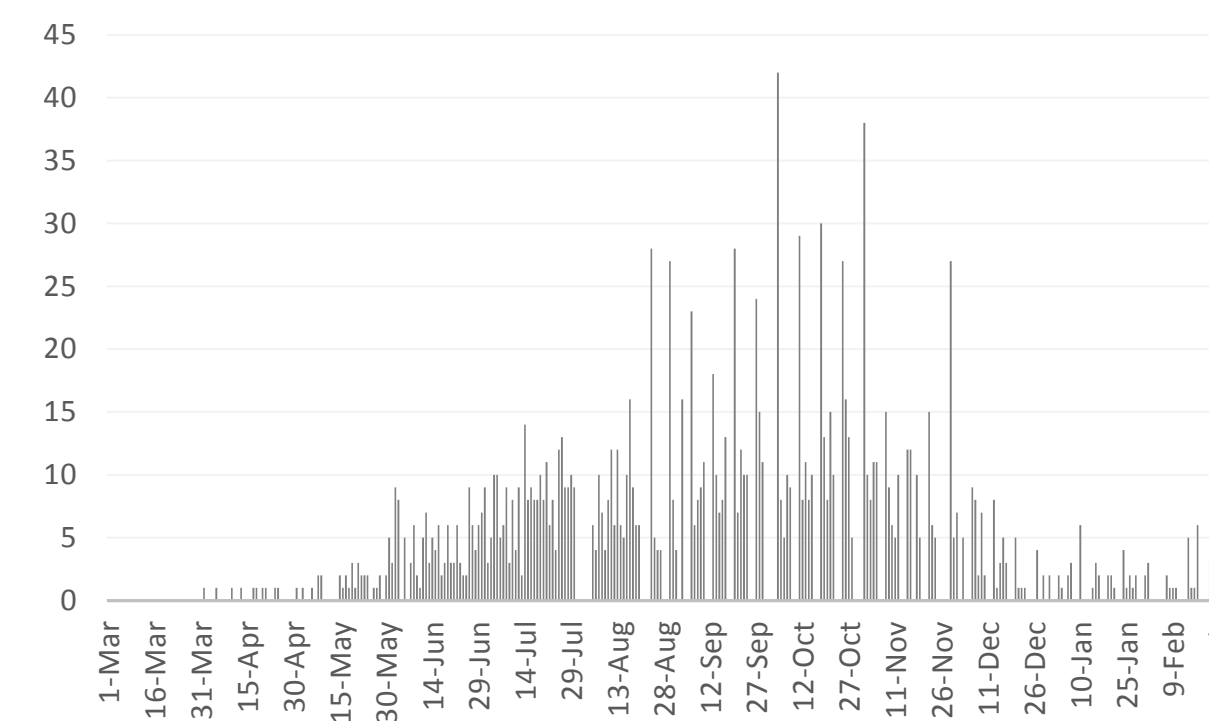
Source : KSA ministry of health

Bahrain



Source :WHO

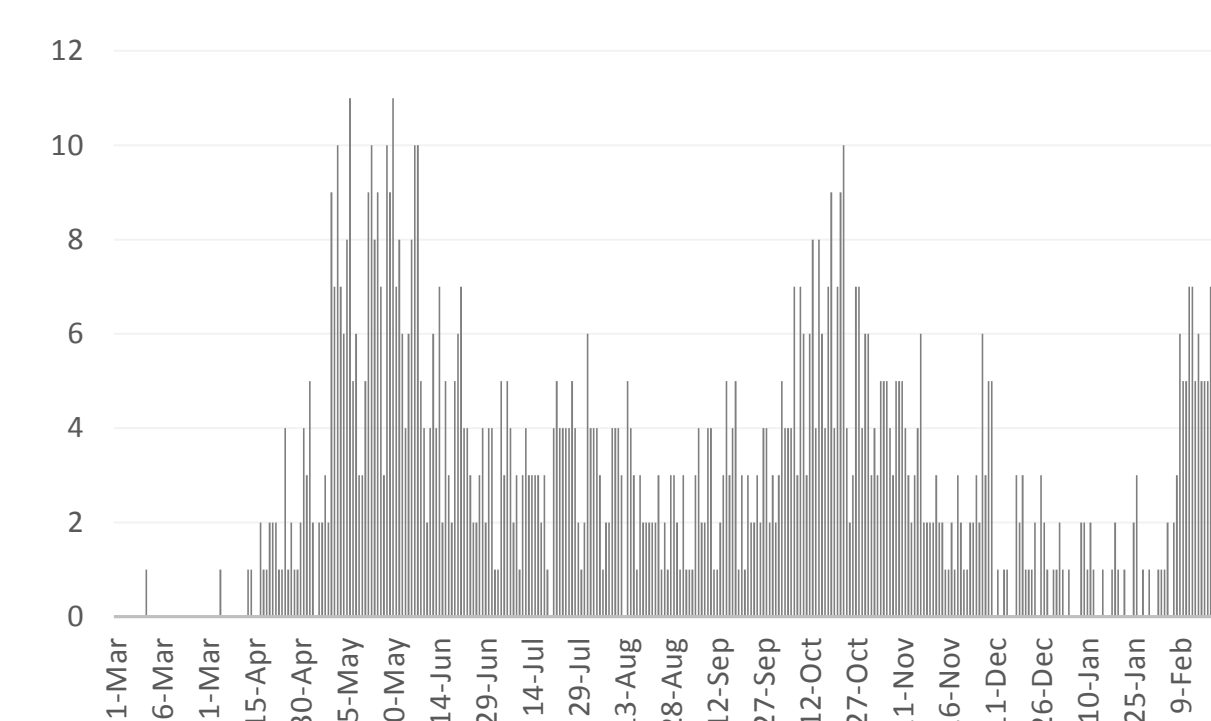
Oman



Source :Oman ministry of health

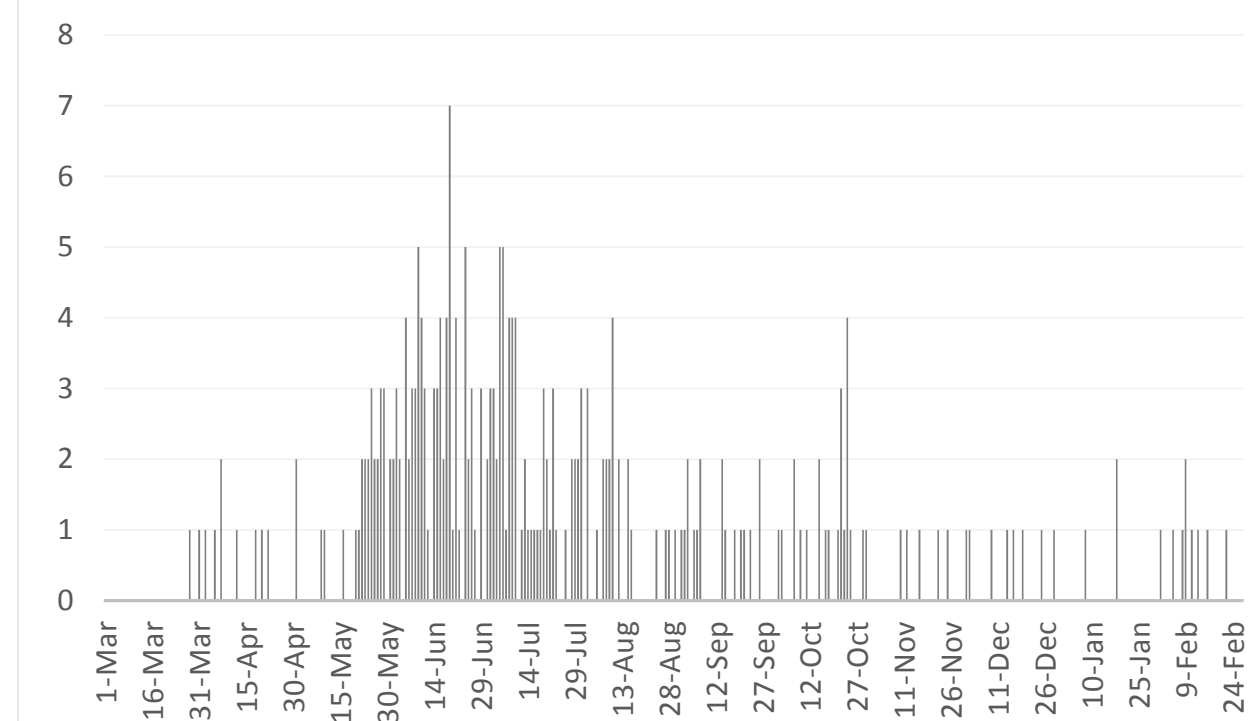
Kuwait

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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 2-6-5-11,12,18,19,25,26,30-SEP,1-2,8,10,16,17,21,24,30,21-OCT, 6-7,13,14,17,20,21, 27,28-NOV,4,5,11,12,18,19,25,31-DEC 2020, 1-2,9,10,15,16,22,23,29,30,31-JAN, 5,5-FEB 2021

*No announced statistic data on weekends and official holidays.



THE CONFERENCE FOCUSES ON TRANSLATING RESEARCH INTO A PUBLIC HEALTH RESPONSE

WHO SPEAKERS :

Dr. Maria Van KerKhove, World Health Organization, Geneva Switzerland.

The Technical lead of COVID-19 response and the head of emerging diseases and zoonosis unit at WHO.

Dr Rana Hajjeh, World Health Organization, EMRO, Egypt.

Director of Programme Management.

ABU DHABI PUBLIC HEALTH SPEAKERS CENTERS/ PARTICIPANTS :

Dr. Farida Al Hosani.

Director of Communicable Disease and Chair of the national COVID19 committee.

Dr. Omniyat Al Hajeri .

Director of the Community medicine.

Dr Shereena Al Mazrouei,

Department manager of the Health promotion , Member Of The National COVID19 Committee.

Dr. Shammah Al Memari

Head Section – Public Health Research. Member Of The National COVID19 Committee

DOH SPEAKER :

Dr. Omar Najim, Chairman Advisor Of DOH.

With multiple local international speakers from around the world. The conference highlighted the COVID19 research efforts in the UAE. Including variety of entities and institutions , such as ADPHC, UAE University , DHA, Khalifa University , MBRU, NY University, Sharjah University, ..etc.

The next pages will highlight the ADPHC research collaborations presented in the conference.

Conference in highlight:

Dr. Maria van kerkhove, head emerging diseases and zoonoses unit COVID-19 health ops and technical lead mers-cov technical lead, world health organization highlighted the global COVID-19 situation including epidemiological trends and the global strategic objectives including the risk monitoring for SAR-COV-2 variants and emphasized that even though we have developed operational and scientific solutions but we have not yet applied the knowledge and in 2021 we must redouble our efforts to suppress transmission, protect the vulnerable and save lives in a comprehensive coordinated way.

Dr. Farida Al Hossani, Official Spokesperson for Health Sector on COVID-19, Manager, Communicable Diseases, Abu Dhabi Public Health Center, UAE addressed the role of the National Research Committee for COVID-19 in UAE and explained the perspectives of work done in 2020 with different stakeholders and the importance of Research as emergency response for COVID-19 infection

Dr. Nawal Al Kaabi highlighted the outstanding efforts of the UAE in mass screening, early diagnosis of the patients and also the vaccination program. Dr. Nawal also discussed the UAE experience in the phase III trial of the inactivated SARS-COV2 vaccine. She gave assurance about the efficacy and the safety of the vaccine and encouraged the attendees to get the vaccine.

Dr. Ziad Memish from King Saud Medical City, Ministry of Health, KSA addressed the public health emergency concerns and its global implications where he started from the historic overview of IHR &PHIEC, the evolution of the outbreak and the typed of coronaviruses, difference between Male and Female reaction to the virus and addressed the strategic choices for responding to COVID-19 from selection to exit.





Article 1
Published
Authors

Epidemiological characterization of symptomatic and asymptomatic COVID-19 cases and positivity in subsequent RT-PCR tests in the United Arab Emirate

February 12, 2021, [PLOS ONE](#)

Rami Al Rifai (UAEU), Farida Al Hosani (ADPHC), Shammah Al Memari (ADPHC), Shereena Al Mazrouie (ADPHC), Juan Acuna (KU), Bashir Aden (DOH), Laui Ahmed (UAEU).

Study Objectives:

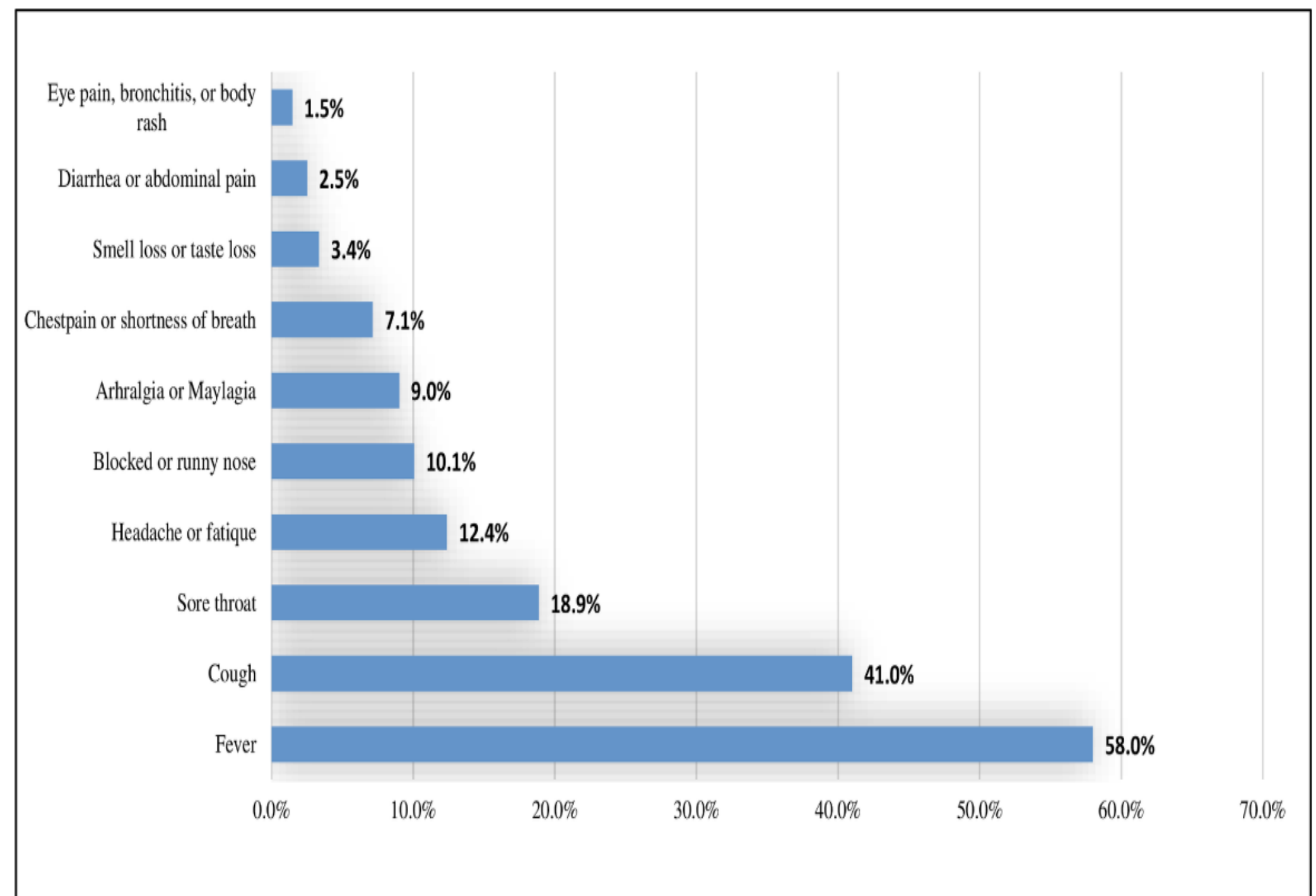
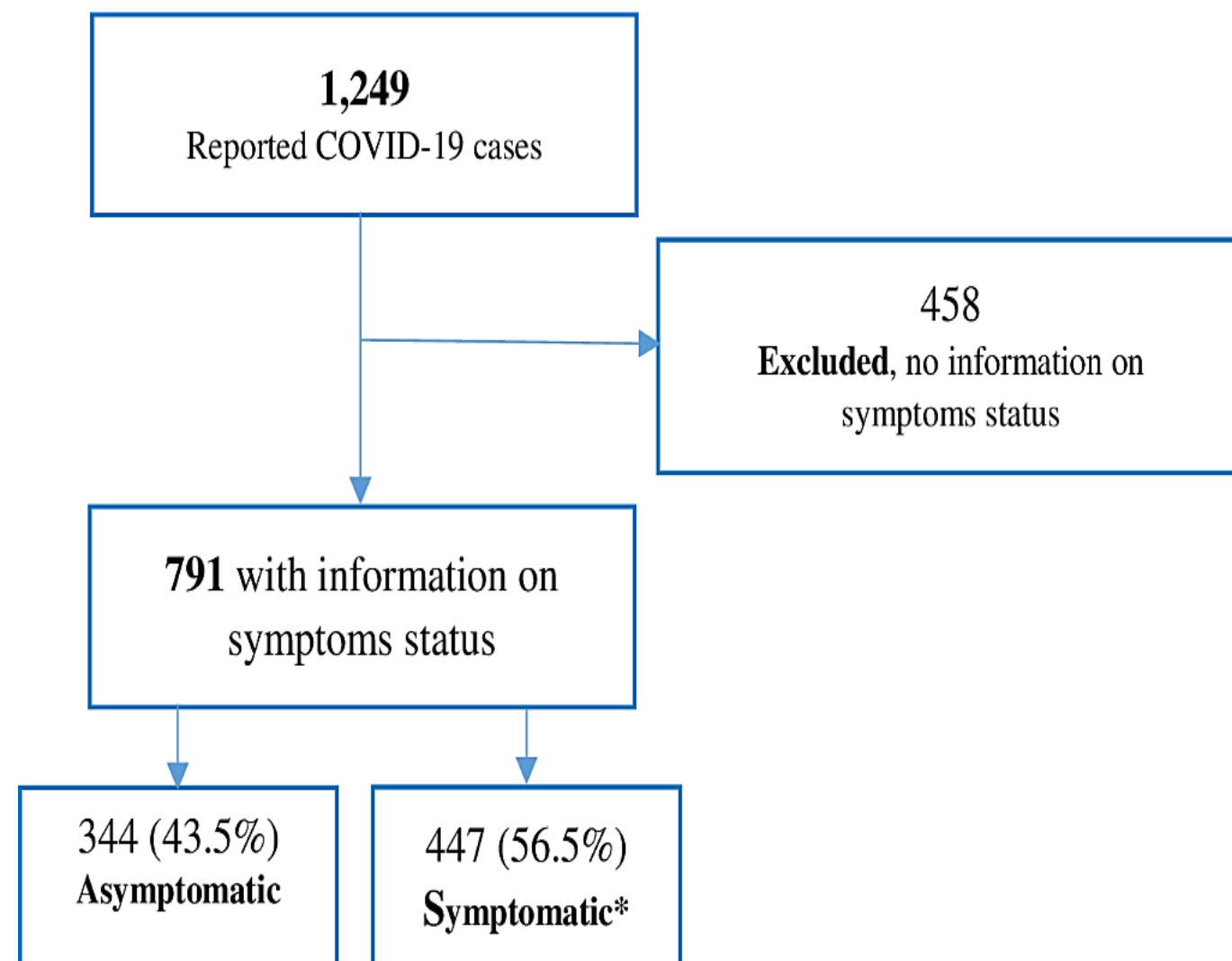
To compare the characteristic of asymptomatic and symptomatic cases of COVID19

Study population

- First cohort of the COVID-19 RT-PCR confirmed cases passively or actively identified and reported.
- Timeline: Feb 28 up to April 08 2020.

Data source

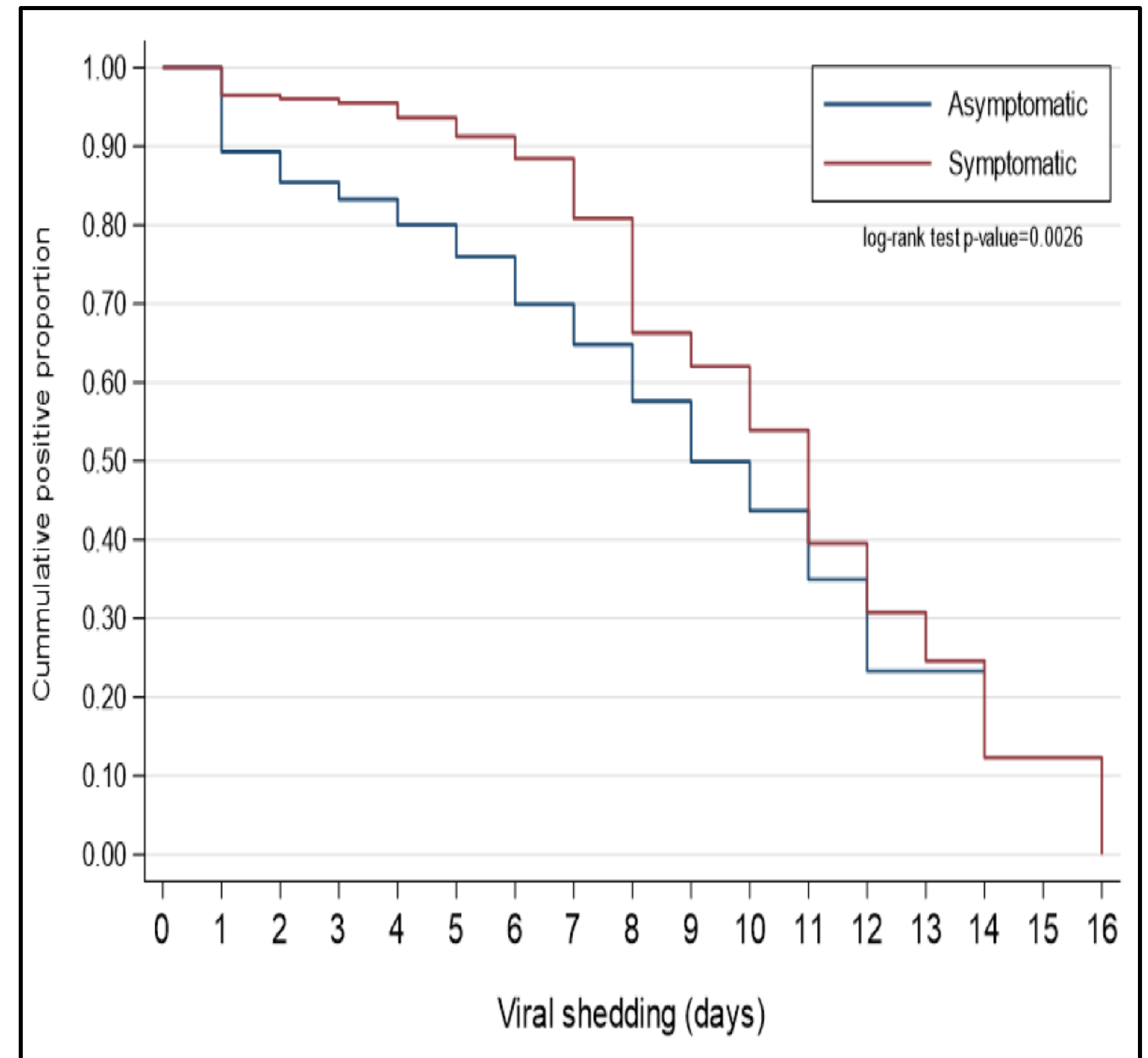
- Abu Dhabi Public Health Center-DOH.





Continued

Characteristics	Asymptomatic	Symptomatic	P-value
	(N= 344) n (%)	(N= 447) n (%)	
Age			
Mean age = 35.6 ± 12.7 SD years	34.5 ± 12.7	36.3 ± 12.6	0.049
IQR = 15 years	14	17	
Range = 1 – 81 years	1-71	1-81	
≤20	28 (8.3)	21 (4.7)	0.040
21–39	211 (62.6)	268 (60.2)	
40–59	78 (23.1)	135 (30.3)	
≥60	20 (5.9)	21 (4.7)	
Gender			0.202
Male	279 (81.3)	347 (77.6)	
Female	64 (18.7)	100 (22.4)	
Nationality			0.070
Emirati	71 (20.6)	70 (15.7)	
Non-Emirati	273 (79.4)	377 (84.3)	
Place of work			0.006
Not working	72 (22.7)	63 (14.6)	
Public places	204 (64.4)	284 (65.7)	
Healthcare setting	21 (6.6)	37 (8.6)	
Aviation and tourism services	20 (6.3)	48 (11.1)	





Article 2 Published Authors

Seroprevalence of SARS-CoV-2 infection in the Emirate of Abu Dhabi, United Arab Emirates: a population-based study

Under manuscript review

Ahmed Deemas Alsuwaidi (UAEU), Farida Al Hosani (ADPHC), Shammah Al Memari (ADPHC), Shereena Al Mazrouie (ADPHC), Ahmed Khudair (ADPHC), Hazem Kamal (ADPHC), Taoufik Zoubeidi (UAEU), Hassib Narchi (UAEU), Sami Shaban (UAEU), Mohamud Sheek-Hussein (UAEU), Mai Al Ketbi, (SEHA), Durra Al Baloushi (SEHA), Abubaker Elfateh (SEHA), Hiba Saud AlHumaidan (SEHA), Noura Alghaithi (SEHA), Khalil Afsh (SEHA), Nawal Al Kaabi (SEHA), Laila Abdel Wareth (NRL), Basel Altrabulsi (NRL), Matthew Jones (NRL).

Study Objectives:

- Estimate the seroprevalence of SARS-CoV-2 in a representative sample of the general population (households) in the Emirate of Abu Dhabi by sex, age group and region
- Estimate the seroprevalence of SARS-CoV-2 in a representative sample of the labor work force in labor camps in the Emirate of Abu Dhabi by age group and region.
- Determine risk factors and clinical characteristics associated with infection by comparing the exposures of seropositive and seronegative individuals

Study population

- Households: 4487 households
- Labor camps: 4855 workers from 40 camps

Study Period:

July 19 and August 14, 2020

Table 1 : Results from Household

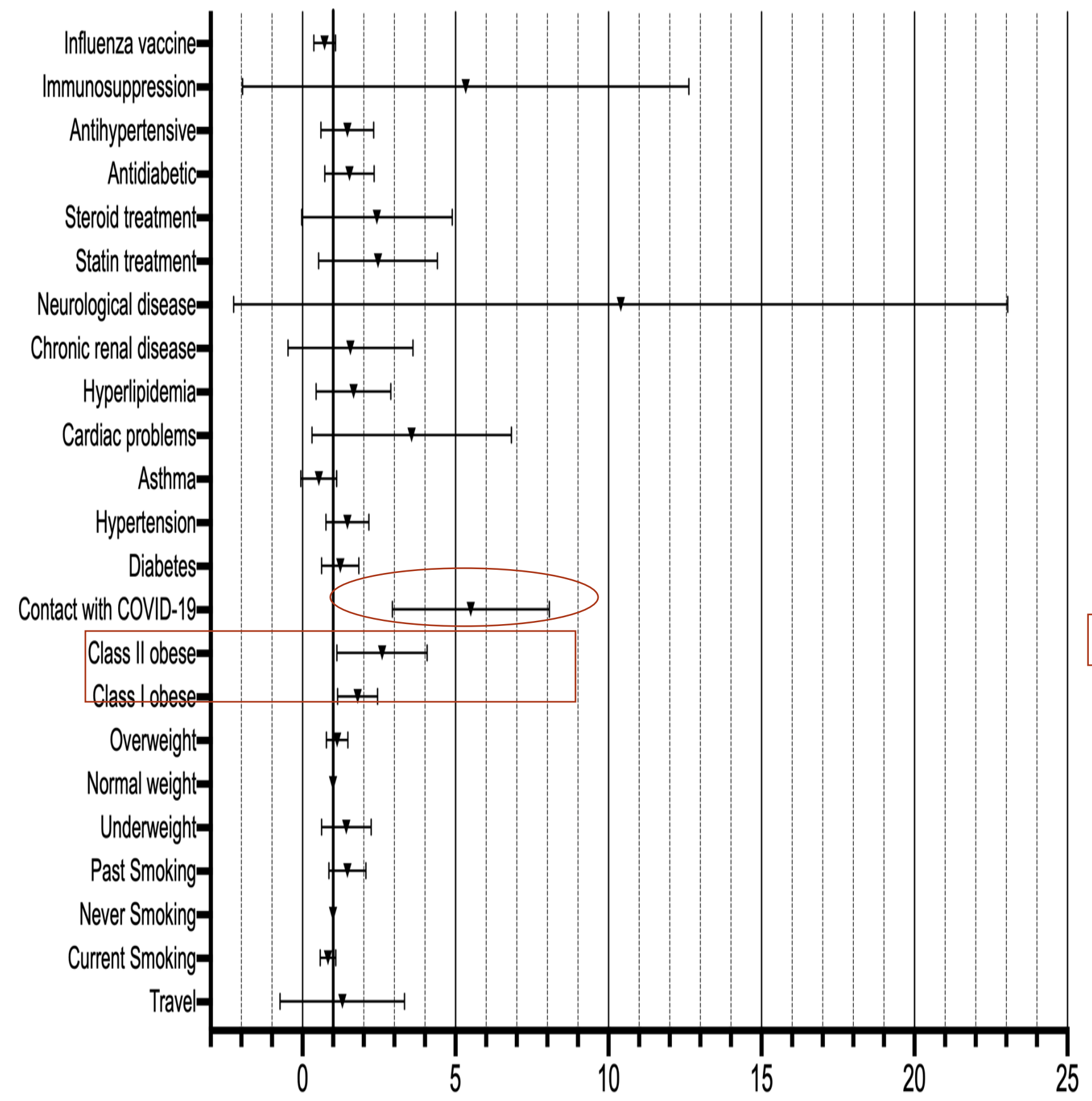
	n (%)	Estimated seroprevalence with 95% CI	Adjusted OR	P
All participants	8,831 (100)	10.4 (9.5–11.4)	NA	NA
Region				
Abu Dhabi	3498 (39.6)	11.8 (10.4–13.4)	3.2 (1.8–5.7)	< 0.001
Al Ain	3298 (37.3)	12.2 (10.5–14.1)	3.0 (1.7–5.3)	< 0.001
Al Dhafra	2037 (23.1)	3.1 (1.7–5.2)	Reference	NA

Table 2 : results from Labor Camps

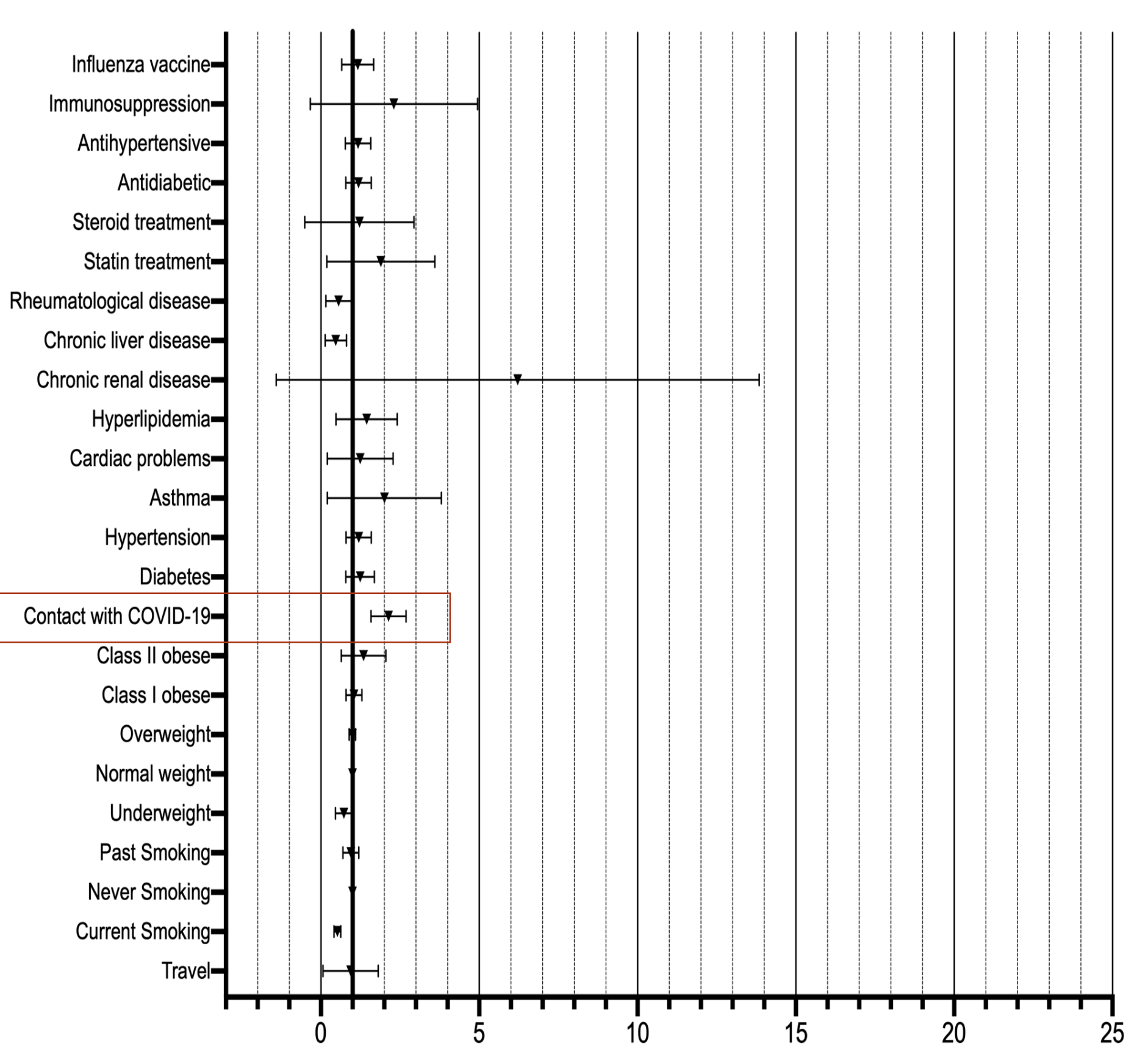
	Number (%) of workers	Estimated Seroprevalence, % (95% CI)	Adjusted OR	P
All workers	4,855 (100)	68.64 (61.7–74.7)	NA	NA
Age (years)				
18–29	1,779 (36.7)	69.54 (60.6–77.3)	Reference	NA
30–39	1,933 (39.8)	68.33 (61.6–74.2)	1.01 (0.8–1.3)	0.89
40–49	883 (8.2)	67.73 (61.3–73.4)	1.03 (0.6–1.6)	0.89
50–59	243 (5.0)	68.43 (58.8–76.7)	1.2 (0.5–2.5)	0.62
≥60	17 (0.3)	58.92 (34.6–79.5)	NA	NA

Continued

Association of SARS-CoV-2 seroprevalence with self-reported risk factors by households



Association of SARS-CoV-2 seroprevalence with self-reported risk factors by camp workers



Continued

Association of SARS-CoV-2 seroprevalence with self-reported preceding clinical symptoms in households

	Number (%) of participants	Adjusted for sampling design and test characteristics, % (95% CI)	Adjusted OR*	P
No symptoms	8374 (94.8)	9.9 (8.9–10.9)	0.4 (0.3–0.7)	< 0.001
Any symptom	322 (3.6)	23.5 (17.2–31.1)	2.5 (1.6–3.9)	< 0.001
High fever	134 (1.5)	35.8 (26.1–47)	3.4 (1.9–5.9)	< 0.001
Fatigue	115 (1.3)	28.4 (16.4–44.9)	3.2 (1.2–8.8)	0.023
Anosmia	43 (0.5)	50.6 (34.3–67.1)	8.6 (3.2–23.4)	< 0.001
Ageusia	38 (0.5)	59.2 (39.0–77.2)	15.8 (5.7–43.5)	< 0.001
Myalgia	88 (1.1)	30.3 (18–46.5)	3.7 (1.4–9.9)	0.01
Sore throat	133 (1.6)	28.7 (18.2–42.1)	3.0 (1.3–7.1)	0.01
Diarrhea	34 (0.4)	45.7 (25.8–67.5)	9.4 (3.3–26.4)	< 0.001





Article 3
Published
Authors

Descriptive Epidemiology of confirmed cases of COVID 19 in the Emirate of Abu Dhabi, United Arab Emirates (April March 2020)

Manuscript accepted at [Medicine®](#)

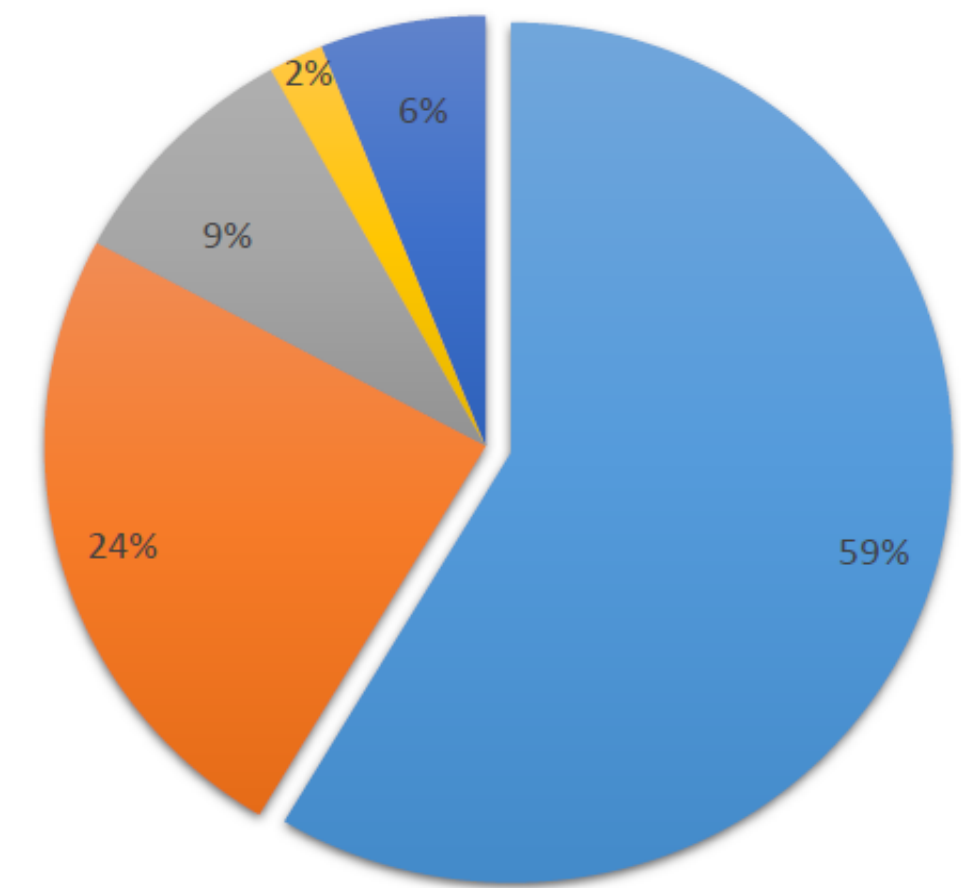
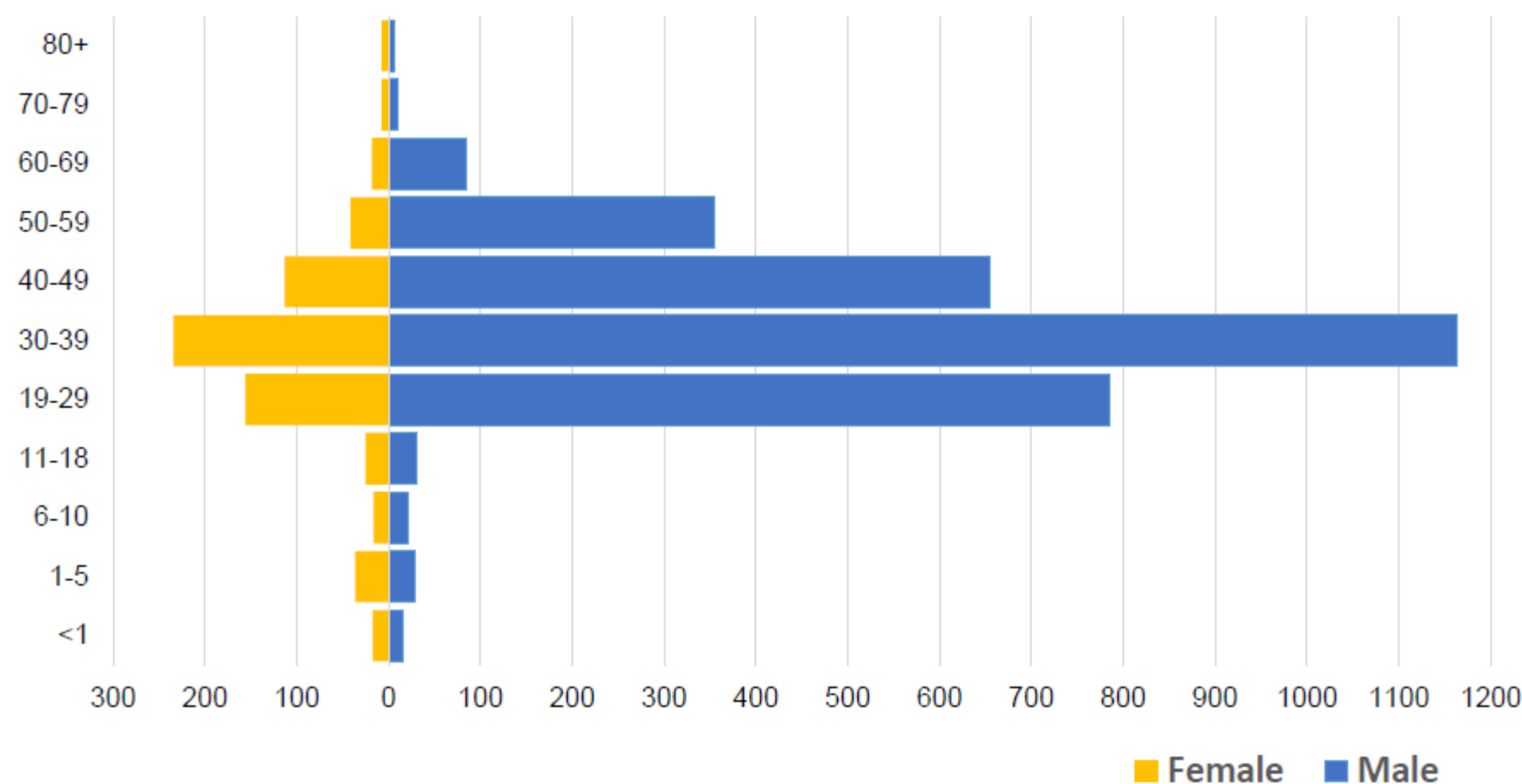
Mohamud Sheek Hussein (UAEU), Farida Al Hosani (ADPHC), Shammah Al Memari (ADPHC), Shereena Al Mazrouie (ADPHC), Bashir Aden (DOH), Suad M Ajab (UAEU), Ahmed R. Alsuwaidi (UAEU), Muhammad Abid(UAEU), Marília Silva Paulo (UAEU), Michal Grivna (UAEU).

Study Objectives:

- Retrospective descriptive study of confirmed positive COVID19 patients
- Data were extracted from the Infectious Diseases Notification Surveillance System held at the Abu Dhabi Public Health Center.
- **Study population**
 - Total of 3,827 cases with 82% were Males
 - **Study Period:**
12th March and 22nd April 2020.

Results:

Figure 1: Age and gender distribution



■ Mild ■ Moderate ■ Severe ■ Critical ■ Missing Symptoms

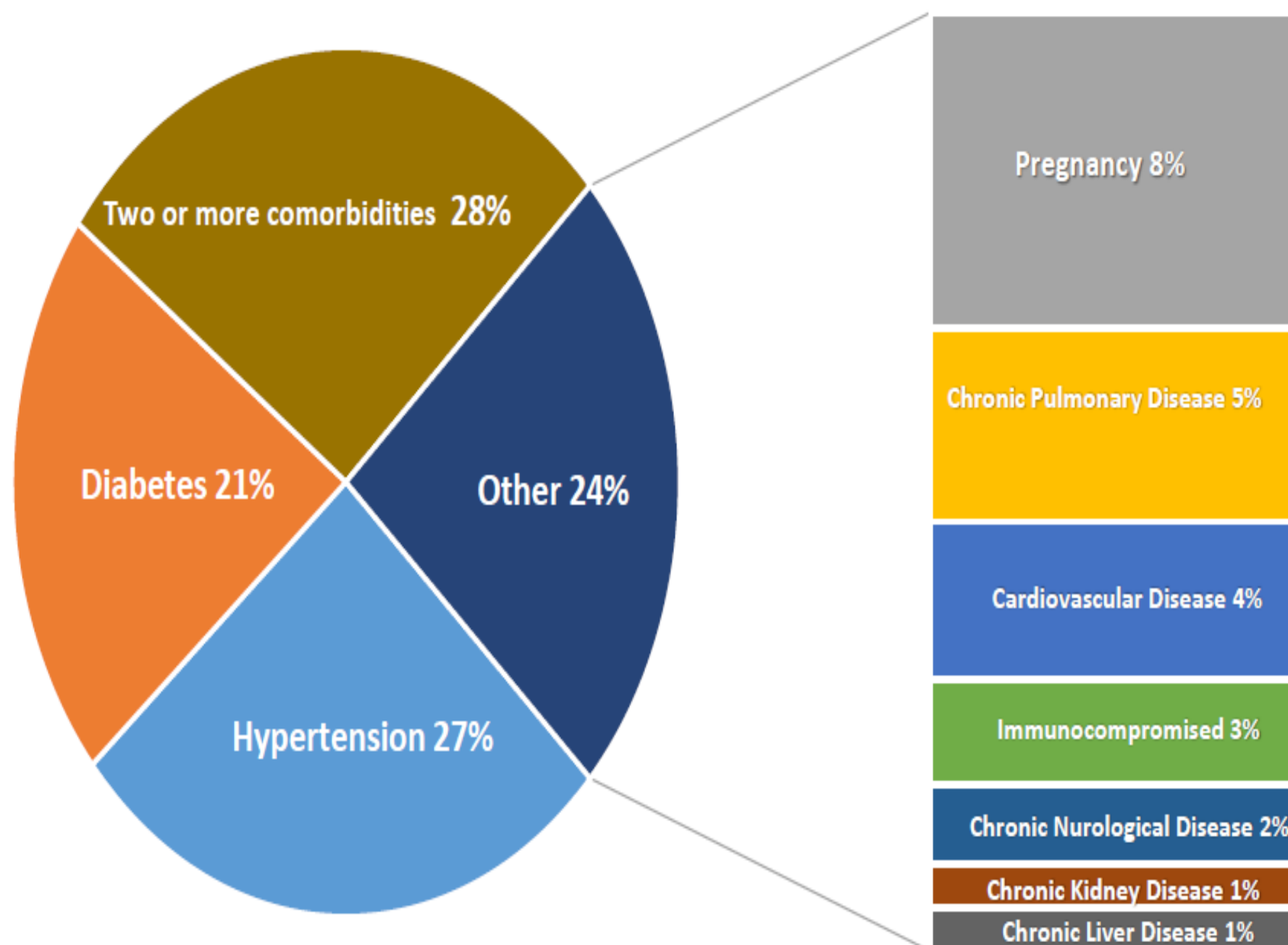
Severity of symptomatic cases





Continued

Only 448 (12%) cases with comorbidities



Summary of results

- 14 % UAE citizens, and 86% were of other nationalities.
- Most cases (72%) had lower exposure to low-risk occupations.
- High risk occupation accounts only for 3%.
- 43% of cases were asymptomatic, 57% displayed symptoms, which were mostly mild.
- Only 12% of patients had co-morbidities, which were significantly higher in males
- Among those who have comorbid conditions; Hypertension (27%) and diabetes (21%) were the most common co-morbidities.
- Only 51 patients (4%) required admission to the Intensive Care Units, and four patients died (0.1%).



THANK YOU

 ADPHCAE  ADPHC_AE  ADPHC_AE  ADPHC.AE  ADPHC-AE  056 2312171