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للصحة العامة
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HEALTH CENTRE

SCIENTIFIC RESEARCH MONITORING ON COVID-19

30 OCTOBER 2020

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SCIENTIFIC RESEARCH MONITORING ON COVID-19 (ISSUE 541)

مركز أبوظبي للصحة العامة
ABU DHABI PUBLIC HEALTH CENTRE

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
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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 PHP@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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Clinical Feature

What Reinfections Mean for COVID-19

UAE Research

Testing for COVID19 in Abu Dhabi-United Arab Emirates: Population's Attitude and Beliefs.

UAE Research

Knowledge, Attitude and Practice of Abu Dhabi Healthcare Services Physicians Towards Teleconsultation in the COVID 19 Pandemic.

Vaccine

Factors Associated with US Adults' Likelihood of Accepting COVID-19 Vaccination

EPIDEMIOLOGY

FROM 21 JAN TO 29 OCT 2020

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

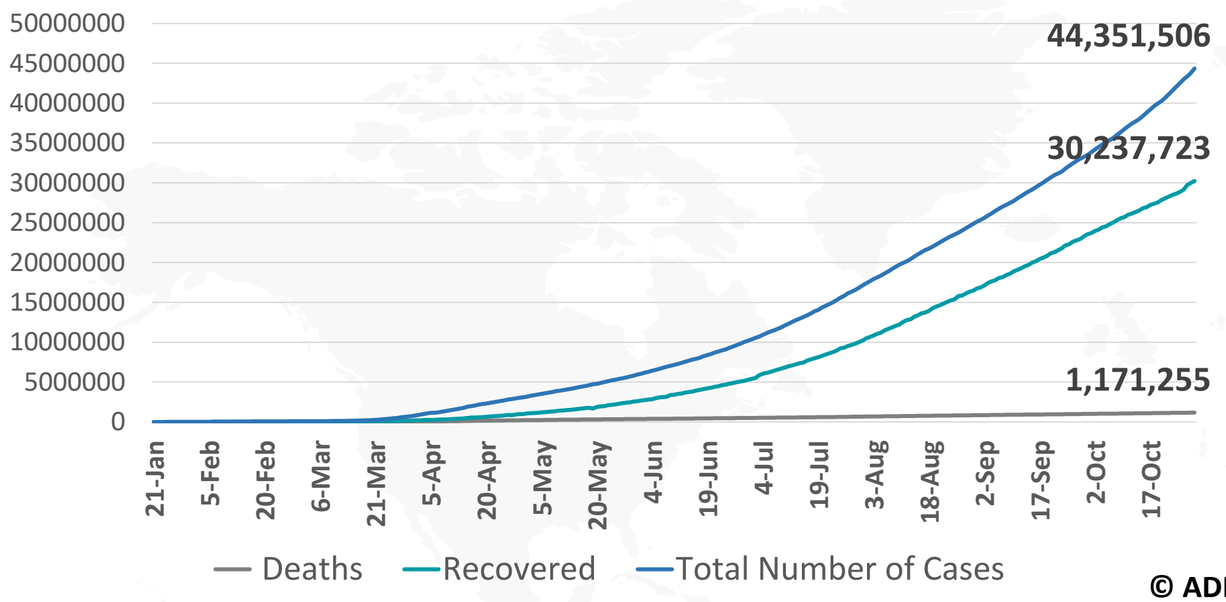


Figure 3: Total Number of Death Due to COVID-19 (china and result of the world)

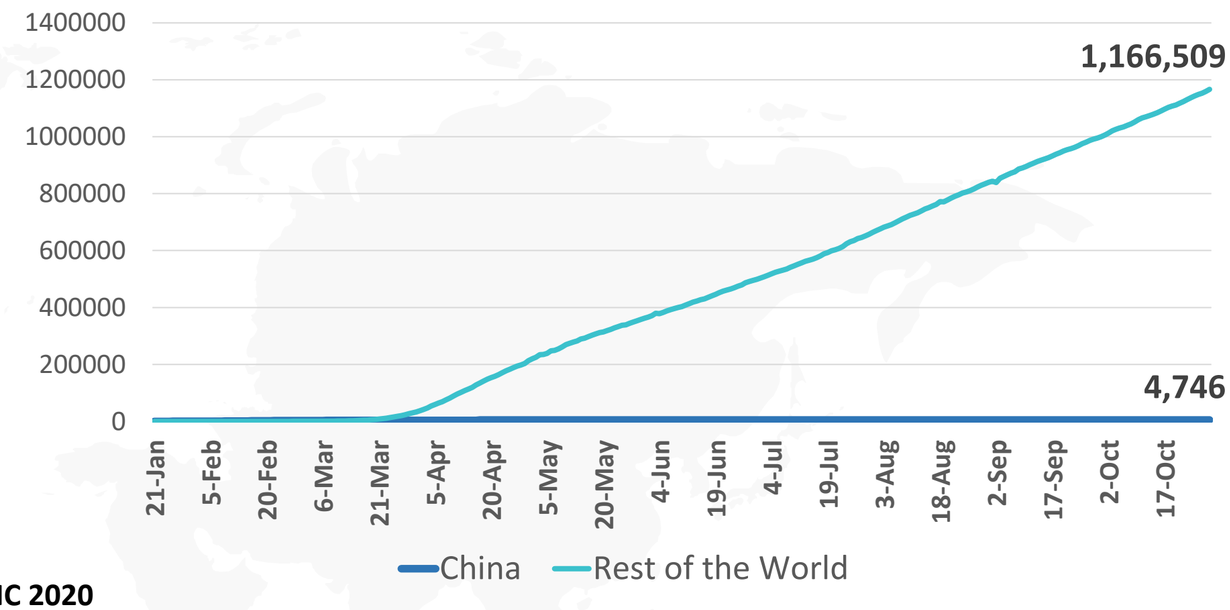


Figure 2: Daily New Infected COVID-19 Cases (China and rest of the world)

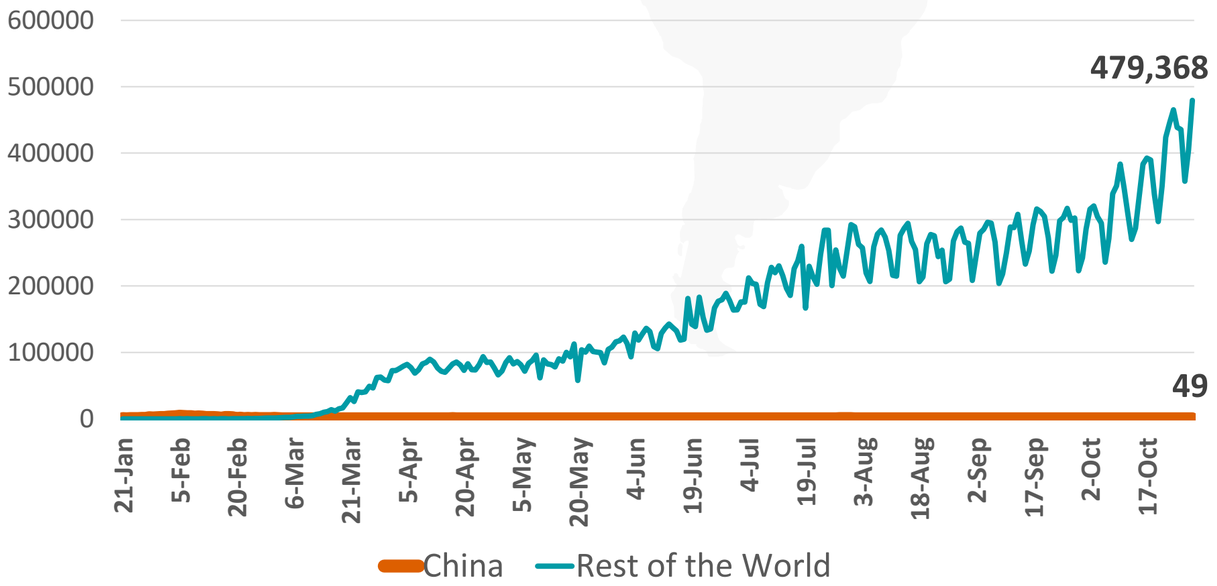
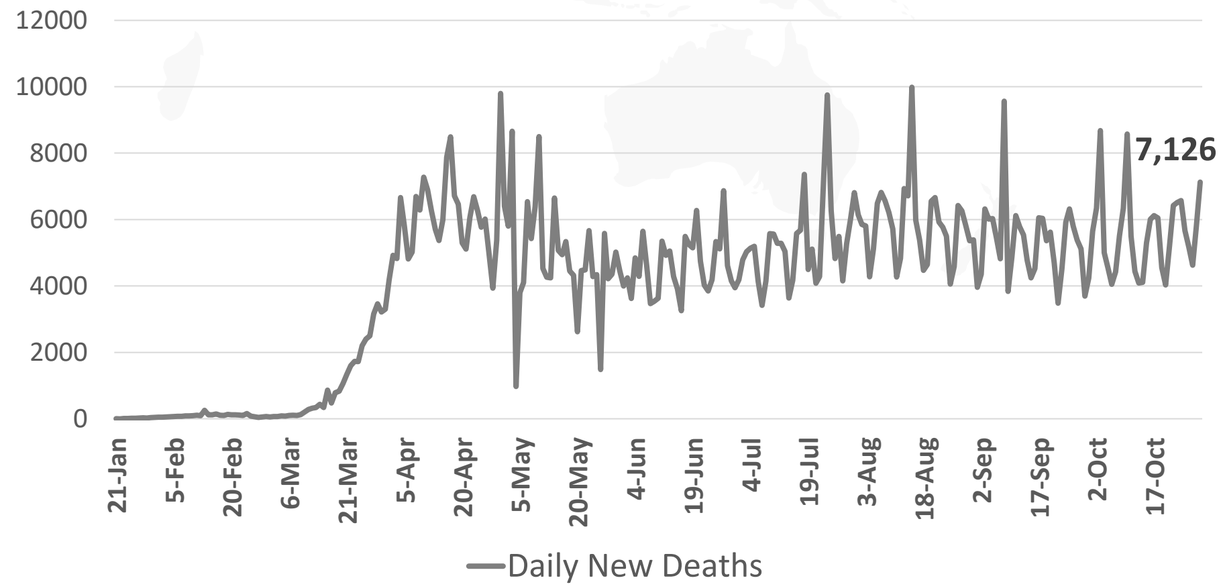


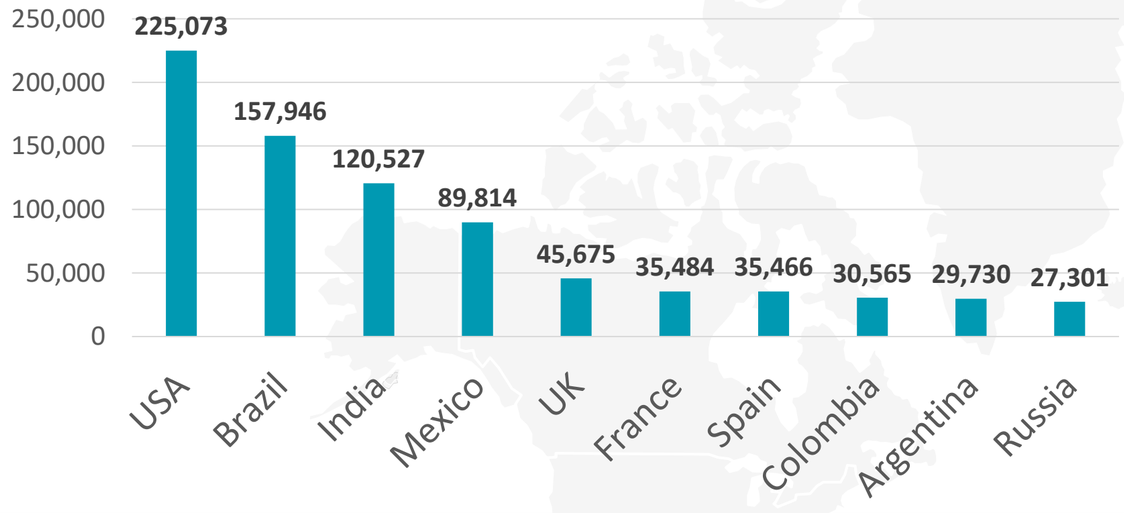
Figure 4: Global Daily New Deaths Due to COVID-19 (china and rest of the world)



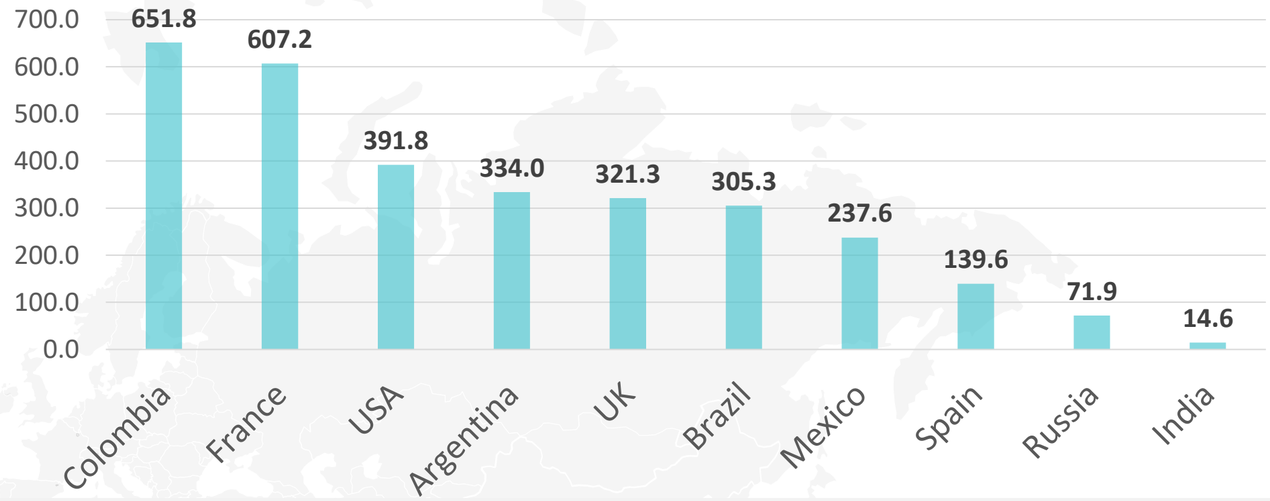
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: John Hopkins, WHO

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

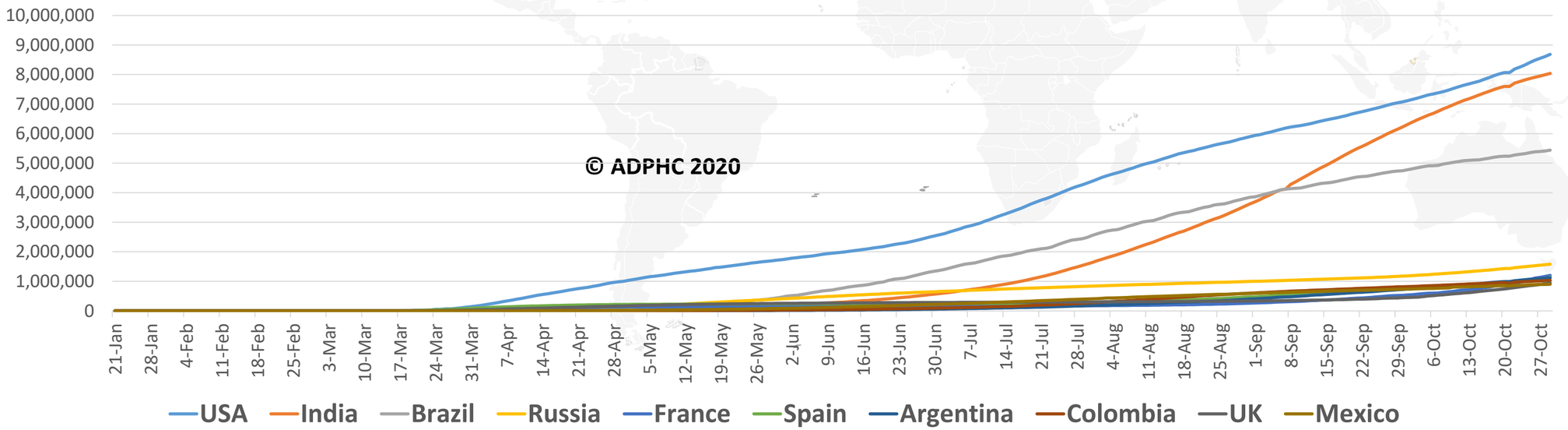
TOTAL DEATHS



DEATHS PER MILLION



TOTAL INFECTED CASES



USA	8,683,298
India	8,040,203
Brazil	5,439,641
Russia	1,581,693
France	1,203,068
Spain	1,136,503
Argentina	1,116,609
Colombia	1,033,218
UK	942,279
Mexico	901,268

Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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

Daily Tests

113,422.7 Average Tests

1,146.8 per 100k population

1.2% Positive Rate

Daily Cases

1,375.1 Average Cases

13.9 per 100k population

Daily Recovered

1,826.1 Average Recovered

18.5 per 100k population

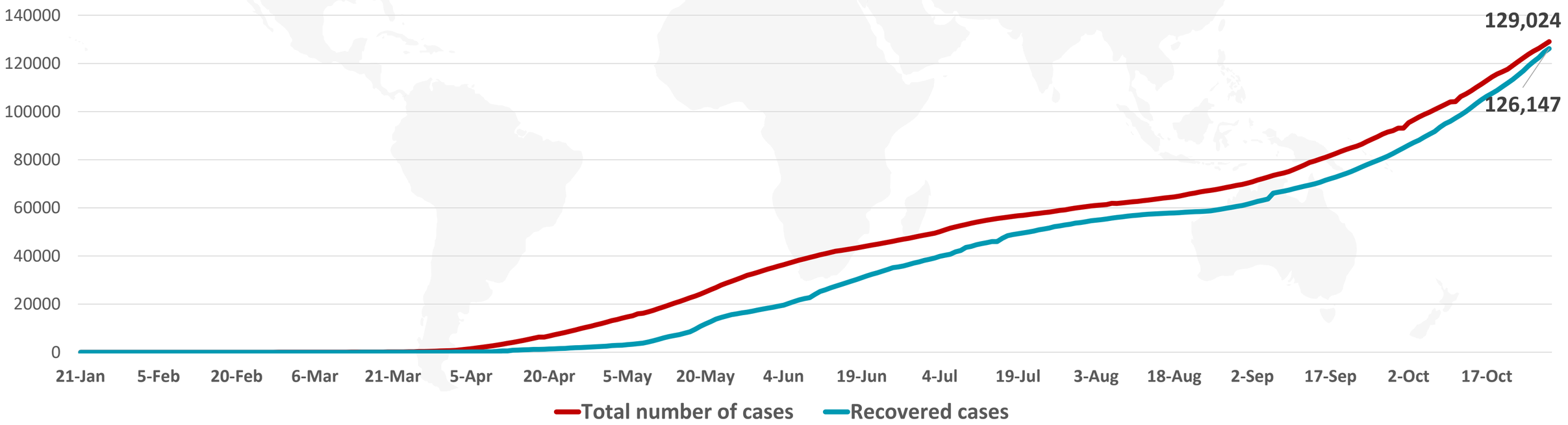
Daily Deaths

2.0 Average Deaths

0.0 per 100k population

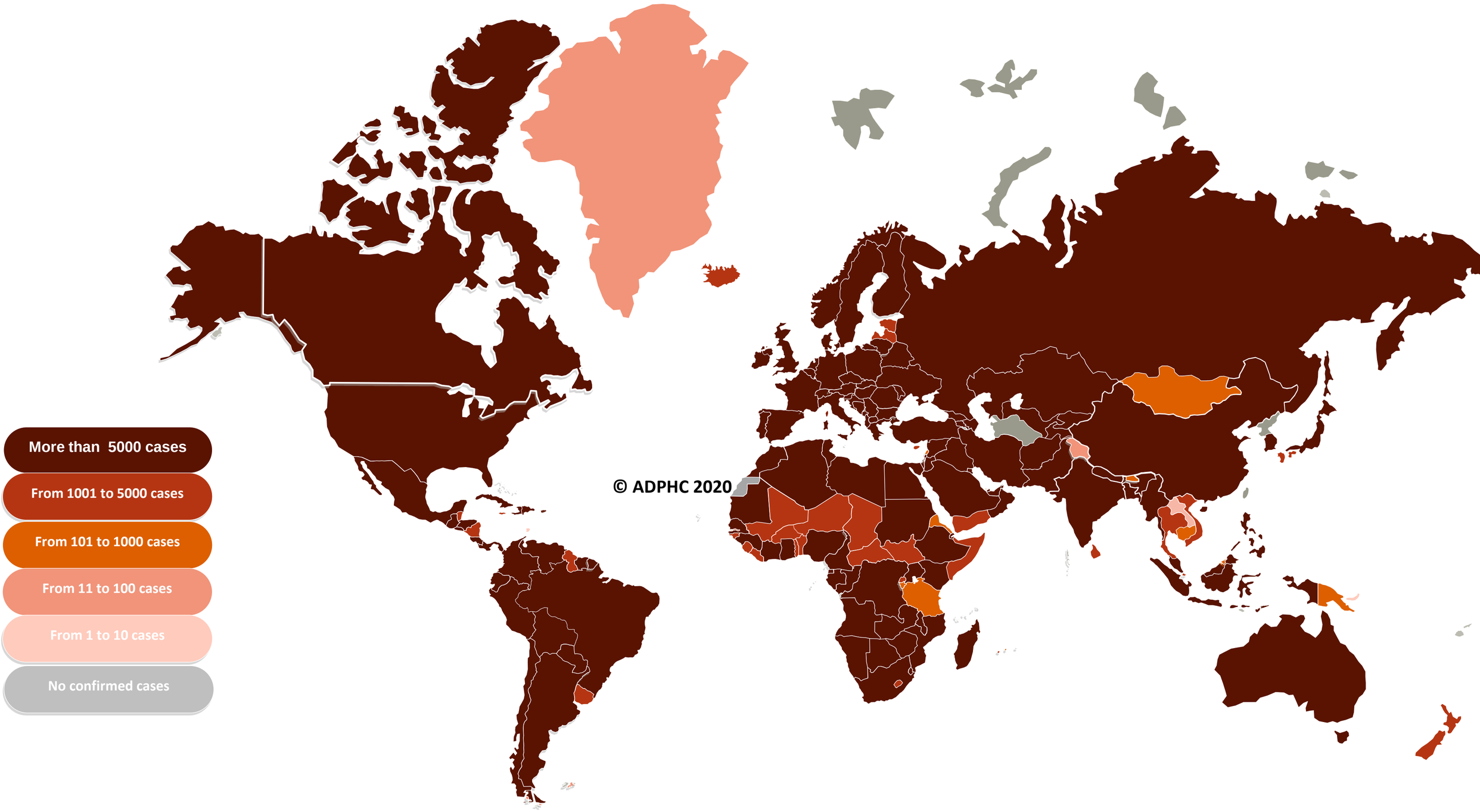
0.1% Case Fatality Rate

TOTAL NUMBER OF INFECTED AND RECOVERED CASES DUE TO COVID-19 REPORTED BY THE UAE



Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: FCSA, WHO, John Hopkins

Figure 7A : Global Distribution of COVID-19 Cases



Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

EPIDEMIOLOGY

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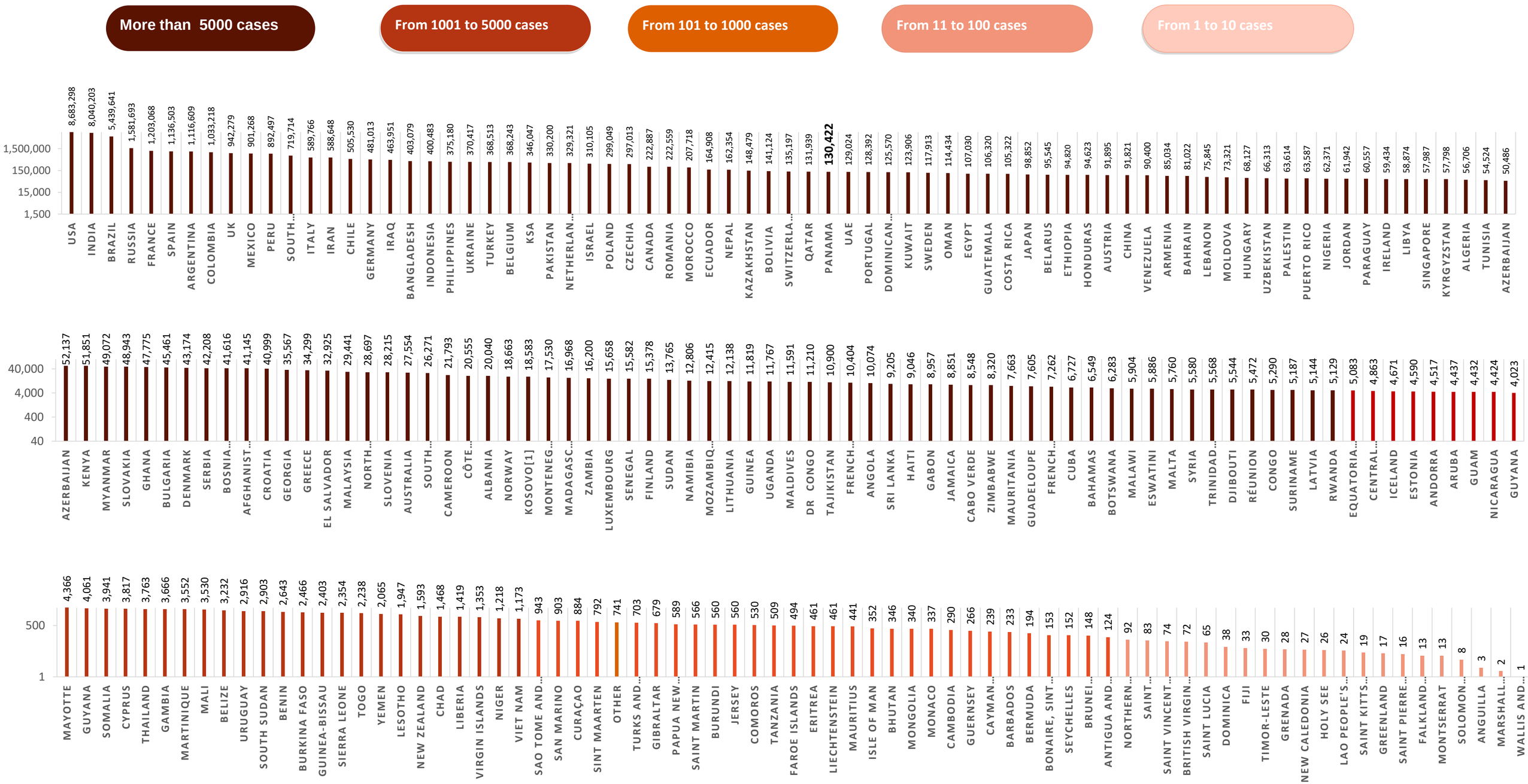
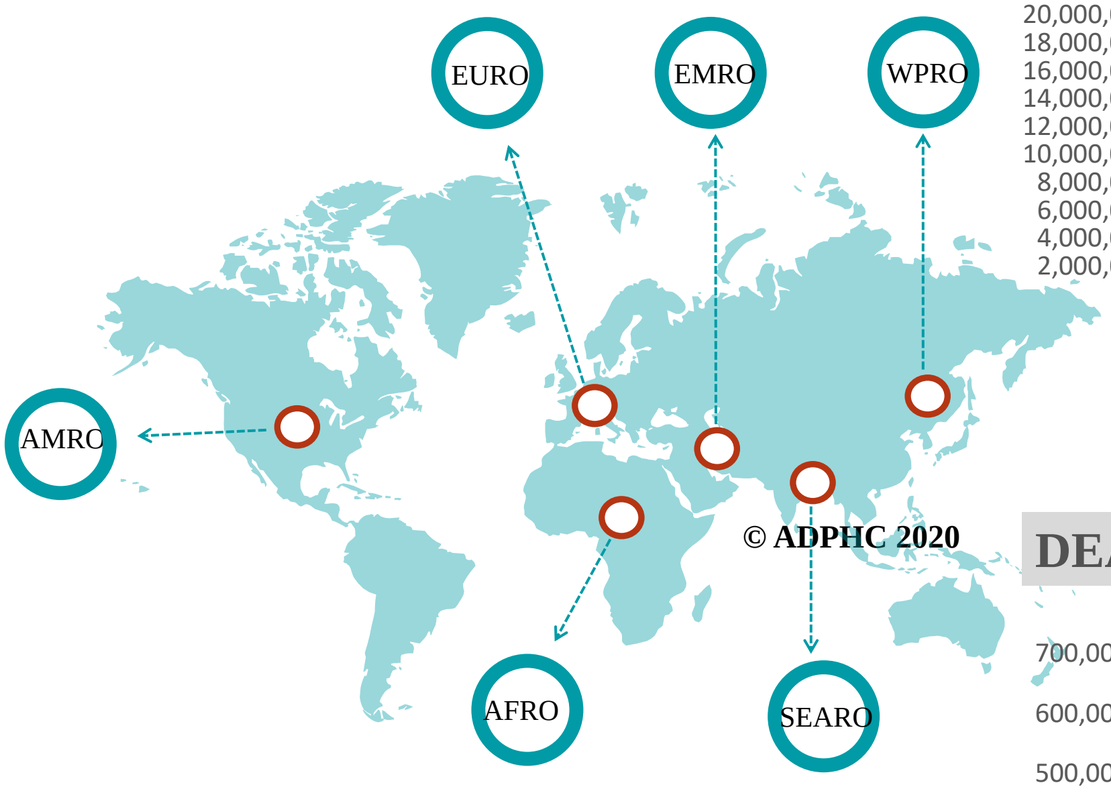
Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases



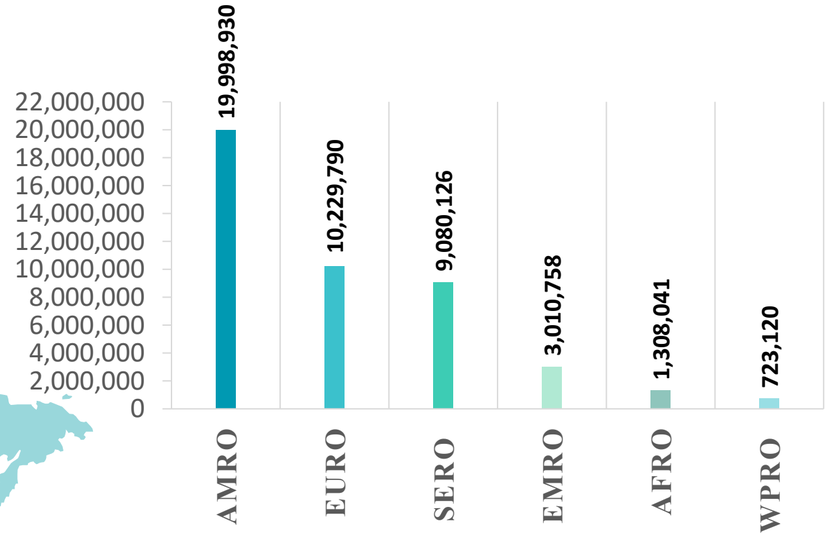
Other*:includes cases and deaths reported under the international conveyance(Diamond Princess)

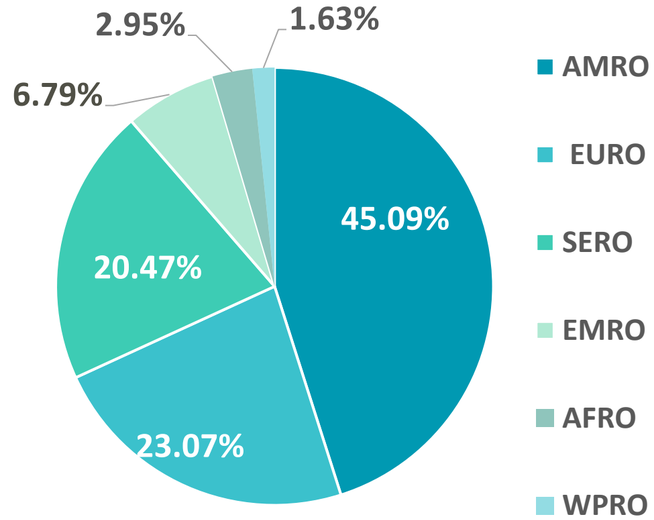
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

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

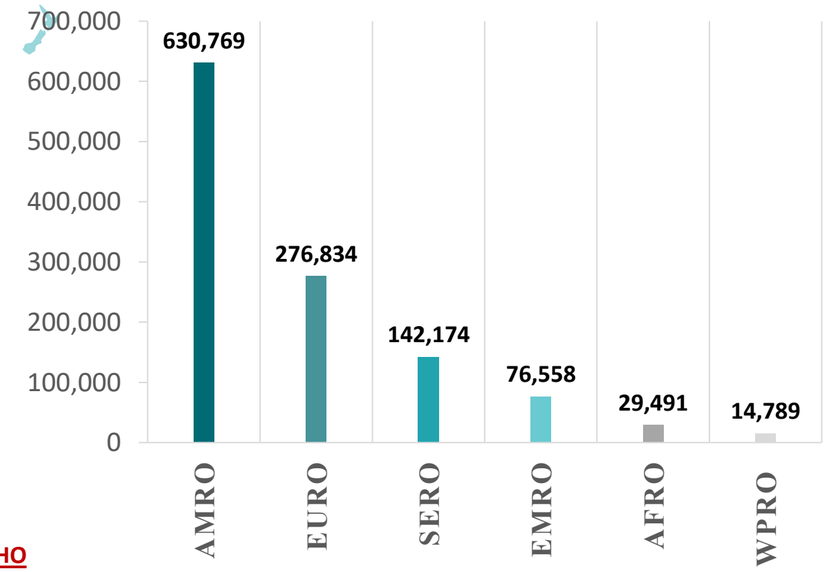


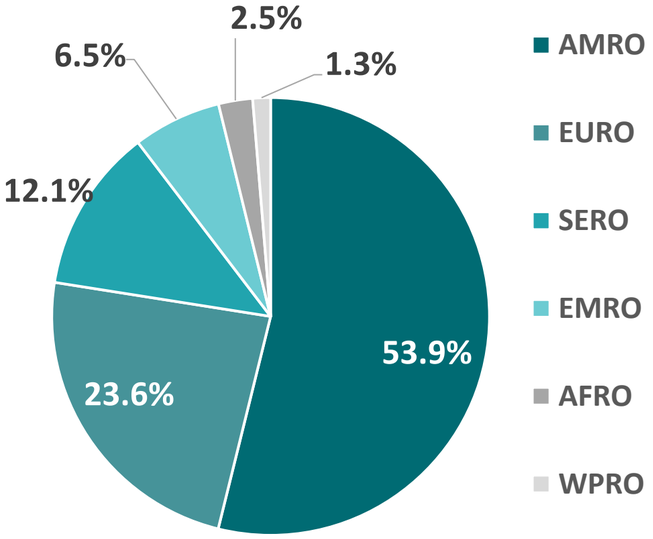
INFECTED





DEATHS

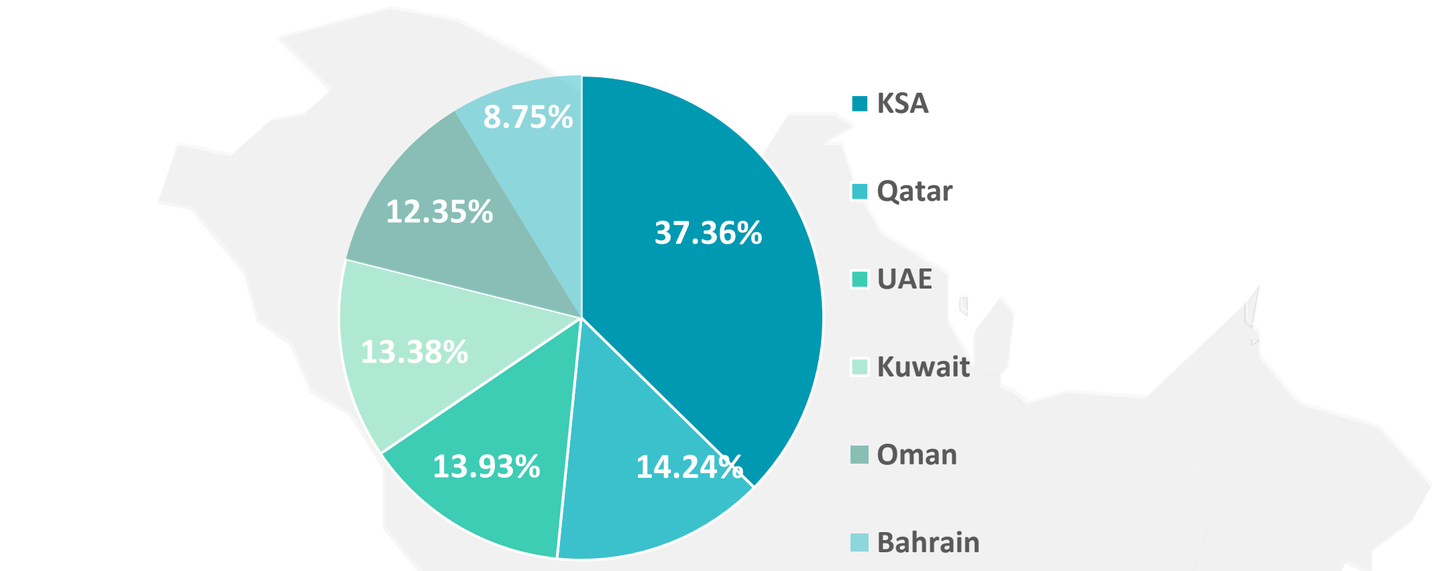


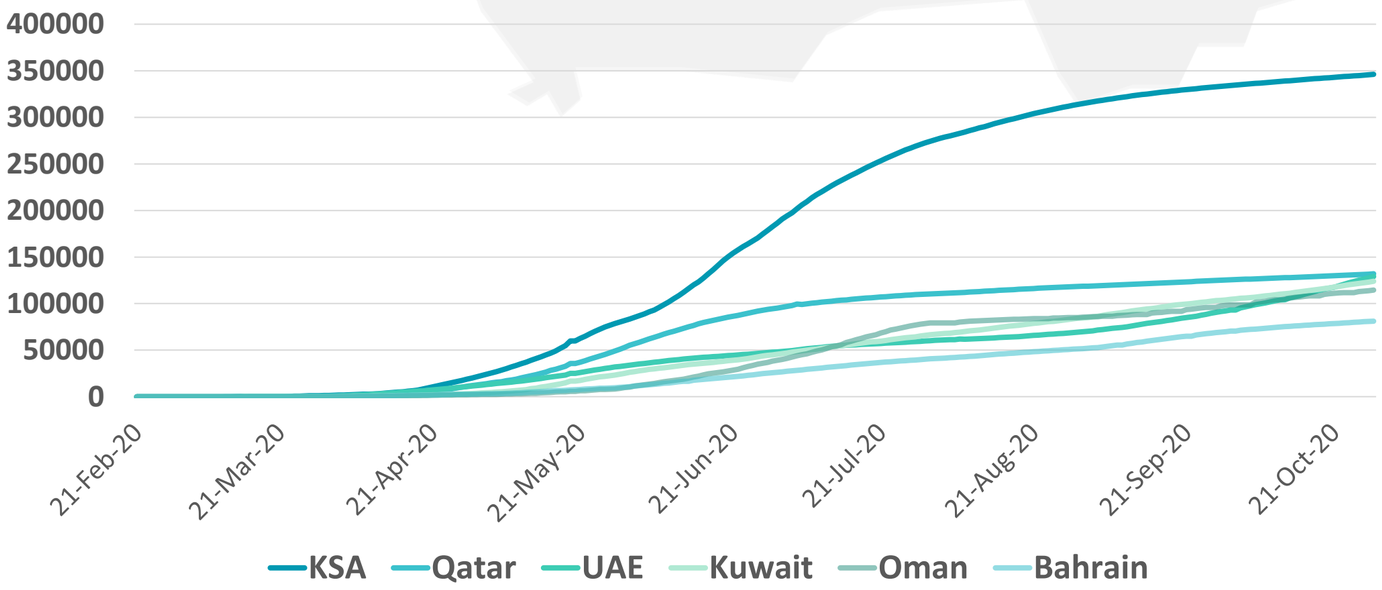


Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: WHO

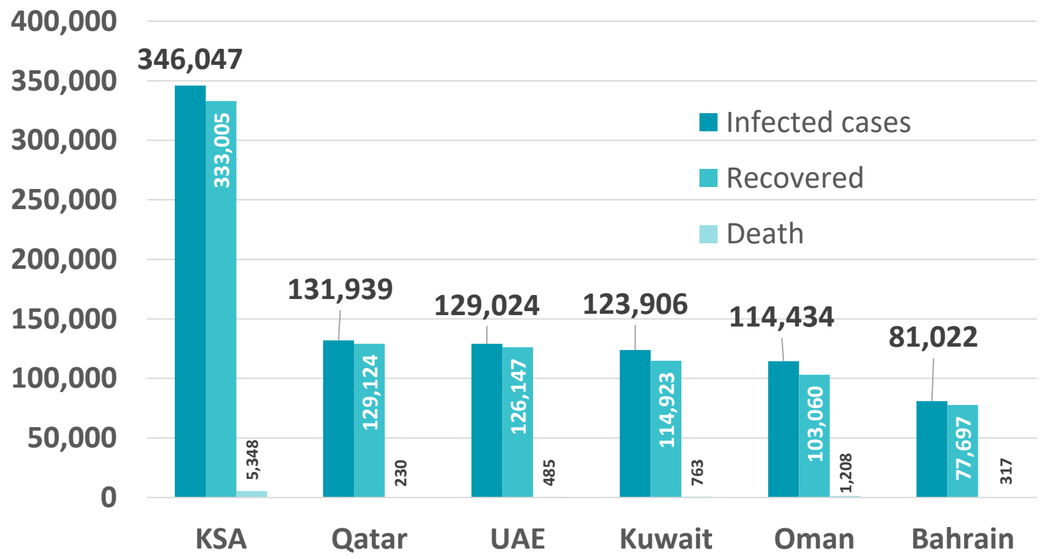
Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

TOTAL NUMBER OF INFECTED CASES

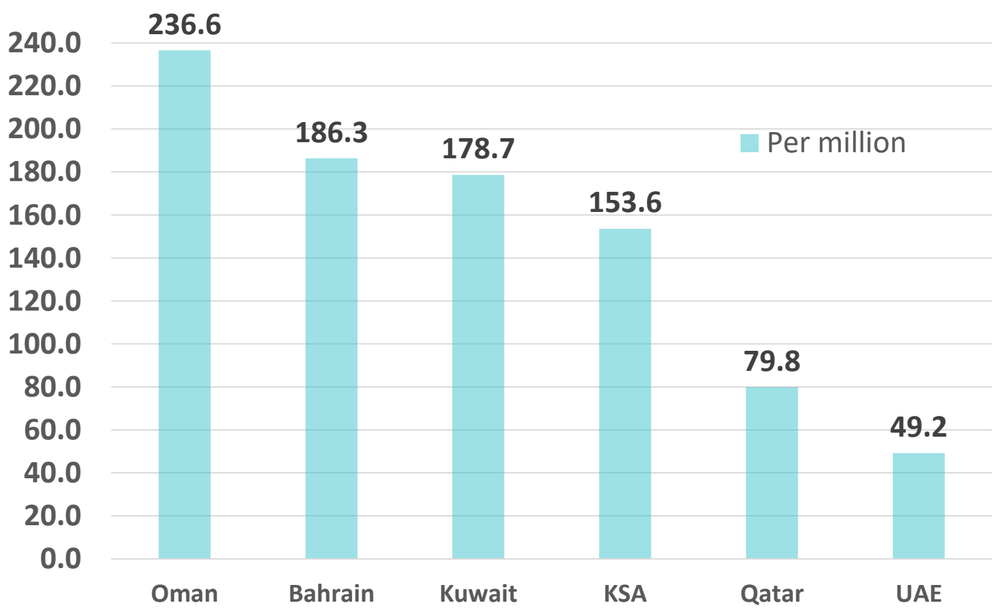




TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATHS PER MILLION



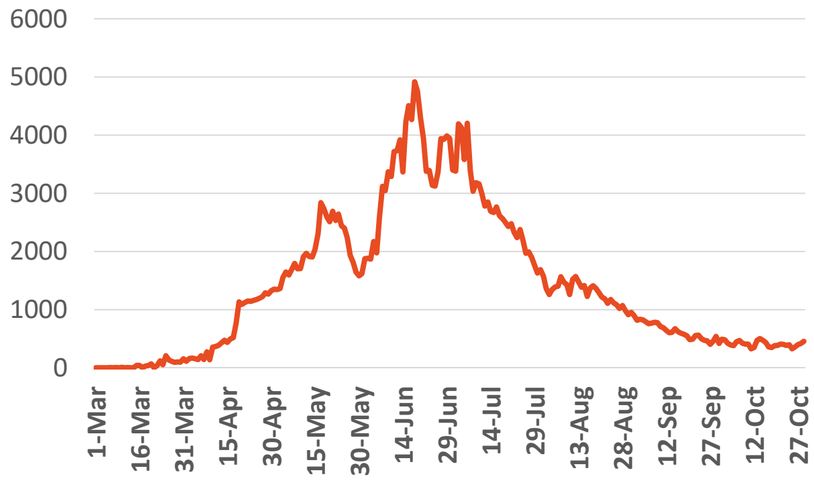
Graphs published by Abu Dhabi Public Health Center 2020 | Data resources: John Hopkins, WHO

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

UAE

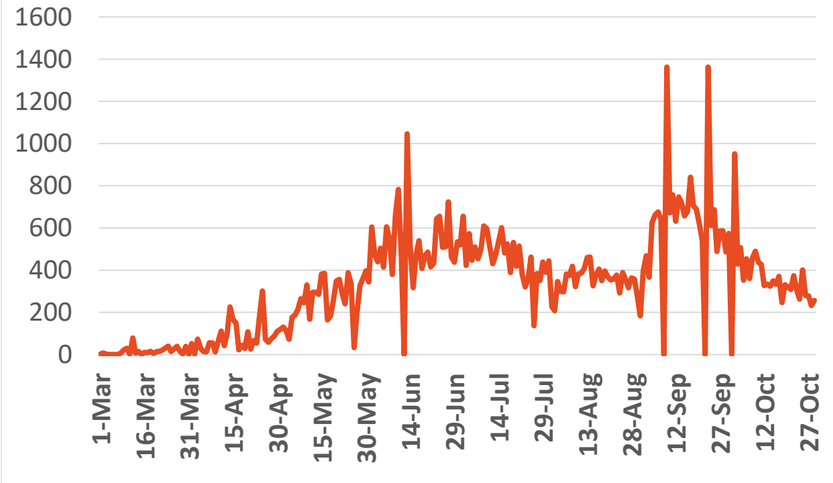
Source : National Emergency Crisis and Disaster Management Authority

KSA



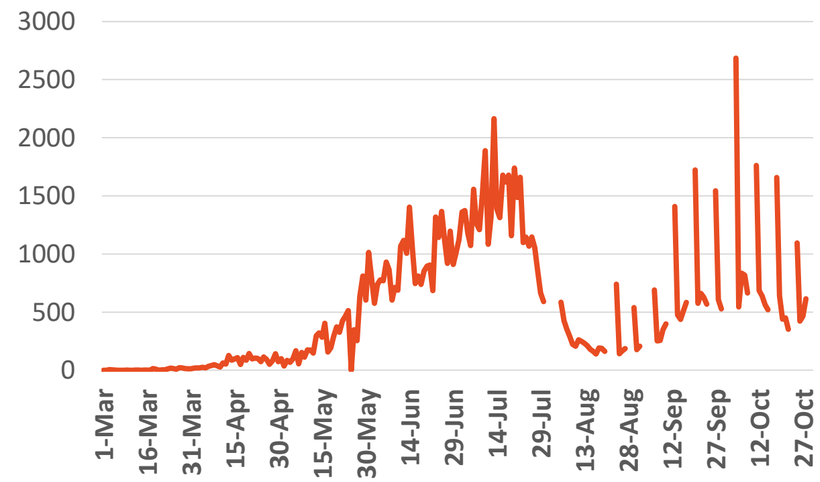
Source : KSA ministry of health

Bahrain



Source :WHO

Oman

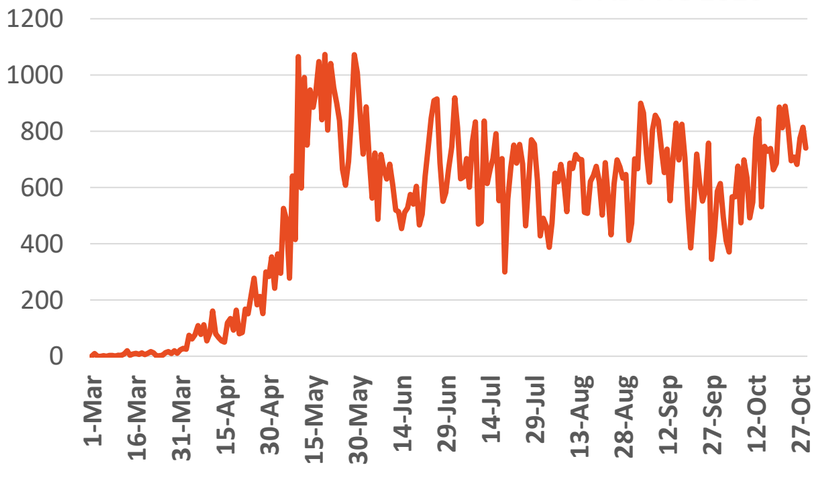


Source :Oman ministry of health

*No announced statistic data from 31 July to 4 August, 21,23,28,30 August 2, 4، 5,11,12,18,19,25 ,26,30 September,1,2,9,10,16,17,23 & 24 October

*No announced statistic data on weekends and official holidays.

Kuwait



Source : Kuwait ministry of health

Qatar

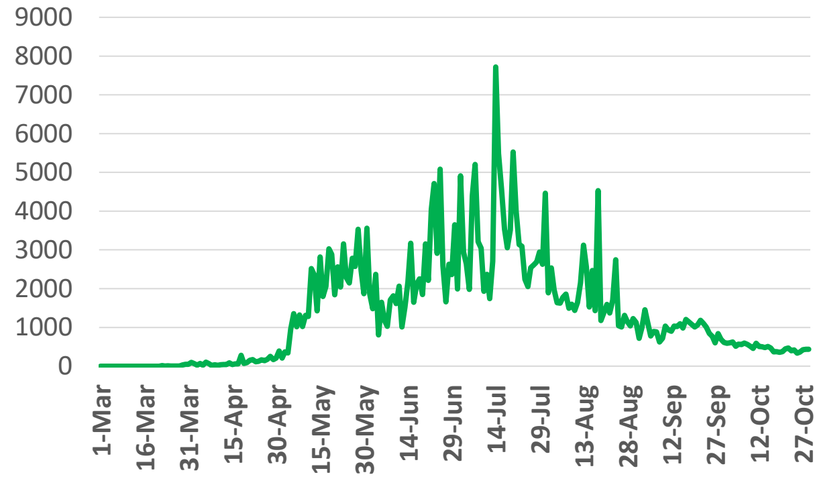
Source : Qatar ministry of health

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

UAE

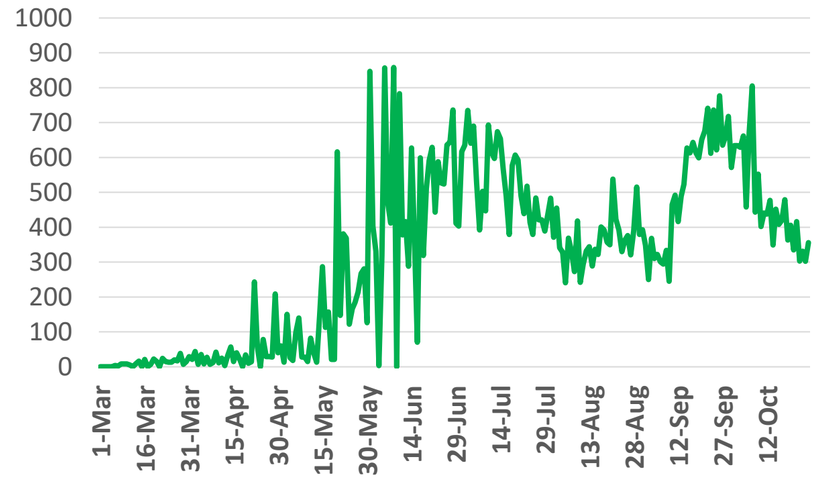
Source : National Emergency Crisis and Disaster Management Authority

KSA



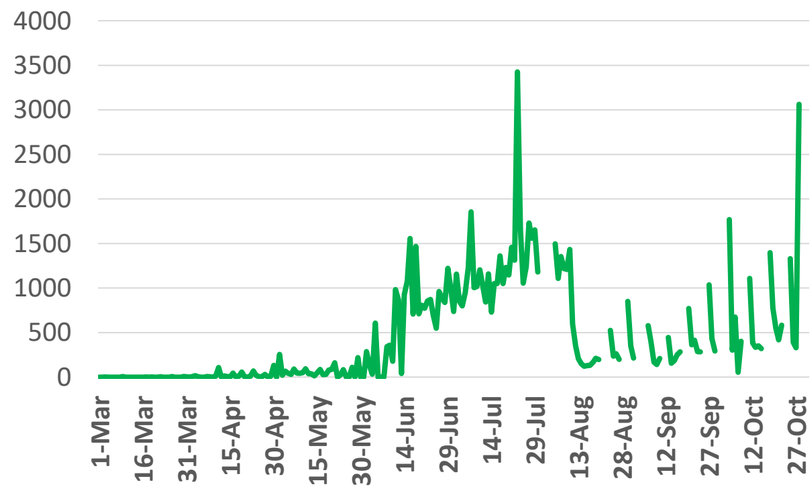
Source : KSA ministry of health

Bahrain



Source : Bahrain ministry of health

Oman



Source :Oman ministry of health

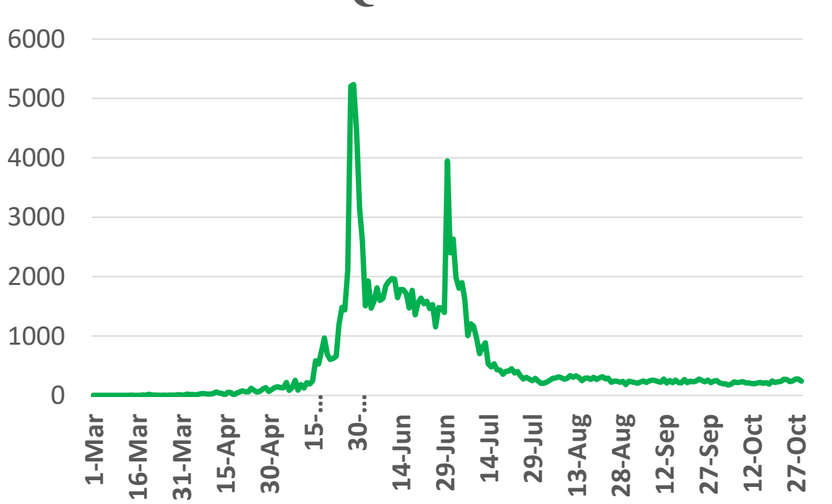
*No announced statistic data from 31 July to 4 August, 21,23,28,30 August 2,4, 5,11,12,18,19,25,26,30 September1,2,9,10,16 &17,23 &24 October

*No announced statistic data on weekends and official holidays.

KUWAIT

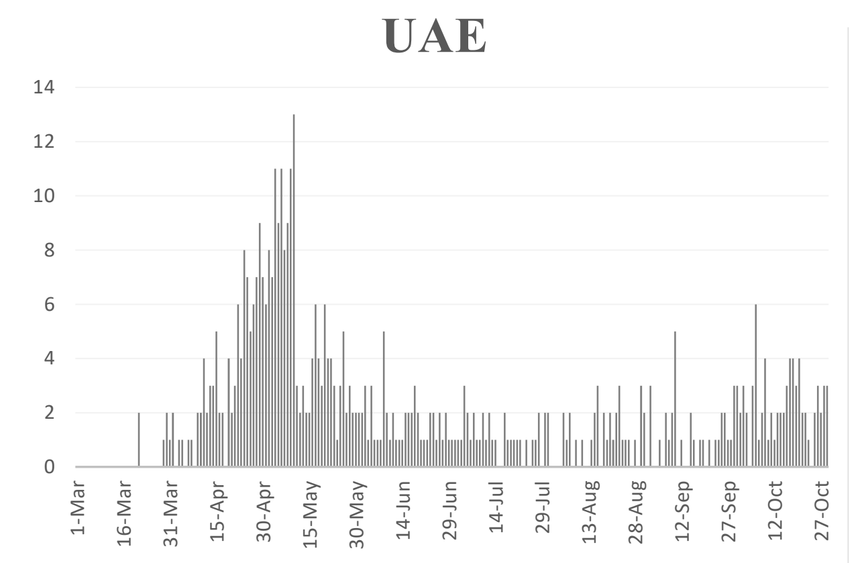
Source : Kuwait ministry of health

Qatar

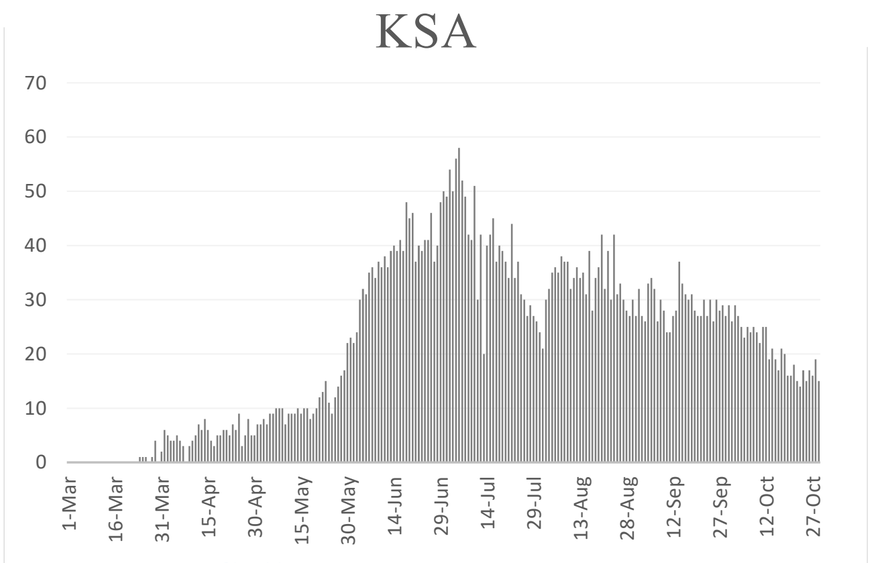


Source : Qatar ministry of health

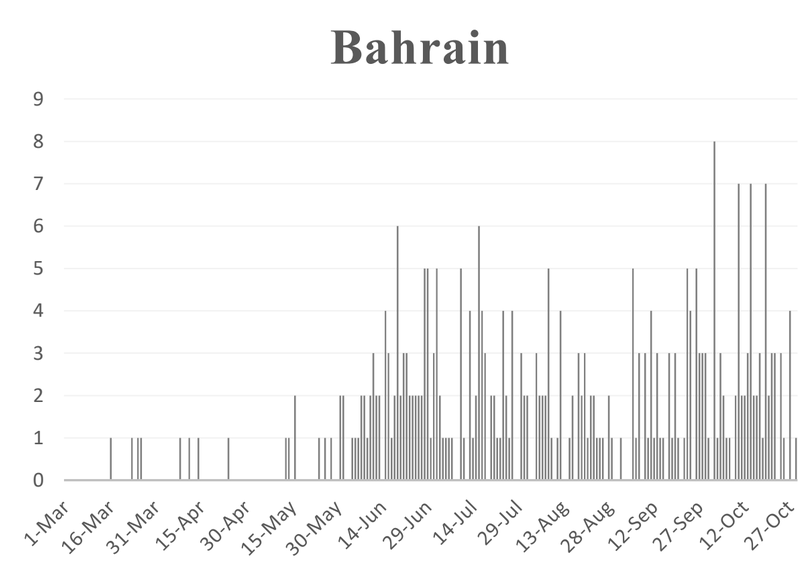
Figure 12: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries



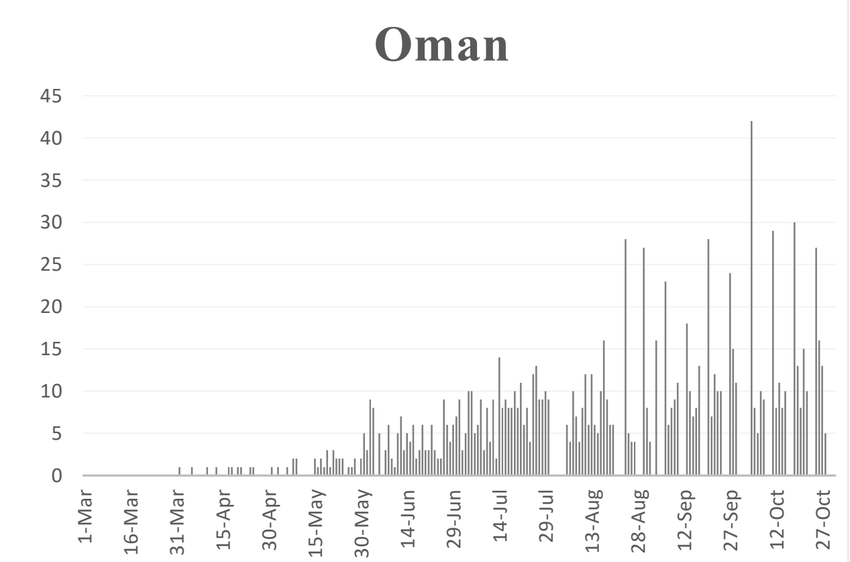
Source : National Emergency Crisis and Disaster Management Authority



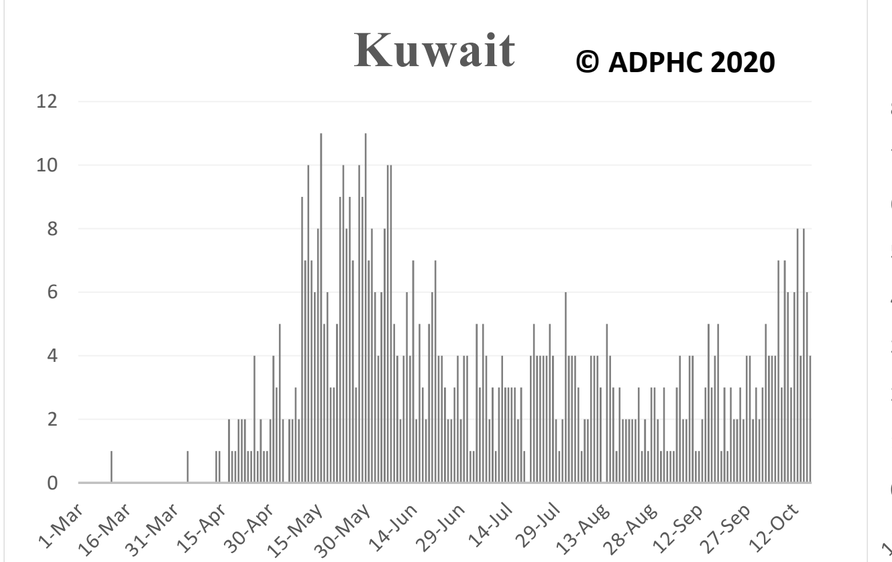
Source : KSA ministry of health



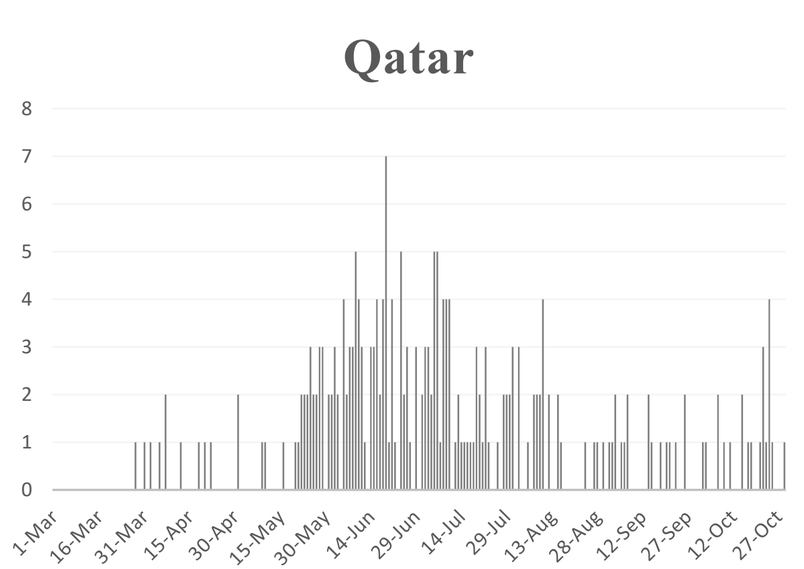
Source :WHO



Source :Oman ministry of health



Source : Kuwait ministry of health



Source : Qatar ministry of health

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*No announced statistic data on weekends and official holidays.

CLINICAL FEATURE

Article 1

What Reinfections Mean for COVID-19

Published October 12, 2020 The Lancet

- During COVID-19 pandemic, there is growing concern about how well and how long the immune responses protect the host from reinfection. The first infection can provide lifelong immunity for some viruses; however, protective immunity is short-lived for seasonal coronaviruses.

- Of the four reinfection cases reported (refer to table), none had known immune deficiencies. Only two had serological data from the first infection and, one had preexisting antibody (IgM) against the virus. Due to the wide range of serological testing platforms used around the world, it is not possible to compare results from one test to another.

- It is not obvious that immunity protects an individual from the disease on reinfection. Patients from Nevada and Ecuador had worse disease outcomes at reinfection than the initial infection. It is important to keep in mind that reinfection cases, in general, are being picked up because of symptoms and are biased towards the detection of symptomatic cases.

- The Ct value of PCR correlates with viral load, and low Ct values (high viral load) might indicate infectiousness of the individual. Although Ct values may vary significantly between various tests, a previous study showed that samples with Ct values >35 were only 8% positive for the cultivable virus. Since some reinfection cases had Ct values <35, the infectious virus might have been harbored in the nasal cavity. Thus, reinfection cases indicate that we cannot rely on immunity acquired by natural infection to confer herd immunity.

- Researchers will have the opportunity to understand better the correlates of protection and how frequently natural infections with SARS-CoV-2 induce that level of immunity. This information is key to understanding which vaccines are capable of crossing that threshold to confer individual and herd immunity.

CLINICAL FEATURE

Continued

	Sex	Age (years)	First infection (Ct)	Second infection (Ct)	Intervening period (days)	Antibody after first infection	Antibody after reinfection
Hong Kong[3]	Male	33	Mild (N/A)	Asymptomatic (27)	142	Negative	IgG+
Nevada, USA[2]	Male	25	Mild (35)	Hospitalised (35)	48	N/A	IgM+ and IgG+
Belgium[4]	Female	51	Mild (26–27)	Milder (33)	93	N/A	IgG+
Ecuador[5]	Male	46	Mild (37)	Worse (N/A)	63	IgM– and IgG–	IgM+ and IgG+

Data were obtained Sept 14, 2020, for reinfection cases confirmed by viral genome sequences. Ct=cycle threshold. N/A=not available. SARS-CoV-2=severe acute respiratory syndrome coronavirus 2.

Table: Characteristics associated with reinfection with SARS-CoV-2

Article 2

Published

Under Progress

Testing for COVID-19 in Abu Dhabi United Arab Emirates: Population's Attitude and Beliefs.

Authors *Latifa Baynouna Alketbi, Nico Negelkerke, Hanan Abdelbaqi, Fatima ALBlooshi, Mariam AlSaedi, Shamsa Almansoori, Ruqaya AlNuaimi, Amal AlKhoori, Aysha AlAryani, Ahmed Al Jiziri, Naji AlMestika, Mariam AlShamsi, Fatima Kayani, Noura Alblooshi, Shamma AlKhajeh, Ibrahim Al Hammadi, Jehan AlFalahi.*

A cross-sectional questionnaire-based study conducted during the peak of the pandemic (April, May, June 2020) from the seven Emirates. A total of 531 subjects presenting for COVID-19 screening were compared to 156 patients who did not do the COVID-19 PCR test. The later subjects were identified from the AHS primary care physicians' panel.

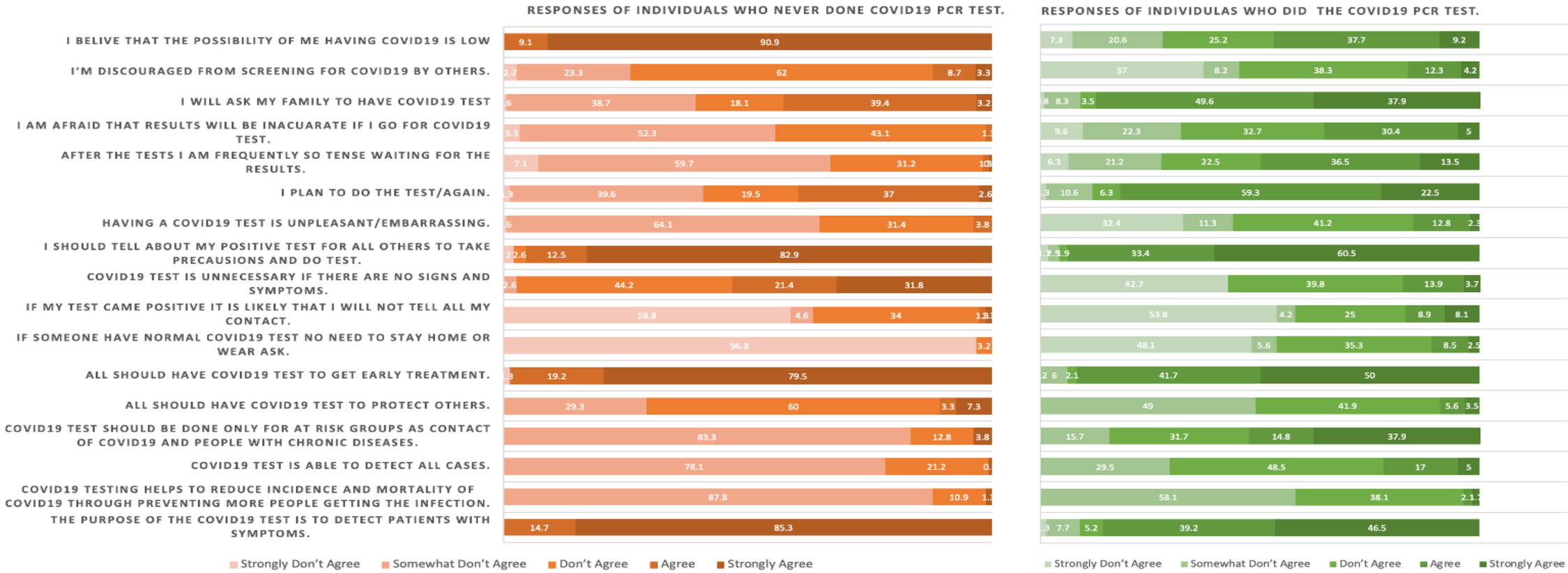
Results

- The uptake of the community and testing coverage was extensive as the percentage of those who did the test at least once reached more than 90% in some centers in the Emirate of Abu Dhabi with an average of 68% overall, (Table 1). A total of 531 subjects completed the survey in the screening centers, (Table 2).
- Regression analysis showed that those who did not do the test were significantly practicing activities like shopping and eating out more p=0.001, younger in age, more likely to have a medical illness p<0.0001 and more likely working from home p=0.005.
- A significant difference in belief between the two groups was noticed in responses to questions such as:
  - "If someone has normal COVID-19 test no need to stay home or wear the mask." Those who did the screening were significantly more in agreement.
  - "Having a COVID-19 test is unpleasant/embarrassing." Those who never did the test were significantly more in agreement.
  - "I am afraid that results will be inaccurate if I go for COVID-19 test." Those who did the screening were significantly more in agreement
  - "I believe that the possibility of me having COVID-19 is low." Those who never did the test were significantly more in agreement.

	TEST DONE %
AH Nahda HC	95
AH Khalifa City A HC	94
AH Yahar Health Center	93
AH Faqah HC	87
AH Muwaeji HC	87
AH Samha HC	87
AH Hili Health Center	86
AH Bateen HC	85
AH Mezyad Health Center	85
AH Towayya HC	82
AH Quaa Health Center	76
AH Madinat Mohamed Bin Zay	76
AH Maqtaa HC	70
AH Oud Al Touba HC	68
AH Jahli HC	66
AH Naima HC	66
AH Shwaib Health Center	66
AH Falah HC	64
AH Sweihan Health Center	64
AH Bani Yas HC	63
AH Zhaker Health Center	63
AH Rowdha HC	55
AH Bahia HC	54
AH Remah Health Center	53
AH Zafrana HC	50
AH Mushrif Children's Specialit	48
AH Khazna Health Center	39
AH Khatem Health Center	38
AH Hayar Health Center	36
Grand Total	68.7

UAE RESEARCH

Continued



- Finally, those who did not get tested were less likely to be in contact with COVID-19 case; 92.3% never had a contact compared to 76.6% in those who did get tested.

Conclusion

The screening in UAE and especially in the capital Abu Dhabi had good acceptability among the population. Raising levels of a perceived threat of the pandemic disease and belief in the effectiveness of measures designed to protect against it could further augment the efforts to contain the pandemic. A populations beliefs and attitude is key to ensuring the testing coverage efficiency and public empowerment.

Acknowledgements: Amna Al Saadi, Mariam Al Kaabi, Muneera Al Blooshi, Raja Farahat, Hodon Saeed, Sameera Omar, Anoud AlShamsi, Mouza Al Dhaheri, Sana Zeinadeen, Mariam Al Kwuiti, Fathya Al Awadhi, Reem Al Falasi.

Article 3

Published

Under Progress

Knowledge, Attitude and Practice of Abu Dhabi Healthcare Services Physicians Towards Teleconsultation in the COVID 19 Pandemic.

Authors

Ahmed Al Sawwafi, Ahmed al Jaziri, Khalid al Awadi, Latifa Baynouna Al Ketbi. AHS- Abu Dhabi

Background

- Abu Dhabi Health Services Company – SEHA started in March 2020 Telehealth service. This was an emergency response to mitigate the pandemic effect on the population of Abu Dhabi and on the healthcare system. SEHA, the largest health care provider in Abu Dhabi, has more than 3000 physicians; consultants, specialists, residents, and internship doctors with different expertise, experience and background who operated this new modality in healthcare provision within days of its introduction. This study aimed to assess knowledge, attitude and practice of physician in the first experience in telehealth during the emergency of COVID 19 pandemic,

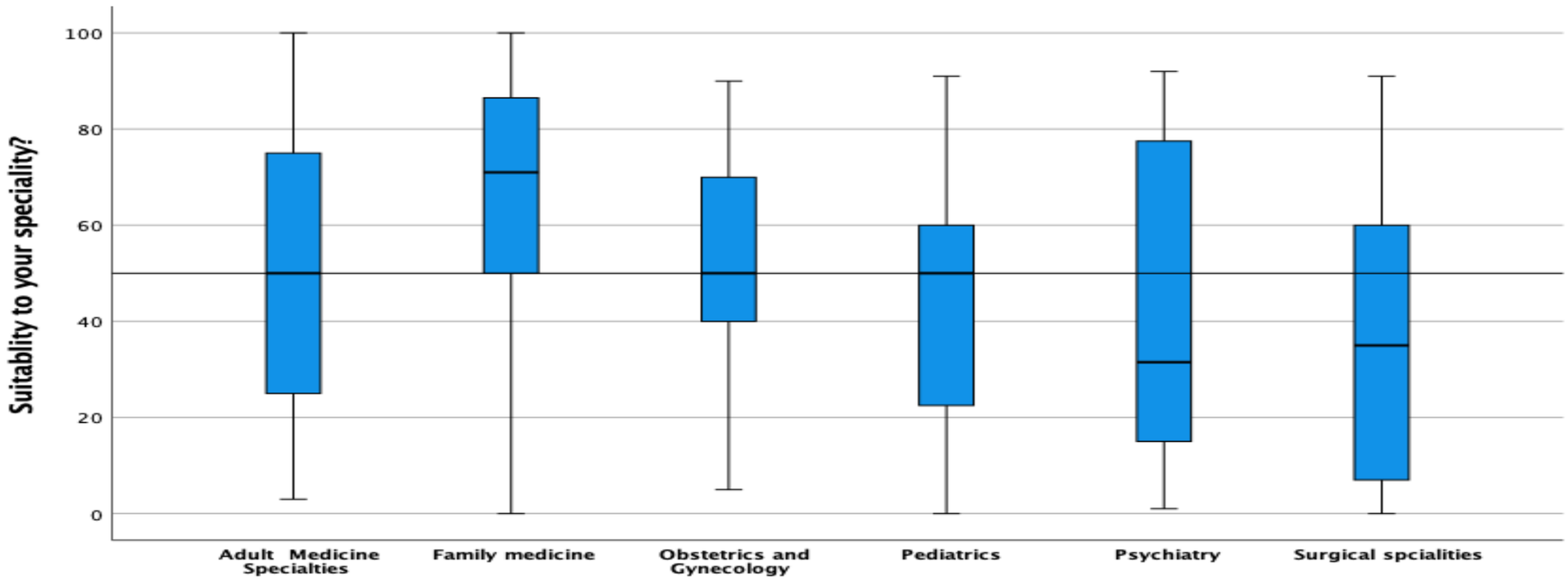
- Methods: This is a cross-sectional descriptive study of the knowledge attitude and practice of physicians of the Telehealth services during the pandemic COVID 19. Participants were all physicians working in Abu Dhabi Healthcare Services-SEHA who consented to participate in the online survey distributed through the internal communication system between May and October. A total of 363 healthcare professionals have responded to the survey.

Results

- Total of 363 physicians completed the survey. SEHA was seen by 80% of its physicians to be prepared for Telemedicine and found it as an acceptable method in the healthcare system. The lack of physical contact during teleconsultation was an issue with 54% of the physicians, and 75% preferred a face to face consultation. Most physicians (75%) found the time allocated for the teleconsultation to be sufficient, and 60% want teleconsultation to persist after the pandemic.

UAE RESEARCH

Continued



- Regarding their experience with teleconsultation, 80% of physicians found that their patients understood them, were interactive, were cooperative, and were able to receive the physician's recommendation without an issue.
- About two-third of the physicians, 69%, found that patients preferred teleconsultation and were supporting it. §A majority as well, 87%, found the area of care best suitable for teleconsultation were follow up and refill cases and the least suitable area (4.4%) was for new patient assessment.
- No prior training was reported by most respondents, 86%, who first encountered teleconsultation during the COVID pandemic. Among different specialities, family physicians found it to be most suitable to their field while surgical specialities found it to be the least suitable.
- Regarding overall satisfaction, nationality was another important determinant with UAE nationals being more satisfied. Overall all interest was higher among family physicians and those with higher positions, as consultant and specialists, independent of the year of experience. Finally, confidence in providing Telehealth was again better among family physician, consultants and younger physicians.

Article 4

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Factors Associated with US Adults' Likelihood of Accepting COVID-19 Vaccination

- In the United States (US), an online survey (n=1,971) was conducted on July 9, 2020, to estimate participants' probability of choosing a vaccine and willingness to receive the vaccination. Participants evaluated two hypothetical COVID-19 vaccines and were asked if they would choose vaccine A, vaccine B, or neither vaccine. Demographic information included age, gender, race/ethnicity, education, income level, and political partisanship and ideology. Vaccine attributes included efficacy, protection duration, major adverse effects, minor adverse effects, Food and Drug Administration (FDA) approval process, national origin of vaccine, and endorsement.

- Efficacy increased from 50%-70% was associated with a higher probability of choosing a vaccine (Coefficient, 0.07; 95% CI: 0.06-0.09) and from 50%-90% was associated with a higher probability of choosing a vaccine (0.16; 95% CI: 0.15-0.18). Protection duration from 1-5 years was associated with a higher probability of choosing a vaccine (0.05; 95% CI: 0.04-0.07). Regarding major adverse effects, a decrease in the incidence from 1 in 10,000 to 1 in 1,000,000 was associated with a higher probability of choosing a vaccine (0.07; 95% CI: 0.05-0.08). Vaccine originated from a non-US country such as China was associated with a lower probability of choosing a vaccine. Endorsements from the Centers for Disease Control and Prevention (CDC) (0.09; 95%CI: 0.07-0.11) and the World Health Organization (WHO) (0.06; 95% CI: 0.04-0.08) were associated with higher probabilities of choosing a vaccine as compared with an endorsement from US President.

- Vaccine related attributes and political characteristics were associated with self-reported preferences for choosing a hypothetical vaccine and self-reported willingness to receive the vaccination. These results may help inform public health campaigns to address vaccine hesitancy.

THANK YOU

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