



SCIENTIFIC RESEARCH MONITORING ON COVID-19

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SCIENTIFIC RESEARCH MONITORING ON COVID-19

(Issue 441)

Abu Dhabi Public Health Center (ADPHC) is gathering the latest scientific research updates and trends on coronavirus disease (COVID-19) in a monthly 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

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Articles

Summary

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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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Looking back and moving forward: Addressing health inequities after COVID-19

The COVID-19 pandemic: Adverse effects on the social determinants of health in children and families

Where to make a difference: research and the social determinants in pediatrics and child health in the COVID-19 era





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

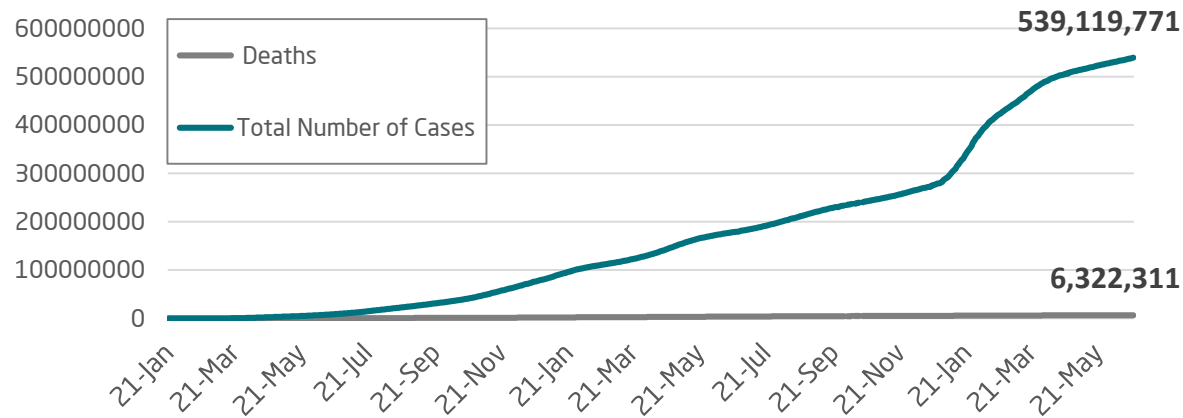


Figure 3: % of people vaccinated fully & partly against COVID-19

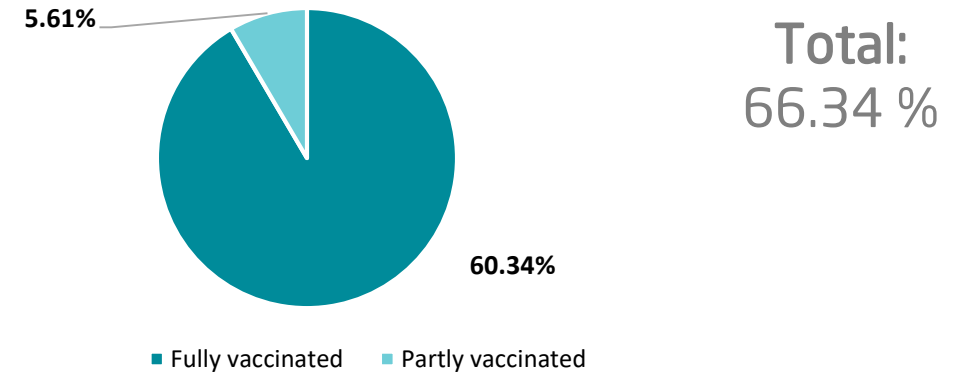


Figure 2: Daily New Infected COVID-19 Cases

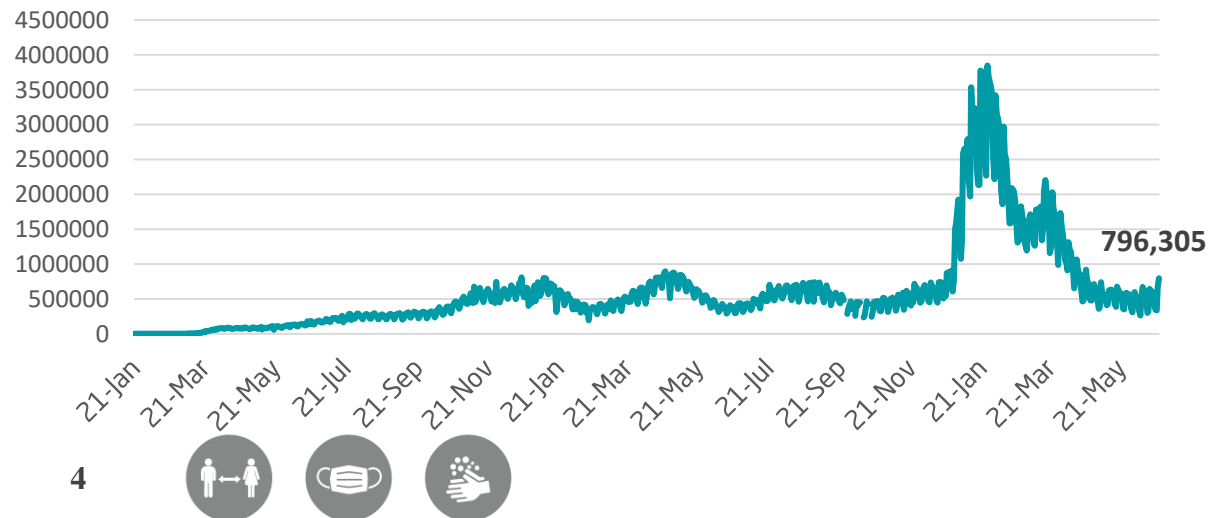


Figure 4: Global Daily New Deaths Due to COVID-19

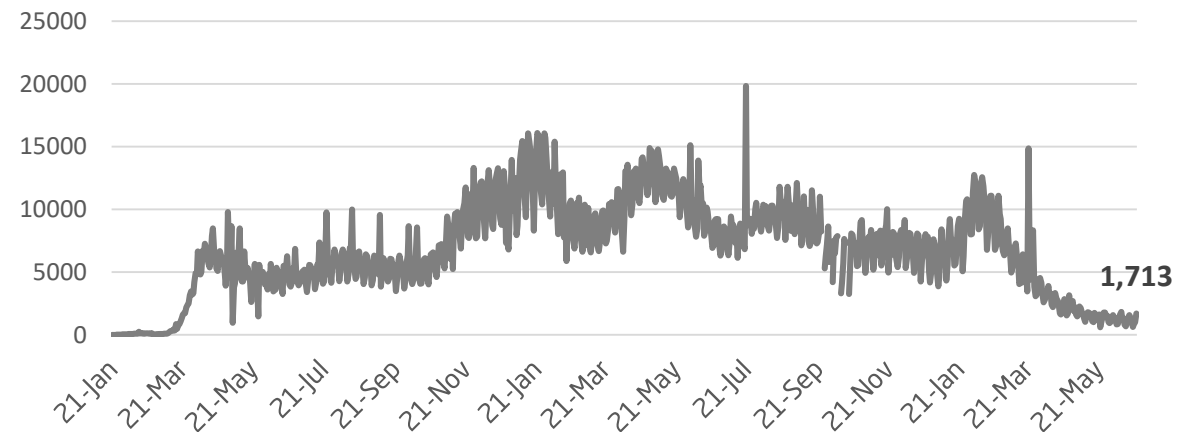




Figure 5: Top 10 Countries in the Total Number of Cases Due to COVID-19

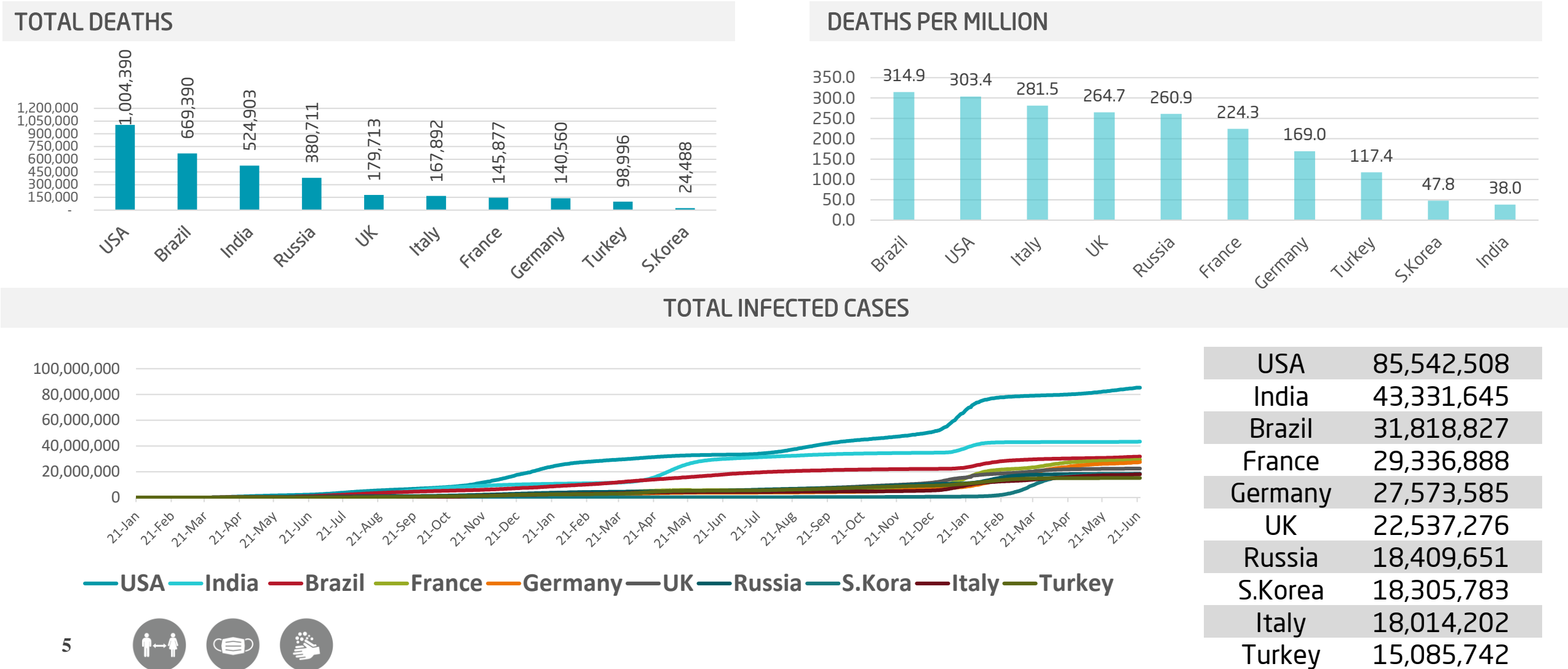




Figure 8: COVID-19 Status in the UAE (Federal Competitiveness and Statistics Authority Dashboard. (Last update on April 2022)



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

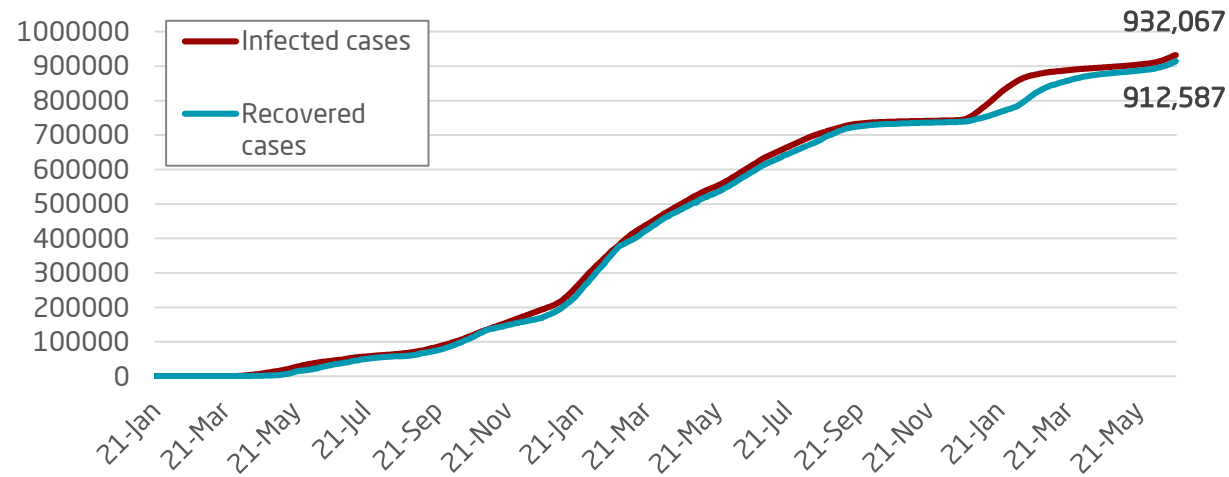


Figure 6 B: TOTAL NUMBER and Percentage of UAE population Vaccinated

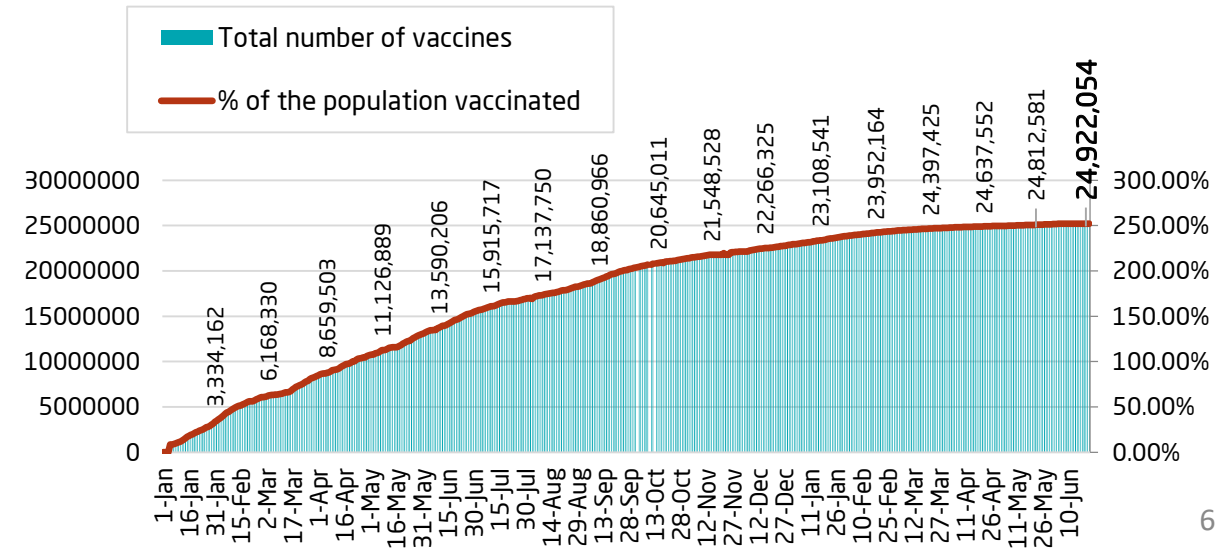




Figure 7A : Global Distribution of COVID-19 Cases

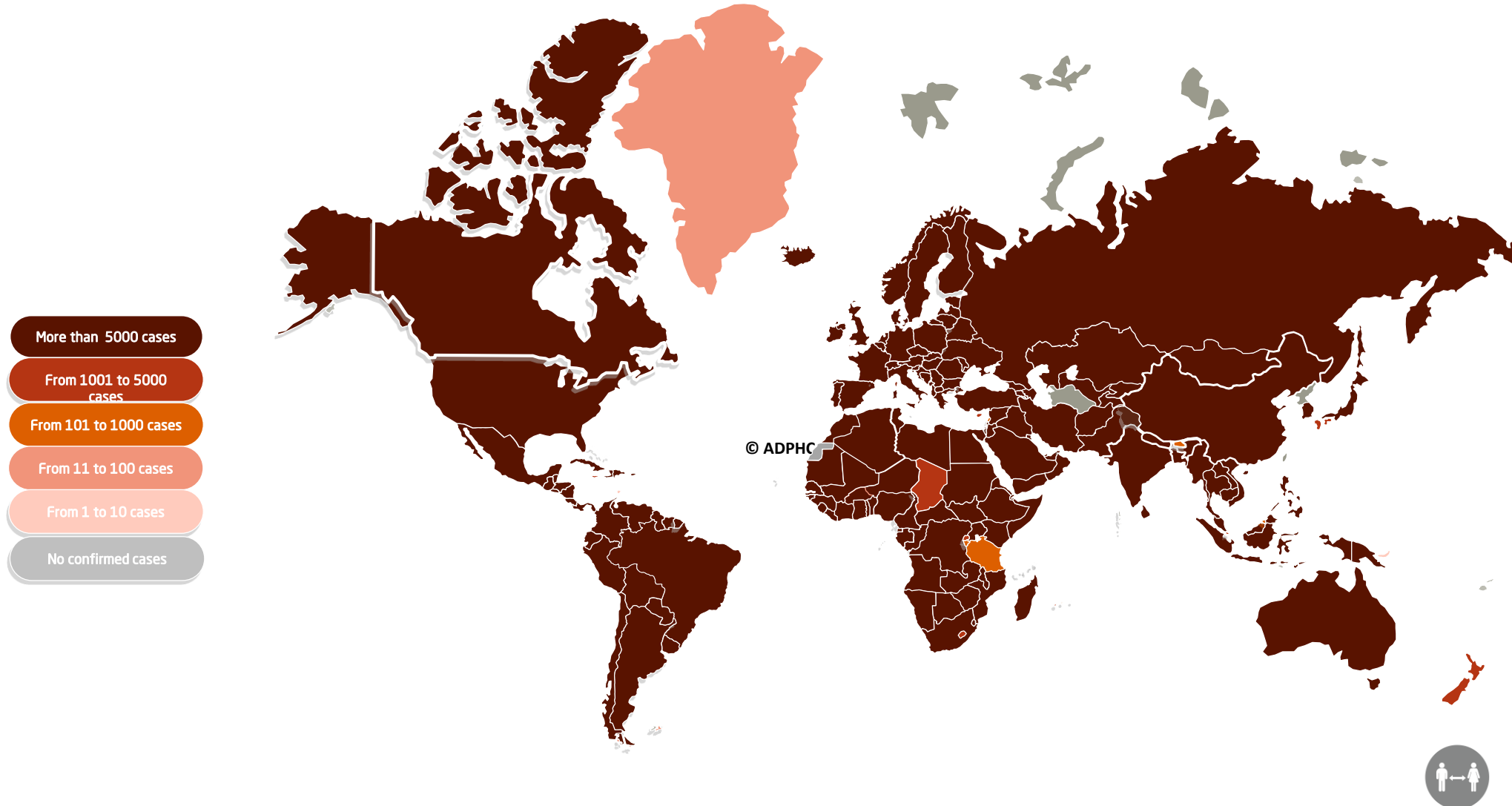




Figure 7B: Bar Chart Illustrates the Global Distribution of COVID19 Cases

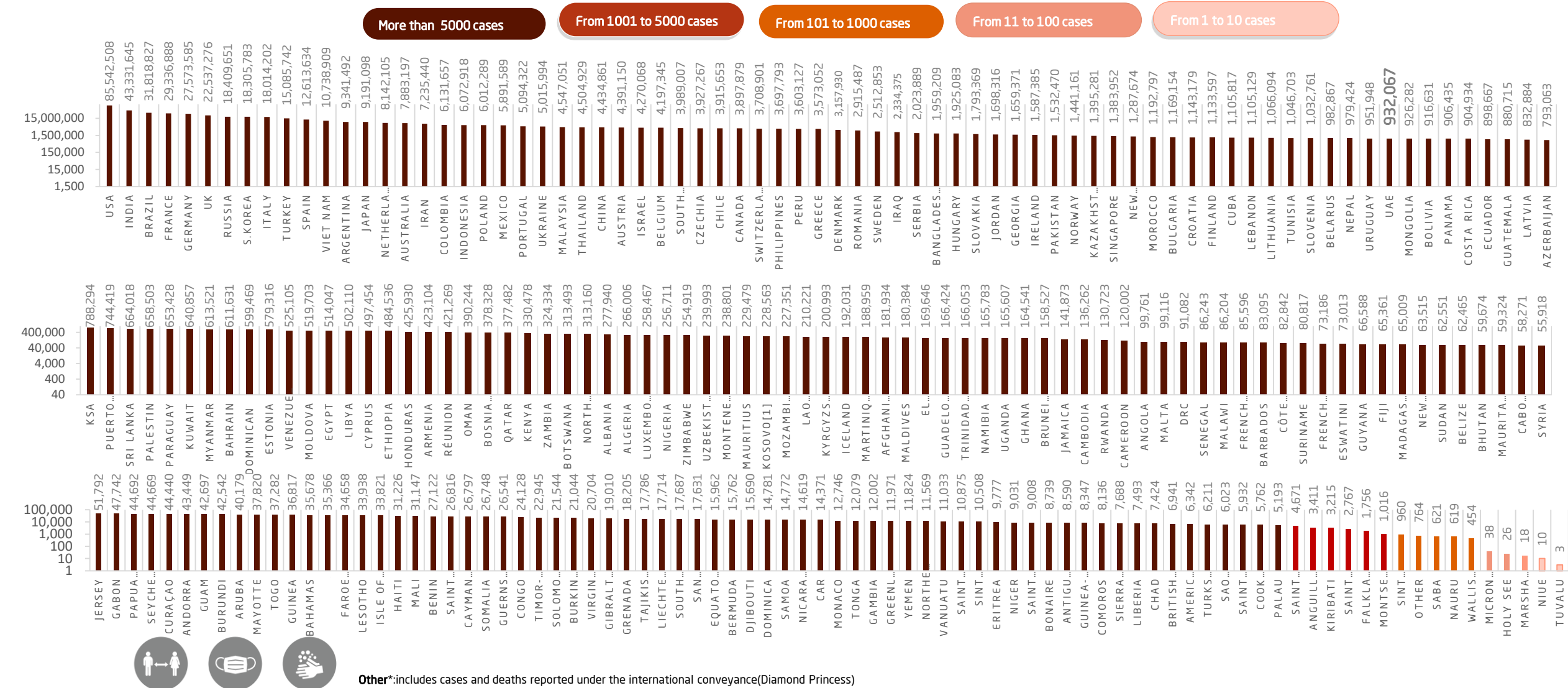
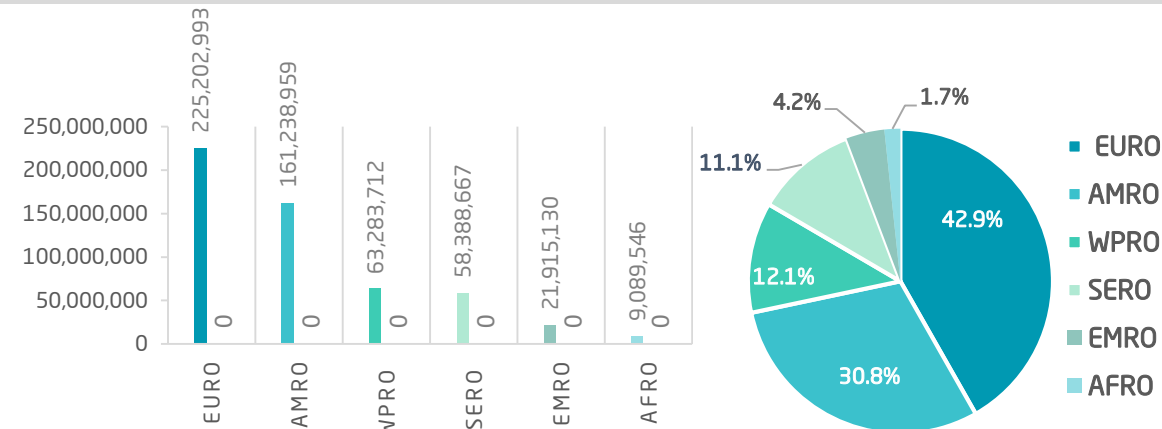




Figure 8: Global Distribution of COVID-19 Cases per Region



INFECTED



DEATHS

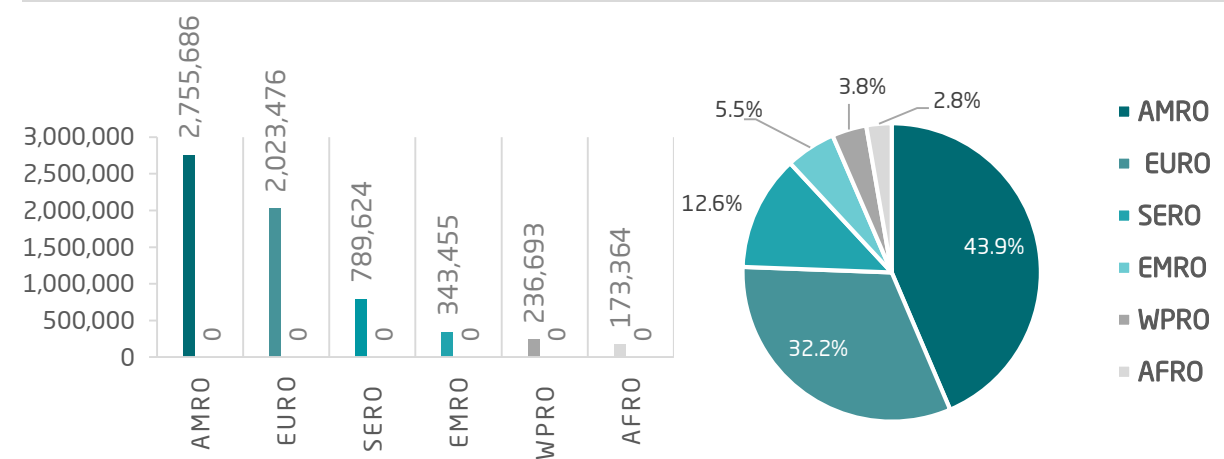
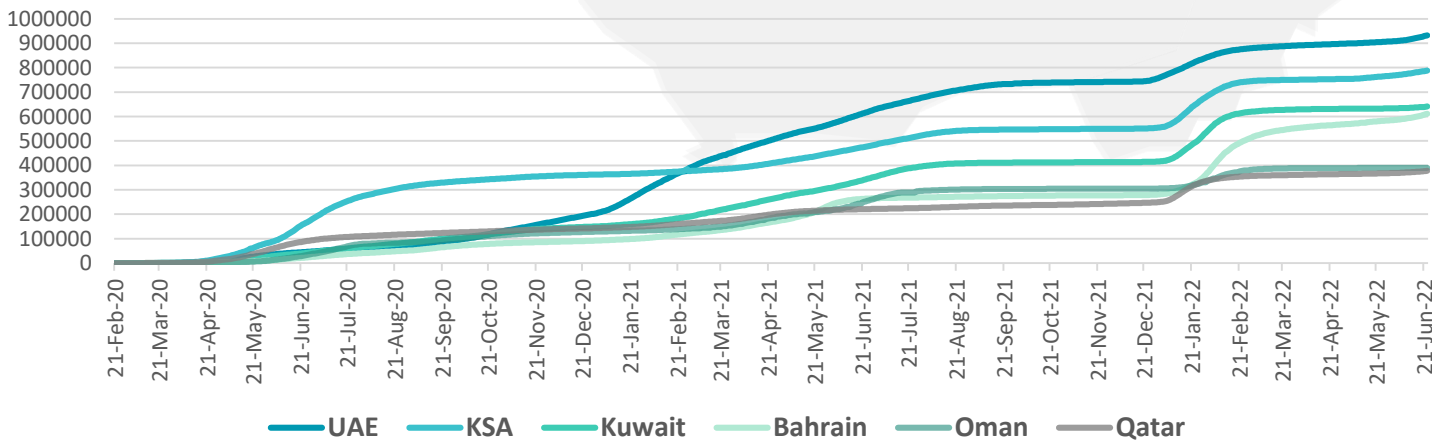
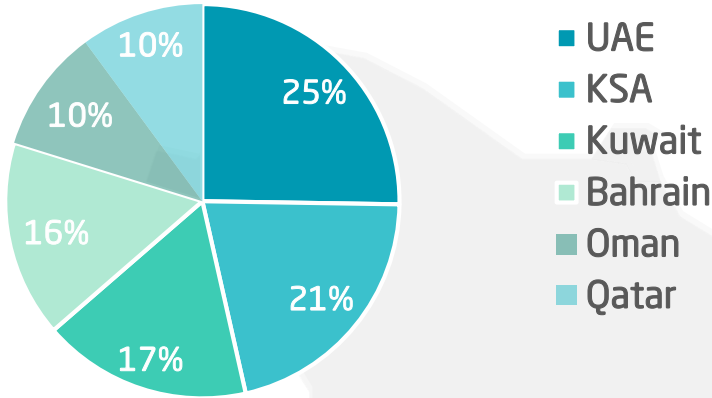
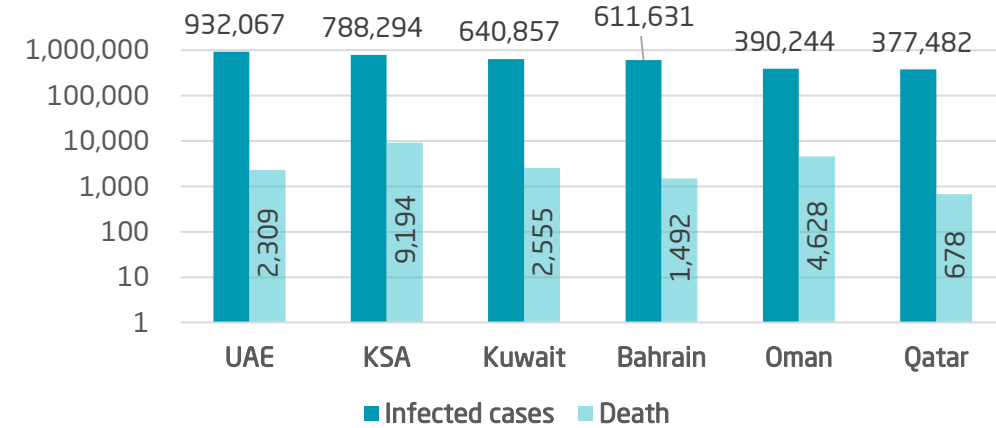


Figure 9: Comparative Analysis of the Distribution of COVID-19 Cases in GCC Countries

TOTAL NUMBER OF INFECTED CASES



TOTAL NUMBER OF INFECTED, RECOVERED AND DEATHS



DEATHS PER MILLION

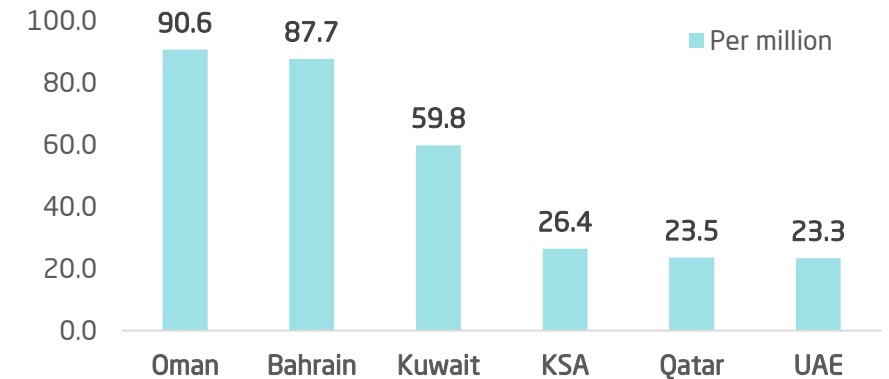




Figure 10: Comparative Analysis of the Distribution of COVID-19 New Cases in GCC Countries

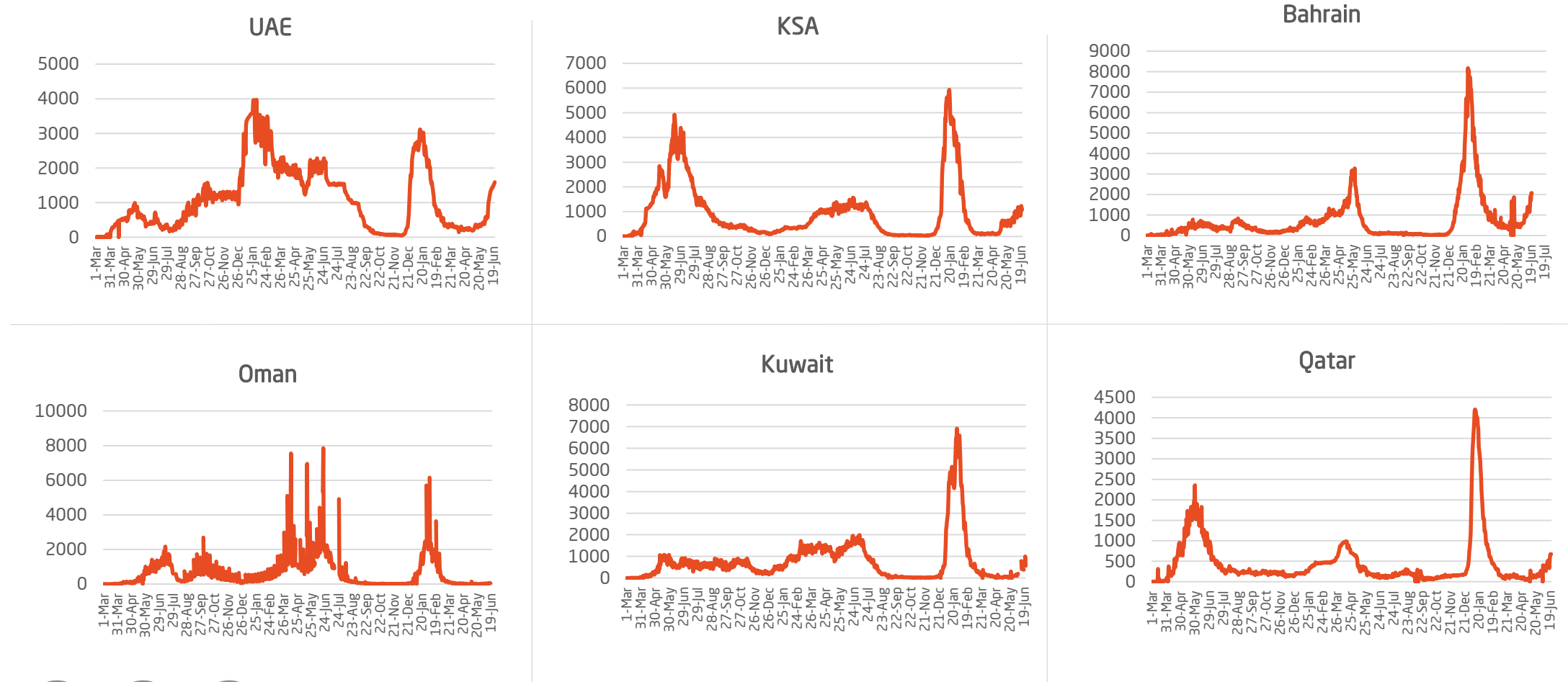
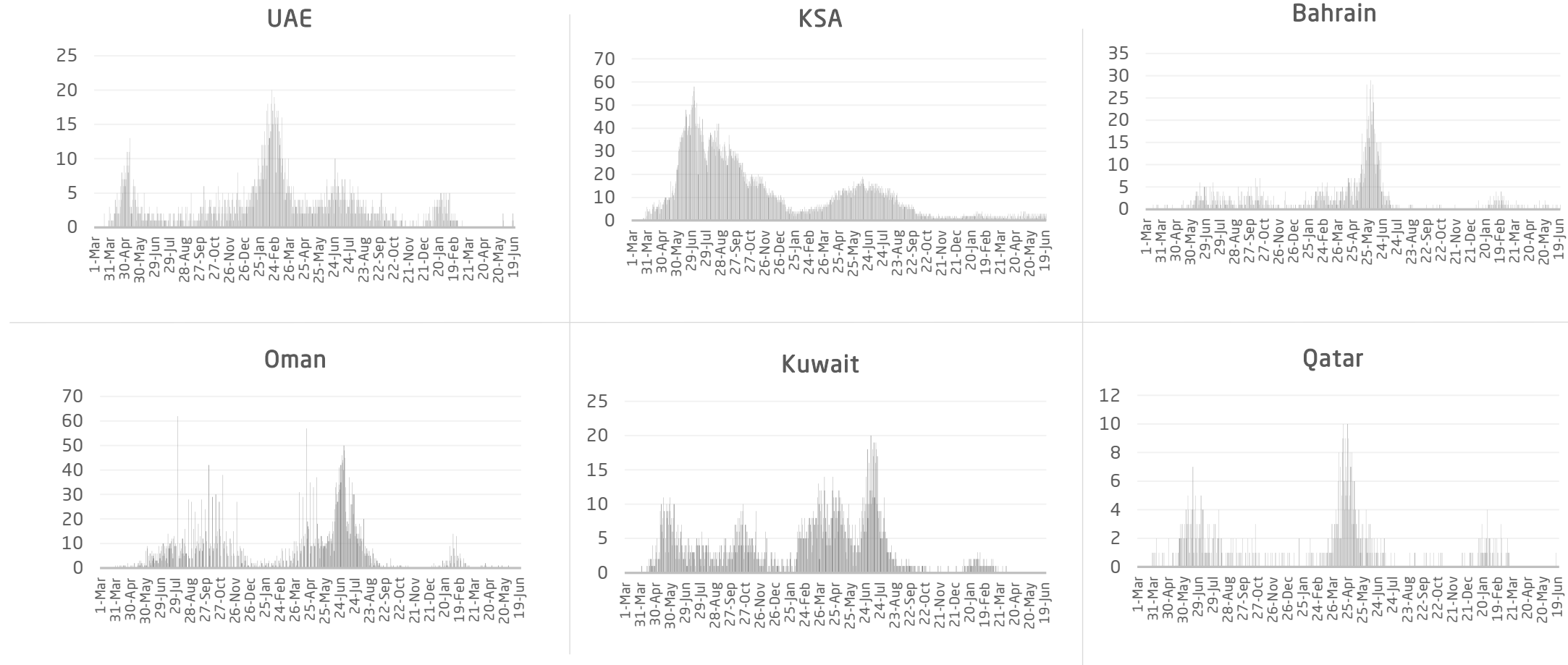




Figure 11: Comparative Analysis of the Distribution of COVID-19 New Death Cases in GCC Countries



- Before summarizing the article of Kimberlyn McGrail and colleagues, it is logic to define the Social Determinants of Health (SDH). The World Health Organization (WHO) defines SDH as the conditions in which people are born, grow, work, live, and age, and the wider set of forces and system shaping the conditions of daily life.

Kimberlyn McGrail and colleagues highlighted the following:

- The authors considered COVID-19 as turning point to address the SDH, since the pandemic put a spotlight on existing societal issues, accelerated the pace of change in others, and created some new ones as well.
- Raising of concerns about inequalities in health by income and race are not new, however, they became more apparent to a larger number of people during 2020.
- COVID-19 created an opportunity and motivation to reassess our understanding of health.
- Perhaps more importantly, it is an opportunity to reduce inequities in who has access to, who uses, and who benefits from the resources that promote health and well-being.

- The authors offered three questions and answering of these questions will give a foundation to stakeholders to think about health and health inequities after 2020:
 - 1) what do we mean by “health” and “health inequality and inequity”?
 - 2) what are the structures and policies we put in place to support or promote health, and how effective are they?
 - 3) who has the power to shape structures and policies, and whose interests do those structures and policies serve?

The authors conclude that:

- Health inequalities during the COVID-19 pandemic, need more discussion and actions need to be taken accordingly.
- The commitment to reducing inequities is through focusing on what really matters, and recognize these are societal choices, not individual ones.
- The world in a moment at which collective attention could lead to re-imagining of how we think about health and what resources are available to support health.
- More fundamentally, it is an opportunity to start acting to address long-standing structural inequities as soon as possible.



The COVID-19 pandemic: Adverse effects on the social determinants of health in children and families

Published

January, 2022 at [Science Direct](#)

- The goal of this article was to describe the impact of social determinants on the experience of the COVID-19 pandemic within the pediatric population.
- The World Health Organization defines social determinants of health as “the conditions in which people are born, grow, live, work and age which could be shaped by the distribution of money, power and resources at global, national levels”.

Housing Security:

- Up to 59% of people experiencing homelessness are children.
- Epidemiologic studies have linked housing insecurity with worsening long-term conditions, such as asthma.
- To solve the housing insecurity, expansion of both temporary and permanent solutions is needed, so that children have a stable housing situation.
- Stable housing situation does not disrupt the family’s ability to manage any chronic disease, including asthma.

Food Security:

- There is significant long-term morbidity associated with periods of food insecurity during childhood.
- For children with food allergy, food insecurity can be potentially dangerous as this may result in decreased access to allergen-safe foods.
- Food insecurity in childhood is associated with a reduced immune innate
- Familial Income, Social Status, and Neighborhood:
- Estimates are that an additional 88 to 115 million people will be categorized as living in extreme poverty.
- Death rate owing to COVID-19 was 3.8 times higher among counties with more, vs less, poverty.
- Relief and Economic Security Act, may indirectly affect children, a focus specifically on the impact of poverty on long-term outcomes of children is essential.



Continued

Educational Attainment:

- For children dependent on school-based health programs for management of chronic diseases, school closures may critically risk reducing access to necessary care, including school-based asthma management programs.
- Future decisions regarding school closures during the pandemic should consider the association between educational disruption and decreased expected lifespan.

Abuse and Child Maltreatment:

- Child maltreatment and abuse have been associated with a variety of long-term adverse health outcomes, including psychological disorders (eg, depression, anxiety disorder, eating disorders, posttraumatic stress disorder), high-risk behaviors (eg, smoking, alcohol abuse, unsafe sexual practices), and overall lower health status.

- School educators should receive training in identifying children at risk in a distance- learning model and screen for home safety.
- Health care providers can play a key role in identifying child maltreatment and supporting vulnerable families, including screening for family stress, identifying children at risk, and recognizing signs of child maltreatment.
- Race or Ethnicity and Systemic Racism:
 - It has been stated that “racism, not race, drives inequity across the COVID-19 continuum.
 - For those living in poverty or with other adverse social determinants of health, the pandemic has made a bad situation worse.
 - Ongoing studies are required to measure the impact of COVID-19 on those with adverse social determinants, in particular among children.



Where to make a difference: research and the social determinants in pediatrics and child health in the COVID-19 era

Published

November 10, 2020 in [Nature](#)

Background:

- The COVID-19 pandemic has emphasized the way different communities have been affected dependent on ethnic or social background. Despite children not being as affected as adults, measures to control the pandemic may have significant consequences for children's mental and physical well-being, as well as long-term challenges for their education.
- Social determinants of health influence life opportunities, disease profiles, health outcomes, and life expectancy for children. Reviews in both UK and the USA, have social determinants have been documented to have a severe adverse impact on children.
- The paper aims to raise the importance of social determinants of health in paediatrics, considers the impact of social determinants of health on COVID-19 and offers opportunities for future research. It covers key areas that require attention as we move to the post COVID era

SDH and COVID-19:

The importance of considering the SDH in pediatric research has been highlighted once more by SARS-CoV-2. In societies affected by the virus, those who suffer inequity and who are negatively influenced by the SDH have been most severely affected. The COVID pandemic has exposed underlying inequalities in society.

- Currently it is not certain why this is so, but the SDH plays a major role as the known risk factors and comorbidities for poorer outcomes in COVID-19 infection, such as diabetes and obesity, and other chronic diseases that are more prevalent in poorer communities and ethnic minorities. It is clear that social background, socioeconomic status, and poverty, along with ethnicity converge to produce worse outcomes. Knowledge of the infection and preventive measures differ as to ethnicity and socioeconomic class.

Research during pandemic:

- The COVID-19 pandemic presents both a challenge and an opportunity for the pediatric research community. In a complex adaptive system such as the COVID-19 pandemic, we need to move to a "more fit-for-purpose scientific paradigm", where linear associations may not be possible, due to the complexity of the real world. As the pandemic is one large natural experiment, reports of the impact of COVID-19 on children are emerging in informal ways through correspondence to journals. Although the evidence base is limited, these early communications point to the type of research that is required in the coming months. There is also the opportunity to reconsider how research is undertaken into the consequences of the pandemic on child health and disease.



Continued

Severe illness and sequelae :

- The COVID pandemic has had a mild impact on children. However, the reports of pediatric inflammatory multisystem syndrome temporally associated with SARS-CoV-2 (PIMS-TS) have indicated up to three-quarters of those infected come from ethnic minorities. In each case, the reason for this has not been determined and while it could be a genetic predisposition, the social determinants of this condition will require further research and should not be ignored.

Collateral damage of the lockdown and social distancing:

- Many of the lockdown interventions have been applied and experienced according to one's social class. Unemployment and loss of "gig economy" work have affected the most disadvantaged. This in turn would have a disproportionate impact on children.

Impact of disparities in technologies of digital health and learning:

The solutions that have been developed for addressing the impact of COVID-19 have included telehealth and digital learning. The decreased attendance at school has affected those from lower socioeconomic status more than those who can afford substitute education and who can access learning via the internet.

Potential for research on the social determinants of COVID-19:

- To assess the long-term impact of isolation on mental well-being, as it is postulated that there will be an increase in mental ill-health issues in children
- To assess the impact on child protection as a result of increased domestic violence
- To assess whether the impact on the treatment of children with chronic conditions and comorbidities had a worse outcome—or were they affected similarly to adults with comorbidities.
- To consider the impact of COVID-19 on pregnancy and whether it led to increases in prematurity.
- Research into the global impact on children is urgently required as the social determinants of healthcare is a global issue.

Conclusion:

- The challenge is great, but it is one that needs to be grasped. Further research on the impact of COVID-19 on children is required. The causes are deep-seated and complex, but the body of evidence is growing. Research is needed and interventions that will improve the Social Determinants of Health—and ultimately health itself must be tested.



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