**Oman – Multisectoral Collaboration and Community Participation Under Robust Health System and Strong Preparedness Capacity to Slow the Spread of COVID-19**

*Introduction*

Oman is a high-income country located on the Southeastern corner of the Arabian Peninsula with stable political, economic, and social system.[ref] During the past decade, Oman has been lauded for its rapid progress in public health sectors, close collaboration with international agencies, as well as the strong commitment of the government on national health priorities.[ref] During the COVID-19 pandemic, Oman faced several potential challenges to mitigating the impact of the novel coronavirus, such as densely populated urban areas, a large population of migrant workers living in crowded informal settlements and the diversity of languages spoken, complicating the implementation of effective public health communication strategies challenging1. As of June 2, 2021, Oman had a total of 218,271 confirmed cases, which is approximately 4274 cases per 100,000 people 2. While these numbers are undoubtedly significant, Oman implemented innovative strategies that likely slowed COVID-19 transmission that are worth exploring.

Diagram, engineering drawing

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Fig.XX Trend of Selected SDG-3 Indicators Before the COVID-19 Pandemic (2009-2019), Oman

*Overview of Health System and progress towards UHC*

*Diagram

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Oman has a predominantly public system in which government-run facilities provide most of the health services for primary, secondary, and tertiary care6. Healthcare facilities that belong to the Ministry of Health (MOH), are classified into three levels, ranging from Governorate (Regional) hospitals that focus on secondary and tertiary care to local Health centers, which provide primary health care services. In addition to those directed by the MoH, there are governmental hospitals operated by the Ministry of Defense, Royal Oman Police, Petroleum Development off Oman, and Sultan Qaboos University. Taken together, the government provides 83.1% of hospitals, 92.5% of hospital beds, 62.2% of outpatient services and 94.5% of inpatient services7. The Ministry of Health provides free universal health care to all Omani nationals and for expatriates that work for the government and employer-provided insurance covers expatriates that work for the private sector8. Overall, while fees for doctor’s visits have recently been established, people pay very little, if any, out of pocket, and the MOH covers over 80% of health costs6.

UHC has been a priority for the government of Oman since the establishment of the MOH in 1971 by classifying health care as a fundamental right for all Omani citizens and as a result, today, the population has near-universal access (both financial and geographic) access to health services8. Despite this success, Oman still faces challenges to achieving effective UHC. Over the past 40 years, primary health care8 has been extended to all the regions in Oman and remains a priority, however, there is a need to increase investment in PHC to keep up with increasing costs and demands on the existing health care system and to adapt to the demographic changes9. Oman has experienced and is projected to continue experiencing significant population growth with a rapidly growing aging population, which requires a shift in health services being provided. There is also a need to focus on preventative versus curative care, which will require additional investment in PHC as a core tenant of UHC9. As of 2019, IHME estimated that Oman had achieved 71.2% effective UHC coverage, an increase of 9.6% from 201010.

Add some progress about SDG-3

*Pandemic Preparedness*

Prior to the COVID-19 pandemic, Oman has had experience with other infectious diseases, including HIV/AIDS, tuberculosis, and MERS-cov-2.[ref] However, because of the robust disease surveillance mechanisms in place, and effective immunization programs for vaccine-preventable diseases, there has been a significant decline in morbidity and mortality of these diseases since 19901. Their preparedness and response capacity before the COVID-19 pandemic largely focused on eliminating the ongoing transmission of HIV and TB, as well as to detect and contain sporadic outbreaks of MERS.

Arabian Peninsula is a region where MERS is endemic among the dromedary camels. Since its first detection of the human MERS infection in 2013, Oman established a national taskforce to implement multiple measures to strengthen the country’s preparedness on MERS outbreaks.[ref] As a result, Oman reported a total of 32 confirmed cases, a much lower number than the neighboring Saudi Arabia or United Arab Emirates.[ref] Unlike forementioned two countries bordering Oman, who reported the outbreaks of MERS in 2020 – 2021[ref], Oman’s last MERS outbreak was reported in March 2019, with 21 confirmed cases across 2 governorates.[ref] After the detection of the first 13 cases, active surveillance and contact tracing activities, followed by laboratory testing, were robustly implemented and identified 8 additional cases, which were not epidemiologically linked to the previously detected cases.[ref] Only 3 confirmed cases were identified as healthcare workers who acquired the disease through nosocomial infection, all in 2019.[ref] Oman’s infection prevention and control (IPC) measures, since then, was further reinforced. Oman’s epidemiological situation with MERS illustrates the country’s strength in responding to infectious disease outbreaks and their commitment to bolster the response capacity.

*Response to COVID-19*

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Oman’s first two cases were reported on February 24, 2020, both with a recent travel history to Iran.[ref] Upon detection, the government released immediate statement which included the recommendation for all travelers from high-incidence countries to quarantine.[ref] Oman, similar to other Gulf countries, took early actions to mitigate the impact of COVID-19, including barring entry of travelers coming from high-incidence countries (e.g., China, South Korea, Italy, and Iran) in March 2020. A number of measures including heavily enforced night-time curfews, prohibition of mass gatherings, requiring masks in all public venues, screening and quarantine of all incoming travelers have been implemented since as early as March 2020. However, Lockdowns and restrictions on travel and gathering has been periodically lifted in effort to keep the economy afloat, which may have led to more transmission.

The agile response in the early phase was possible due to the country’s proactive activation of the emergency taskforce in January 2020, even before the detection of the first cases, based on their previous experience and lessons learned from MERS.[ref] This was followed by an establishment of a multisectoral supreme committee in March 2020, immediately after the detection of first cases, which was charged with implementing necessary measures to reduce disease transmission13. The committee was led by the Minister of Interior Affairs and had representation from key leadership of the MOH.

Oman’s robust and accessible health system has undoubtedly been critical in the country’s response to COVID-19. Oman’s national committee strategically focused on supporting existing primary health care facilities in the early pandemics[ref] and has demonstrated its continued commitment to universal health coverage by taking swift action to increase hospital capacity, including the number of dedicated ICU beds, and mobilizing the health workforce to be able to address the needs of the entire population. The Government provided diagnostic and treatment coverage free of charge to both Omani citizens and the large expatriate community5. In addition, the health system predominantly driven by public sector enabled the smooth coordination of the response activities across levels: Each region operated its own emergency operation center (EOC) and collaborated with each other under the central coordination of MoH;[ref] Community engagement and participation was largely driven by community members and existing organizations in the local communities17; private sectors closely collaborated with the government to facilitate supplies and technologies;[ref]

However,

Conclusion

Oman was relatively successful in reducing the spread of COVID-19 throughout the pandemic. Oman’s COVID-19 attack rate seems to be the highest in the Eastern Mediterranean region.[ref] However, it is most likely due to their robust surveillance system with high sensitivity to detect cases, as well as their transparent and timely information sharing, which is not always the case for countries in the region. INevertheless, there are a few indicators that reflect the success of Oman’s COVID-19 response: Their case fatality rate remains low[ref]; They are less affected by the new variants than the countries in the region;[ref] They are one of the first two countries in the region to kick off its vaccine roll-out and have vaccinated over 500,000 people with full doses.[ref] Oman also plays an active role in cross-country collaboration and information sharing under the International Health Regulations (IHR, 2005) framework, which further contributes to the building of strong international framework of public health system and collaboration. [ref]

Oman’s strong response to COVID-19, as described in the case study, was warranted by several elements in their health system, which existed before the pandemic: Firstly, ’s significant progress towards achieving UHC and the government’s strong commitment to its core principles enabled equitable access to care, including the COVID-19 diagnostics and treatment, during the COVID-19 pandemic.5; Overall focus on existing primary health care facilities for COVID-19 response activities leveraged the strength of the system well; made the early agile response possible; Well-coordinated m, including the strong private sector engagement, led by the central government was the key to coordinated response strategies across different domains; Csupplement holistic national-level outbreak preparedness and response plans with context-specific and community-driven strategies so that no one is left behind. Moving forward,

*Take-aways*

* Oman, a high-income country in Arabian Peninsula, was relatively successful in implementing COVID-19 response.
* Oman’s strength during the pandemic was strongly grounded in its recent achievements towards UHC, i.e. in expanding healthcare coverage, and in providing close-to-free access to primary health care to the population.
* Their previous experience with MERS outbreaks since 2013 provided strong backbone of COVID-19 preparedness and response strategies. The establishment of national taskforce even before the country detected its first cases enabled the government to react with agility in the early phase of the pandemic.
* The government-driven national-level response strategies were complemented by strong engagement of the private sectors and the community-driven local engagements.

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