

CORRESPONDENCE

The fight against COVID-19 in the small island of Mauritius

Kamleshun Ramphul

Department of Pediatrics, Shanghai Xin Hua Hospital Affiliated to the Shanghai Jiao Tong University School of Medicine, Shanghai, China

To the Editor,

The pandemic of Coronavirus disease (COVID-19) has involved more than 218 million people worldwide. The small island of Mauritius, with a population of 1.26 million inhabitants, situated in the Indian Ocean, to the east of Africa, was also not spared. On 18th March 2020, the island reported its first three cases, which led the Prime Minister to close its borders on 19th March 2020. As the virus continued to spread, at first a “sanitary” lockdown and later a complete lockdown were started on 20th March and 24th March 2020 respectively. The country acted fast and severe measures were taken to ensure proper lockdown protocols. Strict laws to combat misinformation and “fake news” were adopted. Within 39 days, the country controlled the pandemic and the lockdown ended on the 30th May 2020 at midnight. Mauritius maintained a Covid-free status up to November 2020 with no “locally transmitted cases” and resumed near-normal life, recording only imported cases after 26th November 2020 (1, 2).

However, as with many countries, Mauritius was not completely safe against a second wave of infection. With the resurgence of cases, a second lockdown was started on 10th March 2021, which lasted till the end of April 2021. While several similar steps were adopted during the first and second waves, the results were not identical. During the lockdown issued in 2020, the country completely suppressed the spread

of the infection, while the second lockdown of 2021 proved to be helpful but slightly less effective. The country also adopted a national mask mandate, performed mass testing, strict contact tracing and proper social distancing protocols during both lockdowns. As Mauritius transitioned to resume its post-lockdown activities, several restrictions were gradually eased despite some active cases and daily new infections. The authorities called for the cooperation of the general public to adhere to the strict sanitary protocols during these periods and for the solidarity and togetherness to help fight this second wave (3).

Mauritius started its vaccination campaign on 26th January 2021. Frontliners, the elderly, and immunosuppressed/compromised were prioritized first, followed by the general public. The island received various vaccines such as Covishield and Covaxin from India, Sinopharm vaccine from China, Hayat-Vax (Sinopharm) from UAE, Sputnik V from Russia, and Johnson & Johnson (Janssen) Vaccine across the year. Authorities plan to include children between the ages of 12 to 17 for vaccine eligibility once the country has access to the Pfizer vaccine.

As the island was approved for enough vaccines, the country prioritized inoculating as many Mauritians as possible to reach herd immunity. Additional doctors were recruited on a temporary basis to assist in vaccination campaigns. Vaccination is compulsory for people working in several sectors such as healthcare, education, daycares, port, airport, retirement homes,

and prisons (4). From 15th September 2021, it will also involve those working in any touristic activities including night-clubs, restaurants, the police force, firefighters, hairdressers and beauty salons, gyms and other sports related centres, and dormitories. A vaccination card was also introduced, and several places such as hospitals, clinics, and schools require proof of vaccination for access (5).

As per data released by the World Health Organization (WHO) (<https://covid19.who.int/region/afro/country/mu>), 10,676 confirmed cases were reported in Mauritius between January 2020 and 31st August 2021, resulting in 31 COVID-19 related deaths. Data from Worldometers (<https://www.worldometers.info/coronavirus/country/mauritius/>) shows that the country registered 643 cases between January 2020 and 10th March 2021 (start of the second lockdown) while 6,763 (63.3%) confirmed cases took place during the month of August 2021 alone. The database also shows that ten deaths were recorded between January 2020 to 10th March 2021, with a case-fatality rate of 1.6%. However, in August 2021, there were twelve deaths and a lower case-fatality rate of 0.18%. A National Response and Contingency Plan has also been set up, which is constantly revised to adapt with the changes in the country, so that adequate provisions can be made for patients requiring intensive care admissions and ventilation, as well as address the different protocols to contain the spread of the virus (<https://health.govmu.org/>).

Meanwhile, the health department of Mauritius (<https://health.govmu.org/>) reported that as of 26th August 2021, 799,170 (63.1%) Mauritians have already received their first vaccine dose (84% of the adult population), and 720,784 (56.9%) are fully vaccinated with two doses (78% of the adult population). Since the vaccines have shown to reduce the risk of severe and fatal outcomes of COVID-19, it can be hypothesized that part of the drastic drop in mortality rates may be linked by the country's rapid vaccination campaign. However, further research to compare viral variants and patients' characteristics during those two periods is also encouraged.

Mauritius is a popular tourist destination, and the pandemic led to a drop in the number of tourist

arrivals and income during 2020 and 2021. During the first quarter of 2021, only 2,772 tourist arrivals were recorded against 304,842 in 2020. Statistics Mauritius also confirmed that the unemployment rate rose from 6.7% to 9.2% between 2019 to 2020 (<https://stats-mauritius.govmu.org/>). This socioeconomic change can be linked with negative impact of the pandemic on the country as hotels could not accommodate foreign visitors for the usual sets of activities and events.

The authorities in Mauritius focused on reopening national borders in different steps, thus allowing them time to adapt to the changes seen with each step. Airport staffs were required to be fully vaccinated. During phase 1 of reopening, which started on 15th July 2021 and will last till 30th September 2021, vaccinated visitors are allowed to enter the country with a negative PCR test before departure and required to stay at "resort bubbles", where regular PCR tests are conducted. Initially a 14-day-stay at "resort bubbles" was mandated. However, as from the 1st of September 2021, only a 7-day stay is sufficient for vaccinated visitors with negative PCR tests done during their stay. The authorities also prioritized all tourism workers and hotel staff's safety, and they were also fully inoculated. Phase 2 of the reopening starts from October 1st 2021, and all vaccinated tourists will be freely allowed into the country with a negative PCR and proof of vaccination. Unvaccinated visitors will be subjected to a 14-day in-room quarantine and regular PCR testing (3).

As the vaccination rates rapidly grew, several newly diagnosed cases were asymptomatic or mild. The authorities proceeded to adopt the concept of home quarantine and self-isolation for COVID-19 positive Mauritians who are below 65, vaccinated and asymptomatic. Additional physicians were recruited to be part of a Domiciliary Monitoring Team to follow up on such cases. The other COVID-19 positive patients will be appropriately taken care of in specific COVID-19 centres and hospitals. This allowed the health care workers and resources to be targeted towards symptomatic and severe cases. The laws requiring masks and proper hygienic protocols were also extended.

While these measures will bring a sigh of relief to the economic blow suffered by the country, the change in the trend of new cases with new arrivals of tourists

and the development of new variants and mutations of the virus cannot be predicted. However, the country has shown praiseworthy determination that led to proper control during the first wave (1), and a rapid and effective vaccination campaign to fight the second wave and protect its inhabitants. As Mauritius embarks on a new phase, the country is wary, yet hopeful, that it has done enough to prepare itself.

Acknowledgement: The author is grateful for the press-releases, updates, and information provided freely by the Health department and the Government of Mauritius to the public via their app and website <https://besafemoris.mu/>, the Government website www.govmu.org, Mauritius Tourism Promotion Authority's website www.mymauritius.travel and information also released by several local news channels (www.defimedia.info, www.lemauricien.com, <https://mbcradio.tv/>, and www.lexpress.mu) on their websites that were used to draft this manuscript as accurately as possible. As the pandemic is rapidly evolving, the article may not reflect the current situation to date, but represents the situation as the draft was being made. We encourage the public to search for the up-to-date information and guidelines from the official government websites. The author is also thankful to all the frontliners and Mauritians who answered the call to help the country during the pandemic. May Dr. Bruno Cheong, a national hero, who passed away while treating the patient zero, rest in peace.

Conflicts of interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

References

1. Musango L, Veerapa-Mangroo L, Joomaye Z, Ghurbhurrun A, Vythelingam V, Paul E. Key success factors of Mauritius in the fight against COVID-19. *BMJ Glob Health*. 2021;6:e005372.
2. Kowlessur S, Ori B, Zimmet P, Tuomilehto J, Chitson P, Ramphul Y. Tackling the COVID-19 pandemic in paradise: the Mauritian experience. *Lancet Diabetes Endocrinol*. 2020;8:878-879.
3. Prime Minister Jugnauth announces easing of restrictions as from 01 July 2021 2021, available online https://besafemoris.mu/general_news/prime-minister-jugnauth-announces-easing-of-restrictions-as-from-01-july-2021/ (accessed on 26th August 2021)
4. Covid-19: la vaccination ouverte à tous et obligatoire pour certains 2021, available online <https://www.lexpress.mu/article/397383/covid-19-vaccination-ouverte-tous-et-obligatoire-pour-certains> (accessed on 26th August 2021)
5. Nouveaux règlements : les écoles et hôpitaux interdits au personnel non vacciné 2021, available online <https://defimedia.info/nouveaux-reglements-les-ecoles-et-hopitaux-interdits-au-personnel-non-vaccine> (accessed on 26th August 2021).

Correspondence:

Received: 26 August 2021

Accepted: 10 September 2021

Kamleshun Ramphul, MD

Department of Pediatrics, Shanghai Xin Hua Hospital, Shanghai Jiao Tong University School of Medicine, 1665 Kongjiang Road, Shanghai 20009, China

Tel.: +86 21 6579 2951

E-mail: adramphul@hotmail.com

