



Short Communication

Lessons to be learnt from the COVID-19 public health response in Mauritius

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ABSTRACT

Objectives: This study had the following objectives: (1) To look into the public health response of the country facing the COVID-19 outbreak, and (2) To examine the effectiveness of the measures being undertaken to contain the outbreak.

Methods: The research method used was the analysis of all documents/discourses pertaining to the public health response of Mauritius towards COVID-19. We compiled data over the period of 17 January 2020 to 15 May 2020 as and when they were communicated.

Results: This study revealed three main themes: (1) Prevention strategy, (2) Outbreak management strategy and (3) Communication strategy. In light of the qualitative findings and the numerical data provided by the Mauritian authorities, we appraise the public health response of Mauritius.

Conclusions: After demonstrating the effectiveness of the public health strategies undertaken by the Mauritian government, we draw the lessons learnt from the experience of Mauritius. These lessons have implications for practice by middle-income countries and/or small island developing states facing a communicable disease outbreak.

1. Introduction

In the midst of the COVID-19 pandemic, African countries face the challenge of having to address the outbreak at national level with respect to their country-specific socio-economic, cultural and epidemiological situations which are largely different from Asian and European countries. The much needed evidence from COVID-19 research in African countries has been highlighted by the COVID-19 Clinical Research Coalition [1]. In light of the identified gap, we designed this research work with the aim to capture in-depth information about the response towards the COVID-19 outbreak which started on 18 March 2020 in Mauritius, an African middle-income Small Island Developing State, lying on the east of Madagascar in the Indian Ocean. The objectives of the study were to look into the public health response of the country facing the COVID-19 outbreak and to examine the effectiveness of the measures being undertaken to contain the outbreak. With a qualitative research approach, our research method was the analysis of all documents/discourses pertaining to COVID-19 public health response in Mauritius. The package of documents used for gathering data included government communiqués, policy statements, press conferences, newspaper articles. Videos of the daily press briefings by the National Communication Committee on

COVID-19 were used and archived [2]. We compiled data over the period of 17 January to 15 May 2020.

2. The COVID-19 public health response in Mauritius

This study showed the preparedness of Mauritius to tackle the COVID-19 pandemic, with the emergence of three main themes: (1) Prevention strategy, (2) Outbreak management strategy, and (3) Communication strategy.

2.1. Prevention strategy

Mauritius implemented passenger screening as early as 20 January 2020, with initial precautionary measures as follows: (1) all passengers with a travel history in China arriving at the Airport/Harbour were screened by thermal scanner; and (2) were closely monitored by the health officers for a period of 14 days post arrival. On 29 January 2020, Mauritius announced the suspension of all direct flights to China, with effect 31 January 2020. As the COVID-19 outbreak continued to affect more countries, Mauritius up scaled its border restrictions to China, South Korea, Italy & Iran. At the same time, the authorities gradually but

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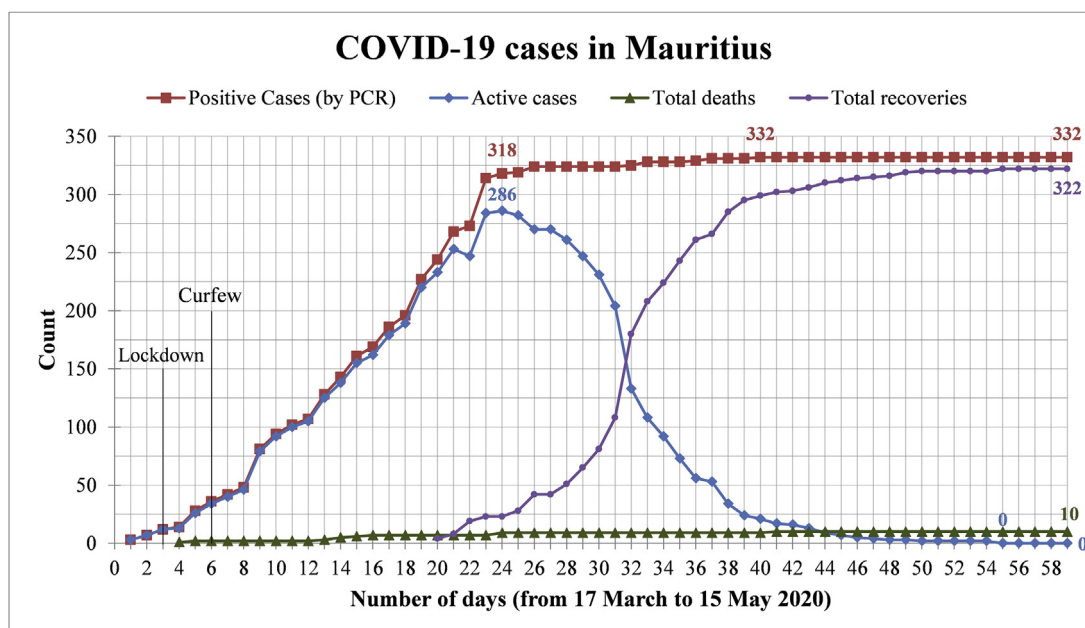


Fig. 1. Number of COVID-19 positive cases, active cases, deaths and recoveries on a daily basis, 17 March - 15 May 2020.

promptly increased the accommodation capacity for quarantine of suspected COVID-19 cases, by converting 11 recreational centres and enlisting the help of hotel establishments to reach a total of 35 health and community facilities for quarantine purposes.

Upon the declaration of the first three confirmed cases of COVID-19 in Mauritius on Wednesday 18 March 2020 (Outbreak Day 1), Mauritius closed its international borders to all foreigners and even its citizens the following day (Day 2). Closure of all educational institutions also became effective the same day. The prevention strategy also consisted of community confinement. A national lockdown was implemented as from 20 March 2020 (Day 3) which was enforced into a curfew order on 23 March 2020 (Day 6). It is to be noted that the curfew order was extended thrice on 30 March, 10 April and 1 May and was valid until 30 May 2020 midnight. Essential services, as well as supermarkets, grocery stores and bakeries were allowed to operate most of the time during the confinement. The population was allowed to shop for food and basic amenities twice per week according to alphabetical order: Surnames starting with A to F were allocated Mondays and Thursdays, G to N Tuesdays and Fridays, and O to Z Wednesdays and Saturdays. Shoppers notably had to wear masks, keep a physical distance of at least 1 m with respect to each other and were allowed only 30 min inside the premises.

2.2. Outbreak management strategy

The strategy adopted by the Mauritian authorities for the outbreak management followed the WHO recommendations [3–5]. All confirmed COVID-19 cases were immediately transferred for isolation in dedicated treatment facilities. In line with WHO and as highlighted by Heymann & Shindo [6], close monitoring of the number of confirmed and suspected cases was undertaken in Mauritius. We acknowledge the valuable contact tracing which was undertaken in a diligent manner by teams of health professionals for rapid isolation of cases. Laboratory testing of suspected cases by PCR started on 3 February 2020 in Mauritius and has been crucial in the diagnosis of the COVID-19 cases during the outbreak. Mass screening of frontline staff by rapid diagnostic testing started on 27 April 2020. As at 15 May 2020, 24,608 PCR tests and 60,867 rapid diagnostic tests have been carried out. This initiative is in line with the WHO recommendation to “test, test and test” [7]. The timely arrival of additional PCR testing kits and protective equipment for health professionals at the end of March 2020 coupled with the delivery of medical materials

and protective equipment by special cargo flights to Mauritius during April 2020 are the key elements contributing to the control of the outbreak.

2.3. Communication strategy

Additional key component for the outbreak control is the enhanced communication strategy put in place by the authorities: A National Communication Committee on COVID-19, led by the Prime Minister, was set up with the participation of the various stakeholders, mainly the Ministry of Health, the Mauritius Police Force and other representatives of the government. The engagement of the population has been sought explicitly by continuously reminding the population that everyone had an important role to play in the fight against COVID-19 and that success depended on our individual behaviour. With reference to Heymann & Shindo, the authorities have been able to provide health information for self-protection through data communication and trust development [6]. This is in line with the United Nations which states that public trust in science is essential for successful implementation of policies [8]. For individuals to change their behaviour to decrease transmission risk, they must trust the health message on COVID-19 [8]. Considering the change in behaviour, everyone in Mauritius going outdoors had to wear masks, which include surgical mask, N95 mask, or any locally produced mask by the clothing industry, as well as maintain social & physical distancing. The Public Health Act was amended to this effect.

2.4. Effectiveness of the public health response

The data communicated on a daily basis by the National Communication Committee on COVID-19 [2,9] was used to examine the effectiveness of the measures being undertaken to contain the COVID-19 outbreak (see Fig. 1). The daily communication of that information was considered an effective means of sensitizing the population to control the outbreak. From Outbreak Day 1 (18 March 2020) to Day 24 (10 April 2020), the number of confirmed cases increased daily from 3 to 318. That number started to stabilize and reached 332 on Day 40 (26 April 2020). On 15 May 2020, as the first phase of easing curfew restrictions began, no new COVID-19 case had been reported for nineteen consecutive days. On Day 20 (6 April 2020) the first four recoveries were reported, and the number of recovered patients kept increasing since that day. The number

of active cases peaked at 286 on Day 24 (10 April 2020) with nine deaths. There was subsequently a steady decline, though there was an additional death on Day 41 (27 April 2020). Day 55 (11 May 2020) was an important date as there was zero active COVID-19 case in Mauritius. Therefore, the initial objectives of the Mauritian government to flatten out any eventual surge in positive cases and to save the maximum of lives have been achieved. The objective to prevent the hospitals from becoming overwhelmed was achieved as the number of patients who required inpatient and intensive care remained under control, with nonetheless the ten deaths which are deplored.

3. Lessons to be learnt

Our study showed that a small island developing state has the potential to efficiently control disease outbreak with the required political will. There is need for a preparedness plan with the protocol to follow for primordial prevention with screening of all passengers upon arrival at airport/harbour and restriction of borders to countries affected by the disease outbreak. There is need to foresee the increasing need for health & community facilities and to enlist the help of hotel establishments for the quarantine of suspected cases in the case of a communicable disease outbreak. The fast and bold implementation of confinement measures, closure of school on Day 2 of the outbreak and the confinement of the population as from Day 3, has shown its effectiveness in Mauritius. In case of a communicable disease outbreak like COVID-19, community confinement measures need to be implemented promptly, with nonetheless controlled access to basic necessities & prime commodities under sanitary conditions. The tracing of all the persons who have been in contact with the COVID-19 cases by trained and committed health professionals proved to be a valuable element of the outbreak management. The early availability of PCR testing facilities in Mauritius has been pertinent in the diagnosis of the COVID-19 cases and thus played a crucial role in the successful public health response of Mauritius towards COVID-19. It is thus of utmost importance for middle-income countries to invest in the required laboratory and human resources for PCR testing.

Authors' contributions

MCS designed the study. All authors collected and analysed the data. All authors wrote and critically reviewed manuscript drafts. All authors read and approved the final manuscript.

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Conflict of interest

The authors declare no potential conflict of interest.

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