

# How Nepal has responded COVID-19 in first and second wave: reactive or prepared?

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## Opinion

### Background

Severe acute respiratory syndrome corona virus 2 (SARS-CoV-2), which causes the corona virus disease (COVID-19), was first identified in Wuhan, China, in December 2019 and later spread globally.<sup>1</sup> Nepal confirmed its first COVID-19 case in a returnee student from Wuhan, China, on Jan 23, 2020, after the throat swabs sent to the WHO laboratory in Hong Kong identified SARS-CoV-2.<sup>2</sup> The World Health Organization (WHO) declared the outbreak a Public Health Emergency of International Concern (PHEIC) on 30 January 2020.

**Situation:** As of 23 May 2021, there are 517,326 SARS-COV-2 cases confirmed in Nepal with a 17% cumulative test positivity rate and 40% on 23 May 2021.<sup>2</sup> However, since July and August 2020, Nepal experienced an unexpected surge of cases every day in the first wave. As of 14 March 2021 (the cut off point of two waves); 2,215,411 reverse transcription polymerase chain reaction (RT-PCR) tests have been performed in seven provinces, of which 275,178 have tested positive for COVID-19 with 12.4% positivity rate.<sup>2</sup>

But the data shows the surge cases in second wave more swiftly. About one third RT-PCR tests then in first wave performed in two months and ten days. In this short duration after transition, the health systems were in pressure with 238,063 new positive cases and 3,332 deaths confirmed within nearly nine weeks in May 2021. The cumulative positivity rate observed nearly three times higher than first wave 33.96% (51.8% on 11 May). Nepal was in the 10th highest rank in terms of new infections and weekly deaths in the last week of May and has the highest daily new cases (300 per million) and deaths (7 per million) in South Asia.<sup>3</sup>

### COVID-19 Response in Nepal

**Reactive response:** Nepal has never faced this kind of pandemic, thus there was not such preparedness. However, Government of Nepal (GoN) was seen more reactive to the COVID-19 in the first quarter of 2020. Later health ministry developed the Rapid Action Plan and endorsed by the government.

Nepal has admitted the challenges in first wave that the disease was entirely new in the globe, lack of evidences and responses were more reactive rather enough prepared for the pandemic. In the new federal context, all three layers of government have aggressively attempted the first wave for example developing protocols, managing quarantine and isolations, testing, contact tracing and treatment. It was observed inadequacy of protocol and legislation, human resource, infrastructure, health care logistics in the health systems to address the pandemic across the country. While Nepal has managed the first wave with some losses even it has got the enough time to be respond and prepared. Though there were some gaps like inadequate political commitment, preparedness, lacking in adherence of public health measures, and inadequacy of critical care facilities in the hospitals.

The Reproduction rate R was more than 2 which means one person can transmit the infection to another two persons.<sup>4</sup> And the positivity rate was observed about 52% on a day which indicates one person infected in every two persons tested. The new variant of concern was also declared by health ministry (B.1.617.1 and B. 1. 617.2).

**Table 1** Key indicators in first and second wave in Nepal

Indicator	First wave	Second wave
Total RT-PCR tests	2,215,411	701,057
Total RT-PCR positive cases	275,178	238,063
Positivity rate (Cumulative) (%)	12.42	33.96
Highest positivity rate (%)/Day	34.8	51.8
Weekly highest RT-PCR positive cases	25,929	61,814
Highest number of active cases/Day	38,461	110,263
Total deaths	3,014	3,332
Highest number of deaths/Day	45	246
Case Fatality Rate (%)	1.09	1.36
Highest number of districts reporting new cases/Day	71	75

Source: Ministry of Health and Population, Nepal 23 May 2021

The second lockdown imposed by Nepal government from 29 April. Lockdown is not the solution rather prepared for timely screening, testing, isolation, contact tracing and treatment. Majority of the active cases 93% (102,455) are in home isolation; 7% (7,808) in institutional/hospital isolation; 1.2% (1313) in ICU and 0.3% (380) in Ventilator.<sup>2</sup> Observing the fewer patients admitted in the hospital that the segregated treatment of mild, moderate and severe patients would be worthwhile.

**Preparedness:** The foundation work has been performed in the first wave and reactivate the system would be beneficial in the second wave though some of the lapses observed to respond the disease in the second wave. Although there was bit time to be prepared during the transition period before starting second wave. Less than 2% of the population have been vaccinated with two doses due to the shortage of the vaccine globally.<sup>3</sup> However, health system was more prepared this time rather reactive but again gaps observed like inadequate coherence among governments and lesser political attention delayed

in screening, testing, isolation, and control at point of entry in land crossing boarder points to India (open boarder about 1,850 KM) and across the country.<sup>4</sup>

However insufficient preparedness also closely observed in the segregation and management of mild, moderate and severs patients in the isolations, high dependency units and ICU and ventilators at the hospitals in the second wave. Several lives missed due to sudden shortage of oxygen supply and lifesaving essentials across the country. The alarming was that hospitals have not been admitting critical patients because they have no oxygen, ICU and ventilators available.

There is still chaos for vaccine availability in time whereas over 1.3 million people aged above 65 had taken first shot. They should have taken the second jabs by June 6. Nevertheless, the shortage of vaccine has been increasing new infections and severity as well.

### Conclusion and recommendation

Experts have been alerting that there would be the possibility of third wave in Nepal which will be more affecting to the children. Since the financing is not the major problem, GoN has even endorsed the COVID-19 Crisis Management Ordinance on (20 May) which may allow declaring health emergency. It is highly recommended to the Nepal government as well as Health Ministry to be prepared always rather being reactive response.

### References

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