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Perspectives

# Efforts and Challenges in the COVID-19 mitigation in Nepal

*Surya B. Parajuli[1,2], Jyoti Kuikel[2,3], Sanu Lama[2,4], Heera KC[2,5]

[1]Department of Community Medicine, Birat Medical College and Teaching Hospital, Morang, Nepal
[2]NMVS Research Academy, Nepal Medical Volunteer Society, Morang, Nepal
[3]Department of Population Studies, Padma Kanya Multiple Campus, Kathmandu, Nepal
[4]Institute of Medicine, Tribhuvan University, Kathmandu, Nepal
[5]Birat Health College, Purbanchal University, Morang, Nepal

***Corresponding Author**: Dr. Surya B. Parajuli; Email: drsathii@yahoo.com

## INTRODUCTION

Nepal is a Himalayan country with a population of 29,136,808 scattered over 7 provinces and 77 districts. The healthcare system of Nepal covers about 61.8% of the population. Nepal is one of the first countries in the South Asia region to have reported COVID-19 on January 23, 2020.[1] There has been an increasing number of COVID-19 cases totaling up to 265,488 with 1,937 deaths (case fatality rate = 0.73) on January 12, 2021. COVID-19 cases and deaths have been reported in all provinces and districts, with highest number in Bagmati province and Kathmandu, the capital city.[2] At the national level, clinical and public health management of COVID-19 cases is headed by Ministry of Health and Population (MoHP) with the primary aim of reducing disease spread and mortality. This article describes the challenges faced by Nepal and the efforts taken by MoHP in the management of this pandemic.

### *Efforts in the containment of COVID-19*

Case Investigation and Contact Tracing Team. Nepal mobilized 1,075 Case Investigation and Contact Tracing teams (CICTs) at local levels.[2] This team includes public health professionals, paramedics, nurses and laboratory technicians/assistants. Its key function is to investigate possible cases of COVID-19, screen and quarantine their contacts and provide information to the local government. They also help local and provincial governments to provide health education, information and support to understand the risks.

Clinical management. As of 2021, there are 366 private hospitals among which 99 are located in Kathmandu. There are nine zonal level hospitals, 2 regional level hospitals, 22 federal hospitals including teaching hospitals and 65 district hospitals. Based on their capacity for human resources and logistics, the MoHP designated specific public and private hospitals for COVID-19 case treatment and isolation. A mechanism was also developed for the general public for online health consultation. Based on the level of severity of COVID-19 infection, the patients were referred to higher levels of hospitals that had highly specialized services. The capacity of public health laboratory at federal, provincial and district levels were strengthened in consultation with the government.[2]

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Preparation of guidelines and protocols. Nepal adopted the COVID-19 case investigation and contact tracing guideline that allowed for a uniform system of case identification and management in the country. COVID-19 related public health information were disseminated through radio, television, newspaper, telecommunication, pamphlet, miking and social sites. The capacity of healthcare institutions were mapped and based on their capacity and infrastructures and were designated to treat mild, moderate and severe COVID-19 cases. The MoHP upgraded the capacity of many hospitals from January 2020 and ensured the availability of Personal Protective Equipment (PPE), consumables and human resources.[3]

Quarantine facilities. The schools, colleges, universities, hostels and hotels were closed and the available facilities were converted into quarantine centers. The minimum duration of 14 days quarantine is mandatory for international travelers and for those not having feasible home-based quarantine.[2] The local governments were involved for quarantine management and many events of compromise in the management of quarantine facilities were reported.

Restriction of transport. There were restrictions placed on the movement of persons and goods within the country and across the international border.[1,2] Nationwide lockdowns were imposed by the federal government while regional lockdowns were also imposed by the provincial and local level governments in selected parts of the country. Kailali district imposed a lockdown before the federal government. International travel through land and air were restricted till August 2020.[4]

Communication system. Nepal Health Information, Education and Communication Center developed standardized messages about COVID-19 for nationwide dissemination. The messages were translated into local languages for wider reach by local communities.[2] Infodemic was countered through sharing factual information through daily press briefing.[5] The COVID-19 related public health information through radio, television, newspaper, telecommunication, pamphlet, miking and social sites. There is an intense lack of basic healthcare awareness among the majority of Nepalese people. The common wrong beliefs are that wearing a mask or maintaining social distance has no role in preventing the COVID-19 and that they are immune to the virus. There were several myths reported in the society such as drinking alcohol, spraying alcohol and chlorine all over the body, garlic, turmeric and Bojo (a local herb used for cough) prevent COVID-19 infection.

### *Challenges in containing COVID-19 in Nepal*

Despite concerted and coordinated efforts from federal, provincial and local governments, Nepal is still facing challenges at various fronts in the prevention and control of COVID-19.

Shortage of healthcare providers. Healthcare providers working at various levels contracted COVID-19 while providing services to the needy people. Some of these healthcare workers suffered humiliation and were threatened by their landlords and neighbors. These social pressures led to resignation of some health workers at a time when there was a dire need. There was a lack of motivation to work in COVID-19 facilities and grossly inadequate incentives, job insecurity, inadequate PPEs, lack of health insurance coupled with work fatigue and burn out.

Nepal's health care delivery system has faced a chronic shortage of human resources. Nepal has 28,477 doctors for 29,136,808 population, 61,421 nurses for 29,136,808 population. There are 194 hospitals with intensive care facilities in 7 provinces. The shortage of health human resources worsened after the new three-tiered healthcare levels were introduced since 2015. Adequate health resources in Nepal has always been overlooked. Many hospitals failed to get support from civil society organizations due to the global COVID-19 pandemic situation. The imposition of lockdown created new obstacles for supply of equipment and funds. There is a shortage of trained ambulance manpower in Nepal which directly jeopardize the delivery of services. High turnover of middle level health care providers was another challenge. Shortages of isolation and treatment facilities, quality laboratories, instruments, ventilators, PPEs and budget are the noteworthy challenges.

Porous border. Nepal shares a long open border with India and cross-border travel remains a major challenge for the country because people come to the country from the porous segment of the border. This increases the burden of diseases. People visited the border area despite the risk of COVID-19 to access low cost good available in these areas. Family linkage between Indo-Nepal border created practical difficulty to implement strict closure of borders. Lack of accountability of concerned local authorities allowed easy movement through the borders.

Coordination between three level of governments.

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The inefficient coordination between federal, provincial and local governments as well as public and private healthcare systems jeopardised the initiatives to address the pandemic. There was also lack of coordination between adjacent local governments. Different announcements from local governments without scientific basis caused public confusion. The influence of political leaders created gaps in the implementation of scientific judgements.

Asymptomatic spread. In Nepal, majority of the COVID-19 cases were asymptomatic during the initial days[6] of the outbreak posing an increased risk of spreading the virus in the community. People were less likely to use masks and adopt social distancing.

Economic Impact. According to the Nepal Rastra Bank, the COVID-19 pandemic and subsequent lockdown led to the complete closure of 61 percent of economic enterprises which resulted in 73.8 percent drop in the production and trade of goods and services in the country. [4] This has a great economic impact for Nepal and the loss of economic livelihood for many. The social and economic issues resulted in a rise in the number of suicides, with at least 20 dying every day during the lockdown, which was higher compared to the same period in 2019.[7]

Vaccine in Nepal. The MOHP in coordination with the Ministry of Foreign Affairs is working to procure COVID-19 vaccines. It is expected that 20 percent of the population will be provided by the World Health Organization under its COVAX program. However, there has been delays in the procurement of the vaccines and further delays are expected in the roll out in the country.

## CONCLUSION

Despite different challenges in the COVID-19 prevention and control in Nepal, there are noteworthy efforts undertaken by different levels of government. The nature of the disease, open borders, inadequate coordination between different levels of government, negligence of public and lack of vaccine diplomacy further challenges the different interventions for better outcomes in the COVID-19 pandemic in Nepal.

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