

Early preparedness and response plan at Lumbini Medical College and Teaching Hospital, Palpa for COVID-19 pandemic

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ABSTRACT

Respiratory illness caused by novel corona virus became global pandemic. The disease is named COVID-19, meaning coronavirus disease 2019. Most of the districts of Nepal became infected with COVID-19. This COVID-19 became challenging aspect for both health personals and government. With emerging data and guidelines on COVID-19 most of health institutions in Nepal started to fight against it. We medical staffs at Lumbini Medical College and Teaching Hospital (LMCTH) realized need of early preparedness and response plan to tackle the rapidly emerging COVID-19 situation over nation.

Keywords: COVID-19, preparedness, pandemic

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INTRODUCTION

Lumbini Medical College and Teaching Hospital (LMCTH) is 600 bedded hospital located at heart of Tansen, Palpa.¹ It is a referral hospital serving people from Palpa and six neighboring districts i.e. Nawalparasi, Arghakhanchi, Tanahu, Syangja, Gulmi and Rupandehi. In December 2019 people in Wuhan, China suffered with pneumonia like illness caused by novel corona virus, later named as COVID-19 by World Health Organization (WHO).² This COVID-19 soon became pandemic affecting 216 nations with 23,518,343 confirmed cases and 810,492 confirmed deaths.³ With the increase in the number of COVID-19 cases in Nepal, the government imposed countrywide lockdown from March 24, 2020. This brought heavy responsibility on hospitals to plan and prepare for the COVID-19 situation. Hospitals decided to step forward in line for management of pandemic. Following are the plans and preparation for COVID -19 at Lumbini Medical College and Teaching Hospital.

1. **Urgent meeting between the hospital management and the government stakeholders of Palpa:** The hospital management committee organized multiple meeting with the different government stakeholders of Palpa for developing COVID-19 management plan, based on the national plan. It was agreed that the local government will support the hospital in COVID-19 situation. We agreed to establish an isolation ward at LMCTH to admit the suspected COVID -19 cases until throat swab PCR report arrives. Initially province government along with hospital decided to refer PCR positive cases to a COVID-19 designated hospital at Butwal. Later decision was changed and planned to keep COVID-19 patient at Lumbini Medical College and Teaching Hospital.
2. **Help from government side: Government officials assured hospital for:** 1. Providing fix quantity of personal protective equipment (PPE), 2. Viral transport medium (VTE) for transportation of the nasopharyngeal swab, and 3. Training the healthcare professionals taking nasopharyngeal swab.
3. **Establishment of COVID-19 Task force team:** Hospital assembled COVID-19 task force team with experts from different departments. Task force team developed management plans for suspected COVID-19 patients. Plans were made in such a way that hospital could treat COVID-19 positive cases in future if required by government. Following are the key actions taken by task force team:
 - a. **Establishment of fever clinic for screening COVID -19 suspected cases:** Fever clinic was established from the first day of lockdown. All the patients and visitors were required to go through the fever clinic. All medical doctors were posted at fever clinic on rotation basis. Fever clinic followed the screening algorithm provided by the WHO for COVID-19.⁴ Temperature guns were used for examining body temperature. Suspected COVID-19 cases were directly admitted to COVID-19 isolation ward through isolated route. Other cases were directed to emergency department.
 - b. All the out-patient departments were closed for first three weeks. Later the hospital had to open outpatient departments as we were having difficulty in managing increasing number of patients in the hospital. Physical distancing and face mask were made compulsory within the hospital premises. Patients were examined taking standard precautions e.g.: face mask, face shield, clean gloves, hand sanitizers etc.
 - c. **Preparation of isolation ward for suspected COVID-19 patients:** Hospital's cabin ward (used to be private and semi-private ward), separate building from main hospital building was converted to COVID-19 isolation ward. Two different entrance locations were arranged, one for entrance of patient and next for medical staffs. Donning and duffing areas were allocated and strict infection control rules implemented as per WHO guidelines. PPE was made mandatory for staffs working in isolation ward.
 - d. **Creating Intensive Care Unit (ICU) for COVID -19 suspected patients:** Post –operative ward of hospital was changed to ICU specially designed for handling the COVID-19 suspected patients.
 - e. **Preparation of building for COVID-19 positive cases:** Hospital along with help of government stakeholders prepared one of its nursing students hostel for accommodation of 50 COVID-19 positive patients.
 - f. **Arrangements for PPEs and items needed for medical staffs:** Task force team along with hospital administration worked on arranging PPEs for medical staffs. Fixed number of PPEs was provided by government and others were ordered by hospital.
 - g. **Training to hospital staffs:** Task force team members after getting training on infection prevention, donning and duffing of PPE, gave training to staff from the respective departments. Staff included doctors, nurses, paramedics, ward boys, helpers, cleaners and

security personals. Doctors, nurses and paramedics were well trained about the proper use of PPEs. Rests of the staffs were trained on level 1 PPE hand hygiene, importance of mask and physical distancing.

- h. **Designing working plans:** Different departments were requested to prepare departmental plan to manage COVID-19 suspected patients. For example, the emergency department designed plan A and B based on screening algorithm by WHO.⁶ plan A for patients with less risk of COVID-19 infection and Plan B for high risk of COVID-19 patients. The patients assigned in Plan B were managed in a separate room in ED with extra precautions. PPE was made compulsory for medical officers and nurses in ED.
- i. **Reporting suspected COVID-19 cases:** Task force team allocated specific staff each day to oversee problems at fever clinic and to report any suspected COVID-19 cases to authorized person of the hospital.
- j. **Stocking of drugs:** Pharmacy worked collaboratively to stock up drugs needed for COVID-19 patients and other patients.
- k. **Transport of swab sample for RT-PCR test:** Hospital administration arranged a vehicle for transport of throat/nasopharyngeal swab in VTM.
- l. **Supervision and monitoring:** The members from the task force team and hospital administration jointly inspected hospital every day and implemented new changes, if required. Daily supervision was conducted at the fever clinic. The security guard conducted temperature measurement at the hospital entrance for every people entering the hospital. The physical distancing was maintained inside the canteen and departmental store within the hospital territory.

4. **Public awareness:** Hospital printed flex containing information about COVID-19 infection and how to stay safe from it. These flex prints were posted at different areas of hospital where gathering is more. Community department of hospital with help of local radio started broadcasting public awareness on preventing COVID-19 infection.

COVID-19 is a new virus to this world. Dedicated team effort, proper preparedness and response plan are major weapons for management against COVID-19 infection.

CONFLICT OF INTEREST

Author declares that no competing interest exists.

FUNDING

No funds were available for the study.

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