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Brief Report

Need for Prioritizing Health: An Old War-Cry Reiterated By COVID-19

Rijen Shrestha,^{a,c} Samata Nepal,^{b,d} Alok Atreya^{a,d}

ABSTRACT:

The poor state of health care in Nepal will be burdened further following the SARS-CoV-2 pandemic. The government failed in timely stockpiling of medical supplies and equipment, development of health infrastructure, including laboratories and quarantine centres, restriction and screening of international travel and information dissemination to the general public. While efforts have now been made to increase the capacity for diagnostic test for SARS-CoV-2, the government still needs to further increase the availability and accessibility throughout the country. This would be the first step in fighting the pandemic. However, it is also important to prepare for the worst case. Similarly, advocacy programs should be developed to inform the general public and alleviate their fears about the disease. These measures would not only help Nepal's capability to respond to the COVID-19 outbreak but could lay the foundations to improve the health of the citizens in general, even after this epidemic is controlled and could go a long way in developing trust of the government in the populace.

Keywords: COVID-19, health policy, Nepal, pandemic.

INTRODUCTION:

The pandemic caused by the severe acute respiratory syndrome corona virus -2 (SARS-CoV-2) has resulted in more than 250,000 deaths, with over 3.5 million cases confirmed globally. As of May 07, 2020, the total number of diagnosed cases in the country have risen to 99, with no reported deaths.[1] This has brought to the fore, the need to prioritize health globally, including in the developed countries. This is especially true for low income countries like Nepal.[2] The Government of Nepal spending on Health in the fiscal year 2018/19 was NPR 65.3 billion, which accounted for 1.9% of GDP

and 5% of the National budget. The per capita health expenditure of Nepal for 2017/18 was NPR 1,819. [3]

This shows the poor state of health care in the country, which will be burdened further following the SARS-CoV-2 pandemic. The first case was confirmed on 24th January, with the second case being traced on 23rd March 2020. Meanwhile, the World Health Organization (WHO) declared a Public Health Emergency of International Concern on the 30th of January following the second meeting of the Emergency Committee[4] and declared a pandemic on 11th March.[5] This provided ample time for the government to develop policies on managing the spread of the virus, and prepare for the impending crisis. However, the incompetence has been evident from the chaos among frontline health workers. This was further aggravated by the lack of equipment including real time polymerase chain reaction (RT

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a - Assistant Professor, Department of Forensic Medicine,
b - Lecturer, Department of Community Medicine,
c - Maharajgunj Medical Campus (TU-IOM), Kathmandu, Nepal.
d- Lumbini Medical College Teaching Hospital, Palpa, Nepal.

Corresponding Author:

Alok Atreya

e-mail: alokraj67@hotmail.com

ORCID: <https://orcid.org/0000-0001-6657-7871>

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PCR) machine for diagnosis and personal protective equipment (PPE).

As of April 20, a 24-hour hotline had been established, 127 hospitals designated as COVID-19 clinics, 12 hospitals for management of mild cases, 12 hospitals for management of moderate or severe cases, and 3 hospitals for specialized surgical and multi-speciality care across the country.[6] A total of 13 laboratories have been made functional for performing RT PCR tests, with 10 of these outside Kathmandu. The government has disseminated guidelines, standard operating procedures (SOPs) and tools for COVID management. In addition, the government has been providing daily virtual situation reports.[6]

The major criticisms of the government relate to inadequate preparations undertaken following the outbreak of COVID-19 in Wuhan, China. This includes adequate and timely stockpiling of medical supplies and equipment, development of health infrastructure, including laboratories and quarantine centres, restriction and screening of international travel and information dissemination to the general public.

SUPPLY OF MEDICAL EQUIPMENT:

The supply of face masks saw a massive downturn following the shortage in China, the largest manufacturer in the world, which was compounded by the ban on export of Indian manufactured masks on January 31.[7] This was despite the declaration from the Chairman of Federation of Nepali Cottage and Small Industries stating that two dozen industries would be able to cope with the country-wide demand for face masks within two days, if directed by the government.[8] In March, the authorities arrested 11 individuals and confiscated 1.2 million face masks from warehouses across Kathmandu, including from RD suppliers' warehouse in Satungal, Bishnudevi warehouse in Kapan.[9] These masks were then sold to the general public through public health bodies. Similarly, the lack of reagent extended to the capacity for testing. The first individual, a 32-year old student from Wuhan was confirmed by WHO Laboratory in Hong Kong.[10]

There have been gross irregularities in the procurement of medical supplies, with reports confirming the grant of the procurement contract without following the government's own

procurement directives. Reports further stated that the price of procurement of the medical supplies being multiple folds higher than the market price. [11] Despite refuting the allegations, the contract awarded on March 26 was subsequently scrapped on April 02, following delivery of sub-standard equipment.[12]

Concerns have also been raised about the Rapid Diagnostic Tests (RDT) being used, regarding their efficacy, reliability and usefulness in diagnosing new cases. A 65-year old woman who had tested negative following RDT was sent home but was found to be positive for coronavirus using PCR testing, after three days.[13] The WHO has always recommended against using RDT for diagnosing new cases.[14,15] RDT detects antibodies developed in the body and therefore, new cases of infection cannot be confirmed or excluded based on this test alone. The standard for diagnosing new infections requires the detection of the virus RNA through Real-Time Polymerase Chain Reaction (RT-PCR). [14] In addition, there have also been concerns regarding the reliability of the test kits procured for the government. On April 01, the government declared that the RDT kits procured did not meet WHO as well as government standards and should not be used.[15]

DEVELOPMENT OF HEALTH INFRASTRUCTURE:

On February 4, the government stated that three hospitals, Sukraraj Tropical and Infectious Disease Hospital, Patan Hospital and Armed Police Force Hospital were equipped with testing facilities and 43 beds to deal with Coronavirus patients. It also informed that health desks were setup in Chitwan, Pokhara and Bhairahawa. However, on February 26, Nepal's capacity for testing was limited to a single PCR machine available in the only Biosafety Laboratory - II (BSL-II) at National Public Health Laboratory, Teku. The laboratory had reagents for testing 1500 samples. In addition, Sukraraj Tropical and Infectious Disease Hospital at Teku, the designated coronavirus hospital was short staffed and lacked infrastructure, with only three intensive care units, five isolation beds and 40 extra beds dedicated to fight the epidemic.[16]

On March 21, the government made it mandatory for hospitals in the capital with more than 100 beds to setup fever clinics and free treatment to

patients suspected of Covid-19. The government provided 50 PPE kits to these hospitals from March 20. On March 23, it was reported that Bir Hospital, BP Koirala Institute of Health Sciences and Dhulikhel Hospital were capable of starting Covid-19 testing, if reagents were provided.[17] Testing was started at BPKIHS on March 28,[18] at Dhulikhel Hospital from April 5,[19] and Bir Hospital from April 12[20]. Equipment for PCR testing were received in all seven provinces on March 31.

Quarantine facilities were provided at Nepal Electricity Authority Training Centre at Kharipati, Bhaktapur, for 175 Nepalese students who were evacuated from Wuhan on February 16.[21] While the facilities at the Kharipati quarantine centre were found to be adequate, the state and condition of other quarantine facilities across the country have not. Several medical experts have also expressed concern of these very quarantine centres developing into outbreak hotspots.[22]

RESTRICTION AND SCREENING OF TRAVELLERS:

On March 12, the government suspended all climbing permits and on-arrival visas.[23] On March 23, the government finally decided to close borders with China and India.[24] The government declared a partial lockdown on March 17th, temporarily halting all air travel, long distance transportation and all non-essential services.[25] This was enacted into a complete nationwide lockdown effective from March 24.[26] An estimated 2 million individuals left the capital fearing COVID-19. On March 22 alone, over 2 lakhs population left Kathmandu along all major highways.[27] This resulted in the first case outside Kathmandu which was confirmed on March 27, in Dhangadhi.[28]

Another major issue of criticism towards the government has been the screening of individuals travelling to Nepal. The WHO recommended the practice of usual precautions to limit infection, including availability of trained staff, stockpiling of equipment, safe transportation to hospitals and developing policies on January 10.[29] In addition, on January 24, the WHO provided directives for screening of international passengers, including setting up of mandatory temperature screening, advocacy and information dissemination measures to detect infected individuals at points of entry.[30] However, Tribhuvan International Airport (TIA)

implemented an 'airport emergency plan' with self-declaration of travel history to Wuhan and fever by the passengers. Two Thermal scanners purchased during the Ebola outbreak were re-installed at TIA on January 25. However, as of March 1st, only one scanner was functional, with reports of the second scanner having broken down within a week of the re-installation.[31] TIA was augmented with thermal guns for temperature screening on February 29.[32] Other inadequacies reported in screening of travellers include the lack of manpower, lack of thermal scanners at land border points, inefficiency of the thermal scanner at TIA due to lack of temperature-controlled room, and absence of appropriate transportation facilities, including ambulances and trained emergency medical technicians.[33]

INFORMATION DISSEMINATION:

Yet another criticism is the lack of effective information dissemination by the government and the distrust towards it. This was evident in the protests by residents of Changunarayan municipality, Ward 6 and Ward 7 of Bhaktapur, who were anxious and concerned with the lodging of the evacuated students. [34] The information dissemination was also faulty in informing medical professional as well as the general public on the usefulness of RDTs. This has led to increased risks in the community by releasing individuals who tested negative using RDTs but were found to be positive following RT-PCR. Another aspect of information dissemination that is lacking is the differentiation of quarantine and isolation. All individuals tested required to be quarantined and their movements restricted, to prevent community spread. On the other hand, all confirmed cases needed to be isolated to prevent the spread of the disease to contacts. The government have however used the two interchangeably and this has led to confusion even among medical professionals on the preventive measures to be taken.

DIAGNOSIS WITHOUT TREATMENT:

While efforts have now been made to increase the capacity for diagnostic test for SARS-CoV-2, the government still needs to further increase the availability and accessibility throughout the country. This would be the first step in fighting the pandemic. However, it is also important to prepare for the worst case. A study published in 2015 states the intensive care unit (ICU) capacity of Nepal to be 16.7 beds per million population.[35] Meanwhile, the number

of ventilators in the country is estimated to range between the government stated 600 to estimates from experts of 360, with over 60% in the capital. Estimates have found that 5% of cases require ventilator support, with an additional 15% requiring hospitalisation.

The COVID-19 Nepal: Preparedness and Response Plan estimates the expected cases based on extrapolations from figures of China (0.005%) to be 1,500.[36] However, based on the current global figures (0.05%), the caseload could be as high as 15,000. It is therefore important to strengthen the health infrastructure to cope with this additional burden. Based on the conservative estimate, Nepal would require 75 ventilators and 225 ICU beds for treating the infected cases. While the numbers are not non-achievable, it is evident from the nature of the disease that COVID-19 patients cannot be lodged in the same units as non-COVID-19 patients. It should also be noted that during normal times, none of the available ICU beds or ventilators were free and therefore, these estimates require the development of newer capacity to cope with the burden of COVID-19.

MANAGEMENT OF THE DEAD:

While numerous guidelines have been developed for diagnosis, tracing, and management of infected cases, it is also essential to note that guidelines have been developed for the management of dead bodies resulting from COVID-19. Numerous reports have established the overwhelming of mortuaries and funeral homes in developed countries.[37] With a fatality rate estimated at 3% of infections,[38] it should be noted that the expected toll on mortuary services and dead body management in Nepal may not be overwhelmed by sheer numbers but by the fear surrounding the disease.

CONCLUSION:

The pandemic resulting from SARS-CoV-2 infection has resulted in collapse of the medical system even in the most developed countries globally and has reiterated the need to prioritise investments in health policy and infrastructure development. While Nepal has been relatively unaffected, the government needs to ensure that adequate and timely prevention measures are developed and the disease does not completely overwhelm the health system. It is also important to develop health infrastructure to

deal with the pending catastrophe. Local companies manufacturing medical supplies should be promoted and their capacity improved to counter the shortage of medical supplies internationally. Similarly, advocacy programs should be developed to inform the general public and alleviate their fears about the disease. These measures would not only help Nepal's capability to respond to the COVID-19 outbreak but could lay the foundations to improve the health of the citizens in general, even after this pandemic is controlled and could go a long way in developing trust of the government in the populace.

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