

Nepalese Health System Response to Fight Against COVID-19 Pandemic

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Abstract

The novel coronavirus or COVID-19 is a new highly infectious virus affecting a large population across the globe. There is no specific therapeutic drug available against covid-19 hence the most effective public health measures need to strictly be adhered to without delay. Range of issues were reported to fight against COVID-19 in the current health system of Nepal which should be addressed and strengthened the full spectrum of the health system for its effective and sustainable response. It is crucial to understand the current health system at the local and provincial level and strictly adhere the federal government policies and plan as per the protocol for maintaining minimum infection prevention and control measures with having preventive and safety measures to both service providers and community people. To tackle those daily increasing number of COVID-19 cases, it provides an opportunity for the three tiers of governments to reprioritize the health service in the national agenda for the effective prevention and response it. Although National health policy 2019 clearly articulated the need for equitable access and quality of health care services to all. Evidence shows that Nepal is in risk zone because of comparably weak health system that should be aware of all three tiers of governments of Nepal and strengthen and control the present threat posed the daily increasing cases of pandemic.

Key words: COVID-19, Health system, Nepal

Background of the study

Health systems around the world are being challenged by the increasing demand for care of people with COVID-19, compounded by limitations on movement that disrupt the health service delivery. The first case of COVID-19 was reported from Hubei Province of China in late 2019, and by 10 July 2020, over 12 million confirmed cases with 545,481 deaths were reported from 215 nations¹. Current global health systems are overwhelmed, and people fail to access services that lead to increase both in direct mortality from an COVID-19 outbreak and indirect mortality from preventable and treatable conditions. COVID-19 was declared a

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pandemic by the World Health Organization (WHO) in March 11, 2020¹ and two weeks later the Government of Nepal enforced a lockdown. On 23 January 2020, Nepal officially announced its first confirmed COVID-19 case who had travelled from China. The cumulative total cases have increased regularly which is significant concern for the current health system of Nepal. The number of new cases is increasing by more than 100 each day and this crisis places pressure on all health systems WHO's six building blocks which framework promote a common understanding of what a health system is and area for strengthening. Its conceptualized on service delivery, health workforce, information, medical products and technologies, financing, and leadership and governance of the health system strengthening in Nepal². In this context this framework is used to understand the current national health system and area to strengthen to response of COVID-19 pandemic through improving access, coverage, quality and safety². The positive cases were largely diagnosed in Southern Nepal in migrant workers returning from India³.

In the early phases of the COVID-19 outbreak, many health systems including Nepal's were able to maintain routine service delivery in addition to managing a relatively limited COVID-19 caseload. As demands surged and health workers themselves became increasingly affected by COVID-19. With a pressure on services many routine and elective services have been suspended or adapted to the pandemic. At this stage effective governance and coordination and protocols for service prioritization and adaptation, can mitigate the risk of outright system failure⁴. The increasing number of new COVID-19 infections has impacted on Nepal's health system's ability to offer preventative measures. This paper aimed to understand those issues and challenges for the effective response of national health system towards COVID-19 in Nepal.

Literature search strategy and synthesis

Electronic journals, newspaper/media coverage and reports related on the COVID-19 outbreak and health system related materials were accessed by using Google, Google Scholar, Ministry of Health and Population (MoHP) and national daily newspapers of Nepal. Other "grey literature" (especially COVID-19 related guideline documents) published by MoHP and external development agencies publications were also searched. The review synthesized the current literature and presented in the health system framework of WHO six building blocks themes: 1) health system response to COVID-19; 2) procurement systems around medical supply, 3) inconsistent prevention information/messages, 4) health workforce, 5) financing,

and 6) leadership and governance of Nepalese health system response on COVID-19 pandemic².

1. Health system response to COVID-19

Government of Nepal (GoN) has made several decisions related to lockdown, instructed people to stay home except for emergency reason with maintaining social distances and established number of temporary quarantine centers, isolation beds in hospitals and set up 24 hours' health desk at the International Airport. The major border districts have also established the health checkpoints and regularly screened those passengers who came from abroad. High level technical team was formed to monitor the situation across the hospitals network. Regular communication mechanism has established between Health Emergency Operation Center, Provincial Health Emergency Operation Center and Ministry of Social Development⁵.

With Nepal's lockdown, all air and surface travel were halted that caused a shortage of essential supplies such as food and medicine and made it difficult for people to reach at health facilities. It has already stretched health care providers that have an important role in providing services to the patients. Number of death cases were reported due to not being able to reach at health facilities as well as patients did not get timely services⁶. The current prevention efforts such as isolate, test, treat and trace process have many issues and monitoring system has a lot of room for the improvement⁷. Most of the public health experts, researchers, clinicians and different stakeholders raised the concerned about the government's weak preparation and unclear strategies for procuring medical supplies, coverage of prevention efforts, mobilizing resources, access to and coverage of services and management of suspected or confirmed cases^{7 8}. It is crucial to understand the current healthcare systems to access to and provision of universal healthcare where many patients have difficulties to reach at the health facilities and access the services. The disruptions to the health system will likely cause more deaths of persons with other urgent health needs than of patients diagnosed with Covid-19 where almost 200 percent increase in maternal mortality rate since the lockdown in Nepal^{9 10}. Those who reach at health facilities also did not get timely services and resulted death but those all cases were not COVID-19 positive⁶. Those few examples clearly demonstrate that, the current health system needs to strengthen to response the current crisis or pandemic¹¹ and MoHP need to ensure healthcare institutions become more accountable to response to any sorts of patient.

Similarly, most of health facilities and health care providers raised concern around the reporting system of COVID diagnosed cases from the laboratory which did not inform to health facilities immediately after diagnosed that makes healthcare providers more panic. There have

been instances when test results were reported positive only after the death or even after the funeral of the COVID-19 patients where a case of a 20-year old man of Surkhet district was declared negative to COVID-19 during quarantine stay test but after returning back to his home he was died at the same day. After his death, the test result came positive for COVID-19¹². This clearly shows that without immediate information to concern health staff, there is high chances of transmission to healthcare providers as well as immediate family members. Therefore, the reporting systems should be smooth and that should also direct to the concern health workers that may help to apply the preventive measures.

The aim of the covid-19 prevention programme is to change individual behaviour of those at risk of infection through the non-pharmaceutical intervention by controlling movement, isolation and quarantine facilities¹³. Quarantine is one of the oldest and most effective public health intervention for responding communicable disease outbreaks which was practiced in the fourteenth century in Italy¹⁴. Government of Nepal developed Quarantine Operation and Management Protocol (2076) and 14 days of quarantine has made mandatory for those person who came from international air and surface travelers^{15 16}. However, there was huge criticism about the quarantine and its facilities. A study conducted during COVID-19 about the health facilities and revealed that none of the quarantine centers were constructed as per the minimal standard of the protocol¹⁷. The government has not yet managed quarantine facilities nor has it arranged for proper facilities but many facilities did not have even drinking water, clean toilet, very congested living arrangement as well as issues reported about sexual abuses and also committed suicides during quarantine stay^{13 18}. It is advisable that the delivery of quality services remains one of the important goals of most health systems.

Similarly, case management protocol has clearly stated that quarantine should have all essential hygiene and sanitation items¹⁵ but there is concern on how quarantine centers have been responding to the children, lactating mothers, elderly and person with disability but national protocol clearly indicated that these populations should be special consideration⁵. The effect of pandemic and lockdown have also risen concern regarding their consequences to the mental health of the population¹⁹. Incidents of violence against women (VAW) have also increased worldwide since the lockdowns and the UN Women has declared that VAW is a shadow pandemic²⁰. Similar issues were also reported in Nepal inside the quarantine few reported cases of sexual violence/rape and committed suicides. A daily newspaper reported that every ten minutes, a woman somewhere in Nepal dials helpline telephone 1145 operated by the National Women Commission either looking to report incidents of abuse or calling to inquire about the support services²¹. It is not clear how long this COVID-19 pandemic last and to respond the

present and future crisis national health system in all levels of Government of Nepal need to strengthen and cater the services with applying the precautionary measures. Although, Nepal Health Policy 2019 has put Universal Health Coverage as the center of its priorities stressing the need for equitable access and quality of health care services to all people²². Therefore, it is important to strengthen the full spectrum of healthcare system on tracing, isolation and quarantine mechanism and care of COVID-19 patients to response the current pandemics.

2. Procurement systems around medical supply

Logistic supply for the COVID-19 response is global issues and Nepal is not an exceptional where special Personal Protective Equipment (PPE) for COVID-19 was not in stock which needs to be imported from the global market which took long time to delivery materials. A study in hospital assessment in Nepal shows that, the supplies of simple face masks, gloves and hand sanitizers were adequate in the majority of hospitals¹⁷. Due to unable to supply and frequent shortages of medical supplies made healthcare providers more panic and putting their lives more at risk of transmitting the viruses²³.

GoN has expanded the testing facilities across the provinces but there was frequent shortage of the test kits and PPEs in different facilities¹⁷. Number of bordering health checkpoints were also running without fully screening passengers coming from India which was high risk of transmitting to their family members or general public⁷. It was also reported that many doctors treated patients without proper PPEs²⁴. The procurement of commodities paid prices and quality of commodities were highly criticized during the COVID-19. Due to lengthy procurement policy, MoHP has faced difficulty to procure and supply commodities on time. Global scenario clearly shows that governments must act quickly to boost supply, ease export restrictions and put measures into place²⁵. MoHP eases the current procurement system which should be straight forward during the crisis and disasters period in order to uninterrupted supply of the commodities without compromising quality and collusions.

3. Inconsistent prevention information/messages

Health information is widely considered to have been provided by authorities at all levels in a timely manner. GoN has initiated on disseminating the national decision and guidance in the national media. Regular daily briefing about the situation to media by spoke persons of MoHP initiated and continue and MoHP separate website for regarding detail information on COVID-19. MoHP has also established hotline service and media monitoring and rumor verification. Many healthcare workers were also trained on quarantine, contact tracing and PPE use, and

conducted for medical personnel and hoteliers. Different audio and video messages with engaging various public figures also produced so that the public can get trust only reliable information⁵.

With the outbreak of the coronavirus, the spread of rumors was high than the virus misleading rumors about the origin and circulated the globe with use only N-95 face masks vs. no benefits of using N-95 face mask, individual whole body spray with using chemical and tunnel sanitation which was practiced in different parts of Nepal. Number of public health experts suggested that individual body spray and tunnel sanitization not a scientific practice that caused different skin and eye diseases²⁶. Number of places we have seen all closely linked to the new 'infomedia' not only did the virus itself spread very rapidly but those information and misinformation about the outbreak makes public more panic²⁷. Despite of number of initiative on the prevention and response messages by the MoHP, it was seen that the social media panic travelled faster than the COVID-19²⁸ and its dark side being the source of rapidly spreading misinformation, which increases the worries and stress among the public. These uncertainties and worries draw additional media consumption and further distress²⁹.

Despite of health and safety messages regarding COVID-19, some patients did not get treatment service because of some hospitals were shut their gates even for fever patients and health workers were also evaded to treat patients until the conditions become severe. Some ambulance did not take patient to hospital^{10 30}. Many confusions were seen on managing COVID positive dead body despite of wearing PPE, mortuary van drivers were refused to transport the body at the funeral place³¹. Number of community also impede to do the funeral possession and mostly cases were managed with the presence of the Nepal Army³². Despite of having clear protocol and all the communication messages but health workers to community level people could not understand the dynamic of COVID prevention measures. Health care workers were hugely panic during the attending patients and they want to escape from the patients that may be the reasons behind of limited understanding and confident. Therefore, the current three tires of government need to identify an effective risk communication strategy and materials that should tailor to response the crisis to the health facility to the community and avoid their panic and confusions.

4. Health workforce

The Covid-19 pandemic has alarming implications for individual and health care functioning. it is difficult to ensure that there exists enough health care provider to response COVID-19 crisis across the Nepal and provide regular health services. It has already stretched health care

providers that have an important role in monitoring and delivering support to their patients. There was frequent concern about the inadequate contact tracing which was because of inadequate human resource to mobilize at risk zone. Many local levels could not form team and mobilize them on time which resulted in an increase in the cases of contact tracing. Therefore, the GoN should facilitate and ensure the basic requirements at the health facility, readiness of the service sites and empower the health care providers on a timely manner⁵.

MoHP had trained many health workers in the field of epidemiology, emergency preparedness and response and other public health management areas in the past and this human resource could be immediately mobilized at the beginning of this COVID-19 outbreak. However, the main reason of not mobilizing staff may be the reason of not having the updated trained health worker's database. Federal and provincial governments should regularly update and maintain trained human resource database to respond to the current outbreak and future emergencies. Currently, the COVID pandemic reached level II (positive cases 2000-5000) but public health emergency had not been declared as per Nepal's Health Sector Emergency Response Plan and GoN failed to have proactive and robust action plans to respond to public health governance⁵.

Frequent reports that staff shortages in remote areas and MoHP has deployed a number of healthcare providers from Kathmandu in provinces seven also reported. Therefore, this sort of issues in the upcoming days can be overcome by mobilizing private health facilities, health service providers and also can mobilize retired health care providers where only available public health facilities and resources are not able to tackle this crisis. Policy and planning division of MoHP should estimate the required number of healthcare providers in the district wise or province wise, prepare a roster and mobilize those healthcare providers who are willing to serve in this crisis.

5. Financing in health care services

The coronavirus outbreak has been an increased threat not only to health but also to the economic sector where the Federal Government of Nepal has used the regular health sector and emergency funds for COVID-19. The Federal Government has set up a COVID-19 fund to fight against the pandemic and all seven provincial governments and few local level governments have also set up COVID-19 funds respectively. Government of Nepal has prioritized health sector and COVID response budget in the fiscal year 2020/21 which includes activities to cover regular priority public health programmes, COVID-19 response, strengthening of health infrastructures and institutions to respond to infectious diseases. The budget of the MoHP has increased for the health system strengthening and expanding the COVID-19 tests in all

provinces to prevent the further spread of the coronavirus. Current fiscal year budget has allocated to establish a total eight infectious hospitals after the COVID-19 pandemic where one 300-bedded hospital in Kathmandu valley, 50-beds infectious disease hospitals in the capital of all seven provinces of Nepal and also budget for the expansion of 250 bedded intensive care units that foster to response the crisis in the future. However, number of local governments had repeatedly criticizing the provincial and Federal Governments about the fund disbursements that should be channelized and timely release for the uninterrupted supply of the services i.e. management of quarantine and mobilization of local and temporary staff. In the current federal context of Nepal, financing at three tires government levels would be a challenge for the country in the absence of an adequate health financing strategy. Budget and authority allocation could have been done well in advance for preparation to the local government but it took time to understand its devastating effects which has even threatened the human existence³³.

6. Leadership and governance

A strong leadership at all levels of society is crucial to prevent and response the current COVID-19 pandemic. The high-level coordination committee on the prevention and control of COVID-19 has established and under the leadership of the MoHP has taken various steps to prevent the outbreaks. Monitoring teams and health desks have been established at major checkpoints in Airport and boarder of the cities. Despite of number of government of Nepal (GoN) initiatives, unfortunately three different tires of government (Federal, Provincial and Local) could not see well-functioning with close coordination and collaboration that are always part of good programme management and maximize resources utilization. It has been particularly challenging to maintain interest and engaging non health sectors in COVID-19 management. System response not functioning well in the logistic management, purchasing a quality of treatment commodities, managing the quarantine with having basic requirements, timely deliver the test reports and mobilizing the health facilities for COVID to non-COVID patients^{5 17 34}. Similarly, the role of provincial and local governments are also highly criticized where different tire of governments did not function well to response and distribute the relief package highly inconsistent which created conflicts among beneficiaries over the types and quantities of relief materials distributed⁷.

Similarly, the district Disaster Management Committees at the district level also play a very minimal role and they are now not directly accountable to either provincial or local governments. Due to COVID-19 pandemic, the general health care system of Nepal has also been disrupted and unable to access to general and specific health problems where many

women have been forced to give birth at home that resulted the increase of maternal mortality vastly¹⁰. The MoHP governance should not neglect the general health care system in the name of combating the COVID pandemic and it is necessary not only to take prevention and response measures, but also to have targeted public health emergency governance. It has largely to be in the area of strengthening the federalism in the health system of Nepal and needs to collectively make strong emergency responses in all three tiers of government to combat the COVID-19 pandemic.

Lessons learned for moving forward

Nepal has taken numerous steps including lockdown to prevent its spread of infection, regular disseminate the information and updated and endorsed various protocols, policies, and strategies to fight against COVID-19. The WHO Building Blocks framework falls short of what is needed to fight against COVID-19 and effective prevention and response of crisis in the current Nepalese health systems. Uninterrupted supply of an essential commodities test kits, PPEs and other medicines should be available all the health facilities and stockpiling of those commodities in advance for use during an emergency is an important lesson learned for the current response of Nepal. The incidence rate of COVID cases are being daily increasing and it is wider criticized that there is an inadequate testing at the community level so the tracing and testing capacities should be improved across the provinces for the timely response the pandemic. Many guidelines and protocols were prepared by MoHP which is good thing but most of them were unclear and created confusions for an effective implementation at the provincial and local level governments. Many concerned raised on adhering the guidelines and protocols at the community level such as quarantine management, catering the general and specific health check-ups of other health problems patients, distribution of relief package and its quality. These guidelines, standards and protocols should be updated and revised timely and adhere it at the implementation level. It shows that many provinces and local levels did not develop their response and contingency plan on timely that makes the responses were in an adhoc basis.

The surveillance system particularly trace, test and treat to be strengthened and closely worked with local and provincial governments together. Quarantine centers should have the basic facilities with having social distancing between all persons, safe and having medical service including the psychosocial support to all quarantine persons. Private providers including retired health care providers to be also mobilized to serve patients in the needy area. Moreover, health workers should be allotted from the less affected areas to highly affected areas for the timely

trace and treat the cases. Health workers should be trained on contemporary COVID-19 and applied the precautionary measures to fight against pandemic. All the health facilities should have regular services to all types of patient and ambulance services that should be monitored by the local and provincial governments to ensure the continuations and the quality of services. The current district health offices role in COVID management shows in very minimum then prior to the federalization although district health office chief as a member of district disaster management committee so to fight against COVID, district health office role to be strengthened for an effective planning and managing the crisis in the respective district.

Strengthening health system at local level should be a crucial opportunity for the local government for timely and quality health service delivery, management of human resource for health and promoting healthy behaviors. From the very beginning, COVID-19 response was more focus on treatment and case management where public health measures were given less priority, but it is most critical to prevent it. It is more challenging and difficult to predict the severity of the outbreak and apply the preventive measures like maintain social distancing at public places (market, bus stop, service sector-bank, electricity billing counter etc.) where some COVID-19 cases reported asymptomatic. Lesson learned, experiences and evidence of best practice from other countries could also be adapted to our country context that could be a major step to Nepal for an effective prevention and response of the outbreaks. Therefore, GoN should foster the health facilities readiness and strengthen their capacity by supplying adequate and quality of commodities and mobilizing trained human resources and release of adequate funds on time that creates a more sustainable health system to fight against crises for the long run. Therefore it needs to be a strong linkage between health institutions at all levels with sound information which need to move in the spirit of federalism and effective preparedness and response that should be developed for both health care providers and general public.

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