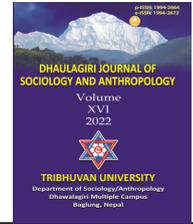


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Opportunities and Challenges of Implementing Federal Health System in Nepal at the Time of the COVID-19 Pandemic

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Nepal has been practicing the federal system in health since the promulgation of the constitution in 2015. The new three-tier system of one federal, seven provincial and 753 local governments have set up ministries, departments, and health units at each level. Less than four years into this system, the country faced the COVID-19 pandemic. The pandemic created both opportunities and challenges for the federal health system. This study aims to identify those factors from the viewpoint of implementers of the health system. After an extensive literature review, exploratory qualitative research was carried out with twenty public health workers and elected representatives from all the tiers of government, including the federal ministry and governments of Lumbini Province. The data was analyzed using the R package for Qualitative Data Analysis (RQDA). Thematic analysis was performed using the World Health Organization's six building blocks of health system as an analytical framework. The participants highlighted many opportunities after federalization in Nepal. The presence of government closer to people helped to make policies and plans as per local needs. Decentralized power to make decisions at the local level made human and financial resources readily available to local governments leading to better service delivery at the time of need. In contrast, the challenges were difficulty transiting into the new system of governance, poor coordination among the different government tiers, and the lack of local expertise to manage and lead the health system during severe constraints posed by the global pandemic of an unprecedented nature. The study showed that the federalization in Nepal has met the goals of devolution of the power structure and better health system management. However, there are specific areas of improvement to ensure a more functional health system.

Keywords: barriers, COVID-pandemic, facilitators, federalism in Nepal, health system

Introduction

Nepal newly became a federal democratic republic in 2008 and functionally entered the federal structure of governance after the promulgation of the new constitution in 2015 (GoN, 2015). With the change in the country's governance system, the health sector is significantly affected in its operations and management. In Nepal, the three tiers of government have been provided with specific areas of rights and duties to plan their independent but coordinated action in the health sector.

In just a few years of implementing the federal system of governance, the country's health system had to experience

the devastating COVID-19 pandemic. The constitution of Nepal has not specifically mentioned the management of a pandemic with respect to the power distribution among the three tiers of government (GoN, 2015). As a result, the three levels of government have been involved in managing the pandemic with differing approaches (Mainali et al., 2021).

While still in the transition phase of implementing the federal health system in Nepal, there is a need for the identification of opportunities and challenges existing in the practice of federalism to make the federal structure better suited to the context of Nepal. Managing COVID-19 pandemic provided a common ground for all levels of government to develop insights into the opportunities and



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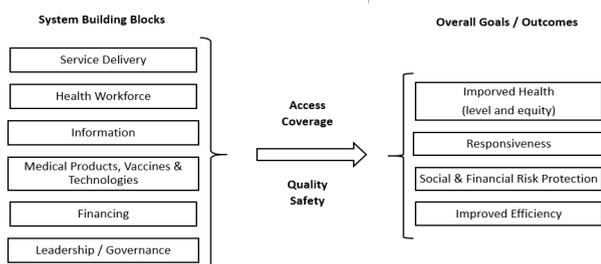
challenges that lie in implementing the federal health system in the country (Piryani et al. 2020; Subedi & Subedi 2020). This study attempts to document the evidence of what the implementers of the health system have experienced as the opportunities and challenges present in the federal health system during COVID-19 management in the country.

Methods and Materials

Exploratory qualitative research was conducted among 20 participants who were selected purposively. The participants included the Public Health Officers working in the health department/units and the elected representative at all three tiers of government. Among them, one participant was from Federal Ministry of Health and Population; one from Lumbini Province Ministry of Health, Population and Family Welfare, and four from the Health Offices (Argankhanchi, Kapilvastu, Rukum East, Rolpa); one from the Sub-Metropolitan City; nine from Municipalities (Tilottama, Bardaghat, Resunga, Kohalpur, Tansen) of which, five were people’s representatives and four were public health officers; and four from Rural Municipalities (Purbakhola, Ribdikot, Badhaiyataal, Jhimruk) of which, two were people’s representatives and two were public health officers. The data was collected till the point of saturation. The study was conducted for six months from August 2021 to January 2022.

Informed consent for the study and recording of the interview was obtained from the participants. The interviews were taken via phone calls and Facebook messenger calls as per the feasibility of the participants. Interviews were carried out with the participants using an in-depth interview guideline prepared after an extensive literature review. The interview was taken via phone calls considering the mobility restrictions imposed for COVID-19 during the duration of the data collection phase of the study. The data collection was done from August to September 2021.

The recorded interviews, which were conducted in Nepali, were transcribed and then translated into English. Braun and Clarke’s thematic analysis framework was used for the data analysis (Braun & Clarke, 2008; Maguire & Delahunt, 2017). We analyzed the data manually using RQDA software and MS word. The data analysis was done using the WHO Health System Framework (WHO, 2007) as the analytical framework and themes were predetermined from the six building blocks of the framework.



Source: WHO, 2007

Results

The structural changes from a highly centralized to a decentralized system have created opportunities and challenges to implementing the policies, programs and activities.

Opportunities

Opportunities in Service Delivery
Accessibility to Health Services

The study participants believed that the public had better access to health services with the implementation of federalism. Such change in the situation had been credited to the expansion of administrative units of the health system to the local levels, an increase in the establishment of healthcare centers and enthusiasm from the part of stakeholders.

If some healthcare unit or urban healthcare unit is to be established, we do not need to make a request to the central level; the local level can do it in a short time.

-Public Health Officer, Urban Municipality

The hospitals in our province which were less than 50 bedded, we have upgraded them with our own capabilities. We are making a communicable disease hospital, well-facilitated trauma center in our province. These are the opportunities created by federalism.

- Lumbini Province MoHP

Accountable Health Services

Some participants mentioned that opportunities had been observed on the part of health workers as well. The human resources becoming more accountable and familiar with the local context had helped in implementing the federal structure in health.

Our health workers have become more accountable now. And with the increase in accountability, I’ll not say the service quality but some quantity and regular service provision is there.

- Senior Public Health Officer, Health Office

As the local level could carry out micro planning for their local level, the participants believed that it was an opportunity provided by the federal system.

The activities on health service provision and providing quality services to the people with better access to health, has increased after the federalization.

- Lumbini Province MoHP

Health Centers for COVID-19 Case Management

The federal structure allowed local governments to plan on establishing and managing the health centers for COVID-19 management. That way, they could decide on various modalities like home isolation with the provision of regular visits from health personnel, establishing isolation and quarantines in public buildings, allocating

some beds or a section of a hospital to COVID-19 and also establishing temporary COVID-19 hospitals.

We mainly focused on home isolation of the people who were positive for COVID-19. After obtaining their phone numbers, health workers reached to their home isolations at least twice during that duration... for counselling.

- Public Health Inspector, Rural Municipality

We admitted 28 people and among those, two died and we referred nine of them. The rest of them did survive. What the local level did is that it established and operated an isolation center even if it was temporary at the time of COVID-19.

- Public Health Officer, Urban Municipality

One of the participants mentioned that, when the budget was inadequate to manage the COVID-19 care centers, the local level had the opportunity to reach out to the public and get support from them.

We got only 10 lakhs and we had to run 28 quarantines with that... To pay for the human resource, we collected money from the community from those areas where we had the quarantines built. People provided help with their willingness and we spent approximately four crores at that time.

- Mayor, Urban Municipality

Continuity of Care to Non-COVID Cases

With the basic healthcare centers coming under the jurisdiction of the local level, along with resources and leadership, they had the opportunity to plan on the continuation of care for the non-COVID cases as per their local needs and feasibility.

We never compromised on the basic health care, immunization or the emergency health services, because we had separate hospitals for the COVID and non-COVID cases.

- Lumbini Province MoHP

During the time of COVID, we placed some of our workforce in the health post and some others in the isolation center and quarantine center. That way we managed it and provided the health services throughout.

- Mayor, Urban Municipality

Opportunities in Health Workforce

Availability of Human Resource for Health

After federalization, the local level, with rights over the basic health service to the people, have the authority to manage the required human resource at their level. The study participants belonging to the district headquarters mentioned that the availability of human resource was not an issue in their area and rather, they had human resource in abundance.

In other municipalities, there is a lack of permanent employees. In our case, what was easy for us is that, as this is the headquarters and an urban area, we did not

face the lack of human resources for health.

- Public Health Inspector, Urban Municipality

Participants also mentioned that the local level had the opportunity to hire required human resources timely as per their needs.

In places where there is no human resource, the local government has hired the workforce on contract and provided health services... Federalism has provided an opportunity for the HR management at the local level.

- Senior Public Health Officer, Health Office

Such an opportunity of hiring human resources at the time of need was utilized by the local level for the management of COVID-19 as well.

We hired the doctors, nurses, and paramedics on a contract basis. We had to ensure their presence for 24 hours and the duty needed to be changed every 15 days, and we did not have the human resource in adequacy so we managed the situation ourselves with our own resources.

- Mayor, Urban Municipality

Identification of Human Resources for Health to Manage COVID-19

The local government had the opportunity of identifying and mobilizing the human resource at their *Palika*, as the workers were subordinates to the local government after federalization. Similarly, in smaller administrative units, there was familiarity and better acquaintance among the officials which made the identification task easier.

For COVID control in federalism, we could identify the health workers as per their background, their academic qualification and their designation. If the person is in the post of a Health Assistant but has academic qualification of a BPH, we involved the person in a public awareness program. If a person is from a hospital-based background, we could make the person get involved in the area that required direct contact with the patient.

- Public Health Inspector, Rural Municipality.

Training of Human Resource for Health

With the resources in hand, the local level had the opportunity to plan and execute training to the human resources as per the felt needs and their perception of the needs. Such opportunity was also utilized in the training of human resources in COVID-19 management.

With federalism, I say that it is easier than before. Because, if the local level is willing on resource allocation, it is easy for them to allocate resources for trainings.

- Senior Public Health Officer, District Health Office

We provided training to the workforce so that the limited manpower would be able to carry out different types of activities. It was not done by all local levels. But in our *Palika*, we had arranged it.

- Public Health Inspector, Rural Municipality

The local level also had the added opportunity of obtaining technical assistance from the Health Office of District and provincial level government when in need and also from the hospitals in the area. Such aspects also aided in developing and executing training programs for human resources.

We did coordination with the hospital here, and asked them to do the trainings. We requested the people from the infection control department to train our people on the measures to be taken to control COVID-19 and the pandemic situation.

- Mayor, Urban Municipality

Appreciation and Motivation of the Human Resource for Health

Appreciation in the form of financial incentives and felicitation was carried out by some of the local governments to the frontline workers of COVID-19 management. The local government also had the opportunity to decide who should be incentivized and in what quantity, irrespective of the national guidelines. And they executed the program by managing the financial resources by themselves.

We ensured that the employees were paid by even cutting down the budget of other areas.

- Deputy Mayor, Urban Municipality

The local government said that how much the others are providing, some more will be given to that and made sure that the people were on duty 24 hours by raising the motivation.

- Public Health Inspector, Rural Municipality

Likewise, motivation was provided by the local leaders by leading the COVID-19 control programs in the field. Such approaches were opportunities at the local level to boost the morale and confidence of frontline workers.

At our local level, the chairperson, vice-chairperson or the health workers made personal visits to people, and asked them to increase their motivation to utilize whatever skills they had. The stakeholders said that they would do what is required, or provide insurance to the people serving at the time of the pandemic and also their families or provide incentives and ensure adequate PPE.

- Public Health Inspector, Rural Municipality

Opportunities in Information

Context Specific Guideline Development and Dissemination

In regard to COVID-19 management, the local level had the opportunity to formulate their unique and own guidelines considering their resources and the socio-economic context of their area.

We made some changes in the guidelines as per our geography, and rather than keeping everyone in the same place, we, considering the choice of people, provided them with techniques as per their understanding to be

at home isolation.

- Public Health Inspector, Rural Municipality

We made local programs and circulated it among the people. The activities performed by us were more impactful than that of the federal and provincial levels.

- Mayor, Urban Municipality

Data Recording and Reporting

Participants mentioned that the local level had developed a realization of the value of data, the feeling of ownership and self-reliance on timely recording and reporting of data over time. Such realization came out more significantly after the COVID-19 pandemic.

In the centralized system, there was a load (regarding data recording and reporting) to the district but now the local level is taking ownership of it and working. It should be called a positive aspect.

- Senior Public Health Officer, Health Office

The local and other levels of government also realized the opportunities that were present in recording and reporting data at the place of its generation.

In the present context, the health coordinator at the health section of municipalities records the data. As a result, health information management has become somehow faster.

- Senior Public Health Officer, Health Office

When data is entered by the same unit where it is generated, there are fewer chances of having errors in data and it results in data being more valid.

- Senior Public Health Officer, Health Office

Data Sharing

With the three levels of government, data sharing has now become more important. During the COVID-19 pandemic, the data sharing mechanism experienced a change from having to share the data to multiple units separately to have a "One door mechanism" for data sharing.

Initially, it (data) was needed to send to everyone separately but now we don't need to do that and can only share to one place.

- Public Health Officer, Urban Municipality

The mechanism for data sharing established for COVID-19 has provided a newer and better way of doing the data sharing task.

Today we have a database for COVID-19 that we update daily. The health office also keeps it, along with the province level and our directorate also keeps the data updated.

- Senior Public Health Officer, Health Office

Information Management

The task of information management played a crucial role in the COVID-19 pandemic management. The participant from the local level believed that it was easier for them to manage the data when they had to work on

their smaller administrative units.

Since the area is small, the information dissemination was faster, information collection and processing were also faster.

- Public Health Inspector, Rural Municipality

In the present context, utilizing the opportunity provided by modern information technology, information management unit (IMU) was developed specifically for COVID-19. Such an initiative created the opportunity by establishing a strong network of information channels to tackle the pandemic.

For COVID information management, our IMU software has provided us with great help. It has been very good and has also been a great learning experience.

- Senior Public Health Officer, Health Office

Opportunities in Medical Products, Vaccines and Technologies

Need Estimation

COVID-19 placed the local government in a situation to make arrangements for necessary medical products, medicines and logistics. For that purpose, need estimation was necessary. The governments, if not many, had some opportunities to make the estimation based on the circumstance that developed and enhanced their capabilities. They estimated the needs based on the number of people getting infected in their area and from the discussions among the decision-makers.

After the decision on the management of health logistics, from various meetings, discussions, and suggestions, we made estimations of our needs.

- Chairperson, Rural Municipality

Procurement

With the responsibility of basic health care service coming down to the local level, they had been active in the procurement of the medical products, drugs and logistics required for health care. This way, they had the opportunity to facilitate procurement of the necessities using the procurement act and e-bidding system, which helped them manage COVID-19 well.

The procurement is done using the Public Procurement Act of Nepal Government. And as per the Act, our local level has developed procurement codes, making it a little easier for us.

- Chairperson, Rural Municipality

The federal structure provided the provincial governments with an opportunity to carry out the procurement of medicines as per the necessity of the area or the disease burden in the area.

The Lumbini province is not required to make requests and wait for the federal government to get paracetamol. It has its own procurement capacity, own procurement budget so it can purchase it itself which can reach the place in need sooner.

- Lumbini Province MoHP

At the local level, the major medicines of requirement and what falls under the top 10 diseases can be procured

by them. It is nice at the local level as it can purchase the necessary medicines as per their quantity needed and whenever needed.

- Public Health Inspector, Urban Municipality

Stockpiling

For the purpose of stockpiling medical products, medicines and logistics, those local levels with better infrastructure managed the storage for themselves.

For storage, we have established stores that are moisture proof and for the cold chain we have bought an advanced refrigerator and managed the storage well.

- Mayor, Urban Municipality

Opportunities in Financing

Budget Allocation

After federalism, the budget allocation has been diversified, as it is done from the federal, provincial and the local levels itself. The COVID-19 pandemic has also shed light on the importance of budget allocation for the health sector. The participant mentioned that the local level had the opportunity to manage required resources and invest in the area of need. They had the luxury of not asking for the budget from the higher level at a time of urgency.

Local level is identifying its own areas of need and managing resources for health by itself and marching forward.

- Chairperson, Rural Municipality

Currently, nobody needs to request the federal or the provincial government for budget. They don't have to wait to expect that the federal or provincial level will provide them with a budget.

- Senior Public Health Officer, Health Office

What was known from some participants was that the personal acquaintance between the officials and decision-makers also aided in allocating better budgets in the health sector.

If the health section chief has very good bonding, coordination or collaboration with the mayor, and administrative officer, he will be successful in allocating a good amount of budget to health.

- Senior Public Health Officer, Health Office

In the case of COVID-19 pandemic, it was experienced that all three levels of government did allocation of budgets to manage the situation.

Our province established four hospitals with two crores each, so, eight crores worth of decision was made in a single day and executed. We also gave a grant to the local level for the establishment of isolation centers, and quarantines.

- Lumbini Province MoHP

Domestic Resource Usage

Federalism has provided an opportunity to the local level in the identification and collection of domestic resources from their local level and pool the resources.

Participants mentioned arranging the local resources at their level and making provisions for their utilization.

Apart from what is sent by the federal level, we have our business tax, household rental tax and many different types of tax. We collect such taxes and make our internal income.

- Mayor, Urban Municipality

Emergency Fund Usage

In regard to provision of emergency funds, some local levels had established emergency funds especially for the health sector such that they could be used at the time of dire need. Similarly, a fund for COVID-19 pandemic was also established at some local levels with the provided opportunity.

In our province, we have the Coronavirus (COVID-19) control and treatment fund. From this fund, we have so far used 53 crores for the COVID-19 control and for the logistics procurement and also for the relief programs for the dead.

- Lumbini Province MoHP

Apart from the health emergency fund, some governments made use of the general emergency fund for the sector of health as well.

We have disaster management fund. When people fall sick the two ambulances that we have may not be enough at times. In such situation we provide up to five thousand for people to go to the hospitals.

- Chairperson, Rural Municipality

COVID-19 Incentive Management

In COVID-19 pandemic, the federal level formulated guidelines on incentivization of the front liners and made provision of budget for the same. As the federal government provided incentive to the permanent officers, the local level arranged incentives from its local resources for the temporarily hired workers.

We provided incentives to them from local resources. It was different to what happened from the center. Those who were the permanent employees, for them it was done by the federal government.

-Deputy Mayor, Urban Municipality

The local government at places increased the incentive amount to better motivate their front liners and also ensured that the payments were made as well.

We have provided extra incentives to the health workforce of 100% 75% 50%. We have managed that from the extra resources. Municipalities have addressed this more or less and this has increased the motivation of health workers.

- Mayor, Urban Municipality

Opportunities in Leadership and Governance

Contribution to COVID-19 Management

The new structure of federalism brought some positive aspects in disaster management of the health sector that came to light while managing COVID-19 pandemic. Many

participants shared the view that the federal state with the local government made it easier to manage COVID-19 pandemic.

If there was no local government, there would have been multiple times higher fatality from COVID-19, as compared to what we have faced at present.

- Public Health Inspector, Urban Municipality

Coordination

Coordination forms an essential component with the presence of multiple structures involved in the governance of a country. It also is a principle outlined in the constitution of Nepal, that is to be present between the three tiers of government. The participants mentioned that the coordination between the different governments aided in managing the COVID-19 pandemic in the way that was possible. Also, the presence of coordination units in the government helped in the process.

With the coordination of the federal, provincial and local level, we have been able to be so well managed (in COVID management). In the health, there are no issues like in other ministries.

- Chairperson, Rural Municipality

Coordination between the health institutions was done for identification of the gaps in services and to make efforts to address them. Along with that, coordination between the local leaders, bureaucrats were also carried out to work together in the health sector.

We did coordination with the provincial government and obtained many helps from there. At the local level, we did coordination with the district administration, especially the Nepal army. The Nepal army helped us in the dead body management in the initial days. We obtained suggestions from different other organization then only we could face the COVID-19.

- Chairperson, Rural Municipality

Monitoring and Evaluation

The participants believed that the local level with the rights provided, could do the required monitoring and evaluation and bring the necessary changes at their level.

As when the district was responsible for monitoring, all the areas could not be reached at once but with local level government and the people's representative there is regular monitoring and supervision which has resulted in regular service provision.

- Senior Public Health Officer, Health Office

The participants also highlighted on the aspect that the public leaders observed the health centers which helped in making improvisation as per the public needs. That way they acted as a bridge and helped in making the public needs in health, heard better at the decision-making level.

There are locally elected leaders in the wards as well and they also think about how can the health service provision be made better in their area. Along with that, they are also involved in monitoring of the health

service provision.

- Public Health Inspector, Urban Municipality

Policy Development

The different levels of government had the opportunity to either stick to the policy developed by the federal level or to improvise and formulate its own policy, but not overruling the laws. Some participants mentioned that they developed their own policy and strategy to act upon in the health sector and also at the time of COVID-19 pandemic.

Taking the policies provided by federal level as a foundation, local policies were developed.

-Public Health Officer, Urban Municipality

We did discuss the local policies related to health. We studied it. We study it in the team of experts, make the policies and pass it taking reference of the federal policies. We make law, codes and policies related to health. We have passed local rules related to health.

-Chairperson, Rural Municipality

Opportunities Created with Local Level Government Establishment

The local government is the actual implementation body in federal structure. At the time of COVID-19 pandemic, the local government took lead in various ways and situations that aided in better managing the pandemic and other aspects of health system during the pandemic. The participants highlighted on the fact that local levels with the resources, rights and authority could develop plans and execute them in the health sector.

The programs that are missed by the central level are carried out by the local level and it is easy.

- Health Coordinator, Rural Municipality

We have ensured free ambulance services and the facility of food and stay for the patient attendant coming to the birthing center. What this shows is that, after federalization, the local level like ours have made huge contributions.

- Mayor, Urban Municipality

They can therefore develop newer innovative programs taking into consideration their particular health problem, particular targeted community and on those health indicators that they believe they can improve. We call targeted and tailored interventions, the culturally sensitive and culturally specific programs, it can be introduced. That is one of the biggest plus points.

- Senior Public Health Officer, Health Office

Challenges

There were multiple challenges that surfaced in the health sector of Nepal. Such challenges were observed more evidently in the context of COVID-19 pandemic management.

Challenges in Service Delivery

Health Service Accessibility to Public

The challenges faced in the areas of human resources, budget availability, infrastructure; created challenges in the provision of health service delivery as mentioned by the study participants.

They have established health center near the people's houses, they have provided medicines and everything has been done. But there are no doctors there, and if there are some, they stay for a maximum of six months and go somewhere else and the place is again without doctors.

- Federal MoHP

Some of the participants highlighted on the situation where the focus had been on increasing the number of healthcare institution with little focus on the quality-of-service provision. This had been a challenge in resource utilization for a better aim.

The number of health centers were increased so as to hire their people and the quality was not cared for apart from buying medicines. And among the people's representative, only the procurement of medicines was understood as health.

- Senior Public Health Officer, Health Office

Health Center for COVID-19 Cases Management

The participants expressed various challenges faced in their level of government in establishing the healthcare institutions for the purpose of COVID-19 cases management. The participants expressed challenges faced in establishment, designation and allocation of hospitals for the treatment of the COVID-19 cases. Those challenges were due to the budgetary factors, coordination issues and human resources unavailability.

The local level is new in its establishment, because of which, there were challenges like, lack of physical infrastructures for the establishment of quarantine, isolation, lack of manpower.

- Public Health Officer, Urban Municipality

For the establishment of different COVID-19 related hospitals and isolation centers, there is lack of budget.

- Mayor, Urban Municipality

Challenges in Health Workforce

Unclear Human Resource for Health Work Policy

Study participants mentioned that the federal structure created a scenario of *Samayojan* (adjustment of government employees according to the federal structure) wherein the human resource management had been challenged.

Without understanding the ethos of health service system, there occurred *Samayojan* as per the constitution. This was not able to motivate many of the employees in a positive way.

- Lumbini Province MoHP

In those places that do not need, there are more human resources and those in need don't have the human resource. This is the effect of federalism.

- Public Health Officer, Urban Municipality

The ideologies and the personal acquaintance of employees with the leaders gave them the luxury of working as per their convenience and not as per their duty as expressed by the informants.

As some of them know the leaders personally, know their own value as voters, know the public there closely and also the departments at the local level, they do not show willingness to serve the people.

- Public Health Inspector, Urban Municipality

The participants expressed that the current number of sanctioned posts for health workers were not improvised as per the current need. When the number of service providers was decided based on the service demand and the target population of many years back; there were challenges seen in the availability of human resources to fulfill the current need, be it in the curative/technical field or administrative field.

There still is the situation of government scholarship graduates in contract basis, running the hospitals. And in another end, there is vacant government sanctioned posts. Such situation is not only in the hospitals but in the health offices and other places as well.

- Lumbini Province MoHP

At the municipality level, when only two officials are there to work for all the programs in the health section, it is difficult. There are online modalities also, like DHIS2, E-LMIS, E-TB; managing that area, working in area of public health, or in the area of policy making, it is a rush for the health workers. So, it is difficult to get proper result and work in a better way.

- Health Coordinator, Rural Municipality

After the establishment of local level, there had been enrollment of people in the posts that they are not well qualified and experienced about. This unavailability of appropriate human resource for the appropriate post was a challenge faced in the current context.

Currently, the coordinators in municipalities are those people who worked as auxiliary health workers, auxiliary nurse midwife formerly. The extent to which they can plan, identify the needs of the municipalities, prioritize the needs, quantify the resource requirements, and how to carry out the forecasting is a challenge to the health coordinators.

- Senior Public Health Officer, Health Office

Acquisition and Mobilization of Human Resource for Health to Manage COVID-19

The participants mentioned that they faced challenges in acquisition of the human resources for health for the management of COVID-19 pandemic. The challenges were caused by social factors, fear among the health workers, emergency enrollment of the health workers.

We were not able to get the required human resource despite their availability in the market. Reason for it was that it was only for two to three months and who would go by keeping their lives at risk and money is not bigger

than life.

- Lumbini Province MoHP

Training of Human Resource For Health

The participants outlined challenges faced in the training of the human resources to be the budgetary issues, lack of experts and lack of knowledge on priority areas for training.

We can find a doctor or an MBBS graduate but there is the need of training from MD level who can provide quality service that is based on the experience as well.

- Public Health Inspector, Rural Municipality

The lack of proactiveness from the government was also taken as a challenge faced in the area of training of human resources.

Nothing as such came from the upper level on making provision of such trainings and at the lower level, there are no such planning or the expertise to conduct such trainings and orientations.

- Public Health Inspector, Urban Municipality

Appreciation and Motivation to the Human Resource for Health

During the COVID-19 pandemic, while the entire country was under lockdown, the health workers were out in the field risking their health and serving the people. In such condition where the health workers needed appreciation and motivation the most, there were various challenges in providing the same to them. Budget issues, lack of uniformity in incentive provision between different governments, were some of the challenges mentioned by the participants.

Health workers deployed in health posts, even in the last year, the incentive was different in different municipalities. Some municipalities provided the incentives whereas some did not.

- Senior Public Health Officer, Health Office

Challenges in Information

Guideline Development and Dissemination

In regard to COVID-19 management, the development of guidelines faced challenges in multiple aspects. There were challenges in implementation of the guidelines and the feedback mechanism about the clarity of guidelines.

The guidelines that were made by the federal level, considering the international protocols, were sent by various means. It reached everywhere and everyone read it. But they (local governments) faced no issue even if they did not do the implementation.

- Federal MoHP

Data Recording and Reporting

As per the participants, various challenges were faced in undertaking the task for data recording and reporting. The issues regarding internet services, electricity, availability of logistics was encountered.

Daily reporting is required and for that, there is no electricity on some days. When there is no electricity, there is no internet and sometimes there is no internet at all.

- Senior Public Health Officer, Health Office

Lack of feedback on the data entered and no modality of rewarding or punishing in regard to data entry was also termed as a challenge by one of the participants.

There is no feedback coming from the higher center on the mistakes present in our data entry. There is neither punishment nor reward for it.

- Public Health Inspector, Rural Municipality

Data Sharing

With more divisions of the administrative units, there were challenges in sharing the data between different units as expressed by the participants.

Initially, we provided information to the health office, they shared it to the district committee and then they shared it to the higher level. Along with that, the police department, different research projects, radio and other communication media also needed the data. The need to inform the data to all these places would be stressful.

- Health Coordinator, Rural Municipality

Information Management

In the task of information management, challenges were faced by the participants in COVID-19 information management as well.

The information management system is being operated by the hospital in our municipality. It is challenging when the human resources are not sufficient.

- Health Coordinator, Rural Municipality

When a patient needed referring, the district CCMC (COVID-19 crisis management center) was to be contacted to decide on where to send the patient. With the lack of managed information system, we faced problems during the difficult time of COVID-19.

- Chairperson, Rural Municipality

Challenges in Medical Products, Vaccines and Technologies

Need Estimation

The participants mentioned that, at the local level there were a number of challenges in estimating the needs and lack of expertise was the most important of all. And subsequently, the lack of knowledge and understanding regarding the priority needs was another set of challenges.

The local level has some problems in quantification, or selection of drugs or the selection of commodities. It is not something that they have done before and they do not have the required expertise to do the same.

- Senior Public Health Officer, Health Office

COVID-19 pandemic which brought a lot of uncertainty with it, the estimation of logistics was faced as a challenge by the participants. Similarly, with different levels of

government, issues regarding clarity on which level would provide what kind of logistics was faced.

There was no clarity on how much quantity will be provided by the province, how much will the district provide, or how much commodity will be coming from the federal government.

- Public Health Inspector, Rural Municipality

Procurement

The procurement of medicines and other essentials had some challenges at the local level. Limited capacities of the local level, lack of understanding of the procurement processes were some mentioned by the participants.

Procurement of vaccines or the procurement at the cost defined by the central level is beyond the capacity of a local government.

- Public Health Officer, Urban Municipality

Participants mentioned that they encountered challenges in the process of procurements as well. The laws related to procurement posed difficulty in procurement made at the local level.

We have to work on the basis of the procurement Act of 2063 B.S. We can't do it anyway otherwise. The law made in the year 62-63 B.S. has not been improvised yet. The local level cannot touch on that. In the procurement order, it can't do anything by itself.

- Public Health Officer, Urban Municipality

Stockpiling

Lack of available space, lack of adequately equipped storage units were some challenges outlined by the participants.

In storage, there were more challenges than the opportunities.

- Public Health Inspector, Rural Municipality

It is very difficult. As a reality, there are many healthcare centers which are not constructed as per the required guidelines throughout the country. We used to store the medicines and other logistics on rented rooms.

- Health Coordinator, Rural Municipality

Some participants also outlined the fact that lack of expertise on management of stockpiling was also a challenge.

There is some difficulty in operating the E-LMIS (electronic logistic management information system) because of the challenges in competency of human resource there.

- Senior Public Health Officer, Health Office

Challenges in Financing

Budget Allocation

After federalism, the budget allocation is done from all three levels of government. The participants mentioned that when there are different sources for budget allocation, there is confusion and a lack of coordination in ensuring an adequate budget for the health sector.

The number of birthing centers which is registered at the ministry of health or the health department is less than the actual number of birthing centers in our district. And when the budget is allocated, it would be only for the registered birthing centers and it would not be sufficient for all the birthing centers present in the district.

- Health Coordinator, Rural Municipality

Doctor is required at the local level, at the municipality. Where will the money come from for the doctor? They ask us to manage it ourselves. Are we supposed to make cuts to the budget for development? How can it be that they don't provide the money but ask to do different things!

- Public Health Officer, Urban Municipality

At the local level, the personal relationships of the administrative people with the elected leaders were found to influence the budget allocation in the health sector. This fact, in some situations, such scenarios could act as an opportunity in the investment but, at the same time, could pose a challenge when adequate allocations cannot be made.

In the areas of powerful leaders, there is enough budget allocation for those places. And in some places, there is a situation of scarcity.

- Mayor, Urban Municipality

For the management of COVID-19 pandemic as well, the confusion in budget allocation was a challenge. Along with that, the untimely dispatching of the budget created further issues in managing the pandemic.

The federal-level stated that they would provide budget per patient but have not provided it to date. That is a challenge. Because of that, the local level has to face the financial burden.

- Mayor, Sub-Metropolitan City

Budget Spending

Some participants outlined the challenges present in the area of spending of budget.

When the budget is sent to the local level, the leaders there have the desire to spend the money in the hope that they will get some commission. At the same time, the officials there have the mentality to not have to spend the money. When they make the expenses, they need to give commission at ten places and answers to 50 places. So, there are abundant situations of not making expenses to make things easy

- Federal MoHP

Domestic Resource Usage

The participants also shed light on how the local levels with lesser income face challenges in managing the crisis with their limited domestic resources. And also considering the fact that there are other developmental activities to be done at their level.

For those with a fixed income, it will not be sufficient

for them to use. They cannot handle the such situation of the pandemic.

- Public Health Officer, Urban Municipality

Channeling the budget from construction and development to health is definitely a challenge.

- Chairperson, Rural Municipality

Emergency Fund Usage in Health

The participants outlined the fact that investment in the emergency fund itself is a challenge, as seen at their level. And the inadequacy of the budget to allocate for the emergency fund is another challenge faced by the local level.

The pandemics don't come with prior information. After the budget is allocated, they do not agree to give it back or leave it. They will have allocated a meagre amount there (in health) and that will not be sufficient.

- Public Health Officer, Urban Municipality

Expenditure Account Management

The participants outlined the fact that challenges in account management occurred because of the lack of required laws.

Sometimes, there is a lack of laws. The federal government has not prepared all laws. Expense criteria have not been made.

- Chairperson, Rural Municipality

At some local levels, with a lack of human resources for carrying out the audit, they faced the challenge and needed assistance from another level for their account preparation.

For that (finance audit), a sanctioned post is present in the name of the account officer. But as the federal government has not arranged the employee, we request the district account office and do the internal audit with their help.

- Mayor, Urban Municipality

Challenges in Leadership and Governance

Coordination

Coordination, which is an essential component of federal structure, is the most challenging aspect, as per the study participants. The participants highlighted that the loss of chain of command, which establishes continued coordination with the human resources and different administrative units, was a huge challenge post-federalization.

Theoretically, there is the concept that federalism makes resource pooling and coordination easier... But in reality, it appears that there is a need to be process-oriented a lot, and one unit makes it look like they are giving responsibility to another, and the other makes it look like giving the responsibility to yet another unit, but in real action, a large gap is observed in the coordination.

- Federal MoHP

The provincial level office is supposed to work together

with the local level.... we were asked to work in coordination with the local level, but we do not have the right to control the local level workforce. - Senior Public Health Officer, Health Office

Some participants also outlined a lack of clear demarcation between the rights and responsibilities of the different tiers of government as a challenge to coordination.

What is to be done at the local level, what needs to be done at the provincial level and what is to be done by the central level? Since this work-related division is not there, there sometimes is duplication of work, errors in the activities, or inability to get actual data.

- Public Health Inspector, Rural Municipality

In managing the COVID-19 pandemic, the challenges in coordination between the different tiers of government and the organizations present further resurfaced more clearly.

There is no form of link between the provincial and federal levels.... The province doesn't have any form of link with the local level. Because of no link, when we told multiple times what needs to be done for COVID-19, some local level followed it, but some did not. - Senior Public Health Officer, Health Office

With multiple governments and people involved in decision-making, there were differences in understanding of the directives from the higher level. Such aspects also posed a challenge to coordination.

They (local governments) did not even consult with the district for that purpose. Nor did they consult with the province or federal government in regard to how to proceed for the establishment of those isolation centers.

- Senior Public Health Officer, Health Office

There are different governments, and different municipalities, and when they have different understandings, the implementation is seen to be carried out differently.

- Senior Public Health Officer, Health Office

The participant from provincial level expressed how challenging it was to carry out the task of coordination when the local level was not willing to reciprocate the efforts made for coordination from higher levels.

After the federalization, the biggest problem I have seen is in coordination...We can make hissing sounds but not bite. (fwaana garna paiyo tara dasna paiyena) They also think that since they are governments, they will act in their own way.

- Senior Public Health Officer, Health Office

As the three levels of government have their own set of rights, coordination is difficult.

- Senior Public Health Officer, Health Office

Monitoring and Evaluation

The issues faced in the sector of human resources in terms of inadequacy were taken as a challenge in the task of monitoring. And the study participants also mentioned

that local level was incapacitated for the task of monitoring and evaluation.

Due to a severe lack of manpower at the local level, monitoring and its management have become difficult from the local level.

- Senior Public Health Officer, Health Office

The monitoring is to be done by the municipalities. But because of the load that the municipalities have, the monitoring has not been happening much.

- Senior Public Health Officer, Health Office

Policy Development and Implementation

The different levels of government when had the authority to develop their own policies and guidelines, and there were issues encountered in deciding on the implementation of which policy or guidelines.

A guideline was received from the Provincial government, another from the Federal government and then there was another one, the Ministry of Home Affairs, which would say some other things. Who are we supposed to listen to?

- Senior Public Health Officer, Health Office

And while making policies at the federal and provincial level, there would be issues in the uniformity in understanding of the situation and it would eventually bring problems at the time of implementation. This happens to be a challenge.

- Federal MoHP

The local government faced challenges in developing and implementing the guidelines. Particular issues faced were in the availability of skilled human resources, making locally and contextually suitable guidelines that were acceptable to the public.

It is difficult to find people with expertise in developing guidelines. It is difficult to find out educated people and to make the guidelines in a short duration and for rapid implementation.

- Public Health Inspector, Rural Municipality

The participant also mentioned that with no feedback mechanism established on guideline sharing and its implementation, there was a challenge in the appropriate execution of the guidelines.

There is no mechanism to share the feedback on the guideline that reach the different governments, the way it is to be taken forward, the challenges that are present in the implementation of those guidelines. And there is the inability to carry out implementation when the feedback are not addressed.

- Federal MoHP

Challenges Created with Local Level Government Establishment

The leadership and governance at the local level did face many challenges. Many of the elected local leaders

said that they had no prior knowledge of how things were happening in the health system management. Some of them had no knowledge about the components of the health system despite the fact that they had the responsibility of overseeing the system.

I do not have much experience in the health sector before the federalization. Because we did not have the responsibility in the health sector and thus couldn't experience much in that regard.

- Mayor, Urban Municipality

Discussion

This study, using the theoretical framework of WHO health system building block, provides insight on the opportunities and challenges in implementing the federal health system at the time of COVID-19 pandemic. The participants mostly observed good opportunities in the areas of health service delivery, and financial and human resource allocation after federalization. The challenges, they mostly expressed in the sector of coordination, leadership, and information management, and also some in the aspect of medical utilities.

The study demonstrated that the government being closer to people at the local level, and with the power to develop plans, can ensure service provision as per the need of people locally and can carry out micro-planning. Management of isolation and quarantine, allocation of hospitals and hospital beds for COVID-19, the establishment of temporary hospitals for COVID-19 along with the continuation of basic health services by local government reflects opportunity present with the local government in providing health service to the public even at the time of national crisis. This result is in line with the finding where, decrease in distance between the administrative unit of government and people is found to bring positive effects on health services delivery as observed in higher coverage of vaccination (Cobos Muñoz et al., 2017). Issues in adequacy of resources, be it financial or human resource created challenge in assuring service delivery to the people. Apart from that, lack of understanding of decision-makers on what constitutes quality health services; focus on increasing the number of health centers rather than improving the quality of services and a major focus on a curative aspect of health were some of the challenges found in the study. A similar finding was observed in the study of Vaidya et al. (Vaidya et al., 2020), which revealed the lack of expertise in the newly formed government to exercise its power to deliver health services as per the need of their area. This study finding contributes to the known challenges and provides evidence on how the inadequacy in quality health service can exacerbate the challenges during a time of crisis like a pandemic.

Regarding the challenges faced in regard to human resources, the study participants outlined the inadequacy of the workforce in the rural and hard-to-reach areas of the

province and made *Samayojan* the reason behind it. Also, hiring human resources based on personal acquaintance was a challenge observed by the participants at the local level. The loss of chain of command, more compartmentalized human resources and the local level workers, not requiring to be answerable to higher level was also taken as a challenge that was specially highlighted at the time of COVID-19 pandemic management. While a study highlighted on the interference of leaders and bureaucrats in recruitment of human resource as a challenge (Cobos Muñoz et al., 2017), furthermore in this study, it was found that some workforce gets the luxury of being inefficient at work under the shade of political leaders as well. In the same context of politically generated challenge, not hiring additional human resources for health through the public service commission health was an important challenge faced at the current period in Nepal.

The COVID-19 pandemic also presented an opportunity in the form of a systematic data sharing mechanism with the establishment and execution of IMU (Information management unit). A study conducted by Rayamajhee et al. (Rayamajhee et al., 2021) highlighted on the aspect that misinformation spreads during a crisis like the COVID-19 pandemic, and the local bodies have the task of addressing such misinformation and develop actions to clarify the public and provide them with scientific information. With respect to that, convenience on preparing and disseminating guidelines as per the local context and local understanding was seen as an opportunity at the local level in the study. However, these findings are new in the arena where little have been observed as the opportunities in health information system in federal context. Thus, the findings in the study adds new insight on how the federal context can create opportunity in improvising the health information system in the country. The findings of the study fits in existing knowledge on the challenges in information system as outlined in the 2016 systematic review report on the Decentralization of health system in low- and middle-income countries. Where, it was highlighted that, lack of technical capacity for the operation and management of the information system was found to be the main reason for the decline in quality of health information (Cobos Muñoz et al., 2017).

The governments were at a position to estimate their need as per the prevalence and trend of disease at their level. In the context of procurement, it could also be done independently, as per the requirement of the local level, in quantity needed and in a quicker way at the time of need. These findings are new in the existing evidence, which mostly expressed the challenges faced in the area of medical products, vaccines and medicines. Making procurements haphazardly just for the sake of obtaining the logistics rather than in a need-based and systematic manner was another challenge observed by the participants of the study. These findings are in line with the findings in previous studies. The 2016 systematic review report

highlights the challenges in medical products, vaccines and technologies in health system to be contributed by the lack of management skills in the responsible authorities at the peripheries and increased involvement of bureaucracy at the local levels of government. The study also sheds light on the aspect that the local levels are assigned with responsibilities that are beyond the capacity of resources available to them (Cobos Muñoz et al., 201).

The findings in health financing saw more opportunities in the federal context than in the challenges. The different governments have their own budget and the local level getting to fill in the budget gap with its own resources is a biggest opportunity in the federal context. A study found that, in terms of financing for health, the sub-national units can use their resources from taxes or other resources to fiscal space (Abimbola et al., 2019). Building upon that, the study finding also revealed the competitive tendency among municipalities and innovative ideas generation for better revenue collection.

The areas of policy development and monitoring and evaluation were the areas that experienced the positive effects of federalism. Compared to the centralized system of governance in the past, even in the area of policy-making, at present, the local and provincial level can develop policies as per the local need and favorable to the local context. This finding supports the findings of the systematic review commissioned by the WHO which highlighted on policies getting driven by local knowledge, expertise and local context (Abimbola et al., 2019; Subedi and Subedi 2022). Moreover, the study also realized that the monitoring and evaluation of health activities can also be done better with smaller administrative areas and local presence of leaders and government officials. The loss of chain of command was considered responsible for the issues in coordination. A similar finding was observed in the study by Vaidya et al. where coordination between multiple governments was objectified as a challenge (Vaidya et al., 2020). The lack of clear demarcation of rights and responsibilities of different levels of government was expressed as one of the major challenges in coordination by the participants. This is in line with the comparative analysis on federalism and the response to COVID-19, wherein lack of clarity regarding the roles and responsibilities among the three levels of government in Nepal was taken as a point of suffering in COVID-19 management (Chattopadhyay et al., 2022). Shrestha et al. (2021) found that preparedness for COVID-19 was affected by the poor coordination between the three tiers of government in Nepal.

Conclusion

The study showed that there are multiple opportunities present in federalism to work for the better implementation of health system. Division of rights and responsibilities to multiple levels of governments is an important asset for contextual planning, implementation and subsequent

monitoring and evaluation of health programs. Likewise, arrangements of budget and human resources along with their allocation as per the need, was another valued gift of federalism. However, there still were multiple challenges experienced in the federal health system. The lack of adequately skilled human resources at the right places and in the right number was a major issue. This created further challenges in the development of the programs and their execution. Coordination was a challenge that was indicated by the informants as the most significant challenge in the federal context. Effective coordination within the sector and between three-level governments and the provision of need-based human resources, supply, commodities and budget, would help improve the quality of services and proper implementation of the federal health system in Nepal.

Declarations

Ethical Approval for the Research

Ethical approval was taken from the Institutional Review Committee of Patan Academy of Health Sciences (Ref: PHP2106251545). Informed consent for the study and recording of the interviews were obtained from the participants. We declare that the research has been conducted ethically.

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None.

Conflict of Interest

There is no conflict of interest with any individual and agency.

Availability of Data and Materials

Data and materials are available for researchers.

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