Local Governments in response to COVID-19: A Sequential Explanatory Mixed Methods Study on the Coordination and Support in Intergovernmental Relations

Research Project

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Abstract

This study aims to identify the activities carried out by local governments (LGs) and challenges they faced while responding to Covid-19 and coordination and support received from Federal and Provincial governments. Further, this study explores the perspectives of the political leaders and chief administrative officers in these issues. This study adopts sequential mixed-methods as it aims to both assess the objective facts first and then subjective perspectives regarding the challenges faced and coordination and support. In particular, it follows explanatory (Quan-Qual) mixed methods in which the quantitative approach will be used first followed by qualitative approach. To collect the data, various sources will be used. The quantitative data collected from 753 local governments out of which 661 data of Mayor and 687 data of CAOs were used by the collaborative study of Yale University, London School of Economics, Nepal Administrative Staff College and Governance Lab, Gaupalika Rastriya Mahasangh Nepal and Municipal Association of Nepal. This data was collected during Chaitra 2077 to Baisakh 2078. Thus, the quantitative data reflects the second wave of the pandemic in Nepal. To collect the qualitative data, case study approach was adopted using cases of 17 municipalities representing 6 provinces of Nepal. The study showed lower positive association between support among the local governments. The major activities were home isolation and raising awareness whereas the major challenges faced were lack of fund, medical supplies and management of returnee migrants.

Keywords: local governments, Covid-19, intergovernmental relationship, coordination, support

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Introduction

The effect of COVID -19 pandemic was observed worldwide since early 2020 affecting lifestyles of people, restricting their mobility (Institute for Integrated Development Studies, 2020). Not only this with COVID-19, the federal governments of many developing countries are tussling with a crisis that requires both a central and local response. Coordinating between the different levels of government was difficult in a state of emergencies like this and in the case of Nepal, the situation gets even severe as it is still struggling to get settled in the new government system. Response to the pandemic in Nepal along with other similar federal countries was clearly being shaped by intergovernmental relations and the situation was even more sensitive in developing countries (Paquet & Schertzer, 2020). Many aspects of an effective response to the virus, such as testing, contact-tracing, and running quarantine facilities must be implemented at the local level. However, local governments often rely on federal funds to carry them out. This means coordinating across different spheres of government becomes crucial at this point when public health funding is both more vital and in shorter supply. Understanding how intergovernmental systems are influencing policy responses to COVID-19 is critical. At the same time, understanding how COVID-19 is impacting intergovernmental systems in federations is also essential (Organisation for Economic Co-operation and Development [OECD], 2020).

The federal structure of Nepal demands and delegates the local level to perform numerous administrative functions along with making decisions relating to local-level governance. Essential health care, sanitation and hygiene are the basic responsibility of the local level whereas public health, in general, were the shared responsibilities among the 3 states (Nepal Law Commission, 2015). Municipalities and ward officials were the focal point for quarantine centres, contact tracing, and implementing testing, providing relief package.

However, the funding decisions, resource allocation, and disbursement were done by the centre to province and then reach the end level (United Nations, 2020).

Nepal government initially responded to COVID-19 by sealing borders and imposing a national lockdown followed by taking other measures to manage the pandemic. Alongside, local level became the focal point to deal with COVID-19 with which the roles and responsibilities of local government paired up with the challenges they had to face also expanded. The visible roles played by local governments, however, changed due the phase of second wave. These roles with respect to intergovernmental relation of Local Governments (LGs) with Provincial Governments (PGs) and Federal Government (FG) from the perspectives of coordination and support are still understudied. Thus, this study had attempted to dig on the challenges faced by them at the local level, and assess support and coordination from provincial governments and federal government to respond to the unfolding crisis.

Federalism in Covid-19 Context

Federalization has become a new phenomenon to ensure governance and accountability especially in developing countries (Litvack et al., 1998). Nepal has also experienced its first local elections after 2 decades which was held under its new constitution that was formulated in 2015. Nepal is in a huge transitional phase from a unitary state to a federal democratic republic, with powers shared between the national, provincial, and local levels. The new Constitution addresses significant changes in the different service sectors, particularly in terms of jurisdictional allocation (GoN, 2015). With the constitutional reform and resulting intergovernmental power-sharing, local administrations are now responsible for meeting the country's commitment to better service delivery. They are confronted with difficulties during this procedure because of the centralized mind-set of leaders and bureaucrats, unitary organizational structure, and legal

framework (Bhandari, 2020). Furthermore, a comparative analysis of functions across the three levels of government reveals some overlap and duplication in the regulation of schools (Acharya et al., 2020). As a result, local government leaders are perplexed by their autonomy to exercise Constitutional rights, their concurrent duties, and their connection with the provincial and federal governments at the intergovernmental level. (Neupane et al., 2018)

While the Government of Nepal is still struggling with implementation of the new federal system, the global crisis brought by COVID 19 has made the scenario even worst. Nepal has suffered a massive COVID pandemic with huge economic losses due to inadequate implementation of the strategies and policies required for management of the overwhelming pandemic and even though the Government of Nepal's constant efforts to restrain the rapid transmission of SARS-CoV-2 at the community level, there appears to be a need for better intergovernmental coordination and cooperation (Rayamajhi et al., 2020). Looking from the lens of COVID-19 and how it crosses with intergovernmental interactions, it can better be analysed how governments have responded to COVID-19 at this specific point in time, when federal, provincial, and local governments were struggling to respond to COVID 19. Thus, it is critical to determine which elements of the inter-government have been operating effectively, which were not with the assess of COVID 19 situation.

Inter-Governmental Relationships

In the federal context, intergovernmental relations (IGR) can be described as the system or process through which different governments within a federal system interact which also includes the extensive informal processes of exchange and interaction (Phillmore, 2013). Despite the fact that IGR is a component of federalism, has several distinguishing qualities that separate it from the larger picture of federalism (Wright, 1974). To begin with, it discusses the notion of

human connections and behaviour. Second, IGR refers to government employees' constant daily interaction patterns, information, and evaluations. Hence, intergovernmental relations can be taken as the cornerstone of any government's complex federal structure, and it is within the intergovernmental relationship to avoid and prevent conflicts, misunderstandings, or disturbances that may arise between the layers of government (Colasante, 2019).

The relation among the federal government, provincial or state government and local governments of Nepal is based on the principles of cooperation, co-existence, and coordination as stated by the Constitution of Nepal 2015 (GoN, 2015). With the establishment of the federal polity, coordination at all levels became the primary mechanism for the seamless operation of the government. In the context of Nepal's IGR, issues have arisen when exercising the powers among the three tiers of government and to strengthen the implementation of federalism in Nepal, regular and intensive discussions and interaction between the three tiers of government are required (Devkota, 2020).

The local level government among the three-level is the closest to the citizens and hence the interrelationship of the local level with the federal and state governments have become even more important and necessary, as it addresses the development of sectors such as education, health, boundary rivers, common (boundary) forests, tourism areas covering boundary areas, archaeological sites, and contiguous areas (Paudel & Sapkota, 2018). Furthermore, the Local Government Operation Act (LGOA) 2017 clarifies the jurisdiction of local governments. These judicial panels are empowered under the LGOA to resolve disputes involving 13 particular issues, including property border disputes, water use, unpaid salaries, and mistreatment of the elderly, minors, and spouses (LGOA, 2017).

Inter-governmental Relationship and COVID 19: Role of Coordination and Support

The response to COVID-19 in Nepal was substantially led and controlled by Federal Government. The government has created different committees and task teams for preparedness and response to COVID-19, Corona Crisis Management the Centre being the leading committee to address the COVID issues and expand the support to LGs in their measures. The district CCMC was responsible for effective coordination for making major decisions related to COVID-19 response and crisis management in the district while similar structures were established in each local government, led by its Chair/Mayor (Karki, 2020). However, CCMC was often criticized for not being able to perform preventive measures due to lack of a legal framework to implement plans and policies issued at the local level (National Health Research Council [NHRC], 2020) thereby causing much difficulties for in coordinating with higher order governments. The response by provincial governments was limited to implementing decisions and orders of the Federal CCMC and carrying out the functions delegated to them. The decisions related to the pandemic response were very top-down, often in a patronizing way, in the form of directives, guidelines, and requests to provincial and local governments (Karki, 2020).

Role of coordination as one of the three fundamental principles of federalism in Nepal was much acknowledged in response to Covid. LGs carried out intergovernmental coordination in both horizontal and vertical form. In the first wave of pandemic, coordination among the three tiers of governments: LGs, PGs and FG were observed in several forms, most of which were regular meeting, requests for resources, dialogues in forums, regular updates of the cases and other events. LGs experienced difficulties in carrying out preventive measures in cases of poor coordination and support from FG and PGs. Literature suggests federal coordination as instrumental in assuring government entities' interdependence (Ribeiro et al., 2018) and this applies in responding to the pandemic as the respective levels. The top-down approach in

managing crisis, however, revealed a lack of severe coordination between the three-level of the government that results in overall weaknesses of the government system including procurement of PPE and (PCR) machines, delays in receiving expert opinions, and expert disagreements with government decisions, understaffed and under-resourced public health care systems, and a lack of media management (Rayamjhi et al., 2020). The coordination and support received from PGs and FG form essential domain to mark the effectiveness of intergovernmental relationship during the difficult times Covid management, especially for LGs.

Role of Local Governments in COVID 19

When a crisis occurs, the consequences are felt most strongly at the local level. COVID-19 was no exception, with cities in the vanguard of the fight against the pandemic's spread and effects. Local leaders have a vital role in determining how well cities have responded since the outbreak began. In cities of Asia Pacific countries such as Guangzhou in China, Daegu in South Korea, and Jakarta in Indonesia, which handled the COVID crisis better, local task forces, established the marshal resources for effective action led directly by the mayor or local government officials (UCLG-ASPAC, 2020). In case of Nepal, local governments were given the responsibility of managing quarantine holding centres and testing for Covid-19, implementing public health guidelines in collaboration with the provincial government (NHRC, 2020). To finance these health responses, local governments received federal grants to support the set-up and operation of quarantine holding centres, and provincial grants for relief distribution. Beyond these grants, local governments largely relied on reallocating funds from their existing disaster relief budgets (Pandey et.al, 2020). The Prime Minister himself praised the roles played by local governments in managing the crisis (Karki, 2020).

Despite their substantial capacity limits and inadequacies, local government has demonstrated a considerably stronger ability to respond quickly to the crisis (Payne, 2020). Keeping everything aside, the pandemic experience provides a chance for the three levels of government, particularly local governments, to reach out to the public and illustrate the true meaning of federalism (Karki, 2020). Overall, the pandemic has provided a chance for the state to speed up the federalization process as well as maintain the inter-governmental relationship in a progressive manner. There were, however, different support and challenges in the response of Covid-19 since the constitution of Nepal has designated public health as a shared responsibility across the three levels of government, with prime healthcare and sanitation as exclusive local government functions. From the change of perspectives in pandemic from preventive to curative measures, decline and some changes in roles of LGs as well as unclear roles of LGs as the number of cases surged to thousands, it was essential to assess the challenges faced by LGs and the level of coordination in relation to support they perceived in Covid management in the second wave. To contribute towards this body of knowledge, this paper aims to answer the below research questions:

1. What are key challenges faced by LGs in response to Covid-19? How do the political and CAOs share their perceived challenges and experiences of changes of their role in the second wave of pandemic?
2. What is the association of coordination of LGs with their perceived support from PGs and FG? How do the Mayors and CAOs perceive support from FG and PGs amidst the second wave and in relation to the first wave?

Research Methods

This study is guided by pragmatist research philosophy adopting sequential mixed-method. Further, it aims to adopt explanatory mixed method (Quan-Qual). As pragmatism strives to bring together both objectivism and subjectivism, facts and values, accurate and rigorous knowledge and varying contextualized experiences, this approach is deemed suitable (Saunders et al., 2016). Literature exhibits changes in the role of local governments across the time period since the first lockdown from March to June, 2020. So, this paper has identified activities conducted in response to COVID-19 in March and April, 2021 when the second wave started along with the support and challenges faced. It uses quantitative data of 753 LGs collected from the third round of survey from 753 local governments out of which 661 data (Mayors) and 687 (CAOs) were used by the collaborative study of Yale University, London School of Economics, Nepal Administrative Staff College and Governance Lab, Gaupalika Rastriya Mahasangh Nepal and Municipal Association of Nepal. Moreover, pragmatism acknowledges that objective realities are not sufficient to depict the changing role of LGs and the experiences of challenges in their management. So, we aim to draw subjective realities using case study. In pragmatism, the issue is with application which is regarding what works and offers solutions to problems. The focus is on the research problems more than the methods and this philosophy utilizes available approached to understand the problem. So this study uses mixed method approach in we intend to assess the nationally representable data and deeply analyse the facts from multiple perspectives.

Study Population, Sample and Participants

The study initially utilizes data set from the third round of survey carried out on all Mayors and CAOs of 753 local governments with the aim to present the nationally represented

findings. It uses collected 661 responses from political leaders (Mayors or Chairpersons) and 687 responses from CAOs representing bureaucratic perspective. So the quantitative part of this research uses cross-sectional survey design with data collected from Chaitra, 2077 to Baisakh 2078 (Bryman, 2016). As at least 661 sample has been drawn, the sample size is adequate to represent the data of the entire country. For the qualitative analysis, institutional cases were purposefully selected in which participants were CAOs and Mayors. Among 17 cases studied, 6 provinces were covered.

Tools and Techniques of Information Generation

As data has been collected for the quantitative part, this study focused on the tools and techniques of information generation. Following the case study approach, in-depth interviews was carried out with the participants. As it was an institution based case study, interview guideline was designed to obtain the answers representing the municipality rather than individual experiences. Interviews were carried out in based on the formal conversation and appointments with the participants considering their positions, high level responsibilities and research ethics. Most of the interviews were conducted physically while some were carried out online due to the physical distances. With permission, recordings were done maintaining the confidentiality and consent clauses of research ethics. Cases were developed based on the themes generated for further knowledge expansion to the results from quantitative data.

Data Analysis and Interpretation

This study, adopting mixed methods, proceeded with data analysis of both quantitative data and qualitative data. The quantitative data followed descriptive, and also correlational analysis to measure the association of support and coordination of LG with PGs and FG using Spearman correlation as the studied variables are Ordinal data. Data interpretation of qualitative

data was carried out using five major steps. First, the raw data collected through in-depth interviews and observations was transcribed ensuring that each conversation is recorded. Further, without losing the key essence of the conversation, the transcribed data was translated into English. The translated data was then coded on the basis of commonalties and unique responses. Based on the codes generated from the texts, suitable sub-themes and themes were generated as the findings. These themes were analysed for interpretation, generation of substantiated knowledge. For merging of the data, side on side comparison of data as one of ways of merging data. For this, a careful consideration will be given to what findings to build on as suggested by Creswell (2018). Data coding and organizing was done using MAXQDA software.

Meta Inference and Joint Display

As the use of mixed methods produces both quantitative and qualitative results, meta-inference was done to come with the comprehensive meaning making from both numerical and non-numerical data. Meta inference integration of data obtained from both qualitative and quantitative approach was done to come up with a concluding idea, explanation and understanding. It ensures enriched inference combining the results of both these methods (Tashakkori & Teddlie (2008). In this study, the results from the quantitative approach such as the objective realities of challenges faced, level of coordination and support as well as their associations, and on the other hands, the perceptions of these challenges along with coordination and support will be analysed through meta-inference.

To provide a strong, iterative visual for the purpose of integrating and exhibiting mixed method results as stated above, joint display was used (Guetterman et al., 2015). A cognitive, integrated and rationale-based framework will be used to support the analysis and present a holistic findings of the mixed method results. The Display through theme generation offered a

visual means to comprehensive analyse the sequentially collected and collectively presented knowledge.

Sample Description: Quantitative Data

This study covered the responses from all the Local governments of all the seven provinces and all 77 districts of Nepal. Respondents were fairly distributed across six provinces with more participation from Province 1 and Madhesh Pradesh. Table 1 displays province-wise data of the respondents.

Table 1: *Province-wise distribution of CAOs & Mayors*

	Chief Administrative Officers		Mayors	
Provinces	**Frequency**	**Percent**	**Frequency**	**Percent**
Bagmati Province	99	14.4	104	15.7
Gandaki Province	80	11.6	73	11.0
Karnali Province	77	11.2	71	10.7
Province 1	125	18.2	119	18.0
Madhesh Province	125	18.2	121	18.3
Lumbini Province	103	15.0	91	13.8
Sudurpashim Pradesh	78	11.4	82	12.4
Total	687	100.0	661	100.0

Participant Selection: Qualitative Data

Provinces	**Municipalities/Metropolitan & Sub-Metropolitans**	**Rural Municipalities**	**Total Frequency**
Bagmati Province	4	-	4
Gandaki Province	1	3	4
Karnali Province	-	1	1

Provinces	**Municipalities/Metropolitan & Sub-Metropolitans**	**Rural Municipalities**	**Total Frequency**
Province 1	2	5	7
Madhesh Province	-	1	1
Lumbini Province	-	-	-
Sudurpashim Pradesh	-	1	1
Total	7	11	18

Results

Quantitative Results

This part of the result shows the quantitative data of the local governments provided by 661 Mayors as the political leaders and 687 Chief Administrative Officers (CAOs) as the administrative heads. It includes descriptive and correlational analyses.

Major Activities carried out by Local Governments & Challenges faced by the Municipalities in controlling the Spread of Covid-19

Data regarding major activities carried out by LGs to manage Covid-19 was collected during the second wave which is shown in Table 2. Since multiple choices were offered, a total of 1540 responses were collected from the Mayors of 661 municipalities. Among them, the most carried out task which accounted to 29.4% was raising of public awareness. Similarly, 28.8% activities show enforcing home isolation and home quarantine was also another heavily carried out activities which was the second highest observation. Besides, vaccination programs also took it pace accounting to 10.4%. The table shows radical decline in previously dominant activities such as distribution of relief measures, maintaining of social distance, or management of immigrants.

Table 02: *Activities conducted by Local Governments in Covid-19 Management*

Major Activities carried out by LGs (Multiple choice)	Frequency	Percent
Enforced Home Isolation & Quarantine Management	443	28.8%
Conducted Tracing & Testing	134	8.7%
Distributed Health & PPE Kits	51	3.3%
Raised Public Awareness	453	29.4%
Established Health Desks	119	7.7%

Major Activities carried out by LGs (Multiple choice)	Frequency	Percent
Conducted Vaccination Programs	160	10.4%
Provided Medical Services & Treatments, Ambulance	61	4.0%
Maintained Social Distance	27	1.8%
Managed Immigrants	7	0.5%
Established Covid Fund	10	0.6%
Distributed Relief Measures	13	0.8%
Others	62	4.0%
Total	1540	100.0%

This data shows that the fear among the public had declined due to which they slowly stopped taking Covid-19 seriously due to which the municipalities had to conduct awareness programs. Besides, the focus changed from mandatory stay in quarantine to home isolation in the second wave. Distribution of health kits were not highly observed since second wave was characterized by severe cases required medical attentions of medical teams.

During the course of Covid-19 management at local level, municipalities faced numerous challenges. These challenges were of municipality level such as lack of quarantine and isolation facilities, community level issues such as closure of schools, social distancing and even national issues such as management of returnee migrants and lack of oxygen. Table 03 enlists the major challenges faced by the municipalities.

Table 03: *Challenges faced by Municipalities in Covid-19 Management*

Major Challenges	Frequency	Percent
Lack of fund	117	10.5%
Lack of Health capacity, Oxygen & Testing Kits	138	12.4%
Coordination with PG & FG	41	3.7%
Lack of Quarantine & Isolation facilities	89	8.0%

Major Challenges	Frequency	Percent
Public Awareness	157	14.1%
Lack of Data	9	0.8%
Lack of Food	31	2.8%
Management of Returnees	216	19.4%
Limited Vaccinations	31	2.8%
Limitations on Employment & Business	19	1.7%
Social Distancing & Safety Protocols	25	2.2%
Closure of School	11	1.0%
Geographical difficulties	15	1.3%
Other	38	3.4%
None	177	15.9%
	1114	100.0%

Table 03 shows a total 1114 responses from the Mayors of 661 municipalities since multiple choice was allowed. Some of the greatest challenges faced by municipalities were managing returnee migrants from India or other parts of the country.

As much as their focus remained on public awareness, the same was responded as a major challenge for them. In the second wave, lack of medical facilities, especially supply of oxygen remained another major challenge with a total of 12.4% because of the nature of Delta variant that spread wide during the second wave. This was closely followed by the crunch of fund among in the municipality accounting to 10.5%. It can be observed that 15.9% Mayors remarked that they did not face any major challenges which was possibly due to their learning from previous wave and prior planning for the future.

The table reveals numerous challenges despite having past experiences which may be due to the severe and highly contagious nature of Delta variant causing thousands of new positive

cases every day during the peak time period of the second wave in Nepal. Among those choosing others, more frequently observed challenges were management of wastes, market, and health issues of frontline and municipality's workers and reduced overall focus on Covid.

Coordination & Support from Higher Level Governments

Mayors were inquired regarding the level of sufficiency of coordination that the municipalities received from i. their respective provincial government, and ii.) federal government before and during the course of second wave. Data shows that nearly two third of the municipalities perceive that the level of coordination from both provincial (63.8%) and federal government (69%) was not enough. It reveals that most of the local governments had to work with insufficient coordination during the time of second eave. Among the two, municipalities answered that the level of coordination from provincial government was slightly higher than that from federal government (see Table 04).

Associated with coordination, level of support was also inquired from the mayors. Usable options were adequate, somewhat adequate and not at all adequate. Table 05 shows more than 80% municipalities perceived that the support they received was not at all adequate both in the case of federal government (87.7%) and respective provincial government (82%). This also reveals the obligation of the local government to perform under extreme circumstances, but without almost any support.

Table 04: *Coordination with Local Governments from Federal and Provincial Governments*

	Coordination from Federal Government		**Coordination from Provincial Government**	
Level of Sufficiency	Frequency	Percent	Frequency	Percent
Not Enough	456	69.0	422	63.8
Enough	197	29.8	231	34.9

More than Enough	3	.5	3	.5
NA	5	.8	5	.8
Total	661	100.0	661	100.0

Table 05: *Perceived support to Local Governments from Federal and Provincial Governments*

	Perceived Support from Federal Government		**Perceived Support from Provincial Government**	
Level of Adequacy	Frequency	Percent	Frequency	Percent
Adequate	35	5.3	47	7.1
Somewhat adequate	41	6.2	67	10.1
Not at all adequate	580	87.7	542	82.0
NA	5	.8	5	.8
Total	661	100.0	661	100.0

Association of Coordination with Support from FG and PG

Correlation among coordination from FG with LG, coordination form PG with LG and support from FG and support from PG were assessed using Spearman Rho (see table 06). In this analysis, there was moderate positive association of coordination from FG with LG and coordination from PG with LG ($r = .415$, $p < .01$). This suggests that the municipalities who perceive inadequate level of coordination from FG have also perceived inadequate coordination level from PG. Similarly, those municipalities who have perceived from FG to be inadequate have moderately perceived support from PG to be inadequate ($r = .409$, $p < .01$). The associations of coordination and support, however, are negative. For instance, perception that coordination of FG with LGs is inadequate has modestly negative association with the perception that support from FG ($r = -.292$, $p < .01$) and support form PG ($r = -.316$, $p < .01$). In other

words, municipalities perceive that they received adequate level of coordination from FG or PG, yet perceived to not receive sufficient support from them or the other way around.

Table 06: *Association of Coordination from FG & PG with Support*

	Support from FG	Coordination from FG	Support from PG	Coordination from PG
Support from FG	-			
Coordination from FG	-.292**	-		
Support from PG	.409**	-.189**	-	
Coordination from PG	-.090*	.415**	-.316**	-

*. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Qualitative Results

The in-depth qualitative data from the interviews with yielded four overarching themes and subthemes related to the roles and challenges of LGs in Covid management, as well as their experiences on coordination and support from higher level governments (Table 5). The results are the voices of municipality rather than an individual (CAO or Mayor). Hence, participants represent municipalities.

Table 05: *Translation of Themes*

Codes	**Sub themes**	**Overarching themes**
Services at the local level Establishment of better medical facilities Management of oxygen Expansion of facilities	Temporary hospitals and isolation centre	Roles of Local Governments in Covid Management
Raising public awareness Providing services in the houses of Covid patients	Focus on home isolation	
• Reflections from the first wave • Use of existing resources from first wave • Receiving support from different organizations	Utilizing learning from the first wave	

Codes	Sub themes	Overarching themes
• Distributions of health packages with food and medicine • Optimum use of personal links for the patients	Good practices	
• Providing vaccination • Informing about vaccination	Roles in vaccination	
• Scarcity of Oxygen • Lack of PPE, masks, sanitizers • Lack of knowledge to conduct PCR • Lack of Antigen kits in the market • Reducing other relief measures	Limitations of medical capacity and expertise	Challenges faced by Local Governments in controlling wide spread of Covid-19
• Rising number of Covid patients • Increased number at the temporary hospitals than the capacity	Higher caseload	
• Monitoring of private hospitals • Difficulties of Procurement in black market	Bureaucratic hassles	
• Authority to control people's movement • People at the border coming to Nepal	People's movement	
• Coordination in admission of patients • Referrals of patients • Coordination for oxygen	Coordination in medical support from PG	Coordination from Higher level governments
• IMU recording and updating • Regular zoom meetings • Orientation on IMU • Inconsistency in record keeping	Coordination in data management	
• Directives from Federal government • Coordination in federal level's hospital for patient referral	Coordination with FG	
• Logistic support from PG • Timely support from PG • Financial support from PG	Support from PG	Support from higher level governments
• Fund from FG for temporary hospitals • Fund for medical teams • Additional funds from FG	Support form FG	
• Role avoidance • Directives in contrast to support, from FG • Lack of timely support • False promises of FG	Issues in support to LGs	

Theme 1: Roles of the local governments (LGs) in controlling the wide spread of Covid-19

During the second wave, the roles of LGs changed much as compared to the first phase of pandemic. The hazards of Covid-19 were unknown creating fear among the public. Even the local governments were unknown about the effective and efficient ways to control the widespread of the disease. However, they learned much from the experiences of first wave which they utilized in the later phases. Moreover, they also utilized the infrastructure in the second that they had built in the first wave. Therefore, though the second wave was much severe with thousands of active cases, municipalities were able to respond to it. In-depth interviews with the administrative and political leaders of the municipalities highlighted numerous roles that they played in the second wave.

Focus on Home Isolation. During the period of second wave, the focus of the LGs shifted from the enforcement of quarantine and isolation centres to home isolation. While some municipalities continued isolation and quarantine centres to a limited capacity, others discontinued. According to a CAO of a rural municipality in Province 1,

> Quarantine was discontinued since our municipality's budget was highly spent on food expenses for a number of people during the first wave and the number of cases in the second wave significantly higher… In the second wave, we focused on home isolation. We contacted them on their mobile phones and upon any problem, we had made the provision to bring them to our Covid hospital. If they could not be treated there, they would be referred to the bigger hospitals… (Municipality 05)

The practice of home isolation was also possible due to the changing perceptions towards Covid-19. Municipalities experience much more awareness regarding the virus by the time second wave started. Numerous participants disclosed how the testing positive with Covid-19 was taken as a stigma and it changed across time.

> …Citizens with positive cases used to hide and escape from quarantine and others due to social fear and fear of unknown. We even had to implement police officers. However, we were much more managed in the second wav (Municipality 04, Gandaki Province).

Establishment of Temporary Hospitals and Medical Facilities. Local governments were instructed to establish a temporary hospital or an isolation centre with a minimum five beds in the second and were required to hire a medical team of a doctor, nurses and assistants providing certain funds for this purpose. Thus, municipalities established a temporary medical facility to treat the patients of mild to moderate cases. Besides, they also made the provision of oxygen cylinders in which many of them further added oxygen cylinders through their own effort or received from other stakeholders.

> We managed for the oxygen by making arrangements of filling up the cylinders. We had to queue up for the cylinders at that time… We also had two concentrators and a stock of oxygen cylinder which we regularly filled from BudhiGanga…We did not let oxygen crisis happen at that time (Municipality 05, Province 1).

Utilization of support from different Stakeholders. Local governments effectively utilized the support from locals, different organizations and development partners. In many municipalities, locals contributed to establish Covid fund. For instance, the experience of Bhaktapur Metropolitan was remarkable.

> … Our community people donated funds to our municipality for COVID management from we were able to collect 6.5 crore rupees in just one and a half month from the community. (Municipality 04, Bagmati Province).

Municipalities also obtained financial support from development agencies and internal sources.

> …We tackled the challenge of fund crisis by not only relying in our internal source, we asked help from different stakeholders including NGOs, INGOs and community people… Our local level staffs, teachers

> and political representatives also contributed a part of their salary to create special budget for Covid. (Municipality 01).

Local governments also utilized personal contacts to help their medical teams get oriented and to provide bed in Covid hospitals of Provincial Hospitals and larger hospitals for severe patients.

Good practices at Local Level. Many municipalities carried out several activities that were praiseworthy. They initiated different activities to help the public in different ways. While some provided various packages, others expanded their services as the part of good practices.

> … we prepared a kit for Covid patients. It consisted of required medicines, instruction for consumption, soap, mask, doctor's number, ambulance's number, nutritious items with 1 packet chyawanprash, 1 carat egg and 1 kg apple… We distributed the kit to around 235 houses with positive cases and explained the way of consuming medicines and informed about the contact numbers and also provided them counselling… The ambulance service was also made free for them… (Municipality 07, Province 1).

Municipalities also provided Outpatient department (OPD) services for nominal charge screening the patients as per their conditions and provided updated information of available medical facilities for the public. While some conducted PCR or Antigen testing for free, others used private vehicles of the leaders as ambulance. Numerous municipalities used local resources, contact persons and other help to serve the public.

Theme 2: Challenges faced by Local Governments in the controlling wide spread of Covid-19

Local governments faced a different level and nature of challenges in the second wave as the number of cases rose significantly and the nature of variant was severe. In-depth interviews unearth numerous challenges faced in the second wave.

Difficulty to manage high number of caseloads. The second wave was remarked by exponential increase in caseloads and severe cases as Delta variant was highly transmissible. Municipalities experienced a sudden surge in positive cases and shared much difficulty to manage them.

> …In the second wave, the number of cases increased from to 279 as compared to only from 7 cases in first wave. This was a critical challenge for us from the management perspective (Municipality 12, Gandaki Province).

Municipalities shared that this rise of caseload actually led to several other challenges such as lack of infrastructure, expertise, issues in intergovernmental coordination, bureaucratic hassles and such.

Limitations of Medical capacity and Expertise. Among the biggest challenges faced by the municipalities in the second wave, limitation of medical capacity and expertise was one which was mainly because of the highly transmissible and threatening nature of Delta variant. Municipalities shared that there were many cases which required hospital's attention because they could not treat with their limited medical expertise and capacity. Some municipalities had to discontinue the temporary hospital after a while to due budget crunch where local governments form remote places faced the crisis of medical personnel during the recruitment process. An experience of a rural municipality of Bajura district goes as:

> ... Government had sent us budget to hire a doctor and nurses nurse and doctors. However, we could not hire doctor because of our geographical remoteness. There were only nurses and helpers available due to which we had to transfer our patients to district hospital which takes around two hours from here… (Municipality 15, Sudurpaschim Province).

Not having medical team was a serious constraint a few municipalities had to face due to their remote location. More to this, they also faced difficulties while transferring severe patients to the

district hospital. The limitations were also experienced in urban areas. Though municipalities and metropolitans had allocated team of doctor, nurses and helpers, they still experienced crunch of human resources due to higher caseloads. In this regard, one metropolitan shared:

> We had crisis of workforce due to high number of inflow at the border which is not possible to handle from our level. We even used to test and identify the positive cases but the question was 'where to keep them?' (Municipality 04, Province 1).

Scarcity of Oxygen was one of the greatest woes most of the municipalities had to face. There was no alternative of oxygen for severe cases due to which they struggled to provide oxygen more than any other medical supplies since barely any municipalities could install the oxygen plants. Some municipalities managed the concentrators of limited capacity through procurement and donations while most of them queued up at the Oxygen plants.

> Unbelievably higher number of people were tested positive and at in same time period, the scarcity of oxygen created a scary scenario. Since we did not have a big hospital with oxygen plant, the situation was more centralized towards hospital because of the nature of the COVID (Municipality 17, Province 1).

Some rural municipalities in Gandaki province also shared that they had to face another difficulty of immense black marketing of Oxygen to which they blamed all three tiers of the government. Beside oxygen, there were issues of delay in obtaining test results of Polymerase Chain Reaction (PCR) test from provincial and federal government based labs.

> We used to collect around 200 PCR samples in a day and send half of them Koshi hospital while half to Provincial public health laboratory. It used to take 4-5 days to get the results which produced dreadful consequences for the patients due to the delay (Municipality 04, Province 1).

Many municipalities promptly started using Antigen Detection Rapid Diagnostic Test (RDT) kits commonly known as Antigen tests as the alternatives. However, their complaint still

remained since Antigen test kits were short in the market and were being traded in black market as well.

> We did not have PCR testing lab. We relied on Antigen test but it was not available in the market… We had to buy 500 kits at expensive rate of over Rs. 800-900 and that too was not available. (Municipality 11, Gandaki Province 1).

Due to the lack of medical human resources, many municipalities faced difficulties in management the dead bodies. They had to convince the public of safety, maintaining health safety of medical teams and manage the dead bodies. One municipality's voice was expressed as:

> In the second wave, 39 people died of COVID in our municipality. Therefore, death management was also a challenge for us because we did not have experience in managing such a huge number of death in short span of time. (Municipality 18, Gandaki Province)

Bureaucratic hassles. Despite being aware of the limited medical supplies in the market and even the blooming of black marketing, municipalities were bound by bureaucratic caps. There were strict procurement regulations to follow. Thus, municipalities some were bound to buy at higher rates whereas some were not ready to procure goods from black market. A rural municipality admitted that:

> Besides, as the patients went to get admitted in the bigger hospital operated under Federal Government, there were a lot of procedural hassles in the initial phases. Patients had to wait for hours. May be it was a part of their documentation process but even then, it required patients to wait outside for a long time despite their critical conditions. It was a big challenge for us to manage that (Municipality 03, Bagmati province).

Regarding the admission of severe patients, some municipalities had unpleasant experiences of their citizens who were charged overwhelmingly high by private hospitals. One municipality shared:

> We got a lot of grievances from our citizens that private hospitals charged them heavily such as 8 lakhs, 10 lakhs, 12 lakhs. We went for monitoring forming a team with the representatives from Provincial and

> Federal Government. However, in that task, we were helpless and could not do much since there were big and powerful medical colleges. Who could control them? To be frank, in our jurisdiction, we only have 15 bedded hospitals. Hospitals with higher bed capacity were under Provincial and Federal Government (Participant 04, Province 1).

Municipalities expressed their helplessness since they could not take any actions despite carrying out monitoring activities. Their hands were tied since such issues were above their jurisdiction. Besides, they were unable to allow people coming from Indian borders to travel to their destinations in the lockdown enforcement periods and cross-border and internal provincial movements were under the authority of higher level governments.

Maintaining Social Distancing. Since lockdown was not the ultimate solution whereas public would not be serious in implementing safety protocols, municipalities had to face a lot of challenges. Some municipalities rely on agriculture and some on tourism and rural also reported that the major income sources of their citizens were labour works and employments in India. As the result, they had to allow people's movement.

> In the second wave, the haat-bazaar and major markets were open. Schools were open. The crowd was higher. We tried to stop that to some extent, but could not control fully due to which it spread in the community. For us, open markets caused major challenges for us… Another thing is people had to travel and move for employment, factories were operational as there was no other means. Even the industries were instructed to open following the safety protocols but the safety protocols were not followed (Municipality 08, Province 1).

Municipalities share the public had started being careless and stopped taking the disease seriously. One municipality added:

> …Citizens even violated the lockdown and did follow the minimal health and prevention protocols. People start celebrating lockdown as a holiday by doing family gathering (Municipality 11, Gandaki Province).

Management of people's movement was even strenuous for municipalities touching the border with neighbouring countries, especially India with which the country shares an open border. Many citizens commute daily to India to shop for basic rations, or for employment. At the check posts, armed police force (APF) was stationed and health desks were also made available. However, the number of people coming to Nepal was overwhelming to timely screen them Besides, there is no demarcation of Indian and Nepali soil in most of the places. One municipality shared:

> We have an open border of 11 km border touched by our municipality. The condition is that in our daily lives rations such as: 1 kg salt, 2 kg lentil, 5 kg sugar, soaps and such come from India. We go to India just a bag and shop back to Nepal. In 11 km border's length it mostly maize field. In this vast range, it is nearly impossible to inspect who went across the border and came back… You enter the maize field or paddy field in Nepal and when you come out, you already have entered India. You would not even realize that you have already entered India. … There is no pillar everywhere or fences. There are all fields. It is all open. (Municipality 08, Province 1).

Theme 3: Coordination from Provincial and Federal Government in Covid Management

Provincial governments mostly coordinated with the local governments in record management system and supply of medical kits and equipment. Some municipalities shared that their respective PGs used to organize online meeting using Zoom software for update sharing of the reports of all the Covid cases related data in Information Management Unit (IMU) and that they often encourage the local governments to utilize available local resources. However, several municipalities have criticised the poor coordination of PG during the second wave. They shared that technical assistance was not adequate as many health in-charges had limited knowledge on uploading the data in the website of IMU. One municipality shared:

> Coordination was not that strong from higher level governments. In case of some issues in reporting in IMU, I used to ask someone from WHO for support. Other than that, coordination was not that much observed (Municipality 16, Madhesh Province).

Municipalities of certain province, example: Province 1 or Bagmati province shared to have received orientation on IMU updating and training use of Anti gen tests. However, other municipalities have common grievances that they did not get proper orientation in IMU and any sort of training on use of equipment.

> …health workers did not receive any basic trainings on how to use equipment or how to carry out PCR tests. In the second wave, we were supposed to install the oxygen cylinders or provide it to the patients but we had not been trained at all. This hampered our work and the situation was very difficult. When we finally received training, it was very late… (Municipality 14, Karnali Province).

The provincial hospital established for Covid-19 cure used to treat in a way of avoidance. Municipalities also shared that PGs did not carry out any monitoring. One municipality's experience was thus shared '*There was no orientation, let alone the monitoring (Sarcastic laughter)*.' Some municipalities have remarked that their PG has barely coordinated with them and even questioned on the need of its existence.

Coordination for some municipalities was better carried out from federal governments since they did not know whom to communicate though there were ministries just as in FG. On the contrary, there were a few other municipalities which had positive experiences regarding PG. A municipality in Bagmati province shared that their respective PG provided better coordination, and in case of a municipality in Gandaki province, it was even better than that from Federal Government. Similar experience of another municipality was thus as:

> … There was also a good coordination while dealing with patients. PG assured us that if there is any critical condition, they would come and help us. We referred severe patients to Chautari Mission Hospital

> and District Health Hospital through their coordination. They also coordinated well in case management by providing technical support through video calls (Municipality 14, Karnali province).

The coordination related experiences of the local governments differed depending on the areas being coordinated and the relationship with provincial governments in general. Regarding coordination from federal government with local levels, those were mostly of policy level. FG often give directives and policy decisions. In numerous cases, municipalities share that FG also carry out direct coordination with them and give attention to support them. They also share that FG inquires about Covid related data with them.

> District Administration Office – health office under federal government, which works district-wise, used to ask for detail data of the new Covid patients, cases of recovery and all (Municipality 16, Madhesh Province)

Municipalities perceive that they are also a part of the government and that includes federal government as well meaning they hold themselves accountable for the actions of the FG. However, in numerous instances, local governments were disappointed with them for poor level of coordination. A similar experience was shared thus:

> … We provide them data in which we only counted the cases of Biratnagar's residents where they counted the data all over Nepal which gives the record of Biratnagar as their address. So, there used to be discrepancy in the total cases. Therefore, media persons used to ask us questions on the difference. There was lack of coordination and cooperation… (Municipality 06, Province 1).

More than the data management, the interests of most of the municipalities were on proper coordination from higher level government during the time of crisis.

> We were only concerned regarding how to get our critical patients admitted in the Covid hospitals. We had to call them from repeatedly and wait for our turn. Otherwise they used to ask to call in other hospitals. It was the biggest problem us. Most of the time, their phones used to be switched. In this area, Federal

> government was responsible to expand the capacity of the hospitals, increase the bed numbers for which they should coordinate with the LGs regarding Covid-19 cases (Municipality 04, Province 1).

Local governments looked up to the higher level governments but they would not conveniently available to facilitate in such cases. Majority of their grievances were regarding lack of coordination during the time of crisis. Municipalities explain that they would require coordination only in such critical cases which were beyond their grip and if they would require clarity on directives to follow.

> Federal government had allocated the budget for municipalities and there are directives to spend that budget. However, if the directives do not align with our activities and projects, we are not in a position to amend the directives (Municipality 02, Bagmati Province).

Rural municipalities often complained that Federal government only give instructions and directives but not a way to work as per the directives and looked at all the local levels from similar lens not considering their resource constraints and geographical remoteness. Even municipalities from cities were unhappy just to receive instructions and not calling upon any meeting on their practicality, role division among the three tiers of the government.

Theme 4: Support from Provincial and Federal Governments

At the start of the second wave, local governments worked with the pre-allocated budget utilizing their internal resources. However, as the caseload skyrocketed, they required more resources to work as per the situation and focused on activities different than before. Local governments received the support of medical kits and equipment such as masks, sanitizers, personal protective equipment (PPE) and such mostly from provincial government. Federal government on the other hand mostly provided fund under certain headings including establishments of isolation centres or temporary hospital, remuneration for medical team, procurement of medical supplies and such. Many municipalities appreciated such support from

Federal governments and informed that they further expanded their medical capacities later. Some also acknowledged that the support and trainings they received through PG was from FG as FG coordinated with them thought a channel, through provincial government.

Municipalities shared that they received more support in later phase such as additional fund, beds, and medical equipment and after field visits to their municipalities. However, due to the crisis situation, local governments commonly expressed inadequacy of support from higher level government. The role of federal government was higher and they provide budget to sub-national governments. In this regard, one municipality claimed:

> All the resources were centralized which were lacking in us and they could not provide us in required time…. Federal Government tried to keep resources with them and tried channelizing from their end only due to which we did not receive timely support (Municipality 01, Bagmati province).

One municipality even accused of creating obstacles instead of supporting them when they were in high need of oxygen and planning to install oxygen plant. Another municipality stated that the principle of self-rule and shared rule and shared roles were not found with an example:

> One pregnant during the time delivery was Covid positive. She needed a bed, but a Covid-special bed. There is Koshi Covid hospital opened by PG and Koshi hospital under FG and private hospitals including Birat medical, Neuro, and Nobel hospital. Government hospitals said they cannot admit her. Koshi Covid hospital also said that they had no such set up and the same came from private hospitals. At last, I had to send her to BPKHIS, Dharan. What would happen if I had not fulfilled my responsibilities? Everyone is trying avoid from their roles here (Municipality 06, Province 1).

Most of the grievances were related to low level of support from higher level governments. Regarding funds, they explained that their expenses were in crores where are they received funds in lakhs due to which they had to take support from locals, outside organizations and development partners and use internal funds meant for other purposes. Municipalities shared that they did not receive adequate logistics from PG.

> When we demanded logistics, let's say when we demanded 200 PPE, we would get only 10. Their responses were that they also had to look after other LGs. My request was to provide us logistics population-wise, case-wise or load-wise. We some many efforts here and there to manage the logistics. … (Municipality 03, Bagmati Province)

Municipalities also complained that though they received support, they did not receive it timely when they needed the most. Regarding timely support, some even felt that if the higher level governments had thought of the possibilities of further outbreak and planned accordingly, things would have been much more managed.

One of the biggest mistakes that the Federal government made was they made false promises of distributing hazard allowance for the health workers. The policy level government announced that the workers would receive allowances and categorized the level of allowances as well depending upon their exposure and effort. However, the health workers received nothing but disappointments. Only a handful of municipalities reported to have received that allowance, that too after almost a year whereas the remaining were left empty handed. A disappointment was thus shared as:

> Government kept giving a hope to provide some incentives to frontline health workers and representatives who sincerely worked to take care of COVID patients, but it was just hope and no any decision were implemented regarding this. (Municipality 15, Sudurpaschim Province).

A few municipalities tried to maintain that promise to keep the health workers motivated by using their own fund. One municipality, with aggression shared:

> …We received nothing. We demanded for it but no health workers received a single penny. They only sent us the directory but not the fund. So, we followed the same directory to provide them around half the remuneration promised using our internal resources (Municipality 09, Province 1).

Local governments complained that the principle of cooperation, coordination and coexistence was not found in practice. They were required to be empowered and take certain decisions in situations of crisis. They are contented with the support they received but expected support and coordination in a timely manner and moreover, responsiveness and ground level communications. One instance faced by them were management of people at the major borders which is under the jurisdiction of federal government. Yet, not receiving authority and proper coordination made it much difficult for them to work.

Discussions: Inferences from Quantitative and Qualitative Findings

During the second wave that was characterized by panic situation, scarcity of medical supplies, especially oxygen and rising number of cases requiring hospital's attention, local governments responded accordingly which was much different than how they responded in the first wave. Their activities were centred around managing home isolation and temporary hospitals raising public awareness along with other regular ones. In this, they faced numerous challenges related to resource scarcity, especially fund and medical expertise. The challenges rose due to the nature of the wave in which focus went from preventive to curative measures. The quantitative results were justified by the qualitative findings from the cases regarding their activities and major challenges. The association of support perceived from higher level

governments were also in alignment with the qualitative results. Support from both the governments were perceived to be minimal. Besides, some municipalities that perceived coordination only received instructions but not the required support. On the other hand, municipalities also experienced that they received support but there was not much coordination regarding their activities.

With the rise in second wave in Nepal starting April 2021 (Ministry of Health and Population [MoHP], 2021; Nepal Economic Forum, 2021), the number of cases surged in time. In the second week of May 2021 when the second wave reached its peak, there were record high cases of as many as 9317 new daily cases with above 9000 cases on average (MoHP, 2021). The number of critical patients, either in hospital's intensive care or ventilator was also alarming. In this time of medical crisis, the responsibilities on the hospitals and other health facilities increased drastically. The hospital cases escalated beyond their capacities. The unprecedented second wave thus led to limitations in quarantine facilities, low testing rates and moreover shortage of hospital beds and oxygen supply (including cylinders), ventilators and other medical supplies in the country. These shortages caused havoc among the positive cases. At some point, many patients lost their lives due to the shortage of these essentials. As the whole country observed much load on curative measures shifting from preventive measures, in this shift, the local governments apparently got disconnected. The role of hospitals and health facilities prevailed as the capacity of local governments continue to remain constrained.

The concept of formulating LGs were to provide public services to the local people as per their requirements but they were neither designed to provide specialized health services, nor they had specialized health facilities and professionals to handle the ever-rising cases of Covid-19. Amidst the experiences of LGs where they had much difficulties in managing workforce and

resources for preventive measures and proper responses that included ambulance, installation of PCR machines (Rayamajhee et al., 2021), the cure of Covid-19 patients in mass and their management, and management of deceased were beyond the scope and resources of LGs. The responsibilities of such wide-spread of Virus was taken by federal government. Hence, the role of coordination among the three tiers of government was significant. Higher level governments were responsible to provide necessary instructions with clarity and in a timely manner. Further, local governments with constrained resources would expect support from them. However, weak coordination and reporting system at all the three tiers of government and failure to increase in increasing capacity through support were among the key lessons acknowledged by the federal government (MoHP, 2021c). The reports of mismanagement and inability to offer vaccines as promised shows lack of coordination among the three tiers of government also reflects on their weaknesses as they overlooked the potentials of LGs. Hence, the study draws an inference that the management of Covid-19 was remarkable to a great despite numerous challenges. However, the higher level governments should study the challenges municipalities faced and prepare a coordinated plan of actions providing support as per the contexts of the municipalities and empower them to an acceptable following the principle of devolution.

Conclusion

In the wake of second wave of pandemic of Covid-19 in Nepal, the role of LGs changed and they faced different challenges. The coordination and links of LGs were not expected with PGs and FG that affected the entire Covid management process in the country. The coordination and support from higher level were found to be less than expected for several reasons. The proper use of capacity, channelization of authorities, timely coordination and facilitation as per

the directives were the highlight requirements. Besides, the coordination and relations were highly affected by lack of actions as compared to the announcements. It is thus imperative that higher level governments make efforts in coordination and support for the local governments as they are working at the ground levels and providing services to the public.

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