

A review of service utilization among the NSI associated hospitals during COVID-19 pandemic in Nepal

ENHANCING RURAL HEALTHCARE

A Preliminary Report of Findings May/June 2020



Acknowledgement

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List of Abbreviations

AMDA	Association of Medical Doctors of Asia
COPD	Chronic Obstructive Pulmonary Diseases
CME	Continued Medical Education
CSSD	Central Sterile Supply Department
DX	Diagnosis
EDP	External Development Partners
ER	Emergency Room
FP	Family Planning
HMC/HDC	Hospital Management/Development Committee
HMIS	Health Management Information System
HMSP	Hospital Management Support Program
ICU	Intensive Care Unit
IPD	In-patient Department
KAHS	Karnali Academy of Health Sciences
OPD	Outpatient Department
PPE	Personal Protective Equipment
MCH	Maternal and Child Health
MeSu	Medical Superintendent
NAMS	National Academy of Medical Sciences
NSI	Nick Simons Institute
NGO	Non-Governmental Organization
OT	Operation Theater
RDT	Rapid Diagnostic Test
RSSP	Rural Staff Support Program
RSSPP	Rural Staff Support Partnership Program
RT-PCR	Reverse Transcription Polymerase Chain Reaction
UMN	United Mission to Nepal

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Background

COVID-19 has caused an immense burden to healthcare systems worldwide. As of 1st July 2020, there have been 10,357,662 confirmed cases of COVID-19, including 508,055 deaths globally [WHO]. Due to this pandemic, Nepal went through an extended lockdown. In Nepal, over 14046 individuals have been identified with COVID-19, while 3656 have recovered, and a total 30 deaths have already been reported. Nepal's most recent situation as reported by the MoHP [as of 1st July 2020] is given below:



This pandemic has greatly impacted Nepal's total healthcare system. Government efforts to respond to and manage coronavirus include contact tracing, rapid diagnostic tests (RDT), reverse transcription polymerase chain reaction (RT-PCR) tests, and stay-at-home mandates for citizens. Mass migrations of urban dwellers to villages have occurred and some Nepali citizens are still stranded at the border between Nepal and India and other countries.

Virus infection prevention and control are crucial. However, it is also important to ensure the continuation of regular healthcare services. The coronavirus pandemic has shifted many resources to respond to emergencies associated with this virus. This shift in resources puts into question the consequence of a reduction and/or neglect of basic and regular hospital services. Nick Simons Institute (NSI) has conducted a rapid online survey to better understand how the current services of NSI associated and supported hospitals are impacted due to the spread of COVID-19 in Nepal. NSI supported hospitals include exclusively Government primary hospitals, whereas NSI associated hospitals include higher-level Government and NGO-run hospitals as training sites located across Nepal.

Objective

Due to the active progression and current harshness of this virus, a rapid study was conducted to review current hospital services that may be impacted by COVID-19. The aim of this assessment is to analyze the impacts of the pandemic situation on NSI associated hospitals across the country. This will help determine the relevant interventions needed in order to provide better services in the future, subsequent to the current pandemic situation.

Method

This study used a mixed method approach. Thus, multiple tools were used. An online survey (using SurveyMonkey.com) consisting of 16 questions - primarily in the English language - was used to understand the current services provided in various levels of hospitals across the country. A self-administered questionnaire sent via email among the 57 NSI associated hospitals was used (40 RSSP/PP and 17 training sites (See annex A). We also reviewed the usual Health Management Information System (HMIS) data that were reported by each hospital. Finally, we collected additional data related to COVID-19 from each of the sites and analyzed the added services as a result of COVID-19. The three newly contracted hospitals under local governments were not included in this study. This rapid study was conducted between May 1-15, 2020. HMIS data were analyzed immediately following hospital reports and telephone interviews were conducted for follow-up (FU). Additional data related to COVID-19 and regular services collected by the Hospital Support Program (HSP) team were also used to supplement study findings.

Findings

This report consists of four main sections: online survey results; qualitative descriptions of the survey; and the HMIS and COVID-19 related findings.

Online Survey

This part of findings is based on the online survey. Altogether, 42 responses (74%) were collected from various hospitals all over Nepal. The contributing hospitals include primarily government health facilities (81%) along with non-governmental organization (NGO) supported and missionary hospitals (19%). The responding hospitals represented all levels from the tertiary (5%), provincial (9%), secondary (26%), primary (31%), NGO/Missionary (19%), and local upgraded hospitals (5%). Two of the others (5%) were Karnali Academy of Health Sciences (KAHS) and Matri Shishu Hospital (Figure 1).

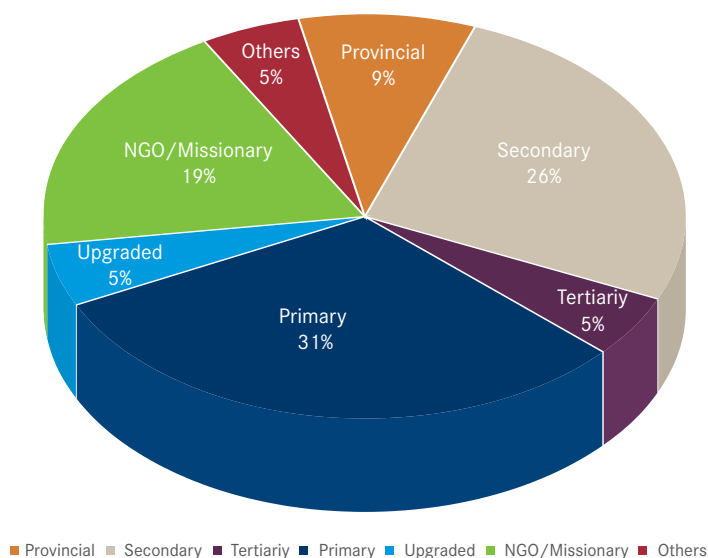


Figure 1: Type of participating hospitals

Survey results show that in all target hospitals of this study, emergency rooms (ER) and pharmacy (100%) still operate normally. At the time of the study, many hospitals still provide other health services such as pathology (98%), delivery (95%), maternal and child health (MCH), radiology and in-patient department (IPD) (90%) regularly (Figure 2).

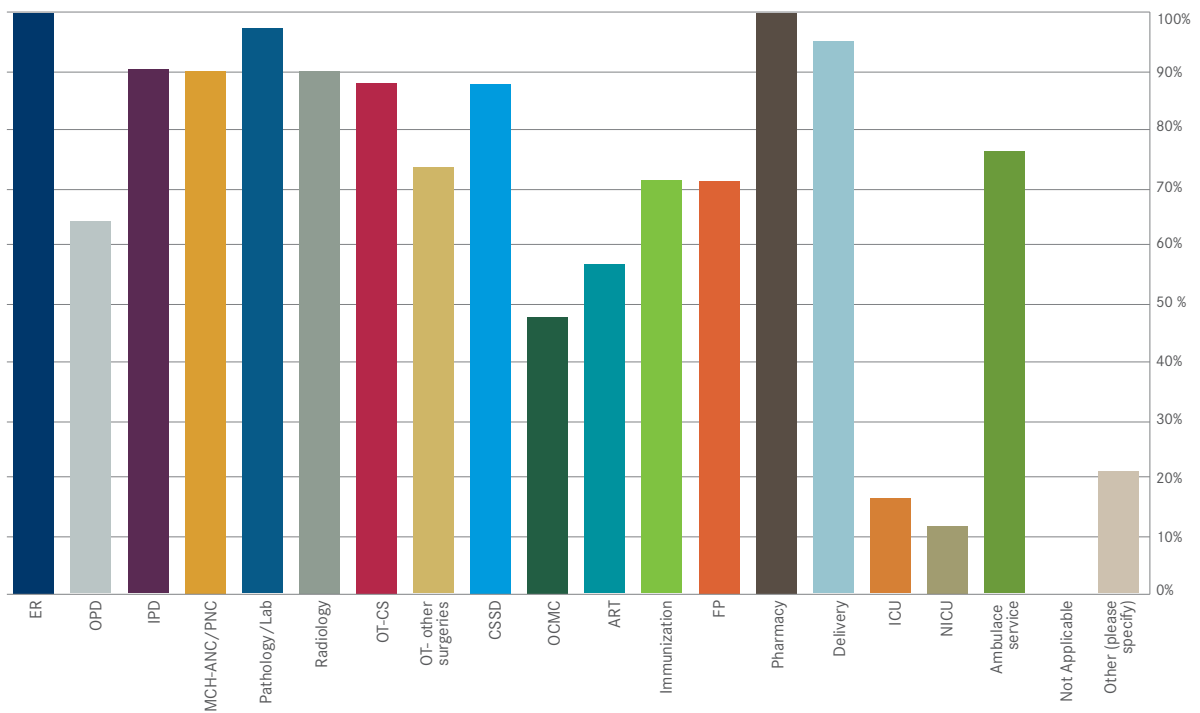


Figure 2: Types of regular services provided by the hospitals

Similarly, 88% of hospitals still provide operational theater/cesarean section (OT/CS) and central sterile supply department (CSSD) compared to other surgeries (72%). Other hospitals also continue to provide services for ambulance (74%), immunization and family planning (FP) (71%), and outpatient department (OPD) (64%) (Figure 2).

Despite the COVID-19 crisis, many hospitals in Nepal still regularly provided essential health services. These uninterrupted regular service operations are due to a combination of reasons. Reasons reported were a supportive staff (81%), availability of medical devices (60%), supportive hospital management committee/hospital development committee [HMC/HDC] (45%), and usual patient flow (42%). At the time of this study, around 40% of hospitals were not impacted by COVID-19 and 33% reported that they had sufficient human resources.

Furthermore, several hospitals also still provide services for diarrhea (98%), injury (95%), chronic obstructive pulmonary diseases (COPD) (93%), tuberculosis (TB) (88%), heart disease (68%), and HIV/AIDS (52%). These are critical for those with chronic diseases and special conditions (Figure 3).

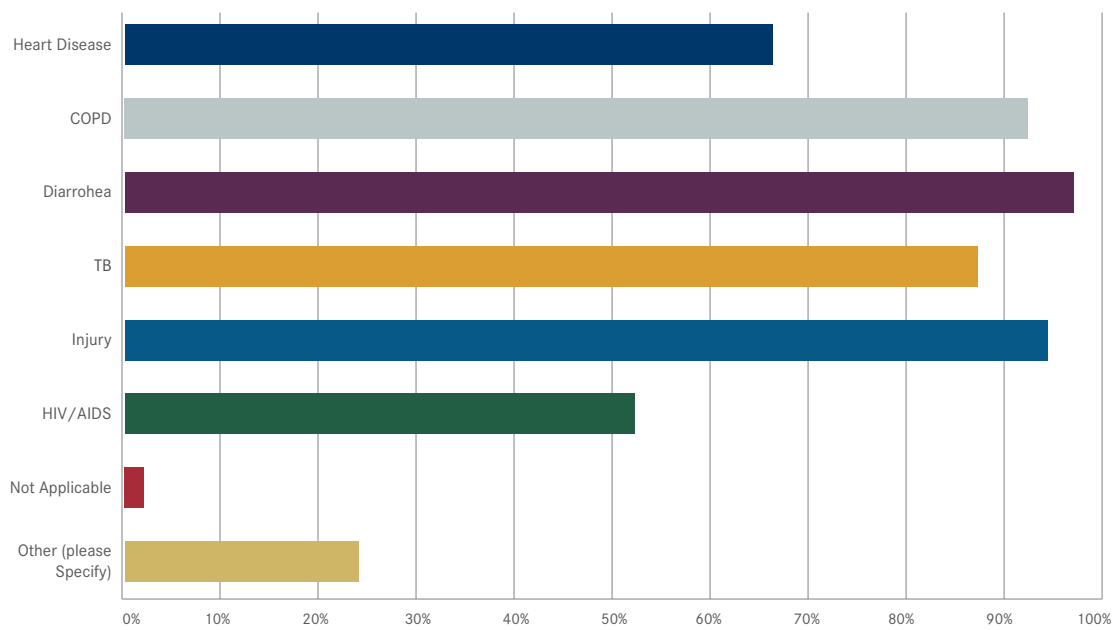


Figure 3: Hospitals providing special services

The COVID-19 crisis has directly or indirectly impacted regular health services provided by hospitals. Several hospitals have temporarily shut down selected regular health services. Forty percent of the hospitals failed to provide OPD services and 19% hold off on immunization and FP services. Similarly, 14% of hospitals have stopped providing surgeries and 2% have temporarily shut down the OT/CS services (Figure 4).

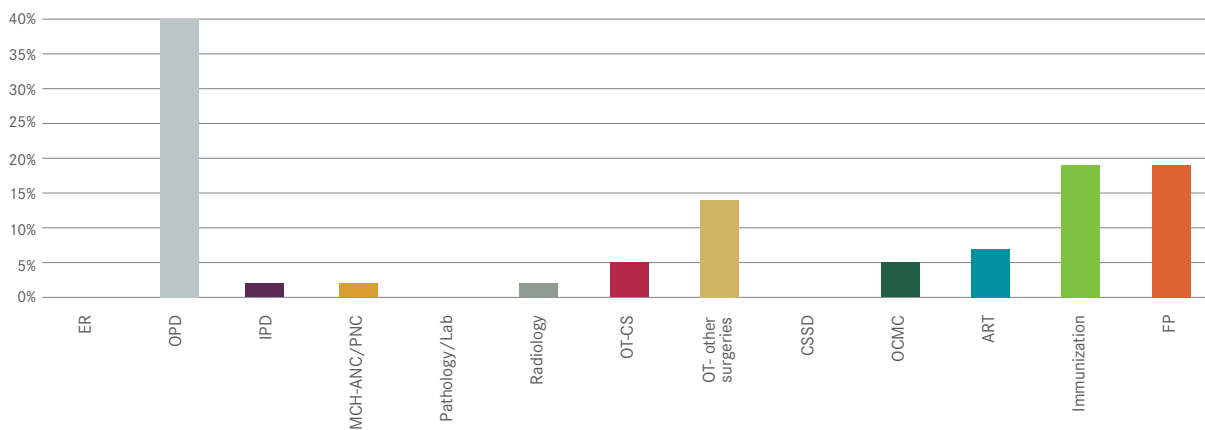
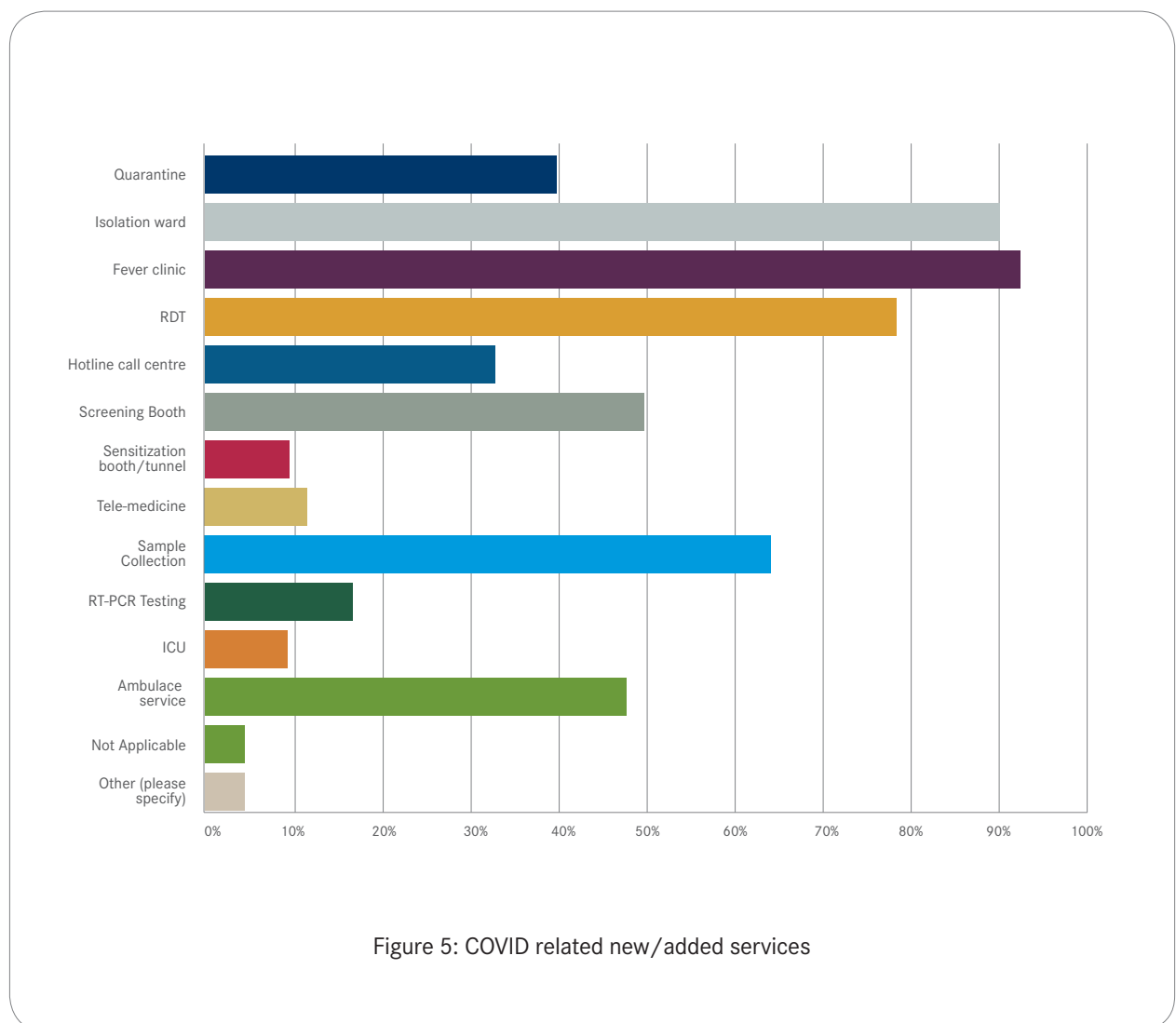


Figure 4: Interrupted regular services

Due to various unavoidable circumstances, hospitals struggled to provide regular services and run as usual. With the country under lockdown, numerous hospitals expected less visitors and cases. Some reasons behind these changes in health services as reported by the study participants are primarily to avoid COVID-transmission (57%), lockdown restrictions (53%), a lack of PPE (36%), and areas being highly impacted by COVID-19 (14%).

Many hospitals temporarily shut down regular services other than ER and delivery to respond to COVID-19. The majority of these hospitals were forced to start various new pandemic related services such as fever clinic, quarantine, isolation, RDTs and RT-PCR testing lab that never existed before. These new or added services include fever clinics (93%), isolation (90%), RDT (79%), sample collection (65%), and quarantine (40%) (Figure 5). These new services varied between hospitals because while some were highly affected by the virus, others were not.

Many hospitals have managed the isolation beds and quarantine in separate buildings. Dr. Sharma from Salayn District Hospital stated, “We have managed a separate building for keeping and taking care of the COVID-19 positive patients while continuing the ER and delivery services as usual”.



Hospitals require massive amounts of resources for the provision of these critical services. Funding from the government is essential. Half of the hospitals used their own internal funds, however 17% received financial support from the federal government, 45% from provincial governments, and 23% from local governments. Twenty four percent of hospitals also received financial support from private charity organizations, while 2% received funds from foreign agencies as well (Figure 6). No foreign aid or external development partners directly supported these hospitals financially, but they did provide medical devices, PPE, and other materials in many instances.

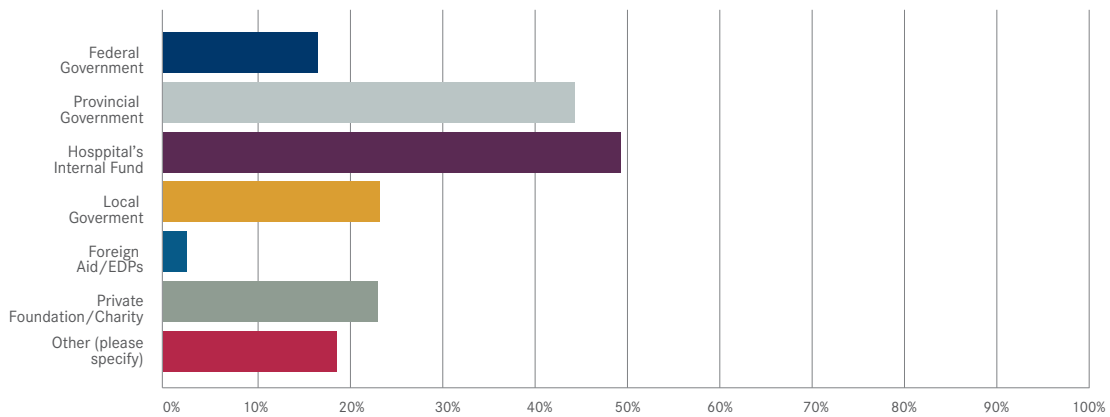


Figure 6: Financial support received from different agencies

Many local governments also supported these hospitals in manners other than funding. They provided equipment and supplies (55%), physical infrastructure (38%), 17% of hospitals increased staffing, and 9% received volunteers (Figure 7).

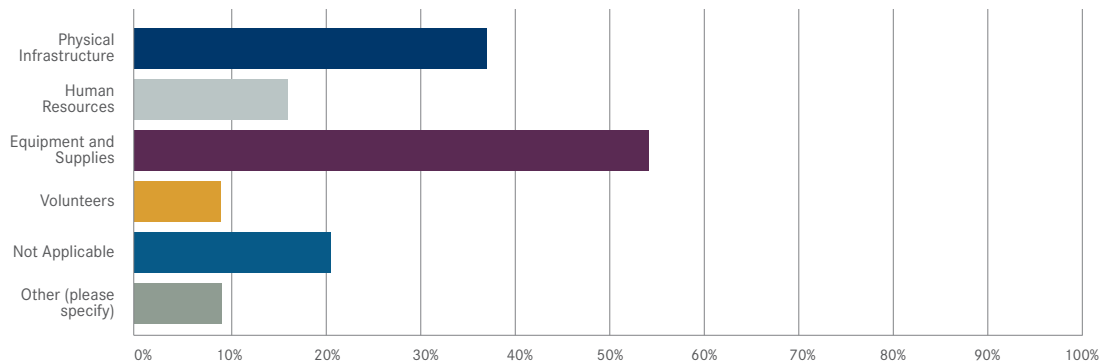


Figure 7: Types of support received from the Local Government

Due to the current COVID-19 pandemic, hospital staff have faced multiple mental health related issues and fears. Ninety eight percent reported fear of transmission of COVID-19, 81% were unhappy with the lack of PPE and 83% reported a lack of incentives. Over 69% responded that they lacked proper training and CME, 52% reported stress or trauma and 40% complained about long working hours and issues with transportation (Figure 8).

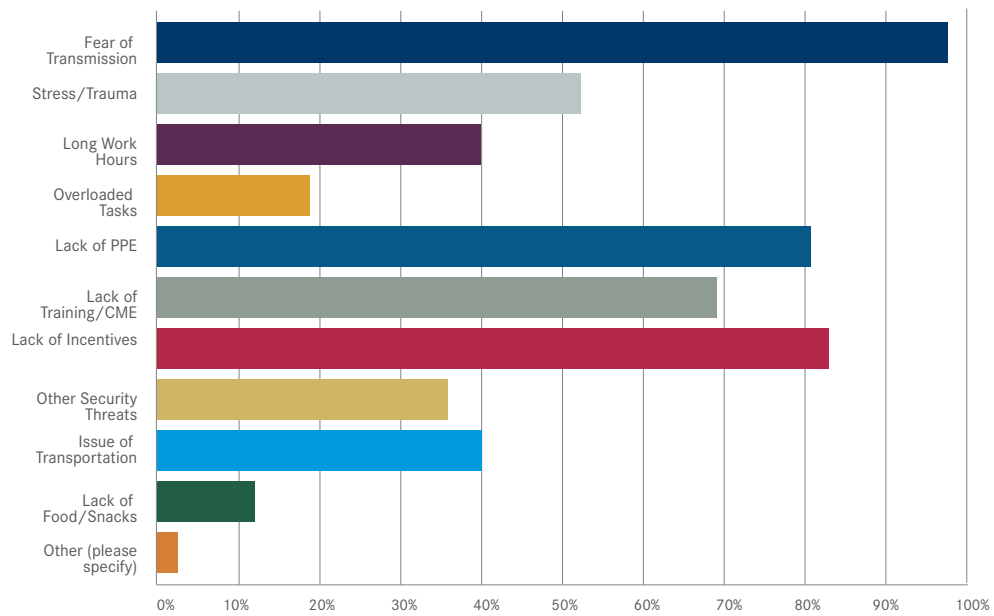


Figure 8: Psychosocial / mental health issues experienced by the health workers

The participating hospitals were also asked to share their thoughts on the challenges of providing services during the pandemic and if they have any suggestions qualitatively. Many of them provided various comments and raised the following issues:

Qualitative Findings of Service Utilization Survey

In the survey, respondents were asked 3 open-ended questions to explore the challenges they have encountered while providing regular and added new services during the COVID-19 pandemic, ways to address those hindrances, and what their experiences of providing services during such critical situations entailed.

A) Challenges

Out of 42 respondents, 39 provided a description of the challenges they have faced while providing regular health services during the pandemic. Among the various challenges hindering proper care, a lack of PPE was the most common that might have created the fear. Almost half of the respondents have an issue with providing health services due to the lack of PPE.

Similarly, some respondents stated that due to high patient flow, they faced problems in providing regular services. They added that due to a probable lack of awareness about the transmission of the virus, patients come to hospitals even for general health problems. Total 9 respondents stated that fear of transmission is another primary reason hindering the provision of health services. Respondents expressed that some staff took a leave because of a fear of being infected by the virus. This in turn affected healthcare service provision. One respondent stated, “Due to fear factor; medical officer was on leave for 2 months. Me & MDGP worked 24 hours in the last 2 months; now comfortable after they were forced to return to work.”

Insufficient infrastructure and supplies as well as issues with the budget were also factors that health workers complained as reasons for challenges in health service provision. Data revealed that few respondents have a problem of referral. Due to the fear of transmission, ambulance drivers were not willing to carry patients. Even the higher-level hospitals would not provide treatment to referred patients.

One respondent stated, “we have encountered one suspected case whose family member is a Saudi Arab returnee and we wanted to refer to Bharatpur Hospital. We lack ambulances to send the patient. Still today, we don’t have a strong channel to attend and refer to the suspected case. We don’t have a dedicated COVID -19 hospital. we don’t have access to the RT-PCR test.”

Lack of COVID-19 treatment guidelines and trained and sufficient staff created problems for some hospitals. These problems could be related to providing treatment for COVID-19 infected patients, possibly due to the lack of probing. It is difficult to interpret that it directly affects regular health service provision.

Ways to address challenges

All 42 respondents suggested ways to address the problems they have encountered during the current pandemic. The intention of this survey question was to understand the possible solutions to facilitate continued regular health services during a pandemic situation, however, most of the responses were related to treatment and management of COVID-19.

B) Solutions suggested to provide regular health services

Qualitative data revealed that almost half of the respondents urged the availability of sufficient PPE is the solution to increase health services. Some of the respondents mentioned that having PPE enabled health workers to work without fear of transmission. Similarly, most respondents stated that during the pandemic, frontline health workers need physiological, emotional, as well as economical support. Respondents also mentioned that having strong coordination between federal, provincial, and hospital level staff is necessary to regulate work smoothly during such pandemic.

A few respondents mentioned that health education to patients, continued medical supply, and management of transportation services are issues that should be focused on to enable the provision of regular services.

C) Solutions related to manage COVID-19

Some responses were directly related to the management of COVID-19. Respondents were not happy to provide health services related to COVID-19 and non-COVID-19 (other health services) at one hospital. They suggested setting up a separate place to manage COVID infected patients to provide isolation of the virus. They also added that there should be separate, dedicated health workers who only treat certain patients with proper training. Additionally, they proposed to allocate a sufficient amount of the budget in advance to manage such pandemic situations so that management can occur at their level and not wait for support from higher levels.

Working experience during the pandemic

A mixed experience was shared by the respondents. Some respondents shared good experiences while the others had bad experiences.

Provision of regular health services

Some respondents were happy as regular health services were not shut down due to the pandemic. One respondent stated, "Actually a lot of patients with chronic diseases are unable to visit higher centers so they were able to get services from our hospital. We even did many Orthopedic Surgeries in this period, for which we feel proud." Similarly, another respondent said that, "I am not directly in contact with COVID-19 patients, but I am happy that even during this pandemic situation delivery services are not closed, many women gave birth to healthy babies."

Utilization of local resources

One respondent shared how the hospital team managed to provide services utilizing local resources in the initial period when PPE was not available from province and federal levels. “It was the day when the first patient was kept in isolation and planned for PCR sample collection. At that time, we had no PPEs, not even surgical masks. Thank God, with the help of the army, we had prepared locally made PPE (plastic made), face shield made from laminating plastic. Sample was sent from Terhathum to Dharan.”

Motivated staff

One of the respondents shared that due to motivated staff work became easier. “I am working as acting chief of this hospital. All my staff are dedicated and motivated to overcome this pandemic situation. They have no such fear of pandemic. Their hard work is quite inspiring for me as well.”

Unable to save the life of a patient

One respondent shared a bad experience. He states that due to lack of medicine, he and his team were not able to save the life of a patient. “A case of valvular heart disease with s/p mitral valve replacement presented to our ER with h/o of chest pain and shortness of breath for 3-4 days. She was under regular medication for her heart problem but was out of stock for 14 days. In the ER she was resuscitated but could not be saved.”

HMIS and COVID-19 related data findings

This part of the findings is based on the HMIS/COVID-19 related quantitative data that were also collected by NSI. The following sections will provide the results from the HMIS/COVID-19 data.

A) Rural Staff Support Program/Partnership Program (RSSP/RSSPP) Hospitals

This section presents the major findings of the service utilization of the selected RSSP and RSSPP hospitals across Nepal. These are primarily rural hospitals of Nepal with whom NSI has been closely working with.

NSI has implemented Rural Staff Support Program (RSSP) as one of the major interventions aimed at increasing hospital service utilization specially C-section throughout year and other lifesaving emergency operations by supporting human resource (surgical team) and enabling environment (equipment, quarter, capacity building). It has been implemented in 18 rural hospitals across Nepal. Recently, a similar program, called Rural Staff Support and Partnership Program (RSSPP) has been expanded in 25 rural hospitals in partnership with the MoHP throughout Nepal. RSSP hospitals have NSI funded MDGPs, whereas RSSPP hospitals have Government scholarship deployed MDGPs.

Out of 18 RSSP and 25 RSSPP hospitals we have used the hospital service utilization data of 34 hospitals (17 RSSP and 17 RSSPP) from Poush 2076 to Baishakh 2077. Due to the unavailability of data, we have excluded 1 RSSP and 8 RSSPP hospitals. We also compared these data with previous year data. List of hospitals is attached in annex C.

Findings

Figure 9 represents the average number of general health services provided by 17 RSSP hospitals during pandemic versus last year. Data shows that ER, OPD and diagnosis services have increased during pandemic. However, the total number of deliveries and the number of in-patients has decreased. Regarding the referral, hospitals were receiving more referral patients but the number of referrals out decreased.

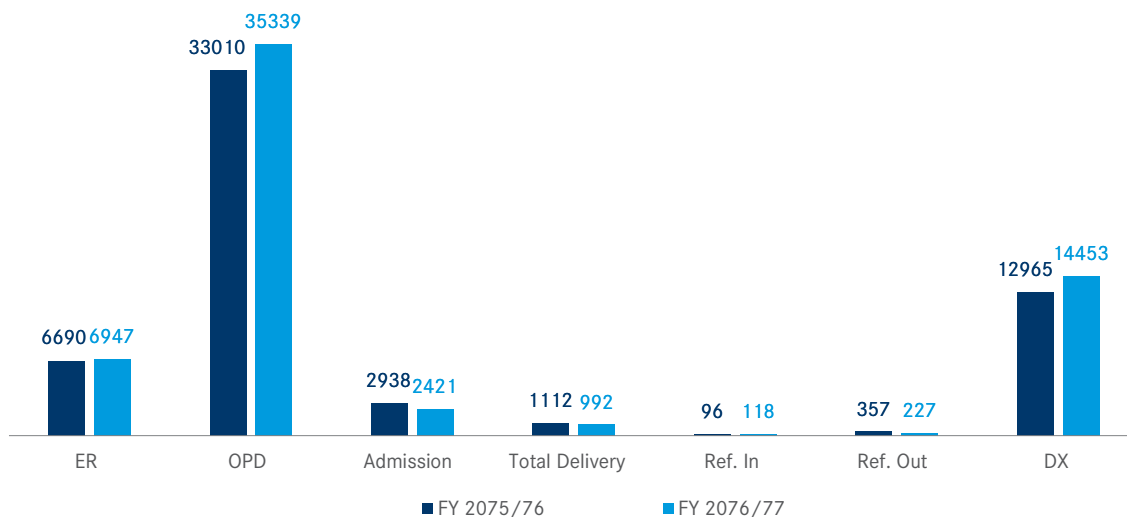


Figure 9: Average monthly health services provided by 17 RSSP Hospitals

Figure 10 below shows the comparison of service provided by RSSP hospitals during pandemic versus last year. Data reveals that the number of C-section and operations were slightly increased compared to last year. Yet, the number of other major services such as minor surgery, procedure, major obstetric complication and anesthesia were decreased during the pandemic.

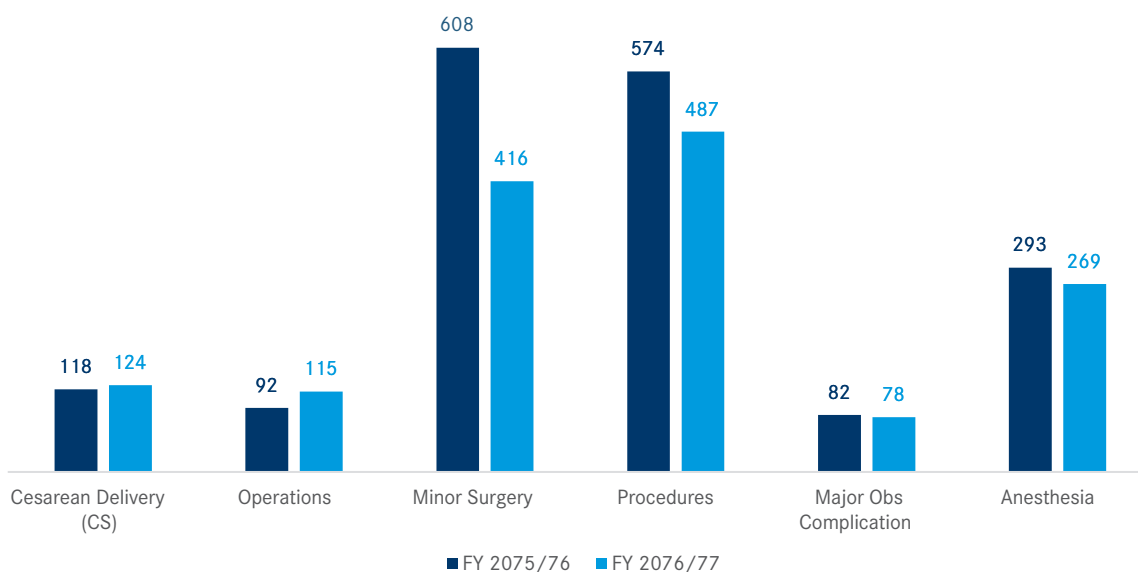


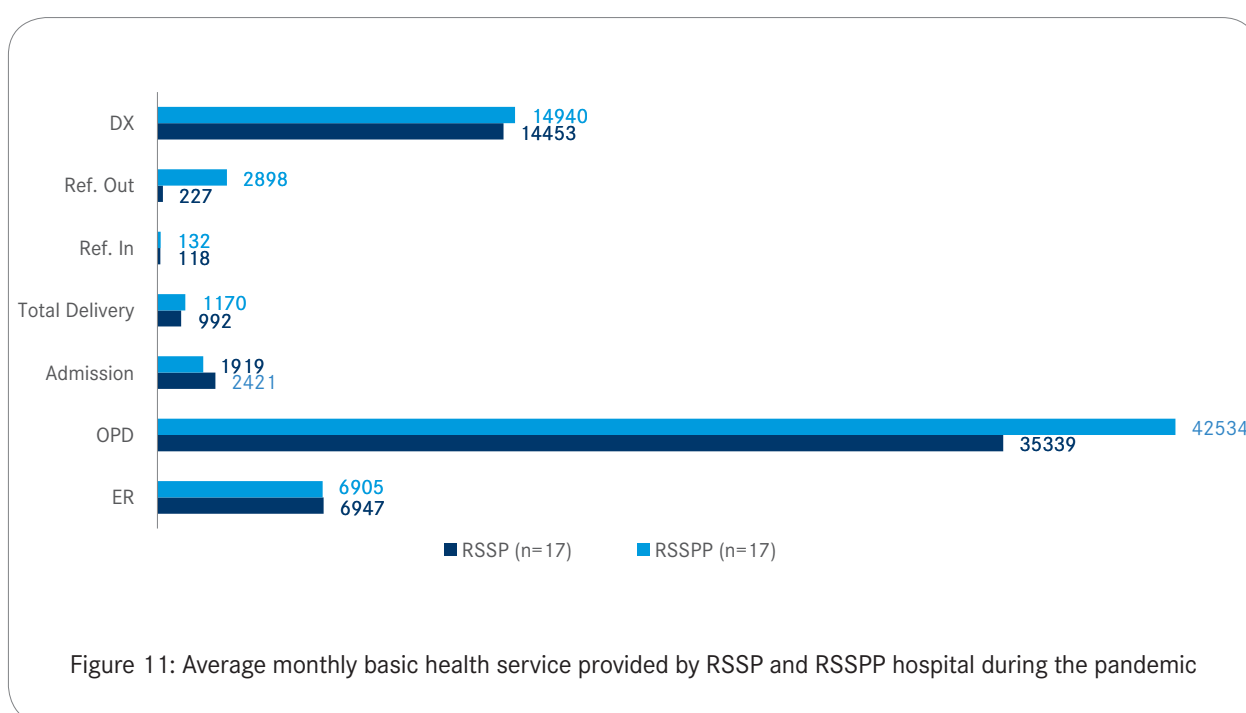
Figure 10: Average monthly major health services provided by 17 RSSP Hospitals

Table below compares the number of basic health services provided by individual RSSP hospital during the pandemic with service provided previous year. More than half (53%) of the hospitals (Bardiya, Beni, Kalikot, Mahottari, Salyan, Bajhang, Darchula, Jiri and Taplejung) have provided emergency services to almost an equal number of patients of previous years. However, 23% of hospitals (Arghakhanchi, Bajura, Pyuthan and Gulmi) have decreased the number of emergency patients during the pandemic. Similarly, only 4 hospitals have increased the number of Out-Patient Service and rest have decreased patient flow in OPD during the pandemic compared to last year. Regarding the In-Patient (admission) and Delivery Service, data shows there were no significant difference.

Name of Hospital	Emergency Service (ER)		OPD		Admission		Total DELIVERIES (Including CS)	
	2075-76	2076-77	2075-76	2076-77	2075-76	2076-77	2075-76	2076-77
Bardiya Hospital	609	632	2756	3378	228	205	102	107
Beni Hospital	606	648	3195	2959	224	186	71	60
Kalikot Hospital	217	200	1389	967	105	88	36	36
Mahottari Hospital	459	525	2184	3559	173	96	114	57
Salyan Hospital	168	131	2306	1944	319	266	109	106
Taulihawa Hospital	579	857	2537	3334	248	250	121	123
Arghakanchi Hospital	516	394	1622	1844	264	119	53	30
Bajhang Hospital	245	239	1139	1065	163	141	42	45
Bajura Hospital	294	185	1577	1042	115	89	24	20
Darchula Hospital	259	284	1535	1341	88	99	39	39
Jiri Hospital	207	181	1684	1334	129	93	21	16
Pyuthan Hospital	663	474	2847	2062	305	212	139	120
Sankuwasava Hospital	581	739	1543	2096	162	134	78	79
Taplejung Hospital	232	224	1732	1531	145	163	47	56
Terhathum Hospital	326	179	1318	1070	90	81	27	25
Khotang Hospital	158	591	879	3281	51	99	33	29
Gulmi Hospital	573	466	2767	2534	129	101	57	45

Table 1: Average number of health service provided by individual RSSP hospital

The graph below compares the number of basic health service provided by RSSP and RSSPP hospital (Figure 11). Among these two different types of hospitals, RSSP hospitals have admitted more patients during pandemic, and provided a bit more diagnostic services compared to RSSPP hospitals. However, RSSPP hospitals have provided more OPD and delivery services and also referred more patients out compared to RSSP hospitals.



The graph below shows that RSSP hospitals have provided more services in each major health service categories. The number of operation service provided by RSSP hospitals have 90% higher than the service provided by RSSPP, followed by providing anesthesia service 60% and managing major obstetric complication 51%. However, there is not much differences in the service provision of C-section, procedure and minor surgery.

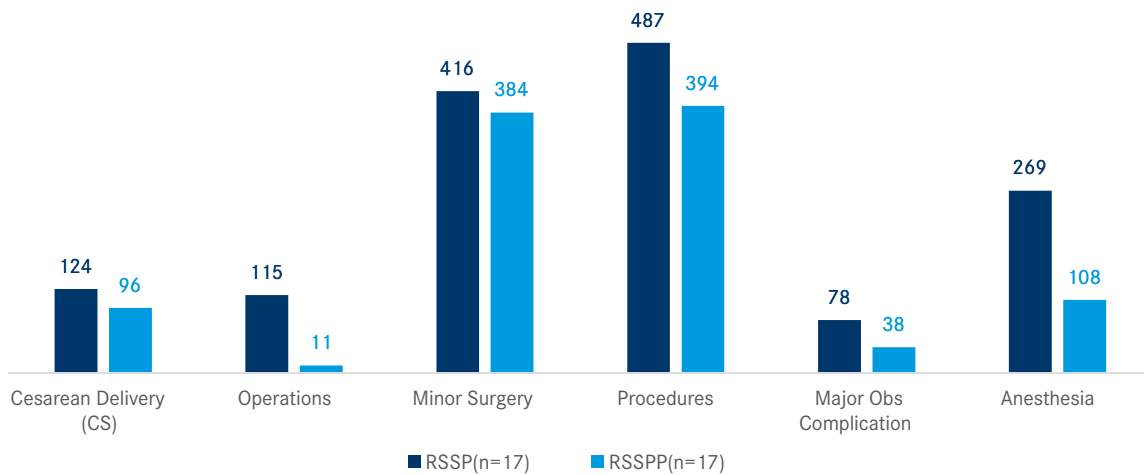
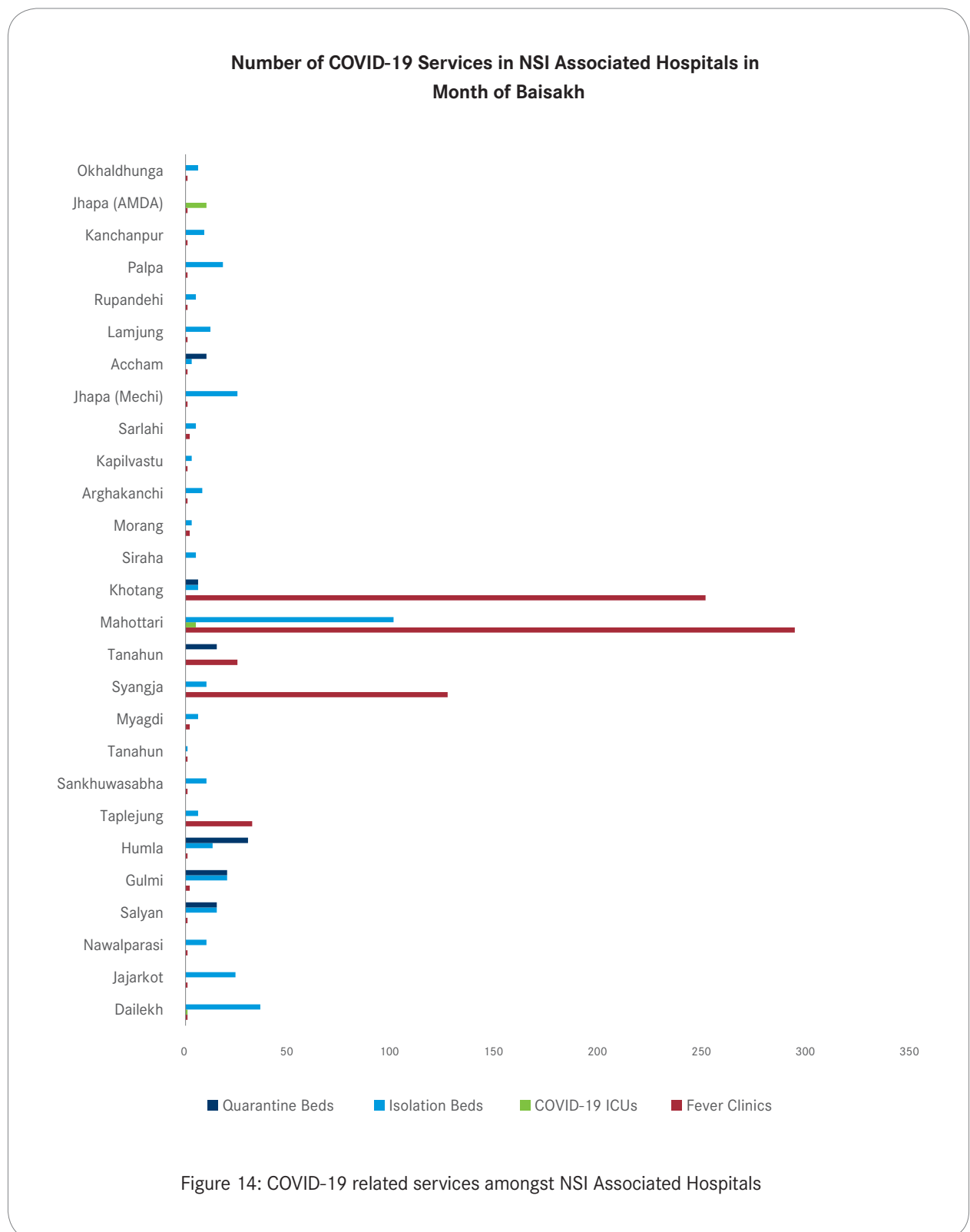


Figure 12: Average monthly major health services provided by RSSP and RSSPP hospital

In summary, there is no drastic change in overall health service utilization during the pandemic in the RSSP and RSSPP hospitals. However, the number of in-patient and referral out has slightly decreased. The number of overall delivery services has decreased yet the number of C-sections has slightly increased. While comparing general health services provided by two different types of hospitals (RSSP vs. RSSPP), RSSP hospitals have provided ER and admission services more than RSSPP hospitals. However, regarding the major health services almost all categories of major health services provided by RSSP are higher than RSSPP hospitals.

COVID related results

This section presents the COVID-19 related services and results from 27 selected NSI associated hospitals across Nepal.



The bar diagram above indicates that selected hospitals have a higher number of ICUs, isolation beds, and quarantine beds managed due to the COVID-19 pandemic (Figure 14).

Number of RDT and RT-PCR Testing in NSI Associated Hospitals in Month of Baisakh

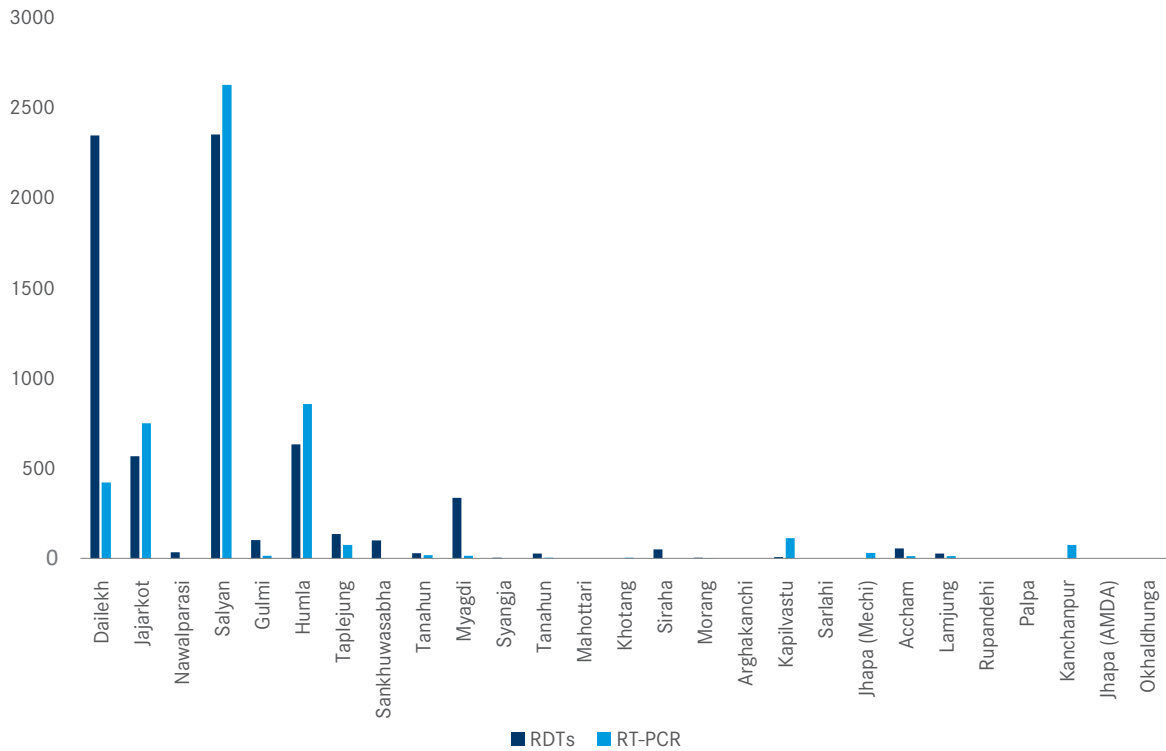


Figure 15: Testing of COVID-19 using RDT and RT-PCR

As most of the RSSP hospitals such as Dailekh, Salyan, Humla and Jajarkot were designated to respond to COVID-19, the bar graph shows a rapid increase in the number of RDT and RT-PCR testing. Testing is comparably minimal in other hospitals and training site hospitals (Figure 15).

% of NSI Associated Hospitals with COVID-19 Services/Cases in the Month of Baisakh

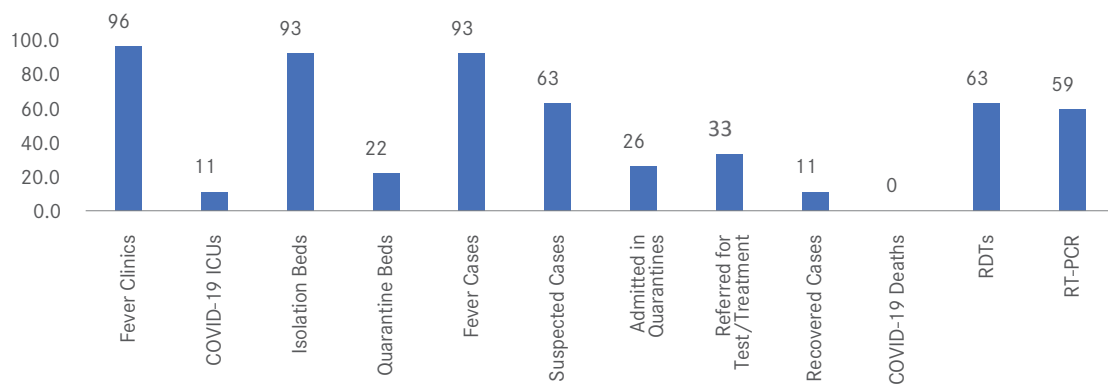


Figure 16: Percentage of hospitals with COVID-19 Cases & Services

Among the participating 27 hospitals, 96% have fever clinics, but only 11% have COVID-19 ICUs. The majority (93%) have managed isolation beds, 93% found fever cases, and 63% had suspected coronavirus cases. Only, 26% of cases were admitted. Similarly, 63% of hospitals were assigned to conduct RDTs, but only 59% of these hospitals actually collected swab [sample] for the RT-PCR tests (Figure 16).

Referral out was slightly higher than referral in. There is variation among hospitals in tracking fever cases and suspected coronavirus infections. This eventually impacts the admission to quarantines and referrals. No cases of COVID-19 related deaths have been recorded among NSI associated hospitals so far. However, some COVID-19 cases have been received.

Conclusion

Many hospitals were forced to introduce new COVID-19 related services such as fever clinics, virus related ICUs, isolation and quarantine beds, and virus testing. These in turn altered and/or reduced some of the regular services provided by hospitals across the country. The pandemic has shifted the focus from existing services and has forced many hospitals to use a majority of their resources to respond to virus-related emergencies. This has resulted in the slight reduction of basic and regular hospital services. Due to the focus of many hospitals on providing new and emergency services related to COVID-19, some essential services were altered. Health workers have been facing many challenges and are also experiencing some very unforgettable events. This pandemic situation has impacted not only service users but has also caused mental stress among frontline healthcare workers due to a lack of PPE and a fear of contracting the virus among other factors. Additionally, newly added services have also created a need for extra roles, a financial burden, and logistic challenges for these pandemic-affected hospitals. Fortunately, however, despite the occurrence of COVID-19, overall, most of the hospitals/training sites associated with NSI were found to provide regular services.

Limitations

This study was conducted in a fairly small amount of time. Most of the responding hospitals were somehow engaged with COVID-19, so a disruption during an urgent and important time may have occurred when asking to fill out the survey and provide additional information. The study was also only limited to hospitals and training sites associated with Nick Simons Institute (NSI). In general, Nepal's hospitals were not prepared for the COVID-19 pandemic so new services required extra resources, devices and human resources which created a lot of chaos. Not all provinces and NSI associated hospitals we expected have provided the data.

Recommendations

1. These hospitals, as per the current limited resources and capacity, need to continue responding to COVID-19 and must also pursue to provide major services such as ER, IPD, OT and delivery services.
2. Totally altering or shutting down regular services must not occur. Limitation of services may be allowed.
3. Although, lockdown restrictions have been slightly relaxed, a large number of common citizens are not expected to seek health services. However, people with chronic diseases, pregnant women and children, and any unexpected emergency patients are still likely to come to hospitals, so response to these patients must be maintained and welcomed.
4. Frontline healthcare workers are very important, and their health and safety are critical. Therefore, the provision of PPE, proper training/CME, and reasonable incentives are all incredibly needed.
5. If the hospitals have sufficient stock of essential supplies and PPEs in such a crisis, the healthcare workers can perform better. Similarly, boosting their morale is also very critical by providing timely orientation, CMEs and incentives.

Implication

The findings of the study will help in evidence-based advocacy and decision-making for NSI internally; and improve the programs in the near future. If we disseminate the findings, this will be also beneficial to MoHP/Government of Nepal and EDPs in fighting the COVID-19.

Annex A: List of NSI Supported Hospitals

S.N.	Hospital Name	District	Province	Type
1	Damak Hospital	Jhapa	Province 1	Primary
2	District Hospital	Udayapur	Province 1	Secondary A
3	District Hospital	Khotang	Province 1	Primary
4	Mangalbare Hospital	Morang	Province 1	Primary
5	Rangeli Hospital	Morang	Province 1	Primary
6	District Hospital	S. Sabha	Province 1	Secondary A
7	District Hospital	Taplejung	Province 1	Primary
8	District Hospital	Terhathum	Province 1	Primary
9	Gaur Hospital	Rautahat	Province 2	Primary
10	Jaleswor Hospital	Mahottari	Province 2	Primary
11	Kalaiya Hospital	Bara	Province 2	Primary
12	Malangawa Hospital	Sarlahi	Province 2	Primary
13	Baghauda Hospital	Chitwan	Bagmati	Primary
14	Bakulahar Hospital	Chitwan	Bagmati	Primary
15	Jiri Hospital	Dolakha	Bagmati	Primary
16	Trishuli Hospital	Nuwakot	Bagmati	Primary
17	Bandipur Hospital	Tanahun	Gandaki	Primary
18	Beni Hospital	Myagdi	Gandaki	Primary
19	Damauli Hospital	Tanahun	Gandaki	Primary
20	MatriShishuMiteri	Kaski	Gandaki	Primary
21	District Hospital	Syangja	Gandaki	Primary
22	Arghakhachi Hospital	Arghakhachi	Province 5	Primary
23	Bardiya Hospital	Bardiya	Province 5	Primary
24	Gulmi Hospital	Gulmi	Province 5	Primary
25	Kapilvastu Hospital	Kapilvastu	Province 5	Primary
26	Lalmatiya Hospital	Dang	Province 5	
27	Lamahi Hospital	Dang	Province 5	Primary
28	Prithivi Chandra Hospital, Parasi	Nawalparasi	Province 5	Primary
29	Pyuthan Hospital	Pyuthan	Province 5	Primary
30	District Hospital	Dailekh	Karnali	Primary
31	District Hospital	Humla	Karnali	Primary
32	District Hospital	Jajarkot	Karnali	Primary
33	District Hospital	Kalikot	Karnali	Primary
34	Mehelkuna Hospital	Surkhet	Karnali	Secondary A
35	District Hospital	Salyan	Karnali	Primary
36	District Hospital	Bajhang	Sudur Paschim	Primary
37	District Hospital	Bajura	Sudur Paschim	Primary
38	District Hospital	Darchula	Sudur Paschim	Primary
39	District Hospital	Doti	Sudur Paschim	Primary
40	Lahan Hospital	Siraha	Province 2	Primary

NSI Training Sites:

S.N.	Hospital Name
1	Mechi Hospital, Jhapa
2	AMDA Hospital, Damak
3	Okhadhunga Community Hospital/UMN
4	Bharatpur Hospital
5	National Academy of Medical Sciences (NAMS), Bir Hospital
6	Paropakar Maternity and Women's Hospital
7	Model Hospital, PHECT Nepal, Kathmandu
8	Dhaulagiri Hospital
9	Pokhara Academy of Health Science
10	Lamjung District Community Hospital
11	Siddhartha Children and Women Hospital, AMDA Butwal
12	United Mission Hospital, Tansen
13	Surkhet, Karnali Pradesh hospital
14	Mahakali Hospital
15	Seti Provincial Hospital
16	Bayalpata Hospital
17	Karnali Academy of Health Sciences (KAHS), Jumla

Annex B: COVID-19 related data collected from selected hospitals in Nepal

Hospital	Province	Fever Clinic	COVID- 19 ICUs	Isolation Beds	Quarantine Beds	Fever Cases	Suspected Cases	Admitted in Hospital Quarantine	Referred for test/ treatment (Isolation)	COVID- 19 Death	RDT	RT-PCR
Dailekh Hospital	Karnali	1	1	36	0	216	0	0	1	0	2344	421
Health Service Office	Karnali	1	0	24	0	35	4	0	0	0	566	749
Pritivi Chandra Hospital	5	1	0	10	0	178	0	0	1	0	33	0
Salyan Health Office	Karnali	1	0	15	15	57	10	10	0	0	2350	2624
Gulmi Hospital	5	2	0	20	20	23	6	0	6	0	102	15
Humla Hospital	Karnali	1	0	13	30	35	3	3	0	0	632	856
Mechi Zonal Hospital	1	1	0	25	0	100	30	0	30	0	0	30
Bayalpata Hospital	Sudur Pachim	1	0	3	10	60	51	11	0	0	55	12
Lamjung Community Hospital	Gandaki	1	0	12	0	100	2	0	0	0	27	13
Siddhartha children and women hospital	5	1	0	5	0	118	0	0	0	0	0	0
Tansen Mission Hospital	5	1	0	18	0	15	2	0	0	0	0	0
Mahakali Hospital	Sudur Pachim	1	0	9	0	31	75	3	0	0	0	75
AMDA Hospital, Damak	1	1	10	0	0	16	5	0	5	0	0	0
Okhalhunga Hospital	1	1	0	6	0	18	0	0	0	0	0	0
Total		15	11	196	75	1002	188	27	43	0	6109	4795
% Hospitals w/ services, cases, and tests		100.0	14.3	92.9	28.6	100.0	71.4	28.6	35.7	0.0	57.1	64.3

Annex C: Name of Hospital included in the study

S.N.	District	Type of Hospital	FY 2076/77	FY 2075/76
			Number of Month	Number of Month
1	Bardiya Hospital	RSSP	4	12
2	Beni Hospital	RSSP	4	12
3	Kalikot Hospital	RSSP	5	12
4	Jaleswor Hospital	RSSP	4	12
5	Salyan Hospital	RSSP	5	12
6	Taulihawa Hospital	RSSP	5	12
7	Arghakanchi D Hospital	RSSP	4	12
8	Bajhang Hospital	RSSP	1	12
9	Bajura Hospital	RSSP	1	12
10	Darchula Hospital	RSSP	1	12
11	Jiri Hospital	RSSP	4	12
12	Pyuthan Hospital	RSSP	4	12
13	Sankuwasava Hospital	RSSP	3	12
14	Taplejung Hospital	RSSP	3	12
15	Terhathum Hospital	RSSP	2	12
16	Khotang Hospital	RSSP	4	12
17	Gulmi Hospital	RSSP	4	12
18	Doti Hospital	RSSP	Data Not Available	12
19	Bandipur Hospital	RSSPP	4	—
20	Damauli Hospital	RSSPP	4	—
21	Kalaiya Hospital	RSSPP	4	—
22	Lahan Hospital	RSSPP	2	—
23	Malangwa Hospital	RSSPP	1	—
24	MatriSisu Hospital	RSSPP	4	—
25	Mehalkuna Hospital	RSSPP	4	—
26	Syangja Hospital	RSSPP	1	—
27	Bagauda Hospital	RSSPP	2	—
28	Bakular Hospital	RSSPP	2	—
29	Dailekh Hospital	RSSPP	4	—
30	Damak Hospital	RSSPP	1	—
31	Humla Hospital	RSSPP	4	—
32	Jajarkot Hospital	RSSPP	5	—
33	Mangalbare Hospital	RSSPP	3	—
34	Nuwakot Hospital	RSSPP	2	—
35	Rangeli Hospital	RSSPP	2	—
36	Rautahat- Gaur	RSSPP	Data Not Available	—
37	Udaypur-Katari	RSSPP	Data Not Available	—
38	Bhojpur	RSSPP	Data Not Available	—
39	Udayapur	RSSPP	Data Not Available	—
40	Lamahi Hospital	RSSPP	Data Not Available	—
41	Palpa Rampur Hospital	RSSPP	Data Not Available	—
42	Prithvi Chandra Hospital	RSSPP	Data Not Available	—



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