

2020

PROVINCIAL PROFILES

# KARNALI PROVINCE



Surveillance, Point of Entry  
and Rapid Response



Risk Communication and  
Community Engagement



Laboratory Capacity



Operations Support  
and Logistics



Infection Prevention and Control &  
Clinical Management



Partner  
Coordination



Government of Nepal  
Ministry of Health and Population



World Health  
Organization  
Nepal

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## **SURVEILLANCE, POINT OF ENTRY AND RAPID RESPONSE**

# SURVEILLANCE, POINT OF ENTRY AND RAPID RESPONSE

COVID-19: How things stand in Nepal's provinces and the epidemiological significance of the coronavirus disease

The major parameters in this profile narrative are depicted in accompanying graphics, which consist of panels of posters that highlight the case burden, trend, geographic distribution and person-related risk factors.

## 1.1 BACKGROUND

The provincial EPI profile is meant to give a thumbnail impression of the Covid-19 situation in the province. The major parameters captured and updated in this profile narrative are depicted in the accompanying graphics over 4 panels of Posters arranged to highlight the case burden, trend, geographic distribution and person related risk factors in a series of updates.

## 1.2 METHODOLOGY

The major data set available for the situation update on Covid 19 come from the laboratories conducting PCR test for Covid 19 cases for people approaching the laboratory for a test, those recommended by medical advice and also in some cases those referred by the public health personnel from wards and Palikas as part of the Case Investigation and Contact Tracing (CICT) or active case search. Some additional information is also supplemented by the active CICT teams and call centres engaged in active follow up of cases and contacts over a period of time. These data are generally uploaded or endorsed by the Province level Health Emergency Operations Centre (PHEOC).

## 1.3 FINDINGS

In this EPI profile we captured the Cases and Deaths attributed to Covid 19 in the province by time, place and person characteristics. The case and

it's time trend, geographic location and spatial movement, affected age groups and there change over time and incidence/prevalence of the cases both as aggregate numbers reported and population denominations. In addition some insights over the changing patterns like change in age at risk and proportion of female in total cases are also captured, as are the trend of Test Positivity Rates and distribution of symptom producing and also those cases with comorbidity.

## 1.4 MAJOR OBSERVATIONS AND TRENDS

Most of Nepal had very few cases of laboratory confirmed Covid -19 till about the middle of April or Nepali new year. Cases then increased to a peak and scaled down to make the first wave over a period of about 4 months ending at the middle of July 2020. These were the cases when most of them came as ex pats returning home fully screened at airports and land crossings at less than 20 laboratories across the country that had the capacity to undertake PCR. The middle of July saw the next wave that rose to high much beyond the projected estimates and overwhelmed the health care infrastructure and put a huge burden on the public health system in the country. The total number of laboratories in the country had reached 70 by then, a large chunk of it in the private sector mostly located in and around Kathmandu. In this second wave there were more symptomatic cases, load on the hospitals were

higher taking away the distinction between isolated designated Covid hospitals from other usual ones and heavily weighing on the intensive care infrastructure and ventilator support.

## 1.5 SITUATION SUMMARY

The total number of Covid-19 cases in Nepal by PCR positivity stood at 222287 as of 23 November 2020. A total of 25421 cases or 11.4% came from Province 1; 19715 or 8.8% came from Province 2; 121861 or 54.8% came from Bagmati province; 13306 or 5.9% came from Gandaki; 24559 or 11% from Karnali and 11427 or

5.1% came from Sudur Paschim. A detailed analysis of these cases had been done in the following pages.

## 1.6 WAY FORWARD

This epidemiological extract has been prepared to help understand the Covid-19 situation better and in a contextual manner for each of the provinces and also to be used as a ready reference for the public health personnel and decision makers to support Public Health and Social Measures at Palika, District and Province level to have better control.

**Map 1: PCR Positive Case and Deaths**

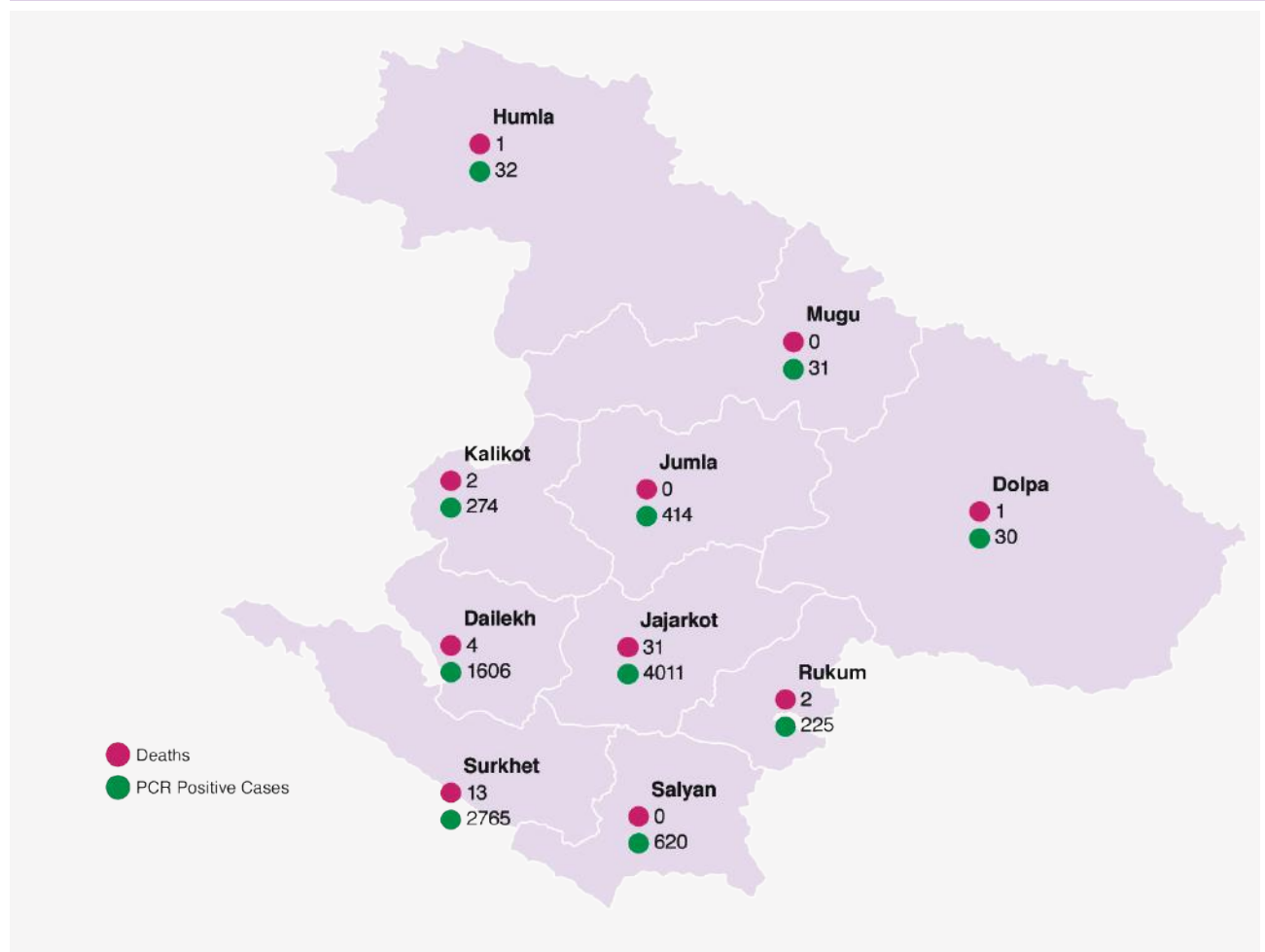
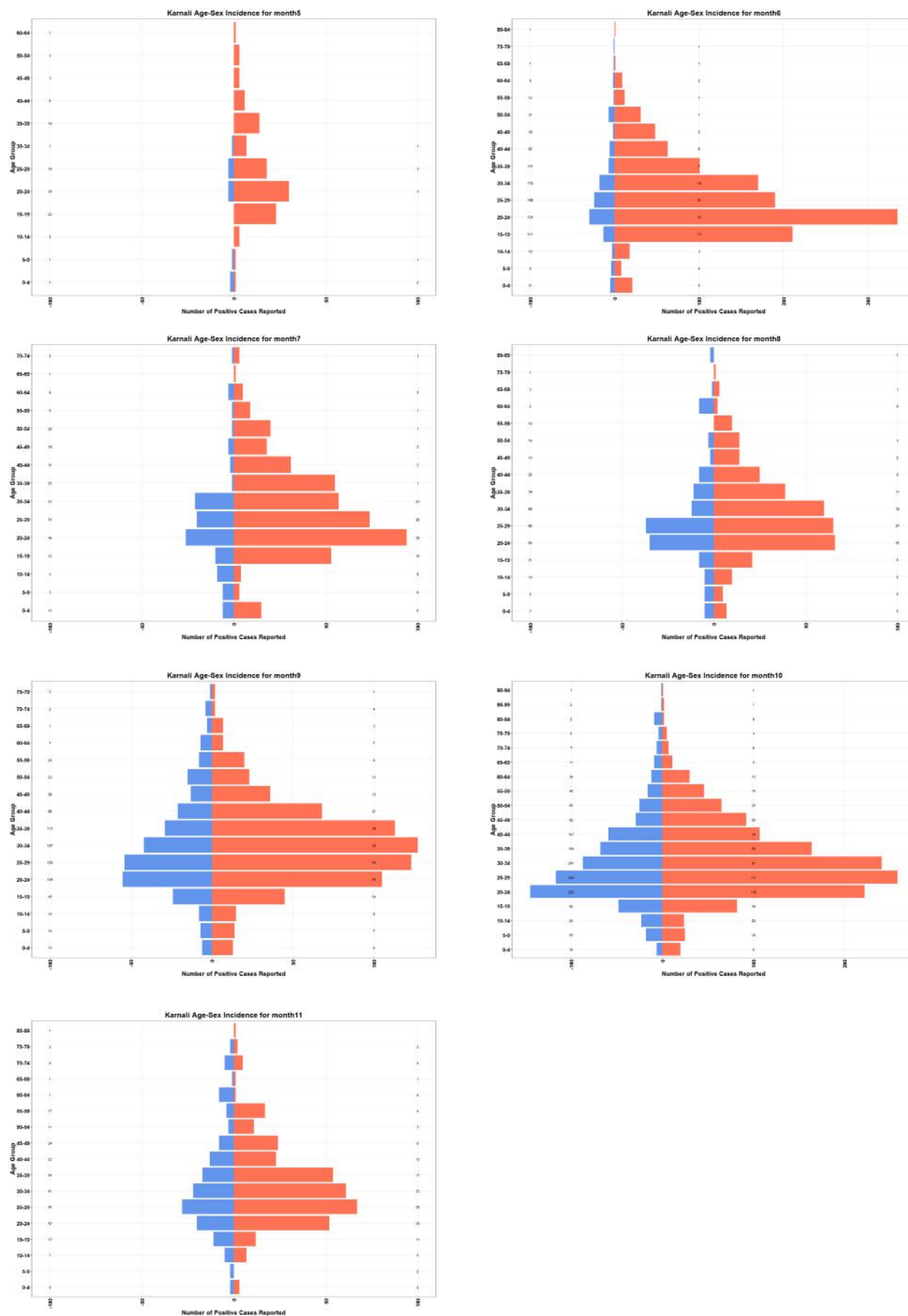


Figure 1: Changing Age-Sex pattern of cases – (April – November)

Sex: ■ Female ■ Male



Map 2: Cumulative Case Incidence by Month – April 2020



Map 3: Cumulative Case Incidence by Month – May 2020



Map 4: Cumulative Case Incidence by Month – June 2020



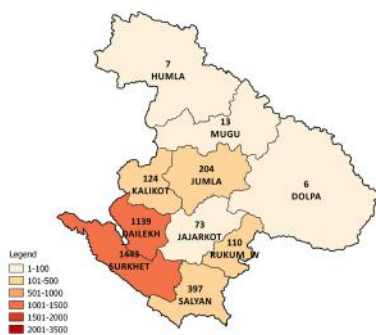
Map 5: Cumulative Case Incidence by Month – July 2020



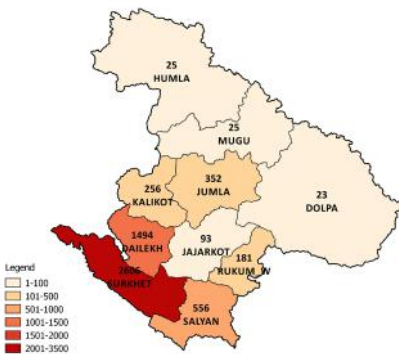
Map 6: Cumulative Case Incidence by Month – August 2020



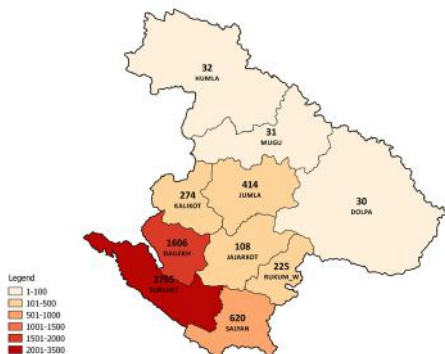
Map 7: Cumulative Case Incidence by Month – September 2020

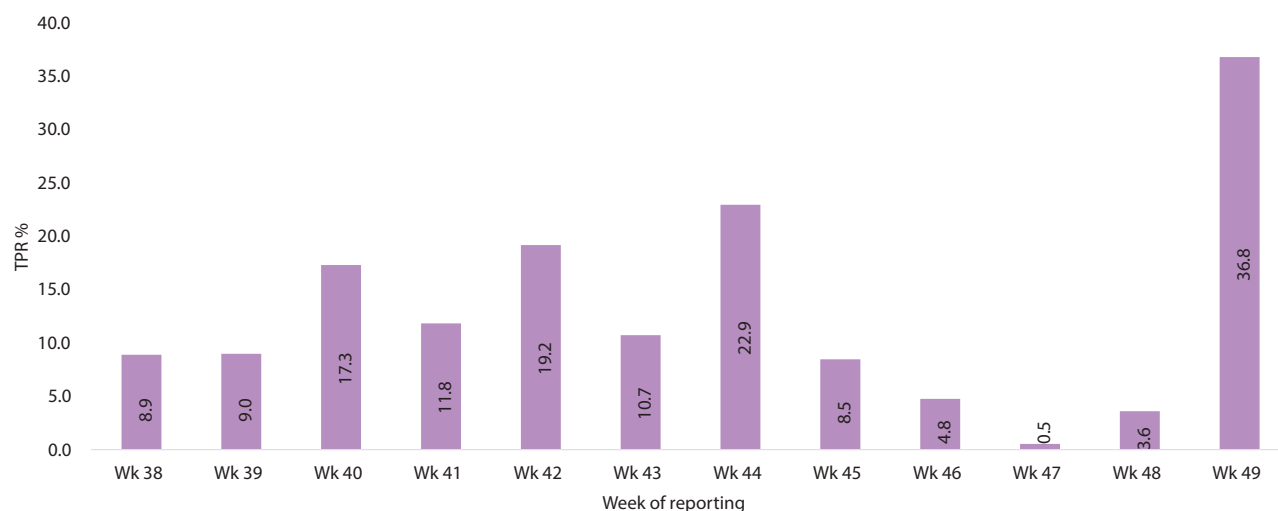
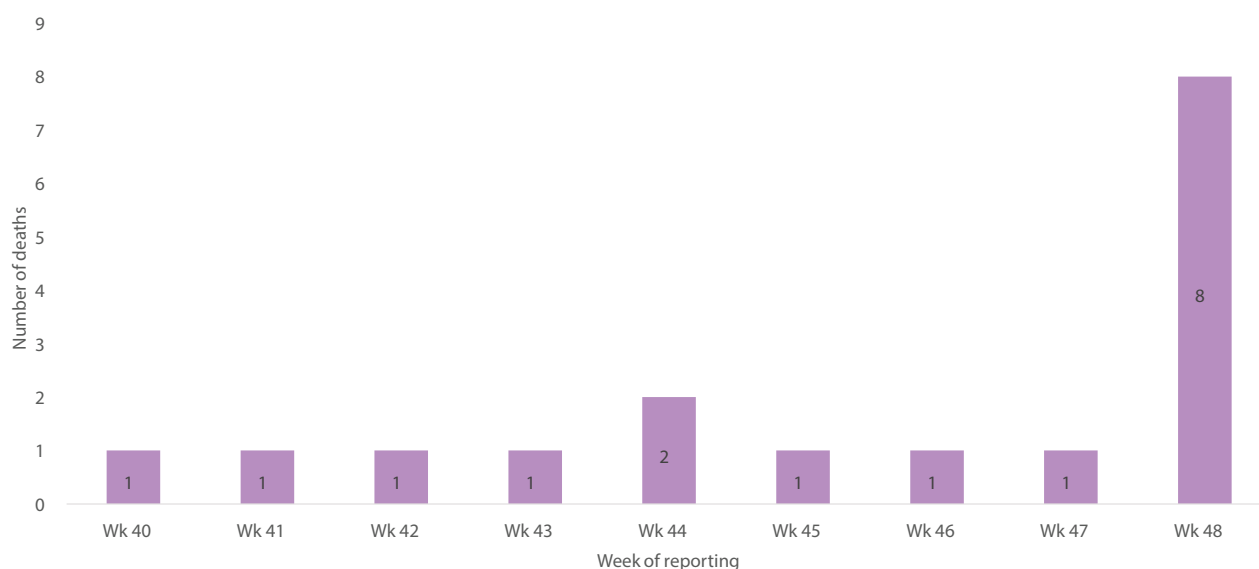


Map 8: Cumulative Case Incidence by Month – October 2020



Map 9: Cumulative Case Incidence by Month – November 2020



**Figure 2: Weekly Test Positivity Rate – (12 weeks)****Figure 3: District Deaths Weekly (12 weeks)**

## 1.7 SUMMARY

In Karnali province, Covid-19 cases started being detected in May. A total of 120 cases were detected in May distributed across the districts of Dailekh, Surkhet, Salyan and Kalikot. The number of cases jumped to 1463 in the next month of June affecting all the 10 districts. The cases came down the following months with a rise in September with 1017 cases and October with 2095 cases. The number of cases took a slump in November with only 494 cases. The total number of cases in the province is 6105.

- Karnali province now has an incidence of 345 per lakh population and the range of district level incidence varied between the lows of 2 per lakh in Dolpa, humla and Mugu to the highs of 91 and 156 per lakh in Dailekh and Surkhet districts. There was an upswing in the monthly case incidence per lakh population in the province. The incidence of cases fell in all the districts in July probably due to unavailability of tests and since September it had been constantly rising in all the districts except

for Mugu and Dolpa. November witnessed a fall in incidence in all the districts.

- The age-sex pattern of the case incidence has been changing in the province. Almost all the age-groups started getting affected since May and in the initial days comprised of overwhelmingly male and mostly covering the young adults. Females started getting represented in the age pyramid only in September and October. But this took a skew in November, something peculiar to this province.
- Karnali province had no cases reported in the month of April. By June, when almost all the districts started reporting cases, the spread was through the length and breadth of the province. Most of the cases are concentrated in the districts of Surkhet and Dailekh. Together these 2 districts accounted for 72% of all cases in Karnali. Surkhet reported 45% of cases with 2765 cases and the district of Dailekh accounted for 26% with 1606 cases.
- This province does not have any Terai region as it has only hills and mountains. Of the 10 districts, 5 are in the hill region and 5 are in the mountains. The population density is also low in the province, particularly in the mountainous districts. The districts of Surkhet,

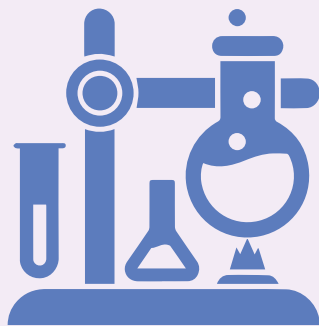
Dailekh, Kalikot and Jumla connected by the Karnali highway keep a high burden of cases in this order. On the other side of Surkhet, Salyan and Rukum west are connected by the Rapti highway coming from Dang in Lumbini Province which resulted in an increased case load in Salyan and Rukum (West). Jajarkot, which is divided by Bheri river from Rukum and Kalikot, and is more isolated experienced a lesser number of cases.

- Karnali province has 4 laboratories located in the districts of Surkhet, Dailekh, Jumla and Rukum west. These are also the districts with higher case load except for Rukum west which has a low case load possibly due to the recent laboratory set up. The test positivity rates calculated as overall rate of test positives by PCR from amongst the total samples tested were between a low of 0.5% in week 47 and a high of 22.9% in week 44. The test positivity rates and adjusted test positivity rates indicate that the efficiency of testing strategy had been consistent since September.
- The total number of deaths in the province is 22 with an overall case fatality of 0.4% and has huge differentials. Surkhet had a fatality rate of 0.4% with 12 deaths of 2765 cases and Dailekh had 0.2% with 4 deaths of 1606 cases.

**Table 1: WHO Transmission Classification**

| Category                               | Definition : Countries/territories/areas with                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No (active) cases                      | No new cases detected for at least 28 days (two times the maximum incubation period), in the presence of a robust surveillance system (where COVID-19 surveillance is not robust, a lack of identified cases should not be interpreted as an absence of transmission). This implies a near-zero risk of infection for the general population.                                                               |
| Imported / Sporadic cases              | Cases detected in the past 14 days are all imported, sporadic (e.g. laboratory acquired or zoonotic) or are all linked to imported/sporadic cases, and there are no clear signals of locally acquired transmission. This implies minimal risk of infection for the general population.                                                                                                                      |
| Clusters of cases                      | Cases detected in the past 14 days are predominantly limited to well- defined clusters that are not directly linked to imported cases, but which are all linked by time, geographic location and common exposures. It is assumed that there are a number of unidentified cases in the area. This implies a low risk of infection to others in the wider community if exposure to these clusters is avoided. |
| Community transmission – level 1 (CT1) | Low incidence of locally acquired, widely dispersed cases detected in the past 14 days, with many of the cases not linked to specific clusters; transmission may be focused in certain population sub-groups. Low risk of infection for the general population.                                                                                                                                             |
| Community transmission – level 2 (CT2) | Moderate incidence of locally acquired, widely dispersed cases detected in the past 14 days; transmission less focused in certain population sub- groups. Moderate risk of infection for the general population.                                                                                                                                                                                            |
| Community transmission – level 3 (CT3) | High incidence of locally acquired, widely dispersed cases in the past 14 days; transmission widespread and not focused in population sub-groups. High risk of infection for the general population.                                                                                                                                                                                                        |
| Community transmission – level 4 (CT4) | Very high incidence of locally acquired, widely dispersed cases in the past 14 days. Very high risk of infection for the general population.                                                                                                                                                                                                                                                                |

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## **LABORATORY CAPACITY**

## 2

# LABORATORY CAPACITY

## 2.1 INTRODUCTION

Here is a detailed description of the laboratory facilities established in the province in response to the COVID-19 pandemic. It is a compilation of the current testing capacity, facilities, equipment, consumables used, manpower, training, laboratory biosafety and bio-security, quality assurance and data management. It also provides salient observations and recommendations for the quality improvement and sustenance of the services.

The data was collected from the laboratories using standardized data collection tool followed by telephonic data collection and review of reports of onsite laboratory visit by experts.

Laboratory services for COVID-19 were established in Karnali Province on 2nd April 2020. As of 4th Nov 2020, a total of 88,586 samples were tested across 4 laboratories of Karnali Province.

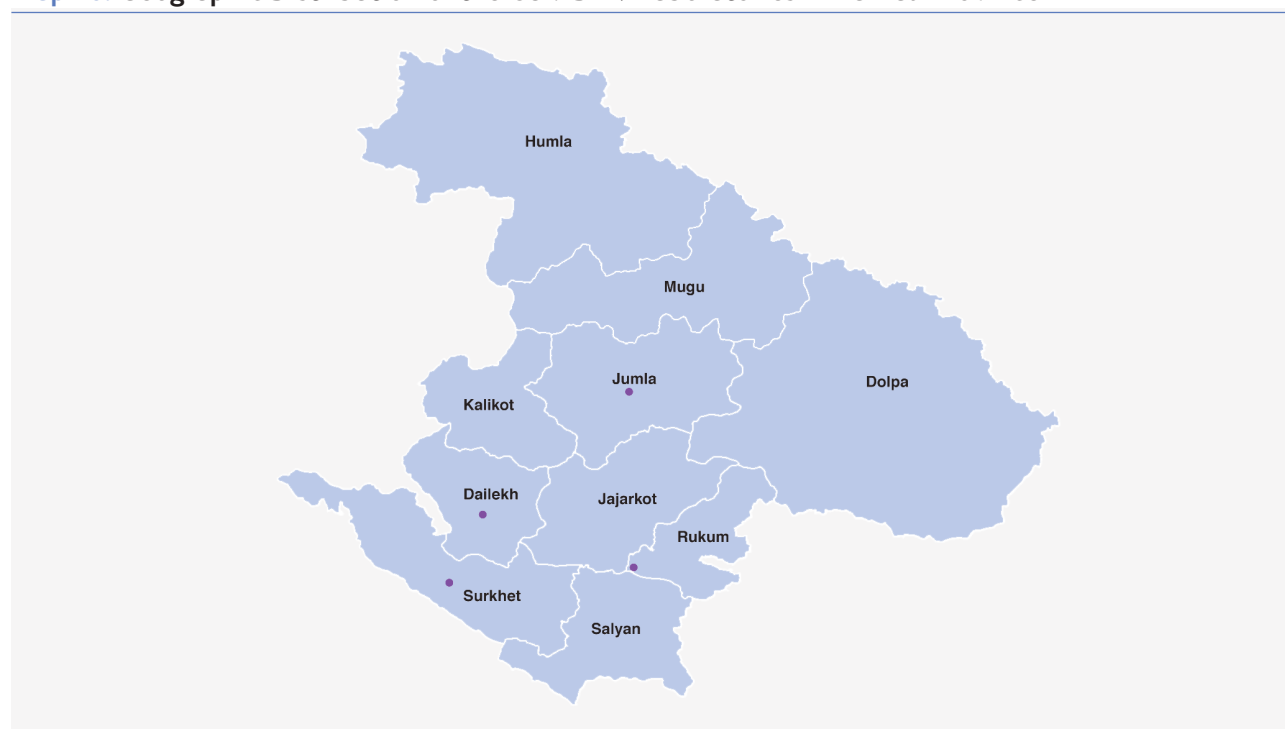
## 2.2 COVID-19 LABORATORIES

A total of four laboratories were established by either repurposing existing laboratories or building new facilities in makeshift facilities. All these labs are run by government sector.

**Table 2: Name, location and contact details of the COVID-19 laboratories in Karnali Province**

| S.No. | Name of Laboratory                                                  | Address | Govt / Private |
|-------|---------------------------------------------------------------------|---------|----------------|
| 1     | Chaurjahari Municipality PCR Laboratory                             | Rukum   | Govt           |
| 2     | COVID-19 Testing Laboratory, Dailekh                                | Dailekh | Govt           |
| 3     | Karnali Academy of Health Science                                   | Jumla   | Govt           |
| 4     | Surkhet Provincial Hospital/ Avian Disease Investigation Laboratory | Surkhet | Govt           |

**Map 10: Geographic Distribution of the COVID-19 Laboratories in Karnali Province**



## 2.3 TESTING CAPACITY OF THE LABORATORIES

**Table 3: Testing capacity of COVID-19 laboratories in Karnali Province**

| Name of Laboratory                      | Date of Establishment (DD/MM/YYYY) | Estimated Testing Capacity/day | Maximum PCR tests/ run |
|-----------------------------------------|------------------------------------|--------------------------------|------------------------|
| Chaurjahari Municipality PCR Laboratory | 17/03/2020 (04/12/2076)            | 150-200                        | 96                     |
| COVID-19 Testing Laboratory, Dailekh    | 20/03/2020 (07/12/2076)            | Individual 100, pooled 240     | 96                     |
| Karnali Academy of Health Sciences      | 02/04/2020 (20/12/2076)            | 150                            | 96                     |
| Surkhet Provincial Hospital             | 27/04/2020 (15/01/2077)            | 700                            | 96                     |

## 2.4 EQUIPMENT AVAILABILITY

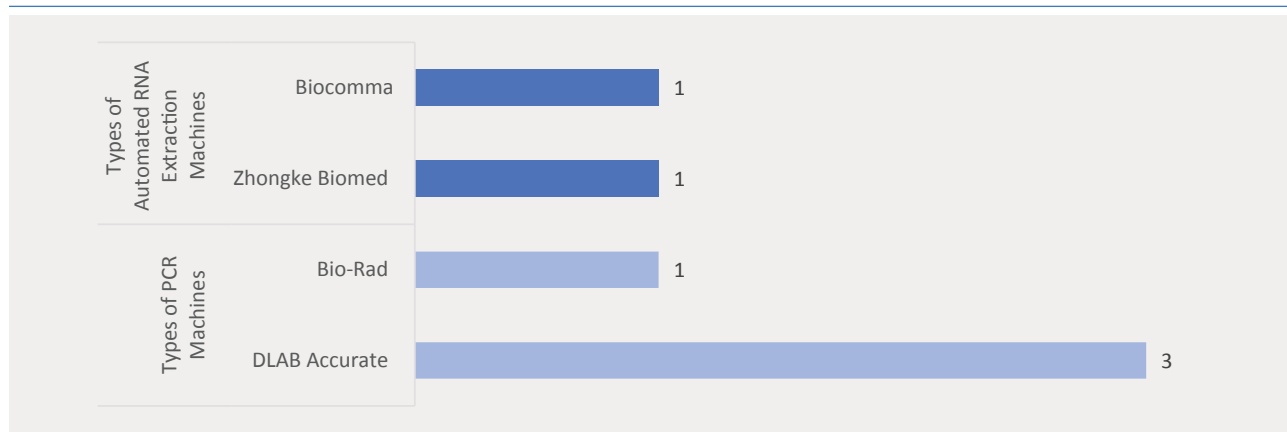
**Table 4: Distribution of Equipment used in COVID-19 laboratories in Karnali Province**

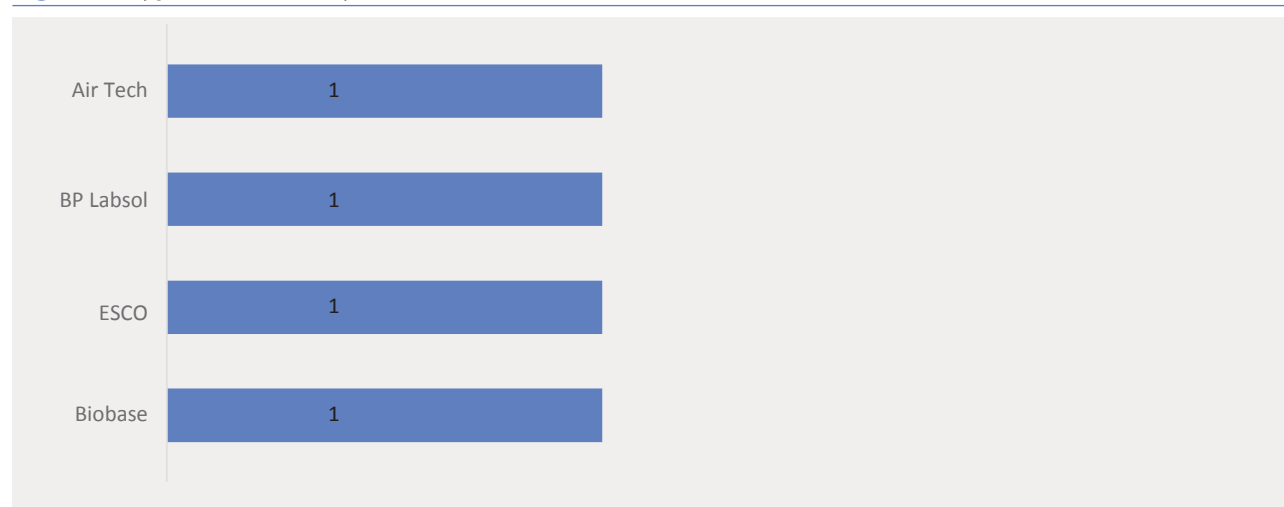
| Name of Laboratory                      | PCR Machine                          |     | RNA automated extraction machine |     | Biosafety Cabinet |     | Freezer (Qty) |       |
|-----------------------------------------|--------------------------------------|-----|----------------------------------|-----|-------------------|-----|---------------|-------|
|                                         | Brand (Capacity)                     | Qty | Brand (capacity)                 | Qty | Brand             | Qty | -80°C         | -20°C |
| Chaurjahari Municipality PCR laboratory | DLAB Accurate (96)                   | 1   | -                                | -   | Air Tech          | 1   | 1             | 1     |
| COVID-19 Testing Laboratory, Dailekh    | DLAB Accurate (96)                   | 1   | -                                | -   | Biobase           | 1   | -             | 1     |
| Karnali Academy of Health Sciences      | DLAB Accurate (96)                   | 1   | Zhongke Biomed                   | 1   | BP Labsol         | 1   | -             | 1     |
| Surkhet Provincial Hospital             | CFX 96 Bio-Rad RT PCR thermal Cycler | 1   | Biocomma                         | 1   | ESCO              | 1   | -             | -     |

**Table 5: Types and capacity of Autoclave machines COVID-19 laboratories in Karnali Province**

| Name of Laboratory                      | Number of Autoclave machine | Capacity (litres)   | Company (Brand)               |
|-----------------------------------------|-----------------------------|---------------------|-------------------------------|
| Chaurjahari Municipality PCR laboratory | 1                           | 100 l               | Biobase                       |
| COVID-19 Testing Laboratory, Dailekh    | 1                           | 100 l               | Biobase                       |
| Karnali Academy of Health Sciences      | No Separate autoclave       | -                   | -                             |
| Surkhet Provincial Hospital             | 2                           | 1= 50 l<br>2= 100 l | Cryste<br>Brand not specified |

**Figure 4: Types of PCR Machines and Automated RNA Extraction Machines in COVID-19 laboratories in Karnali Province**

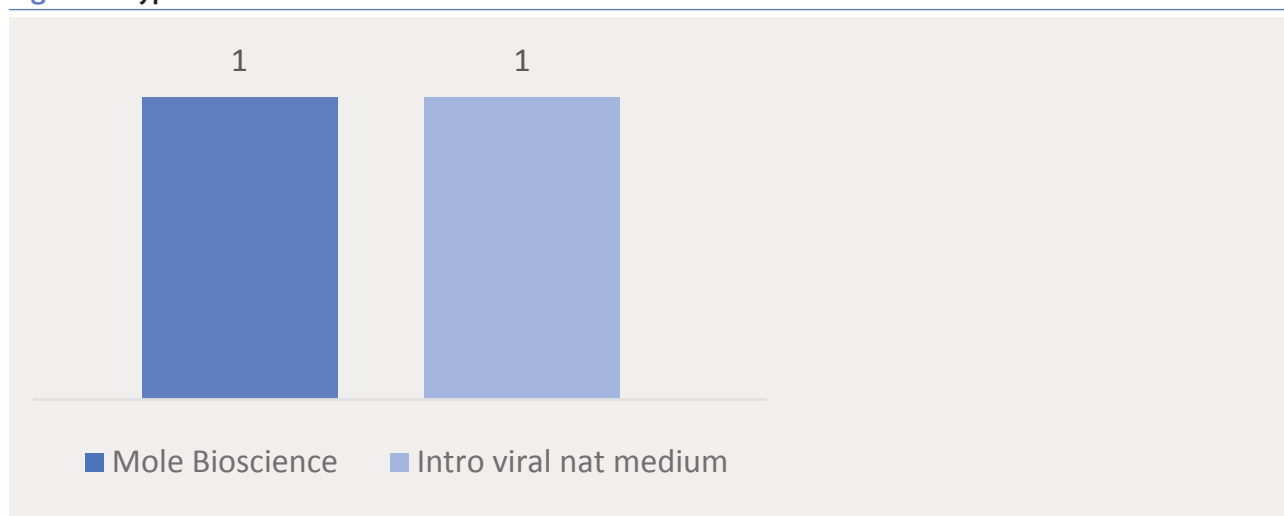
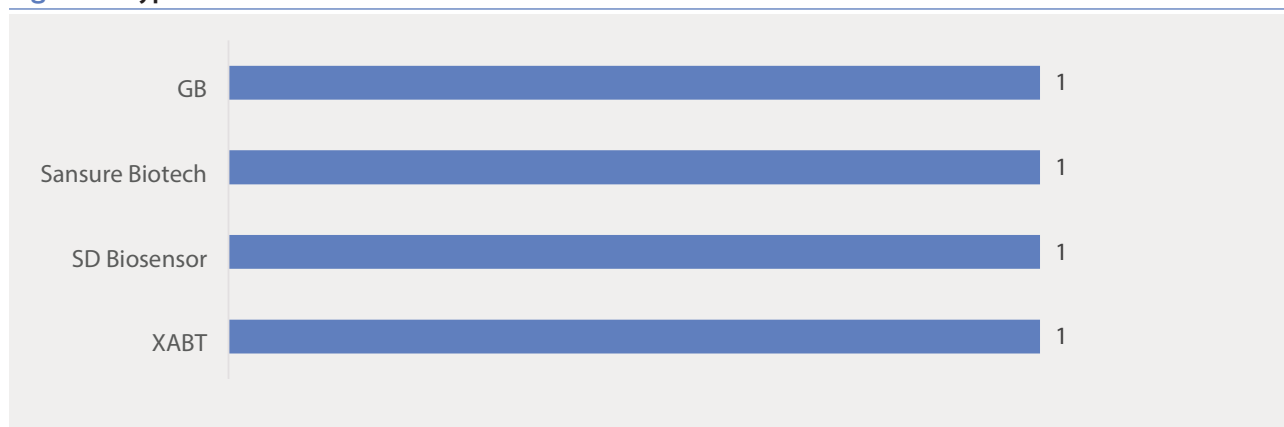
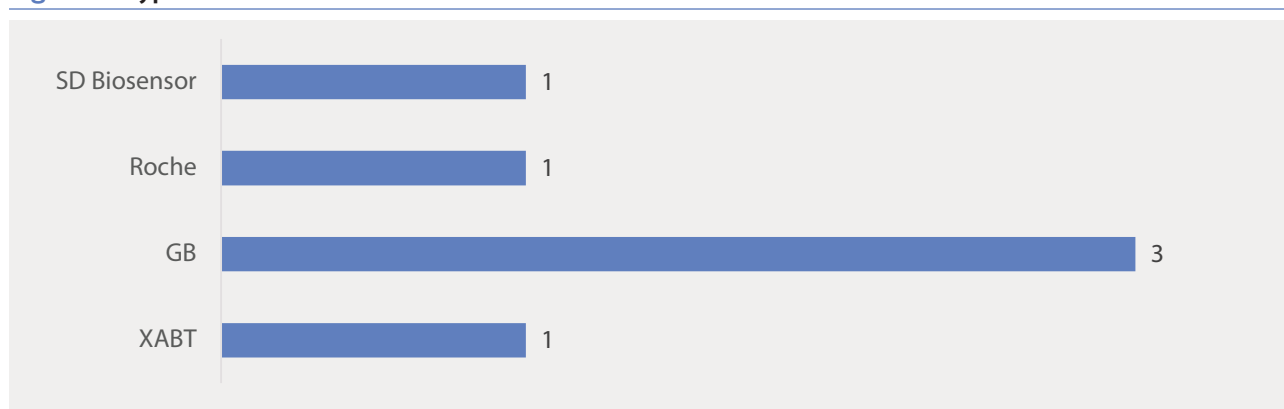


**Figure 5: Types of Biosafety Cabinet in COVID-19 laboratories in Karnali Province****Figure 6: Types and Capacity of Autoclave Machines in COVID-19 laboratories in Karnali Province**

## 2.5. CONSUMABLES/ LABORATORY REAGENTS

**Table 6: Brands of Viral Transport Media (VTM), PCR Test Kits and RNA extraction kits used in COVID-19 laboratories in Karnali Province**

| Name of Laboratory                      | VTM in use             | PCR test kits                               | RNA Extraction kits                         |
|-----------------------------------------|------------------------|---------------------------------------------|---------------------------------------------|
| Chaurjahari Municipality PCR laboratory | Mole Bioscience        | XABT, Beijing Applied Biological Technology | XABT, Beijing Applied Biological Technology |
| COVID-19 Testing Laboratory, Dailkeh    | Not in use             | SD Biosensor                                | GB<br>Roche Life Science                    |
| Karnali Academy of Health Sciences      | Intro viral nat medium | Sansure Biotech                             | SD Biosensor,<br>GB I                       |
| Surkhet Provincial Hospital             | -                      | GB                                          | GB                                          |

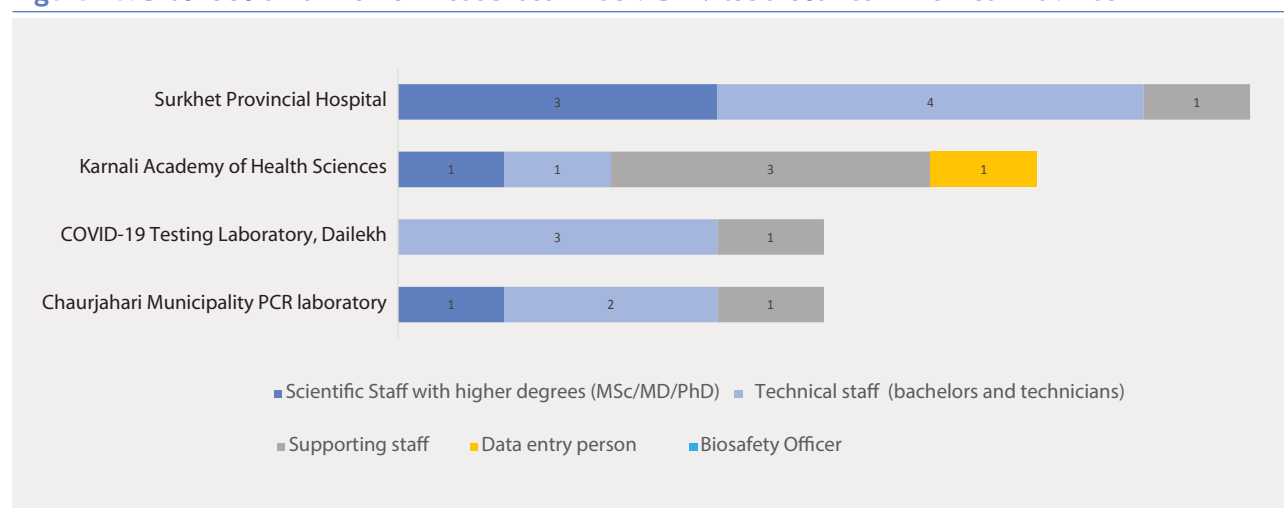
**Figure 7: Types of VTM used in COVID-19 laboratories in Karnali Province****Figure 8: Types of PCR test kits used in COVID-19 laboratories in Karnali Province****Figure 9: Types of RNA Extraction kits used in COVID-19 laboratories in Karnali Province**

## 2.6 HUMAN RESOURCES

**Table 7: Distribution of Human Resources in COVID-19 laboratories in Karnali Province**

| Name of Laboratory                      | Number of scientific staff with higher degrees (MSc/MD/PhD) | Number of technical staff (bachelors and technicians) | Number of supporting staff | Number of data entry person | Number of bio-safety officer |
|-----------------------------------------|-------------------------------------------------------------|-------------------------------------------------------|----------------------------|-----------------------------|------------------------------|
| Chaurjahari Municipality PCR laboratory | 1                                                           | 2                                                     | 1                          | -                           | -                            |
| COVID-19 Testing Laboratory, Dailkeh    | -                                                           | 3                                                     | 1                          | -                           | -                            |
| Karnali Academy of Health Sciences      | 1                                                           | 1                                                     | 3                          | 1                           | -                            |
| Surkhet Provincial Hospital             | 3                                                           | 4                                                     | 1                          | -                           | -                            |

**Figure 10: Distribution of Human Resources in COVID-19 laboratories in Karnali Province**



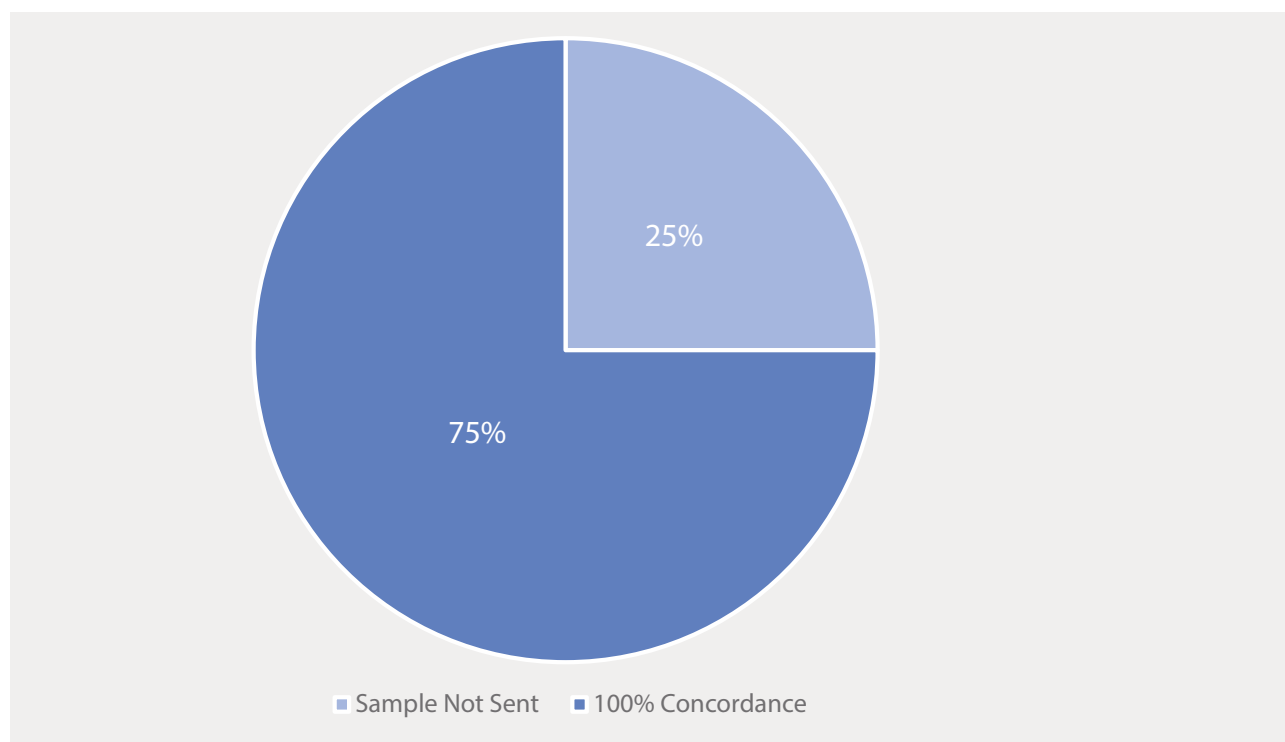
## 2.7 LABORATORY QUALITY INDICATORS

**Table 8: Laboratory Quality Indicators of COVID-19 labs in Karnali Province**

| Name of Laboratory                      | Result of EQAS (Retesting done at NPHL and Proficiency Testing in %) |                    |                   |                 | PT Panel        |
|-----------------------------------------|----------------------------------------------------------------------|--------------------|-------------------|-----------------|-----------------|
|                                         | Asadh (June-July)                                                    | Shrawan (July-Aug) | Bhadra (Aug-Sept) | Asoj (Sept-Oct) |                 |
| Chaurjahari Municipality PCR laboratory | NE                                                                   | 100                | 100               | NP              | Sample not sent |
| COVID-19 Testing Laboratory, Dailkeh    | NE                                                                   | 100                | 100               | NP              | 100             |
| Karnali Academy of Health Sciences      | NP                                                                   | NP                 | NP                | NP              | 100             |
| Surkhet Provincial Hospital             | NP                                                                   | 100                | 60                | NP              | 100             |

Note: NE: Not Established, NP: Not Participated

**Figure 11: Performance of SARS-CoV-2 real time RT-PCR Proficiency test panel in functional laboratories in Karnali Province**



## 2.8 LABORATORY BIOSAFETY AND BIOSECURITY PRACTICES

### Biosafety

All laboratories are following basic laboratory biosafety practices including using PPE and processing all clinical samples in a biosafety cabinet. However, there is no biosafety manual available. Though many laboratories have designated biosafety officers, adequate training and supervision is absent in almost all laboratories. Mostly biosafety training is limited to donning and doffing of PPE. The laboratory staff are not trained in the appropriate and safe use of biosafety cabinets. None of the biosafety cabinets are certified or have any plan in place for their annual maintenance. As most of the samples are collected

in virus inactivating virus transport medium (VTM) the risk is reduced and low while handling these samples. However, a variety of VTMs are in use. There is a need to ensure the laboratories and field personal only use VTM which inactivates the virus.

### Biosecurity

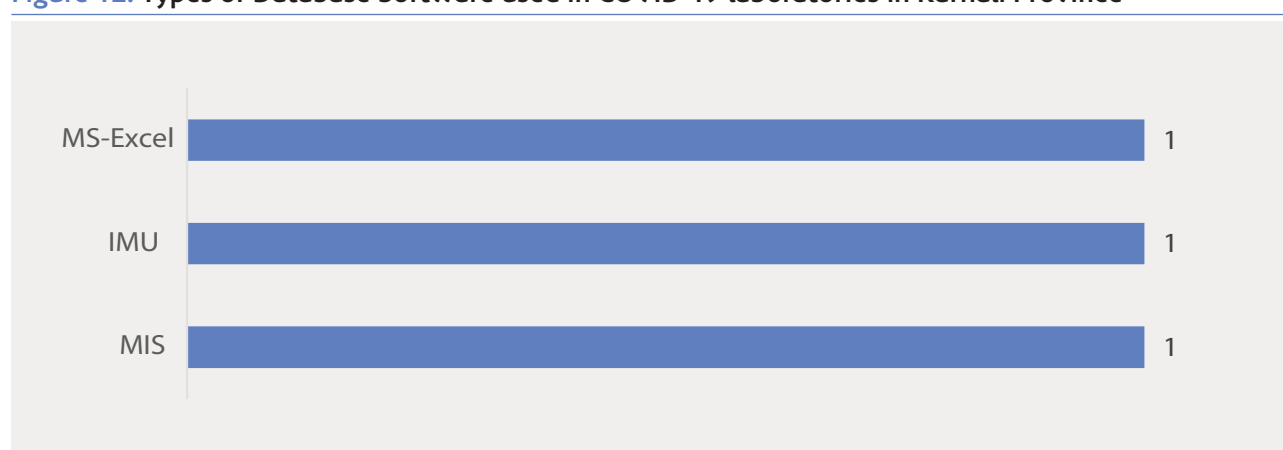
Though few laboratories have access control and surveillance camera in place, there is no regular supervision. There is no biosecurity manual or policy available in these laboratories. Most of the laboratories are storing positive samples as far as their storage space allows. The freezers are not secured with lock and key. As most of the samples are collected in virus inactivating virus transport medium (VTM) the risk of handling live virus is reduced.

## 2.9 LABORATORY INFORMATION MANAGEMENT

**Table 9: Distribution of Laboratory Information Management of COVID-19 laboratory in Karnali Province**

| Name of Laboratory                      | Availability of computer for data entry (Number) | Type of Database                                                                |
|-----------------------------------------|--------------------------------------------------|---------------------------------------------------------------------------------|
| Chaurjahari Municipality PCR laboratory | 1                                                | MIS                                                                             |
| COVID-19 Testing Laboratory, Dailkeh    | 2                                                | IMU (Information Management Unit) (on plan to use new software)                 |
| Karnali Academy of Health Sciences      | Not available                                    | Manual record in record file and then sent to Medical record for Hospital entry |
| Surkhet Provincial Hospital             | 2                                                | MS-Excel                                                                        |

**Figure 12: Types of Database Software used in COVID-19 laboratories in Karnali Province**



COVID-19 data is shared daily from all laboratories with HEOC, EDCD, NPHL, respective municipalities and MoSD.

## 2.10 OBSERVATIONS

- Almost all laboratories are set up outside the institutional infrastructure and housed in rented or temporary buildings.
- Laboratories are disproportionately distributed and mostly clustered in one area or district resulting in inequity of access to testing across districts.
- Facilities are well designed for molecular diagnostics of COVID-19.
- Local leadership and ownership are there but it is limited to COVID-19 response only.
- No clear plan for sustaining the laboratory and extending the services for other infectious diseases.
- Equipment and consumables are procured by local govt or supplied by central government.
- A variety of equipment and reagents used in the province. Equipment calibration and maintenance plan is missing in all most all laboratories.

- While all laboratories have at least one trained / partially trained staff, majority of the staff did not possess any experience in molecular diagnostics which includes supervisors.
- There is commendable commitment of laboratory staff. They are undertaking extra hours of work to reduce turnaround time.
- There is very poor documentation. Though they follow manufacturers instruction for RNA extraction and real time SARS-CoV-2 PCR, no SOPs available for any laboratory process despite access to national laboratory guidelines from NPHL with templates. They cite the lack of manpower for poor documentation.
- Laboratory information management system is not adequate. Many laboratories enter data to generate a test report and enter data into the NPHL management information system. However, there are often delays in data entry and report generation and this adversely affects the turnaround time. In addition, they also provide cumulative data and data on positive cases to MoHP (EDCD and HEOC respectively).
- Many laboratories find it difficult to interpret borderline results. As the current national guidelines allow to report a result as positive or negative only. So borderline results are interpreted subjectively and often reported as positive. This has resulted in false positive reports.
- Most of the laboratories have inadequate biomedical management system. There is no sufficiently sized autoclave to match the workload for decontaminating the biomedical waste. It appears biomedical waste is burned with or without adequately autoclaving. Most of the

laboratories lack documentation on biomedical waste management.

- Frequent change of PCR reagents and compatibility of reagents with PCR machine is a concern for laboratory quality.
- It appears most of these laboratories / facilities will have a natural death once COVID-19 testing policy is changed or once the pandemic is over.

## 2.11 RECOMMENDATIONS

- NPHL should revise the national laboratory guidelines to allow reporting of borderline results as indeterminate or inconclusive rather than leaving subjective interpretation of individual laboratories.
- There is a need for hands on training. Though WHO is supporting NPHL for online weekly training of COVID-19 laboratories, the attendance is poor. The staff of hub laboratories could be trained at NPHL to provide hands on training to other laboratories.
- There is a need to encourage laboratory networking by creating a structure of hub and spoke model with NPHL as apex laboratory and Provincial Public Health laboratory / Medical college or another well-functioning laboratory in the province as hub laboratory. Pairing of Provincial public health laboratories with a medical colleges will be useful.
- It is advised to convert- at least one laboratory per province and selected medical college laboratories into Influenza – SARS-CoV-2 sentinel surveillance laboratories. The new WHO multiplex Influenza- SARS-CoV-2 kits may be useful. Inclusion of Medical colleges may improve SARI surveillance.

- There is a need to issue clear guidelines for biomedical waste management in the laboratories. The laboratories may require support in terms of load appropriate autoclaves. Other partner agencies may be approached for this support.
- Selected laboratories need to be supported for equipment maintenance and calibration to ensure quality. In country training may be organised to create a cadre of biomedical engineers / laboratory technologists for calibration of equipment. Alternatively, one or more agencies may be contracted to provide support.
- As a long-term strategy selected laboratories may be supported to provide laboratory surveillance / diagnostic services for common epidemic prone / endemic diseases such as Dengue, Leptospirosis and Scrub Typhus and AMR surveillance.



3

## **INFECTION PREVENTION AND CONTROL AND CLINICAL MANAGEMENT**

# INFECTION PREVENTION AND CONTROL AND CLINICAL MANAGEMENT

## 3.1 BACKGROUND

Karnali Province, the largest of the seven Federal provinces of Nepal came into existence following the promulgation of the Constitution of Nepal in 2015. Birendranagar, the largest city of the province is its capital. It borders the Tibet Autonomous Region of China to the north, Gandaki Province to the east, Sudurpashchim Province to the west, and Lumbini Province to the south.

Karnali Province is divided into 10 districts. These 10 districts are divided into 25 municipalities and 54 rural municipalities. Birendranagar is the only metropolitan city of this Province.

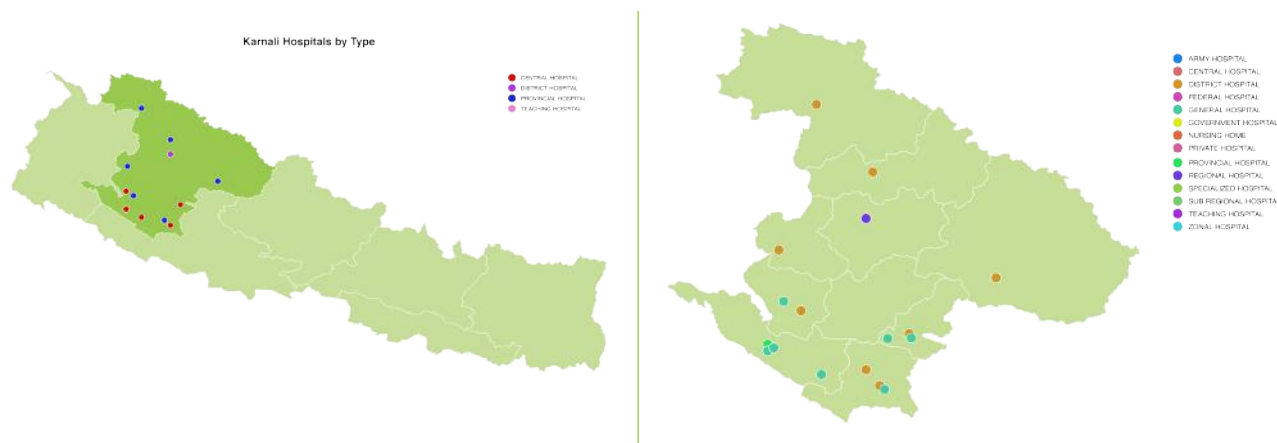
## 3.2 HEALTH BACKGROUND

According to the National Demographic Health Survey (NDHS) 2016, the Province's neonatal mortality (per 1000 live births) stands at 29 and infant mortality rate (per 1000 live births) stands at 47, both of which are higher than the national average of 21 and 32 respectively.

## 3.3 HEALTH FACILITIES BY TYPE

According to the Annual report of Department of Health Services (DoHS) 2018/19, Karnali Province has 12 public hospitals, 14 Primary Health Care Centres (PHCCs), 335 Health posts and 74 Non- public facilities.

**Map 11: Health facilities by type**

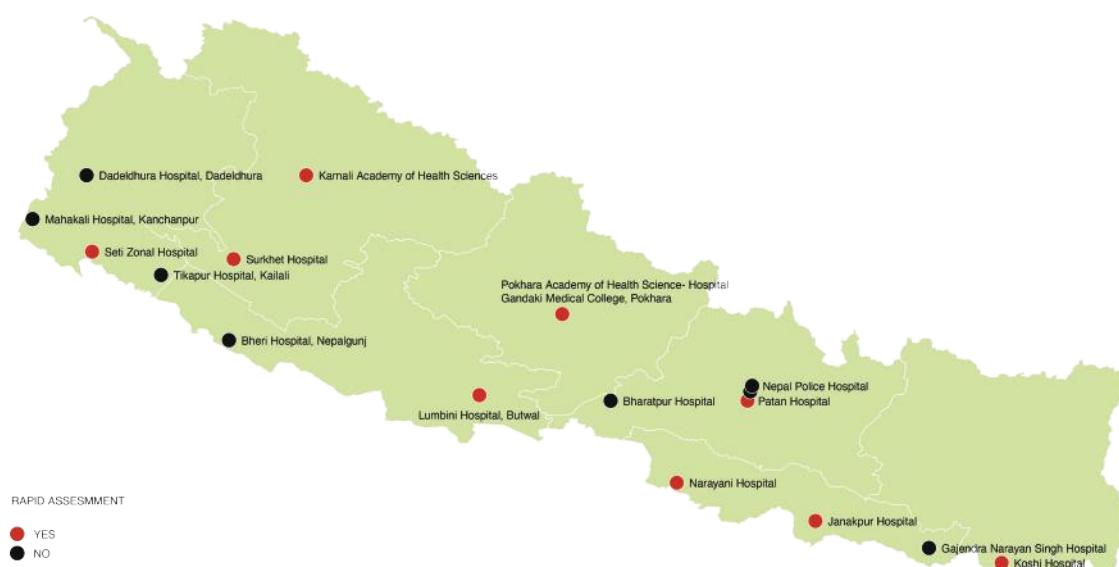


### 3.4 FINDINGS OF A RAPID ASSESSMENT (RA) FOR COVID-19 READINESS 2020

In April 2020 the Curative Services Division (CSD) of the Ministry of Health and Population (MoHP) led a multi

sectoral team to design and develop a rapid assessment tool to assess what was then designated 12 COVID-19 Level II Hospitals. In Karnali Province, Provincial hospital, Surkhet and Karnali Academy of Health Sciences (KAHS) were designated and took part in rapid assessment.

**Map 12: Level 2 Hospitals in Nepal**



The key findings of the rapid assessment as recorded during self-assessment of Provincial hospital, Surkhet and KAHS includes the following:

**Table 10: Key Findings from RA- Provincial hospital Surkhet**

| ICU beds Adult                  | ICU beds children | Functioning ventilators | Oxygen Supply                                                  | COVID-19 designated Nurses | COVID-19 designated MD                                                               | IPC Focal Person | IPC program / activities | IPC dedicated budget |
|---------------------------------|-------------------|-------------------------|----------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------|------------------|--------------------------|----------------------|
| 4                               | No                | 6                       | Cylinder Concentrator                                          | 18                         | 4                                                                                    | No               | Yes                      | Yes                  |
| Key Guidance documents in place |                   | Training on COVID-19    | Autoclave of alternative treatment technology present          |                            | Specific plan in place for patients or family members to mitigate COVID-19 infection |                  |                          |                      |
| Yes, 11/16 are present          |                   | Yes                     | Yes, present but not functional and/or of sufficient capacity. |                            | Yes                                                                                  |                  |                          |                      |

**Table 11: Key Findings from RA- Karnali Academy of Health Sciences**

| ICU beds Adult                  | ICU beds children | Functioning ventilators | Oxygen Supply                                         | COVID-19 designated Nurses | COVID-19 designated MD                                                               | IPC Focal Person | IPC program / activities | IPC dedicated budget |
|---------------------------------|-------------------|-------------------------|-------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------|------------------|--------------------------|----------------------|
| 10                              | 3                 | 4                       | Cylinder Concentrator                                 | 8                          | 3                                                                                    | No               | No                       | No                   |
| Key Guidance documents in place |                   | Training on COVID-19    | Autoclave of alternative treatment technology present |                            | Specific plan in place for patients or family members to mitigate COVID-19 infection |                  |                          |                      |
| Yes, 9/16 are present           |                   | Yes                     | Yes                                                   |                            | Yes                                                                                  |                  |                          |                      |

### 3.5 CURRENT STATUS OF COVID-19 AND NON-COVID-19 HEALTH SERVICE PROVISION

The table below shows the government health facilities and medical colleges in Karnali Province providing various health services in context of COVID-19.

**Table 12: Health services provided by various government hospitals and medical colleges**

| Name of Facility                   | District   | Non COVID-19 services |      |                            |
|------------------------------------|------------|-----------------------|------|----------------------------|
|                                    |            | Outpatient            | MNCH | Surgery                    |
| Dailekh Hospital                   | Dailekh    | ✓                     | ✓    | ✓                          |
| Dullu Hospital                     | Dailekh    | ✓                     | ✓    | x                          |
| Dolpa Hospital                     | Dolpa      | ✓                     | ✓    | x                          |
| Humla Hospital                     | Humla      | ✓                     | ✓    | x                          |
| Jajarkot Hospital                  | Jajarkot   | ✓                     | ✓    | ✓ (spinal anesthesia only) |
| Jumla Hospital                     | Jumla      | -                     | ✓    | -                          |
| Kalikot Hospital                   | Kalikot    | ✓                     | ✓    | ✓                          |
| Mugu Hospital                      | Mugu       | ✓                     | ✓    | ✓                          |
| Rukum Western Hospital             | Rukum west | ✓                     | ✓    | x                          |
| Salyan Hospital                    | Salyan     | ✓                     | ✓    | ✓                          |
| Surkhet Provincial Hospital        | Surkhet    | ✓                     | ✓    | ✓                          |
| Karnali Academy of Health Sciences | Karnali    | ✓                     | ✓    | ✓                          |
| Melkuna Hospital                   | Karnali    | ✓                     | ✓    | x                          |
| Chaurghari Hospital                | Karnali    | ✓                     | ✓    | ✓                          |

**Table 13: Covid-19 Designated Hospitals – HUB Hospital Details**

| S No. | Hub Hospitals                      | COVID-19 Designated Hospitals (Yes/No) | Formation of EMDT |
|-------|------------------------------------|----------------------------------------|-------------------|
| 1     | Karnali Academy of Health Sciences | Yes                                    | Yes               |
| 2     | Provincial Hospital, Surkhet       | Yes                                    | Yes               |

### 3.6 CURRENT STATUS OF BED CAPACITY AND ESSENTIAL HUMAN RESOURCES FOR HEALTH (HRH)

**Table 14: Bed capacity and Human Resources**

| S.N.            | Categories                               | Provincial hospital Surkhet |                         | KAHS                |                         |
|-----------------|------------------------------------------|-----------------------------|-------------------------|---------------------|-------------------------|
|                 |                                          | COVID-19 Designated         | Non-COVID-19 Designated | COVID-19 Designated | Non-COVID-19 Designated |
| Bed capacity    |                                          |                             |                         |                     |                         |
| 1.              | Total bed capacity                       | 200                         | 115                     | 120                 | 180                     |
| 2.              | Bed capacity HDU                         |                             | 0                       |                     | 20                      |
| 3.              | Bed capacity ICU                         | 15                          | 4                       | 6                   | 4                       |
| Human Resources |                                          |                             |                         |                     |                         |
| 4.              | Total number of MD (Consultants)         |                             | 24                      |                     | 15                      |
| 5.              | Number of anesthesiologists/intensivists |                             | 2                       |                     | 5                       |
| 6.              | Total nurses                             |                             | 84                      |                     | 80                      |
| 7.              | Total nurses trained in Critical Care    |                             | 13                      |                     | 19                      |

**Table 15: Establishment of Emergency Medical Deployment Team (EMDT) for COVID-19 Response**

| EMDT Establishment                 |                        |                                                     |
|------------------------------------|------------------------|-----------------------------------------------------|
| Name of the hospital               | Number of Team members | Team Composition                                    |
| Karnali Academy of Health Sciences | 10                     | • 5 Medical Doctors<br>• 3 Nurses<br>• 2 Paramedics |
| Provincial Hospital, Surkhet       | -                      | -                                                   |

**Table 16: Training of healthcare workers and support staff**

| Training on Case Investigation and Contact Tracing (CICT) -Karnali Province |                      |               |                            |                         |
|-----------------------------------------------------------------------------|----------------------|---------------|----------------------------|-------------------------|
| District/Institute                                                          | Participated Palikas | Total Palikas | Date                       | Total trained           |
| Salyan                                                                      | 4                    | 10            | September to November 2020 | 21 (13 Male, 8 Female)  |
| Jajarkot                                                                    | 7                    | 7             |                            | 42 (25 Male, 17 Female) |
| Surkhet                                                                     | 9                    | 9             |                            | 92 (43 Male, 49 Female) |
| Kalikot                                                                     | 9                    | 9             |                            | 41 (28 Male, 13 Female) |
| Jumla                                                                       | 7                    | 8             |                            | 78 (56 Male, 22 Female) |
| Dolpa                                                                       | 3                    | 8             |                            | 21 (16 Male, 5 Female)  |
| Rukum                                                                       | 6                    | 6             |                            | 51 (36 Male, 15 Female) |
| Mugu                                                                        | 4                    | 4             |                            | 21 (9 Male, 12 Female)  |
| Humla                                                                       | 3                    | 7             |                            | 20 (14 Male, 6 Female)  |
| Dailekh                                                                     | 3                    | 11            |                            | 17 (11 Male, 6 Female)  |

Note: No ECCT training in this province (Nov 2020)

**Table 17: Clinical Management COVID-19**

| Current number of COVID-19 cases in Karnali Province             |        |     |           |       |             |                   |      |
|------------------------------------------------------------------|--------|-----|-----------|-------|-------------|-------------------|------|
| Karnali Province COVID -19 Cases (Source: MoHP 30 November 2020) |        |     |           |       |             |                   |      |
| Date                                                             | Active | ICU | Recovered | Death | Total cases | Recovered & Death | CFR  |
| 30 November 2020                                                 | 153    | 9   | 5932      | 23    | 6108        | 5955              | 0.37 |

The following information is for the then level II hospital, Provincial hospital, Surkhet and Karnali Academy of Health Sciences (KAHS):

**Table 18: Treatment Modalities available**

| Name of the hospital         | Remdesivir | Hydrocortisone | Convalescent Plasma | Clinical trials | Secondary infections | Others |
|------------------------------|------------|----------------|---------------------|-----------------|----------------------|--------|
| Provincial hospital, Surkhet | No         | Yes            | No                  | No              | Yes                  | -      |
| KAHS                         | No         | Yes            | No                  | No              | Yes (RTI)            | -      |

### 3.7 DISABILITY INCLUSION, REHAB & POST COVID-19 CARE

**Table 19: Availability of services for disability inclusion**

| Availability of services for disability inclusion                                                                                                   | Provincial hospital, Surkhet | KAHS |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------|
| Accessible facilities (low level beds, transfer board, wheelchair accessible toilet with commode, drinking water within reach, etc.)                | Yes                          | -    |
| Assistive devices available and functional (wheelchair, crutches, etc.)                                                                             | Yes (only wheelchair)        | -    |
| Nurses and paramedics trained in basic disabilities inclusion and rehabilitation                                                                    | Yes (1)                      | -    |
| Facility linked to tele/virtual help-desk for disable people and virtual expert pool – Rehab nurse, physiotherapist, psychologist, speech therapist | Yes                          | -    |

### 3.8 CAPACITY TO PROVIDE OXYGEN IN KARNALI PROVINCE

Information gathered from 13 hospitals:

- Dailekh Hospital
- Mugu Hospital
- Dullu Hospital
- Rukum Western
- Dolpa Hospital
- Salyan Hospital
- Humla Hospital
- Surkhet Provincial Hospital
- Jajarkot Hospital
- Karnali Academy of Health Sciences
- Melkuna Hospital (No COVID-19 beds)
- Kalikot Hospital
- Chaurghari Hospital

**Table 20: Capacity to provide oxygen by bed**

| Type of beds across 13 hospitals                                             | Number of beds |
|------------------------------------------------------------------------------|----------------|
| COVID-19 beds capable of delivering low flow O2 (5L/min)                     | Unknown        |
| COVID-19 beds capable of delivering high flow O2 not on ICU or HDU (10L/min) | Unknown        |
| No. of HDU beds                                                              | 35             |
| No. of ICU beds for Covid-19                                                 | 29             |
| No. of ventilators for COVID-19 patients                                     | 18             |

**Table 21: Oxygen Availability**

| Oxygen supply                                                                            | Number  |
|------------------------------------------------------------------------------------------|---------|
| Oxygen Plant                                                                             | 3       |
| Oxygen plant output expressed as number of cylinders per day                             | Unknown |
| Number of oxygen cylinders available                                                     | 398     |
| Number of oxygen concentrators                                                           | 85      |
| "Minimum number of large cylinders available (plant output added to cylinders available) | >398    |

### OXYGEN SUPPLY AND DEMAND

- Demand based on ICU and HDU capacity delivering 10L/min oxygen (2.2 cylinders per day),
- Plus total covid-19 bed capacity delivering on average 1.5 cylinders per day (mix of high flow and low flow oxygen)
- Some low flow oxygen can be delivered using oxygen concentrators, which is taken into account at the hospital level

| Oxygen supply and demand         | Number of cylinders |
|----------------------------------|---------------------|
| Total oxygen requirement per day | 799                 |
| Number of cylinders available    | >398                |
| Gap (-)/Excess (+)               | -401                |

4



## **RISK COMMUNICATION AND COMMUNITY ENGAGEMENT**

# RISK COMMUNICATION AND COMMUNITY ENGAGEMENT

Major religion is Hinduism which accounts for 95% followed by Buddhism (3%), Christianity (1%) and others (1%).

## 4.1 DEMOGRAPHIC INFORMATION OF KARNALI PROVINCE<sup>1</sup>

### 4.1.1. Ratio

The ratio of women in Karnali Province is more than that of men. There are 51% female and 49% males.

### 4.1.2. Religion

Religion in Karnali Province primarily encompasses 3 groups. Its major religion is Hinduism which accounts for 95% followed by Buddhism (3%), Christianity (1%) and others (1%).

### 4.1.3. Caste

Chhetri is the largest caste in Karnali Province having 42% of the total population followed by Kami (16%), Magar (11%), Thakuri (10%), Brahmin-Hill (8%), Dalit (7%), Sanyasi/Dasnami (2%), Tamang (1%) and others groups (3%).

### 4.1.4. Language Spoken

96% of the population speak Nepali language. The second most spoken language is Magar (2%) followed by Tamang (1%) and other languages (1%).

### 4.1.5. Literacy Rate

The literacy rate in Karnali Province is 62% which means that 38% of the population are unable to read or write.

### 4.1.6. Education Level<sup>2</sup>

There are many education levels in Karnali Province. They are: Primary Level (47%), Lower Secondary Level (21%), Secondary Level (10%), SLC (7%), Intermediate Level (4%), Beginner (6%), Non-formal (4%) and Graduate (1%).

## 4.2 INFILTRATION OF MASS MEDIA COMMUNICATION

### 4.2.1. Community Radio

There are a total of 27 community radio stations in Karnali Province. Detail information of these radio stations are mentioned in Annex 1.

### 4.2.2. Source of communication (Access to Radio, TV, Internet and telephone)<sup>3</sup>

In Karnali province, 52.0% of the population have access to radio, followed by 8.5% having access to TV. Only 0.4% have access to the internet. Similarly, 2.2% have access to landline telephones while 42.8% have access to mobile phones.

### 4.2.3. Popular Newspaper Channels

There are a total of 24 newspaper channels in Karnali Province with provincial and local outreach. As per the classification some of the top ranking newspapers are Dhamaka Dainik, Aaha Sanchar Saptahik and Rekhdek Saptahik. Full details of the newspaper available in Karnali Province are mentioned in Annex 2.

### 4.2.4. Cell Phone Providers

There are two major cell phone providers in Karnali Province. They are Nepal Doorsanchar Company Limited (NTC), Ncell Axiata Limited (NCELL). These providers have coverage across the district of Karnali Province.

1. <https://nepalmap.org/profiles/province-1-province-no-1/>

2. Primary (class 1 to 5), Lower secondary (class 6 to 8), Secondary (class 9 to 10)

3. <https://cbs.gov.np/social-statistics-2075/>

### 4.3 PROVINCIAL LEVEL SPOKESPERSON

- Name: Name of spokesperson:  
Dr Rabin Khadka
- Designation: Health Director
- Contact number: 9851196000
- Email ID: khadkarabin6000@gmail.com
- Language spoken: Nepali

### 4.4 SPOKESPERSON FOR COVID-19 DESIGNATED HOSPITALS

There are a total of 13 hospitals in Karnali Province that are designated for COVID-19. The names of the hospitals are mentioned in Annex 3.

### 4.5 COMMUNITY ENGAGEMENT

#### 4.5.1. Provincial or District Call Centre

There is no call centre in Karnali Province. In case of any query, the District Health Offices provide landline/mobile numbers to the potential cases. Similarly, no mechanism is in place to disseminate phone numbers. Officials personally answer the call. The call service is available 24/7.

#### 4.5.2. Social Service Operation Organization

The list of organizations who support the government with disseminating messages about COVID-19 are as follows:

- Lions Club
- Jaycees, Birendranagar, Surkhet
- Surkhet Women Jaycees
- Jaycees Chhinchu, Surkhet
- Nepal Red Cross Society

#### 4.5.3. Major Business Groups (Industrial)

There presently are no business groups to support Karnali Province in disseminating messages related to COVID-19. The UN/INGOs are supporting the provincial government in risk communication and message dissemination.

#### 4.5.4. Rumour & Misinformation Monitoring Mechanism

There are many rumours and misinformation being circulated regarding COVID-19. In order to address potential rumours and misinformation, MOSD/HDH has prepared a standard messages disseminated across the districts via different channels. MOSD/HDH are the key agencies that monitor/receive feedback from districts about the potential misinformation regarding the COVID-19.

#### 4.5.5. Media Monitoring

Media reports are being monitored during preparation of bi-weekly provincial Situation Reports. These reports are shared with UNCT by each Provincial Focal Point Agency. Respective UN agencies are following up with the different media reports. However, there is no systematic mechanism for media monitoring.

### 4.6 PRESS BRIEFINGS

In Karnali Province, daily briefing from MoSD started on 21 May 2020. However, it was discontinued from 23<sup>rd</sup> September 2020. Press release of the situation report continued through the Facebook page, thereafter.

## 4.7 REPORTING

Situation reports are shared in Karnali Province. PHEOC shares reports with the government counterparts of MoSD, EDCCD, Health Directorate and MoHP on a daily basis. Similarly, MoSD, Karnali publishes the situation report on their Facebook page.

## 4.8 OTHER ACTIVITIES

There are many activities that are conducted at the Provincial level/ district level for Risk Communication & Community Engagement (RCCE) in Karnali Province. These activities are conducted to create awareness to the community about COVID-19. Some of the awareness activities are as follows:

- FM interview of officials on risk communication on the subject are conducted on a regular basis.
- Posters are developed by the health directorate with support from Strengthening System for Better Health (SSBH).
- Posters on COVID-19 preventive measures are distributed to districts.

## 4.9 CHALLENGES

There are many challenges in Karnali Province regarding information related to Risk Communication & Community Engagement. Such as:

- Remoteness of geography
- Limited access to connectivity (phone and internet)
- Lack of systematic monitoring mechanism.

5



## **OPERATIONS SUPPORT AND LOGISTICS**

# OPERATIONS SUPPORT AND LOGISTICS

The provincial profile for the Operations Support and Logistics Pillar has been subdivided into the following categories:

- Health Emergency Operations Center
- Provincial Health Emergency Operations Center
- Electronic-Logistic Information Management System
- Points of Entry
- Repurposing of Health Facilities for Isolation beds

## Health Emergency and Operations Center

The Health Emergency Operations Center (HEOC) acts as the secretariat of the Ministry of Health and Population during health emergencies, including the COVID-19 pandemic. It is the central communication body for the provincial and local levels, and it also coordinates with affiliated international bodies, NGOs, and other organizations.

The HEOC's operations are currently supported by four WHO staff, and six personnel from the government (medical superintendent, section officer, staff nurse, officer, helper).

## Provincial Health Emergency Operations Centers

Provincial Health Emergency Operations Centers (PHEOCs) play an integral part in different areas of health sector preparedness and response readiness, such as hub and satellite hospital network coordination, prepositioning and replenishing emergency medical logistics, risk assessment, and human resources management, among others.

WHO has deployed a team in all seven province to support the provincial governments in health emergency/disaster preparedness, recovery and response. Each team consists of Field Medical Officers (FMOs), a COVID Surveillance Associate (CSA), an Information Management Assistant (IMA) and a driver.

The major roles of an FMO includes assisting federal and provincial health authorities in the core capacity enhancement of national health security,

as well as supporting health emergency/disaster preparedness, recovery and response. An FMO's responsibilities consist of:

- Implementing, monitoring, and assessing existing and planned epidemiologic and laboratory surveillance (event- and indicator-based) mechanisms.
- Establishing and ensuring the efficient functioning of the Public Health Emergency Management Sub-Committees (PHEM-SC) and HEOCs, and their effective coordination, communication and information management functions throughout the disaster/emergency management cycle.
- Maintaining a regular mechanism for the HEOC to coordinate with hub and satellite hospitals, health sector partners, and other stakeholders so as to collaborate on health sector emergency preparedness and response readiness interventions.
- Establishing, capacitating, maintaining readiness, and efficiently positioning emergency medical deployment teams from hub and satellite hospital networks.

The COVID Surveillance Associate (CSA) is responsible for:

- Maintaining daily communication with key hospitals, ground crossings, and tourist hotels identified by the federal and provincial health authorities to collect information on certain diseases, including COVID-19.
- Following up, maintaining records, and reporting the status of admission, investigation, sample collection and shipment, lab confirmation, clinical status and outcome, and referral or discharge details of identified cases.
- Monitoring, reporting, verifying, and investigating events/incidents associated with COVID-19 and other public health issues in coordination with WHE Field Medical Officers

- Assisting provincial health authorities in identifying population groups and vulnerable areas that are at high risk of COVID-19 transmission.

The Information Management Assistant (IMA) is responsible for:

- Communicating and coordinating with districts/local bodies/health facilities and other stakeholder partners to collect information and follow-up on potential public health emergencies for the preparation of situation reports.
- Generating first information reports on public health events/emergencies and reporting them to the WHE FMO and the supervising health authority.
- Updating databases on human as well as logistic and financial resources in close coordination with hub and satellite hospital networks and national/provincial/district/local health authorities. This is done for utilization during the different phases of the health security emergency risk management cycle.

The driver is responsible for:

- Transporting authorized personnel, visitors, and delegates to identified locations within the duty station.
- Translating basic conversations from/to the local language.
- Performing messenger functions, such as delivering various items/commodities, including diplomatic pouches following authorized routing.

Depending on the province, some of the PHEOCs also have government staff working closely with WHO personnel. This has been described in the individual province profile.

### **Logistic Management Section and Electronic-Logistics Management Information System (eLMIS)**

The Logistics Management Section is one of the four units of the Management Division. It is responsible for collecting and analyzing quarterly logistics management information system (LMIS) reports from all the health facilities across the country. The Logistics Management Section prepares reports and disseminates information in order to:

- Forecast the annual requirements for public health programs, including family planning,

maternal, neonatal and child health, HIV and AIDS commodities; vaccines; and essential drugs.

- Help ensure demand and supply of drugs, vaccines, contraceptives, and essential medical and cold chain supplies at all levels.
- Quarterly monitor the national pipeline and stock levels of key health commodities.

The LMIS combines forms and procedures required for collecting and organizing logistic information. It gathers data on the quantities of products dispensed to users, stock levels, stock losses, batch, and expiry, among others. Additionally, it circulates this information, which is required for supply chain management, through the system. The LMIS is an effective tool for inventory control and waste reduction; it also helps in rational as well as decentralized decision-making at federal, provincial, and local levels.

In addition, the LMIS helps to determine order quantities at the facility level; supervise and monitor stocks at the district/provincial level; and forecast, procure, monitor as well as distribute supplies at the federal level.

As for the e-Logistics Management Information System, it was found that all 55 COVID-designated health facilities had received eLMIS training. However, it came to light that only 33 percent of the hospitals/labs had been providing weekly COVID supply updates. Procurement of commodities is done at different levels: provincial, rural/municipality as well as that of the health facility. Therefore, it is essential for the health facilities, which receive the supplies, to track the data on the availability of commodities. A lack of timely updates on the eLMIS makes forecasting and quantification of supplies difficult. Moreover, the supply of required commodities cannot be ensured in the absence of eLMIS data.

### **Establishment of health desks at Points of Entry**

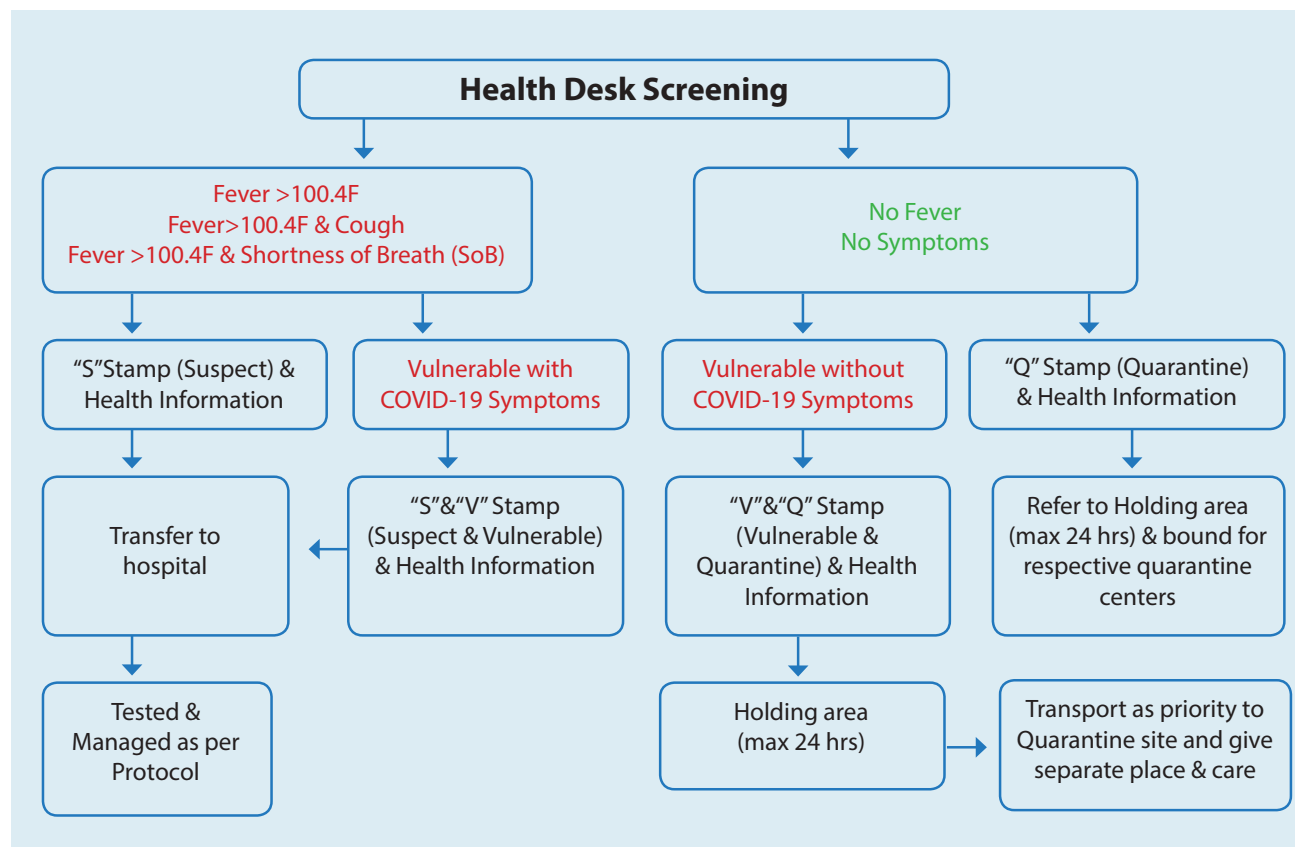
Nepal is surrounded by India on three sides, and the two countries share a 1,751 km long open border. However, due to the COVID-19 crisis, the borders have been sealed, and thousands of out-of-work Nepali migrants are still stuck in India. The Government of Nepal recently announced that 20 border entry points would be opened for them to return home. The mass movement

that the government decision might lead to will require an effective COVID-19 response preparation and management for returnees, including registration and screening at health desks at points of entry, and proper organization of transportation and quarantine.

The key tasks of the health desks are:

- Screening
- Registering
- Triaging, and
- Transferring to appropriate settings

The health desk-screening flowchart is given below:



The first step in the process will be temperature screening. Next, the returnees will be observed and asked if they have been showing COVID-19 symptoms. Suspected cases will be given an 'S' (Suspect) stamp; their basic information will be captured through a screening form, after which they will be ushered to a waiting area for transfer to a hospital for testing and management, as per protocol. Similarly, suspect cases with co-morbidities or vulnerable conditions will be given 'S' and 'V' (Vulnerable) stamps. Their basic information will be captured through a screening form, and they will be ushered to the waiting area for transfer to a hospital, where

they will be tested as priority and managed as per protocol. Those with normal temperatures and no symptoms will be given a 'Q' (Quarantine) stamp for transportation to a holding center for normal quarantine. Travelers with normal temperature and no symptoms but with co-morbidities or vulnerable conditions will be given 'Q' and 'V' stamps. They will be sent to a holding center for vulnerable quarantine where they will be provided with enhanced care and support. Each person will be given a colored card/sticker identification card, which they will have to present at their respective facilities.

## KARNALI PROVINCE

Karnali Province comprises of 10 districts namely Salyan, Surkhet, Rukum, Jajarkot, Dailekh, Dolpa, Jumla, Kalikot, Mugu, Humla, 54 rural municipalities and 25 urban municipalities. It has 395 public health facilities including 2 hub hospitals, 12 hospitals, 13 primary health centers, 336 health posts, 10 urban health centers, 21 community health units and 3 other health facilities.

### 5.1 HR AND OTHER RESOURCES AVAILABLE AT PHEOC

The workforce at Karnali Province has one Field Medical Officer (FMO), two COVID Surveillance Assistant (CSA) and one Information Management Assistant (IMA) and one Driver. There is a single workstation, which has a separate meeting room, internet facility. Power back up is

managed through generator and solar panels. Archival room is not present.

### 5.2 REPURPOSING OF INSTITUTIONS FOR COVID-19 TREATMENT

Amidst the COVID-19 pandemic, 23 institutions of Karnali Province that includes 1 training center and 22 health facilities which are presumed to be converted to COVID-19 wards, for isolation and treatment of cases.

|                                                                |    |
|----------------------------------------------------------------|----|
| Number of training centers developed                           | 1  |
| Number of potential health facilities                          | 22 |
| Number of Institutions that can be converted to COVID-19 wards | 23 |

The name of health facilities, their level, year of construction and bed capacity that are being repurposed for COVID-19 pandemic in this province are given in the table below:

**Table 22: Health facilities, their level, year of construction and bed capacity repurposed for COVID-19**

| Health Facility Name          | Year of Construction | Number of Beds | After repurposing (no of bed) | Categorised level    |
|-------------------------------|----------------------|----------------|-------------------------------|----------------------|
| <b>Surkhet District</b>       |                      |                |                               |                      |
| Dasarathpur PHCC/PH, Surkhet  | 2063/064             | 12             | 29                            | Primary Hospital B 3 |
| Salkot PHCC/PH, Surkhet       | 2064/065             | 12             | 29                            | Primary Hospital B 3 |
| <b>Jumla District</b>         |                      |                |                               |                      |
| Kalikakhetu PHCC/PH, Jumla    | 2064/065             | 12             | 29                            | Primary Hospital B 3 |
| <b>Dailekh District</b>       |                      |                |                               |                      |
| Dullu Hospital, Dailekh       |                      | 15             | 38                            | Primary Hospital B 2 |
| Naumule PHCC/PH, Dailekh      | 2066/067             | 12             | 29                            | Primary Hospital B 3 |
| <b>Dolpa District</b>         |                      |                |                               |                      |
| <b>Humla District</b>         |                      |                |                               |                      |
| <b>Jajarkot District</b>      |                      |                |                               |                      |
| Garkhakot PHCC / PH           | 2068/069             | 12             | 29                            | Primary Hospital B 3 |
| Limsa PHCC / PH               | 2064/065             | 12             | 29                            | Primary Hospital B 3 |
| <b>Kalikot District</b>       |                      |                |                               |                      |
| Kumalgaun PHCC / PH           | 2064/065             | 12             | 29                            | Primary Hospital B 3 |
| <b>Mugu District</b>          |                      |                |                               |                      |
| Kotdanda PHCC / PH            | 2064/065             | 12             | 29                            | Primary Hospital B 3 |
| <b>Rukum Paschim District</b> |                      |                |                               |                      |
| Kotjahari PHCC / PH           | 2068/069             | 12             | 29                            | Primary Hospital B 3 |
| <b>Salyan District</b>        |                      |                |                               |                      |
| Lekhpokhara PHCC/PH           | 2067/068             | 12             | 29                            | Primary Hospital B 3 |
| Tharmare PHCC / PH            | 2063/064             | 12             | 29                            | Primary Hospital B 3 |
| <b>Total</b>                  |                      | <b>147</b>     | <b>357</b>                    |                      |

## 5.3 eLMIS REPORTING STATUS

Regarding eLMIS reporting status of Karnali Province, none of the COVID-19 designated hospitals/labs with access to eLMIS have provided weekly updates. eLMIS reporting status of COVID-19 designated hospitals/labs in this province is summarized in the table below:

| Karnali Province eLMIS update data                                  |   |
|---------------------------------------------------------------------|---|
| No. of COVID-19 designated labs/hospitals updating eLMIS weekly     | - |
| No. of COVID-19 designated labs/hospitals not updating eLMIS weekly | 2 |
| No. of COVID-19 designated labs/hospitals without eLMIS access      | 1 |

The last login details of COVID-19 designated labs/hospitals in this province are as follows:

| S No. | Hospitals/Labs                     | Last log in details |
|-------|------------------------------------|---------------------|
| 1     | Karnali Academy of Health Sciences | 3-May-2020          |
| 2     | Karnali Provincial Hospital        | 6-Jul-2020          |
| 3     | Surkhet Corona Temporary Hospital  | No eLMIS access     |

Both Surkhet Hospital and Karnali Hospital have been using the different information management software for tracking of commodities.

## 5.4 ESTABLISHMENT OF HEALTH DESK AT POINT OF ENTRY (POE)

EDCD has not allocated budget to establish health desks in Karnali Province for the current fiscal year.

6



## **PARTNER COORDINATION**

## 6

# PARTNER COORDINATION

## RISK COMMUNICATION & COMMUNITY ENGAGEMENT

**Distribution of IEC/BCC materials** at the health facility level and public institutions, including posters, leaflets, brochures and reprinting of materials by NHEICC.

**Audio-Visual Communication** including public service announcements on FM stations, establishment of a hotline to provide service to municipalities on COVID-19 relief/response services.

**Web portal and mobile application** with MoHP for epidemic surveillance and response.

**Partners:** AIN, HI, Plan International, VSO, World Vision International, UNICEF, UNFPA, WHO, Ncell/NTC, IOM, GF/SF, Water Aid, IFRC/NRCS, ILO, DFAT, WB

## NATIONAL LABORATORIES

**Capacity building** including training of trainers (ToT) on PPE use/IPC and sample collection, packaging and transport for COVID19 to lab staff from diagnostic sites.

**Procurement and handover** of over 100,000+ RT-PCR test kits to MoHP.

**Partners:** The Global Fund/ Save The Children, UNICEF, USAID, WHO, DFID, Gates Foundation

## POINTS OF ENTRY, INTERNATIONAL TRAVEL AND TRANSPORT

**Capacity Strengthening and Establishing health desks** located at multiple POEs for screening of returning migrants. The measures taken will contain, improve and propose a model for better

management of WASH facilities, making PPE items and noncontact thermometers available for screening at the POEs.

**Participatory mobility mapping** along the border area includes volunteers and public health professionals mobilized to understand the flow of people and identify vulnerability. Partners plan to produce a map which then can be used for targeted response.

**Partners:** Plan International, UNICEF, USAID, World Vision International, IOM, WHO

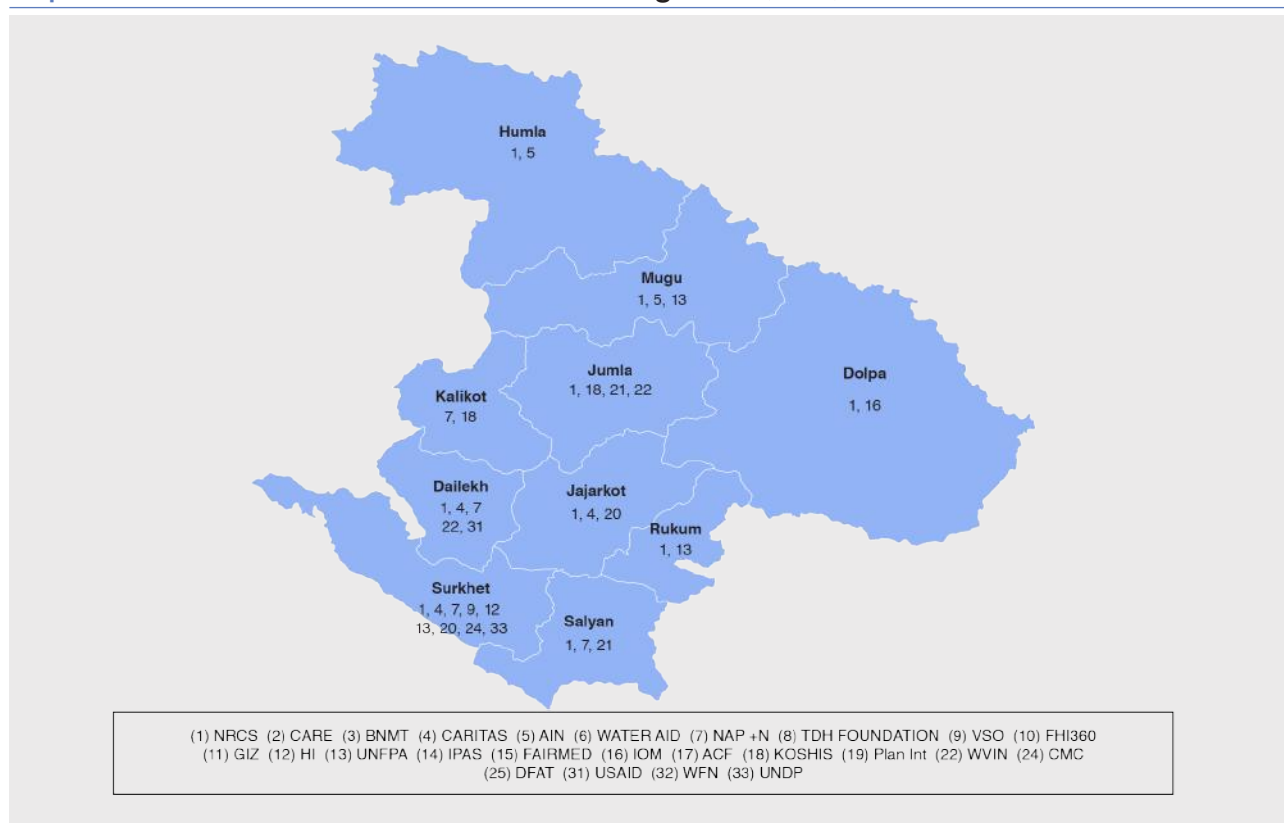
## INFECTION PREVENTION AND CONTROL

**Distribution of PPE and commodities** including alcohol based hand rub, IR thermometer, liquid hand washing soap, soap dispensers, disposable gowns, head protectors, sterile and non-sterile gloves and surgical gloves, disinfectants, testing kits (including RT PCR), KN95 Masks, surgical masks, and eye goggles.

**Support to caregivers and healthcare workers** including training of trainers on PPE use/IPC and sample collection, packaging, and transport for COVID19 to lab staff from COVID10 diagnostic sites.

**Risk assessment and preventative education** in support of caregivers and communities on COVID-19 issues.

**Partners:** AIN, Caritas, HI, NAP+N, IFRC/Nepal Redcross Society, Plan International, UNICEF, USAID, World Vision International, WHO, GIZ, CMDN, UNFPA, Oxfam, Water Aid, GAVI, WB, DFID, Water AID

**Map 13: Provincial UN Focal Point - World Food Programme (WFP)**

## CASE MANAGEMENT

**Orientation for caregivers/health workers of COVID patients with disabilities** on how to provide personal assistance during the treatment period.

**Partners:** AIN, GIZ, HI, WHO, USAID, UNICEF, IOM, DFID, WB

## EPIDEMIOLOGY CASE INVESTIGATION AND CONTACT TRACING (CICT)

**Assessment of Quarantine sites** via real time data collection using KOBO. Partner support in Karnali Province also includes Case Investigation and Contact Tracing (CICT) training package developed with the support of master trainers from NHTC and EDCD.

**Capacity strengthening support** including a mobile based training for health workers and female Community Health Volunteers (FCHVs).

**Partners:** BNMT, FAIRMED, GIZ, IOM, UNICEF, USAID, IFRC/NRCS

## OPERATIONAL SUPPORT AND LOGISTICS

**Establishment of structures** including temporary health desks and physically accessible Quarantine Centres and Isolation wards.

**Quarantine facility support**, establishment of washing stations and other key structures at health facilities.

**Partners:** AIN, HI, IPAS, Nepal Redcross Society, Plan International, UNFPA, UNICEF, USAID, World Vision International, ADB, IOM, DFAT, UNDP, WFP

## MENTAL HEALTH AND PSYCHOSOCIAL SUPPORT

**Communications and Telehealth** including dissemination of psychosocial information through media, individual tele-counseling and mental health services from mental health experts, including assigned experts and experienced psychosocial counsellors, via a toll-free number.

**Psychological First Aid** (at quarantine and isolation centres) through telehealth and through socially distanced support.

**Capacity building and stress management** to the frontline workers, health workers, security forces and I/NGO staff which includes providing a Training of Trainers (ToT) on stress management. This includes supervision and coaching to medical officers in project implemented districts.

**Radio programs broadcast** on psychosocial and mental health related topics, which includes 2 episodes per week of *Jiwan Rakchya* airing on CIN, and 3 episodes (2 on children's and 1 in GBV issues) produced and broadcasted.

**Supply of psychotropic medicines** in support of psychiatric service and in coordination with concerned municipalities and health facilities.

**Partners:** CMC, Nepal Redcross Society

## CONTINUITY OF ESSENTIAL MEDICAL SERVICES

**Human resource support** for HIV programming for COVID-19.

**Financial support** providing essential medical items for spinal cord injury.

**Partners:** HI, UNICEF, USAID, ADB, UNFPA, FAIRMED, DFAT, WVIN, IPAS, GIZ

## WATER AND SANITATION HYGIENE (WASH)

**Technical assistance to MoHP** management division in support of Water, Sanitation and Hygiene standards for Healthcare facilities.

**Construction of handwashing stations** placed in strategic positions throughout Karnali Province's health facilities.

**Partners:** UNICEF, KIRDARC, ENPHO, RVWRMP, NEEDS, RDC, SAC, BEE, BWSN, Campaign, JJYC, CDS, Everest Club, FOHREN, HRDC, IDS, JIDS, Kopila valley, KVS, Lumanti, MCDC, NBS, PACE, PRAG, PTYSM, RDC, Relief Nepal, RRPK, RYC, Sabal, SAC, SAHAS, SUYUK, WEL, GWT, UN-Habitat, UNDP, WFP, IOM, WHO, Nepal Red Cross Society, British Red Cross, ACF, AAN, Blinknow, Care, CRS, CAWST, DCA, DFAT, Felm, GiZ, GNI, Helvatas, LWF, Mercy Corps, NCV, Oxfam, Phase, Plan Int., Practical Action, Save the Children, USAID, Water Aid, WHH, WVI, WTW, ME, SNV

## COORDINATION PLANNING AND MONITORING

**Coordination and planning** between federal, provincial and local government for the provision of female-friendly COVID-19 quarantine facilities.

**Policy and planning strengthening** through technical support to the Nepal Law Society, resulting in the hosting of discussions with the Legislation Management Committee of the National Assembly on the amendment of the Contagious Diseases Act. Partners seek to support amendment of the law, which will provide federal, provincial and municipal governments with greater clarity on their roles and functions with respect to responding and managing epidemics such as COVID-19.

**Partners:** HI, The Global Fund/ Save The Children, UNICEF, USAID, GIZ, DFID, UNFPA, WHO, FAIRMED, DFAT, IFRC/NRCS, CG, EU

## PROVINCEWIDE SUPPORT

**Partners:** USAID, WHO, GIZ, GF/SCI

## NATIONWIDE SUPPORT

**Partners:** ADB, ADRA Nepal, Chaudhary Group, CMDN, DFAT, DFID, EU, FHI 360, Gates Foundation, GAVI, GIZ, ILO, IOM, Ncell, Nick Simmons Foundation Institute, The Global Fund/ Save the Children, UNICEF, WHO, World Bank, German Dev. Cooperation / KfW, KOICA, SDC, USAID, UNFPA, UNDP, WFP

# ANNEXES

## Annex 1: Radio Station available in Karnali Province

| S.N | Station Name        | Freaquency | Watt | District | Contact Person         | Number     |
|-----|---------------------|------------|------|----------|------------------------|------------|
| 1   | Radio Dolpa         | 101.4 MHz  | 100  | Dolpa    | Bishnulal Budha        | 9758900076 |
| 2   | Radio Tripura       | 89.6 MHz   | 100  | Dolpa    | Kamal Bahadur Budha    | 9851181407 |
| 3   | Radio Karnali       | 105.2 MHz  | 100  | Jumla    | Min Bahadur Shahi      | 9851077623 |
| 4   | Radio Nari Aawaj    | 100.6 MHz  | 100  | Jumla    | Hari Devi Rokaya       | 9848300220 |
| 5   | Radio Mugu          | 107.4 MHz  | 100  | Mugu     | Padam Neupane          | 9751060770 |
| 6   | Radio Rara          | 106 MHz    | 100  | Mugu     | Mangal Bdr.Shahi       | 9758900158 |
| 7   | Radio Saurydaya     | 92.4 MHz   | 500  | Mugu     | Padam Malla            | 9748007219 |
| 8   | Radio Kailash       | 103.4 MHz  | 50   | Humla    | Basanti Shahi          | 9841294338 |
| 9   | Radio Karnali Aawaz | 94.2 MHz   | 250  | Humla    | Dal Rawal              | 985821652  |
| 10  | Radio Naya Karnali  | 102.8 MHz  | 100  | Kalikot  | Krishnaraj Dhamala S.M | 9848305181 |
| 11  | Radio Chulimalika   | 101.8 MHz  | 100  | Kalikot  | Ashok nath Yogi        | 9758001436 |
| 12  | Radio Malika        | 97.4 MHz   | 100  | Kalikot  |                        |            |
| 13  | Radio chankheli     | 98.8 Mhz   | 500  | Kalikot  | Jaj Raj Shahi          | 9848301156 |
| 14  | Radio Rapti         | 104.8 MHz  | 100  | Salyan   | Ramesh Gautam          | 9847843555 |
| 15  | Radio Sharada       | 99.2 MHz   | 500  | Salyan   | Shaligram Sharma       | 9857820451 |
| 16  | Radio Kapurkot      | 106.1 MHz  | 100  | Salyan   | Santosh Gharti         | 9847817509 |
| 17  | Radio Salyan        | 101 MHz    | 250  | Salyan   | Rajeev K.C.            |            |
| 18  | Radio Tahalka       | 91.1 MHz   |      | Salyan   |                        |            |
| 19  | Radio Khalanga      | 107.6 MHz  | 100  | Jajarkot | Gobinda Bikram Shah    | 9851086046 |
| 20  | Radio Hamro Paila   | 87.9 MHz   | 100  | Jajarkot | Bal Kumar Sharma       | 9841707313 |
| 21  | Radio Jajarkot      | 105.6 MHz  | 500  | Jajarkot | Raj Bahadur Singh      | 9858051122 |
| 22  | Radio Dhruvatara    | 89.8 MHz   | 1000 | Dailekh  | Chakra Bahadur K.C.    | 9858050323 |
| 23  | Radio Bheri         | 98.6 MHz   | 500  | Surkhet  | Narayan Koirala        | 9858050011 |
| 24  | Bulbule FM          | 103.4 MHz  | 500  | Surkhet  | Mohan Baduwal          | 9848041606 |
| 25  | Jagaran FM          | 90.8 MHz   | 500  | Surkhet  | Tikaram Acharya        | 9848025546 |
| 26  | Radio Surkhet       | 90.2 MHZ   | 250  | Surkhet  | Motilal Paudel         | 9858050010 |
| 27  | Radio Bheriganga    | 91.4 MHz   | 100  | Surkhet  | Kamal B.C              | 9848099629 |

## Annex 2: Newspaper available in Karnali Province

| S.N | Name of the newspaper    | District | Province | Type   | Outreach | Grade    |
|-----|--------------------------|----------|----------|--------|----------|----------|
| 1   | Aaha Sanchar Saptahik    | Rukum    | Karnali  | Weekly | Local    | Kha      |
| 2   | Rekhdhek Saptahik        | Rukum    | Karnali  | Weekly | Local    | Kha      |
| 3   | Janaakanchhya Saptahik   | Rolpa    | Karnali  | Weekly | Local    | Kha      |
| 4   | Junkiri Sanchar Saptahik | Rolpa    | Karnali  | Weekly | Local    | Kha      |
| 5   | Sanstar Saptahik         | Rolpa    | Karnali  | Weekly | Local    | Kha      |
| 6   | Rolpa Samachar           | Rolpa    | Karnali  | Weekly | Local    | Kha      |
| 7   | Hamro Karnali Khabar     | Kalikot  | Karnali  | Daily  | Province | Withheld |
| 8   | Abhibhara Saptahik       | Kalikot  | Karnali  | Weekly | Local    | Kha      |
| 9   | Mission newz sapatahik   | Kalikot  | Karnali  | Weekly | Local    | Withheld |
| 10  | Karnali Sarokar Dainik   | Jumla    | Karnali  | Daily  | Local    | Kha      |
| 11  | Karnaliko Sandesh        | Jumla    | Karnali  | Weekly | Local    | Kha      |
| 12  | Bihani Tara Saptahik     | Jumla    | Karnali  | Weekly | Local    | Kha      |
| 13  | Himali Suskera Saptahik  | Dolpa    | Karnali  | Weekly | Local    | Kha      |
| 14  | Dhamaka Dainik           | Dailekh  | Karnali  | Daily  | Local    | Ka       |
| 15  | Sajha Prabimba Saptahik  | Dailekh  | Karnali  | Weekly | Local    | Ga       |
| 16  | Hamro Naya Nepal         | Surkhet  | Karnali  | Daily  | Province | Ga       |
| 17  | Lokmancha Dainik         | Surkhet  | Karnali  | Daily  | Province | Ga       |
| 18  | KakreBihar Dainik        | Surkhet  | Karnali  | Daily  | Province | Ga       |
| 19  | Yug Aabhhan Dainik       | Surkhet  | Karnali  | Daily  | Province | Kha      |
| 20  | Sajha Bisauni Dainik     | Surkhet  | Karnali  | Daily  | Province | Kha      |
| 21  | Siddhadarshan Dainik     | Surkhet  | Karnali  | Daily  | Province | Ga       |
| 22  | Surkhet Pahichan Dainik  | Surkhet  | Karnali  | Daily  | Local    | Withheld |
| 23  | Surkhet patra Dainik     | Surkhet  | Karnali  | Daily  | Local    | Withheld |
| 24  | Suscmadrsti Saptahik     | Surkhet  | Karnali  | Weekly | Province | Ga       |

**Annex 3: Spokespersons for COVID-19 designated hospitals – Karnali Province**

| S.N | Hospital                                    | Name                  | Designation            | Contact number |            | Email                        |
|-----|---------------------------------------------|-----------------------|------------------------|----------------|------------|------------------------------|
|     |                                             |                       |                        | (Landline)     | (Mobile)   |                              |
| 1   | Provincial Hospital, Surkhet                | Dr. Dambar Khadka     | Medical Superintendent | 083-523200     | 9851062785 | drkhadka@gmail.com           |
| 2   | Jajarkot Hospital, Jajarkot                 | Dr Mahesh Silwal      | Medical Superintendent |                | 9851212918 |                              |
| 3   | Mehelkuna Hospital, Surkhet                 | Dr. Manish Mishra     | Medical Superintendent |                | 9858080502 | manishmishra70@outlook.com   |
| 4   | Dullu Hospital, Dailekh                     | Dr. Puja BC           | Medical Superintendent |                | 9848233373 | poohza87@gmail.com           |
| 5   | District Hopital, Dolpa                     | Dr. Ramesh Rokka      | Medical Superintendent |                | 9824177288 | rdsaaaila99@gmail.com        |
| 6   | District Hospital, mugu                     | Dr. Nirmal Nagarkoti  | Medical Superintendent | 087-460162     | 9847421923 | ganeswor89@gmail.com         |
| 7   | District Hospital, Humla                    | Dr. Amit Bista        | Medical Superintendent |                | 9841455445 | amit_bista2012@yahoo.com     |
| 8   | District Hospital, Kalikot                  | Dr.Bhishma Pokheral   | Medical Superintendent | 087-440133     | 9841836185 | bpokharel150@gmail.com       |
| 9   | District Hospital, Dailekh                  | Dr.Niranjan Pant      | Medical Superintendent | 089-420417     | 9858028117 | npanta98909@gmail.com        |
| 10  | District Hospital, Rukum                    | Dr. Mahesh Chaulagain | Medical Superintendent | 088-530115     | 9848124179 | mahesh23chaulagain@gmail.com |
| 11  | District Hospital, Salyan                   | Rikharam Pun          |                        | 088-520081     | 9847953867 | manipalate@icloud.com        |
| 12  | Karnali Academy of H. Science (KAHS), Jumla | Dr Mangal Rawal       | Medical Superintendent | 087-520355     |            | drmangalkahs@gmail.com       |
| 13  | Chaurjahari Hospital, Rukum                 | Dr.Kaleb Budha        | Medical Superintendent | 089-680155     | 9841402373 | calebbuddha@yahoo.com        |



Government of Nepal  
**Ministry of Health and Population**



**World Health  
Organization**  
Nepal