FINAL REPORT

COVERAGE SURVEY

IMAM Programme

Nepal
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ACTION AGAINST HUNGER
ACTION CONTRE LA FAIM

Nepali Technical Assistance Group
NTAG

Government of Nepal
Ministry of Health and Population
Department of Health Services
Family Welfare Division

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ABBREVIATIONS

AAH	Action Against Hunger
CHW	Community Health Worker
Cin	Case in the IMAM programme
CMAM	Community Management of Acute Malnutrition
CNSI	Comprehensive Nutrition Specific Interventions
Cout	Case not enrolled in the IMAM programme
DHIS2	District Health Information Software 2
DHS	Demographic Health Survey
EPI	Expanded Programme on Immunization
FANTA	Food and Nutrition Technical Assistance
FCHV	Female Community Health Volunteers
HMIS	Health Management Information System
ITCC	Inpatient Therapeutic Care Centre
IMAM	Integrated Management of Acute Malnutrition
LQAS	Lot Quality Assurance Sampling
MAM	Moderate Acute Malnutrition
MNP	Micronutrient Powder
MUAC	Middle Upper-Arm Circumference
NTAG	Nepali Technical Assistance Group
OTCC	Outpatient Therapeutic Care Centres
Rin	Recovering case in the programme
Rout	Recovering case not enrolled in the IMAM programme
RUTF	Ready-To-Use Therapeutic Food, PlumpyNut®
SAM	Severe Acute Malnutrition
SLEAC	Simplified LQAS Evaluation of Access and Coverage
SQUEAC	Semi-Quantitative Evaluation of Access and Coverage
UNICEF	United Nations' Children's Fund
WHO	World Health Organisation
WHZ	Weight-for-Height z-score
WSB+	Wheat-Soy-Milk blend plus

EXECUTIVE SUMMARY

Background

The prevalence of acute malnutrition in Nepal was recorded at 8% in 2022 according to Nepal Demographic Health Survey (DHS). While the national indicator shows a recent decline in acute malnutrition, there are disparities across provinces with some provincial data continuing to be considerably high, surpassing the emergency threshold set by the World Health Organisation (WHO).

The Government of Nepal is implementing IMAM programme in all districts. It tackles acute malnutrition through a community-based approach, encompassing nutrition education, therapeutic feeding, and health services. Severe Acute Malnutrition (SAM) cases without medical complications are treated in Outpatient Therapeutic Care Centres (OTCC), whereas SAM cases with medical complications are treated in Inpatient Therapeutic Care Centre (ITCC). In addition, Nutrition Rehabilitation Centres embedded in hospitals also manage Severe Acute Malnourished (SAM) cases by facility-based services. Moderate Acute Malnutrition (MAM) are mostly managed through counselling to mothers on Infant and Young Child Feeding (IYCF), care practices and hygiene and sanitation. In few food insecure districts, various organizations are conducting supplementary feeding programs.

IMAM programme performance monitoring is integrated into national information system (DHIS2), which includes a number of relevant indicators, which can be used for an indirect estimation of IMAM coverage. However, the routine monitoring data mechanisms have limited capacity to provide insight into barriers and boosters of access and coverage and therefore direct methods, such as coverage surveys, are recommended for the purpose.

From December 2023 to April 2024, Action Against Hunger Nepal conducted a gap analysis across all provinces of Nepal to identify bottlenecks in the implementation of IMAM services using a framework of health system building blocks. This coverage survey seeks to complement the gap analysis and contribute to a comprehensive evidence-based framework which will be used for the revision of IMAM national guidelines in the context of the new WHO guidelines released in June 2023.

Methodology

This coverage survey consisted of a series of SLEAC surveys, which were conducted across three selected districts, namely Rautahat district in Madhesh Province, Dolakha district in Bagmati Province and Mugu district in Karnali Province, to identify key barriers and boosters of access and coverage from the community perspective. It was complemented by qualitative data gathered through interviews with health workers and field observations by the survey team.

Results

Classification of coverage

Due to small sample sizes, Rautahat and Dolakha districts could not benefit from a coverage classification at district level. Given their geographical proximity, the results from both districts were grouped to provide a combined classification. This was made possible as the homogeneity chi-square test (x^2) did not show a significant difference between the results of

the two districts. Meanwhile, the sample size for Mugu district was sufficient to allow for a separate coverage classification.

The combined coverage for SAM treatment in Rautahat and Dolakha districts was classified as "**low**", i.e. below 20% threshold. The coverage for SAM treatment in Mugu district was classified as "**high**", i.e. above 50% threshold. These results are consistent with the results of the gap analysis conducted prior to the survey, which identified Karnali Provine as well performing with regards to WHO health system building blocks, while Bagmati Province scored moderately and Madesh Province demonstrated major weaknesses.

Barriers of access and coverage

Most caregivers of non-covered SAM cases across districts reported being aware that their child was unwell, specifically 88% in Mugu, 77% in Rautahat and 60% in Dolakha. The most common symptoms observed by caregivers across districts included fever, weight loss, diarrhoea and cough. While caregivers are able to recognise key symptoms of childhood illness that should prompt seeking treatment, the fact that some of these symptoms are not specific to malnutrition may complicate healthcare pathways. Mugu district stood out in this regard, with 86% of caregivers observing symptoms associated with malnutrition, such as weight loss and loss of appetite, while caregivers in Dolakha and Rautahat districts reported mostly nonspecific symptoms.

The primary treatment preferences among caregivers across the districts were purchasing medicines from pharmacies or seeking treatment for malnutrition at health facilities. In Dolakha, all caregivers indicated a preference for seeking help at health facilities. In Rautahat, 70% preferred pharmacies, while only 10% indicated seeking treatment at health facilities. Mugu had 43% of caregivers seeking assistance at health facilities while 29% reported not seeking treatment at all. Medicinal plants, enriched meals, prayer, medical products purchased from the market, or seeking treatment at private clinics were mentioned by caregivers across the selected districts, though to a lesser extent. The diverse treatment preferences indicate a lack of awareness among caregivers about malnutrition and available treatment options for the condition, which could hinder access to appropriate care.

Another key aspect of the therapeutic itinerary is the decision-making power with regards to treatment choice, which was found to lie generally in the hands of the father, another family member or a community health worker (CHW). Mothers held decision-making power only marginally.

The results also highlighted a low level of awareness regarding the existence of the IMAM programme among caregivers of non-covered SAM cases, particularly in Rautahat district, which represents a significant barrier to accessing services.

Among caregivers of non-covered SAM cases who were aware of the existence of the IMAM programme, reasons for a child's non-enrolment in the programme included lack of company to go to the health centre, illness of a family member, shortage of RUTF at the OTC, scepticism regarding the programme's effectiveness and lack of information about the programme.

Sub-analysis of MAM non-covered cases

The analysis of 200 non-covered MAM cases included in the survey revealed that most affected children were children aged 6-23 months, particularly girls, indicating higher vulnerability in these groups. Access to health facilities was a major barrier accessing care, with many caregivers reporting distances exceeding 20 minutes to reach services. Consequently, 76% (n=151) of the cases had not been screened in the past three months by either health facilities or FCHVs which shows a possible service outreach barriers and issues with regular growth monitoring, also confirmed through the qualitative insights. Caregivers mainly managed MAM symptoms by purchasing medicines or seeking facility consultations across districts. Few children had previously been enrolled in the IMAM programme, primarily because they were not diagnosed with SAM. Additionally, only a minority of children received support for MAM management in the form of counselling, Multiple Micro-Nutrient Powder, WSB+/Super Cereal, or even RUTF as a supplement. Most caregivers of MAM children receiving any support mentioned being satisfied or neither satisfied or un-satisfied with the service and information received.

Boosters of access and coverage

An analysis of facilitators of access and coverage was conducted for Mugu district only. Questionnaires for the covered cases in Rautahat district were either missing or had to be discarded when a wrong questionnaire was deployed. There were no covered cases in Dolakha district.

Among covered SAM cases enrolled in the IMAM programme in Mugu district, all were enrolled in the IMAM programme for the first time. 82% were the only children enrolled in the programme, while 18% had another child from the household who had previously been enrolled in the programme. A diagnosis of malnutrition by health facility personnel was the main reason for enrolment in the IMAM programme, having been cited by 91% of caregivers. A recognition of malnutrition by caregivers themselves represented a reason for enrolment for only one caregiver.

A large majority of caregivers of SAM children enrolled in IMAM programme in Mugu district expressed being satisfied or very satisfied with the service. Only one caregiver expressed being very unsatisfied, and one was neither satisfied or unsatisfied. A similar trend can be observed for a satisfaction with the reception, satisfaction with the quality of treatment and satisfaction with provided information. One caregiver in each case was neither satisfied nor unsatisfied, while one caregiver expressed being very unsatisfied with the quality of the treatment, explaining that this was due to a stock-out of Ready-to-Use Therapeutic Food (RUTF) during the last follow-up visit.

Qualitative insights

IMAM training and supervision. Interviews with health workers revealed that only a few staff members at health facilities had formal IMAM training, with some receiving it 5 to 6 years ago without refresher courses. Many reported incomplete knowledge due to a lack of practical experience. Some had completed CNSI training, which includes an IMAM module, while others received informal training from senior staff. Several health professionals, including one nutrition focal point, had no IMAM training, partly due to staff turnover. Only one facility reported that all its staff members were trained in IMAM. Field observations also highlighted a lack of monitoring and supervision of the IMAM programme by responsible authorities across all surveyed districts.

Knowledge about the IMAM protocol. Interviews with health workers across districts revealed confusion and gaps in understanding of the IMAM protocol. Some were more familiar with the outdated version, leading to confusion with the simplified protocol introduced during the COVID-19 pandemic, while others had forgotten due to lack of practice. Only a few, mostly nutrition focal points, demonstrated a clear understanding of the protocol.

Community outreach. According to interviews, screening was conducted in various settings, mainly during immunization sessions at Expanded Programme on Immunization (EPI) campaigns, Primary Health Care Out Reach Centers (PHCORC), OTC's and during National Vitamin A Campaign. Local NGO's in Mugu and Rautahat also conducted screenings. In Rautahat, screening by Female Community Health Volunteers (FCHVs) was currently not being conducted across the visited facilities. In Dolakha, screenings were carried out by Health Workers (HW's) and FCHVs, and caregivers were generally familiar with MUAC tape. Observations showed varying knowledge of screening procedures among FCHVs across facilities.

Passive screening. Interviews with health workers highlighted inconsistencies in passive screening and confirmation of acute malnutrition for referred cases across facilities and districts with weight, height, WHZ-score calculations, MUAC and oedema measurements not consistently performed. In several facilities, health workers noted that confirmation of acute malnutrition would not take place at all.

SAM management. In some locations it was noted that the protocol was not respected due to a lack of knowledge among health workers, and the registers indicated several defaulters and uncured cases. In few instances, SAM cases were referred to hospitals for further treatment, though some facilities had not yet encountered such cases. In Dolakha, the Nutrition Rehabilitation Unit at Jiri hospital was reported as non-functional, but local health facilities were not informed of this.

MAM management. Interviews with health workers indicated that MAM management mainly involves counselling for caregivers. Some health workers mentioned that Micronutrient powder (MNP), Wheat-Soy Blend Plus (WSB+), or RUTF were occasionally given to MAM children, but this practice was inconsistent across facilities and districts.

RUTF. Interviews and observations revealed that, aside from a few facilities, RUTF was generally available across districts but distribution often deviated from the established guidelines, with situations of RUTF given as supplementary food to MAM children, or during immunisation activities. Cases of RUTF given to disadvantaged people or relatives of health workers were also reported. Locally, RUTF is referred to as 'halwa", and caregivers perceived it as a 'magic semi-solid jam' that supports physical growth. In one facility, the RUTF stock was reported as expired.

Information management. Interviews with health workers revealed that registers were not consistently available across the visited health facilities, and many were found to be only partially complete or incomplete. Only a limited number of facilities across the selected districts had complete and accessible registers. Some facilities mentioned reporting cases to Health Management Information System (HMIS) or local government and province.

Recommendations

Based on the findings of this coverage assessment, the following recommendations are proposed to address the identified barriers of access and coverage of IMAM programme in Nepal

National guidelines

- Review the national IMAM protocol in line with 2023 WHO guidelines in order to align in-country practice with new evidence-based recommendations, including consideration of comprehensive anthropometric measurements (weight, height, MUAC and oedema) at all health facilities and provision of treatment by FHCV and clear guidance on options for the management of MAM.

Community engagement

- Develop a community engagement strategy to increase awareness about malnutrition and the IMAM programme, leveraging findings from the in-depth qualitative study and mainstreaming gender equity and the inclusion of marginalized communities;
- Train FHCV on detection, referral and follow-up of malnutrition cases, and ensure they are adequately supported and supervised to conduct these activities at community level;
- Develop a targeted action plan to address the misuse of RUTF, including focused communication efforts.
- Consider enhancing referral process for malnourished children through traditional practitioners and pharmacy staff.

IMAM service delivery

- Conduct in-person training sessions for health workers on the updated national IMAM protocol, and establish mechanisms for regular refresher training to ensure new staff are properly trained;
- Expand passive screening activities at various healthcare contact points, including immunisation sessions and healthcare services targeting young children;
- Ensure timely and consistent supply of RUTF and necessary equipment for the IMAM program, including at the health post level;
- Establish clear referral and communication pathways between FCHVs, Health Facilities, OTCs, ITC's and NRC to align patient management and ensure proper management.
- Ensure regular monitoring and supervision activities are conducted by district and municipalities to track progress, reinforce protocol adherence, improve recording and reporting, and adjust IMAM program implementation as needed.

I. INTRODUCTION

Background information

Acute malnutrition is one of the leading causes of child morbidity and mortality while being a major threat to child long-term development with impacts spreading beyond the individual level. The prevalence of acute malnutrition in Nepal was recorded at 15% in 1996, 11% in 2001, 13% in 2006, 11% in 2011, 10% in 2016, and 8% in 2022[1]. While the national indicator shows a recent decline in acute malnutrition, there are disparities across provinces with some provincial data continuing to be considerably high, surpassing the emergency threshold set by the World Health Organisation (WHO).

With the development of national guidelines, the Integrated Management of Acute Malnutrition (IMAM) in Nepal was born in 2011. The guidelines were then revised in 2017 and 2020. The Government of Nepal is implementing IMAM program in all districts. It tackles acute malnutrition through a community-based approach, encompassing nutrition education, therapeutic feeding, and health services. Severe Acute Malnutrition (SAM) cases without medical complications are treated in Outpatient Therapeutic Care Centres (OTCC), whereas SAM cases with medical complications are treated in Inpatient Therapeutic Care Centre (ITCC). Moderate Acute Malnutrition (MAM) are managed through counselling to mothers on Infant and Young Child Feeding (IYCF), care practices and hygiene and sanitation.

IMAM programme performance monitoring is integrated into national health information system (HIS) via DHIS, which includes a number of relevant indicators, which can be used for an indirect estimation of IMAM coverage. However, the routine monitoring data mechanisms have limited capacity to provide insight into barriers and boosters of access and coverage and therefore direct methods, such as coverage surveys, are recommended for the purpose.

Assessment justification

From December 2023 to April 2024, Action Against Hunger Nepal conducted a gap analysis across all provinces of Nepal to identify bottlenecks in the implementation of IMAM services. Using a framework of health system building blocks, namely governance, financing, human resources, supply, service delivery and HIS, all provinces were compared with strengths and weaknesses identified across these areas. This coverage survey seeks to complement the gap analysis and contribute to a comprehensive evidence-based framework which will be used for the revision of IMAM national guidelines in the context of the new WHO guidelines released in June 2023.

II. OBJECTIVES

General objective

The general aim of this survey is to assess the coverage of the IMAM programme in Dolakha district of Bagmati Province, Mugu District of Karnali Province and Rautahat District of Madhesh Province to identify the barriers and boosters of access to treatment of wasting in Nepal in order to contribute learning to a revision of national IMAM guidelines.

[1] Nepal Demographic Health Survey, 2022.

Specific objectives

- Classify the coverage of the IMAM programme in selected districts according to the SLEAC methodology, using a three-tier classification system;
- Identify and analyse the factors which are preventing and/or facilitating access to and coverage of the IMAM programme, based on feedback from carers of wasted children screened during the SLEAC survey;
- Analyse the IMAM programme data[2] in selected districts to identify barriers and boosters of coverage at supply, demand and quality levels;
- To generate practical recommendations for improving access to and coverage of the IMAM programme.

III. METHODOLOGY

Introduction

Coverage surveys aim to measure the **treatment coverage** of IMAM programs. *Treatment coverage refers to the proportion of children eligible for treatment for severe wasting / severe acute malnutrition (SAM) and/or moderate wasting / moderate acute malnutrition who actually receive this treatment.*

Coverage is one of the key principles of the operational model for the management of acute malnutrition. If coverage is high, this could indicate that a large proportion of children in the program is successfully treated to cure. At the same time, high coverage could be an indicator of the effectiveness of the program's community outreach. The most common methodologies used by nutrition programs to assess treatment coverage are **SQUEAC**[3] and **SLEAC**[4].

The SLEAC methodology was developed by Valid International, FANTA, BrixtonHealth, Concern Worldwide, Action Against Hunger and World Vision to classify and/or estimate the coverage of CMAM programmes and to identify barriers of access to treatment. The SLEAC methodology allows to classify the coverage in the service delivery unit as "low", "moderate" or "high ". The classification method is derived from the simplified LQAS classification technique. The advantage of this approach is that it is sufficient to use a relatively small sample (for example, n = 40) to perform an accurate and reliable classification.[5]

This coverage survey consisted of a series of SLEAC surveys, which were conducted across three selected districts to identify key barriers and boosters of access and coverage from the community perspective. It was complemented by qualitative data gathered through interviews with health workers and field observations by the survey team.

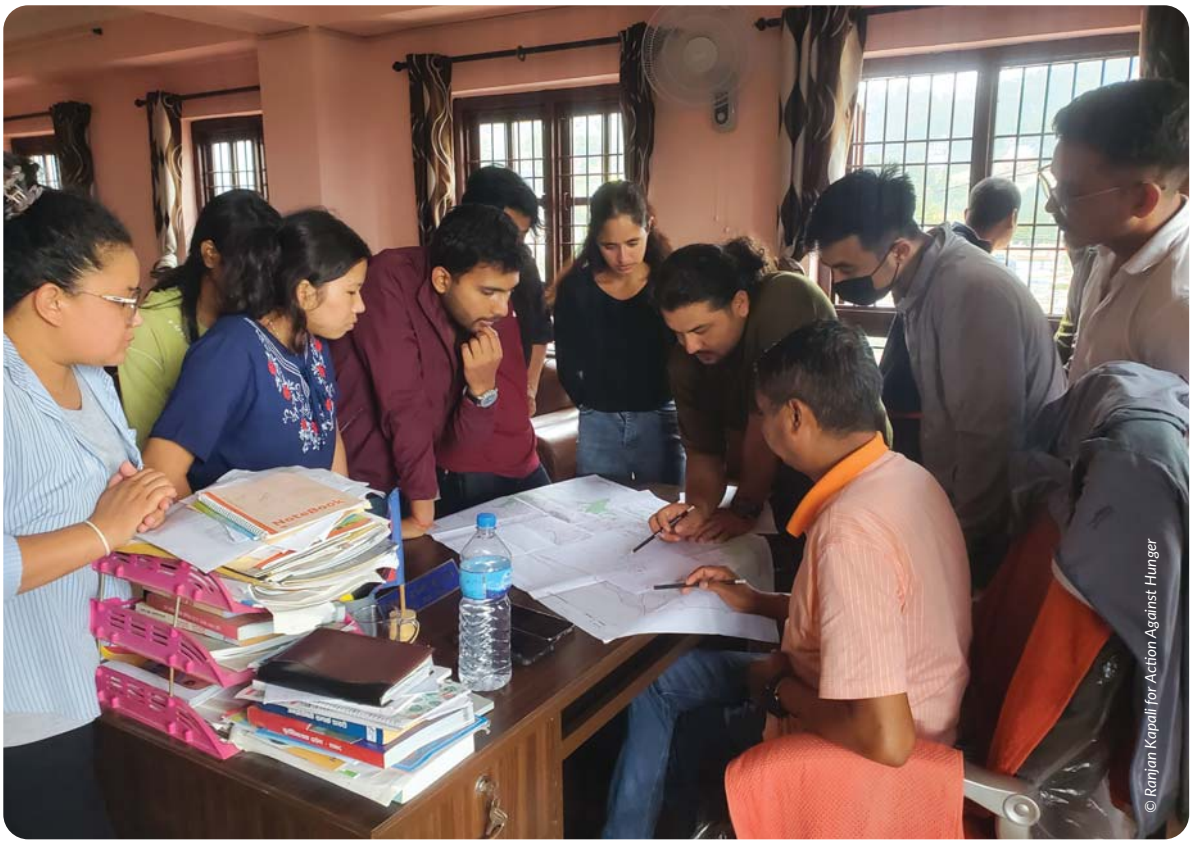
[2] Routine programme monitoring data and complementary programme data.
[3] Semi-Quantitative Evaluation of Access and Coverage.
[4] Simplified LQAS Evaluation of Access and Coverage.
[5] It should be noted that an n=96 sample allows coverage to be estimated at district level without the need to combine results from other adjacent districts for a combined coverage estimate.

A. IMAM PROGRAMME DATA ANALYSIS

ROUTINE PROGRAMME DATA ANALYSIS

During the planning phase, it was established that readily available routine programme monitoring data would be analysed to identify any patterns over time, which could affect the IMAM programme access and coverage and its capacity to respond to changes in demand for its services[6]. The program performance indicators would be compared to SPHERE humanitarian standards related to the context of the survey zone. Additional quantitative data, such as MUAC at admission/default/cure or length of stay, would also be collected and analysed to further understand the IMAM's programme efficiency, especially in terms of early admissions, retention and effectiveness to cure[7]. Data from all OTC centres within each selected district would be extracted from DHIS database and included in the analysis. In case of routine programme data and complementary data collection, the sample would be aligned with sampled wards for the SLEAC survey. Data analysis does not require encoding or processing by a specific software. All data would be processed in an Excel spreadsheet.

Please note that due to the unavailability/incompleteness of data in OTCC registers, the analysis of routine programme monitoring data and complementary data was not possible. Therefore, the description of the methodology for these analyses were excluded from this report. In case of need or interest of the scope of these analyses, please refer to a respective section of the survey protocol.



[6] For more details about routine programme monitoring data analysis, please consult SQUEAC Technical Reference, p.12.
[7] For more details about complementary quantitative data analysis, please consult SQUEAC Technical Reference, p.18.

B. SIMPLIFIED LQAS EVALUATION OF ACCESS AND COVERAGE (SLEAC)

Selection of districts

Considering other partners' efforts with regards to the assessment of coverage, Action Against Hunger Nepal pre-selected Bagmati, Karnali and Madhesh Provinces as these were not included in the assessment plans of concerned partners. The selection of these three provinces is also supported by the findings of the gap analysis conducted by Action Against Hunger Nepal in December 2023-April 2024, according to which the pre-selected provinces potentially represent three diverse scenarios of the IMAM implementation. While Bagmati Province scored moderately well across all studied indicators, Karnali Province performed rather well, especially in relation to supply and Madhesh Province demonstrated major weaknesses across 4 health system building blocks.

In the next stage, in order to select districts within the pre-selected provinces, representative of a variety of "IMAM coverage" contexts for the purposes of learning and IMAM guidelines revision, the following criteria were proposed:

- Supply: % of screened children vs. total population of 6-59 months;
- Demand: % of IMAM admissions vs. estimated SAM burden;
- Performance: Cured rate >75%;
- Performance: Defaulter rate <15%.

The relevant data for each district in pre-selected provinces was extracted from DHIS database for the period from 17 July 2023 till 15 July 2024 and compiled in a dedicated Excel spredsheet. The performance of each district was then carefully assessed against each indicator and compared among other districts within the same province. In Bagmati Province, districts of

Rasuwa, Nuwakot and Makwanpur were excluded from the selection as they benefited from a series of coverage surveys in 2017. The selected districts for the purposes of this coverage survey with reasons for their selection are provided in the table and map below.

Province	District	Reason for selection
Bagmati	Dolakha	Available data suggests an extremely high screening rates (566.9%) but extremely low admissions (4.68%), cured and defaulter rates do not seem to be realistic.
Karnali	Mugu	Mountaneous setting; available data suggests lower screening rates (77.7%) but adequate admissions (100.16%), cured rate of 61% and defaulter rate of 36.2% fall short of SPHERE standards.
Madhesh	Rautahat	Terai setting; available data suggests low screening rates (49.4%) but adequate admissions (107.63%), cured rate of 75.8% and defaulter rate of 7.4% comply with SPHERE standards.

TABLE 1: Criteria for the selection of districts for the coverage survey, Nepal, July 2024

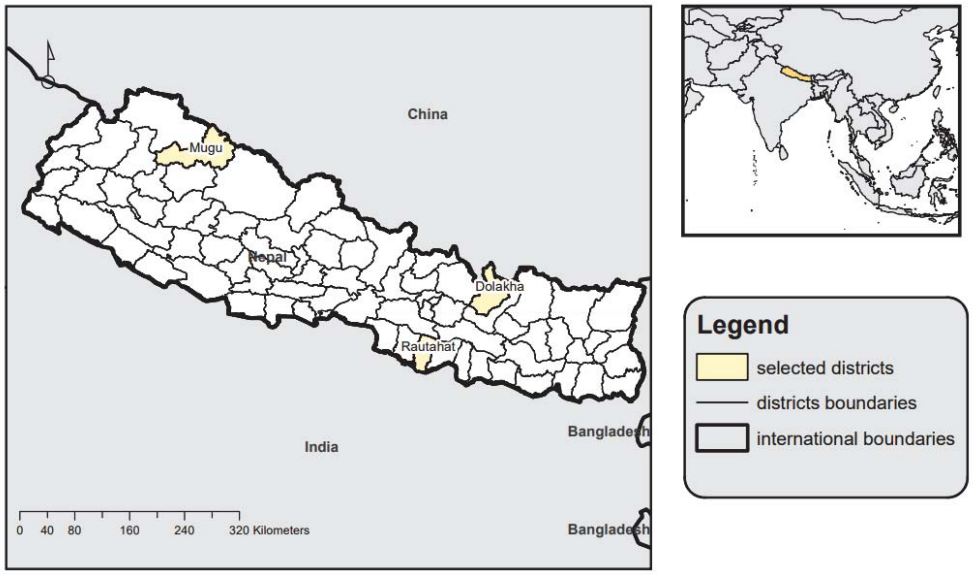


FIGURE 1: Nepal map showing three selected districts for the coverage survey, Nepal, July 2024

Sampling

The SLEAC methodology uses two-stage cluster sampling. The first-stage sampling method must be spatial in order to obtain a sufficiently uniform sample of the intervention area covered by the programme. Thus, in order to ensure spatial representativeness, wards were first selected using the stratified random sampling method from an exhaustive list of wards grouped by catchment area (see First-stage sampling). Sampling at the ward level then followed the exhaustive case-finding method (see Second-stage sampling), which enables all children aged between 6 and 59 months in the sampled locations to be found and classified according to the IMAM's programme admission criteria for severe wasting. In wards with an estimated number of children 6-59 months significantly higher than 100[8], a segmentation by a Probability Proportional to Size (PPS) method was performed to select one segment in that ward where exhaustive screening of children 6-59 months was performed.

[8] Generally considered doable within 1 working day.

First-stage sampling

In the first sampling stage, a list of wards, grouped by catchment area, for each selected district, was obtained from the Central Bureau of Statistics, Nepal. These lists served as a sampling base for selecting wards that are geographically representative of the survey area.

To determine the number of wards to be visited, the SLEAC method uses total population and SAM prevalence estimates by Mid-Upper Arm Circumference (MUAC) and/or bilateral oedema to ensure that the target sample size is reached.

The expected number of SAM cases can be calculated using the following formula:

$$Population_{\,all\ ages} \times \frac{\%\ population_{\,6-59\ months}}{100} \times \frac{SAM\ or\ MAM\ prevalence}{100}$$

A target sample size of 40 SAM cases (n=40) in each area, in this case district, where coverage is to be classified is generally sufficient for most uses of the SLEAC methodology. However, in some contexts it may be difficult, if not impossible, to find 40 (n=40) SAM cases. This may be the case if an average ward population and/or SAM prevalence are low. In such cases, it is possible to reduce the target sample size without increasing the error according to the methodological guidelines presented in Table 5, p. 118 of the SLEAC Technical Reference[9].

Then, to estimate the number of wards needed to reach the target sample size, the following formula is used:

$$n_{villages} = \left\lceil \frac{n}{average\ willage\ population_{all\ ages} \times \frac{percentage\ of\ population_{\,6-59\ months}}{100} \times \frac{SAM\ prevalence}{100}} \right\rceil$$

Based on the calculations in Table 2 below, the target sample size in each selected district was reduced to 19-32 cases, based on most recent prevalence estimates of SAM by WHZ by DHS survey in 2022 available at provincial level. While the SLEAC methodology would give preference to prevalence estimates by MUAC, as this is the recommended community screening method per IMAM guidelines, the respective data was not systematically available from recent and reliable sources for each selected district and/or province.

Province	District	Est. pop. 2021 (M/F)	Est. pop. 6-59 m	Prevalence SAM (DHS 2022 WHZ)	Prevalence MAM (DHS 2022 WHZ)	Est. pop. SAM	Est. pop. MAM	Target sample (n)	Average ward size	Est. pop. SAM per ward	Est. no. wards to visit	Est. no. villages to visit - revised
Bagmati	Dolakha	171,278	10,277	0.40%	4.5%	41	462	22	2314	0.56	**40**	**40**
Karnali	Mugu	63,858	5,639	0.60%	3.8%	34	214	19	1419	0.75	**25**	**25**
Madhesh	Rautahat	813,269	78,074	0.20%	10.1%	156	7,885	32	5180	0.99	**32**	**64**

TABLE 2: Calculation of the target sample size for Dolakha, Mugu and Rautahat Districts, Nepal, July 2024.

Per calculations, in order to reach the target sample size, the SLEAC survey team needed to visit 25-40 wards in selected districts. Considering an exceptionally high average ward size in Rautahat district, the estimated number of wards to visit was doubled as wards would need to be segmented and therefore odds of reaching the sample size would significantly decrease.

[9] The sample size can be reduced if the number of SAM cases expected in the health district does not reach 500.

The exhaustive screening of children 6-59 months was conducted in the entire ward in Dolakha and Mugu districts.

Steps in the random sampling procedure across the designated survey zone

- Identification of exhaustive lists of wards for each selected district;
- Calculation of a sampling interval by dividing the total number of wards by the number of wards to be visited.
- Random selection of a starting ward from the top of the list using a random number between 1 and the sampling interval generated by the random number generator.

The complete list of sampled wards is available in the **Annex 5**.

Second-stage sampling

In the second sampling stage, the aim is to identify all the SAM "cases" in the sampled ward, using an exhaustive case-finding method, which makes it possible to find all the children aged between 6 and 59 months in the sampled locations and classify them according to the IMAM programme admission criteria.

The SAM "case" were defined as any child aged between 6 and 59 months presenting one of the following characteristics:

- MUAC < 115 mm and/or ;
- Bilateral oedema.

Moreover, children aged 6 to 59 months with MUAC ≥ 115 mm and without bilateral oedema were considered as SAM recovering cases, if they were enrolled in the IMAM programme and their nutritional status was confirmed as SAM upon enrolment.

The MAM "case" was defined as any child aged between 6 and 59 months presenting the following characteristics:

- MUAC ≥ 115 mm and < 125 mm ;
- No bilateral oedema ;

For children identified as severely or moderately acutely malnourished, a visual check of the health record and/or Ready to Use Therapeutic Food (RUTF) sachets, was carried out to determine whether or not the children were covered by the IMAM programme.

Data collection

In each sampled ward, the SLEAC survey team visited all households with children aged 6-59 months. In wards with an estimated number of children 6-59 months significantly higher than 100[10], the SLEAC survey team proceeded with a segmentation of that ward using a Probability Proportional to Size (PPS) method. In such cases, only one segment of the ward was visited for the purposes of exhaustive screening of children 6-59 months. This ensured that children at risk of wasting in the sampled ward/segment are screened during the SLEAC survey, classified as covered, recovering or not covered by the IMAM programme, and referred for treatment as needed. A verification of enrolment in the IMAM programme was conducted with the help of a valid health card and RUTF sachets available in the household.

[10] Generally considered doable within 1 working day.

Age (in months), MUAC values (in mm), presence of bilateral oedema and case definition were recorded for all children screened during a data collection period via a case-finding summary sheet, which the survey team completed for each sampled ward. Data for children identified with severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) were collected using electronic questionnaires, administered via portable devices (tablets) and synchronised on a server on the KoboToolBox[11] platform.

For children with MUAC < 115 mm, children with bilateral oedema (children with SAM) or children with MUAC ≥ 115 mm without the presence of bilateral oedema (recovering children), all three enrolled in the OTCC programme, a **questionnaire for carers of covered SAM cases** (Cf. Annex 3A) was used. This questionnaire was used to assess the access to IMAM programme and the motivation of parents to use the services provided by health facilities.

In case of children identified as SAM who are not enrolled in the IMAM programme, a **questionnaire for carers of non-covered SAM cases** (Cf. Annex 3B) was used. This questionnaire was used to assess barriers of access to IMAM programme.

In case of children identified as MAM who were not enrolled in the IMAM programme, a **questionnaire for carers of non-covered MAM cases** (Cf. Annex 3C) was used. This questionnaire was used to assess the kind of support provided.

The introductory questions of an electronic questionnaire guided interviewers towards the use of an appropriate questionnaire. For example, if an interviewer selected a MUAC value for the SAM child and marked that the child is not in the IMAM programme, the questionnaire for non-covered SAM cases was automatically launched.

Children identified as SAM but not enrolled in IMAM programme were referred to the nearest service provider for care.

In order to ensure the highest quality of collected data, a field manual was prepared and distributed to the SLEAC survey team. The raw data was first checked by team leaders who were responsible for the completeness of the data and for verifying that the data from the case-finding summary sheets corresponded with a number of questionnaires for caregivers of covered and non-covered SAM/ MAM cases completed on the tablets. The data was then cross-checked by the SLEAC Survey Manager who was responsible for contacting the SLEAC Survey Lead at the slightest doubt and/or at the end of each data collection day. The data imported on the KoboToolBox platform was checked daily by the SLEAC Survey lead.

Data analysis

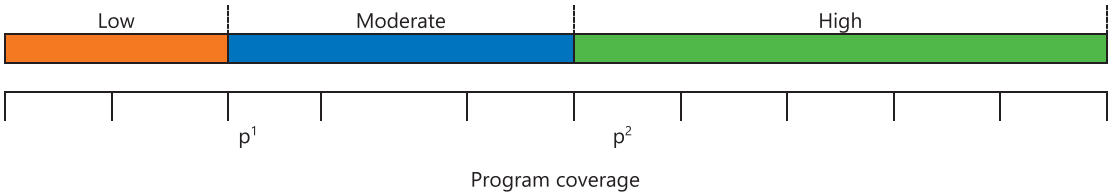
Data analysis does not require encoding or processing by a specific software. All data was processed in an Excel spreadsheet.

Coverage classification

The method for classifying the coverage of CMAM/IMAM programmes is derived from the simplified LQAS classification technique, which allows the classification by two or three tiers. In the present survey, a three-tier classification method was used in order to distinguish service units with very high coverage from those with very low coverage. Coverage was classified as low if it was less than 20% (p^1), moderate if it was less than 50% (p^2) and high if it was more than 50% (in line with SPHERE standards).[12]

[11] https://kobo.humanitarianresponse.info/

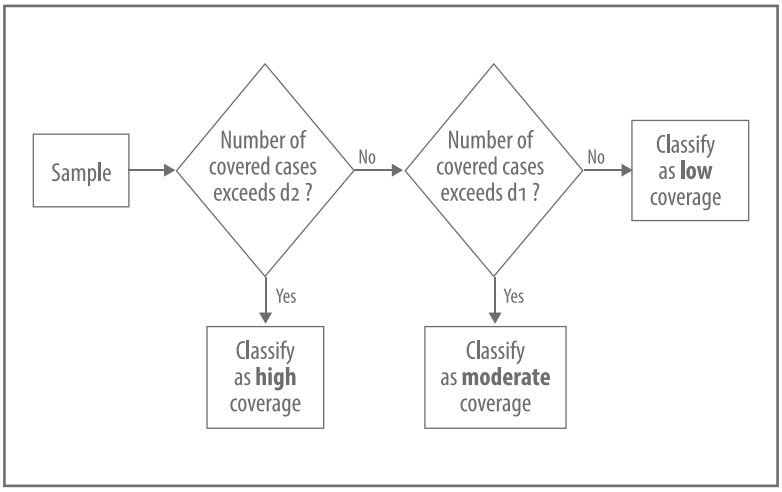
[12] Sphere Project, Sphere Handbook: Humanitarian Charter and Minimum Standards in Disaster Response, 2011, available at: http://www.refworld.org/docid/4ed8ae592.html [accessed 2 July 2019].



The coverage thresholds (d^1 and d^2) were applied to calculate decision values for each district using the respective formulas from the SLEAC Technical Reference[13].

$$d_1 = \left\lfloor n \times \frac{P_1}{100} \right\rfloor \qquad d_2 = \left\lfloor n \times \frac{P_2}{100} \right\rfloor$$

The results were then interpreted using the diagram below:



Coverage estimation

According to the SLEAC methodology, the single coverage estimation of the IMAM programme possible under two conditions. Firstly, the actual sample size must be at least 96 cases. Secondly, coverage in the surveyed area must be homogeneous, i.e. broadly similar throughout the survey area.

Coverage can be estimated using the following formula in the SLEAC Technical Reference and is presented below.

$$Singlecoverage = \frac{C + R_{in}}{C_{in} + R_{in} + C_{out} + R_{out}}$$

Cin = SAM cases in the IMAM programme;
Rin = Recovering cases, i.e. cases identified as SAM who have not yet been discharged from the IMAM programme;
Cout = SAM not enrolled in the IMAM programme;
Rout = Recovering cases not enrolled in the IMAM programme.

[13] Myatt. M, Guevarra. E, Fieschi. L, Norris. A, Guerrero. S, Schofield. L, Jones. D, Emru. E and Sadler. K, 2012. Semi-Quantitative Evaluation of Access and Coverage (SQUEAC) / Simplified Lot Quality Assurance Sampling Evaluation of Access and Coverage (SLEAC) Technical Reference.

The data for *Cin*, *Rin* and *Cout* are collected during the SLEAC survey while the *Rout* value is calculated using the following formula:

$$Rout \cong \frac{1}{3} \times (Rin \times \frac{Cin + Cout + 1}{Cin + 1} - Rin)$$

Rout represents cases in the process of recovery that are not enrolled in the IMAM programme. The inclusion of this value in the coverage estimate of IMAM programmes balances cases in the programme with cases not in the programme. For more information on *Rout* and the calculation formula, please see a *Field Exchange* article published in 2015.[14]

Organisation of data collection

The SLEAC survey team consisted of a SLEAC Survey Lead[15] and SLEAC Survey Manager, assisted by a team of 5 Team Leaders and 10 Surveyors. They were recruited in advance based on their previous relevant experience in nutrition assessments.

The surveyors were divided into 5 teams of two people (pairs). Each pair of surveyors were supervised by a Team Leader, thus forming a work unit of 3 people. Data collection teams were supervised by the SLEAC Survey Manager during the data collection in all districts, as per the established timeline. Additionally, they were technically supported by a SLEAC Survey Lead, who was physically present in Nepal during the data collection in the first district and ensured technical backstopping remotely for the remaining districts. All team leaders were responsible for contacting the SLEAC Survey Manager at the slightest doubt and/or at the end of each data collection day. SLEAC Survey Manager was responsible for contacting the SLEAC Survey Lead with a summary of concerns experienced by data collections teams. Health workers, FCHV's from Local health facilities and social mobilizers were mobilised to assist the data collection team during the screening process in their respective catchment areas.

All data collection teams received a plan of sampled locations to visit. The SLEAC data collection took place from 15 August to 28 September 2024, i.e. 37 days in total, including the travel to sampled locations.

Training of data collection teams

A 4-day training was conducted from 9 to 12 August 2024 in Bhaktapur. The training sessions included a review of key concepts in nutrition, a presentation of the SLEAC methodology, data collection tools and procedures, and a standardisation test. One training day was dedicated to a pilot test. All survey teams were required to pass a standardisation test and post-test with satisfactory results to proceed with the data collection. An additional training day was added to repeat the standardisation test, as the initial results were unsatisfactory.

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[14] Myatt, M et al, (2015). A single coverage estimator for use in SQUEAC, SLEAC, and other CMAM coverage assessments, Field Exchange 49, p.81.
[15] Senior Nutrition Assessment Coordinator, AAH UK.

C. QUALITATIVE INSIGHTS

A qualitative data collection was conducted in parallel with the SLEAC survey to deepen the understanding of identified barriers and boosters and to formulate meaningful recommendations adapted to the context. This data collection was added to the survey without prior planning, based on the SLEAC team's observations during the first few days of data collection in Rautahat district in order to maximize the information potential of the SLEAC survey.

Sampling

In each district, the SLEAC survey teams visited a sample of OTC centres covering the sampled wards for the SLEAC survey. The qualitative data collection involved unstructured interviews with health facility staff, complemented by observations of IMAM registers and RUTF stock levels. The visited OTC centres comprised facilities located in hospitals, primary health care centers, and health posts.

In total, 19 unstructured interviews with health workers were conducted across the three selected districts, as presented in Table 3 below. The collected qualitative data were supplemented by field observations made by the survey managers and supervisors.

District	Unstructured interviews	Field observations	Total
Rautahat	10	9	19
Dolakha	7	7	14
Mugu	2	7	9
Total	**19**	**23**	**42**

TABLE 3: Number of interviews and observations conducted during the SLEAC survey across selected districts, Nepal, August-September 2024

Data collection and analysis

The data was collected via unstructured interview across the three selected districts in line with the key thematic areas of the coverage survey. Qualitative data was recorded manually in a notebook and then consolidated in an Excel spreadsheet by the SLEAC Survey Manager and shared with the SLEAC Survey Lead for analysis. The qualitative data was analysed using thematic analysis.

IV. ETHICAL CONSIDERATIONS

The following provisions were respected during the course of this coverage survey:

a. All relevant national, provincial and district authorities were duly informed about the survey and expressed their agreement with the survey implementation via support letters addressed and delivered to Action Against Hunger Nepal;
b. The health facility personnel, community health workers as well as community leaders were informed of the selection of their catchment area/community for the purpose of the assessment at least one day in advance.
c. Caregivers in all sampled households were informed about the objectives of the assessment and their oral informed consent was sought to ensure voluntary participation in the assessment;
d. The anonymity of participants was ensured during all stages of the assessment (data collection, data analysis and data storage). Their names were not collected nor shared;
e. All children aged 6 – 59 months who were identified as suffering from severe acute malnutrition and/or other medical conditions and who were enrolled in the IMAM program, were referred to the nearest health facility for appropriate treatment;
f. Caregivers and/or community members in need of information on acute malnutrition were referred to competent professionals in their area.

V. SURVEY LIMITATIONS

- **Limited routine monitoring and complementary data availability**. Routine monitoring data were not readily available. Additionally, observations of IMAM registers in health facilities revealed significant documentation and reporting issues, compromising the reliability of the data. Consequently, an analysis of IMAM programme data initially planned could not be conducted.
- **Accessibility issues.** In total 6 wards (3 wards from Dolakha and 3 from Mugu) could not be accessed due to heavy rainfall and were replaced by reserve wards.
- **Target sample size not reached.** Considering an extremely low prevalence of severe acute malnutrition across the country, the target sample size for SAM was not reached in 2 of the 3 selected districts. Therefore, it was not possible to establish individual coverage classifications for each of these districts, which had to be grouped together to obtain a combined coverage classification.
- **Missing questionnaire for SAM covered cases.** A total of 11 questionnaires were missing for covered cases in Rautahat, which impacted the analysis of barriers and boosters for this category, as only 2 questionnaires were correctly completed for the district. Given the low number of cases in the sample, it was possible to conduct the respective analyses only possible for Mugu.

VI. FINDINGS

A.PROGRAMME DATA ANALYSIS

General observations: Based on observations of registers, there were several discrepancies in the number of screenings conducted across the 12 visited facilities across the three selected districts in the past financial year. Some health posts screened a large number of children, while others screened very few, a trend consistent across all three selected districts. For instance, in Mugu, one health post screened many more children than the district hospital, indicating potential challenges with passive screening. Moreover, in some health facilities, the number of screenings matched the number of admissions, while others reported hundreds of screenings with no admissions recorded. In terms of discharges, the numbers of defaulters, non-recovered, and recovered cases generally did not align with numbers of admissions. Some facilities reported zero cases for both admissions and discharges, while others noted a high number of defaulters compared to the number of admissions. The number of non-recovered cases was low, no deaths were reported across all visited facilities, and overall the cure rates were low. These inconsistencies highlight considerable issues with case reporting and management of SAM cases, which were also noted in qualitative insights.

MUAC at admission

According to register observations from 12 health facilities in the selected districts, in the past financial year 68% (n=162) children were admitted with a MUAC lower than 115mm. Of those, 43% of children (n=69) were admitted with a MUAC of 110mm who have a higher risk of mortality. This indicates potential barriers at screening level as well as IMAM and malnutrition awareness levels which were also highlighted by the qualitative data. Additionally, 32% (n= 75) of children were admitted with a MUAC between 115-125mm. This suggests that these children were either admitted based on weight-for-height criteria or were associated with protocol deviations, as noted in the qualitative insights.

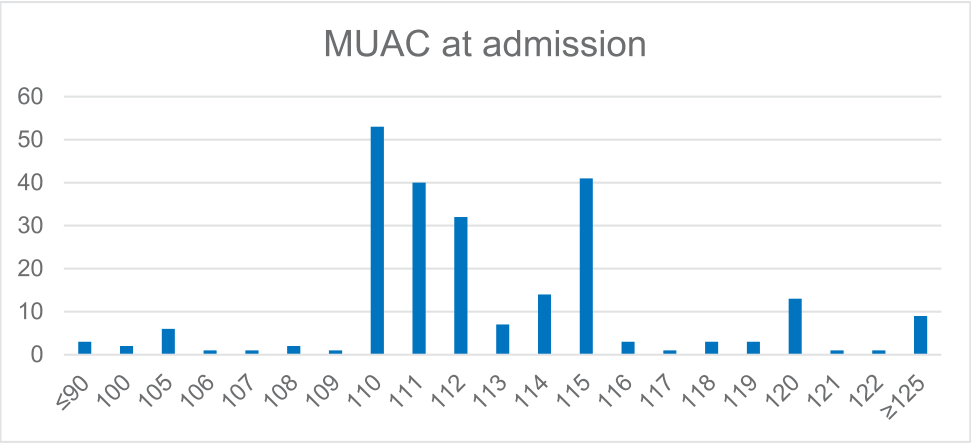


FIGURE 2: MUAC at admission observed from registers in the last financial year in 12 health facilities across the selected districts.

MUAC at default

Based on register observations from 12 health facilities in the selected districts, in the past financial year 42% (n=34) children defaulted while having a MUAC of less than 115mm. Of those, 9% (n=7) had a MUAC of 110mm or lower. The majority of children (51%, n=41) defaulted with a MUAC between 115-125mm.

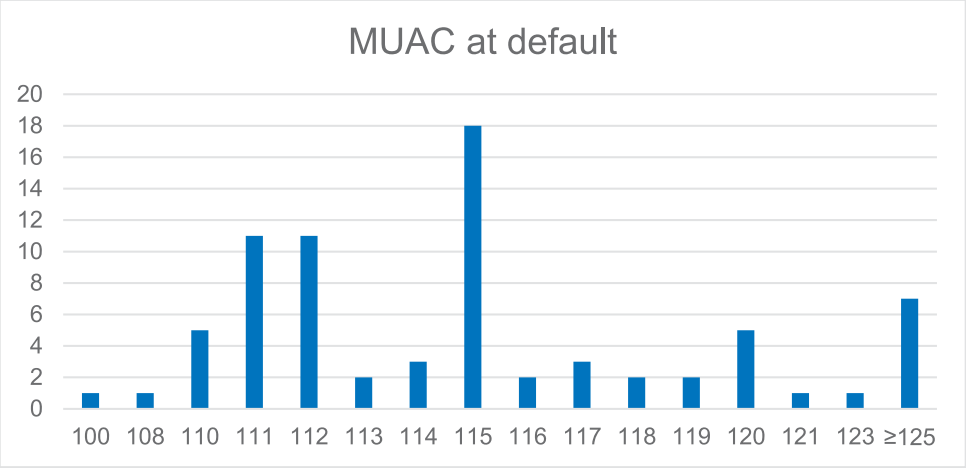


FIGURE 3: MUAC at default observed from registers in the last financial year in 12 health facilities across the selected districts.

MUAC at cure

Based on register observations from 12 health facilities in the selected districts, in the past financial year 76% (n=77) were discharged with a MUAC greater than 115 mm, in accordance with the IMAM protocol. However, nearly one in four children (n= 24) admitted to the programme were discharged with a MUAC of 115 mm or lower. This indicates the presence of possible protocol deviations as reported during the qualitative insights.

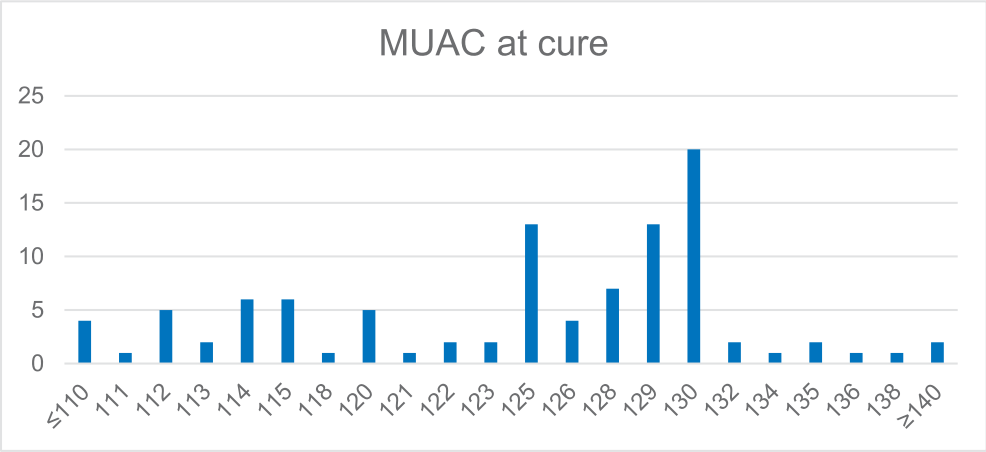


FIGURE 4: MUAC at cure observed from registers in the last financial year in 12 health facilities across the selected districts.

Length of stay at cure

Based on register observations from 12 health facilities in the selected districts, in the past financial year only 39% of the admitted children (n=60) adhered to the minimum length of stay of 6 weeks as outlined in the IMAM protocol. Conversely, 53% of children (n=81) were reported to have stayed for 10 or more weeks before being discharged as cured. When considering length of stay before default, more than half of children among the visited facilities (53%, n= 25) were reported defaulting before the first follow up while 23% (n=11) defaulted after 15 or more visits, indicating possible protocol deviations, keeping children longer in the programme, and/or inconsistencies in data reporting.

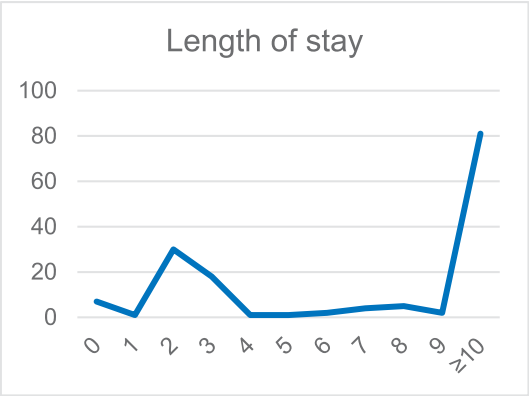


FIGURE 5: Length of stay (in weeks) observed from registers in the last financial year in 12 health facilities across the selected districts.

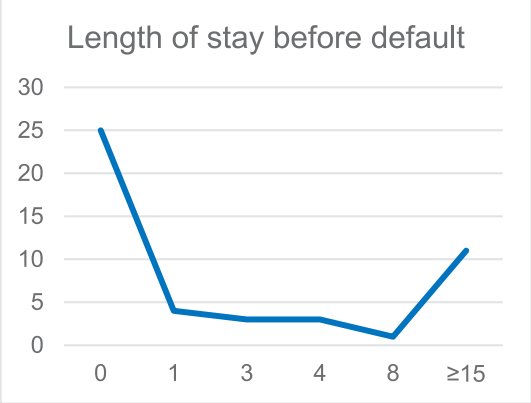


FIGURE 6: Length of stay (in weeks) before defaulting observed from registers in the last financial year in 12 health facilities across the selected districts.

B. SIMPLIFIED LQAS EVALUATION OF ACCESS AND COVERAGE (SLEAC)

GENERAL RESULTS

Out of 97 sampled wards across the selected districts, the SLEAC surveys team completed the data collection in 97, replacing 6 previously sampled wards due to the inaccessibility during the survey. The SLEAC survey teams screened 14,175 children across sampled wards in the selected districts, which represents 95.4% of an estimated population of children 6-59 months in these locations The cumulative screening rate is therefore above an established 90% threshold, which was validated prior the data collection to confirm the exhaustivity of screening by the survey teams.

District	Number of wards visited	Target reviewed sample size	Estimated children 6-59 months[16]	No. Children screened	% Children screened
Rautahat	64	64	5764	6347	110%
Dolakha	40	22	5329	4471	84%
Mugu	25	19	3762	3357	89%
SUBTOTAL	**97**	**73**	**14,855**	**14,175**	**95.4%**

TABLE 4: Summary of screening acts during the SLEAC survey across selected districts, Nepal, August- September 2024

[16] Estimated number of children in Rautahat and Dolakha represents a segment, not the entire ward.

Across the selected districts, 98.3% (n=13,935) of screened children in the sample had a MUAC measurement ≥125mm and were therefore categorised as well-nourished. Of the screened children in the sample, 209 (1.5%) children presented a MUAC measurement between 115 and 124 mm and were therefore categorised as moderately malnourished. Thirty-two children (0.2%) had a MUAC measurement <115mm and were therefore categorised as severely acutely malnourished. No case of oedema was found across the districts.

District	No. Children ≥125 mm	No. Children 115-124 mm	No. Children < 115 mm	No. Children Oedema
Rautahat	6204	131	13	0
	97.7%	**2.1%**	**0.2%**	**0%**
Dolakha	4439	26	6	0
	99.3%	**0.6%**	**0.1%**	**0%**
Mugu	3292	52	13	0
	98.1%	**1.5%**	**0.4%**	**0%**
SUBTOTAL	**13935**	**209**	**32**	**0**
	98.3%	**1.5%**	**0.2%**	**0%**

TABLE 5: Distribution of population 6-59 months by nutritional status during the SLEAC survey across selected districts, Nepal, August-September 2024

All children screened as severely acutely malnourished who were not enrolled in IMAM programme were referred to the nearest service delivery unit for the verification of admission criteria and admission into the programme.

Real sample size

The real sample size includes all cases of severe acute malnutrition, identified during the data collection. This also includes recovering cases enrolled in IMAM programme, even if their upper arm circumference is equal to or greater than 115 mm.

Considering an extremely low prevalence of SAM, the target sample size was not reached in two out of three selected districts, with the exception of Mugu. Consequently, it was possible to provide a coverage classification for Mugu, while Rautahat and Dolakha could not benefit from a coverage classification at district level. The two districts were grouped together after assessing coverage homogeneity using a chi-square test, which confirmed that coverage was not patchy, as detailed in the subsequent section of the report.

District	Target sample size	SAM cases	SAM Rin cases	Real sample size
Rautahat	32	13	11	24
				75%
Dolakha	22	6	0	6
				27%
Mugu	19	13	6	19
				100%
Total Real sample size				**67%**

TABLE 6: Comparison of target and real sample sizes during the SLEAC survey across selected districts, Nepal, August-September 2024.

The overall results presented below provide details for covered (C) and non-covered (NC) SAM cases in each district. However, it should be noted that no covered cases were identified during the SLEAC in Dolakha district, therefore this category is absent from the respective graphs.

Gender

The SLEAC survey conducted in selected districts found that 73% of children with severe acute malnutrition, including recovering cases, were girls (n=33), while 27% were boys (n=12). This trend of a higher proportion of girls was found in both covered and non-covered cases across all districts, with 61% (n=11) of covered children and 81% (n=21) of non-covered children being girls. Among the respective districts, Rautahat showed the highest proportion of girls (92%) among non-covered cases, whereas Mugu reported the highest percentage of covered cases that were girls (64%). These findings suggest a possible increased vulnerability to malnutrition and a possible barrier to access to treatment among the female population in the surveyed districts, indicating a need for further research on this topic.

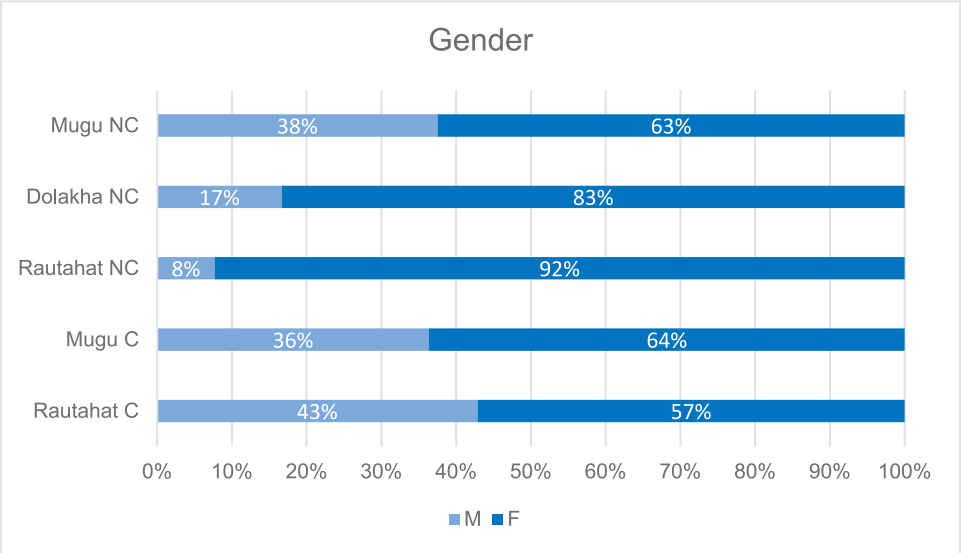


FIGURE 7: Sex distribution of children with SAM by covered and non-covered cases screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

Age

In the SLEAC survey conducted across selected districts, 80% (n=36) of children with severe acute malnutrition were aged 6-23 months, while 20% (n=9) were aged 24-59 months. Among the covered cases, 83% (n=15) were children under two years, and 78% of the non-covered cases fell within the same age group. This trend was consistent across specific districts, with over 60% of non-covered cases and more than 80% of covered cases in each district being children under two years old. Notably, Dolakha had 100% (n=6) of its non-covered cases in this age group. The median age for covered cases was 14 months in Rautahat and 16 months in Mugu, while no covered cases were identified in Dolakha. The median age for non-covered cases ranged from 12 to 17.5 months across districts. These findings may suggest a higher vulnerability to acute malnutrition among children aged 0-23 months in the surveyed areas and can indicate the presence of care practices during the first year of life that could increase the risk of acute malnutrition in this age group. However, further research is needed to explore this possible association.

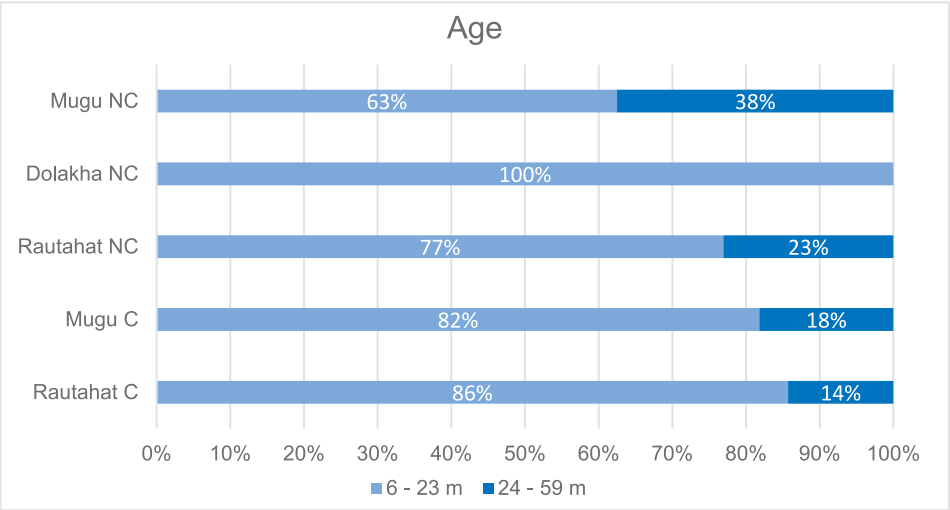


FIGURE 8: Age distribution of children with SAM by covered and non-covered cases screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

Distance to health facility

Among SAM cases found during the SLEAC survey across selected districts, the distance to the nearest health facility for children with SAM revealed clear trends. Sixty-seven percent (n=30) of cases among covered and non-covered reported the distance as very far (more than a 20-minute walk). Additionally, 22% (n=10) categorised the distance as far (between 10- and 20-minutes walking), while only 11% (n=5) considered it near (less than a 5-minute walk). Very few reported the distance as near, with three (17%) among the covered cases and only two (7%) among the non-covered cases mainly located in Rautahat. At the district level, the survey found that among non-covered cases, 83% in Dolakha, 54% in Rautahat, and 88% in Mugu were located very far from health facilities. Notably, even among the covered cases, 73% in Mugu and 43% in Rautahat reported being very far from the health facility. The absence of cases categorised as near a health facility in Mugu highlights the district's greater geographical dispersion. These findings suggest that distance to health facilities can pose a significant barrier to health-seeking behaviours for households located farther away from the health facilities.

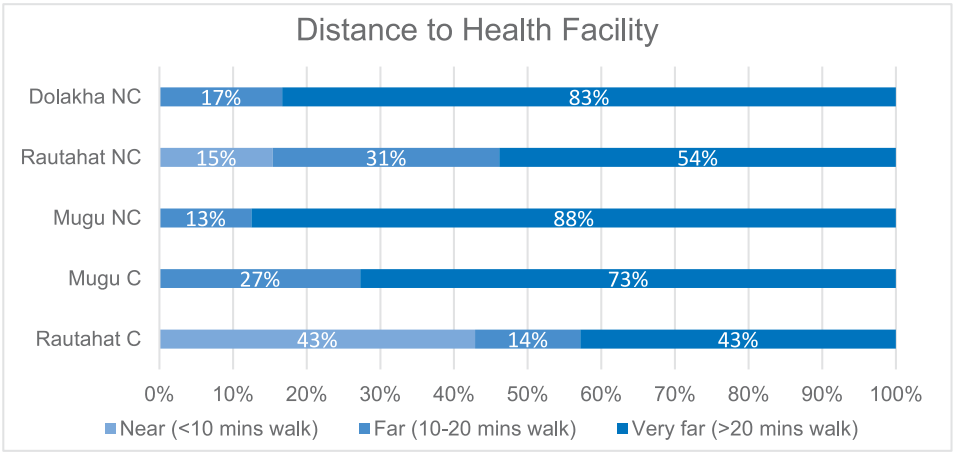


FIGURE 9: Comparison of distance to nearest health facility, as perceived by caregivers of all SAM cases screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

MUAC

Across the selected districts, children enrolled in IMAM programme had MUAC values between 104mm and 134mm, with a median value of 123mm in Rautahat and 120 in Mugu. No covered cases were detected in Dolakha. It is important to note that five out of eleven children in Mugu, approximately 45%, presented MUAC values below 115, which indicates a higher risk of mortality.

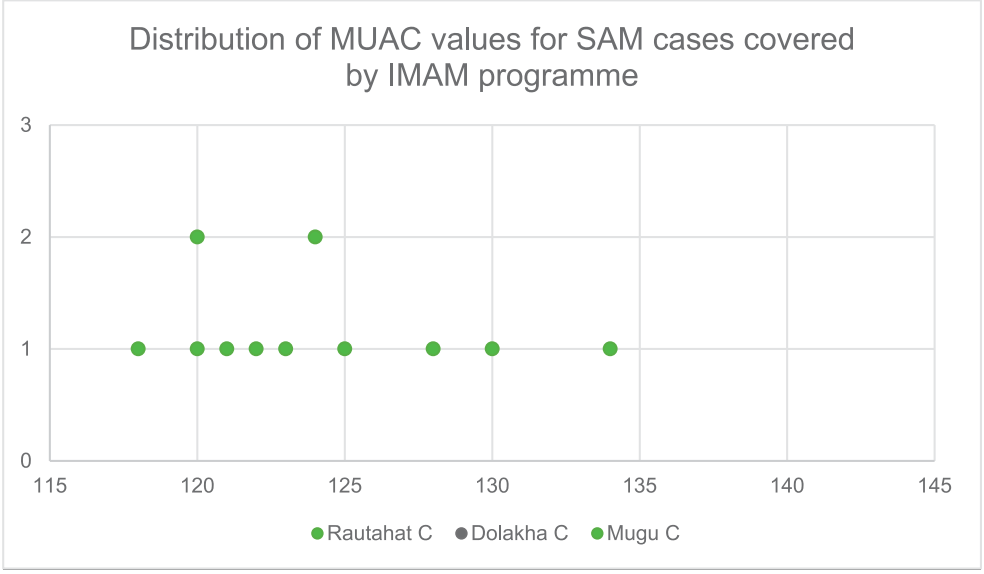


FIGURE 10: Distribution of MUAC values for SAM cases covered by IMAM programme, screened during the SLEAC survey across selected districts, Nepal, August-September 2024.

On the other hand, children not enrolled in IMAM programme had MUAC values between 100mm and 114mm, with a median value of 112mm in Rautahat, 107.5 mm in Dolakha and 110 mm in Mugu, indicating a higher risk of mortality and highlighting weaknesses in the detection and referral system for SAM cases.

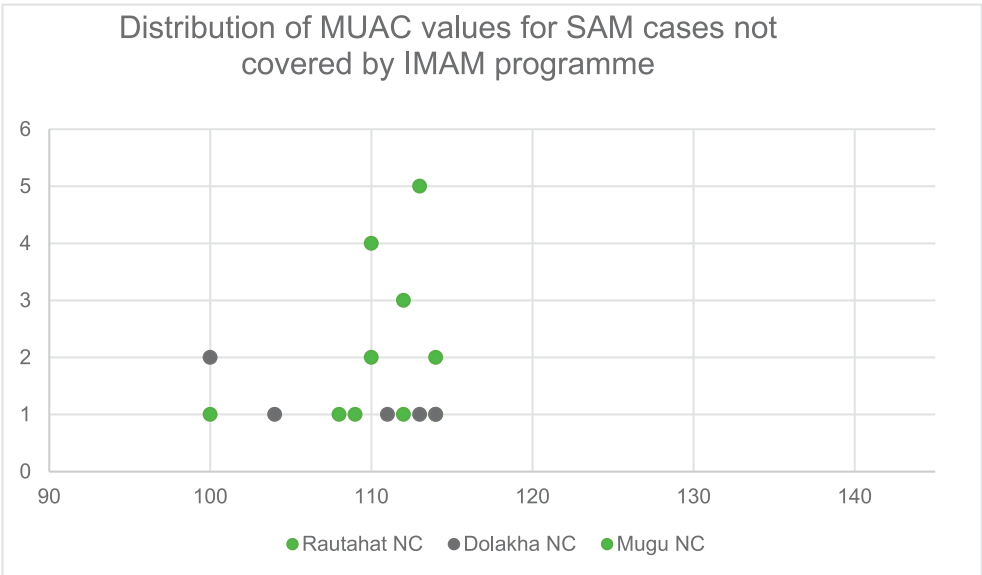


FIGURE 11: Distribution of MUAC values for SAM cases not covered by IMAM programme, screened during the SLEAC survey across selected districts, Nepal, August-September 2024.

CLASSIFICATION OF COVERAGE

In this section, for the purposes of IMAM programme classification, the term "case" refers to a child with SAM or currently recovering from SAM. A detailed breakdown of covered and non-covered cases by district is provided in the table below.

The SLEAC survey teams identified 0 cases enrolled in IMAM programme (Cin), 13 recovering cases (Rin) and 13 cases not enrolled in IMAM programme (Cout) in Rautahat. In Dolakha 0 cases enrolled in IMAM programme (Cin), 6 recovering cases (Rin) and 6 cases not enrolled in IMAM programme (Cout) and in Mugu 5 cases enrolled in IMAM programme (Cin), 13 recovering cases (Rin) and 8 cases not enrolled in IMAM programme (Cout).

District	No. Children SAM covered (Cin)	No. Children SAM non-covered (Cout)	No. Children SAM recovering (Rin)
Rautahat	0	13	13
Dolakha	0	6	6
Mugu	5	8	13
TOTAL	**5**	**27**	**32**

TABLE 7: Distribution of SAM covered and non-covered cases by IMAM programme, across selected districts, Nepal, August-September 2024.

A number of recovering cases not covered by IMAM programme (Rout), which is necessary for coverage classification, has been calculated using a formula below.

$$R_{out} \approx \left\lfloor \frac{1}{k} \times \left(R_{in} \times \frac{C_{in} + C_{out} + 1}{C_{in} + 1} - R_{in} \right) \right\rfloor$$

The calculated values for Rout for each selected district are provided in Table 8 below.

Districts	Cin	Cout	Rin	Rout	ALL
Rautahat	0	13	11	47	71
Dolakha	0	6	0	0	6
Mugu	5	8	6	2	21
TOTAL	**5**	**27**	**17**	**49**	**98**

TABLE 8: Calculation of Rout in the selected districts, Nepal, August-September 2024.

Due to low sample size, Rautahat and Dolakha could not benefit from a coverage classification at district level, necessitating a combined classification instead. In order to confirm whether a classification of coverage is possible for the three selected districts together, a homogeneity chi-square test x^2 was conducted. In line with the methodological requirements for the SLEAC survey, in the SLEAC Technical Reference[17], a difference between service delivery units of less than 5.99 confirms the homogeneity of results and allows to proceed with the classification of coverage for the respective area.

[17] Myatt. M, Guevarra. E, Fieschi. L, Norris. A, Guerrero. S, Schofield. L, Jones. D, Emru. E and Sadler. K, 2012. Semi-Quantitative Evaluation of Access and Coverage (SQUEAC) / Simplified Lot Quality Assurance Sampling Evaluation of Access and Coverage (SLEAC) Technical Reference.

Districts	n	O	E	(O-E)	(O-E)2	(O-E)2/E
Rautahat	71	11	15.94	-4.9388	24.3915	1.53
Dolakha	6	0	1.35	-1.3469	1.8142	1.35
Mugu	21	11	4.71	6.2857	39.5102	8.38
TOTAL	**98**	**22**	**22**	**0.0000**	**65.7160**	**11.26**

TABLE 8: Calculation elements for the x2 chi-square test to determine a homogeneity of selected districts, Nepal, August-September 2024.

According to the calculations in Table 8, there is a significant difference between the 3 districts (resulting value is higher than 5.99) and therefore a combined classification of coverage is not possible.

Considering the relative geographical proximity of Rautahat and Dolakha, we attempted to combine these districts for a combined coverage classification. Meanwhile, the sample size for Mugu district was sufficient to allow for a separate coverage classification. The chi square calculation detailed in Table 9 below met the homogeneity criterion (< 3.84), therefore allowing to provide a combined classification for Rautahat and Dolakha.

Districts	n	O	E	(O-E)	(O-E)2	(O-E)2/E
Rautahat	71	11	15.94	-4.9388	24.3915	1.53
Dolakha	6	0	1.35	-1.3469	1.8142	1.35
TOTAL	**77**	**11**	**17.29**	**-6.2857**	**26.2057**	**2.88**

TABLE 9: Calculation elements for the x2 chi-square test to determine a homogeneity of Rautahat and Dolakha districts, Nepal, August-September 2024.

In the tables below, the value "n" represents all covered and uncovered cases identified during the SLEAC survey, including recovering cases not covered by the IMAM program (Rout). Results include a coverage classification for Mugu district, and a combined coverage classification for Rautahat and Dolakha districts.

The n value in Mugu equals to 21 cases. Thresholds d1 and d2 refer to coverage thresholds, which are explained in the Methodology section of this report. The threshold d1 represents 20% and d2 represents 50% coverage.

n	d1	d2	Cin+Rin	Coverage classification
21	4	10	11	**HIGH**

TABLE 10: Classification of coverage for IMAM programme in Mugu district, Nepal, August- September 2024

Following the calculations of d1 and d2, it is possible to classify the coverage in Mugu district as **"high"**, i.e. above 50% threshold, as the number of covered cases (Cin+Rin) is higher than 10 cases.

Instead in Rautahat and Dolakha, the coverage is classified as "**low**", i.e. below 20% threshold, as the number of covered cases is lower than 15 cases.

n	d1	d2	Cin+Rin	Coverage classification
77	15	38	11	**LOW**

According to SLEAC methodology, a coverage estimation is possible when the achieved sample is of 96 cases or larger. Considering that the selected districts were not confirmed as homogeneous it was not possible to estimate a combined coverage for the three districts. Additionally, despite Rautahat and Dolakha meeting the homogeneity criterion their sample size did not reach the minimum of 96 cases, and it was therefore not possible to estimate a combined coverage. Similarly, the sample size in Mugu district did not allow to provide a coverage estimation.

BARRIERS OF ACCESS AND COVERAGE

The caregivers of all SAM children not covered by the IMAM programme were invited to answer a few questions in order to explore the barriers of access to the service. The questionnaire for caregivers of non-covered cases is composed of a series of cascading questions, which progressively reduce the total sample size, depending on previous answers provided by the caregiver (Cf. **Annex 3A**).

The total initial sample size falls short of 1 questionnaire which was deployed incorrectly causing missing data.

After a thorough data cleaning, a total of 27 questionnaires from 3 selected districts were retained for the analysis. All districts represented rural settings and therefore no further disaggregation was necessary. Additionally, 200 questionnaires from MAM non-covered cases were also analysed separately; detailed results can be found in the subsequent sections of this report.

Awareness of illness

The questionnaire for non-covered SAM cases begins with a question that tests caregiver's awareness that their child is unwell. Most caregivers across districts reported being aware, specifically 88% (n=7) in Mugu, 77% (n=10) in Rautahat and 60% (n=3) in Dolakha. Therefore, it is possible to conclude that awareness of illness does not constitute a barrier of access to IMAM across selected districts.

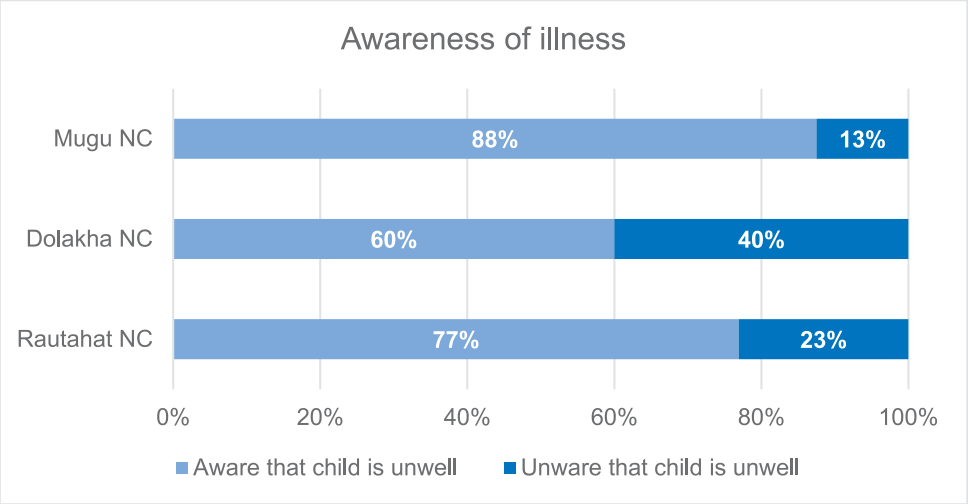


FIGURE 12: Awareness of illness by caregivers of SAM cases not covered by the IMAM programme across the selected districts, Nepal, August-September 2024.

Awareness of malnutrition

The questionnaire for non-covered SAM cases continues with a question about symptoms that a caregiver might have perceived in their child. *Please note that this question is only asked to caregivers who answered the preceding question positively.*

Caregivers across the districts identified fever, weight loss, diarrhoea, and cough as the main symptoms associated with malnutrition. In terms of direct malnutrition symptoms 57% (n=4) of caregivers in Mugu, 20% (n=2) in Rautahat and one caregiver in Dolakha (33%) identified weight loss. Additionally, half of the caregivers in Mugu (n=2) and one in Rautahat observed symptoms of loss of appetite and apathy. Diarrhoea was noted by only five caregivers across districts, with three in Rautahat (30%) and two in Mugu (29%).

Instead, fever was recognised by 80% (n=8) of caregivers in Rautahat, 57% (n=4) in Mugu and one caregiver (33%) in Dolakha. Other non-malnutrition related symptoms which were identified across selected districts included cough, vomiting and skin lesion. Therefore, based on these results it can be concluded that caregivers are able to recognise key symptoms of childhood illness such as fever, cough or diarrhoea that should prompt seeking treatment at the health facility. However, the fact that some of these symptoms are not specific to malnutrition may complicate healthcare pathways and represents the first barrier to access to IMAM programme if the caregivers do not act upon those accompanying conditions.

Mugu district stood out in this regard, with 86% of caregivers observing symptoms associated with malnutrition, such as weight loss and loss of appetite, while caregivers in Dolakha and Rautahat districts reported mostly nonspecific symptoms. The presence of various actors in Mugu implementing nutrition programming may have influenced caregivers' awareness of malnutrition, however this hypothesis will need to be investigated further.

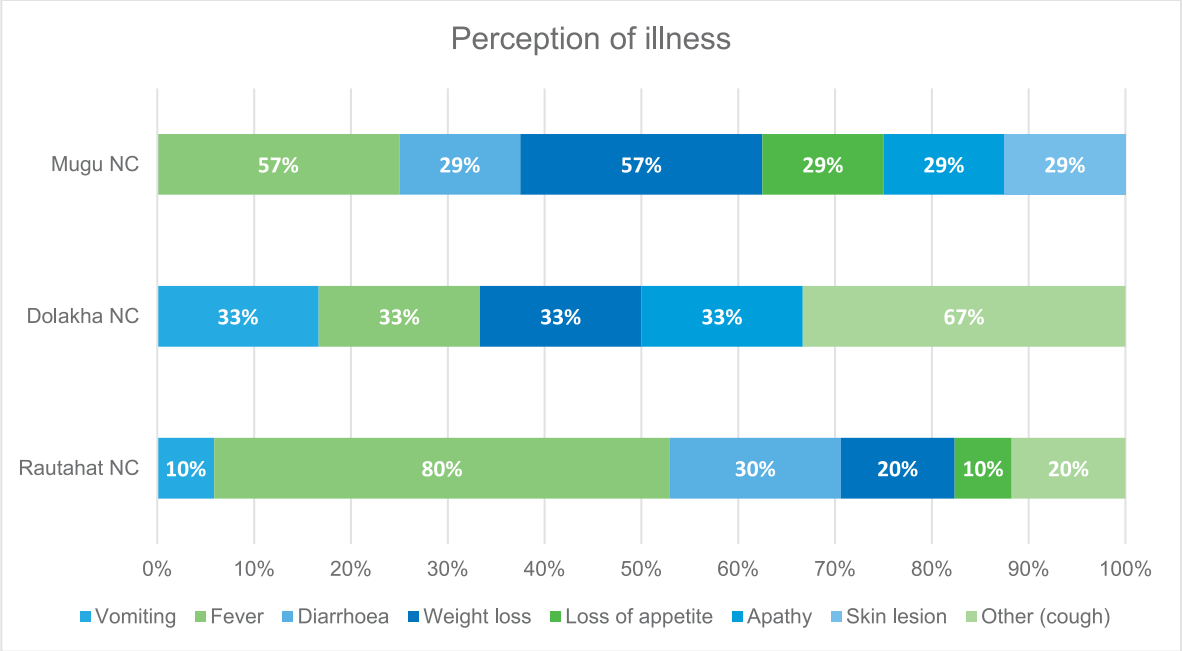


FIGURE 13: Perception of illness among caregivers of SAM cases not covered by the IMAM programme across the selected districts, Nepal, August-September 2024.

Therapeutic itinerary

The questionnaire for non-covered SAM cases continues with a question about a treatment that a caregiver initiated after observing child's symptoms. *Please note that this question is only asked to caregivers who recognised key symptoms of malnutrition in their child in the preceding question.*

The primary treatment preferences among caregivers across the districts were purchasing medicines from pharmacies or seeking treatment at health facilities. Notably, 100% (n=3) of caregivers in Dolakha indicated a preference for seeking help at health facilities. In Rautahat, 70% (n=7) opted to buy medicines at pharmacies, while only 10% (n=1) indicated seeking treatment at health facilities. In Mugu, 43% (n=3) of caregivers would seek assistance at health facilities, while 29% (n=2) reported not seeking any treatment at all. Medicinal plants, enriched meals, purchasing medical products from the market, prayer or seeking treatment at private clinics were practices mentioned by individual caregivers across the selected districts, though to a lesser extent.

The variety of treatment preferences highlighted across districts suggests a possible lack of awareness of malnutrition and its treatment options among caregivers which may hinder their access to appropriate care. Additionally, it is important to note that in Mugu and Rautahat access to health facility is limited/not preferred and therefore it may be an additional barrier of access to the IMAM programme.

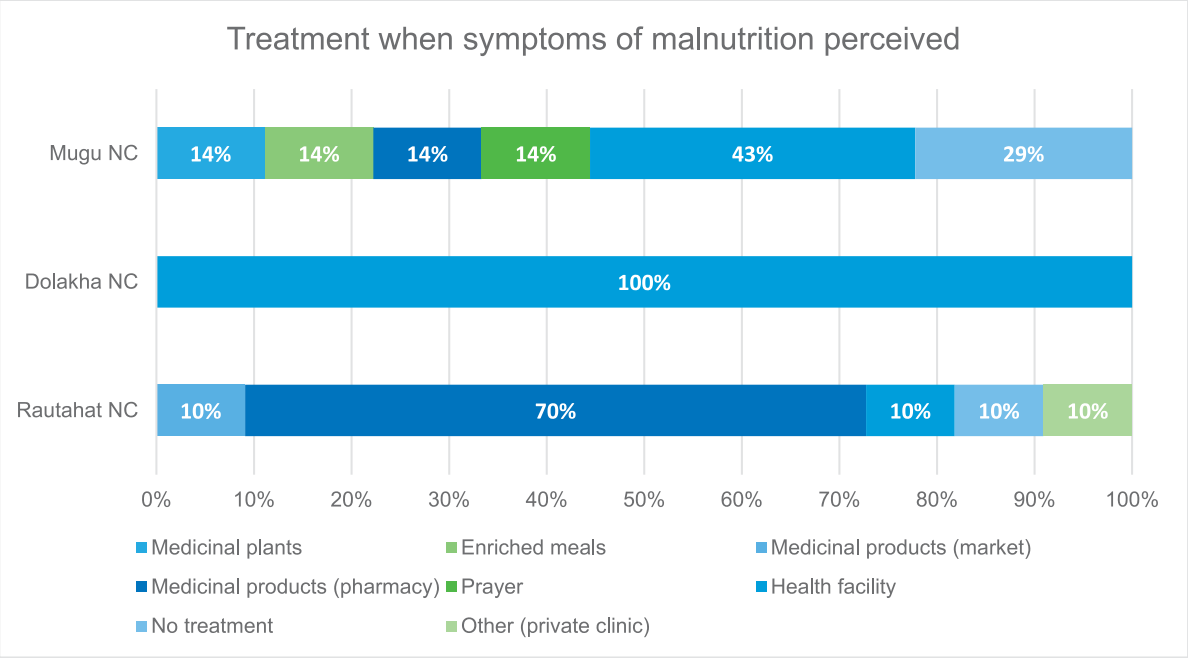


FIGURE 14: Initiated therapeutic itinerary among caregivers of SAM cases not covered by the IMAM programme across the selected districts, Nepal, August-September 2024.

Decision-making power

The questionnaire for non-covered SAM cases continues with a question about a holder of a decision-making power with respect to child's treatment. *Please note that this question is only asked to caregivers who recognised key symptoms of malnutrition in their child.*

Exclusive decision-making power with regards to their child's treatment choice lies generally in the hands of the father, another family member or a community health worker (CHW). In Rautahat, caregivers identified another family member as the primary decision-maker in 60% (n=6) of cases, whereas in Dolakha, 67% (n=2) of caregivers reported a CHW, and in Mugu, 71% (n=5) indicated the father as the main decision-maker. Mothers held decision-making power in a minority of cases, accounting for 20% (n=2) in Rautahat and 14% (n=1) in Mugu, and none in Dolakha. The data highlight the presence of various individuals within the household who possess decision-making power over treatment choices, potentially reflecting different range of power dynamics within the family and cultural barriers within a patriarchal society. Additionally, it is important to recognise the role of health workers (HWs), FCHVs and their significance in guiding caregivers when a child is screened and referred for treatment.

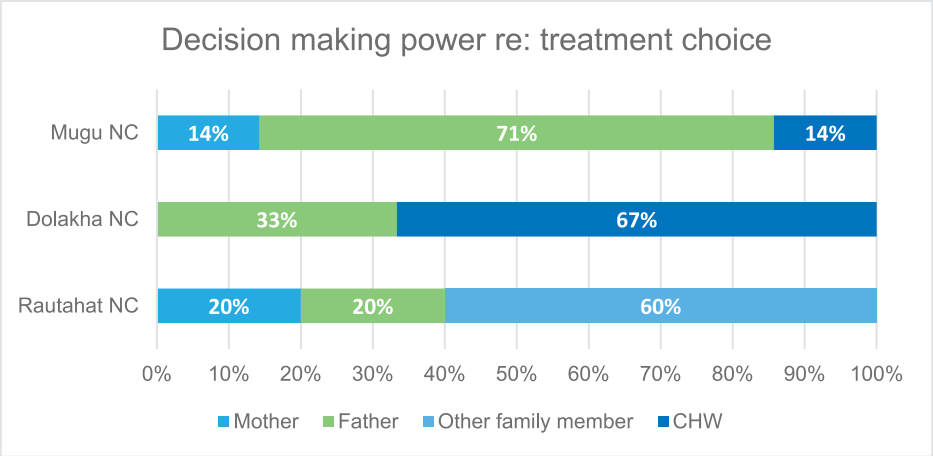


FIGURE 15: Holders of decision-making power with respect to child's treatment, as perceived by caregivers of SAM cases not covered by the IMAM programme selected districts, Nepal, August-September 2024

Awareness of programme

The questionnaire for non-covered SAM cases includes a question about an awareness of IMAM programme to understand whether they are aware of a specific service to treat their child's condition. *Please note that this question is asked to all caregivers who recognised that their child is unwell.*

Generally speaking, more than one half of caregivers, namely 11 out of 20 (55%), were unaware of the existence of IMAM programme. On a district level, Rautahat had the highest rate of unawareness with 70% (n=7) of caregivers not knowing about the programme. In contrast, the unawareness rate was 33% (n=2) in Dolakha and 43% (n=3) in Mugu. These findings indicate that a lack of awareness of the IMAM programme constitutes a barrier to accessing services across districts, highlighting the need for improved programme awareness and outreach.

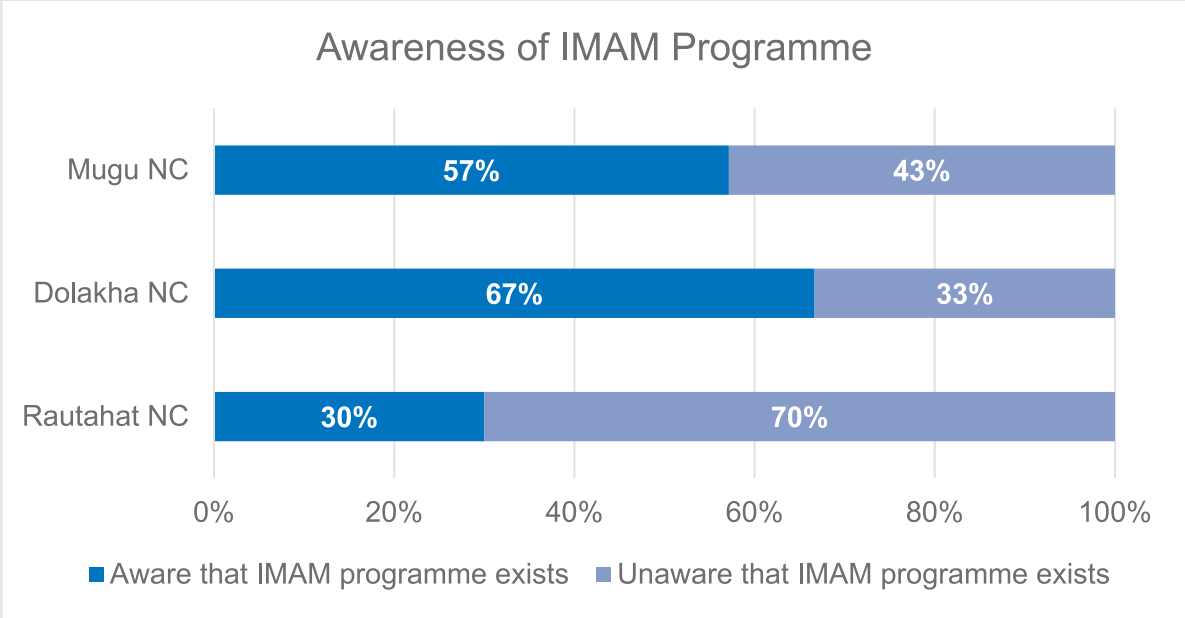


FIGURE 16: Awareness of IMAM programme among caregivers of SAM cases not covered by the IMAM programme across selected districts, Nepal, August-September 2024.

Barriers of access

The questionnaire for non-covered SAM cases continues with a question about reasons of non-enrolment in IMAM programme to understand caregiver's barriers of access. *Please note that this question is asked only to caregivers who stated that they are aware of IMAM programme's existence.*

The barriers to access to IMAM programme differed substantially between districts. In Mugu, caregivers identified several challenges, including lack of company to go to the health centre (n=1), illness of a family member (n=1), shortage of RUTF at the OTC (n=1) and a lack of information about the programme (n=1). In Dolakha, all caregivers expressed scepticism regarding the programme's effectiveness (n=2). Meanwhile, in Rautahat, caregivers mentioned climatic conditions (n=1), lack of RUTF at the OTC (n=1) and reported one child as a relapse.

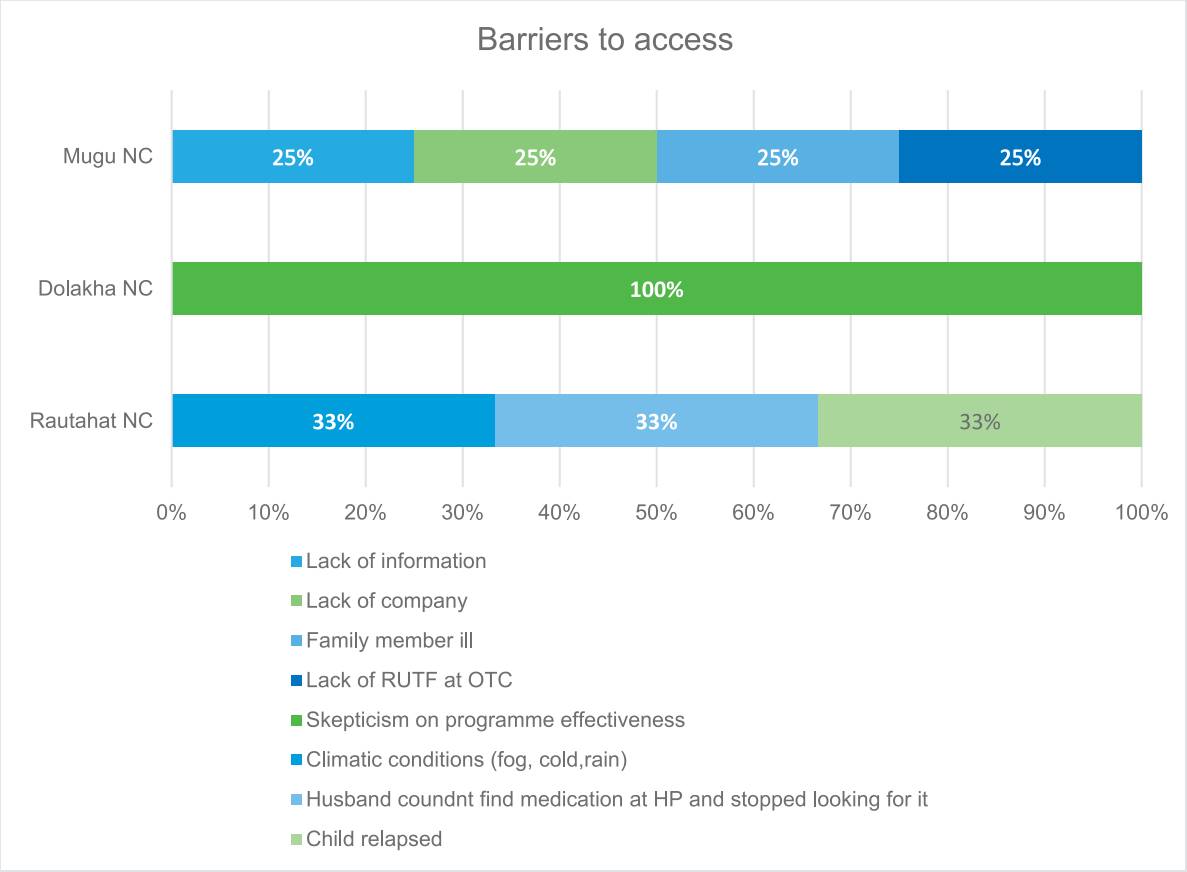


FIGURE 17: Barriers of access to IMAM programme among caregivers of SAM not covered cases across selected districts, Nepal, August-September 2024.

These responses highlight the heterogeneity of barriers across districts, with the common issues of lack of RUTF reported in two districts and scepticism about programme effectiveness shared among both caregivers in Dolakha. However, they also emphasise challenges primarily related to quality of care and sociocultural factors, alongside specific geographical access issues reported in Mugu.

SUB-ANALYSIS: NON-COVERED MAM CASES

There is currently no Therapeutic Supplementary Feeding Programme (TSFP) in Nepal offered to moderately malnourished cases (MAM). However, several non-covered MAM cases were found during the survey across the selected districts. The purpose of this sub-analyses is to provide an insight into the profile of these children in order to provide targeted interventions and prevent their nutritional status from deteriorating into severe acute malnutrition.

Gender

The SLEAC survey conducted in selected districts found 200 children that were non-covered moderately acute cases of malnutrition. Of those 67% (n=133) were girls and 34% (n=67) were boys. This trend was confirmed across the three selected districts with Dolakha showing the highest percentage of 77% (n=20) of cases being girls, followed by 66% (n=86) in Rautahat and 61% (n=30) in Mugu. These findings support the hypothesis of a possible increased vulnerability to malnutrition among the female population, indicating a need for further research on this topic.

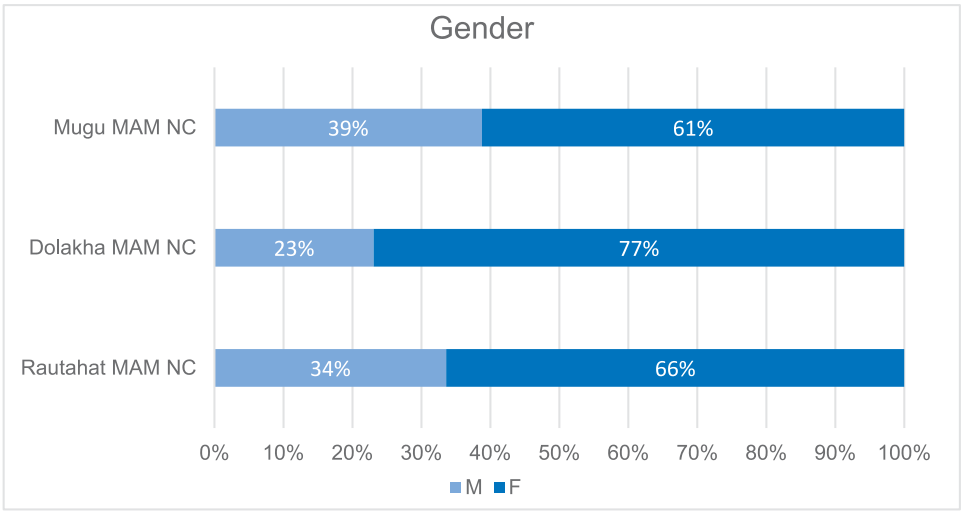


FIGURE 18: Sex distribution of non-covered children with MAM screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

Age

In the SLEAC survey conducted across selected districts, the vast majority (76%, n=151) of non-covered MAM cases were aged 6-23 months. This trend was consistent across surveyed districts, with 79% (n=99) of children under-two years in Rautahat, 77%(n=20) in Dolakha and 65% (n=32) in Mugu. The median age for non-covered MAM cases ranged from 13.5 to 15 months across districts. These findings may suggest a higher vulnerability to acute malnutrition among children aged 0-23 months, therefore further research is needed to explore this possible association.

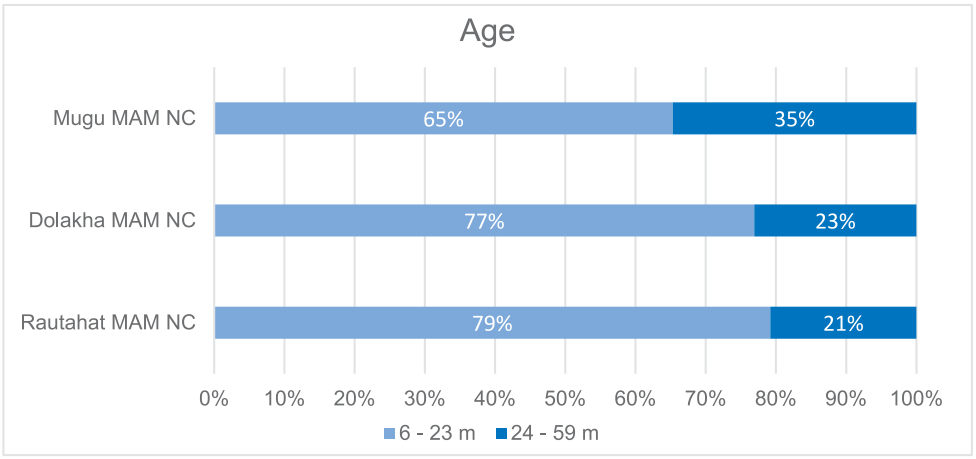


FIGURE 19: Age distribution of non-covered children with MAM screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

Distance to health facility

Among non-covered MAM cases found during the SLEAC survey across selected districts, most caregivers reported that the distance to the nearest health facility was far or very far. Only 26% (n=32) of caregivers in Rautahat and 8% (n=4) in Dolakha reported the health facility to be near (less than 10 min walk). Instead, 62% (n=78) of caregivers in Rautahat, 96% (n=25) in Dolakha and 76% (n=37) in Mugu said that the facility was located very far, requiring more than 20 minutes of walk. These findings suggest that distance to health facilities can pose a significant barrier to health-seeking behaviours for households located farther away from the health facilities.

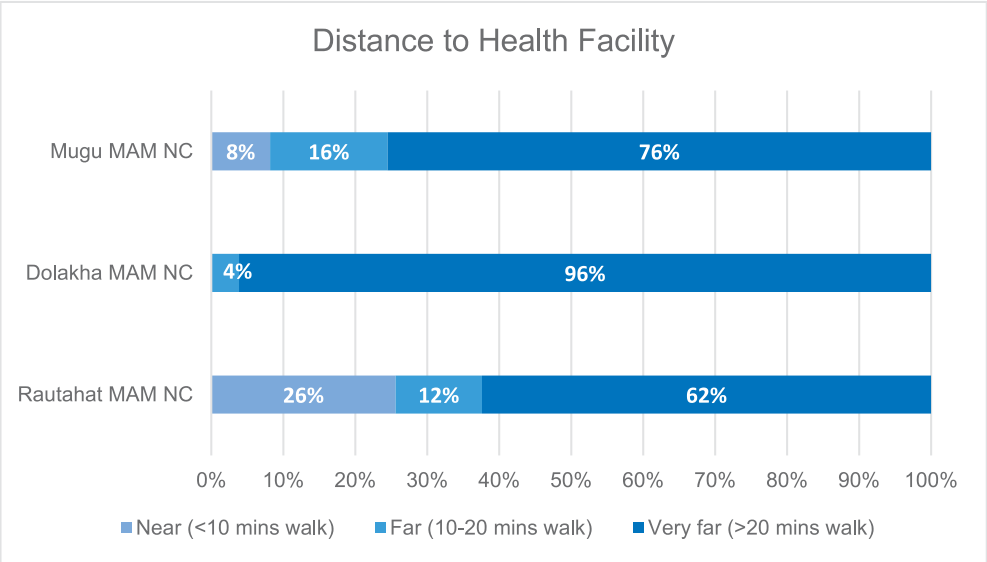


FIGURE 20: Comparison of distance to the nearest health facility, as perceived by caregivers of non-covered MAM cases screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

Screening at health facility and/or by Female Community Health Volunteers (FCHV)

Among the non-covered MAM cases identified during this survey, 76% (n=151) were not screened in the past 3 months neither at the health facility or by a FCHV. This trend was confirmed at district level in Rautahat and Mugu where 91% (n=114) and 57% (n=28) of children respectively were not screened in the past three months. Conversely in Dolakha, 65% (n=17) of non-covered MAM cases were screened. This highlights possible service outreach barriers and issues with regular growth monitoring that require further investigation. The qualitative insights revealed that screening was not conducted consistently across districts and that FCHV did not consistently measure children's MUAC and their knowledge of screening procedures varied across facilities. Addressing these challenges is essential for early identification of at-risk cases to prevent their deterioration.

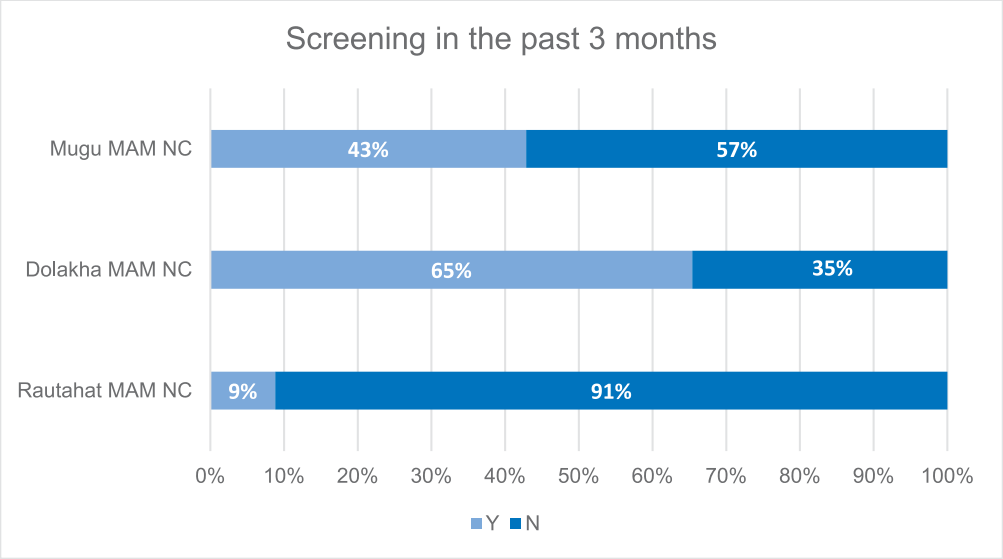


FIGURE 22: Screening frequency in the past 3 months of non-covered MAM cases screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

Among the children reported as being screened, most were screened once a month with the highest number reported in Mugu being 90% (n=19), followed by 27% (n=3) in Rautahat and 12% (n=2) in Dolakha. Additionally, two children (10%) in Mugu were screened more than once a month.

Awareness of illness

Generally speaking, in terms of illness among the non-covered MAM cases, the sample was nearly evenly divided regarding whether their children had been ill in the three months preceding the survey. However, at district level, more than half of children in Mugu (61%, n= 30) and Dolakha (54%, n=14) were reported as not being sick over the past three months, while most caregivers in Rautahat (61%, n=76) indicated that their children had experienced sickness.

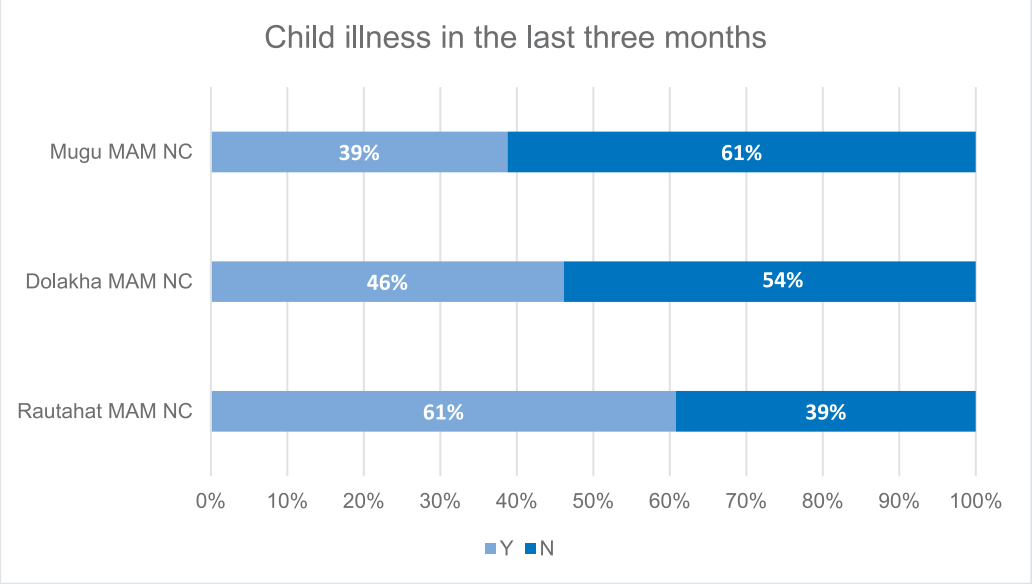


FIGURE 23: Presence of illness in the past 3 months of non-covered MAM cases screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

Therapeutic itinerary

Most caregivers across the selected districts reported treating MAM when symptoms were observed, primarily by purchasing medicines at a pharmacy (Rautahat n=61, Dolakha n=4, and Mugu n=5) or by taking the child to a facility for consultation (Rautahat n=16, Dolakha n=7, and Mugu n=10). At the district level, while seeking help at health facilities was the primary option for caregivers in Mugu and Dolakha, a significant majority of caregivers in Rautahat (80%) preferred to purchase medicine at a pharmacy as their first choice for care. Additionally, buying medicines from a market was chosen by a few caregivers in the three districts (Rautahat n=9, Dolakha n=1, and Mugu n=1). The use of medicinal plants, enriched meals, or consulting a traditional healer was reported by a few caregivers. Two caregivers in each district indicated no treatment.

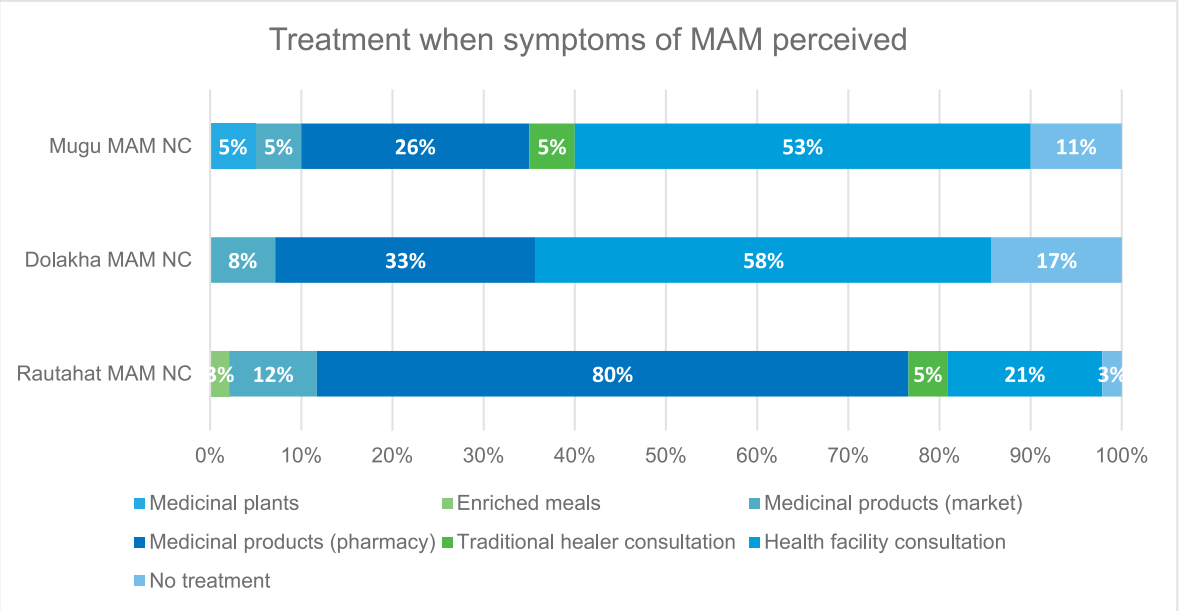


FIGURE 24: Treatment options when symptoms of moderate malnutrition perceived among non-covered MAM cases screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

Decision making regarding treatment options

Out of nine caregivers of MAM non-covered children that answered this question, four in Rautahat and one in Dolakha reported the Community Health Worker as the main decision maker of treatment for their child. The remaining caregivers mentioned that the decision was made by the mother and father together (Dolakha n=1, Mugu n=1), or by one parent alone in Rautahat. These findings support the key role of CHWs and the limited decision-making power of mothers already highlighted for the non-covered SAM cases.

Previous enrolment and discharge from the IMAM programme

Among the non-covered MAM cases found across the selected districts, only a small number had previously been enrolled in the IMAM programme. Specifically, 5% (n=6) in Rautahat, 8% (n=2) in Dolakha and 2% (n=1) in Mugu. Notably, apart from one child in Dolakha, the majority were enrolled in the programme only once before . Some concern is given by the fact that, a part of one case reported to be successfully discharged from the programme, most were not. This scenario highlights clear barriers of access that require further investigation.

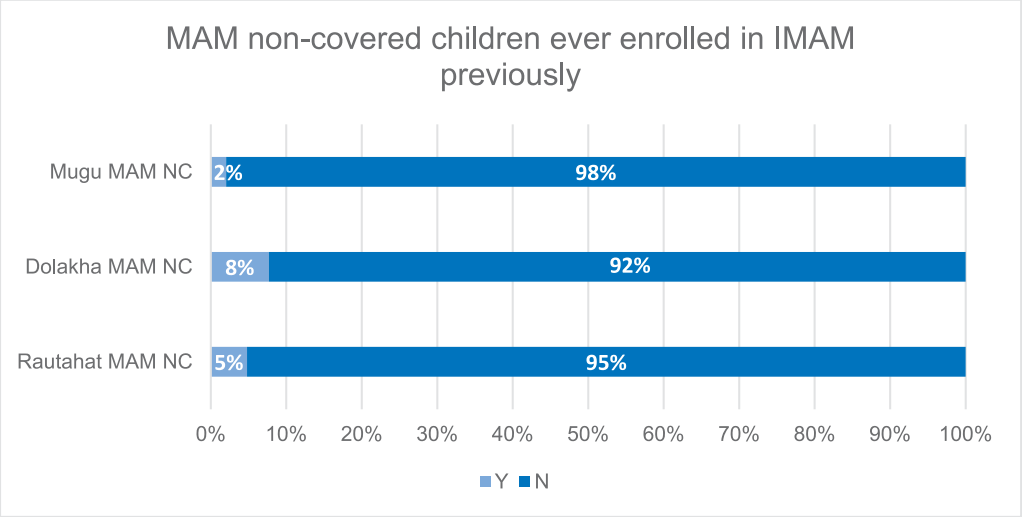


FIGURE 25: MAM non-covered cases ever enrolled in the IMAM programme screened during the SLEAC survey across the selected districts, Nepal, August-September 2024.

Among those children that were never enrolled in an IMAM programme, most caregivers across the three selected districts reported that their primary reason was that their child had never been diagnosed with SAM (97% (n=115) in Rautahat, 94% (n=45) in Mugu and 88% (n=21) in Dolakha). Other minor reasons included lack of belief in the programme (Rautahat n=1, and Dolakha n=1), insufficient financial resources (Rautahat n=1 and Mugu n=2), the absence of someone to care for other children (n=1 in Rautahat) and the husband's unavailability (n=1 in Rautahat). Among the two caregivers in Dolhaka that mentioned distance, one reported a distance of 1hour on foot (5Km) while the other of 2 hours (7km).

MAM support or assistance

A handful of caregivers (n=7) across the selected districts reported that their MAM non-covered children were receiving specific support or assistance for MAM at the time of the survey. This support included counselling reported by 4 caregivers across the selected districts, Multiple Micro-Nutrient Powder (Baal Vita), reported by 2 caregivers in Dolakha, and WSB+ / Super Cereal, reported by 2 caregivers in Mugu. Additionally, one child in Rautahat was reported to have been receiving RUTF, which was supported by qualitative insights indicating that it is a known practice to provide sachets of RUTF as a supplement for children with MAM.

In terms of satisfaction with the service related to MAM management and with the information received about the child health status, most caregivers across selected districts reported being satisfied, 100% (n=2) in both Rautahat and Mugu and 33% (n=1) in Dolakha. Two caregivers (67%) in Dolakha reported being neither satisfied or dissatisfied.

BOOSTERS OF ACCESS AND COVERAGE

Caregivers of all SAM children covered by the IMAM programme, including the recovering cases, were asked to answer a few questions to explore their motivation for enrolling their children in the programme and their satisfaction with the provided service.

It is to be noted that the results presented here reflect only the situation in Mugu district. Questionnaires for the 11 covered cases in Rautahat district were either missing or had to be discarded when a wrong questionnaire was deployed. There was no covered cases in Dolakha district.

Number of admissions

In Mugu district, all covered cases (n=11) were enrolled in the IMAM programme for the first time. 82% (n=9) were the only children enrolled in the programme, while 18%(n=2) had another child from the household who had previously been enrolled in the programme.

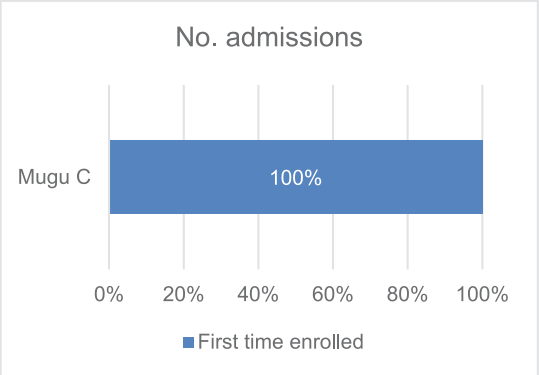


FIGURE 26: Number of admissions per child among SAM cases covered by the IMAM programme during the SLEAC in Mugu district, Nepal, August-September 2024.

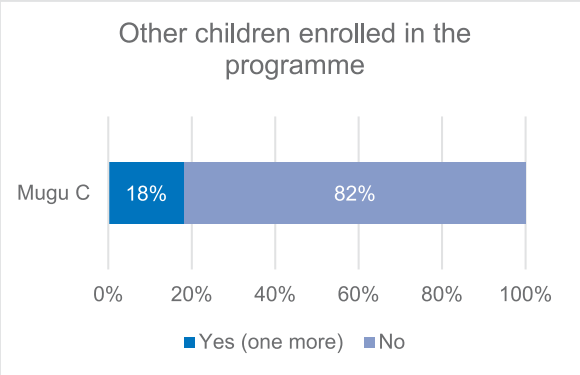


FIGURE 27: Enrolment of other children in the household among SAM cases covered by the IMAM programme during the SLEAC in Mugu district, Nepal, August-September 2024.

Boosters of access

In Mugu district, a diagnosis of malnutrition by health facility personnel was the main reason for enrolment in the IMAM programme, having been cited by 91% of caregivers (n=10). A recognition of malnutrition by caregivers themselves represented a reason for enrolment for only one caregiver.

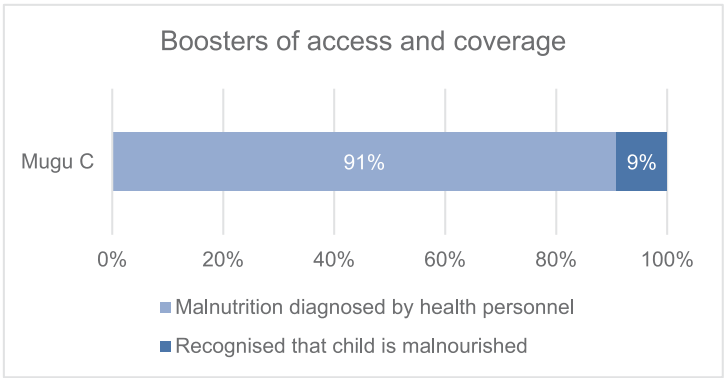


FIGURE 28: Boosters of access to IMAM programme among caregivers of SAM cases covered by the IMAM programme during the SLEAC in Mugu district, Nepal, August-September 2024

Service satisfaction

Among caregivers of SAM children enrolled in IMAM programme in Mugu district, a large majority of caregivers expressed being satisfied or very satisfied with the service. Only one caregiver expressed being very unsatisfied, and one was neither satisfied or unsatisfied. A similar trend can be observed for a satisfaction with the reception, satisfaction with the quality of treatment and satisfaction with provided information. One caregiver in each case was neither satisfied nor unsatisfied, while one caregiver expressed being very unsatisfied with the quality of the treatment, explaining that this was due to an RUTF stock-out during the last follow-up visit.

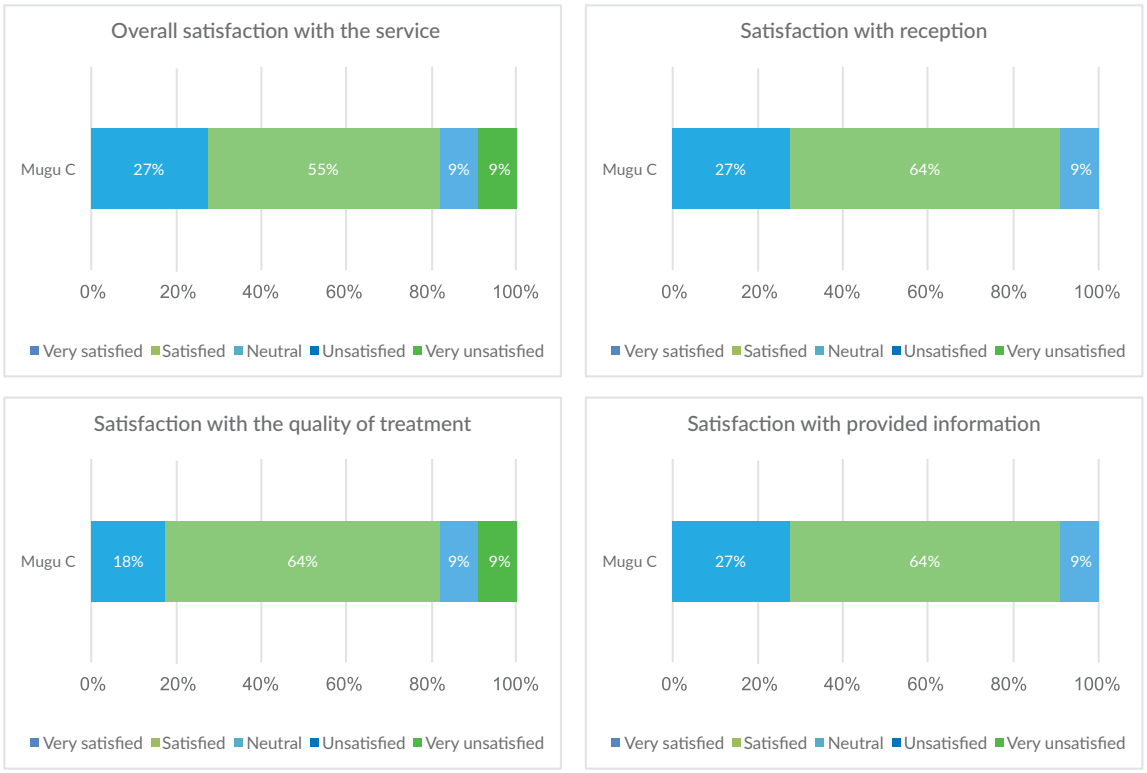


FIGURE 29: Perception of satisfaction with the service among caregivers of SAM cases covered by the IMAM programme during the SLEAC in Mugu district, Nepal, August-September 2024.

C. QUALITATIVE INSIGHTS

IMAM training and supervision

According to interviews conducted with health workers, only a few staff members at the health facilities were formally trained in IMAM. Some reported having received training 5 to 6 years ago, with no subsequent refresher and some lacked practical application of their training hence not remembering all information. Many staff members were said to have completed Comprehensive Nutrition Specific Interventions (CNSI) training, which includes an IMAM module. In some instances, informal training was provided by senior staff at the health facility. Additionally, health professionals in several facilities reported not receiving any IMAM training or support and one of those was a Nutrition focal point. One of the reasons was that many staff that were initially trained in IMAM left. Only one facility reported that all staff members had been trained in IMAM. Field observations also highlighted a lack of monitoring and supervision of the IMAM programme by responsible authorities across all surveyed districts.

Knowledge about the IMAM protocol

Interviews with health workers across districts revealed gaps in understanding of the IMAM protocol. Some health workers reported familiarity with the old protocol, which led to confusion with the simplified version introduced during COVID-19 pandemic and no longer in use, while others admitted to forgetting the information due to a lack of practice. Only a few—typically the nutrition focal points—demonstrated an understanding of the IMAM protocol. Confusion about what protocol to use, was also noted during field observations.

Community outreach

According to interviews screening was conducted in various settings. Most health workers reported that screening typically occurred during EPI campaigns s and Primary Health Care (PHC) or Outpatient Therapeutic Centre (OTC), and during Vitamin A supplementation sessions. Some local organisations, particularly in Mugu and Rautahat, were also noted for conducting screenings as part of their activities. In Dolakha, screening was mentioned as being carried out by a Community Health Worker (CHW) from the local hospital, and by FCHVs in whole district, and caregivers were generally familiar with the use of MUAC tape. In Rautahat, screening by FCHVs was currently not being conducted across the visited facilities. During observations it was also found that FCHVs did not consistently measure children's MUAC and their knowledge of screening procedures varied across facilities.

Passive screening

Interviews with health workers revealed that passive screening and the confirmation of acute malnutrition for referred cases was not consistent across facilities and districts. In the instances where confirmation did occur, children were typically measured for weight and height, and sometimes z-scores were calculated, although this was not done consistently. The same inconsistency applied to MUAC and oedema measurements. In several facilities, health workers noted that confirmation of acute malnutrition would not take place at all.

SAM management

According to interviews with health workers, SAM management is generally done via provision of RUTF across selected districts. However, in some locations it was noted that the protocol was not respected due to a lack of knowledge among health workers, and the registers indicated several defaulters and uncured cases and no follow up being conducted. In a few instances, staff mentioned referring SAM cases to the nearest hospital for further treatment when necessary. However, some facilities reported that they had not encountered such needs until now. In Dolakha, the main referral centre for management of malnutrition mentioned was Jiri Hospital; however, the Nutrition Rehabilitation Centre within the hospital was reported as non-functional, and health facilities had not been informed of this status.

MAM management

According to interviews with health workers, MAM management primarily involves counselling provided to caregivers. Some health workers mentioned MNP, WSB+/Super Cereal or even RUTF also being given to MAM children but not consistently across facilities and districts.

RUTF

Interviews with health workers and observations revealed that, apart from few facilities, RUTF was generally available across districts; however, it was often distributed not according to protocol and not only to children (a case of it being given disadvantaged people was also reported). In some instances, RUTF was given to children attending immunisation programmes, and several staff reported to still utilise a simplified protocol initially adopted during the COVID-19 pandemic. Caregivers reported that RUTF was frequently administered as a supplementary food by health workers or given to relatives of health workers, and sachets were found in many households during the survey, including those with non-malnourished children. Caregivers perceived RUTF as a 'magic semi-solid jam' that supports physical growth, and family members employed in health centres were said to bring RUTF home, believing it would enhance growth and development. Locally RUTF is referred to as 'halwa,' and caregivers reported treating it as an addition to their daily meals. There was also an absence of follow-up, with health workers administering RUTF to most children that were thin, regardless of their nutritional status, with various number of sachets given based on availability. As there is no specific programme for managing MAM children, health workers were said to occasionally distribute one sachet per day for those children. In one facility the RUTF stock was reported being out of date.

Information management

Interviews with health workers revealed that registers were not consistently available across the visited health facilities, and many were found to be only partially complete or incomplete. In a few facilities, there was no current register available for evaluation. Only a limited number of facilities across the selected districts had complete and accessible registers. While some facilities used registers to record cases, some inconsistencies/errors were noted and often only records from the previous year were found.

Due to the low number of admissions in 2024 and 2023 reporting is not done consistently across all facilities. Some facilities mentioned reporting cases to Health Management Information System (HMIS) or local government and province.

VII. CONCLUSION

Based on an available sample, the combined IMAM treatment coverage in Rautahat and Dolakha districts is classified as low, with less than 20% of eligible children eligible effectively accessing SAM treatment. Mugu district, on the other hand, has a coverage classified as high, exceeding a 50% threshold. These results are consistent with the results of the gap analysis conducted prior to the survey, which identified Karnali Province as well performing with regards to WHO health system building blocks, while Bagmati Province scored moderately and Madhesh Province demonstrated major weaknesses. Findings from questionnaires administered to both caregivers of covered and non-covered cases suggest that awareness of a child's illness and the ability to identify malnutrition signs may partly explain the differences in these coverage levels. However, it is important to note that 8 out of the 26 SAM cases identified during the SLEAC survey in Mugu district were not enrolled in the IMAM programme, highlighting significant barriers to access and coverage that remain.

Programme improvement and adaptations will be required to improve coverage across all districts. Improving awareness of malnutrition and the existence of the programme and enhancing the quality of IMAM treatment at health facility level will be key in this effort. Additionally, the revision of the IMAM national protocol in line with the 2023 WHO guidelines should present an opportunity to expand the reach and effectiveness of the IMAM programme by fostering greater involvement of community actors and improving the management of MAM cases.

The recommendations provided in the following section may provide a basis for reflection and prioritisation of needed interventions, which should be implemented with careful consideration of gender equity and the inclusion of marginalized communities.

VIII. RECOMMENDATIONS

Based on the findings of this coverage assessment, the following recommendations are proposed to address the identified barriers of access and coverage of IMAM programme in Nepal.

National guidelines

- Review the national IMAM protocol in line with 2023 WHO guidelines in order to align in-country practice with new evidence-based recommendations, including consideration of a provision of treatment by FHCV and clear guidance on options for the management of MAM.

Community engagement

- Develop a community engagement strategy to increase awareness about malnutrition and the IMAM programme, leveraging findings from the in-depth qualitative study and mainstreaming gender equity and the inclusion of marginalized communities;
- Train FHCV on detection, referral and follow-up of malnutrition cases, and ensure they are adequately supported and supervised to conduct these activities at community level;
- Develop a targeted action plan to address the misuse of RUTF, including focused communication efforts.
- Consider enhancing referral process for malnourished children through traditional practitioners and pharmacy staff.

IMAM service delivery

- Conduct in-person training sessions for health workers on the updated national IMAM protocol, and establish mechanisms for regular refresher training to ensure new staff are properly trained;
- Expand passive screening activities at various healthcare contact points, including immunisation sessions and healthcare services targeting young children;
- Ensure timely and consistent supply of RUTF and necessary equipment for the IMAM program, including at the health post level;
- Ensure regular monitoring and supervision activities are conducted by district and municipalities to track progress, reinforce protocol adherence, improve recording and reporting, and adjust IMAM program implementation as needed.

ANNEXES

Annex 1. Timeline

Activities	2024				
	July	August	September	October	November
Recruitment of enumerators					
Preparation for training to enumerators					
Training to enumerators (4-days)		9-12			
Field data collection at Rautahat district, incl. travel days		14-28			
Field data collection at Dolakha district, incl. travel days			Aug. 30- Sept. 10		
Field data collection at Mugu district, incl. travel days			Sept. 22- Oct. 1		
Draft survey report					
Final survey report					

ACTION AGAINST HUNGER
ACTION CONTRE LA FAIM

Nepali Technical Assistance Group
NTAG

Government of Nepal
Ministry of Health and Population
Department of Health Services
Family Welfare Division

Annex 2

FIELD MANUAL
SLEAC

© Ranjan Kapali for Action Against Hunger

Simplified LQAS Evaluation of Access and Coverage

IMAM Programme

Dolakha and Kathmandu districts of Bagmati Province
Mugu District of Karnali Province
Rautahat District of Madhesh Province

Nepal
August 2024

FIELD CHECKLIST

TO PREPARE THE EVE OF DEPARTURE AND CHECK BEFORE DEPARTURE!!

	Article	Quantity
1	Notebook	2 units
2	Pen	2 units
3	Plastic folder	2 units
4	Tablet[18]	1 unit
5	Case finding summary	2 copies
6	Referral slip	3 coupons
7	SLEAC Field manual	2 copies
8	MUAC band (DO NOT FOLD !!!)	2 units
9	Water/Snacks	as needed
10	Telephone + daily phone credit	1 unit
11	List of EAs to visit	1 copy

NB: If your team is going to the field for several days, make sure you have SUFFICIENT quantity of EACH item to cover your entire stay/total number of wards to visit.

KEY ASSESSMENT TERMINOLOGY

Malnutrition

Malnutrition is an umbrella term, commonly considered synonymous with "**undernutrition**" although technically it also includes **overnutrition** (i.e. overweight and obesity). Malnutrition occurs when the diet does not provide the nutrients necessary for growth and maintenance of the body, often due to economic, political and socio-cultural factors, or when the food ingested is not fully utilized in due to illness.

Acute malnutrition

Also known as **wasting**, acute malnutrition is characterized by a sharp deterioration in nutritional status (loss of body fat and muscle tissue) over a **short period of time**. Depending on the severity, we differentiate between **moderate acute malnutrition (MAM)** and **severe acute malnutrition (SAM)**, within which we further differentiate between emaciation (low weight-to-height ratio) and/or oedema (i.e. retention water in body tissues).

Chronic malnutrition

Chronic malnutrition or "**stunting**" is a form of a growth disorder that develops over a **long period**. Inadequate nutrition over long periods (including poor maternal nutrition and poor infant and young child feeding practices) and/or repeated infections can lead to chronic malnutrition. In children, it can be identified using the height-age ratio.

Term	Definition
Management of Severe Acute Malnutrition	Through Outpatient Therapeutic Program sites for Severe Acute Malnutrition without complications and in Stabilization Centre for Acute Malnutrition with complications, often integrated into health centres and hospitals.

[18] Never forget to charge it the evening before to make sure you can fully use it the following day.

Ready to Use Therapeutic Food (RUTF)	PlumpyNut® (treatment of SAM)
Middle Upper Arm Circumference (MUAC)	Circumference of the arm measured between the shoulder and the elbow, in the middle of the biceps brachii. It allows to diagnose SAM (< 115mm) and MAM (<125mm).
Nutritional oedema	Swelling on the feet (+), legs (++) or face (+++), allowing to diagnose SAM (kwashiorkor).
Recovering	Child admitted to the IMAM program with SAM or MAM but who has in the meantime partially recovered (i.e. his MUAC is within the range of MAM or a healthy child, respectively.)
Default	Child who has not attended the IMAM program for at least 2 consecutive weeks.
Discharged cured	Child has met IMAM exit criteria (i.e. z score -1 for 2 weeks or MUAC ≥ 125 mm, and no oedema for 2 weeks)
Discharged uncured / Non-responsive to treatment	Child has not reached IMAM exit criteria (i.e. target weight and is not considered nutritionally healthy)

EXHAUSTIVE SCREENING

Considering the size of wards in Nepal,

- EXHAUSTIVE SCREENING IN DOLAKHA AND MUGU DISTRICTS (with an average of 139 and 125 children <59 months per ward, respectively)
- SEGMENTATION + EXHAUSTIVE SCREENING IN KATHMANDU AND RAUTAHAT DISTRICTS (with an average of 718 and 497 children <59 months per ward, respectively)
- DOOR-TO-DOOR → NEVER in public gathering!!

SEGMENTATION

Division of a village according to existing administrative sub-divisions (hamlets), natural barriers (rivers, roads, mountains) or public places (markets, schools)

- If the segments are of an equal size (same number of households) → choose a segment at random
- If the segments are of different sizes (different number of households) → use the PPS method
  - Fill the PPS table with a number of households per segment, a number of total households and an interval;
  - Choose a random number from a list of random digits in a desired range;

ARRIVAL IN THE WARD

A. Visit the ward representative, introduce yourself and explain the purpose of your visit;
B. Ask the ward representative to draw the boundaries of the ward.
C. Ask the ward representative to confirm your estimates of the total population/children 6-59 months;
D. Perform the ward segmentation in Rautahat and Kathmandu districts;
E. Ask the ward representative to assign you a guide during your visit (e.g. community health worker);
F. Tour the ward to confirm identification of boundaries;
G. Conduct door-to-door case finding.

ARRIVAL IN THE HOUSEHOLD

A. Introduce yourself to the head of household and explain the purpose of your visit, emphasizing the healthy growth of children. Ask for his consent;

ARRIVAL IN THE HOUSEHOLD

A. Introduce yourself to the head of household and explain the purpose of your visit, emphasizing the healthy growth of children. Ask for his consent;

B. Ask the head of household to show you all children 6-59 months living in the household. Verify their age through official documents (e.g. birth certificates), if available, or estimate it through a local calendar of events;

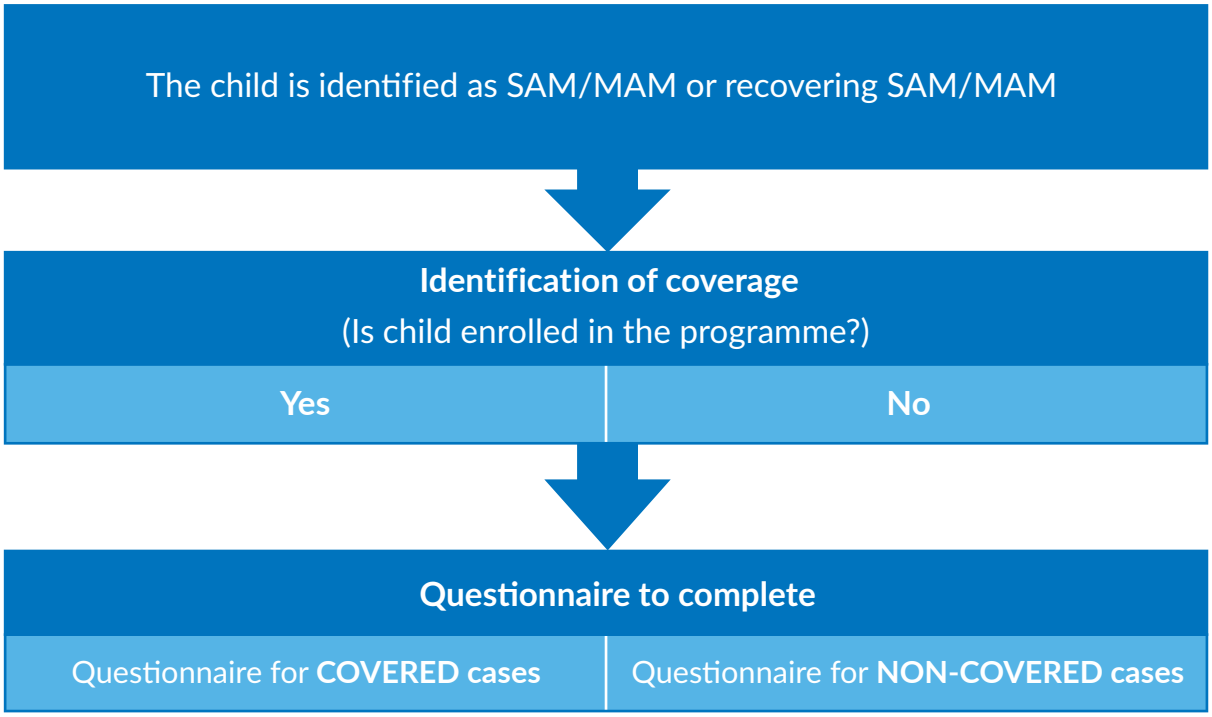
C. Measure all children 6-59 months. Write down the MUAC values;

D. Check for oedema. Write down the values;

E. Explain to parents the results for each measured child, even the healthy one.

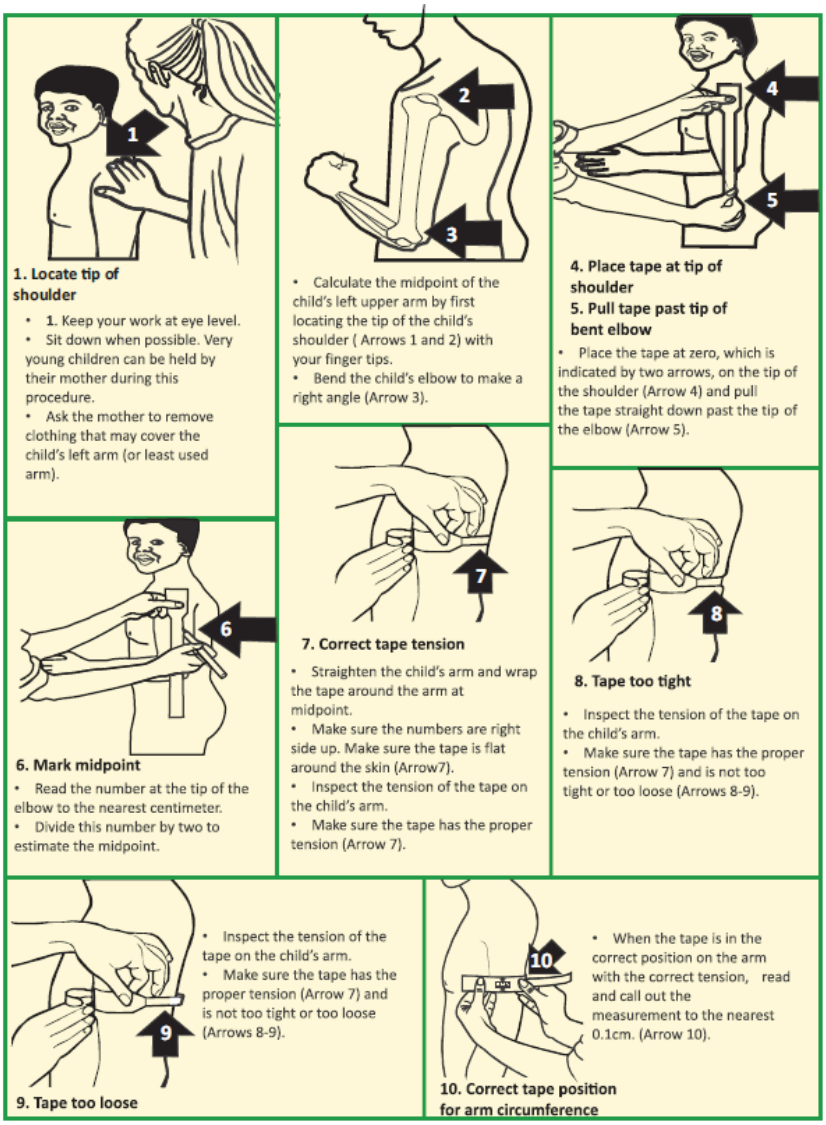
F. Follow the decision tree to decide if the administration of questionnaires for covered or uncovered SAM cases should be deployed.

G. If yes, ask the caregiver for a few minutes for the administration of the respective questionnaire.



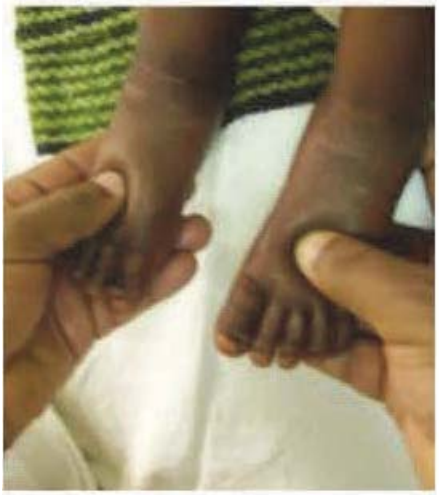
ANTHROPOMETRIC MEASUREMENTS

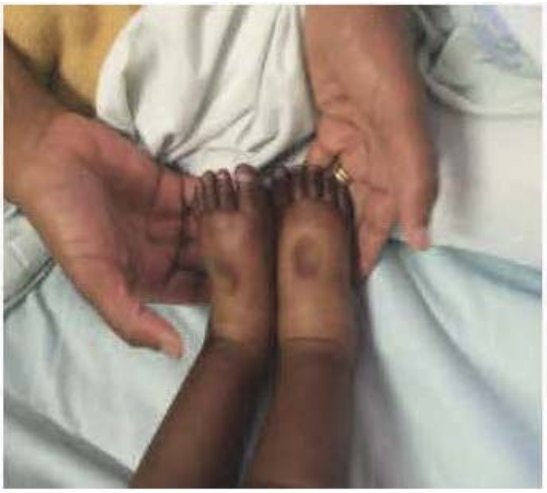
MIDDLE UPPER ARM CIRCUMFERENCE (MUAC)



OEDEMA

A. Test on both extremities at the same time.
B. Press with thumbs on the top of the feet /on the shins / on the forehead.
C. Hold the pressure for about three seconds while counting slowly: "one Mississippi, two Mississippi, three Mississippi".
D. If there is oedema, an imprint will remain for a few seconds on the pressed area (pitting sign).





CASE DEFINITIONS

CURRENT SAM CASE	Child who meets the admission criteria for the SAM treatment, i.e. ▪ Middle Upper Arm Circumference < 115 mm (**114 mm**!!!) ▪ Presence of bilateral pitting oedema
COVERED SAM CASE (Cin) ***SAM Cin***	Child with MUAC < 115 mm or child with bilateral oedema who is enrolled in the SAM treatment
NON-COVERED SAM CASE (Cout) ***SAM Cout***	Child with MUAC < 115 mm or child with bilateral oedema who is NOT enrolled in the SAM treatment
CURRENT MAM CASE	Child who meets the admission criteria for the MAM treatment, i.e. ▪ Middle Upper Arm Circumference 115mm-124mm ▪ No bilateral pitting oedema
HEALTHY CHILD	Child with MUAC ≥ 125 mm without bilateral pitting oedema.
RECOVERING CASE (Rin) ***SAM Rin***	Child who has recently been a SAM case and has meanwhile partially recovered but has not yet met the exit criteria for SAM treatment (i.e. is still enrolled in the program)

KEY ETHICAL CONSIDERATIONS

- Respect for anonymity and confidentiality;
- Principle of non-judgment;
- Free expression;
- Faithfulness of the testimonies and expressed opinions.
- Children under the age of 5 years of age eligible for treatment for acute malnutrition must be systematically oriented and referred to the nearest health facility in the event of a positive screening for moderate or severe acute malnutrition.
- Families and/or community members should be referred to competent professionals when seeking information on acute malnutrition and/or IMAM programme.

END-OF-DAY CHECKLIST

1. Ensure that all eligible children are visited and all data is complete, legible and well recorded before you leave the ward.
2. Review all data with your SLEAC Survey Lead. If in doubt, call Lenka/Kusum to check which procedure to apply.
3. Keep all the forms in plastic folders in order to avoid losing/damaging them. Give them to SLEAC Survey Lead at the end of the day.
4. Take care of your tablets. Submit them for data download when requested and/or at the end of each day.

Annex 3. SLEAC Data collection tools

A. Questionnaire for caregivers of covered SAM cases

District: _____ **Municipality:** _____

Ward: _____ **Nearest OTCC:** _____

Team: _____ **Date:** _____ _ _____ **2024**

1. Is this the first time that your child has been enrolled in the IMAM programme?

☐ Yes → **Q5** ☐ No → **Q2**

2. How many times has your child been enrolled in the IMAM programme?

☐ 1	☐ 2	☐ 3	☐>3

3. Why has your child returned to the IMAM programme?

☐ a. Child has discontinued the programme and returned. a[1]. Why? _____

☐ b. Child was cured and relapsed. b[1]. Why? _____

4. Do you have other children enrolled in the IMAM programme?

☐ Yes	a[1]. How many?	☐ 1	☐ 2	☐ 3
☐ No				

5. Why did you decide to enrol your child in the IMAM programme?

☐ a. Recognition of the disease
☐ b. Disease diagnosed by health personnel
☐ c. Failed traditional treatment
☐ d. Referral by traditional healer
☐ e. Short distance; estimation in km _____
How many minutes on foot? _____
☐ f. Minimal or non-existing security risks
☐ g. Accessibility (no seasonal barriers)
☐ h. Availability of transport
☐ i. Availability of financial resources for transport
☐ j. Availability of company during the journey to the health facility
☐ k. Support and encouragement of the husband
☐ l. Support and encouragement of another family member
☐ m. Support and encouragement of parents with SAM children
☐ n. Support and encouragement of a community health worker
☐ o. Support and encouragement of neighbours
☐ p. Support and encouragement of community leaders
☐ q. Programme appreciated by the community
☐ r. Programme staff is friendly and patient
☐ s. Availability of RUTF
☐ t. Availability of systematic treatment
☐ u. Free service
☐ v. Efficiency of treatment (quick and visible results)
☐ w. Known child cured
☐ x. Access to PlumpyNut®
☐ y Other, please specify _____

6. How have you been overall satisfied with the service?

☐ a. Very satisfied
☐ b. Satisfied
☐ c. Neither satisfied nor unsatisfied
☐ d. Unsatisfied
☐ e. Very unsatisfied

7. How have you satisfied with reception (how you are treated when you come to the health facility)?

☐ a. Very satisfied → **Q9**
☐ b. Satisfied → **Q9**
☐ c. Neither satisfied nor unsatisfied → **Q9**
☐ d. Unsatisfied → **Q8**
☐ e. Very unsatisfied → **Q8**

8. Why are you not satisfied with reception?

_____

9. How have you been satisfied with the quality of treatment?

☐ a. Very satisfied → **Q11**
☐ b. Satisfied → **Q11**
☐ c. Neither satisfied nor unsatisfied → **Q11**
☐ d. Unsatisfied → **Q10**
☐ e. Very unsatisfied → **Q10**

10. Why are you not satisfied with the quality of treatment?

_____

11. How have you been satisfied with the information you receive about the health status of your child?

☐ a. Very satisfied
☐ b. Satisfied
☐ c. Neither satisfied nor unsatisfied
☐ d. Unsatisfied → **Q12**
☐ e. Very unsatisfied → **Q12**

12. Why are you not satisfied with the information you receive about the health status of your child?

_____

Thank you

Comments:

B. Questionnaire for caregivers of non-covered SAM cases

District: _____ **Municipality:** _____

Ward: _____ **Nearest OTCC:** _____

Team: _____ **Date:** _____ _____ _____**2024**

1. Do you think your child is unwell?

☐ Yes ☐ No → **Q4**

1a. What symptoms is your child suffering from?

☐ a. Vomiting	☐ b. Fever	☐ c. Diarrhoea
☐ d. Weight loss	☐ e. Loss of appetite	☐ f. Apathy
☐ g. Swelling	☐ h. Loss of hair	☐ i. Skin lesion
☐ j. Other, please specify: _____		

1b. How have you tried to treat this illness or how are you going to treat it?		
☐ a. Medicinal herbs/roots	☐ b. Enriched meals	☐ c. Fast
☐ d. Medicinal products (bought at the market)	☐ e. Medicinal products (bought at the pharmacy)	☐ f. Prayer
☐ g. Consultation of a traditional healer	☐ h. Consultation at the health facility	☐ i. No treatment
☐ j. Other, please specify: _____		

1c. Who made a decision about the choice of treatment?		
☐ a. Mother of a child	☐ b. Father of a child	☐ c. Mother and father together
☐ d. Grand-parents	☐ e. Community health worker	☐ f. Other, please specify: _____

2. Do you know that there is a service at the health facility dedicated to the treatment of malnutrition?	
☐ Yes → **Q3**	☐ No → **STOP**

3. Why didn't you bring your child to the health facility for the treatment?	
☐ a. Too far; distance in km _____ How many hours on foot? _____	☐ b. Insecurity
☐ c. Inaccessibility (seasonal flooding, etc.)	☐ d. Non-availability of means of transportation
☐ e. Non-availability of the company for the journey	☐ f. Non-availability of financial resources for the journey
☐ g. Husband/family refusal	☐ h. Non-availability of financial resources for the treatment
☐ i. Caregiver ill	☐ j. Family member ill
☐ k. Too busy; reason: _____	☐ l. No-one to look after other children
☐ m. Ashamed to enrol in the programme	☐ n. Lack of belief that the programme can help the child
☐ o. Fear of hospital stay (away from HH, fees)	☐ p. Preference of traditional treatment
☐ q. Previous rejection of a child; when? _____	☐ r. Rejection of a known child
☐ s. Quantity of PlumpyNut® is too little to justify the journey	

4. Has your child been already enrolled in IMAM programme?	
☐ Yes	☐ No → **STOP**

4a. Why isn't your child still in the programme?		
☐ a. Defaulted	☐ a^1. When? _____	☐ a^2. Why? _____
☐ b. Discharged as cured	☐ b^1. When? _____	
☐ c. Discharged but not cured	☐ c^1. When? _____	☐c^2. Why? _____
☐ d. Other reason, please specify: _____		**STOP**

Thank you!

Comments:

C. Questionnaire for caregivers of non-covered MAM cases

District: _____ **Municipality:** _____

Ward: _____ **Nearest OTCC:** _____

Team: _____ **Date:** _____ _____ _____ **2024**

1. Is your child screened in the past 3 months (in health facility and/or by FCHV)?	
☐ Yes → **Q1a**	☐ No → **Q2**

1a. How often is your child screened?		
☐ a. None in a month	☐ b. Once in a month	☐ c. More than once in a month

2. Has your child had any episode of illness in the last three months?	
☐ Yes → **Q2a**	☐ No → **Q3**

2a. If yes, how was it treated?		
☐ a. Medicinal herbs/roots	☐ b. Enriched meals	☐ c. Fast
☐ d. Medicinal products (bought at the market)	☐ e. Medicinal products (bought at the pharmacy)	☐ f. Prayer
☐ g. Consultation of a traditional healer	☐ h. Consultation at the health facility	☐ i. No treatment
☐ j. Other, please specify: _____		

3. Has your child ever been enrolled in the IMAM programme?	
☐ Yes	☐ No → **Q7**

4. How many times has your child been enrolled in the IMAM programme?	
☐ 1	☐ Other, please specify: _____

5. Was your child successfully discharged as cured after the treatment?	
☐ Yes	☐ No

6. Who made a decision to receive the treatment?		
☐ a. Mother of a child	☐ b. Father of a child	☐ c. Mother and father together
☐ d. Community health worker	☐ e. Other, please specify: _____	

7. Why was your child not enrolled in the IMAM programme?	
☐ a. The child was never severely acute malnourished	☐ b. Insecurity
☐ c. Inaccessibility (seasonal flooding, etc.)	☐ d. Non-availability of means of transportation
☐ e. Non-availability of the company for the journey	☐ f. Non-availability of financial resources for the journey
☐ g. Husband/family refusal	☐ h. Non-availability of financial resources for the treatment

☐ i. Caregiver ill	☐ j. Family member ill
☐ k. Too busy; reason: _____	☐ l. No-one to look after other children
☐ m. Ashamed to enrol in the programme	☐ n. Lack of belief that the programme can help the child
☐ o. Fear of hospital stay (away from HH, fees)	☐ p. Preference of traditional treatment
☐ q. Previous rejection of a child; when? _____	☐ r. Rejection of a known child
☐ s. Quantity of PlumpyNut® is too little to justify the journey	

8. Is your child receiving any kind of assistance or support for moderate acute malnutrition management?

☐ Yes → **Q8a**	☐ No → **STOP**

8a. What kind of support is the MAM child receiving?

☐ a. Counselling	☐ d. Cash assistance	☐ g. Other, please specify _____
☐ b. Multiple Micro-Nutrient Powder (Baal Vita)	☐ e. Agricultural support	
☐ c. WSB+ / Super cereal	☐ f. Food assistance	

6. How have you been overall satisfied with the service related to MAM management?

☐ a. Very satisfied	☐ b. Satisfied
☐ c. Neither satisfied nor unsatisfied	☐ d. Unsatisfied
☐ e. Very unsatisfied	

7. How satisfied have you been with the information you receive about the health status of your child?

☐ a. Very satisfied	☐ b. Satisfied
☐ c. Neither satisfied nor unsatisfied	☐ d. Unsatisfied
☐ e. Very unsatisfied	

8. If not receiving any support for MAM, what are the reasons?

_____

Thank you!

Comments:

D. Data collection summary: Exhaustive screening

CASE-FINDING SUMMARY SHEET

District: _____ **Municipality:** _____ **Ward:** _____ **Team** _____

No.	Age (months)	MUAC (mm)	Oedema (Y/N)	Case (SAM/MAM)	Programme (SAM)	Case definition (Cin, Cout, Rin)	No.	Age (months)	MUAC (mm)	Oedema (Y/N)	Case (SAM/MAM)	Programme (SAM)	Case definition (Cin, Cout, Rin)
1							31						
2							32						
3							33						
4							34						
5							35						
6							36						
7							37						
8							38						
9							39						
10							40						
11							41						
12							42						
13							43						
14							44						
15							45						
16							46						
17							47						
18							48						
19							49						
20							50						
21							51						
22							52						
23							53						
24							54						
25							55						
26							56						
27							57						
28							58						
29							59						
30							60						

No.	Age (months)	MUAC (mm)	Oedema (Y/N)	Case (SAM/MAM)	Programme (SAM)	Case definition (Cin, Cout, Rin)	No.	Age (months)	MUAC (mm)	Oedema (Y/N)	Case (SAM/MAM)	Programme (SAM)	Case definition (Cin, Cout, Rin)
61							81						
62							82						
63							83						
64							84						
65							85						
66							86						
67							87						
68							88						
69							89						
70							90						
71							91						
72							92						
73							93						
74							94						
75							95						
76							96						
77							97						
78							98						
79							99						
80							100						

CHILDREN MUAC< 115 MM (RED)			COVERED SAM CASES (CIN)		NON-COVERED SAM CASES (COUT)		
CHILDREN WITH OEDEMA							

CHILDREN MUAC ≥ 115 MM ≤ 124 MM (YELLOW)		RECOVERING SAM CASE (RIN)		CHILDREN MUAC ≥ 125 MM (GREEN)		RECOVERING SAM CASE (RIN)	

WELL-NOURISHED CHILDREN		SCREENED CHILDREN	

Annex 4. SLEAC Supervision checklist

SUPERVISION FORM

Date : _____	**Municipality :** _____	**Ward :** _____
Surveyor: _____	**Supervisor:** _____	**Final note:** _____ /84

COMMUNITY ENTRY

	2	1	0
Presentation of the objective of the visit			
Presentation of the way of working			
Request for a number of residents/children 6-59 months			
Delimitation of the village			
Segmentation of the village, if necessary			
Request for a guide, if necessary			

*** 2 (without errors), 1 (with errors), 0 (omitted)** /12

HOUSEHOLD ENTRY / FILLING OF CASE FINDING SUMMARY

	2	1	0
Presentation of the purpose of the visit			
Request for consent			
Team verifies the number of children 6-59 months in the household			
Team verifies the ages of all children 6-59 months in the household through official documents or events' calendar			
Team ensures that all children 6-59 months old in the household are measured and records the respective values			
Team checks all children 6-59 months for bilateral oedema and records the respective values			
Team explains to parents the results for each child measured			
Team follows the decision tree to decide whether to deploy the questionnaire for covered or uncovered SAM/ MAM cases			

*** 2 (without errors), 1 (with errors), 0 (omitted)** /16

ANTHROPOMETRIC MEASUREMENTS - MUAC

	2	1	0
Team uses MUAC tape to measure a child's arm			
Team uses correct markers (shoulders/elbows)			
Child's arm is bent to identify mid-point of the arm			
Mid-point of the-arm is calculated correctly			
Team uses pen to trace mid-point of the arm			
Child's arm is unbent to measure the circumference			
End point of the MUAC tape is slid through the window			
MUAC tape is well adjusted (not too tight, not too loose)			
Team verifies the positioning of the MUAC tape			
Measurer reads the value out loud and surveyor notes it in the case finding summary sheet while repeating the value out loud			

*** 2 (without errors), 1 (with errors), 0 (omitted)** /20

ANTHROPOMETRIC MEASUREMENTS - OEDEMA

	2	1	0
Team uses thumbs to assess a child's oedema			
Team assesses oedema on two feet at the same time			
Team uses correct pressure			
Team uses a correct counting technique out loud			

*** 2 (without errors), 1 (with errors), 0 (omitted)** / 8

DEPLOYMENT OF QUESTIONNAIRES (TABLETS)

	2	1	0
Team verifies child's health card and presence of PlumpyNut®			
Team deploys a correct questionnaire			
Team asks all respective questions			
Team rephrases questions so that a caregiver can understand them, if they have difficulty in understanding/has difficulty in answering			
Team asks for explanations in case of unclear answers			
Team selects a correct answer from the options noted on the questionnaire			
Team does not judge the answers given and treats the caregiver with great respect			
Team thanks the caregiver for their time			

*** 2 (without errors), 1 (with errors), 0 (omitted)** /16

VERIFICATION OF CASE FINDING SUMMARY

	2	1	0
Team ensures that all children 6-59 months in the village are measured			
Team uses one case finding summary per village			
Team conducts a case count at the end of the day			
Team ensures that numbers for different categories of cases match			
Team cross-checks a number of questionnaires for covered and non-covered cases on the tablets			
Team submits completed case finding summaries at the end of the day			

*** 2 (without errors), 1 (with errors), 0 (omitted)** /12

COMMENTS / OBSERVATIONS

Annex 5. SLEAC Lists of sampled wards

SAMPLED WARDS DOLAKHA

(74 eligible wards)

40 sampled wards + 9 reserve wards

Municipality	Ward	No. HH	Total pop
Gaurishankar Gaunpalika	**1**	503	1704
Gaurishankar Gaunpalika	**2**	473	1495
Gaurishankar Gaunpalika	**4**	540	2201
Gaurishankar Gaunpalika	**6**	411	1468
Gaurishankar Gaunpalika	**8**	467	1718
Bigu Gaunpalika	**1**	636	2290
Bigu Gaunpalika	**3**	529	1696
Bigu Gaunpalika	**4**	974	3208
Bigu Gaunpalika	**6**	458	1615
Bigu Gaunpalika	**8**	564	2095
Kalinchowk Gaunpalika	**2**	884	3113
Kalinchowk Gaunpalika	**4**	562	1936
Kalinchowk Gaunpalika	**6**	779	2520
Kalinchowk Gaunpalika	**8**	602	1990
Kalinchowk Gaunpalika	**9**	773	2581
Baiteshwor Gaunpalika	**2**	627	1967
Baiteshwor Gaunpalika	**4**	619	2033
Baiteshwor Gaunpalika	**6**	773	2470
Baiteshwor Gaunpalika	**8**	588	2007
Jiri Municipality	**2**	425	1515
Jiri Municipality	**4**	439	1585
Jiri Municipality	**5**	567	2045
Jiri Municipality	**7**	468	1800
Jiri Municipality	**9**	496	1897
Tamakoshi Gaunpalika	**2**	534	1710
Tamakoshi Gaunpalika	**4**	606	1965
Tamakoshi Gaunpalika	**6**	615	2139
Tamakoshi Gaunpalika	**7**	455	1868
Melung Gaunpalika	**2**	440	1341
Melung Gaunpalika	**4**	889	2833
Melung Gaunpalika	**6**	609	2009
Shailung Gaunpalika	**1**	603	1910
Shailung Gaunpalika	**3**	784	2711
Shailung Gaunpalika	**5**	426	1377
Shailung Gaunpalika	**6**	500	1758
Shailung Gaunpalika	**8**	1034	4245
Bhimeshwor Municipality	**2**	1183	3802
Bhimeshwor Municipality	**4**	543	1749

Bhimeshwor Municipality	**6**	2075	7572
Bhimeshwor Municipality	**8**	766	2278
Gaurishankar Gaunpalika	**7**	371	1506
Bigu Gaunpalika	**7**	397	1339
Kalinchowk Gaunpalika	**3**	609	2111
Baiteshwor Gaunpalika	**5**	811	2756
Jiri Municipality	**3**	422	1473
Tamakoshi Gaunpalika	**1**	650	2107
Melung Gaunpalika	**7**	573	2057
Shailung Gaunpalika	**4**	626	1997
Bhimeshwor Municipality	**9**	994	3239

SAMPLED WARDS MUGU

(36 eligible wards / Mugumakarmarog excluded for non-accessibility)
25 sampled wards + 3 reserve wards

Municipality	Ward	No. HH	Total pop
Chhayanath Rara Municipality	**1**	512	2132
Chhayanath Rara Municipality	**2**	596	2199
Chhayanath Rara Municipality	**3**	283	1515
Chhayanath Rara Municipality	**5**	427	2217
Chhayanath Rara Municipality	**6**	338	1734
Chhayanath Rara Municipality	**8**	215	1101
Chhayanath Rara Municipality	**9**	77	401
Chhayanath Rara Municipality	**11**	216	1148
Chhayanath Rara Municipality	**12**	357	1827
Chhayanath Rara Municipality	**13**	534	2731
Soru Gaunpalika	**1**	120	834
Soru Gaunpalika	**2**	191	1073
Soru Gaunpalika	**4**	127	777
Soru Gaunpalika	**5**	129	694
Soru Gaunpalika	**7**	305	1573
Soru Gaunpalika	**8**	246	1334
Soru Gaunpalika	**10**	267	1346
Soru Gaunpalika	**11**	205	1049
Khatyad Gaunpalika	**1**	165	907
Khatyad Gaunpalika	**3**	377	2046
Khatyad Gaunpalika	**4**	422	2299
Khatyad Gaunpalika	**6**	234	1336
Khatyad Gaunpalika	**7**	387	1856
Khatyad Gaunpalika	**9**	350	2099
Khatyad Gaunpalika	**10**	264	1376
Chhayanath Rara Municipality	**7**	269	1319
Soru Gaunpalika	**3**	273	1549
Khatyad Gaunpalika	**11**	370	1836

SAMPLED WARDS RAUTAHAT

(157 eligible wards)
64 sampled wards + 18 reserve wards

Municipality	Ward	No. HH	Total pop
Chandrapur Municipality	2	1872	8920
Chandrapur Municipality	4	1911	8667
Chandrapur Municipality	6	1753	8197
Chandrapur Municipality	9	1478	7349
Gujara Municipality	1	843	4182
Gujara Municipality	4	996	5614
Gujara Municipality	6	863	5310
Gujara Municipality	9	1015	5703
Phatuwa Bijayapur Municipality	2	646	4128
Phatuwa Bijayapur Municipality	5	854	5482
Phatuwa Bijayapur Municipality	7	371	2074
Phatuwa Bijayapur Municipality	10	405	1899
Katahariya Municipality	1	1093	6639
Katahariya Municipality	4	1045	6050
Katahariya Municipality	6	588	3572
Katahariya Municipality	9	552	3134
Brindaban Municipality	2	916	5632
Brindaban Municipality	4	858	4915
Brindaban Municipality	7	1196	7254
Brindaban Municipality	9	753	5033
Gadhimai Municipality	3	1431	9370
Gadhimai Municipality	5	449	2542
Gadhimai Municipality	8	715	4494
Madhav Narayan Municipality	1	828	4598
Madhav Narayan Municipality	4	738	4610
Madhav Narayan Municipality	6	1460	8338
Madhav Narayan Municipality	9	150	947
Garuda Municipality	2	893	5537
Garuda Municipality	4	1255	6952
Garuda Municipality	6	1282	7923
Garuda Municipality	9	1274	7474
Dewahi Gonahi Municipality	2	793	5093
Dewahi Gonahi Municipality	5	655	3863
Dewahi Gonahi Municipality	7	934	6023
Dewahi Gonahi Municipality	9	592	3585
Maulapur Municipality	3	599	3824
Maulapur Municipality	5	606	3664
Maulapur Municipality	8	552	3446
Boudhimai Municipality	1	668	4310
Boudhimai Municipality	4	901	5615
Boudhimai Municipality	6	762	4943

Boudhimai Municipality	9	581	3740
Paroha Municipality	2	558	3908
Paroha Municipality	5	567	3840
Paroha Municipality	7	706	4610
Rajpur Municipality	1	1195	7801
Rajpur Municipality	3	1157	7587
Rajpur Municipality	6	756	5338
Rajpur Municipality	8	612	4193
Yamunamai Gaunpalika	2	646	3788
Yamunamai Gaunpalika	4	1540	8997
Durga Bhagawati Gaunpalika	1	668	3742
Durga Bhagawati Gaunpalika	4	951	5297
Rajdevi Municipality	1	736	4385
Rajdevi Municipality	4	401	2383
Rajdevi Municipality	6	969	5225
Rajdevi Municipality	9	756	4188
Gaur Municipality	2	803	4445
Gaur Municipality	5	1413	6721
Gaur Municipality	7	489	2681
Ishanath Municipality	1	522	3398
Ishanath Municipality	3	1050	6391
Ishanath Municipality	6	836	5966
Ishanath Municipality	8	849	5816
Chandrapur Municipality	7	1595	8345
Gujara Municipality	3	995	5657
Phatuwa Bijayapur Municipality	9	554	2857
Katahariya Municipality	2	1389	8574
Brindaban Municipality	6	1109	7452
Gadhimai Municipality	9	710	4786
Madhav Narayan Municipality	8	592	3731
Garuda Municipality	1	1070	7220
Dewahi Gonahi Municipality	8	430	2652
Maulapur Municipality	4	421	2517
Boudhimai Municipality	5	738	4857
Paroha Municipality	9	899	6112
Rajpur Municipality	4	728	5130
Yamunamai Gaunpalika	5	484	2854
Durga Bhagawati Gaunpalika	3	744	4085
Rajdevi Municipality	7	807	4769
Gaur Municipality	8	637	3385
Ishanath Municipality	4	1099	7234

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