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Growth Monitoring and Promotion in Three Districts of Nepal

A Case Study Narrative



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Acronyms

AHW	auxiliary health worker
ANM	auxiliary nurse midwife
CB-IMNCI	Community-based Integrated Management of Newborn and Childhood Illness
CNSI	Comprehensive Nutrition Services Interventions
COVID-19	coronavirus disease of 2019
DHIS2	District Health Information System
FCHV	female community health volunteer
GMP	growth monitoring and promotion
HMG	health mothers' group
HMIS	health management information system
IMAM	Integrated Management of Acute Malnutrition
IYCF	infant and young child feeding
kg	kilogram
MoHP	Ministry of Health and Population
MUAC	mid-upper arm circumference
PHC ORC	primary health care outreach clinic
QI	quality improvement
RUTF	ready-to-use therapeutic food
RDQA	Routine Data Quality Audit
SAM	severe acute malnutrition
UNICEF	United Nations Children's Fund

Introduction

Routine growth monitoring and promotion (GMP) of infants and young children provides frequent contacts with caregivers and can serve as an entry point for other essential nutrition and child health and development services. Governments throughout the world use GMP as a platform for delivering child health and nutrition services; however, GMP platforms have achieved varying degrees of quality and success. As a result, during a 2018 global convening on GMP led by the Global Financing Facility of the World Bank, participants suggested a paradigm shift to reposition GMP to better integrate child growth and development in the first years of life. They also called for defining diverse GMP models and the contexts in which they can be most effective (Bégin et al. 2020). USAID Advancing Nutrition’s two-country case study (northern Ghana and Nepal) contributes to these efforts.

This country narrative highlights findings, challenges, and good practices from three districts of Nepal, which the Ministry of Health and Population (MoHP) and stakeholders can use to foster healthy child growth and development—and share with other countries committed to helping children reach their physical and cognitive potential.

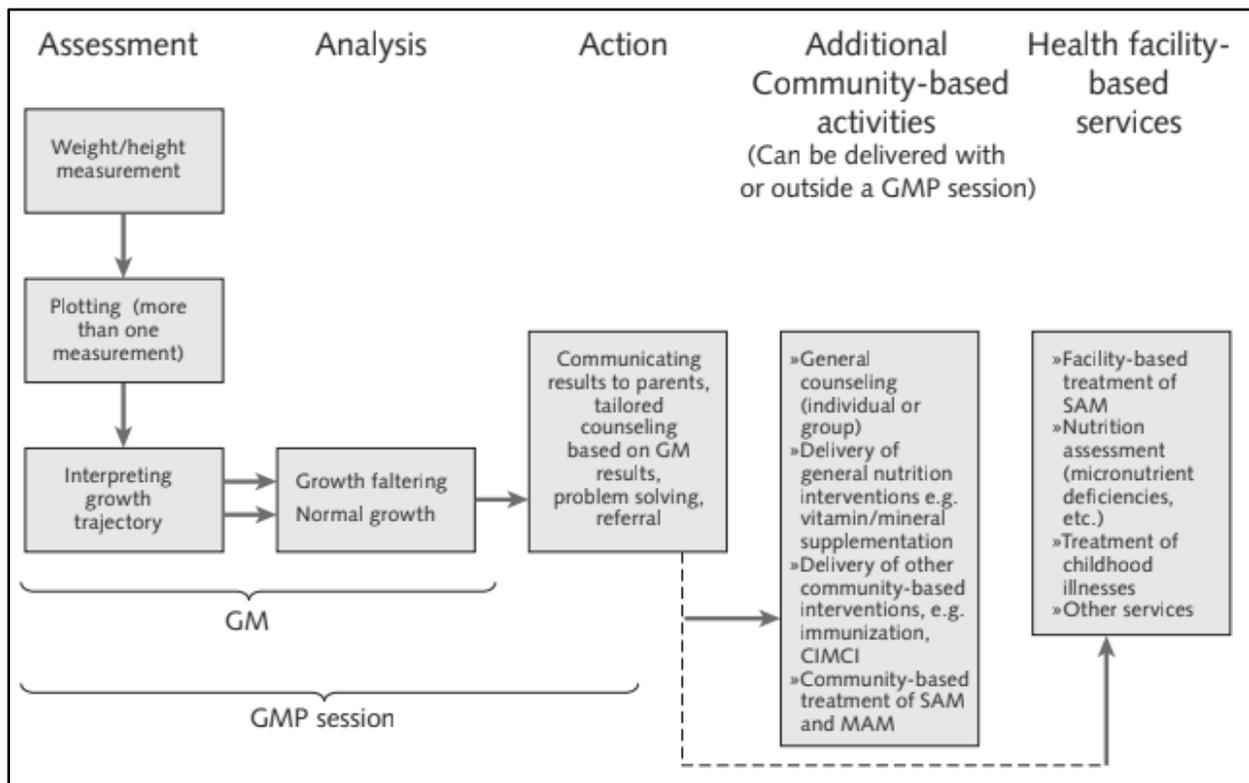
What is Growth Monitoring and Promotion?

“Growth monitoring and promotion (GMP) is a prevention activity that uses growth monitoring, i.e., measuring and interpreting growth, to [detect children who are growth faltering before they become malnourished] and facilitate communication and interaction with the caregiver and to generate adequate action to promote child growth through—

- increased caregiver awareness about child growth
- improved caring practices
- increased demand for other services, as needed” (UNICEF 2007).

The GMP framework (figure 1), adapted from Mangasaryan, Arabi, and Schultink (2011), describes the GMP process for infants and children in the first two years of life. The first step is growth monitoring: monthly contact and an assessment of growth. Monitoring occurs regularly and focuses on the growth trend (i.e., pattern of frequent weight or length/height measurements, characterized as inclining, flattening, or declining), not on nutritional status (i.e., underweight, stunted, wasted). The distinction between monitoring a growth trend and classifying nutritional status, which reflects the accumulation of nutrition, health, and genetic influences on growth, is important for GMP. Focusing on a child’s growth trend over time enables the health system to identify growth faltering early—before a child is malnourished. Importantly, GMP links information gathered over time from monitoring growth trends with an action, where promotion begins. Health workers tailor promotion to the age of the child and community context. Quality promotion includes communicating results to parents; providing specific, actionable advice for the caregiver through counseling aligned with the child’s growth trend; problem solving; and referral, if needed.

Figure 1. GMP Process



Adapted from: Mangasaryan, Arabi, and Schultink 2011, 47 | This paper otherwise uses the acronym CB-IMNCI for community-based integrated management of newborn and childhood illness.

GMP in Nepal

Nepal has achieved substantial reductions in the prevalence of child malnutrition over the last few decades and child nutrition continues to be a national priority. Among children under 5—

- 32 percent are stunted (height/length-for-age greater than two standard deviations below the median)
- 12 percent are wasted (weight-for-height/length greater than two standard deviations below the median)
- 24 percent are underweight (weight-for-age greater than two standard deviations below the median)
- 53 percent of children ages 6–59 months are anemic (hemoglobin <11.0 grams/deciliter).

However, sub-national variation exists (CBS 2020; MoHP, New ERA, and ICF 2017).

The Government of Nepal is currently implementing the second phase (2018–2022) of its Multi-Sectoral Nutrition Plan. In support of this plan, the USAID-funded Suaahara (“Good Nutrition”) II project, a 7-year (2016–2023) multi-sectoral program, aims to reach 1.5 million women and children, with activities across nutrition; health, including family planning and water, sanitation, and hygiene; agriculture/homestead food production; governance; and gender equity and social inclusion. Suaahara II supports GMP in all 42 implementation districts.

The MoHP's nutrition program has implemented GMP for nearly 20 years. At the time of this publication, the government began rolling out a new national GMP protocol demonstrating their continued commitment to GMP. In Nepal, GMP consists of regular growth monitoring by measuring weight (and sometimes length) and plotting them against a standard age-based growth chart on the child's health card. Health facilities implement GMP and health workers conduct additional outreach clinics, with support from female community health volunteers (FCHVs).

According to Suaahara II's annual survey data, the proportion of children 0–2 years weighed in the previous six months by health workers or FCHVs increased from 72 percent in 2017 to 91 percent in 2019. However, GMP coverage is low, including in Suaahara II's program implementation areas. Children 0–2 years weighed in the previous month increased from 20 percent (2017) to 28 percent (2019), indicating that more than two-thirds of children do not attend GMP sessions in any given month. Additionally, only half of the mothers who reported going for GMP said they received information about their child's growth (SII 2020).

A recent study by Pollifrone and colleagues explored the supply and demand factors related to GMP coverage in 16 Suaahara II districts across all three agro-ecological zones (one rural and one urban municipality per district) in Nepal. On the supply side, barriers include deficits in capacity to provide high quality, comprehensive care through GMP services. When presented with hypothetical growth charts, most frontline workers failed to correctly measure, record, and interpret the child's growth status. Few had received training on measuring or counseling methods. The findings also note differences in policy versus practice in FCHVs' roles. A common factor influencing GMP demand was the lower importance given to GMP compared to other services. Both providers and caregivers viewed GMP as a secondary health and nutrition activity, and less important than therapeutic services. In addition, mothers with lower education, lower socioeconomic status, and living in rural areas were less likely to use GMP. Distance and limited transportation options made attendance challenging for many mothers. Mothers also said that they often lacked time to attend GMP sessions due to long hours in agricultural and domestic work. Many mothers who were interviewed asked for FCHVs to conduct GMP because they are more accessible (Pollifrone et al. 2020).

Recommendations include further research to explore the implementation of improved GMP protocols and to evaluate facility-level implementation barriers for “effective and equitable GMP implementation” (Pollifrone et al. 2020, 9). Research from both small-scale studies and larger programs shows that children who attend growth monitoring and “whose mothers receive nutrition and health education and have access to basic child health services have a better nutritional status and/or survival than children who do not” (Ashworth, Shrimpton, and Jamil 2008, 101). Building on the evidence from Nepal and globally, the case study contributes additional insights from stakeholders (including government officials, development partners, and health workers) on the policy environment, implementation, and utilization of services.

Objectives

The objectives of the country case study are to—

- understand how GMP is currently implemented in Nepal
- highlight opportunities and recommendations to leverage and strengthen GMP to improve healthy child growth and development in Nepal
- identify good practices for sharing with global GMP stakeholders.

Methodology

This case study, conducted April–July 2021, systematically describes GMP implementation in three districts (Sindhupalchowk, Jajarkot, and Kailali) across three regions (Mountains, Hills, and Terai respectively) and provinces (see figure 2). In consultation with Suaahara II and the Nutrition Section of the Family Welfare Division at the MoHP, we selected provinces, districts, and municipalities with diverse contexts and different levels of GMP coverage to understand the utilization of GMP services from an access and equity perspective. We

Figure 2. Study Districts



(Source: Nepal in Data 2020)

used the average number of visits among children 0–23 months registered for GMP in FY 2075/76¹ to make this determination. Among the study districts, Kailali had the highest average number of GMP visits (4.3 visits per child this year), Sindhupalchowk had a moderate average number of GMP visits (3.1 visits per child), and Jajarkot had the lowest average GMP visits (2.1 visits per child). Selected municipalities aligned with district averages (e.g., a municipality with a higher average number of GMP visits in Kailali). To collect data, researchers selected a convenience sample of GMP service points to visit: six health facilities (two health posts or primary health care centers per district) and their associated outreach sessions. For this study, we used three methods of data collection:

1. **Desk review:** We reviewed policies, protocols, strategies, program reports, and peer-reviewed literature to understand the current state of children’s health and nutrition in Nepal, as well as the government’s role in supporting GMP. We explored how GMP is implemented, challenges faced and overcome, and how GMP data inform decision-making.
2. **Interviews:** Four expert researchers trained in qualitative research led the data collection with support from field staff of Suaahara II. For the interviews (see table 1), we translated pretested semi-structured in-depth interview guides into Nepali. We interviewed the following staff about roles related to GMP, use/understanding of GMP protocols and the national quality standards, data collection and use, and priority areas for GMP:
 - national level staff: representatives from the Nutrition Section of the Family Welfare division at the MoHP; National Planning Commission; and Ministry of Education, Science, and Technology
 - sub-national focal persons and officers: Provincial Health Directorates, District Health Offices, and municipality health staff
 - representatives from Suaahara II, and development partners: USAID Nepal, United Nations Children’s Fund (UNICEF), and the World Food Program.

We also interviewed health workers and female community health volunteers to learn about experiences, challenges, and recommendations. We asked caregivers of children 0–2 years about their perceptions of GMP services, recommendations for improving GMP, and linkages with other services.

¹ The Nepali calendar is based on the Bikram Sambat, an ancient calendar of the Hindu tradition. FY 2075/76 spans April 2018 to April 2019.

Table 1. Interviews and Observations

Methods	National	Jajarkot	Kailali	Sindhupalchowk	Total
In-depth interviews					
Development partners	3	-	-	-	3
Implementing partners	2	-	-	-	2
National government officials	3	-	-	-	3
Sub-national government officials	-	3	3	3	9
Health workers	-	4	4	4	12
FCHVs	-	4	4	4	12
Caregivers	-	6	6	6	18
Total	8	17	17	17	59
Observations					
Health Posts	-	2	2	2	6
Outreach Clinics	-	2	2	2	6
Total	-	4	4	4	12

- 3. Observations:** We observed a total of 12 health facility and community GMP sessions for individual children from registration through counseling over a period of approximately two to three days per district. The observations ranged from 5–22 minutes depending on the length of the GMP session. We observed which staff are involved in growth measurement and documentation; how they take, record, and use growth measurements; what information they use to make decisions about whom to counsel; the content and quality of counseling; and feedback provided. The observations provided an opportunity to examine how links and referrals to other services within and beyond the health system occur.

Prior to data collection, in collaboration with Suaahara II, we convened three district-level workshops with provincial, district, and municipal-level officials; health workers; and international nongovernmental organizations in each of the study districts to review and agree on the study plan. We also held a post-data collection workshop with national, provincial, and municipal-level officials to contextualize and validate the findings. The nutrition section chief at the Family Welfare Division of MoHP participated in the discussion and offered remarks on the findings.

To analyze the results, we first translated the interviews, conducted in Nepali, into English. We prepared a codebook using deductive (pre-determined) and inductive codes (based on themes that emerged from the data). We coded the interviews using ATLAS.ti 9 software and analyzed the data by thematic area for each research question. We triangulated data from the desk review, interviews, observations, and workshops to confirm and refine the findings.

This country narrative provides a high-level overview of GMP in Nepal. It aims to tell the story of how the study locations implement GMP to contribute to a combined case study of GMP in two countries (Nepal and Ghana). As such, it is limited in scope. It also has a number of methodological limitations. The study, and observation sessions in particular, are neither representative of the entire district nor all sessions in the municipality. The sites for observation were selected opportunistically, based on where health staff conducted GMP on the days they were interviewed. Nevertheless, similarities across the various study sites indicate trends in implementation, which we describe in the following sections. Interviews and observations provide a glimpse of how GMP may be implemented at various sites.

Findings

Implementing GMP

GMP is a national priority for children 0–2 years and implemented in all districts in Nepal. In practice, however, implementation does not always occur according to national guidelines. Decentralization of the government in 2015 has led to variation in implementation by municipality depending on human resources, equipment, and support from local leadership. Due to several variables, including infrequent measuring, the focus is largely on screening for malnutrition because health workers do not have accurate growth trends. Respondents across groups, including national government officials, acknowledged they are looking for opportunities and making efforts to strengthen promotion in particular.

National and subnational government officials attribute the broad coverage of GMP to its link with immunization, but as one national government official noted, the services are supposed to remain separate in an attempt to reduce unmanageable workloads and competing priorities for health workers. GMP is integrated into the MoHP's broader nutrition training package, Comprehensive Nutrition Services Interventions (CNSI), which Suaahara is helping to roll out. Although GMP is widely implemented, national, and subnational government officials recognize the frequency of attendance hampers its effectiveness. Not all mothers bring their children to GMP; several health workers from across districts acknowledged mothers only bring their child to the health facility when they are sick or need an immunization—at which time they get measured. Because most children are only measured at these infrequent visits rather than the recommended once per month, growth is not monitored. In addition, many visits are undocumented in the child health card, which gives the appearance that GMP visits are infrequent and growth is not consistently monitored (see [Tracking and Using Data](#)).

In Jajarkot and Sindhupalchowk, respondents shared that caregivers have difficulty accessing services, particularly in the rainy seasons, due to poor road networks and long distances to access health care. FCHVs expressed similar difficulties in reaching their assigned areas to conduct outreach.

No, children are not brought in this health facility specifically for growth monitoring ... Children are brought to the health post only when they are sick ... It is because the houses are very far [from] here.

— Auxiliary health worker, Jajarkot

Jajarkot's Kuse Rural Municipality is a rural and geographically difficult municipality. We have roads now. But the roads can't be used during the rainy season.

— Auxiliary health worker, Jajarkot

Across districts, caregivers perceive GMP as useful because they find out about their child's health and growth and learn new information, but some acknowledge it is not always a priority. Caregivers in Kailali, and some in Jajarkot, were interested in monitoring their child's weight gain, whereas those in Sindhupalchowk were more focused on learning about their child's nutritional status (according to weight or mid-upper arm circumference (MUAC)). A couple of caregivers and health workers in Jajarkot mentioned that caregivers do not bring children with disabilities to the health facility (including for GMP) because they are not sure their child will live a long life so GMP seems futile. Perhaps because of this, most caregivers and health workers in other study districts did not know of children with disabilities in their community, however, a couple of respondents shared that even those with disabilities attend GMP sessions.

Most of the caregivers attending GMP are mothers, although in Kailali fathers seem to come on occasion, too. Mothers learned about the importance of bringing their child to GMP from other women

in the family or FCHVs. One father, who attended GMP with the child's mother, reiterated the importance of attending GMP to know if the child is healthy and receiving adequate nutrition. He noted that because the child belongs to both of them, they go to the health post together. The father's responses did not vary much from other caregivers; however, he highlighted the importance of counseling both mothers and fathers, especially during pregnancy.

Caregivers bring their children to GMP at two main service points—health facilities and primary health care outreach clinics (PHC ORCs)² in communities. Health mothers' groups (HMG) offer additional community education efforts to support GMP and screen for wasting. Across the districts, at the visited health facilities, auxiliary health workers (AHWs) typically lead GMP sessions and auxiliary nurse midwives (ANMs) sometimes lead or support them. In most study areas, GMP takes place monthly at PHC ORCs. Health facilities offer GMP monthly on the same day as immunization and daily during sick-child care clinics. Kailali was the only study district that offered GMP on a separate day from immunization. At the health facilities visited, researchers found 2–7 staff members working and only 1–2 available to provide GMP services. FCHVs also sometimes support the health facility on GMP days by screening for wasting (taking MUAC) or managing the queue. At PHC ORCs, an ANM leads the monthly GMP session while FCHVs support measurement and counseling.

Though PHC ORCs aim to expand access to GMP, a few respondents from Jajarkot noted that the closest PHC ORC was still 1–2 hours away—a substantial barrier for many caregivers. Researchers observed higher attendance at health facility sessions than PHC ORC sessions likely because of larger catchment areas—in Kailali, almost twice as many caregivers attended the health facility than the PHC ORC (see table 2). Higher attendance at GMP sessions can sometimes be explained by a higher population in the areas they are held, such as in Kailali. Researchers observed health workers spent 5–10 minutes with each child from registration through counseling, with those working at health facilities offering more time.

² Established in 1994, primary health care outreach clinics take primary health care services, such as safe motherhood (including antenatal care), newborn care, family planning; GMP, pneumonia, diarrhea, and first aid treatment; and health education and counseling to communities (MoHP, n.d.).

Table 2. Summary of GMP Observations Sessions by District and Service Point (based on two observation sessions at each service point)

Location	Jajarkot		Kailali		Sindhupalchowk	
Service Point	Primary Health Care Outreach Clinic (PHC ORC)	Health facility (immunization day)	PHC ORC	Health facility	PHC ORC (imm. day)	Health facility (imm. day)
Length of Session (in minutes)	10–22	8–10	~5	~10	~5	5–10
Attendance (caregivers)	20–25	30–35	>50	>100	8–15	25–30
Measurement	weight, MUAC (both children)	weight (both children)	weight, MUAC (both children)	child 1: weight child 2: weight, length, MUAC	weight (both children)	child 1: weight child 2: weight and MUAC
Plotting	No	child 1: No child 2: Yes	Yes	Yes	No	child 1: No child 2: Yes
Tailored Counseling to Weight Gain*	Yes	child 1: No child 2: Yes	child 1: No child 2: Yes	Yes	Yes	Yes

*Weight gain calculated based on data from the previous visit, which was frequently more than a month ago, and sometimes up to 3 or more months ago.

While the old guidelines specific to GMP were no longer widely used in Nepal at the time of the study, the protocol outlined in the CNSI training manual, which respondents described as the current guiding document, generally aligns. Both documents mention the growth trend (weight increasing, constant, or decreasing), though they are more focused on making an assessment and classifying nutritional status based on the colors of the growth chart. The GMP module of the *Health Facility Quality Improvement (QI) Modules for Health Service Strengthening: Maternal, Infant, and Young Child Nutrition*, used to identify gaps in

the quality of nutrition service delivery, also aligns with this focus on classification of nutritional status and subsequent counseling based on “normal,” “low weight,” and “very low weight” (USAID 2020). The service flow (see figure 3) is generally the same across health facilities and outreach clinics. However, only the health facility takes length, and even there it is rarely measured likely due to lack of functioning equipment and time. Researchers only observed staff taking the length measurement at one session in Kailali. CNSI trains health workers on taking length measurements, however measuring length is not included as a performance standard in the QI module on GMP; it only appears as a performance standard in the modules on outpatient and inpatient therapeutic care.

Figure 3. Service Flow at Health Facilities and Outreach Clinics



At health facilities and at outreach clinics, health workers start GMP sessions by collecting the child health cards from the mothers and registering the children. Often the health worker and caregiver work together to measure the child’s weight (and rarely length). Health workers also take the child’s MUAC if there is concern for malnutrition. Next, health workers record the weight in the register and sometimes record or plot the weight on the child health card. Health workers record MUAC (if taken) in the Community-Based Integrated Management of Newborn and Childhood Illness (CB-IMNCI) or Integrated Management of Acute Malnutrition (IMAM) register as appropriate (see [Tracking and Using Data](#)).

Vaccination happens primarily at the health facility along with GMP, but if a child misses a vaccination, health workers will administer vaccines at PHC ORCs. When GMP and vaccination efforts are linked, such as in Jajarkot and Sindhupalchowk, counseling occurs after vaccination so caregivers must wait until all children are weighed and vaccinated. Even then, due to the number of caregivers attending, health workers may not have time for one-on-one individualized counseling (tailoring counseling to the individual child’s growth trend, age, home context, etc.). The guidelines, CNSI training manual, and QI standards focus on individualized counseling and do not provide guidance around supplemental group counseling if individualized counseling is not possible.

Kailali had the highest attendance at both PHC ORCs and health facilities (see table 2), and health workers still plotted the child’s weight at both observed sessions—and tailored counseling according to weight gain for one of the two children at outreach and both children at the health facility. At other sites, researchers observed that some health workers did not plot the weight of the child. In one case, health workers incorrectly identified a child as healthy when she needed outpatient therapeutic care. At one of the health facility sessions in Kailali, researchers also observed two-way communication between the health worker and caregiver, which was missing in the other districts. These exemplary findings in Kailali may be because GMP occurs separately from immunization, so health workers did not have as many competing priorities and could sufficiently focus on child growth. Researchers also noted that higher attendance might be a result of greater engagement by local leaders, a higher population density, and closer proximity to PHC ORCs (e.g., relative to Jajarkot, where respondents noted that PHC ORCs were sometimes 1–2 hours away).

Respondents acknowledged challenges in health worker capacity to deliver GMP—both in the numbers of staff available across the districts, and in their knowledge and skills to accurately measure, plot, and

offer tailored counseling to caregivers and their families. This may be due to the recent decentralization of the government resulting in newly appointed or temporarily contracted untrained staff and vacancies. One subnational government official from Sindhupalchowk noted that prior to decentralization there were 83 staff trained in GMP. This number has since decreased to 19 staff. Another subnational government official from Surkhet estimated that 40 percent of sanctioned positions in Karnali province are vacant.

The old health workers did not properly provide the handover to the new employees and even the new employees did not ask or seek to learn from the old employees ... some of them are good, but not [all are] performing at satisfactory levels.

— Government official, National level

Vacancies put undue pressure on the few health workers present—many of them new to GMP—who also expressed difficulty in carrying out all their assigned tasks. One subnational government official noted that municipal governments are hiring staff for vacant posts and filling equipment gaps. Supervisory efforts from the municipal government were also minimal because many newly appointed leaders were unfamiliar with the GMP platform and the budget and support required for successful operation.

Most health workers did not mention any difficulties with securing tools and equipment, as USAID and other development partners provide equipment, especially weighing scales. However, based on interviews and observations, the availability of functioning length boards was less common. Researchers also noted that health posts and outreach sites have limited space to hang scales or store equipment. Health workers explained that carrying equipment and registers to outreach is difficult.

Defining and Addressing Promotion

Interviews with government officials, health workers, and caregivers indicated the promotion component of GMP is not well defined or understood across districts. When asked about challenges with promotion, health worker responses focused on broader issues, such as getting children to attend GMP, equipment challenges, and the impact of financial limitations on caregivers' ability to carry out recommendations. Aside from one observed health facility session in Kailali, in practice, researchers observed health workers providing infant and young child feeding (IYCF) information through one-way communication rather than counseling. Health workers typically speak to caregivers as a group—unless they identify a child as wasted or underweight and have time to speak with caregivers one-on-one. When they did have one-on-one time with caregivers, they provided information rather than engaging caregivers to share their experiences and solve problems together.

To achieve high quality growth promotion, researchers identified the following good practices and some areas for strengthening:

- **Communicate results.** According to health workers and caregivers, health workers frequently tell caregivers their child's nutritional status (i.e., if a child's weight is normal or too low). Sometimes they tell caregivers if the weight has increased from the previous visit or the color of the plotted weight on the growth chart, but they do not usually have frequent enough growth measurements to share the growth trend.
- **Tailor counseling.** Only a few respondents (FCHVs, health workers, and caregivers) talked about giving or receiving counseling based on how a child's weight has changed compared to the previous visit. However, given the length of time between most visits (likely more than a month ago, if not three or more months), they were unable to have an accurate picture of the growth trend—or counsel according to the growth trend. Most health workers shared general age-based IYCF information or used the child's nutritional status or weight gain from a prior visit (even if

several months prior) to guide information they provided. Guiding documents reinforce the focus on general IYCF information likely because inconsistent visits result in a lack of accurate growth trends to use for tailored counseling.

Respondents did not typically describe and researchers did not observe (except for one session in Kailali) two-way communication in which the health worker sought to better understand and tailor counseling to the child's context; the information provided was usually according to the child's age.

The good thing [is] having children's weight or length measurement ... to know [the] growth status of children. Similarly, how differ[ent] their growth [is] compared to [the] previous [month] and this month. If there is higher kg than [the] previous month, we can say [the] child's growth status is good, if [the] number of kg [is] decreas[ing] or stagnant then we can ask the mother whether child was sick or not, what was the number of breastfeeding in a day, intake of additional food and feeding practice, etc.

— FCHV, Jajarkot

- **Solve problems.** Health workers and FCHVs described techniques they use to engage caregivers in child health and nutrition, such as demonstrations and storytelling. However, respondents described and researchers observed minimal problem solving and negotiation at all study sites.

FCHVs and health workers described using a flip chart as the primary job aid to guide a counseling session, however, these were not always available and researchers only observed flip chart use in Kailali. Age-specific topics covered during counseling include exclusive breastfeeding and complementary feeding especially—

- introducing complementary foods
- making enriched porridge (jaulo) and super flour (lito or sarbottam pitho)
- preparing food hygienically
- feeding children diverse foods
- feeding children four food groups per day (harek baar khana chaar).

Only one health worker and one caregiver (both from Jajarkot) mentioned counseling on developmental milestones (e.g., speaking, crawling) and some caregivers expressed a desire for more information about child development. A caregiver shared that she felt more comfortable receiving counseling from female health workers because they could better relate to her experiences; an FCHV confirmed she had heard this perspective from other caregivers.

Based on observations, health workers and caregivers occasionally reached a specific agreement on what the caregiver would try to do during the following month—but these exchanges occurred verbally and weren't recorded. Caregivers described either agreeing to return on a decided date or agreeing to practice behaviors related to breastfeeding, complementary feeding (diversity and frequency), and hygiene. Caregivers were confident they would be able to practice the behaviors. Some caregivers felt they needed familial support to carry out actions, but others felt they would be able to carry out actions even without much support.

FCHVs reflected that they provide counseling to caregivers with clear actions based on the child's growth (though usually they were actually referring to nutritional status) and that caregivers are generally able to follow recommendations. However, a couple of FCHV from Kailali and Sindhupalchowk noted that caregivers have difficulty practicing agreed upon actions. Health workers across districts also described factors influencing caregivers' ability to act on agreements, including competing priorities

(fieldwork during the rainy season, household chores), lack of familial support, or the inability to afford nutritious foods. During observations, health workers usually told the caregiver when to return, but caregivers across districts reported being told to come back whenever the child was due for their next immunization (e.g., in 5–12 months). In FY 2075/76, the national average number of visits for children aged 0–11 months (3.2 visits per month) and 12–23 months (3.1 visits per month) was similar. However, there was some variation by district. In Sindhupalchowk, on average, children 0–11 months attended GMP sessions 3.4 times while children 12–23 months attended 2.7 times. In Jajarkot, on average, children 0–11 months attended GMP 2.1 times and children 12–23 months attended GMP 2 times. In contrast, in Kailali, the average for children 0–11 months was 3.9 times and for children 12–23 months 5.6 times.

Most health workers and FCHVs did not describe receiving training on knowledge and skills specific to growth monitoring or promotion (including tailoring counseling). However, one health worker recently received training through CNSI and researchers noted that more trainings are planned or underway.

Researchers found that FCHVs are widely appreciated as the pillars of the community for their health promotion activities. One FCHV felt that because she is a woman, she is better able to empathize with the experiences of mothers.

Since we are women, we can understand the feelings of other women. Women are more open to other women (FCHVs) than with men.

— FCHV, Jajarkot

Some national and subnational government officials disagree about the roles FCHVs are qualified to play. As such, their roles vary community to community based on the gaps that need filling (e.g., measuring weight, helping in the health facility). Researchers found some communities requested FCHVs receive weighing scales to conduct GMP at health mothers' groups, as caregivers find FCHVs more accessible, consistent with Pollifrone et al. (2020). Overall, there is general agreement that communities widely trust and appreciate FCHVs, and that they play an important role in community mobilization.

Tracking and Using Data

Respondents across levels described a systematic way to document growth monitoring data. They described several tools (table 3), including the child nutrition register (for children under 2 years of age) and the child health card. Health workers use the child nutrition register to record the weight of all children who attend GMP at the health facility. Health workers also record the weight of the child in the child health card, which caregivers keep. The child health card includes a weight-for-age graph by sex, on which health workers can plot the weight every month from birth to 24 months of age. While most health workers spoke about plotting weight on the card during the interviews, researchers did not observe this. Caregivers mentioned that they do not bring the card because it is not used during GMP and reciprocally, health workers described not using the card because caregivers do not bring it.

Do the health workers plot your son's weight in the card?

No, they don't. They tell us the weight verbally. Only the immunization is recorded. That's why I didn't bring the card today. Weight and arm circumference is recorded in their [health post's] register and is not recorded in the card.

— Caregiver, Jajarkot

Health workers record weight taken at outreach clinics in the outreach register and the child health card. They also mentioned recording anthropometric measurements in the IMAM register and the CB-

IMNCI register when anthropometric measurements were taken as part of IMAM and CB-IMNCI. The IMAM register documents information on children with moderate and severe wasting—and includes a provision to record the weight, length/height, and MUAC of the child. Researchers noted that this is the only register where health workers can record length. Measurement of length was not part of the GMP guidelines that were current at the time of the study. As per the IMAM guidelines, weight and length measurements can be used to calculate the weight-for-length z score to identify a child with moderate or severe wasting. The IMAM register acknowledges that in the absence of equipment and health worker capacity to measure length, admission for moderate and severe wasting can occur based on MUAC (UNICEF 2017). Researchers observed that health workers used MUAC to determine if a child was wasted. Health workers take weight and MUAC measurements every week or every two weeks until the child recovers, which they record in a separate IMAM child health card and register. The CB-IMNCI register documents information on children with illnesses such as pneumonia, diarrhea, etc. Researchers noted that there is a provision to record the weight and MUAC (by color only) in this register. FCHVs talked about recording the number of children they screen for wasting using the MUAC tape (by color only) in their ward register. However, the registers for documenting growth measurements do not have a provision to record the topic of counseling provided and follow-up actions agreed upon with the caregiver.

Table 3. Tools to Document Growth Monitoring and Promotion Data

#	Tool	Category of Child	Who Keeps	Growth Measurement			Growth Promotion
				Weight	Length	MUAC	
1	Child nutrition register (Health Management Information System (HMIS) 2.3)	All	Auxiliary nurse midwife/ Auxiliary health worker	Yes			No (Some IYCF information recorded.)
2	Child health card (HMIS 2.1)	All	Caregiver (filled in by an ANM/ AHW)	Yes			No (Health issues can be recorded.)
3	Primary health care/ outreach clinic register (HMIS 4.1)	All	ANM	Yes			No
4	Integrated management of acute	Acute malnutrition	ANM/ AHW	Yes	Yes	Yes	No

	malnutrition register (HMIS 2.6)						
5	Community-based integrated management of newborn and childhood illness register (HMIS 2.4)	Sick child	ANM/AHW	Yes		Yes (color)	No
6	Ward register (HMIS 4.2)	All	FCHV			Yes (color)	No

Researchers identified several notable efforts by health workers and health facilities to track growth measurements. One health post in Kailali had posted a wall chart tracking growth measurements of all children under 24 months who visited the facility. Similarly, a development partner shared that during a monitoring visit to a health post in Baitadi district, she learned that the growth measurements of one child had been recorded up to 16 times. Recognizing the importance of tracking linear growth, in Kailali, a health worker had added a column to the CB-IMNCI register to record length. However, it is unclear how information on the length of the child was used.

First, we measure the arm by MUAC tape and then we circle whether the child is in red or yellow or green in CB-IMNCI register and length also maintained in the same register by drawing a separate column. Similarly, weight is maintained in HMIS 2.3.

— Health worker, Kailali

Despite the methodical system to track growth-monitoring data, attendance at GMP is low across the country. The low average reported number of GMP visits might be, in part, due to how this indicator is calculated: expecting all children under 24 months to have completed 24 GMP visits³ in the same facility. Additionally, there is no way to track children who visit multiple facilities, as unique identifiers do not exist.

There are different columns in the register to record the data such as new visit and revisit, but our health workers used to keep the record in new visit [column] even child's revisit. Actually, they [health workers] should keep the record until they are two years age of child, but they are not doing so.

— District government official, Jajarkot

³ As per the HMIS Indicators Booklet 2070, the average number of GMP visits is calculated as the numerator (sum of number of visits among children aged 0–24 months registered for growth monitoring) divided by denominator (number of registered visits for children aged 0–24 months registered for growth monitoring). This data is disaggregated by age: 0–11 months and 12–23 months (MoHP 2013).

Similarly, health workers record anthropometric measurements in the IMAM register and CB-IMNCI register but DHIS2 only calculates the average GMP attendance indicator using data from the child nutrition and PHC ORC registers.

Health workers and government officials at the municipal, provincial, and federal level described how health facility staff compile data from the child nutrition and PHC ORC registers to enter into the district health information system 2 (DHIS2) platform. If a health facility does not have a computer or internet, then workers submit the report to the municipality for entry. A federal government official estimated that approximately 80 percent of health facilities currently enter the data themselves. At the municipality level, officials such as health coordinators review GMP data monthly in all three districts. The officer in charge of a health facility represents their facility and communicates relevant decisions made at the review meeting to other facility staff. At the district level, officials such as the public health officer, nutrition focal person, and statistics assistant also review GMP data quarterly, semi-annually, or annually. Several district and provincial government officials shared that GMP data often receive less priority during meetings and sometimes are overlooked. However, when attendees reviewed GMP data some subnational government officials mentioned developing action plans at the district and local level to strengthen GMP services, such as conducting regular outreach clinics and compulsory GMP for children who arrive at service delivery points for outpatient services and immunization.

The GMP data are being used to assess the nutritional status of the children, frequency of the visits and to draw the growth trend. We also calculate the default cases from the collected data. When we identify the default cases then we inform the parent and request them to bring their child for the GM.

— Health worker, Sindhupalchok

Provincial, district, and municipal government officials from Jajarkot and Sindhupalchowk described conducting Routine Data Quality Audits (RDQA) in select health facilities every year to ensure accuracy of data reported in the electronic system. During RDQA, they verify data entered in DHIS2 with information in the registers. Additionally, they explained that as part of the data quality audit, they try to understand why discrepancies exist and develop action plans to overcome them. The action plans are shared with the community and local leadership for input and support.

During the data quality audit, we check for the similarities and discrepancies between the data recorded in the registers, reports, and online database ... We also find out the reasons behind the inconsistencies. It may be due to unavailability of reporting forms and formats or absence of health workers or inadequate training, etc. ... We also discuss the discrepancies with the health workers and seek solutions to prevent similar problems in the future. After discussing with the health workers, we then conduct meetings with the local levels in presence of the mayor to discuss the problems seen during the data quality audit of health facilities and get their suggestions as well.

— Government official, Bagmati Province

At the facility level, several health workers discussed using growth monitoring data to determine reach, follow up on defaulters, develop community-monitoring plans, and request ready-to-use therapeutic food (RUTF) from the municipality. However, several also mentioned that they did not use the growth monitoring data.

At the sub-national level, which included government officials at the provincial, district, and municipal level, stakeholders talked about using data to design programs, identify areas for supervision, and develop action plans. Several also noted that in the new federal structure, they do not play a decision-making role. Finally, at the national level, development partners talked about how growth-monitoring

data are just beginning to be used for program planning. Some federal government staff were not aware of how the data were used, as their organizations were not directly involved in monitoring and managing GMP (National Planning Commission or Ministry of Education, Science, and Technology). Others felt that with the new federal structure, they can advise health facilities, but cannot instruct them to use the data in a particular way.

The GMP data are being reviewed semi-annually and annually. But, the GMP data are being reviewed only after reviewing safe motherhood, immunization, and child health indicators. Sometimes the review of GMP data could be skipped if time is not saved after reviewing the above mentioned programs. Basically, the health coordinator and health post in-charges are supposed to be in the review meeting.

— *Government official, Sindhupalchowk*

Linking with Other Services

Respondents from across groups shared that immunization services have the strongest link with GMP—the same health workers offer them both at the same service points and visits. Immunization takes place at both facilities and PHC ORCs in all districts of Nepal. Attendance at these clinics is high because parents are aware of the importance of vaccinating their children and actively seek this service. The same health workers who distribute or give out vaccines take growth measurements and (ideally) counsel mothers. The documentation and reporting process is also the same for immunization and growth measurements: health workers record both in the child health card, and report them through DHIS2.

GMP has been conducted during immunization clinics and ORCs since the very beginning. That is why GMP is being implemented in all the districts.

— *Government official, Karnali Province*

There is a policy for immunization and outreach clinic dates should be 7–10 days apart. We have told them strictly to differentiate the date for GMP and immunization, that will make them easier for service, recording and reporting, but they are [conducting GMP and immunization on the same day].

— *Government official, District level, Jajarkot*

Health workers also take anthropometric measurements during the biannual vitamin A supplementation campaign. FCHVs screen children for wasting with MUAC tapes, but do not offer counseling. In addition, health workers take anthropometric measurements when children come to the health facility for sick child visits (CB-IMNCI program) and when they receive treatment for wasting (IMAM program). However, measurements taken during these visits are typically not recorded in the child health card. FCHVs and health workers described a clear referral system for the IMAM program, which is implemented in 56 districts (including all three case study districts) (MoHP 2020). FCHVs refer children suspected of severe acute malnutrition (SAM), identified during home visits or health mothers' group meetings, to the health facility for additional assessment and treatment. At PHC ORCs, health workers also refer children with SAM or children who have not gained adequate weight-for-age to the health facility. At health facilities, children with SAM receive outpatient therapeutic care. If a child who is severely wasted has complications then the health workers refer the child to a higher-level facility (e.g., District Hospital Nutrition Rehabilitation Home). This is consistent with a previously reported description of the IMAM implementation modality (Haag et al. 2020). Only a couple health workers noted that caregivers do not always complete referrals and they cited reasons such as other children to take care of, competing priorities, financial burden, etc. However, to make sure referrals are completed, FCHVs and health workers follow up with caregivers through home visits or phone calls.

We refer the children who are lethargic and those who refuse to eat RUTF. We have phone numbers of district level staff. We also provide the phone numbers of district level staff/contact person to the caregivers while referring and ask to contact them after reaching there. I also send messages to district level staff through call[s] or online messaging.

— Health worker in Jajarkot

Sometimes, health workers also call treatment centers or treatment centers call health workers to confirm the referral. In Sindhupalchowk, researchers observed a referral to curative services for a child at a facility-based GMP session who had not grown in the last 30 days.

A few government officials at the provincial and federal level and a development partner suggested conducting GMP for children 6–23 months who come to health facilities for *Baal Vita* supplementation and super flour. Forty-five districts (including Jajarkot and Sindhupalchowk) implement *Baal Vita* supplementation, and super flour is part of the Maternal and Child Health and Nutrition program in six districts (including Jajarkot). In the implementing districts, all children 6–23 months of age receive *Baal Vita* and super flour. The officials described plans to strengthen this link after the CNSI training when *Baal Vita* expands to additional districts.

Impact of COVID-19 on GMP

The coronavirus disease (COVID-19) pandemic affected GMP registration and service delivery. According to national level data from the Department of Health Services, the average number of GMP visits per child (0–23 months) remained the same at 3.1 in 2075/76 (prior to/at the start of the pandemic) and in 2076/77 (during the pandemic). However, the percent of children 0–23 months registered for GMP decreased from 71 percent to 65 percent during the same period. As an FCHV from Jajarkot explained, her health mothers' group stopped meeting for about five months due to the lockdown. A health worker in Jajarkot described adapting to an increase in the number of children with wasting while facing disruption in RUTF supply. Monitoring and supervision of GMP at facilities and outreach clinics ceased as government officials at the municipality level prioritized COVID-19 response and prevention activities.

During lockdown, the number of severely and moderately malnourished children increased during the month of Chaitra and Baisakh. This is a nutrition center, so we had supply of RUTF until Falgun. But, RUTF supply was stopped in Chaitra, and the number of severely malnourished children increased during Baisakh and Jeshtha. We checked the records, and all the staff said that it was due to the lockdown. We didn't have RUTF at that time. So we distributed *Baal Vita* instead. Nutrition counseling was provided in outreach clinics and immunization sessions.

— Health worker, Jajarkot

Good Practices and Lessons Learned

National, provincial, and district officers and health workers shared numerous good practices in GMP:

- Maintaining and strengthening GMP is a national priority. Under the leadership of the Family Welfare Division at the MoHP, the Nepal government remains well informed about GMP implementation and is committed to strengthening the platform for improved child health and development. Importantly, policymakers recognize a need to strengthen growth monitoring, especially frequency of attendance, to establish an accurate growth trend for tailored counseling. They have also prioritized developing new GMP guidelines and a child health card to align with globally recognized best practices.

When we talk about nutrition, agriculture and livelihood also come together. So there must be strong coordination within and outside the health system. We have successfully sensitized the stakeholders about nutrition and more specifically about the growth monitoring. Similarly, we also discuss about improving GMP during the provincial level review meetings. We have also conducted these discussions and developed action plans at the district and local levels.

— *Subnational stakeholder, Sindhupalchowk*

- Provincial officers effectively bring together sectors to improve nutrition, including addressing the quality of GMP during multi-sectoral action planning.
- Respondents shared a number of good practices for health workers monitoring growth that could be implemented more broadly. For example, some described plotting the child's weight on the child health card. Others compare the weight to the previous visit and interpret the trajectory. Visits that are more frequent would provide health workers with a more accurate growth trend to be able to tailor counseling accordingly. One health worker described showing the trend to the caregiver. Some also asked caregivers to bring children back every month for GMP, even if the child is not due for vaccination services. This encourages regular care seeking and normalizes the practice of monthly monitoring for caregivers, which is required for effective GMP. Others have added a column in the CB-IMNCI register for documenting child length after taking length measurements.
- Health workers also shared good practices in promoting growth, which they implement when they have adequate training and a manageable workload. These practices include—
 - counseling using the growth trend
 - tailoring counseling to the home situation
 - incorporating early childhood development considerations and locally available food into their counseling
 - engaging family members during counseling.

Health workers and FCHVs also described following up on agreed upon actions through phone calls or home visits and asking caregivers about them at subsequent visits. One health worker noticed that with quality promotion and caregiver follow-up, children come back looking healthier and acting more playful.

Children are being fed properly and hygiene practices are being followed as counseled. The children look better and are playful when they visit next time ... I try to involve fathers and other family members during counseling sessions. — *Auxiliary nurse midwife, Jajarkot*

- In many facilities, municipal, district, and provincial government officials conduct RDQA to verify data in the registers with data entered in DHIS2. They also try to understand why discrepancies exist and develop action plans to overcome them, which are shared with the community and local leadership for input and support.

Opportunities for GMP to Improve Children’s Healthy Growth and Development in Three Districts of Nepal

1. Opportunities to drive regular attendance include raising awareness about the importance of tracking child growth, continuing to bring demand-driven services closer to communities, and linking GMP with child development.
 - GMP requires regular attendance to track the child’s growth trend over time, ideally monthly. MoHP has rightly prioritized increasing attendance. National and local efforts to communicate the benefits to families of tracking their child’s growth could entail a campaign on mass media and through community media, and/or integrated into existing activities. For example, digital communication platforms on health and nutrition could include text messages to encourage families of young children to prioritize attending GMP each month. Community activities, such as events and women’s groups, and social media could help families visualize healthy growth and learn where to receive services. Tailoring specific messaging could help different family members (including older siblings) learn about healthy growth during the early years.
 - Continue to support government efforts to bring services closer to all communities, especially in hard-to-reach areas and expand outreach sites. Attract attendance to outreach and facility sessions with recognition for children who complete a number of monthly GMP sessions, games, or videos to learn about child development, or other locally appropriate activities.
 - Add counseling and tools on child development, which some caregivers expressed interest in, to motivate regular attendance.
2. Opportunities to strengthen the delivery system for growth monitoring include updating protocols to focus on the growth trend, continuing training and support for health workers, and strengthening data reporting and use.
 - The CNSI training manual outlines children’s growth measurement protocols. It is complemented by the *Health Facility Quality Improvement Modules for Health Service Strengthening: Maternal, Infant, and Young Child Nutrition*. Both documents mention monitoring the child’s growth trend, but are more focused on making an assessment based on the colors of the growth chart or weight classification (e.g., “normal,” “low,” or “very low”) (USAID 2020). Focus on the growth trend in future updates to these materials and in additional guidelines. Update the design of the child health card growth chart to call attention to the growth trend by making the colors less of a focus and making more space for documenting trends and contacts.
 - Continue to train health workers on new guidelines, child health cards, and QI standards based on the growth trend (e.g., plotting, assessing, tailoring counseling). Consider a continuous training system for newly appointed staff. Emphasize onsite supportive supervision to carry out GMP, with coaching and mentoring. Continue partnerships to expand support for municipality governments to provide needed equipment, human resources, etc. and supervision for GMP at facilities and outreach.

- Strengthen data tracking and use through DHIS2 for effective service provision and utilization. Ways to align with best practices and address challenges identified in this case study include—
 - Provide guidance on how to calculate frequency of attendance consistently.
 - Consider how to correlate multiple points/visits of a child across sites (by date of birth, or household identification).
 - Prioritize GMP data at municipality review meetings, develop action plans, and review those plans at subsequent meetings.
 - Conduct RDQA at every health facility on a quarterly basis, including documenting action plans, and revisiting those plans at subsequent audits.
 - Pilot a digital application to guide measurement and plotting.
 - Consider local adaptations, such as offering GMP on a separate day than immunization, depending on accessibility of the PHC ORC/health facility and availability of staff in the district.
3. Opportunities to improve the quality of growth promotion include simplified processes to counsel and streamline workflows, and expand the community role to support counseling, including through FCHVs as appropriate.
- Along with the revisions to the guiding documents outlined in the second recommendation, update guiding documents (e.g., national guidelines, QI standards, and child health card) to focus on the child’s growth trend in counseling contacts. Establish a systematic process to conduct tailored counseling based on each child’s growth trends and individual context.
 - Streamline workflows so health workers can focus on the child’s growth trend and needs— and spend more time with children at risk of malnutrition. Pilot or test a flow chart for counseling focused on children at risk.
 - Expand the community’s role (community leaders, FCHVs, etc.) in supporting services, including improving quality of growth promotion. FCHVs or other volunteers could have more significant and clearly defined roles for mobilization and promotion. In some countries, for example, volunteers support growth promotion after the trained health worker measures the child and plots growth.

Conclusion

Significant national commitment to strengthening the GMP platform in combination with dedicated health workers and FCHVs, and momentum from Suaahara’s programming (e.g., onsite coaching, training, mothers’ groups, etc.), makes Nepal well positioned to renew and refresh its GMP platform. The findings from this case study align with recent research in Nepal, which identified the perceptions of the relative importance of GMP as a barrier to attendance, in addition to knowledge and skill deficits of frontline workers and greater need for training and attention to geographic differences and local contexts across the country (Pollifrone et al. 2020). This case study adds perspectives from national, provincial, and district government officials and development partners on the policy environment and implementation. It also provides insights on challenges and opportunities to strengthen GMP, especially around increasing regular attendance by raising the value of healthy child growth through community engagement and accountability coupled with ongoing efforts to strengthen the quality of service delivery with communities. The findings from this case study helped to inform development of a new national GMP protocol being rolled out by the Government of Nepal at the time of publication.

References and Readings

- Ashworth, A., R. Shrimpton, K. Jamil. 2008, April. "Growth Monitoring and Promotion: Review of Evidence of Impact." *Maternal and Child Nutrition*.4(Suppl 1):86–117. doi.org/10.1111/j.1740-8709.2007.00125.x
- Bégin, F., L. Elder, M. Griffiths, S. Holschneider, E. Piwoz, J. Ruel-Bergeron, and M. Shekar. 2020. "Promoting Child Growth and Development in the Sustainable Development Goals Era: Is It Time for New Thinking?" *The Journal of Nutrition*. 150(2): 192–194. <https://doi.org/10.1093/jn/nxz244>
- CBS (Central Bureau of Statistics). 2020. *Nepal Multiple Indicator Cluster Survey 2019, Survey Findings Report*. Kathmandu, Nepal: Central Bureau of Statistics and UNICEF Nepal.
- Haag, C.K., A. Sharma, K.R. Parajuli, A. Adhikari. 2020, October. "Experiences of the Integrated Management of Acute Malnutrition (IMAM) Programme in Nepal: From Pilot to Scale Up." *Field Exchange* 63:22. Accessed December 28, 2021. www.enonline.net/fex/63/imamprogrammenepal
- Mangasaryan, N., M. Arabi, W. Schultink. 2011, March. "Revisiting the Concept of Growth Monitoring and its Possible Role in Community-based Nutrition Programs." *Food and Nutrition Bulletin*. 32(1):42–53. doi.org/10.1177/156482651103200105.
- MoHP (Ministry of Health and Population), Nepal; New ERA; and ICF. 2017. *Nepal Demographic and Health Survey 2016*. Kathmandu, Nepal: Ministry of Health and Population, Nepal.
- MoHP (Ministry of Health and Population), Nepal. n.d. Primary Health Care Outreach Programme. Accessed 12 November 2021. <https://www.mo hp.gov.np/eng/program/reproductive-maternal-health/primary-health-care-outreach-programme>
- MoHP (Ministry of Health and Population), Nepal. 2020. *Department of Health Services Annual Report 2076/77 (2019/20)*. Kathmandu, Nepal: Ministry of Health and Population, Nepal.
- MoHP (Ministry of Health and Population) Nepal. 2013. *Health Management and Information System (HMIS) Indicators, 2070*. Kathmandu, Nepal: Ministry of Health and Population, Nepal.
- Nepal in Data. 2020. "New District Map of Nepal." Accessed December 29, 2021. <https://nepalindata.com/resource/new-district-map-nepal/>
- Pollifrone, M.M., K. Cunningham, P. Pandey Rana, M.M. Philbin, S. Manandhar, K.P. Lamsal, R. Nandan Mandal, V. Deuja. 2020. "Barriers and Facilitators to Growth Monitoring and Promotion in Nepal: Household, Health Worker and Female Community Health Volunteer Perceptions." *Maternal and Child Nutrition*. 16(4): e12999. <https://doi.org/10.1111/mcn.12999>
- SII (Suaahara II). 2020, January. *Suaahara II Good Nutrition Program Annual Survey Year Three (2019)*. Kathmandu, Nepal: Helen Keller International for USAID.
- UNICEF (United Nations Children's Fund). 2007. "Revisiting Growth Monitoring and its Evolution to Promoting Growth as a Strategic Program Approach: Building Consensus for Future Program Guidance." Report of a Technical Consultation. New York, New York. September 25–26, 2007.
- UNICEF (United Nations Children's Fund). 2017. *Nepal Integrated Management of Acute Malnutrition (IMAM) Guidelines*. Kathmandu, Nepal: UNICEF.
- USAID (U.S. Agency for International Development). 2020. *Health Facility Quality Improvement Modules for Health Service Strengthening: Maternal, Infant, and Young Child Nutrition*. Kathmandu, Nepal: Government of Nepal.



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