



# Counseling in Growth Monitoring and Promotion

## A Rapid Desk Review and Learning Agenda

### Introduction

Countries around the world use growth monitoring and promotion (GMP) as an entry point for preventive care and essential child health, nutrition, and development services. Given its ubiquity and legacy, recent efforts have been made to rethink strengthening GMP in light of the Sustainable Development Goals (SDGs). In 2018, global thought leaders convened to review evidence and coalesce around a way forward. Participants [recommended a paradigm shift](#) to reposition GMP to better integrate child growth and development and strengthen the promotion element (Bégin et al. 2020). In 2022, in collaboration with UNICEF, the World Health Organization (WHO), and the Global Financing Facility (GFF) of the World Bank, USAID and USAID Advancing Nutrition hosted a [GMP expert consultation](#), during which experts reviewed and discussed experiences, innovations, research, and advances in GMP since the 2018 meeting and identified challenges that continue to affect the quality of GMP.

Based on the consultation outcomes, a desk review, and listening sessions with health workers, USAID and partners developed a learning agenda on counseling within GMP to inform research and learning investments that will help guide programming and policies to strengthen the platform globally. The desk review describes findings from studies on what we know about counseling within GMP and the environment that supports it, its effectiveness, challenges, and potential promising solutions and closes by exploring gaps, recommendations, and learning questions for the way forward. Reflections from listening sessions with health workers<sup>1</sup> are woven throughout the desk review to ensure the learning agenda captures the experiences and recommendations of health workers. Global stakeholders including donors, researchers, and implementers refined and validated the learning agenda during a convening in May 2023.

The learning agenda complements ongoing work on growth monitoring by colleagues at the University of South Carolina and International Food Policy Research Institute.

### Background

Despite evidence of challenges with GMP, it is a core component of primary health care services in many countries. GMP seeks to improve child growth by directly improving care practices and timely, appropriate care seeking with resolution of health problems through counseling tailored to the growth trend (figure 1) (Griffiths and Del Rosso 2007).

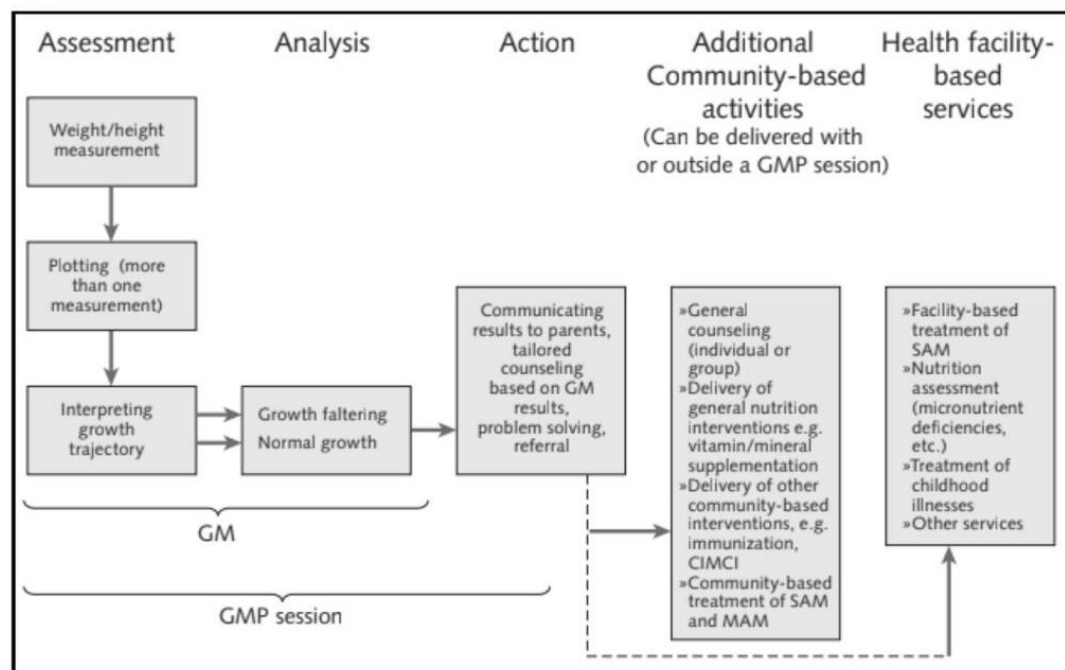
A 2008 review of 12 GMP programs found that growth monitoring leads to improved nutritional status (reduction of child underweight) when implemented with nutrition and health education and access to primary health care services (Ashworth, Shrimpton, and Jamil 2008). However, the review noted that growth monitoring or simply weighing children with no or generic nutrition counseling has little effect on nutritional status (Ashworth, Shrimpton, and Jamil 2008). The findings of this review led the 2008 *Lancet Series on Maternal and Child Undernutrition* to list GM (without promotion) as a not-to-do

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<sup>1</sup> We held five listening sessions across three countries where USAID Advancing Nutrition supports GMP programming—Honduras, the Kyrgyz Republic, and Nigeria. In each country, between seven and 11 health workers (including volunteers) who provide GMP services and were available at the facility or outreach site on the selected day participated in the sessions.

intervention (Bhutta et al. 2008). While practitioners consider nutritional counseling essential for the success of GMP, quality is often lacking. This review summarizes what we know about provision of nutrition counseling as part of GMP and its impact on child nutrition practices and nutritional status.

Figure 1. GMP Process



Adapted from: Mangasaryan, Arabi, and Schultink. 2011, p. 47

CIMCI: community-based integrated management of childhood illness | SAM: severe acute malnutrition | MAM: moderate acute malnutrition

## Definitions

In the community nutrition program literature, education and counseling are terms used loosely. While definitions vary, those included below provide an example of how practitioners typically differentiate them:

“Nutrition counseling is a two-way interaction through which a client and a trained counselor interpret the results of nutrition assessment, identify individual nutrition needs and goals, discuss ways to meet those goals, and agree on next steps” (FANTA 2016, 2).

“Nutrition education presents general information related to health and nutrition, often to groups in clinic waiting rooms or community settings” (FANTA 2016, 2).

Differentiating nutrition counseling from education is an important distinction for the promotion component of GMP, since caregivers are more likely to follow and see results from agreed upon personalized, doable actions. A current accepted definition of promotion includes nutrition counseling, along with other support actions:

Growth promotion is “tailored counseling based on the growth monitoring results and follow-up problem-solving with caregivers” (Mangasaryan, Arabi, and Schultink 2011, 46).

When talking about counseling, it is also important to define the quality of counseling. Below is one definition:

Quality counseling is when “adequacy of growth determines content and intensity of counseling, [and] nutritional negotiation [and] targeted materials are used (Griffiths, Dickin, and Favin 1996).

## Effectiveness

Although practitioners consider the effectiveness of nutrition counseling within GMP essential to its success, researchers have not rigorously studied it. To better understand the counseling component of large-scale GMP programs that effectively improved nutritional status, we examined articles referenced in the 2008 review (Ashworth, Shrimpton, and Jamil 2008). Four large-scale GMP programs (India, Tanzania, Madagascar, and Senegal) demonstrated impact on child nutritional status (underweight) (**Annex I**). These programs employed counseling through both group and individual interactions with caregivers. Community-level health workers conducted weekly or monthly group education sessions at the facility or a central community site, and they visited children that exhibited poor growth at home to provide caregivers with one-on-one support. Participation in GMP ranged from 74 percent to 90 percent.

Researchers found three programs (two in Bangladesh and one in India) that conducted group sessions at a central site on a monthly basis to be ineffective at improving child nutritional status. However, these programs did not provide primary health care services, had low participation in GMP (42 percent to 85 percent), or had low coverage of counseling during GMP (85 percent participated, but only 50 percent received counseling). Overall, there was variation in which age group the GMP programs targeted: children under two, under five, or under six years old (Griffiths and Del Rosso 2007).

Since counseling may occur outside of a designated GMP day, researchers presented three randomized controlled trials that assessed different approaches to nutrition counseling in Brazil, India, and Peru (Ashworth, Shrimpton, and Jamil 2008). The trial in Brazil used integrated management of childhood illness (IMCI) consultations, whereas the trials in India and Peru used multiple routine health service contact points, including GMP. The India and Peru trials found significant improvements in linear growth and feeding practices, while the Brazil trial did not, likely because of low exposure to counseling when limited to IMCI visits (Ashworth, Shrimpton, and Jamil 2008).

A 2007 evidence synthesis report of 16 community-based GMP programs, several of which researchers also included in the 2008 review mentioned above, acknowledged that differences in scale, implementation quality, and evaluation methodologies made comparing the programs difficult (Griffiths and Del Rosso 2007). Of these, five (three in Indonesia and two in Uganda) provided individual nutrition counseling to caregivers at GMP based on age and/or growth status with a focus on children under the age of two (**Annex I**). These programs also included a group education component. Participation in the program ranged from 72 percent to 90 percent. All five programs reported improvements in child nutritional status, but four reported improvements in feeding practices (Stevens-Muyeti and Del Rosso 2007). The providers in all five programs were volunteers.

A 2018 review of the effectiveness of GMP published between 2008 and 2018 examined seven studies (Ramage 2018). Of these, three did not show an impact on child nutritional status while four (Ghana, Afghanistan, Bolivia, and Honduras) improved feeding practices and reduced underweight or overweight (**Annex I**). Effective programs shared several characteristics: they provided individual counseling<sup>2</sup> at the home or a central site in the community, targeted children under the age of two, and conducted quality training and supervision of providers (Ramage 2018). The providers in all four programs were volunteers.

We conducted a rapid search on PubMed and found no evaluations of GMP programs in the peer-reviewed literature published between 2018 and 2023.<sup>3</sup>

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<sup>2</sup> The program in Bolivia also included a group activity.

<sup>3</sup> Search terms included “growth monitoring and promotion” AND (“effectiveness” OR “impact” OR “evaluation”). We conducted the last search on March 3, 2023.

## Cross-Sectoral Engagement

In recent years, several countries (Peru, Nepal, Indonesia, Cambodia, and Senegal) began using GMP as a platform to refer children to programs in other sectors, such as education and social protection (Bégin et al. 2020). Such cross-sectoral engagement will support caregivers to follow through on recommended actions during counseling. This corroborates the growing recognition that children require actions beyond the health sector to thrive and achieve their health and human potential (WHO, UNICEF, and World Bank Group 2018). The Nurturing Care Framework comprises adequate nutrition, responsive caregiving, security and safety, opportunities for early learning, and good health (WHO, UNICEF, and World Bank Group 2018). There is some evidence that delivering elements of the Nurturing Care Framework, responsive care and early learning, with nutrition counseling and other services (e.g., conditional cash transfer, supplements) at the home result in improved child development outcomes (Yousafzai et al. 2014; Sudfeld et al. 2021). One of these, which provided home visits by community health workers or home visits with conditional cash transfers, resulted in increased GMP attendance (Sudfeld et al. 2021). The visiting community health workers did not provide GMP services, but GMP attendance was a conditionality of the cash transfer component.

## Challenges

The quality of counseling within GMP is affected by a myriad of well-recognized and documented challenges that vary depending on the context. In particular, common challenges for counseling pertain to health worker capacity, the enabling environment, integrating early childhood development (ECD), and tracking and measuring. These challenges lead to a lack of counseling altogether or untailored counseling that does not meet the needs of caregivers or respond to specific contextual challenges.

### Constraints to Health Worker Capacity

Health worker capacity in delivering GMP services (growth measurement, plotting, interpretation, and tailored counseling) and associated training remain challenges in some contexts (Ashworth, Shrimpton, and Jamil 2008; Gopalan and Chatterjee 1985; Mangasaryan, Arabi, and Schultink 2011; Pollifrone et al. 2020; Roberfroid et al. 2005; Sulley et al. 2019). Within GMP as a whole, tasks seen as the “most technical” such as growth measurement and plotting, receive more attention during training and supervision, and consequently GMP sessions than counseling (Ashworth, Shrimpton, and Jamil 2008; Griffiths, Dickin, and Favin 1996). Inadequate supportive supervision exacerbates these capacity-related challenges due to insufficient time and funding in strained health systems (Ashworth, Shrimpton, and Jamil 2008; Mangasaryan, Arabi, and Schultink 2011). Poorly designed job aids can also be detrimental to health worker capacity to deliver counseling. The most fundamental principles of counseling—tailoring counseling and focusing on a few actionable steps the caregiver can take based on the child’s growth trend, age, etc.—are often missing in GMP job aids. On the contrary, job aids often guide health workers to provide ineffective, generic messages. Though health workers acknowledged some challenges around capacity during listening sessions, such as tailoring counseling to locally available foods, it was clear the main challenges they faced related to needing a more supportive environment.

### Enabling Environment

Barriers to an enabling environment (staffing, time constraints, infrequent attendance) for quality counseling are ubiquitous and could impact health worker motivation and morale (Agbozo et al. 2018; Charlton, Kawana, and Hendricks 2009; ENN 2012). Often, health facilities conducting GMP programs are overburdened and understaffed (Agbozo et al. 2018; Etyyang, Kielmann, and Maritim 1992; Mangasaryan, Arabi, and Schultink 2011; ENN 2012; Pollifrone et al. 2020) leaving health workers with limited time for each child. In these circumstances, counseling is either cut short or foregone (Gerein and Ross 1991; GFF 2020; Msefula 1993; Pollifrone et al. 2020; Singh et al. 2023). Listening session participants confirmed challenges around high staff turnover, heavy workload, and limited time for counseling. Given bandwidth and time constraints, when counseling does happen, health workers may

default to telling the caregiver generic messages rather than meeting their needs and adapting the counseling and problem solving according to the specific child, situation, and context (Charlton, Kawana, and Hendricks 2009; Gerein and Ross 1991; Gyampoh, Otoo, and Aryeetey 2014; Pollifrone et al. 2020; Roberfroid et al. 2005; Schaetzel et al. 2008; Singh et al. 2023). This approach undermines and undervalues tailored counseling, problem solving, and using growth data for decision-making during counseling, which are key elements of GMP programs.

Infrequent attendance is also a persistent challenge in many GMP programs (Agbozo et al. 2018; Ashworth, Shrimpton, and Jamil 2008; Feleke, Adole, and Bezabih 2017; Kielmann 1992; Mangasaryan, Arabi, and Schultink 2011; Satoto 1992). As a result, health workers do not have an accurate growth trend, which precludes quality tailored counseling and preventive measures (Griffiths, Dickin, and Favin 1996; Singh et al. 2023). Caregivers may deprioritize GMP due to competing priorities in the household; high transport costs; higher perceived value of curative services over preventive ones; and/or less than desirable interactions with health workers during counseling (e.g., scolding, lack of confidentiality, or lack of agreement on follow-up actions) (Agbozo et al. 2018; Ashworth, Shrimpton, and Jamil 2008).

### **Integrating ECD into GMP**

During the 2018 convening, participants articulated a compelling need to better integrate early childhood development with GMP. It is well recognized that children who receive a combination of care and feeding interventions achieve improved development outcomes (WHO 2020), however little is known about how to do this pragmatically, especially within GMP. (See box 1.) Health workers from the listening session in the Kyrgyz Republic specifically noted a need for training around new topics, such as responsive care, early learning, and feeding children with feeding difficulties or disabilities. Though not specific to GMP, potential integration challenges include workload of staff and supervisors; coordination among sectors; language (i.e., how sectors talk about growth and development); and monitoring systems for program progress, quality, and impact (DiGirolamo, Stansbery, and Lung'aho 2014).

#### **Box 1. Integrating ECD into GMP**

USAID Advancing Nutrition is developing a flowchart with health workers in Ghana that streamlines workflow and integrates growth and development. The flowchart has been well-received by health workers and national stakeholders given significant interest in Ghana for practical integration of early childhood development with infant and young child feeding counseling. Integrating ECD in GMP may also generate demand and more frequent attendance with caregiver interest in the topic (Singh et al. 2023).

### **Tracking and Measuring Counseling**

Tracking and measuring counseling has proven particularly challenging and practitioners have not yet fully explored infant and young child feeding (IYCF) counseling from this angle. A GMP study in Ghana and Nepal found that although health workers document whether they provided counseling in the take-home record book and facility-based register, there was neither a place for entering this information into government data tracking systems nor a system for monitoring or tracking the quality of counseling (Singh et al. 2023). A recent survey of global nutrition stakeholders identified IYCF counseling coverage as a data gap, however the survey did not explore availability of data on the content and/or quality of IYCF counseling (Buckland et al. 2020).

### **Local Solutions**

Many country programs have developed context-specific solutions to these common challenges that they could scale up or other countries could adapt for different contexts. Solutions revolve around capacity strengthening, creating a more supportive environment through recognition of counselors, improving the experience of care, and making counseling easier. Evidence shows a lack of solutions around tracking and measuring counseling which is important for ensuring quality counseling and appropriate feedback mechanisms.

**Strengthen capacity.** In contexts where health worker capacity to deliver quality counseling remains a challenge, health workers may benefit from performance support through practice-oriented or competency-based training coupled with mentoring and supportive supervision (Ashworth, Shrimpton, and Jamil 2008; Bégin et al. 2020; GFF 2020). Participants in listening sessions appreciated regular training on IYCF and ECD with supportive supervision, especially in contexts with high staff turnover. They also recognized the importance of opportunities to learn from colleagues through observation, hands-on practice, and demonstrations.

Regular exchange of experiences between nearby facilities can also be helpful. This exchange should not be for monitoring and checking, but to assist each other.

— *Health worker, Suzak Rayon, the Kyrgyz Republic*

**Recognize and support the counselors.** Counselors and supervisors also benefit from motivation through recognition, both formal and informal. For example, Atención Integral a la Niñez en la Comunidad (Integrated Community Child Health Program [AIN-C]) in Honduras planned for regular provision of incentives for volunteers (e.g., a thank you letter from the Secretary of Health, an identification card with a photo, celebrations in honor of Mother’s Day or Children’s Day) (Griffiths and McGuire 2005). The program also ensured workloads were reasonable so volunteers were not overburdened (Griffiths and McGuire 2005). Similarly, during listening sessions, health workers in Honduras shared the importance of recognition with fair compensation to ensure motivation—especially for volunteers given their wide reach.

Make the monitors feel important...they will be interested in the child, if they are shown that they are an important actor, and there will be better results since they help to weigh, measure, and give counseling.

— *Health promoter, Santa Bárbara Department, Honduras*

**Improve the experience of care.** Through listening sessions, health workers consistently reported that caregivers are generally interested and invested in their children’s growth and development. Given such interest, participants expressed a desire to better integrate physical growth and other domains of development (socioemotional, cognitive, verbal) to make the content meaningful to families. This suggestion includes creating job aids to help monitor child development and integrating ECD in data and reporting. Health workers also described efforts to support caregivers and build relationships to ensure trust, leading to better counseling.

The mother who comes regularly, we use...words of encouragement...sit with her and identify the gaps...[and] find a solution to solve the problem...As for the one who does not come or a defaulter, we...teach the importance, benefit...On her first visit...we would take a topic in order not to stress her and ourselves and concentrate on this topic. On her next visit, we would then ask her on the last topic we treated before taking another topic and we continue in this manner until she captures all.

— *Health worker, Bauchi State, Nigeria*

Finding new context-specific ways to improve the care experience for both the counselor and caregiver may also lead to more effective counseling and better integration of proven behavior change strategies within counseling. For example, *Nourishing Connections* is a job aid for community health workers (CHW) to promote children’s dietary diversity in Nigeria, which opens with two personal questions to create a connection between the CHW and caregiver, and shift the power imbalance. Tool developers adapted the [opening questions](#) from the Sharing Histories method of training CHWs in Peru which showed significant improvements in counseling and behavior change among clients (Altobelli 2017; Breakthrough ACTION 2021).

**Make counseling easier to do.** Health workers facing environmental constraints (short-staffed facilities, limited time, etc.) to quality counseling have benefited from methods to task share and streamline workflows (GFF 2020; Okyere et al. 2017). For example, over the years, studies have consistently shown community health volunteers can support growth promotion efforts, including nutrition education and home visits to encourage defaulters to attend GMP (Ashworth et al. 2008; George et al. 1993; Kenga et al. 2018; Melville et al. 1995; Sanghvi et al. 2016). During listening sessions, health workers also recommended task sharing among different cadres for wider reach and lessening the workload burden, but stipulated the tasks must be within the cadre’s capacity and responsibilities. Streamlining workflow would also help overburdened health workers prioritize counseling children who are most at risk of malnutrition or developmental delays. Within the individual counseling session, streamlining would also allow them to prioritize specific topics for each individual child based on the child’s age, assessments, observation of interactions, and caregiver interests and concerns to focus their time. Listening session participants also recommended prioritization of children who are not growing well and tailored counseling on the most pressing issues according to the child’s unique situation, age, and growth trend.

...in a situation when you know that you don’t have so much time, you can now focus on the most important thing to discuss based on the problem you have found in that child. You don’t have to talk about it from the beginning to the end... you may not have time to be talking about that...

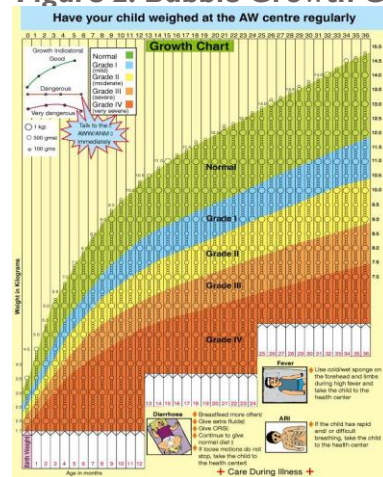
— Health worker, Bauchi State, Nigeria

A flowchart or algorithm to help with decision-making around this prioritization has been a common recommendation to guide counseling and referrals and simplify contacts for children who are not at risk (GFF 2020; Griffiths et al. 1996; Joshi et al. 2014; León et al. 2005; Singh et al. 2023), though development and use of these tools specific to GMP has not been well-documented. USAID Advancing Nutrition’s flowchart (box 1) aims to streamline counseling and integrate growth and development.

Another way to make counseling easier is through carefully designed tools to visualize growth, such as the bubble chart (figure 2). The bubble chart has been adapted and tested in several countries and is appreciated by health workers and families (GFF 2020; Griffiths and Berg 1988). During counseling, visualization tools can help with accurate plotting, supporting families in understanding growth and how it influences a child’s health and development, and sparking interest in GMP (GFF 2020; Griffiths and Berg 1988). If applied to ECD, the same concept of visualization might allow for better integration and more attention to holistic development.

In addition to flowcharts and visualization tools, other pictorial and digital job aids could enhance counseling (Alive and Thrive 2019; GFF 2020; Griffiths et al. 1996; Mayhew et al. 2014; Sanghvi et al. 2013; UNICEF 2012; USAID Advancing Nutrition 2023). During listening sessions, health workers appreciated job aids, such as counseling cards, brochures, and posters, that are practical, easy-to-use, colorful, and interesting. They specifically mentioned the utility of those that help tailor counseling according to the child’s age and suggested considering digital tools, where appropriate. With advances in technology, recent efforts to strengthen the quality of counseling have focused on support through mobile applications (GFF 2020; USAID Advancing Nutrition 2020). (See box 2.) For counseling to be most effective, practitioners should ground all counseling materials—print or digital—with strong formative research to ensure they are context- and culture-specific (GFF 2020).

**Figure 2. Bubble Growth Chart**



Though not specific to GMP, the [Nourishing Connections tool from Nigeria](#) makes counseling easier with a simple, structured flow to help the session focus on one or two needs of the caregiver and agree on action steps. User-testing found that the tool offers promising results. Caregivers and CHWs praised the experience; caregivers noted it was the first time they spoke during counseling and felt they are more likely to remember the discussion (USAID Advancing Nutrition n.d.).

Health workers widely use home visits to follow up with defaulters and reach the children most vulnerable to malnutrition whose caregivers may not bring them to GMP due to stigmatization or other challenges (e.g., transport) (Agbozo et al. 2018; Galasso et al. 2019; Singh et al. 2023). During home visits, health workers have more time and can further tailor counseling based on the home environment and work with family members to garner support for the child’s growth and development (Agbozo et al. 2018; Singh et al. 2023).

## Box 2. Digital Tools

A landscape analysis of digital tools to strengthen nutrition services found programmers designed more than half (29) to support infant and young child feeding counseling within GMP or otherwise. Based on the findings, USAID Advancing Nutrition developed generic versions of the documents needed by programmers to develop digital tools for tracking information and supporting decisions by service providers and their supervisors during GMP, including counseling. Health workers in Ghana and Nepal are currently testing the guidance package (USAID Advancing Nutrition 2020).

The best way of counseling is at home, because it is more relaxed, whereas in a health facility, everyone is in a hurry with husbands rushing wives...when health workers make house calls, they have the opportunity to gather all family members together, which helps to ensure that everyone is equally invested in the child’s development. By involving everyone in the conversation, health workers can promote a sense of shared responsibility and encourage families to work together to support their children’s growth and well-being.

— Health worker, Suzak Rayon, the Kyrgyz Republic

**Support caregivers to follow through on counseling.** Family members have an important role in supporting follow-through on counseling agreements. Engaging family members during counseling sessions or through community groups may encourage optimal care and feeding practices given their influence and context-specific family system dynamics (Martin et al. 2021). During listening sessions, health workers noted that caregivers want more support from family members, particularly fathers, for attending GMP and around care, feeding, and chores. However, there are few examples of successful family engagement efforts in IYCF counseling and none specific to GMP (Martin et al. 2021). It is also important for health workers and caregivers to have tools to guide and track practice of behaviors covered during counseling. Tools such as the Wheel of Practice for Better Living to promote maternal health and prevent child undernutrition in Guatemala might serve this purpose, but it needs to be studied in the context of GMP (Hurtado et al. 2020). When discussing broader growth promotion efforts, listening session participants recognized the importance of community engagement (e.g., through local media) and links and referrals to other services (e.g., social services) to support follow-through on counseling agreements.

## Gaps, Recommendations, and Learning Questions

The following are gaps, recommendations, and learning questions for strengthening and supporting counseling within GMP based on the rapid desk review and key findings from the [2018 convening on GMP led by the Global Financing Facility of the World Bank](#) (Bégin et al. 2020) and the [2022 convening led by USAID and USAID Advancing Nutrition](#) in collaboration with GFF, UNICEF, and WHO (USAID Advancing Nutrition 2022). The points below propose opportunities for testing, adapting, and/or scaling up local solutions and previous recommendations. We focus on four specific areas: preconditions to



quality counseling, achieving quality counseling, creating a supportive community environment, and tracking and monitoring counseling.

## Preconditions to Quality Counseling

Quality counseling requires adequate systems and structures to support health workers, ensuring they have the bandwidth, space, tools, competencies, and supportive supervision to provide quality counseling. Health workers often bear heavy workloads, limiting their time for tailored counseling with individuals. Research has yet to conduct in-depth exploration of methods for reducing workloads and supporting health workers with heavy workloads. GMP programmers would benefit from a better understanding of counseling models that can work in different contexts. Heterogeneity in the design of GMP programs to date has not allowed us to answer whether targeting children for GMP by age (e.g., monthly up to 12 months and quarterly from 12–24 months) or combining with existing health services (e.g., immunization, sick-child visits, well-child visits) enables health workers to have more time with caregivers and provide quality counseling leading to improved caregiver practices and ultimately better nutritional outcomes.

Health worker capacity—knowledge, attitudes, and skills—to deliver GMP and the system that supports them influences their behaviors. Though these elements are highly context-specific, in general, research has disproportionately focused on training, especially around what are seen as more “technical” responsibilities (e.g., measuring weight) and delivering generic messages. Gaps in the evidence base exist around supporting soft skills among health workers (e.g., getting the caregiver to feel comfortable opening up, showing empathy and emotional support, adjusting to the context, encouraging two-way communication, and tailoring counseling). Supervision and mentorship that is adequately resourced and supported combined with quality training may offer opportunities for strengthening these skills, however contextualization and testing of these approaches is needed.

## Recommendations and Learning Questions

1. Test the effectiveness of different GMP models across settings on coverage, quality of health worker counseling, caregiver experiences and practices, and child nutritional outcomes.
  - What type of GMP models (e.g., frequency based on age, or intensity based on location [home vs. community site]) would enable health workers to provide quality counseling? What can we expect counseling to look like in the different contexts in which counseling is offered?  
  
What type of GMP models (e.g., combined with other platforms such as immunization, well-child visits, sick-child visits) would encourage frequent attendance? When integrating GMP into other platforms, (e.g., immunization, well-child visits, sick-child visits) what level of attendance is expected? How might programs change expectations and practice to take most advantage of this potential counseling contact?
2. Conduct implementation research to test methods for developing health worker competencies for quality counseling and create supportive systems to effectively deliver the promotion component of GMP.
  - What are the competencies required for quality counseling?
  - How can we strengthen competencies required for quality counseling during GMP to meet the needs of caregivers (e.g., through mentoring, training, job aids based on feasible solutions in the context, applications)?
  - How can we best support different cadres (e.g., health workers, community health workers, volunteers) to provide quality counseling within GMP?
  - How can different cadres of health workers share responsibilities?

- What are the best ways to support motivation of health workers (e.g., recognition)?
- What management practices can ensure GMP programs are effectively resourced and supported? How can health systems meet staffing needs?

### Achieving Quality Counseling

Elements of quality counseling are well documented throughout the literature; however, gaps remain around how to achieve quality counseling, especially in different contexts. In particular, there are few examples of efficient and feasible methods for streamlining counseling and task sharing to help overburdened health workers. Though there are many examples of job aids to support counseling, few guide prioritization of children most at risk of malnutrition or developmental delays or prioritization of topics discussed during a specific counseling session according to caregiver and child needs, and few leverage visualization of growth and development to support tailored counseling. Job aids must also be designed with the recognition that using ideal recommendations during counseling may not be feasible. To ensure incremental progress toward optimal behaviors, job aids must be designed to meet people where they are at, particularly in less-than-ideal contexts (e.g., no growth trend). Given momentum behind development of digital job aids, programmers interested in incorporating support for providing quality counseling will need to carefully develop and test approaches.

Integrating care and feeding topics during counseling according to the caregiver’s and child’s needs can also help strengthen counseling. With the global push for attention to more holistic child development, guidance for this integration is critical. GMP has heavily focused on physical growth but the other domains of development—verbal, cognitive, and socioemotional—are equally important for children to thrive. In practice, evidence for if and how to integrate ECD into GMP is sparse. Furthermore, gaps remain around how to best visualize and help caregivers understand these different domains, and what specifically to focus on during counseling to make sure a child does not fall behind in any one of the domains.

### Recommendations and Learning Questions

1. Identify and test ways to support health workers in identifying children for tailored counseling and providing tailored counseling.
  - What criteria (e.g., growth trend, low birth weight, caregiver-child interactions, feeding and care practices, caregiver stress, developmental milestones) and thresholds within those criteria inform decisions to provide in-depth tailored counseling and/or trigger a home visit?
  - What digital approaches can support health workers to identify children for counseling and provide tailored counseling (e.g., suggested counseling topics based on assessment results, menu of topics based on child age, providing guidance on counseling skills)? What needs to be done to make these digital approaches context-specific and/or adaptable to different contexts?
2. Introduce improved guidance and tools on counseling with a clear structure and feasible options based on context-specific research co-created with health workers and caregivers and test their effectiveness.
  - What does quality counseling look like in less-than-ideal contexts (e.g., no growth trend available)? How can we support quality counseling in these contexts while working toward making the context more optimal?
  - How can we update or adapt existing job aids to help improve the experience of care and meet caregivers where they are based on their needs and local context?
  - How can we update or adapt existing job aids to streamline counseling to focus on the children who are most at risk of malnutrition, and prioritize the most important topics for those children?

- How can we updated or adapt existing job aids to help visualize growth and development?
  - How could we engage decision-makers to support improved counseling guidance and tools and introduce them into the system?
3. Building on USAID Advancing Nutrition’s work around responsive care and early learning, test and apply approaches for tailoring GMP counseling with all domains of child development, not just physical growth.
- Is there a need and benefit to integrating counseling to support ECD into GMP? If so, how can we better integrate child growth and development during GMP? At a minimum, what elements of ECD are most suitable for incorporating into counseling within GMP?
  - How does the integration of growth and development during GMP counseling vary by context?
  - How can health workers and caregivers better understand and take a more holistic approach to preventive care through GMP counseling (e.g., visualization, resonance based on context)?
  - How effective is a digital tracking and decision support tool developed using USAID Advancing Nutrition’s *Guidance Package for Developing Digital Tracking and Decision Support Tools for Growth Monitoring and Promotion Services* in strengthening the quality of counseling to improve child nutrition and development outcomes?

### Creating a Supportive Community Environment

A supportive environment can help caregivers practice and sustain behaviors they agree to try during counseling. Family influence on care and feeding practices is well recognized, but evidence for approaches to engage family members in GMP, tailor counseling to different family members who may attend, and encourage their attendance is lacking. Involving family members more in child care and feeding could be an opportunity for encouraging follow-through with agreed upon actions during GMP counseling. Questions remain about how to best achieve this support.

Supportive community development efforts strongly linked to the health system are also essential for creating an environment that facilitates good growth and development, and for caregivers to follow-through on recommended actions discussed during counseling. The evidence base is lacking on how to best engage the community for GMP and what tools might facilitate this process.

### Recommendations and Learning Questions

1. Test and apply context-specific approaches for mobilizing family support for care and feeding practices in between GMP contact points and encouraging their attendance at GMP.
  - How can GMP programs engage family members other than the mother (e.g., through other health system contact points or community mobilization activities) to ensure follow-through of counseling recommendations?
  - How can health workers best engage family members in care and feeding practices during GMP counseling at the facility? During outreach? During home visits?
  - What types of take-home materials (e.g., growth chart poster) would encourage continued family support in between GMP contact points?
2. Develop and test ways to equip health workers involved in GMP with information on other programs (e.g., social protection, health, and nutrition projects) in their working area so they can link caregivers to those programs.

- What kind of process to link health workers with other programs in their working areas would enable them to provide actionable recommendations during counseling for caregivers with low economic means?
- How can GMP programs engage communities in ensuring they address the social and environmental factors contributing to undernutrition?

## Tracking and Monitoring

Documentation of counseling is critical to ensuring counseling happens and there is follow-up to what counselors and caregivers discussed during the previous visit. Documentation is also important for providing feedback mechanisms to support quality counseling. Some countries track whether health workers provided counseling and on which topic, but they seldom track the counseling quality (Singh et al. 2023). The Demographic and Health Survey—Phase 8 questionnaire includes questions on the coverage of counseling (whether a health worker provided it and what he/she discussed with the caregiver), but does not capture the quality of counseling provided (DHS 2020). Capturing coverage is essential but insufficient. Quality measures could help ensure that counseling is effective in supporting caregivers to change behaviors. We need a better understanding of what to measure for counseling, and how to document this information especially for health workers.

## Recommendations and Learning Questions

- I. Identify effective systems and processes to measure, track, and use information on counseling provided during GMP.
  - Which indicators can effectively measure quality counseling and its dimensions (e.g., communicating results, tailoring counseling) in GMP?
  - How should we measure success of programs that integrate nutrition and ECD (e.g., improvements in IYCF indicators, ECD outcomes, or both, or no negative impact on IYCF)?
  - How can we track indicators for quality counseling and success of GMP programs and use them for quality improvement?
  - What impact does measuring the quality of counseling have on health worker and supervisor behavior and financing?
  - What tools would help health workers and caregivers track agreed upon actions discussed during counseling?

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## Annex I. Details of Programs

Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
Extracted from Ashworth et al. (2008) and Griffiths and Del Rosso (2007)							
Effectiveness of GMP							
Shekar (1991)  <b>India</b> Tamil Nadu Integrated Nutrition Project, 1980–1986	<b>Intervention:</b> monthly growth monitoring + nutrition and health education+ targeted supplementary feeding + immunization + vitamin A + deworming + basic health care + iron and folic acid for pregnant women <b>Comparison:</b> no	6 months–3 years	<b>Content:</b> Monthly nutrition and health education  <b>Provider:</b> community nutrition worker	Group  Individual (home visit for underweight, focused on velocity of weight gain)	Facility (nutrition center)	> 90%	<b>Study design:</b> Pre/post comparison of participants over six years (1980–1986), no comparison group  <b>Outcome:</b> Mean body weight difference (grams [g]) from baseline, 1980 (n=114) to endline, 1986 (n=308): 6 months: +758 g (p=0.006) 12 months: +392 g (p=0.04) 18 months: +649 g (p=0.005) 24 months: +664 g (p=0.06)
Government of the United Republic of Tanzania et al. (1989)  <b>Tanzania</b> Joint Nutrition Support Program Iringa, 1984–1987	<b>Intervention:</b> monthly or quarterly growth monitoring + maternal and child health + immunization + water and sanitation + household food security + child care and	0–5 years	<b>Content:</b> Monthly nutrition education focused on increasing feeding frequency, energy dense food, reducing women’s workload	Group  Individual (met parents of children with poor growth at the household level)	Community (home/health day)	75%	<b>Study design:</b> Pre/post comparison of over three years (1984–1987), comparison with post only from non-project area. Unclear if sampling was at population level or among participants only.  <b>Outcome:</b> % Underweight (<80% weight-for-age) from pre-intervention, 1984 (n=30,600) to post-

Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
	development + income generation <b>Comparison:</b> yes		Used triple A approach  <b>Provider:</b> Village health workers				intervention, 1987 (n=37,054)  Intervention: Pre: 55.9% Post: 37.9% Comparison: Post (only): 50.0%  % Underweight (<60% weight-for-age) Intervention: Pre: 6.3% Post: 1.7% Comparison Post (only): 5.6%
Marek et al. (1999)  <b>Madagascar</b> Secaline Project, 1994–1997	<b>Intervention:</b> monthly growth monitoring + nutrition and health education (weekly) + food supplements (underweight children) + referral if sick or malnourished + home visit + income generation Exposure to intervention: four months <b>Comparison:</b> no	0–5 years	<b>Content:</b> Weekly health and nutrition education delivered  <b>Provider:</b> Non governmental organization (NGO) community nutrition workers	Group  Individual (home visit to follow-up)	Community (central site)	Not available	<b>Study design:</b> Pre/post comparison of project participants over a range of periods from 1994 to 1997  <b>Outcome:</b> % Underweight (<80% weight-for-age) Baseline: 23–35% (in different areas) Endline: 6–16%  Under-five mortality: 1997: 168 per 1000 live births 2003: 126 per 1,000 live births

Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
Marek et al. (1999)  <b>Senegal</b> Community Nutrition Project, 1996–1998	<b>Intervention:</b> monthly growth monitoring + nutrition and health education (weekly) + food supplements (underweight children) + referral if sick or malnourished + home visit + improved access to water supply <b>Exposure to intervention:</b> 6 months <b>Comparison:</b> no	3 months–2 years	<b>Content:</b> Weekly health and nutrition education  <b>Provider:</b> NGO community nutrition workers (Group d'intérêt économique)	Group  Individual (home visit to follow-up)	Facility (community nutrition center) in peri-urban areas	90%	<b>Study design:</b> Pre/post comparison of four project participant cohorts after five months  <b>Outcome:</b> % Underweight (<80% weight-for-age): Baseline: 60–70% Endline: 20–30% (after five months)  Infant mortality: 1986: 86 per 1,000 live births 2005: 61 per 1,000 live births  Under-five mortality: 1986: 199 per 1,000 live births 2005: 121 per 1,000 live births
<b>GMP Ineffective without Appropriate Nutrition Counseling</b>							
Avsm et al. (1995)  <b>India</b> Integrated Child Development Services, (unclear timeline)	<b>Intervention:</b> <b>monthly</b> growth monitoring + health and nutrition education + supplementary food + primary health care package	0–6 years	<b>Content:</b> Nutrition education  <b>Provider:</b> Anganwadi workers and volunteers	Group  Individual (if child underweight)	Community (likely center)	Subbarao et al. (1989) 42–63% of 0–6 months; inadequate coverage of under three (did not specify)	<b>Study design:</b> Post only comparison between project participants 2–6 years (n=22,333) and children in areas without the project (n=13,854)  <b>Outcome:</b>

Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
	<b>Comparison:</b> basic health care						% Underweight (<75% weight-for-age): Intervention: 27% Control: 30%  Gopaldas et al. (1990) GM not associated with health or nutrition status (controlled for socio-economic status and other program activities), but half the children had not been weighed
Karim et al. (1994)  <b>Bangladesh</b> Bangladesh Rural Advancement Committee (BRAC), 1990	<b>Intervention:</b> monthly growth monitoring (under twos) + oral rehydration therapy (ORT) + immunization + vitamin A + family planning + nutrition education + primary health-care package <b>Comparison:</b> primary health care package	0–2 years	<b>Content:</b> Monthly health and nutrition education  Food demonstration  <b>Provider:</b> BRAC health workers and volunteers	Group	Community (central site)	43%	<b>Study design:</b> Post only comparison between participants 6–23 months (n=188) and non-participants (n=308) from the same area in 1990  <b>Outcome:</b> % Underweight (<80% weight-for-age): Participants: 47.9% Non-participants: 49%
Hossain et al. (2005)  <b>Bangladesh</b>	<b>Intervention:</b> monthly growth monitoring + nutrition counseling + food	0–2 years	<b>Content:</b> Monthly health and nutrition education	Group	Facility (nutrition center)	85% (but only 50% received counseling)	<b>Study design:</b> Post only comparison of children 6–23 months in project areas (n=1,598) with children in

Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
Bangladesh Integrated Nutrition Program, 2002	supplementation (if underweight <b>Comparison:</b> no (compared to national data)		<b>Provider:</b> Community nutrition workers				non-project areas (n=790) in 2002  <b>Outcome:</b> % Underweight (weight-for-age Z <-2): Project: 47% Comparison: 48%
<b>Extracted from Griffiths and Del Rosso (2007)</b>							
Priyosusilo (1988)  <b>Indonesia</b> Family Nutrition Improvement Program (Usaha Perbaikan Gizi Keluarga [UPGK]), 1978–1980	<b>Intervention:</b> Monthly growth monitoring (priority to under two) + immunization + vitamin A + food coupons for children with malnutrition + ORT + medical referrals + nutrition education <b>Comparison:</b> none	0–5 years	<b>Content:</b> Counseling by age Generic messages  <b>Provider:</b> Volunteers	Group (“Nutrition Circle”)  Individual (at community site)	Community	75–90%	<b>Study design:</b> Pre/post comparison of participants from 1978 to 1980 *sample size is unclear <b>Outcome:</b> % Underweight (80–60% weight-for-age) Project: 1978: 52% 1980: 36%
Zeitlin (1984)  <b>Indonesia</b> Nutrition Communication and Behavior Change (NCBC) Component, 1977–1981	<b>Intervention:</b> monthly growth monitoring + education focused on feeding practices for under two *Added to UPGK	0–5 years	<b>Content:</b> Counseling by age and growth status  Innovative communication materials and mass media	Individual (follow-up with home visit as needed)  Community meetings	Community	78%	<b>Study design:</b> Post only comparison of children under 24 months in project (n=600) and comparison areas (n=400); comparison of data from annual survey in project areas only in 1981

Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
	<b>Comparison:</b> yes		(action posters by age, short radio dramas)  <b>Provider:</b> Kaders (volunteers)				*methodological issue with baseline conducted in project areas  <b>Outcome:</b> Underweight (<75% weight-for-age) 50% less in project vs. comparison areas  % Underweight (<75% weight-for-age) went from 48% to 28% in project areas
Zeitlin (1989)  <b>Indonesia</b> The Weaning Project, 1987–1989	<b>Intervention:</b> monthly growth monitoring + nutrition education focused on weaning practices <b>Comparison:</b> yes	0–2 years	<b>Content:</b> Counseling by age and growth status  Food demonstration  Materials (counseling cards, dialogue and jingles for radio and cassette, posters, leaflets)  <b>Provider:</b> Kaders (volunteers)	Individual (at the community site)	Community	80%	<b>Study design:</b> Cross-sectional pre-post among project participants (n=390) and comparison group (387) from 1987 to 1989  <b>Outcome:</b> Significant difference in weight-for-age Z scores between children in the program and comparison group at endline after controlling for age (F=5.95, p=0.015), but no difference between the groups at baseline Mean ± standard deviation (SD) weight-for-age Z score

Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
							Baseline: project (-1.36±1.24) vs. comparison (-1.59±1.22) Endline: project (-1.44±1.18) vs. comparison (-1.59±1.15)
Alderman (2007)  <b>Uganda</b> Nutrition and Early Childhood Project, 2000– 2003	<b>Intervention:</b> early childhood development services (including growth monitoring and promotion) + grants + deworming (in one arm) <b>Comparison:</b> no services	0–6 years	<b>Content:</b> General messages  <b>Provider:</b> Unclear	Unclear	Unclear	Not available	<b>Study design:</b> Longitudinal among project and comparison groups from 2000 to 2003  <b>Outcome:</b> +0.22 SD improvement in weight-for- age Z score among children 0–12 months in project compared with comparison groups
Muyeti and Del Rosso (2007)  <b>Uganda</b> Uganda Program for Human and Holistic Development, 2006–2007	<b>Intervention:</b> monthly growth monitoring for under two + promotion/ counseling and referral + home visits <b>Comparison:</b> no	0–2 years	<b>Content:</b> Counseling by age and growth trend specific (growth faltering based on minimum weight gain)  <b>Provider:</b> Community growth promoters	Individual (at the community site and home as necessary)	Community (central site, home)	72%	<b>Study design:</b> Pre/post comparison among children under two years of age from data in village registers over eight months from 2006 (n=748) to 2007 (n=680)  <b>Outcome:</b> % Underweight (weight-for- age <-2) Baseline: 12.8% Endline: 7.9%

Extracted from Individual Studies Cited in Ramage (2018)

Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
<p>Agbozo et al. 2016</p> <p><b>Ghana</b> Community-based growth promotion (CBGP)</p>	<p><b>Intervention (CBGP):</b> monthly growth monitoring and counseling on IYCF + health care</p> <p><b>Comparison (GMP):</b> monthly growth monitoring and counseling (group) on IYCF at child welfare clinics + primary health care</p>	0–2 years in CBGP (compared to 0–5 years at GMP)	<p><b>Content:</b> Counseling on IYCF</p> <p><b>Provider:</b> Child growth promoters (volunteers)</p>	Individual (at the community site) and home visits	Community (central site, home)	Not available (all caregiver-child pairs who received services at the selected sites were invited to participate)	<p><b>Study design:</b> Cross-sectional post only between CBGP (n=124) and GMP (n=108)</p> <p><b>Outcomes:</b> % Underweight (weight-for-age &lt;-2) CBGP: 8% vs. GMP: 14% (p=0.154)</p> <p>Exclusive breastfeeding CBGP: 73% vs. GMP: 56% (p=0.001)</p> <p>Minimum diet diversity CBGP: 77% vs. GMP: 61% (p=0.035)</p>
<p>Mayhew et al. (2014)</p> <p><b>Afghanistan</b> Community-based growth monitoring promotion</p>	<p><b>Intervention:</b> pictorial community-based growth monitoring and promotion tools (cGMP) + integrated child survival package (C-IMCI, basic essential maternal and newborn care)</p> <p><b>Comparison:</b> Integrated survival package</p>	0–2 years (sample was 6–18 months)	<p><b>Content:</b> Counseling based on adequate weight gain by age</p> <p><b>Provider:</b> Community health workers</p>	Individual	Community (central site)	53%	<p><b>Study design:</b> Cross-sectional post only between participants (n=414) and non-participants (n=414) and two time points for participants</p> <p>*non-participants lived in areas where cGMP was not offered</p> <p><b>Outcome:</b> Mean weight-for-age Z score</p>



Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
							Participants -0.9 (-1.0, -0.8) vs. non-participants -1.2 (-1.3, -1.1) ( $p<0.01$ )
Navarro et al. (2013)  <b>Dominican Republic</b> 2005–2007	<b>Intervention:</b> Monthly home visits during pregnancy + group meetings biweekly during pregnancy and monthly after birth (growth monitoring and counseling during home visit or group meeting)  <b>Comparison:</b> basic health care	0–2 years	<b>Content:</b> Counseling based on growth curve using Triple A approach, including for overweight  <b>Provider:</b> Community volunteers	Group and individual (home visit)	Community (central site, home)	Not available	<b>Study design:</b> Pre/post intervention (n=196) and comparison (n=263) from 2005 to 2007  <b>Outcome:</b> Body mass index (BMI)-for-age Z score (adjusted effect): -0.31 (-0.49, -0.12) $p=0.001$  BMI-for-age > 85th percentile (odds ratio): 0.43 (0.23, 0.77), $p=0.005$  Exclusive breastfeeding through six months (odds ratio): 3.28 (1.24, 8.69), $p=0.017$  Five feedings with solids or semi-solids (odds ratio): 1.62 (1.03, 2.55), $p=0.037$
Schaetzel et al. (2008)  <b>Honduras</b> AIN-C, 1998–2002	<b>Intervention:</b> monthly growth monitoring and counseling + home visit (as needed) + reporting growth monitoring	0–2 years	<b>Content:</b> Counseling based on growth performance	Individual	Community (central site, home)	90%	<b>Study design:</b> Post comparison between participants (n=603) and non-participants (n=733) in 2002 *methodological issues with evaluation

Program/ Study	Intervention	Age	Content Provider	Group vs. Individual	Setting (Facility vs. Community)	Participation	Study Design, Timeline Outcome
	<p>information to community + treatment of common childhood illnesses</p> <p><b>Comparison:</b> similar services except no GMP</p>		<p><b>Provider:</b> Volunteers</p>				<p><b>Outcome:</b> Mean weight-for-age Z score: AIN-C: -0.78 (1.10) Non-AIN-C: -0.67 (1.16), <math>p &lt; 0.01</math></p> <p>Exclusive breastfeeding at six months: AIN-C: 56% Non-AIN-C: 40%</p> <p>Complementary feeding frequency: 6–8 months AIN-C: 99% Non-AIN-C: 89%</p>



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