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# Integrated Nurturing Care Activity to Improve Early Childhood Outcomes in Mozambique

## Qualitative Findings Brief

### Abstract

A high portion of children are at risk of not reaching their developmental potential in Mozambique. USAID Advancing Nutrition partnered with the Government of Mozambique and USAID's bilateral nutrition project, Transform Nutrition, led by the local organization Ajuda de Desenvolvimento de Povo para Povo, to improve early childhood development (ECD) outcomes through integrating responsive caregiving and early learning (RCEL) content and supporting and monitoring ECD within a community-led group-based intervention. USAID Advancing Nutrition implemented a mixed-method quasi-experimental evaluation to understand the experience and effects of the integration of this content.

In this brief, we present findings from the qualitative component of the evaluation, which comprised semi-structured interviews and focus group discussions with 60 respondents and thematic analysis to explore the feasibility, acceptability, and implementation of this integration. Respondents saw RCEL and ECD monitoring integration in nutrition programming to be largely feasible and acceptable. The behaviors of play, hand making toys, and talking to babies in the womb were well understood and accepted, while responding to children's signals and attending to and monitoring children's development were not as well understood by respondents in treatment communities. Respondents' reports and explanations of RCEL and ECD concepts showed that there were gaps and limitations in capacity and delivery at the community level, which likely reduced the effectiveness of the intervention. We recommend that future interventions that integrate RCEL and ECD monitoring increase training and supervision for frontline delivery implementers, adjust materials and training to accommodate front-line implementers' capacity and literacy levels, and increase focus on ECD monitoring.

### Introduction

The first 1,000 days are a critical period of rapid brain development. Good maternal and child health and nutrition, in addition to responsive caregiving and early learning (RCEL), are critical to early brain development during this period (Black et al. 2017). In fact, children who receive a combination of nutritional and caregiving interventions have better early development than those who receive only one or the other (WHO 2020). Integrating RCEL content into existing health and nutrition services can amplify the impact for both nutrition and early childhood development (ECD) outcomes (WHO 2020).

Seventy-two percent of young children in Mozambique are at risk of poor development based on a composite indicator of stunting in children under 5 and exposure to extreme household poverty (Lu, Black, and Richter 2016). Further, fewer than half (41 percent) of infants under 6 months of age are exclusively breastfeed, only 13 percent of children have a minimum acceptable diet, 47 percent are engaged in activities to promote early learning, and only 3 percent have children's books at home (UNICEF 2023). Evidence from low- and middle-income countries indicates that combined caregiving and nutrition interventions are effective in improving children's cognitive, language, and motor development, compared with usual care or nutrition interventions alone (Jeong, Franchett, and Yousafzai 2018).

In this context, USAID Advancing Nutrition partnered with the Government of Mozambique and USAID’s bilateral nutrition project, Transform Nutrition, led by the local organization Ajuda de Desenvolvimento de Povo para Povo (ADPP), to improve ECD outcomes. The strategy was to integrate RCEL content and support and monitoring of child development (referred to hereafter as RCEL and ECD monitoring) within a community-led group-based intervention focused on nutrition and water, sanitation, and hygiene (WASH). To evaluate the integration of this content, USAID Advancing Nutrition implemented a mixed-method quasi-experimental evaluation. This brief summarizes the qualitative component of the evaluation.

The qualitative component of the mixed-method quasi-experimental evaluation addressed two research questions:

1. What is the feasibility, acceptability, and implementation experience of integrating RCEL and ECD monitoring messaging into a nutrition and WASH platform by a local partner?
2. What was the experience of community actors and caregivers with identifying and referring children with developmental delays for additional services?

In this brief, we first present background on the intervention we implemented and assessed. Next, we summarize the qualitative research methods. We then summarize the findings for each research question and present conclusions and recommendations based on the findings.

## Intervention Background

In recognition of the critical importance of ECD, the Government of Mozambique has integrated RCEL and ECD monitoring messaging into the community-based Nutrition Interventions Package—Pacote de Intervenções de Nutrição (PIN)—with support from PATH and the United Nations Children’s Fund (UNICEF). The integrated PIN package includes guidance on volunteer-led nutrition groups. Transform Nutrition expanded the programs existing nutrition-focused curriculum to provide a detailed manual for facilitation of nutrition groups which integrated RCEL and ECD monitoring. The curriculum for nutrition groups is made up of 30 sessions designed to be facilitated in 1.5 to 2 hours total (figure 1). A full cycle was planned to take 8 months. Community health workers/*agente polivalente elementars (APEs)* were responsible for mobilizing 10 community volunteers who serve as nutrition group leaders and deliver the intervention to 10 caregivers of children 2 years and under and to community influencers (male caregivers, local leaders, etc.). The curriculum uses a “negotiated practices” approach to identify small achievable actions that caregivers can practice after each group session. During group meetings, volunteers were trained to facilitate reflection on the actions from the prior week and sharing among participants about their experiences or challenges and how they overcame them. The nutrition groups were

**Figure 1. Illustration from Nutrition Group Manual of Father Looking at and Talking about Pictures with his Child**



complemented by home visits from the volunteers to follow up with caregivers who participate in the community group, focusing on those who need additional support.

In the districts that received the integrated package, four of the sessions were focused on these practices and all sessions included an opening song or play activity. In addition, to improve identification of children with developmental delays, the project promoted at the community level the use of child health cards, which include developmental milestones by age. APEs were also trained to refer children who were not meeting the developmental milestones for the child's age to the health facility for additional support. In addition to home visits and nutrition groups, content was delivered through radio and community video groups. The intervention content was developed in partnership with PATH, building upon existing work on ECD in Mozambique. At the health facility level, health workers were trained to use the Malawi Developmental Assessment Tool for a further assessment of child development, adapted for clinical use by the Ministry of Health in the final months of the project (after this research was conducted).

To support the RCEL and ECD monitoring integration, the project used a cascade training approach with follow-up supervision to build capacity of the community-based workers to deliver the expanded nurturing care content. The initial training of trainers was conducted for district-level staff and area leaders who oversaw a cluster of APEs and their associated volunteers who led nutrition groups. Training and supervision of volunteers was provided by the local implementing partner's staff (including area leaders, mentors, and nutrition and sanitation officers) as well as the APEs, and supplemented with routine visits from the USAID Advancing Nutrition team. USAID Advancing Nutrition also worked closely with government stakeholders at the national and provincial levels to raise awareness about ECD and support better coordination across sectors.

## Methods

The qualitative research was completed in the six districts in Nampula Province, Mozambique, that received the nutrition and WASH-focused programming in addition to the RCEL and ECD monitoring content. Project monitoring included indicators to monitor the RCEL and ECD monitoring training sessions and supervision.

We used semi-structured interviews and focus group discussions to explore the feasibility, acceptability, and implementation experiences of integrating RCEL and ECD monitoring with nutrition services and experiences with identifying and referring children with developmental delays for additional services. We collected data with seven respondent groups. Five respondent groups were program participants (table 1) and two were program implementers and government stakeholders (table 2). We conducted semi-structured interviews with all program participant groups except for area leaders with whom we conducted two focus group discussions. Respondents (except for caregivers) were purposively sampled from the six treatment districts or Nampula City. Caregivers were randomly selected from the baseline quantitative household survey sample. The aim was to select six caregivers from a sampling frame of children who performed poorly during the baseline on the Ages and Stages Questionnaires (ASQ)<sup>1</sup> and six caregivers from a sampling frame of children who performed well on the baseline ASQ. We were not able to recruit equal numbers though, and four caregivers of children who performed poorly and eight who performed well were included in the sample.

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<sup>1</sup> We used the ASQ-3 (ASQ-3, Squires, Bricker, and Twombly 2009), which has been previously used in Mozambique (Martinez, Naudeau, and Pereira 2012). The ASQ-3 consists of age-specific forms, each with 30 questions that capture development across five domains of fine motor, gross motor, communication, problem-solving, and personal-social skills.

**Table 1. Program Participant Respondents by District**

Type of Respondent		Percent female	# Respondents						
			Lalaua District	Nacala Porto District	Mossuril District	Larde District	Meconta District	Rapaple District	Total
1	Caregivers	100	2	2	2	2	2	2	12
2	Influencers	0	1	1	1	1	1	1	6
3	Area leaders	33	9			9			18
4	Community health workers (APEs)	58	2	2	2	2	2	2	12
5	Volunteers (nutrition group leaders)	42	2	2	2	2	2	2	12
Total			10	10	10	10	10	10	60

**Table 2. Program Implementer and Government Respondents by Location**

Type of Respondent		# Respondents					
		Nampula City	Mossuril District	Rapale District	Nacala Porto District	Larde District	Total
1	Program implementer staff (district coordinators, ECD advisor, Transform Nutrition leadership, ECD officers, PATH personnel)	6	1	1	1	0	9
2	Government stakeholders (district or provincial leaders from the Ministry of Health, nutrition, gender/child sectors)	3	1	0	1	1	6
Total		9	2	1	2	1	15

USAID Advancing Nutrition hired Maraxis, a firm in Mozambique, to collect and analyze the data. Data collection was done in Portuguese or Makua according to the preference of the respondent. Interviews and focus group discussions were audio-recorded and summary notes were produced and translated into Portuguese immediately after the interviews. The Portuguese notes were later translated into English to facilitate analysis by U.S.-based staff. The quotes provided in this document paraphrase responses rather than provide them verbatim. The study was reviewed and approved by the JSI and the UniLurio institutional review boards. Additional approval for the endline phase was provided by UniLurio as well as the Direccção Provincial de Saúde (Provincial Directorate of Health). All data collectors were trained in research ethics.

Data were analyzed using thematic analysis. Each English transcript was independently coded and analyzed by using MAXQDA software initially and then by using Atlas.ti. First, two researchers developed an initial codebook based on the research questions and data collection guides. Second, the two researchers coded all of documents and created analytic memos for each document. Third, the two researchers discussed the codebook and coding after initial coding and a reviewer spot-checked the coding. The two researchers then finalized the coding to align with the final codebook and ensure

consistent coding between the two researchers. The two researchers and reviewer analyzed and discussed the coded data to determine key themes and variations across respondent groups. We explored variation by district but did not find consistent patterns.

There are several study limitations. Due to upheavals in some of the communities in Nacala Porto at the time of data collection, not all the communities participated. Interviewers did not consistently use probing questions to solicit more detailed information on RCEL content and ECD monitoring, leading to limited depth of information in some interviews. The report is based on self-reported opinions and perceptions which can be subject to the following biases: a) social desirability bias, where the respondent answers questions in a way that is socially acceptable or that they think the data collector will view favorably, and b) recall bias, when the respondents do not accurately recall past events.

## Qualitative Findings

### Question 1: RCEL and ECD Monitoring Integration

In line with the program design, respondents reported that RCEL and ECD monitoring<sup>2</sup> content was delivered to caregivers and community influencers at the community level through nutrition group meetings run by volunteers as well as through home visits conducted by volunteers and APEs. The project strengthened the capacity of these community-level workers to enable this integration through cascaded trainings. Below, we summarize findings on RCEL and ECD monitoring capacity strengthening, implementation of community-level delivery, and the feasibility and acceptability of integration. Then we present successes and recommendations shared by respondents.

#### RCEL and ECD Monitoring Capacity Strengthening

##### Cascade Training

The project used a **cascade training** approach as described by respondents, with follow-up supervision to strengthen the capacity of community-based workers to deliver the RCEL and ECD monitoring content in addition to nutrition and WASH content. Program implementers said the project provided an initial training of trainers and provided trainees with a training-of-trainers manual. Based on project monitoring data, this training of trainers was provided to 46 program implementers, area leaders, district coordinators, provincial officers, and government staff. Then the training was cascaded down separately by these trainers to 301 APEs and 3,065 volunteers at the community-level, according to project monitoring data (USAID Advancing Nutrition 2023). The area leaders and district coordinators were responsible for training the volunteers in their geographic areas, with support from USAID Advancing Nutrition staff. According to program implementers, the initial training did not include APEs' mentors and community leaders but they learned it was important to include these actors in training, and trainings were later conducted with both of these groups.

The RCEL and ECD monitoring topics included in the training are shown in table 3. When asked about the training, area leaders and APEs broadly recounted learning about those topics, including how to read children's signals and being responsive to those signals, integrating children into household activities, talking to children, and making toys for children. Some area leaders and APEs shared that they felt well prepared to deliver RCEL and ECD monitoring messages to the community and to observe children's development. Volunteers provided less detailed responses than area leaders and APEs about the RCEL and ECD monitoring content that they learned during training. Volunteers reported learning about the topic of RCEL and ECD monitoring in general and only about a few specific practices including playing with children and how to monitor children's development. A few APEs and volunteers did not recount in interviews any RCEL or ECD monitoring content from trainings. Program implementers reported that

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<sup>2</sup> In interviews, respondents predominately described this topic as "ECD" and did not use the term RCEL. We use RCEL content and ECD monitoring throughout for specificity.

the quality of the training was high at the provincial level but did not provide information about the quality of the trainings at lower levels. Program implementers noted observing some quality issues in community-level implementation and conducting refresher training for APEs as a result. This suggests that volunteers at the end of the training cascade may have not gained as strong an understanding of RCEL and ECD monitoring through training as those higher up in the cascade.

**Table 3. Promoted and Learned Caregiver ECD Behaviors**

<b>Overarching Behavior in Manual</b>	<b>Consistently Reported Behaviors</b>	<b>Inconsistently Reported Behaviors</b>
<b>Responsive care and early learning</b>		
Understanding our child’s signals and responding well	N/A	Respond when children cry or use gestures to get attention. Do not respond to children by yelling or hitting.
Talking to children from pregnancy	Talk to babies in the womb so they recognize their parents’ voices.	Talk to children to improve speech development and other reasons.
<b>Supporting and monitoring child development</b>		
Playing with our children during our daily work	Parents should play with children, including to improve development. Give children toys, including toys that are homemade.	Sing with children to teach them and help them learn to speak. Tell children stories.
Attending to our child’s development	N/A	Recognize developmental milestones appropriate to age, including following object with eyes, sitting, crawling, and walking. Notice when child develops new basic skills. Encourage children to crawl and walk.

Program monitoring data also suggest that volunteers and APEs did not have strong knowledge of RCEL and ECD monitoring and had weaker capacity on RCEL and ECD monitoring content than those at a higher level of the training cascade. Program monitoring data showed that just over half of trainees mastered RCEL and ECD monitoring content based on pre-post training tests. On average, the improvement in RCEL and ECD monitoring scores was around 10 percent, which was below the target of 20 percent (USAID Advancing Nutrition 2023). These unpublished data also showed relatively lower changes in pre-post test scores at the lower level of the cascades (i.e. APEs and volunteers) with only 43 percent of these trainees demonstrating mastery on pre-post tests.

Respondents reported several challenges that likely contributed to the limited improvement from training seen in volunteers and APEs in RCEL and ECD monitoring competencies. The most common training challenge reported by government stakeholders, program implementers, and area leaders was the limited literacy of APEs and volunteers. For instance, a government stakeholder noted that “the literacy level of the APEs has been very low and this has been the great challenge” (Government stakeholder, Nampula City). The training materials were in Portuguese, in which not all volunteers and

APEs were literate. Some were not literate in any language and some had limited writing skills. Respondents attributed this to the low level of educational attainment of some volunteers and APEs, such as only having fourth- or seventh-grade certificates. A program implementer explained this challenge saying,

“Language barrier was also an issue. At some point we came to realize that some of the volunteers that we had in the training did not know how to read or write in Portuguese, because all the contents including those for nutrition that we were training on were all in Portuguese language. In that case, the volunteer was required to be literate to be able to understand, comprehend and explain to the caregivers what they were supposed to do well to support their children” (Program implementer, Nampula City).

A few respondents also noted that the RCEL and ECD monitoring content was challenging for some trainees to understand, and their limited educational attainment contributed to that. In addition, a few respondents noted that trainees may have forgotten what they learned over time. One volunteer said they were told they were going to receive RCEL and ECD monitoring training but did not. However, they did receive the nutrition group manual which had RCEL and ECD monitoring content. This volunteer only reported supporting caregivers on nutrition and WASH and not ECD during nutrition groups and home visits.

### Nutrition Group Manuals

To support RCEL and ECD monitoring implementation beyond training, respondents said that the project provided trainees with **nutrition group manuals**. As described by volunteers, these manuals outlined the curriculum for nutrition groups and included RCEL and ECD monitoring content (table 3). Program implementers noted that the manuals were written in Portuguese, while the activities were delivered in the local language, Makhuwa. However, program implementers reported that not all volunteers and APEs were literate in Portuguese as noted above. The manuals were supposed to be distributed at trainings, although program implementers reported that not all volunteers received manuals. One volunteer respondent reported not receiving a manual.

In interviews, we asked volunteers how useful they thought the manual was. Volunteers largely reported that the manuals were useful and had helpful content. A volunteer explained that the manual “has been very useful because it guides us [in] what we should do. For example, children's games are based on age, so it is through this that we know in this age group the games we can have are these and others” (Volunteer, Larde District). Program implementers and area leaders reported that they thought that limited literacy of some volunteers and APEs constrained their ability to use the manuals. While APEs and volunteers did not report this challenge, a few volunteers highlighted that the pictures in the manuals made the information easy for them and mothers to understand (figure 1). One volunteer said, “the manual helps me a lot because it has pictures of actions” (Volunteer, Mossuril District).

### Supervision

To continue to strengthen RCEL and ECD monitoring capacity of volunteers and APEs, program implementers and area leaders said they provided **mentoring and supervision** visits. Respondents primarily discussed mentoring and supervision provided by area leaders. They supervised the nutrition group sessions, completed supervision forms, and reported their observations to the district level. APEs and volunteers mostly reported that area leaders provided supervision, while a few also reported receiving supervision from the program implementer staff at higher levels. While approximately two-thirds of APEs and volunteers reported receiving supervision, they typically said the supervision was for nutrition services, suggesting that nutrition services rather than ECD was prioritized during this supervision. Respondents did not consistently report the frequency of this supervision; however, some said it was infrequent. For example, one volunteer said that the APE supervisor did not visit often so the volunteers would refer to the manual for information. Area leader supervisors said they faced

challenges, including limited transportation, conducting supervision. When it was received, APEs and volunteers reported favorable views of this supervision and the guidance they received. A few volunteers and APEs noted that if they made mistakes or had doubts about RCEL and ECD monitoring content, they could get support from their supervisor. A volunteer explained the importance of supervision, noting “an effective participation of supervisors in the community was necessary, because with constant participation of supervisors, some failures are recoverable and if there is no supervision, failures are not irrecoverable” (Volunteer, Meconta District).

### Community-Level Delivery

Volunteers and APEs were the primary workers responsible for delivering the integrated RCEL and ECD monitoring content as part of nutrition group meetings and home visits. Nearly all volunteers and APEs described their role and responsibility as educating and supporting caregivers on child nutrition, with WASH and RCEL and ECD monitoring reported less frequently. Approximately two-thirds of volunteers and APEs specified supporting RCEL and ECD monitoring as part of their role. Both volunteers and APEs said that RCEL and ECD monitoring support was part of their role in four of six districts. A volunteer in Rapale noted, “My responsibilities in supporting ECD in the community are to encourage the community to play with children and make homemade toys like rag dolls, [or] wooden or bamboo cars, and not just rely on toys from the store” (Volunteer, Rapale District).

Volunteers, APEs, caregivers, and influencers saw a child's health and nutrition status as part of children's development. When asked about child development, it was common for respondents across these groups to provide answers about nutrition or other care practices (e.g., those related to WASH) rather than RCEL and ECD monitoring. While these respondents' responses linking children's health and nutrition with ECD suggests limited understanding about ECD, throughout interviews, they discussed promoting or learning about a range of behaviors that related to the four overarching RCEL and ECD monitoring behaviors covered in the RCEL and ECD monitoring training and manual. Table 3 shows the behaviors that respondents across volunteers, APEs, caregivers, and influencers groups reported fairly consistently and those that only a small number of respondents reported. Each volunteer, APE, caregiver, and influencer discussed a few of these specific behaviors but they did not discuss all four overarching behaviors or specific related behaviors. Caregivers and volunteers on average reported learning about two to three specific behaviors, with influencers and caregivers whose children scored well on the baseline ASQ referencing more behaviors than caregivers whose children scored poorly at baseline on the ASQ. It is worth noting that the number of caregivers whose children scored poorly on the baseline ASQ was small.

Playing with children during daily work, followed by talking to children from pregnancy, were the overarching behaviors consistently referenced by volunteers, APEs, caregivers, and influencers. Understanding a child's signals and responding well and attending to a child's development were inconsistently discussed by these respondent groups. There was largely agreement across and within respondent groups about which behaviors were promoted and learned. The relative consistency across respondent groups in the behaviors that they discussed during interviews may suggest that caregivers and influencers learned the RCEL and ECD monitoring information that was communicated to them by volunteers and APEs and that the gaps in what caregivers and influencers learned may be due to capacity gaps among volunteers and APEs. As discussed below, these respondent groups did not discuss all four behaviors in response to questions about nutrition groups and home visits.

### Nutrition Groups and Adherence to the Manual

Volunteers organized and facilitated **nutrition groups** using the nutrition group manual curriculum. The nutrition groups were supposed to be made up of 10 male or female caregivers of children 2 years and under and influencers in the community. Volunteers did not give detailed information about the number, frequency, or length of the sessions. Caregivers and influencers reported a range of meeting frequency from once a month to twice a week, with weekly being the most common. Project



monitoring data reported that 15,019 caregivers were reached with RCEL and ECD monitoring messages through these nutrition groups over the three-year life of the project (USAID Advancing Nutrition 2023).

The curriculum was designed to be delivered in weekly sessions, with each session lasting 1.5 to 2 hours. Four sessions were supposed to focus on RCEL and ECD monitoring. A few volunteers described using the nutrition group manual to plan the group sessions and that different sessions would focus on different topics. For instance, one volunteer said, “We have a handbook. We wrote the mothers in the nutrition group and chose a day of the week to share the material using the manual and each day/session has a new theme” (Volunteer, Meconte District). A few volunteers also noted that they considered what they observed in home visits when planning for nutrition group meetings.

While the program intended for volunteers to use a negotiated practice approach in the nutrition groups, volunteers did not describe using this approach. They characterized their discussions as giving “lectures” in the groups and only a few also noted providing demonstrations of play or singing in the group. A few caregivers and influencers said that they had discussions during the groups and as one influencer said, “there was a lot of exchange of experience between us [parents]” (Influencer, Mossuril District).

Volunteers did not report covering all of the RCEL and ECD monitoring topics in the nutrition groups and caregivers and influencers did not report learning about all four in nutrition groups. Volunteers, caregivers, and influencers often focused on the nutrition content of nutrition group sessions, with RCEL and ECD monitoring content and WASH discussed as secondary topics. When asked about their experience leading the nutrition groups, only half of volunteers reported discussing RCEL and ECD monitoring in the nutrition group sessions. In interviews, volunteers primarily gave general descriptions of the RCEL and ECD monitoring content they covered in the sessions but did not name specific RCEL and ECD monitoring practices they discussed. Many volunteers provided more detail on the nutrition practices they discussed during the nutrition group meetings than the RCEL and ECD monitoring practices. The limited detail they reported on RCEL and ECD monitoring content may in part be due to a lack of probing on the part of the interviewer but may also indicate weaknesses in RCEL and ECD monitoring content delivery in the nutrition groups. APEs demonstrated a more detailed understanding of RCEL and ECD monitoring practices and information; however, they only supervised some nutrition group sessions and did not facilitate them.

When asked specifically about what they delivered, volunteers reported promoting the following behaviors during nutrition groups—

- **Talking to children from pregnancy:** A few volunteers said that they encouraged parents to talk to children, particularly that they should talk to their children in the womb.
- **Playing with children during daily work:** Volunteers most consistently said they discussed playing with children and creating homemade toys for them from locally available materials. For example, a volunteer said, “In these sessions, I usually...encourage mothers to play with their children” (Volunteer, Rapale District). A few volunteers gave more detail about how they encourage play, including that mothers should not shoo children away but play with them while they are doing their household chores, that mothers can use toys to teach children colors, and that when mothers play with children, they develop well.

Both play and talking to the fetus in the womb (figure 2) were practices with very clear illustrations in the nutrition group manual, which may have facilitated volunteers’ understanding and teaching about those practices. Volunteers did not report discussing the other two overarching behaviors— understanding a child’s signals and responding well or attending to a child’s development through monitoring developmental milestones at different ages.

**Figure 2. Illustration in Nutrition Group Manual of Father Talking to the Baby During Pregnancy**



Two-thirds of caregivers and influencers said RCEL and ECD monitoring content was discussed during their nutrition group sessions. Caregivers and influencers gave somewhat more detailed descriptions of the RCEL and ECD monitoring practices they learned during the nutrition groups than did volunteers, suggesting that volunteers did discuss more specific RCEL and ECD monitoring practices than they reported.

When asked specifically about what they learned about RCEL and ECD monitoring content in nutrition groups—within the four main RCEL and ECD monitoring topics—caregivers and influencers reported learning the following—

- **Understanding a child’s signals and responding well:** Although volunteers did not report this, a few caregivers and

influencers said groups covered reading and responding to children’s cues and signals such as crying, singing with children to help them develop speaking skills, talking, and not yelling or hitting children. For example, a caregiver shared, “I didn’t know the signs of a child...that when he cries it’s because he wants something or because something is bothering him” (Caregiver, Nacala Porto District).

- **Talking to children from pregnancy:** Some caregivers and influencers said they learned it is possible to babies while they are still in the womb, and this is particularly something fathers can do. An influencer explained, “For example, my wife being pregnant, I can talk to the fetus inside and when the baby is born it recognizes my voice” (Influencer, Nacala Porto District). A few also noted that you should talk to children when they are older to help them develop their speech skills. One caregiver showed a strong understanding of the need to speak to children and explained speaking to a son, “Because whenever I speak, he imitates me. Despite not having many speaking skills, he tries to imitate me. I know why we have to stimulate speech in children.... Even my son can imitate the letters and words” (Caregiver, Nacala Porto District).
- **Playing with our children during our daily work:** Play was the most common topic that caregivers and influencers reported discussing. They described learning to play with children in games such as hide and seek, to play with children while they are still in the womb, to make time to play with children, and to play with children rather than yelling or hitting them. Play was a topic that a few caregivers and influencers noted was something that fathers could do. Providing and making toys was also a common topic that caregivers and influencers said they learned, including how to make toys with locally available materials rather than purchasing them. One caregiver reported making dolls in the nutrition group for their children. A caregiver explained the importance of providing toys, saying “we need to give toys to children, if not from the store, at least one homemade, this helps to stimulate the child’s development” (Caregiver, Mossuril District). A few caregivers and influencers also said they learned to sing with children as a way of teaching, as a form of play, or to help develop their speaking skills.

- Attending to a child’s development: Like volunteers, caregivers and influencers largely did not report discussing developmental milestones that parents can expect at different ages during nutrition groups. Only one influencer reported learning about this topic. He said, “I learned that we have to run our hand over the child’s face to see if the child follows the hand movements with his eyes. Or even do this exercise with a piece of paper and if the child doesn’t follow or doesn’t see it, it’s easy to find out and take [the child] to the hospital” (Influencer, Rapale District).

Responses from caregivers, influencers, and volunteers indicate that learning to talk to children and play with children were the most common RCEL and ECD monitoring practices discussed and encouraged during nutrition group meetings. While some caregivers and influencers reported learning to read and respond to children’s signals, it was not a consistent topic covered. Monitoring children’s developmental milestones was a consistent gap in responses describing nutrition group delivery.

Project monitoring data (based on project staff observations) showed that nutrition group leaders performed at least 80 percent of the monitoring checklist correctly in 62 percent of visits in the second year of the project and in 88 percent of visits in the third year (USAID Advancing Nutrition 2023). These monitoring data show improvement during the project; however, the monitoring data and qualitative data suggest some issues with the quality of the nutrition group implementation. About half of volunteers said they faced difficulties with at least some nutrition group sessions. They said some of the topics related to RCEL and ECD monitoring were difficult to understand and unfamiliar to caregivers. For example, a volunteer explained that “when we deal with ECD as a subject, it is very complicated because there are many things and most caregivers are not aware of this topic” (Volunteer, Larde District).

### Complementary Activities

APEs and volunteers completed **home visits** to reinforce practices discussed during nutrition groups and to provide individualized, interpersonal counseling to caregivers. At these visits, volunteers and APEs said that they talk to mothers and ask them how they and their children are doing. Volunteers and APEs did not mention talking to fathers during these visits. A few noted the importance of starting home visits by having an informal conversation and being respectful. Then the volunteers and APEs said they would ask questions, give a lecture if necessary, and refer pregnant women or children to the health unit if needed. About half of volunteers said they discuss RCEL and ECD monitoring content during home visits.<sup>3</sup> A few specified the RCEL and ECD monitoring topics that they discussed during home visits, which included play and toys. Only one volunteer reported monitoring the child for appropriate developmental milestones. One volunteer specifically said they do not discuss RCEL and ECD monitoring during home visits. Only one caregiver reported discussing RCEL and ECD monitoring with a volunteer or APE during a home visit. This suggests a gap in delivery of RCEL and ECD monitoring content during home visits and limitations in interpersonal counseling on these topics.

The project also used **community videos and radio** to promote ECD practices included in the nutrition group manual. Area leaders and project implementers discussed use of these mass media approaches.<sup>4</sup> Area leaders and project implementers shared that a project partner, H2H, creates videos in communities and shows the videos to other communities, but did not provide examples of ECD practices included in these videos. Area leaders and project implementers reported that the project shared ECD content on the radio, such as through on-air debates and testimonies from mothers implementing ECD.

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<sup>3</sup> While APEs conducted home visits, interviewers did not consistently ask APEs about home visits so we do not know how commonly APEs addressed ECD during home visits.

<sup>4</sup> Interviews did not ask community-level respondents about exposure to these mass media approaches.

## Feasibility of RCEL and ECD Monitoring Integration

Respondents largely saw the inclusion of RCEL and ECD monitoring content in nutrition training and program delivery to be a feasible addition to the nutrition groups. Program implementers, government stakeholders, and volunteers and APEs did not characterize the inclusion of RCEL and ECD monitoring content as adding a time burden or not feasible due to other responsibilities. A few government stakeholders noted that it was important that RCEL and ECD monitoring content was integrated into existing nutrition services rather than trying to add a separate service that needed to be delivered. Capacity strengthening on RCEL and ECD monitoring was seen as critical for respondents across levels to be able to deliver these services, however. As discussed above, program implementers experienced challenges strengthening capacity on RCEL and ECD monitoring; such challenges included maintaining training quality down the training cascade and the low literacy levels of volunteers and APEs. The challenges that volunteers and APEs shared were largely not specific to RCEL and ECD monitoring integration, but related to broader constraints they face delivering all nutrition and health services. The most common constraint was limited financial compensation for their work, namely the low subsidy received by APEs and the lack of any remuneration for volunteers. Other constraints included limited transportation and long distances between households, difficulty changing caregiver behaviors, and having limited resources for cooking demonstrations and other activities. Another challenge volunteers noted is that it can be difficult to get caregivers to attend individual nutrition group sessions and to continue attending for the full series of 30 sessions.

## Acceptability of RCEL and ECD Monitoring Integration

The RCEL and ECD monitoring integration into nutrition groups and home visits was seen as acceptable by respondents. Program implementers and community-level workers discussed the overall importance of ECD, seeing it as sitting within their existing mandate to support child health. ECD was described as contributing to their role to support caregivers to take good care of their children so they grow and develop well. For example, a volunteer said—

“I like to encourage mothers to attend the nutrition site, teach them how to prepare porridge, explain that they should play with their children, [and] encourage them to do family planning so they don't get unwanted pregnancies and have babies every year because it weakens the body” (Volunteer, Rapale District).

Caregivers and influencers found integration to be an acceptable part of nutrition services as well. They commonly reported nutrition as the most important or interesting topic that they learned in nutrition groups, but RCEL and ECD monitoring was raised as important content by some caregivers and influencers. The most important RCEL and ECD monitoring practices that they learned included playing with children, singing to children, and talking to children in the womb. Caregivers and influencers expressed acceptance of the RCEL and ECD monitoring practices that the project promoted, although they described some practices as new. Talking to babies in the womb was particularly seen as new and surprising information. For example, an influencer said, “Many did not know that the child's brain [hears] from birth. We thought it was at the moment of learning to speak as it begins to record voices inside the womb. These things seemed like myth” (Influencer, Nacala Porto District). Caregivers and influencers seemed to accept this information though and a few shared positive attitudes toward it. An influencer shared some of what he learned, including talking to the fetus in the womb and said that “these things all seem like fun things but they are beneficial things for us adults” (Influencer, Nacala Porto District). Program implementers, area leaders, and government staff saw some RCEL and ECD monitoring practices that the program promoted as previously taboo in communities. Talking to babies in the womb was the most common taboo. Other taboos they shared were a father caressing the wife's pregnant belly, a husband accompanying his wife to antenatal care, parents playing with their child, and husbands sharing household tasks with their wives.

Caregivers and influencers were generally accepting of integration in nutrition groups and home visits. In nutrition groups, the only challenge of integration was that some said fathers did not participate in nutrition groups because they saw caring for children as outside of their role and as women's roles or women's issues. However, not all community members shared this view. Respondents said that fathers who participated did so because they like participating, feel they benefit, share the knowledge with their wives, and that they have a duty to care for children. For example, a mother said that fathers participate "because not only mothers are responsible for childcare, but also fathers have this duty" (Female caregiver, Larde District). Caregivers saw RCEL and ECD monitoring integration as an acceptable part of home visits as well. Most caregivers and influencers said that they trusted APEs to talk about RCEL and ECD monitoring content during home visits, as they already knew APEs, trusted them, and were used to receiving home visits from them. The addition of RCEL and ECD monitoring topics to the advice that they received on child health was acceptable.

### Successes

Respondents reported several successes and perceived outcomes of RCEL and ECD monitoring content integration, which supports the feasibility and acceptability of this integration. Some caregivers and influencers shared that they have changed some caregiving practices, which were most commonly playing with children and making them toys. They also referenced talking to babies in the womb as a practice they began doing. Program implementers, volunteers, APEs, area leaders, and government stakeholders also reported, consistent with caregiver reports, that caregivers have adopted some RCEL and ECD monitoring practices, including playing with children, making toys for children, and talking to babies in the womb. Some respondents also reported that fathers' involvement in these practices have shifted in some cases resulting in fathers also engaging in these practices. Program implementers also said that government and other decision makers have learned about RCEL and ECD monitoring content and now can advocate for investment in ECD as part of their roles. Some influencers, such as community and religious leaders, who participated in nutrition groups have become passionate about ECD and share the information on their own (e.g., through community meetings).

### Respondent Recommendations

Respondents provided recommendations for improving the integration of RCEL and ECD monitoring when asked—

- **To increase government commitment and ownership:** Program implementers recommended strengthening engagement with the government to increase government ownership for the intervention and that government should hold meetings at the district, provincial, and national levels to maintain commitment.
- **To incorporate in government planning:** Program implementers recommended integrating RCEL and ECD monitoring in the health sector technical working groups that address malnutrition. A government stakeholder reported that RCEL and ECD monitoring integration should be included in annual economic and social plans.
- **To strengthen integration in health services:** A few government stakeholders recommended expanding cadres of health workers that receive training on RCEL and ECD monitoring to other relevant staff such as maternal and child health nurses and pediatric units.<sup>5</sup>
- **To strengthen capacity of APEs and volunteers:** Program implementers, area leaders, APEs, and government stakeholders agreed that training should be offered for new APEs and volunteers and more frequent refresher training and supervision would help increase capacity and improve

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<sup>5</sup> This intervention was implemented after the qualitative data collection occurred.

service quality. Program implementers, area leaders, and APEs thought that community leaders could be trained to help provide this supervision. A government stakeholder said that this supervision is particularly important for APEs during their first three months on the job. Program implementers suggested providing more illustrated materials to support volunteers with low literacy. A program implementer also suggested providing more in-depth explanations about children's psychosocial and psychomotor development in training.

- **To improve APE and volunteer motivation:** Program implementers recommended considering how to increase motivation for service providers; options included inviting service providers to the district headquarters for training and providing other incentives. Area leaders and APEs recommended providing financial incentives for volunteers to increase their commitment and motivation.
- **To support APEs and volunteers:** Area leaders and APEs said there is a need to ensure APEs have needed resources including manuals, illustrated posters, supplies such as pens and paper, and transportation subsidies.
- **To support caregiver behavior change:** Program implementers, area leaders, and APEs recommended providing longer-term follow up with caregivers to support behavior change over time. They also recommended continuing to engage community leaders to reinforce education and support on RCEL and ECD monitoring through community meetings, community dialogues, etc. An area leader suggested increasing the use of practical demonstrations during nutrition group sessions to demonstrate to caregivers how to carry out behaviors including how to play with children. A few caregivers and influencers recommended continuing to educate the community about RCEL and ECD monitoring; one strategy is nutrition group sessions. A few area leaders and APEs noted that small incentives, such as a bar of soap, and providing recognition to caregivers for changing behaviors, such as offering a prize, would help increase caregiver motivation.
- **To increase inclusion of caregivers with disabilities:** A few area leaders and APEs said sensitizing nutrition group members about disabilities could help families with children with disabilities feel comfortable participating in the nutrition groups.

## Question 2: Referrals for Developmental Delays

The project encouraged APEs to monitor developmental milestones using child health cards and to make referrals to health units when developmental delays are identified (table 4). The government-provided child health cards described developmental milestones that children should reach at different ages in addition to other health topics such as child growth.

**Table 4. Promoted and Learned APE and Caregiver Practices**

Overarching Behavior in Manual	Consistently Reported Behaviors	Inconsistently Reported Behaviors
<b>Supporting and monitoring child development</b>		
Monitoring milestones using the child health card	N/A	<ul style="list-style-type: none"> <li>• APEs, volunteers, and parents observe child’s development and monitor for psychomotor delays (e.g., speech, walking)</li> <li>• APE uses health card to discuss child’s development with parents</li> <li>• Health card helps parents learn about how their child develops</li> </ul>

### Child Health Cards

The project aimed to promote the use of child health cards to monitor children’s development (figure 3). Respondents who received training did not report this as a topic that was covered in the ECD trainings. A program implementer noted that developmental monitoring and referrals were not covered in depth during training:

“We know that in the APEs’ training package this component is touched on but not in great depth, we brought... the delay in psychomotor development to the APEs so that they could pay more attention as they are community nurses... so we guided them so that during their daily activities they could pay more attention to these children with delays and make the proper referral to the nearest health unit” (Program implementer, Nampula City).

Only one volunteer reported using a health card. APEs commonly reported using the health cards, but primarily said they use the health cards to monitor children’s growth and provide appropriate counseling based on the monitoring. APEs largely said they were comfortable using child health cards and did not report challenges using the health cards. Despite this, only two APEs specified that they have used the health

**Figure 3. Example of Psychomotor Development Section of Child Health Card**

Sinais	Idade (meses)	Observações
Segue o objecto com olhar e vira a cabeça para o lado do som	Até 2	
Sustenta a cabeça e sorri quando lhe fala	3-5	
Mantém-se sentada sem apoio	6-8	
Gatinha e fica em pé com apoio	9- 11	
Anda apoiada pela mão e diz tá-tá	12-17	
Anda sozinha e usa 6 a 20 palavras	18-23	
Corre e diz o primeiro nome	24-59	
Veste-se sozinha e conta os cinco dedos da mão	Apartir de 60	

cards to monitor child development. For example, one APE described the child development portion of the health card and monitoring development. They said—

“[The health card] has a section that provides information on what to do when the child has psychomotor delay. [It has] all the guidelines on the activities that the child is expected to start doing in the intervals of months. If the child is 5 months old and does not start crawling, then he has a psychomotor delay. In this case, we have to advise the mother to simulate the child in order to recover” (APE, Nacala Porto District).

Other APEs who said that they use the health cards to monitor developmental delays and disabilities, did not describe monitoring child development but rather weighing children. This suggests that APEs did not have a strong understanding about how to use the health cards to monitor for developmental delays and did not regularly do so.

In line with what APEs said, caregivers and influencers recognized that APEs used the health cards during home visits. They primarily said the APEs use the health cards to monitor children’s growth. A few caregivers and influencers said that APEs use the cards to monitor and discuss children’s development, but they did not provide details. One caregiver noted that volunteers do not use health cards, but only health workers at facilities use the health cards.

### Referrals for Developmental Delays

Through using the health cards to monitor child development, the project intended for APEs to make referrals to the local health unit for children showing signs of a developmental delay or disability. APEs said that they routinely make referrals for children; however, this was primarily for malnutrition or other illness. Few caregivers reported experiencing or being aware of APEs making referrals to health facilities. Only two APEs specified making a referral for a child showing signs of a disability. Both described challenges with the referrals. One APE described making a referral for a delay in walking and needing to convince the mother that the child had a delay and accompanied the mother to the hospital—

“I had a 1 year and 1 month old child who couldn't walk and when he stood up he would tremble. When advising the mother, she said it was a normal delay. I made a referral and she showed me difficulties in taking her child to the hospital. I personally accompanied her. I continued to sensitize her about the risks that the child runs if [the mother] does not follow the guidelines. The case ended well; the child is already walking” (APE, Nacala Porto District).

The other APE reported making referrals for speech delays and shared a challenge: that caregivers think they will receive a simple treatment rather than the kind of interventions that are needed to treat developmental delays.

“I have registered cases linked to speech delays or speech deficiencies, for these cases I have advised them to undergo some speech stimulation and development therapies.... But I have received dissatisfaction linked to the frustrated expectations of the mothers because they think that these are cases like malaria that the child just medicates and gets better” (APE, Mossuril District).

A few respondents noted challenges with referrals. An area leader reported that some APEs are “problematic” and do not make referrals even when they identify developmental challenges. An area leader and government stakeholder reported that some caregivers may receive a referral but do not visit the health facility so more follow-up with caregivers is needed to ensure that they take their child to the health facility. One APE noted that they have faced this challenge, and they now advise the caregiver and offer to accompany the caregiver to the health facility if the caregiver is hesitant about taking a child to the health facility. An influencer reported that there was a campaign that went house to house to identify children with disabilities, but they did not identify any in their community. A program



implementer noted that even if a caregiver takes a child to the health facility with a referral, the caregiver may not get adequate support at the facility as the facility staff have likely not been trained in RCEL and ECD monitoring.<sup>6</sup>

The project intended to monitor the number of children identified with developmental delays or disability referred to a health facility. However, the project was not able to collect the data needed to report on this indicator because the APE monthly reporting form does not disaggregate this information. Several negotiation attempts were made with the Direccção Provincial de Saúde (Provincial Directorate of Health) and Ministério da Saúde (Ministry of Health) to adjust the form (USAID Advancing Nutrition 2023). The lack of disaggregation was also reported by government stakeholders in interviews as a challenge that limits referrals.

### Respondent Recommendations

Respondents provided a few recommendations about how to improve referrals for developmental delays but did not suggest how to improve the use of health cards to monitor ECD. An influencer recommended that influencers be engaged to accompany caregivers and their children to health facilities when caregivers receive a referral to a health unit to help encourage caregivers to follow through with the referral. Program implementers and government stakeholders recommended integrating identification and referral of developmental delays and disabilities in APE monthly reporting forms. A government stakeholder recommended advocating to the Ministry of Health for this inclusion. An APE suggested revisiting how to fill out the registration book in refresher training as it was a challenging topic. Lastly, a government stakeholder recommended engaging staff in psychiatry units to support ECD monitoring and follow-up.

## Conclusion and Recommendations

Respondents saw RCEL and ECD monitoring integration in nutrition programming to be largely feasible and acceptable. Limitations to feasibility were predominately related to broader constraints facing community health service delivery but were not specific to the integration of RCEL and ECD monitoring content. Adding sessions to integrate RCEL and ECD monitoring content to an already large number of nutrition and WASH sessions could have exacerbated challenges getting caregivers and influencers to attend all nutrition group sessions, although this was not directly reported by respondents. Respondents saw a few RCEL and ECD monitoring behaviors as taboo, but the project was able to share these new practices and change attitudes about them.

Implementation of RCEL and ECD monitoring integration in nutrition groups and home visits was enabled by training and support provided to volunteers and APEs at the community level. While volunteers and APEs were receptive to this training and willing to integrate RCEL and ECD monitoring content into their work, there were gaps in their RCEL and ECD monitoring capacity and thus delivery to caregivers and influencers. The training cascade was not as effective at lower levels of the cascade, in part due to the limited literacy of APEs and volunteers. The behaviors of play, making toys by hand, and talking to babies in the womb were well understood and accepted by APEs, volunteers, caregivers, and influencers. Other behaviors of responding to children's signals and attending to and monitoring children's development were not as well understood by these respondents.

Overall, respondents presented RCEL and ECD monitoring as new topics and felt that capacity on these topics was strengthened. However, RCEL and ECD monitoring integration had limitations and did not effectively build capacity on or promote all four overarching behaviors. This is in line with results from the quasi-experimental evaluation that found limited impact on early stimulation activities and no impact on ASQ developmental scores (forthcoming). Notably the concept of responsive care was not strongly

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<sup>6</sup> After the qualitative data collection, the project worked to address this issue.

understood by the volunteers and APEs, which is an important gap to address as interventions focused on responsive care have shown greater impacts on children's development (Jeong et al. 2021). Based on the findings, future integration initiatives should increase training and supervision of volunteers and APEs to enhance their knowledge of RCEL and ECD monitoring content and their skills in facilitation of the negotiated practices approach. To the extent possible, RCEL and ECD monitoring content should be simplified and the manual tailored for use by volunteers with limited literacy. Further, developmental milestones and ECD monitoring should receive more focus in training and nutrition groups as these were more challenging topics for respondents than RCEL. Learning from some of these challenges, USAID Advancing Nutrition created [videos](#) to teach these topics, focusing especially on responsive care, that can be used and studies elsewhere have shown how media content can be helpful in building capacity (Ferla et al.). More consistent monitoring of uptake and more frequent supervision should be used to ensure consistent delivery of RCEL and ECD monitoring content and inform course correction, supervision topics, and refresher trainings. Strategies to reduce time and mobility barriers to supervision, such as providing some mentoring and supervision remotely, can also be considered.

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