Transforming the Lives of Children in Rwanda: Investing in family and community-centred services

Endline evaluation summary report on the ECD and Family Programme, 2015-2017







Transforming the Lives of Children in Rwanda: Investing in family and community-centred services. Endline evaluation summary report on the ECD and Family Programme, 2015–2017

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¹ The full technical report on the endline evaluation can be found at UNICEF Rwanda, www.unicef.org/rwanda/ events 17573.html>.



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INTRODUCTION

Early childhood development has emerged as a national priority in Rwanda and is a fundamental element of the Economic Development and Poverty Reduction Strategy II (2013–2018) and the National Strategy for Transformation (2017–2024).

As a response to this priority, UNICEF, in partnership with the IKEA Foundation, the Government of Rwanda and civil society organization led by the Imbuto Foundation, designed and implemented *Transforming the Lives of Children in Rwanda: Investing in family and community-centred services*, a programme that is also known as the Early Childhood Development and Family (ECD&F) programme.

The programme was first implemented in January 2015, with the aim to give children in Rwanda the best start in life and the opportunity to thrive by investing in:

- Effective and responsive care of young children by the primary caregiver, family and community;
- Improved access to and use of quality early childhood development (ECD) and other basic social services for young children; and
- Child-sensitive policies at all levels of government.

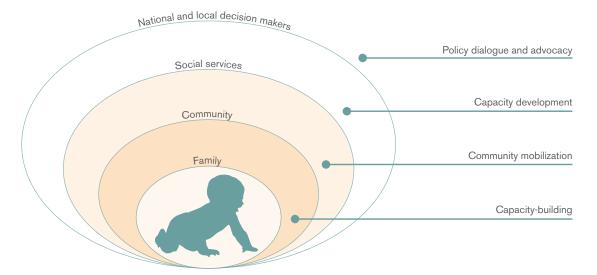


Figure 1: ECD&F conceptual model

To achieve these objectives, a comprehensive package encompassing nutrition, water, sanitation and hygiene (WASH), child protection and social protection interventions – as well as ECD services – was put in place in some of the poorest communities in 10 selected districts. The primary target groups were children 0–6 years old, their families, service providers (ECD caregivers, community health workers), government officials, representatives of civil society organizations and community representatives.

To monitor the intervention's impacts, UNICEF conducted comprehensive research on a representative sample of children and families participating in the programme, and a control group of children and families who did not participate. This report summarizes endline evaluation results as reflected in the lives of these young children and their families. It is our hope that the programme experiences captured through this evaluation will provide valuable guidance as ECD&F is continued and expanded – with early childhood development interventions offered at scale throughout Rwanda.

The Early Childhood Development and Family programme was first implemented in January 2015, with the aim to give children in Rwanda the best start in life and the opportunity to thrive.

OVERVIEW OF KEY ENDLINE RESULTS

ECD&F Programme intervention related indicators	ECD&F and control sites at baseline	ECD&F sites – endline	Control sites – endline
Family care practices			
Primary caregiver engages in three activities to promote learning or school readiness in the past week	9%	22%	9%
Children exposed to any inadequate care in the past week	46%	52%	57%
Children exposed to any violent discipline (children 24–35 months)	81%*	85%	91%
Caregivers who believe physical punishment is necessary to raise a child well	34%	28%	48%
Father cares for child daily	63%	57%	49%
Support for learning			
Availability of three or more children's books in the household	2%	9%	6%
Availability of playthings in the household (two or more playthings)	20%	53%	46%
Access to ECD and community services			
Children attend ECD programme or organized learning programme	6%	41%	16%
Children 48–59 months who attend nursery or pre-primary school	27%	47%	18%
Child development			
Children 36-59 months developmentally on track as per the ECD index	n/a	61%	52%
Water, sanitation and hygiene			
Households with an improved water source	77%	82%	72%
Households with an improved sanitation facility	69%	83%	75%
Households with a place for hand-washing	6%	32%	3%
Nutrition			
Children who are stunted (HAZ < -2)	46% Children 24–35 months	43% Children 48-60 months	41% Children 48-60 months
Children who are receiving the minimum acceptable diet	13%	58%	57%
Child health			
Children who had diarrhoea in the past two weeks	29%	15%	27%
Children who had fever in the past seven days	38%	36%	40%

^{*}Reported only for children ages 24-35 months at baseline



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OVERVIEW OF PROGRAMME ACTIVITIES

In July 2013, UNICEF and the Imbuto Foundation launched a prototype for the Early Childhood Development and Family (ECD&F) programme by building a community-based ECD centre that provided play-based learning activities for young children and counselling for parents on children's health and nutrition. This initiative generated substantial interest among authorities in Rwanda, and created demand in neighbouring communities for the development of similar centres and services.

In response to this demand, starting in 2015, UNICEF partnered with the IKEA Foundation, the Government of Rwanda and Imbuto Foundation, to offer integrated ECD&F services in 10 districts (Gakenke, Gasabo, Gicumbi, Ngoma, Nyabihu, Nyamagabe, Nyamasheke, Nyarugenge, Ruhango and Rwamagana).

Fostering optimal child development and well-being requires integrated interventions that target the multiple risks to which children are exposed. Recognizing the importance of this, key activities of the ECD&F programme include:

- Establishing community-based ECD&F centres and providing home-based care for young children;
- Offering education on parenting, and communication for social and behaviour change;
- Improving access to water, sanitation and hygiene (WASH) facilities;
- Supporting child protection and links to social protection; and
- Strengthening health and nutrition at the community level.

The programme has been rolled out in phases, beginning with development of a conceptual framework, community mobilization and construction of ECD&F centres. During this phase, a rigorous evaluation was commissioned by UNICEF and the Imbuto Foundation, in partnership with Harvard University, Partners in Health and University of Rwanda to establish a baseline for assessment of the impact of integrated ECD&F services after two years of implementation. The baseline evaluation enhanced understanding of the health,

Fostering child development requires integrated interventions



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nutrition and developmental status of young children in the target sites and the key factors that affect children, their families and the community.2

During the modelling and implementation phase, a comprehensive set of basic social services was brought to the communities, new services were piloted for feasibility and acceptability, and links were established with existing social services in the community. In addition, a system for 'real-time' monitoring was set up and operational research was conducted, following a cohort of children, parents and communities.

To date, 15 ECD&F model centres have been built in selected communities in 14 districts. Ten ECD&F centres are supported by the IKEA Foundation and are the subject of this endline evaluation. Between 2015 and 2017, the programme implemented multiple interventions and achieved significant milestones, including those briefly described below.

Support for improved family care practices: Towards the goal of ensuring effective care for young children, parenting education was provided through group sessions, followed by home visits. The system for home visits was set up in catchment areas for the ECD centres and aimed to reach expectant parents and parents of children 0-2 years old.

A communications strategy was drafted to mobilize communities and support behaviour change related to responsive and effective family care. Communication materials were developed to promote key messages for ECD topics - including nutrition, hygiene, and social and child protection; the role of fathers in parenting; and the role of religious leaders in supporting early childhood development.

Around 160 religious leaders and volunteers participated in training to promote early childhood development through religious services and door-to-door outreach. Community theatre activities were initiated in selected communities, and 30 community members participated in training on drama techniques. In addition, the radio programme 'Itetero' (Nurturing Space for Children) was launched, and is the first of its kind in Rwanda that aims to reach young children and their families with critical ECD messages.

Promoting access to and use of quality ECD and other social services: Throughout the course of the programme community-based ECD&F centres were established in targeted communities, providing play-based learning and care for children aged 3-6 years. The care for young children focuses on school readiness (early literacy and numeracy skills, socialization and socio-emotional development, physical/motor development, communication and language skills, and hygiene habits and cultural values. A special emphasis is placed on engaging fathers in caring for their children. The sites also serve as hubs for parents to meet and learn, with facilities available for such activities as demonstrating proper cooking and feeding practice, and facilitating income-generating activities. Communities in areas around ECD 'Centres of Excellence' were also provided with access to improved sources of water for drinking and washing - encompassing more than 23 kilometres of new pipeline, 12 water storage tanks and 36 new water points.

More than 18,000 locally produced children's books were published and distributed to all ECD&F centres and target communities. Ten mobile libraries offer access to books and raise community awareness of the importance of reading for children's cognitive and language development.

As part of the training for ECD caregivers, the 'Essential Package of Early Child Development and Family Services' curriculum was designed, tested and rolled out. The package was developed based on the UNICEF/World Health Organization Care for Child To date, 15 ECD&F model centres have been built in selected communities in 14 districts. Ten ECD&F centres are supported by the IKEA Foundation and are the subject of this endline evaluation.

² UNICEF Rwanda and Imbuto Foundation, Early Childhood Development and Family Services: Baseline evaluation in 20 sites in Rwanda, United Nations Children's Fund, Kigali, 2015. Available at <www.unicef.org/rwanda/events_17574.html>.

Communication materials were developed to promote key messages for ECD topics – including nutrition, hygiene, and social and child protection; the role of fathers in parenting; and the role of religious leaders in supporting early childhood development.

Development Package which was adapted to suit Rwandan context. Around 90 ECD service providers (50 caregivers, plus managers and home visitors) participated in training and received certification. A system of mentoring and supportive supervision of caregivers was also established.

Home-based ECD services were organized to provide proper care for young children, with more than 300 parents (mostly mothers) selected by the community to provide care for neighbouring children. The home-based sites are equipped with play materials and children's books, and are organized and managed by parents' groups. Parent leaders participate in training on early childhood development and the basics of facilitating play-based learning.

The ECD&F programme was integrated with ongoing initiatives in social protection, child protection and health:

- Through the main Social Protection programme in Rwanda, the Vision 2020 Umurenge Programme (VUP) the ECD&F programme provided mobile crèche childcare services to 240 households participating in VUP public works, as well as provision of flexible public works project to additional 240 households.
- In the area of child protection, a national capacity development programme was established, including a training curriculum. Child protection volunteers - one man and one woman per community - were identified and trained to provide services at the community/family level. Known as Inshuti z'Umuryango (Friends of the Family), the volunteers provide psychosocial support and referrals to relevant services, as needed. To help prevent and respond to child protection risks, the volunteers conduct regular home visits and group sessions with families. Instruments for routine monitoring and evaluation of child protection service delivery were developed, and a referral system to follow up with victims of violence was put in place.
- Regarding health care, capacity-building activities reached approximately 1,600 community health workers. This included training on the integrated ECD&F and community health package - maternal/newborn health, nutrition, hygiene and sanitation - and cohesive community case management for children under 5 years of age, along with supportive supervision for the health workers.



EVALUATION METHODS FROM BASELINE TO ENDLINE

The baseline evaluation was carried out in 2014 by the Harvard T.H. Chan School of Public Health, local non-governmental organization Partners in Health/Inshuti Mu Buzima and the University of Rwanda - in partnership with UNICEF and the Imbuto Foundation, and guided by the ECD&F Evaluation Technical Committee.3

Two central objectives of the baseline study were to assess the health and well-being of young children and families in the surveyed sites, and to provide pre-intervention indicators to enable the endline evaluation of programme impact and effectiveness. The baseline evaluation included 10 ECD&F intervention sites - two in each

³ The study tools were originally designed by the Technical Committee and the School of Public Health, in collaboration with Partners in Health/Inshuti Mu Buzima and the University of Rwanda.



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Figure 2. Map of ECD&F study sites, Rwanda

Source: UNICEF, 2014



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Two key objectives of the endline study were to assess impacts of the programme and to identify successes and areas that need adjustment going forward.

province, selected because of their rural locations and high levels of poverty - and 10 control sites, in the same sectors. The control sites were selected based on the following set of indicators to ensure comparability with the intervention sites:

- Number of households;
- Estimated number of children under 5 years;
- Estimated average household wealth;
- Distance from health-care facilities (health centres, hospitals); and
- Presence of schools and ECD centres.

Cluster sampling was used to set up a case-control design for the selection of children and caregivers into the baseline assessment. Caregivers and children were assessed in pairs, and if a randomly selected family had more than one child within the target age ranges, both children were eligible to participate in the study. A total of 884 households/ caregiver-child pairs were included in the ECD&F baseline evaluation.

At the time of the baseline, one aspect of the inclusion criteria was that participants must be the primary caregiver to a child in either of two age categories: 0-11 months or 24-35 months. At endline, the majority of children were aged 24-35 months or 48-59 months, referred to in this summary as the 'younger' and 'older' age groups, respectively.

The endline evaluation was conducted from October 2016-February 2017, and carried out in the same districts and with the same households and caregiver/child pairs (cohort) as the baseline. A total of 813 households were surveyed, representing 92 per cent of the baseline households. This summary report provides an overview of the findings that are fully described in the Endline Evaluation Technical Report, 4 validated by the ECD Evaluation Technical Committee in May 2017.

Two key objectives of the endline study were to assess impacts of the programme and to identify successes and areas that need adjustment going forward. At the time of endline data collection, there were four ECD&F sites that had been operating for less than one year and six sites operating for one year or longer. As impact of the programme would be negligible in sites with programmes operating for less than a year, the analysis of the summary report focuses on comparing control sites with ECD&F sites where interventions have been operating for at least one year. It is important to note that the results are not nationally representative and only apply to the survey sites in 10 districts.

Although measurement of children's development in low- and middle-income countries can be challenging due to the lack of locally tried and tested tools, the ECD&F evaluation benefited from previous experience in Rwanda and applied a variety of measures that were adapted for the country context. The endline study used three measures to assess children's development: the Ages and Stages Questionnaire (ASQ-3), first adapted for use in Rwanda by CARE International and further adapted as part of the ECD&F baseline evaluation; the Ages and Stages Social Emotional Questionnaire (ASQ:SE), which was also adapted to the Rwandan context as part of the baseline study; and the ECD Index, which was first used in Rwanda as part of the 2014-15 Demographic and Health Survey (DHS).

Elements of the Multiple Indicator Cluster Surveys (MICS), as well as the DHS, were also applied to assess various indicators. The UNICEF MICS Child Discipline module, for example, was used to identify the number of children exposed to harsh disciplinary practices (psychological aggression or physical punishment).5

The Early Childhood Development and Family Services Endline Evaluation Technical Report is available at www.unicef.org/ rwanda/events_17573.html>.

United Nations Children's Fund, 'Multiple Indicator Cluster Surveys: Round 5', UNICEF, New York, 2012. For more information on MICS, see: UNICEF, http://mics.unicef.org>.

To enrich the opportunities for learning from the ECD&F programme, a qualitative component was included in the baseline and endline evaluations. This involved three indepth interviews per intervention site with key informants, three focused interviews with caregivers who used ECD&F services, and five focus group discussions with parents, one in each of Rwanda's five provinces. Results of the qualitative component are highlighted throughout the report to enrich the quantitative analysis results.

Detailed information on these and other tools used to measure the ECD&F programme indicators is provided in the Endline Evaluation Technical Report.⁶

The evaluation results presented in this summary are organized around the programme objectives for core family care practices, the physical environment and well-being of young children, and access to and use of quality ECD and other basic social services. The policy environment and effect of the interventions on policies related to early childhood development were not a subject of this research.

For the full comparison from baseline to endline, and between intervention and control sites, including significance testing of results (p values), please refer to the full technical report.

Definitions of key indicators presented in this summary report are provided in Annex I.



⁶ The Early Childhood Development and Family Services Endline Evaluation Technical Report is available at <www.unicef.org/ rwanda/events_17573.html>.

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ENDLINE FINDINGS

Household and caregiver characteristics

Exploring the basic characteristics of the 813 households surveyed at endline, the average household size was 5.4, the average number of children aged 17 and younger was 3.1, and the average number of children under 5 years was 1.5. ECD&F intervention sites had a larger average household size (5.5) than control sites (5.1).

In most households, both the biological mother (95 per cent) and a second primary caregiver (62 per cent) were living in the home. The biological father lived in the home in 49 per cent of the households surveyed. These proportions were comparable between control and intervention sites. Regarding biological mothers in the home, the proportion was similar to the baseline (99 per cent), while the proportion for biological fathers was much higher at baseline (78 per cent) - indicating demographic changes in the family environment that may have important effects on children's development.

In 93 per cent of households, the biological mother was the primary caregiver, and this did not differ much between control and intervention sites, nor between the baseline and endline. Other primary caregivers interviewed for the endline study included grandparents (4 per cent) and biological fathers (2 per cent). When looking at education levels for caregivers across both intervention and control sites, 17 per cent had no formal education, 75 per cent had a primary education, and 8 per cent had achieved a secondary or higher education - but 23 per cent of caregivers reported they were unable to read or write.

Economic status: Household wealth was assessed in two ways in the baseline and endline evaluations – by ownership of durable assets and, according to *Ubudehe*, Rwanda's community-based ranking system.

In the baseline survey, 13 per cent of households had electricity, 54 per cent owned a radio, 65 per cent had a mobile phone and 18 per cent owned a bicycle. Overall, asset ownership at endline was not significantly different across study sites.

Ubudehe rankings were used to identify the most vulnerable households and to prioritize the provision of key social services, such as subsidized health insurance and enrolment in social protection programmes. ⁷ The sample shows that ECD&F sites had the highest percentage of households in *Ubudehe* 1, with 16 per cent, and control sites had 14 per cent.

Caregivers' well-being: Poor mental health among parents, particularly mothers, can lead to poorer developmental outcomes and nutritional status of children. While the ECD&F programme was not designed to intervene in this area and did not have any specific interventions to address depression, anxiety or alcohol abuse among caregivers, these factors were assessed as a measure of psychological distress, which is known to have important implications for young children's development.

The percentage of caregivers with elevated symptoms of distress was somewhat lower in ECD&F sites (33 per cent) than in control sites (37 per cent). These elevated symptoms of distress, such as anxiety and depression, are twice as high among the poorest caregivers compared to the richest.

⁷ In 2014, when the baseline evaluation was conducted, the ranking system had six categories, from the poorest households, placed in Ubudehe 1, to the wealthiest households in Ubudehe 6. Categories 1 and 2 were the primary targets for poverty-related programmes. Since then, the system has been revised and condensed to four categories, and the poorest households (Ubudehe 1) are eligible to participate in poverty-related programmes.

Exposure to household conflict: Although this was not an explicit component of the ECD&F programme, exposure to conflict within the home was measured as a way to identify potential risks to child development in the intervention communities. One quarter of all caregivers reported having serious conflicts in the home within the past six months, which was consistent across all study sites. From baseline to endline, in the ECD&F sites, the proportion of children exposed to serious conflict in the home dropped from 31 per cent to 22 per cent; the proportion in control sites also declined, from 32 per cent at baseline to 27 per cent at endline.

Family decision making about children: Understanding how decisions are made about children's health, nutrition and participation in ECD programmes is an important factor for programme design. The ECD&F programme aims to promote joint participatory decision making between mothers and fathers in the household. To assess this, caregivers were asked about decisions on whether children attend ECD services, what to do when a child is sick, and what the child eats.

Decisions regarding a child's participation in ECD services was most often made jointly by mothers and fathers, and the proportion was higher in the ECD&F sites (55 per cent) than control sites (43 per cent). Across ECD&F sites and control sites, there was no significant difference in whether decisions about what to do when children are sick were made jointly, or by either the mother or father alone; feeding decisions, however, were almost always made by the mother alone.

Parents in the ECD&F sites show trends of more frequent joint decision making between mothers and fathers (33 per cent) compared with control sites (22 per cent). Overall, shared decision making tends to increase as the household's wealth increases.

"[My husband and *I*] help each other in household chores. Suppose I am not available at home, he knows well that he has to take care of the child and take the child to the centre. We sit down as husband and wife and look at a list of household chores and then decide together who will be responsible. As you can see, this has helped to improve our relationship."-Mother,Rwamagana





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Core family care practices and home environment

The home environment in which children are raised shapes their future. The ECD&F programme aimed to promote positive parenting practices by encouraging caregivers to spend time playing with their children, making toys, and teaching their children new words, games or skills every day. These and other parenting practices were assessed by asking questions about the interactions between caregivers and their young children. Results regarding the main family care indicators are outlined below.

Caregivers' support for learning and healthy child development

Stimulation promotes early learning and brain development, which occurs most rapidly during the first few years of life. Early learning helps prepare children for success in school and subsequently later in life. As part of the ECD&F interventions, parenting education included group sessions followed by home visits. In addition, parents were reached with key messages and communication materials. At baseline and endline, the primary caregivers were asked if they engaged in three activities in the past week (sing songs/tell stories, look at pictures in printed materials or teach the child something new).

At endline, 22 per cent of caregivers engaged in activities to promote learning, versus only 9 per cent in control sites. This is a significant increase from the baseline for ECD&F sites (9 per cent), while no improvements were seen in this indicator in control sites from baseline to endline.

The frequency of daily engagement by fathers in their children's care at endline was similar across ECD&F and control sites, with about half of fathers across all groups participating in childcare on a daily basis. Although engaging fathers in caring for their children was an important part of the programme, there was a slight decline in their engagement from baseline, although this decline was less in ECD&F sites compared to control. This can be partially explained by children's increased ages, as a newborn requires more care than a toddler.

At endline, 9 per cent of caregivers in control sites engaged in activities to promote learning, while 22 per cent of caregivers did so in the ECD&F sites.

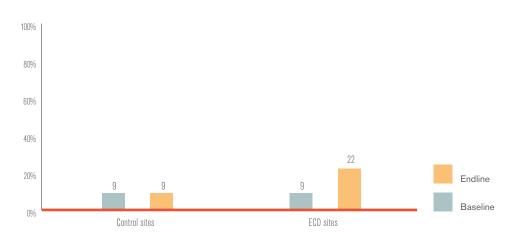


Figure 3. Percentage of caregivers who engaged in three activities to support learning in the past week, at endline

Building more engaged relationships between parents and children through play and education demonstrated an impact for families. The ECD&F programme provided opportunities to learn about the benefits of playing with children in simple ways that could be part of families' daily lives. The qualitative evaluation highlighted that although some parents felt that their responsibilities as a parent did not include playing with their children, others began to think differently - engaging with their children on new levels, and learning ways to teach their children through fun activities.

Regarding fathers' engagement with their young children, although the quantitative data show a slight decline in fathers' involvement, participants in the interviews and focus group discussions noted that fathers' interactions with play and caregiving increased after involvement with the programme. Participants also reported increased shared responsibility between mothers and fathers in their home.

"As parents we used to think that we should not play with children. We used to think that games and play were for the children only. But now we have been trained that adults should play with the children and make them feel free and happy. This has been a new revelation." - Mother, Rwamagana

"We thought that once you feed your child lunch that's all. You don't need to do anything else. But they taught us and told us that you could take a little time, a very little time, and grab a little ball or play 'ikibariko' with your kid for like 30 minutes and then go back to your daily activities." - Mother, Nyarugenge

"The child's father didn't know that he could just grab a ball and play with his child. He would say, 'Go away! Me play with you?' But now the child comes and says, 'Dad let's play!' The ECD programme taught us. The father also feels that it's important and that it's his obligation, and the child is happy. The child is really happy even when they play for a few seconds." – Mother, Nyarugenge

"A lot has changed because my husband now spares time for [the] children and plays with them in addition to asking them what they have learnt at school. For that reason, the children are so happy and I, as the mother, am overjoyed about this positive change. This was therefore one of the main changes in our family, thanks to the introduction of the ECD programme." – Mother, Rwamagana



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Exposure to books and playthings, and other children

Exposure to books provides a foundation for developing early literacy skills, and the presence of books in the home is important for future performance in school. To support this aspect, children's books are increasingly being made available in Rwanda in the local language, Kinyarwanda. But only 9 per cent of households in ECD&F sites and 6 per cent of households in control sites had three or more children's book at endline. Nonetheless, this is an increase compared to the baseline, when only 2 per cent of households in ECD&F sites and 1 per cent in control sites had three or more children's books available.

The presence of playthings, whether homemade or purchased, is also important for promoting stimulation and learning. The ECD&F programme provides access to toys during programme activities and also teaches and encourages parents to make toys out of locally available materials for play within the home.

The endline shows a significant difference between study sites with regard to households having two or more playthings in the home, with 53 per cent of households in the ECD&F sites having two or more playthings available, compared with 46 per cent in control households.

There was no difference in the proportion of playthings available in the richest and poorest households in ECD&F intervention areas (59-60 per cent), but this was not the case in control sites (49 per cent of poorest versus 61 per cent of wealthiest households). This result is most likely due to the ECD&F programme's promotion of local toy-making using common household objects, making toys accessible to all households regardless of their socio-economic status.

In addition to books and playthings, it is important for children to have exposure to other children their age (playmates) to promote optimal social development, providing them with opportunities to develop social skills, learn through play with peers, and engage in more imaginative play activities. At endline, 95 per cent of children had playmates their own age; this was true across all study sites and did not vary based on the child's sex, age or household wealth quintile. At baseline only 59 per cent of children had playmates, partially explained by their young age at time of baseline.



A young child's home environment plays a key role in child development. This section discusses results regarding levels of care and discipline in the home.

Inadequate care of young children

Inadequate care in the home is defined as being left in the care of someone younger than 10 years old for more than one hour in the past week, or being left alone for one hour or more in the past week. The ECD&F programme directly addresses concerns about inadequate care by providing options for children at centres, home-based childcare programmes, and mobile crèches at some VUP social protection public works sites. All of these services provide a safe, stimulating environment for children, while enabling caregivers to work or participate in other activities without leaving their children at home unattended or under the care of other children.

The proportion of children exposed to any inadequate care at baseline and endline in ECD&F sites was 46 per cent and 52 per cent, respectively; in control sites, the proportion increased from 46 per cent at baseline to 57 per cent at endline. While results indicate



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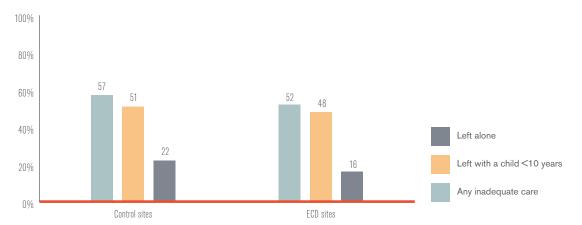


Figure 4. Type of inadequate care children were exposed to, at endline

that the ECD&F programme did not reduce exposure to inadequate care, it may have prevented a larger increase than would have otherwise occurred.

Exposure to inadequate care was more common for the older age group of children in the control sites (66 per cent) than younger children in the control sites (47 per cent), but in the intervention sites there was not much of a difference by age, with about half of children in each age group exposed to inadequate care.

The most common type of inadequate care that children are exposed to is being left with another child under 10 years, which represents about half of children across all study sites. In control sites, 22 per cent of children were left alone versus 16 per cent in ECD&F sites.

Child disciplinary practices

Child discipline is an integral part of child rearing in all cultures. The ECD&F programme aimed to uphold every child's right to be free from all forms of violence by promoting parenting education and positive disciplinary practices as an alternative to harsh methods of discipline. At the time of the endline evaluation, however, the child protection component of the ECD&F programme aimed at prevention of violence was not yet fully in place, which is one factor to be considered in the interpretation of results.

Violent discipline measures children exposed to physical punishment and/or psychological aggression in the past month.

Rates of violent discipline significantly increased in both ECD&F sites (48 per cent at baseline, 85 per cent at endline) and control sites (51 per cent at baseline, 91 per cent at endline). However, if only looking into the older age group (24-35 months at baseline and 48-59 months at endline), the increase is not significant - 81 per cent of children in this age group experienced violent disciplinary practices at the time of baseline. This is not necessarily surprising, as the use of physical punishment in settings where it is a common form of discipline tends to increase as children get older (the younger age cohort was 0-11 months at baseline). Physical punishment was the most common form of violent discipline, whereas severe physical punishment (beating the child as hard as one could and repeatedly or hitting/slapping the child on the face, head, or ears) was rare (8 per cent overall). The prevalence of this practice was similar in regard to girls and boys, and across wealth quintiles and levels of caregiver education.

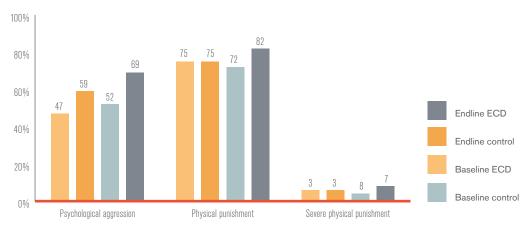
While the practice of violent discipline remained high at endline, there are some indications that caregivers' attitudes were shifting as a result of the intervention among those in the

"Some people think it [beating] is the best way to punish children for they say they were also beaten in their young age and that if they had not been beaten they would not be the people they are today. That's the way we have all been raised: Whenever we did something bad we were punished. Many people think it is the best way to raise children." -ECD&F staff member, Gasabo

"There are some parents who stick to their old mindset and who do not want to change and who say 'I will continue to beat my child because my parents used to beat me and that this is why I was able to learn and acquire wisdom and knowledge.'" – ECD&F staff member, Gakenke

"As I grew up in that context. I was also convinced that I should discipline each time they misbehave. I thought beating a child was the only acceptable and normal punishment. Since this ECD programme started in this area, they sensitized us not to beat our children because beating may just hurt the body but never cures a bad habit." – Mother, Nyarugenge

"We used to beat when the children would not respond to what we were telling them ... I have now learned that it is important to talk to the children and attentively listen to them ... instead of applying the rod as a form of punishment." -Mother, Rwamagana



Endline ECD&F includes only sites operating for >=1 year Baseline includes only children ages 24-35 months at baseline (excludes 0-11 months of age)

Figure 5. Types of violent discipline used in the past month, at baseline and endline

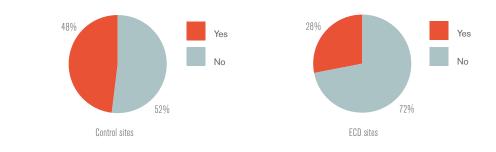


Figure 6. Percentage of caregivers who believe physical punishment is necessary to raise a child well, at endline

ECD&F sites – where 28 per cent of caregivers believe physical punishment is necessary to raise a child well, compared to 48 per cent in control sites. The qualitative results also indicate the positive shift in attitudes towards violent disciplinary practices.

Water, sanitation and hygiene at home

Proper WASH facilities and practices are important components of early childhood development, affecting outcomes for health, nutrition, education and protection. At the ECD&F model centres, child-friendly sanitation services were installed and good hygiene behaviours - such as hand washing at the proper times - were promoted for both parents and children. The communities surrounding the ECD&F centres also benefit from increased access to improved water sources, and were mobilized to construct household latrines and adopt safe hygiene practices using community-led and demand-driven approaches.

One component of the ECD&F programme was to provide access to improved drinkingwater sources for communities in areas around the ECD centres. At endline, 82 per cent of households in ECD&F sites and 72 per cent in control sites had access to improved water sources – a significant increase from 77 per cent at baseline in intervention sites,

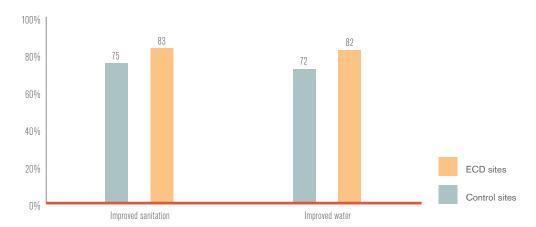


Figure 7. Percentage of households with access to improved water and sanitation, at endline

though in control sites, the coverage of improved water sources remained unchanged. The discrepancy by wealth was less apparent in ECD&F sites at endline, which is a positive improvement from baseline, when access decreased as wealth decreased.

Regarding access to an improved sanitation facility, 83 per cent of households in ECD&F sites had access, compared with 75 per cent in control sites. At baseline, 69 per cent of households in all sites had access to an improved sanitation facility. The disparities by wealth in availability of sanitation facilities are decreasing.

In ECD&F sites, the proportion of households that stored water in closed containers to prevent contamination increased from 43 per cent at baseline to 49 per cent at endline, but in control sites, this practice remained unchanged (44 per cent).

The percentage of households with a fixed place for washing hands saw a fivefold increase in ECD&F sites, from 6 per cent at baseline to 32 per cent at endline. But in control sites, this proportion actually decreased from 5 per cent to 3 per cent. Wealthier households reported having fixed places for hand washing more often than poorer households.

In addition to assessing the availability of hand-washing supplies, particularly soap, caregivers were asked an open-ended question about times when they always wash their hands (after using the toilet, before cooking, before eating and before feeding young children). Caregivers reported always washing their hands after using the toilet nearly twice as often in ECD&F sites at endline (63 per cent) compared to baseline (35 per cent).

Nutrition and feeding practices at home

Proper nutrition is a good indicator of a child's overall health, as malnutrition contributes to poor health and development among young children. The evaluation used various indicators to assess nutrition, such as stunting (whether a child is too short for her or his age), child feeding practices (which food groups and how often fed), and food security (whether households have enough food).

To address malnutrition, the programme supported procurement of growth-monitoring equipment and essential commodities such as micronutrient supplements. The network of community health workers was engaged to improve parents' and caregivers' nutritional practices through counselling, demonstration kitchens and the establishment of kitchen gardens. Growth monitoring was carried out slightly more consistently than the monthly

In ECD&F sites there were less disparities in access to improved drinking water based on wealth, versus control sites.

The percentage of households with a fixed place for washing hands saw a fivefold increase in ECD&F sites – from 6 per cent at baseline to 32 per cent at endline.

"No, we do not have enough food. Though we planted beans, most of the harvest has been spoiled due to the drought. Today, one kilogram of cassava flour is five hundred francs [RWF]. So the answer is no, food supply is not enough." - Mother, Nyarugenge

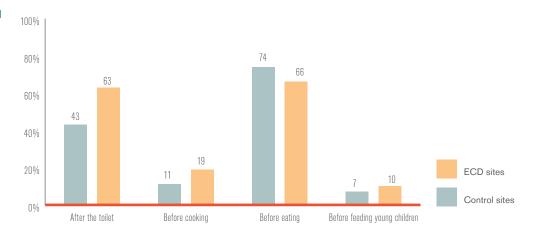


Figure 8. Times when caregivers report to always washing their hands, at endline

visits. In total, around half of children in all study sites had their growth monitored in the past month. When looking at ECD&F sites, the proportion of children's growth monitored by a community health worker was 56 per cent at baseline, but declined to 47 per cent at endline (64 per cent at baseline and 56 per cent at endline in control sites). This could be due to various factors, such as shifts to facility based growth monitoring, and the children growing older and thus less priority placed on growth monitoring.

For the interpretation of endline evaluation results presented in this section, it should be noted that:

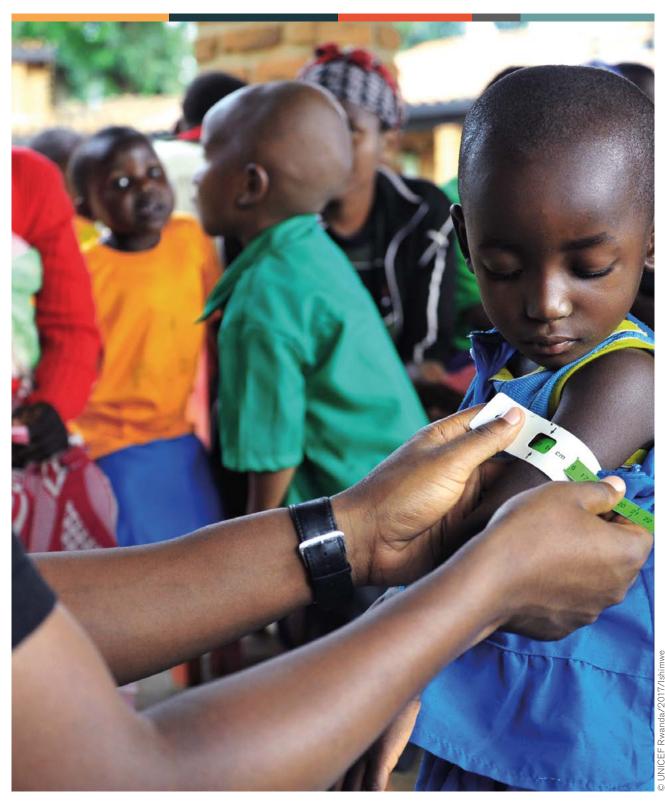
- Food insecurity has increased in parts of Rwanda since the time of the baseline (2014), as documented in various research studies and evaluations, due to the impact of seasonal drought, among other factors.
- The roll-out of nutrition-related interventions in the ECD&F programme and other programmes has been universal in targeted districts, hence both control and intervention sites have received these interventions.
- The roll-out of the ECD&F programme's nutrition-related interventions was delayed in comparison to the implementation of other activities.

Dietary diversity is a vital factor in ensuring children's growth and development. At endline, it was evaluated by asking caregivers if the child ate foods from seven different food groups (legumes, dairy products, meat, etc.) during the day or night preceding the survey. When compared to baseline, the proportion of children meeting the minimum dietary diversity criteria substantially increased in all study sites. At endline, the proportion was similar across ECD&F sites (58 per cent) and control sites (57 per cent), up from 13 per cent at baseline. At endline, 56 per cent of boys and 61 per cent of girls in ECD&F sites met diversity criteria, compared with 61 per cent of boys and 53 per cent of girls at the control sites.

Although differences in dietary diversity by wealth exist, this difference is less pronounced in ECD&F sites. The proportion of children who met minimum dietary diversity increased with the primary caregiver's level of education.

One cause of a poor diet is food insecurity, measured by low food consumption, high expenditure on food and negative coping strategies in the past week. At endline, 9 in 10 households were experiencing food insecurity, with little difference between control and intervention sites (92 per cent and 91 per cent, respectively). All of the poorest families, and 76 per cent of the wealthiest, had faced food insecurity in the past week. In ECD&F

sites, the proportion of food-insecure households increased from 79 per cent at baseline to 91 per cent at endline, and in control sites, this proportion rose from 80 per cent to 92 per cent. The non-significant differences in nutrition measures demonstrate, again, that the nutrition interventions were rolled out district-wide, hence both ECD&F intervention and control sites benefitted equally.





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Access to and use of ECD and other social services for young children

Rwanda has made tremendous investments in creating access to core services and programmes that support the well-being of children and communities. These services include a decentralized public health system, and universal access to primary education through free and compulsory schooling. To close the gap in access to services for young children, however, more investments that promote childhood development and early learning are needed. This section outlines programme results related to improved opportunities to access early childhood services and other social services in the surveyed sites.

Access to ECD services

A core part of the ECD&F programme is the establishment of model centres that offer play-based learning and care for children aged 3-6 years, a place for parents to participate in parenting education, and links to other social services such as health, nutrition and child protection.

In the ECD&F sites, 41 per cent of children attended any ECD or organized learning programme, compared to 16 per cent of children from control sites. The proportion of girls who attended any ECD or organized learning programme was higher than the proportion of boys (57 per cent and 43 per cent, respectively) in the ECD&F sites. This may demonstrate a positive benefit of ECD&F programmes in reaching girls, who appear less likely to attend these services elsewhere.

The proportion of children who attended any ECD or organized learning programmes also varied by age, with access among the younger children significantly higher in ECD&F sites (21 per cent) than in control sites (7 per cent) with access among the younger children (24-35 months) significantly higher. In control sites, slightly more boys than girls attended any ECD or organized learning programme. This may be attributed to the unique programming focus on reaching the family and caregivers of children under 3 years. Nearly half of the children from ECD&F sites attended pre-primary school, compared to just 18 per cent of children from control sites.

Access to services among the poorest families was greater in ECD&F sites (37 per cent) compared to control sites (14 per cent). This demonstrates progress towards providing equitable access to services for all children and families in ECD&F programme sites which is a key objective of the programme.

In the ECD&F sites, 41 per cent of children attended any ECD or organized learning programme, compared to 16 per cent of children from control sites.

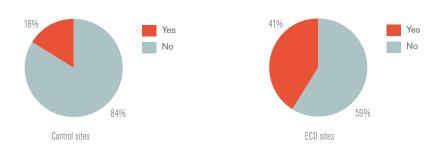


Figure 9. Percentage of children who attend any ECD or organized learning programmes

During a focus group discussion, a mother described the reality of the lives of many parents who work in the fields. They have two choices: Leave the child at home alone, or take the child with them. Either way, the parent will have some level of worry and stress. With the ECD&F programme options, parents could manage their work, as well as feel that their children are safe.

"Just imagine how a mother, who sets out to till her family land, leaves alone with her young child left behind and alone at home in the village, or alternatively, carries her child all day long, while at the same time she carries her hand-hoe and a bundle of firewood, all together! But these days when a mother leaves her young one in the caring hands of the ECD centre caregivers, she is rest assured that the child is safe." – Mother, Ngoma

Both the home-based and centre-based ECD&F sites offer children a place where they receive supervision from caregivers who have participated in ECD training. In addition to providing a safe educational environment, a community-wide impact mentioned in several locations during the qualitative evaluation was that fewer children were wandering around village streets after the ECD&F programmes were introduced.

"Our children do not roam about in the village or along the streets as it was the case before. We used to be worried leaving our children alone at home. Children used to play in dirty, muddy water and this was the source of many diseases since they would eat anything dirty." – Mother, Gasabo

Furthermore, the qualitative evaluation highlights that parents discussed the ECD&F programmes and/or services in very positive ways regarding the changes they noticed in their children, including the observation that they were happier and more social. Parents and community leaders were impressed with how children improved in readiness for school, and mentioned skills such as counting, learning the alphabet, learning how to act in a classroom and gaining an overall eagerness to go to primary school. They also noted that children learned about proper hand washing, before eating and after using the toilet.

Parents also spoke about stronger social networks due to the training and socialization opportunities offered by the ECD&F programme and services, and discussed new relationships with other families in the neighbourhood and emotional support from neighbours and newly met friends.

"Parents were rather surprised to find out that the ECD programme admits all children without any discrimination, including children from poor or indigenous families. For that reason, some parents initially refused to enrol their children in the programme because they thought they did not have sufficient financial capacity to meet the school requirements." -Mother, Rwamagana

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"Children have become more joyful, happier, and endearing." - Mother, Nyarugenge

"I can see there has been a change, because when you look at children from ECD you can see when they meet other children, they speak to them in English as if they were [native speakers]." – Local leader, Gasabo

"The centre is like a home, which brings us [parents] together." -Mother, Nyarugenge

Perspectives on centre-based and home-based ECD&F

Parents engaged with the programme shared many questions about ECD&F as it entered the community, as well as positive responses as it was implemented. Some community members did not think the ECD&F programme would work at first, but they later saw the benefits and wanted to enrol their children. Others were still apprehensive at endline and did not yet want to participate.

Some respondents had the impression that ECD&F centres and other related services were only for wealthy families. Even when it became clear that the programme was available for all children in the community, many held the perception that it would eventually change and become unaffordable.

Another common perception was that the home-based programme was not as good as the centre-based sites due to the different levels of training for caregivers in each setting. The opportunity to learn French or English at centre-based programmes was noted as a benefit, but it was also a source of concern. Parents leading home-based groups were often not able to speak English or French, and some felt they were not as qualified as teachers in the centres.

Additionally, the physical structure of the centre- and home-based locations was very different because the centres were built specifically for the ECD&F programme. A mother equated the home-based scenario with children being at home, not school, because the floors were mud, rather than cement.



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At times, differences between the two programmes caused jealousy in the community. A staff member from an ECD centre noted that parents with children in the home-based centres were often envious because parents with children in the centre-based programme were not required to be caregivers at the centre. Some parents mentioned that they did not want the responsibility of being a caregiver in the home-based programme. In one district, participants in a focus group discussion spoke about how some families were suspicious of sending their children to the home-based programme at a neighbour's house.

Barriers to participation in the ECD&F programme

Financial restraints were one of the main barriers to ECD&F programme use discussed in the interviews and focus groups. From the perspective of the parents who used the services, the contribution for porridge prevented some families from participating on a long-term basis or prevented them from joining the programme in the first place. During a focus group discussion, one mother explained how the contribution forced some families to quit the programme and suggested providing assistance to those who cannot afford the contribution as a way to keep these families engaged.

Others mentioned being forced to choose between feeding their family and making the contribution to the ECD&F programme. Although the contribution amount may seem minimal (200–500 RWF), it is still beyond the reach of many of the poorest families in Rwanda.

Another barrier noted by some parents was the distance to an ECD centre. Parents also mentioned that the centre facilities were quite different from their individual homes and their daily situation. This made it a challenge to encourage children at home to continue with the skills they had learned at the centre. After learning how to use toilet paper, for example, some families could not afford to buy toilet paper for household use. Also, while there were plenty of books and toys in the centres, many homes lack toys and books, so it is difficult to keep up the play and reading activities.

Access to health services

Rwanda achieved the Millennium Development Goal targets for maternal and child health primarily because of its concerted investment in a comprehensive health system, supported by UNICEF and other partners. The ECD&F intervention benefited from that investment and aimed to establish effective linkages between the targeted communities and health facilities and community health workers. In Rwanda's health-care system, a network provides every village with three community health workers who are responsible for detecting and treating common childhood illnesses. They also conduct monthly growth monitoring and provide referrals in cases of acute malnutrition. According to the national programme, all children under 5 years should be visited by community health workers once per month.

The ECD&F programme relied on the existing network of community health workers that reaches all villages in Rwanda, and conducted training sessions to enhance their skills related to young child development. In addition, functional links were created between the health system and ECD centres.

Health insurance: *Mutuelle de Santé*, Rwanda's system of community-based health insurance, has improved access to health-care services for both children and adults. While increasing access to health insurance was not a specific target of the ECD&F programme, it is an important facilitator of access to health care in Rwanda, and there are many ongoing efforts to promote insurance coverage through *Mutuelle*. Therefore, this factor was evaluated at baseline and endline.

"We were concerned that children who would be studying at the ECD centre would learn to speak English. We wondered what would happen to our children because a lot of us as parents are illiterate." — Mother, Rwamagana

"In my village 23 parents had been selected [for the home-based programme] ... People thought the programme would provide teachers. But they finally noticed the parents had to care for the children themselves, and some parents dropped from the project." – Mother, Nyarugenge



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In ECD&F sites, the proportion of households who reported having a family member covered increased from 57 per cent at baseline to 68 per cent at endline; in control sites, the proportion decreased, from 65 per cent at baseline to 59 per cent at endline. Overall, as expected, the percentage of households with health insurance increased in the higher wealth quintiles.

At endline, insurance coverage for children was higher in ECD&F intervention sites (69 per cent) compared to control sites (57 per cent).

Access to social protection

The main social protection programme in Rwanda is the Vision 2020 Umurenge Programme (VUP), which provides several services to households in the lowest *Ubudehe* categories. These services include temporary 'cash for work' projects (public works), direct cash transfers for households with no labour capacity, and some financial and community education programming.

The ECD&F programme piloted new child-sensitive social protection projects in two districts (Gakenke and Nyabihu) that were implemented by CARE International alongside the Government's VUPs. For pregnant and breastfeeding women and households with young children, these programmes included child-sensitive public works options (options that adjust public works to the caring needs of households with young children through measures such as flexible working hours, availability of child care at work sites, and other measures) that were closer to villages and less labour-intensive than traditional public works. The second programme was a mobile crèche set up at public work sites to provide on-site childcare for children whose parents attend public works programmes.

The social protection pilot in the two districts was also evaluated in a separate study.8 Endline evaluation results indicate that households' participation in the child-sensitive VUP increased over time: in Nyabihu, 17 per cent participated; in Gakenke, 23 per cent participated. Of the control households, 6 per cent participated.

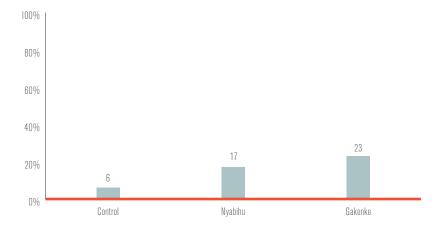


Figure 10. Percentage of households that participated in the child-sensitive VUPs

⁸ The results of this study are available at https://www.unicef.org/rwanda/events_20983.html.

Children's well-being and development

Impacts of the ECD&F programme interventions on vital aspects of children's well-being - namely health, nutrition and child development - are discussed in this section. Although these interventions have only been running for a short period of time, and hence it is too early to measure impact, significant positive changes in child health and development have been noted after only two years of programme implementation.

ECD&F sites showed declines in diarrhoea prevalence, from 29 per cent at baseline to 16 per cent at endline; these gains were not seen in control sites.

Child health

This section summarizes findings on diarrhoea, cough and fever, which are primary symptoms of major childhood illnesses, including malaria and measles.9 There were no differences in fever prevalence from baseline to endline in either ECD&F intervention or control sites.

ECD&F sites showed declines in diarrhoea prevalence from 30 per cent to 19 per cent for the younger age group, and from 27 per cent to 12 per cent for the older age group. These gains were not seen in control sites. Younger children were more likely to have diarrhoea than the older group of children in control sites (31 per cent versus 25 per cent) and ECD&F intervention sites (19 per cent versus 12 per cent). Children from poorer families were more likely to have diarrhoea than children from wealthier families.

ECD&F sites showed a decrease in prevalence of coughing, from 58 per cent at baseline to 48 per cent at endline, which was not seen in control sites (53 per cent and 52 per cent, respectively).

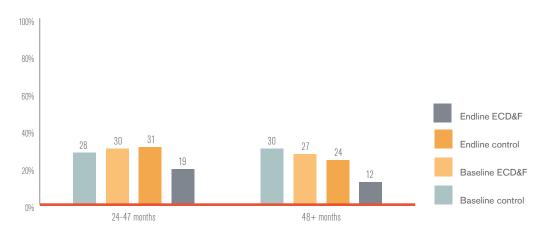


Figure 11. Prevalence of diarrhoea across study sites, by age

National Institute of Statistics of Rwanda, Rwanda Demographic and Health Survey (RDHS), 2014-15: Final report, NISR, Ministry of Health and ICF International, Rockland, Md., March 2016, p. 135. Wamani, Henry, et al., 'Boys Are More Stunted than Girls in Sub-Saharan Africa: A meta-analysis of 16 demographic and health surveys', BMC Pediatrics, vol. 7, no. 17, 2007, available at https://bmcpediatr.biomedcentral.com/articles/10.1186/1471-2431-7-17.



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Child nutritional status (stunting)

Across study sites at endline, children were affected by consistently high rates of stunting and a higher percentage of boys were stunted compared to girls, a pattern that has been seen throughout sub-Saharan Africa.10

In ECD&F sites, the prevalence of stunting among children aged 24-35 months was 45 per cent at baseline; at endline, when these children were aged 48-60 months, this figure dropped to 43 per cent. In the control sites, stunting rates fell from 47 per cent to 41 per cent, over the same period for the same age group. Children in the poorest households (53 per cent) are more likely to be stunted than children in the wealthiest (15 per cent), however, the number of observations are too few to disaggregate between ECD&F and control sites.

Again, it should be noted that nutrition interventions were carried out covering whole districts, hence both ECD&F interventions sites and control sites benefitted from nutrition interventions.

Child development

Child development is at the heart of the ECD&F programme, and the Ages and Stages Questionnaire (ASQ) and the MICS ECD Index were used to measure results in this fundamental area. The ASQ measures five domains of child development: gross motor skills, fine motor skills, communications skills, problem-solving skills and personal-social development. A child is considered to be developmentally on track in the ASQ if above thresholds in all five of the domains. The other measure of child development, the ECD Index, only applies to children aged 36-59 months, and measures four domains of child development: literacy-numeracy, physical, social-emotional and learning. The ECD Index is calculated as a percentage of children developmentally on track in at least three of the four domains.

While overall the proportion of children who are developmentally on track is low, it is important to interpret these findings with caution due to the lack of Rwanda-specific



Figure 12. Percentage of children from ECD&F sites developmentally on track according to ASQ-3 domains, at endline

¹⁰ Wamani, Henry, et al., 'Boys Are More Stunted than Girls in Sub-Saharan Africa: A meta-analysis of 16 demographic and health surveys', BMC Pediatrics, vol. 7, no. 17, 2007, available at https://bmcpediatr.biomedcentral.com/ articles/10.1186/1471-2431-7-17>.

thresholds. In addition, it is important to recognize the rather stringent scoring system that considers a child to be potentially delayed if he or she is behind on any single domain.

Children in ECD&F sites were more frequently on track in all five ASQ-3 domains of development than children in the control sites. Further disaggregation is not possible due to the low number of observations.

Children from ECD&F sites operating for more than a year performed well in many of the assessed domains at endline, such as communication (85 per cent on track), gross motor (80 per cent on track) and personal social skills (68 per cent on track). Children in ECD&F sites were more frequently on track in all five ASQ-3 domains of development (23 per cent) than children in control sites (14 per cent). In contrast, only 50 per cent of children were on track for the ASQ-3 fine motor domain and 57 per cent for the ASQ-3 problem-solving domain.

The other measure of child development, the ECD Index applied to older children, shows that 61 per cent of children aged 36-59 months were developmentally on track in ECD&F sites, versus 52 per cent in control sites (difference not statistically significant).

Across all sites, 45 per cent of boys were developmentally on track, compared to 63 per cent of girls. This disparity was smaller in the ECD&F sites - at 53 per cent of boys and 62 per cent of girls - than in the control sites (38 per cent of boys and 63 per cent of girls), which warrants further exploration.

"They are no longer lonely and isolated. They are different from other children who are not in this programme. They have developed mentally, socially and culturally." -Mother, Ngoma

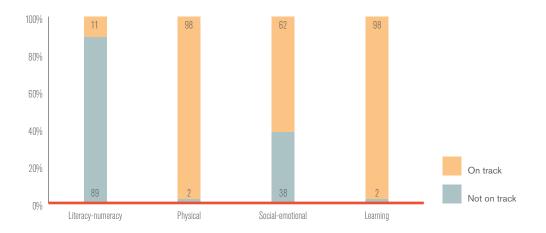


Figure 13. Percentage of children developmentally on track in ECD&F sites, by ECD Index domain, at endline

Almost all children (98 per cent) are developmentally on track in the physical domain and approaches to learning (this domain is designed to measure whether children can pay attention to learning); fewer children are developmentally on track in the social-emotional domain (62 per cent); and very few children are on track in literacy-numeracy (11 per cent). Similar patterns are found in the 2014-15 DHS. 11

¹¹ National Institute of Statistics of Rwanda, Rwanda Demographic and Health Survey (RDHS), 2014–15: Final report, NISR, Ministry of Health and ICF International, Rockland, Md., March 2016, p. 308.



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FINDINGS AND RECOMMENDATIONS

Overall, the Early Childhood Development and Family programme interventions and activities during 2015-2017 have resulted in positive impact, particularly in areas where there were intensive efforts. Caregivers' and stakeholders' perspectives shared in interviews and discussion groups indicate that the programme was valued by community members and viewed as having overall positive impacts on children and families.

This final section of the endline evaluation summary begins with a recap of the study's important results, followed by suggestions for the expansion of the ECD&F programme throughout Rwanda.

Findings

Core family care practices/home environment

Family care practices are a central focus of the ECD&F programme, recognizing that children's development is most effectively supported by environments that protect them from harm and stress, promote learning and stimulation, and provide responsive and loving care. At endline, the evaluation showed mixed, but overall positive, results for ECD&F sites:

- 22 per cent of caregivers in ECD&F sites operating for more than a year engaged in activities to promote learning during the past week, e.g., singing a song, telling stories, teaching something new. Although this figure is low, the proportion in control sites was just 9 per cent.
- 53 per cent of households in ECD&F sites had two or more playthings in the home, significantly higher than in the control sites. Additionally, the poorest households had a similar percentage of playthings available at home as the richest (which was not the case in control sites). Across all sites, however, just 7 per cent of homes had three or more children's books available.
- Though 57 per cent of fathers participated in their child's care on a daily basis in ECD&F sites, a slight decline from baseline (but a smaller decline than in control sites), qualitative feedback from ECD&F participants revealed progress in positive attitudes towards the engagement of fathers in play with their young children.
- 52 per cent of children were exposed to inadequate care (left alone or in the care of another child) in the prior week, an increase from the baseline (to be expected as children grow older). However, the increase in inadequate care was significantly less in ECD&F sites than control sites.
- While the use of violent discipline increased between baseline and endline (again, this is common practice as children grow older), caregivers attitudes appear to be changing. The belief that physical punishment is necessary to discipline a child was much less prevalent in ECD&F sites than in control sites (28 per cent versus 48 per cent) - offering hope that disciplinary practices may slowly change from violent to positive with more investment in this area.

Endline findings related to water, sanitation and hygiene were particularly encouraging:

- There was a significant increase in access to safe drinking water (from 77 per cent at baseline to 82 per cent at endline).
- There was a significant increase in access to improved sanitation (from 69 per cent at baseline to 83 per cent at endline).
- One third of households in ECD&F sites had a fixed place for hand washing, an improvement from the baseline that was not seen in control sites.

Access to ECD and other social services

Certain core services and programmes are essential to promote the well-being of children. Endline results suggest that the programme helped increase access to ECD services, with a focus on reaching the poorest children in the community. Disparities in various childrelated outcomes and access to services based on wealth were significantly less evident in ECD&F sites than control sites. Among the outcomes of the evaluation:

- Children from intervention sites were more likely to attend any ECD or organized learning programme compared with children from control sites (41 per cent versus 16
- Nearly half of the children from intervention sites attended pre-primary school, compared to just 18 per cent of children from control sites, indicating positive spillover effects of the ECD&F programme on pre-primary attendance.
- Among the children in households at intervention sites, 32 per cent participated in a social protection programme and 69 per cent had coverage for health insurance.
- The qualitative evaluation shows that the requirement for parents to make minor financial or in-kind contributions as part of attending an ECD centre can be a barrier for the poorest families to participate in ECD&F programmes.
- Caregivers' perspectives highlighted that they tend to view home-based ECD as providing a poorer quality learning and overall experience for children, in comparison to the ECD centres.

Intervention impact on health, nutrition and development

- ECD&F sites showed declines in diarrhoea prevalence, from 29 per cent at baseline to 15 per cent at endline. These gains were not seen in control sites.
- The results for nutrition were mixed, with no significant reduction in stunting but improvements in dietary diversity. While minimum dietary diversity increased in both ECD&F and control sites, the disparities between dietary diversity of richer versus poorer households were less pronounced in ECD&F sites than control sites.
- Children in ECD&F sites were more frequently on track in all five domains of development (gross motor skills, fine motor skills, communications skills, problemsolving skills and personal-social development) than children in control sites.

Recommendations

The goal at the heart of the ECD&F programme is to improve children's development. The method is to implement holistic interventions to address risk factors for poor development - including interventions that promote positive parenting, fathers' participation in caregiving, child and social protection, and good nutrition, as well as access to early learning opportunities, WASH and health services.

Though many of the endline results are promising, the evaluation shows a need to strengthen investments in multiple areas that are crucial to promoting early childhood development. Based on the experiences captured so far, the following recommendations are suggested as ways to bolster the ECD&F programme being brought to scale in Rwanda.

Core family care practices and the home environment

- The ECD&F programme should continue to promote family care practices, such as positive parenting, encouraging engagement with young children, and in particular the engagement of fathers.
- The availability of books in households is extremely low and needs to be further

Disparities in various child-related outcomes and access to services based on wealth were significantly less evident in ECD&F sites than control sites.



Access to ECD services improved significantly in the ECD&F sites, demonstrating the possibility of scaling up and reaching a critical number of children in a short period of time.

- promoted as part of the ECD&F programme (both availability and affordability). Likewise, the positive experience and impact of engaging caregivers in the production of locally made toys should be scaled up as part of ECD programming.
- Changes in violent disciplinary practices will take time, but the shifts in attitude demonstrated in the endline results offer hope that these practices will slowly change - hence, support for efforts related to child protection systems should be increased.
- The encouraging findings in relation to water, sanitation and hygiene show that with concerted efforts, access to improved water and sanitation can be increased in a short period of time, and these efforts should be further scaled up.
- As already highlighted, the results for nutrition were mixed, demonstrating how complex the underlying causes of poor nutrition are - among them food insecurity. Social protection, linked with nutrition programmes, should be bolstered to increase households' resilience to food insecurity.

Access to ECD services

- Access to ECD services improved significantly in the ECD&F sites, demonstrating the possibility of scaling up and reaching a critical number of children in a short period of time.
- However, the high proportion of young children still experiencing inadequate care (left alone or in the care of another child) highlights the urgent need to expand the availability of quality ECD services, particularly in underserved areas.
- Contributions to ECD centres, whether minor financial contributions or in-kind, should be carefully considered and discussed with the poorest families, as they create barriers of access for the poorest households, which are in most need of these services.
- Further scale-up of home-based ECD requires additional attention to quality of services, including additional training and mentorship.

Policy implications

- Under the leadership of Rwanda's Ministry of Gender and Family Promotion and the National ECD Programme, implementation of the ECD Policy and Strategic Plan needs to be reinforced at the national and decentralized levels - ensuring accountability of the sectors that are vital to young children's development (health, nutrition, protection) and overseeing the investments of development partners and civil society organizations in scaling up ECD services. At the district level, efforts should be made to incorporate ECD priority interventions into district plans and budgets, and in regular monitoring and evaluation. An ECD monitoring system should be strengthened, and measures of child development need to be further tested and adapted to the Rwandan context, in order to get an accurate picture of the various domains of child development including gross motor skills, fine motor skills, communication, problem solving, socialemotional and learning. Additional research and analysis in the area of early childhood development should be promoted in order to enhance ECD programme implementation throughout the country.
- Links with other social services social protection, health, nutrition and child protection - should be strengthened, and social services brought to young children and their families in a coordinated manner. In addition, an increase in financial and human resource investments by the Government and civil society organizations should be explored, in accordance with the costed ECD Strategic Plan.
- As the Government of Rwanda is committed to providing quality ECD services for every young child and their families, the establishment of low-cost community-based centres should be prioritized as a way to address the lack of physical infrastructure, in addition to current models for ECD centres.

Under leadership of Rwanda's Ministry of Gender and Family Promotion, implementation of the ECD Policy and Strategic Plan needs to be reinforced at the national and decentralized levels ensuring accountability of the sectors that are vital to young children's development.

ANNEX I: DESCRIPTION OF KEY INDICATORS

Indicator	Description	
Family care practices		
Inadequate care	Percentage of children left alone or in the care or another young child younger than 10 years of age for more than one hour at least once in the last week	
Child discipline	Percentage of children who experienced physical punishment and/or psychological aggression	
Attitudes toward physical punishment	Percentage of caregivers who believe that physical punishment is necessary to raise a child properly	
Father's engagement	Percentage of fathers who engage in the daily care of the child	
Exposure to conflict	Percentage of children exposed to serious conflict in the household	
Household decision-making	Percentage of caregivers who report shared or not shared decision-making in terms of what the child eats, ECD attendance and what to do when the child is sick	
Support for learning		
Support for learning	Percentage of children with whom an adult has engaged in three activities or more to promote learning and school readiness in the past week	
Availability of children's books	Percentage of children who have three or more children's books	
Availability of playthings	Percentage of children who play with two or more playthings	
Access to ECD and service	es	
Attendance to early childhood education	Percentage of children who are attending an early childhood education programme	
Attendance at pre-primary school	Percentage of children aged 48-59 months who attend nursery or pre-primary school	
Social protection	Percentage of households participating in a VUP programme	
Health insurance	Percentage of households and/or children covered by health insurance	
Child development		
Early child development index	Percentage of children aged 36–59 months who are developmentally on track in at least three of the following four domains: literacy-numeracy, physical, social-emotional and learning	
Early child development index: Literacy- numeracy	Child can identify/name at least 10 letters of the alphabet; can read at least fou simple, popular words; and/or knows the names and recognize the symbols of all numbers from 1 to 10. If at least two of these capabilities are observed, a child is considered developmentally on track.	
Early child development index: Physical	Child can pick up a small object such as a stick or a rock from the ground with two fingers and/or the mother does not indicate that the child is sometimes too sick to play. If a child can perform one of those two activities, the child is regarded as being on track in the physical domain	

	Description
Child development (cont.)	
Early child development index: Social- emotional	Child gets along well with other children, and/or does not kick, bite or hit other children; and/or does not become distracted easily. If a child is able to show two out of three behaviours, the child is regarded as being on track in the socialemotional domain
Early child development index: Learning	Child follows simple directions on how to do something correctly and when given something to do, and is able to do it independently. If a child is able to perform one of those two activities, the child is regarded as being on track in the learning domain
ASQ development	Percentage of children who are developmentally on track in all five domains of gross motor skills, fine motor skills, communication skills, problem-solving skills and personal-social development
Water, sanitation and hygie	ene
Use of improved drinking water sources	Percentage of household members using improved sources of drinking water (piped water into dwelling/yard/plot, public tap/standpipe, tube well/borehole, protected dug well, protected spring and rainwater)
Households with an improved sanitation facility	Percentage of household members using improved sanitation facilities (flush to piped sewer system, flush to septic tank, flush to pit latrine, ventilated improved pit (VIP) latrine, pit latrine with slab, and composting toilet)
Place for handwashing	Percentage of households with a specific place for handwashing – where water and soap or other cleansing agents are present
Handwashing occasions	Percentage of caregivers who report always washing their hands after using the toilet, before cooking, before eating and/or before feeding young children
Nutrition	
Stunting	Percentage of children under age 5 who fall below (a) minus two standard deviations (moderate and severe) (b) minus three standard deviations (severe) of the median weight for height according to the WHO standard
Minimum acceptable diet	Children who received minimum dietary diversity (foods from four or more food groups during the previous day) and minimum meal frequency (minimum number of times or more during the previous day)
Health	
Children with diarrhoea	Percentage of children with diarrhoea in the last two weeks
Care-seeking for diarrhoea	Percentage of children with diarrhoea in the last two weeks for whom advice or treatment was sought from a health facility or provider
Children with fever	Percentage of children with fever in the last two weeks
Care-seeking for fever	Percentage of children with fever in the last two weeks for whom advice or treatment was sought from a health facility or provider
Poor mental health	Percentage of caregivers with elevated levels of depression and anxiety symptoms

Indicator	Description	
Food insecurity		
Household food insecurity	Percentage of households that did not have enough food or money to buy food on at least one day during the past week	
Coping strategies to address food insecurity	Frequency (mean number of days in the week before the survey) of households applying the following coping strategies because they did not have enough food or enough money to buy food: 1. Rely on less preferred and less expensive foods 2. Borrow food, or rely on help from a friend or relative 3. Limit portion size at mealtimes 4. Restrict consumption by adults to allow young children to eat 5. Reduce the number of meals eaten in a day	