

BACKGROUND

This policy brief provides summary information on the Sugira Muryango (Strengthen the Family) cluster randomized trial funded by the World Bank Strategic Impact Evaluation Fund (SIEF), USAID, ELMA Philanthropies, the Network of European Funders, Wellspring Advisors, and the Japan Trust Fund (JTF). The SIEF project seeks to understand both effectiveness as well as barriers and facilitators to the implementation of Sugira Muryango for promoting early childhood development (including key nutritional outcomes) and reducing violence using a cost-effective model. The JTF project complements the SIEF objectives as it aims to understand barriers and facilitators to delivery of the program within the VUP structures and key strategies for selecting, training, and supervising personnel. Findings from the Sugira Muryango evaluation conducted in 2019 generated the policy recommendations found at the end of this brief, with the purpose of informing future policy decisions and early childhood development (ECD) interventions.

INTRODUCTION

It is estimated that globally over 250 million children are at risk of failing to meet their developmental potential (1). While the SDGs cover a broad range of urgent global challenges, three of the goals pertain specifically to children under 5: SDG 2 sets forth the global target to end malnutrition by 2030 and achieve the WHO standards for stunting and wasting for children under 5 by 2025 (2).¹ SDG 3 focuses on achieving good health and wellbeing via universal health care coverage, ending preventable deaths of children under 5, reducing under-5 mortality to 25 per 1,000 births, and ending epidemics by 2030 (3). SDG 4 targets inclusive and quality education, stating that by 2030 all children under 5 be developmentally on track in health, learning, and psychosocial wellbeing, as well as have access to organized, pre-primary school learning one year before official primary school age (4).



In addition to the SDGs, the Government of Rwanda (GoR) has ambitious strategies to address its development challenges in ECD, which are outlined in the overarching National Strategy for Transformation (NST1). As the implementation instrument for the country's economic, social, and governance goals, the NST1 directs the Vision 2020 and Vision 2050 plans, which are the long-term strategic development frameworks guiding Rwanda's development over the last 20 years and through the next 30 years. Priority areas in the plans include: reducing the high prevalence of chronic malnutrition (55% in 2005), reducing the poverty rate (60.4% in 2000), reducing the infant mortality rate (107 per 1,000 births in 2000), and reducing the mortality rate from malaria (51% in 2000) (5-6).

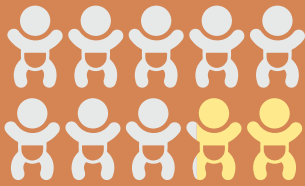
In conjunction with the Vision 2020/2050 plans, the Economic Development and Poverty Reduction Strategy (EDPRS) I and II, the establishment of universal health care, the Imihigo/VUP social protection projects, the budgetary commitments of the GoR to the health sector, and the efforts of CSOs, NGOs, and development partners have contributed to the significant progress towards each of these aims. Between 2000 and 2017, the percentage of the population living under the

poverty line was reduced from 55% to 39.1%, infant mortality was nearly halved from 107 to 55.34 per 1,000 births, and the mortality rate from malaria dropped from 51% to 4%. Furthermore, Rwanda has made significant investment in the health sector by increasing the number of nurses per 100,000 inhabitants from 16 in 2000 to 69 in 2017 and increasing the number of doctors per 100,000 inhabitants from 1.5 in 2000 to 5.5 in 2017. It is evident that policy makers are committed to making the necessary investments in Rwanda's human capital.

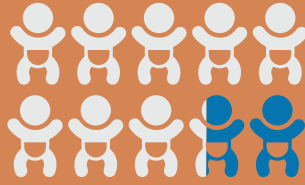
EARLY CHILDHOOD DEVELOPMENT IN RWANDA

Although there has been tremendous progress on the indicators of child health in Rwanda, rates of low height-for-age or stunting due to chronic undernutrition remain high. It is well established that undernutrition contributes significantly to poor cognitive and physical development, which can have negative compounding effects over a child's life course. In particular, the years between 0 and 5 are critical for achieving not only individual potential in later years (e.g. cognitive and mental well-being) but also contributing socially and economically to society (7).

The 2018 Rwanda Economic Update published by The World Bank reported the stunting rate of children under 5 as 38%, falling short of the target rate of 5% set forth in the Vision 2020 plan (8). Furthermore, the prevalence of wasting is 2%, underweight is 12.6%, and overweight² is 2.4% (9). In its most recent strategic plan, the National Early Childhood Development Programme (NECDP), created to coordinate and implement multi-sectoral nutrition and ECD interventions, reported that stunting is most prevalent among the poorest households and those living in rural areas (almost 50%), but also affects 25% of children in the top two wealthiest quintiles (10). The NECDP also found that only 18% of children aged 6-23 months are currently fed in accordance to all three UNICEF-recommended Infant and Young Child Feeding (IYCF) practices, which include: (1) early initiation of breastfeeding within one hour of birth, (2) exclusive breastfeeding for the first 6 months of life, and (3) introduction of nutritionally-adequate and safe complementary (solid) foods at 6 months with continued breastfeeding up to 2YO or beyond (10). Only 17% of children in Rwanda achieved the minimal acceptable



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UNICEF-RECOMMENDED INFANT AND YOUNG CHILD FEEDING (IYCF) PRACTICES:

- 1 Early initiation of breastfeeding within **ONE HOUR** of birth
- 2 Exclusive breastfeeding for the first **6 MONTHS** of life
- 3 Introduction of nutritionally- adequate and safe complementary (solid) foods at 6 months, with continued breastfeeding up to 2 y/o or beyond



diet, based on dietary diversity and meal frequency, and there is low consumption of animal sourced protein (10).

Food insecurity is a common contributing factor to stunting (11). The 2018 Comprehensive Food and Security Vulnerability Assessment (CFSVA) of Rwanda reports that 18.7% of households in Rwanda are food insecure and of these, 1.7% are severely food insecure, with half (51%) of all food insecure households in the Ubudehe categories 1 and 2 (9, 12). Children who live in these food insecure households are also much more likely to be malnourished (9).

A HOLISTIC RESPONSE

Despite these significant and complex challenges, the NECDP and the GoR continue to pursue aggressive ECD targets, which include the reduction of stunting rate to 19% and increasing the rate of exclusive breastfeeding for children under 6 months of age to above 90% by 2024 (10). Ensuring children’s healthy development requires more than nutrition-specific interventions. Children also need the other aspects of nurturing care, including early learning opportunities, responsive care, health and hygiene, and safety and security. The Nurturing Care Framework from UNICEF and the World Health Organization (WHO) provides a roadmap for stakeholders on how to implement multi-sectoral laws, policies, and programs that incorporate all aspects of nurturing care to create an environment in which children can thrive (13). As such, nutrition-sensitive components embedded in holistic ECD programs that also include early stimulation and play, hygiene education, violence reduction, and dual caregiver engagement and have proven effective in improving short-term ECD outcomes (14).

CASE STUDY ON HOLISTIC ECD PROGRAMMING - SUGIRA MURYANGO

Sugira Muryango (Strengthen the Family) is an example of an evidence-based and holistic ECD intervention that has seen promising results among the most vulnerable Rwandan households-- those categorized as Ubudehe 1. A home visiting program targeting children between 6 and 36 months, Sugira Muryango uses active coaching to deliver the 12-module program, which encompasses all aspects of nurturing care, including: nutrition, hygiene, early stimulation, play, responsive parenting, nonviolent interactions among household members, and engagement of both male and female caregivers, where applicable. Implemented by community based lay workers, the program also serves as a referral mechanism to connect families to health and nutrition services, as well as community social supports.

Delivered by community-based volunteers (CBVs) to 541 households and 559 children located in Ngoma, Nyanza, and Rubavu districts over the course of 13 sessions, with two additional booster sessions at three months and six months following the end of the program, Sugira Muryango saw improvement between baseline and post-intervention measurements of dietary diversity, consumption of animal-based protein, and the minimum acceptable diet for children 6-23 months.

Mixed models were used to examine differences in trajectories of outcomes over time among families receiving the Sugira Muryango intervention versus control families and revealed that children in families receiving Sugira Muryango had a significantly greater increase in dietary diversity, minimum meal frequency and minimum acceptable diet compared with controls (p<0.001).

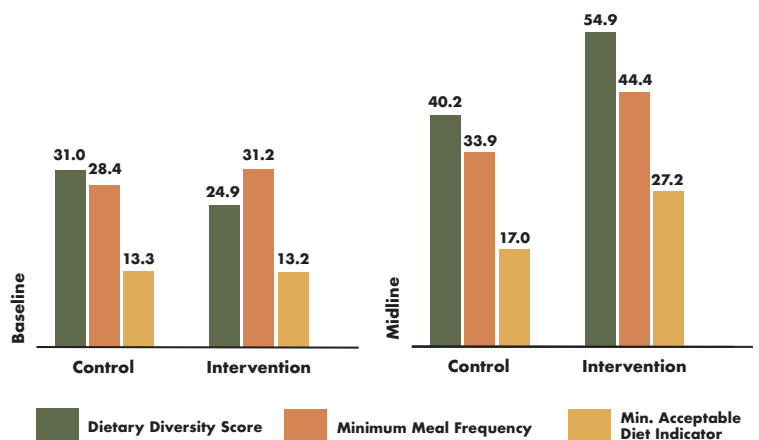


Figure 1. Changes in selected nutrition indicators over time

RECOMMENDATIONS

To leverage the current political will and favorable policy environment to achieve its ECD goals, stakeholders can:

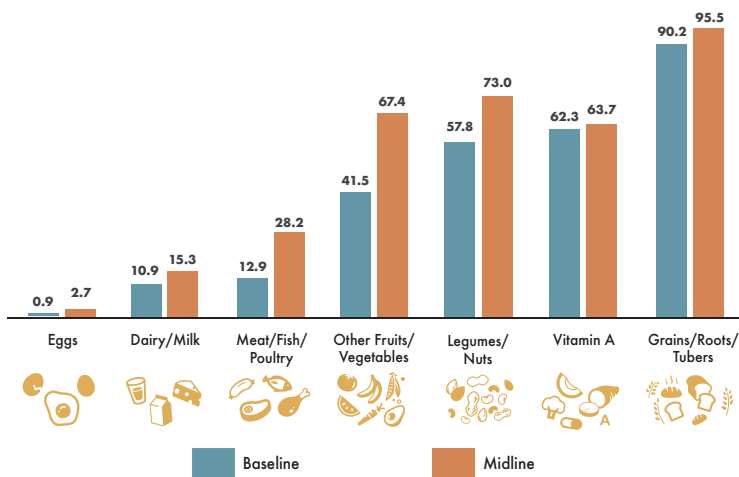


Figure 2. Changes in food consumption address key categories of food.

IMPLEMENT HIGH-QUALITY, EVIDENCE-BASED, HOLISTIC, AND FISCALLY FEASIBLE INTERVENTIONS.

Resource constrained settings face difficulties in implementing high-quality, evidence-based ECD interventions. One strategy to mitigate these challenges is to leverage existing work forces, such as the Community Health Workers or Inshuti z’umuryango, to deliver evidence-based ECD programs. This integration must be conducted sustainably and in coordination with systems strengthening and expansion so as to not overburden existing workforces. Policies and programs should also incorporate all aspects of nurturing care, which requires coordination across government sectors, CSOs, and development partners.

CONDUCT A COSTING AND RETURN ON INVESTMENT ANALYSIS.

Due to resource constraints, the cost of scaling programs like Sugira Muryango is a top concern for the GoR. As such, it is critical to conduct a rigorous costing analysis that reports: 1) the cost of delivery as is, 2) the cost of delivery by an INGO, and 3) the cost of delivery through an existing government system. These analyses should also include a breakdown of cost per family and cost per session, while also calculating the return on investment of the program over the lifecycle of its participants. This detailed information will assist government stakeholders in determining the feasibility of scaling the program.

SUPPORT RESEARCH TO MAKE NUTRITION-SENSITIVE PROGRAMMING EFFECTIVE.

While increased attention and funding has been allocated to nutrition-sensitive programming in LMICs relative to previous years, few interventions have proven effective in addressing chronic malnutrition, especially in the long-term (18-21). Additional research needs to be conducted to understand why short-term gains do not extend to the long-term. The NECDP has also identified a research gap in micronutrient deficiencies in Rwanda. Building the evidence base in this area could subsequently inform the micronutrient powder programs within the country.

DISSEMINATE EVIDENCE-BASED INTERVENTIONS WITH COMMUNITY-BASED APPROACHES.

Stakeholders should be encouraged to ensure that beneficial research findings and evidence are translated into formats and materials for those at the service delivery and beneficiary level, such as those working in and visiting community health centers. The National Social and Behavior Change Communication Strategy for Integrated ECD, Nutrition, and WASH details national priority areas for behavior change communication, which include: early childhood stimulation, adult involvement in early learning and stimulation, adequate care for young children, adult and child nutrition, and health-seeking behavior (22). To reach the widest possible audience, message formats must be accessible to those with low literacy levels and disability and complement the existing priority areas with less frequently addressed topics, including caregiver mental health and stress management within households.

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NURTURING CARE
FOR EARLY CHILDHOOD DEVELOPMENT

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BOSTON COLLEGE
SCHOOL OF SOCIAL WORK

NUTRITION-SENSITIVE EARLY CHILDHOOD DEVELOPMENT THROUGH HOME-VISITING: *SUGIRA MURYANGO*



IN THE RECENT CLUSTER RANDOMIZED TRIAL IN THREE DISTRICTS, CHILDREN ENROLLED IN *SUGIRA MURYANGO* (STRENGTHEN THE FAMILY) SHOWED IMPROVEMENTS IN NUTRITION AND NURTURING CARE ESSENTIAL FOR SUPPORTING CHILDREN'S EARLY DEVELOPMENT.

18.7% of households in Rwanda are food insecure.

Children in these households are more likely to be malnourished and at risk of poor development.

1.7% of households are severely food insecure.

Half of all food insecure households fall into Ubudehe categories 1 and 2.

EVIDENCE BASED INTERVENTION

The *Sugira Muryango* model was tested in a large cluster randomized trial in 2018-2019 involving 1049 households residing in Ngoma, Nyanza, and Rubavu. The program was layered into the national poverty reduction strategy, the Vision Umurenge Program. Families receiving only the social protection program served as controls. Delivered by well-trained and supervised community-based volunteers, 541 households and 559 children received the 12 *Sugira Muryango* modules, with two additional booster sessions at three months and six months after the end of the program.

Compared with control families, children from families receiving *Sugira Muryango* had increased dietary diversity, were more likely to have a minimum acceptable diet for children 6-23 months (Figure 1) and had increased consumption of animal-based protein (Figure 2). Above and beyond improved nutrition outcomes, *Sugira Muryango* was also associated with improvements in outcomes related to positive parenting, hygiene, increased care seeking for child illness, reduced use of violent discipline, reduced intimate partner violence, and increased father engagement in caregiving.

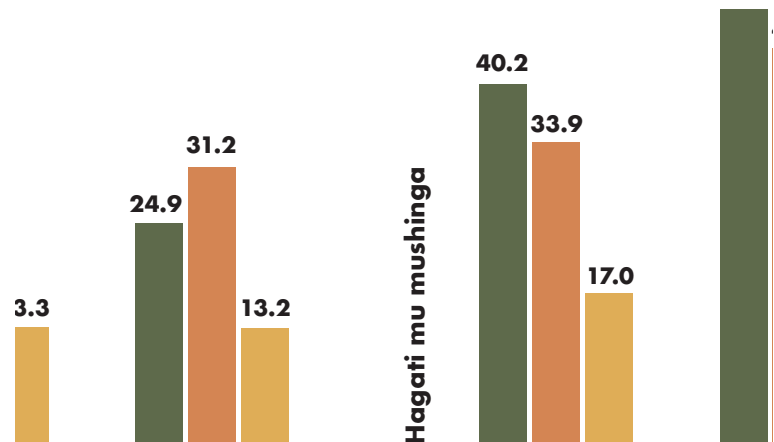


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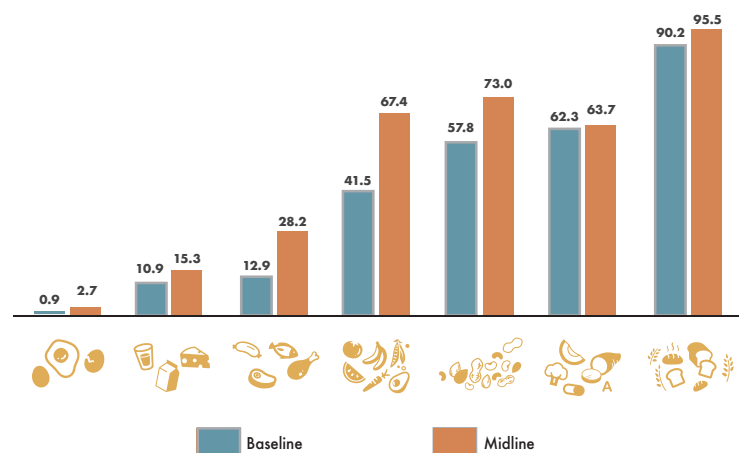


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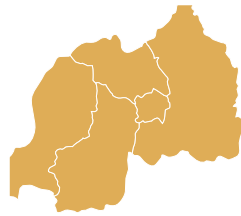
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BOSTON COLLEGE
SCHOOL OF SOCIAL WORK

NUTRITION-SENSITIVE ECD PROGRAMMING AND POLICY IN RWANDA

INTRODUCTION

The Government of Rwanda (GoR) has ambitious strategies to address its development challenges in early childhood development (ECD). In its Vision 2050 plan, the long-term strategic development framework guiding Rwanda's development, areas of priority include reducing the high prevalence of chronic malnutrition, and reducing rates of poverty and mortality due to malaria and infant mortality.



Guided by the National Strategy for Transformation (NST), many initiatives seek to address these goals including the VUP 2050 plan, the Economic Development and Poverty Reduction Strategy (EDPRS) I and II, the establishment of universal health care, the Imihigo/VUP social protection projects, and the establishment of the National Early Childhood Development Programme (NECDP), which was created to coordinate and implement multi-sectoral nutrition and ECD interventions. In particular, the budgetary commitments of the GoR to the health sector and the efforts of CSOs, NGOs, and other development partners have contributed to the significant progress towards each of these aims. Despite progress on many health indicators, Rwanda's rate of chronic malnutrition and stunting remains high. The 2018 Rwanda Economic Update published by The World Bank reported a stunting rate of 38% among children under 5⁽¹⁾. In its most recent strategic plan, the NECDP found that stunting was most prevalent among poor and rural households where it affected almost 50% of children, compared with 25% of children in the two wealthiest quintiles⁽²⁾. Food insecurity is a common contributing factor to stunting with 18.7% of households in Rwanda being food insecure⁽³⁾. Despite significant and complex challenges, the NECDP and the GoR continue to pursue ambitious ECD targets including reducing the stunting rate to 19% and increasing the rate of exclusive breastfeeding for children under 6 months of age to >90% by 2024⁽²⁾.

A HOLISTIC RESPONSE

The Nurturing Care Framework from UNICEF and the World Health Organization (WHO) provides a roadmap for stakeholders involved in the implementation of multi-sectoral laws, policies, and programs to establish environments in which children can thrive. Components of nurturing care include: good health, adequate nutrition, responsive caregiving, opportunities for early learning, and security and safety⁽⁴⁾. Nutrition-sensitive components embedded in holistic ECD programs targeting early stimulation and play, hygiene education, non-violent discipline, caregiver stress reduction, and dual caregiver engagement have proven effective in improving short-term ECD outcomes⁽⁵⁾.



NURTURING CARE
FOR EARLY CHILDHOOD DEVELOPMENT

RECOMMENDATIONS

IMPLEMENT HIGH-QUALITY, EVIDENCE-BASED, HOLISTIC, AND FISCALLY FEASIBLE INTERVENTIONS. Sustainable programs use existing workforces with systems strengthening and expansion to avoid overburdening the existing workforces. Policies and programs incorporating all aspects of nurturing care require coordination across government sectors, CSOs, and development partners.

SUPPORT RESEARCH TO MAKE NUTRITION-SENSITIVE PROGRAMMING EFFECTIVE.

Research is needed to resolve knowledge gaps and explore how to extend short-term to long-term gains. The NECDP has identified consequences of micronutrient deficiencies in Rwanda as a key gap where knowledge can inform national micronutrient powder programs.

DISSEMINATE EVIDENCE-BASED INTERVENTIONS WITH COMMUNITY-BASED APPROACHES.

To ensure reach to all vulnerable households, messaging formats must be clear and accessible to caregivers and stakeholders with low literacy and disability. Messages can be delivered together other priority areas, including caregiver mental health, violence reduction, and stress management within households.

INVEST IN INTERVENTIONS ALONG THE LIFECOURSE. Evidence suggests that ECD gains can be lost if not followed by quality services throughout the life course⁽⁶⁾. Coordinated efforts across the health, education, nutrition, child protection, and social welfare sectors can sustain improvements achieved in the early years of life.

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WHAT IS IMPLEMENTATION SCIENCE?

Broadly defined, implementation science is “the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services and care.”¹

WHY IMPLEMENTATION SCIENCE?

There is considerable interest in implementing evidence-based practices in targeted systems of care. However, implementing these practices in “real world” settings remains a substantial challenge. As such, successful implementation typically requires adherence to specific intervention protocols accompanied by quality improvement practices, including fidelity monitoring, to ensure that an intervention is delivered in a way that adheres to evidence-based practices as intended. Quality improvement practices are essential for ensuring that interventions continue to have intended impact as they transition to scale.

PHONE-BASED INDIVIDUAL SUPERVISION

OCCURRED ON A WEEKLY BASIS, WITH EACH EXPERT SUPERVISOR SCHEDULING A 30-60 MINUTE STRUCTURED SUPERVISION SESSION WITH THEIR ASSIGNED CBV’S.

A TELEPHONE GUIDE WAS CREATED TO ENSURE THIS SUPERVISION FOCUSED ON PROBLEM SOLVING ISSUES IN THE HOME RELATED TO THE INTERVENTION.

PROVIDED AN OPPORTUNITY FOR EXPERT SUPERVISORS TO PROBLEM SOLVE WITH THE CBV ON CHALLENGES IN PROGRAM HOUSEHOLDS AND TO GIVE FEEDBACK FOR THE CBV TO IMPLEMENT IN THE SUBSEQUENT SESSION.

FACE-TO-FACE SUPERVISION

OCCURRED ON A CONSISTENT, WEEKLY BASIS FOR THE FIRST MONTH OF THE INTERVENTION FOR ALL CBV’S.

FACE-TO-FACE SUPERVISION TAPERED OFF AND WAS REPLACED WITH PHONE-BASED SUPERVISION AS THE CBV’S BECAME MORE CONFIDENT.

THROUGHOUT THE ENTIRE INTERVENTION, THE SUPERVISORS WERE AVAILABLE TO TRAVEL TO THE DISTRICT TO CONDUCT FACE-TO-FACE SUPERVISION AS NEEDED.

GROUP SUPERVISION

GROUP SUPERVISION OCCURRED ON THE WEEKENDS AND INCLUDED GROUPS OF CBV’S FROM DIFFERENT CATCHMENT AREAS IN THE SAME DISTRICT.

IN THE BEGINNING, THE EXPERT SUPERVISORS FACILITATED THESE SESSIONS, MODELING FACILITATION IN ORDER FOR “SUPER CBV’S” TO EVENTUALLY PHASE IN AS FACILITATORS.

GROUP SUPERVISION GAVE CBV’S AN OPPORTUNITY TO BRAINSTORM ON CHALLENGES IN A GROUP SETTING AND RECEIVE SUPPORT FROM PEERS.

Figure 1. Supervision structure of CBVs.

IMPLEMENTATION SCIENCE IN ACTION

Sugira Muryango (Strengthen the Family) was tested in a cluster-randomized trial funded by the World Bank Strategic Impact Evaluation Fund (SIEF), USAID, ELMA Philanthropies, the Network of European Funders, Wellspring Advisors, and the Japan Trust Fund (JTF). The Research was implemented by FXB-Rwanda and Boston College with independent data collection by Laterite. *Sugira Muryango* is a home visiting intervention for families living in extreme poverty (Ubudehe 1) to promote early childhood development and prevent violence in families with a child under the age of three. It is delivered

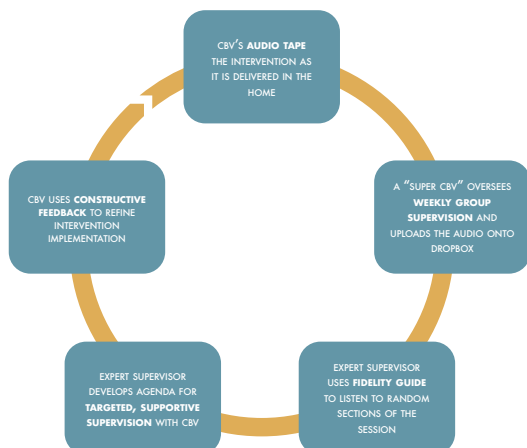


Figure 2. Fidelity monitoring feedback loop implemented by *Sugira Muryango*

by Community-Based Volunteers (CBVs) using active coaching and a focus on father engagement, as relevant. *Sugira Muryango* promotes early stimulation, play, nutrition/dietary-diversity, hygiene, responsive parenting, reducing violence, and navigating

formal and informal resources (e.g., health and nutrition services and social support). The content of *Sugira Muryango* draws from the UNICEF/WHO Care for Child Development materials, as well as a prior tested family strengthening intervention^{2,3}. Primary caregivers participate in the modules in interaction with their child(ren); All home visits include a 15-minute “active play and communication” session where caregivers receive live feedback on parent-child interactions.

The evaluation of *Sugira Muryango* used implementation science techniques to examine barriers and facilitators to delivering the intervention to Ubudehe 1 families served by the National Social Protection System (VUP). Implementation science funded by the JTF focused on: (1) the fidelity of delivery of *Sugira Muryango* by CBVs serving VUP families with young children, (2) how features of the *Sugira Muryango* program as implemented moderated or mediated program outcomes on children and their families (what works for whom under what circumstances), and (3) the improvement of practices for selection, training, and supervision of delivery personnel to support a systems level scaling-up of the *Sugira Muryango* program.

SUPERVISION AND FIDELITY MONITORING OF SUGIRA MURYANGO

A hybrid design testing intervention effectiveness and implementation elements of *Sugira Muryango* was implemented in the rural areas of three districts: Ngoma, Nyanza, and Rubavu. A total of 118 CBVs across these districts delivered the intervention to 541 families between May and August 2018 with one intervention module delivered to each family per week. Each CBV carried a caseload of approximately 5 households. These CBV interventionists received face-to-face and phone-based supervision by an Expert Supervisor based at FXB-Rwanda in Kigali. Six bachelor-level Expert Supervisors supervised the CBVs for a ratio of approximately 1:17 and engaged in face-to-face, phone-based, and/or group supervision throughout the intervention (See Figure 1). A cadre of “Super CBVs” were identified after the CBV training to assist in group supervision and fidelity monitoring and quality improvement by reviewing audiotaped intervention sessions and providing targeted feedback to home visitors to strengthen their work on active coaching and father engagement.

Supervision and fidelity monitoring were integrated processes intended to support quality of programme delivery by the CBVs. A fidelity monitoring feedback loop informed the supervision of the CBVs so knowledge and skills pertaining high quality delivery could be supported. (See Figure 2).

LESSONS LEARNED AND RECOMMENDATIONS:

To achieve implementation science goals of integrating evidence-based practice into systems and transition them to scale in order to reach more vulnerable families, *Sugira Muryango* recommends the following:

ESTABLISH AND MAINTAIN STRONG PARTNERSHIP WITH GOVERNMENT STAKEHOLDERS. *Sugira Muryango* collaborates extensively with government stakeholders by participating in the government-led Nutrition and WASH Thematic Working Groups (TWGs) and through the establishment of a program advisory board. The program advisory board consists of *Sugira Muryango* staff and government officials from the NECDP, the Ministry of Gender and Family Promotion (MIGEPROF), the National Commission for Children (NCC), the University of Rwanda (UoR), the Rwanda Biomedical Center (RBC), and the Ministry of Local Government (MINALOC). Through these close partnerships and the promising results of the cluster-randomized trial, discussions are currently underway for the expansion of *Sugira Muryango* using a government-funded cadre of workers.

INVEST IN QUALITY AND SUSTAINABLE TRAINING AND ONGOING SUPERVISION/QUALITY IMPROVEMENT OF PROGRAM STAFF AND COMMUNITY-BASED VOLUNTEERS. It is critical that strong investments be made in training personnel prior to delivering the curriculum, but also to supervision structures to ensure problem solving and effective practice as the intervention is spread to more families through delivery systems. *Sugira Muryango* conducted a 3-week intensive and interactive training with its community-based volunteers at the beginning of the program, weekly supervision throughout the program, and held additional training before the 3-month and 6-month program booster sessions. Trainings were designed to respond to the needs of the CBVs in each respective district while also practicing key components of the curriculum. Future phases of the work to expand the program will test the use of a Seed Team to shift ownership of the intervention and ongoing training and supervision responsibility to local partners to enhance local capacity and sustainment of the evidence-based practice.

IMPLEMENT COST-EFFECTIVE AND SUSTAINABLE FIDELITY MONITORING PROCESSES. Though the fidelity monitoring process using audio recorders was effective in the *Sugira Muryango* pilot study, it was challenging to implement in the three-district expansion due to the distance required for Expert Supervisors based in Kigali to reach the districts. Furthermore, it is unlikely that the cost of audio recorders would be feasible under further government expansion. Because of these factors, *Sugira Muryango* recommends that Expert Supervisors be embedded in the administrative levels of the CBVs for which they are responsible in order to mitigate challenges experienced during the scale-up. The Rapid SMS quality indicator system currently used by the Ministry of Health for community health workers could also be adapted to *Sugira Muryango* home visiting to ensure a more affordable set of rapid quality indicators.

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