

COMMUNITY-BASED LAY- WORKER FEASIBILITY CLUSTER RANDOMIZED CONTROLLED TRIAL FOR STRONG FAMILIES, THRIVING CHILDREN, SUGIRA MURYANGO

Midline Data Collection Report

October 2018

laterite
DATA | RESEARCH | ADVISORY

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INTRODUCTION

Project Overview and Background

This study is a cluster randomized controlled trial of the Strong Families, Thriving Children *Sugira Muryango* intervention delivered by community-based lay-workers trained and supervised by FXB Rwanda. The study was designed as a quantitative survey conducted in three districts of Rwanda (Nyanza, Ngoma, Rubavu) with 1,040 households and qualitative interviews with a subset of 40 caregivers. *Sugira Muryango* will be evaluated as a supplementary intervention for households participating in Vision Umurenge 2020 Programme (VUP) Public Works. Data is being collected at three time points:

- Baseline: immediately prior to the intervention (April-May 2018);
- Midline: immediately following the intervention (August-September 2018).
- Endline: one year following the intervention (August-September 2019).

The project will evaluate the impact of the *Sugira Muryango* intervention for all households participating in the study as well as for VUP Classic Public Works and VUP Expanded Public Works separately.

Project Objectives

The main objective of this study is to determine whether the *Sugira Muryango* intervention, delivered by community-based lay-workers, is effective in improving early childhood development (ECD) outcomes and supporting vulnerable families. This will be measured through surveys with the primary caregiver and their intimate partner (when applicable), and through child development assessments and anthropometric measurements.

This study will be used to support the design of policy aimed at strengthening Rwanda's most vulnerable families.

The data collected will also be used by the Government of Rwanda and the World Bank to test the sustainability and scalability of *Sugira Muryango* when delivered by community-based lay-workers and linked to VUP Public Works programming.

ROLES AND RESPONSIBILITIES

Throughout the design process and the implementation of baseline and midline data collection, Laterite worked very closely with the team from Boston College to operationalize the study design.

Boston College

Boston College's responsibilities included but were not limited to:

Obtaining research permits: Boston College was responsible for obtaining approvals to conduct the study from Rwanda National Ethics Committee (RNEC) and the National Institute of Statistics of Rwanda (NISR).

Sampling: Boston College led the design of this cluster randomized control study, including developing the sampling strategy.

Designing research instruments: Boston College designed the research instruments and consent forms and completed initial translations. Prior to data collection, Boston College approved the final versions of the instruments.

Training: Boston College designed and led field team training on the Malawi Development Assessment Tool (MDAT).

Data collection: When Laterite identified potential cases of severe abuse, suicidality, or malnutrition, Boston College and FXB were responsible for assessing risk severity and making referrals for additional services or treatment.

Laterite

Laterite's responsibilities included:

Obtaining approvals from local authorities: After receiving approvals from the RNEC and NISR, Laterite was responsible for informing and obtaining clearance for conducting the study from local authorities at the district, sector, cell, and village levels.

Sampling: Laterite operationalized the sampling strategy by collecting updated VUP participant lists, conducting village listing and household rostering to identify households that were eligible to participate in the study, randomly selecting clusters of households based on Boston College's study design, and enrolling the selected households in the study.

Reviewing, coding, and testing research instruments: Laterite reviewed all survey instruments and made recommendations regarding translations, cultural appropriateness, and logic patterns. Once the research instruments were finalized, Laterite programmed them into SurveyCTO for electronic data collection. Enumerators and Laterite researchers tested multiple iterations of the surveys to ensure functionality and estimate the time required to administer each instrument.

Recruitment and training of field staff: Laterite recruited a team of data collectors from its roster of qualified personnel. Laterite developed and delivered training on all surveys completed at the household and on taking and recording anthropometric measurements. Laterite also included in its training sessions an overview of the project, Laterite policies, and research ethics.

Data collection: Laterite led all data collection activities, including developing field plans, scheduling appointments, conducting interviews and assessments, managing enumerator teams, and addressing quality concerns while in the field.

Data cleaning, monitoring, and auditing: Throughout data collection, Laterite monitored the quality of data, audited audio recordings of a random subset of interviews, and worked with the team in the field to resolve duplicates or discrepancies. With this report, Laterite submitted a cleaned dataset to Boston College.

METHODOLOGY

Design and Sampling

Details regarding the methodology of this cluster randomized controlled trial are included in the Field Preparation Report dated June 2018.

Figure 1 and Figure 2 show the target number of clusters and households to be enrolled in the trial. Because of the timing of cluster allocation to treatment assignment and cluster failure, there are an uneven number of Expanded Public Works clusters and households in the treatment and control arms of the trial and in the pooled analysis. Additional details on the process of cluster selection, treatment allocation, and the selection of additional clusters are described in detail in the Field Preparation Report.

Figure 1. Number of Clusters Allocated to Treatment and Control

	Control	Treatment	Total
Classic PW	75 clusters	75 clusters	150 clusters
Expanded PW	39 clusters	47 clusters	86 clusters
Pooled	98 clusters	100 clusters	198 clusters

Figure 2. Number of Households Allocated to Treatment and Control

	Control	Treatment	Total
Classic PW	375 households	375 households	750 households
Expanded PW	138 households	174 households	312 households
Pooled	513 households	549 households	1062 households

Research Instruments

Quantitative data collection utilized the survey instruments described below, which are broadly categorized according to the location where the surveys were administered. Boston College designed and translated the research instruments, which Laterite reviewed for appropriateness and effectiveness. Laterite coded all surveys for deployment using SurveyCTO.

Between baseline and midline data collection, survey edits were made based on feedback from the client, enumerators, and research team. Changes to the surveys were reviewed and discussed with the Boston College Team. Prior to midline data collection, Laterite shared the coded final research instruments in Excel format and enabled Boston College with electronic access to the surveys on SurveyCTO. The research team from Boston College approved all final instruments in the first week of data collection (they were not approved prior to the start of data collection because Boston College staff were out of office in the days immediately prior to data collection, and there were last minute changes to the survey protocol around additional caregivers). Changes made between baseline and midline data collection, and those made during data collection are compiled in the “FSI Survey Changes Midline” Excel file in the 9- Midline Surveys folder on Box. Once data collection began, all changes suggested by the field team or the client were compiled and implemented in batches.

Surveys at the Household

The following surveys were administered at the respondent's domicile.

- **Report on the Child:** This survey was completed by the baseline primary caregiver or new midline primary caregiver for and with each eligible child in the study household. It includes: questions for the caregiver regarding child feeding practices, food security, child health, and child discipline; the Ages and Stages Questionnaire (ASQ)-3; the Home Observation for Measurement of the Environment (HOME); and the Observation of Mother Child Interaction (OMCI).
- **Caregiver Report on Household:** This survey was completed by the primary caregiver in each study household or by his or her intimate partner and includes modules regarding the family composition, household assets, social protection, VUP participation, finances, and food security.
- **Caregiver Report on Self:** This survey was completed by each primary caregiver in the study household. If the primary caregiver had an intimate partner, the Caregiver Report on Self was completed by the intimate partner as well. Intimate partner surveys were not considered mandatory for household completion, but every attempt was made to complete this survey with both partners when applicable. The survey includes modules regarding health, disability, parenting and co-parenting, the family unit, early childhood development knowledge, caregiver mental health, caregiver alcohol use, daily hardships, and intimate partner violence.

MDAT and Anthropometric Surveys

- **Malawi Development Assessment Tool (MDAT):** This observation-based assessment was completed by each eligible child in the study household.
- **Child anthropometric measurements:** Measurements of weight, height or length depending on age, and mid-upper arm circumference (MUAC) were taken for each eligible child in the study household.

FIELD TEAM

Recruitment and Profile of Team Members

Laterite maintains a pool of qualified personnel to act as field team members for quantitative and qualitative data collection projects. In order to qualify for field enumeration work, individuals must pass a rigorous testing process which evaluates logic, problem solving, and, most importantly, communication skills. The interview process includes an Excel test, a written test, and a situational face-to-face interview. Successful candidates are added to the Laterite roster. Laterite selected data collectors for this study from this roster of qualified candidates. The majority of the enumerators utilized during midline data collection were experienced members of the field team from baseline data collection. Below is a description of the profiles of the field staff who worked on this project:

Field Supervisors

Field supervisors are experienced members of the Laterite team who oversee data collection activities and manage both field coordinators and enumerators.

Field Coordinators

Field coordinators are ground-level supervisors who lead small teams of enumerators while conducting data collection themselves. They coordinate logistics for their teams and carefully monitor the team's daily data uploading.

Enumerators

Enumerators are data collection specialists who conduct in-home and centralized interviews and assessments with adults and children in study households. Among groups of three enumerators, one was designated the field team leader to coordinate group logistics and liaise with the field coordinator.

Field Team Structure

Surveys at the Household Field Team

The household survey field team comprised 24 enumerators divided into eight sub-teams of three enumerators each. Each sub-team was led by an enumerator field team leader and field coordinators oversaw two sub-teams of three enumerators each. One field supervisor managed the team completing the surveys at the household, coordinated all data collection activities, and reported directly to the Data Manager. The structure of the household field team is outlined in Figure 2. Five of the 24 enumerators (20%) at midline were new; the remaining 19 were also part of the baseline household enumerator team.

MDAT and Anthropometrics Field Team

In each district, the MDAT and anthropometrics field team consisted of 16 enumerators divided into two field teams of seven enumerators and led by one field coordinator. The enumerators and field coordinators shared responsibilities of conducting MDAT assessments, taking anthropometric measurements, and conducting data entry. One of Laterite's full-time senior field supervisors in coordination with the field supervisor managed all team activities. The structure of the MDAT field team is outlined in Figure 3. One of the 16 enumerators at midline was new, but had been an

alternate on the baseline team and participated in baseline team training; the remaining 15 enumerators were also part of the baseline MDAT team.

Figure 2. Non-MDAT Field Team Structure

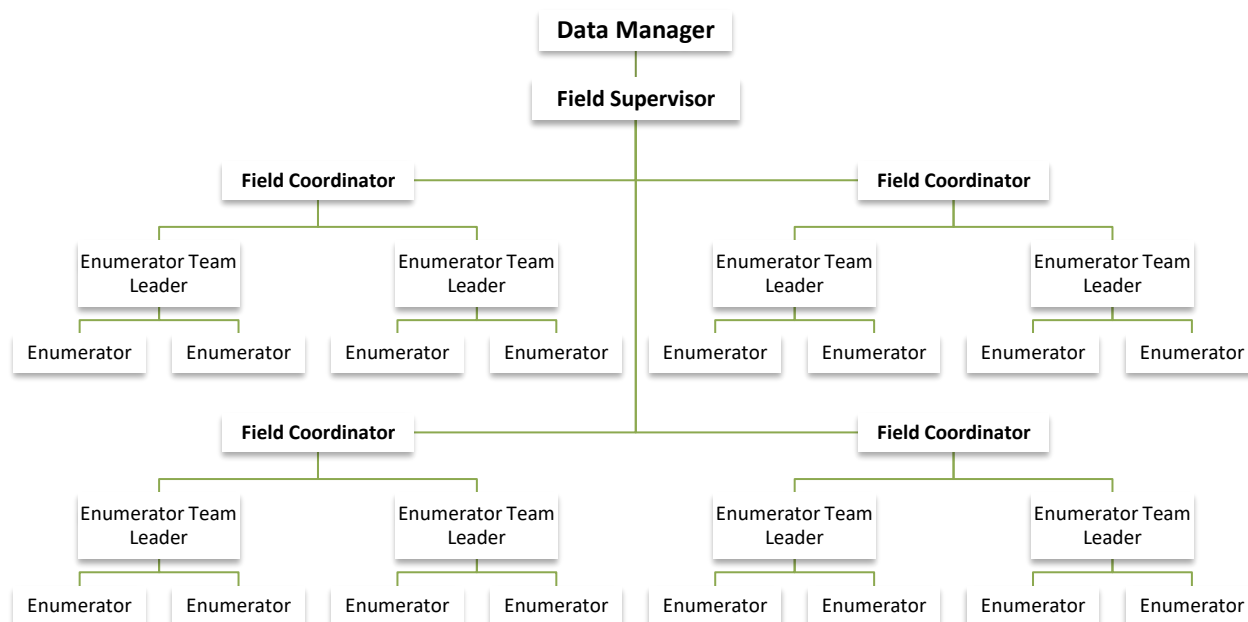
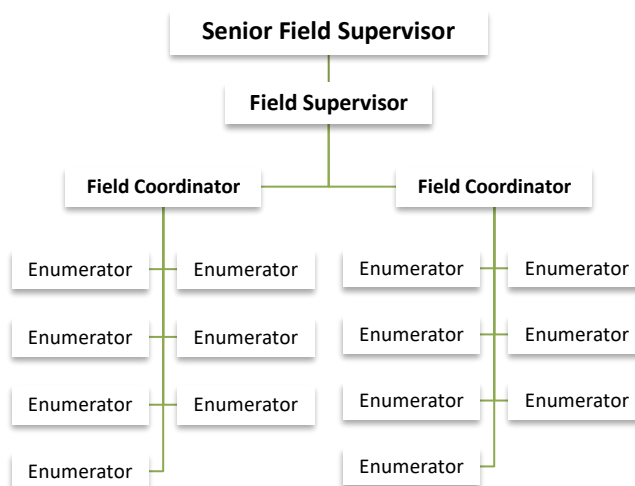


Figure 3. MDAT and Anthropometrics Field Team Structure



Project Management

Amani Ntakirutimana, Data Manager at Laterite Rwanda, managed all data collection activities and field staff for this project and was embedded with the field team for a significant portion of midline data collection. Amani is one of the most experienced field researchers in Rwanda and specializes in large-scale data collection projects involving complex logistics.

FIELD PLAN AND PROTOCOLS

Informed Consent

Laterite enumerators sought informed consent from participants at least once during field preparation, at baseline data collection, and at midline data collection. Caregivers consented both themselves and their children.

The consent form, provided by Boston College, included the following information:

- Subject and purpose of the research;
- How participants were selected;
- That personal information collected would be used only for study purposes and would remain confidential;
- The type of questions to be asked and the estimated time to complete the surveys;
- Study contact details in case of questions or concerns; and
- That participation is voluntary and that participants may withdraw at any time

Enumerators read aloud the consent form in Kinyarwanda given the low literacy level in the catchment area. The forms were signed or, when this was not possible, a thumbprint was given in lieu of a signature.

Laterite and the participant each kept a signed copy of the consent form. Laterite stores consent forms at our main office in Kigali.

Strategy for Finding Households

Participants were contacted in advance of midline data collection and informed about the date, time, and venues of the interview were communicated prior to be visited for interview. These appointment calls were made by a team of enumerators was calling from the Laterite Kigali office. During these calls, the following additional information was collected about respondents in advance of midline data collection:

- Changes to location of the child, caregiver, or household
- Additional caregivers in the household
- New contact details

For the respondents without contact details, the field team worked with CHWs and local leaders to contact participants in advance of data collection inform them of when the household and MDAT surveys were scheduled.

Prior to data collection beginning in each District, this information from appointment calls was compiled and shared with the field team. In addition, in advance of data collection in each District, any information obtained by the Community Based Volunteers (CBV) during the information about changes or issues in the intervention households, or delays to intervention completion in households, was merged into the household list and shared with the field team.

If a participant or household was not available on the day scheduled for their interview, they were added to a list of households for mop-up. Enumerators then followed up with these households and completed any outstanding surveys at the end of data collection in that District.

Interview Protocols at Midline

Exclusion Criteria

Participants were dropped from the study at midline under the following limited circumstances:

- If the child moved outside of the study districts (Rubavu, Ngoma or Nyanza), the household was considered no longer eligible and was not surveyed at midline.
- If a caregiver moved outside of the study districts (Rubavu, Ngoma, or Nyanza), they were not surveyed at midline.
- If a child had died, the household was considered no longer eligible and was not surveyed at midline.

Caregivers

Considerable effort was made to locate and survey all caregivers interviewed at baseline.

Under certain circumstances, additional caregivers not interviewed at baseline were interviewed at midline. All new caregivers were given a new data collection caregiver identification number. Below is a description of the five types of caregivers interviewed at baseline and midline, respectively.

Baseline Caregivers

1. Baseline Primary Caregiver (P1): If available and participating in childrearing, the biological mother of the eligible child. If the biological mother is not available, then the primary caregiver of the eligible child.
2. Baseline Partner of the Primary Caregiver (P2): The intimate partner of P1.

Additional Caregivers at Midline

3. Midline Primary Caregiver (P3):
 - a. A new primary caregiver who replaced P1 because P1 is no longer in the home.
 - b. A biological mother who was not available at baseline but has returned to the home.
 - c. A biological mother who was under 18 at baseline but is now 18 years of age.
4. Midline Partner of the Primary Caregiver (P4):
 - a. A new intimate partner of P1.
 - b. An intimate partner of P1 who was under 18 at baseline but is now 18 years of age.
 - c. An intimate partner of P3.
5. Additional Caregivers (G1): No more than one additional person in the household who has a significant role in taking care of the child. A significant role is defined as someone who cares for the child the same amount of time as the primary caregiver, or more, or as at least 3 days per week. In order of priority, assuming caregiving responsibilities are similar:
 - a. A grandparent of the eligible child.
 - b. An aunt or other relative of the child who takes care of the child.

Surveys Completed by Caregivers

Each survey was completed by one or more respondent in the household. The following criteria were used to determine who should complete each type of survey:

- Caregiver Report on Self
 - Completed by: each caregiver identified in the household
 - Number completed: minimum 1; maximum 5
- Caregiver Report on Household¹
 - Completed by: Any caregiver surveyed in the household
 - The VUP recipient was prioritized for survey completion. If unavailable, the most consistent caregiver was prioritized.
 - If a child moved to a new household, a CGRH was completed for both the baseline and the new midline households.
 - Number completed: minimum 1; maximum 2
- Report on Child
 - Completed by: the baseline or midline primary caregiver
 - If the baseline primary caregiver was available and still had caring responsibilities for the child, they were prioritized for survey completion at midline to ensure consistency in respondents over time.
 - Number completed: one per eligible child in the household
- MDAT & Anthropometrics
 - Any member of the household could bring the child to the MDAT & Anthropometrics assessments.
 - Number completed: one per eligible child in the household

Adverse Event and Risk of Harm Reporting

An adverse event is any occurrence observed during research which suggests that a participant may be at risk for, or may have experienced physical, mental or sexual harm. This information may be directly reported by the participant or may be observed, e.g., bruising as a sign of physical abuse. Adverse events identified by the field team were managed according to a detailed risk of harm protocol, outlined in Appendix 1, developed by Boston College, which guided the field team through the appropriate response to different risks of harm.

Specific survey questions automatically triggered action according the risk of harm protocol. In these cases, enumerators were required to enter additional information at the end of the survey regarding participant risk and action taken in the field. These flags were monitored in real time by field supervisors and twice weekly by the research team to ensure that the protocol was followed appropriately and suspected cases of harm were escalated. All risk of harm flags and their responses were reported to Boston College weekly.

During midline data collection, three breaches to the protocol occurred with late reporting of risk of harm cases. A review of these breaches was sent to Boston College on October 13, 2018. Laterite is working with Boston College to strengthen procedures and training for the endline data collection.

¹ Because there are now two CGRH surveys per “household” at midline, we have created a new **house_id** which distinguishes between houses within the same household. Baseline households are identified by a unique household ID (hhid). We use household to refer to the family unit as it was surveyed at baseline, which now may be residing in one or more house and geographic location.

DATA COLLECTION TRAINING

Surveys at the Household

Refresher training was held between August 1st and 8th, 2018. Refresher training for surveys completed at the household included an overview of the study's objectives and methodology, sampling and replacement strategies, research ethics, the field team's responsibilities, adverse event reporting and the risk of harm protocol, and a thorough review of the survey instruments. The review of survey instruments included presentations outlining:

- The Report on the Child survey, including:
 - All ASQ-3 surveys for 8- to 45-month-old children (ASQ-8-month to ASQ-42-month) with pictorial representations of milestones to ensure field team understanding;
 - The HOME survey;
 - The OMCI tool;
- The Caregiver Report on the Household survey; and
- The Caregiver Report on the Self survey.
- Change of caregivers
- Identification of additional caregivers and protocols

Field training was led by Amani Ntakirutimana, Data Manager at Laterite Rwanda, and presentations were adapted or created by Melissa Sutton, MD, Global Health Research Consultant at Laterite Rwanda.

As there were no major changes to survey questions, no pilot was done in advance of midline data collection.

MDAT and Anthropometrics Surveys

Refresher training was held on August 1st, 2nd, and 6th and was led by Senior Field Supervisor Juliet Kalimba.

Training on anthropometrics measurements was designed by Dr. Sutton in collaboration with the Laterite Senior Field Supervisor. The training included practical exercises on taking measurements as well as recording the information in the surveys.

SURVEY INSTRUMENT PILOTING

Surveys at the Household

As there were no major changes to the survey instruments, no piloting was done for the surveys at the household.

MDAT Midline Pilot

Objectives

The MDAT survey midline pilot was used as an opportunity to repeat inter-rater reliability (IRR) calculations, thereby assessing enumerator consistency in implementing this complex pediatric developmental assessment.

Implementation

The MDAT survey midline pilot involved 38 children. To evaluate inter-rater reliability, children were assessed by a single enumerator and then reassessed by a different enumerator later the same day. One child was unable to complete the second assessment due to illness and two children were unable to complete the second assessment due to napping, reducing the final sample size to 35.

The MDAT pilot was held at the Centre Spiritual San Jose Carmelo in Kigali with a random sample of the families interviewed during the baseline MDAT pilot.

Measures of Rater Reliability (IRR)

Inter-rater reliability was evaluated with a kappa coefficient, κ . The distribution of kappa coefficients and the percentage agreement were calculated using STATA version 15 and are presented in Figure 4. The pilot sample of 35 was powered to detect a κ of 0.80, with a minimum κ of 0.60 and a maximum κ of 1.0, with power = 80% and $\alpha = 0.05$.

Figure 4. MDAT Midline Pilot Inter-rater Reliability

Kappa				Percentage Agreement			
>0.80 excellent	0.61-0.80 substantial	0.41-0.60 moderate	0.21-0.40 fair	>90%	81-90%	71-80%	61-70%
3 (9%)	24 (69%)	8 (23%)	0 (0%)	13 (45%)	13 (45%)	3 (10%)	0 (0%)

Overall, inter-rater reliability was substantial with a mean $\kappa=0.67$ (95% CI: $\kappa= 0.65 - 0.71$) and an overall percentage agreement of 84%. Reliability was excellent for 9% of inter-rater reliability assessments. The majority of assessments had substantial reliability ($\kappa=0.61-0.80$). No assessments had less than moderate reliability ($\kappa<0.41$).

Anthropometrics Midline Pilot

Objectives

The Anthropometrics survey midline pilot was used as an opportunity to evaluate inter-rater reliability (IRR) calculations, thereby assessing enumerator precision in obtaining anthropometric measurements, including weight, length or height², and mid-upper arm circumference (MUAC).

Implementation

The Anthropometrics survey midline pilot involved 38 children. To evaluate inter-rater reliability, children were assessed by a single enumerator and then reassessed by a different enumerator later the same day. One child was unable to complete the retest due to illness, reducing the final sample size to 37. With a sample size of 37, it is possible to detect a hypothesized intraclass correlation coefficient (ICC) as high as 0.99, assuming a null ICC of 0.50, with power = 100% and alpha = 0.05.

Enumerators were trained in obtaining child anthropometric measurements according to international best practices.³ Children were undressed to a minimum and shoes removed prior to all anthropometrics measurements.

To obtain weight measurements, children were placed in cloth bags with leg holes which were then hung from digital hanging scales which read to the 0.005 kg. Height and length measurements were obtained using height boards with an attached measuring tape which read to the 0.1 cm. Height boards were placed horizontally on a table or the ground for length measurements and a footboard was utilized to ensure accurate measurement. The same height boards were placed vertically (i.e., upright) on a flat surface for height measurements and a headboard was utilized to ensure accurate measurement. To obtain MUAC measurements, enumerators utilized standard measuring tapes which read to the 0.1 cm. Enumerators first measured the distance from the child's elbow to shoulder, with the elbow bent to 90 degrees. At the mid-point of these anatomic landmarks, enumerators then measured the circumference of the child's mid-upper arm, with the arm relaxed in extension.

The Anthropometrics survey midline pilot was held at the Centre Spirituel San Jose Carmelo in Kigali with a random subset of the families interviewed during the baseline MDAT pilot.

Measures of Rater Reliability (ICC)

Inter-rater reliability was evaluated using a one-way random, agreement, single measures ICC. ICC estimates and their 95% confidence intervals were calculated using STATA version 15 and are presented in Figure 5. Overall, inter-rater reliability was excellent with all ICC values exceeding 0.90. MUAC had the lowest inter-rater reliability with an ICC = 0.914. These data suggest very high precision amongst enumerator anthropometric measurements.

² Length is measured in children under age two, while height is measured in children two and older.

³ Department of Technical Cooperation for Development United Nations, and Statistical Office United Nations. *How to weigh and measure children: assessing the nutritional status of young children in household surveys*. UN, 1986.

Figure 5. Anthropometrics Midline Pilot Inter-rater Reliability

Intraclass Correlation Coefficient		
Weight	Length or height	Mid-upper arm circumference
0.999 (95% CI: 0.998, 0.999)	0.992 (95% CI: 0.985, 0.996)	0.914 (95% CI: 0.840, 0.954)

Anthropometrics Validation Study

Objectives

The Anthropometrics validation study was designed to assess the accuracy of enumerator anthropometric measurements.

Implementation

To evaluate the accuracy of enumerator anthropometrics measurements, children were assessed first by enumerators and then immediately reassessed by a medical doctor utilizing the same equipment, with the latter measurement representing a “gold standard” against which measurement accuracy may be judged. The enumerator assessment was recorded prior to the assessment by the medical doctor, and all evaluators were asked to refrain from observing each other’s measurements. Due to the reality of testing conditions in the field, it was not possible to physically separate the anthropometric measurements. To ensure that this study accurately captured the enumerators’ typical anthropometric measurements, enumerators were not retrained prior to obtaining measurements and observed errors were not corrected.

The Anthropometrics validation study involved 27 children. With a sample size of 27, it is possible to detect a hypothesized intraclass correlation coefficient (ICC) as high as 0.99, assuming a null ICC of 0.50, with power = 100% and alpha = 0.05.

Measures of Rater Reliability (ICC)

Inter-rater reliability was evaluated using a one-way random, agreement, single measures intraclass correlation coefficient (ICC). ICC estimates and their 95% confidence intervals were calculated using STATA version 15 and are presented in Figure 6. Anthropometrics Midline Validation Study. Overall, weight and height measurements demonstrated excellent accuracy, with both ICC values exceeding 0.95. MUAC was the least accurate anthropometric measurement, with an ICC of 0.870. This is also the most technically difficult measurement; however, the overall anthropometric MUAC accuracy remains very good.

Figure 6. Anthropometrics Midline Validation Study

Intraclass Correlation Coefficient		
Weight	Length or height	Mid-upper arm circumference
0.999 (95% CI: 0.999, 1.000)	0.971 (95% CI: 0.938, 0.987)	0.870 (95% CI: 0.738, 0.938)

DATA COLLECTION

Schedule

Baseline data collection was carried out over seven weeks from August 13, 2018 to September 30, 2018. Two weeks were spent in each district, and districts were surveyed sequentially starting in Nyanza then Ngoma then Rubavu. All data collection was completed in one district before data collection in the following district began.

The MDAT and anthropometric team followed behind the team completing the surveys at the household by one week, so that the MDAT survey was completed after the surveys at the household. The lag between household and MDAT/anthropometric surveys was longer at midline than baseline (where it was just a couple of days), due to a delay in receiving the scales required to start anthropometric data collection.

Completion Statistics

For data collection from a household to be considered complete, the household must have completed at minimum the Caregiver Report on Self with the primary caregiver; Report on the Household with the household where the eligible child(ren) lived at Midline; and Report on Child, MDAT, and Anthropometrics with all eligible children. In total, data collection was completed with 1,044 of the 1,049 households in the baseline sample. Four households were not surveyed at midline because they had moved outside the three study districts and one household refused to participate. Details of households not surveyed at midline are included in Appendix 2. A breakdown of the number of clusters and households in the midline sample by treatment status and public works type is presented in Figure 7 and Figure 8, respectively.

Figure 7. Number of Clusters by Treatment Status in Midline Sample

	Control	Treatment	Total
Classic PW	75 clusters	75 clusters	150 clusters
Expanded PW	38 clusters	47 clusters	85 clusters
Pooled	97 clusters	100 clusters	197 clusters

Figure 8. Number of Households by Treatment Status in Midline Sample

	Control	Treatment	Total
Classic PW	372 households	373 households	745 households
Expanded PW	133 households	166 households	299 households
Pooled	505 households	539 households	1044 households

The final dataset includes 1,078 of the 1,085 children in the baseline sample. Five of the seven children not surveyed at midline were part of households not surveyed. There are 36 households in the baseline sample with two eligible children. In two of the 36 households one child was not surveyed: in one household one child moved outside the districts in the study, in the other household one child was dropped because they were overage at baseline. Details of the children not surveyed at midline are included in Appendix 3. Therefore, there are 34 households in the midline sample with two children surveyed.

The final caregiver dataset include 1,797 caregivers: 1,035 of the 1,049 primary caregivers in the baseline sample, 438 of the 508 partners of primary caregivers in the baseline sample, 18 new primary caregivers at midline, 36 new partners of primary caregivers at midline, and 269 additional caregivers. Details of the caregivers not surveyed at midline are included in Appendix 4.

The numbers of each type of survey collected by district and the number of each type of caregiver by district are presented below in Figure 9 and Figure 10 , respectively.

Figure 9. Surveys completed for six survey instruments by baseline district

District	Number of households	Report on Household	Caregiver Report on Self	Report on Child	MDAT	Anthropometrics
Ngoma	345	346	586	355	355	355
Nyanza	350	351	599	360	360	360
Rubavu	349	349	612	363	363	363
Total	1,044	1,046	1,797	1,078	1,078	1,078

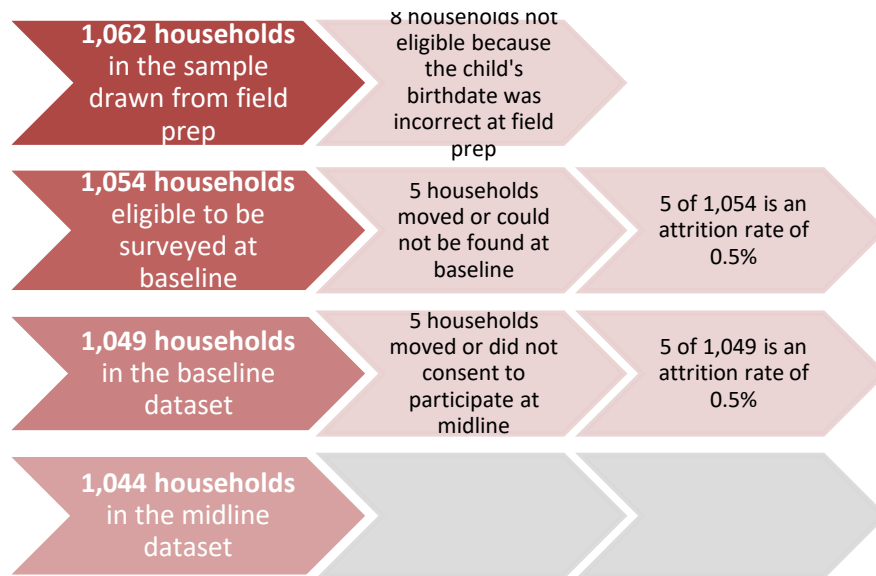
Figure 10. Caregiver surveys completed at midline by baseline district

District	Total number of caregivers	Caregiver Type					
		Baseline Primary	Baseline Partner	Midline Primary	Midline Partner	Additional Caregivers	Other
Ngoma	586	343	119	4	9	110	1
Nyanza	599	345	138	6	14	96	0
Rubavu	612	347	181	8	13	63	0
Total	1797	1035	438	18	36	269	1

Attrition

Between each wave of data collection, some households moved, declined to participate, or were otherwise not able to be surveyed. Figure 11 below outlines the attrition between the sample being drawn, baseline, and midline data collection. Between each wave there has been an attrition rate of about 0.5% of households.

Figure 11. Attrition in each wave of data collection



In addition to attrition of households, there is attrition of caregivers and children between waves of data collection. Figure 12 outlines the attrition of caregivers and children between baseline and midline data collection. The numbers used for baseline here are the number of caregivers and children in the 1,049 households in the baseline dataset, not the number surveyed at baseline. There was one primary caregiver, a number of partners of primary caregivers, and one child in the 1,049 households who were not able to be surveyed at baseline.

Figure 12. Respondents lost in follow-up between baseline and midline

Respondent Type	Baseline	Midline	Total Attrition # (%)
Primary Caregivers (P1 only)	1,049	1,035	14 (1.3%)
Partners of Primary Caregivers (P2 only)	508	438	70 (13.8%)
Children	1,085	1,078	7 (0.6%)

Administration of Surveys

Surveys at the Household

The Report on the Child, Caregiver Report on the Household, and Caregiver Report on Self were all performed in the home. The order in which the surveys were administered depended on whether the child was able to be assessed. If the child was present and awake, the Report on the Child was administered first, then the other surveys followed. If the child was asleep or not available, the enumerator would start with the caregiver surveys instead. Due to the sensitive nature of the intimate partner violence questions in the Caregiver Report on Self, this survey was conducted only by enumerators of the same gender as the respondent and in as private a location as possible. In the case that a survey was not completed during the first visit—because there was a mismatch in the genders of the enumerator and respondent, for example—an appointment for mop up would be communicated to the household immediately and an enumerator would return at the earliest opportunity.

MDAT and Anthropometrics Surveys

Participants were scheduled to attend appointments for MDAT assessments and anthropometric measurements at centralized locations. In each cell, a community health worker selected a safe place—such as the cell office, a church, or school—to serve as the data collection site. Participants were notified in advance regarding the location and timing of these surveys.

On the day of the surveys, enumerators explained to caregivers that they would first play with the child then take measurements and reminded caregivers to do both sessions before leaving the venue. A dedicated enumerator took measurements for weight, height or length based on the age of the child, and MUAC and recorded observations on a paper form with a unique ID to identify the child. These measurements were entered into SurveyCTO at the earliest opportunity and always on the same day as data collection.

Survey Duration

Figure 13 below shows the median completion time for each type of survey at baseline and midline. The anthropometrics measurements were first recorded on paper and then entered into the tablet later, so an accurate median time can't be calculated from the SurveyCTO output. Surveys at the household took less time at midline than baseline, and respondents who had completed the surveys before were somewhat faster than their counterparts who were completing the survey for the first time. The MDAT took on average longer at midline, likely because the children are older at midline and the average survey time increases with age. The median duration for all of the surveys at the household was 2 hours and 16 minutes per household. This varied by number of caregivers surveyed, with the median duration increasing with number of caregivers surveyed. The median duration of all household surveys (ROC, CGRS, and CGRH) by the number of Caregiver Report on Self Surveys completed is presented in Figure 14.

Figure 13. Median duration for each survey

Survey	Baseline Median Time (minutes)	Midline Median Time (minutes)
Surveys at the Household		
Caregiver Report on Self	44	37
Baseline primary caregivers	43	36
Baseline partners	47	37
Midline primary caregivers	---	42
Midline partners	---	43
Midline additional caregivers	---	41
Caregiver Report on Household	30	20
Report on Child	53	49
MDAT Survey		
MDAT	47	52

Figure 14. Median Total Duration of Surveys at the Household by Number of Caregivers Surveyed

Number of CGRS surveys completed	Number of households	Median Total Duration of Surveys at the Household
0	1	61
1	316	106
2	703	145
3	22	198
4	2	299

Participant Compensation

All study households received 5,000 RWF disbursed in two increments of 2,500 RWF at the completion of each the household surveys and the MDAT, as compensation for their time and the cost of travelling to a centralized cell location for the MDAT and anthropometric assessment.

Challenges

The team encountered and addressed the following challenges during data collection:

- Errors in the participant list: There were a few households where caregiver names or other details were missing from the participant list because of missing or switched caregiver information in the field prep and/or baseline datasets. Enumerators were able to correct many participant details in the surveys, or add in missing details in the survey comments.
- The addition of new caregivers: Scheduling surveys was more difficult at midline as the number of caregiver surveys required per household was not known until the household was visited. Where the caregiver changed and additional caregiver surveys were required, a second mop-up visit to the household to complete the additional caregiver surveys was often required.
- Unavailability of a child in the household: There were cases where children went to visit other family or moved into a different household between appointment calls and data collection, and were not present at the household on the day planned for data collection. In these cases, enumerator teams followed up with other participants from the household, village leaders, CHWs and others to locate these children.
- Changes in local authorities: In some study locations local authorities changed between baseline and midline, and they complained about not being informed about the project. In these cases, the team had to pause data collection and contact the District or the *Sugira Muryango* staff to clear up the issue.
- Availability of scales: The scales used to take child weight measurements in the Anthropometrics data collection did not arrive in time for the planned start of data collection, and the start of the MDAT team's data collection had to be pushed back about half a week until the scales arrived. So, instead of following the Household survey team by 2-3 days as they did at baseline, the MDAT team followed the Household team by about a week. In addition, the pilot and training were done with a different set of scales, which were similar but not identical, than those used at midline. This meant the enumerator team was not fully trained on the new equipment. As a result, they were not properly taring the scales during the data collection to remove the weight of the bag the children are

weighed in. However, they were consistent in the methods they were using and it was possible to remove the weight of the bag from every child during data cleaning.

- MDAT mop-ups: Some kids were sick on the day they were supposed to be assessed for the MDAT, which required scheduling mop-up appointments. Mop-up appointments for the MDAT and Anthropometrics were particularly difficult because the MDAT team had a limited number of cars, these assessments require quite a bit of equipment, and the venues for MDAT data collection are only reserved in advance for the scheduled data collection day.
- ASQ mop-up: For the first three days of baseline data collection, the child birthday pulled into the Report on Child was an updated birthday (incorporating any corrections to child birthdays from the baseline MDAT and Anthro) instead of the birthday used in the baseline ROC. For seven children in these three days of data collection, the birthday pulled into the ROC was not the same as the baseline ROC. For these children, the ASQ modules were re-done later as a mop-up. The mop-up modules have been merged into the ROC dataset during midline data cleaning and surveys for these children are flagged in the cleaned child dataset with the variable “asq_mop_up_ROC”.

DATA QUALITY MONITORING

Field Supervision

Throughout data collection, the field supervisor for the surveys at the household would choose one sub-team to accompany each day to confirm that interviews were conducted in the right households, protocols were followed, and ethical considerations were met. When enumerators raised issues during the day, the field coordinator reported them immediately to the field supervisor who communicated them to the data manager for the final decision. The field supervisor would observe one or two surveys (with the exception of the Caregiver Report on Self since it included questions about particularly sensitive information) for each sub-team’s member to confirm that questions were asked and answers recorded correctly. The field supervisor and senior field supervisor for the MDAT and anthropometric team roved among enumerators to check that assessments were conducted according to protocol and to offer guidance or corrections.

At the end of each day, the field supervisors updated the log of surveys completed and issues to be cleaned in the data and compiled a daily field report for the data manager. The teams for both the surveys at the household and the MDAT and anthropometric assessments attended a daily debrief session led by the senior field supervisor and data manager. During the debrief, the team discussed issues from the day’s surveys, and the data manager provided solutions and communicated any changes in the survey. Before heading to the field each morning, the team met with the data manager who updated the list of households with any replacements from the previous day, reviewed the schedule, and addressed quality concerns from the data collected in the previous days.

Real-time Completion Tracking

Laterite used SurveyCTO’s feature of real-time publishing of form submission data into Google Sheets to track the progress of data collection compared to the targets in the field plan. A dashboard was

created to track the completion of all surveys for each household. The Google Sheet dashboard was also used to track additional caregivers and households and flag duplicate surveys.

Routine Monitoring

Laterite used proprietary audit algorithms to review survey metadata to flag unusual submissions such as those with comparatively short or long durations or abnormal percentages of missing data. Concerning surveys were flagged to the Data Manager and Senior Field Supervisors for further investigation. In addition, Laterite routinely monitored the incoming survey data for survey duplication and outliers signaling potential measurement errors. Laterite reported survey completion statistics to Boston College in weekly Data Collection Reports.

Flagged Survey Responses

Several survey responses triggered the risk of harm protocol. These flags were monitored in real-time by field supervisors and twice weekly by the data monitoring team to ensure that the risk of harm protocol was followed appropriately. Figure 15 shows the frequency of each flagged responses triggering the risk of harm protocol.

Laterite was asked by Boston College to flag several additional survey responses (see Figure 16). Responses were flagged and reported only if occurring more than 10 times in 3 months or, in the case of parq_4, if the response was, “almost always true.” Flagged responses were reported to Boston College in the weekly monitoring reports along with household information.

Figure 15. Flagged Responses Triggering the Risk of Harm Protocol

Variable	Question Text	Response triggering Risk of Harm Protocol	Instances Reported # (% of those asked)
Caregiver Report on Self			
hsc1_20	Thoughts of ending your life (please tell us how many times it happened to you or stressed you last week including today)	A little / Quite a Bit / Extremely	87 (4.84%)
	Has any argument between you and your partner or most recent partner ever led you to do any of the following?		
cts_9	Used a knife or any other weapon to harm your partner	Yes	4 (0.27%)
cts_10	You hit your partner with something that could cause injuries to your partner	Yes	8 (0.54%)
cts_13	You used forceful means to be able to have sexual intercourses with your partner	Yes	26 (1.7%)
	Has your partner ever done any of the following things to you?		
cts_20	She/he used a knife or any other weapon	Yes	20 (1.34%)
cts_21	She/he hit you with an object that could cause injuries	Yes	44 (2.95%)

Variable	Question Text	Response triggering Risk of Harm Protocol	Instances Reported # (% of those asked)
cts_24	She/he forced you have sexual intercourse when you didn't want	Yes	94 (6.3%)
Report on Child			
cd_12	Beat him/her up, that is hit him/her over and over as hard as one could (tell me if you or anyone else in your household has used this method in the past 30 days with [child name])	Yes	8 (0.74%)

Figure 16. Additional Flagged Responses

Variable	Question Text	Flagged Response	Instances Flagged # (% of those asked)
Caregiver Report on Self			
	Has any argument between you and your partner or most recent partner ever led you to do any of the following?		
cts_6	Shoving your partner	Yes	112 (7.5%)
cts_7	Grabbed your partner	Yes	57 (3.82%)
cts_8	Slapped or punched your partner	Yes	93 (6.23%)
cts_12	Kicked your partner	Yes	15 (1.01%)
	Has your partner ever done any of the following things to you?		
cts_17	She/he shoved you	Yes	135 (9.05%)
cts_18	She/he grabbed you	Yes	117 (7.84%)
cts_19	She/he hit you	Yes	153 (10.25%)
cts_22	She/he pushed you into a wall	Yes	83 (5.57%)
cts_23	She/he kicked you	Yes	50 (3.35%)
Report on Child			
parq_4	I hit my child/children even when (s)he may not deserve it (Please pick how accurate you think these statements might be)	Almost always true	10 (0.56%)

Audio Audits

Audio from a sample of all surveys conducted at the household was automatically recorded using the in-built feature of SurveyCTO. The questions that triggered the audit were pre-selected and recordings were reviewed to assess whether (i) the interviews actually took place; (ii) enumerators were following proper interview procedures such as: explaining confidentiality and sticking to the script while asking sensitive questions; (iii) enumerators were asking questions with a respectful tone and without pushing the respondent or leading them towards a certain response; and (iv) explaining

to the respondents that they could opt out of taking part (or answering questions in some parts of) in the survey. The questions audited are listed in Appendix 5 **Error! Reference source not found.** A random sample of 5% of all surveys were recorded for each question.

No audio audits were set for the MDAT and anthropometrics surveys since the proper administration of these assessments relied less on enumerator-participant dialogue. These surveys were instead administered under supervised conditions and enumerator behavior was closely monitored.

Throughout data collection, Kinyarwanda-speaking data auditors reviewed the audio recordings to confirm that there was dialogue between the enumerator and the respondents (i.e. that responses were not entered without actually asking the questions) and that enumerators were following proper interview procedures like explaining confidentiality and ensuring privacy for sensitive questions and asking questions in a respectful tone without pushing the respondent or leading them towards a certain response. Issues identified by the auditors were recorded and relayed to the data manager for proper follow-up and resolution with the field supervisors.

DATA CLEANING

Laterite cleaned data iteratively throughout data collection to identify issues as they arose. At the end of midline data collection, a master data cleaning file was compiled that included all deduplication and cleaning done throughout data collection, as well as the merging of datasets, de-identification of the dataset, coding of missing values, and other steps to prepare the data for Boston College. All data cleaning was completed in STATA version 14.

Duplicates Management

Duplicates identified during data quality monitoring by unique identifiers were managed as follows:

- True duplicates (all variables identical): one copy was deleted using the *duplicates drop* command.
- Partial duplicates (not all variables identical): both copies were flagged using the *duplicates tag* command, removed from the dataset, logged, and investigated by the data manager. Following investigation, the Master Corrections .xls file and/or the STATA .do file (depending on the issue identified) were updated and the duplicates were cleaned with the subsequent round of data.

Duplicates reports were generated daily during the first week of data collection then with decreasing frequency as field errors decreased and data quality improved.

Master Datasets

The data cleaning process involved reshaping the raw dataset from SurveyCTO, containing all form submissions, and transforming it into cleaned—de-duplicated, de-identified—datasets. Reshaping and merging the results of the five surveys, Laterite created three datasets: Caregiver, Household, and Child. The folder “10-Midline Data Cleaning” contains all the necessary files (raw data .csv files, .dta files, auxiliary files & .do files) used to produce the final datasets. Details about the inputs and structure of the files is outlined Readme.docx file included with the data sets.

The first step of the data cleaning process converted the raw data into the labelled Stata format dataset by running the import_.do files that are output from SurveyCTO using the raw .csv files. This step was repeated for each version of each of the five surveys: Anthropometrics, Caregiver Report on the Household, Caregiver Report on Self, MDAT, and Report on Child. One of the inputs to this .do file is the survey-specific corrections file, which is used to make changes to values in the dataset by referring to the submission key and variable name. The corrections files are updated manually by the data monitoring and cleaning team at Laterite to incorporate changes suggested by the data collection team in the field or address values recorded erroneously.

For variables like name that might be used to verify identity, corrections were not made in the corrections file, but instead added to a separate “corrections_midline_surveys” document and merged into the dataset as a new variable (such as “name_corrected”).

Other changes that required the dataset to be over-written were kept in the corrections .csv files for each survey. In total, there were 57 corrections to the Caregiver Report on Self, to update or add caregiver information (e.g. caregiver type and location change); 4 corrections to the Caregiver Report on Household, again to update caregiver information and 2 corrections to the Report on Child to correct caregiver type. All additional changes are made to the dataset via the data cleaning do files.

Data cleaning is done in one .do file for each dataset. The data cleaning process involved appending survey versions, resolving duplicates, pulling relevant information from the field prep data, comparing caregiver information across field prep and baseline data collection, merging the translations of enumerator comments, labelling variables, and re-coding skipped or missing values according to the Boston College team’s guidance. The child data cleaning files also merge in data from the ASQ mop-up and reshape the MDAT data. The final outputs are:

- Caregiver dataset with 1,797 observations from data collected through the Caregiver Report on Self
- Household dataset with 1,046 observations (“houses”) from data collected through the Caregiver Report on Household, representing 1,044 households.
- Child dataset includes 1,078 observations from data collected through the Report on Child, MDAT, and Anthropometrics.

In the cleaned midline datasets, we differentiate between a **household**, the primary sampling unit and the unique ID in the household dataset at baseline, and a **house**, which is each separate residence at midline and the unique ID in the household dataset at midline. By definition there was only one house per household at baseline. At midline because of changes in the family structure over time there may be more than one separate residence, or house, per household.

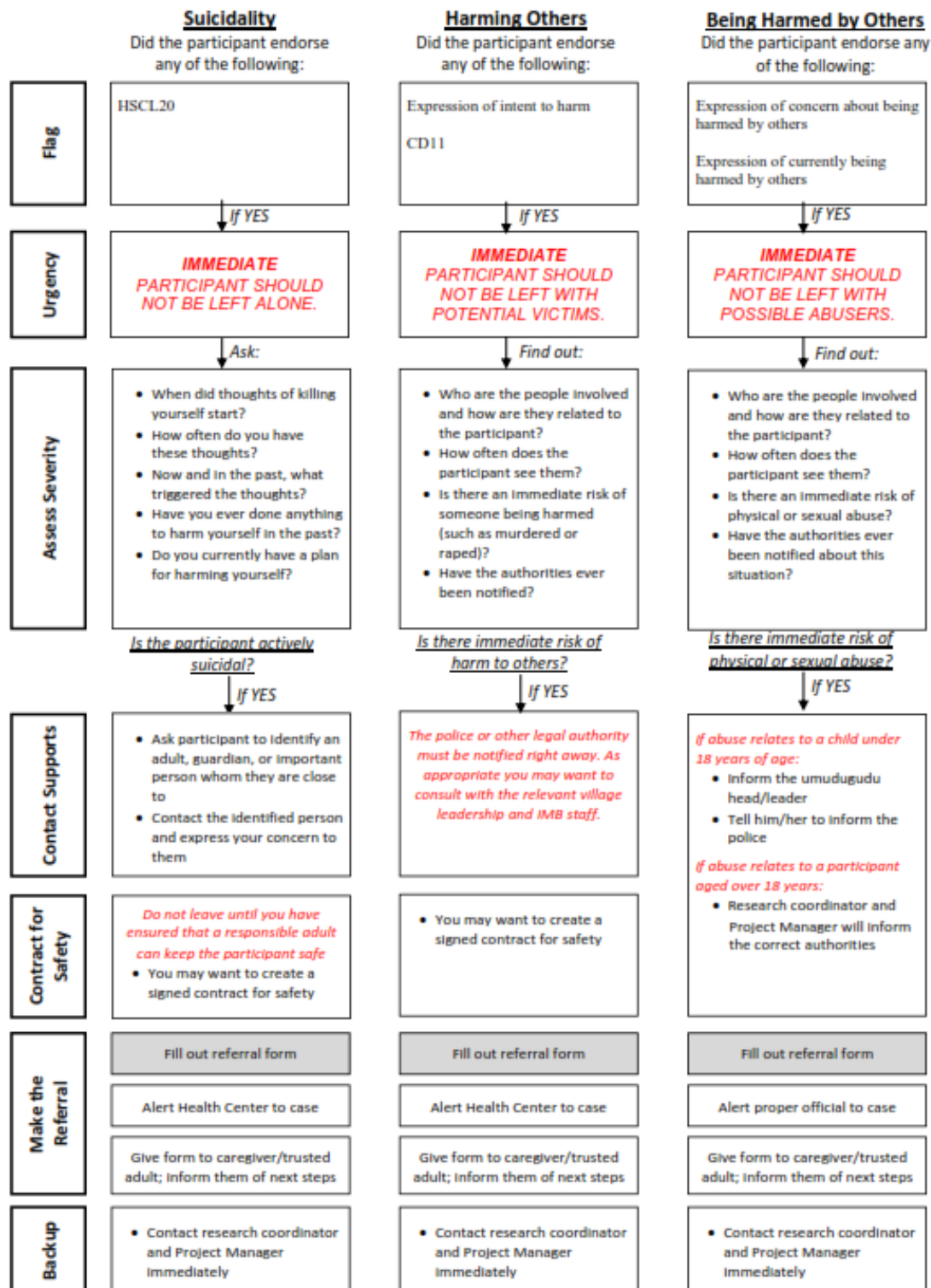
Observations from the three datasets can be linked using the household ID variable (hhid), a unique identifier for each household. Children and caregivers can be further linked to the house where they live using house ID (house_id), a unique identifier for each residence within a household. Figure 17 shows the identifying variables in each dataset.

Figure 17. Identifying variables in each dataset

Household Dataset	Caregiver Dataset	Child Dataset
<ul style="list-style-type: none">•Unique ID: house_id•hhid links houses in the same household•hhid is consistent across baseline and midline datasets	<ul style="list-style-type: none">•Unique ID: cg_id•house_id specifies which house in a household the caregiver lives in•hhid links caregivers in the same household•cg_id is consistent across baseline and midline datasets	<ul style="list-style-type: none">•Unique ID: child_id•house_id specifies which house in a household the child lives in•hhid links children in the same household•child_id is consistent across baseline and midline datasets

Appendix 1. Risk of Harm Action Flowchart

RISK OF HARM ACTION FLOWCHART



Appendix 2 . Households lost in follow-up

Household ID	Why not found
103977	Child moved to another district
108328	Child moved to another district
109227	Child moved to Uganda
115069	Mother and child moved to Uganda
114682	Household refused to participate

Appendix 3. Children lost in follow-up

Household ID	Child ID	Why not found
107697	407691	Child moved to another district
109216	409218	Child dropped since overage at baseline

Appendix 4. Caregivers lost in follow-up

Household ID	Caregiver ID	Why not found
Primary Caregivers		
100526	200529	During Baseline the child was living with her mum who was interviewed as P1 but now the child is living with her grandmother. The child's mother left this household and went in another district.
100620	200624	During baseline, the child was living with his the grandmother who was interviewed as P1, now the grandmother is married, and left the child.
101544	201549	P1 was in Kigali to take care his hospitalized brother from June through the day data collection ended in Nyanza.
101973	201976	P1 lives in Kigali for work.
103891	203895	During baseline the child was living with her grandmother who was interviewed as P1, but now her mother is back at home. The child's grandmother is now living in another district.
110351	210356	P1 has not been at home for two months; visiting family in another district.
112914	212917	P1 has left and the child is living with his father alone.
109402	209401	P1 lives in Kigali for work.
107338	207335	CGRS for P1 and G1 are missing. At the first visit the female enumerator did not find them at home and during mop up the team found out that both went to another district and were not able to be interviewed while team was in Ngoma.
Secondary Caregivers		
100265	300188	The CGRS for P2 is missing because he is living in another district Kirehe.
100279	300191	CGRS for P2 is missing because he lives in Eastern Province.
100784	300422	P2 was not found.
101241	300605	CGRS for P2 is missing because works in Mayaga and is available at home only once every three months.
101286	300639	The secondary caregiver works in Kigali.
101651	300724	CGRS for P2 is missing because he is living in Kigali.
102267	301052	No secondary caregiver lives in this household.
102310	301083	CGRS for P2 is missing because he works in another district and is available at home only once in a month.
102558	301261	CGRS for P2 is missing because he refused to participate.
102683	301358	The CGRS for P2 is missing because he is in Kigali looking after a family member who is sick.
103033	301554	CGRS for P2 is missing because he works in Mayaga.
103678	301862	CGRS for P2 is missing. The grandfather was considered as P2 in the household but he was not interviewed.
104266	302108	CGRS for P2 is missing because he was not available for the duration of data collection in Nyanza.
104503	302234	CGRS for P2 is missing because he has mental problems.
104493	302227	CGRS for P2 is missing because he has mental illness.
104588	302291	CGRS for P2 is missing because he works in Kigali.

Household ID	Caregiver ID	Why not found
111406	305290	CGRS for P2 is missing because he works in Goma and is not home during the day.
110367	304645	CGRS for P2 is missing because he was not at home for any of the 3 visits to the household.
115573	307701	CGRS for P2 is missing because he has mental problem and was not interviewed.
110884	304979	CGRS for P2 is missing because he works far away and comes home only once a month.
112897	306166	CGRS for P2 is missing because he works in Kigali.
114242	306956	CGRS for P2 was not found at home during 3 visits.
111295	305215	CGRS for P2 is missing because he moved to Uganda.
110439	304707	CGRS for P2 was not found at home during 3 visits.
110988	305035	CGRS for P2 has left this home and has a second wife in an unknown place.
113118	306316	CGRS for P2 is missing, he is staying in at Musanze.
115027	307360	CGRS for P2 is missing, he is a taxi driver and the team did not find him after 3 visits.
113219	307977	CGRS for P2 is missing. He is in jail.
112533	305930	CGRS for P2 is missing. He spends all the day in Congo.
115151	307467	CGRS for P2 is missing. He works in Kigali.
112777	306072	CGRS for P2 is missing. He is in jail.
113851	306713	CGRS for P2 is missing. He works in Kirehe District.
111085	305081	CGRS for P2 was not found at home during 3 visits.
111251	305176	There is no P2 in the HH.
113126	306327	There is no P2 in the HH.
112642	305974	CGRS for P2 is missing. He works in Kigali.
114431	307054	CGRS is missing. He spends the day in Goma.
108260	303813	CGRS for P2 is missing because he doesn't live with his wife and we didn't find him at his place during 3 visits.
109345	304195	CGRS for P2 is missing. The husband doesn't live in this home. No one knows where he moved to.
108825	304027	CGRS for P2 is missing. He went to work in Kirehe district and they don't know when he will be back.
105387	302663	CGRS for P2 is missing. He is in army peace-keeping mission in South Sudan.
107697	303624	CGRS for P2 is missing. He was not available at home for the duration of data collection in Ngoma.
109029	304114	CGRS for P2 is missing. He works in another district and comes at home one in three months.
107418	303447	CGRS for P2 is missing. He has moved to an unknown place.
108481	303868	CGRS for P2 is missing. He went to Ruhengeri to take care of his brother who is sick. The wife doesn't know when he will be coming back.

Appendix 5. Questions in the Audio Audit

Variable	Question Text	Why Audited
Caregiver Report on Household		
vup_1 to vup_3	vup_1; What type of public works job have you participated in? vup_2; About how many months have you/your household worked in Public Works (VUP) in the past 3 months? vup_3; Are you or is someone in your household currently working in public works (VUP)? (By currently, we mean within the past week)	Ensure enumerator stuck to the script; that it was clear to the respondent that the questions were <i>about the past week</i> ; and that the enumerator was not rushing or being rude to the respondent
fc_1 to fc_3	fc_1; In total, how many people live in your household? fc_2; In total, how many children 17 years old or younger live in your household? fc_3; How many children under 5 are in the household?	Ensure that the enumerator asked the questions in a clear and easy to understand manner; that the question script wasn't altered; and that the enumerator was courteous and not rushing
ha_ws12 to ha_ws14	ha_ws12; Do you have any soap or detergent or ash/mud/sand in your household for washing hands? ha_ws13; Do you normally wash your hands after you have been to the toilet? has_ws14; The last time your children passed stools, what was done to dispose of the stools?	Find out if the respondent was at ease; ensure the enumerator was reading the questions as scripted; the interview was not rushed and the enumerator was courteous
Caregiver Report on Self		
alc_inst to alc_2	alc_inst; INSTRUCTIONS: Due to the fact that alcohol carries some health risks and can interfere with some medications, it is important that we ask you questions about your alcohol consumption. Your answers will be kept confidential, that's why we ask you to be honest. Try to answer questions about alcohol beverages. Ask for clarification whenever needed: alc_1; How many times do you drink? alc_2; How many drinks containing alcohol do you have on a typical day when you are drinking?	Ensure reminder of confidentiality was read as written; that the respondent acknowledged having heard and understood the confidentiality reminder; Check that the enumerator was clear, courteous, at ease, not rushed and not harsh.
cts_inst to cts_note1	cts_inst; INSTRUCTIONS: Now I am going to ask you questions about your partner (boyfriend/girlfriend/husband/wife). cts_1; Have you ever been married or had a partner? cts_2; Are you married now or have a partner? cts_3; Do you currently live with your partner? cts_note1; INSTRUCTIONS: These questions might remind you of difficult events or circumstances. At any point if you do not wish	Check that the enumerator ensured no one else was present before asking these questions; Ensure that the enumerator clearly explained to the respondent that they could choose to opt out of answering this set of questions; that the enumerator received acknowledgement from the respondent of having understood

Variable	Question Text	Why Audited
	<p>to answer these questions let us know and we can skip a particular question or move to the next section.</p> <p>Has any argument between you and your partner or most recent partner ever led you to do any of the following?</p>	the instructions; and that the enumerator was clear, courteous, at ease, and not harsh.
Report on Child		
chh_momhi v to chh_hivb	<p>chh_momhiv; Let me remind you that all of your answers are confidential, and that the information you provide is very important for the survey. Did you/the mother know if you were HIV+ when you were pregnant with \${_calc_child_name}?</p> <p>chh_momhivb; If HIV+, did you/the mother receive treatment to prevent transmission of HIV to your baby?</p> <p>chh_hiv; Has \${_calc_child_name} ever been tested to see if he/she has HIV?</p> <p>chh_hivb; Let me remind you that all of your answers are confidential, and that the information you provide is very important for the survey. Could you please tell me what was the result of your child's last test for HIV?</p>	Ensure reminder of confidentiality was read as written; Check that the enumerator was clear, courteous, not rushed and not harsh; and that the respondent was at ease.
_check_child_bday to note_confirm_age	<p>_check_child_bday_confirm; Was [child name] born on [child birthday]?</p> <p>child_bday_doc; What document was used to verify the date of birth?</p> <p><i>[non-spoken questions omitted here]</i></p> <p>According to our records, [child name] is [age in months] months old today. Can you confirm that this is correct?</p>	Check that birthday corrections were being done correctly, and to identify any issues in confirming birthday documentation; Check that the enumerator read the question as written, and that they were clear, at ease, and not harsh or forceful.
cd_inst to cd_13	Gross motor objects available (e.g., ball, rope, ring, stone).	Check that the enumerator was clear, at east, not rushed, and that the enumerator looked for the objects mentioned or the participant brought them to the enumerator.