Monitoring the Outcomes of Orphans and Vulnerable Children Programs in Kenya

Findings from 2016–2018 Panel Data MWENDO Project

September 2019

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CONTENTS

TABLES

ABBREVIATIONS

APHIAplus	AIDS, Population and Health Integrated Assistance Program
ART	antiretroviral therapy
ARV	antiretroviral
CHV	community health volunteer
CI	confidence interval
CRS	Catholic Relief Services
ESI	essential survey indicator
GBV	gender-based violence
KDHS	Kenya Demographic and Health Survey
KNBS	Kenya National Bureau of Statistics
LIP	local implementing partner
MER	monitoring, evaluation, and reporting
MUAC	mid-upper arm circumference
MWENDO	Making Well-Informed Efforts to Nurture Disadvantaged Orphans & Vulnerable Children
N/A	not applicable
OVC	orphans and vulnerable children
PEPFAR	United States President's Emergency Plan for AIDS Relief
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

This report presents findings from a panel study of beneficiary households receiving services from Making Well-Informed Efforts to Nurture Disadvantaged Orphans & Vulnerable Children (MWENDO), in Western Kenya. MWENDO is a five-year project funded by the United States Agency for International Development (USAID) and implemented by Catholic Relief Services (CRS) that provides an umbrella of services to orphans and vulnerable children (OVC). Key OVC program areas and intervention components of the project are education support, household economic strengthening, healthcare and nutrition, shelter, psychosocial care and support, and child protection services. This study was undertaken by MEASURE Evaluation—a project funded by USAID and the United States President's Emergency Plan for AIDS Relief (PEPFAR)—at the request of PEPFAR and the USAID Kenya mission. This 2016–2018 panel study was designed to meet PEPFAR's monitoring, evaluation, and reporting (MER) requirements, which include standard indicators. PEPFAR encourages the collection of data on these indicators every two years (MEASURE Evaluation, 2014).

When MWENDO began implementing OVC programs in 2017, it took over the support of OVC beneficiaries from its predecessor project—AIDS, Population and Health Integrated Assistance Program, Western Kenya, known as APHIAplus. The panel study compared results from Round 1 (2016, APHIAplus beneficiaries) and Round 2 (2018, with the same households, now MWENDO beneficiaries). It measured changes in the well-being of OVC beneficiaries over the two years using nine essential survey indicators (ESIs) required by PEPFAR and two supplemental indicators.

Four hundred twenty-six households were interviewed during the Round 1 survey. They were revisited for the Round 2 survey, with only 377 households successfully reinterviewed (88.5% response rate). For the most part, the ESI results showed improvements in the well-being of beneficiary children and their households from 2016 to 2018, with most indicators showing improvements. Table 1 summarizes the findings.

Table 1. Comparison of PEPFAR MER OVC ESIs for Round 1 and Round 2

OVC MER ESIs	Number of observations: child/caregiver records[1]	Round 1 (2016) Percent (95% confidence interval [CI])	Round 2 (2018) Percent (95% CI)	*p* value[2]
OVC_SICK: Percent of children (aged 0–17 years) too sick to participate in daily activities	R1: 1219[3] R2: 1320	32.3 (28.7–35.9)	19.6 (16.5–22.6)	<0.001
OVC_HIVST: Percent of children (aged 0–17 years) whose primary caregiver knows the child's HIV status	R1: 1219 R2: 1320	71.7 (67.6–75.8)	77.7 (74.1–81.3)	0.007
OVC_NUT: Percent of children (aged 6–59 months) who are undernourished	R1: 80 R2: 81	1.8 (0.0–5.4)	No undernourished children	N/A
OVC_STIM: Percent of children < 5 years of age who recently engaged in stimulating activities with any household member over 15 years	R1: 94[4] R2: 96	94.3 (89.0–99.6)	88.1 (80.5–95.6)	0.205

OVC MER ESIs	Number of observations: child/caregiver records[1]	Round 1 (2016) Percent (95% confidence interval [CI])	Round 2 (2018) Percent (95% CI)	*p* value[2]
OVC_BCERT: Percent of children (aged 0–17 years) who have a verified birth certificate	R1: 1219 R2: 1320	39.0 (34.6–43.4)	44.4 (40.2–48.5)	0.029
OVC_SCHATT: Percent of children (aged 5–17 years) regularly attending school	R1: 1072 R2: 1133	69.2 (65.6–72.9)	80.4 (77.3–83.5)	<0.001
OVC_PRGS: Percent of children (aged 5–17 years) who progressed in school during the last year	R1: 1069 R2: 1130	89.3 (86.9–91.8)	93.1 (91.1–95.1)	0.012
OVC_CP: Percent of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control of children in the home or at school	R1: 377 R2: 377	71.4 (66.8–75.9)	76.4 (72.1–80.7)	0.105
OVC_MONEY: Percent of households able to access money to pay for unexpected household expenses	R1: 145 R2: 145	35.2 (27.3–43.0)	66.2 (58.4–74.0)	<0.001
OVC_KE1: Percent of children (aged 0–17 years) living with HIV who are taking antiretroviral (ARV) drugs	R1: 83[5] R2: 75	94.2 (85.7–100.0)	100.0	0.167
OVC_KE2: Percent of households able to access money to pay for expected household expenses	R1: 377 R2: 377	36.9 (32.0–41.8)	69.5 (64.8–74.2)	<0.001

[1] Number of observations used in the analysis included only households with data in both survey rounds after merging the data.

[2] Significance test comparing Round 1 and Round 2 using paired t-tests (two-sided).

[3] R1 = Round 1; R2 = Round 2.

[4] The panel data captured only children ages 0–4 years who were there in 2016 and still in the same age category in 2018. Therefore, only children ages 0–2 years old whose households were interviewed again in 2018 were captured by these figures.

[5] N includes all children living in a household in which at least one child is living with HIV, including children who do not have HIV and those whose status is unknown. The number of children living with HIV is smaller.

These findings have several programmatic implications:

1. MWENDO should continue to reinforce its existing household economic strengthening strategies.
2. MWENDO should put additional focus on community-level activities to change attitudes about harsh physical punishment.
3. Although OVC indicators on health, education, and legal status have improved, there is room for additional improvement. Closer collaboration with government departments, additional sensitization of community health volunteers (CHVs), and increased data use are recommended.

INTRODUCTION

The United States President's Emergency Plan for AIDS Relief is committed to supporting OVC in countries around the world as part of its global effort to assist children affected by the HIV epidemic. Given PEPFAR's considerable investment in OVC programs, in 2014, it introduced the MER ESIs to help track changes over time in the well-being of OVC project beneficiaries and their households. These outcome indicators reflect internationally accepted developmental milestones and ways that OVC programs gain from, and contribute to, broader HIV and child protection responses. PEPFAR encourages collection of data on these indicators every two years (MEASURE Evaluation, 2014).

At the request of PEPFAR and USAID Kenya mission, the USAID- and PEPFAR-funded MEASURE Evaluation project collected the first round of MER ESI data in Kenya in 2016. One of the implementing partners whose beneficiaries were assessed in 2016 was APHIAplus. The project has since ended, and its beneficiaries now receive services from the MWENDO project. MEASURE Evaluation conducted the second survey round of MWENDO beneficiaries in 2018.

This report compares MER ESI data for beneficiaries who received services from APHIAplus in 2016 and from MWENDO in 2018. The findings are intended to help the MWENDO project better understand changes in the well-being of its beneficiaries from 2016 to 2018, and to support the project, the PEPFAR OVC team, and other program decision makers and stakeholders, including those from the Government of Kenya, to take evidence-informed actions to improve OVC program strategy, resource allocation, and implementation, with the ultimate goal of improving the well-being of the children and households they serve.

The APHIAplus and MWENDO Projects

APHIAplus was a large, five-year, USAID-funded project, implemented by PATH, Kenya. It began in 2011, following a previous five-year project, and ended in 2017 after a short extension. The project delivered an umbrella of programs and services, including HIV care and treatment; water and sanitation; malaria; family planning and reproductive health; maternal, neonatal and child health; human resources for health; and the full array of OVC services.

When APHIAplus ended in 2017, the MWENDO project, implemented by CRS Kenya, took over supporting its OVC beneficiaries, and continued to enroll new beneficiaries, albeit with some changes in strategy and intervention focus. Unlike its predecessor, MWENDO focuses on OVC services only. MWENDO's holistic, child-focused, and family-centered approach sees child well-being as nested in household well-being, community resilience, and support. That is, interventions are at the community and household levels, but focus on the needs of children. Specifically, the project strengthens the HIV and social support system from the household level to the national level, and across systems and sectors, with a specific focus on protection, household economic strengthening, health and HIV, and the intersections among them (CRS, n.d.)

MWENDO has three purposes (CRS, n.d.):

1. *Increased access to health and social services for OVC and their families.* Through social and behavioral change initiatives, the project works at the community level to increase knowledge about child protection and HIV, reduce HIV-related stigma and discrimination, and transform communities to become advocates for vulnerable children and their families.
2. *Strengthened capacity of households and communities to protect and care for OVC*, by helping households meet basic needs and grow their resources to improve their economic security. MWENDO

facilitates household access to social safety-net programs, financial services, and financial education.

3. *Improved child welfare and protection structures and systems for effective responses*. This involves capacity building for local implementing partners (LIPs) in organizational effectiveness, and using a management information system to collect and use data to strengthen case management, target referrals, and inform advocacy.

In the first six months of 2016, APHIAplus reported that it had provided OVC programs and services to more than 190,000 OVC. These interventions were delivered through 76 local nongovernmental, community-based, and faith-based partners, each of whom served from 1,000 to 4,800 OVC beneficiaries. All LIPs provided the same package of OVC services and assessed beneficiary needs using the same methods and criteria. When MWENDO took over the provision of services to APHIAplus OVC beneficiaries, it selected 38 LIPs through an open bidding process. Each LIP provides services to a significantly larger number of beneficiaries. The project reported nearly 300,000 individual beneficiaries receiving services in August 2018, among nearly 150,000 households. The LIPs work with CHVs who play lead roles in assessing household needs through monthly visits. MWENDO uses a case management approach to providing services, and vulnerability is assessed through a Case Plan Achievement Readiness Assessment and use of the Household Vulnerability and Prioritization Tool (Bunkers & Ventimiglia, 2017). The CHVs are also the primary service providers to registered OVC and their households.

Study Objectives

The conceptual model used to define the MER ESIs is the same as in Round 1 (Settergren, Faye, & Beguy, 2018). It assumes that the set of interventions delivered to members of households enrolled in MWENDO-supported activities should lead to the improved well-being of children younger than age 18 in the households, as measured by the OVC ESIs. The purpose of this study was to track changes in the OVC ESIs from 2016 to 2018 among OVC beneficiaries and their households who were served by APHIAplus until 2017 and are currently served by MWENDO. The study aimed to support evidence-informed strategy, programming, and resource allocation by Kenyan stakeholders, and contribute to a global PEPFAR-wide evidence base on the effectiveness of PEPFAR OVC programming. The study had the following objectives:

- Assess changes in children's health, nutrition, education, legal rights, and early childhood development between 2016 and 2018. The following indicators were used for this assessment, by domain:
    - Health: percent of children too sick to participate in daily activities.
    - Nutrition: percent of under-five children who are undernourished.
    - Education: percent of children regularly attending school, and percent of children who progressed in school during the last year.
    - Legal rights: percent of children who have a verified birth certificate.
    - Early childhood development: percent of under-five children who recently engaged in stimulating activities.
- Assess changes in caregiver attitudes about harsh physical punishment.
- Assess changes in OVC households' economic resilience (i.e., percent of households able to access money to pay for unexpected household expenses).
- Assess changes in additional indicators of interest to Kenyan stakeholders: percent of children living with HIV who are taking ARV drugs; percent of households able to access money to pay for expected household expenses.

- Propose recommendations to improve MWENDO project activities and other PEPFAR OVC programs in Kenya.

METHODS

Study Design

This was a panel study that involved two survey rounds: Round 1 (2016) and Round 2 (2018). Round 1 selected a two-stage cluster randomized sample and interviewed caregivers in randomly selected households receiving services from APHIAplus. Households were selected from a list of all households that were receiving services from the project at the time. Details of the cluster design used in Round 1 are available in the Round 1 report (Settergren, Faye, & Beguy, 2018). Caregivers from 426 households were successfully interviewed in Round 1. In the Round 2 survey, households that were successfully interviewed in Round 1 were revisited for a follow-up interview.

In both rounds, face-to-face interviews were conducted with the primary caregivers of the OVC residing in the selected households. Female and male caregivers of all ages were eligible for the survey. The caregivers were asked questions about themselves, their household, and the children in their care. All children ages up to 17 years (at their last birthday) who slept in the household on the night preceding the interview were considered eligible for the survey and the caregiver was asked questions about each one. This included children who were actively registered as beneficiaries of the project and those who were not. However, registration status was recorded for each child. If the caregiver present in Round 2 was not the one who was interviewed in Round 1, the new caregiver was interviewed. In Round 2, all children were eligible even if they were not part of the household in Round 1. No attempt was made to track children included in Round 1 who were no longer part of the household at the time of the Round 2 interview.

Indicators and Questionnaires

The survey collected data for measuring the nine PEPFAR OVC MER ESIs, which were vetted and selected in 2014 by the global PEPFAR OVC program and strategic information technical leaders (MEASURE Evaluation, 2014). They applied several criteria in their selection, including relevance in the various countries where PEPFAR provides OVC program support and representation of factors amenable to change over a two-year period. The selection criteria and the indicator reference sheets that define the indicators can be found in the MEASURE Evaluation guidance developed for the surveys (MEASURE Evaluation, 2014). Two supplemental indicators were added (OVC_KE1 and OVC_KE2), chosen by the Kenyan PEPFAR team before the first round of data collection in 2016 (Settergren, Faye, & Beguy, 2018). Table 2 lists the 11 indicators.

Table 2. PEPFAR OVC MER ESIs and two supplemental indicators

Indicator reference	Type	Indicator
OVC_SICK	ESI	Percent of children (aged 0–17 years) too sick to participate in daily activities
OVC_HIVST	ESI	Percent of children (aged 0–17 years) whose primary caregiver knows the child's HIV status
OVC_NUT	ESI	Percent of children (aged 6–59 months) who are undernourished
OVC_STIM	ESI	Percent of children <5 years of age who recently engaged in stimulating activities with any household member over 15 years of age
OVC_BCERT	ESI	Percent of children (aged 0–17 years) who have a verified birth certificate

Indicator reference	Type	Indicator
OVC_SCHATT	ESI	Percent of children (aged 5–17 years) regularly attending school
OVC_PRGS	ESI	Percent of children (aged 5–17 years) who progressed in school during the last year
OVC_CP	ESI	Percent of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control of children in the home or at school
OVC_MONEY	ESI	Percent of households able to access money to pay for unexpected household expenses
OVC_KE1	Supplemental	Percent of children (aged 0–17 years) living with HIV who are taking ARV drugs
OVC_KE2	Supplemental	Percent of households able to access money to pay for expected household expenses

Interviews were conducted with caregivers using a standardized questionnaire previously developed by MEASURE Evaluation for the PEPFAR OVC Technical Working Group specifically for the purpose of collecting data for the MER OVC ESIs. The survey questionnaire has three components: (1) caregiver; (2) child ages 0–4 years; and (3) child ages 5–17 years. The survey team made only minor modifications to the standardized questionnaire to adapt it to the Kenyan context and added the supplemental indicators. The questionnaire was translated into Kiswahili, Luhya, and Luo, the primary languages spoken among the project beneficiaries. Minor changes were made to the translations following pilot testing to enhance the clarity of the translations. The English version of the questionnaire used in 2018 (Round 2) is provided in Appendix A. It is identical to the version used in 2016 (Round 1), but with minor modifications needed for a panel study, such as asking caregivers whether they were the same ones interviewed for the household in 2016.

Ethics Review and Compliance for the Study

Institutional review board approval for the Round 1 protocol was granted in 2016 by the AMREF Health Africa Ethics and Scientific Review Committee, Kenya, and the Health Media Lab, United States. The same institutional review boards approved the protocol for Round 2 in 2018. All study activities adhered strictly to United States, Kenya, and international research ethics guidelines, including the Code of Federal Regulations, part 45CFR46, and the Council for International Organizations of Medical Sciences. Participation in the study was completely voluntary, based on a consent form. Interviews were undertaken in the caregivers' homes, in areas where the conversation could not be observed or overheard by persons outside the household and where interruptions could be minimized. Maintaining the privacy and confidentiality of respondents was paramount.

Fieldwork for Round 2

MEASURE Evaluation worked closely with the African Population and Health Research Center to implement the survey rounds in 2016 and 2018. Data collection for Round 2 followed similar procedures used in Round 1.[1] It was undertaken between October 29 and November 17, 2018, by a team of trained data collectors, comprising a field coordinator, two field supervisors, and eight field interviewers. The team worked with MWENDO's LIPs to locate the selected households using information obtained from the

[1] Information on Round 1 fieldwork is available in Settergren, Faye, & Beguy, 2018.

2016 survey data, (e.g., village, name of the CHV assigned by the LIP to support the household, and the caregiver's name and telephone number). The CHVs or other LIP staff accompanied the data collection team to the household and facilitated introductions. However, they left the household before the field interviewer started the consent process for the interviews, to maintain confidentiality and avoid coercion to participate.

As in Round 1, informed consent was sought by field interviewers from all participating OVC caregivers before they were interviewed for Round 2. All participating caregivers were adults ages 18 years and above. They were asked to consent to their own participation and to provide assent for mid-upper arm circumference (MUAC) measurement of children ages 6–59 months in their care. Respondents who consented to participate signed a soft copy of the informed consent form on a password-protected Android tablet and a hard-copy duplicate informed consent form, which was left with them.

Responses from survey participants were captured electronically on password-protected Android tablets preprogrammed with the survey questionnaire using the SurveyCTO software. The electronic data capture tool mirrored the paper questionnaire, which is provided in Appendix A, and presented one question per screen. Instructions were included in the tool to guide the interviewers and to facilitate the interview flow. Skip logic was built in and error messages and caution notices were triggered when faulty or out-of-range data were entered to alert the field interviewers to correct any errors at the point of data collection. Caregivers were interviewed in a quiet and private location out of earshot of others, including children and other family members. MUAC measurements of children ages 6–59 months were obtained in the presence of their caregivers. At least three attempts were made to conduct interviews with caregivers who were temporarily absent from the household at the time of the first visit to their households.

The field team met after each day's work to review the experiences of the day and to plan for the following day. All completed interviews were reviewed daily by the field supervisors, and any errors encountered were referred back to the field interviewers for correction before the data were approved for transmission to the African Population and Health Research Center database server. Daily checks were done on the data based on a predesigned data cleaning script in Stata 15 that included checks for structure, uniqueness, and external consistency of key identifiers; completeness of the data; acceptable data; and unexpected data. An inconsistency report from the database was then generated and shared with the field team daily. Immediate action/correction (e.g., reinterview; revisit to households for confirmation) was undertaken by the field teams to correct the inconsistency before the data were resubmitted.

Data Processing and Analysis

When data collection for Round 2 was completed, additional checks were done on the full data file by the survey's Data Analyst. Only minimal edits were required because real-time data cleaning was continuously done during data collection. On completion of these checks, a clean version of the data was merged with Round 1 data for analysis. The analytical files included data dictionaries with variable labels, value labels, and other standard specifications. Detailed metadata reports were also generated using Nesstar software. Missing data were minimal, so there was no need for data imputation.

Data for Round 1 and Round 2 were merged at the household level. Only households that were interviewed in both rounds were included in the panel analysis. Because all children in the care of the primary caregiver were included in the study at each round, it was possible that the children (and the number of children) in a given household differed between the two rounds. For example, some children included in Round 1 interviews aged out of the program (i.e., were over 18 years of age in 2018) or had left the household for other reasons; others were born into participating households in the intervening two

years, or otherwise joined the household. Therefore, results presented in this report for Round 1 differ from those presented in the Round 1 report (Settergren, Faye, & Beguy, 2018).

Because the different rounds sometimes captured responses from different children in the household, we used household averages rather than individual-level data in the panel analysis. This approach was developed by the MEASURE Evaluation project and has been used for MER ESI Round 2 surveys it has implemented in other countries. The averages were calculated differently for disaggregated data (by sex or age). This was done separately for 2016 and 2018. The resulting data had one record per household, with a 2016 and a 2018 value for each indicator. Table 3 shows an example.

Table 3. Example of the indicator household average calculation

	Gender	2016		2018	
		Age	Indicator value	Age	Indicator value
Child 1	Female	1	Yes	3	Yes
Child 2	Male	3	No	5	Yes
Child 3	Male	6	No	8	Yes
Child 4	Female	11	No	13	No
Child 5	Male	14	Yes	16	Yes
Child 6	Male	17	No	19*	N/A
Assuming Yes = 1 No = 0, the household value for the indicator was calculated as follows:					
2016				2018	
All children: (1+0+0+0+1+0)/6 = 0.33				All children: (1+1+1+0+1)/5 = 0.8	
Females: (1+0)/2 = 0.5				Females: (1+0)/2 = 0.5	
Males: (0+0+1+0)/4 = 0.25				Males: (1+1+0)/3 = 0.67	
Ages 0–4: (1+0)/2 = 0.5				Ages 0–4: 1	
Ages 5–17: (0+0+1+0)/4 = 0.25				Ages 5–17: (1+1+0+1)/4 = 0.75	

*The 19-year-old child is no longer in the study.

In the presentation of MER ESI results, we show figures only for those households that were included in both rounds, using household averages. However, the background characteristics (age, sex, education) are shown for all respondents in both rounds. For the disaggregation of indicators by sex and/or age, panel data were created for each sex and/or age combination, by first creating subsets of each data set from the two surveys using the desired disaggregation. For example, if indicators were required for males and females separately for beneficiary children ages 0–4 years, then a subset of data was created for Rounds 1 and 2 surveys separately for all males ages 0–4 years. Then panel data were created by merging the two subsets of data sets together (Round 1 and Round 2 data sets) at the household level. The resulting panel data for analysis then contain only male children ages 0–4 years from the two data sets that successfully merged. Note that if a household had more than one child (two or more children) in this age group and some responses were yes and some were no, this record would become a proportion, (i.e., an average between 0 and 1 [0-No; 1-Yes]), of the responses in that household. The two data sets were merged by household identification to create the panel data. If, during the Round 2 survey, a household did not have a male child ages 0–4, then this household would be excluded from the males ages 0–4 analysis. The same applied to other age groups and to sex disaggregation. It is therefore important to be aware that specific counts for age and sex for each age group (0–4, 5–9, 10–14, and 15–17) in the respective rows in the tables

are independent, based on the way the data panels were constructed, and these specific age group counts *should not add up to the overall totals* for all ages 0–17 years combined.

The following analyses were then performed for each ESI using Stata 15:

- Point estimates (proportions) were calculated for the two rounds (for those households that responded at both time points) as specified in the MEASURE Evaluation guidance document (MEASURE Evaluation, 2014) using the merged panel data set.
- Confidence intervals (CIs) (95%) around the point estimates were derived.
- Differences in proportions between the two survey rounds were tested using two-sided paired t-tests under the null hypothesis of no difference between the two proportions. Pairing was at the household level.

Response Rate

Of the 426 OVC households interviewed in Round 1, a total of 377 households were successfully interviewed in Round 2, representing 88.5 percent of the total households sampled in Round 1. As shown in Table 4, the field team, working with the CHVs, could not trace 14 households, because they were unknown to the LIP-assigned CHV or the local guide. In the remaining 35 households, the caregivers could not be interviewed for a variety of reasons, such as the caregiver being away for an extended period or permanent relocation of the household.

Table 4. Household response rates, by survey round[1]

Category	Number	
	Round 1 (2016) (APHIAplus)	Round 2 (2018) (MWENDO)
Households served by the OVC program (based on project listing)	Approximately 110,000	Approximately 148,000
Households in the survey sample (selected for Round 1 interview from the project listing; selected for Round 2 because they were successfully interviewed in Round 1)	480	426
Sampled households (or caregivers) unknown to the LIP-assigned CHV or the local guide	21	14
Sampled households found to have duplicate identification numbers in the project listing	2	0
Percentage of sampled households not matching the project listing	**4.80%** (23/480)	0 (0/426)
Household permanently moved out of the survey area	12	10
Caregiver reported to be temporarily away from the household for an extended period	4	14
Caregiver residing at the sampled household but could not be located for an interview after three attempts	14	10
Caregiver deceased and new caregiver not yet identified	0	1
Households with no resident children under age 18	1	0

Category	Number	
	Round 1 (2016) (APHIAplus)	Round 2 (2018) (MWENDO)
Total number of sampled households where an interview was not conducted (household nonresponse)	54	35
Households with successfully completed interviews	426	377
Response rate	**88.80%** **(426/480)**	**88.5%** **(377/426)**

[1] This table presents the data in absolute numbers before creating a panel.

Table 5 shows the number of caregivers interviewed and their corresponding number of children during the two survey rounds.

Table 5. Questionnaires completed and other sample information[1]

Sample information	Number	
	Round 1[2]	Round 2
Number of caregivers interviewed ("caregiver" questionnaire completed)	426	377
Number of children ages 0–4 years on which caregivers responded	177	188
Number of children ages 5–17 years on which caregivers responded	1,261	1,160
Total number of children on which caregivers responded	1,438	1,348
Average number of children on which caregivers responded per household	3.4	3.6

[1] This table presents the data in absolute numbers before creating a panel.

[2] During the first three days of data collection for Round 1, caregivers were interviewed only about children registered with the program because of a misunderstanding about the protocol. Thereafter, caregivers were interviewed about all eligible children in their care (those registered and those not registered). In Round 2, all children in these households were included.

RESULTS

Background Characteristics

Caregivers

The majority of caregivers who were successfully interviewed in both survey rounds were females (84.0% in Round 1 and 86.5% in Round 2) (Table 6). All caregivers interviewed in Round 2 were adults ages 18 years or more, whereas in Round 1, one minor caregiver was interviewed. As expected, on average, caregivers in Round 2 were about two years older than in Round 1. Table 6 presents the age and sex of caregivers, by survey rounds.

Table 6. Caregiver age and sex, by survey round[1]

Variables	Round 1 (N=426)		Round 2 (N=377)	
	n	% (95% CI)	n	% (95% CI)
Sex				
Female	358	84.0 (80.6–87.5)	326	86.5 (83.0–90.0)
Male	68	16.0 (12.5–19.4)	51	13.5 (10.1–17.0)
Age (years)				
<18	1	0.2(0.0–0.7)	0	0 (-)
18-30	45	10.6(7.6–13.5)	26	6.9 (4.3–9.5)
31-50	210	49.3(44.5–54.0)	184	48.8 (43.8–53.9)
51+	170	39.9(35.3–44.6)	167	44.3 (39.3–49.3)

[1] This table presents the data in absolute numbers before creating a panel.

The proportion of caregivers who reported ever attending school was similar in both rounds: 86.6 percent in Round 1 and 85.4 percent in Round 2 (Table 7). The proportion was higher among male caregivers (91.2% in Round 1 and 96.1% in Round 2) compared with female caregivers (85.8% in Round 1 and 83.7% in Round 2), with no statistically significant differences between the rounds. Among those who ever attended school, primary school was the highest level among the majority of the caregivers. Table 7 presents details on the caregivers' education, by survey round.

Table 7. Caregivers' educational background, by survey round[1]

Education	Round 1		Round 2		*p* value
	n / N	% (95% CI)	n / N	% (95% CI)	
Female caregivers					
Ever attended	307/358	85.8 (82.1–89.4)	273/326	83.7(79.7–87.7)	0.464
Highest level attended					
Preprimary	2/307	0.7(0.0–1.6)	2/273	0.7(0.0–1.7)	0.906
Primary	242/307	78.8(74.3–83.4)	221/273	80.9(76.3–85.6)	0.524
Secondary	58/307	18.9(14.5–23.3)	46/273	16.9(12.4–21.3)	0.522
College/University	5/307	1.6(0.2–3.0)	4/273	1.5(0.0–2.9)	0.874
Male caregivers					
Ever attended	62/68	91.2 (84.4–97.9)	49/51	96.1(90.8–100.0)	0.291
Highest level attended					
Preprimary	1/62	1.6(0.0–4.7)	1/49	2.0(0.0–6.0)	0.866
Primary	44/62	71.0(59.7–82.2)	34/49	69.4(56.5–82.3)	0.857
Secondary	16/62	25.8(14.9–36.7)	14/49	28.6(15.9–41.2)	0.745
College/University	1/62	1.6(0.0–4.7)	0/49	0.0	0.372
Both sexes					
Ever attended	369/426	86.6 (83.4–89.9)	322/377	85.4(81.8–89.0)	0.622
Highest level attended					
Preprimary	3/369	0.8(0.0–1.7)	3/322	0.9 (0.0–2.0)	0.867
Primary	286/369	77.5(73.2–81.8)	255/322	79.2(74.8–83.6)	0.592
Secondary	74/369	20.1(16.0–24.1)	60/322	18.6(14.4–22.9)	0.638
College/University	6/369	1.6(0.3–2.9)	4/322	1.2(0.0–2.5)	0.674

[1] This table presents the data in absolute numbers before creating a panel.

Children

Overall, approximately one-half of the children living under the care of the caregivers interviewed were female in both rounds (Table 8). A somewhat higher proportion of male children were represented in Round 2 compared with Round 1, but the difference was not statistically significant. The age distributions of the children were also similar across both sexes in the two survey rounds. The highest proportion of children represented in the surveys were those ages 10–14 years, constituting 40.3 percent in Round 1 and 38.3 percent in Round 2. Table 8 shows the distribution of the children, by sex and age.

Table 8. Characteristics of children, by survey round

Child's age (years)	Round 1		Round 2		*p* value
	n / N	% (95% CI)	n / N	% (95% CI)	
Sex					
Female	740/1438	51.5(48.9–54.0)	668/1348	49.6 (46.9–52.2)	0.315
Male	698/1438	48.5(46.0–51.1)	680/1348	50.3 (47.8–53.1)	0.315
Age					
0–4	177/1438	12.3(10.6–14.0)	188/1348	14.0 (12.1–15.8)	
0–5 months	12/1438	0.8 (0.3–1.3)	10/1348	0.7 (0.3–1.2)	
6–11 months	0/1438	0.0	8/1348	0.6 (0.2–1.0)	
12–23 months	33/1438	2.3 (1.5–3.1)	30/1348	2.2 (1.4–3.0)	
2–4 years	132/1438	9.1 (7.7–10.7)	139/1438	10.3 (8.7–11.9)	
5–9	368/1438	25.6 (23.3–27.8)	306/1348	22.7 (20.5—5.0)	
10–14	579/1438	40.3 (37.7–42.8)	516/1348	38.3 (35.7–40.9)	
15–17	314/1438	21.8 (19.7–24.0)	338/1348	25.1 (22.8–27.4)	

OVC Graduation

Some of the OVC households supported in 2016 were no longer receiving support in 2018 because they were deemed to be no longer vulnerable, having received sufficient support (the household "graduated" from the program). Overall, 11 households interviewed at both points in time had graduated between 2016 and 2018, representing 3 percent of participating households in the panel. They are included in the results presented in this report.

OVC Services Received

Caregivers were asked whether they had ever personally participated in program activities or received services from APHIAplus (in 2016) or MWENDO (in 2018). They were also asked whether they had participated in or received the services in the six months preceding each survey round. As shown in Table 9, there was a slight increase in the proportion of caregivers who reported that they had ever participated in program activities or received services from the OVC project or the LIP associated with it (81.7% versus 85.4% in Rounds 1 and 2, respectively). More female caregivers reported having ever received services compared with male caregivers in both rounds (83.2% versus 69.0% in Round 1 and 86.8% versus 78.6% in Round 2, respectively). Overall, the percentage of caregivers who reported having received at least one service from the OVC project in the six months preceding their interviews dropped between survey rounds, from 66.0 percent in Round 1 to 55.2 percent in Round 2 ($p<0.01$). The decrease was statistically significant for female caregivers overall, but not for males. These results are shown in Table 9.

Table 9. Caregivers' reports of their receipt of OVC project services, by sex and survey round

Caregivers	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Female caregivers				
Ever received services	304	83.2 (79.0–87.4)	86.8 (83.0–90.7)	0.205
Received services in the past six months		69.1 (63.9–74.3)	59.9 (54.3–65.4)	0.013
Male caregivers				
Ever received services	42	69.0 (54.5–83.6)	78.6 (65.6–91.5)	0.323
Received services in the past six months		50.0 (34.2–65.8)	33.3 (18.5–48.2)	0.090
Both sexes				
Ever received services	377	81.7 (77.8–85.6)	85.4 (81.8–89.0)	0.162
Received services in the past six months		66.0 (61.2–70.8)	55.2 (50.1–60.2)	0.001

[1] Only households that had a female caregiver in both rounds were included, so the N value for both sexes is not the sum of the N values of subgroups.

Caregivers who reported participating in or receiving services in the six months before the survey were asked whether they or another member of their household had received each of the ten types of services provided by the respective projects in Round 1 and Round 2. Only six of the ten services were included in Round 1. The four services that were added during the Round 2 survey were HIV testing and counselling, referral to antiretroviral therapy (ART), support for disclosing HIV status, and referral to gender-based violence (GBV) services. A summary of the results is shown in Table 10. Although psychosocial counseling and education were the most commonly reported services by the majority of the caregivers in both survey rounds, a significant decline was noted between 2016 and 2018 (57.8% and 57.0% in Round 1 versus 41.9% and 39.0% in Round 2, respectively, $p<0.01$). A significant decline between Round 1 and Round 2 was also observed for shelter and legal and social protection services. However, there was a significant increase in the receipt of health and nutrition services (20.7% in Round 1 versus 38.5% in Round 2, $p<0.01$). There was a marginally significant increase in household economic strengthening services, from 26.8 percent in Round 1 to 32.6 percent in Round 2, $p<0.1$. As for the additional services measured in Round 2 only, we noted that HIV testing and counselling was the most frequently reported service (36.1%), followed by support for disclosing HIV status (23.3%), and by referral to ART (13.5%). Referral to GBV services was the least reported service, with 6.9 percent of caregivers reporting having received it in the six months preceding the Round 2 survey.

Table 10. Caregivers' reports of the types of services received through the OVC project in the past six months

Type of service (n=377)	Round 1 (APHIAplus)	Round 2 (MWENDO)	*p* value
	% (95% CI)	% (95% CI)	
Psychosocial counselling	57.8 (52.8–62.8)	41.9 (36.9–46.9)	<0.001
Health or nutrition	20.7 (16.6–24.8)	38.5 (33.5–43.4)	<0.001
Education	57.0 (52.0–62.0)	39.0 (34.0–43.9)	<0.001
Shelter	27.6 (23.1–32.1)	5.6 (3.2–7.9)	<0.001
Household economic strengthening	26.8 (22.3–31.3)	32.6 (27.9–37.4)	0.050
Legal and social protection	41.4 (36.4–46.4)	20.2 (16.1–24.2)	<0.001
HIV testing and counselling	N/A[1]	36.1 (31.2–40.9)	N/A
Referral to ART	N/A[1]	13.5 (10.1–17.0)	N/A
Support for disclosing HIV status	N/A[1]	23.3 (19.1–27.6)	N/A
Referral to GBV services	N/A[1]	6.9 (4.3–9.5)	N/A

[1] Caregivers were not asked about these services in Round 1.

PEPFAR MER OVC Essential Survey Indicators

Results for the ESIs were disaggregated by sex and age following PEPFAR's MER requirements. For each indicator, the denominator (N), indicator estimate (%), and 95% CIs (lower and upper limits) are provided in a table format. A significance test comparing Round 1 and Round 2 estimates was also computed for each indicator. The findings are organized by the dimensions of OVC well-being that were measured. In the following tables, the N is the number of children in a given category. The round comparisons and p-values are based on the proportions derived from household-level aggregated proportions of a given indicator (where proportions of each household were based on the number of children in that household), and not strictly based on the number of households.

Health

OVC_SICK: Percent of children (aged 0–17) years too sick to participate in daily activities

Caregivers were asked whether the children in their care had been too sick to participate in daily activities at any time in the two weeks before the survey. The results presented in Table 11 showed a significant decline between the Round 1 and Round 2 estimates, from almost one-third (32.3%) of all children in Round 1 to 19.6 percent of all children in Round 2. The decline is statistically significant for both male and female children. Although children ages 0–4 were more likely to be sick than the other age groups, they also showed a significant decline.

Table 11. Percentage of children too sick to participate in daily activities

Child's age (years)	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Females				
0–4	R1: 42	48.6	30.0	0.074
	R2: 43	(32.2–65.0)	(14.3–45.7)	
5–9	R1: 114	27.8	11.4	0.003
	R2: 104	(18.9–36.8)	(4.7–18.1)	
10–14	R1: 183	30.9	13.2	<0.001
	R2: 185	(23.4–38.4)	(7.7–18.7)	
15–17	R1: 72	31.2	17.2	0.057
	R2: 77	(20.0–42.5)	(7.9–26.4)	
All female children (0–17)	**R1: 587**	**33.2**	**19.9**	**<0.001**
	R2: 601	**(28.5–38.0)**	**(15.8–23.7)**	
Males				
0–4	R1: 41	39.8	24.2	0.148
	R2: 37	(22.4–57.1)	(9.3–39.1)	
5–9	R1: 87	34.7	22.3	0.075
	R2: 78	(23.3–46.1)	(12.1–32.5)	
10–14	R1: 178	31.1	16.4	0.001
	R2: 169	(23.3–38.9)	(10.2–22.6)	
15–17	R1: 94	25.6	14.0	0.056
	R2: 104	(16.4–34.8)	(6.7–21.2)	
All male children (0–17)	**R1: 569**	**32.1**	**19.0**	**<0.001**
	R2: 587	**(27.4–36.8)**	**(14.9–23.0)**	
Both sexes				
0–4	R1: 94	47.0	30.3	0.031
	R2: 96	(35.8–58.2)	(19.8–40.9)	
5–9	R1: 249	33.4	17.5	<0.001
	R2: 222	(26.6–40.3)	(11.8–23.1)	
10–14	R1: 422	31.0	15.6	<0.001

Child's age (years)	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Females				
	R2: 445	(25.7–36.2)	(11.6–19.6)	
15–17	R1: 211	29.5	16.2	0.002
	R2: 238	(22.9–36.1)	(11.0–21.4)	
All ages (0–17)	**R1: 1219**	**32.3**	**19.6**	**<0.001**
	R2: 1320	**(28.7–35.9)**	**(16.5–22.6)**	

OVC_HIVST: Percent of children (aged 0–17 years) whose primary caregiver knows the child's HIV status

Caregivers' knowledge of the HIV status of children in their care is critical for the provision of appropriate child healthcare services. Findings from the surveys showed a significant increase in caregivers' knowledge of the HIV status of children in their care, from 71.7 percent in Round 1 to 77.7 percent in Round 2, $p<0.01$. The increase was statistically significant for both male and female children. The detailed results are presented in Table 12.

Table 11. Percentage of children whose primary caregiver knows the child's HIV status

Age (years)	N – Number of children	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Females				
0–4	R1: 42	67.1	84.3	0.090
	R2: 43	(51.0–83.2)	(71.9–96.6)	
5–9	R1: 114	74.0	82.3	0.110
	R2: 104	(64.7–83.3)	(74.1–90.5)	
10–14	R1: 183	74.1	83.1	0.028
	R2: 185	(66.9–81.4)	(76.9–89.4)	
15–17	R1: 72	72.7	76.6	0.470
	R2: 77	(61.5–83.8)	(66.1–87.0)	
	R1: 587	**71.6**	**79.7**	**0.003**
All female children (0–17)	**R2: 601**	**(66.7–76.5)**	**(75.4–83.9)**	
Males				
0–4	R1: 41	71.0	80.6	0.264
	R2: 37	(54.0–87.9)	(65.9–95.4)	
5–9	R1: 87	79.0	69.4	0.090
	R2: 78	(68.9–89.2)	(57.6–81.2)	
10–14	R1: 178	78.5	81.5	0.510
	R2: 169	(71.3–85.7)	(74.7–88.3)	
15–17	R1: 94	71.9	81.7	0.059
	R2: 104	(61.9–81.9)	(73.3–90.0)	
All male children (0–17)	**R1: 569**	**72.7**	**78.9**	**0.034**

Age (years)	N – Number of children	Round 1	Round 2	p value
		% (95% CI)	% (95% CI)	
	R2: 587	**(67.7–77.8)**	**(74.4–83.3)**	
Both sexes				
0–4	R1: 94	70.1	82.1	0.062
	R2: 96	(59.3–81.0)	(72.9–91.3)	
5–9	R1: 249	74.6	76.7	0.570
	R2: 222	(67.8–81.4)	(70.0–83.4)	
10–14	R1: 422	73.9	81.5	0.012
	R2: 445	(68.8–79.0)	(76.9–86.2)	
15–17	R1: 211	72.7	79.9	0.041
	R2: 238	(65.9–79.5)	(74.1–85.7)	
All ages	**R1: 1219**	**71.7**	**77.7**	**0.007**
	R2: 1320	**(67.6–75.8)**	**(74.1–81.3)**	

OVC_KE1: Percent of children (aged 0–17 years) living with HIV who are taking ARV drugs

Caregivers who reported knowing the HIV status of the children in their care were also asked to report their status. The results showed that 4.7 percent of all children in Round 2 were reported to be living with HIV compared with 6.7 percent reported during Round 1 (Table 13). However, this change was not statistically significant, $p<0.5$. By sex, we noted a statistically significant decline among boys (7.5% in Round 1 versus 4.0% in Round 2, $p<.01$). Table 13 shows the percentage of children reported to be living with HIV. A decline was also seen among female children, but the difference was not statistically significant.

Table 12. Percentage of children reported by caregiver to be living with HIV

Age (years)	Round 1		Round 2	p value
	N – Number of Children	% (95% CI)	% (95% CI)	
Females				
0–4	R1: 25	4.8	0.0	0.329
	R2: 26	(0.0–14.7)		
5–9	R1: 80	8.0	2.4	0.084
	R2: 70	(0.9–15.2)	(0.0–6.1)	
10–14	R1: 129	4.1	5.7	0.424
	R2: 133	(0.6–7.6)	(1.5–9.8)	
15–17	R1: 50	0.0	0.0	N/A
	R2: 54			
All female children (0–17)	**R1: 431**	**5.4**	**4.3**	**0.482**
	R2: 450	**(2.7–8.1)**	**(1.9–6.8)**	
Males				
0–4	R1: 29	2.5	0.0	0.330

Age (years)	Round 1		Round 2	p value
	N – Number of Children	% (95% CI)	% (95% CI)	
	R2: 25	(0.0–7.7)		
5–9	R1: 58	5.0	0.8	0.142
	R2: 51	(0.0–11.1)	(0.0–2.5)	
10–14	R1: 125	9.6	5.8	0.173
	R2: 123	(3.4–15.9)	(0.9–10.7)	
15–17	R1: 64	4.6	1.9	0.182
	R2: 71	(0.0–10.1)	(0.0–5.6)	
All male children (0–17)	**R1: 424**	**7.5**	**4.0**	**0.005**
	R2: 433	**(4.1–10.8)**	**(1.6–6.4)**	
Both sexes				
0–4	R1: 64	3.5	0.0	0.183
	R2: 62	(0.0–8.7)		
5–9	R1: 173	9.4	4.2	0.095
	R2: 147	(3.8–1.9)	(0.5–7.8)	
10–14	R1: 305	6.1	5.9	0.901
	R2: 324	(2.7–9.4)	(2.7–9.0)	
15–17	R1: 145	3.1	3.6	0.783
	R2: 162	(0.0–6.3)	(0.1–7.1)	
All ages	**R1: 981**	**6.7**	**4.7**	**0.105**
	R2: 1048	**(4.2–9.3)**	**(2.7–6.7)**	

Overall, only households in Round 1 (and none in Round 2) had a child living with HIV not on ART.

Nutrition

OVC_NUT: Percent of children (aged 6–59 months) who are undernourished

MUAC measurements were taken and recorded for children ages 6–59 months. In accordance with PEPFAR's MER OVC ESI guidance, a child was considered undernourished if his/her MUAC measurement fell below 125 mm. Only one child in Round 1 and no children in Round 2 were considered to be malnourished.

Early Childhood Development

OVC_STIM: Percent of children < 5 years of age who recently engaged in stimulating activities with any household member over 15 years of age

Caregivers were asked whether under-five children in their care had engaged in stimulating activities with any household member over 15 years of age in the past three days. Six stimulating activities were considered: reading books, looking at pictures in books, telling stories, singing songs or lullabies, playing with the child, and naming, counting, or drawing things. Overall, there was a decline in the proportion of children who participated in at least one stimulating activity, from 94.3 percent in Round 1 to 88.1 percent in Round 2, but this was not significant ($p<0.5$). However, the findings revealed an increase in some activities and a decrease in others, as shown in Table 14. The only statistically significant change was an

increase in the proportion of children who engaged in telling stories (as reported by their caregivers), from 40.5 percent in Round 1 to 59.5 percent in Round 2 ($p<0.05$).

Table 13. Percentage of children under five years of age who recently engaged in stimulating activities with any household member over 15 years of age

Sex of child/Activity	N	Round 1	Round 2	p value
		% (95% CI)	% (95% CI)	
Females				
Read books or looked at picture books	R1: 42	32.9	45.7	0.212
	R2: 43	(16.8–49.0)	(29.4–62.0)	
Told stories	R1: 42	37.1	64.3	0.026
	R2: 43	(20.8–53.5)	(48.4–80.2)	
Sang songs or lullabies	R1: 42	90.0	78.6	0.222
	R2: 43	(80.0–100.0)	(64.6–92.6)	
Engaged in play	R1: 42	87.1	80.0	0.377
	R2: 43	(76.7–97.6)	(66.1–93.9)	
Named, counted, or drew things	R1: 42	38.6	44.3	0.629
	R2: 43	(21.9–55.3)	(27.7–60.8)	
One or more activities	R1: 42	98.6	85.7	0.048
	R2: 43	(95. –100.0)	(73.5–97.9)	
Males				
Read books or looked at picture books	R1: 41	28.0	41.9	0.202
	R2: 37	(12.2–43.7)	(24.2–59.7)	
Told stories	R1: 41	36.0	58.1	0.055
	R2: 37	(19.4–52.7)	(40.3–75.8)	
Sang songs or lullabies	R1: 41	84.4	83.9	0.956
	R2: 37	(71.7–97.1)	(71.0-96.7)	
Engaged in play	R1: 41	81.1	72.6	0.449
	R2: 37	(67.4–95.0)	(56.3–88.9)	
Named, counted, or drew things	R1: 41	39.9	50.0	0.433
	R2: 37	(22.4–57.1)	(31.7–68.3)	
One or more activities	R1: 41	92.5	91.9	0.938
	R2: 37	(83.2–100.0)	(82.4–100.0)	
Both sexes, all children <5				
Read books or looked at picture books	R1: 94	33.1	42.5	0.210
	R2: 96	(22.3–43.9)	(31.3–53.8)	
Told stories	R1: 94	40.5	59.5	0.014
	R2: 96	(29.2–51.9)	(48.5–70.4)	
Sang songs or lullabies	R1: 94	83.8	81.6	0.730
	R2: 96	(75.3–92.4)	(72.8–90.4)	
Engaged in play	R1: 94	83.0	77.4	0.416

Sex of child/Activity	N	Round 1	Round 2	p value
		% (95% CI)	% (95% CI)	
	R2: 96	(74.5–91.7)	(67.3–87.4)	
Named, counted, or drew things	R1: 94	39.6	46.3	0.423
	R2: 96	(28.6–50.5)	(34.8–57.7)	
One or more activities	R1: 94	94.3	88.1	0.205
	R2: 96	(89.0–99.6)	(80.5–95.6)	

Percent of children (aged 2–5 years) regularly attending preschool

Questions about preprimary education were included in the surveys. Specifically, caregivers were asked about preschool enrollment and regular attendance during the past year for each child ages 2–5 years in their care. In Kenya, preprimary school begins as early as age two and children typically begin primary education at age six. In Table 15, we present results for children ages 2–5. Overall, there was a significant increase in the proportion of children who were enrolled in preprimary school (41.3% in Round 1 versus 58.5% in Round 2, $p<0.05$), with a significant increase observed for both male and female children. The percentage of children who attended preprimary school regularly (i.e., did not miss school in the past week) increased from 27.5 percent in Round 1 to 42.8 percent in Round 2. Although this overall increase was not statistically significant, the difference was significant for girls (22.1% in Round 1 to 47.5% in Round 2, $p<0.05$).

Table 14. Percentage of children ages 2–5 years who were enrolled in and regularly attended preschool

Child's age (years)	N	Round 1	Round 2	p value
		% (95% CI)	% (95% CI)	
Females				
Enrolled	R1: 40	39.7	66.7	0.027
	R2: 42	(23.2–56.2)	(51.4–81.9)	
Regularly attending school	R1: 40	22.1	47.5	0.030
	R2: 42	(7.7–36.4)	(30.9–64.2)	
Males				
Enrolled	R1: 38	32.8	58.3	0.050
	R2: 37	(16.6–49.1)	(41.1–75.5)	
Regularly attending school	R1: 38	26.6	44.8	0.126
	R2: 37	(11.4–41.7)	(27.4–62.2)	
Both sexes				
Enrolled	R1: 94	41.3	58.5	0.041
	R2: 97	(30.6–52.0)	(48.0–68.9)	
Regularly attending school	R1: 94	27.5	42.8	0.051
	R2: 97	(17.7–37.3)	(32.2–53.4)	

Education

OVC_SCHATT: Percent of children (aged 5–17 years) regularly attending school

As shown in Table 16, approximately 97 percent of children ages 5–17 years were enrolled in school in both survey rounds. Overall, no significant differences between rounds were observed by sex, age category, or school level.

Table 16. Percentage of children enrolled in school

Child's age (years)	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Females				
5–9	R1: 114	94.5	100.0	0.019
	R2: 104	(89.9–99.1)		
10–14	R1: 185	99.6	98.9	0.158
	R2: 183	(98.9–100.0)	(97.3–100.0)	
15–17	R1: 72	96.9	95.3	0.531
	R2: 77	(92.5–100.0)	(90.5–100.0)	
All female children (5–17)	**R1: 507**	**97.2**	**97.5**	**0.783**
	R2: 512	**(95.5–99.0)**	**(95.9–99.1)**	
Males				
5–9	R1: 87	96.8	96.8	1.000
	R2: 78	(92.9–100.0)	(92.3–100.0)	
10–14	R1: 178	99.2	99.0	0.854
	R2: 169	(97.5–100.0)	(97.9–100.0)	
15–17	R1: 94	93.8	95.0	0.698
	R2: 104	(88.3–99.2)	(90.5–99.5)	
All male children (5–17)	**R1: 501**	**97.5**	**97.4**	**0.954**
	R2: 509	**(95.9–99.1)**	**(95.9–98.9)**	
Both sexes				
5–9	R1: 249	95.8	98.0	0.223
	R2: 222	(93.0–98.6)	(95.9–100.0)	
10–14	R1: 422	99.4	99.1	0.518
	R2: 445	(98.5–100.0)	(98.3–99.9)	
15–17	R1: 211	95.2	93.9	0.437
	R2: 238	(92.3–98.6)	(90.7–97.2)	
All ages (5–17)	**R1: 1072**	**97.0**	**97.3**	**0.781**
	R2: 1133	**(95.7–98.4)**	**(96.0–98.5)**	

Among all children ages 5–17, 69.2 percent were attending school regularly (i.e., did not miss any school days in the week preceding the survey) in Round 1 compared with 80.4 percent in Round 2 (Table 17). This increase in regular school attendance was statistically significant ($p<0.01$). A similar significant upward trend in attendance was observed for both female and male children. When we examined the results by

age, we noted a significant increase for children ages 5–9 years ($p<0.01$) and 10–14 years ($p<0.01$). These results are shown in Table 17.

Table 17. Percentage of children regularly attending school

Child's age (years)	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Females				
5–9	R1: 114	60.4	81.7	0.003
	R2: 104	(50.0–70.7)	(73.6–89.8)	
10–14	R1: 183	76.5	81.4	0.288
	R2: 185	(69.6–83.3)	(75.2–87.7)	
15–17	R1: 72	76.6	78.1	0.831
	R2: 77	(66.4–86.7)	(68.5–87.8)	
All female children (5–17)	**R1: 507**	**68.9**	**80.6**	**<0.001**
	R2: 512	**(64.0–73.8)**	**(76.5–84.8)**	
Males				
5–9	R1: 87	68.5	81.2	0.040
	R2: 78	(57.5–79.6)	(71.6–90.8)	
10–14	R1: 178	70.9	89.0	<0.00
	R2: 169	(63.3–78.5)	(83.9–94.2)	
15–17	R1: 94	69.4	78.3	0.196
	R2: 104	(59.4–79.3)	(69.5–87.1)	
All male children (5–17)	**R1: 501**	**68.4**	**83.6**	**<0.001**
	R2: 509	**(63.4–73.3)**	**(79.7–87.5)**	
Both sexes				
5–9	R1: 249	60.9	81.6	<0.001
	R2: 222	(53.7–68.2)	(75.9–87.3)	
10–14	R1: 422	73.8	84.0	0.001
	R2: 445	(68.9–78.8)	(79.9 88.1)	
15–17	R1: 211	70.5	76.1	0.233
	R2: 238	(63.9–77.1)	(70.0–82.2)	
All ages (5–17)	**R1: 1072**	**69.2**	**80.4**	**<0.001**
	R2: 1133	**(65.6–72.9)**	**(77.3–83.5)**	

OVC_PRGS: Percent of children (aged 5–17 years) who progressed in school during the last year

Table 18 presents the percentage of children ages 5–17 years reported to have progressed in school during the past year, (i.e., their caregivers reported them to be in a higher grade level at the time of the survey compared with the grade they were in the previous school year). The findings showed a statistically significant increase in progression, from 89.3 percent in Round 1 to 93.1 percent in Round 2, $p<0.05$. The

increase was greatest among the youngest age group. Similar upward trends were observed for both females and males (except for girls ages 15–17), but none of the differences were statistically significant.

Table 18. Percentage of children ages 5–17 who progressed in school during the past year

Child's age (years)	N	Round 1 % (95% CI)	Round 2 % (95% CI)	*p* value
Females				
5–9	R1: 110	91.7	95.8	0.163
	R2: 102	(85.4–97.9)	(91.3–100.0)	
10–14	R1: 183	90.4	92.7	0.429
	R2: 184	(85.7–95.1)	(88.7–96.8)	
15–17	R1: 70	91.0	88.5	0.659
	R2: 75	(83.8–98.2)	(81.0–96.1)	
All female children (5–17)	**R1: 504**	**90.2**	**93.7**	**0.068**
	R2: 509	**(86.9–93.4)**	**(91.2–96.2)**	
Males				
5–9	R1: 79	90.4	96.2	0.182
	R2: 75	(82.1–98.7)	(90.7–100.0)	
10–14	R1: 177	90.9	92.3	0.660
	R2: 169	(86.1–95.7)	(87.8–96.8)	
15–17	R1: 91	88.7	94.0	0.208
	R2: 101	(81.7–95.6)	(89.0–99.0)	
All male children (5–17)	**R1: 496**	**89.8**	**93.3**	**0.103**
	R2: 507	**(86.6–93.1)**	**(90.6–95.9)**	
Both sexes				
5–9	R1: 237	89.8	96.3	0.009
	R2: 219	(84.8–94.7)	(93.4–99.1)	
10–14	R1: 422	89.4	92.3	0.173
	R2: 445	(85.9–92.8)	(89.3–95.3)	
15–17	R1: 205	89.9	91.7	0.562
	R2: 233	(85.2–94.4)	(87.8–95.6)	
All ages (5–17)	**R1: 1069**	**89.3**	**93.1**	**0.012**
	R2: 1130	**(86.9–91.8)**	**(91.1–95.1)**	

Legal Rights

OVC_BCERT: Percent of children (aged 0–17 years) who have a verified birth certificate

Ensuring that children have a valid birth certificate is a first step toward child legal protection. We asked caregivers whether the children in their care had birth certificates. For the children for whom a birth certificate was reported, the caregivers were asked to show the birth certificate to the interviewers if they had it. In both Round 1 and Round 2, many caregivers indicated that the child had a birth certificate, but a larger percentage of birth certificates were available and shown to the interviewer: 44.4 percent in Round 2 versus 39.0 percent in Round 1 (Table 19). This overall increase in the percentage of verified birth certificates was statistically significant, $p<0.05$. Increases from Round 1 to Round 2 were observed for both female and male children, but the difference was greater and statistically significant only for female children (37.8% in Round 1 and 47.1% in Round 2, $p<0.01$). Increases over time were observed across all age categories, but the difference was statistically significant only for 10- to 14-year-olds. These results are shown in Table 19.

Table 19. Percentage of children (ages 0–17 years) who have a verified birth certificate

Child's age (years)	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Females				
0–4	R1: 42	17.1	30.0	0.059
	R2: 43	(4.7–29.6)	(14.3–45.7)	
5–9	R1: 114	34.1	45.0	0.058
	R2: 104	(23.9–44.3)	(34.4–55.7)	
10–14	R1: 183	40.7	50.9	0.051
	R2: 185	(32.5–48.9)	(42.7–59.1)	
15–17	R1: 72	45.3	55.5	0.198
	R2: 77	(32.8–57.8)	(43.1–67.9)	
All female children (0–17)	**R1: 587**	**37.8**	**47.1**	**0.004**
	R2: 601	**(32.6–43.1)**	**(42.0–52.3)**	
Males				
0–4	R1: 41	9.7	16.1	0.354
	R2: 37	(0.0–19.6)	(2.4–29.8)	
5–9	R1: 87	33.9	38.4	0.524
	R2: 78	(22.2–45.5)	(26.4–50.5)	
10–14	R1: 178	43.3	52.1	0.095
	R2: 169	(34.6–52.0)	(43.3–60.9)	
15–17	R1: 94	46.2	50.4	0.487
	R2: 104	(35.4–57.1)	(39.7–61.1)	
All male children (0–17)	**R1: 569**	**38.1**	**43.6**	**0.064**
	R2: 587	**(32.8–43.5)**	**(38.4–48.8)**	
Both sexes				
0–4	R1: 94	14.2	22.9	0.043

Child's age (years)	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
	R2: 96	(6.3–22.1)	(13.1–32.7)	
5–9	R1: 249	33.0	39.5	0.134
	R2: 222	(25.8–40.2)	(32.0–47.0)	
10–14	R1: 422	42.3	51.8	0.011
	R2: 445	(36.4–48.3)	(45.9–57.7)	
15–17	R1: 211	47.0	55.9	0.049
	R2: 238	(39.6–54.4)	(48.5–63.3)	
	R1: 1219	**39.0**	**44.4**	**0.029**
All ages (0–17)	**R2: 1320**	**(34.6–43.4)**	**(40.2–48.5)**	

Attitudes about Child Punishment

OVC_CP: Percent of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control of children in the home or at school

Nearly three-quarters of caregivers agreed that hitting or beating a child is always or sometimes an appropriate means of discipline or control in the home or at school (71.4% in Round 1 and 76.4% in Round 2) (Table 20). The difference between the two survey periods was not statistically significant ($p<0.5$). Overall, the increase in approval for harsh punishment was highest among older caregivers (i.e., those 51 years and older). Although we saw an increase in both female and male caregivers approving of physical punishment, the increase was greater among male caregivers compared with females (but still not statistically significant). Table 20 presents a summary of caregiver's attitudes about harsh physical punishment of children, by age and sex of the caregiver, and by survey round.

Table 20. Percentage of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control of children in the home or at school

Sex and age of caregiver (years)	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Females				
<18	R1: 0	--	--	N/A
	R2: 0			
18–30	R1: 33	78.8	87.9	0.263
	R2: 33	(64.1–93.5)	(76.1–99.6)	
31–50	R1: 133	74.4	78.9	0.319
	R2: 133	(66.9–81.9)	(71.9–86.0)	
51+	R1: 112	68.8	75.0	0.299
	R2: 112	(60.0–77.5)	(66.9–83.1)	
	R1: 304	**74.0**	**77.6**	**0.274**
All females	**R2: 304**	**(69.1–79.0)**	**(72.9–82.3)**	
Males				
<18	R1: 0	--	--	N/A

Sex and age of caregiver (years)	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
	R2: 0			
18–30	R1: 1	100.0	0.0	N/A
	R2: 1			
31–50	R1: 16	56.3	62.5	0.718
	R2: 16	(28.9–83.6)	(35.9–89.1)	
51+	R1: 26	61.5	73.1	0.449
	R2: 26	(41.5–81.6)	(54.8–91.3)	
All males	**R1: 42**	**59.5**	**69.0**	**0.400**
	R2: 42	**(44.0–75.0)**	**(54.5–83.6)**	
Both sexes				
<18	R1: 0	--	--	N/A
	R2: 0			
18–30	R1: 18	77.8	83.3	0.717
	R2: 18	(56.5–99.1)	(64.3–100.0)	
31–50	R1: 149	72.5	77.2	0.287
	R2: 149	(62.2–79.7)	(70.4–84.0)	
51+	R1:138	67.4	74.6	0.198
	R2: 138	(59.5–75.3)	(67.3–82.0)	
All ages	**R1: 377**	**71.4**	**76.4**	**0.105**
	R2: 377	**(66.8–75.9)**	**(72.1–80.7)**	

Household Economic Well-Being and Resilience

OVC_KE2: Percent of households able to access money to pay for expected household expenses

Caregivers were asked whether their households were able to cover expected household expenses in the 12 months preceding the survey. The results are given in Table 21. Overall, 69.5 percent of all households reported that they were able to pay for expected expenses in Round 2 compared with only 36.9 percent in Round 1. This increase was statistically significant for both female and male caregivers.

Table 21. Percentage of households able to access money to pay for expected household expenses

Sex of caregiver	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Females	R1: 304 R2: 304	36.5 (31.1–42.0)	71.7 (66.6–76.8)	<0.001
Males	R1: 42 R2: 42	33.3 (18.5–48.2)	57.1 (41.5–72.8)	0.049
All households	**R1: 377** **R2: 377**	**36.9** **(32.0–41.8)**	**69.5** **(64.8–74.2)**	**<0.001**

OVC_MONEY: Percent of households able to access money to pay for unexpected household expenses

Caregivers were asked whether their households had experienced any unexpected household expenditures in the 12 months preceding the survey, and if so, whether they were able to access money to pay for those unexpected expenses. Overall, the percentage who responded in the affirmative increased from 35.2 percent in Round 1 to 66.2 percent in Round 2 (Table 22). This increase was statistically significant for both female and male caregivers.

Table 22. Percentage of households able to access money to pay for unexpected household expenses

Sex of caregiver	N	Round 1	Round 2	*p* value
		% (95% CI)	% (95% CI)	
Females	R1: 116 R2: 116	37.9 (29.0–46.9)	65.5 (56.7–74.3)	<0.001
Males	R1: 16 R2: 16	18.8 (0.0–40.2)	56.3 (28.9–83.6)	0.029
All households	**R1: 145** **R2: 145**	**35.2** **(27.3–43.0)**	**66.2** **(58.4–74.0)**	**<0.001**

DISCUSSION

This panel study involved an outcome monitoring survey conducted two years apart in Kenya, focusing on the nine PEPFAR MER OVC ESIs and two supplemental indicators. The study fulfills PEPFAR's global reporting requirements that aim to measure and track progress of PEPFAR-supported OVC programs over time. The findings highlight various dimensions of child well-being, focusing on progress from 2016 to 2018. These results will support evidence-informed strategies, programming, and resource allocation by a PEPFAR-supported local project (MWENDO); will assist other OVC stakeholders in Kenya to design their programs; and will contribute to a global PEPFAR-wide evidence base on the effectiveness of PEPFAR OVC programming.

The findings show statistically significant improvements for seven of the eleven indicators, reflecting an overall improvement in MWENDO project activities between 2016 and 2018.

All respondents were listed as receiving OVC services from APHIAplus in 2016 because this was a condition for study participation. Not surprisingly, however, not all respondents reported that they had ever received services from the project. The small increase in the percentage of caregivers who reported ever receiving services (from 81.7% in Round 1 to 85.4% in Round 2) was expected because this variable is cumulative. That not all caregivers reported having ever received a service from the project may be explained by the fact that intangible services may not be considered by respondents to be services. For example, the project may consider an informational conversation to be a service, whereas respondents do not consider it as such, because it is not as tangible as receiving financial assistance. Moreover, the question to the respondent was phrased as "have you ever *personally* received services?" Because some services are directed to the child rather than to the caregiver, some caregivers may not have considered child services as personal services and, therefore, did not report them. We recognized that this question did not work as intended after Round 1, but we did not change it for Round 2 so that we could measure change over time.

On the other hand, significantly fewer households reported receiving services in the past six months (55.2% in Round 2 versus 66.0% in Round 1). A decrease of as much as 3 percent from Round 1 to Round 2 was expected because 3 percent of households reported that they had graduated from the program between Round 1 and Round 2. These are the households that were deemed to no longer require services and that were no longer receiving services. They would say that they had not received services in the past six month if they had graduated more than six months ago. An overall decrease is also not surprising because some services are cumulative. For example, for those children who were helped in getting a birth certificate before the 2016 survey, caregivers would not have reported this service again for the six months before the 2018 survey.

When asked about specific services received in the past six months, most services showed a decline, with the exception of health and nutrition services, which showed a marked increase. Of interest are the services that were not asked about in 2016: HIV testing and counseling (reported by 36.1%); referral to ART (13.5%); support for disclosing HIV status (23.3%); and referral to GBV services (6.9%). These percentages showed that there was some demand for these services.

Regarding **children's health**, there was a significant decline in the proportion of children who were too sick to participate in daily activities (32.3% in Round 1 versus 19.6% in Round 2). These findings may indicate positive impact of MWENDO project activities aimed to provide children with needed healthcare services. In addition, there was an increase in caregivers' knowledge of HIV status of children in their care, from 71.7 percent of children in Round 1 to 77.7 percent in Round 2, reflecting the MWENDO project's activities that focus on social and behavior change to promote community knowledge about child

protection and HIV by working with LIPs, and the promotion of HIV testing as part of case management. Although this finding is positive, the total number of OVC with HIV status known to the caregiver does not meet the expectation that primary caregivers know the HIV status of all OVC in their care. Therefore, despite the improvement between the two survey rounds, there is still room for MWENDO to improve efforts for caregivers to know the HIV status of all their children.

Our findings suggest that severe **malnutrition** is not a major problem among MWENDO beneficiaries. Based on MUAC measurement of OVC ages 6–59 months, no child was found to be undernourished in Round 2 of the survey compared with one case in Round 1. This finding should be interpreted cautiously because the sample size for this age group was very small; yet, the finding is consistent with figures from national surveys that show very low rates of wasting among young children in counties included in this survey (Kenya National Bureau of Statistics [KNBS] and ICF International, 2015).

The survey found widespread engagement of caregivers or other household members over 15 years of age in **stimulating activities** with young children in the household. However, this figure was significantly lower in Round 2 (88.1%) compared with Round 1 (94.3%). MWENDO activities have a component on positive parenting, which includes sensitizing caregivers on the importance of engaging young children in stimulating activities. These results suggest that more emphasis should be given to this component of the program.

Another aspect of **early childhood development** that we measured is preschool attendance of children ages 2–5 years. The percentage of young children enrolled in preschool significantly increased, from 41.3 percent in 2016 to 58.5 percent in 2018. However, we expect that the increase could have been larger, if not for the new (2017) Ministry of Education policy, which states, "The overall goal is to enhance access to quality relevant preprimary education services to all children aged 4–5" (Republic of Kenya, Ministry of Education, 2017, p. 20). Although the policy does not state that schools should disallow children younger than four years from enrolling in preschool, many schools interpret it this way and may refuse to enroll younger children. These attendance rates are consistent with figures from national surveys (World Bank, 2016).

Performance on **OVC education** over the two years between the surveys improved because 97.3 percent of children ages 5–17 years in Round 2 and 97.0 percent in Round 1 were enrolled in school, and 80.4 percent were regularly attending school (i.e., did not miss any school days in the week preceding the survey) in Round 2 compared with 69.2 percent in Round 1. The increase in school attendance between 2016 and 2018 was statistically significant. Although this may not be attributed only to MWENDO project interventions, this finding suggests that the project's education interventions may be working. Reasons for missing school were not asked in the survey, but there is some evidence from the child health indicator that the reduction in school absence may be partly owing to a reduction in cases of children's ill health. The 2014 Kenya Demographic and Health Survey (KDHS) reported lower primary net attendance ratios than those found in Round 2 (i.e., 87.9% in Western and 84.5% in Nyanza regions) (KNBS and ICF International, 2015). However, secondary school attendance in Round 1 and Round 2 was found to be twice that of the regional net secondary attendance ratios reported in the 2014 KDHS (i.e., 26.1% and 37.5% of 14- to 17-year-olds in Western and Nyanza regions, respectively, were reported to be attending secondary school) (KNBS and ICF International, 2015). Of note, however, the KDHS rates reflect attendance at any time during the year preceding the survey and, therefore, are not entirely comparable with the OVC survey indicator. Moreover, because this survey collected information only about children who slept in the household on the night before the interview, the education indicator estimates do not include students who were away at boarding school at the time of the survey. Nevertheless, the

improvements we see between Round 1 and Round 2 may be attributed to the MWENDO project, at least in part, either directly (through activities aimed at improved school attendance), or indirectly, by improving the health of children and the economic well-being of the household. Improved financial stability can increase school attendance in two ways. First, households are better able to afford school fees; and second, households have less need for the adolescent to bring income home, so that she or he can continue schooling.

As a component of its child protection services and in support of **child legal rights**, MWENDO provides assistance in registering births and helping caregivers obtain birth certificates for their children. Our findings show a marked increase in the proportion of children with a verified birth certificate, reflecting MWENDO's focus on systematically registering all births that occur in their supported households. Government programs to register children in the area may have also contributed to this observed improvement, especially given that MWENDO works closely with the government to facilitate access to birth certificates through mobilization, assistance with forms and procedures, and payment of registration fees. However, despite the noted increase, the overall percentage of children who have a birth certificate is still low, suggesting that more effort aimed at improving birth registration is needed, especially for younger children. However, these figures are consistent with low estimates from national surveys (KNBS and ICF international, 2015).

The survey found that about three-quarters of caregivers agreed that hitting or beating a child is always or sometimes an appropriate means of discipline or control in the home or at school (71.4% in Round 1 versus 76.4% in Round 2). Although we saw an increase from Round 1 to Round 2, it is not statistically significant, suggesting no real change. The acceptance of violence against children may reflect cultural norms that condone violence, in general. Moreover, public debate around students' lack of discipline in schools as a result of recent spates of school strikes and cases of children reportedly burning their schools (BBC News, 2016) may have limited the influence of the project on caregivers' attitudes about harsh punishment as a way of disciplining children in school and at home. The 2014 KDHS found that physical violence against women and children was most prevalent in Western and Nyanza regions compared with other parts of the country (KNBS and ICF International, 2015). This finding suggests the need for MWENDO to increase efforts to reduce **harsh physical punishment** against OVC.

As to **household economic well-being and resilience**, the survey showed that the proportion of households that could pay for expected household expenses nearly doubled, from 36.9 percent in Round 1 to 69.5 percent in Round 2. A significantly higher proportion of those who experienced unexpected household expenses were able to pay for them in Round 2 (66.2% compared with 35.2% in Round 1). This finding reflects MWENDO's focus on addressing household economic resilience by promoting entrepreneurial training and linking their beneficiaries to sources of support for startups for income-generating activities and to savings and loan organizations as a way of promoting beneficiaries' economic independence.

Limitations of the Study

There are several limitations of the study that should be considered when interpreting these results.

1. Data on children were reported by the caregiver, not the child, and may therefore be subject to inaccuracies and bias as to the child's actual well-being.
2. Round 1 was designed to be a cross-sectional survey and was sampled for that purpose. Only in preparation for Round 2 was the decision made to convert it to the first round of a panel study.

Although the Round 1 sampling approach was not powered for a panel study, the sample was large enough for statistical calculations to be valid, especially given the high response rates.

3. This was a panel study of households, not of children. Some caregivers changed between rounds; some children aged out of the eligibility range of the study or otherwise left the households; other children were born into participating households or otherwise joined them. Therefore, we could not match the children's information between the rounds and had to rely on household means, which limited the precision of the indicator estimates.
4. The association of the survey team with the LIP during fieldwork (for the purpose of locating beneficiary households) may have influenced caregiver responses; however, without assistance of the partner, field teams would not have been able to locate the households and, likely, as "outsiders," would have faced refusals for interviews.
5. The survey was designed for the purposes of outcome monitoring only, and the methodology does not allow for attribution of results directly to the MWENDO project. Moreover, the results from this survey cannot be generalized to populations outside the project beneficiary population, given that the sample was selected from among project beneficiaries only.

Despite these limitations, the findings provide evidence of changes in the well-being of MWENDO OVC project beneficiaries between 2016 and 2018. Our findings provide insights on project successes and gaps, which may be useful for the project and for other OVC projects in Kenya.

RECOMMENDATIONS

Our findings have clear programmatic implications for MWENDO and for other OVC programs in Kenya.

1. Clearly, some activities work and work well. In particular, the economic empowerment activities appear to be very successful. For household economic well-being to continue to improve, MWENDO should reinforce the existing households' economic strengthening strategies, such as linking the households' access to social safety-net programs; to financial services, such as savings and internal lending communities; and providing financial education to caregivers. Moreover, the case management approach to household economic strengthening should focus on households that lag behind.
2. The indicator on approval of capital punishment has regressed instead of improving in the two years between survey rounds. Given the cultural norms that favor violence in the family, there is a need for activities at the community level to encourage change. For example, MWENDO could design community sensitization activities that address the dangers associated with corporal punishment and tackle related norms and attitudes.
3. Health, education, and legal status indicators have improved, but there is still room for improvement, as follows:
    a. There is a need to improve collaboration with relevant government agencies, such as the Department of Children Services and the Office of the Registrar of Births, to ensure that registration services are made available conveniently, to the extent possible. The project should also assist caregivers to navigate the requirements and documentation.
    b. With respect to health, CHVs should become more empowered to identify and refer sick children to necessary care. The project should also focus more on conducting HIV risk assessments and referring those most at-risk children to HIV testing to ensure that their status information is reliable and up to date.
    c. We recommend increasing internal data use to inform actions for households with children who have challenges with school progression.

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APPENDIX A. QUESTIONNAIRES

IDENTIFICATION DATA

001	QUESTIONNAIRE IDENTIFICATION NUMBER	
002	OVC Service Delivery Partner	Timiza 90 MWEND0 WRP/HJFMRI
002	COUNTY	
003	Subcounty	
005	WARD	
006	VILLAGE/TOWN	
007	TYPE OF LOCATION *Circle*	Urban 1 Rural 2
008	HOUSEHOLD NUMBER (from sampling list)	**[__ __]**
009	Panel survey or cross-sectional	Panel study 1 Cross sectional 2

INTERVIEW RESULT

	VISIT 1	VISIT 2	VISIT 3
DATE (day/month/year)			
INTERVIEWER RESULTS			

Interview comment codes: 1–Interview completed; 2–Relocated/Changed address in the area; 3–Unavailable for extended period; 4–Out-migrated; 5–Not known in the community / Not traced; 6–Duplicate 7–Refused.

009	INTERVIEWER	A) CODE	B) NAME
010	DATE INTERVIEW COMPLETED (day/month/year)		

COMMENTS

Caregivers

First, I have a few questions about you and the children in your care.

No.	Question	Coding Category			Skip
1	**Record caregiver sex.**	Female 1 Male 2			
2	IF PANEL STUDY We interviewed this household two years ago as part of the same project. Were you the caregiver that we interviewed then?	Yes 1 No 2 Don't know 8 No answer 9			
3	How old were you at your last birthday? **Do not leave blank. If unknown, ask respondent to estimate.**	[_____] years			
4	Have you personally ever received services or participated in activities from [insert name of OVC CBO]? By this, I mean have you ever been visited by a community worker, or have you ever participated in any activities organized by this organization such as a savings group or parenting program?	Yes 1 No 2 Don't know 8 No answer 9			**If No, DK, or No answer: 8**
5	How many months/years ago did you start receiving services or participating in activities from [insert name of CBO]?	[_____] months [_____] years Record 88 for Don't know; 99 for No answer			
6	Have you personally received services or participated in activities from [insert name of CBO] in the last 6 months?	Yes 1 No 2 Don't know 8 No answer 9			
7	What types of services have you or other members of your household received from [organization] in the past 6 months?	**Yes**	**No**	**Don't know**	**No answer**
	7.1 Health or nutrition	1	2	8	9
	7.2 Education	1	2	8	9
	7.3 Shelter	1	2	8	9
	7.4 Household economic strengthening	1	2	8	9
	7.5 Legal and social protection	1	2	8	9
	7.6 Psychosocial counselling	1	2	8	9
	7.7 HIV testing and counseling	1	2	8	9
	7.8 Referral to ART	1	2	8	9
	7.9 Support for disclosing HIV status	1	2	8	9
	7.10 Referral to GBV services	1	2	8	9

No.	Question	Coding Category			Skip
8	Have you ever attended school?	Yes 1 No 2 Don't know 8 No answer 9			**If No, DK, or No answer: 10**
9	What is the highest level of school you attended?	Pre-primary/nursery/ECD . . .0 Primary . . . . . .1 Secondary . . . . . .2 College . . . . . .3 University . . . . . .4 Don't know . . . . . 8 No answer 9			
10	Do you think that hitting or beating a child is an appropriate means of discipline or control <u>in the home</u>?	Always an appropriate means of discipline . . . . . 1 Sometimes an appropriate means of discipline. . . . . 2 Rarely an appropriate means of discipline . . . . . 3 Never an appropriate means of discipline . . . . . 4 Don't know . . . . . 8 No answer 9			
11	Do you think that hitting or beating a child is an appropriate means of discipline or control <u>at school</u>?	Always an appropriate means of discipline . . . . . 1 Sometimes an appropriate means of discipline. . . . . 2 Rarely an appropriate means of discipline . . . . . 3 Never an appropriate means of discipline . . . . . 4 Don't know . . . . . 8 No answer 9			
12	I'm now going to read some statements and I'd like you to tell me if you agree, partially agree, or do not agree.	**Agree**	**Partially agree**	**Do not agree**	**No answer**
	12.1 Changing diapers or giving a bath to kids is only mother's/woman's responsibility.	1	2	3	9
	12.2 Feeding a child can be the father's responsibility	1	2	3	9
	12.3 Taking care of her home and family is only the woman's responsibility	1	2	3	9
	12.4 The husband should decide to buy the major household items.	1	2	3	9
	12.5 A man should have the final word about decisions in his home.	1	2	3	9

No.	Question	Coding Category			Skip
	12.6 A woman should obey her husband in all things.	1	2	3	9
	12.7 There are times when a woman deserves to be beaten.	1	2	3	9
	12.8 A woman should tolerate violence to keep her family together.	1	2	3	9
	12.9 If someone insults a man, he should defend his reputation with force if he has to.	1	2	3	9
	12.10 A man using violence against his wife is a private matter that shouldn't be discussed outside the couple	1	2	3	9
13	Do you own the house/dwelling where you live	Yes 1 No 2 Don't know 8 No answer 9			
14	Does your household have any of the following:	**Yes**	**No**	**Don't know**	**No answer**
	14.1 Electricity (connected to grid)	1	2	8	9
	14.2 Solar power	1	2	8	9
	14.3 Generator	1	2	8	9
	14.4 Other source of electricity	1	2	8	9
15	Has your household been able to cover <u>expected</u> household expenses in the last 12 months?	Yes 1 No 2 Don't know 8 No answer 9			
16	Did your household incur any <u>unexpected</u> household expenses, such as a house repair or urgent medical treatment, in the last 12 months?	Yes 1 No 2 Don't know 8 No answer 9			**If No, DK, or No answer: 18**
17	Was your household able to pay for these expenses?	Yes 1 No 2			
18a	Are there children in your care who used to receive services from [LIP name] but are no longer receiving services, since January 2018?	Yes 1 No 2 Don't know 8 No answer 9			**If No, DK, or No answer: 19**

No.	Question	Coding Category	Skip
18b	How many children in this household are no longer receiving services from [LIP name] since January 2018?	Number /__/ Don't know 98 No answer 99	**If No, DK, or No answer: 20**
19	Does this household still qualify to receive services from [LIP name]	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 19b** If Yes: 20
19a	Were you told that the household no longer qualifies for services from [LIP name]?	Yes 1 No 2 Don't know 8 No answer 9	
19b	When was the last time (or how many months ago) you or the children you care for received any service from [LIP name]	[_____] months [_____] years Record 88 for Don't know; 99 for No answer	
19c	Since that time, have you or any child from this household received any service or support from	Y/N Government services…… Other NGOs…… Churches/Mosques……..	
20	How many children ages 0–17 years are you responsible for?	[_____]	

Starting with the oldest, please tell me the first names and ages of the children you care for or for whom you are responsible. ***Make sure that the total number of children is the same as the response given to question 20 above.***

No.	First name	Age (years)	Questionnaire		Registered beneficiary of [organization's] OVC program
			0–4 years	5–17 years	Y/N
1	*Example.* Samuel	6	-	X	Y

Child Ages 0–4 years

I have a few questions about [insert child's name]. Check to make sure that the sampled child is present. You will need to take this child's mid–upper arm circumference.

No.	Question	Coding Category			Skip
1	Is [NAME] female or male?	Female 1 Male 2			
2	How old was [NAME] at her/his last birthday? **Do not leave blank. If unknown, ask caregiver to estimate. If the child is older than 4 at last birthday, use 5–17 years questionnaire. Proceed to next household/child on list.**	[_____] years			**If No, DK, or No answer: 4**
3	3.1 Does [NAME] have a birth certificate?	Yes 1 No 2 Don't know 8 No answer 9			**If No, DK, or No answer: 4**
	3.2 Could you please show me [NAME'S] birth certificate?	Seen/Confirmed 1 Not seen/Not confirmed 2			**If 1: 4**
	3.3 What is the reason you are unable to show it to me?	Can't locate it just now 1 Permanently missing/ destroyed 2 Someone else keeps it 3 Other reason (specify) 8			
4	In the past 3 days, did you or any household member over 15 years of age engage in any of the following activities with [NAME]: **Read out one at a time.**	**Yes**	**No**	**Don't know**	**No answer**
	4.1 Read books to or looked a picture books with [NAME]?	1	2	8	9
	4.2 Told stories to [NAME]?	1	2	8	9
	4.3 Sand songs to [NAME] or with [NAME] including lullabies?	1	2	8	9
	4.4 Played with [NAME]?	1	2	8	9
	4.5 Named, counted, or drew things with [NAME]?	1	2	8	9
5	Is [NAME] currently enrolled in school (Early Child Development)?	Yes 1 No 2 Don't know 8 No answer 9			**If No, DK, or No answer: 8**
6	During the last school week, did [NAME] miss any school days for any reason?	Yes 1 No 2 Don't know 8 No answer 9			

No.	Question	Coding Category	Skip
7	What ECD grade (or year) is [NAME] in now?	[___|____] Record 88 for Don't know; 99 for No answer	
8	Was [NAME] enrolled in school during the previous school year?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 10**
9	What ECD grade (or year) was [NAME] in during the previous school year?	[___|____] Record 88 for Don't know; 99 for No answer	
10	In the last 2 weeks, has [NAME] been too sick to participate in daily activities?	Yes 1 No 2 Don't know 8 No answer 9	
11	Has [NAME] ever received services or participated in activities from [insert name of CBO]? READ: For Example, referral to health services for the child, referral of the child for immunizations, referral of the child to HIV testing and counseling, referral for ART, counseling, payment of school fees, support for school supplies and materials, help to get child's birth certificate, water-treatment products, medicines, referral to social protection services, etc.	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 14**
12	How many months ago did [NAME] start receiving services or participating in activities from [insert name of CBO]?	[_____] months Record 88 for Don't know; 99 for No answer	
13	Has [NAME] received services or participated in activities from [*insert name of CBO*] in the last 6 months?	Yes 1 No 2 Don't know 8 No answer 9	
14	Has [NAME] ever been tested to see if he/she has the AIDS virus?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer:**

No.	Question	Coding Category	Skip
15	Do you know the results of [NAME's] test?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: end**
16	Did [NAME] test positive for the AIDS virus?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 20**
17	Is [NAME] currently taking antiretroviral (ARV) drugs?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 20**
18	When the last time [NAME] was took his/her ARV drugs?	Number of days ago: [___|___] 0=today 88=Don't know 99=No answer	
19	May I measure your child's mid–upper arm circumference? **Measure the child's mid–upper arm circumference using the MUAC tape and record measurement.**	[___|___].[__|___] cm Record 88.88 if permission not given 99.99 if child not present	

Child Ages 5–17 years

Age group	5–9 years	10–14 years	15–17 years

I have a few questions about [insert child's name].

No.	Question	Coding Category	SKIP
1	Is [NAME] female or male?	Female 1 Male 2	
2	How old was [NAME] at her last birthday? **Do not leave blank. If unknown, ask caregiver to estimate. If the child was less than 5 years old at last birthday, complete the 0- to 4-year-old form. If the child is 18 or older, stop the interview for this child.**	[___|____] years	
3	3.1 Does [NAME] have a birth certificate?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 4**
	3.2 Could you please show me [NAME'S] birth certificate?	Seen/Confirmed 1 Not seen/Not confirmed 2	**If 1: 4**
	3.3 What is the reason you are unable to show it to me?	Can't locate it just now 1 Permanently missing/ destroyed 2 Someone else keeps it 3 Other reason (specify) 8	
4	Is [NAME] currently enrolled in school?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 7**
5	During the last school week, did [NAME] miss any school days for any reason?	Yes 1 No 2 Don't know 8 No answer 9	
6	6.1 What education level is [NAME] currently attending?	Pre-primary/nursery/ECD 0 Primary 1 Post-primary training 2 Secondary 3 Post-secondary training 4 College 5 Vocational training 6 University 7 Don't know 8 No answer 9	

No.	Question	Coding Category	SKIP
	6.2 What school grade is [NAME] currently attending?	[___|____] Record 88 for Don't know; 99 for No answer	
7	Was [NAME] enrolled in school during the previous school year?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 9**
8	8.1 What education level did [NAME] attend during the previous school year?	Pre-primary/nursery/ECD 0 Primary 1 Post-primary training 2 Secondary 3 Post-secondary training 4 College 5 Vocational training 6 University 7 Don't know 8 No answer 9	
	8.2 What school grade did [NAME] attend during the previous school year?	[___|____] Record 88 for Don't know; 99 for No answer	
9	At any point in the last 2 weeks, has [NAME] been too sick to participate in daily activities?	Yes 1 No 2 Don't know 8 No answer 9	
10	FOR FEMALE CHILDREN, AGE 12+ 10.1 Has [NAME] ever been pregnant?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 11**
	10.2 How old was [NAME] when she first became pregnant?	[_____] months Record 88 for Don't know; 99 for No answer	
11	Has [NAME] ever received services or participated in activities from [insert name of CBO]? READ: For Example, referral to health services for the child, referral of the child for immunizations, referral of the child to HIV testing and counseling, referral for ART, counseling, payment of school fees, support for school supplies and materials, help to get child's birth certificate, water-treatment products, medicines, referral to social protection services, etc.	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: 14**

No.	Question	Coding Category	SKIP
12	How many months ago did [NAME] start receiving services or participating in activities from [insert name of CBO]?	[_____] months Record 88 for Don't know; 99 for No answer	
13	Has [NAME] received services or participated in activities from [*insert name of CBO*] in the last 6 months?	Yes 1 No 2 Don't know 8 No answer 9	
14	Has [NAME] ever been tested to see if he/she has the AIDS virus?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, or No answer: end**
15	Do you know the results of [NAME's] test?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, No answer: end**
16	Did [NAME] test positive for the AIDS virus?	Yes 1 No 2 Don't know 8 No answer 9	**If No, DK, No answer: end**
17	Does [NAME] know that s/he tested positive for the AIDS virus?	Yes 1 No 2 Don't know 8 No answer 9	
18	Is [NAME] currently taking antiretroviral (ARV) drugs?	Yes 1 No 2 Don't know 8 No answer 9	
19	When the last time [NAME] was took his/her ARV drugs?	Number of days ago: [___|___] 0=today 88=Don't know 99=No answer	

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