Monitoring Outcomes of PEPFAR Orphans and Vulnerable Children Programs in Nigeria:

Association for Reproductive and Family Health 2016 Survey Findings

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PEPFAR

MEASURE Evaluation

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This report presents the findings of a study on Monitoring, Evaluating, and Reporting (MER) orphans and vulnerable children (OVC) Essential Survey Indicators in Nigeria that MEASURE Evaluation conducted among the beneficiaries of Association for Reproductive and Family Health (ARFH), in partnership with the Center for Research, Evaluation Resources and Development (CRERD) and the Academy for Health Development (AHEAD)—two research organizations based in Ile-Ife. The CRERD/AHEAD consortium was responsible for finalizing the design and study protocol, obtaining ethical clearance, conducting all data collection activities including co-facilitating the training for data collectors, piloting final tools and consent forms, developing the field manuals and data quality assurance procedures, developing a data collection tracking database, developing the electronic data collection scripts in Open Data Kit, undertaking data collection in the field, data cleaning, analyses, and report writing.

MEASURE Evaluation, through the technical lead of Walter Obiero, provided technical support throughout the survey. The report was compiled by Elizabeth Omoluabi, Akanni Akinyemi, and Adesegun Fatusi (CRERD/AHEAD Consortium), with technical support from Walter Obiero of MEASURE Evaluation, Palladium, and his colleagues from the Nigeria office. We acknowledge the technical support and guidance received from Susan Settergren and Lisa Parker (MEASURE Evaluation, Palladium) and wish to thank Lisa Marie Albert (MEASURE Evaluation, Palladium) for assistance with weighting the survey data. We also thank the MEASURE Evaluation's knowledge management team at the University of North Carolina at Chapel Hill for their editorial and production assistance.

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TABLES

ABBREVIATIONS

AHEAD	Academy for Health Development
APIN	AIDS Prevention Initiative in Lagos Nigeria, Ltd/Gte
APR	Annual Progress Report
ARFH	Association for Reproductive and Family Health
ART	antiretroviral therapy
CBO	community-based organization
CDC	United States Centers for Disease Control and Prevention
CRERD	Centre for Research Evaluation, Resource and Development
CRS/SMILE	Catholic Relief Services
CV	community volunteer
FBO	faith-based organization
HES	household economic strengthening
IHVN	Institute of Human Virology Nigeria
IP	implementing partner
LGA	local government area
LOPIN	Local Partners for Orphans and Vulnerable Children
MER	monitoring, evaluation, and reporting
MTN	Mobile Transmission Network
MUAC	mid-upper arm circumference
NGO	nongovernmental organization
NPoPC	National Population Commission
OVC	orphans and vulnerable children
PEPFAR	United States President's Emergency Plan for AIDS Relief
USAID	United States Agency for International Development
USG	United States Government
VSLA	village savings and loan association
WEWE	Widows and Orphans Empowerment Organization

EXECUTIVE SUMMARY

Survey Background

Investment programs to improve the well-being of approximately 17.5 million orphans and vulnerable children (OVC) and their households in Nigeria have been substantial, and yet the impact of this investment is uncertain (United States President's Emergency Plan for AIDS Relief [PEPFAR], 2012). To address this, in 2014, PEPFAR introduced a set of outcome indicators for OVC programs, referred to as Monitoring, Evaluation, and Reporting (MER) Essential Survey Indicators, with the requirement that these indicators be collected every two years by a research organization external to the OVC program. These outcome indicators reflect internationally accepted developmental milestones and collectively measure holistic well-being of children over time. This survey is designed to use standardized methodology developed for application across multiple countries to provide measurable indicators on PEPFAR-supported projects that aim to improve the well-being of OVC in Nigeria.

Objective of the Survey

The objective of this survey is to collect the first round of the nine essential outcome indicators for registered active beneficiaries of Association for Reproductive and Family Health (ARFH). This survey provides the first estimates of the essential outcome indicators and will be repeated at a two-year interval to monitor changes in the well-being of OVC and their caregivers over time.

Survey Design and Methods

The survey design was a descriptive cross-sectional survey assessing the well-being of vulnerable households, caregivers, and children enrolled in the ARFH project in Lagos, Rivers, and Akwa/Ibom States. The targeted population groups are registered active beneficiaries of the ARFH project, including primary caregivers ages 18 years and above and children ages 0–17 years (on whose behalf questions were directed to the primary caregiver). In all, 1,960 children and 606 caregivers were sampled in this study.

Major Findings

Weighted results for the 13 survey indicators (nine essential and four Nigeria-specific) are as presented in Table 1.

Table 1. Weighted Results of 9 Essential Survey Indicators and 4 Nigeria-Specific Indicators

Indicators	All		Male Children	Female Children
	N	% [95% C.I]	% [95% C.I]	% [95% C.I]
OVC_HIVST: Percent of children (aged 0–17 years) whose primary caregiver knows the child's HIV status	1960	42.7 [34.3 – 51.4]	42.3 [34.1 – 51.0]	42.1 [34.1– 52.5]
OVC_NUT: Percent of children (aged 6–59 months) who are undernourished	415	3.9 [1.4 – 10.1]	4.2 [1.3 – 12.9]	3.5 [1.4 – 8.6]
OVC_SICK: Percent of children (aged 0–17 years) too sick to participate in daily activities	1960	44.6 [39.9 – 49.3]	42.8 [37.2 – 48.5]	46.5 [40.2 – 52.9]
OVC_BCERT: Percent of children (aged 0–17 years) who have a birth certificate	1960	15.4 [11.1 – 21.0]	16.5 [11.1 – 23.7]	14.3 [10.0 – 20.1]
OVC_SCHATT: Percent of children (aged 5–17 years) regularly attending school	1314	51.1 [41.6 – 60.6]	52.0 [43.0 – 60.9]	50.1 [39.1 – 61.2]
OVC_PRGS: Percent of children (aged 5–17 years) who progressed in school during the last year	1316	91.6 [89.5 – 93.3]	88.3 [85.1 – 91.0]	94.8 [91.5 – 96.9]
OVC_STIM: Percent of children <5 years of age who recently engaged in stimulating activities with any household member over age 15 years of age	446	95.9 [89.0 – 98.6]	94.2 [81.9 – 98.3]	97.7 [89.7 – 99.5]
OVC_CP: Percent of caregivers who agree that harsh physical punishment is an appropriate means of discipline to control children in the home or at school	606	63.0 [53.1 – 72.0]	61.4 [48.8 –72.6]	63.5 [52.1 – 73.6]
OVC_MONEY: Percent of households able to access money to pay for unexpected household expenses	446	13.5 [8.9 – 20.1]	9.1 [3.8 – 20.4]	14.9 [9.4 – 22.7]
Nigeria Specific Indicators				
OVC_NG1: Percent of households that have attained food security in the last 3 months	606	14.4 [8.7 – 23.0]	9.9 [4.6 – 20.2]	15.8[9.7 – 24.6]
OVC_NG2: Proportion of children and caregivers with adequate shelter	606	18.5 [14.1 – 23.9]	18.7 [11.0 – 29.8]	18.4 [13.8 – 24.3]
OVC_NG3: Percent of children having access to basic healthcare services	1960	39.1 [28.6 – 50.7]	40.2 [29.9 – 51.5]	37.9 [26.5 – 50.9]
OVC_NG4: Percent of children who went to bed without food in the last 4 weeks	1960	81.4 [75.9 – 85.9]	81.9 [75.9 – 86.7]	80.8 [74.2 – 86.1]

BACKGROUND

Study Overview and Rationale

Nigeria Government and U.S. Government investment programs to improve the well-being of orphans and vulnerable children (OVC) and their households have been substantial, and yet the impact of this investment is uncertain and there are still questions regarding "what works" in improving OVC well-being (PEPFAR, 2012). To address these concerns, in 2014, PEPFAR launched its new MER guidance, with a set of outcome indicators for OVC programs. These outcome indicators reflect internationally accepted developmental milestones and collectively measure holistic well-being for children and their families over time. These outcome indicators are designated as "essential survey indicators," which means that PEPFAR considers them critical to tracking progress of PEPFAR-funded projects and has therefore made them a reporting requirement. A standardized survey methodology and tools have been developed to collect these data in countries where PEPFAR is supporting OVC programs. PEPFAR Nigeria has asked the MEASURE Evaluation project to conduct surveys to collect these indicators among five OVC projects. Conducting the MER OVC Essential Indicator Surveys supports the purposes of the evaluation policy of the United States Agency for International Development (USAID) for accountability and promoting learning to generate greater positive change. Likewise, the MER OVC Essential Survey Indicators' technical guidance helps USAID Missions and implementing partners (IPs) meet USAID's evaluation policy requirements, by encouraging the use of external data collectors for objectivity—unbiased measurement and reporting—and use of the best methods to generate high-quality data and credible evidence.

Purpose of the Survey

MEASURE Evaluation, in collaboration with USAID, the United States Centers for Disease Control (CDC), and the five OVC projects conducted the MER OVC Essential Indicator Survey in order to obtain a snapshot of program outcomes at one point in time and to track changes in outcomes over time (at two-year intervals) at round two in 2018.

Survey Objectives

The objective of this survey is to examine the well-being of OVC and their caregivers at one point in time through a series of nine internationally accepted indicators and four additional indicators specific to Nigeria. The survey is driven by the research question:

- What are the estimates of the 13 MER OVC essential survey indicators in a household-based, project-representative sample of OVCs ages 0–17 and caregivers ages 18 years and above?

Situation of OVC in Nigeria and National Response

According to the 2014 National Standards for Improving the Quality of Life of Vulnerable Children Report, about half of Nigeria's population of 140 million is under the age of 18 and an estimated 17.5 million of these children are considered vulnerable to adversity and at risk of not fulfilling their full potential to live a safe and productive life (Federal Ministry of Women Affairs and Social Development, 2014; Tagurum, et al. 2015). Among the vulnerable children, 7.3 million are orphans, of which 2.39 million were orphaned due to an AIDS-related death of one or both parents (Center for Global Health and Development & Initiative for Integrated Community Welfare in Nigeria, 2009; UNICEF, 2013a). In

addition to HIV/AIDS, other major causes of orphanhood are road accidents, maternal mortality, and ethnoreligious conflicts (Case, Paxson, & Abieidinger, 2004). Major challenges facing OVCs are child labor, violence against children, insufficient food, inadequate legal protection, and poor access to social, health, and educational services. Girl children often face greater challenges than boys due to pervasive, harmful gender norms and practices that discriminate against girls.

The national response to the needs of OVC is currently coordinated by the Federal Ministry of Women Affairs and Social Development (FMWA&SD). It started with the Rapid Assessment, Analysis and Action Planning Process and the National OVC Conference in 2004. Since then, Nigeria has put in place the following policies, strategies, structures, and systems to respond to the challenges posed by the large numbers of OVC in the country:

- National Standards for Improving the Quality of Life of Vulnerable Children
- National Plan of Action (2006–2010) for OVC (Federal Ministry of Women Affairs and Social Development, 2006)
- Guidelines and Standards of Practice for OVC (defining a minimum package of services for OVC)
- National OVC Monitoring and Evaluation Framework
- OVC eligibility criteria
- OVC advocacy package
- Psychosocial training manual
- OVC Unit in FMWA&SD
- Priority actions developed to end violence against children
- President declaring 2015 the Year of Action to End Violence against Children

PEPFAR OVC Program in Nigeria

Apart from the government at various levels, many organizations are involved in OVC work in Nigeria. They include international nongovernmental organizations (NGOs), mainly the United States government (USG) and Global Fund IPs, local NGOs, faith-based organizations (FBOs), and community-based organizations (CBOs). Except for the MTN Foundation, the contribution of the private sector has been very limited. According to APR 2015 compiled by PEPFAR Nigeria, nearly 700,000 children orphaned by AIDS and other vulnerable children received care and support in Nigeria. The PEPFAR OVC service delivery package follows the National OVC Service Standards guide. Children receive need-based and age-appropriate interventions including: support to access healthcare; HIV testing and counseling; linkages to treatment and adherence support for HIV-positive children; nutrition assessments and counseling; caregiver and community capacity-building for parenting, early childhood development, and child protection; household economic strengthening; prevention interventions for older OVC; and access to education.

The PEPFAR program aims to achieve epidemic control in scale-up local government areas (LGAs) through enhancement of HIV case detection, linkage to care and treatment and viral load assessments. Community-based OVC programs recruit referral coordinators to facilitate access and adherence to antiretroviral therapy (ART) for HIV-positive children and caregivers. Prevention messaging targets

adolescent OVC, especially girls, with linkages to adolescent-friendly reproductive health services. There is a strong focus across the program on strategies to empower households and communities for better parenting and sustainable care and support to OVC. Services are delivered within the household and community, with strong facility–community referral systems to provide HIV-positive OVC with seamless services from the health facility and within the community where they reside.

PEPFAR MER OVC surveys in Nigeria

The PEPFAR Nigeria team selected the following five OVC projects in Nigeria to be surveyed out of seven USAID-funded and nine CDC-funded projects:

1. APIN Public Health Initiatives, Ltd/Gte
2. Association for Reproductive and Family Health (ARFH)/Local Partners for Orphans and Vulnerable Children (LOPIN 1)
3. SMILE: Sustainable Mechanism for Improving Livelihoods and Household Empowerment (SMILE)
4. The Institute of Human Virology – Nigeria (IHV-Nigeria)
5. Widows and Orphans Empowerment Organization (WEWE)/LOPIN

Two of the IPs, APIN and the Institute of Human Virology Nigeria (IHVN), are supported by CDC, while WEWE, ARFH, and CRS/SMILE are supported by USAID. The selected projects are located in high HIV-prevalence LGAs and the coverage of these scale-up LGAs is where intervention for OVCs will continue up to or beyond 2018. Selection criteria included diversification of U.S. agency support, project funding levels, geographic burden of HIV, and planned continued support to the beneficiary populations served by these projects for at least another two years. The three projects deliver a similar comprehensive package of OVC services based on assessed needs of beneficiaries. Although there is some overlap in the counties served by the projects, all beneficiaries receive services from just one of the projects. Currently, the coverage of these five projects varies from 9,000 to over 300,000 OVCs and their caregivers being served. The OVC outcome MER Survey is expected to happen every two years and selection considers location where continuous OVC intervention ensures that the client/case load will be available for the next two years when the survey will be repeated following the MER indicator guidance. Consideration also includes near-equal representatives of IPs funded by the two major donor agencies of the USG for OVC programs in Nigeria–CDC and USAID.

Survey Implemented by MEASURE Evaluation

The PEPFAR Team selected the five OVC projects mentioned above and asked MEASURE Evaluation to survey all of them, but this report discusses only one survey: ARFH. The ARFH survey was implemented by MEASURE Evaluation in partnership with the Center for Research, Evaluation Resource and Development (CRERD) and the Academy for Health Development (AHEAD), two research organizations based in Ile-Ife. MEASURE Evaluation provided overall leadership for the survey and was responsible to USAID for all activities undertaken. The MEASURE Evaluation activity lead held overall technical, management, and supervisory responsibility for the survey including development of the survey protocol, quality assurance, analysis, technical writing, and dissemination of findings. The

MEASURE Evaluation activity lead ensured that the survey was conducted in accordance with the protocol and for the safety and protection of survey participants.

The CRERD/AHEAD consortium was responsible for all data collection activities including co-facilitating with MEASURE Evaluation the training for data collectors, piloting final tools and consent forms, developing the field manuals and data quality assurance procedures, developing a data collection tracking database, developing the electronic data collection scripts on SurveyCTO, data collection in the field, data cleaning, analyses, and report writing. CRERD/AHEAD ensured that the team performed survey activities to the highest quality standards and on schedule.

ARFH project staff played supportive roles in making sure that the survey was successfully completed. The survey activities were coordinated by the MER survey coordinator, a consultant under MEASURE Evaluation. The MER survey coordinator served as the liaison officer among all partners during the survey.

How the Results Will Be Used

The data obtained from the findings in these MER Surveys will be used in combination with input/output data at the USAID Mission level to support program planning, targeting, resource allocation, and implementation. The Office of the Global AIDS Coordinator (S/GAC) will synthesize data to report to the U.S. Congress on the progress of PEPFAR OVC programs globally in improving children's well-being. Additionally, results from the MER OVC Essential Indicator Surveys will be triangulated with findings from OVC project routine monitoring and project evaluations, thus strengthening the evidence base for USG-funded OVC programs. PEPFAR requires that data for the MER OVC Essential Indicator Survey be collected every two years so that progress can be tracked over time. This report covers data at one point in time, that is, the first round of data for these indicators in Nigeria, specifically for ARFH.

ARFH Project

This report presents the findings from the survey of MER OVC essential indicators from one of the five selected IPs—ARFH. ARFH has a widespread network of service providers, communities, and persons living with HIV/AIDS support groups in three states in Nigeria: Akwa Ibom, Lagos, and Rivers. It is an NGO registered with the Nigerian Corporate Affairs Commission. Our MER OVC Essential Indicator Survey was conducted in the three states.

ARFH is a leading indigenous not-for-profit, NGO established in Nigeria in 1989 in response to the health and social needs of the disadvantaged groups in rural and urban communities. ARFH is committed to improving the quality of the life of people in Nigeria and elsewhere in sub-Saharan Africa.

Since its inception, ARFH has consistently responded to the public health challenges including reproductive health (abortions not supported); HIV/AIDS prevention, care, and support; maternal and child health tuberculosis and malaria prevention and treatment; adolescent and youth programs; support to orphans and vulnerable children.

The USAID-supported OVC grant awarded to ARFH is a five-year (2014–2019) LOPIN project covering 15 selected local governments in three states, namely Akwa Ibom (five local governments), Lagos (seven local governments), and Rivers State (three). The project is currently being implemented in 12 scale-up LGAs, namely Agege, Ajeromi, Apapa, and Surulere in Lagos State; Port Harcourt, Obio/Akpor, and

Eleme LGAs in Rivers State, and Ikot-Epene, Okobo, Oron, Uruan, and Uyo LGAs in Akwa-Ibom State. The three sustained-support LGAs, namely Badagry, Kosofe, and Ojo, are in Lagos State.

The project aims to provide and expand access to sustainable care and support services to 300,000 OVC and 60,000 households over five years, with yearly targets provided by PEPFAR.

The objectives of the ARFH LOPIN Region 1 project are the following:

- Improve the systems and structures at the community, LGA, and state levels to provide responsive care, protection, and support services for 300,000 OVC and 60,000 households in the three states over five years
- Improve organizational and technical capacity of local Nigerian partners to offer services to OVC and their families (NGOs/CBOs)
- Facilitate local Nigerian CBO partners to engage more effectively with LGA and private sector partners

The ARFH LOPIN project provides services to OVC and their households in the areas of health, education, psychosocial support, nutrition, shelter, protection, and economic strengthening of the OVC households. The service provision component has strong referral and linkage to services, but with direct service provision as needed and the provision of emergency funds, especially for HIV counseling and testing care and treatment and access to healthcare and education. Through private partnerships, the project also provides services that might be of immediate need for OVC (food, medicine, shelter) but that are not part of the design of the project, given the paradigm shift in OVC programs away from the provision of handouts. Strong oversight, hand holding, and monitoring are critical components of the project, and direct implementation is also provided as necessary. ARFH works in partnership with a network of community-based organizations, community volunteers, support groups for people living with HIV/AIDS, as well as with LGA and state authorities in the three implementing states.

As part of the implementation of the LOPIN project, ARFH conducted a baseline survey using quantitative methods and qualitative methods, including key informant interviews, in all 15 LGAs. One objective of the surveys was to better understand the context of programming in the various locations. Other objectives were to collect baseline data on MER OVC indicators, including nutrition/household food security, access to health, protection, school attendance, HIV counseling and testing knowledge, emotional health, and social behavior, as well as household socioeconomic characteristics, and stimulating activities. Progress will be monitored against these data. Anthropometric measures (weights, heights, and use of mid-upper arm circumference [MUAC] tapes) were used in the nutrition assessment. Subsequent to the surveys, OVC and households enrolled in the LOPIN Region One project will receive a continuum of services to mitigate the debilitating impact of HIV/AIDS based on identified needs and case management plans. Referral and linkages of OVC and caregivers to appropriate care was undertaken as applicable. Following the capacity assessment of CBOs, LGAs, and state counterparts to implement OVC interventions, capacity development plans were developed, and several training interventions were provided at all levels, including on National OVC Management Information System. Community volunteers who live in the community work directly with the households. Economic empowerment of households is undertaken through support to skills acquisition for OVC and adolescent girls; setting up of village savings and loan association (VSLA) groups; provision of start-up business materials for caregivers following the necessary assessment; and financial training. The Block Grant Model in Education is being implemented in schools that enroll a large number of the ARFH OVC so that OVC can further their

education without the fear of being asked to pay fees or any form of levy. Monitoring, supervision, data quality verification are key components of the project.

In 2016, ARFH engaged a consultant as part of our work plan to conduct operations research on the project to assess the progress made in implementation, focusing on the key MER indicators.

Progress Update

A total of 117,129 beneficiaries (including children and caregivers) (65,082 female, 52,047 male) received at least one of the six primary services by the end of September 2016. A cumulative 39,862 beneficiaries (11,462 caregivers and 28,400 OVC) know their HIV status.

A total of 93,131 (46,205 female, 46,926 male) accessed health services, including treatment of minor illnesses, HIV testing and linkage to ART, prevention of mother-to-child transmission, and access to Insecticide Treated bedNets. A total of 100,470 (49,982 female, 50,488 male) were provided with psychosocial support. Educational services were received by 15,198 children, including linkage to schools, assessment of performance of OVC, and school visits across the three states. In addition, through the Block Grant, the ARFH/LOPIN 1 project renovated five schools in five LGAs. With this approach, a more conducive environment for learning is provided for all the pupils in the supported schools. Through a memorandum of understanding with the Ministry of Education, the schools are able to exempt the 1,118 children enrolled in the five schools from any form of levy or fees. The support includes school desks and tables, renovation of the library, provision of books, white writing boards, and renovation of recreation facilities.

Household economic strengthening (HES): A total of 2,722 caregivers (with 7,978 OVC under their care) and adolescent boys/girls were economically empowered through the provision of business start-up materials, while adolescent/older OVC were enabled to acquire skills. HES promotes asset building through a culture of savings and financial literacy and enables caregivers to become the first-line providers for their wards. Subsequent monitoring of empowered beneficiaries reported that than 80 percent are doing well and have expanded their businesses. A total of 233 VSLA groups have been established, with a membership of more than 5000 caregivers and more than N 6 million reported to be in savings and social funds. A total of 35 adolescent girl VSLAs have also been formed across the three project states.

The 424 adolescent girl groups established meet monthly. Some of the topics discussed include gender norms orientation (using their Gender Dialogue Module), adolescent reproductive health, livelihood skills, family life education, and HIV prevention, care, and treatment. LOPIN 1 has also established adolescent boy groups in more than 50 communities across the three states to address the increasing involvement of boys in communal clashes, sexual abuse, and other societal vices.

For interventions pertaining to gender within the context of HIV/AIDs, 100 percent of the target of 14,249 people was achieved (22,684) through a multi-pronged approach involving all of ARFH's service delivery platforms and the partnership with the State Universal Basic Education Board for the training of teachers and adolescent students.

STUDY DESIGN AND METHODS

Design Overview of the ARFH Survey

The survey design used a descriptive cross-sectional approach, assessing the well-being of vulnerable households, caregivers, and children enrolled in the ARFH project as one of the five OVC PEPFAR projects. We sought information about two beneficiary groups of the ARFH project:

1. Primary caregivers ages 18 years and above
2. Children ages 0–17 years (questions were directed to the primary caregiver)

We sampled beneficiaries from ARFH's 12 CBOs working in the scale-up LGAs spread across the three selected project states (Akwa-Ibom, Lagos, and Rivers States) with the expectation that the project will still be active in the selected sites by the time the follow-up survey will be conducted in 2018; therefore, we will have the ability to assess changes in indicators over time.

Outcome Measures

This survey obtained information on (1) socioeconomic characteristics of the household; (2) characteristics of all children in the household (caregiver's knowledge of child's HIV status, possession of a birth certificate for child, child's school attendance, progression in school, whether receiving project services); and (3) attitudes of the caregiver toward physical punishment and engaging in stimulating activities with children under age five. After the completion of each interview, all children ages 6-59 months from the sampled households were assessed for malnutrition using the MUAC measurement. See Table 2 for the details.

Table 2. PEPFAR MER Essential Survey Indicators for OVC Programs

Number	Outcome Indicator	Rationale for Inclusion	ARFH Program Component that Contributes to the Indicator
OVC_HIVST	Percent of children (aged 0–17 years) whose primary caregiver knows the child's HIV status	If a child's HIV status is unknown to her/his caregiver, the child will not have access to life-saving care, treatment and support interventions.	The ARFH OVC program is not authorized to directly test active beneficiaries for HIV. However, through assisted referrals by community volunteers (CVs), our enrollees are linked with HIV testing IPs (FHI 360, Society for Family Health, and Health Facilities for the uptake of HIV testing services. Reactive beneficiaries are enrolled on treatment and provided adherence support by the CVs. Following a shift from generalized testing to targeted testing, the focus now is on local epidemics, households of people living with HIV (PLHIV), victims of gender-based violence, teen pregnancies, children and adults attending tuberculosis clinics, households of long-distance drivers, and female

Number	Outcome Indicator	Rationale for Inclusion	ARFH Program Component that Contributes to the Indicator
			sex workers. Referral forms/test results are enclosed in the ARF project Household Folders.
OVC_NUT	Percent of children <5 years of age who are undernourished *For this indicator, the interviewer will obtain measurement of mid-upper arm circumference (MUAC) for children ages 6–59 months. It is the only indicator whose measurement requires direct interaction with a child.*	Nutrition is a critical factor in reducing infant mortality and builds a strong foundation for a child's health, growth, and development.	During enrolment and subsequent six-monthly conduct of the Child Status Index, the CVs use MUAC tapes and weighing scales provided by the project to each CV to monitor the growth of children <5 years of age. Caregivers of children whose measures were in the "red" range are referred to nutrition clinics. Nutrition education on how to use locally available foodstuffs to meet nutrition needs of the children (including practical sessions on food preparation) is usually provided during caregiver fora and home visits. ARFH also leverages support from pharmaceutical firms (Fidson, REAL) for the provision of food supplements and infant formula, though this is not universal given the large numbers of OVC being supported. PLHIV caregivers are usually provided with HES support, to enable them to meet the nutrition, health, and education needs of their children in a sustainable manner.
OVC_SICK	Percent of children (aged 0–17 years) too sick to participate in daily activities	PEPFAR OVC programs support critical linkages to health services and treatment, aiming to reduce the number of sick children and improve functional well-being.	ARFH provides age-appropriate services (deworming, immunization, treatment of minor illnesses, provision of insecticide-treated nets) through assisted referrals by the CVs. ARFH provides funds for emergency health response on a case-by-case basis to prevent avoidable child mortality or disability. During home visits, health and nutrition education and water, sanitation, and hygiene education are usually provided in addition to adherence support for children and caregivers on ART.
OVC_BCERT	Percent of children (aged 0–17 years) who have a birth certificate	Ensuring children access to basic legal rights such as birth certificates enables them to access	Birth registration and issuance of birth certificates form key components of our child protection domain. Through

Number	Outcome Indicator	Rationale for Inclusion	ARFH Program Component that Contributes to the Indicator
		other essential services and opportunities, including health, education, legal services, and legal employment when they grow older.	assisted referrals, caregivers are linked with the LGA offices of the National Population Commission (NPoPC). As a sequel to the advocacy visit to the state directors of NPoPC, the CVs have been trained on the completion of the basic data forms using information provided by the caregivers. The NPoPC is solely responsible for the issuance of birth certificates and determines the level of uptake by each IP. ARFH has recently started to provide logistical support for the issuance of birth certificates in order to increase the uptake. The caregivers retain original copies, while photocopies of birth certificates are filed in household folders.
OVC_SCHATT	Percent of children (aged 5–17 years) regularly attending school	In addition to being important in its own right, efforts to keep children in school have positive impacts on HIV prevention.	Children enrolled in schools are monitored to ensure regular school attendance and retention. The CVs conduct routine school visits and any child not marked present on the attendance register of the teacher is followed up through a home visit to meet with the caregiver. The School Attendance Guideline stipulates that when a child is absent from school twice in a month, s/he is now classified as having irregular school attendance. The community quality improvement team inaugurated by ARFH also monitors loitering and hawking by enrolled children. ARFH provides funds for emergency education response for the re-enrollment of out-of-school children, especially female children. Our Block Grant education support to schools enhances retention in school through the exemption of enrollees from direct payment of school fees and levies. It also encourages the transitioning of girls from primary to secondary schools, preparatory to becoming responsible adults.
OVC_PRGS	Percent of children (aged 5–17 years)	Studies in many countries have linked	Children enrolled in school are monitored to ensure that they

Number	Outcome Indicator	Rationale for Inclusion	ARFH Program Component that Contributes to the Indicator
	who progressed in school during the last year	higher education levels with increased AIDS awareness and knowledge, higher rates of contraceptive use, and greater communication regarding HIV prevention among partners.	attend school regularly. Extramural classes are organized by the CBOs to further equip the students academically. Teachers are sometimes approached for personalized attention for students that are weak or have missed some classes due to ill health. During home visits, the CVs also review the books of enrollees and provide lessons to fill any observed gaps. During the caregiver fora, participants are encouraged to provide after-school coaching for their children as part of our good parenting package. The emergency education support fund is also used to assist children who have lost their books, writing materials, etc. to fire, demolition, or natural disasters (e.g., floods), to cushion the effect and ensure that their education is not interrupted.
OVC_STIM	Percent of children <5 years of age who recently engaged in stimulating activities with any household member over 15 years of age	Early childhood cognitive, social, and physical stimulation is essential for promotion of long-term learning, growth, and health.	ARFH psychosocial support interventions require caregivers, teachers (Early Child Development Educators) and young adults to progressively interact with children <5 years old. The children are further stimulated to interact with peers and adults during the kids' club activities. ARFH has a standard of practice for the provision of age-appropriate services. Children who seem withdrawn and nonresponsive during home visits and psychosocial support activities are usually provided with personalized support, tailored to meet their identified needs, sometimes through the provision of toys, kids club materials, and learning aids, to elicit responses from the more reserved children.
OVC_CP	Percent of caregivers who agree that harsh physical punishment is an appropriate means of discipline or	Reducing harsh physical discipline, violence and abuse against children is a PEPFAR priority. Perceptions of physical discipline have been linked to actual use of	ARFH has a standard of practice on parenting, which is used in the mentoring of caregivers during meetings (caregiver fora). The 4Children (USAID IP) has built on this standard of practice to

Number	Outcome Indicator	Rationale for Inclusion	ARFH Program Component that Contributes to the Indicator
	control in the home or school	physical discipline against children.	provide a standardized parenting package. For better parenting, the caregivers are taught to provide quality support to their children by being good role models, are able to manage their emotions, and acquire skills for good communication and acceptable positive discipline. During home visits, CVs provide further counseling and interact with the children to ascertain any cases of harsh treatment. ARFH has a Child Safeguarding Policy (CSP), developed with support from Save the Children International. This document is used in the training of teachers and project implementing partners.
OVC_MONEY	Percent of households able to access money to pay for unexpected household expenses	The key goal of household economic strengthening programs is to improve household's resiliency to economic shocks, such as unexpected household expenses. Child well-being is assumed to be affected by the household's resiliency to economic shocks.	ARFH has a standard of practice on household economic strengthening interventions that is being implemented to meet the needs of children, especially in health, nutrition, and education, in a sustainable manner. One of these interventions is the VSLAs established in project communities with caregivers as members. The VSLA provides readily available funds to meet financial needs of members, promotes a culture of saving and provides financial literacy training for the caregivers. In addition, ARFH provides vocational skill education and start-up for older OVC and caregivers. Furthermore, caregivers are provided start-up materials for asset building following established processes, including training on financial literacy. Beneficiaries are also linked to microfinance banks for asset building and technical assistance for improved business performance and diversification.

Number	Outcome Indicator	Rationale for Inclusion	ARFH Program Component that Contributes to the Indicator
Nigeria-Specific Indicators			
OVC_NG1	Percent of households that have attained food security in the last 3 months	Food insecurity has a negative impact on the overall nutritional and health status of those infected and affected by HIV/AIDS, and PLHIV often express that food is the greatest need for themselves and their families. According to USAID multisectoral nutrition strategy 2014–2025, there are intrinsic linkages between HIV, food insecurity, and malnutrition.	ARFH has a nutrition standard of practice used in the training of caregivers to promote food sufficiency in vulnerable households using locally available foodstuffs. In terms of food security, caregivers in farming areas are provided with pro-vitamin A cassava stems, leveraged from government and agricultural establishments. Caregivers also receive trainings on cassava farming, processing, and marketing through linkages for an improved value chain. Caregivers including PLHIV are empowered to build their family assets to enhance food security and sufficiency in vulnerable households through HES, skills acquisition, and the setting up of VSLAs. Food is also leveraged, though on a small scale, from public–private partnerships. The LOPIN project does not have a provision for food distribution in accordance with the paradigm shift in OVC programming.
OVC_NG2	Proportion of households (with children and caregivers) with adequate shelter	An adequate dwelling unit provides protection for orphans and vulnerable children against the weather and gives them a sense of membership among family. Children and young people should have a safe and conducive shelter to live in.	OVC IPs are not required to directly provide dwelling places, except through leveraged support from public–private partnerships and through economic empowerment interventions. ARFH provides shelter-related care, such as clothes and assisted rent payments for PLHIV through support leveraged from FBOs and individuals. The community quality improvement teams also assist identified households to effect minor repairs (e.g., leaky roof, cracked walls, etc.) with privately sourced support. The emergency fund to a limited extent is available for very needy cases.
OVC_NG3	Percent of children having access to basic healthcare services	Access to basic health care service is important for children, especially vulnerable children. The human right to health	ARFH provides age-appropriate health support through assisted referrals for immunization, deworming, treatment of minor illnesses,

Number	Outcome Indicator	Rationale for Inclusion	ARFH Program Component that Contributes to the Indicator
		means that everyone has the right to the highest attainable standard of physical and mental health, which includes access to all medical services.	malaria prevention, sanitation, hygiene, reproductive health, health education, and HIV testing, treatment, and adherence support. Caregiver fora, home visits, kids' club, and adolescent girls/boys' meetings are platforms for health education. ARFH provides emergency health support funds for quick uptake of services by enrolled children. The CVs provide the households with lists of services available in the nearest health facility. ARFH provides support for gender-based violence victims to readily access post-exposure prophylaxis.
OVC_NG4	Percent of children who went to bed without food in the last 4 weeks	It is important for children, especially vulnerable children, to have food.	ARFH provides nutrition education to OVCs. The project has no provision to provide food for OVCs. However, although the HES and VSLA interventions are ultimately expected to assist households to be food sufficient, their coverage is limited, and funding is not likely to be available for all who might need the intervention. To a limited extent, the project leverages food items from FBOs and market women for distribution to vulnerable households.

Survey Instruments

The survey used the *MER Questionnaire* developed under the MEASURE Evaluation project (Chapman, Foreit, Hickmann, & Parker, 2013). The questionnaire includes three key sections: caregiver, children ages 0–4, and children ages 5–17 years. All survey questions (except the MUAC measurement) were directed to the caregivers, who were asked to respond to questions about themselves, the household, and the children in the household under their care. While most of the questions were asked about all children, questions related to nutrition and stimulating activities were asked about children ages 0–4 years. Questions related to education were asked about children ages 5–17 years. The questionnaire and the consent forms were created in English and translated into Pidgin and Yoruba. While English was used to administer interviews in all of the three states, Yoruba was also used in Lagos State and Pidgin in both Akwa-Ibom and Rivers States. Translations aimed to maintain the core meaning of the questions rather than translate the question verbatim. The survey tools (questionnaire and consent forms) were pretested for two days (November4–5) in Lagos with 10 team supervisors to check the translations. In addition, the English and the translated versions of the questionnaires were also pretested for accuracy, acceptability,

and feasibility. As a result of pretesting, some questions were fine-tuned for clarity and accuracy (see example below).

Before pretest:

3a	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 educational support, food, and nutritional support, healthcare, shelter, and care, etc.?	Yes 1 No 2

Revision after pretest:

3a	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 from [insert name **of OVC CBO],** or have you ever participated in any activities organized by [insert name of **OVC CBO]** such as: **Educational Support** **1) Yes** **2) No** **Food and Nutritional Support** **1) Yes** **2) No** **Healthcare** **1) Yes** **2) No** **Shelter and care** **1) Yes** **2) No**	

Other revisions included addition of some sociodemographic variables and a question on where the caregiver sought treatment the last time child was sick (see Appendix A, Q9B):

A second pretest was done in the field as part of the data collectors training in Unguwar Koro of Dutsen Alhaji ward of the Bwari Area Council in Abuja on Thursday, November 17, 2016. The aim was to test the procedures and competence of field teams in collecting the data as well as in taking the MUAC measurements. This also included testing for comprehension of the instrument. This second pretest comprised 29 interviews among beneficiary households that had not been selected as part of the survey sample. Participants in the pretest were told that they were participating in a pretest. The data collected from these households were not included as part of the survey. After the pretest, updates to the survey tools were made, particularly on the anthropometric MUAC measure to accommodate options for cases where OVC were not available or caregivers refused for a child to be measured. Also, precautionary steps were discussed during a meeting held in collaboration with CRERD/AHEAD staff, MEASURE Evaluation, and the IPs. The meeting participants decided that the field staff should interview caregivers of such children but not finalize the questionnaire, pending availability of eligible children for measurement. Interviewers were asked to inquire from the caregivers as to when the children would be at home to make callback visits to take the MUAC readings. While we slightly adjusted the wording of questions to align with Nigerian discourse and enhance clarity, recall periods were not changed. The interviews lasted an average of 45 minutes, with a minimum of 20 minutes and a maximum of 60 minutes depending on the number of 0- to 17-year-olds in the households. Feedback and issues emerging from the pretesting exercise, including any proposed changes to the questionnaire and translation issues, were discussed and addressed during the pretest feedback session.

Sampling Frame

The survey sampling frame comprised all households located in 57 randomly selected communities spread across 12 scale-up LGAs in Akwa-Ibom, Lagos, and Rivers States that were registered as beneficiaries of the ARFH project. The 12 scale-up LGAs cover 227 communities served by the ARFH project. The initial assessment through community trace and verify found that beneficiary databases were generally not updated for both paper- and electronically-based systems. Some beneficiaries who had either relocated or dropped off and were lost to follow-up were still found in the IP's database of active beneficiaries. Only 84 percent of active beneficiary households were located during the community trace and verify activity.

Based on the large number of discrepancies found in the initial assessment of the beneficiary database maintained by ARFH, the survey team decided to reconstruct the household beneficiary listing from records maintained by the local CBOs rather than from the ARFH beneficiary database. The survey team worked directly with the local CBO IPs and their community volunteers in the 57 randomly selected communities (clusters) to construct an up-to-date list of households of beneficiaries residing in the communities within the 12 scale-up LGAs. The updated list was constructed from community volunteers' notebooks or sheets of paper printed from the CBO's office. Where a selected community had several community volunteers, we harmonized the lists of all volunteers to ensure that no beneficiary household was omitted or duplicated. Survey staff then verified this list by going through each household listed with volunteers to confirm the list or make changes. Once confirmed, a household was then entered in an updated sampling frame listing. The updated sampling frame included a list of all 227 communities and a total of 6,423 households from 57 communities.

Selection of Households

ARFH has 12 CBOs working in 227 communities that are spread across the 12 scale-up LGAs in Akwa-Ibom, Lagos, and Rivers States. Only 57 of these communities were randomly selected and used for this survey. Eleven households were randomly selected from each of the 57 communities (clusters), giving a total sample size of 627. This sample size was chosen based on calculations assuming 80 percent power to detect a 10 percent change in indicator prevalence from survey round one to survey round two (where prevalence in round one is assumed to be near 50%) with 95 percent confidence. (See sample size calculation formula in Appendix D.)

We used the assistance of ARFH's community volunteers who worked in the 57 communities to systematically verify the presence of every selected caregiver. This assistance meant that the survey was conducted on a sampling frame that was up-to-date. The verification exercise revealed a wide variation in the number of verified households per community. The average number of verified households in a community was 221; a minimum was 23 and a maximum number was 409. After the systematic verification of households/caregivers, the data auditor and the supervisors then visited each selected community and randomly selected 11 households from each community sampling frame that contained a list of verified households, using the random number generator application in the smartphone. The supervisor and the data auditor were jointly responsible for making and documenting the selections, which were in turn verified by the quality assurance team. At the community, the probability of selecting a beneficiary household was 1/the number of verified beneficiary households. The response rate for households/caregiver was 96.7 percent (Table 3).

Table 3. Summary of sampling information for ARFH

Total number of communities (clusters) in scale-up areas	227
Number of communities (clusters) randomly selected	57
Total number of households verified and listed at the time of the survey from selected communities (clusters)	6423
Target number of households planned to be randomly selected per community (cluster)	11
Number of households randomly selected from the list of actually verified households in the selected communities (clusters)	627
Total number of caregivers not available after 3 attempts	8
Total number of caregivers who refused an interview	7
Number of households with no children under age 18 years	6
Number of households with completed interviews in the cleaned dataset	606
Survey household/caregiver response rate	96.7%

Fieldwork and Quality Assurance Procedures

The training for the fieldwork was conducted in Lagos November 2–5, 2016. The data for ARFH were collected by a team from the staff trained in Lagos. The fieldwork was implemented from November 28–December 20, 2016 in all of the 12 LGAs where the ARFH project is being implemented (five LGAs in Akwa-Ibom, four in Lagos, and three in Rivers States). Because of the time lapse between training and fieldwork in Lagos, a one-day refresher training was conducted among fieldworkers in the southern states. For this survey, 20 interviewers, three supervisors, one data auditor, and one quality assurance officer participated in the fieldwork exercise. Each supervisor managed a team of about six to seven data collectors and was assisted by the data auditor.

Data were collected using Android phones pre-installed with the SurveyCTO application. The smartphones were preprogrammed with questionnaires that were linked to a cloud server through a wireless connection. Data were transmitted to the cloud server based in CRERD/AHEAD headquarters daily. The smartphones were preprogrammed to enforce completeness of the data, correct skips of questions, logical and consistent entries of data elements, and automatic checking of the total number of children ages 0–17 in the households. Data were uploaded by the field team on a daily basis to the web-based database.

Supervisors and data auditors went to the field to initiate fieldwork. At each selected community, they met with the community volunteer and reviewed the list of selected households in the community to verify which beneficiary households were present for interview that day. From the list of selected households, the community volunteers assisted in identifying the household, after which they had to step back and allow the interviewer to conduct the interview in private with the caregiver. Supervisors and data auditors checked the data quality. While the supervisors check the work of the data collectors in the field to ensure the right caregivers have been interviewed, the role of the data auditor was critical for the quality of downloaded data. Each data auditor downloaded the survey data from our cloud server on a daily basis for verification and cleaning. The quality assurance officers were in the field to ensure strict compliance to the research protocol. The survey protocol and guidelines were strictly followed.

Interview time was checked and interviews that took place in less than 20 minutes were flagged for verification. Individual data collectors' work was also checked for typing errors and, if possible, checked

for flipping of age numbers, e.g., entering 25 as 52. Where errors were identified, data collectors were called by phone from the office to either correct on the spot or return to the household to redo an interview if necessary. At the end of the survey, the final dataset was exported in CSV format for analysis.

Analysis Methods

All the Essential Survey Indicator (ESI) outcome measures are expressed as proportions of appropriate denominators and disaggregated by sex and age in accord with PEPFAR OVC ESI reporting requirements. We used Chi-square statistics to test for independence between outcome indicators and beneficiaries' gender and t-statistics for continuous variables like age. Sample weights were used in the analysis to account for differential probabilities of selection into sample, since the sampling did not use PPS procedures that could have resulted in self-weighting data. All estimates were calculated unweighted and weighted. Ninety-five percent confidence intervals were calculated on the weighted data.

Data were downloaded in a CSV file format from the server database to CRERD/AHEAD headquarters desktop computers. Data were analyzed using STATA V14.0. The data elements were realigned and then reshaped into an easy-to-analyze format. For example, each caregiver had all the data from all the children under her/his care linked to his/her data. Variable names for the data about the children were renamed for uniformity across the different age categories (0–4, 5–9, 10–17).

RESULTS

Basis Characteristics of the Study Population

Of the 627 randomly selected caregivers in the 12 LGAs invited to participate in this survey, 606 caregivers responded, yielding a 96.7 percent response rate. The mean age was 38.7 years (SD=10.9, minimum=18, maximum=80) with about 62 percent of caregivers ages 31–50 years. The survey sample consisted of 143 (24%) males and 463 females (92%). There was no significant difference in the mean age for males (mean=35.9, SD=7.3) and females (mean=33.7, SD=3.2); t(604)=-0.3, p=0.759. These results suggest that male caregivers were not significantly older than female caregivers. Almost half of sampled caregivers (43%) had at least a secondary education while about 11 percent had no education and 46 percent had primary education.

Table 4. Demographic characteristics of primary caregivers in the survey population

Variable	All Primary Caregivers		
Mean Age (SD)	38.7 years (±10.9)		
	Unweighted		**Weighted**
	n	**(%)**	**%**
Age Group[1](N=606)			
18–30	148	24.5	26.3
31–50	373	61.9	60.6
51+	82	13.6	13.2
Sex (N=606)			
Female	463	76.4	77.1
Male	143	23.6	22.9
Education (N=606)			
None/Islamiyah	89	14.7	11.3
Primary	271	44.7	45.7
Secondary or higher	246	40.6	43.0

[1]Age is missing for 3 records; therefore, denominator used to calculate proportions for age group is 603.

A total 1,960 children were listed among the 606 households, which translates to an average of three children per household/caregiver within the project study areas. The caregivers were asked about all the 1,735 children ages 0–17 during the survey. The sex and age distribution of these children is given in Table 5. Overall, about 3 percent of the children were below the age of 1 year (0–5 months and 6–11 months), while about 53 percent were in the age group of 1–9 years and 43 percent above 10 years. Almost an equal number of females (993) and males (967) were cared for by the 606 caregivers.

Table 5. Sex and age of children ages 0–17 years under the care of primary caregivers in the survey population

Variable	All Children (N=1960)		Female Children (N=993)		Male Children (N=967)	
Mean Age (SD)	8.6 years (±4.7)		8.6 years (± 4.7)		8.4 years (±4.6)	
Age Group	**Unweighted (n) %**	**Weighted %**	**Unweighted (n) %**	**Weighted %**	**Unweighted (n) %**	**Weighted %**
0–5 months	(30) 1.5	2.0	(15) 1.5	2.0	(15) 1.6	1.9
6–11 months	(26) 1.3	1.3	(14) 1.4	1.2	(12) 1.2	1.3
1–4 years	(390) 19.9	20.5	(196) 19.7	20.1	(194) 20.1	20.2
0–4 years	(446) 22.7	23.8	(225) 22.6	23.3	(221) 22.9	23.4
5–9 years	(644) 32.9	32.8	(325) 32.7	31.4	(319) 33.0	34.3
10–14 years	(604) 30.8	30.8	(301) 30.3	31.1	(303) 31.3	30.6
15–17 years	(266) 13.6	12.6	(142) 14.3	13.6	(124) 12.8	11.7

Participation and Services Received from ARFH

In the MER survey, each selected beneficiary household had one caregiver as the respondent. Caregivers were asked about services their households had ever received from ARFH. Specifically, they were asked about educational support, food and nutritional support, shelter, and care, and household economic strengthening. Table 6 shows that only one in three (32%) caregivers reported that their households had received services from the ARFH project. It is important to note that the study sites selected for the MER survey were located in the scale-up LGAs because they will still be in the program by 2018, when the MER surveys are expected to be conducted again.[1] However, among those who have received any service, food and nutritional support was the most prevalent form of support reported (64% of households supported). About half (55%) of the caregivers reported that one or more children under their care had received some form of support for her/his education, while about half of the caregivers had received support in the areas of shelter and care and half in household economic strengthening (Table 7).

Table 6. Percentage of caregivers according to whether their household has ever received services from ARFH

All Caregivers (N=606)				
Variable	**Unweighted**	**Weighted**	**95% Confidence Interval**	
	(n) %	**%**	**Lower Limit**	**Upper Limit**
Ever received service/support?				
Never received any support	(368) 60.7	67.7	58.3	75.8
Received at least one support	(238) 39.3	32.3	24.2	41.7

[1] It is possible that some CBOs had not yet started or fully rolled out their support projects in the scale-up LGAs at the time of the survey.

Table 7. Percentage of caregivers whose household has benefitted from ARFH's services by type of service

All Caregivers (N=238)				
Variable	**Unweighted**	**Weighted**	**95% Confidence Interval**	
	(n) %	**%**	**Lower Limit**	**Upper Limit**
Services of CBO[1] received				
Educational support	(168) 70.6	55.2	40.8	68.8
Food and nutritional support	(155) 63.1	64.3	49.4	76.9
Shelter and care	(138) 58.0	53.6	41.2	65.5
Household economic strengthening	(122) 51.3	52.0	37.5	66.1

[1]Multiple responses allowed

Table 8 presents the percentage distribution of caregivers who indicated how many types of services their households had ever received from ARFH. Among those whose households had received at least one type of service, 42 percent had received one service, 21 percent had received two, 8 percent had received three, and 30 percent had received all the four highlighted types of services. The average number of services received was two. The majority of those who were enrolled had been receiving the services for less than one year, with about one-quarter reporting that they had been receiving the service for one to two years.

Table 8. Percentage of caregivers who have received a certain number of activities

All Caregivers (N=238)				
Variable	**Unweighted**	**Weighted**	**Confidence Interval**	
	n (%)	**(%)**	**Lower Limit**	**Upper Limit**
Services of CBO				
1 service	(79) 33.2	42.0	27.7	57.7
2 services	(54) 22.7	20.7	14.6	28.6
3 services	(24) 10.1	7.6	4.0	14.0
4 services	(81) 34.0	29.7	17.9	45.1
Mean Number of Services (SD)	2.45 (1.26)	2.25 (1.27)		
Time since households or caregiver personally started receiving services from CBO (among those who reported having received at least one type service)				
< 1 year	(164) 68.9	64.2	50.6	75.8
1–2 years	(67) 28.2	31.8	21.5	44.3
> 2 years	(7) 2.9	4.0	1.8	8.5

Estimates of Outcome Indicators

The outcome measures presented in this section are based on reported responses from the caregivers when asked a series of questions (see questionnaire in Appendix A). A caregiver was then asked about all of his/her children ages 0–17 under her/his care. Based on this information, nine EIS and four Nigeria-specific measures are presented disaggregated by age and sex in accordance with PEPFAR reporting guidance.

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

Caregivers were asked about every child under their care if the child had ever been tested for HIV, if the child had been tested in the past six months, and if the caregiver knew the results of the HIV test (Table 9). Caregivers reported knowledge of HIV status of only 43 percent of the 1,960 children under their care. Knowledge of HIV status was slightly higher for female children than male children (43% versus 42%). A chi-square test of independence was performed to examine the relation between a caregiver knowing the HIV status of the child and sex of the child. The relation between these variables was not significant: $X^2_{(1, N=1960)} = 0.11, p = 0.741$). Table 9 indicates that caregivers' knowledge about male children's HIV status increased with age and was highest among the 15- to 17-year-olds than among the lower age groups. The pattern among female children was similar: caregivers' knowledge of the HIV status of the female children in their care increased with the age of those children.

Table 9. Core indicator: Percent of children (aged 0–17 years) whose primary caregiver knows the child's HIV status

	All Children				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=1,960)					
0–4 year	446	(221) 49.6	39.8	31.3	48.8
5–9 years	644	(323) 50.2	41.1	32.1	50.7
10–14 years	604	(305) 50.5	42.5	33.9	51.6
15–17 year	266	(148) 55.6	52.8	38.9	66.2
Sex					
Male	967	(474) 49.0	42.3	34.1	51.0
Female	993	(523) 52.7	43.1	34.1	52.5
All Children	1960	(997) 50.9	42.7	34.3	51.4
	Male Children				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=967)					
0–4 years	221	(100) 45.3	38.3	28.4	49.3
5–9 years	319	(155) 48.6	41.4	32.4	51.0
10–14 years	303	(151) 49.8	41.5	31.7	52.0
15–17 years	124	(68) 54.8	55.3	39.4	70.1
All Male Children	**967**	**(474) 49.0**	**42.3**	**34.1**	**51.0**
	Female Children				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=993)					
0–4 years	225	(121) 53.8	41.2	31.8	51.3
5–9 years	325	(168) 51.7	40.8	29.5	53.2
10–14 years	301	(154) 51.2	43.5	33.8	53.8
15–17 years	142	(80) 56.3	50.5	33.9	67.0
All Female Children	**993**	**(523) 52.7**	**43.1**	**34.1**	**52.5**

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

According to the MER OVC guidance, a child was considered undernourished if their left MUAC measures below 12.5 cm. Table 10 presents the distribution of children below five years of age (6–59 months of age) who are undernourished. Overall, 4 percent of 415 children below the age of five years were undernourished. Undernourishment was more likely to happen among 6- to 11-month-old children (11%) than among 12- to 59-month-old children (3%) ($X^2_{(1, N=415)} = 3.68$, $p > 0.05$). About the same proportion of both male children and female children were likely to be undernourished (4%). Fisher's exact test shows that the difference was not significant: p=0.240. Because of the small sample sizes, the figures should be interpreted with caution.

Table 10. Core indicator: Percent of children (aged 6–59 months) who are undernourished

	All Children				
	Unweighted		Weighted	95 % Confidence Interval	
Variable	N	(n) %	%	Lower Limit	Upper Limit
Age Group(N=415)					
6–11 months	26	(2) 7.7	11.1	1.8	46.3
12–59 months	389	(13) 3.3	3.4	1.2	9.4
Sex					
Male	206	(8) 3.9	4.2	1.3	12.8
Female	209	(7) 3.4	3.5	1.4	8.6
All Children < 5 Years	**415**	**(15) 3.6**	**3.9**	**1.4**	**10.1**
	Male Children				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=206)					
6–11 months	12	(2) 16.7	20.7	3.2	67.2
12–59 months	194	(6) 3.1	3.1	0.6	13.2
All Male Children < 5 Years	**206**	**(8) 3.9**	**4.2**	**1.3**	**12.9**
	Female Children				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=209)					
6–11 months	14	(0) 0.0	0.0	0.0	0.0
12–59 months	195	(7) 3.6	3.7	1.5	9.1
All Female Children < 5 Years	209	**(7) 3.4**	**3.5**	**1.4**	**8.6**

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

Children who are unable to participate in daily activities may need immediate medical care and could be in an especially vulnerable state. For each child age 0–17 years included in this survey, their primary caregiver was asked if the child had been too sick to participate in daily activities in the two weeks prior to the survey. Caregivers reported that 45 percent of children had been too sick to participate in daily activities at some point in the two weeks prior to the survey (Table 11). Sickness within the past two weeks was more prevalent among children 0–4 years old (49%) than among 5- to 17-year-olds ($X^2_{(1, N=1960)} = 1.51, p > 0.05$). About 43 percent of male children and about 47 percent of female children were reported to have been too sick to participate in daily activities. There was no statistical difference between male and female children in terms of proportions of children who were too sick to participate in daily activities: $X^2_{(1, N=1960)} = 2.71, P=0.328$.

Table 11. Core indicator: Percent of children (aged 0–17 years) too sick to participate in daily activities

	All Children				
	Unweighted		Weighted	95% Confidence Interval	
Variable	**N**	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group (N=1,960)					
0–4 years	446	(230) 51.6	48.7	42.2	55.3
5–9 years	644	(294) 45.7	40.4	34.8	46.3
10–14 years	604	(263) 43.5	44.6	38.3	51.1
15–17 years	266	(113) 42.5	47.5	36.2	59.0
Sex of child					
Male	967	(442) 45.7	42.8	37.2	48.5
Female	993	(458) 46.1	46.5	40.2	52.9
All Children	**1,960**	**(900) 45.90**	**44.6**	**39.9**	**49.3**
	Male Children				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group (N=967)					
0–4 years	221	(114) 51.6	44.3	33.2	56.1
5–9 years	319	(149) 46.7	39.3	31.5	47.6
10–14 years	303	(128) 42.2	43.8	35.2	52.8
15–17 years	124	(51) 41.1	47.2	35.5	59.2
All Male Children	**967**	**(442) 45.7**	**42.8**	**37.2**	**48.5**
	Female Children				
	Unweighted		**Weighted**	**95 % Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group (N=993)					
0–4 years	225	(116) 51.6	53.2	44.6	61.5
5–9 years	325	(145) 44.6	41.8	34.7	49.2
10–14 years	301	(135) 44.9	45.5	38.7	52.4
15–17 years	142	(62) 43.7	47.7	32.9	62.8
All Female Children	993	**(458) 46.1**	**46.5**	**40.2**	**52.9**

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

A key PEPFAR indicator for OVC programming is the number of children in possession of a birth certificate. Overall, about 56 percent of all 1,960 children were reported to have been issued a birth certificate, with roughly the same proportion across age group and sex of child (see Appendix B, Table B3). However, when caregivers were asked to show the birth certificates, they either could not produce them or presented the data collectors with documents other than actual birth certificates for more than half of the children (41%) initially reported to have a birth certificate. (See Appendix B, Table B2).

Table 12 below presents the distribution of children whose birth certificates were verified to exist by the interviewer. Overall, only about 15 percent of all 1,960 children were reported to have been issued a birth certificate that was viewed by the data collector. About less than 18 percent of children across all age groups had birth certificates shown to survey staff. Seventeen percent of male children and 14 percent of female children had birth certificates. Regarding specific age groups, ownership of a birth certificate among male children was either equal to or higher than female children, except for 10- to 14-year-olds.

Table 12. Core indicator: Percent of children (aged 0–17 years) who have a birth certificate that was verified

	All Children (N=1,960)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	446	(79) 17.7	15.3	10.6	21.7
5–9 years	644	(118) 18.3	14.9	9.9	21.8
10–14 years	604	(117) 19.4	16.5	11.3	23.5
15–17 years	266	(47) 17.7	14.2	9.5	20.6
Sex of Child					
Male	967	(182) 18.8	16.5	11.1	23.7
Female	993	(179) 18.0	14.3	10.0	20.1
All Children	**1960**	**(361) 18.4**	**15.4**	**11.1**	**21.0**
	Male Children (N=967)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	221	(36) 16.3	14.8	9.1	23.2
5–9 years	319	(66) 20.7	17.8	10.9	27.7
10–14 years	303	(53) 17.5	15.6	9.9	23.7
15–17 years	124	(27) 21.8	18.1	11.1	28.0
All Male Children	**967**	**(182) 18.8**	**16.5**	**11.1**	**23.7**
	Female Children (N=993)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	225	(43) 19.1	15.9	10.2	23.9
5–9 years	325	(52) 16.0	11.6	7.0	18.5
10–14 years	301	(64) 21.3	17.4	11.6	25.4
15–17 years	142	(20) 14.1	10.7	5.5	20.0
All Female Children	**993**	**(179) 18.0**	**14.3**	**10.0**	**20.1**

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

In Nigeria, children usually begin grade school at age five years. In this survey, primary caregivers were asked two questions regarding school attendance of the children ages 5–17 years under their care, in order to generate this indicator. First, caregivers were asked if the child was currently enrolled in school. Secondly, for those children who were enrolled in school, caregivers were asked if there was any day in the past school week that a child had missed school for any reason. Table 13 presents these results. Overall, 51 percent of 1,314 children were regularly attending school at the time of the survey. Children ages 10–14 years were the most likely to be regularly attending school (53%). Children ages 5–9 years were reported to be regularly attending school (50%) slightly more often than the 15- to 17-year-olds, whose proportion of regular school attendance was the lowest (48%). Almost equal proportions of male children (52%) and female children (50%) were regularly attending school at the time of the survey.

Table 13. Core indicator: Percent of children (aged 5–17 years) regularly attending school

	All Children Ages 5–17 Years Enrolled				
	Unweighted		Weighted	95% Confidence Interval	
Variable	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=1,314)					
5–9 years	581	(274) 47.2	50.2	39.7	60.7
10–14 years	541	(268) 49.5	53.2	43.2	62.9
15–17 years	192	(91) 47.4	47.5	34.9	60.4
Sex of Child					
Male	645	(305) 47.3	52.0	43.0	60.9
Female	669	(328) 49.0	50.2	39.1	61.2
All Children 5–17 Years	1,314	**(633) 48.2**	**51.1**	**41.6**	**60.6**
	Male Children				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=645)					
5–9 years	286	(133) 46.5	50.9	39.2	62.5
10–14 years	273	(131) 48.0	53.2	44.2	62.1
15–17 years	86	(41) 47.7	52.2	39.8	64.4
All Male 5–17 Years	645	**(305) 47.3**	**52.0**	**43.0**	**60.89**
	Female Children				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=669)					
5–9 years	295	(141) 47.8	49.5	38.9	60.1
10–14 years	268	(137) 51.1	53.2	40.4	65.5
15–17 years	106	(50) 47.2	44.2	28.3	61.4
All Female 5–17 Years	669	**(328) 49.0**	**50.1**	**39.1**	**61.2**

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

This is a composite indicator, measured by a series of four related questions related to school enrollment and grade in school at the time of the survey. These questions are school enrollment and the current grade at the time of the survey, and school enrollment and the grade the child was in during the previous school year. The indicator requires looking at all children ages 5–17 years who report being in a more advanced grade level at the time of the survey compared to the previous school year, with the denominator being 5- to 17-year-old children surveyed who report being enrolled in school during the academic year previous to the current/most recent academic year. Table 14 presents the results of this composite indicator, disaggregated by age and sex of the child.

Overall, of the 1,316 children enrolled the previous year, 92 percent progressed to a higher grade, with the highest proportion of progression reported for the 15- to 17-year-olds (99%) **(p<0.01**). Across gender, 88 percent of the 636 male children and 95 percent of the 680 female children progressed to the next grade during the last academic year, and the difference was statistically significant **(p=0.004).** Further

disaggregating by gender, result shows a relatively lower progression rate among the 5- to 9-year-olds, where 21 percent of male children and 11 percent of female children did not progress to a higher grade.

Table 14. Core indicator: Percent of children (aged 5–17 years) who progressed in school during the last year[1]

	All Children Ages 5–17 Years (N=1,316)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	**N**	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
5–9 years	542	(459) 84.7	83.7	78.3	88.0
10–14 years	547	(529) 96.7	96.6	94.3	98.0
15–17 years	227	(221) 97.4	99.3	98.2	99.7
Sex of Child					
Male	636	(573) 90.1	88.3	89.5	93.3
Female	680	(636) 93.5	94.8	91.5	96.9
All Children 5–17 Years	1316	**(1209) 91.9**	**91.6**	**89.5**	**93.3**
	Male Children Ages 5–17 Years (N=636)				
	Unweighted		**Weighted**	**95 % Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
5-9 years	266	(218) 82.0	79.4	72.5	84.9
10-14 years	265	(253) 95.7	95.0	90.4	97.5
15-17 years	105	(102) 97.1	99.2	97.1	99.8
All Male Children 5–17 Years	636	**(573) 90.1**	**88.3**	**85.1**	**91.0**
	Female Children Ages 5–17 Years (N=680)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
5–9 years	276	(241) 87.3	89.8	79.9	94.0
10–14 years	282	(276) 97.9	98.05	93.4	99.5
15–17 years	122	(119) 97.5	99.4	97.8	99.8
All Female Children 5–17 Years	680	**(636) 93.3**	**94.8**	**91.5**	**96.9**

[1]To be eligible for this indicator, the child must have been enrolled in school during the previous school year. Therefore, the denominator is children enrolled in the previous school year.

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

This is a direct outcome indicator of whether caregivers and other adults are engaging children at a young age. The survey asked if anyone age 15 and above in the household had read a book or looked at pictures with the OVC, told stories, sang to, played with, counted, or drawn with the child.

Tables 15 through 17 present the distribution of children under five years of age by experience of stimulating activities with any household member over 15 years of age. According to Table 15, among the 446 children younger than five years, 72 percent experienced stimulating activities with a book (reading or looking at pictures), and another 69 percent were told stories. The most common stimulating activity for children was being played with (93%), followed by being sung to (91%). Overall, female children were more likely than male children to have been engaged in any stimulating activities.

Table 15. Core indicator: Percent of children <5 years of age who engaged in stimulating activities with any household member over 15 years of age during the last 3 days

Variable	All Children < 5 Years (N=446)			
	Unweighted	Weighted	95% Confidence Interval	
	(n) %	%	Lower Limit	Upper Limit
Read books or looked at picture	(314) 70.4	71.5	63.2	78.5
Told stories	(304) 68.2	68.7	60.8	75.7
Sang songs or lullabies	(407) 91.3	91.0	80.7	96.1
Played	(416) 93.3	92.9	81.1	97.5
Counted or drew	(317) 71.1	69.2	61.3	76.2
Male Children <5 Years (N=221)				
	Unweighted	Weighted	95% Confidence Interval	
	(n) %	%	Lower Limit	Upper Limit
Read books or looked at picture	(153) 69.2	70.1	57.0	80.6
Told stories	(148) 67.0	68.8	56.5	78.9
Sang songs or lullabies	(197) 89.1	89.3	73.5	96.1
Played	(202) 91.4	91.4	73.5	97.6
Counted or drew	(153) 69.2	66.2	53.4	78.1
Female Children <5 Years (N=225)				
	Unweighted	Weighted	95% Confidence Interval	
	(n) %	%	Lower Limit	Upper Limit
Read books or looked at picture	(161) 71.6	72.9	64.22	80.1
Told stories	(156) 69.3	68.7	60.4	75.9
Sang songs or lullabies	(210) 93.3	92.8	85.9	96.5
Played	(214) 95.1	94.4	87.13	97.7
Counted or drew	(164) 72.9	71.5	64.0	78.1

[1]Multiple activities allowed per child

Table 16 shows the distribution of children younger than five years of age by the number of types of stimulating activities in which the children ages 0–4 years were engaged. Overall, over half of the children had been engaged in all five stimulating activities, which translates to 59 percent of female children and 57 percent of male children. About 6 percent of male children compared to only 2 percent of female children were not engaged in any stimulating activities.

Table 16. Core indicator: Percent of children <5 years of age who engaged in a certain number of stimulating activities with any household member over 15 years of age during the last 3 days

Variable	All Children < 5 Years (N=446)		Female Children < 5 Years (N=225)		Male Children < 5 Years (N=221)	
Number of Activities	Unweighted (n) %	Weighted %	Unweighted (n) %	Weighted %	Unweighted (n) %	Weighted %
No activities	(20) 4.5	4.1	(5) 2.2	2.3	(15) 6.8	5.6
1 activity	(6) 1.4	1.9	(3) 1.3	1.9	(3) 1.4	1.9
2 activities	(69) 15.5	16.9	(37) 16.4	17.8	(32) 14.5	16.0
3 activities	(47) 10.5	9.1	(24) 10.7	8.5	(23) 10.4	9.8
4 activities	(47) 10.5	9.6	(24) 10.7	10.0	(23) 10.4	9.1
5 activities	(257) 57.6	58.4	(132) 58.7	59.4	(125) 56.6	57.4

The proportion of children who engaged in at least one stimulating activity is presented in Table 17. Overall, among the 446 children under age five, 96 percent were reported to have been engaged in at least one stimulating activity. Even though high proportions of children in various age groups were engaged in at least one stimulating activity, the proportion was relatively smallest among the 12- to 23-month-olds. Across gender, 94 percent of male children below the age of five years and 98 percent of their female counterparts were reported to have been engaged in at least one stimulating activity.

Table 17. Core indicator: Percent of children <5 years of age who engaged in at least one stimulating activity with any household member over 15 years of age during the last 3 days

	All Children < 5 Years (N=446)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–11 months	56	(53) 94.6	96.1	83.0	99.2
12–23 months	73	(71) 97.3	94.2	70.8	99.1
2–4 years	317	(302) 95.3	96.3	90.9	98.5
Sex of Child					
Male	221	(206) 93.2	94.2	81.9	98.3
Female	225	(220) 97.8	97.7	89.7	99.5
All Children < 5 Years	446	**(426) 95.5**	**95.9**	**89.0**	**98.6**
	Male Children < 5 Years (N=221)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–11 months	27	(24) 88.9	92.3	72.4	98.2
12–23 months	46	(44) 95.7	91.0	57.1	98.7
2–4 years	148	(138) 93.2	95.5	85.7	98.7
All Male Children < 5 Years	221	**(206) 93.2**	**94.2**	**81.9**	**98.3**
	Female Children < 5 Years (N=225)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–11 months	29	(29) 100.0	100.0	-	-
12–23 months	27	(27) 100.0	100.0	-	-
2–4 years	169	(164) 97.0	97.0	86.9	99.4
All Female Children < 5 Years	225	**(220) 97.8**	**97.7**	**89.7**	**99.5**

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

The indicator "percent of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control in the home or school" was derived from two variables: whether harsh physical punishment is considered an appropriate means of discipline or control in the *home* or at *school*. Separate analyses that consider the view first at home and then in school are presented in Appendix B, Tables B5 and B6.

Table 18 presents the distribution of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control in the home or in school. Overall, 63 percent of the caregivers supported harsh punishment as appropriate for OVC either at home or in school. The proportion with this opinion increased with the age of the caregiver, as 57 percent of those 18- to 30 year of age compared with 63 percent of those 31- to 50 years of age and 74 percent of those age 50 years or more approved of

harsh punishment as appropriate for OVC either at home or in school. By sex, 61 percent of male compared with 64 percent of female approved of it **(P>0.05).**

Table 18. Core indicator: Percent of caregivers of active beneficiaries who agree that harsh physical punishment is an appropriate means of discipline or control in the home or at school

Variable (N=603)	All Caregivers[1]				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group[1]					
18–30 years	148	(95) 64.2	56.5	41.4	70.6
31–50 years	373	(260) 69.7	63.3	53.7	72.0
50+ years	82	(60) 73.2	74.0	58.3	85.3
Sex (N=606)					
Male	143	(99) 69.2	61.4	48.8	72.6
Female	463	(319) 68.9	63.5	52.1	73.6
All Caregivers	**606**	**(418) 69.0**	**63.0**	**53.1**	**72.0**

[1]Age is missing for 3 primary caregivers, and therefore is not summarized under Age Group.

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

Ability of households to access funds for unexpected household expenses reflects issues around vulnerability and a measure of household resilience to economic shock. About 74 percent of households reported that they had recently experienced an unexpected need. However, only 14 percent of all households exposed to such shock were able to access money to meet such expenses. Within the age groups, only 12 percent of caregivers ages 18–30 years compared with 15 percent of those 31–50 years and 9 percent of those 50 years or older were able to access money for unexpected household expenses. Across sex (Table 19), 9 percent of male caregivers compared with only 15 percent of female caregivers were able to access funds for such unexpected household expenses.

Table 19. Core Indicator: Percent of households able to access money to pay for unexpected household expenses

	All Caregivers[1] (N=606)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	**N**	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group[1]					
18–30 years	112	(22) 19.6	11.7	6.3	20.6
31–50 years	274	(58) 21.2	15.3	9.2	24.3
50+ years	60	(8) 13.3	9.1	3.7	20.9
Sex of Caregiver					
Male	108	(16) 14.8	9.1	3.8	20.4
Female	338	(72) 21.3	14.9	9.4	22.7
All Households	**446**	**(88) 19.7**	**13.5**	**8.9**	**20.1**

[1]Of the 606 caregivers, 446 (73.6%) reported unexpected expenses. Those who reported unexpected expenses are used in the denominator for this indicator.

Nigeria-Specific Outcome Indicators

OVC_NG1: Percent of households that have attained food security in the last three months

All 598 caregivers were each asked if in the past three months there had been a moment or moments when his/her household did not have enough food to eat. Table 20 presents the distribution of households that have attained food security. Among all 606 surveyed households of caregivers, 14 percent of households had attained food security within the past three months, reporting that there were no moments in the past three months when their household did not have enough food to eat. About the same low proportions of caregivers across the distribution of age and sex of caregiver had attained food security in the past three months. However, the proportion among the male caregivers was the lowest (10%).

Table 20. Country-specific: Percent of households that have attained food security in the last three months

	All Children				
	Unweighted		Weighted	95% Confidence Interval	
Variable	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=603)					
18–30 years	148	(18) 12.2	12.1	5.1	26.0
31–50 years	373	(60) 16.1	15.8	10.4	23.4
50+ years	82	(12) 14.6	12.9	5.2	28.4
Sex (N=606)					
Male	143	(18) 12.6	9.9	4.6	20.2
Female	463	(72) 15.6	15.8	9.7	24.6
All Households	**606**	**(90) 14.9**	**14.4**	**8.7**	**23.0**

[1]Age is missing for 3 primary caregivers, and therefore is not summarized under Age Group.

OVC_NG2: Percent of households that have adequate shelter

Table 21 presents the distribution of households who considered their dwelling units to be adequate. Overall, among all 606 caregivers, only 19 percent of caregivers considered their dwelling units to be adequate for them and their children. Although generally low, this proportion was lowest among caregivers who were 18–30 years (15%) and increased with age.

Table 21. Country-specific: Percent of caregivers who considered their dwelling unit to be adequate

	All Caregivers (N=606)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	N	(n) %	%	Lower Limit	Upper Limit
Age Group[1]					
18–30 years	148	(28) 18.9	15.2	8.7	25.2
31–50 years	373	(88) 23.6	16.9	11.8	23.6
50+ years	82	(32) 39.0	32.5	18.2	50.9
Sex					
Male	143	(31) 21.7	18.7	11.0	29.8
Female	463	(118) 25.5	18.4	13.8	24.3
All Caregivers	**606**	**(149) 24.6**	**18.5**	**14.1**	**23.9**

[1]Age is missing for 3 primary caregivers, and therefore is not summarized under Age Group.

OVC_NG3: Percent of children with access to basic healthcare

Table 22 below describes the percentage of children who had access to basic healthcare services for minor sickness such as diarrhea, malaria, fever, and rashes. Among all children, less than half (39%) were reported to have access to primary healthcare during any episode of illness. Children 0–4 years were more likely to easily get healthcare compared to any child above five years (49%). Access to basic health service was least reported among older children (15–17 years) and was also reported to be relatively lower for female children (38%).

Table 22. Country-specific: Percent of children having access to basic healthcare services

	All Children (N=1,960)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	**N**	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	446	(246) 55.2	49.4	37.7	61.1
5–9 years	644	(279) 43.3	38.0	25.6	52.1
10–14 years	604	(237) 39.2	37.1	25.8	50.0
15–17 years	266	(97) 36.5	27.5	19.5	37.3
Sex of Child					
Male	967	(428) 44.3	40.2	29.9	51.5
Female	993	(431) 43.4	37.9	26.5	50.9
All Children	1960	**(859) 43.8**	**39.1**	**28.6**	**50.7**
	Male Children (N=967)				
	Unweighted		Weighted	95% Confidence Interval	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	221	(119) 53.9	52.7	41.8	63.4
5–9 years	319	(139) 43.6	37.2	24.8	51.5
10–14 years	303	(127) 41.9	39.7	27.2	53.7
15–17 years	124	(43) 34.7	25.3	16.1	37.4
All Male Children	967	**(428) 44.3**	**40.2**	**29.9**	**51.5**
	Female Children (N=993)				
	Unweighted		Weighted	95% Confidence Interval	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	225	(127) 56.4	45.9	31.7	60.9
5–9 years	325	(140) 43.1	38.9	25.0	54.8
10–14 years	301	(110) 36.5	34.4	22.8	48.2
15–17 years	142	(54) 38.0	29.5	19.0	42.7
All Female Children	993	**(431) 43.4**	**37.9**	**26.5**	**50.9**

[1]Age is missing for 3 primary caregivers, and therefore is not summarized under Age Group.

OVC_NG4: Percent of children who went to bed without food at least once in the last four weeks

Table 23 describes the percentage of children who went to bed without food at least once in the past four weeks in the various households surveyed. Overall, 81 percent of children slept hungry at least once in the past four weeks. Larger proportions of children in the older age groups (at least 86%) had gone to bed without food at least once within the reference period compared with 65 percent of the children ages 0–4 years. Feeding in the households was almost the same proportion across the sex of the child, with 81 percent of male and female children going to bed without food at least once in the reference period of four weeks.

Table 23. Country-specific: Percent of children who went to bed without food in the last four weeks

	All Children				
	Unweighted		Weighted	95% Confidence Interval	
Variable	N	(n) %	%	Lower Limit	Upper Limit
Age Group (N=1,960)					
0–4 years	446	(286) 64.1	64.9	57.3	71.7
5–9 years	644	(526) 81.7	86.4	79.2	91.3
10–14 years	604	(499) 82.6	85.7	79.4	90.4
15–17 years	266	(220) 82.7	89.0	82.1	93.4
Sex of Child					
Male	967	(759) 78.5	81.9	75.9	86.7
Female	993	(772) 77.7	80.8	74.2	86.1
All Children	1960	**(1531) 78.1**	**81.4**	**75.9**	**85.9**
	Male Children (N=967)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	221	142 (64.3)	65.1	53.8	74.8
5–9 years	319	263 (82.5)	88.5	81.8	92.9
10–14 years	303	252 (83.2)	85.1	75.4	91.4
15–17 years	124	102 (82.3)	88.4	78.5	94.1
All Male Children	967	**759 (78.5)**	**81.9**	**75.9**	**86.7**
	Female Children (N=993)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	225	(144) 64.0	64.7	55.5	72.8
5–9 years	325	(263) 80.9	83.9	74.8	90.2
10–14 years	301	(247) 82.1	86.5	77.7	92.1
15–17 years	142	(118) 83.1	89.5	81.1	94.4
All Female Children	993	**(772) 77.7**	**80.8**	**74.2**	**86.1**

DISCUSSION AND RECOMMENDATIONS

According to the Federal Ministry of Women Affairs and Social Development (2014), Nigeria has made progress in responding to the needs of orphans and vulnerable children. This progress is marginal, however, when compared with the enormous needs of an estimated 17.5 million Nigerian children who are categorized as OVC. A 2008 national situation assessment and analysis showed that a significant proportion of OVC lost a parent to HIV/AIDS, road accidents, maternal mortality, ethnic conflicts, and terrorist insurgence. Other children were made vulnerable through poverty, harmful cultural practices, and gender inequality.

This survey has provided outcome measures on core service areas that include education, health services, household economic strengthening, nutrition and food security, protection, and shelter and care that can be used to reinforce the commitment of all stakeholders at the federal, state, and local government levels in strengthening care and support services provided to OVC.

Access to Services

High numbers of households (about 68%) had never received any services even in the past six months. These findings are unexpected, given that ARFH and the national response have been implemented for more than five years. It is not certain if this is a true reflection of the challenges these communities are facing in accessing these services for any number of reasons, or if it is the result of respondent bias either due to recall bias or purposely giving incorrect responses in the hopes of getting more services (see Tables 6 and 7 of this reports for the results of this question). In this survey, the interviewers asked the question exactly as written in the questionnaire. (See Appendix A, Questions 5 and 6, for a list of the program items or services received). Follow-up on these findings was not part of the scope of this survey. It is, however, important for ARFH service providers to follow up on these issues to verify the findings and address the gaps in offering their services if indeed these items and services are not being fully accessed by or provided to the program beneficiaries.

HIV Testing for Children

Knowledge of HIV status has implications for early detection and uptake of health interventions. Studies have documented the health and economic benefits, as well as survival opportunities, associated with early detection of HIV status among children and adolescents, particularly OVC (Violari, et al., 2008; Schenk, Kiragu, Murugi, & Sarna, 2014; Thurman, Luckett, Taylor, & Carnay, 2016). In this survey, primary caregivers knew the HIV status of only about two-fifths of the children ages 0–17. Because there are no comparable data collected from other sources that we are aware of, we use the Nigeria Demographic and Health Survey (NDHS) 2013 data on children/young adults ages 15–19 years who are tested and know their status as a comparison. However, it should be recognized that this is a self-reported figure, as compared to the PEPFAR indicator, which asks about the caregiver's knowledge of the child's HIV status. Looking at our own data for the age group closest to the age group on which the NDHS reports (15–17), 53 percent have ever received an HIV test and their caregiver knows their result. This number is far higher than the 2013 NDHS figure of 7.6 percent of children ages 15–19 nationally who were ever tested and received their results. This paint a mixed picture for HIV testing of children, but given that these are not comparable indicators, there are few conclusions we can safely reach. For instance, many children in the 15- to 17-year age bracket are able to get their own HIV test and therefore

the caregiver may not know their status. These findings indicate that testing rates among 0- to 17-year-olds may be below average compared with the Lagos testing rates provided in the NDHS 2013. Regardless, it is clear that ARFH must work to increase testing rates for children—in particular given that they are in Akwa-Ibom, Lagos, and Rivers, some of the most HIV-affected states.

Infant Nutrition

The contribution of undernutrition to child mortality stemming from fetal growth restriction, stunting, wasting, micronutrient deficiencies, and suboptimal breastfeeding have been well documented (Rice, Sacco, Hyder, & Black, 2000; Black, et al., 2008; Bhutta, et al., 2013; UN Standing Committee on Nutrition, 2014; USAID, 2014). Undernutrition also influences children's health, growth, and cognitive functioning and development. Although this survey found that only 4 percent of 0- to 4-year-old children were undernourished, the undernourishment was more prevalent among 6- to 11-month-olds (11%) than among 12- to 59-month-old children (3%). The Multiple Indicator Cluster Survey (MICS) 2011 study in Nigeria (UNICEF, 2013b) further suggest that only two-thirds of children received Vitamin A supplementation. From a life cycle perspective and according to UNICEF, the most crucial time to meet a child's nutritional requirements is in the first 1,000 days, including pregnancy and ending with the child's second birthday. During this time, the child has increased nutritional needs to support rapid growth and development. It is therefore recommended that ARFH place more emphasis on policies and programs that support action before the age of two years, especially on appropriate infant feeding and care practices. In more advanced countries, formal support in terms of food parcels and stipends are provided to vulnerable homes. This approach can be adopted in Nigeria.

Health

Percentage of children too sick to participate in daily activities is a direct outcome indicator of a child's well-being (MEASURE Evaluation, 2015). It is a measure of the impact of sickness, impairment, and mental health on a child's daily life. This survey found that almost one-fifth of the children in the sample were too sick to participate in daily activities. It is especially important for ARFH to monitor this indicator because children who are unable to participate in daily activities may need immediate medical care and could be in an especially vulnerable state. Disaggregation enables programs to define interventions to reach specific subpopulations based on need. For example, this survey found that 0- to 4-year-olds and 15- to 17-year-olds fell sick more frequently than any other age group within the last two weeks prior to the survey.

Child Protection

A birth certificate is an official document provided as evidence of birth registration. The National Population Commission (NPopC) is the ministry of the Federal Republic of Nigeria authorized to issue birth certificates accepted in Nigeria and abroad. The process of obtaining a birth certificate is relatively easy through local government authorities but is not free. A fee ranging from N 300 to N 1000 (between US$1 and US$4) is charged. However, it is important to apply for it before it can be issued. Possession of a birth certificate may be very important at critical points in life, for example, during admission to schools and institutions, or in applying for an identification card or international passport. Birth certificate possession was quite still low according to the findings of this survey.

Only about 15 percent of all 1,960 children ages 0–17 years were reported to have been issued a birth certificate that was seen by the data collector. As a whole, the possession of a birth certificate among

children 15–17 (14%) is lower than the most recent data for Lagos State (from the Nigerian MICS 2011), which show registration for children under five at 33 percent. The project must try to address the reasons for these low numbers. For example, ARFH should intensify awareness raising of the importance of birth registration among caregivers and ensure coordination between relevant government ministries and institutions involved in birth registration processes.

School Progression

School progression is at 99 percent for children 5–17 years according to the data collected in this survey. School progression figures for children in the program ages 5–9 and 10–14 were also high (84% and 97%). While universal coverage is recommended, the ARFH project should maintain its efforts geared toward school enrollment and progression. School enrollment is a major developmental issue among OVC (Akinyemi & Isiugo-Abanihe, 2014). The percentage of children regularly attending school is a direct outcome measure of school attendance (MEASURE Evaluation, 2015). Research on children has demonstrated that education can contribute to significant improvements in the lives of children and their families. In addition to fostering basic educational competencies, such as reading, writing, and mathematics, learning opportunities can provide students with chances to develop age-appropriate, gender-sensitive life skills and can also offer health education interventions. School attendance indicates that children and youth have the opportunity to engage in formal learning and are not required to join the workforce or quit school in order to care for younger siblings or family members. Disaggregation is necessary to identify subpopulations at high risk for dropping out of school, (for instance, at the age when youth transition from primary to secondary school is believed to be an area in need of specific targeting to encourage continued school attendance).

Early Childhood Development

Stimulating activities enhance young children's physical and mental development. There is ample evidence from low-resource settings that programs to improve infant stimulation have very high resultant beneficial effects on children's long-term development, psychosocial outcomes, and mental health (Walker, Chang, Powell, & Grantham-McGregor, 2005; Kieling, et al., 2011; Milteer, Ginsburg, Council on Communications and Media Committee on Psychosocial Aspects of Child Health, & Mulligan, 2012). Promoting stimulating activities among OVC will help in their cognitive development and in developing a healthy lifestyle. This is one of the ARFH project's strongest areas according to the findings of this survey. Overall, among the children under five years of age, 96 percent were reported to have been engaged in at least one stimulating activity.

Child Discipline

Studies across the globe on the influence of harsh physical punishment on children all converge on its negative outcomes (MacMillan, Boyle, Wong, Duku, Fleming, & Walsh, 1999; Palmer & Hollin, 2001; Coyl, Roggman, & Newland, 2002; Rodriguez, 2003; Javo, Rønning, Heyerdahl, & Rudminet al., 2004; Turner & Muller, 2004; Bugental, Martorell, & Barraza, 2003; Afifi, Brownridge, Cox, & Sareen, 2006). About seven out of 10 OVC caregivers in the ARFH project sites support harsh physical punishment as appropriate discipline for children, especially in schools. This generally accepted cultural practice has deep implications for children who are already vulnerable. Perceptions of physical discipline have been linked to actual use of physical discipline against children. It is therefore important to note that reducing harsh physical discipline, violence, and abuse against children is a PEPFAR priority. Parenting and child protection efforts should address attitudes of corporal punishment in both the school and home settings, which may require different messaging strategies.

Economic Strengthening

About 75 percent of households reported that they had recently experienced an unexpected need. However, only 14 percent of all households exposed to such shock were able to access money to meet such expenses. This is quite low, indicating the economic volatility of and absence of adequate safety nets for OVC households. Perhaps members of these households who were interviewed purposefully reported that they were not able to pay for these unexpected expenses in anticipation of being given more support following the survey. We recommend that the ARFH project develop mechanisms for follow-up and feedback (if not already in place) to assess what challenges are faced by these households and how best to improve service provision and support for effective interventions. There are well-documented successes of improving OVC economic coping strategies in Zimbabwe (Williamson, 2003), Kenya ((Adato & Bassett, 2008), and other East African countries (McPeak, Doss, Barrette, & Kristjanson, 2009) that can be successfully implemented in Lagos or Nigeria. These include but are not limited to village savings and loan schemes for low-income groups. However, household economic strengthening programs should consider caregivers' level of readiness and capacity to succeed when determining whether an economic strengthening activity is appropriate.

Food Security

According to the USAID multisectoral nutrition strategy 2014–2025, there are intrinsic linkages between HIV, food insecurity, and malnutrition. Millions of HIV-infected people live in countries with high levels of poverty and food insecurity. Food insecurity has a negative impact on the overall nutritional and health status of those infected and affected by HIV/AIDS, and PLHIV often express that food is the greatest need for themselves and their families (Palermo, Rawat, Weiser, & Kadiyala, 2013; Aberman, 2014). The situation in Nigeria is quite similar. The four additional Nigeria-specific indicators show that 86 percent of households surveyed in the ARFH project sites are not food-secure (81% of children had gone to bed at least once without food) and about 81 percent of households did not have adequate shelter. ARFH should do research on food security among its beneficiaries to ascertain the situation.

CONCLUSION

This report has presented the findings of the OVC survey among the beneficiaries of the ARFH project being implemented in 12 scale-up LGAs from Akwa-Ibom, Lagos, and Rivers States. The objectives of the survey were to examine the well-being of OVC and their caregivers at one point in time through a series of nine internationally accepted indicators and four additional indicators specific to Nigeria. The survey interviewed 606 caregivers and obtained information on 1,960 orphans and vulnerable children ages 0–17 years.

One major lesson from this survey is the quality of data on OVC across the value chain from IPs to CBOs and community volunteers. In many cases, the databases are not available in electronic format or information provided by IPs on OVC are either difficult to verify or inaccurate. However, although CBOs and their community volunteers usually have more up-to-date information on the OVC they are directly serving, this is usually in paper notebooks or on loose pieces of paper. Because accurate and timely data are critical for effective service delivery, there is the need for well-structured, harmonized electronic data consistently maintained to support data use for service provision and studies.

The findings from this survey will help the ARFH project and USAID better understand the characteristics of vulnerable and HIV-affected households in Akwa-Ibom, Lagos, and Rivers, as well as their current state of well-being measured by the nine essential indicators. The data collected provide the basis for revised targets by both ARFH and USAID on specific indicators (e.g., numbers of caregivers who know children's HIV testing status, number of children benefitting from early child development services, and number of caregivers who believe harsh physical punishment is appropriate for child discipline) within the program for reporting and implementation purposes.

The survey design is subject to limitations of cross-sectional surveys, including response and recall biases. Data on OVC reported by caregivers may reflect social desirability bias rather than actual knowledge or practices and may be affected by response bias. However, ARFH collects similar data on some of the indicators on a routine basis and thus, the next steps could be to assess the comparability of measures and then to compare results.

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APPENDIX A. NIGERIA MER OVC ESSENTIAL SURVEY INDICATOR QUESTIONNAIRE

A	INTERVIEWER'S NAME:	
B	STATE	*[pre-populates from the cell phone]*
C	IMPLEMENTER	*[pre-populates from the cell phone]*
D	CBO	*[pre-populates from the cell phone]*
E	LGA	*[pre-populates from the cell phone]*
F	COMMUNITY	*[pre-populates from the cell phone]*
G	ADDRESS	_____ _____
H	HOUSEHOLD NUMBER/CAREGIVER'S NUMBER IN THE REGISTER	[_ _ _ _]
I	NUMBER OF VISITS:	Visit 1 1 Visit 2 2 Visit 3 3

MER Indicator Consent Form for Caregivers

Hello. My name is _____ and I am working with CRERD/AHEAD consortium. We are conducting a survey about child and caregiver well-being so that we can improve the impact of our services and programs. To gather this information, we are interviewing caregivers in some households. We have randomly chosen to visit your household.

We would very much appreciate your participation in this survey. Participation involves answering some easy questions about children ages 0–17 under your care. If you care for a child who is older than 5 months but less than 5 years, I will also measure that child's mid-upper arm circumference.

The interview with you will not take too long, depending on the number of children that you care for. If you agree to participate, we will ask you questions from a questionnaire and we will note your answers on the cell phone. The risks to you as a participant in this survey are minimal. Some of the questions are personal and some people may find them difficult to answer. You do not need to answer any questions that you do not want to.

Your participation in this survey is voluntary. You will not be given any money or other compensation for participating. If you don't want to answer my questions, it is OK. If you agree to participate, you can decide not to answer certain questions and can stop the interview at any time. Your decision about whether to participate in this survey or to answer any specific questions will in no way affect any services that you receive.

Other people will not know if you participated in this survey. We will put things we learn about you together with things we learn about other people from your community, so no one can tell what answers came from you. We will never use your name, so no one will ever know what answers you gave me. Only a few data collectors will have access to this information, and all information will be stored in a locked cabinet under the care of CRERD/AHEAD consortium until it is destroyed in in about three (3) months from the

conclusion of the survey. The stored data will have de-identified survey data that will be submitted to all stakeholders.

Your participation in this survey will not benefit you directly, but it may benefit others in the future, as your responses will improve our understanding of ways to provide better services to people in communities like yours.

Before you say yes or no to participating, we will answer any questions you have. You can also ask me questions later. Do you have any questions now?

[PAUSE & ANSWER ALL QUESTIONS]

If you have any questions later, you may contact the survey coordinator (Dr. Elizabeth Omoluabi) at 07015809204 or the office of the National Health Research Ethics Committee of Nigeria (NHREC) on +234095238363

	ASK: May I begin the interview now?	Yes 1 No 2	=>end

CONSENT STATEMENT FOR SIGNATURE OF RESPONDENT

I have read this entire consent form, or I have had it read to me, and any questions have been answered to my satisfaction. I agree to participate in this survey.

- First name of respondent: ……
- Signature of respondent: ……
- Signature of Data collector: ……

Household Roster

Starting from the eldest to the youngest person in this household, I am now going to ask a series of questions about each usual member of the household or anyone who slept in the house last night.

[Repeats for the total number of usual household members including the caregiver]

No	Question	Coding Category	Skip
1	First name	_____	
2	Sex	Male 1 Female 2	
3	Age ***Note:*** *In complete years* *If less than 1, record 0* *If unknown, record '-998'* *If no response, record '-999'*	[_____] years *Record months if age is less than 1 year, record months.*	0 => 4
4	Age ***Note:*** *In complete months*	[_____] months	
4	Relationship to caregiver	Caregiver 1 Wife/Husband 2 Son/Daughter 3 Son/Daughter-in-law 4 Grandchild 5 Parent 6 Parent-in-law 7 Brother/Sister 8 Other 96 Don't know 98 No response 99	
5	Is this person a usual member of the household or has he/she slept in the house last night?	Yes 1 No 2	
6	Is the caregiver responsible for taking care of [**NAME**]?		

MER Indicator Questionnaire: Caregivers

First, I have a few questions to ask

No	Question	Coding Category	Skip
Q1	What is your highest level of education?		
Q2	What is your main occupation/economic activity?		
Q3	What is your religion?	Christianity 1 Islam 2 Other (Specify) _____ 96	
Q4	Please tell me about items that your household owns. Does your household have: *[Select all that apply]*	Electricity? 1 A wall clock? 2 A radio? 3 A black/white television? 4 A color television? 5 A mobile telephone? 6 A non-mobile telephone? 7 A refrigerator? 8 A cable TV? 9 A generating set? 10 An air conditioner? 11 A computer? 12 An electric iron? 13 A fan? 14 A watch? 15 A bicycle? 16 A motorcycle/motor scooter? 17 An animal-drawn cart? 18 A car or truck? 19 A canoe? 20 A boat without a motor? 21 None of the above 77 No response 99	
	ARFH		
Q5	Have you personally ever received services or participated in activities from **"CBO"**? By this I mean, have you ever been visited by a community worker from **"CBO"**, or have you ever participated in any of the follow activities organized by **"CBO"**: *[Select all that apply]* Educational support 1) Yes 2) No Food and nutrition 1) Yes 2) No Shelter and care 1) Yes 2) No Household economic strengthening 1) Yes 2) No	=>Q5b

	APIN				
Q5	Have you personally ever received services or participated in activities from **"CBO"**? By this I mean, have you ever been visited by a community worker from **"CBO"**, or have you ever participated in any of the follow activities organized by **"CBO"**: *[Select all that apply]* Educational support Food and nutritional support Healthcare Shelter and care		1) Yes 1) Yes 1) Yes 1) Yes	2) No 2) No 2) No 2) No	=>Q5b
	CRS/SMILE				
Q5	Have you personally ever received services or participated in activities from **"CBO"**? By this I mean, have you ever been visited by a community worker from **"CBO,"** or have you ever participated in any of the follow activities organized by **"CBO"**: *[Select all that apply]* Health support Educational training Vocational training Household economic strengthening		1) Yes 1) Yes 1) Yes 1) Yes	2) No 2) No 2) No 2) No	=>Q5b
	IHVN				
Q5	Have you personally ever received services or participated in activities from **"CBO"**? By this I mean, have you ever been visited by a community worker from **"CBO,"** or have you ever participated in any of the follow activities organized by **"CBO"**: *[Select all that apply]* Educational support Health support Nutrition education Psychosocial support through adolescent and kids' clubs		1) Yes 1) Yes 1) Yes 1) Yes	2) No 2) No 2) No 2) No	=>Q5b
	WEWE				
Q5	Have you personally ever received services or participated in activities from **"CBO"**? By this I mean, have you ever been visited by a community worker from **"CBO,"** or have you ever participated in any of the follow activities organized by **"CBO"** on: *[Select all that apply]* Nutrition education and counselling		1) Yes	2) No	

	Measuring of MUAC for children 6 months to 4 years 1) Yes 2) No Provision of food for malnourished children 1) Yes 2) No Provision of nutrition supplement for malnourished children 1) Yes 2) No		=>Q5b
Q5b	How long ago did you start receiving services or participating in activities from **"CBO"**?	[_____] months	
Q6	Have you personally received services or participated in activities from **"CBO"** in the last six months?	Yes 1 No 2	
Q7	In the last 3 months, has there been a moment or moments when your household did not have enough food to eat?	Yes 1 No 2	
Q8	Do you feel that your current house/living area is adequate for you and your household?	Yes 1 No 2	
Q9	Has your household been able to cover expected household expenses in the last 12 months?	Yes 1 No 2	
Q10	Did your household incur any unexpected household expenses, such as a house repair or urgent medical treatment, in the last 12 months?	Yes 1 No 2	=>Q12
Q11	Was your household able to pay for these unexpected expenses?	Yes 1 No 2	
Q12	Do you think that hitting or beating a child is an appropriate means of discipline or control in the home?	Yes 1 No 2	
Q13	Do you think that hitting or beating a child is an appropriate means of discipline or control at school?	Yes 1 No 2	

MER Indicator Questionnaire for Children Ages 0–4 Years

[Repeats for the total number of children ages 0–4]

I am now going to ask a series of questions about **"NAME"**

No	Question	Coding Category	Skip
A1	Does **"NAME"** have a birth certificate?	Yes, seen 1 Yes, not seen 2 No 3	
A2	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"**:		

	(a) Read books to or looked at picture books with **"NAME"**?	Yes No	1 2	
	(b) Told stories to **"NAME"**?	Yes No	1 2	
	(c) Sang songs to **"NAME"** or with **"NAME"** including lullabies?	Yes No	1 2	
	(d) Played with **"NAME"**?	Yes No	1 2	
	(e) Named, counted, or drew things with **"NAME"**?	Yes No	1 2	
A3	In the last 2 weeks, has **"NAME"** been too sick to participate in daily activities?	Yes No	1 2	
Now, I would like to take the measurement of the mid-upper arm circumference of **"NAME"**				
A4	May I measure **"NAME"**'s mid-upper arm circumference now?	Yes No. Child not at home No. Caregiver declines No. Other reasons	1 2 3 4	 =>A5 =>A5 =>A5
A4b	MUAC measurement **Note**: *The measurement must be taken on the **left upper** arm.* *Every measurement below 12 cm should be re-confirmed and reported to the supervisor*	[_____] cm		
A5	Has **"NAME"** ever received services or participated in activities from **"CBO"**	Yes No	1 2	 =>A6
A5b	How long ago did **"NAME"** start receiving services or participating in activities from **"CBO"**? **Note**: *In months*	[_____] months		
A6	Has **"NAME"** received services or participated in activities from **"CBO"** in the last 6 months?	Yes No	1 2	
A7	I don't want to know the results, but has **"NAME"** ever been tested to see if he/she has the AIDS virus?	Yes No	1 2	 =>A9
A8	I don't want to know the results, but do you know the results of **"NAME"** test?	Yes No	1 2	
A9	When **"NAME"** is ill with minor sicknesses such as diarrhea, malaria fever, rashes, is it easy for you to obtain medical	Yes No	1 2	

	treatment for **"NAME"** at primary health care centres? **Explain**: *A PHC is the basic structural and functional unit of the public health services. They are essentially single-physician clinics usually with facilities for minor surgeries.*		
A9b	The last time "**NAME"** was ill with minor sicknesses such as diarrhea, malaria fever, rashes, where did you seek treatment? Hint: *Do not read*	Did not seek treatment 1 Self-medication for him/her 2 Traditional health attendant 3 PPMV 4 Primary healthcare centre 5 Secondary healthcare centre 6 Other (Specify)_____ 96	
A10	Has there been any time when **"NAME"** has not had sufficient food to eat during the last 12 months?	Yes 1 No 2	
A11	Has **"NAME"** gone to sleep without food in the last 4 weeks?	Yes 1 No 2	

MER Indicator Questionnaire for Child Ages 5–17 Years

[Repeats for the total number of children ages 5–17]

I am now going to ask a series of questions about **"NAME"**

No	Question	Coding Category	Skip
B1	Does **"NAME"** have a birth certificate? **NOTE**: *Request to see the birth certificate and record "NO" if birth certificate is not sighted.*	Yes 1 No 2	
B2	Is **"NAME"** currently enrolled in school?	Yes 1 No 2	=>B5
B3	During the last school week, did **"NAME"** miss any school days for any reason?	Yes 1 No 2	
B4	What grade/form/year is **"NAME"** in now?	Pre-primary 1 Primary 1 2 Primary 2 3 Primary 3 4 Primary 4 5 Primary 5 6 Primary 6 7	

		JSS1	8	
		JSS2	9	
		JSS3	10	
		SS1	11	
		SS2	12	
		SS3	13	
		Tertiary/university	14	
B5	Was **"NAME"** enrolled in school during the previous school year?	Yes	1	
		No	2	=>B7
B6	What grade/form/year was **"NAME"** during the previous school year?	Pre-primary	1	
		Primary 1	2	
		Primary 2	3	
		Primary 3	4	
		Primary 4	5	
		Primary 5	6	
		Primary 6	7	
		JSS1	8	
		JSS2	9	
		JSS3	10	
		SS1	11	
		SS2	12	
		SS3	13	
		Tertiary/university	14	
B7	At any point in the last 2 weeks, has **"NAME"** been too sick to participate in daily activities?	Yes	1	
		No	2	
B8	Has **"NAME"** ever received services or participated in activities from **"CBO"**?	Yes	1	
		No	2	=>B9
B8b	How long ago did **"NAME"** start receiving services or participating in activities from **"CBO"**?	[_____] months		
B9	Has **"NAME"** received services or participated in activities from **"CBO"** in the last 6 months?	Yes	1	
		No	2	
B10	I don't want to know the results, but has **"NAME"** ever been tested to see if he/she has the AIDS virus?	Yes	1	
		No	2	=> B12
B11	I don't want to know the results but do you know the results of **"NAME"**'s test?	Yes	1	
		No	2	
B12	When **"NAME"** is ill with minor sicknesses such as diarrhea, malaria fever, rashes, is it easy for you to obtain medical treatment for **"NAME"** at primary healthcare centres?	Yes	1	
		No	2	

	Explain: *A PHC is the basic structural and functional unit of the public health services. They are essentially single-physician clinics usually with facilities for minor surgeries.*		
B12b	The last time "**NAME"** was ill with minor sicknesses such as diarrhea, malaria fever, rashes, where did you seek treatment? Hint: *Do not read*	Did not seek treatment 1 self-medication for him/her 2 Traditional health attendant 3 PPMV 4 Primary healthcare centre 5 Secondary healthcare centre 6 Other (Specify)_____ 96	
B13	Has there been any time when **"NAME"** has not had sufficient food to eat during the last 12 months?	Yes 1 No 2	
B14	Has **"NAME"** ever gone to sleep without food in the last 4 weeks	Yes 1 No 2	

Thank you very much for your time. We have now come to the end of the survey.

Interview comment codes:	Interview completed 1 Appointment made for later today 2 Appointment made for another day 3 Refused to continue and no appointment made 4 Other (Specify) _____ 96			
Interview language	English 1 Hausa 2 Ibibio 3 Igala 4 Pidgin 5 Tiv 6 Yoruba 7 Other (Specify) _____ 96			
GPS: **Note**: *Please step outside and record the GPS coordinate*	Latitude	Longitude	Altitude	Accuracy

APPENDIX B. SUPPLEMENTARY TABLES

Table B1. Percentage of children ages 0–17 years whose caregivers report the child has been tested for HIV

	All Children (N=1,960)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	**N**	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–11 months	56	(17) 30.4	16.3	6.6	34.9
1–4 years	390	(235) 60.3	51.9	41.3	62.4
5–9 years	644	(378) 58.7	52.8	42.6	62.8
10–14 years	604	(354) 58.6	53.4	44.3	62.2
15–17 years	266	(171) 64.3	61.5	49.7	72.1
Sex					
Male	967	(541) 56.0	49.9	41.4	58.4
Female	993	(614) 61.8	55.6	46.5	64.4
All Children	**1960**	**(1155) 58.9**	**52.7**	**44.4**	**60.9**
	Male Children (N=967)				
	Unweighted		Weighted	95% Confidence Interval	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–11 months	27	(7) 5.9	19.6	5.2	52.0
1–4 years	194	(108) 55.7	48.5	35.9	61.3
5–9 years	319	(178) 55.8	48.9	38.4	59.4
10–14 years	303	(172) 56.8	50.7	40.3	61.0
15–17 years	124	(76) 61.3	61.5	46.5	74.6
All Male Children	**967**	**(541) 56.0**	**49.9**	**41.4**	**58.4**
	Female Children (N=993)				
	Unweighted		Weighted	95% Confidence Interval	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–11 months	29	(14) 34.5	12.9	4.9	30.0
1–4 year	196	(127) 64.8	55.4	42.4	67.6
5–9 years	325	(200) 61.5	57.3	46.2	67.7
10–14 years	301	(182) 60.5	56.1	44.2	67.3
15–17 year	142	(95) 66.9	61.6	46.8	74.4
All Female Children	**993**	**(614) 61.8**	**55.6**	**46.5**	**64.4**

Table B2. Percentage of children who have a birth certificate (not verified)

	All Children (N=1960)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	**N**	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	446	(156) 35.0	34.5	25.1	45.3
5–9 years	644	(290) 45.0	42.5	35.2	50.2
10–14 years	604	(249) 41.2	40.2	30.2	51.1
15–17 years	266	(131) 49.3	50.6	41.1	60.0
Sex of child					
Male	967	(398) 41.2	40.1	32.6	48.1
Female	993	(428) 43.1	41.7	33.8	50.1
All Children	**1960**	**(826) 42.1**	**40.9**	**34.0**	**48.3**
	Male Children (N=967)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	221	(83) 37.6	37.0	26.0	49.5
5–9 years	319	(144) 45.1	43.2	34.5	52.4
10–14 years	303	(120) 39.6	38.1	27.7	49.7
15–17 years	124	(51) 41.1	42.8	33.8	52.3
All Male Children	**967**	**(398) 41.2**	**40.1**	**32.6**	**48.1**
	Female Children (N=993)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	225	(73) 32.4	32.0	21.7	44.5
5–9 years	325	(146) 44.9	41.8	34.2	49.8
10–14 years	301	(129) 43.0	42.3	28.9	57.0
15–17 years	142	(80) 56.3	57.4	44.4	69.5
All Female Children	993	**(428) 43.1**	**41.7**	**33.8**	**50.1**

Table B3. Percentage of children who have a birth certificate (either verified or not)

	All Children (N=1,960)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	**N**	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	446	(235) 52.7	49.9	41.3	58.4
5–9 years	644	(408) 63.4	57.5	49.0	65.5
10–14 years	604	(366) 60.6	56.7	43.8	68.7
15–17 years	266	(178) 66.9	64.8	54.4	73.8
Sex of child					
Male	967	(580) 60.0	56.6	49.5	63.4
Female	993	(607) 61.1	56.0	46.4	65.3
All Children	**1960**	**(1187) 60.6**	**56.3**	**48.3**	**64.0**
	Male Children (N=967)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	221	(119) 53.9	51.8	42.5	61.0
5–9 years	319	(210) 65.8	61.0	51.4	69.9
10–14 years	303	(173) 57.1	53.7	43.0	64.0
15–17 years	124	(78) 62.9	60.9	50.1	70.8
All Male Children	**967**	**(580) 60.0**	**56.6**	**49.5**	**63.4**
	Female Children (N=993)				
	Unweighted		**Weighted**	**95% Confidence Interval**	
	N	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group					
0–4 years	225	(116) 51.6	47.9	37.0	59.1
5–9 years	325	(198) 60.9	53.4	43.9	62.7
10–14 years	301	(193) 64.1	59.7	40.8	76.1
15–17 years	142	(100) 70.4	68.1	56.4	78.0
All Female Children	**993**	**(607) 61.1**	**56.0**	**46.4**	**65.3**

Table B4. Proportion of children ages 5–17 years currently enrolled in school

Variable	All Children (N=1514)		Female Children (N=768)		Male Children (N=746)	
Age Group	**Unweighted (n) %**	**Weighted %**	**Unweighted (n) %**	**Weighted %**	**Unweighted (n) %**	**Weighted %**
5–9 years	(581) 90.2	89.2	(295) 90.8	90.0	(286) 89.7	88.8
10–14 years	(541) 89.6	87.1	(268) 89.0	86.1	(273) 90.1	88.1
15–17 years	(192) 72.2	65.4	(106) 74.7	72.3	(86) 69.3	57.5
Overall (5–17 years)	(1314) 86.8	84.4	(669) 87.1	85.2	(645) 86.5	83.8

Table B5. Percentage of caregivers of active beneficiaries who agree that harsh physical punishment is an appropriate means of discipline or control in the home

	All Caregivers[1] (N=606)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	**N**	**(n) %**	**%**	**Lower Limit**	**Upper Limit**
Age Group[1]					
18–30 years	148	(77) 52.0	48.1	32.9	63.7
31–50 years	373	(193) 51.7	48.3	38.3	58.6
50+ years	82	(45) 54.9	63.1	45.6	77.8
Education					
None/Islamiyah	89	(45) 50.6	47.9	27.9	68.5
Primary	271	(167) 61.6	57.7	44.5	69.9
Secondary or higher	246	(105) 42.7	42.8	31.1	55.5
Wealth Index					
Lower	230	(141) 61.3	51.9	36.2	67.3
Middle	198	(98) 49.5	50.1	37.9	62.3
Upper	178	(78) 43.8	48.2	36.2	60.5
All Caregivers	**606**	**(317) 52.3**	**50.2**	**40.0**	**60.3**

[1]Age is missing for 3 primary caregivers, and therefore is not summarized under Age Group.

Table B6. Percentage of caregivers of active beneficiaries who agree that harsh physical punishment is an appropriate means of discipline or control in the school

	All Caregivers[1] (N=606)				
	Unweighted		Weighted	95% Confidence Interval	
Variable	N	(n) %	%	Lower Limit	Upper Limit
Age Group[1]					
18–30 years	148	(88) 59.5	50.9	36.1	65.4
31–50 years	373	(235) 63.0	57.9	48.5	66.8
50+ years	82	(50) 61.0	64.9	46.7	79.6
Education					
None/ Islamiyah	89	(62) 69.7	53.1	32.6	72.6
Primary	271	(183) 67.5	65.1	52.1	76.2
Secondary or higher	246	(131) 53.3	49.5	37.0	62.2
Wealth Index					
Lower	230	(157) 68.3	56.6	42.0	70.2
Middle	198	(124) 62.6	57.3	44.4	69.2
Upper	178	(95) 53.4	57.3	46.3	67.7
All Caregivers	**606**	**(376) 62.1**	**57.1**	**47.1**	**66.4**

[1]Age is missing for 3 primary caregivers, and therefore is not summarized under Age Group.

APPENDIX C. RESEARCHERS WHO IMPLEMENTED THE PROJECT

MEASURE Evaluation Study Coordinator—Moses Onazi

CRERD/AHEAD

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APPENDIX D. SAMPLE SIZE CALCULATION

$n = D [(Z_{\alpha} + Z_{\beta})^2 * (P_1 (1 - P_1) + P_2 (1 - P_2)) / (P_2 - P_1)^2]$

n = required minimum sample size per survey round

D = design effect (assumed in the following equations to be the *default* value of 2)

P_1 = the estimated level of an indicator measured as a proportion at the time of the first survey

P_2 = the *expected* level of the indicator either at some future date or for the project area such that the quantity ($P_2 - P_1$) is the size of the magnitude of change it is desired to be able to detect

Z_{α} = the Z-score corresponding to the degree of confidence with which it is desired to be able to conclude that an observed change of size ($P_2 - P_1$) would not have occurred by chance (α - the level of statistical significance), and

Z_{β} = the z-score corresponding to the degree of confidence with which it is desired to be certain of detecting a change of size ($P_2 - P_1$) if one actually occurred (β-statistical power).

In our case, we assume an increase of 10 percentage points in the EIS indicators. Assume further that at the time of the first survey, about 50 percent of households have access to financial support. In this case, $P_1 = .50$ and $P_2 = .60$. Using standard parameters of 95 percent level of significance (α) and 80 percent power (β), $Z_{\alpha} = 1.645$ and $Z_{\beta} = 0.840$ are chosen. Inserting these values in the above formula yields the following result:

$n = 2 [(1.645 + 0.840)^2 * ((.5) (.5) + (.6) (.4))] / (.6 - .5)^2$

$= 2 [(6.175 * 0.49) / .10^2]$

$= 2 [(3.02575) / .01] = 2 (302.575) = 605.15$, or 606 households per survey round

For ARFH, the sample was adjusted to 627 for nonresponse.

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