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

Sustainable Mechanism for Improving Livelihoods and Household Empowerment (SMILE) Program 2016 Survey Findings

Walter Obiero, PhD, Elizabeth Omoluabi, PhD, Akanni Akinyemi, PhD, and **Adesegun Fatusi, PhD**

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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 Catholic Relief Services/Sustainable Mechanism for Improving Livelihoods and Household Empowerment (CRS/SMILE), 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 cofacilitating 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.

The USAID- and PEPFAR-funded MEASURE Evaluation, through technical lead of Walter Obiero, provided the 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 colleagues from MEASURE Evaluation/Nigeria. We acknowledge technical support and guidance received from Susan Settergren, Lisa Parker (MEASURE Evaluation, Palladium) and thank Lisa Marie Albert (MEASURE Evaluation, Palladium for assistance with weighting the survey data.

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TABLES

ABBREVIATIONS

AHEAD	Academy for Health Development
APIN	AIDS Prevention Initiative in Lagos Nigeria, Ltd/Gte
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	Catholic Relief Services
FCT	Federal Capital Territory
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
MUAC	mid-upper arm circumference
NGO	nongovernmental organization
OVC	orphans and vulnerable children
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
SMILE	Sustainable Mechanism for Improving Livelihoods and Household Empowerment
USAID	United States Agency for International Development
USG	United States Government
VC	vulnerable children
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 (PEPFAR, 2012). To address this, in 2014, the United States President's Emergency Plan for AIDS Relief (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 enrolled active beneficiaries of the Catholic Relief Services/Sustainable Mechanism for Improving Livelihoods and Household Empowerment (CRS/SMILE) project. 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 CRS/SMILE project in the Federal Capital Territory (FCT), Benue, and Nasarawa States. The targeted population groups are registered beneficiaries of the CRS/SMILE 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, 2,340 children and 605 caregivers were sampled in this study.

Major Findings

Weighted results for the 13 survey indicators (nine essential and four Nigeria-specific) are as presented below:

Table 1. Weighted results for the 13 survey indicators

Indicators	All		Male Children	Female Children
	N	% [95% C.I]	% [95 % C.I]	% [95% C.I]
OVC_HIVST: Percentage of children (aged 0–17 years) whose primary caregiver knows the child's HIV status	2,340	45.7 [35.7 – 56.1]	49.0 [37.7 – 60.4]	42.3 [33.1 – 52.0]
OVC_NUT: Percentage of children (aged 6–59 months) who are undernourished	605	4.5 [2.8 – 7.3]	4.6 [2.2 – 9.6]	4.5 [2.2 – 9.0]

Indicators	All		Male Children	Female Children
	N	% [95% C.I]	% [95 % C.I]	% [95% C.I]
OVC_SICK: Percentage of children (aged 0–17 years) too sick to participate in daily activities	2,340	36.2 [31.6 – 41.2]	37.8 [32.0 – 44.0]	34.6 [28.4 – 41.4]
OVC_BCERT: Percentage of children (aged 0–17 years) who have a birth certificate	2,340	17.2 [12.0 – 24.2]	16.8 [11.8 – 23.5]	17.7 [12.0 25.4]
OVC_SCHATT: Percentage of children (aged 5–17 years) regularly attending school	1,295	55.6 [47.8 – 63.1]	51.7 [43.2 – 60.1]	59.7 [50.5 – 68.2]
OVC_PRGS: Percentage of children (aged 5–17 years) who progressed in school during the last year	1,284	90.6 [87.6 – 93.0]	88.4 [84.2 – 91.6]	92.3 [89.1 – 95.4]
OVC_STIM: Percentage of children <5 years of age who recently engaged in stimulating activities with any household member over age 15	661	95.6 [65.2 – 99.5]	95.8 [63.2 – 98 .9]	95.4 [63.2 – 99.5]
OVC_CP: Percentage of caregivers who agree that harsh physical punishment is an appropriate means of discipline to control children in the home or at school	605	79.4 [72.8 – 84.7]	78.8 [48.4 – 93.6]	79.4 [73.3 – 84.4]
OVC_MONEY: Percentage of households able to access money to pay for unexpected household expenses	443	65.9 [59.4 – 71.9]	87.5 [69.6 – 95.5]	64.5 [57.7 – 70.7]
Nigeria-Specific Indicators				
OVC_NG1: Percentage of households that have attained food security in the last 3 months	605	71.3 [65.4 – 76.5]	47.4 [23.7 – 72.4]	72.6 [66.7 – 77.7]
OVC_NG2: Proportion of children and caregivers provided with adequate shelter	605	42.9 [33.3 – 53.2]	57.9 [32.9 – 79.4]	42.2 [31.4 – 53.8]
OVC_NG3: Percentage of children having access to basic healthcare services	2,340	76.0 [68.2 – 82.4]	76.1 [67.0 – 83.3]	76.1 [68.5 – 81.9]
OVC_NG4: Percentage of children who went to bed without food in the last 4 weeks	2,340	57.6 [49.3 – 65.4]	59.3 [50.1 – 67.9]	55.8 [46.8 – 64.4]

Source: MEASURE Evaluation, 2014

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 monitoring, evaluation, and reporting (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 within 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 a survey 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 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 peculiar 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; Tagurun, 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, 2013). 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, a number of 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, and community-based organizations (CBOs). With the exception of the Mobile Transmission Network Foundation, the contribution of the private sector has been very limited. According to the 2015 annual progress report 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 children living with HIV; 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 control the HIV/AIDS epidemic by scaling up the enhancement of HIV case detection, linkage to care and treatment, and viral load assessments in local government areas (LGAs). Community-based OVC programs recruit referral coordinators to facilitate access and adherence

to antiretroviral therapy (ART) for children and caregivers living with HIV. 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 OVC living with HIV 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) AIDS Prevention Initiative (APIN) Public Health Initiatives, Ltd/Gte
2) Association for Reproductive and Family Health (ARFH)/Local Partners for Orphans and Vulnerable Children (LOPIN)
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 program 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: CRS/SMILE. The CRS/SMILE survey was implemented by MEASURE Evaluation in partnership with the Centre 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 cofacilitating 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 in Open Data Kit, 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.

CRS/SMILE 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 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 CRS/SMILE.

CRS/SMILE Project

This report presents the findings from the survey of MER OVC essential indicators from one of the five selected IPs—CRS/SMILE. CRS is a nongovernmental organization registered with the Nigerian Corporate Affairs Commission and has worked at different projects in more than 26 states of Nigeria and the Federal Capital Territory (FCT). SMILE is designed to scale up care and support services for OVC in Benue, Kogi, Edo, and Nasarawa States and the FCT. SMILE seeks to improve the well-being of 600,000 Vulnerable Children (VC) and 150,000 caregivers. It is being implemented through an umbrella grants mechanism (UGM) whereby civil society organizations (CSOs) receive subgrants to support capacity strengthening and OVC program implementation at the community level. The project is currently working with over 40 CSOs in the FCT and the four focal states (Benue, Kogi, Edo, and Nasarawa). SMILE also strengthens the Nigerian VC response by working at the state level to enhance the coordination and monitoring capacity of the five State Ministries of Women Affairs and Social Development (SMWASD) and Social Welfare Departments of targeted LGAs. In addition, SMILE facilitates CSOs' collaboration with communities to increase access to integrated and comprehensive services for vulnerable children and households, with a focus on household economic strengthening (HES), quality nutrition and food security services, and increased access to HIV and TB services (in Benue State).

The SMILE project, through its partnering CSOs, recruits OVC through a combination of approaches, including referrals from focal communities, referrals from HIV/AIDS support groups, and recruitment at

the community level. The national standards serve as a guide for targeting and identifying vulnerable household and children. Criteria for considering a household as vulnerable include:

- Caregiver/household head is living with HIV
- Child is living with HIV
- Maternal orphan
- Paternal orphan
- Double orphan
- Child laborer
- Street child
- Child with disability
- Child lives in a child-headed household
- Child lives with a chronically ill parent

A key component of the CRS programming approach is integration; the project "integrates activities in health, education, nutrition, microfinance and protection, for a truly holistic approach to helping Nigeria's most vulnerable children and the people who care for them." SMILE has an electronic data collection tool called the National OVC Management Information System (NOMIS), which was developed in response to the growing number of VC's being enrolled. NOMIS supports effective programming and is a platform for tracking OVC-related services.

STUDY DESIGN AND METHODS

Design Overview of the CRS/SMILE Survey

The survey design used a descriptive cross-sectional approach, assessing the well-being of vulnerable households, caregivers, and children, enrolled in the CRS/SMILE project as one of the five OVC PEPFAR projects. These projects are diverse in terms of types of services provided and existence of previous projects.

We sought information about two beneficiary groups of the CRS/SMILE 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 CRS/SMILE's 15 CBOs that are working in the scale-up LGAs spread across the two states of the country (Benue and Nasarawa States) and FCT, with the expectation that the project will still be active in the selected sites by the time the follow-up survey would 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) outcome measures on caregivers and OVC well-being (caregiver's knowledge of child's HIV status, possession of a birth certificate for child, child's school attendance, progression in school, if receiving project services); (3) attitudes of the caregiver towards physical punishment; and (4) stimulating activities with children below age five years. All children ages 6–59 months from the sampled households were assessed for malnutrition using the mid-upper arm circumference (MUAC) measurement.

Table 2. PEPFAR MER essential survey indicators for OVC programs (MEASURE Evaluation, 2014)

No.	Outcome Indicator	Rationale for Inclusion	CRS/SMILE 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.	HIV/AIDS education mainstreamed into caregivers' savings and internal lending communities support group, adolescent/youth club meetings, and the conduct of targeted/index patient HIV testing services focusing on enrolled SMILE beneficiaries.
OVC_NUT	Percent of children (aged 0–17 years) 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.	• Nutritional assessment, counseling, and support, with food provision for severely malnourished <5 children using the emergency funds • Nutrition education, water, hygiene and sanitation information, and provision of infant and young child feeding information to caregivers in the households helps in reducing infant mortality and morbidity amongst children 6–59 months. • Home gardening and food demonstration supports diet diversity in the household for child's health and development. • Referral to health facilities and other organizations in the community for the nutrition intervention SMILE is not providing
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.	• WASH (water, sanitation, and hygiene) is provided on the project through the community platforms of caregivers and kids and youth clubs, and during home visits by trained community volunteers. The intervention is meant to prevent minor illnesses and the spread of waterborne diseases. • The project also supports beneficiaries to access

No.	Outcome Indicator	Rationale for Inclusion	CRS/SMILE Program Component that Contributes to the Indicator
			treatments/medical care (also OIs for PLHIV) through emergency/discretionary funds made available to all CSOs.
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 other essential services and opportunities, including health, education, legal services, and legal employment when they grow older.	• SMILE, through its CSOs, educates caregivers and children on the rights of children during caregivers' fora and kid and youth clubs in project communities. SMILE also provides caregivers with linkages and referrals to National Population Commission to access birth registration certificates for their children.
OVC_SCHATT	Percent of children (aged 5–17 years) regularly attending school	Despite being important in its own right, efforts to keep children in school have positive impacts on HIV prevention.	SMILE educational activities to improve school attendance include but are not limited to: educational awareness and sensitization (advocacy) with government agencies, monthly school visits by community volunteers, school performance assessments done quarterly by school teachers, fee waivers, and school enrollment (through block grants).
OVC_PRGS	Percent of children (aged 5–17 years) who progressed in school during the last year	Studies in many countries have linked higher education levels with increased AIDS awareness and knowledge, higher rates of contraceptive use, and greater communication regarding HIV prevention among partners.	Monthly school visits and quarterly school performance assessment using the SMILE education performance assessment form are activities conducted by SMILE to support children's school attendance, retention, and progression. Caregivers who benefitted from the SMILE cash transfer also supported their children's school needs and fees payment.

No.	Outcome Indicator	Rationale for Inclusion	CRS/SMILE Program Component that Contributes to the 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	Early childhood cognitive, social, and physical stimulation is essential for promotion of long-term learning, growth, and health.	Psychosocial support is provided to all beneficiaries of the project communities using a standard manual for both kids' club meetings and caregiver fora to receive the social, emotional, mental, and spiritual support needed to achieve their optimal potential. The kids' club meetings are based on age-appropriate classification of 2–3 years, 4–6 years, 6–12 years, and 13–17 years. The ages from 13 to 17 are taught sessions on gender and life skills. During the caregiver fora, parenting, gender, and life support skills are taught to caregivers to support their children in early stimulating activities.
OVC_CP	Percent of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control in the home or school	Reducing harsh physical discipline, violence, and abuse against children is a PEPFAR priority. Perceptions of physical discipline have been linked to actual use of physical discipline against children.	SMILE uses monthly caregiver fora and home visits to provide parenting skills to caregivers using standardized manuals. Each caregiver is taken through a 14-module curriculum during which they acquire skills on how to care for and discipline their children using appropriate methods.
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.	• Establishment/formation of savings and internal lending communities • Provision of cash transfers for food consumption and business expansion • Linkage to microfinance institutions, cooperatives, and organizations for soft loans • Enrollment into vocational skills trainings and provision of start-up kits for successful trainees

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 used during CRS/SMILE's survey were created in English but were also translated into Hausa, the commonly spoken language in Benue and Nasarawa States. English and Hausa were the two languages used to administer the interviews. Translations aimed to maintain the core meaning of the questions rather than translating the question verbatim. The survey tools (questionnaire and consent forms) were pretested for two days (November 4–5) in Lagos with a small group of 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 caregivers 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 decided that the field staff should interview caregivers of such children but not finalize the questionnaire, pending availability of the 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

CRS/SMILE has 15 CBOs working in 101 communities that are spread across the 14 scale-up LGAs in the FCT, Benue, and Nasarawa States.[1] Only 55 of these communities were randomly selected and used for this survey. 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 lists of beneficiaries.

Based on the large number of discrepancies found in the initial assessment of the beneficiary database, the survey team decided to reconstruct the household beneficiary listing from records maintained by the local CBOs rather than from the CRS/SMILE beneficiary listing. The survey team worked directly with the local CBO IPs and their community volunteers in the 55 communities (clusters) to construct an up-to-date list of households of beneficiaries residing in the focal communities. The updated lists were obtained from the CBO beneficiary lists maintained and recorded by the community volunteers in notebooks or sheets of paper printed from the office. Survey staff then verified this list by going through each and every household listed with the volunteers' beneficiary register to confirm the list. There was no photocopy machine in the community during fieldwork, so staff worked directly with the notebooks or paper lists of the community volunteers. First, they renumbered these lists so as to skip the several nonactive beneficiaries. Then, using the random number generator application on the Android phone, the data auditor selected the targeted number of households to be interviewed at that community. It is important that a neutral person like the data auditor be the one to do the random selection because he/she will not do the data collection. Once selected, the data auditor also keeps a copy of the names of

[1] The 14 scale LGAs are about 29% of the total number of the LGAs (48) to which SMILE has provided OVC services across the five focus states (Benue, Nasarawa, FCT, Edo, and Kogi) from project inception to date.

selected households to facilitate easy tracking when the data from the selected household hit the server. It was communicated to the supervisor that any data that did not come from a household would be rejected.

It was rare to have more than one community volunteer operating in a community, but when it happened, the supervisor and data auditor called all community volunteers to bring their beneficiary lists. They renumbered in pencil very lightly on the side of the register for the first register, continued numbering with the second, then the third, until they finished renumbering all beneficiaries in all registers. The updated sampling frame included a total of 9,052 households from 55 communities.

Selection of Households

Eleven households were randomly selected from each of the 55 CRS/SMILE randomly selected communities (clusters), giving a total sample size of 605 households to be interviewed. However, the sample size was adjusted to 638 to allow for nonresponse. 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 (with round one prevalence assumed to be near 50%) with 95 percent confidence (see sample size calculation formula in Appendix D).

We used the assistance of CRS/SMILE's community volunteers who worked in the 55 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. It also meant that interviews started immediately after random selection of eligible households and not with a "cold" sample frame. The verification exercise revealed a wide variation of the number of verified households per each community. The average number of verified households in a community was 165, with a minimum of 8 and a maximum of 1,111. After the systematic verification of households/caregivers, the data auditor and the supervisors then visited each selected community and, using a random number generator application for a smartphone, randomly selected 11 households from the verified households in each of the 55 communities (clusters), yielding a total sample size of 605. To achieve a 638-household sample, 33 extra households were randomly selected from some of the largest communities (clusters). In cases where we found fewer than 11 verified beneficiary households, the protocol was to select all verifiable households (in this case, less than target) and then randomly select the balance as part of the next community (cluster) selection process.

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 level, the probability of selecting a beneficiary household was 1/the number of verified beneficiary households. response rate for households/caregivers was 94.8 percent (see Table 3).

Table 3. Summary of sampling plan information for CRS/SMILE

Total number of communities* (clusters) under scale-up areas	101
Number of communities (clusters) randomly selected	55
Total number of households actually verified and listed from the selected communities (clusters)	9051
Target number of households planned to be randomly selected per community (cluster)	11
Total number of households randomly selected	638
Total number of caregivers not available after 3 attempts	13
Number of caregivers who refused an interview	10
Number of households with no children under age 18 years	10
Number of households with completed interviews and in the cleaned data set	605
Survey household/caregiver response rate	94.8%

*A community is the primary sampling unit defined on the basis of the area where a CBO provides services within an LGA.

Fieldwork and Quality Assurance Procedures

The training for fieldwork was conducted in Abuja from November 15–18, 2016. The fieldwork was implemented November 28–December 20, 2016 in FCT, Benue, and Nasarawa States. For this survey, 21 interviewers, three supervisors, three data auditors, and one quality assurance officer participated in the fieldwork. Each supervisor managed a team of about seven data collectors and was assisted by one data auditor each.

Data were collected using Android phones with the SurveyCTO application. The smartphones were preprogrammed with questionnaires that were linked wirelessly to a cloud server. Data were transmitted to the cloud server based in CRERD headquarters on a daily basis. The smartphones were preprogrammed to enforce completeness of the data, correct skips of questions, ensure logical and consistent data entry, and automatically check the total number of 0- to 17-year-olds in the households.

Supervisors and data auditors went to the field to initiate work there. At each selected community, they met with the community volunteer and went over the list of selected households in the community to verify which beneficiary households were present for interview that particular day. Using the list of selected households, the community volunteers assisted in identifying the household, then stepped back and allowed the interviewer to conduct the interview in private with the caregiver. Supervisors and data auditors checked the data quality. Supervisors checked the work of the data collectors in the field to ensure that the correct caregivers had been interviewed, while data auditors were critical to ensuring the quality of downloaded data. Each data auditor downloaded the survey data from the 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.

Interview duration was checked, and interviews that took less than 20 minutes were flagged for verification. Individual data collectors' work was also checked for typing errors and, when necessary, for reversing the digits in age numbers, e.g., entering 25 as 52. When errors were identified, data collectors were called by phone from the office to either correct the errors immediately or return to the household to redo an interview, if necessary. At the end of the survey, the final data set was exported in a comma-separated values format for analysis.

Analysis Methods

All of the essential survey indicator outcome measures are expressed as proportions of appropriate denominators and are disaggregated by sex and age in accordance 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 the sample, since the sampling did not use probability proportional-to-population size (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 comma-separated values 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 638 randomly selected caregivers in the CRS/SMILE project coverage communities in FCT, Benue, and Nasarawa States that were invited to participate in this survey; 605 caregivers responded, yielding a 98.4 percent response rate. The mean age was 36.4 years (SD=11.5, minimum=16, maximum=86), with 47 percent of caregivers ages 31–50 years. The survey sample consisted of 575 females (95%) and 30 (5%) males. Individuals with no formal education or Islamiyah-only education constituted the highest category of the sampled caregivers (38%), while about 30 percent had only primary school education, and another 33 percent had at least secondary school education.

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

Variable	All Primary Caregivers (N=605)		
Mean Age	**36.4 years (standard deviation=11.5)**		
	Unweighted n	(%)	Weighted %
Age Group			
< 18 years	1	0.2	0.0
18–30 years	202	33.4	38.3
31–50 years	327	54.1	47.3
51+ years	75	12.4	14.2
Sex			
Female	575	95.0	94.9
Male	30	5.0	5.1
Education Completed			
No education/Islamiyah	230	38.0	37.9
Primary	187	30.9	29.2
Secondary or higher	188	31.1	32.9

A total of 2,340 children were listed among the 605 households, which translates to an average of approximately four children per household/caregiver. The caregivers were asked about all the 2,340 children ages 0–17 during the survey. The sex and age distribution of these children is given in Table 5. Overall, about 5 percent of the children were below age one year (0–5 months and 6–11 months), while about 59 percent were ages 1–9 years, and 37 percent above 10 years. There was a slight preponderance of females (1,224; 51%) compared to males (1,116; 49%) among the children cared for by the 605 caregivers.

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

Variable	All Children (N=2,340)		Female Children (N=1,116)		Male Children (N=1,224)	
Mean Age	**7.9 years (±4.7)**		**8.1 years (±4.7)**		**7.6 years (±4.7)**	
Age Group	**Unweighted n (%)**	**Weighted (%)**	**Unweighted n (%)**	**Weighted (%)**	**Unweighted n (%)**	**Weighted (%)**
0–5 months	54 (2.3)	2.5	23 (2.1)	2.2	31 (2.5)	2.8
6–1 months	53 (2.2)	2.0	22 (2.0)	2.0	31 (2.5)	2.2
1–4 years	554 (23.7)	24.0	265 (23.7)	23.3	289 (23.6)	24.6
5–9 years	776 (33.3)	34.6	358 (32.1)	33.1	418 (34.1)	35.9
10–14 years	605 (25.9)	25.5	306 (27.4)	28.3	299 (24.4)	22.8
15–17 years	298 (12.7)	11.2	142 (12.7)	11.0	156 (12.7)	11.5

Participation and Services Received from CRS/SMILE

In the MER Survey, each selected beneficiary household had one caregiver as the respondent. Caregivers were asked about services that their households had ever received from CRS/SMILE. Specifically, they were asked about healthcare, educational support, vocational training, and household economic strengthening. With regard to each of these services, 6 shows that about 56 percent of caregivers reported that their households had received services from the CRS/SMILE 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.[2] Healthcare services and household economic strengthening were the categories of support most reported by caregivers. Some 79 percent of caregivers reported ever receiving healthcare services while approximately 34 percent reported receiving household economic strengthening. About 31 percent of caregivers reported that one or more children under their care had ever received some form of support for her/his education and 23 percent mentioned vocational training.

[2] 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 6. Percentage of caregivers according to whether their household has ever received services from CRS/SMILE

Variable	All Caregivers (N=605)			
	Unweighted	Weighted	95% Confidence Interval	
	(n) %	%	Lower Limit	Upper Limit
Ever received a service?				
Never received any support	(262) 43.3	45.3	37.2	53.6
Received at least one support	(343) 56.7	54.7	46.4	62.8

Table 7. Percentage of caregivers whose household has benefitted from CRS/SMILE services, by type of service

Variable	All Caregivers (N=343)			
	Unweighted	Weighted	Confidence Interval	
	(n) %	%	Lower Limit	Upper Limit
Activities of CBO*				
Healthcare	(281) 81.9	79.1	71.6	85.0
Educational training	(107) 31.2	31.5	22.5	42.3
Vocational training	(67) 19.5	22.6	14.2	34.1
Household economic strengthening	(124) 36.2	43.3	34.2	52.8

*Multiple responses allowed

Table 8 presents the percentage distribution of caregivers who indicated how many types of these services their households had ever received. Among those whose households had received a service, 53 percent had received one type of service, 24 percent had received two, 15 percent had received three, and only 8 percent had ever received all of the four highlighted types of services, with an average of almost two services per household. The majority (65%) of those who were enrolled on the support program had been receiving the services for less than one year, with about a quarter reporting that they had been receiving the service for one to two years.

Table 8. Percentage of caregivers who have benefitted from a certain number of activities from CBOs

Variable	All Caregivers* (N=343) Who Had Received at Least One Service			
	Unweighted	Weighted	95% Confidence Interval	
	(n) %	%	Lower Limit	Upper Limit
Activities of CBO				
1 service	(206) 60.1	53.4	42.7	63.7
2 services	(71) 20.7	24.2	18.7	30.8
3 services	(33) 9.6	14.9	7.8	26.7
4 services	(33) 9.6	7.5	2.9	17.9
Mean Number of Services (SD)	1.69 (0.99)	1.77 (0.96)		
Time since households started receiving activities from CBO (among those who received at least one type of service)				
< 1 year	(250) 72.9	64.6	47.5	78.6
1–2 years	(72) 21.0	27.4	16.6	41.5
> 2 years	(21) 6.1	8.1	4.5	13.9

* Of the 605 caregivers, 343 had ever received a minimum of one service. Those 343 are used in the denominator for this indicator.

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 children ages 0–17 under her/his care. Based on this information, nine EIS and four Nigerian-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 her/his care if the child had ever been tested for HIV, if they had been tested in the last six months, and if they knew the results of the HIV test (Table 9). Caregivers reported knowledge of HIV status of only 48 percent of the 2340 children under their care. Knowledge of HIV status was higher for male compared to female children (49% 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 relationship between these variables was statistically significant $X^2_{(1, N=2340)} = 10.75$, $p = 0.0130$. Table 9 indicates that caregivers' knowledge about the HIV status of the children under their care is positively associated with the age of the child, among both male and female children.

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

Variable	All Children (N=2,340)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	661	(321) 48.6	40.7	31.5	50.5
5–9 years	776	(403) 51.9	46.1	35.0	57.7
10–14 years	605	(297) 49.1	48.9	37.9	60.0
15–17 years	298	(160) 53.7	50.3	37.7	62.9
Sex of Child					
Male	1224	(642) 52.5	49.0	37.7	60.4
Female	1116	(539) 48.3	42.3	33.1	52.0
All Children	2340	(1181) 50.4	45.7	35.7	56.1
	Male Children (N=1,224)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	351	(176) 50.1	45.8	34.0	58.2
5–9 years	418	(225) 53.8	49.5	37.0	62.0
10–14 years	299	(153) 51.2	50.3	37.7	63.0
15–17 years	156	(88) 56.4	53.2	37.6	68.3
All Male Children	**1224**	**(642) 52.5**	**49.0**	**37.7**	**60.4**
	Female Children (N=1,116)				
	Unweighted		Weighted	95% Confidence Interval	
	N	n %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	310	(145) 46.8	34.8	26.0	44.8
5–9 years	358	(178) 49.7	42.3	31.6	53.7
10–14 years	306	(144) 47.1	47.7	36.6	59.1
15–17 years	142	(72) 50.7	47.1	34.2	60.4
All Female Children	**1116**	**(539) 48.3**	**42.3**	**33.1**	**52.0**

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

According to the MER OVC guidance, a child is considered undernourished if the measurement of their left mid-upper arm circumference is below 12.5 cm. Table 10 presents the percentage of children below five years (6–59 months) of age who were undernourished. Overall, 5 percent of 605 children below the age of five years were undernourished. Undernourishment was more likely to be recorded among 6- to 11-month-old children (10%) than among 12- to 59-month-old children (4%). Male children were more likely to be undernourished (4.7%) than female children (4.5%). However, statistical test shows that the difference is not significant $X^2_{(1, N=2340)} = 0.9$, $p = 0.948$.

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

Variable	All Children (N=605)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
6–11 months	53	(8) 15.1	10.2	4.1	23.1
12–59 months	552	(17) 3.1	4.1	2.4	6.8
Sex					
Male	319	(14) 4.4	4.7	2.2	9.6
Female	286	(11) 3.9	4.5	2.2	9.0
All Children < 5 Years	**605**	**(25) 4.1**	**4.6**	**2.8**	**7.4**
	Male Children (N=319)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	(%)	Lower Limit	Upper Limit
Age Group					
6–11 months	31	(6) 19.4	14.0	5.1	32.4
12–59 months	288	(8) 2.8	3.8	1.8	8.1
All Male Children < 5 Years	**319**	**(14) 4.4**	**4.7**	**2.2**	**9.6**
	Female Children (N=286)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
6–11 months	22	(2) 9.1	5.9	1.4	22.4
12–59 months	264	(9) 3.4	4.4	2.0	9.4
All Female Children < 5 Years	**286**	**(11) 3.9**	**4.5**	**2.2**	**9.0**

* MUAC measurements were taken for 605 of the 607 children ages 6 months to 4 years. Two were absent for an extended period.

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 ages 0–17 years included in this survey, her/his primary caregiver was asked if the child had been too sick to participate in daily activities within the last two weeks prior to the survey. Caregivers reported that 36 percent of children were too sick to participate in daily activities at some point within the two weeks prior to the survey (see Table 11). Sickness within the past two weeks was more prevalent among 0- to 4-year-olds compared to older age groups (5–17 years) (p=0.807). About 38 percent of male, and about 35 percent of female children were reported as being 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, $X^2_{(1, N=2340)} = 2.59$, $p=0.428$.

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

Variable	All Children (N=2,340)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age of Children					
0–4 years	661	(235) 35.6	37.1	29.7	45.1
5–9 years	776	(246) 31.7	36.6	30.4	43.3
10–14 years	605	(190) 31.4	36.6	29.5	44.3
15–17 years	298	(85) 28.5	32.2	23.8	41.9
Sex of Child					
Male	1,224	(397) 32.4	37.8	32.0	44.0
Female	1,116	(359) 32.2	34.6	28.4	41.4
All Children	**2,340**	**(756) 32.3**	**36.2**	**31.6**	**41.2**
	Male Children (N=1,224)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age of Children					
0–4 years	351	(120) 34.2	37.5	31.0	44.5
5–9 years	418	(141) 33.7	40.8	33.1	49.0
10–14 years	299	(91) 30.4	36.7	26.2	48.6
15–17 years	156	(45) 28.9	31.4	22.6	41.8
All Male Children	**1,224**	**(397) 32.4**	**37.8**	**32.0**	**44.0**
	Female Children (N=1,116)				
	Unweighted		Weighted	95% Confidence Interval	
Age of Children					
0–4 years	310	(115) 37.1	36.7	26.2	48.6
5–9 years	358	(105) 29.3	31.8	23.3	41.8
10–14 years	306	(99) 32.4	36.5	29.8	43.7
15–17 years	142	(40) 28.2	33.0	20.9	47.8
All Female Children	**1,116**	**(359) 32.2**	**34.6**	**28.4**	**41.4**

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

One key PEPFAR indicator for OVC programming is the number of children in possession of a birth certificate. Overall, about 56 percent of all 2,340 children were reported to have been issued with 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 certificate, they could not do so for 39 percent of those initially reported to have a birth certificate **(see Appendix B, Table B2)**.

Tables 12 presents the distribution of children whose birth certificates were verified to exist by the interviewer. Overall, only about 17 percent of all 2,340 children were reported to have been issued a birth certificate that was viewed by the data collector. Seventeen percent of male children and 18 percent of female children had a birth certificate. Except for children ages 0–4 years, less than 20 percent of children in other age groups had birth certificates that were shown to our staff. For children ages 0–4 years, 25 percent of females compared to 22 percent of males had a birth certificate that was verified. However, for children ages 15–17 years, a higher proportion of males (13%) had a verified birth certificate compared to females (11%).

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

Variable	All Children (N=2,340)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	661	(135) 20.4	23.1	15.8	32.5
5–9 years	776	(123) 15.9	17.6	10.9	27.2
10–14 years	605	(85) 14.1	12.4	8.2	18.4
15–17 years	298	(35) 11.7	12.3	7.3	20.0
Sex of Child					
Male	1,224	(200) 16.3	17.7	12.0	25.4
Female	1,116	(178) 16.0	16.8	11.8	23.5
All Children	**2,340**	**(378) 16.2**	**17.3**	**12.0**	**24.2**
	Male Children (N=1,224)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	351	(74) 21.1	21.9	14.6	31.3
5–9 years	418	(70) 16.8	17.5	10.9	26.9
10–14 years	299	(39) 13.0	11.1	6.4	18.6
15–17 years	156	(17) 10.9	13.4	6.9	24.4
All Male Children	**1,224**	**(200) 16.3**	**16.8**	**11.8**	**23.5**
	Female Children (N=1,116)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	310	(61) 19.7	24.6	16.1	35.6
5–9 years	358	(53) 14.8	17.7	10.4	28.4
10–14 years	306	(46) 15.0	13.6	8.4	21.1
15–17 years	142	(18) 12.7	11.1	5.8	20.0
All Female Children	**1,116**	**(178) 16.0**	**17.7**	**12.0**	**25.4**

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 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 last school week that a child missed school for any reason. Table 13 presents the results of the combination of

the two questions related to school attendance that primary caregivers were asked about the children under their care. Overall, 56 percent of 1,295 children were regularly attending school at the time of the survey. Children ages 10–14 years constituted the category most reported to be regularly attending school (57%), while the proportion for regular school attendance was lowest for children ages 15–17 years (55%). A higher proportion of female children (60%) compared to male children (52%) were regularly attending school at the time of the survey.

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

Variable	All Children Ages 5–17 Years (N=1,295)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
5–9 years	599	(364) 60.8	55.8	47.2	64.1
10–14 years	491	(292) 59.5	56.9	48.5	64.9
15–17 years	205	(113) 55.1	51.4	37.0	65.5
Sex of Child					
Male	679	390 (57.4)	51.7	43.2	60.1
Female	616	379 (61.5)	59.7	50.5	68.2
All Children 5–17 Years	**1295**	**769 (59.4)**	**55.6**	**47.8**	**63.1**
	Male Children Ages 5–17 Years (N=679)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
5–9 years	322	(190) 59.0	50.3	41.8	58.7
10–14 years	247	(139) 56.3	53.2	42.0	64.1
15–17 years	110	(61) 55.5	53.0	35.5	69.7
All Males 5–17 Years	**679**	**(390) 57.4**	**51.7**	**43.2**	**60.1**
	Female Children Ages 5–17 Years (N=616)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
5–9 years	277	(174) 62.8	62.1	51.1	71.9
10–14 years	244	(153) 62.7	60.1	49.5	70.0
15–17 years	95	(52) 54.7	49.4	32.1	66.9
All Females 5–17 Years	**616**	**(379) 61.5**	**59.7**	**50.5**	**68.2**

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

The indicator "percentage of children who progressed in school during the last year" is a composite indicator, measured by a series of four successive questions related to school enrollment and grade in school at the time of the survey. These questions include school enrollment and grade attending at the time of the survey, and school enrollment and grade the child was in 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 were reported by the caregiver as 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 1,284 children enrolled the previous year, 91 percent progressed to a higher class, with the highest proportion of progression reported for the 10- to 14-year-olds (99%) **(p<0.01)**. Across gender, 88 percent of the 665 male children and 93 percent of 619 female children made progress by transitioning to upper classes/grades during the last academic year; the difference is statistically significant **(p=0.035)**. Further disaggregating by age and gender, results show a relatively lower progress rate among the 5- to 9-year-olds, where 22 percent of male children and 14 percent of female children did not transition to a higher class.

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

Variable	All Children Ages 5–17 Years (N=1,284)				
	Unweighted		Weighted	95% Confidence Interval	
	N	n (%)	(%)	Lower Limit	Upper Limit
Age Group					
5–9 years	536	438 (81.7)	81.7	75.9	86.4
10–14 years	511	499 (97.7)	98.7	96.8	99.5
15–17 years	237	226 (95.4)	95.6	89.3	98.2
Sex of Child					
Male	665	596 (89.6)	88.4	84.2	91.6
Female	619	567 (91.6)	92.9	89.0	95.4
All Children 5–17 Years	**1,284**	**1,163 (90.6)**	**90.6**	**87.6**	**93.0**
	Male Children Ages 5–17 Years (N=665)				
	Unweighted		Weighted	95% Confidence Interval	
	N	n (%)	(%)	Lower Limit	Upper Limit
Age Group					
5–9 years	291	232 (79.7)	77.6	70.1	83.7
10–14 years	251	246 (98.0)	99.5	98.5	99.9
15–17 years	123	118 (95.9)	94.6	85.7	98.1
All Male Children 5–17 Years	**665**	**596 (89.6)**	**88.4**	**84.2**	**91.6**
	Female Children Ages 5–17 Years (N=619)				
	Unweighted		Weighted	95% Confidence Interval	
	N	n (%)	(%)	Lower Limit	Upper Limit
Age Group					
5–9 years	245	206 (84.1)	86.3	78.1	91.7
10–14 years	260	253 (97.3)	98.1	94.3	99.4
15–17 years	114	108 (94.7)	96.6	89.7	98.9
All Female Children 5–17 Years	**619**	**567 (91.6)**	**92.8**	**89.1**	**95.4**

*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 drew things with the child.

Tables 15–17 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 661 children age less than five years, 34 percent experienced stimulating activities with a book (reading or looking at pictures), and 42 percent were told stories. The most common stimulating activity for children was being played with (91%), followed by being sung to (78%).

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=661)			
	Unweighted	Weighted	95% Confidence Interval	
	(n) %	(%)	Lower Limit	Upper Limit
Read books or looked at picture with	(260) 39.3	43.0	34.4	52.1
Told stories to	(329) 49.8	52.7	42.3	62.9
Sang sons to or lullabies	(535) 80.9	84.9	78.4	89.8
Played with	(614) 92.9	95.3	91.4	97.4
Counted or drew things to or with	(280) 42.4	44.0	35.2	53.2
	Male Children <5 Years n=351			
	Unweighted	Weighted	95% Confidence Interval	
	(n) %	(%)	Lower Limit	Upper Limit
Stimulating activities				
Read books or looked at picture with	(135) 38.5	40.6	31.9	49.9
Told stories to	(174) 49.6	52.5	41.7	63.1
Sang sons to or lullabies	(287) 81.8	85.7	74.9	92.4
Played with	(325) 92.6	95.4	89.1	98.2
Counted or drew things to or with	(144) 41.0	42.8	33.6	52.5
	Female Children <5 Years n=310			
	Unweighted	Weighted	95% Confidence Interval	
	(n) %	(%)	Lower Limit	Upper Limit
Stimulating Activities				
Read books or looked at picture with	(125) 40.3	45.7	34.7	57.1
Told stories to	(155) 50.0	52.9	39.1	66.2
Sang sons to or lullabies	(248) 80.0	84.0	75.7	89.9
Played with	(289) 93.2	95.1	89.5	97.8
Counted or drew things to or with	(136) 43.9	45.4	34.5	56.7

*Multiple activities allowed per child

Table 16 shows the distribution of children less than five years of age by number of type of stimulating activities the children 0–4 years were engaged in. Overall, slightly more than a quarter (27%) of the children had been engaged in all five stimulating activities—26 percent among female children and 28 percent among male children. About 4 percent of both girl children and boy children did not engage 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=661)		Female Children < 5 Years (N=310)		Male Children < 5 Years (N=351)	
Number of Activities	Unweighted (n) %	Weighted %	Unweighted (n) %	Weighted %	Unweighted (n) %	Weighted %
No activities	(40) 6.1	4.4	(19) 6.1	4.6	(21) 6.0	4.3
1 activity	(58) 8.8	6.2	(32) 10.3	7.9	(26) 7.4	4.7
2 activities	(164) 24.8	26.4	(64) 20.7	21.5	(100) 28.5	30.7
3 activities	(130) 19.7	18.3	(63) 20.3	18.2	(67) 19.1	18.4
4 activities	(103) 15.6	17.6	(56) 18.1	21.4	(47) 13.4	14.1
5 activities	(166) 25.1	27.1	(76) 24.5	26.3	(90) 25.6	27.9

The proportion of children who engaged in at least one stimulating activity is presented in Table 17. Overall among the 661 children below age five, 96 percent were reported to have been engaged in at least one stimulating activity. Even though high proportions of children within various age groups were engaged in at least one stimulating activity, the proportion increased progressively with age of the child. Across gender, 96 percent of 351 male children below the age of five years and 96 percent of their 301 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

Variable	All Children <5 years (N=661)				
	Unweighted		Weighted	95% Confidence Interval	
	N	n %	%	Lower Limit	Upper Limit
Age Group					
0–11 months	107	(89) 83.2	84.6	68.7	93.2
12–23 months	103	(96) 93.2	94.8	82.2	98.6
2–4 years	451	(436) 96.7	98.4	96.0	99.4
Sex of Child					
Male	351	(330) 94.0	95.8	89.3	98.4
Female	310	(291) 93.9	95.4	89.9	98.0
All Children < 5 Years	**661**	**(621) 94.0**	**95.6**	**91.9**	**97.6**
	Male Children <5 Years (N=351)				
	Unweighted		Weighted	95% Confidence Interval	
	N	n %	%	Lower Limit	Upper Limit
Age Group					
0–11 months	62	(51) 82.3	85.4	66.8	94.4
12–23 months	59	(55) 93.2	93.5	74.2	98.7
2–4 years	230	(224) 97.4	99.2	97.4	99.7
All Male Children < 5 years	**351**	**(330) 94.0**	**95.8**	**89.3**	**98.4**
	Female Children <5 Years (N=310)				
	Unweighted		Weighted	95% Confidence Interval	
	N	n %	%	Lower Limit	Upper Limit
Child Younger than 5					
0–11 months	45	(38) 84.4	83.7	57.7	95.1
12–23 months	44	(41) 93.2	97.2	88.3	99.4
2–4 years	221	(212) 95.9	97.6	93.2	99.2
All Female Children < 5 Years	**310**	**(291) 93.9**	**95.4**	**89.9**	**98.0**

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

The indicator "percentage 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, 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, 79 percent of the caregivers were in support of harsh punishment as appropriate for OVC either at home or in school. Across age, 80 percent of those in the 31- to 50-year age group compared with 79 percent of those 50 years or more and 79 percent of those ages 18–30 years approved of harsh punishment as appropriate for OVC either at home or in school. Across sex, 79 percent of both females and males approved of harsh punishment.

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 school

Variable	All Caregivers (N=605)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group[1]					
<18 years	1	(1) 100.0	100.0	-	-
18–30 years	202	(147) 72.7	78.6	69.9	85.3
31–50 years	327	(244) 74.6	80.0	72.5	85.9
50+ years	75	(55) 73.3	79.3	65.4	88.6
Sex					
Male	30	(24) 80.0	78.8	48.4	93.6
Female	575	(423) 73.6	79.4	73.3	84.4
All Caregivers	**605**	**(447) 73.9**	**79.4**	**72.8**	**84.7**

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

The ability of households to access funds for unexpected household expenses reflects issues around vulnerability and a measure of household resilience to economic shock. About 73 percent of households reported that they had recently experienced an unexpected need. However, only 66 percent of all households exposed to such shock were able to access money to meet such expenses. Within the age groups, 62 percent of caregivers over 50 years compared with 66 percent of those 31–50 years and 67 percent of those 18–30 years were able to access money for unexpected household expenses. Across sex, 65 percent of females compared with a higher 88 percent of males 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

Variable	All Caregivers* (N=443)				
	Unweighted		Weighted	95% Confidence Interval	
	N	n (%)	(%)	Lower Limit	Upper Limit
Age Group[1]					
<18 years	0	0	0	0	0
18–30 years	151	(100) 66.2	66.5	52.6	78.0
31–50 years	237	(144) 60.8	66.4	57.6	74.2
50+ years	55	(29) 52.7	62.9	41.7	88.0
Sex of Caregiver					
Male	27	(19) 70.4	87.5	69.6	95.5
Female	416	(254) 61.1	64.5	57.7	70.8
All Households	**443**	**(273) 61.6**	**65.9**	**59.4**	**71.9**

*Of the 605 caregivers, 443 (73.2%) 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 605 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. Overall, among all 605 surveyed households of caregivers, 28 percent had attained food security within the past three months, reporting that there had been no moments in those three months when the household did not have enough food to eat. About 37 percent of households with caregivers ages 18–30 years had food security, compared with 19 percent among the oldest caregivers (above 50 years). About 53 percent of male primary caregivers' households and 27 percent of female caregivers' households had attained food security.

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

Variable	All Caregivers (N=605)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
<18 years	1	(0) 0.0	0	-	-
18–30 years	202	(72) 35.6	37.0	29.9	44.8
31–50 years	327	(98) 30.0	24.8	18.5	32.4
50+ years	75	(18) 24.0	19.4	9.9	34.3
Sex of Caregiver					
Male	30	(17) 56.7	52.6	27.6	76.3
Female	575	(171) 29.7	27.4	22.3	33.3
All Households	605	(188) 31.1	28.7	23.5	34.6

OVC_NG2: Percent of Households that have adequate shelter

Table 21 presents the distribution of households that considered their dwelling units to be adequate. Overall, among all 605 caregivers, only 43 percent of caregivers considered their dwelling units to be adequate for them and their children. This report was relatively higher among male caregivers (58%) compared with their female counterparts (42%).

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

Variable	All Caregivers (N=586)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group[1]					
<18 years	1	(1) 100.0	100	-	-
18–30 years	202	(84) 41.6	41.7	28.6	56.2
31–50 years	327	(136) 41.6	43.1	35.2	51.4
50+ years	75	(33) 44.0	45.4	30.0	61.7
Sex of Caregiver					
Male	30	(14) 46.7	57.9	32.9	79.4
Female	575	(240) 41.7	42.1	31.4	53.8
All Caregivers	**605**	**(254) 42.0**	**43.0**	**33.3**	**53.2**

OVC_NG3: Percent of children with access to basic health care

Table 22 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, about three-quarters (76%) were reported to have access to primary health care during any episode of illness. Children 10–14 years (79%) were more likely to easily get healthcare compared to other age groups, while children 5–9 years (74%) were least likely to have access to basic healthcare services. Access to basic healthcare services was similar for males (76%) and females (76%).

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

Variable	All Children (N=2,340)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	661	(468) 70.8	75.7	66.8	82.9
5–9 years	776	(541) 69.7	74.1	65.7	81.1
10–14 years	605	(432) 71.4	79.2	70.4	85.9
15–17 years	298	(204) 68.5	75.0	65.9	82.2
Sex of Child					
Male	1,224	(849) 69.4	76.1	67.0	83.3
Female	1,116	(796) 71.3	75.8	68.5	81.9
All Children	**2,340**	**(1,645) 70.3**	**76.0**	**68.2**	**82.4**
	Male Children (N=1,224)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	351	(246) 70.1	74.2	63.6	82.5
5–9 years	418	(285) 68.2	74.7	64.5	82.8
10–14 years	299	(209) 69.9	79.9	68.7	87.7
15–17 years	156	(109) 69.9	77.8	66.5	86.1
All Male Children	**1,224**	**(849) 69.4**	**76.1**	**67.0**	**83.3**
	Female Children (n=1,116)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	310	(222) 71.6	77.5	68.1	84.8
5–9 years	358	(256) 71.5	73.4	64.3	80.9
10–14 years	306	(223) 72.9	78.6	70.0	85.3
15–17 years	142	(95) 66.9	71.8	58.9	81.9
All Female Children	**1,116**	**(796) 71.3**	**75.8**	**68.5**	**81.9**

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 last four weeks in the various households surveyed. Overall, 58 percent of children had slept hungry at least once in the last four weeks. Larger proportions of children in the older age-groups (at least 65%) had gone to bed without food at least once within the reference period compared with 38 percent of the children 0–4 years. Feeding in the households slightly differed by the sex of the child, with 59 percent of male children and 56 percent of 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

Variable	All Children (N=2,340)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	661	(244) 36.9	37.7	28.1	48.5
5–9 years	776	(476) 61.3	65.4	56.5	73.3
10–14 years	605	(362) 59.8	65.1	55.6	73.5
15–17 years	298	(178) 59.7	67.2	54.2	78.0
Sex of Child					
Male	1,224	(688) 56.2	59.3	50.1	67.9
Female	1,116	(572) 51.3	55.8	46.8	64.4
All Children	**2,340**	**(1,260) 53.9**	**57.6**	**49.3**	**65.4**
	Male Children (N=1,224)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	351	(129) 36.8	36.4	26.8	47.2
5–9 years	418	(270) 64.6	68.6	57.5	77.9
10–14 years	299	(190) 63.6	67.4	56.2	76.9
15–17 years	156	(99) 63.5	72.9	60.6	82.5
All Male Children	**1,224**	**(688) 56.2**	**59.3**	**50.1**	**67.9**
	Female Children (N=1,116)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group					
0–4 years	310	(115) 37.1	39.3	26.4	53.8
5–9 years	358	(206) 57.5	61.7	51.7	70.8
10–14 years	306	(172) 56.2	63.0	53.5	71.6
15–17 years	142	(79) 55.6	60.8	45.1	74.6
All Female Children	**1,116**	**(572) 51.3**	**55.8**	**46.8**	**64.4**

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, however, marginal 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

A high proportion of households (45%) had never received any services even in the past six months. These findings are unexpected given that CRS/SMILE or national response have been implemented for more than five years. It should be noted that nine out of the 14 LGAs surveyed (64%) were recruited in FY16 after a modification of SMILE project scope by USAID. These nine new scale-up LGAs were yet to commence regular OVC service delivery at the time of the study. 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 program items or services received). Further follow-up on these findings was not part of the scope of this survey. It is, however, important for CRS/SMILE service providers to follow up on these issues to verify these findings and address the gaps in channeling provision of 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, the primary caregivers knew the HIV status of less than half of the children (48%). While there is 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 closest age group (15–17), 50 percent have ever received an HIV test and their caregiver knows their result. This figure 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, as well as the figures for Nasarawa (31%) and Benue (35%) States for women ages 15–49, but lower than the figure of 54 percent for women

15–49 years in FCT. Clearly, CRS/SMILE must work to increase testing rates for children in its project areas.

Infant Nutrition

The contribution of undernutrition to child mortality stemming from fetal growth restriction, stunting, wasting, micronutrient deficiencies, and suboptimal breastfeeding has 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 5 percent of 0–17 children were undernourished, the undernourishment was more prevalent among 6- to 11-month-olds (10%) than among 12- to 59-month-old children (4%). From a life cycle perspective and according to UNCEF, 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 for CRS/SMILE to put 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 more than a third of the children (36%) in the sample were too sick to participate in daily activities It is especially important for CRS/SMILE project 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 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 is the agency 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 to 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 a critical point 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 17 percent of all 2,340 children ages 0–17 were reported to have been issued a birth certificate that was seen by the data collector. Possession of a birth certificate among children 0–4 years of age (17%) is similar to the most recent data (National Bureau of Statistics, 2011) for Benue State (10%) and Nasarawa State (14%) but lower than the figure recorded for FCT (27%). The CRS/SMILE project must try to address the reasons for these low numbers. For example, CRS/SMILE should intensify awareness-raising of the importance of birth

registration among caregivers and also ensure coordination between relevant government ministries and institutions involved in birth registration processes.

School Progression

School progression is at 91 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 (82% and 99%). While universal coverage is recommended, the CRS/SMILE project should maintain its efforts geared towards school enrollment and progression. School enrolment 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 CRS/SMILE project's strongest areas as per the findings of this survey. Overall, among the children less than five years, 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 on the children (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). Approximately four out of every five OVC caregivers in the project areas of CRS/SMILE 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 73 percent of households reported that they have recently experienced an unexpected need, and two-thirds (66%) of all households exposed to such shock were able to access money to meet such expenses. This figure, while fair, needs to be improved upon to reduce the economic volatility and strengthen safety nets for OVC households. We recommend that the CRS/SMILE Project develop mechanisms for follow-up and feedback (if not already in place) to assess what challenges are faced by these households 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 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 a particular economic strengthening activity is appropriate.

Food Security

According to the USAID multi-sectoral nutrition strategy 2014–2025, there are intrinsic linkages between HIV, food insecurity, and malnutrition. Millions of people living with HIV 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 and 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 only 29 percent of OVC households surveyed in the CRS/SMILE project communities are not food secure (58% of children went to bed at least once without food) and about 21 percent of households did not have adequate shelter. CRS/SMILE should do more research on food security among its beneficiaries in Benue, FCT, and Nasarawa States to ascertain the situation and whether the caregivers' responses aimed at obtaining more food support.

CONCLUSION

This report has presented the findings of the OVC survey among the beneficiaries of the CRS/SMILE project being implemented in scale-up LGAs within FCT, Benue, and Nasarawa 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 605 caregivers and obtained information on 2,340 orphans and vulnerable children ages 0–17 years.

One major lesson from this survey is the quality of data on OVC from IPs to CBOs and community volunteers. The electronic CRS/SMILE electronic database, was relatively accurate, though minor deviations were detected during the verification exercise. As accurate and timely data is very important for effective service delivery, there is the need for a well-structured, harmonized electronic database and consistently maintained to support data use for service provision and studies.

The findings from this survey will help the CRS/SMILE project and USAID to better understand the characteristics of vulnerable and HIV-affected households in FCT, Benue, and Nasarawa States, as well as the current state of their well-being measured by the nine essential indicators. The data collected provide the basis for revised targets by both CRS/SMILE and USAID on specific indicators (e.g., numbers of caregivers who know children's HIV testing status, number of children benefitting from early childhood 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, CRS/SMILE collects similar data on some of the indicators on a routine basis and thus, a possible next step could be to assess the comparability of measures and 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 1) Yes 2) No Food and nutritional support 1) Yes 2) No Healthcare 1) Yes 2) No Shelter and care 1) Yes 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	1) Yes 2) No	
	Educational training	1) Yes 2) No	
	Vocational training	1) Yes 2) No	
	Household economic strengthening	1) Yes 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	1) Yes 2) No	
	Health support	1) Yes 2) No	
	Nutrition education	1) Yes 2) No	
	Psychosocial support through adolescent and kids' clubs	1) Yes 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 No	1 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 No	1 2	
Q8	Do you feel that your current house/living area is adequate for you and your household?	Yes No	1 2	
Q9	Has your household been able to cover expected household expenses in the last 12 months?	Yes No	1 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 No	1 2	=>Q12
Q11	Was your household able to pay for these unexpected expenses?	Yes No	1 2	
Q12	Do you think that hitting or beating a child is an appropriate means of discipline or control in the home?	Yes No	1 2	
Q13	Do you think that hitting or beating a child is an appropriate means of discipline or control at school?	Yes No	1 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 Yes, not seen No	1 2 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 1 No 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 1 No 2	=>A9
A8	I don't want to know the results, but do you know the results of **"NAME"** test?	Yes 1 No 2	
A9	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? 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.	Yes 1 No 2	
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 No	1 2	
B2	Is **"NAME"** currently enrolled in school?	Yes No	1 2	 =>B5
B3	During the last school week, did **"NAME"** miss any school days for any reason?	Yes No	1 2	
B4	What grade/form/year is **"NAME"** in now?	Pre-primary Primary 1 Primary 2 Primary 3 Primary 4 Primary 5 Primary 6 JSS1 JSS2 JSS3 SS1 SS2 SS3 Tertiary/university	1 2 3 4 5 6 7 8 9 10 11 12 13 14	
B5	Was **"NAME"** enrolled in school during the previous school year?	Yes No	1 2	 =>B7
B6	What grade/form/year was **"NAME"** during the previous school year?	Pre-primary Primary 1 Primary 2 Primary 3 Primary 4 Primary 5	1 2 3 4 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? 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.	Yes	1	
		No	2	

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 self-medication for him/her Traditional health attendant PPMV Primary healthcare centre Secondary healthcare centre Other (Specify)_____	1 2 3 4 5 6 96	
B13	Has there been any time when **"NAME"** has not had sufficient food to eat during the last 12 months?	Yes No	1 2	
B14	Has **"NAME"** ever gone to sleep without food in the last 4 weeks	Yes No	1 2	

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

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

Please step outside and record the GPS coordinate				

APPENDIX B. SUPPLEMENTARY TABLES

Table B1. Percentage of children ages 0–17 years ever tested for HIV/AIDS

Variable	All Children (N=2,340)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	L	U
Age Group					
0–4 years	661	(372) 56.3	48.5	38.3	58.8
5–9 years	776	(462) 59.5	54.1	41.5	66.2
10–14 years	605	(348) 57.5	58.4	46.4	69.5
15–17 years	298	(189) 63.4	60.9	48.3	72.2
Sex					
Male	1,224	(745) 60.9	57.9	45.3	69.6
Female	1,116	(626) 56.1	50.6	40.8	60.4
All Children	**2,340**	**(1,371) 58.6**	**54.4**	**43.4**	**65.0**
	Male Children (N=1,224)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	L	U
Age Group					
0–4 year	351	(206) 58.7	53.2	40.3	65.7
5–9 years	418	(254) 60.8	56.8	43.5	69.2
10–14 years	299	(187) 60.9	62.1	46.5	75.6
15–17 year	156	(103) 66.0	65.2	48.7	78.7
All Male Children	**1,224**	**(745) 60.9**	**57.9**	**45.3**	**69.6**
	Female Children (N=1,116)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	(%)	L	U
Age Group					
0–4 years	310	(166) 53.6	43.3	33.5	53.6
5–9 years	358	(208) 58.1	51.0	38.1	63.7
10–14 years	306	(166) 54.3	55.2	44.6	65.4
15–17 years	142	(86) 60.6	56.1	43.4	68.1
All Female Children	**1,116**	**(626) 56.1**	**50.6**	**40.8**	**60.4**

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

Variable	All Children (N=2340)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age of Children					
0–4 years	661	(227) 34.3	36.8	29.2	45.2
5–9 years	776	(263) 33.9	36.0	27.9	44.9
10–14 years	605	(226) 37.4	42.4	31.6	54.0
15–17 years	298	(116) 38.9	41.3	29.7	54.0
Sex of Child					
Male	1,224	(433) 35.4	39.7	32.1	47.8
Female	1,116	(399) 35.8	37.2	29.3	45.8
Total	2,340	(832) 35.6	38.5	31.1	46.4
	Male Children (N=1,224)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age of Children					
0–4	351	(127) 36.2	40.1	31.8	49.0
5–9	415	(138) 33.0	35.3	26.6	44.9
10–14	299	(107) 35.8	44.6	29.1	61.3
15–17	156	(61) 39.1	42.6	29.4	56.9
All Male Children	**1,224**	**(433) 35.4**	**39.7**	**32.1**	**47.8**
	Female Children (N=1,116)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age of Children					
0–4 years	310	(100) 32.3	33.1	24.1	43.6
5–9 years	358	(125) 34.9	36.8	28.1	46.6
10–14 years	306	(119) 38.9	40.5	31.3	50.4
15–17 years	142	(55) 38.7	40.0	26.7	54.8
All Female Children	**1,116**	**(399) 35.8**	**37.2**	**29.3**	**45.8**

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

Variable	All Children (N=2,340)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	(%)	Lower Limit	Upper Limit
Age Group					
0–4 years	661	(362) 54.8	60.0	51.0	68.3
5–9 years	776	(386) 49.7	53.6	41.4	65.4
10–14 years	605	(311) 51.4	54.8	42.7	66.3
15–17 years	298	(151) 50.7	53.6	40.6	66.2
Sex of Child					
Male	1,224	(633) 51.7	56.5	46.9	65.7
Female	1,116	(577) 51.7	54.9	43.6	65.7
All Children	2,340	(1,210) 51.7	55.7	45.5	65.5
	Male Children (N=1,224)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	(%)	Lower Limit	Upper Limit
Age Group					
0–4 years	351	(201) 57.3	62.0	53.5	69.7
5–9 years	418	(208) 49.8	52.7	41.6	63.6
10–14 years	299	(146) 48.8	55.7	41.2	69.3
15–17 years	156	(78) 50.0	56.0	41.4	69.6
All Male Children	**1,224**	**(633) 51.7**	**56.5**	**46.9**	**65.7**
	Female Children (N=1,116)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	(%)	Lower Limit	Upper Limit
Age Group					
0–4 years	310	(161) 51.9	57.7	46.9	67.9
5–9 years	358	(178) 49.7	54.6	39.9	68.4
10–14 years	306	(165) 53.9	54.0	41.3	66.2
15–17 years	142	(73) 51.4	51.0	36.5	65.4
All Female Children	**1,116**	**(577) 51.7**	**54.9**	**43.6**	**65.7**

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

Age Group	All Children (N=1,679)			Female Children (N=806)			Male Children (N=873)		
	N	Unweighted (n) %	Weighted %	N	Unweighted (n) %	Weighted %	N	Unweighted (n) %	Weighted %
5–9 years	776	(599) 77.2	78.4	358	(277) 77.4	78.6	418	(322) 77.0	78.2
10–14 years	605	(491) 81.2	81.9	306	(244) 79.7	80.4	299	(247) 82.6	83.6
15–17 years	298	(205) 68.8	69.1	142	(95) 66.9	65.7	156	(110) 70.5	72.1
Overall (5–17 years)	**1,679**	**(1,295) 77.1**	**78.2**	**806**	**(616) 76.4**	**77.4**	**873**	**(679) 77.8**	**79.0**

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

Variable	All Caregivers[1] (N=605)				
	Unweighted		Weighted	95% Confidence Interval	
	N	(n) %	%	Lower Limit	Upper Limit
Age Group[1]					
<18 years	1	0	0	0	0
18–30 years	202	(104) 51.5	56.2	45.7	66.2
31–50 years	327	(169) 51.7	58.3	47.6	68.2
50+ years	75	(38) 50.7	60.9	40.3	78.3
Sex					
Male	30	(14) 46.7	51.0	24.6	76.8
Female	575	(297) 51.7	58.2	48.4	67.4
All Caregivers	**605**	**(311) 51.4**	**57.8**	**47.6**	**67.3**

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

Variable	All Caregivers (N=605)				
	Unweighted		Weighted	95% Confidence Interval	
	N	n (%)	(%)	Lower Limit	Upper Limit
Age Group[1]					
<18 years	1	1 (100.0)	100.0	-	-
18–30 years	202	142 (70.3)	78.0	69.2	84.8
31–50 years	327	240 (73.4)	77.8	70.5	83.6
50+ years	75	54 (72.0)	78.6	64.7	88.1
Sex					
Male	30	(23) 76.7	77.5	47.8	92.8
Female	575	(414) 72.0	78.0	72.1	83.0
All Caregivers	**605**	**437 (72.2)**	**78.0**	**71.6**	**83.3**

APPENDIX C. RESEARCHERS WHO IMPLEMENTED THE PROJECT

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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 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 CRS/SMILE, the sample was adjusted to 638 to cater for nonresponse.

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