An Evaluation

Community Education and Sensitization as an OVC Care and Support Strategy: Evaluation of the Integrated AIDS Program-Thika in Kenya

Prepared by:

Tonya R. Thurman, MEASURE Evaluation, Tulane University School of Public Health, New Orleans, LA, USA
Paul Hutchinson, MEASURE Evaluation, Tulane University School of Public Health, New Orleans, LA, USA
Lawrence Ikamari, Population Studies Research Institute, University of Nairobi, Kenya
Wanjiru Gichuhi, Population Studies Research Institute, University of Nairobi, Kenya
Kimani Murungaru, Population Studies Research Institute, University of Nairobi, Kenya
Florence Nyangara, MEASURE Evaluation, Futures Group International, Washington

University of Nairobi
Population Studies and Research Institute

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Contents

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Acronyms

AIDS	acquired immune deficiency syndrome
CHW	community health worker
HBC	home-based care
HIV	human immunodeficiency virus
IAP	Integrated AIDS Program-Thika
NGO	nongovernmental organization
OVC	orphans and vulnerable children
PLWHA	people living with HIV and AIDS
USAID	U.S. Agency for International Development

Introduction

Key IAP staff, Sister Emmah Karanja (right) and Sister Helen Kisolo, at the IAP office and community center.

MEASURE Evaluation photo by Kristin Neudorf

In sub-Saharan Africa, an estimated 12 million children 17 years of age and younger have lost one or both parents to AIDS, and many more live with a chronically ill parent or guardian.[1] Children affected by HIV and AIDS often face intensified poverty; inadequate food, shelter, and medical care; stigma and discrimination; mental distress; and other challenges. Despite recognition of the scale and negative consequences of these problems, there is a dearth of evidence as to what types of programs best improve the well-being of orphans and vulnerable children (OVC).

To address this evidence gap, MEASURE Evaluation received funding from the U.S. President's Emergency Plan for AIDS Relief to conduct evaluations of four different, multifaceted programs for OVC — two in Kenya and two in Tanzania. Each evaluation examines the effectiveness of specific program strategies on improving the lives of OVC aged 8-14 and their guardians.

This paper presents the findings from the evaluation of the Integrated AIDS Program-Thika (IAP) operating within Kenya. IAP is a community and faith-based organization that receives technical and financial support from Pathfinder International. This evaluation explores the impact of IAP's community education and sensitization efforts focusing on OVC care and support. These meetings aim to enhance child protection and reduce stigma concerning OVC and people living with AIDS (PLWHA), and these outcomes are examined among attendees and non-attendees with a post-test study design. The indirect influence of living in "high acceptance" or "high stigma" communities on the level of community support provided to OVC is also explored. This paper further provides a profile of the characteristics and needs of OVC relative to other children. The programmatic implications of these findings are discussed.

Intervention Model

IAP was implemented within Kamwangi Division, part of Central Kenya, in 1999. A principal objective of the organization is to decrease stigma and discrimination of those affected by HIV and AIDS. IAP also aims to educate communities on how to enhance the protection and care of their children. To achieve these aims, the program conducts community education and sensitization activities focusing on OVC care and support.

OVC care and support is addressed through discussions held in community forums, such as markets and churches; and among local leaders, such as teachers, pastors, and authorities. These meetings are designed to counteract the stigma and discrimination surrounding HIV and sensitize participants to issues facing OVC, facilitating an understanding of the need among OVC for social inclusion and support. The meetings further promote child protection by providing advice and guidance concerning legal matters and child rights, and information on trained paralegals accessible in the community. Sensitization sessions are facilitated by IAP staff but are also often led by IAP-trained community members.

Other key objectives of IAP are to increase HIV preventive behaviors and the number of people accessing voluntary counseling and testing (VCT) services. While not OVC-specific, these important aspects of their program were also evaluated, with results reported in a separate paper.[2] However, IAP also provides a wide range of other support services for OVC and PLWHA that are not assessed in this evaluation, including counseling and group therapy, nutritional support, treatment of opportunistic infections, paralegal services, income-generating opportunities, educational support, and vocational training. In addition, the project builds community capacity, training volunteers as community health workers (CHWs) to provide home-based care (HBC) for PLWHA, local leaders as paralegals, and teachers on HIV and AIDS and basic counseling skills. Readers are encouraged to see the program case study, which has details about the program model and the lessons learned during implementation.[3]

Pathfinder's contributions to IAP have focused on providing IAP with the skills to serve as and train others as HBC providers and VCT counselors. Pathfinder also provides HBC kits, transport allowances for CHWs, salary support for related clinic staff, and rent for the office. Pathfinder has further given direct funding to IAP to support community sensitization activities and distribution of resources to particularly needy clients.

Methods

Study Setting

Kamwangi Division is in the Central Province of Kenya within the newly created Gatundu District (formerly part of Thika District). Located 40 kilometers from the capital city, Nairobi, it is a rural environment with 22,607 households.[4] Residents typically rely on subsistence farming and employment at local coffee and tea plantations for income. However, Kamwangi is characterized by high unemployment rates and many local residents have limited access to land. In 2005, about 35% of residents in Thika were reported to live below the poverty line.[5] This area is also greatly affected by HIV and AIDS. In 1997, Thika District had an HIV and AIDS prevalence rate of 33%. HIV prevalence in the area has declined dramatically in recent years (6.1% in 2006), but Thika still has the highest infection rate in Central Province.[6]

Quantitative Data

The outcome evaluation used a post-test study design with an intervention and comparison group constructed based on self-reported exposure to program activities. Data were collected from April to August, 2007. Two of the five locations within Kamwangi Division were selected as the study sites — Mang'u and Githobokoni. Three sub-locations in each of the sites were included in the survey, inclusive of 40 villages. Each of the sub-locations was comparable in size and context.

With assistance from local authorities, the research team enumerated all households within the study areas. A total of 6,224 households were identified. All households were approached to participate in the survey, although only those with a child aged 8-14 were eligible. Thus, the sampling approach can be seen as a "modified household census" and participating households included those with and without OVC. Within this study, OVC included orphans, those who had lost one or both parents, as well as children living with an ill adult.

In all eligible households, the research team attempted to conduct face-to-face interviews with the child and his or her guardian. If more than one child aged 8-14 lived in the household, up to two children were included in the study (in cases where there were three or more children within this age range, the interviewers selected two children randomly). With the possibility of up to two children per household, the total sample of children was larger than the sample of guardians.

The final sample included 2,487 guardians and 3,423 children. This sample represented 40% of the total households in the area. Of the 6,224 households identified and approached, 57% were ineligible (i.e., did not have a child aged 8-14), 2% were not home after three visits, and less than 1% refused to participate.

Qualitative Data

To supplement the survey findings, 10 focus groups were held (four with children, three with guardians, and three with CHWs). Groups were stratified by gender, and, in the case of the children's groups, by age. Table 1 presents details on the composition of the focus groups. All focus group participants resided within the Mang'u location, had been directly involved with the program for at least one year, and to the extent possible, were randomly selected from beneficiary or program volunteer lists. All focus groups were transcribed verbatim in the language they occurred (Kikuyu) and then translated into English for analysis.

Ethical Considerations

Before data collection, the full research protocol and all instruments were approved by the institutional review boards at Tulane University in the United States and Kenyatta National Hospital in Kenya. All potential respondents were informed at the study's outset that their participation was voluntary and did not affect their eligibility to

Table 1. Composition of Focus Groups

Children age 8-10 (2 groups)		Children age 12-14 (2 groups)		Guardians (3 groups)		CHWs (3 groups)	
Participants per group		**Participants per group**		**Participants per group**		**Participants per group**	
Gender	*#*	*Gender*	*#*	*Gender*	*#*	*Gender*	*#*
Boys	5	Boys	7	Females	11	Females	7
Girls	4	Girls	5	Females	12	Females	7
				Males	7	Females	7
Total	9	Total	12	Total	30	Total	21

receive services from the program. Additionally, participants were informed orally of the purpose and nature of the study, as well as its expected risks and benefits. Because of the high illiteracy rate, verbal consent was requested of participants. Adults provided consent for themselves and the children under their care. Consent was also acquired from children, using child-friendly language to ensure their understanding. If consent was given, the interviewer signed the consent form for the participant. To maintain confidentiality, respondents' names were not collected and survey and focus group participants were identified by unique numerical identifiers.

Analysis

The objective of this program evaluation was to determine whether or not OVC care and support meetings resulted in expected outcomes for participating guardians and their children. In particular, analyses examine:

- the impact of guardian's attendance at OVC care and support meetings on the protection outcomes of their children, including OVC; and
- the impact of attendance at OVC care and support meetings on the stigma levels of participants and their children.

To provide a context for the results and explore the potential needs of OVC, analyses also concentrate on the following questions:

- How do the socio-demographic characteristics of OVC and their guardians differ from the rest of the children and adults in the sample?
- How do OVC fare relative to other children in regards to child protection and community support?
- How do levels of community stigma influence community support provided to OVC and their households?

Based on information collected from guardians, the sample was classified into various types of OVC: maternal orphans (those who lost their mother including those who lost both parents); paternal orphans (those who lost their father or both parents); or children living in households with a sick adult (a chronic illness for three months or more in the previous year among guardians and/or any adult household member). Classifications of OVC were based on guidelines put forth by experts in the field. For instance, the indicator used to detect chronic illness is a common marker for HIV and AIDS;[7] however, it is recognized this may also incorporate those with other types of severe illnesses. The classification of orphans is consistent with international definitions, in that maternal orphans and paternal orphans are each inclusive of double orphans.[8,9] Further, avoiding a common problem in the orphan literature,[10] orphan classifications were very specific and were limited to only those situations where a death was confirmed by the child's current guardian. Specifically, the 2% of the sample (n=65) where the father was alive and mother's status was unknown were not considered maternal orphans. Nor were the 8% of the sample (n= 284) where respondents indicated that the mother was alive and the father's living status was unknown considered paternal orphans. These children were not included in counts of orphans and were considered part of the rest of the sample because their inclusion as orphans would render incomparable this study's definition of orphans to standard international definitions. Their exclusion as orphans also recognizes that children may have varying outcomes and issues stemming from parental death versus parental absence.

It is also worth noting that these categories of OVC are not entirely mutually inclusive. As can be seen in Figure 1, there were a small number of children that fell into more than one category. Less than 7% (n=32) of all orphans were counted within both maternal and paternal (i.e., double orphans). Orphan categories also include some children living with an ill adult and vice versa. For instance, nearly 15% (n=94) of children living with an ill adult are also either a maternal or paternal orphan.

Analyses concentrate on seven key indicators within the following domains: child protection, three indicators; community support, three indicators; and stigma, one indicator. All of these were child-level outcomes, with exception of one community support indicator (i.e., in-kind support), reported by guardians; and stigma, which was assessed among guardians as well as children. For measures that were scales, Cronbach's coefficient alpha was employed to estimate their internal consistency (reliability). An alpha of 0.60 or higher was considered acceptable. Further details concerning each of these indicators are provided in the Results section.

Initial bivariate analyses were conducted to assess for unadjusted differences on key characteristics and outcomes among each type of OVC group relative to the rest of the children in the sample. For instance, maternal orphans and their guardians were compared to the rest of the children and adults in the sample, as was the case for paternal orphans and children living in households with ill adults. Indicators reflecting the socio-demographic profile of children and guardians were examined as well as measures of child protection and community support. Bivariate analyses included one way ANOVA for continuous outcomes and chi-square for categorical outcomes.

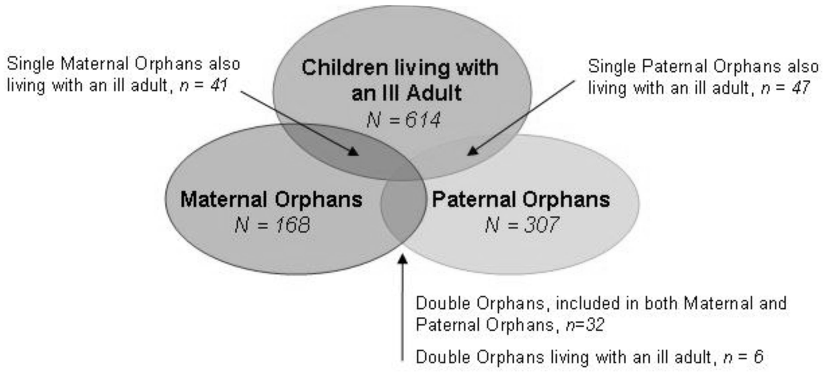


Figure 1. Extent of overlap across the three OVC groups applied in this study.

Multivariate analyses were conducted to investigate the impact of attending OVC care and support meetings on the outcomes of participants and their children. Indicators of child protection were examined among the full sample, as well as the three OVC groups. For the OVC groups, the outcomes of children with guardians who attended were compared to children of the same vulnerability type without guardians who attended (e.g., the impact of guardian meeting attendance on maternal orphans relative to maternal orphans without a guardian who attended). The impact of meeting attendance on the stigma levels of adult participants and their children was also explored. However, these analyses were conducted only among the full study sample, as the meetings aimed to influence the stigma levels of the broader community beyond OVC.

Lastly, analyses explored the relative importance of meeting attendance affecting participants' levels of stigma. To do so, multilevel analyses examined the relationship between community stigma and community support outcomes of OVC. These analyses test the hypothesis that attitudes of adults in the community influence individual-level community support outcomes of OVC. The impact of community levels of stigma on each community support outcome was assessed separately for maternal orphans, paternal orphans, and children living in households with an ill adult. In that way, insight was gained as to whether the influence of stigma on community support varies depending upon the type of OVC.

Both the multilevel and multivariate analyses described above applied ordinary least squares regression for continuous outcomes and probit regression for binary outcomes. All models controlled for individual background characteristics described in Table 2, reflecting household, guardian, and child-level characteristics. The multilevel models also included the mean levels of stigma among surveyed adults in the village where the OVC resides (i.e., mean levels in each of the 40 different villages).

Table 2. Control Variables in Multivariate and Multilevel Regression Models

Outcomes for:	Control Variables
Guardians	*Age, gender, marital status, level of education, caregiver illness, household socioeconomic status, number of children in the household.*
Children aged 8-14	*All guardian and household characteristics described above as well as child characteristics of: age, gender, orphan status (non-orphan, maternal, paternal, double orphan),* relationship to guardian (mother, father, other), and number of households the child had lived in during the last year.*

* Orphan status was excluded in orphan-specific models because it was accounted for by the fact the sample was limited to orphans.

Limitations

There are several limitations the reader should bear in mind when interpreting these results. First, the post-test study design does not allow for the analysis of changes since the inception of the program. Therefore, it is not possible to definitively assume causality for differences found between individuals exposed to OVC care and support meetings and those not exposed — many of these differences may have been pre-existing. Second, it may be that the unexposed group is systematically different from the exposed group. For example, although meeting attendees and non-attendees are from the same areas and the sensitization activities were held in public spaces open to all community members, participants may simply be more empowered or motivated individuals, or individuals who already had less stigma or better child care-taking behavior. However, every effort has been made to control for measurable differences between the two groups, particularly socioeconomic and demographic dimensions. In addition, analyses did not reveal any substantial differences in the demographic profile of the exposed and unexposed groups. Nonetheless, the results of this study must be interpreted cautiously because of potential selection bias and lack of baseline information.

Readers should also be aware that impacts from the OVC care and support meetings cannot be definitively attributed to IAP. Respondents were asked if they had attended meetings on this topic in the last year, not if they had attended meetings on this topic led by IAP. Questions were posed in this manner because IAP engages other community leaders to implement these meetings and, as such, respondents would not always be aware of IAP's involvement. However, the study sites were specifically selected because they lacked significant community-based organization presence beyond IAP.

In addition, it is important to acknowledge that the evaluation does not cover all possible impacts of the IAP and Pathfinder activities. Not all program elements could be assessed due to small exposure sample sizes (i.e., less than 2% of the sample reported being visited by a CHW or receiving other types of direct support services from IAP). In addition, the study's focus on children aged 8-14 leaves unknown the impact of these interventions on children of different ages. Similarly, whether the intervention influenced attitudes or behaviors of adult community members beyond those who are guardians of children aged 8-14 is unknown.

Lastly, the OVC classifications used in this study pose consideration for the interpretation of findings because the categories are not mutually exclusive. As discussed in the preceding section, the number of double counted children across the different OVC groups is small. Nonetheless, it is important for the reader to keep in mind that: (1) the findings reported herein for maternal and paternal orphans are both influenced by the small number of double orphans; and (2) the findings reported for orphans and children living in a home with an ill adult are each influenced by a small number of children fitting into both categories.

Results

Description of the Sample

This section describes the sample including child, guardian, and household characteristics. The prevalence of OVC within the sample is presented, as are their characteristics relative to the rest of the sample. All results reported as significant were statistically significant at $p < .05$ in bivariate analyses.

Children — Table 3 presents the prevalence of orphans and children affected by illness in the sample, as reported by guardians.

Nearly 5% of children were maternal orphans, meaning they lost their mother or both parents. Almost 9% were paternal orphans, meaning they lost their father or both parents. The extent of crossover between maternal and paternal orphans was very small, as only 8% of orphans had lost both parents (double orphans).

Nearly 18% of children were living with an adult with a chronic illness, defined as having an illness lasting longer than three months in the last year. Most lived with only one ill adult (84%); however, some had more than one ill adult in their home (mean=1.2, range=1-3). In many cases, the child's parent was sick. Nearly half of the children living with an adult with a chronic illness lived with a sick mother, and about one-third lived with a sick father. However, over a quarter were living with an ill grandparent. It is notable that among the children living with an ill grandparent (n=172), in 65% of those cases the grandparent was also reported as the child's primary caregiver (data not shown).

The demographic characteristics of the children in the sample are shown in Table 4. Characteristics are presented for the total sample as well as among maternal orphans, paternal orphans, and children living in households with an ill adult.

Table 3. OVC Prevalence within the Sample

	Percent	N
OVC status (n = 3,438)		
Maternal orphan	4.9	168
Paternal orphan	8.9	307
Living at home with an ill adult	17.9	614
Orphan Status (n=443)		
Single orphan	92.3	411
Double orphan	7.7	32
Number of ill adults in the home (n= 614)		
Only 1 ill adult in the home	83.7	514
Two ill adults in home	14.7	90
Three ill adults in home	1.6	10
Mean number of ill adults in the home =1.2		614
Ill adults' relationship to child (n =713)		
Mother	47.2	288
Father	33.0	201
Grandmother	21.5	131
Grandfather	6.7	41
Other adult	8.5	52

The characteristics of OVC are similar to the rest of the sample of children with respect to gender, school enrollment, and number of homes lived in during the past year. Slightly more than half of the children were male and virtually all children were reported to be enrolled in school at the time of the survey. Most children had lived in one home during the previous year. The age distribution of children with an ill adult in the home was also similar to the full sample. However, maternal and paternal orphans tended to be significantly older than other children. Whereas only 44% of the full sample was between 12 and 14 years old, among maternal and paternal orphans, more than half were this age (54% and 56%, respectively).

It is notable that both maternal orphans and children living with an ill adult were significantly less likely to be living with all of their child-aged siblings than the rest of the sample. Whereas 93% of the full sample of all children reported that all of their siblings under age 18 lived with them, only 84% of maternal orphans and nearly 90% of those living with an ill adult had all of their siblings living with them at the time of the survey. There was no difference among paternal orphans; they were equally likely as the rest of the sample to have all siblings within their home.

Mothers were the most common guardian of OVC (with exception of maternal orphans). However, in 27% of cases, paternal orphans were cared for by someone other than their mother. Grandmothers were the primary guardian for a noticeable fraction of OVC. Over half of maternal orphans and 24% of children living in homes affected by adult illness were cared for by a grandmother.

Table 4. Demographic Profile of the Children and Differences in these Characteristics among OVC Relative to the Rest of the Sample Examined with Chi-Square Analyses

Classification of child:	**All Children** Percent (n=3,423)	**Maternal Orphan** Percent (n=168)	**Paternal Orphan** Percent (n=307)	**Living with an Ill Adult** Percent (n=614)
Gender		*NS*	*NS*	*NS*
male	50.9	51.8	51.0	51.6
female	49.1	48.2	49.0	48.4
Age		*	**	NS
8-9	28.9	22.9	21.4	26.9
10-11	27.5	23.5	23.0	27.9
12-14	43.7	53.6	55.6	45.3
Enrolled in school		*NS*	*NS*	*NS*
yes	99.3	98.8	99.3	99.3
Number of homes in last year		*NS*	*NS*	*NS*
one	84.2	81.9	84.5	82.6
two or more	15.8	18.1	15.5	17.4
Living in the same household with all siblings under age 18 †		**	*NS*	**
yes	93.0	83.5	91.1	89.5
Relationship to Guardian ‡				
natural mother	77.9	---	73.0	64.8
natural father	6.3	15.7	---	6.4
natural grandmother	11.3	51.8	16.1	23.9
other	4.3	32.5	10.9	5.3

NS Not significantly different from all children.

* OVC group is significantly different than the rest of the children at $p \leq .05$.

** OVC group is significantly different than the rest of the children at $p \leq .01$.

† This was limited to only those who had a sibling age 18 or less, n = 3,039 .

‡ Bivariate analyses not conducted because categories were not consistent across groups.

Guardians — The health and demographic characteristics of the 2,485 guardians interviewed are presented in Table 5. This table also illustrates similarities and significant differences between the OVC guardians and the rest of the sample.

Among the entire sample, the majority of guardians (91%) were female, about 19% were 50 years or older and only 10% were widowed. However, there were significant differences in these demographics among OVC guardians. In many aspects, the profile of OVC guardians is not surprising, considering the relationship of the guardians to the children presented in Table 4. For example, maternal orphans, 15% of whom are cared for by their father, had a higher proportion of male guardians. Similarly, OVC guardians were significantly older than the rest of the sample, perhaps explained in part by the high proportion of guardians who were grandmothers. Whereas only 19% of guardians in the full sample were 50 years of age or older, about 62% of guardians of maternal orphans were 50 or older. A smaller, though significant percentage of other OVC guardians were also found to be older: 26% of guardians of paternal orphans and 35% of guardians of children with an ill adult in the home were 50 or older. In addition, a significantly higher proportion of orphan guardians were widowed, explained by both the elderly status of guardians and the orphan status of children. While only 10% of guardians within the full sample were widowed, 36% of maternal orphan guardians and 57% of paternal orphan guardians were widowed.

Educational achievement was also significantly lower among OVC guardians. Whereas only 12% of the overall sample reported never having attended school, lack of education occurred among 38% of maternal orphan guardians, 19% of paternal orphan guardians, and 24% of guardians of children with an ill adult in the home.

Only 13% of guardians among the full sample reported they had a chronic illness (lasting three months or more in the last year). However, as might be expected, this was much higher among children living with an ill adult. In these instances, 59% of guardians reported that they themselves were ill. Guardian illness was also significantly more common among maternal orphans, with 20% reporting an illness.

Household— Socioeconomic characteristics of the guardians are seen in Table 6. Again, chi-square tests were applied to assess if these differences varied between each of the different OVC groups with respect to the rest of the households in the sample.

Table 5. Demographic Profile of the Guardians and Differences in these Characteristics among OVC Guardians Relative to the Rest of the Sample Examined with Chi-Square Analyses

Guardian of a child who is:	All Children Percent (n=2,485)	Maternal Orphan Percent (n=138)	Paternal Orphan Percent (n=237)	Living with an Ill Adult Percent (n=447)
Gender		**	**	*NS*
male	8.3	16.7	3.0	9.0
female	91.7	83.3	97.0	91.0
Age		**	**	**
<30	14.1	14.5	8.0	11.2
30-49	66.8	23.9	65.8	53.5
50+	19.1	61.6	26.2	35.4
School achievement		**	**	**
none	11.8	38.4	18.6	23.5
primary	64.2	47.1	63.3	61.3
secondary	22.0	13.8	16.9	14.5
higher	2.0	0.7	1.3	0.7
Relationship status		**	**	*NS*
married/living with someone	74.7	42.8	16.9	72.7
widowed	10.4	36.2	56.5	13.2
separated/divorced	7.4	9.4	11.8	6.5
single	6.7	10.9	12.7	6.7
Guardian ill		**	*NS*	**
yes	12.6	20.3	15.6	59.4

NS Not significantly different from all children.
* OVC group is significantly different than the rest of the children at $p \leq .05$.
** OVC group is significantly different than the rest of the children at $p \leq .01$.

Overall, about one-third of the households had three or more children living there. OVC households were not responsible for any more children as related to the rest of the sample. However, homes where there was a maternal orphan had significantly fewer children than the full sample population.

A wealth index was developed considering whether the household had the following assets: radio, television, telephone, refrigerator, bicycle, motorcycle, vehicle, or livestock (cows and chickens). Home conditions, such as whether they had a floor type other than mud, ventilated pit latrine or flush toilet, electricity or solar power, utilization of coal or paraffin for cooking, and reliance on water from either a public tap or in-home piping were also considered. Respondents were given one point for possession of each of the preceding assets and household features, with the exception that two points were given in instances where they had piped water (n=787), as well as if they had a flush toilet or ventilated pit latrine (n=173). This analysis suggests that many of the families face economic difficulties, with 24% in the poorest category reporting two or fewer assets, and 17% with only three assets. However, poverty levels were significantly worse among all OVC households. For instance, while only 24% of the full sample was in the poorest category, approximately one-third of all types of OVC households were within the poorest category.

Levels of food insecurity provide further indication of the economic strains facing these households. Food security was measured by the nine-item Household Food Insecurity Access Scale developed by the Food and Nutrition Technical Assistance Project.[11] Results indicate that severe household food insecurity was much higher in all OVC groups relative to the rest of the sample. While 27% of the full sample was severely food insecure, the prevalence was significantly higher among households with maternal orphans (46%), paternal orphans (35%), and an ill adult (40%).

Outcomes of OVC Relative to Other Children

OVC care and support meetings are expected to influence child protection and community support outcomes of OVC. Before presenting the impact of OVC care and support meetings on these outcomes, this section describes the child protection and community support outcomes of OVC relative to the rest of the children in the sample. This study measured child protection through three areas: possession of identity documents; identification of an alternative caregiver; and child abuse. Community support includes three indicators: children's levels of social isolation; support received from extended family; and in-kind support provided to the household from community sources. The following sections provide details concerning the potential differences between OVC and other children on these indicators. Table 7 depicts a summary of these results. All results reported as significant were statistical significant at p < .05 in bivariate analyses.

Table 6. Socioeconomic Profile of the Households and Differences in these Characteristics among OVC Households Relative to the Rest of the Sample Examined with Chi-Square Analyses

	All Children	Maternal Orphan	Paternal Orphan	Living with an Ill Adult
	Percent (n=2,471)	Percent (n=138)	Percent (n=237)	Percent (n=447)
Number of children in household		**	*NS*	*NS*
≤3	66.0	75.4	66.7	67.6
>3	34.0	24.6	33.3	32.4
Poverty		*	**	**
poorest (≤2 assets)	23.7	34.1	35.0	32.2
second poorest (3 assets)	16.7	13.8	14.4	18.1
middle (4-5 assets)	32.5	31.2	30.8	32.2
second wealthiest (6 assets)	11.2	7.3	8.4	6.5
wealthiest (7 assets)	15.9	13.8	11.4	11.0
Food security		**	**	**
food secure	28.4	14.3	22.0	17.4
mildly food insecure	8.6	6.4	6.6	6.4
moderately food insecure	35.6	33.6	36.5	36.1
severely food insecure	27.4	45.7	34.9	40.1

NS Not significantly different from all cHildren.
* OVC group is significantly different than the rest of the children at p≤.05.
** OVC group is significantly different than the rest of the children at p≤.01.

Child Protection — Possession of Identity documents was measured by asking guardians: "Does the child have a birth certificate or other proof of identity?"

Table 7. Summary of Bivariate Results Comparing OVC Outcomes to the Rest of the Children in the Sample

	Maternal Orphan	Paternal Orphan	Living with an Ill Adult
Child protection			
child had identity documents	*	*	*
alternative caregiver for child identified	*NS*	*	*NS*
abuse of child by household adults	*NS*	*NS*	**
Community support			
child social isolation	*NS*	*NS*	*
extended family support	*NS*	*	**
in-kind community support recently provided to the household	**	**	**

NS Not significantly different than the rest of the children.

* OVC group is significantly different than the rest of the children at $p \leq .05$.

** OVC group is significantly different than the rest of the children at $p \leq .01$.

▒ = group of children were worse off relative to all children

▨ = group of children were better off relative to all children

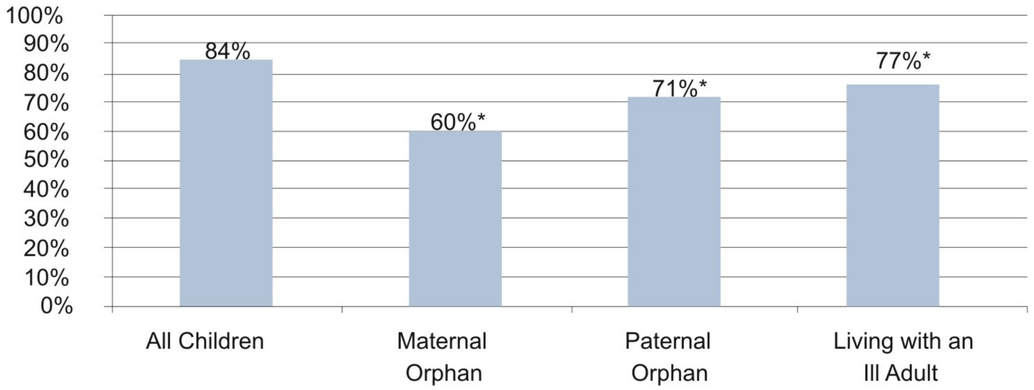
with “yes,” “no” or “don’t know” as the possible response options. Overall, 84% of children had identity documents.

Possession of identity documents was significantly lower among all three OVC groups relative to the rest of the children in the sample (see Figure 2).

Identification of an alternative caregiver was determined by asking guardians whether they had “identified someone to care for the child if they could not do so.” Overall, only 18% of the sample had identified an alternative caregiver.

Relative to other guardians, those of maternal orphans and children living with an ill adult were equally likely to have identified an alternative caregiver. However, only 12% of guardians of paternal orphans had identified an alternative caregiver, significantly fewer than the rest of the population ($p < .01$). Even narrowing the sample further by focusing only on guardians with an illness, they were not more likely to have done so. Only 19% of guardians with an illness had identified an alternative caregiver.

Child abuse was assessed with a five-item abuse scale (alpha=.73) based on items suggested within a 2006 United Nations Children’s Fund report.[12] Children were asked to indicate how often an adult in the household used a stick, belt, hairbrush or other hard item to discipline them; slapped, punched, pinched, or hit them on the head or face; said they would be sent away or kicked out of the house; withheld a meal to punish them; and called them dumb, lazy, or other similar names. The score range was 1 to 5, with higher scores indicating greater abuse. A mean score of 1.31 (SD = 0.57) was found.



* Indicates $p \leq .05$ difference between OVC group and the rest of the children in the sample.

Figure 2. Possession of identity documents among OVC groups compared to other children.

Rates of child abuse were higher among children living in households with an ill adult, relative to the rest of the sample (1.40 versus 1.18, $p < .01$). However, abuse was not significantly higher among either type of orphan as compared to other children.

Community Support — Social isolation among children was measured by the KIDSCREEN social acceptance scale (alpha = .77).[13] The scale included five items assessing how often children play alone or were teased, picked-on, or bullied. The score range was 1 to 5, with higher scores indicating greater social isolation. The mean was 1.96 (SD = 0.81).

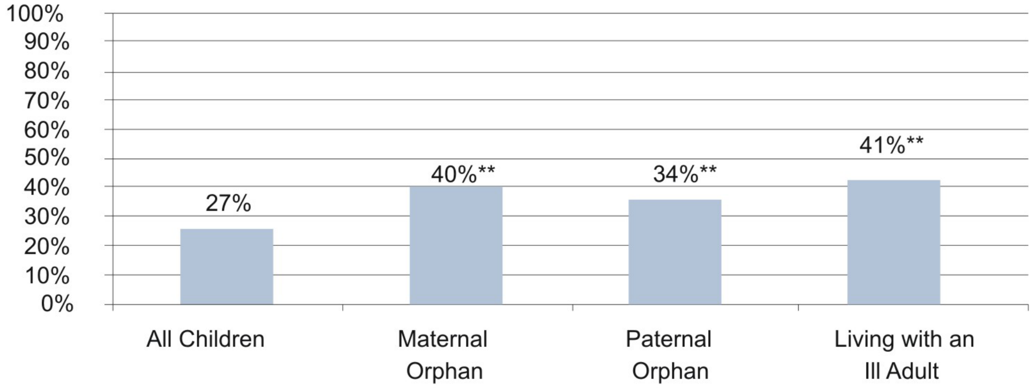
Children living with an ill adult had slightly though significantly higher social isolation as compared to the rest of the population (2.02 versus 1.95, $p < .05$). However, the isolation levels of either type of orphan were not significantly different than those of other children.

Extended family support was measured with a scale developed for this study (alpha = .68). Children rated their level of agreement on three items: relatives visit to see how you are doing; relatives help when you need it; and many of your relatives take advantage of you. The score range was 1 to 4, with higher scores indicating greater family support. The mean was 3.55 (SD = 0.55).

There was no difference in the degree of family support reported by maternal orphans as compared to the rest of the sample. However, both paternal orphans and children living with an ill adult reported slightly though significantly less support (3.48 for both OVC groups versus 3.55 for the rest of the sample, $p < .05$).

In-kind community support was measured by guardians' yes or no response as to whether their household had received help from friends, relatives, or neighbors in the six months preceding the survey. Overall, around one-quarter of the sample reported having received some support. As displayed in Figure 3, all types of OVC households reported receiving significantly more support than the rest of the sample.

Those who reported having received support were also asked if they received specific types of assistance and results are displayed in Table 8 among the full sample and different OVC groups. Tangible support such as food and money were the most common types of assistance reported. Other goods such as clothing and assistance with expenses related to medical and educational needs were also provided to OVC households. Respondents also reported receiving non-tangible support, such as counseling and child care. Relative to the rest of the sample, those living in homes with an ill household member were significantly more likely to have received food, counseling, medical, or



** Indicates $p \leq .01$ difference between OVC group and the rest of the children in the sample.

Figure 3. **In-kind community support provided to OVC groups compared to other children.**

Table 8. Types of In-kind Assistance Provided among Those Who Reported Having Received Support from the Community and Chi-square Differences between the OVC Groups and the Rest of the Sample

	All Children (n=925)	Maternal Orphans (n=67)	Paternal Orphans (n=102)	Living with an Ill Adult (n=249)
Food	67.3	83.6**	71.6	72.3*
Money	45.6	32.8*	46.1	48.2
Counseling	30.9	31.3	33.3	36.1*
Clothing	25.7	25.4	26.5	27.3
Medical care	19.2	20.9	20.6	26.9**
Child care	15.8	22.4	12.7	20.1*
Child educational supplies and assistance	12.8	10.4	14.7	12.4
Transportation	6.5	6.0	7.8	8.8

* OVC group is significantly different than the rest of the children at $p \leq .05$.

** OVC group is significantly different than the rest of the children at $p \leq .01$.

child care assistance. Homes caring for a maternal orphan were also significantly more likely to have received food but less likely to have received money. Paternal orphans were neither more nor less likely to have received each type of assistance.

Program Exposure

Guardians were asked if in the last year they had attended a community meeting discussing OVC care and support. This was examined among the entire sample and by type of OVC guardian. As seen in Table 9, among all guardians in the sample, slightly over a quarter (26%) had attended an OVC care and support meeting in the year preceding the survey. Exposure across guardians of the different OVC groups was similar with about one quarter of each type having attended the meeting.

Table 9. Participation in OVC Care and Support Meetings of the Different Types of Guardians

Attended meeting	%	n
All guardians (N= 2,472)	26.0	643
Guardian of a maternal orphan (N=131)	26.7	35
Guardian of a paternal orphan (N=304)	23.4	71
Guardian of a child with an ill adult in the home (N=454)	23.1	105

Impact on Child Protection

OVC care and support meetings included information for guardians concerning child protection. This section explores whether attendance at OVC care and support meetings was associated with favorable child protection outcomes among the children of participants, including OVC. Impact was assessed among the entire sample and the three types of OVC, comparing participants and non-participants of the same type (e.g., the impact of guardian meeting attendance on paternal orphans relative to paternal orphans without a guardian who attended). Considering the small sample size when comparing attendees and non-attendees within the different OVC groups, a p-value of less than .10 in multivariate analyses is deemed as reasonable probability.

Figure 4 displays the unadjusted percentages for possession of identity documents for each group depending upon whether a guardian had attended an OVC care and support meeting. In bivariate analyses, possession of identity documents was significantly higher among the full sample of children with a guardian who attended an OVC care and support meeting as compared to children with guardians who did not attend a meeting

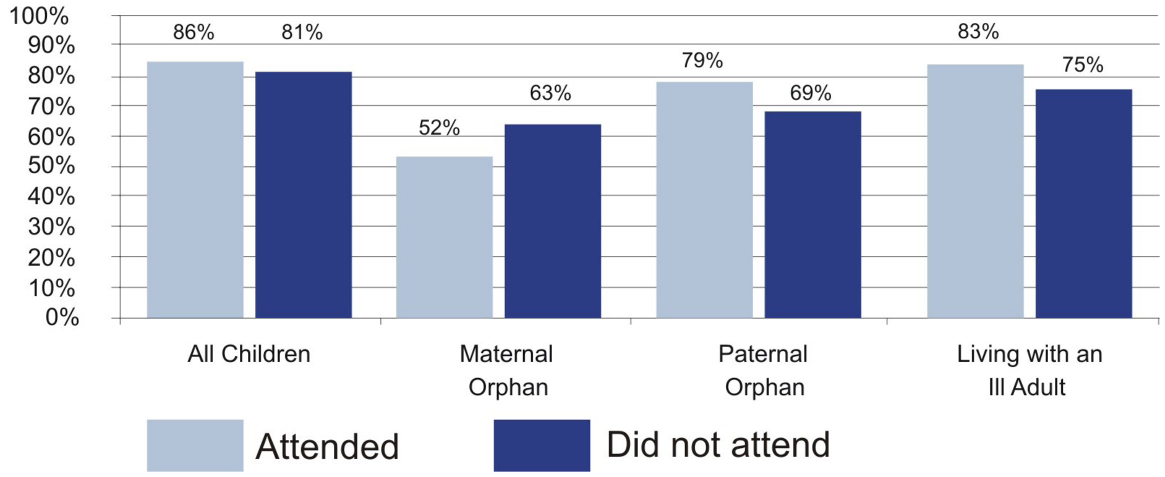


Figure 4. **Possession of identity documents of OVC by guardian attendance at OVC care and support meetings.**

(p <.01). This difference was also seen among children living in a home with an ill adult and paternal orphans with a guardian who attended (p <.05). Differences among all children and those living with an ill adult persisted after controlling for background characteristics (p <.01 for both). However, in multivariate analyses, the difference among paternal orphans was only marginally significant (p = .081). There was no significant difference found among guardians of maternal orphans; however, a trend can be seen in Figure 4, as a larger number of maternal orphans with a guardian who attended had identity document relative to maternal orphans without a guardian who attended.

> *"We benefit a lot from this training. Whatever one learns in the (OVC care and support) seminar helps such a person later on. It gives us courage to love those children very much."*
>
> **Female guardian, age 41**

Identification of an alternative caregiver was found to differ only among guardians of the full sample who attended the meeting (16.9% versus 21.0%, p < .01). This difference persisted in multivariate analyses (p < .05). Meeting attendance was not found to be associated with having identified an alternative caregiver among any of the OVC groups. Even narrowing the sample further by focusing only on guardians with an illness who attended (21% of 411 ill guardians attended), meeting attendance was not associated with identification of an alternative caregiver.

Child abuse was significantly lower among the full sample of children with guardians who attended the meeting relative to children without guardians who attended (1.25 versus 1.33, p = .000). This difference was also seen among children living in a home with an ill adult, those with guardians who attended the meeting reported lower levels of abuse than children with guardians who did not attend the meeting (1.26 versus 1.38, p < .05). This difference persisted in multivariate analyses among all children (p < .01) and was marginally significant (p = .068) among children living with an ill adult. Guardian meeting attendance was not associated with child abuse for either type of orphan.

Impact on Community Support

OVC care and support meetings were designed to enhance community acceptance and support of OVC and PLWHA. This study examines first whether the degree of negative perceptions concerning OVC and PLWHA (i.e., stigma) differed between participants and non-participants, as well as the indirect influence of living in "high acceptance" or "high stigma" communities on OVC community support outcomes.

Stigma was measured through a scale generated for this study that assessed negative attitudes towards orphans or families affected by HIV and AIDS. The same scale was applied among guardians (alpha = .84) and children (alpha = .75). The scale included three items: whether the community rejects orphans; whether the community rejects families affected by HIV and AIDS; and whether people were jealous of the services given to orphans and families affected by HIV and AIDS. The score range was 1 to 4, with higher scores indicating greater negative perceptions concerning OVC and PLWHA. The mean was 2.10 (SD = .92) among guardians and 1.91 (SD= .81) among children.

To provide further information on this aspect of stigma, the percent of guardians and children who either "strongly agreed" or "agreed" with each of the statements within the scale is presented in Table 10. As also reflected in guardians' higher mean scores above, they reported more negative attitudes than children. Overall, about one-third of guardians felt the community rejects orphans or families affected by AIDS. Over one-quarter felt there was jealousy of services given to these families.

Bivariate results illustrate that guardians who reported attending OVC care and support meetings had significantly lower perceived negative attitudes towards OVC and PLWHA (2.02 versus 2.12, p < .01) and this difference is also seen among the children of guardians who attended (1.83 versus 1.94, p < .001). In multivariate analyses, meeting attendance was still significant among participants' children (p < .01) and marginally significant for guardians (p = .081).

To examine the potential importance of reduced stigma on community support outcomes, multilevel analyses were conducted among each of the three OVC groups. These analyses assess whether mean community stigma levels of guardians across the 40 communities were associated with community support outcomes of OVC within these communities after controlling for other background characteristics.

> *"At first, they were negative about them [PLWHA and OVC], but after mobilizing people to talk to them and gain fellowship with them, they changed their perception and became positive. . . . If they knew someone is sick, they became more responsible over them, be it their family or the extended family, hence improved relationships and love."*
>
> **Female CHW**

Table 10. Percent of the Sample Who "Strongly Agreed" or "Agreed" with Items Reflecting Negative Perceptions Concerning Orphans or Families Affected by HIV and AIDS

	Gurdians (n=2,471)	**Children** (n=3,423)
Community rejects orphans	34.3	20.1
Community rejects families affected by HIV and AIDS	35.7	29.2
Community is jealous of the services given to orphans and families affected by HIV and AIDS	27.2	22.3

Across the 40 villages within this sample, mean community stigma levels of guardians ranged from 1.63 to 3.67. Multilevel analyses indicate that higher guardian community stigma levels were associated with some poorer community support outcomes for OVC. The patterns were the same for maternal and paternal orphans, as well as children living with an ill adult, with respect to higher community stigma being significantly associated with greater social isolation (p < 0.00 in all models). Stigma was an important factor with regard to family support only among orphans. For both types of orphans, higher levels of community stigma were significantly associated with lower levels of child-reported family support (p < 0.01 in both models).

No significant relationship was found between community stigma and whether any type of OVC guardian reported receiving in-kind support. However, while stigma was not found to be an important factor, single guardians were significantly more likely to have received support across all OVC groups.

Conclusions

These findings illustrate the power of interventions that not only provide services to OVC but also improve the community in which they grow and develop. Results demonstrate how targeting initiatives at the general community can reach OVC directly and indirectly. While this study does not offer conclusive evidence that the program had impact, it does present some encouraging findings concerning the potential influence of OVC care and support meetings on the broader community and OVC. Although some outcomes were associated with program exposure at only $p < .10$ rather than the conventional standard of $p < .05$, these findings suggest a positive trend towards the desired effect and are considered of programmatic importance.

Guardian participation in OVC care and support meetings enhanced child protection in some instances. Among the full sample, children of meeting attendees were more likely to have identity documents and reported lower abuse than children whose guardians did not attend the meetings. These same differences were also found among children living in households coping with adult illness who had a guardian attend. This is notable given that, as a whole, children living with an ill adult were less likely to possess identity documents and had higher levels of child abuse than the rest of the children. However, the meetings were associated with fewer positive outcomes for orphans. No difference was found with respect to abuse among either maternal or paternal orphans with guardians who attended these meetings. While orphans did not report more abuse than other children, ideally, the lowered levels of abuse seen among guardians of the full sample of children who attended would also be evident among orphans. Further, while both maternal and paternal orphans were less likely to have identity documents, only the possession of identity documents of paternal orphans was positively associated with meeting attendance. In addition, meeting attendance was positively associated with the identification of an alternative caregiver only among the full sample. The fact that OVC guardians were no more likely to have identified an alternative caregiver for their children than the rest of the sample even irrespective of meeting attendance is concerning considering that OVC may be most in need of this safety net. Future programs should try to meet these needs while retaining this program's benefits.

This study further highlights the important role that community stigma can have on the social integration and support of OVC. As such, it is encouraging that community sensitization efforts focusing on OVC care and support were associated with lower negative attitudes concerning OVC and PLWHA; although, these differences were only modest. However, the reduction of stigma among adult attendees extended to their children, a fact that highlights the potential long-term benefits of such initiatives. Efforts to foster a supportive environment — increasing openness, acceptance and support of OVC and PLWHA — will indirectly affect OVC for years to come.

It is notable that while the importance of community stigma and the potential impact of sensitization efforts on this outcome were explored, all the complex facets of stigma are not likely captured within the unidimensional measure applied in this study. In particular, this measure focused only on broad negative perceptions concerning OVC and PLWHA, such as community rejection of them and jealousy concerning support they receive from nongovernmental organizations (NGOs). Future research can further inform programmatic efforts through inclusion of a more comprehensive assessment of stigma, including its potential precursors, such as the level of misinformation and moral judgments concerning HIV infection.

Finally, in light of the post-test only design and other study limitations, these results must be interpreted cautiously. OVC care and support meetings were held informally in local public settings and among key community stakeholders, providing the opportunity to sensitize a wide range of community members on issues concerning child protection, and acceptance and support of OVC and PLWHA. As such, some of the findings are within the anticipated direction. On the other hand, these findings cannot be directly attributed to the program and any potential effects on community members falling outside the inclusion criteria of this sample are unknown. There were also varying results across the OVC groups, and without baseline information, reasons for this are only conjecture. Future research should include more rigorous research designs to make more definitive conclusions about the impact of such initiatives.

Programmatic Implications

OVC households continue to need direct services. This study reinforces the notion that OVC families face many challenges. Higher rates of poverty and food insecurity were found in OVC households relative to the rest of the sample. OVC guardians were also found to be older and have lower levels of education. Many guardians must further cope with personal illness or care for other ill adult household members.

> *"Seminars are good but, irrespective of that, after attending and learning a lot of things then we go back home with our problems. We cannot confess to have benefited, apart from gaining some knowledge. If I had left home without some milk, I'll still not have it when I get back."*
>
> **Female guardian, age 50**

OVC children also faced increased difficulties relative to other children. Maternal orphans and children living with an ill adult were less likely to live with all of their child-age siblings, indicating the strains facing these households. They were also less likely to have identity documents, an asset that could be particularly empowering for them as they age, enabling them to access formal employment and social services. Children living in households affected by illness had even more vulnerabilities, with elevated rates of abuse and social isolation as compared to other children.

These findings highlight the importance of supplementary assistance provided by IAP and other NGOs to OVC families. Coupling community sensitization with direct services, such as psychosocial support, home visits, income-generating efforts and individualized paralegal guidance, will best meet the multifaceted needs of OVC and their families. Protection of OVC is likely to be increased through tailored efforts that take into account the particular issues facing these families.

> *"When children complete their examinations and they need money to proceed with education, the community comes together to fund-raise and assists the family in sending these children to school."*
>
> **Female CHW**

> *"There is somebody in the community who gave me clothes to wear and gave my grandmother money."*
>
> **Male, age 13**

Community education and sensitization can enhance child protection, beyond OVC . Nearly a quarter of all types of guardians in this study were exposed to OVC care and support meetings. While positive impacts emerged in some cases for OVC guardians, among the entire sample of guardians, all three child protection outcomes were positively associated with meeting attendance. Initiatives targeting the general community can help other children beyond OVC, for example, decreasing abuse. Communities devastated by HIV, AIDS, and poverty leave many children in need of protection, and as this study demonstrates, many of them can benefit from community education and sensitization efforts.

Opportunities exist to support community-based responses. It is encouraging that communities in this study were found to have provided support to OVC households. About 40% of both maternal orphans and children living with an ill adult and 34% of paternal orphans reported having received some support from family or local community members in the six months preceding the survey. For each of the three OVC groups, receipt of such in-kind support was significantly higher than the rest of the sample. Single OVC guardians were also found to be most likely to receive such assistance. Support included tangible goods, such as food and money, as well as other assistance with child care and emotional needs. Much of this support was likely received from unrelated community members, considering that family support was reportedly lower among paternal orphans and children living with an ill adult.

A key strategy for OVC care is to mobilize and support community-based responses.[7,8] These findings highlight that many community members have recognized the vulnerability of some OVC households and are making efforts to support them. Programmers should find ways to uncover from whom these households are receiving support and build the capacity of such concerted individuals. As one expert has observed, "Capacity building may include training in writing proposals, developing and managing programs, mobilizing local resources, fundraising, or training in child development, health care, nutrition, and children's rights."[14]

Efforts to reduce community stigma are important and could be intensified. In this study, children living in communities with higher levels of stigma were found to have poorer outcomes, including more social isolation among all OVC groups and less family support among orphans. Past research has also suggested how stigma operating in myriad ways may lessen the level of community support OVC receive.[15] Perceived stigma has also been found to be the most important contributor to psychological distress among OVC.[16] Stigma is further important in curbing the overall HIV and AIDS epidemic and the prevalence of OVC, reported to affect negatively preventive behaviors,[17] testing,[18] and care-seeking.[19]

> *"Community members say a lot of things, like we're getting assistance, while no one is helping them. When I visit a friend of mine, she makes comments like 'you're very lucky to be under the IAP program since you will get aid or your child could benefit. What about us who are the sole bread-winners of our families and also need help?'"*
>
> **Female guardian, age 72**

Only modest differences were found between the stigma levels of participants and non-participants of OVC care and support meetings. Programmers should therefore consider supplementary and more intensive strategies for reducing stigma. For instance, stigma reduction was found among Tanzanian school-children who participated in a three-month program consisting of AIDS-related information, small group discussion, role play, and student-created posters.[20] Past research has also demonstrated success in reducing stigma of initiatives that couple information with direct contact with people living with HIV and AIDS.[21]

Lastly, efforts to promote community acceptance and support of OVC should pay credence to the finding that nearly a quarter of the sample reported jealousy concerning the NGO support that OVC and PLWHA receive. It may be important to sensitize the community as to the vulnerabilities of OVC and PLWHA, explaining why they receive supplementary support. Further, engaging community members in decisions concerning who receives such assistance could reduce resentment.

Succession planning needs more attention. Program managers should spend more time on succession planning or find better ways to encourage it. Although they face above-average risks of death, very few guardians with an illness had identified an alternative caregiver, with only 19% having done so. Succession planning is also needed among guardians age 50 and above, who face similar risks and account for 61% of maternal orphan guardians and a fifth of all guardians. Without efforts to encourage succession planning, many children could end up on their own.

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MEASURE Evaluation
Carolina Population Center
University of North Carolina at Chapel Hill
206 W. Franklin Street
Chapel Hill, NC 27516 USA
919.966.7482 / measure@unc.edu
http://www.cpc.unc.edu/measure