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RESEARCH AND EVALUATION REPORT

Implementation of Standards of Service Delivery for Orphans and Vulnerable Children in Kenya: *A Prospective Evaluation of Performance, Costs, and Equity*

NOVEMBER 2011

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DISCLAIMER

The views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ABBREVIATIONS

AED	Academy for Educational Development
AIDS	Acquired immunodeficiency syndrome
CBO	Community-based organization
CRS	Catholic Relief Services
CSI	Child Status Index
DCS	Department of Children’s Services
GOK	Government of Kenya
HCI	USAID Health Care Improvement Project
HIV	Human immunodeficiency virus
IP	Implementing partner
KAPAP	Kenyan Agricultural Productivity Program
KSh	Kenya shilling
MOH	Ministry of Health
NGO	Non-governmental organization
OVC	Orphans and vulnerable children
TOT	Training of trainers
TWG	Technical working group
URC	University Research Co., LLC
USAID	United States Agency for International Development
US\$	United States dollar

EXECUTIVE SUMMARY

Introduction

Due to an increase in the number of children affected by HIV and AIDS in Kenya, efforts to provide services for orphans and vulnerable children (OVC) have expanded quickly in recent years, with a focus on high coverage and outputs but insufficient attention paid to outcomes. Lately, stakeholders have realized more attention should be given to outcomes and service quality. To address this, standards for services for vulnerable children in Kenya were first drafted at a five-day workshop held in November 2009, and further sessions in 2010 led to the development of the first complete draft of national OVC service standards.

USAID and the Government of Kenya were interested in gathering evidence on the effectiveness, efficiency, and equity of implementation of the draft standards, so it was determined that the standards should be implemented on a pilot basis in four districts. Seven implementing organizations were identified to participate in the piloting of the draft standards. Two international non-governmental organizations (NGOs) participated in the pilot quality improvement (QI) intervention per district.

The USAID Health Care Improvement Project (HCI) designed a research study to document the results of the piloting. Quantitative data were collected on changes to children's status as measured by the Child Status Index (CSI) from the baseline period immediately prior to initiation of the intervention to the end line following six months of application of the new standards. Data collection enabled examination of whether there were differences between the performance of boys and girls and between younger and older children. Qualitative data were gathered from interviews with key implementing partners on the effects of using the new standards on performance of vulnerable children service delivery. Cost data from the perspective of the funders—USAID and the implementing partners—were collected from the accounting records of HCI and its partners.

The main study questions were:

1. Was there a difference in the welfare of children receiving services from participating community-based organizations as measured by the difference between baseline and end-line CSI scores?
2. What was the incremental cost to the implementing partners and to HCI of implementing the new standards?
3. What was the proportion of girls and boys enrolled in vulnerable children care in the participating sites?
4. Were there differences in the effectiveness of the service delivery in improving child welfare between boys and girls and between younger and older children?
5. As reported by coaches and QI team members, what were key activities, the progress seen, the challenges, and the role of stakeholders in implementing the new standards of vulnerable children care?

Methodology

This was a prospective cohort study in which cost data were collected from seven sites, and quantitative and qualitative data were collected from four sites. The variables of interest were the twelve indicators of the CSI. For the sex and age equity component, the dependent variables were the CSI indicators, and the independent variables were sex and age. Four implementing partners (IPs) provided CSI data from a randomly selected group of children receiving services. Four partners submitted qualitative data. Respondents to the questionnaire were the coaches from the implementing partners and the leaders of the quality improvement teams made up of representatives of community-based organizations (CBOs) and community stakeholders.

CSI data were collected during the routine evaluation of child status by CBO staff. Baseline data were collected between September and October 2010, and end-line data were collected between March and April 2011 to correspond with six months of service delivery to vulnerable children applying the draft standards. Qualitative data were obtained through written forms completed by implementing partners and CBOs. Cost data from CBOs and implementing partners were self-reported and collected monthly. HCI cost data were collected from accounting data.

CSI data from the baseline evaluation were compared to end-line data using ordered logistic regression. However, for ease of communication to the general audience, data were also analyzed as if the CSI was a series of continuous variables. Written responses from the open-ended questionnaire were e-mailed to the evaluators and organized into themes. Monthly incremental costs were averaged among all participating partners and converted to US dollars at the rate of 90 KSh to US\$1.

Results

There were 381 children from five service providers who had baseline and end-line CSI scores (59.3% boys, 40.7% girls). For the 271 children with ages recorded, age at baseline ranged from three to 17 years with a mean of 10.6 and a median of 11. The average CSI scores at baseline for all children for the 12 individual sub-domains of the CSI were between 2.8 for food security and 3.3 for emotional health. End-line CSI scores all increased from the baseline, with average increase ranging from 0.55 for care to 0.19 for wellness. At baseline, there was no statistically significant difference in CSI scores between children five years or younger and those six years and over except for food security, which was higher in the younger group. Improvements seen in younger children were statistically significantly higher for shelter, care, wellness, health care services, emotional health, social behavior, and education. Girls tended to have slightly higher baseline CSI scores than boys in all sub-domains except for abuse/neglect; however, none of the differences were statistically significant. The only statistically significant difference in improvement was in abuse/neglect in which girls were one and a half times as likely to improve by one score point than boys ($p=0.007$).

Written reports from the four implementing partners showed substantive changes in activities of delivering vulnerable children's services which they attributed to their piloting of the new standards. Chief among these were improved communication with and participation by children and their caregivers, improved coordination among the implementers and other governmental and NGO service delivery partners, and more active problem solving to meet the specific needs of the children. Challenges to achieving better performance included a drought which increased food insecurity and decreased income in many regions, and the high expectations from service recipients.

The cost to the implementing partners for the nine months attributable to the piloting program was 14.47 KSh per child receiving services (US\$ 0.16 per child). The total cost to the USAID Health Care Improvement Project was 4,180,000 KSh (\$ 46,470).

Conclusions and Recommendations

The qualitative data showed that significant positive changes were seen by the implementers in the overall quality of the services delivered to vulnerable children. By this measure, the standards piloting was a success. The improvement seen in the CSI scores was positive and encouraging, particularly given that a drought was significantly affecting the welfare of the populations in the piloting districts. However, in the absence of a control group for a valid comparison, it is unknown how much of the improvement was due to the new standards. On the strength of the qualitative evaluation of the program and the low additional cost to the implementing partners, expansion of the program is recommended. If done on a regional basis so that travel expenses for the new standards workshop, learning sessions, and coaching visits could be minimized, the overall efficiency of the program would be substantially enhanced. Further research is necessary to determine exactly what proportion of the CSI improvements were due to the new standards; such an evaluation should be part of any scale-up of the OVC service standards.

I. INTRODUCTION

Due to increase in the number of children affected by HIV and AIDS in Kenya, efforts to provide services for orphans and vulnerable children (OVC) have expanded quickly in recent years. In some settings, the rapid increase in OVC program funding has resulted in a focus on high coverage and outputs, with insufficient attention paid to outcomes, without clear evidence that the services provided are effective, appropriate, efficient, and equitable. Lately, stakeholders have realized that more attention should be given to desired outcomes and the need to provide a quality service that makes a difference in the lives of the vulnerable children.

To address the issue, a draft version of standards for services for vulnerable children in Kenya was developed in a five-day workshop held in November 2009, after a process of consensus building among partners, including representatives of the Government of Kenya (GOK), USAID-supported partners such as international non-governmental organizations (NGOs), and their implementing partners (local NGOs, faith-based organizations, and community-based organizations) across the country. Further sessions in 2010 resulted in the development of the first draft standards for care of vulnerable children in Kenya. A team comprised of monitoring and evaluation specialists further reviewed the document to finalize indicators in preparation for implementation in July 2010.

USAID and the GOK were interested in gathering evidence on the effectiveness, efficiency, and equity of implementation of standards of service to vulnerable children, so it was decided that the standards should be piloted before full national adoption and roll-out. The national OVC technical working group (TWG) identified seven implementing organizations to participate in the piloting of service standards in four districts considered suitable for the quality improvement intervention. Two international NGOs participated per district but one implementing partner had to discontinue involvement due to an end in their outside funding source. The purpose of the piloting was to inform decisions on whether the program should be increased in scale to cover a larger proportion of the country and whether or not changes to implementation are warranted.

Developed with support from USAID, the Child Status Index (CSI) is a scoring system for children's overall welfare based on six core service areas (domains) with 12 measurable goals related to the six core services. The six domains of care are: food and nutrition; shelter and care; protection; health; psychosocial; and education and skills. The index includes a four-point scale for each goal so that the child's well-being can be assessed as good, fair, bad, or very bad (1).

This evaluation relies on three sources of information. The first is the quantitative section which reports findings on changes to children's status as measured by the CSI from the baseline period immediately prior to initiation of the intervention to the end-line following six months of application of the new standards. We examined changes seen from baseline to end-line in CSI scores to determine whether there were any differences between performance of boys and girls and between younger and older children.

The second part of the evaluation gathered information from interviews with key implementing partners in which data were collected on the effects of using the new standards on the delivery of services to vulnerable children.

The third part includes collection of cost data from the perspective of the funder—the USAID Health Care Improvement Project (HCI). It also includes the incremental costs to the implementing partners of the changes attributable to participation in the piloting of the new standards.

Study questions

Specifically, this report sets out to answer the following questions:

1. Was there a change in the welfare of children receiving services from community-based organizations participating in the standards piloting as measured by the difference between baseline and end-line CSI scores?
2. What was the proportion of girls and boys enrolled in care for vulnerable children in the participating sites?
3. Was there a difference in the effectiveness of the service delivery in improving child welfare between boys and girls?
4. What was the age distribution of children enrolled to receive services in the participating sites?
5. Was there a difference in the effectiveness of the service delivery in improving child welfare between younger and older children enrolled to receive services at participating sites?
6. As reported by coaches and QI team members, what key activities were implemented to address problems with service delivery at participating sites?
7. As reported by coaches and QI team members, what progress was seen at the participating sites in terms of actions to improve child welfare?
8. As reported by coaches and QI team members, what are the challenges that remain to providing high quality services?
9. As reported by coaches and QI team members, what is the role of stakeholders in the provision of quality services for vulnerable children?
10. As reported by coaches and QI team members, what are the lessons learned from implementation of the new standards of services for vulnerable children?
11. What was the incremental cost to the implementing partners of complying with the new standards? What was the cost to the USAID Health Care Improvement Project of implementing the new standards with all partners?

II. METHODOLOGY

A. Study Design

This was a prospective cohort study. Data were collected from all seven sites involved in the piloting of the new standards for costs, from four sites for the quantitative data (CSI scores), and from four quality improvement coaches and the corresponding improvement team members at the four sites.

The unit of analysis for the quantitative part is the individual child. The variables of interest are the twelve indicators of the CSI. For the gender and age equity component, the dependent variables are the CSI indicators, and the independent variables are gender and age. The unit of analysis for the qualitative component is the facility.

The study was initially designed to include a control group. This was to allow a comparison of the changes in child status seen in the intervention sites with children's status changes at sites where service delivery was continuing without an improvement intervention. However, due to operational difficulties, these data were not available for inclusion in this evaluation.

B. Sampling

Implementing partners were responsible for the selection of community-based organizations (CBOs) to participate in the piloting of the standards. Some partners chose CBOs that were perceived to have potential to improve but had not yet done so because of lack of resources. Another partner chose a CBO based on their under-performing in terms of providing high quality services to vulnerable children. Another partner chose a CBO close to the partner's base of operation to minimize travel expenses.

For the CSI quantitative sections, the sampling frame was all children receiving vulnerable children's services from the CBOs under the auspices of the seven implementing partners and who had both baseline and end-line CSI data recorded. This was a subset of the total number of 27,954 children receiving services from the implementing partners (see Table 1). From this frame, four implementing partners provided CSI data from a randomly selected group of children receiving services.

Table 1: Total number of children receiving vulnerable children's services at implementation sites

Organization	Project	Children Served	Provided Qualitative Data
Government of Kenya - OVC	Kasarani-Cash Transfer	492	No
Hope Worldwide Kenya	Hope Worldwide Kenya	6,615	No
Lea Toto	Lea Toto	3187	No
AED Speak for the Child	AED-Nyando	2,813	Yes
Catholic Relief Services	CRS-Homa Bay (USAID)	750	Yes
	CRS-Homa Bay (TCB Project)	4,491	No
Maua Methodist Hospital	Maua Methodist & ZOE	4,800	Yes
Aphia -NEP	Aphia-Garissa	4806	Yes
Total		27,954	

For implementing partner costs, the sampling frame was all partners, and all submitted cost data. Therefore, this is considered population data rather than a sample. The same holds for the HCI implementation costs.

For the qualitative component, the sampling was from all seven implementing partners and their CBOs that were delivering services and part of the piloting. Among those, four submitted qualitative data. Respondents to the questionnaire were the coaches from the implementing partners and the leaders of the CBOs' quality improvement teams.

The sample size was calculated to be able to detect a meaningful difference in mean CSI scores between baseline and end-line data.

C. Data Collection

The data collection instrument for the quantitative component was a database template with columns for a child's unique identification number, age, gender, and each of the twelve sub-domains of the CSI. Determination of a child's CSI was done during the routine evaluation of child status conducted by CBO staff. Data were then collated by the implementing partner and sent to HCI staff. The CBO staff were trained on how to collect valid and reliable CSI data from the implementing partner coaches previously trained by staff from MEASURE Evaluation on collecting accurate CSI data in a two-day course. Baseline data were collected between September and October 2010, depending on when the CBO was able to start implementation of the new standards. End-line data were collected between March and April 2011 to correspond with six months of service delivery to vulnerable children under the new standards.

Qualitative data were obtained through written questionnaires which posed a series of questions about progress made by participating partners, key changes in services delivery practices, challenges experienced in implementation, the role of stakeholders, and the lessons learned from new standards implementation. The questionnaires were completed jointly by implementing partner and CBO staff. Completed questionnaires were then e-mailed to HCI staff.

Cost data from CBOs and implementing partners were self-reported and collected monthly during the implementation period. A database template was distributed among participants, and completed data forms were e-mailed to HCI staff. HCI cost data were collected from a direct review of HCI accounting data.

This study was considered a program evaluation so no approval from a formal research institutional review board was necessary. The project and its evaluation were approved by the Kenyan Ministry of Social Welfare.

D. Analysis

1. Quantitative data

CSI data from the baseline evaluation were compared to CSI data collected at end-line. Because the CSI is an ordinal scale rather than a continuous variable, the most robust method of analyzing whether there was a statistically significant change in CSI from baseline to end line is through the use of ordered logistic regression accounting for the fact that the data are paired (one baseline and one end-line observation per child). However, for ease of communication to the general audience, the data were also analyzed as if the CSI was a continuous variable for graphical presentation. Indications of statistical analysis were reported only for the ordered logistic regression analysis. Subgroup analyses comparing CSI by age group and gender were conducted using the same methods. Statistical significance was determined if $p < 0.05$.

Data management was done using Excel, and statistical analysis was conducted with STATA 11.

2. Qualitative data

Written responses from the open-ended questionnaire were e-mailed to the evaluators and collated. All responses were organized into themes. Tables of responses were cross-referenced, and representative comments were highlighted.

3. Cost data

Monthly incremental costs were averaged among all participating partners. The overall costs to all of the partners over a six-month period was divided by the total number of children receiving services from the seven partners to give a total per-child amount. The costs of the piloting workshop, the learning sessions, and the coaching visits were reported directly. Kenyan Shilling amounts were converted to US dollars at the rate of 90 KSh to US\$1, the prevailing rate in July 2011.

III. RESULTS

A. Sample Characteristics

From the five service providers, there were 381 children who had CSI scores recorded for both baseline and end-line. There were 162 (59.3%) boys and 116 (40.7%) girls, a statistically significant difference overall (see Table 2). For the 271 children with ages recorded, age at baseline varied from three to seventeen years with a bimodal distribution, a mean of 10.6, and a median of 11 (see Figure 1). All children under the age of six came from only two sites: Kasarini and Maua Methodist (Table 3).

Table 2: Sample size from implementing partners by gender

Implementers	Boys	%	Girls	%	Total	p-value	
Aphia - Garissa	41	68.3	19	31.7	60	<0.001	**
CRS-Homa Bay	42	58.3	30	41.7	72	0.027	*
Hope Worldwide Kenya	64	57.7	47	42.3	111	0.013	*
Kasarini CT	50	52.1	46	47.9	96	0.307	
Maua Methodist	22	52.4	20	47.6	42	0.372	
Total	219	57.5	162	42.5	381	0.004	**

*Statistically significant, $p < 0.05$

**Statistically significant, $p < 0.01$

Figure 1: Age distribution of children for whom age was recorded

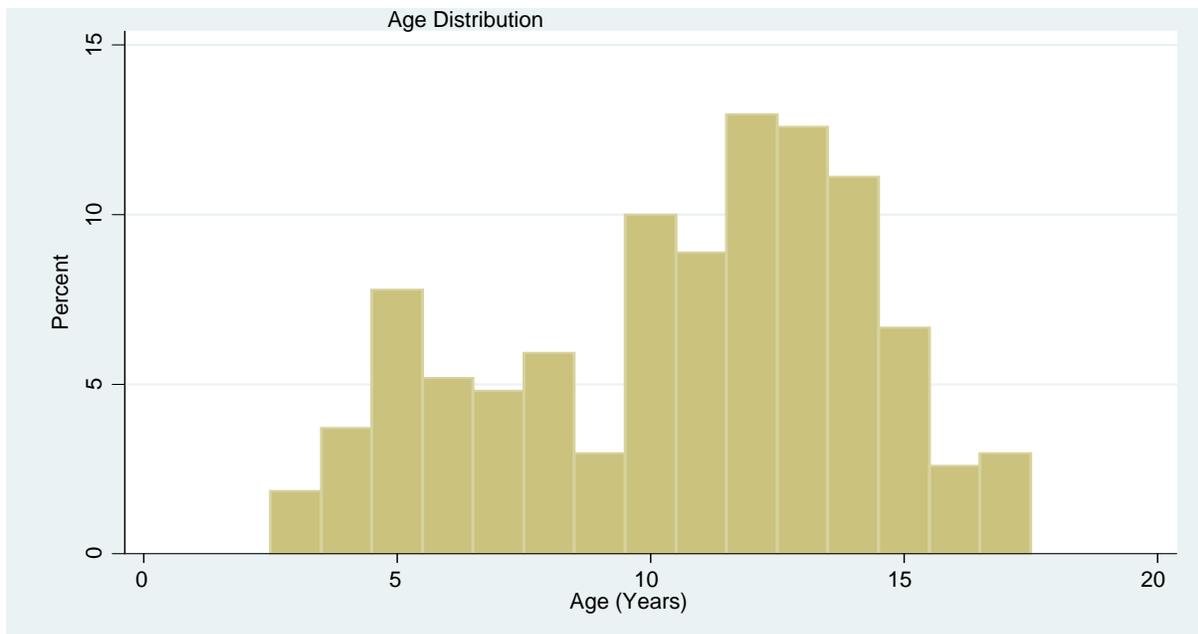


Table 3: Sample size from implementing partners by age group

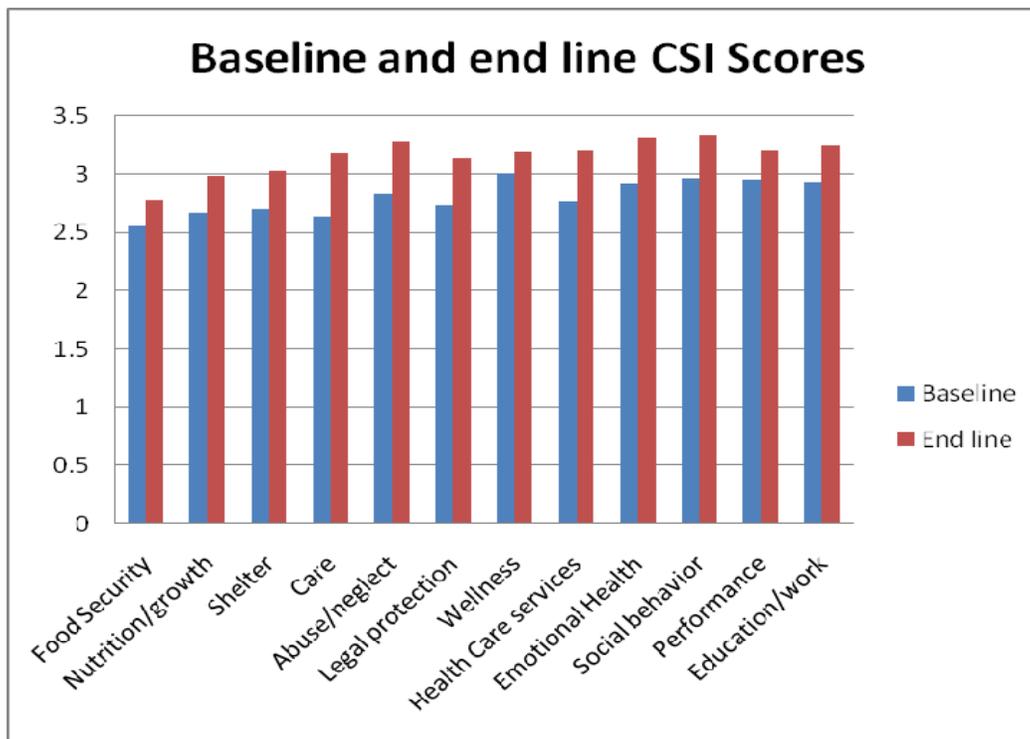
Implementers	Age 6 to 17	%	Age 5 or below	%	Total
Aphia - Garissa	60	100	0	0	60
CRS-Homa Bay	72	100	0	0	72
Hope Worldwide Kenya	111	100	0	0	111
Kasarini CT	90	93.8	6	6.3	96
Maua Methodist	12	28.6	30	71.4	42
Total	345	90.6	36	9.4	381

B. Outcomes

1. Overall CSI Improvements

The average CSI score at baseline for all children in the study for the twelve sub-domains of the CSI ranged between 2.8 for food security and 3.3 for emotional health. End-line CSI scores all increased from the baseline. The highest increase was 0.55 for the sub-domain care, while the lowest increase was 0.19 for the sub-domain wellness (see Figure 2). Table 4 shows the overall improvement in CSI scores from baseline to end-line. The interpretation of the row labeled “Average difference” is that this is the average improvement in CSI scores seen across children. For example, if half the children at end-line had experienced an increase in CSI by 1.0 and half experienced no increase in their CSI from baseline, then the average increase would be 0.50. The higher the number, the greater the improvement. The interpretation of the “Odds of increasing CSI score by one point” row in the table is that this number is the odds of a child increasing from whatever their baseline score was to one higher than that score by the end-line. The higher the number, the higher the likelihood of an increase in CSI score. The improvements seen in all CSI sub-domains were statistically significant ($p < 0.01$ for all).

Figure 2: Baseline and end-line CSI scores for sample of children receiving services



2. Improvements by age

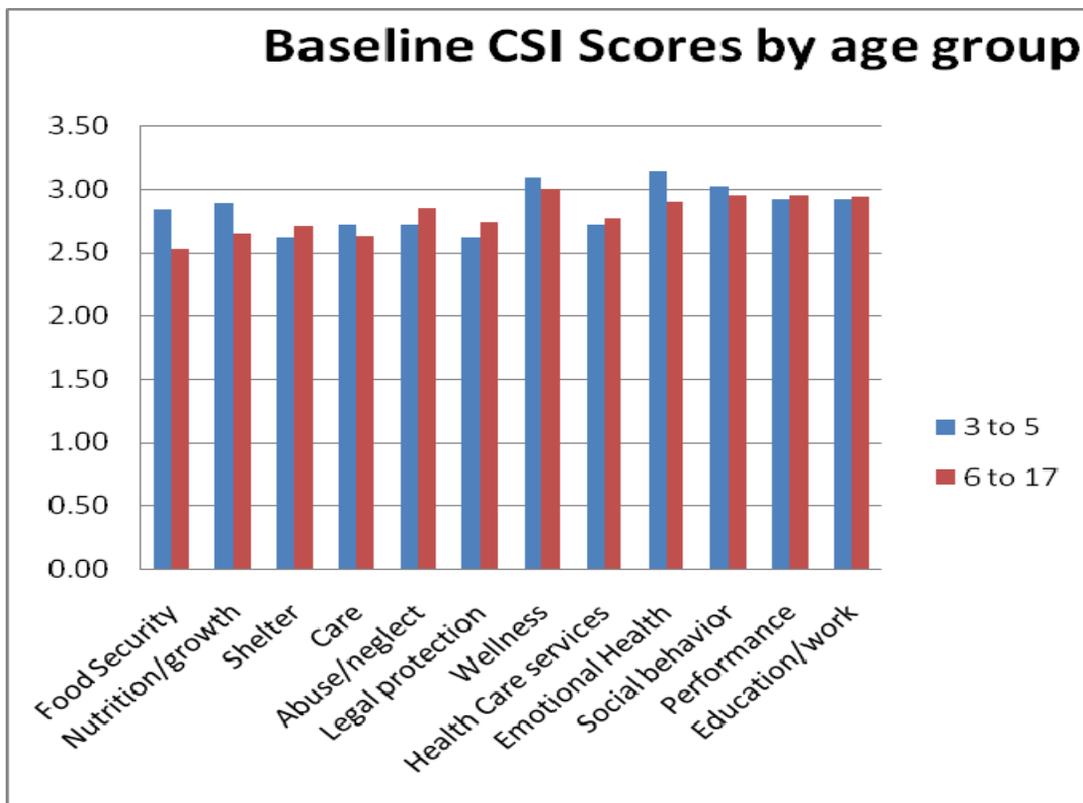
All children aged five and under received services in only two of the five implementers: Kasarini CT and Maua Methodist. Therefore, improvements in this age group represent performance in only two of the participating sites. At baseline, there were no statistically significant difference in CSI scores between children five years or younger and those six years and over except for food security. Younger children had slightly higher scores for food security than older children on average (2.83 versus 2.53; $p = 0.031$) (see Table 4 and Figure 3).

Table 4: Improvement in CSI – Average improvement and odds of increasing by one score point on CSI

	Food Security	Nutrition / growth	Shelter	Care	Abuse / neglect	Legal protection	Wellness	Health Care services	Emotional Health	Social behavior	Performance	Education /work
Average difference	0.22	0.32	0.32	0.55	0.45	0.40	0.19	0.44	0.38	0.37	0.26	0.32
Odds of increasing CSI score by 1 point	1.72	1.99	2.03	3.25	2.32	2.02	1.3	2.25	2.02	1.81	1.59	1.62
P-value for improvement	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.01	<0.001	<0.001	<0.001	<0.001	<0.001

Note: All values for improvement are statistically significant at $p > 0.01$

Figure 3: Baseline CSI scores by age group

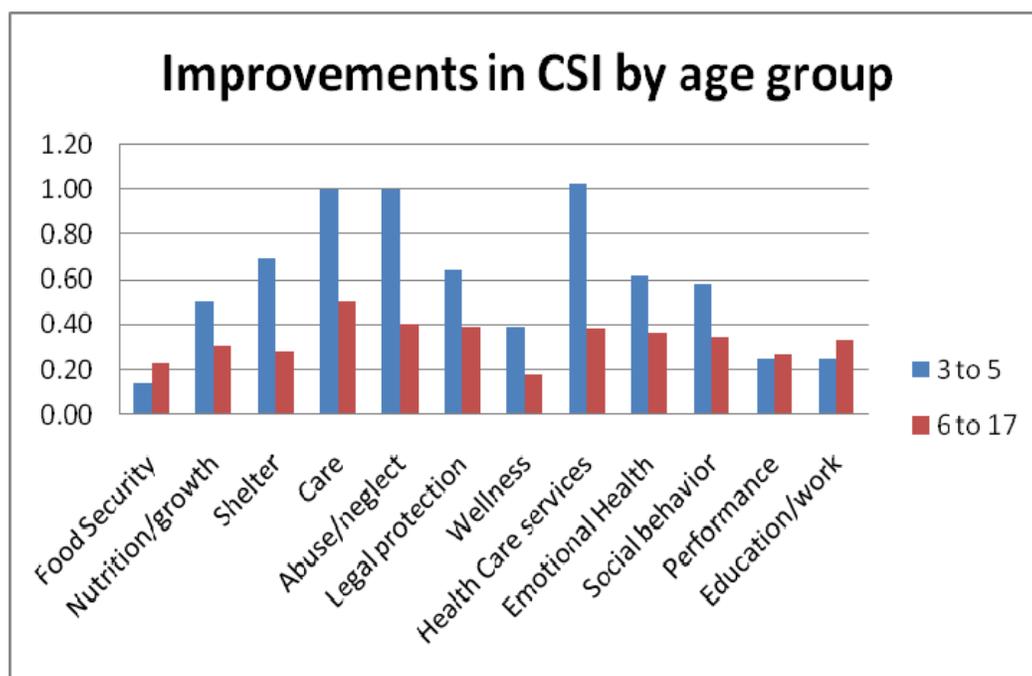


Improvements seen in younger children were statistically significantly higher for the sub-domains shelter, care, wellness, health care services, emotional health, social behavior, and education (see Table 5 and Figure 4).

Table 5: Average improvement in CSI scores and odds of increasing by one score point on CSI, by age group

Age	Food Security	Nutrition/growth	Shelter	Care	Abuse/neglect	Legal protection	Wellness	Health Care services	Emotional Health	Social behavior	Performance	Education/work
Baseline												
3 - 5	2.83	2.89	2.61	2.72	2.72	2.61	3.08	2.72	3.14	3.03	2.92	2.92
6 - 17	2.53	2.64	2.71	2.63	2.84	2.75	3.00	2.77	2.90	2.95	2.95	2.94
p-value	0.031	0.123	0.522	0.565	0.495	0.456	0.635	0.788	0.182	0.674	0.843	0.919
Improvement												
3 - 5	0.14	0.50	0.69	1.00	1.00	0.64	0.39	1.03	0.61	0.58	0.25	0.25
6 - 17	0.23	0.30	0.28	0.50	0.40	0.39	0.18	0.38	0.36	0.34	0.27	0.33
Odds of CSI increase by 1												
3 - 5	1.79	5.48	20.13	26.84	20.47	9.47	4.40	16.78	9.77	5.79	2.49	3.21
6 - 17	1.73	1.86	1.81	2.81	1.98	1.88	1.24	1.90	1.83	1.64	1.55	1.59
p-value	0.614	0.061	0.020	0.000	0.000	0.055	0.028	0.000	0.007	0.017	0.976	0.007

Figure 4: Improvements in CSI scores by age group



3. Improvements by gender

Girls tended to have slightly higher baseline CSI scores than boys in all sub-domains except for abuse/neglect; however, none of the differences was statistically significant (see Figure 5 and Table 6). In all sub-domains except nutrition/growth and shelter, girls showed greater improvement in CSI scores than boys (see Figure 6). However, the only statistically significant difference in improvement was in improvements in abuse/neglect in which girls were one and a half times as likely to improve by a score of 1 than boys ($p=0.007$) (Table 6).

Figure 5: Baseline CSI scores by gender

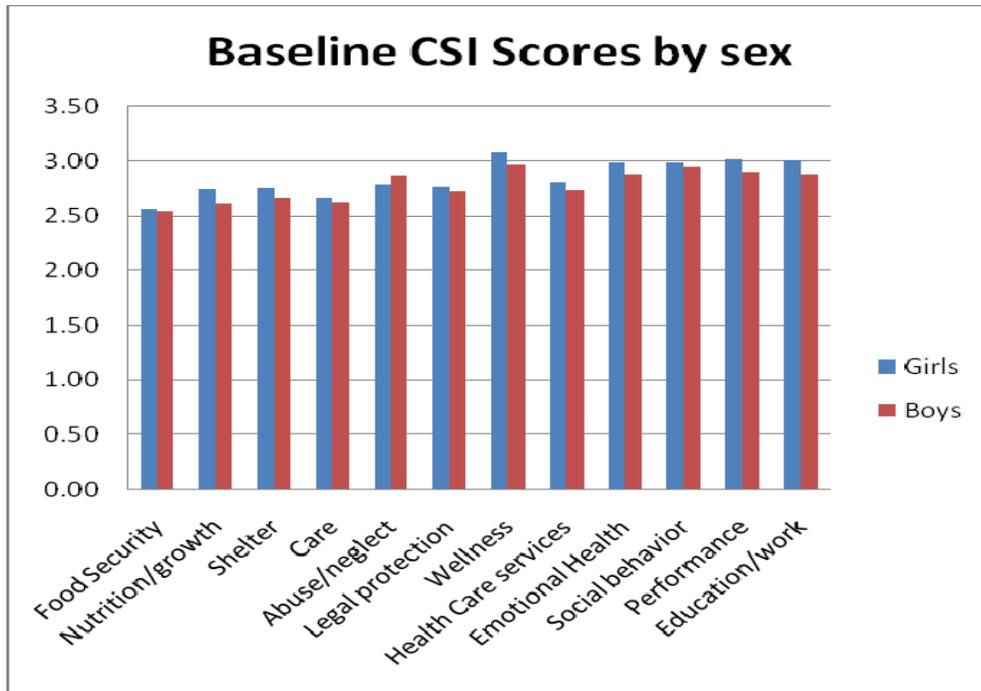


Figure 6: Improvements in CSI scores by gender

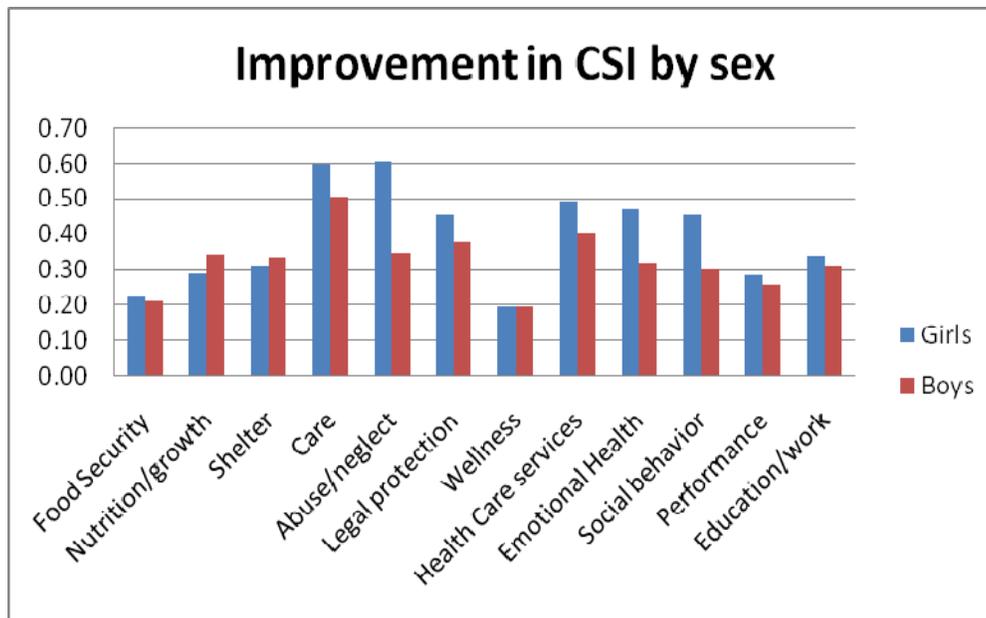


Table 6: Average improvement in CSI scores and odds of increasing by one score point on CSI, by gender

	Food Security	Nutrition/growth	Shelter	Care	Abuse/neglect	Legal protection	Wellness	Health Care services	Emotional Health	Social behavior	Performance	Education/work
Baseline												
Girls	2.57	2.75	2.75	2.66	2.79	2.76	3.07	2.81	2.99	2.98	3.02	3.01
Boys	2.55	2.61	2.66	2.62	2.86	2.72	2.96	2.73	2.88	2.94	2.89	2.88
p-value	0.812	0.138	0.320	0.680	0.479	0.706	0.267	0.481	0.292	0.707	0.221	0.263
Improvement												
Girls	0.23	0.29	0.31	0.60	0.60	0.46	0.20	0.49	0.47	0.46	0.28	0.34
Boys	0.21	0.34	0.33	0.51	0.35	0.38	0.20	0.41	0.32	0.30	0.26	0.31
Odds of CSI increase by 1 or more												
Girls	1.78	1.87	1.97	3.56	3.03	2.09	1.30	2.42	2.59	2.17	1.60	1.63
Boys	2.09	1.68	2.06	3.03	1.90	1.97	1.34	2.13	1.72	1.58	1.57	1.60
p-value	0.908	0.528	0.789	0.354	0.007	0.621	0.885	0.312	0.087	0.119	0.854	0.904

C. Qualitative Results

1. Improvement activities and progress

There were several activities common across all five respondents. The implementers sought to identify problems with service delivery by engaging directly with the caregivers and the child recipients. Garissa provided for meeting opportunities for caregivers and children to provide a “safe platform for [vulnerable children] to express their needs for appropriate responses and actions”. It was widely reported that the added engagement of service recipients in problem identification and problem solving led to better relationships between providers and recipients.

Several implementers also reported engaging other CBOs in bringing to light general problems with service delivery as well as helping identify specific families that were in particular need of services.

All partners produced a list of specific accomplishments achieved in the prior months as a result of their participation in the piloting of the new standards. Maua Methodist, CRS-Homa Bay, and AED-Nyandu all reported activities to enable children to obtain birth certificates. Maua Methodist linked families to pro bono lawyers. AED-Nyandu advised caregivers as a group to order their applications for birth certificates as those that were needed imminently for school registration received priority from the government registrar.

Most implementers discussed activities focused on addressing food insecurity, and frequently this was linked to income-generating activities. AED-Nyandu promoted caregiver activities through support groups, which enabled more money to be spent on food given that the poor growing season rendered many families deficient in home-grown food. CRS-Homa Bay linked caregivers with agricultural extension workers for training on better crop management. Maua Methodist organized training for children and caregivers on bio-intensive farming and efficient animal husbandry. Garissa organized

supplementary feeding programs through a partnership with another CBO for children most at risk of malnutrition.

AED-Nuandu and Garissa organized hospital waivers so that children could get free access to health services. AED-Nyandu worked “[t]o facilitate mobile health outreaches through MOH”. All participating children in Garissa were given deworming treatment, and some were also given supplemental feeding through this mechanism. CRS-Homa Bay linked children to immunization and child growth monitoring through Ministry of Health (MOH) clinics.

Significant training and counseling was offered by all implementers to children and caregivers. CRS-Homa Bay reported that “children were sensitized on their rights and how to be involved as key players in seeking ... help”. Maua Methodist reported “[t]raining of [vulnerable children] and guardians on Right of the child by TOTs”. Garissa discussed training children and caregivers in their rights to protection and the laws of child labor.

2. Linkages with stakeholders

All implementers emphasized their increased linkages with other stakeholders as a result of participation in piloting the new standards for vulnerable children service provision. All mentioned increased communication with children and caregivers as noted previously. Three of the four discussed improved coordination with faith-based organizations. CRS noted their engagement with the Kenyan Agricultural Productivity Program (KAPAP). All discussed their coordination with various local and provincial government entities including the Ministry of Health, Ministry of Education, and the Children’s Department of the provincial administration.

3. Challenges

Drought was reported to have created significant difficulties both in terms of food security and the generation of income by all implementers. While the drought had brought an increase in some aid from donors, its adverse effects on the welfare of children and caregivers were not substantially ameliorated.

Maua Methodist, Garissa and CRS-Homa Bay discussed the lack of resources for complete implementation of quality services. While participation in the new standards piloting had improved the efficiency of service delivery by improving partnerships among other CBOs, there was still a greater need than could be met with the resources presently available.

AED-Nyandu, Maua Methodist, and Garissa said that there were very high and unrealistic expectations from caregivers and the community at large of the ability of the implementers to meet all of the needs of the vulnerable children.

Garissa also discussed a lack of coordination with the Government of Kenya at the local level and that the local administration was not supportive of the efforts to improve quality of service delivery. CRS-Homa Bay reported that there was an incentive to drop some vulnerable children cases if other CBOs were providing some services to the household. They also noted a “[L]ack of community structures for vulnerable children protection” and the lack of incentives for the QI team for items such as expense reimbursement for travel.

4. Lessons learned

Both Garissa and CRS-Homa Bay stated that linkages and developing “synergies” between various other service providers was very important to improving vulnerable children service delivery and should be promoted assiduously among implementers. Maua Methodist reported learning that behavior change among partner organizations, government entities, children, and caregivers is a gradual process. They also reported that the series of changes needed to improve the delivery of vulnerable children services was feasible. They said that the learning sessions and coaching visits were an essential component of the intervention because it helped “inform the whole process and help[ed us] stay on track”. Maua

Methodist also expressed their recommendation for “[r]olling out of the standards to all program areas”. Overall, the experiences of the implementers participating in this survey were positive.

D. Costs

The incremental cost to the partners overall per month was 6,424 KSh (Table 7). For the nine months of the piloting program’s operation, the cost was calculated to be 404,712 KSh (US\$ 4,497). Dividing this by the total number of children receiving services from the implementers in the piloting sites, the per-child cost over the nine months was 14.48 KSh (US\$ 0.16 /child).

Table 7: Cost of piloting the new vulnerable children care standards per month

Cost item	Incremental cost per program per month		
	KSh	US\$	%
Additional participants or time at regularly scheduled meetings	2721	30.23	42.4
Additional Meetings for vulnerable children Standards Piloting	284	3.16	4.4
General (equipment, stationery, supplies, printing, phone, internet)	2510	27.89	39.1
Data collection (transport, accomodations, meals, equipment, supplies)	910	10.11	14.2
Total incremental cost per program per month	6424	75.57	

Costs to the USAID Health Care Improvement Project were taken directly from project accounting records. These costs included transportation, accommodation, per diems, facility rental, and miscellaneous expenses associated with convening the national piloting workshop in July, the subsequent district learning sessions, coaching visits by HCI personnel, consultant activities, and training. More than 60% of the cost to the project was from the piloting workshop.

Table 8: Costs to the USAID Health Care Improvement Project for standards piloting

Month	Primary activity	Cost in KSh	%	Cost in \$US
Jul-10	Piloting Workshop	2,586,527	61.8	28,740
Aug-10	QI team coaching visit	83,306	2.0	926
Sep-10	QI team coaching visit	35,143	0.8	390
Oct-10	QI team coaching visit	186,116	4.5	2,068
Nov-10	District Learning Session	692,631	16.6	7,696
Dec-10	District Learning Session	491,010	11.7	5,456
Jan-11	Consultant activities	23,000	0.5	256
Feb-11	Consultant activities	43,600	1.0	484
Mar-11	CSI training	41,000	1.0	456
Total		4,182,333		46,470

IV. DISCUSSION

A. Summary

There is very strong unequivocal improvement in the average welfare status as measured by all sub-domains of the CSI of all children receiving vulnerable children services from the implementing partners who participated in the piloting of the new standards. Improvements varied from a 30% increased likelihood of improving by a CSI score of one for the wellness sub-domain to a three-fold increased likelihood of improving by a CSI score of one for the care sub-domain.

Baseline CSI scores for children aged five years and younger were no different than for those six and older in all sub-domains except for food security, where the younger children were enrolled with better levels of food security. While children in both age groups improved, the increases in CSI scores for the younger group were on average much greater in eight of the twelve sub-domains.

There were fewer girls than boys enrolled to receive vulnerable children care in the participating sites: approximately three girls for every four boys were receiving care. Once enrolled, girls receiving services tended to improve the same or slightly more than boys. Only in the sub-domain of abuse and neglect were improvements among girls significantly higher than for boys.

Written reports received from four out of the seven implementing partners showed substantive changes in activities of delivering vulnerable children services which they attributed to their participation in the piloting of the new standards. Chief among these were improved communication with and participation by children and their caregivers, improved coordination among the implementers and other governmental and NGO service delivery partners, and more active problem solving to meet the specific needs of the children. Challenges to achieving better performance included a drought, which increased food insecurity and decreased income in the regions, and the high expectations of service recipients.

The cost to the implementing partners for the nine months attributable to the piloting program was 14.47 KSh per child receiving services (US\$ 0.16 per child). The total cost to the USAID Health Care Improvement Project was 4,180,000 KSh (US\$ 46,470).

B. Relation to Other Evidence

The effects of poor quality care on the wellbeing of children in Kenya have been associated with inadequate shelter, respiratory tract infections, and overcrowding but these were foster-care settings rather than in social services provided by NGOs (2). Several authors in the peer-reviewed literature have described programs to address the wellbeing needs of children affected by HIV/AIDS, many of which are specific to sub-Saharan Africa. O'Hare et al. (3), Bhargava (4), and Beard (5) all describe interventions that specifically address vulnerable children, but none evaluate the effectiveness of the programs in terms of objective outcomes. Adejuyigbe (6), in surveying interventions that were available to children affected by HIV/AIDS in Nigeria, found no specific interventions to assess. A report by Wallis et al. (7) evaluated the effectiveness of an intervention to foster empowerment among HIV/AIDS-affected children in a case study from rural Tanzania, but the report did not use any objective measures of the program's effects, and there were no measurements of costs associated with its implementation. A Cochrane Review of interventions to improve psychosocial wellbeing of children affected by HIV/AIDS found no papers that met the inclusion criteria for robustness of design to show effectiveness (8).

C. Interpretation

Comparing baseline and end-line measures of child welfare shows an improvement over the period of the intervention. While the magnitude of improvement was modest overall, it occurred at a time of significant hardship in the communities in which the piloting was taking place due to a severe drought. Without a comparison to changes seen during the same time period in an adequate sample of children

from appropriately selected control sites, it is not possible to determine the magnitude of the change in recipient children's welfare that was attributable to the introduction of the new standards.

Only two of the seven participating implementing partners served vulnerable children aged five years and under. These younger children initially scored at about the same level on the CSI but fared much better at end-line in most sub-domains than their older counterparts.

No studies were found that report the ratio between girls and boys who are adversely affected by HIV/AIDS. The sex distribution in all children under 14 in Kenya is 50.4% boys to 49.6% girls (9). If the distribution was the same among HIV/AIDS-affected children, a significant proportion of girls who should be receiving services are not enrolled. Once they are enrolled, they appear to do as well as or slightly better than boys.

As with the quantitative part of this evaluation, there was no comparison of qualitative findings to sites that were not part of the new standards piloting. However, the implementers had experience and knowledge of how vulnerable children services were delivered prior to their participation in the piloting of the new standards. Implementers were very positive overall in their assessment of the changes seen in service delivery and their effect on the welfare of children receiving the services. This is despite some barriers such as a limitation of resources available to deliver services and unrealistically high expectations from caregivers and service delivery partners.

D. Limitations

The most significant weakness of this study was the lack of a comparison group of children who were receiving vulnerable children services from an implementing agent that was not part of the piloting of the new standards. Having a control group would have substantively improved the case for attributing the improvements seen in children who were served by partners participating in the piloting to the actual implementation of the piloting.

The initial plan included data collection from control sites but two service providers who initially said they could collect such data were unable to do so. A third was willing to but they did not have baseline CSI data of adequate quality in their proposed control group to make a valid comparison to follow-up data to be able to accurately quantify changes in children's status over the same period of implementation in the piloting sites.

A fourth implementing partner did provide data on fifteen recipients of services in what was thought to be control sites but it was later discovered that these were the same children who received services later with intervention partners and therefore they did not meet the definition of a true control site.

Collection of control site data is inherently difficult because implementing partners not part of any quality improvement initiative often do not have adequate baseline data. This can be because CSI data are simply not being collected systematically or because those delivering services are not adequately trained in reliably evaluating a child's wellbeing with the CSI.

The Child Status Index itself has received criticism as a tool for measuring the vulnerabilities of children affected by HIV/AIDS (10). The validity of the tool in the sub-domains food security and wellness was shown to be moderate while validity in all other sub-domains was either poor or negative. While there may be weakness in the tool, there are several reasons it was used in this study. First, its use has been promoted by many governmental organizations and NGOs to standardize the way children's welfare is measured across different settings. Second, there is familiarity with the use of the tool among many service providing organizations. Given the inherent difficulty of measuring the welfare of children and the absence of other objective and widely accepted measurement tools, the designers of this intervention utilized the CSI because it was the best available option.

Child Status Index data were collected by community-based volunteers who worked directly with the children under their care. Improvements in average CSI scores reflect well on the implementers, and

therefore there may be an incentive to overestimate welfare scores. However, it should be noted that there was no evidence that this occurred in this case. A better design for evaluation of CSI would be to have trained, independent data collectors evaluate the children. Limited time and funding precluded the use of such data collectors in this instance.

There may also have been some measurement errors on the part of the QI teams who were collecting the CSI data. We attempted to minimize this by having MEASURE Evaluation, the USAID contractor that developed the CSI, conduct a two-day training for implementing partners on accurate collection of the CSI scores.

It was originally intended that a cost-effectiveness analysis would be conducted using the CSI improvements in the intervention group compared to a control group as a measure of effectiveness and the incremental costs of the intervention as the numerator. In the absence of a control group, it can be concluded only that the 14.47 KSh (US\$ 0.16) appears modest for additional expenditures as a result of the piloting of the standards. This amount can be compared to other interventions for children affected by HIV/AIDS. The major cost of the intervention was the new standards piloting workshop conducted in July, 2010 as the first step in roll-out of the intervention. If this project were to be scaled up to other implementing service providers on a regional basis, the costs of this stage would be significantly less. This is because most of the expense was reimbursement for travel, per diems for the participants, and accommodation for a week. This has important implications because decreasing this expense would make the overall program much more attractive to the Government of Kenya or other future funders of such a scale-up.

V. CONCLUSION AND RECOMMENDATIONS

The qualitative data showed that significant positive changes were seen by the implementers in the overall quality of the services delivered to children affected by HIV/AIDS and their caregivers. By this measure, the standards piloting was a success. The improvement seen in the CSI scores was positive and encouraging, particularly given the fact that a drought was significantly affecting the welfare of the populations in the area where implementation took place. However, in the absence of a control group for a valid comparison, it is unknown how much of the improvement was due to the new standards.

On the strength of the qualitative evaluation of the program and the low additional cost to the implementing partners, expansion of the program is recommended. If done on regional basis so that travel expenses for the standards introduction workshop, learning sessions, and coaching visits could be minimized, the overall efficiency of the program would be substantially enhanced. Further research is necessary to determine exactly what proportion of the CSI improvements were due to the new standards; such an evaluation should be part of any scaling-up of the program.

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