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A COSTING ANALYSIS OF SELECTED ORPHANS AND VULNERABLE CHILDREN (OVC) PROGRAMS IN BOTSWANA

AUGUST 2010

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

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ABBREVIATIONS

AIDS	Acquired Immuno-deficiency Syndrome
BAIS	Botswana AIDS Impact Survey
BNPA	Botswana Nation Plan of Action on OVC
CBOs	Community-Based Organizations
CCA	Common Country Assessment
CSO	Central Statistics Office
DSS	Department of Social Services
FBOs	Faith-Based Organizations
GoB	Government of Botswana
HIV	Human Immuno-deficiency Virus
HPI	Health Policy Initiative
IGA	Income Generating Activities
MLG	Ministry of Local Government
NGOs	Non-Governmental Organizations
OVC	Orphans and Vulnerable Children
PEPFAR	United States of America's President's Emergency Plan for AIDS Relief
PSS	Psychosocial Support Services
S&CD	Department of Social Welfare and Community Development
SSA	Sub-Saharan Africa
STPA	Short Term Plan of Action on the Care of Orphans
UNAIDS	Joint United Nations Program on HIV/AIDS
UNICEF	The United Nations Children's Fund
USAID	United States Agency for International Development
WB	World Bank

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EXECUTIVE SUMMARY

According to the 2008 Situation Analysis on orphans and vulnerable children (OVC), there are approximately 51,806 (6.5%) orphans in Botswana. The needs of these orphans are currently being addressed by a host of stakeholders that include the Government of Botswana, Non-Government Organizations (NGOs), Community Based Organizations (CBOs), Faith Based Organizations (FBOs) and private individuals. The Government of Botswana, with supplementary funding facilitated through PEPFAR¹, provides the greatest amount of support to OVC. The national response to OVC care and support is currently guided by a number of policies/acts and frameworks which include the Short Term Plan of Action on OVC (STPA) of 1999, the National OVC guidelines of 2008, the Children's Act of 2009 and the revised Destitute Policy of 2002, to name a few.

Despite efforts to date, very little is known about the actual costs of running OVC support interventions in Botswana. The objective of this report is to provide an analysis of the costs of OVC interventions in Botswana from the perspective of a sample of 19 organizations². This report is therefore one of the first steps towards estimating the actual short-term and long-term costs of OVC support in Botswana.

The costing study uses data³ from participating organizations to ascertain the current costs of services to OVC in Botswana. Nine defined service areas are examined in this report namely: food and nutrition, shelter and care, education, psychosocial support (PSS), child protection, health care, income generating activities (IGA), special needs and clothing/bedding.

There is only one Government institution represented in analysis done in the main report. Therefore, the costs presented in the study are more representative of costs from the perspective of NGOs, CBOs and FBOs, than the cost to Government for provision of OVC services. Annex A⁴ provides an analysis of the costs to Government for provision of select OVC services. Overall the OVC costing study reveals that in Botswana:

- *most organizations are currently providing a wide array of OVC services*
- *costs vary considerably within and across service areas among organizations*
- *labor, overhead and material costs are the most expensive resources*
- *institutional care is more costly than community based interventions*
- *scaling up existing programs may reduce the cost per child of interventions*

RESULTS

Median costs (rather than mean costs) are presented throughout this study because of the wide variation in costs. In data with extreme outliers, as is the case in this study, the median is a better measure of central tendency to use than the mean. The median represents the middle value in the data set and is a better representation of the cost results in this study. The analysis on costs has been disaggregated by total costs, costs per child, costs per service area and by resource type. The results obtained are presented briefly below.

¹ This stands for the United States Government President's Emergency Plan for AIDS Relief

² These organizations include non-governmental organizations (NGOs), Faith Based organizations (FBOs), Community Based organizations, Government institutions and private organizations.

³ The data collected are capital and recurrent costs categorized in terms of labor, overhead, transport, and equipment/furniture and material costs.

⁴ At the time the analysis was carried, the authors had not received complete data from the Government for inclusion of this analysis in the final report.

I. The total cost of OVC support

As indicated in Table A, the total cost of OVC support was estimated to be BWP 36,158,993 (US\$ 5,174,352) per year for all 19 organizations. Total costs ranged from BWP 179,589 (US\$ 25,699) to BWP 6,384,446 (US\$ 913,614) per annum for each organization. At the median total costs amounted to BWP 1,123,414 (US\$ 160,760) per year per implementing organization. There are a number of reasons for the wide variation in intervention costs, including the range of service being provided, issues of scale and the different costs of inputs by organization.

Table A: Summary of total costs in BWP

II. Costs per child

The costs per child also varied considerably and ranged from BWP 286 (US\$ 41) to BWP 148,328 (US\$ 21,226) per annum. Within the sample, at the median, the cost per child was BWP 6,682 (US\$946) per year.

III. Costs by service area

Total Costs

On average, organizations provided 4 services each. As Table B indicates, the most expensive service is education, costing BWP 10,772,113 (US\$ 1,541,489) per year, and commanding 29% of total costs.

Second is psychosocial support, which accounts for 24% of total cost at BWP 8,894,416 (US\$ 1,272,791) per year. The total cost of food and nutrition amounts to BWP 8,438,277 (USD 1,206,802) per annum and is the third most expensive service and accounts for 23% of costs. Shelter and care cost BWP 2,833,162 (US\$ 405,425) per year and account for 8% of the total costs. Clothing and bedding support totaled BWP 2,104,366 (US\$ 301,135) per annum and represents 6% of total costs. Health care support to OVC makes up 5% of total costs and totals BWP 1,920,348 (US\$ 274,802) per annum. Income generating activity (IGA) support per annum costs BWP 1,382,377 (US\$ 197,818) and is 4% of total costs. Per annum, special needs support contributed to 1% of total costs, at BWP 390,284 (US\$ 55,850). Child protection was the least expensive accounting for less than 1% of total costs. This service costs totaled BWP 94,019 (US\$ 13,454) a year.

Table B: Total costs by service area

Service area	Total costs by service area	% of Total Costs
Education	BWP 10,772,113	29%
Psychosocial support	BWP 8,894,416	24%
Food and nutrition	BWP 8,438,277	23%
Shelter and care	BWP 2,833,162	8%
Clothing and bedding	BWP 2,104,366	6%
Health care	BWP 1,920,348	5%
IGA	BWP 1,382,377	4%
Special needs	BWP 390,284	1%
Child protection	BWP 94,019	1%

Unit Costs

As can be seen from Table C, the most expensive cost per child is shelter and care. At the median, the cost per child was BWP 16,686 (US\$ 2,388) for those organizations providing the service. The next most expensive intervention was special needs at a median cost of BWP 6,024 (US\$ 862) per child per year. At the median, education costs BWP 3,581 (US\$ 512) per annum and was the third most expensive area of support. After this intervention the next most expensive service was food and nutrition at a median cost of BWP 3,027 (US\$ 433) per year. The median cost per child for health care amounted to BWP 2,315 (US\$ 331) per annum. The median cost per child of clothing and bedding was BWP 2,182 (US\$ 312) per year. The three lowest cost per child services were psychosocial support (PSS), IGA and child protection respectively. At the median, PSS support costs BWP 1,538 (US\$ 220) per child, per annum. Per year, the median cost of IGA per child amounted to BWP 1,422 (US\$ 203) per annum. The intervention that cost the least per child was child protection at a cost of BWP 1,324 (US\$ 189) per year.

Table C: Median costs per child

Service area	Costs per child
Shelter and care	BWP 16,686
Special needs	BWP 6,024
Education	BWP 3,581
Food and nutrition	BWP 3,027
Health care	BWP 2,315
Clothing and bedding	BWP 2,182
Psychosocial support	BWP 1,538
IGA	BWP 1,422
Child protection	BWP 1,324

IV. Costs by resource type

As indicated in Table D, review of the costs by resource type reveals that the bulk of OVC costs are associated with labor (37%), followed by the cost of program materials (32%). Overhead costs are the third largest at 19% of the total costs followed by transport costs, which accounted for 9% of the total expenditures. The smallest proportion of costs is associated with the annualized cost of equipment and furniture, which account for only 3% of total costs.

Table D: Costs by resource type

Resource type	% of Total Costs
Labor	37%
Materials	32%
Overhead	19%
Transport	9%
Equipment/Furniture	3%

RECOMMENDATIONS

The following recommendations are tabled in this report for consideration based on the experiences and findings of the study:

- Use unit cost estimates derived from this study in costing the BNPA, which is planned for completion in late 2010.
- Conduct a costing study to establish the cost of OVC services to Government given the limitations of this particular study as noted earlier.
- In order to guarantee that domestic and international resources are being spent to achieve the greatest possible impact, conduct further research on the cost-effectiveness of current OVC interventions.
- Standardize the scope and coverage of OVC services to facilitate improved service delivery where possible.
- Escalate current efforts to improve the implementation capacity of organizations to deliver OVC support.
- Regularly collect, maintain and monitor cost data alongside current OVC data feeding into existing OVC monitoring and evaluation frameworks and systems.
- Finally, greater emphasis should be placed on the provision of IGA services to OVC and their parents/caregivers.

I. INTRODUCTION

The number of children under the age of 18 in Sub-Saharan Africa (SSA) who have lost one or both parents to AIDS has increased dramatically in the last five years. The number of children orphaned by AIDS in SSA is estimated to be around 12 million (UNICEF, 2006). Many more children live with one or more chronically ill or dying parents and or live in poverty stricken and food insecure households. In response to this crisis, governments, civil society and international institutions have developed a range of programs to provide protection, care and support to orphans and vulnerable children (OVC) and their families.

However current efforts still remain insufficient to address the OVC situation and a massive scale-up of interventions is required to make an impact. To facilitate such a scale-up, policy makers require estimates on future program costs (Dougherty et al., 2005). Projecting such costs is difficult owing to limited data on the current costs of OVC interventions. Although cost analyses have been conducted for a wide variety of HIV and AIDS interventions, very few have been done on the costs of services provided to OVC.

The objective of this report is to provide an analysis of the costs of OVC interventions in Botswana from the perspective of a sample of 19 service organizations. This report is therefore one of the first steps towards understanding the actual short-term and long-term costs of OVC support in Botswana.

Background on orphans and vulnerable children in Botswana

The number of orphans in Botswana has escalated drastically due to the high prevalence of HIV, to an extent that the extended family and community can no longer cope (Government of Botswana, 2008b). In 1999, the number of registered orphans was 21,209 (Tsheko et al., 2007). As at June 2010, 44,327 orphans were registered with the Department of Social Services (DSS)⁵. The Botswana AIDS Impact Survey III (2009) estimated the population⁶-based HIV prevalence to be 17.6% in 2008, with the age group 40-44⁷ years being the most affected. Estimates⁸ by UNICEF indicate that in 2007, there were an estimated 130,000 orphans in Botswana, 9,500 of whom were orphaned due to AIDS (UNICEF et al., 2009). These statistics, which exclude the number of vulnerable children, indicate the severity of the OVC situation and the urgent need for a multi-sectoral response as has been taken in Botswana.

In Botswana, an orphan is defined as a child below 18 years who has lost one parent (single orphan) or both parents (double orphan) (Government of Botswana, 2008a). Based on the Botswana definition, as of 2008, 6.5% of all children in Botswana were orphans (Government of Botswana, 2008a). Of these, 3.1% have lost both parents; 2.4% have lost only their mother and 1.0% have lost only their father (Government of Botswana, 2008a). The double orphan population estimated by the Situation Analysis on OVC of 2008 is comparable to the rate of 3% reported in the Botswana AIDS Impact Survey (BAIS) III of 2009 (CSO, 2009). Table 1 provides a summary of select OVC indicators⁹.

The definition of a vulnerable child is not as straight forward, but relates to a child below the age of 18 in any of the below categories:

1. lives in an abusive environment
2. lives in a poverty-stricken family and cannot access basic services
3. heads a household
4. lives with a sick parent(s)/guardian

⁵ The authors obtained the information from the Social Welfare Division Database 2010

⁶ Those 18 months and above

⁷ Prevalence among women in this age group was 38% and among men of the same age group 43%.

⁸ These estimates are based on the broader definition of an orphan than the Botswana definition. The definition of an orphan used is, any child below the age of 18 who has lost one or both parents.

⁹ AIDS Orphans statistics: are as % of all orphans in 2005. Source: UNAIDS 2006

- 5. is infected with HIV
- 6. lives outside family care

(Government of Botswana, 2008a).

At an operational level only two of the above categories (i.e., #2 and #4) are measurable at present (Government of Botswana, 2008a). Based on the Central Statistics Office (CSO) demographic survey questionnaire of November 2006, the prevalence of vulnerable children who "lived in a household where there is no one gainfully employed" was 30.6% and; 4.4% of children "lived in a household where there was a person who had been critically ill for at least 3 months" (Government of Botswana, 2008a).

In Botswana nearly one-third (30.1%) of the population is poor, with poverty more prevalent in rural areas (44.2%) (CSO, 2003). Most households are therefore unable to provide for their own children, much less the needs of orphaned relatives. Although BAIS III estimated that in 2008 approximately 1.7% (12,303) of the child population is vulnerable, given the current prevalence of HIV and poverty, this figure is likely to be a gross under-estimation. By the end of June 2010, a total of 36,183 vulnerable children were registered with DSS.

Approximately 49% of all households with OVC receive some form of assistance from Government (Government of Botswana, 2008a). However, despite efforts to date, the characteristics of OVC households continue to be of concern. Data from the Situation Analysis shows an increasing number of female-headed households with OVC. In addition, most OVC were found to live with relatives. Most of these relatives were unemployed, widowed, and had low education levels and low income.

Table I: Select OVC Statistics

Indicator	Statistic
Infant mortality (per 1000)	57
Under 5 mortality (per 1000)	76
Orphan prevalence	6.5%
Maternal orphans	2.4%
Paternal orphans	1.0%
Double orphans	3.1%
AIDS orphans	76%
Vulnerable children	1.7%

Source: BAIS III (2009); OVC Situational Analysis (2008), UN Botswana Second Common Country Assessment (CCA) (2007)

The national response to OVC care and support is coordinated by the Department of Social Services of the Ministry of Local Government, and implemented at district level by the Department of Social Welfare and Community Development (S&CD). To date, coordination of the national response has also included other Government bodies and the civil society. Government provides a large portion of financial support for OVC services, primarily in the form of food and education support. Other stakeholders such as Non-Governmental Organizations (NGOs), Community-Based Organizations (CBOs) and Faith-Based Organizations (FBOs) provide a broad range of services. However, support from these stakeholders is limited by insufficient implementation capacity and resource constraints. For more effective response to the increasing number of OVC in Botswana, it is important for other support sources to play a more significant role in supporting OVC.

At present policy and programming matters regarding orphans are guided by the Short Term Plan of Action (STPA) on the Care of Orphans developed in 1999 and that of vulnerable children by the Destitute Policy of 2002. The STPA identified the needs of orphans to include the provision of basic services such as food, clothing, protection, toiletries and education. The Ministry of Local Government evaluated the STPA in 2006 and made several valuable recommendations regarding the care and support of Orphans in Botswana. One of the key recommendations emerging from the evaluation was the development of an OVC Policy that recognizes the inclusion of vulnerable children in the Orphan program, and a Botswana National Plan of Action on the Care of OVC (BNPA), informed by a situational analysis. The Situation Analysis on OVC was conducted in 2008. The OVC Policy and the BNPA on OVC are to be completed in the later part of 2010. The OVC policy seeks to harmonize and address both orphan and vulnerable children services and regulations under one policy. Other key OVC documentation in place include the Regulations governing alternative arrangements for children in need of care (1999); the Children in Need

of Care Regulations (2005); the National OVC guidelines (2008); the National Monitoring and Evaluation Framework for OVC (2008), and the Children's Act of 2009.

Rationale for Costing OVC Interventions

Neglecting OVC needs today has the potential to generate high costs in the future, at an individual level, for families and society at large (WB, 2010). The argument for support to OVC and sufficient funding to support OVC interventions stem from human rights, economic and social capital arguments. From a human rights perspective, every child has the right to education, health and protection from abuse and economic exploitation. Orphans and vulnerable children contribute to future human capital, and in high prevalence countries, they constitute the bulk of the future labor force. Therefore, investment in OVC from an economic point of view is a critical aspect of developing future income earning capabilities. (WB, 2010). On the social side, failure to allocate sufficient funding for OVC may lead to neglected OVC growing up to be dysfunctional adults, resulting in a large-scale erosion of social capital.

Based on the arguments raised above, securing funding for comprehensive OVC interventions is a must, and conducting a costing of OVC interventions in a high HIV prevalence country such as Botswana has many advantages. Identification of future resource needs for OVC support is particularly important in Botswana given Governmental provision of free Antiretroviral Therapy (ART). The provision of ART is a long-term commitment that commands a considerable amount of Government funding and hence makes securing donor funding very important for OVC programming. In Botswana, the United States Government President's Emergency Plan for AIDS Relief (PEPFAR) funds a wide variety of OVC interventions. Within the sample selected, 42% of the organizations are primarily PEPFAR funded. Other organizations are funded by churches (11%), private individuals (11%) and the community (5%) and by Government (16%). Five organizations received funding from multiple donors.

Government and donors want to know how much it costs to provide support to one OVC, and consequently, what the appropriate cost of an OVC program is. Is the current level of OVC funding sufficient to provide the required support to OVC? How much would it cost to scale up OVC interventions to reach a wider population of OVC? A cost analysis such as the one detailed in this report is an important management tool that provides decision-makers with answers to such question.

Costing OVC interventions enables sustainable program planning to ensure that key stakeholders have adequate resources available for OVC programming. By knowing the cost of operating an intervention, program planners can estimate resources required for future programming and scale-up. In fact, it is anticipated that this particular costing exercise will feed into the BNPA process and provide Government with estimates of future OVC costs. In addition, costing studies can be used to evaluate the relative efficiency of spending between programs. For example, a cost analysis may find that two programs achieve the same results but that one costs more than the other, suggesting that the more expensive intervention is not using its resources efficiently. When making decisions on which programs are best to fund, donors may use costing information as part of their broader cost-effectiveness analysis. Finally, costing OVC services facilitates evidenced-based programming, which is beneficial when seeking donor funding.

II. METHODOLOGY

This section of the report outlines the methodology adopted. Although cost analyses have been conducted for various HIV and AIDS interventions, costing of OVC interventions is relatively new. This is in part due to the wide variety of services offered to OVC in developing countries and in part due to the difficulty in estimating the financial burden of the problem on communities (Dougherty et al., 2005; Forsythe, 2004).

One of the first analyses of this kind was performed in South Africa in 2001 by Desmond and Gow (2001)¹⁰. Since then, a number of other OVC costing studies have been conducted, using various methodologies, namely Forsythe (2004) on Zambia; Dougherty et al., (2005) on Eritrea and Zambia; Forsythe and Telake (2010) on Ethiopia and; Prywes et al. (2004) on Eritrea and Benin.

Sample size, selection process and type of services

A sample of 23 OVC organizations was initially considered for this study. However, due to the unavailability of three sites and lack of critical costing information from the fourth¹¹, this study is based on a sample of 19¹² organizations (see Table 2 below). The sample size was chosen based on five main criteria, namely geographic representation, category of service (to ensure diversity within the sample), number of OVC serviced, type of institution (CSO, NGO, CBO Government, Private), and amount of funds that the organization receives (to ensure the availability of data).

Based on the above criteria, the organizations listed in Table 2 were interviewed for the study between May and July 2010. The sites visited covered all major districts in Botswana and were a mix of rural and urban areas. Within the sample, eight FBOs, eight NGOs, and one each; Government, private and CBO, participated in the study based on the above agreed criteria. Three organizations are orphanages, 15 are pre-schools/day care centre focused on early childhood development and one is a boarding school. On average organizations provided four different services. The 9 OVC service areas examined in this study are:

1. Food and Nutrition
2. Shelter and Care
3. Education
4. Psychosocial Support (PSS)
5. Child Protection
6. Health Care
7. Income Generating Activities (IGA)
8. Special Needs
9. Clothing and Bedding

Although transport was an important aspect of service provision, transport was not considered as a separate service area. In this study, transport costs were apportioned across the 9 service areas outlined above based on how it was used within the respective organizations.

¹⁰ Desmond & Gow's (2001) were one of the first to measure actual costs of alternative types of orphan programs. The study was carried out assessing the costs of alternative approaches to orphan care in South Africa. More significantly, the study attempted to measure the cost effectiveness of orphan care, that is, the cost of delivering a given package of services to orphans and demonstrated the difficulty of measuring cost-effectiveness.

¹¹ The remainder of data for the 20th site was received after the main analysis was done. This discussion is provided in Annex A of this study.

¹² These 19 organizations were selected from among 241 OVC service providers registered with DSS based on the 5 criteria articulated above.

Table 2: List of organizations that participated in the OVC costing study

Silence Kills Support Group (NGO, Selebi Phikwe)	Bokamoso Trust (NGO, D'kar)
Mahalapye Mother's Union (FBO, Mahalapye)	King's Foundation (FBO, Francistown)
I am Special Education Society (NGO, Tlokweng)	Catholic Relief Services (FBO, Francistown)
Tumelong Counseling Centre (FBO, Kumakwane)	Tutume Baptist Day Care and Counseling Centre (FBO, Tutume)
Kamogelo Day Care Centre (FBO, Gabane)	Joan's Cousins (FBO, Lobatse)
Hajee Gulam Mustapha Children's Home (Private, Gaborone)	Kazungula Children's Arc Support Group (NGO, Kazungula)
Mpule Kwelagobe Centre (Government, Jwaneng)	Botshelo Trust (NGO, Shakawe)
SOS Children's Village (NGO, Gaborone)	Stepping Stones International (NGO, Mochudi)
Tirisanyo Catholic Commission (FBO, Hukuntsi)	Bana Ba Metsi (NGO, Ngarange/Seronga)
Botswana Retired Nurses Association (BORNUS) Day Care Relief (CBO, Tlokweng)	

Data issues and limitations

This report follows the costing methodology and approach taken by Forsythe (2004) and that of Forsythe and Telake (2010). The study is an analysis of cost data from the participating organizations and is limited in scope to the cost per OVC for the respective services. As an analysis of the current status of costs for various OVC services, this study does not make an assessment of what a model OVC program of support *should* encompass and cost. The study simply documents and analyses the associated costs of OVC services in Botswana.

It is important to note that this study is neither an analysis of cost-effectiveness nor a cost-benefit analysis. Cost-effectiveness analysis measures and compares the costs and *consequences* of interventions, assesses their relative efficiency and estimates future resource requirement (UNAIDS, 2000). Measurement of the costs of services/interventions per child is not a sufficient estimate of cost-effectiveness, since it doesn't provide information on the quality of services or their impact on the quality of life of OVC. This is primarily because children entering interventions have different characteristics, the quantity and quality of services provided differ and the resultant benefits in turn differ (Prywes et al., 2004). Therefore comparison of the cost-effectiveness of the different services offered by each organization is not feasible in this study. A cost analysis such as this is, however, the first step in collecting information required to conduct a cost-effectiveness study (UNAIDS, 2000).

The OVC Situation Analysis of 2008 attempted a crude costing of select OVC services among four organizations in Botswana. Based on the limitations experienced in the costing analysis in the Situation Analysis, recommendations were made for a more comprehensive costing study to be undertaken. This report is as such the first study of its kind in the OVC technical area for Botswana. Annex E provides a brief discussion of the next steps regarding undertaking a cost-effectiveness study for Botswana.

Being the first such study, a key data challenge was the attainment of complete cost data across organizations. A number of organizations had difficulty providing complete equipment/furniture, transport and program materials costs. Another data issue of note relates to making a distinction between orphan and vulnerable children. Most organizations did not keep statistics in this manner but rather had "OVC" statistics. As such analysis in this study is limited to discussion on OVC as a group, and is not disaggregated.

The Costing Approach

This study is an analysis of the costs per child reached over a one-year period of service delivery, from the perspective of the participating organizations. In doing so the study takes into account the value of all resources, capital and recurrent, required to deliver respective services. The analysis of costs provided encompasses annual total costs, cost per child, cost by service area and by resource type.

There are two types of costs, *financial costs* and *economic costs*. Financial costs represent actual expenditure on goods and services (UNAIDS, 2000; WB, 2010). To obtain the financial costs incurred, the overall level of expenditure on goods and services was obtained. Most organizations that support OVC benefit from valuable donations and voluntary labor. Costs such as food donations, donated vehicles, computers, volunteer labor etc, are not captured in a financial analysis, since they are not represented by actual expenditures incurred.

Economic costs include the actual value of all resources used, including the imputed value of voluntary labor, donated goods, etc. (UNAIDS, 2000). As such economic costs express the opportunity costs of goods and services that go into an intervention, and are therefore important to calculate in order to understand the potential sustainability of an intervention. For example, a building donated to an OVC organization could have been used for teaching instead of service provision and a volunteer could have been working elsewhere.

Capital costs refer to the cost of goods that have a life of more than one year (e.g., buildings, furniture, equipment, computers, vehicles, etc). All capital goods were annualized based on a 3% discount rate and given a life span of 10 years and 5 years for furniture and electronic equipment respectively. Smaller capital items such as bicycles were given a lifespan of 2 to 3 years. *Recurrent costs* are expenditures on resources with a lifespan of one year or less and on services. That is, they measure costs (e.g., salaries, utilities, fuel and food) of running an intervention.

Both purchased and donated items are included in the cost estimates presented. A substantial amount of equipment and furniture was donated. However, many organizations did not know the cost of donated items. Where the purchase price was not known, the value of donated goods and services was estimated by taking their current market price. From an economic perspective, volunteer labor should be costed based on the opportunity cost of that labor. However, in 18 organizations volunteers received some form of stipend or allowance. As such the cost of volunteer labor was costed based on the stipends/allowances received at the various organizations. Therefore there may be some underestimation of the actual value of volunteer labor, given that the stipends may inadequately represent the full opportunity cost of this labor.

Cost data for each service area was collected by reviewing program budgets and financial documents, and costs were categorized according to the resource types in Table 3. Although indicated separately as capital and recurrent costs, building and utility costs are analyzed jointly as overhead costs in this study. In some instances, but not all, these include building operating and maintenance costs.

The cost of select items was provided in US Dollars. In instances such as this, the foreign exchange rate for the month of June 2010 was applied for conversion to local currency. Consequently, all US Dollar conversions are conducted at a rate of one (1) US Dollar being equivalent to BWP 7.

Table 3: Categorization of costs by resource type

Capital costs	Recurrent costs
Buildings	Labor
Equipment and Furniture	Utilities
Vehicles	Materials
	Transport

Analysis of the data collected for this study was done in Microsoft Excel. Each organization's cost information was inputted into excel spreadsheets categorized

by resource type namely: labor, overhead, transport, equipment/furniture and materials. Figure 1 provides a summary of the steps taken in the costing process.

Figure 1: Summary of steps¹³ taken in the costing exercise

- Step 1:** A policy workshop was held with members of the reference group on 4 May 2010
- Step 2:** A 2-day costing workshop was held with 27 organizations and DSS from 6-7 May 2010
- Step 3:** A sample of 23 organizations was selected based on the five (5) stated criteria
- Step 4:** Pilot testing of data collection instruments at two (2) of the 20 identified sites from 10-11 May 2010, in Mahalapye and Selebi-Phikwe
- Step 5:** Cost data was collected from the remainder of organizations between the period 28 May and 30 July 2010
- Step 6:** Data (managed as outlined in the methodology) were compiled and entered in excel
- Step 7:** Unit costs/cost per child were derived by dividing total costs by the population of OVC reached

¹³ Step 3 refers to 20 sites because data was collected for 20 sites but the analysis was only done with 19 due to incomplete data for site 20.

III. ESTIMATING THE POPULATION REACHED

The 19 organizations in this study reached a total of 8,001 OVC per year. At an organizational level, the number of OVC supported varied considerably, ranging from a population size of 6 to as many as 3,149. The median number of OVC supported per organization was 138. Six organizations (32%) served between 450 to 950 OVC. Only one organization provided service to a population of more than 950 OVC. Figure 2 present a summary of the OVC population reached.

Most organizations in the sample were small-scale and therefore served relatively small OVC populations. Current regulation restricts the number of children an organization can serve based on the size of premises from which they operate. Therefore, the service capacity of select organizations was often determined by the size of their premises. This was particularly the case with those that offered day care services.

Food and nutrition support was offered in 18 of the 19 participating organizations, reaching 3,069 OVC. The three most common services provided were: food and nutrition, education and PSS. These three services were provided frequently (daily and weekly as applicable) throughout the year. Consequently although the intensity of these three services varied from organization to organization, the frequency of delivery was similar.

The least common services were special needs and income generation activities (IGA). Only 9% (732) of the OVC population in this sample benefited directly or indirectly from IGA. Of these 4% (311) benefited directly and 5% (391) indirectly through support provided to their caregivers. Special education was provided to 2% (164) of the OVC reached. Of these, 29 benefited from the skills of qualified special education teachers. See Figure 3 for a graphical representation of the percentage of the OVC population receiving respective services by service area.

Figure 2: Summary of OVC Population served

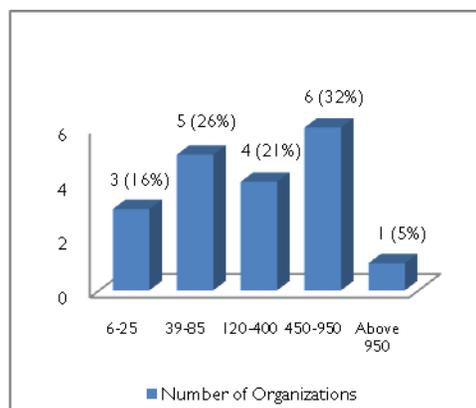
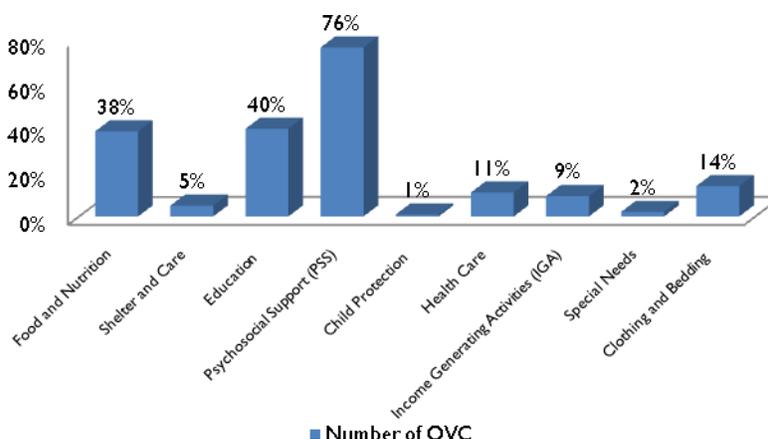


Figure 3: Percentage of OVC population receiving respective services by service area¹⁴



¹⁴ Please note that the total add up to more than 100% because OVC receive more than one service.

OVC Service Areas

Programming for OVC in Botswana is guided by the STPA, the Children's Act of 2009, the National Guidelines on the Care of Orphans and Vulnerable Children and other legislation. Based on international principles on OVC care, the guidelines articulate the procedures and issues to be considered in provision of basic care and support to OVC. Orphan and vulnerable children's programming is also guided by five internationally adopted principles that are child-centered, family and community focused, and human rights-based (see Figure 4) (Government of Botswana, 2008b). These principles are at the core of the services provided to OVC in Botswana. Based on these principles, the needs of OVC are met through services that address the rights of the child and fulfillment of a child's basic needs. In each of the organizations in the sample, one or more of these principles were central tenants of and shaped their OVC program.

Figure 4: Core principles for the protection, care and support of OVC in Botswana

1. Strengthen the capacity of families to protect and care for orphans and vulnerable children by prolonging the lives of parents and providing economic, psychosocial and other support;
2. Mobilize and support community-based responses;
3. Ensure access for orphans and vulnerable children to essential services, including education, health care, birth registration and others;
4. Ensure that governments protect the most vulnerable children through improved policy and legislation and by channeling resources to families and communities; and
5. Raise awareness at all levels through advocacy and social mobilization to create a supportive environment for children and families affected by HIV/AIDS.

Source: Government of Botswana (2008b)

Provision of OVC care and support services was the only business of 16 (84%) of the organizations in this study, while the remaining three provided other HIV/AIDS services. Interventions in support to OVC included initiatives that targeted children directly and indirectly through their parents/caregivers and the community. All organizations supported OVC directly primarily through food and nutrition support, education and or PSS. Indirect support was provided through PSS to parents/caregivers, parent/caregiver training/workshops and promotion of IGA¹⁵.

The core package of OVC services in Botswana was identified in an OVC costing reference group meeting held on 4 May 2010 and was found to be applicable among the organizations participating in this study. Among these organizations, one provided 7 services, three provided 6, two provided 5, five provided 4, six provided 3 and, two provided 2 services. The determination of each organization's service area was based on two main criteria:

- whether costs could be attributed to the service area and;
- whether a single output could be attributed to the service area.

All of the organizations were able to articulate their key service areas and each met the above criteria. Where organizations provided once-off ad-hoc services or services for less than three months, such services were not taken in consideration because the two criteria stated above could not be met given the rarity with which the services in question were provided.

¹⁵ This was only in the case of the 3 organizations providing IGA.

Components of the package of services provided to OVC in Botswana are detailed below.

Food and Nutrition

Food and nutritional sustenance is a fundamental human right of every child. It is also an important aspect of a child's physical and mental development, particularly in the early years of childhood. However, OVC often experience food insecurity and are at higher risk of malnutrition than other children (Government of Botswana, 2008b). Nutrition support is therefore an important component of OVC care. In 2007 approximately 13% percent of children in Botswana under the age of five were underweight or too thin for their age (CSO, 2007). Food and nutrition interventions for OVC encompass the provision of food, growth monitoring and nutritional counseling along with training caregivers and OVC in nutrition (Government of Botswana, 2008b).

This service area was the most commonly provided. Within the sample, 18 of the 19 organizations provided food and nutrition support to a total of 3,069 OVC. On average, organizations providing food and nutrition support provided a minimum of two meals a day (breakfast and lunch). Some organizations offered a mid-morning and afternoon snack depending on how long the children remained at the centre and availability of financial resources. The majority of organizations providing this area of support also provided nutritional guidance and training to parents/caregivers and the community.

As part of the national response to the OVC situation, registered orphans receive food support, in the form of a food basket from the government through the orphan program. The orphan food basket, which includes food and toiletries, is administered monthly and ranges in costs from BWP 525 (US\$ 75) to BWP 963 (US\$ 138) or above per orphan, depending on geographic location. Vulnerable children are supported through the Destitute policy through which they receive nutritional support, among other services. The OVC Situation Analysis reported that approximately 92% of households with registered OVC received food assistance for OVC care (Government of Botswana, 2008a).

Only 5 (26%) of the organizations within the sample confidently reported that their OVC received the food basket. Based on these responses, an estimated 778 (10%) of OVC receiving support from the participating organizations also benefit from the government food basket. The other 14 organizations (74%) were either not sure if the OVC they served received the food basket or said their OVC did not receive the food basket. This may result in underestimation of actual food support, given that this analysis may be missing cases where children and their families are receiving a food basket that has not been confirmed by the sampled organizations. On the other hand, it is important to note that food baskets, when provided, were given to the entire family and therefore were not given for the exclusive consumption of the OVC.

OVC attending government schools also receive additional nutritional support through the school feeding scheme. Those in primary schools receive a mid-morning meal and secondary school children a mid-morning snack and lunch.

Shelter and Care

The purpose of this intervention is to ensure that OVC have adequate shelter at all times. As discussed, Botswana has adopted a family centered approach to OVC support focused on ensuring that where possible, OVC remain within a family unit. As such, support to caregivers to enable them to have OVC remain with the family/community system is an important aspect of ensuring that OVC have adequate shelter. Placing a child in an orphanage is taken as a last resort. In such instances, placement of OVC is guided by the Regulations Governing Alternative Arrangements for Children in Need of Care of 1999.

The BAIS III report found that an estimated 17% (61,863) of orphans resided in rural areas. Given the high prevalence of poverty in rural areas, orphans in these areas are more at risk of insecure shelter options and require special attention.

Only four of the participating organizations provided shelter and care. All four provided full residential care. Three of these organizations were orphanages and the fourth a boarding school. A total of 388 OVC were supported with this service.

Education

Education is the right of every child and is vital for children's physical, intellectual, emotional and social development (International HIV/AIDS Alliance, 2010). OVC are at higher risk of dropping out of school due to a number of barriers such as stigmatization, lack of school uniforms, shoes and other miscellaneous school costs. The purpose of this area of support is to ensure that OVC remain in school and reap the short term and long term benefits of education. Tuition for primary schools is almost¹⁶ free in Botswana, however, higher levels of education are not. Guided by the STPA, through the S&CD¹⁷, registered OVC receive the necessary support to remain in school. This support includes the provision of school fees and uniforms, transport cost, accommodation support etc as identified by the needs of the child.

Education support provided by the participating organizations was primarily about provision of early childhood development (ECD). Seventeen (17) organizations provided this service to approximately 3,162 OVC. Of these 17 organizations, only 4 organizations provided support for school fees and uniforms.¹⁸ The rest of the organizations were primarily ECD/day care organizations or drop-in centers providing after school homework support and PSS to children at risk of dropping out of school. The support provided by the respective organizations focused primarily on pre-school education, nutrition and parental support. Of the participating organizations, 7 (37%) provided health screening and immunization support to OVC. Select organizations also offered life skills training. Only one organization provided vocational training.

Psychosocial Support (PSS)

Orphans and vulnerable children can suffer considerable emotional trauma as a result of their respective family situations ranging from loss of one or both parents and the trauma that comes from living in various abusive circumstances. This, coupled with stigmatization and marginalization, leaves them highly vulnerable, in need of counseling and various other coping mechanisms. Psychosocial support (PSS) gives OVC the skills with which to cope with stress, trauma and other difficult situations that they experience in life. An important aspect of PSS is ensuring that parents/caregivers are also equipped with skills to provide better care and support to OVC.

Within the sampled organizations, counseling, support groups, community sensitization activities and spiritual support were the main areas of support provided. Seventeen organizations provided this service and as a group reached a total of 6,093 OVC. In most organizations this service was provided to both OVC and their caregivers. In select cases they offered specialized support in the form of teen clubs, art and drama therapy, peer education etc. A point to note is that PSS was not only provided by social workers. In several instances other staff such as cooks, gardeners, cleaners etc., were reported to be providing PSS support.

¹⁶ Prior to 2006 it was totally free. Parents are now required to pay development fees of between BWP 20-25 for development fees. This is paid annually.

¹⁷ Vulnerable children supported by virtue of their parents' destitution are categorised as needy student and receive the necessary support to remain in school.

¹⁸ Note that in this analysis, only the incremental cost of additional OVC support for education is included. Thus the full-cost of the education is not provided in this report, since the regular cost of educating a child are incurred regardless of the OVC status of the child.

Child protection

All children require protection. However, OVC are particularly vulnerable to abuse, exploitation and neglect. When children's right to protection are violated they are at increased risk of HIV infection and physical, social and emotional problems (International HIV/AIDS Alliance, 2010). The 2006 evaluation of the STPA revealed that very little progress has been made with regard to protection of OVC and their rights (Government of Botswana, 2008b).

Child protection support should ensure that legal and social provisions are made to defend children from exploitation, drug abuse, sexual abuse, cruelty, separation from family, discrimination and protection from all forms abuse (Government of Botswana, 2008b). This support should include support to ensure that each child has a birth certificate with which to claim his or her birthright. Government regulations to facilitate these services exist. In addition, a National Protocol on Child Protection that involves the police services, teachers, social workers, parents and youth activists, aimed at addressing issues of abuse is to be established.

Only one organization provided child protection services to 71 OVC in the form of succession planning. Unfortunately the key organization outside of the government, providing child protection services, was unable to participate in this study.

Health Care

Basic health care is virtually free of cost to citizens of Botswana through the government health care system. As with education, access to basic health services is the right of every child. Despite this, "OVC face inadequate access to healthcare, prohibitive costs in resource constrained environments and re-emergence of opportunistic infections for those who are living with the [HIV] virus" (Government of Botswana, 2008b). The focus of this area of support is to ensure that OVC receive the health care support they need, including immunization, anti-retroviral treatment (ART), treatment for childhood illness, adequate referral services etc. Training parents/caregivers and the community on basic health care of OVC is a critical aspect of provision of health care for themselves and their children. Research has shown that a child's health status is dependent on the survival of their parents (International HIV/AIDS Alliance, 2010).

Seven organizations provided health care support.¹⁹ However, in 4 of these organizations the actual service was provided mainly through the government health system and in special instances private doctors. The remainder of organizations, one orphanage and two CBOs, provided health care support on-site. The support offered included immunizations, HIV testing and adherence support. One orphanage had an in-house nurse who dealt with various minor health issues on-site. A total of 862 OVC were reached with this service.

Income Generating Activities (IGA)

This area of support is focused on establishing different strategies to protect and strengthen the economic situation of OVC and their families such that they are able to provide food, clothing, shelter, education and psychosocial support to OVC (Government of Botswana, 2008b; International HIV/AIDS Alliance, 2010).

Economic security enables families to reap the full benefits of various OVC interventions received (JLICA, 2009). The absence of viable and sustainable IGA will often negate the benefits of interventions

¹⁹ As with education, the full cost of the service to the government is not included in this analysis. The focus of the health care costs is only focused on the incremental cost of additional health care services that were incurred by the service delivery organization, not the full cost to the government of all health care needs of children.

to improve the well being of OVC. IGA activities need to generate sufficient family income with which parents/caregivers can elevate themselves and OVC out of poverty (JLICA, 2009).

Within the sampled organizations, only three provided IGA. A total of 732²⁰ OVC received this service, which included job skills training, business skills training and seed funding to start select IGA such as confectionary, catering businesses, crafts and events management to name a few. In two of these organizations this support was provided to OVC and caregivers. The third organization provided this support to only caregivers.

Special Needs

The authors deliberately included organizations in the sample that provided support to children with disabilities. The decision to review the cost of providing specialized²¹ OVC support stems from the recognition that disabled children who are orphaned are at special risk with regards to even the most basic of services, and yet very few institutions for disabled children exist in Botswana. In addition to their disabilities²², handicapped children often suffer serious discrimination in many cultures, including in Botswana. It is important to note that many disabled children who stay with their parents could become functional and integrated into society if special interventions are supplied and families adequately supported to care for them (WB, 2004). Disaggregated data on orphans and vulnerable children obtained from the organizations sampled was not consistent enough to provide an analysis of costs covering the above categories.

Within the sample, three organizations provide specialized OVC support to children with various disabilities. As a group the organizations reached 164 OVC. Two organizations providing special needs support had among their staff special needs teachers who provided educational and psychosocial support to children with disabilities ranging from various physical disabilities to intellectually challenged children. One organization focused primarily on the use of sport as a form of psychosocial support for children with disabilities.

Clothing and Bedding

Clothing is one of the priority needs of OVC. This includes casual clothing and school uniforms. Beyond the social needs that clothing fulfils, clean clothing is also essential for the health of a child. It acts as a hygienic barrier, keeping toxins away from the body and limits the transmission of bacteria and viruses (International HIV/AIDS Alliance, 2010). In addition, clean and decent clothing makes a great deal of difference to the education of a child. Children with decent, clean clothes often do well in school, are more confident and have more self-esteem than those without (International HIV/AIDS Alliance, 2010).

However, provision of basic clothing items, much less school uniforms and bedding, is a struggle for most parents and caregivers of OVC. Many are unable to meet the costs of such needs due to low income coupled with the burden of caring for their immediate family and relatives. To fill this gap, through the orphan and destitute programs, government provides clothing support to OVC.

The objective of this service area is to provide adequate and decent clothing for OVC. Clothing and bedding support was provided by seven organizations. Five of these organizations provided primarily civic clothing items on average once a year. This support was made possible through donated clothing

²⁰ Refer to the section on estimating the OVC population for a breakdown of this figure.

²¹ There are five main categories of OVC that require special needs services however, all these categorizations do not apply in the Botswana context. These are: *Street children*: those of and on the street; *Children in the worst form of labor*: slavery, prostitution, illicit activities, harmful work etc; *Children affected by armed conflict*: indirectly through parents; those orphaned, disabled and traumatized by war; those in camps and; child soldiers; *Children affected by HIV/AIDS*: either living with infected parents; orphaned by HIV/AIDS, infected by HIV or; live away from home because of HIV/AIDS and; *Children with disabilities* (WB, 2010).

²² Such as severe physical disabilities, chronic disease, impairment of senses, intellectually challenged children and children with psychiatric problems and even children with smaller handicaps like cleft palate.

items from the community and select local and international organizations. The other two organizations (orphanages) provided bedding along with clothing because of the scope of their service provision. A total of 1,095 OVC received this support.

IV. RESULTS

The total cost of OVC support varied considerably among organizations. The same applies to the costs per child. The reasons for this variation are numerous, and range from the type of service provided, issues of scale and mix of inputs used by organizations. Because of the wide spread of costs, the study presents median²³ costs of OVC care.

It is important to note that the results presented in this study are more representative of the costs of providing respective OVC services from the perspective of NGOs, CBOs and FBOs, than the costs to Government and the private sector. For both Government and private sector, there is only one organization per sector in the sample. A further discussion of the costs to Government for provision of select OVC services is provided in Annex A.

As can be seen from Table 4, the total cost of OVC support was estimated to be BWP 36,158,993 (US\$ 5,174,352) per year for all 19 organizations. Total costs ranged from BWP 179,589 (US\$25,699) to BWP 6,384,446 (US\$ 913,614) per annum for each organization. At the median total costs amounted to BWP 1,123,414 (US\$ 160,760) per year.

Table 4: Summary of total costs in BWP

Total cost	BWP 36,158,993
Range	BWP 179,589 - BWP 6,384,446
Median	BWP 1,123,414

The difference in total costs can in part be attributed to the scale of operations and the types of service offered. In most instances, organizations with a higher cost per OVC reached were offering 5 or more services, while programs with a lower unit cost were offering fewer services. In addition, unit costs were lower for those organizations reaching large numbers of OVC, whereas organizations seeing smaller numbers of OVC had a higher unit cost.

Unit costs were also found to be highest for those organizations that offer residential care services. In total there were 388 OVC being reached through a residential care facility. The median cost per child of residential care was found to be BWP 16,686 (US\$ 2,388). One of the organizations in the sample providing residential care had a total cost of only BWP 889,970 (US\$127,355) with a cost per child of BWP 148,328 (US\$21,226). This facility served only 6 OVC, and supported them through completion of undergraduate education.

Another organization above the median provided boarding school services, and as such could be considered to provide residential care as well. For this organization costs totaled BWP 1,398,054 (US\$ 200,062) per annum, with a cost per child of BWP 27,961 (US\$ 4,001). The organization provides support to 50 children. The difference in total cost between these two organizations is in part due to the fact that the boarding school has considerably higher running costs than the small orphanage. However with a higher population of OVC served, the boarding school has the benefit of economies of scale.

Overall the variations in total cost indicate that there are diverse cost implications associated with the variety of OVC interventions required to address the needs of OVC. For example, provision of institutional care and interventions targeting high-risk OVC who are sick and or have chronically ill caregivers are bound to be more costly than interventions that provide PSS or education support to lower risk OVC (Dougherty et al., 2005).

²³ The median is the data point at the middle of ranked data and is particularly useful when results are strongly skewed, as is the case with the results of the costing.

In general the geographic location of organizations appears to have very little cost implication. Refer to the discussion on costs by resource type for more detail.

Unit costs per OVC reached

This section of the report provides a discussion of the unit costs or costs per child served. The unit costs are presented as an average cost and are calculated by dividing total cost by the population of OVC served. As such the costs per child are in part affected by the size of population served.

As with total costs, unit costs vary considerably among organizations, and range from BWP 286 (US\$ 41) to BWP 148,328 (US\$ 21,226) per annum. Regardless of the type of service provided, the median cost per child was BWP 6,682 (US\$ 956) per year. The variation in unit costs is attributable to the variation in population size, type of interventions provided and operating costs. As is to be expected, organizations providing residential care had higher costs per child. Other factors affecting the unit costs are the different costs and mixes of inputs in the different organizations.

Analyzing cost per child without factoring in the type of service provided is not recommended. This is because within this study, organizations were not providing consistently comparable services in terms of scale, type, scope, intensity and quality. For example, within this sample, two organizations provide five services each, and yet one has a cost per child per annum of BWP 8,552 (US\$ 1,224) while the other a cost of BWP 27,113 (US\$ 3,880) despite the fact that the later organization reaches a larger population of OVC. For this reason, the costs per child by service area are more informative and of value for programming purposes.

Determinants of Unit Costs

As discussed above, unit costs in this study vary considerably. There are a number of factors that affect unit costs. In general, these factors relate to scale, efficiency, and geographic location to name a few. As discussed earlier, in this study the geographic location of respective organizations appears to have very little cost implications. In terms of efficiency, the vast variation in costs suggests varying levels of efficiency given that on average organizations provided similar services at similar intensity and frequency. However, without the benefit of an analysis of the cost-effectiveness of these services, it is difficult to fully attribute inefficiency to the unit cost variations observed. In this study, a key cost driver is scale as can be seen in Figures 5 and 6. Figure 5 illustrates the relationship between scale and cost per child for food and nutrition, while Figure 6 depicts the same relationship but for education. In both Figure 5 and 6, the more children reached, the lower the cost per child for each of the services provided. Similar outcomes are observed across the other service areas.

Figure 5: Relationship between scale and cost per child (Food and Nutrition)

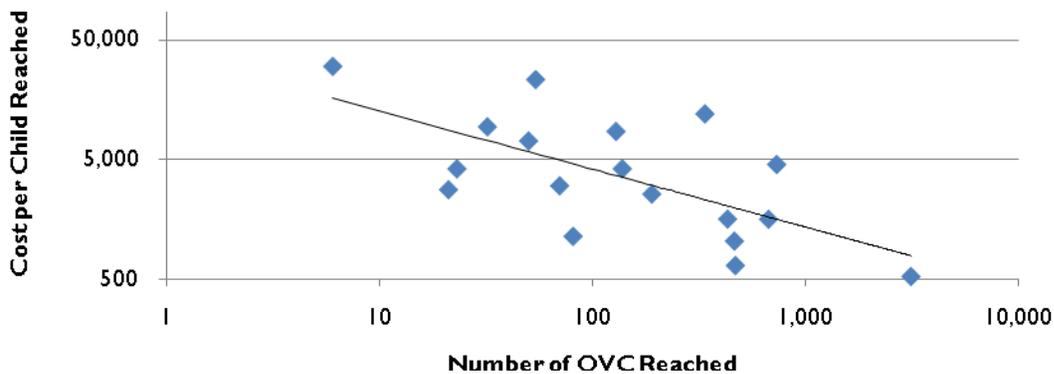
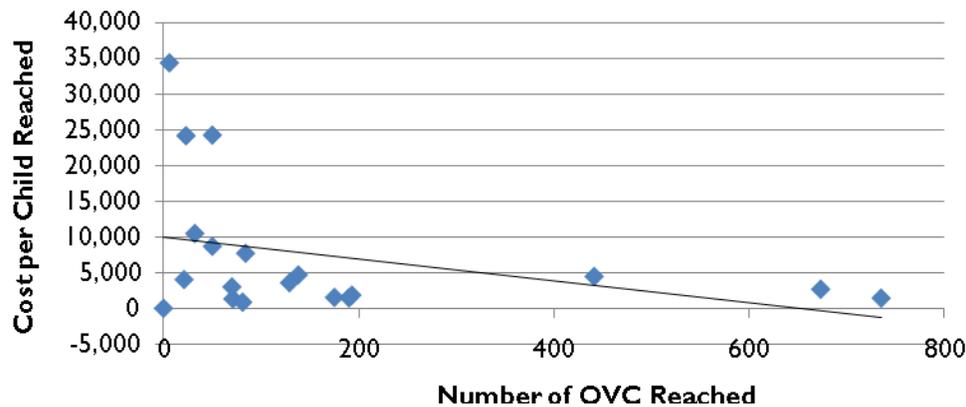


Figure 6: Relationship between scale and cost per child (Education)



Costs by Service Area

This section of the report provides an analysis of costs disaggregated by service area. Both the total costs and unit costs by service area are presented here. Cost estimates under each service area are comprised of the costs associated with the labor, overhead, transport, equipment/furniture and material that go towards provision of the respective services. The data have been treated as discussed in the methodology section. Resources among the sampled organizations served multiple functions and therefore contributed to multiple services. As such it was not possible to associate a resource with only one activity. Consequently, estimates were made regarding the contribution of each resource to respective service areas. The unit costs were derived as discussed in the section on costs per OVC reached above.

Figure 7 and 8 present aggregate and unit costs per service area respectively. A detailed analysis of these costs is provided in the sub-sections that follow. Annex B provides a breakdown of total costs and cost per child per organization covered in the study while Annex C presents estimates of costs per child by service area.

Figure 7: Aggregate costs per service area as a percentage of total costs

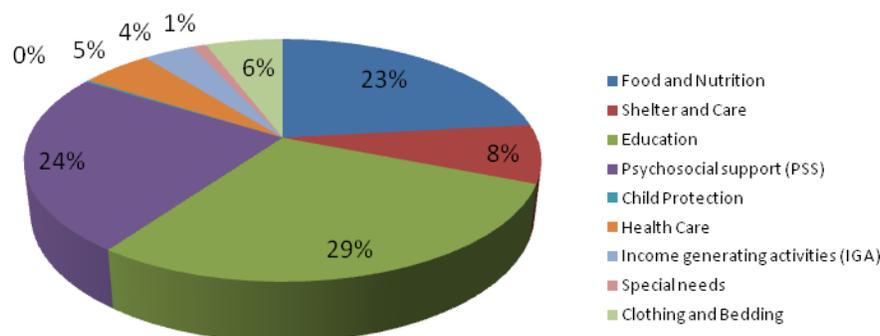
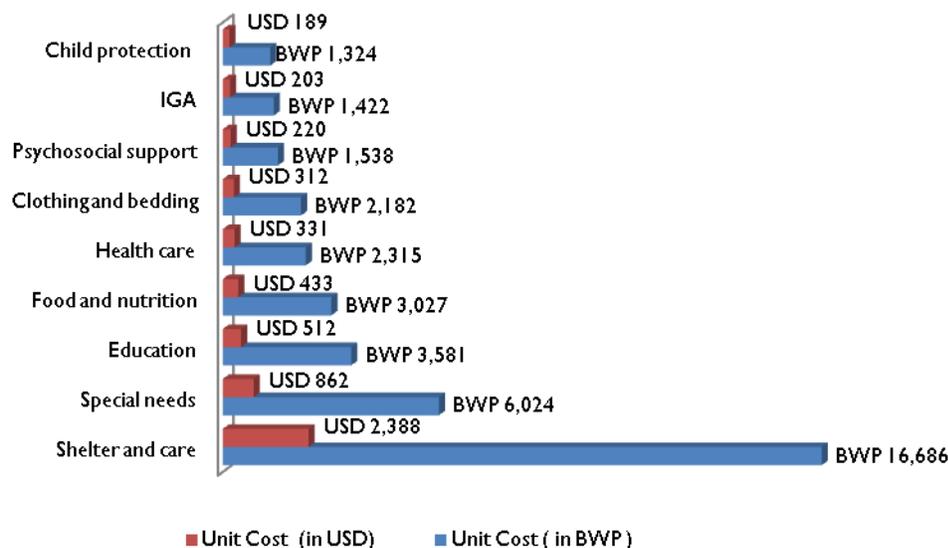


Figure 8: Cost per child by service area



Food and Nutrition

Total costs

As can be seen from Table 5 (below), the total cost of food and nutrition amounts to BWP 8,438,277 (USD 1,206,802) per annum for all 19 organizations, and is the third most expensive area of OVC support in this study. And, as Figure 7 (above) illustrates, food and nutrition accounts for 23% of total costs. A total of 3,069 OVC were reached with this service, which is 38% of the total population of OVC reached in this sample. Of this proportion, an estimated 778 OVC are reported to be receiving additional food support through the Government food basket at a total cost of BWP 8,990,568²⁴ (US\$ 1,286,550) per year, where the additional cost per child is BWP 11,556 (US\$ 1,654) per year. It is important to note that this cost is comprised of the cost of food and toiletry items only and is not a full reflection of the costs incurred by the Government to provide this service. This amount omits capital and recurrent costs incurred by government in administering this service.

²⁴ This is calculated based on a food basket of BWP 963 (US\$ 138) per month for one child.

As indicated, the costs estimates in the study vary considerable. This holds true for this service area. The lowest total cost was BWP 58,933 (US\$ 8,433) and the highest BWP 1,272,167 (US\$ 182,047). At the median, nutritional support costs BWP 302,931 (USD 43,349) per annum. For three of the nine (33%) organizations with total costs above the median, the relatively higher costs were due to the fact that two of the organizations are orphanages and the third a boarding school that provide a minimum of three meals (breakfast, lunch and dinner) a day. Within this group cost variations exist, and are attributed to scale and variation in input costs. Variation in cost among the remaining organizations can also be attributed to these factors.

Table 5: Total costs by service area

Service area	Total costs by service area	% of Total Costs
Education	BWP 10,772,113	29%
Psychosocial support	BWP 8,894,416	24%
Food and nutrition	BWP 8,438,277	23%
Shelter and care	BWP 2,833,162	8%
Clothing and bedding	BWP 2,104,366	6%
Health care	BWP 1,920,348	5%
IGA	BWP 1,382,377	4%
Special needs	BWP 390,284	1%
Child protection	BWP 94,019	1%

Unit costs

As can be seen from Figure 8, the median cost per child for food and nutrition for a year was BWP 3,027 (US\$ 433) per annum. This service was the fourth most expensive. The costs per child ranged from BWP 525 (US\$ 75) to BWP 30,35 (US\$ 4,344) per annum.

Shelter and care²⁵

Total costs

Among the four organizations in the sample that provided shelter and care, the total cost of this service ranged from BWP 278,190 (US\$ 39,809) to BWP 1,501,656 (US\$ 214,887). The population of OVC served also varied considerably from coverage of 6 children to 282. The aggregate cost of shelter and care was BWP 2,833,162 (US\$ 405,425), which is 8% of the total costs.

The organizations providing this service reached a total of 388 OVC. The median total cost was BWP 526,658 (US\$ 75,365) per annum. The organizations with costs below the median had considerably lower total costs if not costs per OVC. The relatively lower total costs could in part be attributed to the fact that one was a boarding school and the other a private orphanage with relatively limited resources and capacity as compared to the two organizations with costs above the median. Despite being below the median, one of the two organizations had the highest cost per child due to the small OVC population reached (6 in total). The organizations above the median were larger in comparison and provided support to 336 OVC between them.

Unit costs

As is to be expected, the most expensive cost per child is shelter and care at an annual median cost of BWP 16,686 (US\$ 2,388) (Figure 5). The costs per child ranged from BWP 2,420 (US\$ 346) to BWP 61,804 (US\$ 8,844).

Education

Total costs

Education is the most costly OVC intervention for the organizations participating in this study at a total cost of BWP 10,772,113 (US\$ 1,541,489) per year, commanding 29% of total costs. A total of 3,162 OVC benefited from this support. The costs of education ranged from BWP 69,425 (US\$ 9,932) to BWP 1,967,450 (US\$ 281,542).

All but one organization provided some form of education support. This support varied considerably from pre-school services, after school homework support, to boarding school services. The average cost of

²⁵ The analysis of these costs does not include the cost of toiletries provided by government to orphans and vulnerable children through the respective food basket.

education support was BWP 566,953 (US\$ 81,131). At the median the cost of education was BWP 355,177 (US\$ 50,826) per year. For the three most expensive organizations, costs were higher because these organizations supported pre-school fees for OVC. The high costs of the fourth most expensive organization can be explained by the fact that in addition to day care services, the organization specialized in training pre-school teachers. For the remainder of organizations, the difference in costs is primarily due to variation in input costs. The majority of these organizations provided similar services at similar frequency.

Unit costs

Education was the third most expensive cost per child at median cost of BWP 3,581 (US\$ 512) per annum. The costs per for child for education ranged from BWP 857 (US\$ 123) to BWP 34,441 (US\$ 4,929) per year. As indicated earlier, on average these costs do not include the cost of school uniforms and school fees.

Psychosocial support (PSS)

Total costs

Psychosocial support is the second most costly intervention and accounts for 24% of total cost at BWP 8,894,416 (US\$ 1,272,791) per year. A total of 6,093 OVC benefited from this support. Total costs ranged from BWP 3,695 (US\$ 529) to BWP 3,049,169 (US\$ 436,336). At the median costs totaled BWP 265,104 (US\$ 37,936).

Unit costs

PSS is one of the least costly with a median cost per child of BWP 1,538 (US\$ 220) per annum. The costs per child ranged from BWP 165 (US\$ 24) to BWP 15,504 (US\$ 2,219) per year.

Child Protection

Total costs

Only one organization provided child protection services. The organization in question supported families with succession planning. Their costs totaled BWP 94,019 (US\$ 13,454) a year. This area of support was the least expensive accounting for less than 1% of total costs. Because these costs are for provision of only one of several child protection interventions, they are not representative of the full costs of providing child protection services. A total of 71 OVC were reached with this service.

Unit costs

Child protection support per child amounted to BWP 1,324 (US\$ 189) per year. These estimates should be used with caution, as they are a gross underestimation of the actual costs of child protection for the reasons discussed above.

Health Care

Total costs

Health care support to OVC contributes to 5% of total costs and totaled BWP 1,920,348 (US\$ 274,802) per annum. Costs for this service area ranged from BWP 8,127 (US\$ 1,163) to BWP 755,864 (US\$ 108,164). A total of 862 OVC benefited from this support at a median cost of BWP 210,779 (US\$ 30,162) per year. Costs varied primarily because of the different kinds and intensity of health care support. The two most expensive organizations were the two largest orphanages in the sample.

Unit costs

The cost per child for health care is the fifth most expensive service. At the median this intervention cost BWP 2,315 (US\$ 331) per year. For this service the costs per child ranged from BWP 20 (US\$ 3) to BWP 13,997 (US\$ 2,003) per annum.

Income Generating Activities (IGA)

Total costs

IGA support was provided by three organizations at an annual total cost of BWP 1,382,376.95 (US\$ 197,818). These costs are 4% of total costs. The average cost of this intervention was BWP 460,792 (US\$ 65,939). IGA interventions often require considerable resources. The relatively low costs of this support in this sample are attributable to the fact that IGA was a small component of the services offered by the three organizations providing this service. As reported earlier, a total of 732 OVC benefited from this intervention either directly or indirectly. A better reflection of the costs of IGA support would be provided by an organization that specializes primarily in IGA support for OVC and their parents/caregivers. There are however no such organizations in Botswana.

Unit costs

Per year, IGA costs per child amounted to BWP 1,422 (US\$ 203) at the median. The costs per child ranged from BWP 1,103 (US\$ 158) to BWP 8,023 (US\$ 1,148) per annum. However, for the reasons raised above, these estimates should be used with caution.

Special Needs

Total costs

Per annum, special needs support to OVC contributed to 1% of total costs, and reached 164 OVC. This area of support cost BWP 390,284 (US\$ 55,850). Only one of the three organizations providing this service provided support to children with disabilities as their main business. For the other two the service was not a core program area.

Given the specialization of the service area, one would expect the costs to be higher. It would be worthwhile to cost a representative sample of organizations providing specialized support to OVC for a better analysis and appreciation of the costs of such interventions.

Unit costs

At the median special needs support costs BWP 6,024 (US\$ 862) per child, per annum. The costs per child ranged from BWP 39 (US\$ 6) to BWP 41,070 (US\$ 5,877). Once again these estimates should be used with caution as per the discussion above.

Clothing and Bedding

Total costs

A total of 1,095 OVC benefited from this area of support. This area of support totaled BWP 2,104,366 (US\$ 301,135) per annum and represents 6% of total costs. At the median this intervention cost BWP 178,426 (US\$ 25,533). The variation in costs is due to the varying financial and implementation capacities of the various organizations. It is important to note that these costs relate to the provision of clothing on average once a year. These costs are therefore an underestimation of the true costs of the resources required to provide adequate clothing *and* bedding to OVC.

Unit costs

The cost per child for clothing and bedding was BWP 2,182 (US\$ 312) per year at the median. The costs per child ranged from BWP 1,103 (US\$ 158) to BWP 8,023 (US\$ 1,148) per year. Again these costs estimates should be used with caution as discussed above.

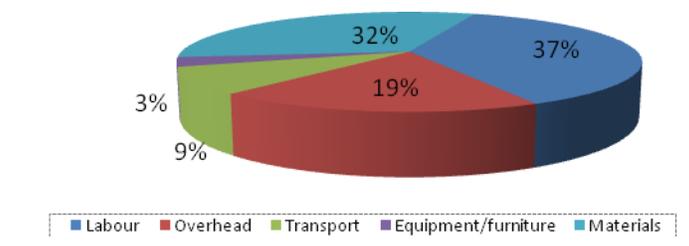
Cost by Resource Type

Estimates of costs disaggregated by resource type are presented in this section of the report. As illustrated in Figure 9 below, the bulk of OVC costs are associated with labor (37%) followed by the cost of program materials (32%). Labor cost data was composed of technical program and administrative staff as

well as the cost of volunteer labor. As discussed previously, most volunteers working with the participating organizations received a stipend/allowance. The stipend/allowance amount was therefore taken as the cost of volunteer labor. In select instances volunteer labor was fully donated. In such cases the current market value of such labor was estimated. Within the sample, volunteer labor constituted a small fraction of the staff complement. Contrary to the experience of other countries²⁶, it appears that OVC interventions in Botswana benefit comparatively little from volunteer labor. Material costs in the study entail the cost of food items, scholastic material, uniforms, and other such program costs.

Overhead costs are the third largest at 19% of the total costs followed by transport costs, which accounted for 9% of the total expenditure. Overhead costs include rental/property costs, the cost of utilities (electricity, water and telephone) and in some instances building maintenance expenditures. Within this resource type, rental/building costs constitute the largest proportion of costs. Transport costs included, annualized vehicle costs, fuel, insurance and vehicle maintenance. Transport costs for organizations in relatively rural areas were on average 17% higher than that of other organizations, but were still considerably smaller than other resources. The smallest proportion of costs was associated with equipment and furniture, which account for only 3% of the total costs. Equipment and furniture costs included items such as desks and computers. A summary of the costs by resource type is provided in Annex C of this report.

Figure 9: OVC Program Costs by Resource Type



²⁶ For example Forsythe (2004) and that of Forsythe and Telake (2010) found this to be the case in Zambia and Ethiopia respectively.

V. DISCUSSION AND POLICY IMPLICATIONS

Establishing the cost of OVC interventions in Botswana is an important activity that will facilitate evidenced-based policy and programming in Botswana. Analysis of cost data obtained presents several findings worth highlighting regarding the current cost of OVC interventions. Although the findings are based on the data from the 19 sampled organizations, they are believed to be representative of costs of services to OVC in Botswana. However as noted earlier, these costs are primarily representative of the costs to civil society organizations than those to the government. The study reveals that:

- *Organizations provide a variety of OVC services:* in an effort to respond to the multiple needs of OVC, each organization must provide a variety of services. Within the sample, on average organizations provided 4 key services each. Costs per service area were therefore apportioned based on the resources respective service areas commanded.
- *Costs vary considerably:* despite the fact that organizations provide relatively similar services, costs vary considerably. Total costs ranged from BWP 179,589 to BWP 6, 384, 446 per annum. While costs per child ranged from BWP 286 to BWP 148,328 per annum with a median cost of BWP 6,682. This extreme variation was also found in the cost per service area.
- *Labor, overhead and material costs are most expensive:* labor is the most expensive resource representing 37% of total expenses. This was followed by the cost of programming material (32%). Overhead costs contributed to 19% of total costs.
- *Institutional care is more costly than community-based interventions:* the organizations with the highest total costs were the two large-scale orphanages. This suggests that community-based interventions are less expensive in comparison to institutional care, which require higher start-up and recurring costs.
- *Scaling up existing programs may reduce the cost per child of interventions:* as could be seen from Figure 5 and 6 in the results section, scale has a noticeable impact on the costs per child. On average the population of OVC served by the participating organizations was relatively small. The median number of OVC served was 138. Where possible, organizations should be supported to scale-up service at their current operating costs in order to reap the benefits of economies of scale. Many organizations cited resource constraints as a major obstacle on this front.
- *Efficiency varies among organizations:* the extreme cost variations in the study suggests varying levels of efficiency among the sampled organizations. Despite the variation in costs, on average organizations provided similar services at similar intensity and frequency. However, it is hard to concretely determine the efficiency of services without an assessment of their cost-effectiveness.
- *Further research is required:* based on the finding of this report, a cost-effectiveness study would be of great benefit to better determine the sustainability of OVC interventions in Botswana.

Policy Implications

There are a number of critical policy issues for policymakers, both within the Government of Botswana and within the donor community. National estimates put the orphan population in Botswana at 51,806²⁷ as at 2007, while estimates by UNICEF²⁸ suggest an orphan population of 130,000 for the same year. Both

²⁷ Government of Botswana 2008a

²⁸ UNICEF et al., 2009

estimates do not include the number of vulnerable children in Botswana. As at June 2010, 44,327 orphans and 36,183 vulnerable children were registered with DSS. Based on the current HIV prevalence and poverty estimates, the number of registered OVC is likely to be a small proportion of the actual OVC population. It is therefore important that policymakers focus attention on the provision of services that will augment the quality of life of targeted children. Given the anticipated OVC situation, the efficiency with which services are provided is also equally important.

At this point in time, a key question for policymakers relates to how OVC resources in Botswana are being allocated across services. This study indicates that the largest percentage of resources is being allocated to education (29% of all economic costs), followed by psychosocial support (24%), food and nutrition (23%), and then shelter and care (8%). Relatively small percentages of resources are being spent on, clothing and bedding (6%), health care (5%), IGA (4%), special needs (1%) and child protection (less than 1%). While this study cannot recommend an ideal allocation of resources, it is nonetheless critical that policymakers consider this allocation and ask whether this is likely to achieve the greatest possible impact for OVC. For example, should donors be spending more funds on services such as IGA support? Are there alternatives to relatively expensive services such as shelter/care?

As already indicated, policymakers may wish to focus more attention on the cost per child reached with a specific service rather than an overall cost per child reached. Nonetheless, policymakers are interested in knowing what they need to budget in order to reach a specified number of OVC with the current package of services. In this study the economic cost per child reached is BWP 6,682 (US\$956) per annum. Policymakers should consider, however, if another combination of services or efficiency gains could contribute to either a less expensive cost per child reached or improvements in the quality of life of OVC. For example, do the nutrition programs offer food that is essential for the quality of life of the child? Should additional food items be added to the food basket? Should some be removed? Do services such as educational support significantly increase school attendance? Does psychosocial support have a demonstrably beneficial impact on the well being of the children?

The analysis of cost drivers also raises questions for policymakers and the way in which they allocate their resources. In this case the study found significant variations in the cost per child reached with specific services, depending on the scale of the program. Some interventions were serving only 6 OVC per year, while others were reaching over 3,000. The analysis here suggests that for food and nutrition programs, it is much more efficient to fund programs which reach large numbers of children. Programs providing educational services appear to have lower costs with the more children reached, however, there may be diseconomies of scale as larger numbers of children are reached. Thus policymakers, in the absence of data indicating any differences in quality, may prefer to fund larger programs as opposed to smaller ones.

In terms of efficiency gains, it is important for policymakers to use this report to assess where potential reductions in unit costs could be achieved. For example, labor and materials account for 69% of all economic costs associated with these programs. Meanwhile transportation accounts for only 9%. Thus any cost savings that policymakers may wish to pursue should probably focus more on the costs paid for labor and materials as opposed to transportation.

This report raises a number of policy questions about allocating resources to OVC programs. The challenge for policymakers is to assure that programs reach the largest number of OVC at the lowest possible cost with the highest quality service. While this study doesn't address all of the questions that policymakers have in this regard, it provides a first step in a more comprehensive analysis of how OVC are being reached in Botswana.

VI. CONCLUSION AND RECOMMENDATIONS

As of June 2010, a total of 44,327 orphans were registered with DSS, which presents 86% of the orphan population estimated by the Situation Analysis of 2008. This study has highlighted the importance of a costing study such as this one, and has provided estimates of the costs of various OVC services. In so doing, the study is the first step towards estimating the future costs of OVC care and support in Botswana. Analysis of these costs has revealed several issues of importance for policy makers and programmers as per the discussion provided in section IV above. In conclusion, this section of the report sets forth a number of recommendations for consideration based on the experiences and findings of the study:

- The BNPA process needs to estimate future OVC resource requirements. This process requires projections of both the number of OVC and the unit cost of reaching OVC. This study provides the latter information. As such unit cost estimates derived from this study should be used to cost the BNPA. Doing so will enable Government and other key stakeholders to budget for and allocate the true level of financial resources required to provide a comprehensive set of services to OVC in Botswana.
- A costing study should be conducted to establish the cost of OVC services to government given that government is the main funder of OVC services. A costing study that brings out the full costs to government will better support government planning and budgeting.
- Further research on the cost-effectiveness of current OVC interventions is needed. Such research is important for determination of the sustainability of interventions.
- The scope and coverage of OVC services should be standardized to facilitate improved service delivery where possible.
- Current efforts to improve the implementation capacity of organizations to deliver OVC support should be escalated. A number of organizations providing support to OVC are primarily “armed with good intentions”, and lack the requisite information and skills to efficiently implement program initiatives. Capacity building on this front should therefore facilitate comprehensive training of relevant staff based on a standardized OVC training curriculum/manual for organizations providing support to OVC.
- Cost data can be a powerful tool for decision makers and programmers. As such cost data should be collected and maintained alongside current OVC data feeding into OVC monitoring and evaluation frameworks and systems. In doing so methods for both registering and tracking orphans *and* vulnerable children statistics as two distinct groups should be strengthened.
- Finally, there is need for greater emphasis on the provision of IGA services to OVC and their parents/caregivers. IGA are instrumental in ensuring that the positive benefits of other OVC interventions are sustained.

ANNEX A: AN ANALYSIS OF THE COST OF OVC SERVICES TO GOVERNMENT

This annex presents an analysis of the costs to Government for the provision of select OVC services. At the time the main report was written, complete cost data had not been received from the Government of Botswana and therefore this information was not available for inclusion with the analysis contained in the final report. The analysis undertaken in this section is for the Boteti sub-district council, and helps to capture the costs that the Government incurs to provide services to OVC in Botswana. It is important to note that the main focus of this study was an analysis of PEPFAR funded OVC interventions. However, to meet the selection criteria articulated in the methodology section of the report, two Government entities were included. The Government entities in question are the Mphule Kwelagobe Centre in Jwaneng and the Boteti sub-district S&CD office. The cost analysis for Mphule Kwelagobe Centre is captured in the final report as complete data was available during the main analysis. This annex is therefore an analysis of the costs to the Boteti S&CD office.

The Boteti S&CD office covers eighteen recognized villages and settlements, and provides services²⁹ beyond OVC care and support. As such, only 60% of labor and overhead costs were attributed to OVC support. Materials, transportation and furniture costs on the other hand were OVC-specific and were allocated fully to the respective OVC services provided by Government.

As indicated in the main body of the report, support to orphans is extended through the STPA and vulnerable children through the Destitute Policy of 2002. For vulnerable children, the support is facilitated through identification of their respective parents as destitute. Based on the categorization of families as destitute, the children of destitute parents are provided with support under the categorization of needy children, with further sub categorization of children attending schools away from home as needy students.

As at May 2010, 4,703 OVC were being reached by the Boteti S&CD office. Of these, 1,598 were orphans and 3,105 were children who were otherwise vulnerable. Among the vulnerable children, 27 were children in need of care who received primarily food support; 3078 were needy students of which 47 went to school away from home and received more than food support. Food support for the needy students who remained at home is facilitated through the food basket provided to the family as a whole. Needy students attending school away from home receive the same food basket as orphans. This basket includes both food items and toiletries.

The discussion that follows is an analysis of the costs to Government for provision of food and nutrition, shelter and care, education, PSS and clothing and bedding. Although the S&CD office facilitated access to health care by referral to Government clinics, the service was not provided directly by the office. The costs incurred related to health care were transport, and in special instances, specialist medical treatment costs. The S&CD office had a budget of BWP 10,440 (US\$ 1,494) per annum for specialist medical treatment and instances where care givers had to accompany OVC for treatment.

²⁹ Services provided by the S&CD office also includes home based care, general counseling, and court cases.

Total and unit costs

The total costs to Government for providing the OVC services articulated below irrespective of service type is BWP 54,666,788 (US\$ 7,822,817). The cost per child was BWP 11,624 (US\$ 1,663) per annum (see Table I).

Table I: Summary of Government Total and Unit costs

Type of cost	BWP	USD
Total costs	BWP 54,666,788	USD 7,822,817
Unit costs	BWP 11,624	USD 1,663

Costs by Service Area

As can be seen in Table II below, in terms of total costs, the most expensive service area of support per annum for Government is food and nutrition followed by education, shelter and care, clothing and bedding and then PSS.

In terms of cost per child, the most expensive cost per annum is food and nutrition, followed by education, shelter and care, clothing and bedding then PSS (see Table III). The detailed results of the costs of OVC services provided by the Boteti S&CD office are discussed below.

Table II: Summary of Government total costs by service area

Service Area	Total costs (in BWP)	Total cost (in USD)	Percent
Food and Nutrition	BWP 33,307,535	USD 4,766,308	61%
Education	BWP 10,658,807	USD 1,525,275	20%
Shelter and Care	BWP 7,292,320	USD 1,043,531	13%
Clothing and Bedding	BWP 2,767,848	USD 396,079	5%
Psychosocial support (PSS)	BWP 640,278	USD 91,624	1%

Table III: Summary of Government unit costs by service area

Service Area	Cost per child (in BWP)	Cost per child (in USD)
Food and Nutrition	BWP 7,082	USD 1,013
Education	BWP 2,279	USD 326
Shelter and Care	BWP 1,551	USD 222
Clothing and Bedding	BWP 592	USD 85
Psychosocial support (PSS)	BWP 136	USD 19

Food and nutrition

Total costs

As discussed, food and nutrition support is provided in the context of a food basket that is administered monthly to OVC. As can be seen from Table II above, food and nutrition support amounts to BWP 33,307,535 (US\$ 4,766,308) per annum, and contributes to 61% of total costs. This support is provided to

all registered OVC. At the time of this study the Boteti S&CD office had reached a total of 4,703 OVC with this service.

Unit costs

As Table III indicates, the cost per child for food and nutrition was BWP 7,082 (US\$ 1,013) per annum and was the most expensive service per child.

Education

Total costs

Education support in this instance includes the costs of school uniforms and development and sports fees that are paid once a year. OVC are waived from paying school fees, and with the exception of the 47 needy students in this sample, all other OVC went to school within walking distance from home so no transport costs were incurred to facilitate attendance at school. Per annum, the total cost of education was BWP 10,658,807 (US\$ 1,525,275). This service was the second most expensive, and contributes to 20% of total costs (see Table II). A total of 4,676 OVC were reached with this service.

Unit costs

The costs per child for education is BWP 2,279 (US\$ 326) per annum.

Shelter and Care

Total costs

Shelter and care amounts to 13% of total costs at a cost of BWP 7,292,320 (US\$ 1,043,531) per annum. This service includes the cost of shelter and toiletries. Toiletries were provided to 47 needy students going to school away from home, 27 children in need of care, 3,031 needy students residing at home and 1,598 orphans. Only the 47 needy students away from home received shelter support. These costs are the third most expensive.

Unit costs

As can be seen from Table III, the cost per child for shelter and care amounts to BWP 1,551 (US\$ 222) per annum.

Psycho-social support (PSS)

Total costs

Although PSS is an important area of support, the S&CD office was often overwhelmed with other aspects of OVC support and other duties. As such they estimated that only 5% of their time was spent on providing PSS. PSS support included counseling, retreat camps and caregiver workshops and seminars. All 4,703 OVC received this service at a cost of BWP 640,278 (US\$ 91,624) per annum. This was the least expensive intervention (see Table II).

Unit costs

Per annum, the cost per child of PSS support was BWP 136 (US\$ 19).

Costs by Resource Type

As Table IV shows, estimates of Government costs disaggregated by resource type indicate that material costs make up the bulk of costs and amount to BWP 51,486,881 (US\$ 7,367,773) per annum. This amount accounts for 94% of total costs. These costs are primarily comprised of procurement of food and toiletries for OVC, totaling 75%³⁰ of material costs. Labor, transport, and overhead costs amount to less than 5% of costs. Labor costs account for 4% of total costs, while transport and overhead costs were 2% and 1 % respectively. Equipment and furniture costs were less than 1% of total expenditures.

Table IV: Government OVC programme costs by resource type

Resource Type	Cost (in BWP)	Cost (in USD)	Percent
Materials	BWP 51,486,881	USD 7,367,773	94%
Labor	BWP 2,038,965	USD 291,776	4%
Transport	BWP 828,905	USD 118,616	2%
Overhead	BWP 275,040	USD 39,358	1%
Equipment/furniture	BWP 36,997	USD 5,294	0%

Conclusion

Analysis of the costs of the Boteti S&CD office sheds some light on the cost to Government to provide the services discussed above. As recommended in the main report, a costing study should be undertaken to fully review the costs to Government for provision of OVC support.

³⁰ These costs amount to BWP 38,757,134 (US\$ 5,546,146) per annum for provision of food and toiletries to approximately 4703 OVC.

ANNEX B: TOTAL COSTS AND COSTS PER CHILD BY ORGANIZATION

Organization	Total Cost	Cost per child	Total Number of OVC
Organization 1	BWP 270,429	BWP 286	945
Organization 2	BWP 664,660	BWP 1,539	432
Organization 3	BWP 5,645,961	BWP 1,793	3,149
Organization 4	BWP 1,012,248	BWP 2,154	470
Organization 5	BWP 1,217,888	BWP 2,619	465
Organization 6	BWP 2,307,738	BWP 3,140	735
Organization 7	BWP 302,059	BWP 3,729	81
Organization 8	BWP 914,457	BWP 4,813	190
Organization 9	BWP 902,951	BWP 6,543	138
Organization 10	BWP 2,258,628	BWP 6,682	338
Organization 11	BWP 179,589	BWP 8,552	21
Organization 12	BWP 6,281,249	BWP 9,333	673
Organization 13	BWP 1,715,780	BWP 13,301	129
Organization 14	BWP 1,897,912	BWP 27,113	70
Organization 15	BWP 1,398,054	BWP 27,961	50
Organization 16	BWP 791,560	BWP 34,416	23
Organization 17	BWP 1,123,414	BWP 35,107	32
Organization 18	BWP 6,384,446	BWP 118,230	54
Organization 19	BWP 889,970	BWP 148,328	6

ANNEX C: SUMMARY OF COSTS BY SERVICE AREA AND RESOURCE TYPE

I. Costs by service area

Service Area	Total Cost (in BWP)	Total Cost (in USD)	Unit Cost (in BWP)	Unit Cost (in USD)
Food and Nutrition	BWP 8,433,277	USD 1,206,802	BWP 3,027	USD 433
Shelter and Care	BWP 2,833,162	USD 405,425	BWP 16,686	USD 2,388
Education	BWP 10,772,113	USD 1,541,489	BWP 3,581	USD 512
Psychosocial Support (PSS)	BWP 8,894,416	USD 1,272,791	BWP 1,538	USD 220
Child Protection	BWP 94,019	USD 13,454	BWP 1,324	USD 189
Health Care	BWP 1,920,348	USD 274,802	BWP 2,315	USD 331
Income Generating Activities (IGA)	BWP 1,382,377	USD 197,818	BWP 1,422	USD 203
Special Needs	BWP 390,284	USD 55,850	BWP 6,024	USD 862
Clothing and Bedding	BWP 2,104,366	USD 301,135	BWP 2,182	USD 312

II. Costs by resource type

Resource Type	Cost (in BWP)	Cost (in USD)	Percent
Labor	BWP 13,596,784	USD 1,945,700	37%
Overhead	BWP 7,015,776	USD 1,003,958	19%
Transport	BWP 3,177,529	USD 454,704	9%
Equipment/furniture	BWP 1,119,521	USD 160,203	3%
Materials	BWP 11,904,712	USD 1,703,564	32%
Total	BWP 36,814,322	USD 5,268,129	100%

ANNEX D: BRIEF PROFILE OF ORGANIZATIONS SAMPLED

1. Stepping Stones International

Stepping Stones International, founded in 2006, is located in Mochudi, Kgatleng District, Botswana. This non-profit organization has established an after-school program that is dedicated to serving youth in Botswana that have been classified as OVC (Orphans or Vulnerable Children). The program's mission is to empower youth to become leaders of the next generation by nurturing their mental, physical, and spiritual well being, and SSI seeks to achieve this mission through a variety of activities, including job and life skills training, psychosocial support and counseling, income generating activities, expression activities, outreach to families, and others. Since its founding, the organization's successes include the opening of a new centre in October 2008 and winning the rating of best small non-profit organization in the Mountain Region (USA) in October 2009.

2. Mahalapye Mother's Union

Mother's Union Orphan Care Centre is currently the only centre in Mahalapye, Botswana, that focuses mainly on the support and care of Orphans and Vulnerable Children (OVC). For this reason, the centre provides a vital service to the community of 50,000 people with an increasing number of OVC due to HIV/AIDS. The centre began in 2000 with 30 preschool children, and it has now grown to include an after-school program for kids ages 6-13 and a Kids Club program for kids ages 13-18. Managed by the Mothers' Union Diocese of the Anglican Church, the organization transports the children to the centre every day and provides them with meals and psychosocial support, which includes their mental, social, and spiritual needs.

3. Silence Kills Support Group

Silence Kills Support Group is a community-based organization in Selebi-Phikwe that began in 2003 as a support group for people living with HIV and AIDS. It was later registered as a society in March 2006. The mission of the group is to be a valued partner in providing holistic HIV/AIDS prevention interventions, and improve the lives of people affected by the epidemic. In order to achieve this goal, the group is involved with a number of activities, including provision of psychosocial support to people living with HIV/AIDS, provision of support services to the most vulnerable children, voluntary HIV/AIDS testing and counseling, HIV/AIDS prevention by research and advocacy, and many others.

4. I am Special Education Society

I am Special Education Society was founded in 2002 in Tlokweng, Botswana, in response to the fact that children with multiple disabilities had limited options for education. Focusing on children with intellectual or multiple disabilities, this non-profit organization's mission is to provide an Education Centre where children with multiple disabilities may receive equal opportunity for a comprehensive education, through recognition of each child as an individual with specific needs, dreams and ideals, and by empowering them to achieve their full God-given potential. The centre has the capacity to accommodate 30 students, 5-12 years of age, and offers programs including literacy and numeracy, sports, practical subjects, neuro-cognitive reconstructive therapy, and auditory integration training.

5. Tumelong Counseling Centre

Tumelong Counseling and Day Care Centre began in 2003 when local pastors and church members began offering counseling services to community members infected with HIV and AIDS, as well as to their families. In 2004, an orphan day-care centre was started to serve the growing number of HIV-infected local children. Today, the centre continues to offer counseling services to over 100 people in the community affected by HIV and AIDS. The day-care program serves over 60 preschool age children by providing them with meals, activities, and counseling. The after-school program serves over 30 school age children by providing them with a meal, homework help, counseling, and important adult relationships.

6. Hajee Gulam Mustapha Children's Home

The Hajee Goolam Mustapha Children's Home was opened in July 2009 in Gaborone, Botswana. The vision of the home is to assist the orphans of Botswana and South Africa not merely via financial handouts, but by a personal involvement in the upbringing, well-being, and uplifting of a vulnerable sector of our society. Supported by a group of families and business people within the Muslim community, the home seeks to be a home in its true sense, through love, care, and intimacy, by restricting the number of children to ten children between the ages of 4 and 6. The home was created with the intention of operating and existing like any family living in a house, and the caregivers are responsible for meeting all the children's needs, including their food, health, educational, emotional, psychological, intellectual, social, and spiritual needs.

7. Kamogelo Day care Centre

The Kamogelo Day Care Centre, led by the Tirisanyo Catholic Commission, provides free day-care service for the community of Mogoditshane and the surrounding areas for orphans and vulnerable children. The mission of Kamogelo, is to provide all orphans and vulnerable children with a safe and stigma-free environment in which they can easily access quality services, as well as to empower the caregivers of vulnerable children to compassionately and competently care for them. The day care currently provides for over 150 preschool children through meals, activities, transportation, family outreach, etc. Over 250 additional children also attend the day care's weekend Kids Club.

8. Mpule Kwelagobe centre

The Mpule Kwelagobe Children's Centre is a Botswana Government initiative that seeks to provide residential care, support, and protection to orphans and vulnerable children in a residential setting when traditional caring structures have failed. The centre's mission is to provide quality care and support for orphans and vulnerable children through improving their access to basic needs including parental care, guidance, love, psychological support, and health care. The centre admits children between the ages of 0 to 14 years old, and social workers seek to make long term arrangements for the OVC as the centre is not designated to be an orphanage, but rather a temporary place of safety for the child.

9. SOS Gaborone

SOS Children's Village is a private welfare organization that offers orphaned and vulnerable children a new and permanent home, with a mission to develop the children into responsible and independent adults who will have the inner strength to cope with the challenges of the future. An SOS village consists of about 10-15 houses, and each house has an SOS Mother and 6-10 boys and girls who grow up as brothers and sisters. The Tlokweng village near Gaborone currently cares for 245 youth, and the Francistown village currently cares for 240 youth. Programs that the villages have include a kindergarten for both SOS children and those from the surrounding area, as well as a family strengthening program to attempt to keep children in the community with their families.

10. King's Foundation

The King's Foundation originally began in the UK as a Christian-based organization that uses sports to benefit children and young people. Since 2002, the King's Foundation has worked in Botswana with the primary purpose of developing individuals and organizations that work with children, training and developing local volunteers in sports leadership, and ultimately making a difference in the lives of children in need. In collaborative efforts with other local individuals, churches, and organizations, the King's Foundation seeks to establish local programs that use sports, games, and activities to form good relationships in the community. In addition, the foundation invests in the emotional and spiritual development of the children through bible-based life skills activities.

11. Tirisanyo Catholic Commission

The Tirisanyo Catholic Commission was founded in 1978 with the goal of working with local people in order to help lift them out of poverty. The agency works to raise people's standards of living through measures addressing education, better access to health services, and more effective use of resources. There is a major emphasis on caring for orphans and vulnerable children, enhancing food security, and increasing people's incomes. One current project funded by the agency is the Kgalagadi North Pre-school Program, whose main objectives are to prepare rural area development children for integration into the formal education, and to promote the economic and social empowerment of communities through the establishment of effective functioning communal shops.

12. Kazungula Children's Ark OVC Day Care centre

Kazungula Children's Ark is a community-based organization founded in June 2006. The organization provides day care services and after school support to OVC in the Kazungula village. The pre-school supports children between the age of 3 and 7 years of age. The services offered are early childhood development, food support and psychosocial support. Primarily individuals in the community and 7 volunteers fund the Centre.

13. Catholic Relief Services

Since becoming involved in Botswana in March 2007, Catholic Relief Services has worked in partnership with the Vicariate of Francistown with the overarching goal of improving the quality of life for OVC in Botswana. Classified as both an FBO and NGO, CRS and the Vicariate of Francistown hope to reach 5,000 OVC in strengthening the holistic service delivery that they receive. Current activities that CRS and the Vicariate of Francistown support include pre-school enrolment, community-level psychosocial support, guardian OVC care and support training, OVC home visits, HIV prevention activities, nutrition education, and income generating activities.

14. Tutume Baptist Day Care and Counseling Centre

Tutume Baptist Day Care and Counseling Centre began in January 2005 as a program that serves as a day care and counseling centre for OVC in Tutume, Botswana. Currently reaching 32 OVC, Tutume Baptist Day Care and Counseling Centre's main objective is to provide OVC with early education as well as other types of support. Their services include running a day-care and pre-school for younger OVC, providing food, playing games and sports, collaborating with the local hospital to provide health services, working with various groups to host training sessions that teach different life skills, and providing psychosocial support to vulnerable children.

15. Joan's Cousins

The M. Joan Cousin Centre was established in 1998 in Lobatse, Botswana. At the time of its founding, the main objective of the centre was to respond and mitigate the HIV and AIDS pandemic in Botswana, especially among women and young people. The centre currently serves as an after-school program for over 80 OVC in the Lobatse area. The centre provides the OVC with a variety of services such as meals, tutoring, and activities that include drama, music, dance, cycling, pool, bible studies, and others.

16. Botswana Retired Nurses Association (BORNUS) Community Day Care Relief Centre

The Botswana Retired Nurses Society established the Community Relief Day Care Centre in Tlokweng. The main objective of the centre at the time of its founding was to provide quality care and support to people living with HIV/AIDS, orphans and vulnerable children, and other chronically and terminally ill persons. In order to achieve this goal, the centre provides a variety of services including a day care, provision of developmental stimulation for OVC, counseling and support to families, follow-up visits to clients and caregivers, outreach education, training of caregivers, income generating activities, and others.

17. Botshelo Trust

Botshelo Trust works to improve the conditions of children of all ages in the Shakawe region of Botswana, in addition to improving their home environment by also working with their caregivers. In order to achieve this goal, they seek to develop programs that empower community members to become self-reliant. Programs that they support include those that provide life skills training for OVC and caregivers, practical skills for older OVC and caregivers, peer support groups for youth and caregivers, and early childhood education. Some of the programs that they support include the Belega Bana Day Care Centre, the Tsofelo Community Centre, and the Play Group Cluster.

18. Bana Ba Metsi

The Bana ba Metsi School, founded in 2000 by the Moremogolo Trust, was created to target young people of primary school age who have been expelled from or dropped out of regular classes due to behavioral problems and other socio-economic reasons. The mission of the Bana ba Metsi School is to provide an opportunity for youth at-risk to develop understandings, skills, attitudes and personal qualities through the dignity of learning and work, in order to re-enter the formal education system and become productive members of the community. The school seeks to achieve its mission statement by teaching every student practical life skills, such as building, cooking, information technology, etc., in addition to completing the school's primary school program. While the school is currently only available to boys, the Trustees will consider opening a second school for girls at some point in the future.

19. Bokamoso Trust

The Bokamoso Education Trust was founded D'kar, Botswana, with a vision to provide early childhood education, particularly for OVC. The motto of the program is "our children, our education," and their goal is to provide the children with an education that will prepare them for education later on in life. The objectives of the Trust include enabling children to have access to quality early education; creating awareness, building self-esteem, and changing the negative attitude of community caregivers; to focus on use of the "mother tongue" as a medium of communication; to provide low cost early education options available; and to strengthen the support and guidance for trained teachers and training.

ANNEX E: NEXT STEPS IN EVALUATING COST-EFFECTIVENESS

While this cost analysis was not intended to collect data to evaluate the effectiveness of different OVC services, it can provide critical information for a more in-depth cost-effectiveness analysis (CEA). It is therefore useful to consider how a CEA could be performed in Botswana, using the cost data collected in this report.

One approach would focus on issues of quality of life (QOL). The World Health Organization (WHO) defines QOL as "an individual's perceptions of their position in life in the context of the culture and value system where they live, and in relation to their goals, expectations, standards and concerns"³¹. Many world summits and conventions have pledged to improve the QOL of the world's children by setting targets for reducing infant, child, and maternal mortality rates; improving child nutrition; improving access to basic education, safe water, and environmental sanitation; improving primary healthcare; and protecting children from abuses and exploitation. However, few studies use QOL definitions or indicators to measure this progress³².

A recent analysis in southwestern Tanzania attempted to evaluate the QOL of OVC³³. This study focused on three dimensions of QOL: 1) psychosocial, 2) physical (health) and 3) socioeconomic. The psychosocial aspects of QOL were evaluated using the "Children's Depression Inventory" (CDI), Social Supports Questionnaire (SSQ) and the Strengths and Difficulties Questionnaire (SDQ). Physical well-being was evaluated using the Body Mass Index (BMI). Finally socioeconomic well-being was determined through the development of an economic status survey and focus groups with key informants. Children being reached by OVC interventions in one community in Tanzania were found to be less depressed and to attend school more frequently relative to other OVC. There was no measurable difference though between OVC and non-OVC in terms of emotional and behavioral functioning, overall health or social integration.

The study in Tanzania, like most analyses, did not attempt to combine dimensions to create one single estimate of overall well-being. One tool that does create one overall score for the QOL of children is the KINDL index, which was developed in 1994 and updated in 1998 by the University Clinic Hamburg-Eppendorf³⁴. The KINDL index uses surveys designed for specific age groups: 4-7, 8-11, 12-16 and parents. The KINDL index provides one number which is representative of a child's overall QOL, but also breaks down the QOL figure into six different dimensions: 1) physical well-being, 2) emotional well-being, 3) self-esteem, 4) family life, 5) friends/social life, and 6) school/education. The KINDL index was used to compare the QOL measures of children and adolescents in HIV/AIDS-affected households and neighboring households in Cambodia. This study compared children orphaned because of HIV/AIDS to children in neighboring households. The results found that orphaned children scored lower on 5 of the 6 dimensions of well-being: physical well-being, emotional well-being, self-esteem, friends/social life and schooling. There was no statistical difference between the case and control populations in terms of family life.

³¹ *Quality of Life Assessment. What is it and how should we measure it?* in *World Health Forum*. 1996. Geneva, Switzerland: The WHOQOL Group.

³² Alkenback, S., S. Forsythe, and T. Chettra, *The Social and Economic Impact of HIV/AIDS on Families with Adolescents and Children in Cambodia: Findings from a research study conducted in Phnom Penh, Battambang, and Takeo* 2004, POLICY Project: Washington DC. p. 1-64.

³³ Wallis, A.D., Victor, Learning How to Measure the Well-Being of OVC in a Maturing HIV/AIDS Crisis. *Journal of Health Care for the Poor and Underserved*, 2009. 20: p. 170-184.

³⁴ Ravens-Sieber, U. KINDL Homepage. 1998 [cited; Available from: <http://kindl.org/cms/>].

In terms of a future study in Botswana, one approach would compare the QOL of OVC being reached by interventions to the QOL of OVC not being reached by interventions. One challenge with such a study is assuring that the case and control groups are comparable (except for whether they are being reached with an intervention). For example, OVC reached by an intervention may be in greater need than those children who are not receiving an intervention. Targeted children may also differ geographically (e.g., if initial outreach programs are reaching mostly urban children, then a CEA analysis would need to assure that the “control” populations are not disproportionately drawn from rural areas). If these differences are not controlled for in the CEA, the final results may attribute differences to the intervention when in fact the differences are attributable to other external factors.

One way to address this potential bias would be to identify comparable untargeted communities and then to randomly assign these communities to either an “early intervention” or “delayed intervention” group. In this way it should be possible to compare children in each community and observe differences. For example, by comparing the QOL of children in “early intervention” communities to children who have not yet been reached in the “delayed intervention” communities, it should be possible to assess how the interventions affect, or don’t affect, these children.

Another approach would involve using a “nearest neighbor approach”, where reached OVC are matched with unreached OVC. If the OVC are adequately matched with children in the same community, it will be possible to assess the impact of interventions and specific services on the well-being of these children.

Regardless of which approach is used, it would be useful to conduct the CEA by prospectively monitoring changes in well-being over time. In other words, OVC should be interviewed on an annual basis so that it becomes possible to observe both short-term and long-term changes in their QOL. However, this can be expensive, especially if the children are expected to be very mobile and there is a potentially high loss to follow-up. In our experience, we have found that the use of GPS technology makes it easier to follow-up with children and to easily return to locations once children have initially been identified.

Another approach to assessing well-being would involve comparing the QOL of OVC relative to other non-OVC. In this way it should be possible to identify the unique needs that should be addressed by OVC interventions. For example, if a comparison concluded that OVC suffered greater stigma than non-OVC in the community, future interventions may wish to focus more attention on addressing this stigma. On the other hand, if a comparison concluded that OVC were severely malnourished relative to other non-OVC, future interventions may wish to focus more attention on food and nutrition.

Once a QOL survey is completed, it should be possible to estimate the cost per quality adjusted life year (QALY). In other words, it will become possible to compare the cost/QALY of one service with the cost/QALY of another. Thus, it would be possible to evaluate if a Pula spent on food and nutrition has a larger impact on the QOL than a Pula spent on education. This would provide donors with a clearer picture of how they could best allocate their resources to assure the highest possible QOL for those children being reached by an intervention.

A less rigorous type of analysis could focus on measuring certain intermediate outcomes to be achieved. For example, an analysis could be performed to assess if children reached by educational interventions are actually remaining in school for longer periods of time. Another analysis could focus on whether children are actually healthier when they are reached with health interventions. In this way it would become possible to determine which interventions succeed and which interventions fail in terms of achieving the established goals of the service. This approach would not allow for a comparison of services, but it would suggest which services are achieving their goals and therefore are worthy of continued funding.

In conclusion, a CEA analysis is advisable as a next step to this cost analysis. While there is no universally accepted means to measure the effectiveness of OVC interventions, there are validated tools available for determining how effective interventions are at positively influencing the lives of OVC.

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