

AREA: Children orphaned by AIDS  
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DATE: February 2001

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# **The Cost-Effectiveness of Six Models of Care for Orphan and Vulnerable Children in South Africa**

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**Prepared for UNICEF, Pretoria, South Africa**

**Draft Submitted: November 2000**

**Final Report: February 2001**

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## **Abstract**

By the year 2010 it is estimated that South Africa will have an orphan population close to two million, mainly as a result of the HIV/AIDS epidemic. Planning for their care has commenced, by families, communities, NGOs and government. A number of different models of care currently exist in South Africa. These models vary in both the quality of care offered and the cost of providing it. This paper is one part of a two-part study dealing with these differences. This study concentrates on the cost of providing care in each, of six identified models ranging from formal children's homes to community based structures, utilising cost effectiveness analysis. The other paper deals with the quality of care in the same six models.

The study is directed toward policy makers, but also provides valuable information to NGOs and other community organisations working in the field.

To allow for meaningful comparison the cost analysis was conducted using two effectiveness measures: the cost of care per month per child and the cost of providing a minimum standard of care per month per child in each of the six models. This was necessary as the quality of care varied substantially and conclusions based on comparing only the current cost per month would be misleading and show differences in quality rather than just differences resulting from the structure of care. The cost of providing minimum care allowed for comparison between the models which provide more than the minimum of care and those which are unable to achieve even this minimum.

The results show the high costs associated with formal models of care, but also the difficulties of providing care in the informal models due to lack of access to resources. The conclusion of the paper is that resources should be concentrated on the more informal community based structures, for the most cost-effective care of orphaned vulnerable children while recognising the need for more formal organisations as a last resort.

# Chapter One

## Introduction

Currently in South Africa an estimated 4.2 million people are infected with HIV. These infections are concentrated in the 15-49 year old age group. The death of members of this age group has a significant impact on numerous aspects of South African society. The longest term of these impacts will be the loss of mothers and fathers of young children and a subsequent increase in the number of orphans. An orphan is defined as a child under the age of 15 years who has lost his or her mother. It has been estimated that in 2001 South Africa already has over three hundred thousand orphans, expected to rise to two million by 2010 as a result of AIDS deaths<sup>1</sup>.

At present a variety of models of care for orphan and vulnerable children exist in South Africa. As the number of orphans increase some or all of these models will have to be expanded to avoid rapid increase in child-headed households and street children. The quality and costs of the care provided by these different models, however, differs. To plan for the most efficient and effective response the relationship between the quality and costs of care provided by the different models presently available needs to be more clearly understood.

This paper is one part of a combined study examining the quality of different types of orphan care and their associated cost of delivery. The first part of the study developed indicators for assessing the quality of care offered and evaluates the extent to which the different approaches meet the needs of children. The second part of the study which forms this paper examines the variations in cost between the different options of care, using cost-effectiveness analysis, to allow for comparison of the resource requirements of each model. The purpose, to provide information useful in planning the efficient allocation of resources aimed at the care of orphans and vulnerable children. This analysis can then be combined with the detailed study of the quality of care provided by each option. This combined output will provide a useful tool for use in making policy decisions on the allocation of resources towards the care of orphaned and vulnerable children in South Africa.

Failure to consider the costs and quality of care offered will likely lead to inefficient allocation of resources and inappropriate care of children, the long term implications of which are far-

reaching. South Africa is presently experiencing the result of one 'lost generation', as a consequence of the apartheid system and the struggle against it. It can ill afford to experience the results of another 'lost generation'.

This paper is divided up along the following lines. The various categories of care will be examined in Chapter Two. For a more detailed discussion of these categories reference should be made to the first part of the study. This will be followed in Chapter Three by an outline of the method used in the estimation of costs. The results of the six case studies will be given in Chapter Four. Finally, Chapters Five and Six will deal with discussion and conclusions respectively.

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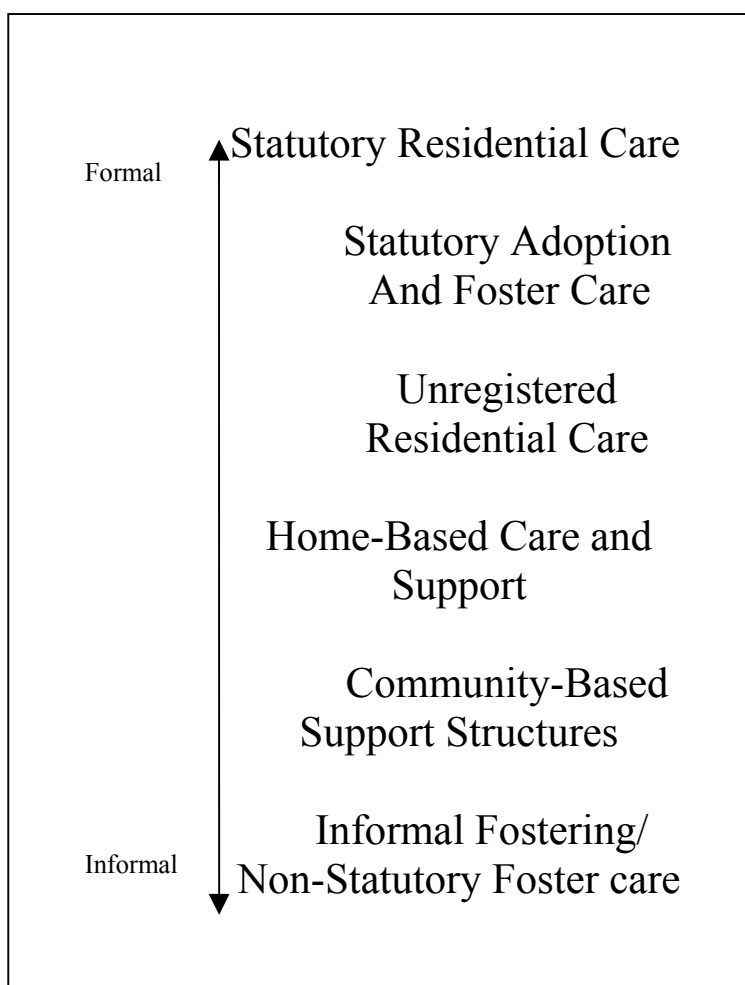
<sup>1</sup> Based on projections made by the Doyle model by Metropolitan Life, 1998.

## Chapter 2

### Identification of Models of Care

The type of care offered to orphaned and vulnerable children in South Africa varies greatly, from formal children's homes to informal adoptions. These two examples represent the extreme options, and four additional models or categories of care were identified in-between. The six models of care were identified in the first part of the study and provide the basis of the split outlined. These six models of care represent a continuum as follows:

**Figure 1: Models of Care: from Formal to Informal**



Ten sites were identified as possible case studies, with at least one applicable to each of the six models of care. The following criteria were used in the selection process:

1. The service must have been in operation for at least a year;
2. Consideration of Provincial HIV infection rates (with a concentration on KwaZulu-Natal, Mpumalanga and Gauteng provinces, the provinces with the highest rate of infection);
3. Organisations which clearly stipulate that they are providing a service to children either infected or affected by HIV/AIDS;
4. An even urban/rural spread;
5. Services which span the four policy levels versus those which are focused on only one level:
  - Level 1: Prevention e.g. income generation, training.
  - Level 2: Early Intervention e.g. home visits, support groups, material relief.
  - Level 3: Statutory Services e.g. formal placement in foster care and adoption; accessing foster care grants.
  - Level 4: Continuum of Care – the full range of services offered in a residential care setting e.g. 100% care; respite care; day-care.

Based on these criteria the sites in figure 2 were selected:

Of the ten sites selected, one from each model of care was chosen for the cost analysis. This decision was based primarily on the availability or otherwise of data. These six were Nazareth House, Durban Children's Society, Sophie Jardim House, Sinosizo, the Pin Project, and Nceba Village the results for which appear in Chapter Four. The following Chapter outlines the method used in the analysis.

**Figure 2: Site Selection Matrix**

SITE	PROVINCE	U/R	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
<b>STATUTORY RESIDENTIAL CARE</b>						
Nazareth House	Western Cape	U				Statutory residential care for children infected and affected by HIV/AIDS. Formal organisational structure.
<b>STATUTORY ADOPTION AND FOSTER CARE</b>						
Durban Children's Society	KwaZulu-Natal	U/R			"Community-family" foster care programme and kinship care. Independent family-type care provided for up to 6 children of all ages in their communities of origin. Welfare society owns homes and appoint community mothers Also offer professional foster care and adoption programme	William Clarke Gardens in-patient special care unit caters primarily for HIV+ and AIDS-ill babies and children.
<b>UNREGISTERED RESIDENTIAL CARE</b>						
Nkosi's Haven	Gauteng	U	Small income generation project for women living at the home	Home visits and food parcels to families with orphans in Sebokeng and Thembisa		House for 7 HIV+/AIDS-ill destitute mothers and their 11 children. When mothers are ill or die the children stay on at the home. No statutory procedures.
Sophie Jardim's Home	Mpumalanga	U				Residential care of 14 children, 6 of whom are formally placed there in foster care. Welfare agents place all the children there.
<b>HOME-BASED CARE AND SUPPORT</b>						
Centre for Positive Care	Northern	R	Peer education	Home Based Care giving 43 orphans have been identified through the home care programme and are receiving support. Some child-headed households have been identified and are receiving support.		
Sinosizo	Kwa-Zulu Natal	U/R	Training of other organisations in providing home based care;	Supporting and teaching families to care for the chronically ill. Home visits to orphans and	Caregivers are identified and children are legally placed in foster care and assistance is given in accessing foster care	

SITE	PROVINCE	U/R	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
			Vegetable gardens.	potential orphans. Food parcels are given when available.	grants. Children are also referred to child welfare agencies in the region.	
St Nicholas	Free State	U/R	Care training of family members: Care of the Child with AIDS and Home Care of People with AIDS. AIDS awareness programmes. Research on MTCT and guidelines of care of children with AIDS .	Mobile outreach provides care and support to children in remote areas Includes: medical care; counselling; Identification of orphans or potential orphans and assists with placement or referral; On-going bereavement support.	Assistance to access grants	In-patient palliative residential care (full/ part-time and respite) for children needing pain management, terminal and respite care.
<b>COMMUNITY BASED SUPPORT STRUCTURES</b>						
Pin Project	KwaZulu-Natal	R	Community-fund/ income-generation project for grandparents caring for AIDS orphans.			
<b>INFORMAL FOSTERING/NON-STATUTORY FOSTER CARE</b>						
Mpumalanga Project Support Association	Mpumalanga	R	Informal caregiver training	12 home based care projects. Older women from community are identified and trained as caregivers and placed in homes of orphaned children 300 orphans in community have been identified and are assisted with food, school fees, clothes and medical care.	Assistance with accessing Child Support Grant	
Nceba Village	Eastern Cape	R		A one-man show supporting three women who are voluntarily taking care of at least 10 children each. He does home visits to support them in their informal child care arrangements, gives them information on HIV/AIDS, provides material relief when it is available and transport to clinics and collect water when the vehicle is operative.		



# Chapter Three

## Method of Analysis

### 3.1: Introduction to Cost-Effectiveness Analysis

Cost-effectiveness analysis is used when both the costs and outcomes of alternative programmes differ, but effectiveness can be compared using a single common measure. For example, the relative effectiveness of employing a HIV/AIDS counsellor in general practice or training a general practitioner to provide HIV/AIDS counselling can be assessed using a measure such as patient satisfaction, or reduction in symptoms of depression and despair among patients.

Cost-effectiveness analysis does not provide solutions as to which option to select, but clarifies the costs and effects of achieving specific objectives. It can be used alongside other criteria such as acceptability and feasibility. For example, a transport company needs to move goods from Durban Port to its Johannesburg warehouse, it has the option of road, rail or air transport. A cost-effectiveness analysis might be undertaken to help make the choice. Criteria for helping select an alternative may consist of shifting the greatest load for a given budget, or moving a given load at least cost.

Cost-effectiveness analysis is used for more focused comparisons than cost-benefit analysis. Whereas cost-benefit analysis involves placing a monetary value on all relevant costs and benefits of alternative schemes, and assessing which produces the greatest benefit, cost-effectiveness analysis is used when an outcome has already been deemed worthwhile and the main objective of the analysis is to determine how to allocate resources between the different options to achieve the defined outcome.

One approach to assessing relative cost-effectiveness is to compare the options in terms of the average costs per treated case. Using this criterion the most cost-effective option is that with the lowest average cost. However, a decision-maker may not wish to reject a higher cost option if it is also more effective than the alternatives. Hence, cost-effectiveness analysis can also be used to provide information on the additional costs of achieving a greater outcome from a more successful treatment.

### **3.2: Application of CEA**

Cost-effectiveness analysis is concerned with assessing the type of service likely to be the most beneficial and appropriate given the resources available. Cost-effectiveness analysis can also be used to address issues of how much more effective the service might be if it is expanded by using additional resources (such as extra staff or time), or how much reduction in effectiveness is probable from a contraction of the resources available. In this way it supports other criteria for the choice of service such as feasibility, availability or appropriate staff and other resources, political, organisational and cultural acceptability and so on.

While this technique does not have the theoretical rigour of cost-benefit analysis, cost-effectiveness analysis has the advantage of practical simplicity. It can be readily applied to help assess whether the resources that are available are being used to best effect, and to assess in what way new resources could be used to meet the service objectives and provide the greatest returns. If a service were demonstrated to be cost-effective, this information might be used to back up subjective beliefs about the benefits of the service provided, and to help convince managers and budget holders of the value of their service.

A single measure of effectiveness is needed in a cost-effectiveness analysis in order to compare the relative effectiveness of alternative options. The measure adopted must adequately reflect the objectives of the service. For example, a reduction in psychotropic medication might be the outcome measure to compare counselling in general practice with referral to a clinical psychologist while reflecting the objectives of all parties concerned – the general practitioner principals, the counsellor and patients. A broader outcome measure might be required if a wider set of counselling options are to be compared, or if the measure of success is more client orientated. Thus, it may be more appropriate to measure the psychological well-being of users of a general practitioner practice-based counselling service in order to compare its relative cost-effectiveness with other counselling services external to the practice, or a different use of resources such as the provision of information leaflets for patients.

It might also be possible to use such outcomes to compare the cost-effectiveness of a counselling service with other mental health services which produce similar types of benefits. However, it would not be possible to compare counselling services with, for example, surgery for heart

disease, as gains in well-being are unlikely to reflect the full benefits of the latter intervention. In this case, cost-utility analysis or cost-benefit analysis is required.

Undertaking any CEA involves the following steps:

1. Define the programme's objective;
2. Identify the possible ways of achieving those objectives;
3. Identify and measure the cost of each option;
4. Identify and measure the effectiveness of each option;
5. Calculate the cost-effectiveness of each option.

### **3.3: CEA and the Models of Care**

The objective under consideration here is the care of orphaned and vulnerable children. The possible ways of achieving this were outlined in the previous chapter.

The costs identified are the economic costs of each alternative. The analysis uses 'opportunity costs', which are equal to the value of the best available alternative use of resources. Opportunity costs differ from what are conventionally considered costs. For example, volunteers' time has a positive opportunity cost despite having no financial implications for the organisation. Volunteers' time could be invested elsewhere to generate value, and it is this foregone value which represents the opportunity cost. This method of costing measures the cost to society, rather than to an organisation or an individual. This is done so that the most cost-effective result for society is identified.

The identification of an effectiveness measure proved a difficult task. The most obvious would be the number of months or years each child is cared for, multiplied by the number of children. The effectiveness measure would be childcare months or years. The effectiveness measure does need, however, to be the same for each alternative. All the alternatives under analysis have as their objective the care of orphaned and vulnerable children: the quality of this care, however, varies substantially between models, with some not providing even a minimum standard, probably not meeting the basic rights of the children. An analysis of cost per childcare month would therefore misrepresent the situation, it would show care to be very cost-effective in some

settings which however failed to provide adequate care. This problem was overcome by changing the numerator (the costs) in the cost effectiveness calculation, and keeping the denominator as childcare months.

Two adjustments were made to the traditional cost calculations to make the results more useful. Firstly, the costs were adjusted to the cost of replicating that model of care. The purpose of this paper is not the calculation of the cost effectiveness of providing care at each site, but rather the model, which could be replicated elsewhere. Therefore costs particular to the site were changed to the costs of doing the same elsewhere. For example volunteer costs were calculated as the cost of employing a person to do the work done by the volunteer, rather than the opportunity cost of that particular volunteer's time.

Secondly, the cost of providing a minimum standard of care in that setting was then estimated. The minimum standard of care is derived from the essential elements of care which are identified in the first part of the study. For a detailed discussion of these elements refer to chapter two of the first part of the study. The essential elements comprise five categories: survival, security, socialisation, self-actualisation and palliative care. All essential elements require the child to have a care giver, there after the resource constraints are concentrated on the realisation of the survival elements: food, clothing, home environment, education, hygiene and health care. The realisation of the other elements of care rely largely on the decisions of the care giver and the structure of the care and the degree to which models achieve these elements is the basis of the first part of this study. Therefore, each site has two costs associated with it, the cost of providing per childcare month, and the cost of providing a minimum standard of care.

The minimum standard is defined as the availability of a caregiver and the achievement of the survival category of the essential element. This is not to suggest that at a minimum children do not require the other essential elements, but rather that the realisation of these elements, given the presence of a caregiver, is determined not so much by resources, but by the type of care and decisions of the caregiver. The minimum standard comprises, therefore, of the care givers time, the provision of food, clothing, shelter and hygiene. Education and health care also form part of the survival category, however their inclusion is, however, more complicated to analyse.

Many of the sites visited stressed that school fees and uniforms were an essential element of the child's care. The South African constitution, however, states that schools may not discriminate

against or exclude any learner. Based on this knowledge the first part of the study concluded that school fees and uniforms are not an essential part of the child's care, but what is essential is for the child to have someone who can advocate on his or her behalf and ensure their right to free education is protected. This would suggest that the minimum standard calculation should not include fees and uniforms. As mentioned previously, the costs are based on opportunity cost, therefore, although the fee and uniform costs are not essential for the guardian, they are still costs of care. The costs of education (fees and uniforms) are, therefore, included in the minimum standard calculation. The resource costs not covered by the fees are not included, as they do not form part of the cost of care.

Medical costs on the other hand are not included in the minimum standard calculation. Medical care in South Africa can be obtained free for children up to the age of six years. After the age of six some free medical care is provided, however delivery shows great variance across the country. Similar to the argument on school fees, the cost of free health care need not be included in the calculation of the minimum standard. The exclusion, however, should be remembered when interpreting the results.

The medical costs of HIV positive children do, however, need to be considered. The medical care needed by an HIV positive child differs substantially from that required by other children and the costs of this care are high. The cost of caring for an HIV positive child is highlighted in the Nazareth House case study. In this case study the cost of medical care is calculated, but kept as a separate item. Other sites may also have HIV positive children, but the records are not accurate. The high costs can, therefore, only be highlighted in the Nazareth House case and borne in mind when considering the others.

The estimation of two costs, the replication and the minimum standard allows for more meaningful comparisons. Replication costs highlight the variation in the actual costs of the models as they currently exist. This variation being attributed to differences in both the quality of material care provided and the structure of the model. The minimum standard remove as far as possible differences in costs resulting from variation of the material standard of care and allow for comparison of cost differentials resulting from the structure of the models.

The results of the CEAs are outlined in Chapter Four, and a detailed description of the assumptions underlying the analysis is provided in appendix A1.

## Chapter 4

### Case Studies

The results of the CEAs are outlined in this chapter, beginning with the most formal model, and ending with the most informal model. A detailed description of the calculations and assumptions of each model is provided in Appendix A1 d A2.

Firstly, Nazareth House provides an example of the most formal model of care, statutory residential care. The analysis of the statutory adoption and foster care model is based on the care provided by Durban Children's Society, by way of the community family homes. This is followed by the Jardim House case study, an example of unregistered residential care, and Sinosizo an example of home-based care and support. The community-based support structures are represented by The Pin Project. Finally, Nceba Village provides an example of informal fostering or non-statutory foster care.

Cost estimates are based on the length of the child's stay. For example, the costs of placement although paid up front are amortised across the length of the child's stay. The assumed length of stay differs by case. The Nazareth House case study uses an assumption based on the life expectancy of HIV positive children. The other case studies assume that children remain in care until 18 years of age. Where calculations require an age of placement this is assumed based on evidence from each case study.

In some of the case studies reference is made to placement and supervision cost. These costs are largely incurred in gaining access to grants offered by the government. Different grants come with different conditions, the main grant considered here are those to children's homes and foster care grants. The state subsidy for children's homes is R824 per month per child. It is paid only to state registered homes and only after a child has been placed in the care of the home by the court. Foster care grants are R375 per month per child and are paid after a successful court application to have a child placed in foster care. Prior to the application a social worker, from either the state or a local welfare agency screens the prospective parents. After the placement social workers must submit a report on the child every two years, and visit the child's home and foster parent. Obtaining both grants requires court and social workers time, each at a cost. This cost is included, where appropriate, as part of the placement costs. The costs of the procedures

after placement are included in the supervision costs. Where the time spent on placement varies greatly between children the mean is used in the calculation.

Although the study includes only the above two grants it is worth being aware of another two involved in the care of children: the child support grant and the place of safety grant. The child support grant is a means tested payment of R100 per month per child until the child's seventh birthday. The place of safety grant is R12.50 a day and is supposed to be a short term grant of between 12 weeks and 6 months, in reality such placements often continue for much longer.

## **4.1: Nazareth House**

### **4.1.1: Introduction**

This section attempts to find the cost of caring for an HIV positive child in institutional care for a month. The data used are primarily from Nazareth House, although the implications are designed to be comparable to other types of care and in other locations.

Nazareth House is a church-run institution based in Cape Town. It consists of a home for the elderly and another for children. Until the early 1990s the children's home cared for children in need, of various ages. In 1992 the home took their first HIV positive child: gradually they found alternative accommodation for the older children and began taking only seriously ill children, almost all of whom have been HIV positive.

The care of HIV positive children makes the home different from an average children's home. Care of younger children requires a higher staff-to-child ratio than the care of older children. As children born HIV positive are unlikely to live past the age of five, the children in the home are generally very young. They are also sick, often requiring constant medical care.

Institutional care at the best of times is expensive: with ill HIV positive children it is even more so. But HIV positive children are the ones that parents, either natural or foster, are most likely to be unable to cope with and provide the necessary level of care. It is probable, therefore, that a higher percentage of HIV positive children will find themselves in care than will HIV negative children, even if they both end up as AIDS orphans.

#### **4.1.2: Data and Method**

The cost data were obtained primarily from financial statements. These statements, however, included costs for both the children's home and the old age home. Where accurate division of costs can be made they have been allocated, by the accounting staff, to either the children's home or the old age home. For example, the salaries of staff who work only in the old age home are allocated to it. The costs which were not easily divisible were allocated 1/3 to the children's home and 2/3 to the old age home. This allocation was based on the experience of the accountant and the relative size of each operation.

A number of the costs which appeared on the statements did not reflect the true economic costs. Adjustment was made to depreciation, as this is an accounting method and does not reflect the economic cost. Salaries were increased to include the time of the volunteer staff and the supervising nuns. The cost of education was adjusted, as the home pays fees only for children in special schools. Thus fees for the children in normal state schools was also included. The funeral expenses were changed as they had been recorded as the net cost, rather than actual costs.

A number of relevant costs did not appear on the statements. These included the cost of the building and the costs of the medical care provided for the children. The cost of care for HIV positive children was based on a previous study and the cost of the building was estimated by a quantity surveyor. Medical costs were included to highlight the increased costs of care resulting from the children's HIV status, although they are not strictly speaking part of the model. The results are presented, therefore, in a manner, which provides for easy removal of this component.

The value of the material donations presented a problem. Although a record of what has been donated is kept, the quantities are not. A donation of a pack of diapers or 100 packs was simply recorded as diapers. Attaching a value proved impossible, but judging from the staffs' comments and the number of donations, this value is thought to be significant, although not estimated here.

Statutory care involves the placement and supervision of children by social service organisations external to the home. A cost, therefore, of the statutory placement and supervision needed to be

estimated. This was based on a survey of social workers' time and costs at Durban Children's Society. The detailed explanation of the cost data for Nazareth House appears in Appendix A1.1.

To estimate the cost of providing similar care in a different location (replication cost) the church cost were subtracted. This is not to suggest that the church has no importance in their care, but rather that they need not support one financially. The support in the case of the Children's Home is in place of the nuns' salaries, and counting both would be incorrect, and as they have been allocated salaries in the analysis, the church costs are deducted.

#### 4.1.3: Results

The results of the CEA are provided in Table 1 below in five stages. The cost per childcare month was estimated according to the financial statements. Adjustments to costs, which appeared on the financial statements, but did not reflect the opportunity cost, were then made. Similarly, costs which did not appear on the financial statements, but are real economic costs were included. Adjustment was then made to estimate the cost of providing the same type of care elsewhere. Finally, adjustment was made to calculate the cost of providing a minimum standard of care in such a setting. All costs are estimated as the average over the life span of the child, which in this case is based on survival rates for HIV positive children – as outlined in Appendix 1.1.3.3..

**Table 1: Results of CEA for Nazareth House**

<b>Stage of analysis</b>	<b>Rand per month</b>
Cost per month according to financial statements	2605
Adjusted for budget items	+244
Adjusted for off budget items	+1035
Replication adjustment	-11
<b>Cost per month for care in setting</b>	<b>3873</b>
Adjustment for minimum standard	-348
<b>Cost per month for minimum standard</b>	<b>3525</b>

The adjustment for the provision of the minimum standard of care is small (approximately 10%) in comparison to the total costs. This is a result of a large portion of the costs being fixed or

semi-fixed, by virtue of the model of care. The following table breaks down the costs into fixed, semi-fixed and variable. Semi-fixed costs are those costs which vary, but are not under the control of the organisation. For example, electricity: the home could try to use less electricity, but the bulk of use would be unavoidable. Included in semi-fixed costs are salaries: although staff could be removed they would then no longer be providing the standard of care the model represents.

**Table 2: Costs by fixed, semi-fixed and variable components for Nazareth House**

	<b>Rand per month per child</b>	<b>Percentage of total cost</b>
Fixed costs		
Building costs	61.60	
Depreciation	5.55	
Security	44.39	
Total fixed costs	111.54	3
Semi-fixed cost		
Water and electricity	137.86	
Cleaning materials	29.41	
Insurance	33.13	
Salaries and wages	1334.83	
Nursing fee	259.46	
Funeral expenses	24.94	
Statutory placement and administration	26.00	
Other semi-fixed costs	534.01	
Total semi-fixed costs	2379.64	61
Variable costs		
Clothing	15.46	
Provisions	414.27	
Total variable costs	429.73	11
Medical costs		
HIV costs	935.00	25
Other medical	17.09	
Total	952.09	
<b>Total</b>	<b>3873.00</b>	<b>100</b>

The care provided by Nazareth House is very specialised. The cost of care is high as a result of high medical costs, high staff-to-child ratio and high overheads. The first two are a direct result of the children's HIV status. Even providing a minimum standard of care in this setting is costly because of these high fixed and semi-fixed costs: by the same token, providing a better than minimum standard does not substantially increase the costs, relative to the total.

## **4.2: Durban Children's Society**

### **4.2.1: Introduction**

Durban Children's Society is a non-governmental organisation dealing with the care of children. They offer a wide range of orphan care facilities. They run children's homes, are involved in the placement of children in foster care, and more recently have developed an alternative form of foster care placement called community care. Although all the forms of care in which the society is involved are important and of interest, the case study concentrated on foster care and in particular community-based foster care.

Traditional foster care involves the placement of an orphan in a home by the court. The caregiver receives a grant from the state to subsidise the cost of caring for the child. Foster care is limited to six placements per home. The placements may be with either related or non-related caregivers. The statutory placement is a complicated procedure and involves interviews, background checks and court time. Social workers spend additional time on background checks of non-related caregivers.

Community foster care differs from conventional placements, as the society owns the home in which children are placed and covers the basic cost of operation. Children are placed in the home under the care of an individual (usually single women) or couple from the community. The caregiver receives the foster care grant for each child (up to six), plus an additional allowance per child paid by the Children's Society and free lodgings. The caregiver is thereafter responsible for the care of the children in the home and all expenses related to it.

### **4.2.2: Data and Method**

Durban Children's Society keep detailed accounting records, which assisted greatly in the costing this model of care. In addition a survey was conducted among the social workers employed by the society on the allocation of their time to different tasks. As a result of the structure of the care provided, and the method used to cost it, very little cost information was required for the exercise. The following section will outline the method used in the cost estimation which reduced the data requirements.

The care that is provided by community foster care involves three types of costs. The first is the cost of placing the child in care, second, the cost of care to the child society and third the cost of care borne by the caregiver.

The cost of placement was based on a survey of social workers' time and the estimated cost of that time taken from the financial statements. The costs of care to the Children's society were determined from the financial records, and an allocation of time and cost of social workers' supervision. The caregivers receive a grant, which they can spend entirely on the care of the child, or partially – holding the remainder for themselves, in which case it forms part of their payment or reimbursement for the care of the child. Either way, the entire grant is allocated as a cost of care of the child, directly or via the reimbursement of the caregiver. It was therefore unnecessary, for the purpose of costing, to establish what portion of the grant was spent directly on the care of the child and what portion was withheld as payment for the caregiver. The information is however important to avoid exploitation of the children in this model of care. Undertaking this is however beyond the scope of this study.

When estimating the cost of providing minimum care, how the grant is spent is an issue. If the community mother spends only part of the grant on the care of the child and keeps the rest as part of her remuneration, would she be prepared to work if the grant were less? As the relief mother works for the value of the allowance, it can be assumed that a suitable employee could be found at that rate and that they do not require a portion of the child's grant. The cost of the community mother is, therefore, taken as the allowance amount, with capacity assumed, i.e. six children per mother. For the minimum standard of care calculation the amount that would have to spent for the provision of the bare minimum food, clothing and schooling was used, based on secondary data.

Based on the above, the cost of the provision of care by this model was calculated as was the cost of providing the minimum standard of care.

### 4.2.3: Results

The results of the CEA for Durban Children’s Society’s community care model are outlined in Table 3 below. The assumptions and calculations are outlined in more detail in Appendix A1.2. The cost estimates are based on the assumption that care continues until the child’s 18<sup>th</sup> birthday. The child is assumed to be placed there at birth. Although this is not always the case, the results were not very sensitive to changes in this assumption.

**Table 3: Results of CEA for Durban Children’s Society**

<b>Costs</b>	<b>Rand per month</b>
Placement and supervision	13
Cost of staff	+117
Building costs	+109
Other expenses	+370
<b>Cost per month of care in setting</b>	<b>609</b>
Adjustment for minimum standard	-199
<b>Cost per month for minimum standard</b>	<b>410</b>

The costs here do not include the medical costs associated with any children who are HIV positive. These costs are external to the model and were only included in the Nazareth House case study to highlight their magnitude. It is, however, important to note that the costs may differ in other respects for HIV positive children. The costs above are based on full capacity of six children. It may not be possible to care for this many children if they, or some of them, are HIV positive, because the physical demands and time required are that much higher than for HIV negative children. Additionally the caregiver may not be willing to accept the same allowance for HIV positive children as for the HIV negative children whose care is much less time

consuming. At present it is not possible to estimate the cost of these factors, but they should be recognised.

### **4.3: Jardim House**

#### **4.3.1: Introduction**

Jardim House is the private home of Sophie Jardim, into which she has taken a number of children. In total over the past seven years, twenty-three children have passed through, six have died and a few have been placed back with families. Some have been placed with her in foster care, but she has exceeded the maximum of six children, so cannot access grants for the others. She currently provides care for fifteen children, some of whom are HIV positive. The Department of Welfare will not register Jardim House as a children's home, because it does not meet the legal requirements for registration as a statutory care institution.

Ms. Jardim is assisted with the care of the children and the running of the house, by a neighbour, her daughter, a domestic worker and gardener. A number of social workers from the local welfare agency provide emotional and administrative support. The home is supported financially by the grants that can be obtained from government and a variety of donations, both in cash and in kind.

#### **4.3.2: Data and Method**

A social worker assists in the keeping of financial records and records on the health of the children. These records were used as the bases of the costing exercise. Further information was obtained from interviews by and observations of the researcher who visited the site. As with a number of the other case studies, the organisation relies heavily on the assistance of volunteers. In this instance data on the costs did not exist and similar values were used from a number of other sites to facilitate comparison. The cost of the volunteers was based on values taken from

the Nazareth House case study, and the cost of Ms. Jardim’s time was based on supervisor salaries at Durban Children’s Society, as was the cost of social workers’ time.

The cost of care provided was estimated based on the above sources of data. Thereafter an adjustment was made to estimate the cost of providing a minimum standard of care in the setting. This was achieved by reducing the cost of consumables to the very minimum, based on secondary data.

### 4.3.3: Results

The results of the CEA for Jardim House are outlined in Table 4 below. A detailed breakdown of costs and assumptions is provided in Appendix A1.3. The cost estimates are based on the assumption that care continues until the child’s 18<sup>th</sup> birthday. The child is assumed to be placed there at birth., Although this is not always the case the results were not very sensitive to changes in this assumption.

**Table 4: Results of CEA for Jardim House**

<b>Stage of analysis</b>	<b>Rand per month</b>
Cost per month according to financial statements	553
Adjusted for budget items	+405
Adjusted for off budget items	+38
Replication adjustment	-
<b>Cost per month of care in setting</b>	<b>996</b>
Adjustment for minimum standard	-39
<b>Cost per month for minimum standard</b>	<b>957</b>

The cost of care at Jardim House is relatively high. This is mainly as a result of the structure of the model rather than the quality of the care. The structure, however, is necessary in part because a number of ill children as well as a number of children requiring special care are present.

## **4.4: Sinisizo**

### **4.4.1: Introduction**

It was originally the intention that the site to represent Home-Based Care and support models of care would be the Centre for Positive Care, in the Northern Province. On examination of the situation at the two sites it became apparent that they were following very similar paths, but Sinisizo was further along. For example, the Centre for Positive Care intends to introduce a full time post dealing with the orphans from next year. Sinisizo has had such a post for the past year. It was, therefore, decided to use Sinisizo as the representative site because of its more advanced programme.

Sinisizo is a home based care organisation, providing care and support to the terminally ill and their families. In the course of their operations they come into contact with many children who are in vulnerable situations. After a volunteer identifies a child at risk, typically a child whose parent(s) are ill and dying of AIDS, they notify the social worker. Thereafter the social worker visits the family and helps make arrangements for the child after the death. This often involves the obtaining of birth certificates, and the identification of foster parents. After death of the parent the social worker refers the child's case to the local welfare agency. The social worker will still, however, make follow up visits to ensure progress in the child's development. In addition to these activities foster parents are also provided with training, particularly if the child is HIV positive. Both the child and other relatives are given bereavement counselling.

The costs of care, therefore, are essentially the costs of the foster care placement with some additional costs included in the identification of child and preparation for the death of the parent.

### **4.4.2: Data and Method**

Sinisizo keeps detailed records, both financial and operational. The costing, however, was based on information obtained from interviews on the structure and process of the organisation and cost data from the other models. This was done to allow for better comparison and to isolate the differences in the costs of models resulting from structure rather than from the differences in salaries and overheads.

The costs of care were broken down into four categories: identification and referral, statutory placement and supervision, foster parents' time and other expenses. The cost of identification and referral was based on interviews with Sinosizo staff and is an estimate of the average time allocated per case. The statutory placement and supervision was based on an estimate of time from a survey of social workers at Durban Children's Society and an estimate of cost per hour. The cost of the foster parents' time was estimated as the allowance for childcare in the community family care model plus the value of free accommodation. Similar to the community family model it was possible to assume that the entire foster care grant formed part of the provision of care to the child, directly or via the foster parents' remuneration.

The estimate of the cost of care was adjusted to obtain an estimate of the cost of providing a minimum standard in that setting. This was achieved by removing the grant assumption and replacing it with the cost of providing minimum food, clothing and schooling.

#### **4.4.3: Results**

The results of the CEA for Sinosizo are presented in the Table 5 below. A detailed breakdown of costs and assumptions are provided in Appendix A1.4. The cost estimates are based on the assumption that care continues until the child's 18<sup>th</sup> birthday. The child is assumed to be placed there at birth., Although this is not always the case the results were not very sensitive to changes in this assumption.

**Table 5: Results of CEA for Sinosizo**

<b>Costs</b>	<b>Rands per month</b>
Identification and referral	4
Statutory placement and supervision	+9

Foster parents' time	+123
Other expenses	+370
<b>Cost per month of care in setting</b>	<b>506</b>
Adjustment for minimum standard	-200
<b>Cost per month for minimum standard</b>	<b>306</b>

## **4.5: The Pin Project**

### **4.5.1: Introduction**

The project is based in the Richards Bay area of KwaZulu-Natal. It involves the development of an income-generating project, the proceeds of which are divided between the participants and a community fund. The community fund is designed to provide assistance to community members on approved application. The income generation programme and community fund are in the early stages of development. The caregivers themselves are all female pensioners, their only source of income is a monthly pension, food from vegetable gardens or donations and possible small amounts from craft activities. The income generation project is yet to have a significant impact on contributing to their material need, although during the course of the study the funds available increased. Many of the participants are, however, currently caring for large numbers of children, most of whom are their grandchildren. Some of the children are orphaned, while others stay with them while their parents are away.

### **4.5.2: Data and Method**

The data available on the care of children were scarce. The placement is informal, with grandparents taking over the care of children when their children travel to find work or die, usually from AIDS related conditions. All the caregivers have similar low incomes and limited access to resources: the number of children in their care primarily determines the quality of care that is provided. The number of children varies greatly between sites and individuals. For example at one site with four women, two cared for seven children, one for ten and one for fifteen. The care differed in a number of respects, for example, the number of children of school-going age attending school was determined by the ability to pay fees and provide uniforms. Those with more children were less able to afford to send them to school. In the site

mentioned previously the women with seven children in their care were able to send five and six children to school, the one with ten was able to send five and the one with fifteen sent seven. Data, therefore, on the cost of care were different for each individual and no common cost structure was available.

The care provided did not meet the minimum material standard of care. Children were poorly clothed and many did not attend school. Additionally food was always in short supply. The cost estimation was, therefore, a calculation of how much it would cost to provide a minimum standard of material care in that setting.

The cost of food, clothing, and other consumables was estimated with the use of secondary data. A problem, however, arose in the valuation of the caregivers' time. The model of care has no placement or supervision costs. The caregivers are family members and placed with them by the child's parents, prior to departure or death. In all of the case studies the replication cost has been estimated in place of the opportunity cost. The costs used have been similar in each model to allow for comparison, but the replication cost which has been used for the reimbursement of caregivers' time may not be appropriate, where family members are involved. For consistency the same cost is applied, the appropriateness of this, however, needs to be considered further. The same principal was used in the estimation of the cost of schooling as school fees differ substantially from site to site.

#### **4.5.3: Results**

The costs of providing a minimum standard of care in The Pin Project model of care are outlined in Table 6 below. The costs are based on secondary data and the assumption that the caregivers' time is of the same value as for non-related persons in the other models. The cost estimates are based on the assumption that care continues until the child's 18<sup>th</sup> birthday. The child is assumed to be placed there at birth., Although this is not always the case the results were not very sensitive to changes in this assumption.

**Table 6: Results of CEA for The Pin Project**

<b>Cost</b>	<b>Rand per month</b>
Material minimum variable costs	162
Caregivers' time	+114
<b>Cost per month for minimum standard</b>	<b>276</b>

The cost of providing the material minimum was the same as in Nceba Village. The total is lower as a result of lower staff costs. The lower staff costs result because of the less supervised nature of the model, due to its extended family basis.

#### **4.5.4: The Community Fund**

The income generation activities and the creation of the community fund were not included in the costing because of their infancy. This structure does, however, represent an alternative method of funding which merits discussion.

The income generation project is based on the production and sale of beaded AIDS pins. The pins are produced by groups of local grannies and sold in the UK. The profit from the project is divided between the groups and a community fund. Community members may then submit claims to the committee administering the fund, for assistance in the care of orphaned and vulnerable children. During the course of the study the fund has grown and a number of distributions made.

A structure such as this allows for the community to distribute funds to those they perceive to be most at need. The difficulty is to establish an income generation project, which creates adequate profit to compensate and support those involved, and support a community fund. The Pin Project has received considerable foreign support which is not available to every community. Therefore, effort needs to be made to identify income generation projects which could be more easily established.

## **4.6: Nceba Village**

### **4.6.1: Introduction**

Nceba Village is located in the Eastern Cape, in a rural part of what was formerly the Transkei homeland. Resources and facilities are few, there is no running water, electricity only from a limited number of generators, and health and transport infrastructure is poor. Nceba Village attempts to operate in this very resource constrained setting, to care for orphaned and vulnerable children. There are three housemothers who care for the children in their own homes. Previously children lived at an old mission station, but it was badly damaged in a recent severe storm and they have been relocated to the housemothers' homes. The costing will concentrate on the current structure of care. In addition to the housemothers there is a supervisory role played by another community member in the care of the children.

Due to the lack of resources and infrastructure Nceba Village is able to provide only very limited material care. Access to adequate clothing, health care, education and food is constrained by the environment in which the organisation operates.

### **4.6.2: Data and Method**

The collection of current cost information was not undertaken. As noted previously, the constraints under which the organisation must operate are such that only limited material care can be offered. The estimation of the cost of providing less than adequate material care is of little use. The data used, therefore, were cost information on how much it would cost to provide minimum material care within the structure of the organisation. The information used from the site visit, therefore, concentrated on the way in which the organisation worked and the structures which were necessary for its operation.

The cost of providing a minimum standard of material care within this model of care was estimated. Information on the structure was obtained from the site visit and subsequent interviews with the organiser. The cost of providing the minimum standard of care was based on secondary data. No attempt was made to cost the current care provided as it fell below the material minimum. The cost of the housemothers' time and the supervisors were estimated as replication cost, with levels comparable to other projects rather than as the opportunity cost of their time. This allows better comparison and provides a more useful policy tool as the opportunity cost would be linked to that individual and may not be appropriate if the model were used elsewhere. The placement and supervision costs are included in the costs associated with the housemothers and the supervisors.

#### 4.6.3: Results

The results of the CEA for this model of care are broken down into the cost of the staff involved and the cost of providing minimum material care. The cost estimates are based on the assumption that care continues until the child's 18<sup>th</sup> birthday. The child is assumed to be placed there at birth. Although this is not always the case, the results were not very sensitive to changes in this assumption.

**Table 7: Results of CEA for Nceba Village**

<b>Costs</b>	<b>Rand per month</b>
Cost of staff	158
Cost of material care to child	+167
<b>Cost per month for minimum standard</b>	<b>325</b>

The estimated values used are detailed in Appendix A1.6. What cannot be captured in the above is the cost of care for HIV positive children. There are no testing facilities in the region and although some children show signs of HIV infection, it has not been possible to confirm their status. Furthermore, local medical facilities are inadequate and the quality of care is constrained in the same manner as the orphan care. The cost of providing the level of care commensurate with the previous studies could be included as an estimation of the cost of providing an accepted

level of care. Adjustments would have to be made to the cost of material care because of the age differences, but would be insignificant compared to the cost of medical care.

# Chapter 5

## Discussion

### 5.1: Results

The costs estimated in the previous chapter vary greatly between the models. The table below summarises the results of the six case studies, both for the cost per childcare month and the adjusted cost of a minimum standard childcare month. Again it must be emphasised that the minimum standard is the bare minimum necessary for survival.

**Table 8: CEA of the Six Models of Orphan Care**

<b>Model of care</b>	<b>Site</b>	<b>Rand per childcare month</b>	<b>Rand per minimum standard child care month</b>
Statutory residential care	Nazareth House	2938 (3873*)	2590 (3525*)
Statutory adoption and foster care	Durban Children's Society	609	410
Unregistered residential care	Jardim House	996	957
Home-based care and support	Sinosizo	506	306
Community-based support structures	The Pin Project	**	276
Informal fostering/ Non-statutory foster care	Nceba Village	**	325

\*including medical costs associated with the child's HIV positive status

\*\*fail to meet material minimum

At first glance the results suggest that the most cost-effective way of caring for children is through community-based organisations, represented here by The Pin Project. This is indeed

what the results suggest, but further discussion is required to highlight other issues relevant to policy makers, the main one being the differences in the quality of care between the different models.

As mentioned previously, there exists the problem in this analysis of comparability of the effectiveness measure. Although the analysis was refined to include the more comparable cost of minimum standard of care, other differences still exist in the services offered, while mention has to be made of the failure, internally, of some sites to meet the minimum standard.

The differences in the services offered, the structure of the organisations and the quality of the care provided, are the focus of the other part of this two-part study, and as stated previously the results of this analysis should be read in conjunction with the other part of the study. There are, however, a number of differences which lead to the variation in cost which need to be dealt with here. One of these is the cause of the difference in cost between the cheaper alternatives.

Nceba Village and the Pin Project differ in one fundamental regard in structure, and this difference is the cause of the difference in cost. The costing of Nceba Village included a cost of supervision, which increased the cost of care. Supervision provides additional protection for the children against abuse and exploitation, as well as support to the caregiver. Although this supervision does not seem necessary at the Pin Project site, mainly as the care was provided by grandparents, this may not always be the case, even if family is involved. When examining the costs associated with the two models this additional benefit must be kept in mind.

A similar clarification is required in the comparison of both the Pin Project and Nceba Village with models which include foster care placements. The supervision and placement costs of models which access foster care are higher. The increased costs provide access to increased resources. The probability that a model which gains access to grants is able to provide more than the minimum standard of care, appears higher than the probability that a model which does not gain access will be able to meet even the minimum. Access to grants, therefore, provide additional security for the child, although at an increased cost. Similarly for the difference of R1698 per minimum standard child care month between Jardim House and Nazareth House, although Nazareth House is far more expensive it is able to access larger grants as a result. Sinosizo provides a safety net, faster identification, placement of orphans and protection of

inheritance, all of which increase the cost of the model compared to others. Table 9 summarises some of these differences.

**Table 9: Differences in the structural cost of care**

<b>Project</b>	<b>Cost (minimum standard)</b>	<b>Increase</b>	<b>Reason for increase</b>
The Pin Project	276	-	-
Sinosizo	306	+30	-Process for identification -Process for placement and grant access
Nceba Village	325	+19	-Higher degree of supervision -Smaller scale
Durban Children's Society	410	+85	-Security of accommodation -Quality of accommodation -More administration
Jardim House	956	+546	-High staff to child ratio -Provision of emergency care -Care of sick children
Nazareth House	2590	+1634	-Very high staff to child ratio -Care only for sick children -Meet statutory requirements for a children's home -High over heads -On site medical care -On site pre-school education

As well as having different benefits, the models have different success in providing for the minimum standard. The estimation of costs for a number of sites was based on what it would cost to provide a minimum standard in that setting, as a minimum standard was not achieved. It is necessary, therefore, to consider ways of improving access to resources so that the minimum standard can be achieved. This situation highlights the difficulties in gaining access to resources necessary in childcare, and how the most cost-effective models are not viable ways of meeting the basic needs of children, unless these difficulties of access are removed.

Finally, the results outline the expensive nature of the more formal models, particularly Nazareth House and Jardim House. Here too consideration needs to be given to additional issues. At both Nazareth House and Jardim House it was made clear that children were placed there because there was nowhere else to go. The local children's societies try first to place children in one of the less formal arrangements, but when they fail they are placed at homes like the ones mentioned. The costs, therefore, although high, may in some circumstances be the only option to abandonment and life on the street for the children. Furthermore some of the high costs are associated with the care of sick and abused children. Again this needs to be kept in mind when making comparisons.

## **5.2: Implications**

A number of clear implications stem from the CEA. These will be reinforced and added to by reference to the other part of this study.

Firstly, the cost-effectiveness of family-provided orphan care is clear. However, the provision of adequate care in such settings is problematic due to lack of and access to resources.

Secondly, many orphaned children are placed at risk of not receiving adequate material care, due to the lack of access to resources. Although state grants exist, they are not easily obtainable and in the more remote areas they are near impossible to access. Where accessible the cost of obtaining them is significant. Considerable effort is therefore required to provide easier access.

Thirdly, it is apparent that the extended family cannot always cope. Ways in which to identify vulnerable children and place them in alternative care arrangements need to be promoted. The addition of identification and placement programmes for orphans to home-based care structures is an effective means of providing such a safety net. This is highlighted by the small cost associated with this process in the Sinosizo case study, particularly when compared to other expenses incurred in that operation.

Fourthly, although expensive and apparently cost-ineffective, the more formal models represent the end of the road. Children placed in Nazareth House are those who have no alternative accommodation in the Cape Town region. More effort should be made to avoid children being

placed in a situation where there is nowhere else for them to go, while accepting that a last resort, even if expensive, more formal models will still be required for some.

Finally, a child's HIV status is a major determinant of the cost of care, requiring expensive medical treatment, and high staff-to-child ratios. These costs only reinforce the humanitarian argument that efforts should be made to reduce the rate of mother-to-child HIV transmission.

### **5.3: Limitations**

The study was limited by the differences in the primary goals of the organisations. Comparisons were hindered as a number of the sites selected provided care which differed in fundamental terms. Nazareth House, for example, cares primarily for HIV positive children. The costs of caring for HIV positive children in any setting are likely to be higher than the care of HIV negative children. The costs, therefore, associated with Nazareth House are not indicative of statutory care as a model, but of statutory care for HIV positive children. The results are not, therefore, directly comparable with the other models which care for both HIV positive and negative children. It is difficult to assess the degree to which the higher costs are associated with the model of care and which with the child's HIV status.

Sinosizo presented problems along similar lines. The primary goal of the organisation was not orphan care. Orphan care and placement are offshoots of the organisation's focus elsewhere. Sinosizo is a home-based care organisation. Estimating the costs associated with orphan care, therefore, was problematic. The orphan care component could not be provided without the other service, but it is not appropriate to attribute the costs associated with the other service to the provision of the orphan services.

Although it is possible to calculate the cost of minimum care in each setting, the estimate fails to consider the cost of the necessary infrastructure to deliver such services. For example, Nceba Village is without water and electricity, access is difficult and available health facilities are limited. To provide a minimum standard of care in these settings the situation would have to be improved. Such improvements would benefit the entire community and not just the children: the allocation of the costs would therefore be problematic. It is, however, necessary to note that the infrastructure necessary to provide these services is not always there.

## **Chapter 6**

### **Conclusions and Recommendations**

As mentioned in the introduction South Africa is beginning to experience a sharp rise in the number of orphans as a result of increased AIDS deaths. By 2010 it is estimated that 2 million children in South Africa will be orphans. These, like all other children, have a right to be cared for. This study has analysed the cost of six models of care for orphaned and vulnerable children that already exist in South Africa. Based on the results of this study a number of conclusions and recommendations can be made regarding the formulation of appropriate policy to address the needs of the growing orphan population. Policy must, however, be based not only on the cost but also on the quality of care and reference should be made to the first part of the study for conclusions in this regard.

The most cost-effective models of care are clearly those based in the community. These models, however, struggle to provide adequate material care, if they are to provide care they need support. In the case studies two avenues of obtaining support were identified. Government grants and income generation projects. The simplification of the grant system and the establishment of successful income generation projects would, therefore, allow for the more efficient care in the community to achieve adequate levels of care. Aside from financial support if these models are to be successful infrastructure needs to be developed where it prevents the achievement of adequate care.

Aside from financial support to maximise the number of children kept within the community attention needs to be paid to development and support of safety net structures. Both Nceba Village and the home based care models provide examples of existing arrangements. The apparent effectiveness of the addition of identification of further orphans in the home based care operations came out during the case study. Support should, therefore be given to such organisations so that they can expand in this way.

No safety net can be perfect and some children will always fall through. Durban Children's Society provided an example of how such children can be placed back into the community in a semi-formal arrangement. This arrangement is more cost effective than the more formal children's home, even Sophie Jardim House. Support, therefore, should be given to the

development and expansion of community based models of care for children who slip through the safety net. Although this provides support for semi formal care based in the community it does not negate the more formal options.

The formal models of care examined in this study are comparatively very expensive. They do, however, have two roles which need to be mentioned. They provide emergency care and care for very ill children who are difficult to place. This reinforces the earlier conclusion that safety net structures need to be reinforced, it also points to the need to maintain and support these organisations to continue to provide these services.

Planning for the care of orphans is clearly a complex task with resources having to be divided to deal with different problems. Although the three less formal community models of care are clearly the most cost effective, the need for a continuum of options is still evident. The resource requirements to maintain such a continuum, even if the bulk were directed at the more cost-effective models, will be large. Failing to plan, however, will result in more and more children finding their way into situations where they do not receive even the minimum standard of care, or worse falling through the net altogether and having to fend for themselves.

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# Appendices

The two appendices outline the assumptions and calculation on which the case study results are based. The estimates are based on the replication costs of each model and not the opportunity cost and are in A1. The calculation of the cost of providing minimum care is further explained in A2.

## **A1: Detailed assumptions and calculations of case studies.**

A discount rate of 5% was used for all calculations. The rate was used as it is the most widely used rate and facilitates comparison. The costs are based on estimated replication costs. Labour has been priced at similar rates in different settings to allow for comparisons of model structure, rather than location.

### **A1.1 Nazareth House**

#### 1.1.1: Financial statement analysis

Nazareth House maintains comprehensive financial records. Where possible the costs incurred are allocated directly to either the old age home or the children's home. The costs of staff who work in one part only, for example, are allocated directly to that part. Costs which cannot be directly allocated are apportioned 2/3 to the old age home and 1/3 to the children's home. This is based on the experience and judgement of the book-keeper and is assumed in this study to be the best estimate of the relative size of each operation.

An inflation-adjusted average of the previous two years' financial statements was used as the starting point for the analysis. The number of children in the home is 44. The total cost of the children's home was, therefore, divided by 528 (44 children multiplied by 12 months), to obtain the cost per childcare month according to the financial statements, which is reported in the paper.

**Table A1: Calculation of costs according to financial statements for Nazareth House (Rands per month)**

Cost per childcare month	1998-1999	1999-2000	Average
Administration fee	3.47	16.74	10.10
Auditors' remuneration	5.56	6.95	6.25
Bank Charges and interest	3.79	4.23	4.01
Books	4.74	5.05	4.89
Clothing	14.79	16.15	15.47
Cleaning Materials	14.81	44.03	29.42
Depreciation	43.56	46.41	44.98
Dry cleaning and laundry	3.98	1.02	2.50
Education and recreation	44.73	54.54	49.63
Fuel and electricity	99.98	113.06	106.52
Functions and church	13.05	9.12	11.08
Funeral expenses	0.00	-0.65	-0.32
Insurance	37.81	28.45	33.13
Linen and kitchenware	9.60	0.50	5.05
Medical expenses	18.76	15.43	17.10
Motor vehicle expenses	17.57	31.63	24.60
Nursing fees	234.68	284.25	259.47
Petty cash purchases	2.50	4.04	3.27
Postage	8.79	13.28	11.03
Provisions - other	46.29	0.00	23.14
Provisions	448.14	380.41	414.28
Repair and maintenance	241.19	215.55	228.37
Residents' pocket money	0.83	2.65	1.74
Salaries and wages	1082.60	1167.66	1125.13
Security	56.26	25.41	40.83
Pension fund	55.91	27.33	41.62
Stationery	25.58	21.28	23.43
Telephone	30.39	38.16	34.28
Travelling expenses	4.31	1.07	2.69

Water	18.39	44.85	31.62
<b>Total</b>	<b>2592.06</b>	<b>2618.60</b>	<b>2605.33</b>

#### 1.1.2: Adjustments to items on the financial statements

A number of the costs reported in the financial statements do not reflect the economic costs, but rather the financial cost. These costs were adjusted as shown in this section.

##### 1.1.2.1: Depreciation

The depreciation charge reported was divided into two categories: furniture and equipment, and motor vehicles. Both were calculated on a straight line basis, furniture and equipment were assumed to have a useful life of 10 years and motor vehicles 5 years. The two were dealt with separately.

Furniture and equipment: the portion of the depreciation charge which was allocated to furniture and equipment for the children's home was multiplied by 10 to establish the total value. This value was then amortised over the useful life of 10 years, with a discount rate of 5%.

Motor vehicles: the depreciation charge for motor vehicles was removed and replaced with a new calculation. The new calculation was based on discussions with staff as to the type of vehicle required and the useful life. Based on this the vehicle selected was a Toyota Venture, and the useful life was estimated at 10 years. Based on this the market value of a new venture was amortised over 10 years - 5% discount rate.

**Table A2: Adjustment of depreciation charge for Nazareth House (Rands)**

Furniture and equipment charge over 10 years	106055	(1)
Amortised over 10 years	13735	(2)=(1)/7.722
New car amortised over 10 years	12950	(3)=100000/7.722
Previous total	23752	(4)
New total	26685	(5)=(2)+(3)

<b>Adjustment per childcare month</b>	<b>+5.5</b>	<b>(6)=[(5)-(4)]/538</b>
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#### 1.1.2.2: Education

A number of the children at the home attend schools for children with special needs. For these the home must pay fees, but for the state school it does not. The school fees not paid were ascertained and included in the estimation.

#### 1.1.2.3: Funeral expenses

The funeral expenses appeared as an income on the financial statements, because the donations exceeded the costs. This was removed from the calculation and replaced with the market cost of funerals. The market cost was established by a phone survey of three major funeral organisers. The cost used was a generally agreed R2500, for a cremation. The number of deaths at the home has varied greatly over the last four years. It was assumed that on average four children would die each year. This is the highest number of deaths in a year over the last three years. The number was chosen as the average age of the children in the home has increased and the rate of deaths, sadly, is likely to climb in the future. Thus, the funeral cost was changed to R10 000 a year.

#### 1.1.2.4: Sisters' salaries

There are two nuns involved in the running of the home. One works exclusively in the children's home and the other is involved in the overall administration. In order to provide replication cost, salaries appropriate to the work performed by the nuns were attached to their time. The appropriate salaries were based on those paid to people doing similar jobs within Durban Children's Society, including overheads and benefits. The supervising nun's time was allocated on a two thirds basis to the old age and one third to the children's home.

#### 1.1.3: Addition of items not on the financial statements

The financial statements did not include a number of economic costs associated with the children's care and adjustment had to be made for this.

#### 1.1.3.1: Buildings

The building which houses the children's home is over eighty years old. The plans for the building are not available. An estimate was made of the cost of building a structure of similar size by a quantity surveyor. This estimate of R500 000 was then amortised over 30 years. This estimate is conservative as it was felt that the high repair and maintenance costs included in the calculation already, accounted for some of the building costs.

#### 1.1.3.2: Volunteers

A number of individuals provided their time free of charge to the home, to help care for the children. During an average week volunteers spend 70 hours at the home. The cost of this time was estimated based on the cost of staff doing similar work at the home.

#### 1.1.3.3: Medical costs

A significant portion of the cost of care are the medical costs. Although medical costs are not strictly part of the care, as all children are entitled to medical care according to the Constitution, it was included to highlight the significant costs involved in the care of HIV+ children.

The estimation of the costs was based on those compiled by Soderlund et al (1999). The cost of each year was estimated. The survival rate was then used in conjunction with these costs to calculate the present value of the future stream of costs of the cohort of HIV positive children. This present value was then amortised across the children's lives.



**Table A3: Estimation of medical costs for Nazareth House**

Year	Birth (0)	1	2	3	4	5	6	7	8
Survival %	100	66	46	33	24	20.25	16.5	12.75	9
Out patient days*	140	92.4	64.4	46.2	33.6	28.35	23.1	17.85	12.6
Cost of days**	118580	78262.8	54546.8	39131.4	28459.2	24012.45	19565.7	15118.95	10672.2
% admitted***	65%	47%	47%	46%	69%	69%	69%	69%	69%
Inpatient days per child	8.9	6.2	5.5	6.2	23.8	23.8	23.8	23.8	23.8
In patient days	203.90	66.97	41.88	32.84	137.38	115.92	94.45	72.99	51.52
Cost of Days****	850697.1	279399.2	174703.5	137002.7	573167.6	483610.2	394052.7	304495.3	214937.9
<b>Total cost</b>	<b>969277.1</b>	<b>357662.1</b>	<b>229250.3</b>	<b>176134.1</b>	<b>601626.8</b>	<b>507622.6</b>	<b>413618.4</b>	<b>319614.2</b>	<b>225610.1</b>

\* Four extra outpatient days per child, 35 HIV+ children

\*\*Cost per day R847

\*\*\*The percentage of surviving HIV positive children admitted to hospital

\*\*\*\*Cost per day of R4172

The present value of the total cost is R3, 251,185, amortised over eight years is R503, 056 per year, which is R935 per child month. The cost per month for each HIV positive child is R1198, but the figure used is less than this, because not all the children are HIV positive.

#### 1.1.3.4: Statutory placement and administration

All children at Nazareth House are placed by court order. This involves a placement procedure and a supervision requirement. The calculation of these costs was based on a survey of the time taken in each of these activities by 15 social workers at Durban Children’s Society. The time spent on the placement and supervision was assumed to be the average result from the survey. The cost of this time was calculated as the average cost of social workers salaries and an allocation of overheads with data from two Durban area offices. It was assumed that four placements were made a year and that every child was supervised.

**Table A4: Time spent by social workers for residential statutory placement**

<b>Activities involved in placement*</b>	Hours	95% confidence interval
Screening	2.43	1.80
Court Report	3.60	1.90
Court Appearance	1.31	0.60
<b>Total</b>	7.34	
<b>Activities involved in supervision**</b>		
Monitoring	5.20	3.60
Section 16 Report	2.40	1.20
<b>Total</b>	<b>7.60</b>	

\*Placement activities are once off

\*\*Supervision times are per two-year period

#### 1.1.4: Replication adjustments

As mentioned in the paper the purpose of this exercise was to establish the cost of the model, rather than the site. For this reason a number of adjustments were made to costs which were particular to the site rather than the model.

#### 1.1.4.1: Church Costs

The church costs, which were reported in the financial statements, were removed from the estimation. Although the church plays a role in the type of care, it was felt that it was in appropriate to include them as well as salaries for the nuns.

#### 1.1.4.2: Security

The security costs were lower than they would be if replicated as the home benefits from sharing the costs with the old age home and a retirement village on the same property. The costs were therefore changed to the costs of security of a stand-alone children's home in Durban, as reported in their financial statements.

#### 1.1.5: Adjustment for minimum standard

The estimation of the cost of providing a minimum standard of care was obtained by deducting the costs of provisions and clothing and replacing them with an estimate of the cost of providing the minimum food and clothing. The other costs were held constant as they form part of the model of care. Appendix A2 provides a detailed explanation of this process.

#### 1.1.6: Limitations of the Nazareth House study

Three major cost components were not included due to lack of or inappropriate data.

##### 1.1.6.1: Land and rates

The cost of the land and the rates, which would be paid on it if the home were not there, were not included. The value of the land would have been inappropriate as the home is situated on the slopes of Table Mountain, on some of the most valuable land in the country. The inclusion of

this value would have been inappropriate for the estimation of a replication cost. The inclusion of rates suffered from a similar problem, with the additional problem that the Cape Town Council refused to disclose what the rates were in that area.

#### 1.1.6.2: Donations

The home receives a variety of material donations from numerous sources. It is felt by the staff that these donations, are very important in the running of the home. Records, however, show only what is donated, and not how much. For example ‘toys’ could mean boxes, or just one or two. It was, therefore, impossible to determine the value of them. This was the most significant limitation faced in this case study and the results should be read bearing in mind that donations are not included.

#### 1.1.6.3: Court time

No estimate of the cost of court time was available. This, however, is of little significance as it is estimated that placement takes no more than an hour of court time. This hour is then amortised over the child’s life. This exclusion is, therefore, of little consequence.

### **A 1.2: Durban Children’s Society**

#### 1.2.1: Statutory placement and supervision

All the children in the community care home are placed there by the court, as a foster care placement. The cost of this was based on a survey of social workers’ time at Durban Children’s Society. The cost of this time was based on the salaries and overheads of social workers based at two offices in the Durban region. The supervision cost was estimated in the same way.

**Table A5: Time spent by social workers for non-related foster care placement**

<b>Activities involved in placement*</b>	Hours	95% confidence interval
Screening	5.00	3.26
Court Report	3.50	1.62
Court Appearance	1.0	0.48
<b>Total</b>	9.50	
<b>Activities involved in supervision**</b>		
Monitoring	2.90	1.26
Section 16 Report	2.70	1.15
<b>Total</b>	5.60	

\*Placement activities are once off

\*\*Supervision times are per two-year period

### 1.2.2: The cost of the housemother

The housemother is paid an allowance of R100 per child per month. In addition to this she is provided with free accommodation. The free accommodation should be included as part of the cost of the housemother. For the purposes of this costing, however, this allocation is unnecessary. All costs attributed to the housemother will eventually be attributed to the cost of caring for the children. Ignoring the benefits of accommodation to the housemother and allocating them all directly to the children results in the same estimation. It is important, however, to remember that the R100 is not full reimbursement. There is provision in the model for the housemother to take leave for two weeks once a year. The cost of this replacement was included as part of the housemother's cost, by dividing the cost of two weeks pay, over the year.

### 1.2.3: Building costs

The building costs include rent, rates, electricity and water. The rental for the home is subsidised by the municipality, the unsubsidised rental was used in the estimation. The rates are those actually paid. The electricity and water estimations were the average of the previous two months. All costs were based on the oldest and most established home.

**Table A6: Composition of building costs – Durban  
Children’s Society**

	Rand per month
Rent (unsubsidised)	396
Rates	59
Electricity and Water	200
<b>Total</b>	<b>655</b>
<b>Per Child</b>	<b>109</b>

### 1.2.4: Other expenses

The assumption that other expenses amounted to the value of the grant was explained in the text. In summary the housemother uses the grant either for the child or for herself. If part of it is used for her, then this forms part of her reimbursement and should eventually be allocated to the cost of caring for the child. It is, therefore, valid to assume that the entire grant should be allocated directly to the cost of caring for the child.

### 1.2.5: Adjustment for minimum standard

In the estimation of the cost of providing a minimum standard of care in that setting, the foster care grant was deducted and replaced with the cost of providing the minimum food, clothing and schooling. This assumes that the housemother needs only what she earns as an allowance, and receives in kind, to work. The other costs were held constant, as they are associated with areas that define the model.

### **A1.3: Jardim House**

#### 1.3.1: Financial records

The first source of data for the CEA was the financial records. The home keeps monthly accounts of income and spending. These provided a useful source of information. In a similar manner to Nazareth House the cost according to the statements were used and then adjusted. The costs according to the financial statements were recorded as follows.

**Table A7: Cost of care according to financial records –  
Jardim House**

Cost per childcare month	Rands per month
Salaries	110.71
Monthly rent	60.71
Electricity and Water	92.85
Public transport	17.14
Repairs	7.14
Fuel	30.00
Clothing and nappies	34.28
Food	128.57
Stationary	7.14
Telephone	28.57

Total	517.11
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A number of the costs reflected above had to be adjusted to reflect the economic and replacement cost of resources used in the model.

### 1.3.2: Adjustment of costs reflected in the records

#### 1.3.2.1: Salaries

The salaries had to be adjusted as a large portion of the work was done on a voluntary basis, or for far less than the market rate for that labour. For example, the neighbour assists in return for only a small allowance, which is only paid when funds are available. The cost of labour was based on salaries and overheads found elsewhere in the study. Sophie Jardim's time was given the same value as the nun running the children's home at Nazareth House. The neighbour and the daughter's time were allocated at the rate of people doing similar work at Nazareth House. The domestic workers pay was kept constant. The public transport costs were removed, as these were paid to the workers to travel to work. This payment is not necessary if staff are salaried.

#### 1.3.2.2: Clothing and nappies

Five hundred nappies are donated on approximately three monthly intervals. The cost was adjusted to include this, an addition of R24 and child per month  $[(500 \times R2) / 3] / 14$ .

#### 1.3.2.3: Food

Sophie Jardim has estimated that they receive between R500 and R700 per month in donated food. The more conservative estimate was used as the food is passed its sell by date (but not the use by date) which reduces the market value.

### 1.3.3: Additional costs

#### 1.3.3.1: Support

The local child welfare organisation provides support to both the children and the caregivers. The social workers estimated that, in total, they spent 3.5 hours per week on work related to the home. This time was included in the calculation at the same rate as that associated with Durban Children's Society, to allow for comparison.

#### 1.3.4: Adjustment for minimum standard

The minimum standard calculation replaced the cost of food and clothing with the cost of providing the absolute minimum. Secondary data was used, the bases for this is outlined in appendix A2.

### **A 1.4 Sinosizo**

#### 1.4.1: Identification and referral

The costs associated with the identification and referral of children are what differentiates the model from the traditional foster care. The estimate of the cost was based on information provided by the social worker responsible. On average, she estimates that she spends eight hours per child. Made up of a number of visits before the parents' death, referral procedure to the local welfare agency and follow up. This increases the cost of placement substantially. The social workers time was valued the same for the other case studies to allow for comparison. Additional costs are associated with the training of the foster care mother and the bereavement concealing for the child. These were estimated at the same rate. The costs were then amortised over the children's lives.

#### 1.4.2: Statutory placement and supervision

Once referred to the welfare agency it was assumed that children follow a similar path to children being placed in the care of related persons. This assumption was based on the conclusion that background check, even for unrelated care givers, will be the minimum as this task has already been started or even complete by Sinosizo.

The cost of the placement and supervision was based on the following, from the survey of social workers time:

**Table A8: Time spent by social workers for related foster care placement**

<b>Activities involved in placement*</b>	Hours	95% confidence interval
Screening	3.00	1.05
Court Report	3.00	1.18
Court Appearance	1.00	0.57
<b>Total</b>	7.00	
<b>Activities involved in supervision **</b>		
Monitoring	2.50	0.75
Section 16 Report	2.20	0.97
<b>Total</b>	4.70	

\*Placement activities are once off

\*\*Supervision times are per two-year period

#### 1.4.3: The cost of the foster parent and other expenses

The cost of foster parent was assumed to be the same as for Durban Children’s Society’s Community Care model: R100 a month plus any portion of the grant used for themselves. As with the community care model it is not necessary to determine if any part of the loan is with

used for themselves, because the entire grant is allocated to the child directly, including all other expenses as well as the labour. In addition to the allowance and any portion of the grant the value of free accommodation for the community models housemother is estimated and included as a cost of labour. The estimation is based on secondary data outlined in appendix A2.

#### 1.4.4: The adjustment for minimum standard

The adjustment for the estimation of the cost of providing minimum care was obtained by removing the value of the grant and replacing it with the amount required to provide the minimum clothing and food for each child. The bases and calculation of this amount is outlined in appendix A2.

### **A1.5 Pin Project**

As mentioned in the text and similar to Nceba Village, the Pin Project CEA was an estimation of the cost of providing a minimum standard of care in that area.

#### 1.5.1: Cost of staff

The care in the Pin Project is given by family members: the estimation of the replication cost was, therefore, difficult. It is not clear whether family members require less remuneration than non-family members, to care for children. To facilitate comparison it was assumed that they would require the same as the non-related persons in the community care model, the amount calculated the same as Nceba Village, to include the value of free accommodation.

#### 1.5.2: Cost of material minimum

The cost of material care was an estimation of the cost of providing minimum food, clothing, housing and schooling to children in that area. Appendix A2 provides details of this process.

## **A 1.6: Nceba Village**

As noted in the text, the CEA of Nceba Village was an estimation of how much it would cost to provide a material minimum standard of care in that setting.

### 1.6.1: Cost of staff

The cost of the primary caregiver was assumed to be R158 per child. This amount consisted of R100, the same as Durban Children's Society's Community Care model allowance, plus R58 based on the value of free board. The value of free board was based on household costs from the same secondary data source, appears in appendix A2. The cost of the supervision was based on the cost of social workers' time in the Durban Children's Society's case study. The reason for the use of these costs was to allow for easy comparison of models.

### 1.6.2: Cost of material care

The cost of material care was an estimation of the cost of providing minimum food, clothing, housing and schooling to children in that area. Appendix A2 provides details of this process.

## **A2: The cost of providing minimum care assumptions**

### **A2.1: The basis of the costs**

The calculation of the cost of minimum care is based on: Potgieter, J. (September 2000) *The Household Subsistence Level in Major Urban Centres of South Africa*. Health and Development Research Institute. Faculty of Health Science, University of Port Elizabeth.

The report was selected as the data provided allowed for simple calculations of the costs of minimum care. Furthermore the study has been recently updated, September 2000, and is the only public study of its kind in the country which breaks down the costs to such a degree.

The report calculates the cost of subsistence living in a number of urban areas in South Africa. This is the very minimum. It is therefore, important to stress that this paper is not suggesting that this level of care is acceptable, by rather the very least which could be offered to support children's lives. The report deals only with urban areas: where the case study has been located outside an urban area the closest has been used. This is not an ideal situation but provided the best available approximation of these important costs.

The report divides costs between food, clothing, fuel/light/washing/cleaning and household costs. The cost of providing the subsistence level of these is estimated based on local prices for various categories of individuals: children aged 1-3, 4-6 and 7-10, boys and men aged 11-14, 15-18 and 19+ and girls and women aged 11-14, 15-18 and 19+.

The food cost was based on the prices for the following items:

**Table A9: Subsistence quantities of food**

Food item Quantities = grams or ml	Children			Females		Males	
	1-3	4-6	7-10	11-14	15-18	11-14	15-18
Skimmed milk powder	1200	1200	1200	1200	1200	1200	1200
Meat (red & Chicken)	245	389	577	795	795	795	795
Fish (Pilchards)	123	195	289	397	397	397	397
Eggs (1 egg-50g)	650	650	650	650	650	650	650
Fresh Vegetables	3600	5550	7650	9000	9000	9000	9000
Fresh Fruit	823	823	1083	1083	1083	1083	1083
Margarine	300	450	450	450	450	600	600
Cooking oil (ml)	260	433	606	606	606	606	606
Brown Bread (800g)	1650	2100	3150	4200	4200	5250	8400
Maize Meal, samp etc	3600	5400	5400	5400	5400	5400	7200
Sugar & jam	900	1050	1200	1200	1200	1350	2100
Peanut butter	260	260	260	433	433	433	433
Legumes	65	130	130	390	390	390	390
Coffee & tea	-	-	130	217	217	217	217
Salt	65	65	130	130	130	130	130
Spices & condiments	22	22	44	44	44	44	44
Fluids e.g. Vinegar	44	44	87	87	87	87	87

Adapted from: Daily Food Rations for Adults and Children, National Research Council, USA, as revised in 1989. Adapted and revised by the Dept. of National Health and Population Development in 1975, 1982 and 1993.

The same was done for clothing and fuel etc, although clothing was calculated only for adults and children were reported as a percentage of adult female costs as follows: under 3 years 25%,

4-9 years 50 % and 10-16 years 75%. School uniforms were assumed to form part of the clothing.

## **A2.2: The costs used in the case studies.**

### **2.2.1 Nazareth House**

The adjustment for minimum standard at Nazareth House used only the food and clothing components of the subsistence allowance. An average of the cost for children 1-10 years was used the Cape Town cost data:

**Table A10: Costs used for Nazareth House**

	Food	Clothing	Total
Children 1 – 3 years	79.25	11.82	91.07
Children 4 – 6 years	95.55	23.64	119.19
Children 7 – 10 years	118.17	23.64	141.81
<b>Average</b>	<b>97.66</b>	<b>19.70</b>	<b>117.36</b>

### **2.2.2 Durban Children’s Society**

The adjustment for Durban Children’s Society’s Community Family Care, used the average cost of food and clothing for children from 1-18. The figure used was obtained as follows, from the Durban cost data:

**Table A11: Costs used for Durban Children’s Society**

	Food	Clothing	Total
Children 1 – 3 years	85.73	11.82	97.55
Children 4 – 6 years	102.06	23.64	125.7
Children 7 – 10 years	125.12	23.64	148.76
Boys 11-14	147.64	35.46	183.1
Boys 15-18	166.9	48.8	215.7
Girls 11-14	142.55	35.46	178.01

Girls 15-18	142.55	47.28	189.83
<b>Average</b>	<b>130.36</b>	<b>32.3</b>	<b>162.66</b>

### 2.2.3: Jardim House

The closest urban area to the home for which secondary data exists is Springs. It was however felt that the data for this area were inappropriate as they were heavily influenced by the close proximity of Johannesburg. Cost data for Pietersburg, a nearby rural town, were used as a better approximation.

**Table A12: Costs used for Jardim House**

	Food	Clothing	Total
Children 1 – 3 years	80.64	11.82	92.46
Children 4 – 6 years	96.99	23.64	120.63
Children 7 – 10 years	120.79	23.64	144.43
Boys 11-14	145.24	35.46	180.7
Boys 15-18	166.62	48.80	215.42
Girls 11-14	139.50	35.46	174.96
Girls 15-18	139.50	47.28	186.78
<b>Average</b>	<b>127.04</b>	<b>32.30</b>	<b>159.34</b>

### 2.2.4: The Pin Project and Sinosizo

The data for Durban were used for the adjustment. In these two case studies no data were provided for Richards Bay, the urban area around which The Pin Project is based. The costs for the Durban area were used as this is the closest urban area for which data were provided.

**Table A13: Costs used for Sinosizo and the Pin Project**

	Food	Clothing	Fuel etc	Total
Children 1 – 3 years	85.73	11.82	4.11	101.66
Children 4 – 6 years	102.06	23.64	4.11	129.81
Children 7 – 10 years	125.12	23.64	4.11	152.87
Boys 11-14	147.64	35.46	4.11	187.21
Boys 15-18	166.90	48.80	4.11	219.81
Girls 11-14	142.55	35.46	4.11	182.12
Girls 15-18	142.55	47.28	4.11	193.94
<b>Average</b>	<b>130.36</b>	<b>32.3</b>	<b>4.11</b>	<b>166.77</b>

The household costs and costs of food for the caregivers were as follows:

**Table A14: Additional costs used for the Pin Project**

Primary Care giver fuel etc	4.11
Household costs	194.39
Total	198.50

### **2.2.5: Nceba Village**

The minimum cost was not an adjustment in the case of Nceba Village but rather the only calculation. The provision of the material minimum was based on Umtata cost data as follows:

**Table A15: Costs used for Nceba Village**

	Food	Clothing	Fuel etc	Total
Children 1 – 3 years	84.76	11.82	4.68	101.26
Children 4 – 6 years	100.92	23.64	4.68	129.24
Children 7 – 10 years	124.26	23.64	4.68	152.58
Boys 11-14	147.54	35.46	4.68	187.68
Boys 15-18	167.67	48.80	4.68	221.15
Girls 11-14	142.18	35.64	4.68	182.50
Girls 15-18	142.18	47.28	4.68	194.14
<b>Average</b>	<b>129.93</b>	<b>32.33</b>	<b>4.68</b>	<b>166.94</b>

The household costs and costs of fuel etc for the caregivers were as follows:

**Table A16: Additional costs used for Nceba Village**

Primary caregiver fuel etc	4.68
Household costs	134.68
<b>Total</b>	<b>139.36</b>