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A Health Program Proposal for Orphans and Vulnerable Children at AIM Care Points in Swaziland

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An abstract of

A thesis submitted to the Faculty of the

Rollins School of Public Health of Emory University

in partial fulfillment of the requirements for the degree of

Master of Public Health

in the Hubert Department of Global Health

2015

Abstract

A Health Program Proposal for Orphans and Vulnerable Children at Adventures In Missions Care Points in Swaziland

By Claud D Crosby III

At the turn of the 21st century the Kingdom of Swaziland experienced a tremendous loss of life due to the HIV/AIDS pandemic ravaging sub-Saharan Africa. With thousands of adult lives lost, Swaziland faced a new crisis of more than 120,000 orphans and vulnerable children (OVC). Adventures in Missions (AIM) responded to this crisis in 2004 by collaborating with a Swazi pastor to establish neighborhood care points east of Manzini in central Swaziland. More than a decade later AIM manages 33 care points, serving more than 6,000 OVC. However, there is no formal health program for OVC at those care points; thus, AIM requested a health program proposal that would extend health care to the OVC they serve.

The purpose of this Special Studies Project is to develop a culturally appropriate health program proposal that draws on the expertise of other organizations currently providing OVC health services in Swaziland. Interviews with AIM staff in Swaziland were used to guide the research phase of this proposal by identifying the most relevant organizations in Swaziland to be assessed. The competitive analysis of these exemplary organizations, an analysis of AIM's organizational capacity, and research on the national referral system informed the development of the health program. The proposed program capitalizes on existing strengths among AIM staff and identified staffing and resource gaps to be filled in order to implement a successful health program.

The goal of the program proposal is to develop a cost-effective and culturally appropriate program that integrates well with the objectives of the national health system. Key research findings include the need to identify and train community health workers for each care point, develop and implement a monitoring and evaluation plan, and develop a referral system that tracks patients and ensures the completion of treatment. The proposal includes plans for onsite acute care and preventative treatment, as well as an explicit plan for referrals. The proposal is divided into three progressive phases of implementation, and it provides AIM with a framework for implementing a system of health for the 6,000 OVC under their care.

A Health Program Proposal for Orphans and Vulnerable Children at AIM Care

Points in Swaziland

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Table of Contents

List of Abbreviations

AIM Adventures in Missions

ART antiretroviral therapy

BMI Body Mass Index

CHIPS Children's HIV Intervention Program in Swaziland

CHW Community Health Worker

CMS Cabrini Ministries Swaziland

DFA Dream for Africa

DHS Demographic and Health Survey

ECD Early Childhood Development

IMCI Integrated Management of Childhood Illnesses

LXP The Leadership Experience

MDRTB Multidrug Resistant Tuberculosis

M&E Monitoring and Evaluation

MOH ministry of health

MUAC Mid-Upper Arm Circumference

NCP Neighborhood Care Point

NGO Non-governmental Organization

OVC Orphaned and Vulnerable Children

PIH Partners In Health

PMTCT Prevention of Mother to Child Transmission

PEPFAR The U.S. President's Emergency Plan For AIDS Relief

RFM Raleigh Finkin Memorial Hospital

RHM Rural Health Motivators

SDHS Swaziland Demographic and Health Survey

SEPI Swaziland Extended Program of Immunization

SHIMS Swaziland HIV Incidence Measurement Survey

TASC The AIDS Information and Support Center

VHT Village Health Team

WASH Water, Sanitation, and Hygiene

List of Terms

Bomake – Translated as "mothers" from siSwati, and in the context of this document this term is used in reference to the Swazi women staffing the care points on a daily basis.

Borehole – A drilled well with a hand pump, or in some locations with a solar powered pump connecting to an elevated tank.

Care point – Donated or purchased land in a community where the bomake cook daily meals for orphans or vulnerable children. Care points typically are comprised of one or more buildings, a water source or bore hole, and a put latrine or toilet. Other facilities may or may not be present depending on the development stage and location of each care point.

Emalangeni (E) – Swazi currency (1 USD = 12.46 E)

Kombi – A 16-seat-van typically used as a taxi in Swaziland

Pap – Ground maize cooked to a thick consistency and eaten as the staple food in Swaziland.

Primary School – Grades 1 -7 (Typically for ages 5-12)

Rand (ZAR) – South African currency (1 USD = 12.46 ZAR)

Secondary School – High School (Typically for ages 13-18)

Chapter 1: Introduction

1.1 Rationale

Swaziland is a small kingdom situated between the eastern part of South Africa and Mozambique. According to a national survey from 2007, there were roughly 1.2 million inhabitants in Swaziland spread across four administrative regions: Hhohho, Manzini, Lubombo, and Shiselweni[1]. Swaziland is low ranking on the Human Development Index at 144 out of 177 countries and has the highest prevalence of HIV in the world, with 26% of adults of reproductive age being HIV positive[1, 2]. The nation also faces an epidemic of tuberculosis - 1,380 cases per 100,000 residents - because so many of its residents are immunocompromised[2, 3]. This high burden of infectious diseases have severely strained the national health system, which already experiences a dearth trained physicians and nurses[4, 5].

Perhaps one of the greatest challenges now facing Swaziland is the plight of thousands of children left orphaned as a result of HIV and AIDS. By 2007, roughly 23% of all children under the age of 18 were orphans[3]. To fill the gap left by parents who succumbed to AIDS, the elderly head roughly 35% of all households in Swaziland, and another third of all households are headed by children alone[1]. In addition to the parenting crisis, more than a third of all Swazis currently receive some type of food aid according to the World Food Program (WFP), and malnutrition is a challenge for numerous OVC[2, 3, 6]. This crisis resulted in a prevalence of stunting, underweight, and wasted children at 29%, 5%, and 3% respectively[1]. The percentage of underweight children climbs even higher to 11% among OVC[3].

Through a national plan to make primary education free for all Swazi children, the net attendance of primary school has risen to 84% according to the 2007 SDHS. However, large numbers of pupils attending primary school are older learners, no longer attending the appropriate grade level for their age[3]. Though rates of school attendance among OVC differs by only 3% from children living with their parents, it has been clearly shown that OVC are more likely to drop out or perform poorly in school due to their profound life challenges[1, 3, 7, 8].

In a country with the worst HIV prevalence in the world, casual sex at a young age can become a death sentence. The SDHS demonstrated that OVC were 50% more likely to have sex before the age of 15 in Swaziland than their peers. Additionally, crippling poverty often forces young orphaned girls into exchanging sexual encounters for food, clothing, and shelter in Swaziland, where there is a known tendency for young girls to get into relationships with older men[1-3, 8].

1.2 Problem

As the HIV/AIDS pandemic swept across sub-Saharan Africa in the late 90's and early turn of the century, the Kingdom of Swaziland, one of Africa's smallest nations, became infamous for the worst HIV prevalence in the world. The small nation, known for its peaceful people and unique traditional customs surrounding the royal family, staggered public health officials as the HIV prevalence rapidly ascended well above 30% of the entire population[2, 5]. Before long, media reports began to postulate whether or not the small kingdom could survive coming decades as an entire generation of parents was decimated by the virus, leaving behind a generation of orphans and vulnerable children (OVC)[9].

During that time a prolific author determined to use the proceeds from his newfound success to create an organization that would seek to turn the tide of the HIV pandemic in Africa. Thus, Dream for Africa (DFA) was founded, and innovative strategies were sought to tackle the pandemic among at risk youth in Africa's high schools. Adventures in Missions (AIM) was established as a non-profit Christian mission organization in 1989, initially founded as a vehicle to connect American church youth groups to service opportunities in impoverished communities at domestic and international sites. As AIM evolved over the years, it expanded its operations to include a one-year missionary internship for college students and young professionals interested in a career in missions.

In February of 2004 DFA recruited leaders from numerous mission organizations in southern Africa and the United States, including staff members of AIM, to develop and pilot an HIV prevention campaign in schools across Botswana and Swaziland. These mission leaders gathered in Swaziland to develop and implement a two-week pilot program, out of which evolved a curriculum to accompany the film entitled *Beat the Drum,* which was a semi-fictional story of a young South African boy orphaned by AIDS who travels from the village to Johannesburg in search of a future. This Hollywood film artfully incorporated many of the misconceptions surrounding HIV and AIDS into a culturally relevant story intended to be an instructional tool in high schools across Africa. Subsequently, in the winter of 2004 the Beat the Drum Campaign was launched in every high school across the Kingdom of Swaziland. The program included a week of educational sessions about HIV and a culminating ceremony at each week's end where

students were given the opportunity to publically commit to a healthy lifestyle conducive to the prevention of HIV transmission.

While the campaign successfully reached every high school in Swaziland in the months of June, July, and August of 2004, it also became painfully obvious that additional services and assistance was needed to help a people ravaged by the HIV pandemic. AIM staff members who participated in the campaign recalled countless high school students whom they had met who were heading entire households by themselves. Visits made to government hospitals during the campaign seared grim images in the minds of staff members of bodies ravaged by AIDS, skin drawn taut across sub-one hundred pound adult bodies. These and other experiences motivated AIM to open a mission base in Swaziland following the campaign, in order to continue to offer services to communities ravaged by HIV.

Among AIM's many partners throughout the country, one particular relationship with a local Christian pastor, trained in community assessment and development, shaped the future direction of the organization. Through this partnership, AIM relocated its entire staff to the pastor's rural community (Engculwini) east of Manzini, where it would focus serving a catchment area of 10 square kilometers. Shockingly, within that small catchment area there were no fewer than 1,000 OVC in need of daily food and other services. In order to provide meals for these vulnerable children, the rural pastor had developed a network of local mothers, *bomake* in the local siSwati language, to staff eight community care points. Each care point comprised land donated by the

village chiefs, where the *bomake* would construct simple mud-and-stick kitchens out of which they would provide daily meals to hundreds of OVC.

Upon being introduced to the network of volunteers, AIM staff determined that they could play a unique role in supporting the care point system developed by the pastor. Therefore, a strategic plan was developed that involved pairing U.S. churches with each care point, in order to provide ongoing personnel and financial support for the provision of food, clothing, spiritual mentorship and informal education to the OVC. Through a collaboration with The Children's Hope Chest, an nongovernmental organization (NGO) offering support to orphans around the world, AIM has continued to support the network of care points in Engculwini while expanded to other regions of the country to develop additional care points. AIM currently supports a network of 34 care points spread across the Kingdom of Swaziland, serving roughly 6,000 OVC.

Although AIM has made tremendous progress toward improving the lives of OVC in Swaziland, there is still no formal health component in their programs. As a result, AIM staff members have often had to respond to health crises among the children they serve on a per patient basis, often with moderate outcomes. This gap motivated AIM staff to conduct research and develop an ideal health component to compliment the other services offered at each care point.

1.3 Purpose

This special studies project is designed to be a resource for Adventures in Missions that is replete with programmatic recommendations for system of health care to be added to the existing OVC project. These recommendations are informed by a robust literature search and a review of

technical documents regarding the best practices and international guidelines for OVC health care. Additionally research was conducted on existing OVC programs in sub-Saharan African nations making substantial contributions to the health of OVC. AIM requested that an Emory graduate student from the School of Public Health conduct site visits in May 2015 in Swaziland, which included visits to AIM facilities, competitor facilities, and other government agencies dealing with adolescent and OVC health. The purpose of this research was to conduct a competitor analysis of other non-profit and faith-based organizations providing health care to OVC in Swaziland, in order to identify the best practices being used in the country. Interviews were conducted with all AIM staff members who will ultimately be involved in providing health care to the OVC, in order to assess AIM's organizational capacity for growth and development of a health program. A focus group was conducted with the volunteers (*bomake*) from multiple AIM care points to assess their prioritization of the health needs they encounter on a daily basis while serving the OVC. Mapping of existing health services available for OVC in the country was also performed during the site visits, informed by interviews at the Baylor Pediatric Center of Excellence. The final product to be delivered to AIM by August 2015 will therefore include sound evidence-based recommendations for a program of health to complement the OVC program in Swaziland, including a proposed plan for staffing and budgetary needs, as well as the development of an efficient referral system.

1.4 Aims

Aim One ~ Review the literature and technical documents from multilateral, non-governmental, and private organizations in order to inform the development of a health program for OVC at AIM's care points in Swaziland.

Aim Two ~ Conduct an organizational assessment of AIM informed by interviews with its Swaziland staff members.

Aim Three ~ Produce programmatic recommendations for a health program to complement AIM's existing OVC programs, including information regarding personnel needs and budgetary considerations.

Aim Four ~ Develop a referral system for cases encountered at the care points that are beyond the abilities of the AIM health care staff.

1.5 Significance

Although several organizations are operating in Swaziland in response to the OVC crisis precipitated by the HIV pandemic, no formal database has been established to document the methods by which each program addresses health care. Additionally the types of services offered to OVC in Swaziland vary based on each organization's goals, the region of the country in which they function, and the availability of external services.

AIM began as a short-term mission organization in the late 1980's, and since that time has expanded their work to numerous nations worldwide. AIM's programs have generally been focused on offering young American students the opportunity to do missionary work in

communities with profound needs, in hopes that they will grow in their faith and consider how they might actively serve others with their lives. Therefore AIM's programs in Swaziland are unique, for Swaziland is one of the few nations where AIM staff provides services on a daily basis on an incredibly large scale. The development of the OVC program in Swaziland would not have been possible without key partnerships within the community, as well as a formalized partnership with Children's Hope Chest, an organization dedicated to the care of orphans. That said, AIM has not traditionally been involved in the direct provision of health care, making the development of an OVC health program the first endeavor of its kind for AIM. Executive leadership from AIM have recognized the need to formalize a culturally-appropriate system of healthcare for OVC in Swaziland, but wish to do so through effectively utilizing existing health services provided by the Swazi government and other organizations. Therefore, the request for programmatic recommendations are intended to guide the creation of a standardized system of referrals and linkage to care, while providing limited essential primary health care to OVC.

In response to the dire health needs of the OVC under their care, AIM has hired a local nurse to begin treating children at the care points. However, with a health provider-to-child ratio of 1:6,000, and because AIM care points are located in disparate parts of the country, much consideration should be given regarding the best utilization of this new staff member. While it is anticipated that other health care staff may need to be hired, it is critical to first develop an extensive plan for AIM's programs that will inform the type of staffing needs that are to be met. Additionally, it is believed that the more than 80 volunteers who staff the care points could be a tremendous asset in terms of assisting with the provision of ongoing screening and care of the

OVC. Therefore, included in the programmatic recommendations should be potential ways in which the nurse could train the volunteers to collaborate with her to monitor and screen the OVC health.

AIM holds regular meetings with its principle donors, at which time they provide updates on the current OVC programs in Swaziland and cast vision for future programs to be developed and for which funds should be raised. Therefore, AIM desires OVC health program recommendations that will both shape the development of their future health system for the OVC, and that could be used to support fundraising efforts for such a program. A formal document including thorough research on existing programs of OVC health care and details regarding existing services in Swaziland would provide the ideal tool for the development of a new program in the latter half of this year.

Chapter 2: Literature Review

2.1 Introduction

AIM's programs differ vastly from one country to the next because their primary intent is to expose participant to service in international settings, commonly among impoverished communities. AIM staff members establish bases around the world and target the objectives of each site to the needs of the local population. As a result, AIM programs typically have an organic evolution in the absence of a strict policy or list of objectives upon entering a new country. This has been the case with AIM's Swaziland division, which was developed in

response to the AIDS orphan crisis. The OVC programs were initially concerned with the most pressing need of food security and education. Once these two issues were addressed, the natural next step in a country stricken by poverty and disease was clearly to address the health of the OVC. However, because AIM is not a health care organization, background research through a thorough review of the literature was necessary to build the context in which their OVC health program can be developed.

In order to propose and plan the implementation of a health program for OVC, a review of the literature was first undertaken. The essential first step was to understand the government of Swaziland's position on OVC care and all established national guidelines so that the development of programs works in concert with the government's intentions. Furthermore it was critical to understand international guidelines for providing care to OVC and specifically what recommendations exist for developing health programs appropriate for a population of OVC so heavily impacted by the HIV pandemic. Beyond national and international guidelines for OVC programming, it was important to understand the most common challenges to health and nutrition among the OVC in Swaziland, and how those challenges should be measured and appropriately addressed. Finally, the research should compile a catalogue of exemplary OVC program models in sub-Saharan Africa that could be used as a basis for the creation of the AIM health program.

The literature search was conducted using databases accessible through the Emory library website, including PubMed and Web of Science. Government documents available from the

Kingdom of Swaziland were also used to detail the determinants of poor OVC health and the national requirements for programs addressing these challenges. Documents published by international organizations were frequently consulted as part of the literature review, including documents from UNAIDS, USAID, World Bank, and WHO. Additionally, evaluations of organizations working with OVC in sub-Saharan Africa were consulted from organizations such as Hands@Work in South Africa and Bantwana in Swaziland. Finally, technical documents regarding treatment protocols for childhood illness were reviewed, including those from the CDC, WHO, and Baylor College of Medicine.

The literature review is intended to substantiate the programmatic recommendations made at the end of this document through providing information on evidenced-based programs that have been successful in similar contexts, and to ensure that AIM's program meets national and international standards. The review should also assist with the creation of an appropriate system of monitoring and evaluation, complete with indicators by which the successes or failures of its health program can be assessed. Lastly, the ultimate intent of the literature review and subsequent sections of this document are intended to avoid "reinventing the wheel" and instead to build upon successes of outstanding OVC health programs past and present.

2.2 Swaziland

The Kingdom of Swaziland gained its independence from British colonial rule on September 6, 1968 and has since grown to over 1.25 million citizens inhabiting 17,360 square kilometers of diverse landscapes. The current king of Swaziland, King Mswati III, came to power on April 25, 1986 and rules the country through a unique combination of traditional systems of power

(*Tinkhundla*) and western forms of elected government officials. Swaziland has been a peaceful country for decades, however; it has an extremely low life expectancy of less than 45 years as a result of the HIV pandemic [10]. For years Swaziland has had the worst HIV prevalence globally, and the 2012 nationally representative Swaziland HIV Incidence Measurement Survey (SHIMS) found that 31% of adults are HIV positive. At that time the SHIMS also determined that HIV incidence was 2.28%, which was an improvement from the 2006 Demographic and Health Survey (DHS), but still the worst global figure. Strikingly, only half of those surveyed who were aware of their HIV positive status were taking ARVs [5].

2.3 National Programs of the Ministry of Health

The health system in Swaziland is made up of the following three tiers of services: The primary level is comprised of community health workers (CHWs), 76 clinics, and 187 outreach service sites. The secondary level includes 13 health centers and public health units offering both inpatient and outpatient services. At the tertiary level there are six government hospitals (including specialized tuberculosis and psychiatry hospitals) and two mission hospitals [10]. Among the numerous nationwide health programs being implemented by the Ministry of Health (MOH), the following four programs most directly impact the health of OVC: The National AIDS Program, The National Nutrition Strategy, Integrated Management of Childhood Illness (IMCI), and The Swaziland Expanded Program on Immunization (SEPI)[10].

In recent years systematic and meta-analyses have demonstrated that nurses and clinical officers are capable of producing the same patient outcomes as physicians in terms of the initiation and management of ART, and at times with fewer patients lost to follow up[4, 11-13]. This has led

many nations, including Swaziland, to implement task-shifting strategies to cope with the dearth of physicians that previously made HTC and ART coverage tremendous challenges for limited-resource nations with a high prevalence of HIV [11-14]. Additionally, massive efforts are underway to decentralize HIV testing, counseling, and enrollment in treatment to the primary level of the health system in order to alleviate the strained work loads of physicians and nurses. Like other countries in Africa, Swaziland suffers from a shortage of physicians to care for the vast numbers of its citizens infected with HIV, and therefore a substantial initiative of the MOH is underway to shift HIV testing and counseling (HTC) responsibilities from physicians to nurses and community health care workers. The primary goals of the task-shifting effort is to increase access to testing and counseling for residents in rural areas, and to increase ART coverage for all Swazis living with HIV [11, 13].

One of the greatest challenges of the Swazi health care system is the lack of trained physicians in the country. Currently, there is one nascent medical school in Swaziland to train indigenous physicians, forcing most who wish to study medicine to attend institutions in neighboring countries and abroad. Furthermore, there are only three institutions providing training for clinicians: the Faculty of Health Sciences at The University of Swaziland, Nazarene College, and the Good Shepherd Nursing School [13]. Beyond the aforementioned institutions, which solely train nurses and nursing assistants, there are no other training facilities for any other type of clinician (e.g., clinical officers, pharmacists, laboratory technicians). In response to the lack of trained physicians to meet the overwhelming health needs of the general population Colombia University's ICAP, in partnership with the MOH, launched a standardized training curriculum in

2012 to train nurses to take on initiation and monitoring of ART, with impressive results from the program's inception [4].

2.4 Orphans and Vulnerable Children

PEPFAR defines an orphan as "a child, 0-17 years, old who is either orphaned or made more vulnerable because of HIV/AIDS" and defines vulnerable children by the following criteria[15]:

- A child who is HIV positive
- A child who has inadequate adult support (which includes living in a child-headed or grandparent headed household or lives with chronically ill parents)
- A child who lives outside of family care
- A child who is discriminated against, marginalized, or stigmatized

According to the WFP, there are over 80,000 orphans in Swaziland, and children head 15% of all households in the country[16]. When combined with other vulnerable children, there were an estimated 104,026 OVC in Swaziland by 2010. One of the greatest challenges posed by the orphan crisis in Swaziland is that the brunt of their care falls on grandparents and other relatives, and in dire situations these children are left to fend for themselves and raise their own siblings [2]. UNICEF puts the figure even higher, stating that 125,000 children have lost at least one parent due to the HIV pandemic. Beyond the challenge of being orphaned, infectious diseases like HIV and tuberculosis have taken a massive toll of the lives of vulnerable children in Swaziland. Malnutrition has also taken its toll on the young population, where chronic malnutrition affects as much as 40% of all Swazi children (UNICEF SD site). World Bank data notes wasting among 1% of all Swazi children, and low birth weight in nearly one tenth of all

children[17]. Additionally, the 2010 MICS indicated that 31% of children less than 5 years of age were stunted and 6% were underweight.

In addition to numerous challenges to adolescent health, UNICEF notes that one in three Swazi females experiences some form of sexual violence as a child, and almost 5% of females experience forced intercourse. In fact, intergenerational sexual intercourse with older men and an early sexual debut are noted to be critical problem areas that have led to the high HIV prevalence among female Swazi teens[2].

2.5 National Plans of Action for Children and OVC

All information in this section comes from Swaziland's *National Plan of Action for OVC*, which was developed in 2006 around the following four goals[6]:

> (1) "Children are ensured access to shelter and protection from abuse, violence, exploitation, discrimination, trafficking, and loss of inheritance
>
> (2) Vulnerable individuals and households are able to produce or acquire sufficient appropriate food to meet short and long term nutritional needs
>
> (3) Improved access to basic health care services for the most vulnerable children
>
> (4) Universal primary education achieved, and support provided to OVC in secondary school."

The Government of Swaziland grouped into five rights-based programmatic areas that include: the right to food, right to protection, right to education, right to basic services, and the right to participation. Health services rank among the most critical basic services to be rendered to Swaziland's large OVC population, who often struggle to access basic health care due to

inadequate transportation or financial limitations. In the absence of free primary health care, neighborhood care points (NCPs) have also played a vital role in delivering services to OVC at 435 sites across the country, staffed by over 1,300 local volunteers. There has been discussion of expanding NCPs nationwide as a means of community-lead service delivery to OVC, but this has yet to be fully realized. That said, the volunteers at most NCPs work hard to provide food, shelter, psychosocial support, and at times informal education to OVC attending the care points. Some sites go so far as to plant gardens in order to provide more stable sources of food for the OVC and to address the plethora of malnourished children in Swaziland.

In addition to addressing the nutritional needs of the children, OVC stakeholders have called for the creation of a formal linkage between the NCPs and the health care system in order to treat those OVC with profound health needs. This potential system of referrals is an important means of extending pediatric HIV treatment to OVC who otherwise might never be connected to care. Stakeholders have also ambitiously advocated for the government to create a system of free primary health care to OVC. Major concerns for the current systems of OVC care include inadequate access to clean drinking water at many schools and NCPs, as well as poor data collection tools at the national level for OVC.

Built into the national plan of action was a four-year budgetary allocation of nearly 40 million USD to go toward improving health services for OVC. Embedded in the health plan were goals to increase immunization coverage against the seven killer childhood diseases (tuberculosis, measles, diphtheria, pertussis, tetanus, hepatitis B, and polio), increase the percentage of those on

vitamin A, zinc, and iron supplementation, provide PMTCT services for orphan prevention, provide co-trimoxazole prophylaxis for HIV exposed children, extend HIV treatment to all infected children, provide routine health care for children <5, children 5-9, and children 10-18, and finally to train rural health motivators (RHMs) to support OVC health care. Other targets mentioned include annually deworming all children and increasing the access to safe water and sanitation at schools and all NCPs.

2.6 International Guidelines for OVC Health

In multiple technical documents PEPFAR acknowledges that many OVC programs are uniquely positioned to have an incredible impact on the health of children both within their programs and in the community. This is because organizations that serve OVC typically have a strong presence within the community, can focus on the socioeconomic determinants of health and behavior, and can serve as a bridge between clinic-based care in the local health system and community-based care. This advantageous posture allows them to reach women, children, and infants who may be less likely to utilize formal health care facilities due to a number of financial and or logistical constraints[18].

When designing a health program for orphans and or children affected by HIV and AIDS, the World Bank OVC Tool Kit recommends the inclusion of the following interventions[19]:

- Offer free/reduced services in collaboration with other NGOs
- Include psycho-social assessment in routine heath assessment
- Offer follow-up for psycho-social problems
- Design outreach services targeting child-headed households

- Develop support for children of HIV-affected households
- Develop an AIDS care and prevention training program
- Train children (when necessary) to care for AIDS patients at home
- Promote participation in health activities through conditional transfers
- Waive or except children from fees depending on their situation
- Provide school-based health services

It should be noted that some of these suggestions would vary depending on the location of the program and the nature of the OVC target group. It is also important to keep in mind how critical the early years of a child's development can be, and the impact on an individual of poor health and nutrition during those early years. Therefore, the following time-sensitive key intervention periods should be targeted when developing a health program for OVC (See Table 1):

Table 1: Critical Development Intervention Points	
Maternal & Neonatal Health	Development outcomes and infant mortality are critically dependent upon the first 1,000 days of a child's life, making it a key time for health, hygiene and nutrition interventions.
Early Childhood Development	Holistic early childhood development is proving to be incredibly influential on the lifelong health of a person, both in terms of biomedical and psychosocial health.
Nutritional Intake	The most critical time for appropriate nutritional intake occurs during the first 5 years of life, at which time differences in nutritional demands between both sexes is negligible.
Adolescent Vulnerability	Adolescent girls are disproportionately more vulnerable than their male peers to sexual exploitation, and thus at a higher risk for contracting HIV.
Information Source: 2012 PEPFAR Guidance for OVC Programming	

In order to measure the ongoing progress and impact of a health program it is also critical to develop a monitoring and evaluation plan prior to beginning the program. In this case there are often common measures or indicators that serve as useful benchmarks to test the efficacy of the health program. PEPFAR offers the follow nine indicators for care and support of OVC, many of which directly impact the health of the child (See Table 2):

Table 2: PEPFAR OVC Care Indicators
Percent of children whose primary caregiver knows the child's HIV status
Percent of children <5 years of age who are undernourished
Percent of children too sick to participate in daily activities
Percent of children who have a birth certificate
Percent of children who are regularly attending school
Percent of children who progressed in school during the last year
Percent of children <5 years of age who recently engaged in stimulating activities with any household member over 15 years of age
Percent of households able to access money to pay for unexpected household expenses
(Child Protection) Percent of caregivers of the active beneficiaries who agree that harsh physical punishment is an appropriate means of discipline or control in the home or school
Information Source: 2012 PEPFAR Guidance for OVC Programming

Similar to the general PEPFAR indicators, MEASURE Evaluation recommends the following Child Wellbeing OVC impact indicators affecting a child's health and wellness status[20].

Table 3: MEASURE Evaluation Child Wellbeing Indicators
Percent of children malnourished
Percent of children <5 years with recent diarrhea
Percent of children <5 with recent fever
Percent of children who are too sick to participate in daily activities
Percent of children >2 years reporting irregular food intake
Percent of children 1-5 years fully immunized
Percent of children with basic shelter
Percent of children aged 10-17 years reporting basic support
Percent of children who have a birth certificate/identification card
Percent of children >5 years currently in enrolled in school
Percent of children >5 years regularly attending school
Percent of children >5 years who progressed in school over time
Information Source: 2012 MEASURE Evaluation Core OVC Program Impact Indicators

In order to develop an effective program for OVC it is not necessary to become a primary health care provider, for in many locations adequate health systems exists, and the challenge to be overcome is effectively navigating that health system and mitigating barriers to receiving care[21]. Therefore, program managers may elect to develop systems of referral for OVC under their care, funding mechanisms to ensure services are rendered, and structured follow-up so that patients do not get lost in transitions between various levels of the health system[7, 18, 19, 21]. To include this type of system, PEPFAR recommends that the following four components be integrated into any health and nutrition program for OVC[18]:

1. Utilize ECD and school-based programs to address health and nutrition of the child, with a family-centered approach
2. Integration of the program with existing community/home-based activities, which should include PMCTC, PMI, and child survival

3. Reduce barriers to health services with social protection schemes such as health insurance
4. Creating systems of referral between programs in the community and health facility-based programs

2.7 OVC Care Models and Best Practices

An Analysis of South African OVC Programs

Due to Swaziland's close proximity to South Africa, and the historical relationship and consequent similarities between the Swazi and Zulu tribes, OVC programming that is effective in South Africa would be highly applicable and relevant in Swaziland. In 2008 Khulisa Management Services and their partners published a summary report that included an analysis of 32 South African OVC program case studies. Though each of the profiled organizations offer different OVC services, some common themes emerged that led to recommendations for effective OVC programming[22]. The following is a summary of the research and subsequent recommendations[22].

Seventy-two percent of the profiled organizations provided general health care services. These services primarily involved assisting OVC with accessing existing health facilities when they fell ill. This typically involved an organization training care workers or volunteers to identify sick children on home visits or presentation at a drop center, and accompanying them to the nearest health facility. Some organizations went a step further and trained their staff to check children's "Road to Health Cards" in order to monitor their growth and development progress and their

immunization status. In this case, if a child is missing certain immunizations the care worker should accompany the child to the health facility to ensure all vaccination requirements are met. A small number of the organizations profiled, such as Hands@Work and Ikwanca HBC, hired dedicated nurses who accompany care workers on home visits and attend OVC at drop in centers.

Unfortunately, only 60% of the profiled organizations ran HIV prevention campaigns, which involved training workshops that targeted their staff, volunteers, and community members at large. Additionally, only one fifth of the organizations offered support ART services to HIV positive OVC. This was primarily done through accompanying them to the local clinic or receiving ARV's on their behalf. A few of these organizations also monitored ARV adherence, and one provided a drop-in shelter for HIV positive children who had emergent health problems. Seven of the 32 organizations offered clinical nutritional support, which often was delivered to the home in the form of E-pap or nutritionally fortified porridge. Some of the organizations also connected HIV positive mothers to free formula, and Hands@Work provided multivitamins and deworming tablets on a biannual basis.

One commonality across 78% of the surveyed organizations was that they rely heavily on home visits, generally referred to as home based care (HBC). For most of these organizations, staff members providing HBC were trained in ARV treatment for both adults and children, tuberculosis treatment including directly observed therapy (DOT), HIV prevention and awareness, palliative care, and one on one counseling. These home visits were noted to be vital

to the effectiveness of OVC programming regardless of whether the children lived one parent, another adult guardian, or was part of a child-headed household, because including other household members in educational efforts and treatment plans has been known to increase program effectiveness.

The report noted some common challenges faced by all 32 organizations that face the immense challenge of caring for an estimated 3.8 million OVC in South Africa. First, insufficient resources have often led to insufficient staff to meet the needs to OVC and a lack of specialized training for all parties involved. The lack of funding has also limited stipends paid to volunteers, which limits their willingness to be involved in OVC programming on a long-term basis. Second, many OVC organizations suffer from high staff turnover, likely due to the abovementioned lack of resources and burnout. Third, the stigma surrounding HIV/AIDS has been known to deter community members from seeking services, so in some places the services may exist but the community is hesitant to enroll in the programs. Finally, few organizations had enough resources to effectively implement monitoring and evaluation plans, which are desperately needed to evaluate a program's reach and effectiveness. It was far too common that organizations serving OVC could not accurately quantify the number of clients they served, making effective program planning a tremendous challenge.

An Analysis of Four Programs in East Africa

In 2009 MEASURE Evaluation published a report that summarized outcomes, emerging issues, and lesson learned from case studies conducted of four organizations serving OVC in Kenya and Tanzania. The analyses of these four organizations are included in this report based on their similarities with other NGOs serving OVC in Swaziland. The following information is a summary of that report and its subsequent key recommendations to improve the effectiveness of these and other interventions for OVC[23].

Programs from Kenya evaluated in this report included the *Integrated* AIDS Program-Thika (IAP), and Catholic Relief Services (CRS). Two additional programs in Tanzania were also evaluated, Allamo and The Salvation Army (TSA). A post-test study design was used to assess these groups, comparing the intervention group to a similar group that was not exposed to the intervention. The following table compares the four programs:

Table 4: Sample OVC Program Strategies from East Africa		
Program	**Study Site**	**Intervention Strategy Evaluated**
Community-Based HIV/AIDS Prevention, Care and Support Program implemented by Pathfinder and Integrated AIDS Program (IAP).	Thika District, Kenya	•Home visits and HBC by trained volunteers •School-based HIV education •OVC care/support community sensitization •VCT Promotion and services
Kilifi OVC Project implemented by Catholic Relief Services (CRS).	Kilifi District, Kenya	•Home visits and support from trained volunteers •Support groups for guardians •Income generation for guardians •Educational Support •Food support •Linkages to a health clinic •School-based HIV education
Tumaini Project implemented by CARE International, Family Health International, and a faith-based organization, Allamano.	Iringa Region, Tanzania	•Home visits and home-based care from trained volunteers •Kid's clubs for OVC •Income generation for guardians (gardening and livestock) •Educational Support •Food support •Linkages to a health clinic
Mama Mkubwa & Kids Club implemented by The Salvation Army (TSA) Tanzania command.	Mbeya Region, Tanzania	•Home visits and support from trained volunteers •Kid's clubs for all community children, including OVC
Information Source: MEASURE Evaluation [23]		

Key Findings in East African Programs

All of the organizations that were assessed demonstrated an ability to correctly identify and enroll in their programs the most vulnerable children from their respective communities through a process of utilizing community committees. This reiterated the important of involving community members in the process of identifying the most at risk children. Three of the four organization utilized home visits to the households of OVC, but these visits were infrequent and had limited effects on the psychosocial and health outcomes of OVC. The variation of the effects

of home visits among organizations was likely due to differing degrees of training received by organization staff conducting the home visits.

In homes where a guardian was present, program services targeted to those guardians were found to improve the lives of OVC living on the homestead, whether through improved food security at home or through developing more appropriate interventions. The study data also demonstrated mixed result in terms of the effect of material support such as educational resources and funding. Interestingly, OVC who received education support did not necessarily have better educational outcomes. The case studies had mixed effects on the utilization of free or reduced cost health services. It was also found that OVC utilizing services from these four organizations were at times subject to unintended repercussions including jealously and stigma.

As a result of the comparison, the following five recommendations were made for the improvement of OVC programs or the development of new programs[23]:

- Develop and encourage comprehensive volunteer training.
- Involve guardians/caregivers OVC interventions development
- Create stronger linkages between OVC care and other support organizations
- Improve ongoing program M&E systems to track OVC programs
- Regularly assess program coverage and client participation

Additionally, an evaluation system should be included in an initial program plan, and adequate resources must be allocated for this system at the beginning of each program cycle. For organizations that might not already have monitoring and evaluation systems in place, simple tools are recommended such as the *Child Status Index*, which assess the well-being of an organization's beneficiaries.

2.8 Community Health Workers

In order to have a lasting impact on the health of OVC in vulnerable communities, organizations may consider training community members to become influential community health workers. The American Public Health Association (APHA) defines a community health worker (CHW) as:

"A frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served. This trusting relationship enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery." To elaborate on this definition, effective CHWs often come from within a community and therefore fulfill a vital role of connecting impoverished community members to health services[24-26]."

The concept of the community health worker is not new, though their title varies from place to place. For example CHWs might be referred to as village health teams (VHTs) in Uganda, traditional birth attendants (TBAs) in Tanzania, *accompagnateurs* in Haiti, or rural health motivators (RHMs) in Swaziland. Regardless of the local name, this cadre of health workers generally has the most accurate picture of the health situation and all associated beliefs and perceptions of the local community, making them the most well-positioned people to reach an otherwise isolated community[24].

Partners In Health and Lehmann et al. argue that, in many respects, CHWs are the critical first point of contact of any effective system of primary health care in hard-to-reach rural areas[24, 26]. A 2007 analysis of community health worker programs across the globe identified a consensus around the following five concepts[26]:

- Community health workers improve community access to health care and make meaningful contributions to the development of communities.
- In order to make a meaningful and sustainable impact in a community CHWs must be carefully chosen, well trained and continuously supported.
- CHW systems are not a cheap solution to the health challenges of a community, and by themselves are insufficient to fill the gaps left by weak and underdeveloped health systems.
- Community ownership and engagement are critical for the success of any CHW program.
- There is a continual debate regarding whether or not CHWs should be compensated or should offer their services on a voluntary basis.

Depending on their location, CHWs may fulfill preventative and/or curative roles, and they have also been useful for assisting those with complex chronic conditions requiring ongoing treatment[26]. It should be noted that CHWs are not intended to supplant the role of the well-trained clinician, and perhaps one of their greatest functions is serving as a link between the community and the appropriate health facility for services. Therefore, effectively trained CHWs will work in concert with existing health systems, and not in parallel and separate systems[24-26].

One of the critical questions regarding any system that utilizes CHWs is whether or not they are compensated for their services or if they function on a voluntary basis. The question of compensation also relates closely to whether CHWs fit into the private or public sector[24]. Boston-based Partners In Health (PIH), which operates in numerous developing countries around the globe and relies heavily on the incorporation of CHWs into their health systems, suggests that in order to develop sustainable programs of health CHWs should always be integrated into the public sector at least to some degree. Furthermore, when developing new health programs that will include CHWs, PIH recommends considering the following selection criteria as CHWs are recruited: a minimum age and education level, gender, and the individual's standing within the community. Quality training of the recruited CHWs is vital to the success of any program, and it is recommended that any all trainings align with national protocols[26]. The great emphasis placed on task-shifting across Swaziland and the presence of the existing RHM program make developing a complimentary CHW program a natural fit with the existing national health system[4, 11, 13].

A principle benefit of utilizing CHWs is their ability to develop trust within the community, for they are commonly recruited from and work within their own communities. Additionally, CHWs can identify patients suspected of having chronic conditions such as HIV, tuberculosis, or those that are malnourished and refer them earlier to life-saving treatment[24]. Furthermore, for patients already diagnosed with any of the abovementioned chronic conditions the CHW can assist with adherence to and successful completion of the rigorous treatment protocols[24, 26, 27].

It is vitally important that adequate supervision and training be provided to CHWs, and that clear job descriptions and expectations are explicitly outlined at the onset of a new program. Included in the system of oversight should be elements of quality control to ensure the equity and quality of treatment that the CHWs are offering within the community[26]. In many cases CHW oversight comes from a physician, nurse or some other health care worker with formalized clinical training[27]. Having oversight from a skilled clinician allows for ongoing training and task shifting, where the CHW learns new skills and can mitigate the overwhelming patient loads of clinicians in over-burdened health systems[12, 25, 27].

Though implementation of large-scale CHW programs has waxed and waned over decades, there are numerous examples of the effectiveness of such programs. In the 1980's successful programs emerged in Brazil, Bangladesh and Nepal serving hundreds of thousands, and at times millions of people[28]. These programs tackled a number of challenges including the provision of family planning services, immunization, detection and treatment of childhood diseases, and the

provision of antenatal and neonatal care. Based on observed successes in these programs, massive CHW programs later followed in the 90's and early 2000's in Ethiopia, Pakistan, Uganda, and India; the latter involving roughly 800,000 CHWs otherwise known as ASHAs[28]. A 2013 review article looked specifically at the impact CHW programs had on HIV diagnosis and treatment and found that CHWs enhanced the reach and uptake of HIV services, in addition to improving the patients' quality of life and their propensity for retention in treatment programs[29]. There are countless documented ways in which CHWs can improve health outcomes in low and middle income countries (LMICs), and some notable effects include: the reduction of under nutrition, the reduction of under 5 mortality, community case management of serious childhood illnesses, reduced neonatal and maternal mortality, malaria control, tuberculosis control, and the improvement of ART adherence and treatment success[24, 26, 28, 29].

2.9 Conclusion

In the beginning of this section AIM's involvement in Swaziland was detailed and specific attention was given to the fact that AIM is traditionally known as a missionary sending organization with limited direct experience in health care. Furthermore, AIM staff at the various sites have vastly different approaches to rendering service to the local community, so the care point model of serving OVC in Swaziland is unique to that one AIM location alone. This information substantiated the need for a literature review of various topics to inform the research and development phases of a health program for OVC.

In order to understand the context in which AIM's OVC program functions, a concise history of Swaziland provided, which includes its devolution into a nation with the worst HIV prevalence in the world. The challenges Swaziland faces due to the HIV/AIDS epidemic are further compounded by the dearth of physicians, nurses, and other trained health care professionals in the country. Therefore, the Ministry of Health has placed a great emphasis in recent years on efforts to decentralize the delivery of HIV screening, diagnosis, and treatment through task shifting. The task shifting initiative has allowed nurses to perform many of the functions of HIV diagnosis and enrollment on ARVs, which was traditionally reserved for physicians alone. As the HIV crisis put seemingly insurmountable strain on an already weak health system, the Ministry of Health has forged some critical partnerships with other entities like ICAP and the Baylor College of Medicine, to attempt to further develop the health system and the country's ability to cope with the needs of its citizens.

The HIV epidemic is known to have precipitated the current orphan crisis, which involves in excess of 125,000 OVC and roughly 15% of all homesteads in Swaziland being child-headed. These OVC have been shown to be particularly vulnerable to malnutrition, tuberculosis, HIV, and sexual abuse and exploitation. Subsequently, national plans of action call for improved access to health care for this vulnerable population. In order to address the profound needs of the OVC, neighborhood care points (NCP) have been developed at more than 400 locations across the country, with plans to expand the program nationally. More than 1,300 volunteers from the local communities staff the NCPs, and national objectives call for the development of a referral system through which volunteers could identify and refer OVC suffering from various health

conditions. However, this system does not currently exist and would require additional monetary input in order for OVC to successfully follow through on a referral. Other challenges facing many of the NCPs include inadequate access to clean sources of drinking water and poor data collection tools at the national level to monitor and evaluate their impact.

A review of international guidelines for OVC services highlights the importance of child health and nutrition during the early years of life. There is also a call for robust monitoring and evaluation plans to be developed and included in OVC programs, in order to measure and improve the impact of these programs. It is clear from these guidelines that providing effective health care for OVC includes tackling other challenges in a more holistic and comprehensive manner, such as psychosocial health, food security, and even acquisition of proper identification documents. Thus, because effective OVC programs must be comprehensive it is not recommended that every organization necessarily become a primary care provider for their clients, but rather that they become proficient at referring OVC to the national health systems in an appropriate manner. Case studies from 30 organizations serving OVC in South and East Africa referenced, and the consensus called for better staff training and support, referral and accompaniment into the national health system for illness, better systems of monitoring and evaluation, and appropriate remuneration for all staff. The most effective programs relied heavily upon home visits made by well-trained staff members who possessed both psychosocial counseling and public health skills. Effective programs also included routine input from community members and OVC guardians.

Finally, research conducted on effective OVC health programs in Asia and Africa, along with programmatic recommendations from PIH, were used to build a case for the utilization of community health workers. The concept of programs built upon the work of CHWs could potentially integrate well with the Swazi government's emphasis on task shifting in response the HIV pandemic. The following section describes the methods employed to conduct research on various organizations providing health care to OVC within Swaziland, as well as those implemented to asses AIM's current organizational structure, functions, and capacity. The material is this literature review and the research conducted in May 2015 in Swaziland will serve as the basis for the recommendations made to AIM for the development of an OVC health program.

Chapter 3: Methods

3.1 Introduction

In March 2015, Adventures in Missions requested recommendations for the development of an OVC health program that could be implemented at its 33 care points across Swaziland. It was requested that the program be tailored to the size of AIM's OVC program, which serves roughly 6000 children, and that recommendations be a culturally appropriate response to OVC health challenges. In order to make an informed recommendation, the student researcher from the Rollins School of Public Health traveled to Swaziland in May 2015 to conduct staff interviews, assess AIM's organizational capacity, conduct competitor analyses of other organizations serving OVC, and describe the network of existing health care facilities and services in available Swaziland. The goal of the trip was to develop a cost effective OVC health program, that is

appropriate to the local context of Swaziland and that maximizes the use of existing health services in the country through a system of referrals.

In order to understand and document AIM's current organizational structure and job descriptions for each staff member, staff interviews were conducted in May with the two full time health care staff. These interviews also sought to obtain qualitative information about strategies already being attempted to promote health at the care points, and to document staff members' input on the development of the formalized program of health. Information from these interviews was used to supplement information gained through conducting an assessment of AIM's organizational capacity, which utilized an assessment tool for organizations serving OVC in resource limited settings developed by the *Bantwana* organization. The competitor analyses of other organizations in Swaziland serving OVC were conducted to assess which programs are most effectively improving the health status of their constituents, in order to adapt those methods to AIM's future health program. The analyses were supplemented through a literature review of other effective programs in sub-Saharan Africa, which included program progress reports and evaluations. The Swaziland health system was mapped out, including services offered at the facilities in close proximity to each care point in order to develop a referral procedure for AIM.

The following sections include the methods employed to conduct the staff interviews, organizational assessment, competitor analyses, and referral system mapping. Included in these sections are assessment tool development processes, methods of analysis, and limitations of the research. The requirement for Emory IRB approval was waived as this project was not

considered human subject research because Adventures In Mission requested an organizational assessment and programmatic recommendations.

3.2 Staff Interview Methods

Purpose

Senior AIM leaderships identified four AIM staff members who will be directly involved in the development of AIM's OVC health program in Swaziland. These four members were the stateside director, the in-country director, the medical director, and a nurse. Interviews were conducted with each individual in order to gain an understanding of the current organizational structure of AIM's operations in Swaziland and the roles assigned to each staff member. Questions were developed to invite the opinions of each staff member regarding the most important elements to be included in the health program. Interview questions also sought to draw from the experiences of each staff member working in Swaziland, and to discover existing partnerships within the country that could be leveraged to benefit the future OVC health program. The ultimate purpose of these interviews was to inform the development of the OVC health program that capitalizes on existing strengths within the organization.

Instrument Development

The development of survey questions for the AIM staff interviews was a multistep process. Through a dialogue with the U.S.-based director of AIM's Swaziland projects a list of key topics areas was developed for these surveys. From these topics a list of survey fields was created that included demographic information, work experience, skills/assets, common OVC illnesses, exemplary OVC health care providers, perceived staff needs, and perceptions of the general

health needs of OVC at AIM care points. These fields were common to all three interviews conducted in Swaziland. Additional interview questions appropriate to the respondent's cultural background and professional experience were also added to each survey.

Procedures

All interviews were conducted in person on a one on one basis between the interviewer and the respondent. Each interview lasted two to three hours, and all responses were transcribed during the meeting. Open-ended questions were asked at the end of each interview, and the opportunity was given for respondents to share any additional information that may benefit the development of the OVC health program. Transcribed interview data were then cleaned and responses were entered into a compiled document in order to identify common themes and a list of organizational assets and gaps of knowledge and resources.

Limitations

Limitations of the interview process include the vastly different cultural and economic backgrounds of each of the participants, which led to broad variations in interview responses. Furthermore, cultural differences may have prevented some respondents from freely and honestly answering questions. Lastly, time restrictions during some of the interviews may have led to incomplete answers.

3.3 Comparable Organization Analyses Methods

Organizations Assessed and Selection Process

Adventures in Missions staff members informed the researcher of other organizations providing health care to OVC in Swaziland, and each of those organizations were contacted to arrange an interview in May 2015. Five key organizations responded positively to the request for an on-site assessment and interview. These five organizations were also selected based on the quality of health services they provide to OVC and the region of the country in which they function. Subsequently assessments were conducted on each of these organizations by the RSPH researcher and a research assistant.

Instrument Development

A questionnaire was developed from an adapted version of the following USAID document: *Technical Capacity Assessment of Orphans and Other Vulnerable Children (OVC) Services*. Some changes to the survey were informed by the following PEPFAR document: *Guidance for Orphans and Vulnerable Children Programming*. The adapted version of the document included both quantitative and qualitative questions, as well as section for recommendations and suggestions for AIM's health program. AIM staff members checked the document questions for appropriateness prior to administration of the survey.

Procedures

Meetings were arranged for the month of May via email communication with each participating organization. Upon arrival to Swaziland, AIM staff members reviewed the survey document and

alterations were made to ensure the appropriateness of questions. All assessments were conducted in person on site at the organization's main offices or within the catchment area where the organization functions. Surveys were conducted in English, and the responses were documented both electronically and audio recorded. Responses were checked for errors the same day of the interviews and appropriate corrections were made. Each survey took roughly one hour to administer, and an additional 30 minutes was used for free-response questions and recommendations for AIM's programs. At the conclusion of each meeting contact information was shared and an appropriate method of follow up was agreed upon. Survey respondents were also given a small gift in appreciation for contributing their time to the research project.

Analysis of Data

Errors were corrected in the survey responses and the information was transferred from Microsoft word and PDF files to a Microsoft Excel document to allow for an easy comparison of responses across the various organizations. The information from this document was used to provide an understanding of which health services each organization is providing for OVC, and to compile a list of recommendations for AIM's health program.

Limitations

Some limitations of the competitor analysis included the limited time that the researcher and research assistant spent in Swaziland, which minimized the number of organizations assessed in person. Additionally, the analysis surveys were completed by a sole staff member from each organization and were subject to biased responses based on the nature of the questions and could

have been erroneous. Also, not every organization that was contacted for an interview was willing to meet in person during the requested time period. Finally, organizations completing the assessment via email were subject to even greater biases based on the self-report nature of the survey, as some organizations might not be willing to share sensitive programmatic information with other organizations.

3.4 Assessment of Available Health Services

Purpose

In order to avoid the creation of parallel health systems, AIM staff intends to utilize the national health system as frequently as possible for the treatment of OVC illnesses. This approach will lead to a more sustainable health model for the Swazis who are referred and it aligns with the goals of the national government and MOH. Therefore, a thorough assessment of the health services offered within Swaziland was conducted in order to guide AIM staff regarding to effectively refer and accompany a patient through the health system. This approach minimizes the cost incurred to develop the AIM OVC health program, as well as minimizes the need to hire many additional health care staff.

Procedure

In order to develop an understanding of the health system in Swaziland a literature search was completed that included government documents detailing the organization of the national health system of Swaziland. An interview was conducted with the country director of Bantwana, an organization focusing on OVC services and HIV prevention that works extensively with the MOH and the Swazi government. A document produced by Bantwana that outlines the

development of effective referral systems in Uganda and elsewhere was also consulted[21]. Meetings were held with hospital administrators at various hospitals in Swaziland to confirm the appropriate processes for making referrals in the country and the subsequent fees associated with each type of service.

Instrument Development

Information gathered from the literature review and meetings with hospital administrators were used to develop a structural chart of the referral system within Swaziland. Then local health officials in Swaziland corroborated the referral chart, and it was confirmed and approved by the AIM staff nurse.

Limitations

The graduate student conducting research in Swaziland discovered that some rural health facilities did not always have the resources required to offer all services advertised by the MOH. Due to time constraints it was not possible for the RSPH researcher to visit all of the health clinics in close proximity to each AIM care point to ascertain whether all of the services described were made available. It was discovered that there is limited accountability at rural health facilities and at times some health officials took advantage of their positions of power, presenting unanticipated challenges when referring patients. It should be noted that the effectiveness of a detailed referral plan is dependent upon adequate funding for transportation and consultation fees for each patient.

3.5 AIM Organizational Capacity Assessment Methods

Purpose

Since arriving in Swaziland in 2004, AIM has continued to develop its programs and hire new staff, including both American and South African expatriates, as well as indigenous Swazis. AIM's OVC programs formally began in 2005, and have grown from an initial eight care points in one chiefdom to more than 30 across the country, serving more than 6,000 OVC. Although qualitative internal evaluation has been an ongoing process for AIM, it has been on an informal basis without documentation. Therefore, in order to identify target areas for growth and improve the services provided to OVC there is a need for a thorough formal assessment of AIM's organizational capacity in Swaziland. The assessment would highlight potential gaps in the range of services provided to OVC and identify key areas of organizational structure and procedures for AIM to improve upon. Conducting the assessment will not only benefit the development of a health program for OVC, but will also improve other facets of the OVC program, moving AIM toward the provision of more comprehensive services.

Instrument Development

The Bantwana *Initiative* exists to "help children orphaned and made vulnerable by AIDS, and their care givers, access the full range of support and comprehensive care they need to grow into healthy adults" [30]. In 2007 Bantwana developed an assessment tool to analyze an organization's capacity for providing comprehensive OVC care to children affected by HIV and AIDS. The assessment tool includes quantitative measures within the following five key domains: (1) leadership and governance strategy, (2) program and financial management, (3)

monitoring and evaluation, (4) comprehensive services (essential care), and (5) creating an enabling and sustainable environment. The tool was developed from a compilation of other existing capacity assessment tools including International Self Reliance (ISR), Organizational Assessment Capacity Tool (OCAT), Training and Technical Assistance Plan (TTAP), New Directions in Organizational Capacity Building (DOSA), and the ART Site Program Readiness Tool. The assessment defines comprehensive OVC services to include these eight categories: health, shelter, education, nutrition, child protection, livelihoods and economic security, psychosocial support, and legal rights. This tool will be specifically utilized to evaluate AIM's existing programs and organizational structures, in order to highlight successes within the organization and identify areas for potential growth. The assessment tool, which includes both quantitative and qualitative questions, will be conducted twice with two different local AIM staff in Swaziland. Multiple administrations of the survey will be useful to identify discrepancies between documented policies and procedures and those that are actually being implemented in the field. The assessment was not altered in any way prior to administration because it was designed specifically for organizations serving OVC in the region of Africa in which AIM works.

Analysis of Data

The results of the assessments will be cleaned and compiled for review by AIM's senior level leadership in the U.S. and the director of the Swaziland program. The results will include quantitative measures of in each of the five key domains on a scale from 1-10, assigning AIM a number in each category representing the level of maturity the organization has reached in that

area. Additional probing qualitative questions will be asked to further explain the current status of the organization. A summary of the assessment and an analysis of the data will be presented in conjunction with programmatic recommendations, justifying each recommendation. Lastly, any discrepancy between responses from the Swaziland staff and the main U.S. office will be highlighted as areas to target for improvement, so that gaps between policy and implementation can be closed.

Limitations

The primary limitation of the assessment process was the fact that no other formal evaluation of AIM's program exists, and therefore there was no baseline data against which to compare the results. Thus, it is recommended that AIM store the baseline data from this survey and conduct a follow up evaluation of their programs in roughly 18 months to compare against the baseline data. Due to the limited time frame in which research was conducted, this assessment was not performed on other organizations operating in Swaziland against which to compare the results. Additionally, because the assessment relies on self-reported responses from AIM staff, it is subject to bias and may not be representative of the AIM OVC program. Finally, there was a great deal of variation in the provision of services at different AIM care points, so the results of this survey may not be an accurate representation of each care point site.

3.6 Program Recommendation Development

Purpose

A literature review was conducted to inform the development of the OVC health program. The literature review included guidelines from PEPFAR, the government of Swaziland, the World

Bank, Partners In Health, and other entities. Program documents and evaluations from NGOs were reviewed to elicit best practices in providing OVC health care. Lastly, five program models within Swaziland were assessed, as well as 33 exemplary OVC programs from other parts of sub-Saharan Africa, to determine effective methods for implementing an OVC health program in this region.

Procedures

The determination of the key elements for effective OVC health programs was made by comparing program models from the following organizations in Swaziland: Baylor, The Luke Commission, The Kudvumisa Trust, Cabrini Ministries, Children's Cup, and The Bantwana Initiative. Models from other sub-Saharan African countries were also compared based on publically available documentation of their programs. Program models with the most effective impact emerged from the comparison, and those models were used to inform the recommendations made to AIM.

Limitations

There was great variation across organizations in the annual funding received, the size and scope of each organization, the years the organization had been in existence, and the indicators chosen to quantify the impact of each program. These differences made a comparison of programs difficult. However, common themes emerged from the research: thus the recommendations are justifiable on the basis of core common components identified across numerous models OVC health care provision.

Chapter 4: Organizational Assessment

4.1 Overview

The Bantwana *Initiative's* Community Assessment Tool was used to assess AIM's current organizational structure and technical capacity[31]. This tool provides a quantitative system for measuring an organization's current standing within the following five domains:

1. Leadership, Governance and Strategy
2. Program and Financial Management
3. Monitoring and Evaluation
4. Comprehensive Services (Essential Care)
5. Creating an Enabling and Sustainable Environment

Domains 1-3 are further grouped into one category of the *Technical Capacity Domain,* and domains 4 and 5 comprise the *Organization Capacity Domain*. Quantitative scores in each category are totaled and the organization subsequently falls in one of the following four stages of organizational development: a Nascent, Young, Expanding, or Mature organization. The two-fold purpose of this assessment was to highlight organizational strengths and identify key areas for growth. In additional to the assessment, interviews with staff members and a survey of material available on the internet from the organization were used to document the history of AIM's involvement in Swaziland, its current organizational structure in Swaziland, the quantity and type of personnel currently on staff, sources of funding for projects, and its current strategic partners. This section concludes with key findings from the organizational assessment that inform the programmatic recommendations made in chapter 6 of this document.

4.2 History of AIM Swaziland

AIM staff members began work in Swaziland in February 2004 as part of the Beat the Drum campaign, which targeted the prevention of HIV transmission through education at all secondary schools (high schools) across Swaziland. Permanent AIM staff members moved to the Ezulwini area of Swaziland in August 2004, and the process was initiated to register AIM as a nongovernmental organization (NGO). In June 2005 AIM staff members relocated to the rural Engculwini area east of Manzini and began an informal partnership with local pastors and volunteers at eight neighborhood care points (NCPs).

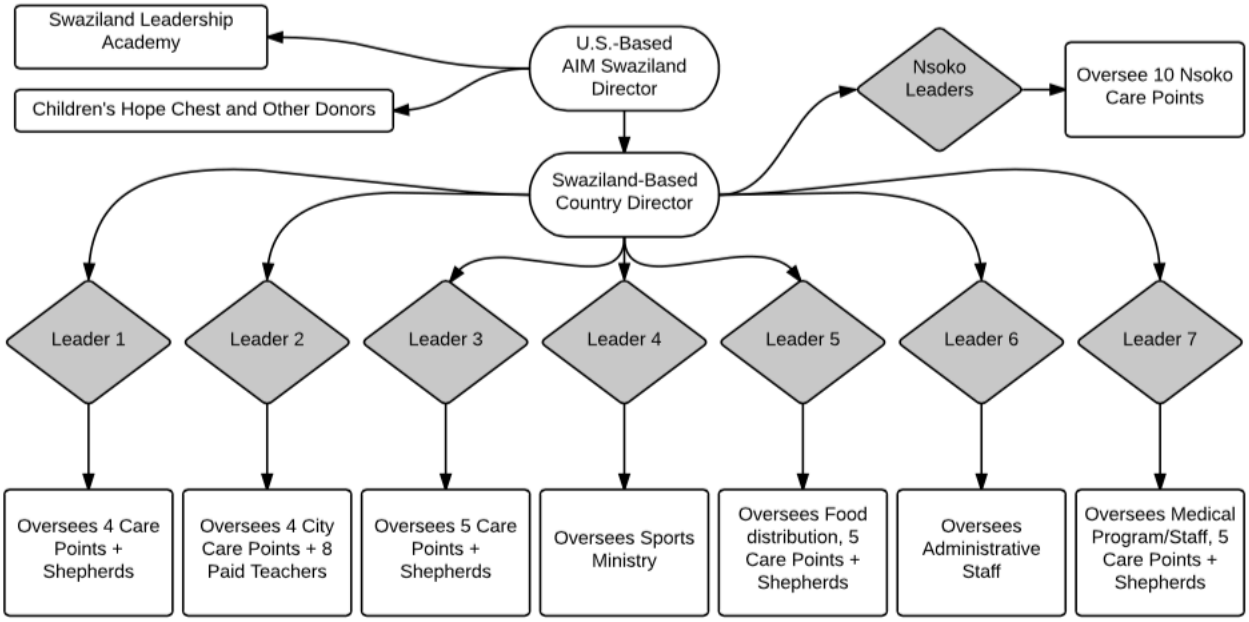
By late 2006 AIM had established a formal partnership with Children's Hope Chest (CHC), and together the two organizations supported the NCPs with food and other financial assistance. Through the partnership with CHC, child sponsorships were initiated and U.S. churches were recruited and paired with care points in a 1:1 manner. At this time AIM developed a mentorship program for the OVC at the care points, where the OVC are taught to imitate the life and teachings of Christ. Concurrently, a cooperative was being developed among the *bomake* volunteering at the care points, which would ultimately evolve into Timbali Crafts. As part of the cooperative, 110 local Swazi women were taught sewing skills and their products continue to be sold at domestic and international venues, creating an income stream for the women. AIM has continued to expand its reach in Swaziland, and as of May 2015, AIM and CHC have been overseeing projects at 33 care points, serving roughly 6,000 children five to six days a week.

4.3 Current Organizational Structure and Personnel

The Swaziland division of AIM currently employs roughly 30 Swazi nationals, two South African nationals, and 10 Americans. Of those only one Swazi national and one American have any formal medical training. Additionally, AIM sends 10-12 Swazi nationals for leadership development training in Jeffrey's Bay, South Africa annually through The Leadership Experience program (LXP). Those who complete the LXP program return to Swaziland to complete a two-year service internship, serving as care point shepherds to oversee the daily activities at one to two care points. Roughly two to eight Swazi women (*bomake*) cook and serve food daily at each of the 33 care points on a voluntary basis.

Expatriate AIM staff primarily fundraise their own salaries from U.S. individuals and churches, while a few AIM staff utilize their entrepreneurial skills to create alternative streams of income to subsidize their service with AIM. Swazi nationals serving on staff with AIM are salaried based on their skill levels and average wages paid within Swaziland for comparable work. In addition to the full time staff, AIM also hosts roughly 700 short-term volunteers and potential donors throughout the year. Figure 1 outlines the general organization of AIM's Swaziland program staff members:

Figure 1: AIM Swaziland Organizational Structure



The principle roles of the country director include oversight of organizational expansion, legal issues and registration, financial accountability and asset acquisition. The country director's U.S. counterpart is responsible for donor relations, expatriate staff recruitment, development of the *Swaziland Leadership Academy,* and any overarching programmatic changes to be implemented country-wide. The recently developed leadership team (seven members) meets on a weekly basis to discuss and document any necessary changes to AIM's regular activities, and to provide oversight for the shepherds and volunteers at each care point. The medical director and nurse work together to develop and oversee all health related activities to be carried out at the care points. Finally the administrative department handles documentation of all individual sponsorships through the partnership with CHC, and maintains records on the numbers of children served daily at the care points.

4.4 Sources of Funding

The majority of expatriate AIM staff members working in Swaziland fundraise their annual salary, while most Swazi nationals receive a monthly salary. American churches and individuals are the primary sources of funding for goods and services provided to the NCPs. Currently, AIM does not receive any grant funding or governmental assistance. Based on the nature of AIM's sources of funding minimal record keeping and reporting is required by donors with the exception of anecdotal reports and a general quantification of the number of meals served daily at each NCP.

4.5 Strategic Partners

AIM currently maintains strategic partnerships with Children's Hope Chest, A Child's Hope International, and The Leadership Experience (LXP). The partnership with CHC connects sponsoring churches to care points in order to provide ongoing funding for all programs at select care points. Fortified rice packets, purchased from A Child's Hope International, are served at the NCPs to mitigate cases of malnutrition among the OVC. Finally, a cohort of young Swazi adults is recruited every year to be part of The Swaziland Leadership Academy, a three-year leadership development program hosted by AIM. As part of the program, academy recruits spend their initial eight months in Jeffrey's Bay where they are enrolled in the LXP program. The focus of LXP is developing servant leadership qualities through a curriculum of character formation, biblical theology, and practical community service opportunities related to HIV prevention.

4.6 Organizational Profile Key Findings

Organizational Capacity

Based on the Bantwana Initiative's organizational assessment tool AIM scored 57 out of a possible 130 points in the organizational capacity domain. This domain included sub-categories of (1) Leadership, Governance and Strategy, (2) Program and Financial Management, and (3) Monitoring and Evaluation. AIM's score in this category ranked it as a "Young Organization" to which the following recommendation is made:

"Focus on expanding and improving services. Organizational systems are beginning to emerge and there is capacity to develop these. Some basic systems including an M&E plan and program may be in place. The organization is considered a good candidate to deliver comprehensive OVC services, but will need considerable organizational developmental support[31]."

Leadership, Governance and Strategy

Within the Leadership, Governance and Strategy domain a notable strength identified was the recent development of the five-member leadership team. This leadership team has led to a shared leadership among staff members in Swaziland and greater continuity of the NCP programs by eliminating the necessity of the country director for decision-making. One prevailing weakness identified in this domain was the absence of any Swazi nationals among senior level management at AIM, and the similar absence of any Swazi board members. Therefore, the recruitment and development of a Swazi advisory board is strongly recommended.

Program and Financial Management

Some highlighted strengths within this category included the programs of skills development to capacitate Swazi staff members. These included the Swaziland Leadership Academy annual cohort, training of staff members in sports ministry, and development training for certain staff. An identified weakness in this domain was the lack of staff members trained in OVC program development or management, and the fact that numerous staff members were taking on tasks for which they had not been formally trained. This weakness indicates a need to hire staff in key technical areas with appropriate training, such as an M&E officer.

Monitoring and Evaluation

AIM's current protocols do not require routine monitoring and evaluation reports; therefore, the graduate researcher gave this category the lowest possible score within the organizational capacity domain of the assessment. This differs dramatically from other grant-funded NGOs, which are required to submit routine M&E reports to evaluate program impact. The World Bank defines monitoring and evaluation in the following terms[32]:

> "Monitoring is a continuing function that aims primarily to provide the management and main stakeholders of an ongoing intervention with early indications of progress, or lack thereof, in the achievement of results…Monitoring helps organizations track achievements by a regular collection of information to assist timely decision making, ensure accountability, and provide the basis for evaluation and learning."

> "Evaluation is the systematic and objective assessment of an on-going or completed project, program, or policy, and its design, implementation and results. The aim is to determine the relevance and fulfillment of objectives, development efficiency, effectiveness, impact, and sustainability."

Currently AIM solely collects daily attendance at each care point; however, even these limited records were incomplete. Furthermore, AIM does not conduct any formal assessments or evaluations of their programs. Reports of activities to stakeholders are currently limited to anecdotal stories and estimated numbers of children fed and provided with assistance for school fees. Therefore, it is highly advised that AIM develop a simple plan for monitoring and evaluation in order to determine the efficacy of its programs and improve reporting to its donors.

Technical Capacity

Within the technical capacity domain AIM scored 25 out of a possible 110 points. This score correlated with being ranked a "Nascent Organization" and given the following recommendation by the Bantwana Initiative*[31]:*

> "Focus on improving services. The organization is planning/mobilizing resources to deliver OVC related services. There is insufficient internal management and/or technical capacity to move towards a comprehensive care paradigm. Major technical support/improvements are needed to deliver OVC services."

Comprehensive Services (Essential Care)

According to PEPFAR and other international organizations with programs designed to support OVC, comprehensive OVC services should address the following eight categories: health, nutrition, education, psychosocial support, livelihoods/economic security, child protection, shelter, and legal rights. The assessment of AIM's OVC program identified strengths in the areas of nutritional support through the provision of fortified rice, and assistance with education through the provision of secondary school fees. Conversely, AIM currently offers few or no services in the areas of child protection, shelter, legal rights, and most importantly in the context of this document almost no ongoing health services. Within the context of providing health services to OVC, it is recommended that AIM develop both programs of prevention and linkage to existing networks of health care.

Creating an Enabling and Sustainable Environment

In order to improve relationship with its stakeholders and to develop more culturally appropriate programs AIM has begun to develop committees at each care point, which primarily include local volunteers, village chiefs or elders, and other key community members. This is certain to improve relationships with local leadership and will likely lead to a higher score in the area of community support systems within this domain. On the other hand, most AIM staff members are unaware of national policies and guidelines for OVC, and thus have not made efforts to align their programs with these national strategies and guidelines. It is advisable to align AIM's programs with national standards because it will improve sustainability and may also lead to additional sources of funding from the Swazi government and its multilateral partners.

Limitations

There are notable differences between the methods employed by mission organizations and secular development agencies. Therefore, it may be determined that it is unreasonable to assess AIM's OVC program with an assessment tool designed for a secular development organization. In spite of these differences, it is believed that there remains much to be gained from conducting this type of assessment of AIM in order to identify key areas for organizational growth and development. Another possible limitation of conducting this assessment of AIM is that no other organizations were assessed in the same manner against which to compare the results. However, if the results of this assessment are retained as a baseline measure of AIM's organizational capacity, they will provide a record against which future organizational growth can be compared.

Chapter 5: Program Model Analysis

5.1 Introduction

Valuable insights from the staff of other NGOs providing OVC health care in Swaziland are being used to develop the health program proposal for AIM. Some of these organizations are health-centric and provide no other types of services, while others have health program components that fit into much larger organizational objectives. Similarly, while some organizations target the provision of health services to OVC, others respond to the profound health needs of the entire population. Without question, the HIV/AIDS pandemic exposed the weaknesses of the national health system in the early 2000's, and led to drastic changes in the provision of health care in Swaziland. The changing landscape resulting from HIV/AIDS has forced some much needed improvements to the national health system, and forged unique

partnerships between the government and NGOs providing health services. Through interviews with various health care providers in Swaziland, organizations providing outstanding health services to OVC were identified and contacted to be interviewed and to conduct a general assessment of their service provision. The five NGOs making the greatest impacts on the health status of OVC in Swaziland were selected among those interviewed, and the results of those assessments are included below.

5.2 Organizations Addressing OVC Health in Swaziland

Baylor International Pediatric AIDS Initiative (BIPAI)

Baylor opened its Children's Center of Excellence in Mbabane in 2006 and satellite clinics at RFM in Manzini and in Hlathikhulu. The mission of Baylor's initiative in Swaziland is to provide outstanding pediatric HIV and TB services and to strengthen and support Swaziland's national health care system. *Baylor* is the single largest provider of ARVs for children in Swaziland, handling roughly 40% of all pediatric HIV cases in the country. *Baylor's* programs have been adapted over the years to meet new challenges faced by their clients and extended care to HIV positive mothers and caregivers of their pediatric patients. The *Baylor* staff also conducts ongoing infectious disease research, and they facilitate regular teen clubs that offer psychosocial support to adolescents affected by HIV/AIDS.

Baylor employs eight physicians who staff their primary clinic, satellite clinics in Manzini and Hlathikhulu, and other sites throughout the country. One of these physicians directs *Baylor's* tuberculosis programs, for which a new facility has been constructed adjacent to the main clinic

in Mbabane. Another Baylor physician specializes in second and third line ART and trains other physicians across Swaziland to treat HIV cases resistant to conventional first line therapy. There are currently no Swazi physicians on staff at *Baylor*, however the majority of the supporting administrative staff members are Swazi nationals. With the expansion of services extending beyond pediatric HIV cases, Baylor currently manages an ongoing load of 4,284 patients.

Baylor receives funding from a number of sources including grants, private donations, and government allocations. In order to both keep their costs down and create a sustainable model of health care *Baylor* refers patients with any conditions other than HIV or tuberculosis to the government health facilities, most often to the National Government Hospital in Mbabane and RFM in Manzini. All health care services offered at Baylor are provided at no cost to the patient. Baylor's strongest partnership is with the Swaziland MOH, but it also works closely with ICAP, The Rocking Horse Project, The Phalala Fund, and Bulembu Orphanage. As previously mentioned, ICAP works closely with the Ministry of Health to improve nationwide surveillance of disease and strengthen the referral system. The Rocking Horse Project is a non-profit organization based in Mbabane that seeks to improve the lives of children with chronic health conditions or disabilities through the provision of care and financial assistance. The Phalala Medical Referral Fund has offices within the Mbabane Government Hospital, and it is intended for patients who need specialized care that is unavailable in Swaziland. A physician's referral is required to be considered by the Phalala Fund, and if approved the patient is transported to a South African health care facility. The entire cost of transportation and care is subsidized by the

Swazi government. Baylor refers OVC without legal guardians or caregivers to the Bulembu Orphanage for housing and living assistance.

The greatest strength of Baylor's approach to health care in Swaziland is their goal to improve the national health care system, as opposed to creating a parallel system. This is evidenced by their objectives to train health care staff across the nation to administer effective pediatric HIV treatment and care. Additionally, Baylor physicians and staff are implementing an innovative tuberculosis case finding program where adult cases are traced back to the home, so that children residing in the same homestead can be screened for TB. Baylor is currently the only health care facility in Swaziland offering specialized services for pediatric tuberculosis cases, and they are assisting with the development of a pediatric ward to treat cases of MDRTB at the National TB Hospital in Moneni. Finally, Baylor physicians have recently developed a 24 hour hotline designed to consult with Swazi nurses and other clinicians around the country and equip them to tackle rare pediatric conditions.

In response to an inquiry regarding the development of a partnership between AIM and Baylor, the director of Baylor's programs in Swaziland gave the following recommendations: First, AIM staff should refer any suspected pediatric cases of HIV or tuberculosis to the nearest health care facility for testing and counseling. In the Manzini area the appropriate referral center would be the Baylor clinic within RFM, and patients in the Mbabane area can be referred directly to Baylor's main facility. Secondly, ensure that all AIM health care staff are aware of the Baylor hotline for medical advice and referrals. Finally, AIM should refer any pediatric patients to

Baylor who are suffering from unusual or undiagnosed health conditions that cannot be handled in the government hospitals, for Baylor has the unique ability to consult with Texas Children's Hospital on such cases. A recent example and success story was a case of a rare pediatric cancer, untreatable in Swaziland that was diagnosed remotely in Texas through this avenue, and referred for treatment in South Africa.

Cabrini Ministries Swaziland (CMS)

By invitation of King Shobhuza II the Missionary Sisters of the Sacred Heart came to the Lubombo region of Swaziland in 1971. In response to the devastating HIV/AIDS pandemic in Swaziland the sisters formed Cabrini Ministries Swaziland in 2004 in Mhlatuze. The work of this nascent organization was divided among three intertwined departments: Health Care, Family Services, and Child Care. The mission of CMS is to respond to the needs of the communities that it serves, which include health, education, nutrition, protection, mental and spiritual well being.

CMS Swaziland is based at St. Philip's Mission in the Lowveld region of Swaziland and serves the chiefdom's of Ngcamphala, Mamba, Gamedze, Shongwe, Mkweli, and Nceka. These chiefdoms make up a catchment area of roughly 20 square kilometers of extremely dry and flat land. CMS is comprised of 65 full time staff, 57 of which are native Swazis, and 22 who are directly involved in health care delivery. Three of the five members on the executive team are Swazis, and all project development involves consultation with an advisory board comprised of well-accomplished Swazi nationals. Since its inception in 2004, CMS has reached over 8,000

people with live-saving ARV or tuberculosis medication, in addition to serving more than 2,000 OVC. In the 2013-2014 fiscal year CMS provided medical services to 2,071 patients in their catchment area.

Funding for all CMS projects comes from three sources: large grants from USAID and other multilateral organizations, Cabrini International, and smaller independent grants. CMS currently functions on an annual budget of roughly 1 million USD. In recent months CMS has taken over the St. Philip's Clinic, expanding its health services to include primary care. This change comes in addition to robust community-based HIV and tuberculosis programs. These programs reflect a recent shift from clinic-based care to home-based care, which has demonstrated much-improved results in terms the health outcomes of patients with chronic conditions requiring complex treatment regimens. With the addition of the St. Philips Clinic, CMS now only refers women for labor and delivery and other patients with complex health conditions that require invasive surgical interventions. The staff members who were interviewed at CMS consider partnerships with the following organizations to be critical for the effective delivery of services to the community: the Swaziland MOH, PACT, PEPFAR/USAID, ICAP and CANGO. The partnership with PACT has included small grants to develop programs and capacitate Swazi staff members, as well as to facilitate training for HTC counselors. The Coordinating Assembly of Non-Governmental Organizations (CANGO) functions to integrate and inform the efforts of all involved NGO's in Swaziland.

Among the surveyed organizations that provide health services to OVC in Swaziland, CMS had the greatest longevity of service. The successes of CMS's health programs emerge from a number of well-defined and proven systems. For example, the transition to home-based medical care for patients with chronic conditions has tremendously benefited their patients by improving adherence to treatment regimens, improving overall health outcomes. This process involves both CHW's who make regular visits to patient homes, and social workers who investigate each patient's home environment and the impact it has on the psychosocial and physical health of the patient. Beyond the provision of curative health services, CMS also performs annual wellness visits for all children enrolled in their programs. In order to avoid straining the health care staff, which already manages a number of patients with chronic conditions, visiting physicians and nurses from Cabrini Australia perform the wellness check-ups during short-term mission trips. Finally, CMS maintains detailed records on all of its clients, integrating digital databases from their health care, childcare, and family services departments. A well-organized M&E department manages these systems and generates routine reports to fulfill donor requirements and maintain grant funding.

In light of their experience providing health care to children affected by HIV/AIDS and tuberculosis, CMS staff members made the following recommendations for AIM's future OVC health program. Because a new health program should complement AIM's other programs, it was recommended that AIM develop a well-defined referral system that capitalizes on existing services offered at appropriate governmental health facilities. The details of this referral system have already been described well by ICAP and NERCHA, and these two organizations should be

consulted for a clear understanding of available services and associated costs in each region of the country. Once the referral system is well understood, AIM health care staff should document this system in the format of a referral SOP and disseminate this document to all AIM staff. Additionally, it was recommended that AIM hire an M&E Officer to complement the current health care staff by driving the data collection and management for the organization. This will assist with the acquisition of additional funding, creating donor reports, and minimizing the amount of time the nursing staff spends on administrative duties. The M&E officer should work in concert with both the nursing staff and the care point shepherds, training them on accurate data collection and reporting procedures. The cost of hiring a well-trained Swazi to fulfill this role should be commensurate with the average monthly salary of a nurse, roughly 700-900 USD. Lastly, it was advised that from the beginning of implementing its new health program AIM should integrate its orphan sponsorship information with the collection of health care data, as opposed to having two parallel systems. CMS suffered unnecessary effort to later integrate all of its electronic databases, and it would have been far more advantageous to combine the various record keeping systems from the outset to avoid any duplication of information.

Children's Cup

American missionaries Dan and Jean Ohlerking founded Children's Cup in 1992 in response to the evolving orphan crisis being perpetuated by the spread of HIV/AIDS in Africa. Since that time the organization has grown to include operations in Mozambique, South Africa, Swaziland, and Zimbabwe, with home operations in the United States. Children's Cup develops community care points in the neediest parts of these countries where OVC receive daily food, medical care,

educational assistance, character development or discipleship, and economic empowerment. There are now more than two dozen Children's Cup care points, where roughly 15,000 OVC receive daily services.

Children's Cup has a staff of 24 full time employees in Swaziland, including a mix of employed and volunteer Swazis, South Africans, and Americans. Among the staff there are four medical staff, which includes two American nurses, and two African HTC counselors. Three thousand five hundred OVC receive daily services at nineteen Children's Cup care points in Swaziland, which includes 2,200 sponsored children. The Children's Cup medical staff operates a mobile clinic that sees an average of 60-120 patients per day, and it rotates to each care point once every six weeks. In addition to providing first aid and acute medical care sponsored children also receive an annual wellness check up from the nurses.

All Children's Cup funding to run the care points and pay employee salaries comes through private donations from American churches and individuals. Medical staff routinely provide acute care for sick children at the care points, in addition to ongoing care for HIV and tuberculosis for 135 OVC or volunteers through a partnership with BIPAI. The Children's Cup nurses have also trained one teacher at each care point to administer first aid and equipped each care point with a first aid kit. A small stipend of 50 emalangeni is kept on hand at each care point for emergency referrals, and a strict accountability system is in place to account for the use of these funds and first aid materials. The Children's Cup nursing staff deeply values their partnerships with Baylor, MSF in Matsapha, and RFM in Manzini. It was noted that the Baylor physicians have been

particularly helpful by treating unusual medical conditions that were untreatable in other government facilities.

The Children's Cup medical staff has managed to effectively deliver medical care to its vast OVC client base through task shifting basic medical services to on-site staff. This includes training care point teachers and volunteers to recognize the signs and symptoms of common ailments that frequently plague children in Swaziland, and training first aid care givers at every care point. Furthermore, the streamlined mobile clinic that includes 60-80 of the most commonly used medications in Swaziland has allowed for onsite medical care to be delivered at each of the 19 care points, which eliminates excessive transportation costs for basic illnesses. In addition to the four health care staff, a medical driver was hired to provide regular transport to the Baylor Clinic for patients to receive ARV and TB medication, and to provide transportation for other patients with non-emergent health conditions requiring a referral.

The director of the Children's Cup medical program shared the following recommendations for AIM's future OVC health program, based on the strong similarities between the two organizations: A profound change in the health status of OVC at Children's Cup care points was noticed once each site had access to clean drinking water; therefore, it is critical to ensure that every care point is equipped with a borehole and that OVC and their caregivers are educated about the importance of using clean sources of drinking water at the homestead. It was also advised that AIM capitalize on its current system of volunteers and shepherds at each care point, and that one person at each care point be trained as the resident CHW. This person should

administer all basic medical care, manage a first aid kit and referral fund for each site, and be the point person to contact the AIM nursing staff with medical concerns. This system of training a CHW for each site would be the most effective use of the current AIM nurse without hiring additional medical staff. When developing a system of medical records, it was recommended that the forms correlate with Baylor's medical record system, which improves the ease of referrals when necessary. Finally, the nursing staff recommended that a formal partnership be developed with the Baylor Clinic, similar the one that Children's Cup has established. This partnership is critical for the treatment of pediatric HIV and tuberculosis, and for assistance with rare medical conditions encountered at the care points for which no care is available at governmental health facilities.

Kudvumisa Trust/CHIPS

The Children's HIV Intervention Program in Swaziland (CHIPS) was formed in 2008 in order to provide HIV screening and treatment to children in hard to reach communities in Swaziland. Many of the initial clients enrolled in the program came from disenfranchised communities of laborers on sugar cane farms in eastern Swaziland. As the mission to provide quality, compassionate health care based on Christ's example emerged the program was expanded to meet the needs of all community members, and the organization changed its name to the Kudvumisa Trust. Today, the organization continues to work in sugar cane farming communities within Maphiveni and Vuvlane, with dual goals of tackling the epidemics of HIV and TB and assisting people to escape from the bondage of crippling poverty.

The staff of Kudvumisa Trust currently consists of two co-directors, four HTC counselors, one nurse, three administrators, and one M&E officer. With the exception of the American co-directors, the remainder of the staff is either Swazi or Zimbabwean, which is by design to promote the longevity of the organization. While a main office is maintained in Mbabane, the majority of the staff function out of a satellite office within the catchment area that it serves in the eastern region of the country. A recent review of medical records indicated that 1,665 patients were cared for in 2014, and many of these patients received multiple medical visits throughout the year.

The primary source of funding for the Kudvumisa Trust programs comes from a USAID/PEPFAR grant, which is currently nearing the end of its cycle. Services offered to clients at the community level include HIV and TB screening and counseling, initiation on ARVs, CD4 cell quantification, adherence counseling, and referrals to Good Shepherd hospital for other medical care. Funds are provided for transportation to and from any referral, and a thorough tracking system is in place to ensure that each patient's referral and subsequent treatment is completed. A formal MOU with the Swaziland MOH was necessary to encourage partnerships with local clinics and health facilities in the catchment area. In addition to partnerships with the MOH and USAID, a nascent collaboration is also being developed with ICAP.

One of the strengths of Kudvumisa Trust is its emphasis on developing and training indigenous leadership to provide all medical services to its clients. Another key to the success of its medical programs is the target of providing onsite screening, counseling, and care within the community.

In the early years of the HIV epidemic in Swaziland there was a strong emphasis on testing and counseling, but the initiation of and adherence to ART remained out of reach for some residents. The staff of Kudvumisa Trust identified this gap, and made a point to develop a thorough system that ensures patients receive complete and ongoing care as opposed to merely being diagnosed and yet never enrolled on therapy. In the advent of task-shifting efforts by the government and with a modest reduction of the harsh stigmatization of HIV patients, there has been a trend toward an improved adherence to ART. One of the challenges facing Kudvumisa Trust, along with other organizations providing health care to HIV positive patients, is the short-term nature of certain grants, which fail to compliment the life-long treatment needs of these patients.

During a meeting with the director of the Kudvumisa Trust, the following considerations were recommended as AIM develops a program for the provision of OVC health care. When hiring indigenous health care personnel to staff a rural location it is important to hire from within the rural areas, otherwise staff retention will likely be problematic. It was also recommended to send multiple AIM staff, likely the care point shepherds, through the six-week HTC training course offered by *The AIDS Information and Support Center* (TASC) in Manzini. Ideally this skill should also be complimented by phlebotomy training, which Kudvumisa arranged for their staff through a special arrangement with the *Baylor Clinic*. Finally, in order to develop an effective medical record system and to track the provision of services it was recommended that AIM consider hiring an M&E officer.

The Luke Commission

In 2005 Harry and Echo VanderWal, an American physician and physician's assistant respectively, started The Luke Commission (TLC) in Swaziland. TLC's mission involves bringing compassionate and comprehensive medical care to underserved areas of Swaziland through an extensive mobile health clinic. Observing steady growth since 2005, TLC now provides in excess of 250,000 medical services annually at numerous locations across Swaziland. In February 2013 land was purchased in Sidvokodvo on which a Miracle Campus would be constructed to house TLC's staff, vehicles, equipment and supplies.

TLC currently has seven clinicians and 90 total staff members, 70 of which are native Swazis. To date, TLC has provided in excess of 804,000 medical services, distributed more than 20,000 Bibles, given clothes and shoes to more than 300,000 OVC, and delivered more than 42,000 Christmas Child Boxes to OVC. Mobile clinics are held as one-day events in local schools, based on previously established agreements with the Ministry of Education and local community leaders. Prior to the arrival of the mobile clinic, local community members clean and transform local schools into an informal hospital where the TLC will operate the clinic. The mobile clinics are now conducted throughout the year, with the exception of school holidays, which are used by TLC to maintain their vehicles, reorganize supply shipments, and conduct staff training.

A number of sources of funding allow for the ongoing medical clinics including USAID/PEPFAR grants and private donations from churches, universities, and individuals. Each mobile medical clinic costs roughly 25,000-30,000 USD, which translates to an annual operating

budget nearing 5 million USD. Comprehensive medical services are offered during each clinic, including HIV and TB screening, ARV initiation, mobile x-ray, circumcision, minor surgical procedures, eye care, the provision of glasses, wheelchairs, and other assistive devices for those with disabilities. Patients requiring ongoing care for chronic conditions are referred to the appropriate government health facilities, and their progress is tracked through a system of follow up phone calls. TLC has a formal MOU with the Swaziland MOH and partners with other PEPFAR grantees such as ICAP and EGPAF when necessary. Additionally, all pediatric HIV and TB cases are referred to the Baylor Clinic or one of its satellite locations.

No other organization offering health care in Swaziland has the broad reach of TLC while offering services at no cost to the patient. Therefore, TLC is the premier organization reaching the medically underserved in Swaziland. It is also apparent that hiring and training Swazi staff is an important objective for the organization, demonstrated by their heavily weighted Swazi staff. This becomes incredibly important in terms of delivering culturally adapted messages of health education and counseling during the mobile clinics, as well as creating numerous employment opportunities for Swazis. At TLC Swazi staff members are not bound to a singular role in the organization and they rotate through a variety of departments in order to acquire multiple job skills. In addition to the large number of Swazis on staff with TLC, there is also an advisory board made up entirely of indigenous leaders from other sectors. The TLC facilities at its Miracle Campus are incredibly well organized and managed, and reflect the thorough planning that goes into each mobile outreach. Dr. VanderWal has also established unique partnerships with some U.S. medical institutions that send medical students and residents for rural health clerkships.

Based on the comprehensive nature of care provided at TLC's medical outreaches, and because all medical services are provided at no cost to the patient, AIM should consider directing OVC and their care-givers to TLC mobile clinics conducted in or near their communities. This is a cost-effective way for health care to be extended to other members of the homesteads of OVC whom AIM serves. Also, as AIM develops its medical program a collaborative partnership with the community should be established, similar to the requirements that TLC makes of community members prior to their arrival to conduct a mobile clinic. Finally, it is strongly advised that AIM develop a Swazi advisory board to continue to guide AIM's programs, and assist with a progressive shift toward a predominantly indigenous leadership team.

5.3 Comparison of OVC Health Care Models

Comprehensive OVC Services

According to international guidelines provided by PEPFAR, comprehensive services for OVC include the following: (1) food security and nutritional support, (2) shelter and care support, (3) physical protection and legal aid, (4) general health care support, (5) psychosocial support, (6) educational and vocational training support, (7) early childhood development activities, and (8) economic opportunity strengthening[18]. Though some of the NGOs assessed in Swaziland do not limit the provision of services to OVC, the following table compares the various services offered by each organization.

Table 5: Comparison of OVC Services Offered in Swaziland									
	Food Security/ Nutrition Support	Shelter/ Care Support	Physical Protection/ Legal Aid	General Health Care Support	Psychosocial Support	Educational /Vocational Training	Early Childhood Development Activities	Economic Opportunity Strengthening	Comprehensive Care Score
Baylor College of Medicine	1	2	3	5	4	1	1	2	19
Cabrini Ministries	5	4	4	5	4	3	2	3	30
Children's Cup	4	1	1	4	2	3	4	2	21
CHIPS/ Kudvumisa Trust	2	1	1	3	3	2	1	2	15
The Luke Commission	1	1	2	4	2	1	1	1	13
Information Source: Competitive Analysis of Organizations in Swaziland Providing OVC Services Numbering System: 1-None, 2-Limited, 3-Adequate, 4-Comprehensive, 5-Exemplary									

For a description of how each value in the table is determined see the Technical Capacity Assessment Orphans and Other Vulnerable Children (OVC) Services[33]. As described in the table, among the NGOs assessed in Swaziland, Cabrini Ministries Swaziland offers to the most comprehensive OVC service package. Some of the strengths of CMS's program include exemplary health services and nutritional support, which are enhanced by OVC's location in a hostel where the provision of nutritional foods and health monitoring can occur with relative ease. The CMS program model also employs social workers who are able to directly address the psychosocial needs of each child. Children's Cup, which does target all of its programs toward OVC, ranked second in terms of the provision of comprehensive services, with high scores in health care, food security, and early childhood development activities. The principal differences between these two organizations relate to the fact that CMS has recently moved into providing primary health care within its catchment areas, whereas Children's Cup offers a basic health care plan in conjunction with a formalized referral system. Other differences occur because OVC are housed on site at CMS compared to OVC visiting Children's Cup care points daily and later

returning to their homesteads. The remaining three organizations scored high in some individual categories, but their overall scores were less impressive, likely due to the fact that none of them limit their services strictly to OVC.

Staff

The ability to provide services in any organization depends on the number of staff that an organization employs and the type of skills represented among staff members. These skills and staff numbers varied drastically across the organizations that were assessed -- primarily because they do not all share the same health care objectives. That said, the following table is useful to better understand the capabilities of each organization in terms of the provision of health services.

Table 6: Comparison of Health Care Staff Between Organizations Providing OVC Services

Organization	Baylor College of Medicine	Cabrini Ministries	Children's Cup	CHIPS/ Kudvumisa Trust	The Luke Commission
Physician(s)	8	0	0	0	1
Physician Assistant(s)	0	0	0	0	1
Nurse(s)	12	5	2	2	UN
HTC Counselor(s)	2	4	2	4	UN
Pharmacy Dispenser	0	2	0	0	UN
Adherence Officer	0	1	0	0	UN
M&E/Data Officer(s)	1	1	0	1	UN
Health Administrator(s)	1	1	1	3	UN
Interdepartmental	0	8	0	0	UN
Total Health Care Staff	**24**	**22**	**5**	**10**	**90**

Information Source: Competitive Analysis of Organization in Swaziland Providing OVC Services. UN=Unknown (TLC currently employs 90 staff, 7 of whom are clinicians)

Among the organizations surveyed, Children's Cup is most similar to AIM in terms of their mission and the size of their medical staff.

Health Care

All of the NGOs assessed are providing exceptional health care services in their own right, with some degree of variation between organizations. It is important to note that provision of quality health services does not necessarily imply that all services are provided on site, for outstanding health care provision is possible through effective referrals to other entities offering health services. In these cases, the key is that an NGO not only refer a client to the appropriate provider, but that the referral is accompanied by the financial provision and necessary follow-up to ensure the process is completed. Therefore, the decision to provide a particular service or refer a patient out for that service hinges on a number of factors. Some of those factors include: the frequency of interactions with OVC, program enrollment, staff capacity, and referral options based on the geographic location of the client. For example, organizations like CMS and Children's Cup have ongoing contact with the OVC in their catchment areas, compared to others like TLC that only interact with OVC on a one-time basis with the potential for a recurring visit 12 to 18 months later. These differences drastically alter the type of care offered to clients, whereby the former organizations might offer a health package that includes both curative and preventative services, but the latter organization type may elect to focus on the provision of diagnostic and curative services primarily.

Though a direct comparison of organizations would be unfair, notable strengths and weaknesses of each NGO did emerge. Baylor's programs for pediatric HIV and TB are the gold standard for pediatric medicine in the country and are by far the most organized and thorough programs for infectious disease. Baylor is currently the only organization in the country offering specialized pediatric tuberculosis treatment, and they are consulting with the national TB referral hospital on the development of a pediatric MDRTB ward. It was also the only organization conducting any form of contact tracing for tuberculosis cases. However, some weaknesses of Baylor's program include a heavy reliance on foreign physicians and a clinic-centered approach to ART that assumes patients have the ability to return to the clinic routinely for follow up.

Cabrini Ministries Swaziland captured and organized patient data more efficiently than any other organization, which is the result of well-planned systems of monitoring and evaluation. CMS also has the most thorough ART and DOT programs for HIV and TB patients, which included follow up calls and routine home visits to ensure medication adherence and overall patient health progression. The organization also effectively integrates multiple services in a joint system that electronically profiles each patient. Some of the limitations noted in CMS's programs were the reliance on foreign physicians and nurses on mission trips to conduct annual wellness visits, and that comprehensive health care services were limited to fewer than 850 OVC. However, when compared to the remaining four organizations CMS emerged with the most comprehensive and effective health care system for OVC in Swaziland.

The medical staff of Children's Cup was exemplary in terms of their development and utilization of a referral network. The network included partnerships both governmental and non-governmental entities to ensure the provision of health care for OVC under their care. Though the health care staff is limited to five people, they have developed a creative system that utilizes small cash accounts (50 emalangeni) at each care point to cover transportation costs for emergencies, and they have task-shifted basic first aid care to teachers or volunteers at each care point. Some weaknesses of the Children's Cup health program compared to other programs of OVC health were as follows: Only children who were officially sponsored in the program received annual wellness visits, meaning that roughly 1,300 additional children who regularly attend the care points did not receive this service. Additionally, half of the health care staff comprises American nurses, whose skill level was comparable to that of indigenous Swazi nurses. It is likely that employing local nurses would require less funding, less training, and would produce a more culturally adept staff. Finally, the limited staff size meant that the mobile clinics could only be operated at each care point once every six weeks.

In spite of its small staff of 10, the Kudvumisa Trust has brought effective HIV testing and counseling to multiple vulnerable and hard-to-reach communities. In the 2014 fiscal year alone, Kudvumisa staff provided HTC to over 1,665 patients, provided ART adherence support to 162 patients, and were able to give 378 patients a baseline CD4 count. This is one of the few organizations to make CD4 counts available within the community, which helps determine a patient's clinical course and the urgency of follow-up required. Kudvumisa stands out from the other organizations that were assessed based on its focus to hire and train indigenous Swazi staff

to handle all patient interactions, which is a more sustainable model for development. One of the principal challenges facing Kudvumisa currently is their dependence on grant funding from a singular source, which is currently nearing the end of its cycle. This makes the fulfillment of the organization's goal of providing ongoing life-long care for HIV patients incredibly challenging and threatens the continuity of their programs. This organization also offered the fewest health services to its clients among all surveyed organizations, which mean the staff frequently refers patients from the community to other health care facilities.

Among all of the organizations surveyed, The Luke Commission operated with a largest annual budget and had the widest geographic reach in Swaziland. TLC mobile clinics were conducted every week around the country, where comprehensive health services were made available to patients at no cost, often in hard to reach areas. TLC is exemplary in terms of providing outstanding medical diagnosis and acute care, and does so with a vast team predominantly made up of Swazis. This allows all consultation and community health education to occur in a culturally appropriate manner and in the local siSwati language. In this way, TLC is effectively bringing medical care to Swazis in the most remote parts of the country who otherwise might never access medical care. One drawback of the TLC health care model, however, is the outrageous cost of each medical outreach, averaging between 25,000 and 30,000 USD per day. It can also be argued that the mobile clinic model of care does nothing to develop or strengthen the national health system, and that it is unsustainable. Finally, because TLC mobile clinics may only return to an area 12-18 months after an initial visit, patients who receive referrals during a clinic may be lost to follow up or unable complete the treatment necessary for chronic

conditions. Without the ability to follow up regularly with its patients in person, TLC runs the risk of delivering incomplete care to Swaziland's most destitute residents.

As previously mentioned, the five organizations that were assessed differ in their mission and in the types of services that they provide. Where CMS, TLC, and Baylor seek to provide comprehensive care on site, Children's Cup and Kudvumisa Trust rely more heavily on diagnosing their patients and then funneling them into the national referral network. That said, the table below services as a reference for the types of services offered by each organization.

Table 7: Available Health Services					
Organization	**Baylor College of Medicine**	**Cabrini Ministries**	**Children's Cup**	**CHIPS/ Kudvumisa Trust**	**The Luke Commission**
Serves OVC Only			✓		
Blood Sugar Monitoring		✓			✓
Eye Glasses					✓
HTC	✓	✓	✓	✓	✓
Wheelchairs/Devices		✓	✓		✓
TB Screening	✓	✓		✓	✓
PMTCT Services	✓	✓		✓	✓
ARV Initiation	✓	✓	Transport	Transport	Referral
ARV Refills	✓	✓	Transport	✓	
ARV Adherence	✓	✓	Transport	✓	✓
DOT	✓	✓		✓	✓
X-ray	✓	Referral	Transport	Transport	✓
Male Circumcision		✓			✓
Annual Check-ups		✓	✓		
First Aid	✓	✓	✓	✓	✓
Deworming	✓	✓	✓		
Multivitamin	✓	✓	✓		
Growth Monitoring	✓	✓	✓		
HB Health Education	✓	✓	✓	✓	
Improved Water Source		✓	✓		
Malnutrition Screening	✓	✓	✓	✓	✓
Dental Care			✓		
Minor Surgeries	Referral	Referral	Transport	Transport	✓
CD4 Count	✓	✓		✓	✓
Information Source: Competitive Analysis of Organizations in Swaziland Providing OVC Services. Transport=Organization subsidizes transportation cost					

5.4 Conclusion

In order to create useful recommendations for AIM's OVC health program, five exemplary organizations providing health care to OVC in Swaziland were assessed. It is advisable that the strengths of each of these programs be adapted for the development of AIM's OVC health program where applicable. Summarily, AIM's future program should incorporate the following elements demonstrated by Baylor, Cabrini Ministries Swaziland, Children's Cup, Kudvumisa Trust, and The Luke Commission:

- Create a detailed referral system with multiple partnering organizations supported with a transportation budget and emergency funds at each site
- Shift the task of providing basic medical care to care point volunteers, instructors, or shepherds at each site
- Bring HTC, TB, and malnutrition screening to the community level when feasible
- Seek to hire and train indigenous Swazi staff wherever possible
- Perform home-based care and follow up for patients with chronic conditions such as HIV and tuberculosis
- Trace TB cases back to the homestead and screen all potential suspects
- Develop creative methods of bringing medical care to those in a targeted catchment area who are unable to access it through the traditional system
- Train Swazis with the skills to provide basic medical care and to deliver health educations messages, capitalizing on their ability to adapt those messages to the local cultural context

- Follow up on all referrals through completion of treatment or resolution of the identified health issue, including the provision of funds necessary for transportation

These recommendations are the result of the comparison of five organizations providing exemplary OVC health care in Swaziland, and were derived from the strengths of each organization. The selection of these five organizations was based on recommendations made by AIM staff and their in-country partners.

Chapter 6: Recommended Program Plan

6.1 Program Executive Summary

The proposed OVC health program is divided into three phases that can be progressively implemented over 18 months. The program relies on the collaborative efforts of care point shepherds, community health workers, nurses, HTC counselors, and an M&E officer. Existing AIM staff will fill the majority of these positions, and health services will be extended to all 33 AIM care points by Phase 3 of the program. Conservative estimates of the on-site program costs include a one-time expense of 5,500 USD (167 USD per care point), and an additional 3,500 USD monthly expenditure (106 USD per care point) by Phase 3 of the program. Additional funding will be required to cover the cost of non-emergent referrals, consultation fees, and approved/subsidized medical.

The health program combines the provision of acute, preventative, and diagnostic services at each care point, and the utilization of additional services provided by governmental and non-governmental organizations in an explicit referral network. Services provided at each care point will include: annual wellness check-ups, health education, preventative services, acute care for minor injuries and illnesses, and targeted screening for malnutrition, tuberculosis, and HIV. When necessary, OVC or AIM volunteers will be referred to an appropriate health care facility through its documented referral network, complemented by a thorough follow-up system to ensure continuity and completion of care.

The success of the OVC health program relies on routine data collection based on appropriate indicators and a thorough monitoring and evaluation plan. Health data will be captured at each care point in a custom-designed health ledger, containing four unique, duplicate health forms. These data will be entered into an electronic database weekly, making aggregate countrywide data available to monitor the impact of the program, track staff productivity, and produce donor reports. This health system will allow AIM to improve the overall health of roughly 6,000 OVC, track the longitudinal health of these OVC under their care, and compete for additional grant funding to expand its programs.

6.2 Staff

The development of the OVC health program is broken into three phases, some of which will require hiring additional staff members. The following table outlines the staffing requirements and the responsibilities of each staff member within the health program. A thorough explanation

of the purpose of each role and the associated costs follow the table.

Table 8: Total Staff Requirements & Responsibilities					
	Current Standing	Phase 1 (Pilot)	Phase 2 (Partial Coverage)	Phase 3 (Comprehensive Coverage)	Responsibilities
Time Period	n/a	2 months	6 months	6 months	
Medical Director	1	1	1	1	•Oversee medical staff •Train CHW in first aid
Nurse(s)	1	1	2	3	•Acute care visits to CP's •Train CHW's and CP volunteers •Manage referrals
Care Point Shepherd(s)	1/Care Point	1/Care Point	1/Care Point	1/Care Point	•Monitor CP hygiene •Growth monitoring
M&E Officer(s)	0	1 (Temporary)	1 (Full-time)	1 (Full-time)	•Determine indicators •Aggregate data •Produce donor reports
HTC Counselors	0	2	3	3	•Offer HTC at care points
Community Health Worker(s) (1 CHW/Care Point)	0	5	23	33	•Monitor OVC for HIV, TB, and malnutrition •Recommend OVC for screening •Administer deworming tablets and multivitamins •Administer First Aid
Medical Driver(s)	0	0	0	1 or 2	•Transport OVC and caregivers for referrals
Information Source: Program Proposal. Community Health Workers and HTC counselors will be selected and trained from among current AIM staff or volunteers.					

Phase 1 – Contracted M&E Officer and Community Health Workers

Phase 1 of the health program is a smaller pilot phase that allows for program testing and the easy implementation of program changes. Hiring additional full time staff is unnecessary for this initial phase of the program. However, a short-term contract with an M&E officer is

recommended in order to develop appropriate indicators and data management systems for the care points. A worthy candidate for this position should have prior experience with other NGOs operating in Swaziland, and he or she should be familiar with the national reporting requirements for organizations serving OVC. If the AIM staff is pleased with the results of this candidate's work, he or she could be considered for full time employment in Phase 2 of the health program.

One of the most critical roles in the proposed health program is that of the community health worker. It is recommended that AIM identify at least one person at each care point to serve as the CHW, and this person could potentially be a care point shepherd, one of the volunteer *bomake*, or another community member. It is important that whoever is chosen to be the CHW for each care point is present for the majority of the time the care point is functioning, and that he or she is able to work well with the AIM nursing staff. The CHW will often be the first point of contact with an ill child at the care points. The primary purpose of the CHW is to shift basic health care services such as first aid and identifying critical illnesses from the nursing staff to someone who maintains a presence at each care point daily. This person will communicate frequently with the AIM nurse regarding referrals or other health needs at their respective care point. Finally, CHWs will also play the role of a social worker, routinely visiting the homesteads of the OVC attending the care points to determine other opportunities for improving their health through changes made at home. One of the primary goals of the routine home visits is to identify and support child-headed homesteads. The previously mentioned assessment 32 organizations serving OVC in South Africa noted that nearly every organization had a social worker on staff, and the success of

each program was often credited to the provision of HBC through this position.

Phase 2 – One Additional Nurse and One M&E Officer

The second phase of the program requires the recruitment of one additional full time Swazi nurse who will be dedicated to the Nsoko region care points. According to recommendations from Kudvumisa Trust, this nurse should be a resident of the region in which she will practice (or similar rural area) in order to promote staff retention. It was also noted that Good Shepherd nursing students frequently rotate through a six-week rural nursing internship at Cabrini Ministries Swaziland, whose programs are similar to the proposed program for Nsoko care points. Therefore, it is recommended that AIM consult with the medical director at CMS, Mr. Bongani Khumalo, for assistance with the recruitment of an appropriate nurse for this position. (See Appendix for contact information) AIM should expect to pay a nursing salary of between 700 and 900 USD, depending on the level of training and experience of the potential candidate. It is advisable that the nurse has been trained as an HTC counselor and to initiate ART. Additionally, AIM may need to provide housing for this new staff member if daily commuting is unreasonable.

In order effectively manage the health data from all AIM care points, and to create monthly, quarterly, or biannual donor reports AIM should consider hiring a full-time M&E officer. This position would work in concert with the nursing staff and the care point shepherds to ensure the accurate collection and aggregation of useful data. Furthermore, this position would ensure that the nursing staff spends the majority of their time treating patients as opposed to being pulled

into lengthy data management activities. The appropriate salary for an M&E officer is commensurate with a nursing salary, ranging from 700 to 900 USD per month. Ideally the M&E officer's activities would integrate well with the AIM administrative department's record keeping system; therefore this position would be based at the main office in Manzini.

Phase 3 – An Additional Nurse and 1-3 Drivers

The third phase of the OVC health program is incumbent upon a thorough evaluation of Phases 1 and 2, and an assessment of the availability of additional funds for expansion. Assuming these requirements are met, and that there is an indication for the need to expand the program further it is likely that AIM will require a third nursing staff member. This need is anticipated because interviews with AIM staff members indicated that there is the intention to add additional care points within the 2015 calendar year. Thus, based on recommendations from the medical director of Children's Cup, the ideal nurse to care point ratio should not exceed 1:12, necessitating the addition of more nursing staff.

An analysis of expenditures during the first two phases of the OVC program will indicate the average monthly and annual cost of health referrals, in addition to the costs incurred from nurse visits to the care points. Depending on these transportation costs, AIM may determine that it is more financially advantageous to hire dedicated medical drivers for the transportation of referred patients and for nurse visits to each care point. This recommendation was made based on the system put in place by Children's Cup, which includes one driver and a vehicle dedicated to medical transport. In addition to providing transportation for Children's Cup referrals, this driver

also transports 126 HIV positive OVC and caregivers to the Baylor Clinic for monthly ARV refills and routine check-ups.

6.3 Training

AIM currently benefits from having a medical director who is a trained EMT and firefighter as well as a full time Swazi nurse on staff. Therefore, the vast majority of the required training for the health program can be accomplished without the need to hire external facilitators. See Table 9 for a detailed list of recommended training topics.

Table 9: Training Topics Required for the Proposed OVC Health Program

Training Topic	Recipient	Facilitating Person/Organization
Growth Monitoring	CHW	AIM Nurse
Malnutrition Screening	CHW	AIM Nurse
Hygiene Education	CHW, Shepherds, Volunteers	AIM Nurse
First Aid/Choking	CHW	AIM Medical Director
Emergency Response	CHW	AIM Medical Director, AIM Nurse
HIV/TB symptoms	CHW	AIM Nurse
*HTC	Shepherds	TASC - Manzini
*Phlebotomy	Shepherds	Baylor Clinic - Mbabane
Fire Safety	CHW	AIM Medical Director
Referral System	CHW, Shepherds	AIM Nurse
Diarrhea & ORT	CHW, Shepherds	AIM Nurse

Information Source: Program Proposal
*Additional Cost Required for External Facilitator

One critical aspect of the training program involves dissemination of relevant topics from those receiving to the training to other care point staff members. It is also important that facilitators adapt trainings to suit the literacy levels of the recipients. For suggestions regarding effective training of CHWs see units 6-7 in the PIH Program Management Guide[24]. HTC and

phlebotomy training are two exceptions that will require facilitators from external organizations and additional training costs. The HTC training is a six-week course run by TASC in Manzini, and trainees must have a high school certificate and a letter from a sponsoring organization. The staff of Kudvumisa Trust recommended that all HTC counselors also be trained in phlebotomy, which they were able to arrange through a special arrangement with the Baylor Clinic. The HTC training costs roughly 500 USD per trainee; therefore, AIM may consider training only two to four HTC counselors who will rotate among the different care points in each region.

6.4 Activities on Site

The proposed health program for OVC at AIM care points blends elements of care provided on site at each care point with an explicit referral system for other services, including procedures to ensure continuity and completion of treatment. The following table outlines which services would be offered at each care point and other services for which OVC or caregivers would be referred. It is important to note that while both the OVC and the volunteers are eligible for all on-site services and subsidized transportation for referrals, subsidized consultations and treatment at the health are facility are only available to OVC.

Table 10: Proposed Program Health Services			
Category	**On Site Services**	**Services Referred**	**Referral Location**
Preventative Care	Annual Check-ups First Aid/Wound Care Deworming (Every 6 Months) Multivitamins Growth Monitoring Health/Hygiene Education Dental Education/Supplies Improved Water Source Improved Nutrition ORT for Diarrhea Home Visits & HBC Vaccination Follow-up		
HIV	HTC ARV Adherence Counseling PMTCT	ARV Initiation ARV Refills CD4 Count	Nearest Clinic Nearest Clinic Government Hospital
TB	Tuberculosis Screening	TB Therapy Initiation Directly Observed Therapy	Baylor Baylor
Malnutrition	Malnutrition Screening Nutritional Support		
Other		Blood Sugar Monitoring Eye Glasses Wheelchairs/Crutches Minor/Major Surgeries Male Circumcision X-Ray Emergency Services Comprehensive Clinic	Nearest Clinic St. Teresa's Mbabane Gov. Hospital Government Hospital Government Hospital Government Hospital Government Hospital Luke Commission
Information Source: Program Proposal			

The following is a detailed description of services to be made available at each care point to more than 60 volunteers and 6,000 OVC.

Preventative Services

- **Annual Check-ups –** These wellness check-ups should be conducted for every child who regularly attends a care point. The data from these check-ups is a means of assessing the child's longitudinal health over time, and will demonstrate the long-term benefits of other aspects of the OVC program. Some organizations, such as Cabrini Ministries Swaziland, elect to utilize short-term medical missions teams to perform the annual check-ups, while others use their nursing staff to complete this process. (See the Appendix for sample wellness check-up forms from various organizations) If AIM intends to capture other demographic or profile data annually, it would be ideal to synchronize these two processes.
- **First Aid/Wound Care –** One CHW at each care point should be trained in first aid and equipped with a first aid kit that is routinely restocked.
- **Deworming Tablets/Multivitamins –** All OVC should receive these tablets every six months, and records should be kept of each child's name and when they received the tablets. According to the Children's Cup nursing staff, these tablets can be acquired in Manzini, in bulk quantities, and at no cost to the organization. These tablets are currently being handed out at AIM care points, but individual records of each child who receives them are not being kept. Additionally, it was observed that some children did not consume the tablet after receiving it. This process should be integrated with the daily record of attendance, and it can be performed by the care point CHW or shepherd.
- **Growth Monitoring –** Growth monitoring should be performed following the WHO standardized protocol and can be integrated into the child's annual wellness visit[34].

This process includes calculation of the child's BMI and MUAC scores, which are indications of appropriate growth and malnutrition respectively[35]. If necessary, care point CHWs or shepherds can be trained to perform these tasks by the AIM nurse.

- **Health/Hygiene Education –** The newly hired AIM nurse noted that children and care givers are not yet practicing appropriate hand washing techniques following toilet use or prior to meal consumption. Therefore, a reinforcement of the basic WASH (water, sanitation, and hygiene) principles is necessary, and the CHW or shepherd must enforce the implementation of these principles at each care point on daily basis. Successful implementation assumes an adequate provision of necessary soap, clean running water, and toilet paper at each care point.
- **Dental Education/Supplies –** It is recommended that the OVC at each care point receive routine instruction on dental care, and that tooth brushes, tooth paste, and floss be supplied to each homestead multiple times throughout the year. AIM may consider requesting that short-term mission teams sponsoring each care point provide the necessary dental supplies. A cost comparison is recommended for the purchase of these supplies within Swaziland compared to purchasing them in the U.S.
- **Improved Water Sources –** The staff of Children's Cup noted a pronounced improvement in the health of OVC in the months following installation of clean water sources at their care points. Currently every AIM care point is either equipped with a functioning bore hole or fresh water is delivered to those care points where the bore hole is nonfunctional. Therefore, it should be a priority to repair nonfunctional bore holes at each care point, and the provision of clean water should be a prerequisite for opening new

care points. Additionally, it is recommended that the CHW for each care point assess the source of water for each homestead in order to holistically address this issue for OVC.

- **Improved Nutrition –** OVC at AIM care points currently receive high protein fortified rice from A Child's Hope International as their daily meal. Pre-school aged children receive additional porridge in the morning made from locally purchased maize meal. At select care points these meals are supplemented with locally grown vegetables from care point gardens. It is recommended that the provision of fresh vegetables be extended to every care point, which will necessitate the initiation of additional care point gardens.
- **ORS for Diarrhea –** Diarrhea and subsequent dehydration can be potentially life threatening for infants and small children, and its causes and effective treatment are often unknown to rural Swazi families. Therefore, it is recommended that all care point CHWs, shepherds, and volunteers be trained to recognize signs and symptoms of dehydration, and to prepare and administer oral rehydration salts (ORS) as necessary. (See WHO/UNICEF documents for current ORS standards.)
- **Home Visits –** Cabrini Ministries Swaziland credits much of the success of its health program to the provision of HBC (home based care), which allows their staff to become knowledgeable about the home environments of their patients. Similarly, because OVC receiving services at AIM care points do not live on site, it is critical to assess the type of environment in which each child is living and the implications that environment has on the health of the child. An assessment of the homestead should include: whether an adult is present in the home, the type and quantity of meals provided at home, the source of water for the homestead, provision of soap for hand washing and bathing, the type of

dwelling the OVC sleeps in, the presence of chronically ill relatives, and whether cooking is done within the residence or in a separate location. The task of conducting home visits could be given to the care point CHW or care point shepherd.

- **Vaccination Follow-up –**AIM should confirm that OVC under their care have received all of the required immunizations in order to prevent unnecessary childhood illnesses. Confirmation of a child's vaccination history could be integrated into the annual wellness check-ups or conducted at other routine points throughout the year.

Diagnostic and Curative Services

HIV

- **HTC –** Making HIV testing and counseling available to OVC and their guardians at the care points inevitably leads to earlier diagnosis and enrollment in treatment for HIV positive community members. In Swaziland consent for testing is required for children under the age of 14. Families and guardians of children presenting to the care points with the signs and symptoms of HIV infection should be sought out for consent of testing. Currently, the AIM nurse is the only staff member who is HTC trained, therefore it is recommended that AIM train additional HTC counselors. HTC counselors are an integral part of all five of the surveyed organizations serving OVC in Swaziland. Those organizations agreed that any testing that results in a positive diagnosis must be linked to enrollment in treatment at the nearest health clinic or hospital, and the patient must receive ongoing adherence counseling to ensure effective treatment. For example, through a strong partnership with the Baylor Clinic and commitment to rigorous follow-

up, Children's Cup is effectively managing 135 HIV positive OVC and caregivers.

- **ARV Adherence Counseling –** The successful treatment of HIV requires strict adherence to treatment protocols. Though the acquisition of free ARVs may come through a local health clinic, AIM HTC counselors will be uniquely positioned in the community to ensure that newly enrolled patients are adhering to their treatment regimens. AIM should be prepared to provide subsidized transportation for OVC and volunteers for ARV refill appointments to ensure treatment adherence. At care points where multiple patients are enrolled on treatment, it is possible for an AIM nurse to acquire and deliver the medication directly to the care point for distribution in order to reduce transportation costs.
- **PMTCT –** Adherence counseling must be complemented by information for expectant mothers regarding the prevention of mother-to-child HIV transmission. It is advised that this service be targeted to all AIM volunteers, as well as any expectant mothers who interact with the care point staff.

Tuberculosis

- **TB Screening –** The CHWs for each care point should be trained by the AIM nurse to recognize the signs and symptoms of tuberculosis, and identify children who may be infected. Sputum samples can be collected on site by the AIM nurse, and sent to the nearest laboratory for diagnosis. Baylor is currently the leading expert on the treatment of pediatric cases of tuberculosis in Swaziland, and they should be consulted following a positive culture diagnosis. Like ARVs, tuberculosis therapy requires strict adherence to

treatment protocols, and AIM health care staff should ensure that any OVC diagnosed with TB adheres to his or her treatment. Active case finding will also be useful for the prevention of new infections on homesteads where relatives have active or latent TB. Homesteads found to have a TB positive resident should be educated on the modes of transmission and the methods of prevention for others living on the homestead. This underscores the necessity of integrating home visits into the OVC health program.

Malnutrition

- **Malnutrition Screening and Nutritional Support–** The CHWs and care point shepherds should be trained to recognize the signs and symptoms of malnutrition and they should refer any suspected OVC to the AIM nurse. Appropriate nutritional support should be supplied to the guardian of the malnourished OVC, and routine follow-up visits scheduled every two weeks to monitor the child's progress.

6.5 Referrals

Referral Network

In their initial request, AIM sought to develop an appropriate response to the health needs of OVC that effectively utilizes the existing health system of Swaziland. Subsequently, the following diagram outlines the levels of care available in Swaziland, and an explicit description of this system follows the image.

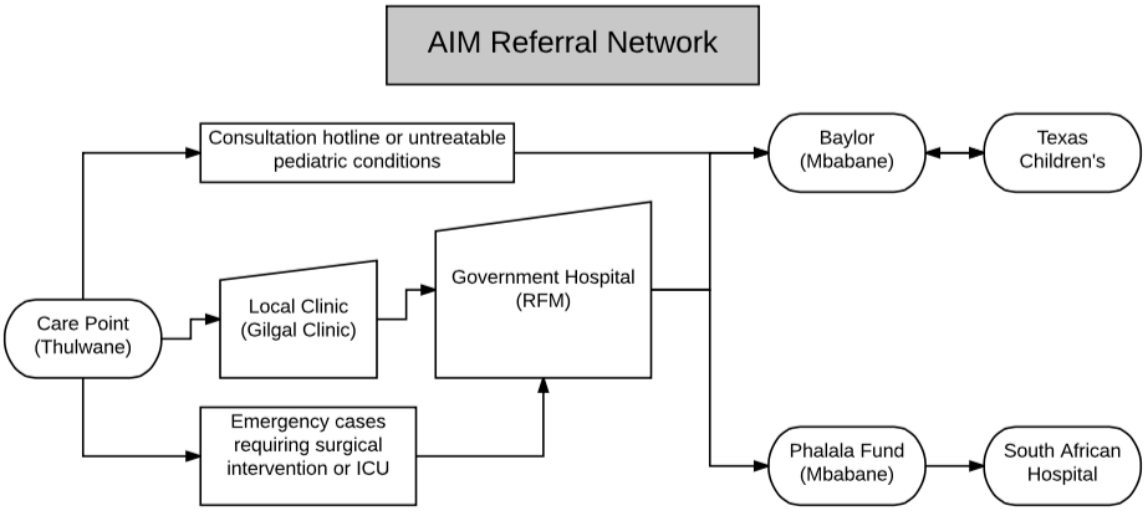


Figure 2. Proposed AIM Referral Network.

When an OVC or caregiver presents with an illness or injury at the care point, the CHW assesses the patient and either treats them on site, refers them to the appropriate health facility, or consults with the AIM nurse for an appropriate action plan. First aid and general wound care are provided on site by the CHW, and illnesses requiring medication beyond the scope of the CHW's abilities either await treatment from the AIM nurse or are referred to the local clinic if a nursing visit is not scheduled in the near future. Emergency cases requiring invasive procedures, such as those involving fractures or those that are life threatening are to be referred to the nearest government hospital. In these cases emergency referral funds can be accessed for transportation and consultation. When the CHW identifies a potential chronic illness, the patient is screened by the nurse or HTC counselors and referred to the nearest clinic for initiation of the appropriate therapy. All unusual conditions for which no diagnosis or treatment plan has been made at government hospitals are to be referred to the Baylor Clinic in Mbabane. Alternatively, conditions that are diagnosed but unable to be treated in Swaziland can be referred to the Phalala

fund within the government hospital in Mbabane (A physician's referral is required). If approved, these patients will be sent to South Africa for treatment at no cost to the patient. At any point, consultation with a Baylor physician is available to the AIM nursing staff through the 24-hour Baylor hotline, which operates Monday through Friday.

Referral Fund

Based on an effective referral system implemented by the Children's Cup staff, it is recommended that AIM create an emergency referral fund of 50 emalangeni at each care point. These funds are available for the transportation of patients and medical consultation in emergent situations or by request through the nurse's referral. A detailed explanation of appropriate reasons for use of the funds must be disseminated, and strict documentation should be required each time the funds are used, including receipts from the medical consultation.

Documentation and Referral Follow-up

There are multiple points in the referral network where a patient could be lost to follow up or fail to complete his or her treatment. An effective use of this network requires either accompaniment through the entire process and/or thorough documentation of each step involved and the ultimate outcome. Therefore, it is recommended that AIM subsidize the transportation costs incurred for referrals and develop a field on their medical forms to document this process. The table below includes sample referral fields for the medical record.

Table 11: Sample Fields for Effectively Tracking Referrals						
Care Point: Thulwane						
Patient Name	**Date**	**Reason for referral**	**Referred to**	**Outcome/Diagnosis**	**Next Steps**	**Cost**
Khumalo, Bongani	6/12/15	Lymphadenopathy	RFM-Manzini	Cancer	Referred to Phalala Fund	•24 E-transport •15 E-Consultation
Khumalo, Bongani	6/15/15	Referred from RFM: cancer diagnosis	Phalala Fund	Submitted Application for travel to SA for treatment	Awaiting application approval	•24 E-transport
Khumalo, Bongani	7/10/15	Cancer diagnosis Phalala Fund Approval	SA for treatment	Surgery in SA	Awaiting result of surgery	•Government Subsidized

During an organizational assessment, the staff at Kudvumisa Trust implored other organizations to remember that an accurate diagnosis of a life threatening condition, without the funds to complete the referral process and receive treatment, is a crippling death sentence for the poor in Swaziland.

6.6 Strategic Partners

The following section includes a list of key partners who contributed to the development of the health program proposal, and other organizations that provide support services integral to the program proposal. A list of contacts for these partnering organizations is included in the Appendix of this document.

Emory University Rollins School of Public Health – Conducted research and provided programmatic recommendations for the development of the OVC health program.

Baylor Clinic Mbabane – The director of Baylor's main clinic in Mbabane requested that AIM utilize their services for any OVC who present with unusual pathologies that cannot be diagnosed or treated at the government hospitals. Baylor will provide an initial consultation for these patients free of charge and will consult with their colleagues at Texas Children's Hospital

when necessary for diagnoses and treatment advice.

Baylor Satellite RFM – The satellite Baylor clinic, located within RFM, should be used for the diagnosis of pediatric HIV or TB in the Manzini area. Their physicians will also be able to provide specialized care for any patients requiring second or third line ART.

Government Hospitals – Mbabane Government, Good Shepherd, and RFM hospitals play an integral role in the referral system to be utilized by AIM. Therefore, it is advisable that the CHWs and shepherds from each care point become familiar with the nearest government hospital and learn which services require referral to these larger facilities. Consultation fees and the cost of transportation should be documented in each care point's referral document. According to the Children's Cup staff, the acquisition of crutches and wheelchairs for OVC is possible through contacts at Mbabane Government hospital at no charge.

ICAP – Technical assistance and questions regarding the national referral system should be directed to ICAP. This organization will also be a useful reference when seeking additional training for AIM health care workers.

Local Health Clinics – It is advisable that a relationship be developed between the CHW and shepherd from each care point and the staff at the nearest government health clinic. The CHW and shepherd should become familiar with the services and medications available at the local clinic, and develop an understanding of which health conditions are appropriate to refer to that particular facility. When possible, a contact phone number should be acquired from the clinic staff for input in the referral document for each care point. The distance to the clinic and the cost of transportation should also be documented in each care point referral document.

TASC – This organization is located in Manzini and provides six-week trainings for HTC-VCT counselors. The cost of training is approximately 500 USD per participant.

The Luke Commission – Mobile clinics hosted by TLC are conducted on a weekly basis throughout the country, and medical services are rendered at no cost to the patient. These clinics offer comprehensive medical services that include diagnostic devices typically found only at the government hospitals. Therefore, based on the limited number of AIM health care staff and the related infrequency of nurse visits to each care point, it is recommended that AIM encourage the OVC and other community members with medical complaints to attend any TLC clinics in close proximity to their community. AIM staff should request that all OVC under their care who are treated at the mobile clinics bring a record of their visit to the care point for effective follow up.

6.7 Monitoring and Evaluation

Data Collection

In order to measure the success of AIM's OVC health program it is imperative that quality data be collected every month. A biannual review of these data will identify unmet gaps in AIM's health program and assist with a performance evaluation of the health care staff. Good data collection involves the selection of appropriate indicators prior to the initiation of the health program, adequate training for all those involved in data collection, and periodic checks to ensure the accuracy of the data. The United Nations Development Program's Handbook on Planning, Monitoring and Evaluation for Results suggests that a good indicator is specific, measurable, assignable, realistic, and time-specific (SMART)[36]. A suggested list of monthly and biannual indicators can be found in table twelve below in the sample indicators section.

Though the benefits of electronic mobile data collection tools were considered, none of the other organizations in Swaziland that were assessed used these tools, nor did they recommend them. A poor internet network connection, possible theft, and additional training requirements were cited as reasons for dissuading AIM from utilizing a mobile data collection system. That said, AIM can explore the use of mobile data collection in conjunction with the implementation of the cloud-based profile system currently being trialed by Children's Hope Chest. For all other health records it is recommended that a health care ledger be kept on site at each care point, and that the designated care point shepherd or CHW enter the data from the ledger once per month into an electronic database. Microsoft Access and Excel programs will be the simplest and most cost effective tools for a basic aggregation of all care point data. (Contact Bongani Khumalo, medical director of CMS, for more information regarding printing duplicate ledger books in Matsapha.)

Based on the limited number of current AIM health care staff, the proposed OVC health program should be progressively implemented in three phases. During the pilot phase, or Phase 1 of the program, the CHWs will be trained and data collection should begin at the five care points located around Manzini. These data can be compared to data on the same indicators from other AIM care points where the program has not yet been implemented in order to demonstrate its impact; this is known as a stepped wedge evaluation design. The benefits of this type of design include a progressive roll out of the program as funding becomes available, and the generation of impact data that demonstrate the effects of the program at sites receiving the intervention

compared to sites without the intervention. During Phase 2 of the program monthly data collection will be extended to 18 additional care points, with the exception of those in the Nsoko region. In Phase 3 of the program, data collection will be extended to the remaining care points, and at this point country wide AIM aggregate data will become available on the database.

Sample Indicators

Table 12 includes suggested indicators to be measured at each care point. These indicators should be adapted where necessary through consultation with the temporary M&E officer, who is to be hired during Phase 1 of the program.

Table 12: Monitoring and Evaluation of the OVC Health Point Program		
	Indicators for OVC Care	**Indicators for Volunteer Care**
Monthly Indicators Collected at Each Care Point	Avg. # Children attending care point daily # Fortified meals provided to OVC # OVC treated for acute illness on site (by illness) # OVC screened/counseled for HIV # OVC newly enrolled on ART # OVC screened for TB # OVC Newly enrolled on TB therapy # OVC/guardians adherence counseled # OVC screened for malnutrition # OVC diagnosed with malnutrition # Malnourished OVC given nutritional support # OVC on ORS # Referrals made (by reason for referral) # Referral forms completed Amount of Emalangeni Spent on transportation # Health education lessons delivered (by topic) # Home visits completed # OVC identified/counseled for vaccination completion	# Treated for acute illness on site (by illness) # Screened/counseled for HIV # Newly enrolled on ART # Screened for TB # Newly enrolled on TB therapy # Adherence counseled # Referrals made (by reason for referral) # Referral forms completed Amount of Emalangeni Spent on transportation
Biannual Indicators	# OVC receiving deworming tablets # OVC receiving multivitamins	
	Annual OVC Outcome Measures	
Per Care Point	Rate of acute illness Rate of malnutrition # OVC received wellness check-ups % Regular attenders who received wellness check-ups # Child headed homesteads identified % OVC fully immunized # OVC on ART # OVC Treated/Currently on TB Therapy	
*Each care point shepherd or CHW should enter their monthly data into an Access database at the AIM office or remotely, allowing for the monthly production of aggregate data for the entire OVC program.		

Donor Reports

In addition to measuring the effectiveness of the OVC health program, monthly care point data can be used to produce donor reports demonstrating the programs impact at each location. Collection of these types of data would also make AIM eligible for periodic grants released by USAID and other organizations, fostering greater collaboration with other NGOs in Swaziland.

6.8 Health Records

It is strongly advised that AIM staff develop a streamlined health record system to accompany the OVC health program so that the medical staff is not burdened with excessive paper work and lengthy data entry. A well-planned medical record system can both expedite the training of new staff members and allow for program expansion. Conversely, a poorly planned system can add unnecessary time and frustration for health care workers, negatively impacting the quality of care they provide. The following sections include considerations that should be made when developing AIM's medical record system.

As previously mentioned, the research team explored the benefits and drawbacks of implementing an electronic system that allows health workers to capture data on mobile phones or tablets at the care points in lieu of paper forms. In the final analysis, the health care staff's unfamiliarity with electronic systems, poor network coverage at some care points, excess costs for mobile data, and the potential of device theft led the researchers to conclude that mobile data capture is an unnecessary and cumbersome component to be included in the initial phase of the program. Furthermore, none of the other five organizations assessed were using this technology, and all of them discouraged its use in the context of Swaziland.

Consequently, it is recommended that AIM implement a streamlined system of paper medical records that can be filled out at the care points and later entered into a database at the AIM office or at remote sites with an internet connection. For the ease of tracking a patient's history on multiple forms, and because multiple children at a care point may share the same name, it is recommended that each child be given a unique identifying number. This identifying number

should also include some characters indicating which care point they attend (e.g., Bongani Khumalo at the Thulwane care point might be coded: Thw001) Ideally these ID numbers would also be used for the child sponsorship program.

It is important that all medical records are stored in a safe place that is not accessible to the general public in order to protect patient privacy. It is also useful to have duplicate copies of each medical encounter so that both clinicians on site at the care point and those at the main office have access to a patient's record. Therefore, it is recommended that AIM invest in medical ledgers that create duplicate carbon copies of each medical encounter. These ledgers would be kept on site at each care point, and duplicate copies of each encounter would be taken to the main office and filed into each patients file on a weekly basis. This process ensures a back-up copy of each encounter is available in the case of theft or damage at the care points. In order to maintain a simple records system, the following four forms should be created in duplicate format: an (1) an Acute Encounter form, (2) a Wellness Check-up form, (3) a Health Care Worker Task form, and (4) a Monthly Care Point Encounters form. (See the sample forms from other organizations included in the Appendix.) It should be noted that both the Acute Encounter and Wellness Check-up forms include a detailed section for documenting referrals and their outcome. Following recommendations from TLC, the fields on each form should be tailored to require minimal writing by including options to be checked or circled, minimizing errors in the field and increasing health worker productivity.

In order to produce electronic, countrywide data, the care point shepherds are responsible for entering duplicate forms into the Microsoft Access database and then filing the forms into the

patient's file at the AIM office. This process should be completed on a weekly basis, and it will eliminate the need to hire additional data entry staff. At this stage the M&E officer or the medical director could query the aggregate data in the database to monitor the impact of the health program, identify illness trends at different care points, and create donor reports. Access to the database could also be granted to the U.S.-based director to generate additional reports, for the use of the unique identifying number for each patient protects their privacy. (Note: Prior to finalizing and printing the medical forms, consultation with a data entry specialist is recommended to ensure that the forms are adapted for easy data entry. Once the forms are printed, copies could be sent to AIM's IT staff in Gainesville, Georgia to inform the development of the Access database.)

6.9 Timeline

The following is a suggested timeline for the implementation of the OVC health program at the AIM care points. The associated costs for training and hiring additional staff are included in this table, but a more detailed analysis of program costs will be included in the subsequent section.

Table 13: Timeline for Implementation of the Proposed OVC Health Program				
	Research Phase	**Phase 1 (Pilot)**	**Phase 2**	**Phase 3**
Suggested Timeline	6/15 - 8/15	9/15-12/15	1/16-6/16	7/16-12/16
Additional Staff Requirements	0	(1) M&E Officer (Temp.)	(1) M&E Officer (1) Nurse	(1) Nurse
Total Medical Staff	2	3	4	5
Added Cost of Salaries/Mos.	$ -	$ -	$ 1,600.00	$ 800.00
Added One Time Costs	$ -	$ 1,000.00		
Training				
Internal Training	Select CHW for Phases 1 & 2	Train CHWs for 5 Manzini Care Points	Train CHWs for Additional 18 Care Points	Select and Train CHWs for 10 Nsoko Care Points
External Training		(2) CHWs HTC Trained	(1) Additional HTC Trained	
Associated Costs	$ -	$ 1,000.00	$ 500.00	$ -
Tasks				
Medical Director	•Research referral system •Research Supply Chain •Cost Comparisons •Define CHW Roles •Select CHWs •Develop medical forms and print ledgers •Develop Access database	•Work with temporary M&E Officer to determine indicators and develop health database. •Train CHWs in first aid, fire safety, effective use of the referral system, and data entry.	•Train CHWs in first aid, fire safety, effective use of the referral system, and data entry.	•Train CHWs in first aid, fire safety, effective use of the referral system, and data entry.
Lead Nurse	•Collaborate with medical director to develop health ledgers and Access database.	•Train CHWs in: growth monitoring, tablet administration, ORS for diarrhea, signs and symptoms of HIV, TB, and malnutrition.	•Train CHWs in: growth monitoring, tablet administration, ORS for diarrhea, signs and symptoms of HIV, TB, and malnutrition.	•Train CHWs in: growth monitoring, tablet administration, ORS for diarrhea, signs and symptoms of HIV, TB, and malnutrition.
M&E Officer		•Consult with medical director and lead nurse to create appropriate indicators and the health database. •Train CHWs in quality data collection	•Manage health database and produce monthly reports. •Oversee data entry process.	•Manage health database and produce monthly reports. •Oversee data entry process.
Evaluation Points		Dec-15		Dec-16
			One Time Staffing Costs	$ 2,500.00
			Additional Monthly Salaries From July 2016 onward	$ 2,400.00

6.10 Budget

The following chart includes the initial budgetary requirements to launch the on-site component of the health program, as well as the program's monthly cost from Phase 3 of implementation onwards.

Table 14: Proposed OVC Health Program Budget (Amounts in USD)						
	Research Phase	Phase 1	Phase 2	Phase 3	Monthly Costs By Phase 3	Conservative Estimate (Phase 3)
Staff	$ -	$ 1,000.00	$ 1,600.00	$ 800.00	$ 2,400.00	
Training	$ -	$ 1,000.00	$ 500.00		$ -	
Emergency Referral Fund for all Care Points	$ -	$ 133.00	$ 133.00	$ 133.00	$ 133.00	
Operational Costs based on May 2015 Expenditures (Restock, Petrol, Airtime)	$ 214.00	$ 214.00	$ 214.00	$ 428.00	$ 428.00	
First Aid Kits, Scales, and Measuring Tapes for all Care Points	$ 2,681.25	$ -	$ -	$ -	$ -	
				Total One Time Expenses	$ 5,181.25	$ 5,500.00
				One Time Expenses Per Care Point	$ 157.00	$ 167.00
				Total Monthly Expenses	$ 2,961.00	$ 3,500.00
				Total Monthly Expenses Per Care Point	$ 89.72	$ 106.00

There are additional anticipated costs associated with the referral arm of the program that could be not accounted for in this budget. These expenses will include non-emergent referrals, consultation fees, and medical procedures. The cost of non-emergent medical referrals will depend on both the cost of transportation between each care point and the associated health facility, and the per care point average monthly frequency of these referrals. Further research is required to determine the consultation fees at each facility. Finally, an inquiry has been made into the explicit costs of each type of medical procedure at government health facilities, and this information should be available before the conclusion of the research phase of the program. The following form is an example of the outstanding information required from each care point in order to make referral budgetary projections.

Table 15: Referral Costs Inquiry Form to be Completed During Program Research Phase				
Care Point Name	Distance to Health Facility	Health Facility Name	Cost of Round Trip Referral	Consultation Fee
Thulwane	5km	Gilgal Clinic	10 E	15 E
*This information should be compiled for each care point prior to the program pilot phase. E= Swazi Emalangeni				

6.11 Assumptions and Limitations

Funding – This proposal assumes that AIM's has adequate funding to allocate to developing and sustaining an OVC health program or that the necessary funding will be fundraised. The program proposal includes a one-time cost of 5,500 USD and an additional monthly expenditure of 3,500 USD (primarily dedicated to hiring and training staff, and emergency referral funds for the care points). These figures do no include projections for the ongoing costs incurred for non-emergent referrals, and subsequent consultation and treatment costs. That said, a strict review of monthly expenditures is built into each phase of the program, and an average monthly cost per care point should be derived at the end of Phase 1 of program implementation.

Availability of AIM Staff – One critical aspect of this proposal is the inclusion of AIM staff in Swaziland into the health program, where a number of them will be trained to function as community health workers. This component of the program assumes that the care point shepherds have the aptitude and ability to fulfill this role, and that these new responsibilities are reasonable additions to their current job descriptions. If these assumptions are unrealistic, the program cost would need to be altered to account for the salaries of additional staff. The program proposal also assumes that the IT staff from AIM's home offices in Gainesville, Georgia has the

time to devote to developing a Microsoft Access database for the health program. If this assumption is not correct, additional costs would be incurred to hire an external IT consultant to create the health system database.

From Mission to Development – Throughout the research phase of developing this proposal it became apparent that the recommendations align more with a development organization paradigm than a mission organization paradigm. This proposal assumes that AIM staff members will embrace this type of transition, or at least begin to bridge the divide between the two disparate approaches of "serving the poor." Among the many changes this type of paradigm shift would bring, the most notable include capturing and tracking data on the organization's projects and conducting ongoing monitoring and evaluation to improve its programs. Cabrini Ministries Swaziland made a similar intentional transition in 2004 in response to the HIV/AIDS crisis in Swaziland, and their executive leadership should be consulted about this process.

Additional Research – One of the greatest limitations to this proposal is the limited time that was available to conduct research. Therefore, additional research will be necessary during Phase 1 of project implementation.

Referral Network – Though a general outline of the referral network in Swaziland was developed, specific referral pathways should be documented for each care point. Therefore, it is recommended that the AIM health care staff develop partnerships with the staff at the clinics in closest proximity to each care point. Those conducting this research should determine available

services at each facility and the distance and cost of transportation from the care point to the clinic, and they should obtain multiple contact numbers for each clinic.

Provider Partnerships – One meaningful suggestion made by the director of Kudvumisa Trust during an interview was to develop partnerships with health care providers in each region. For Kudvumisa Trust this came in the form of an official letter from the MOH requesting that all local clinics in their catchment area partner with their organization and that they welcome all referrals made to the clinic. Another suggestion was to establish a monthly fee paid to a private clinic in exchange for a specified number of monthly OVC visits to the clinic.

Cost Analysis – Further analysis of projected costs for implementation of the OVC health program is needed. Projections should be made for the following categories: consultation and treatment fees at each health facility, cost of transport between each care point and the linked referral facilities, and one-time and on-going printing and stationary costs for medical records.

Mobile Data Capture – One of AIM's strategic partners, Children's Hope Chest, is currently developing a mobile data system where staff members will profile sponsored children at each care point on an android platform tablet. While the use of mobile data capture was discouraged for ongoing data capture, one potential use includes the creation of digital annual wellness check-up forms. Special care should be given to patient privacy rights and how to restrict access to sensitive health data on cloud based systems. EGPAF has been trialing the use of similar

technology in Rwanda for its HIV research programs, and they could be consulted if this type of system is being considered for AIM's programs.

Nutrition Consultation – Primary food served at the care points is a protein-fortified rice from A Child's Hope International. Multiple shipments are received each year and transported to Swaziland for distribution at the care points. Nutrition plays an integral role in child development and health, so it is advised that a nutritionist in Swaziland be consulted to determine whether any other local foods should be used to complement or supplant the fortified rice meals served to OVC. Purchasing locally grown agricultural products would benefit the local economy and facilitate a more sustainable long-term program model.

Cost of Treatment – One critical question left unanswered by this proposal is whether AIM will cover the cost of treatment for all OVC referred to the local clinics and government hospitals. Though the government of Swaziland subsidizes ARVs, TB therapy, deworming tablets, multivitamins, and some other preventative services, the cost of lab work, surgeries, and other complex medical procedures varies and may not be free. Therefore, it is recommended that AIM medical staff acquire a list of services available at each government facility and the associated costs for each service. The director of AIM Swaziland and the health care staff will use this list to determine which services AIM will commit to subsidizing for cases where a guardian is not present or is unable to afford medical care.

Chapter 7: Discussion and Conclusion

7.1 Demand for an OVC Health Program

The HIV/AIDS pandemic undoubtedly decimated the population of Swaziland in the late 1990's and early 2000's, crippling an already weak health system and creating an orphan crisis across the Kingdom. As the pandemic raged on numerous multinational, governmental, and non-governmental organizations responded to the crisis and developed programs targeting those affected by HIV/AIDS. Adventures in Missions was one of those organizations that responded, and in 2004 joined a campaign to bring HIV education and prevention to every high school in Swaziland.

Following the campaign, AIM relocated its operations to the eastern region of the country to assist a local pastor with the development of eight neighborhood care points. The care point program began with volunteer cooks who served meals out of mud-and-stick kitchens to nearly 600 OVC east of Manzini. As the program evolved, more volunteers were recruited, and AIM started additional care points at other locations across Swaziland. Concurrently, the care point program expanded to include the provision of clothing, education, and Christian spiritual formation (discipleship) through a partnership with Children's Hope Chest. By January 2015, AIM and its partners were providing services to more than 6,000 OVC at 33 care points, with a staff comprised of 30 full time Swazi employees, 12 foreign missionaries, and more than 60 community volunteers. To date Aim continues to field numerous requests to start additional care points in communities across the country.

Though the care point program has been in existence for a decade, there has never been a formalized health program for the OVC under AIM's care. In addition to the common childhood illnesses seen in many low-income rural African settings including infection, pneumonia and diarrhea -- Swaziland's OVC population suffers disproportionately from HIV, tuberculosis, and malnutrition[1, 2, 10]. An exceedingly high unemployment rate (60%) and a large number of child-headed households create additional barriers to accessing health care and maintaining child health for the OVC that AIM serves. Subsequently, international guidelines mandate that comprehensive OVC services include the provision of health services. Therefore, as AIM's programs move toward a more comprehensive and sustainable model of care, it is imperative that an OVC health care component be developed.

7.2 Implementation

AIM and its strategic partners recognize the impact that ill health can have on a child's physical, spiritual, emotional, and educational development. They also recognize that chronic ill health among OVC often leads to a failure complete elementary or high school, unemployment, and strained relationships -- all of which put families at an economic disadvantage. Therefore, illness is a barrier to achieving the programmatic goals that AIM and its partners share for the OVC at each care point.

In order to ensure that OVC have access to comprehensive health services, the proposed health program blends on-site diagnostic, preventative, and curative services with a detailed referral network that capitalizes on services provided by other entities. The program necessitates the

collaboration of various members of AIM staff including nurses, HTC counselors, care point shepherds, and volunteers. It includes continual and precise measurements of program outcomes through a streamlined monitoring and evaluation plan. These data are then used highlight the successes of the intervention and to identify opportunities for improving the delivery of health services where they are needed most.

The proposed OVC health program has a high propensity for success for a number of reasons. The initial investment required to launch the OVC health program is minimal (5,500 USD), and the monthly costs are reasonable if shared across the various care point supporters (106 USD/care point). Limited staff additions will be required to implement the program at each care point, because the program plan capitalizes on current personnel through training AIM staff to fulfill supportive roles. All OVC at the care points currently receive limited or no curative health services, they can rarely afford transportations costs for referrals, and routine wellness check-ups are unheard of. Therefore, the proposed OVC health program will fill an immense gap in the provision of care to more than 6,000 OVC in Swaziland.

7.3 Program Progression and Inputs

Funding - AIM differs from other development organizations in that its primary funding sources are churches and individual donors. Through a partnership with Children's Hope Chest most care points are connected to a sponsoring church committed to support that care point for a minimum of five years. Dividing the cost of implementing the health program across this structured support system makes the program both affordable and more sustainable. Additionally, the

program's impact will be measurable and reportable through a basic monitoring and evaluation plan to ensure donor satisfaction and sustain their continued involvement.

Phases - The health program is structured into a research phase plus three additional phases, incrementally building upon the successes of each previous phase. The benefit of the stepwise progression is that each phase will inform subsequent phases through monitoring of predetermined indicators and program expenses. For example, the program will begin at limited sites in close proximity to Manzini to allow for weekly adjustments made to improve service delivery. Once the program methods are refined, Phase 2 allows for a more precise per care point cost estimate. Phase 3 of the program will extend health service delivery to the most rural locations in Nsoko, completing health coverage for all AIM care points.

Partners - Developing new partnerships at the local and national level is an integral part of implementing the proposed OVC health program. During the early phases of the program AIM will collaborate with TASC and ICAP, two organizations with a nationwide reach in health care. HTC training through TASC will equip select AIM staff with the skills to diagnose and refer HIV cases from the care points for treatment. This partnership will also connect AIM to a local organization at the forefront of the national health care plan, facilitating a stronger connection to the national health objectives. ICAP will assist AIM staff to identify the most effective use of the national referral network, and the available health services in each region of the country. ICAP will also be a tremendous source of national level data against which AIM can compare the efficacy of its health program.

Two of the most critical partnerships that will inform the OVC health program will be AIM's collaboration with local clinics and maintaining an ongoing dialogue with each care point committee. According to the national health model, no care point should be more than eight kilometers from a health facility, and developing a relationship with staff at each of these clinics is an extremely important task for the CHWs and care point shepherds. This will facilitate effective referrals from the care points into the national health system. Another previously unmentioned development within AIM's organizational structure is a plan to develop committees at each care point, comprised of local leaders and community members who will inform the program development process at each site. These committees will play an integral role in ensuring that health services reach the most vulnerable OVC in the community, and assist with the identification of vulnerable child-headed household.

Expansion - AIM continues to receive requests to start additional care points in various parts of the country, and they plan to add additional care points in 2015. Therefore, it is important that the health program is well documented and that it can expand to new sites with relative ease. One of the primary purposes of implementing the OVC health program in phases is to refine the per care point cost of the program. It is anticipated that the initial budgetary projections will be adjusted during Phases 1 and 2 of the program, so that by Phase 3 a precise cost per care point cost known for future expansion. Expansion to nascent care points will also include the selection and training of a care point CHW, and checks to ensure that AIM has enough nurses and HTC counselors to serve additional sites. Based on recommendations from Children's Cup it is

advisable to consider maintaining a ratio of one nurse and one HTC counselor for every 10 care points. Ideally both the nurse and HTC counselor are stationed in close proximity to the cluster of care points for which they are responsible.

7.4 Closing Considerations

Critical Reflection

During the data collection and analysis process of this Special Studies Project some critical questions arose regarding the current and future status of AIM's OVC program that are worth consideration. While visiting one of the AIM care points in a remote village, it was discovered through an inquiry of community members that two men had fathered more than 60 children in that community, a number of which were receiving services at this particular care point. It was discovered that a number of children from these two families had also been receiving educational assistance from AIM, but they were now out of school due to inadequate grades and spent much of their days sitting at home. This begs the question of whether or not AIM staff knowledgeable of the existence of these types of family structures, and if continuing to provide services for such families without addressing the underlying issues of a lack of family planning and subsequent poverty is wise. At the very least, the graduate research student recommends that AIM care points shepherds become responsible for investigating the home situations of all OVC receiving services at the care points, in order to determine the best method of providing services without creating an unhealthy dependency of charitable programs. Therefore, in order to develop its health program, in addition to further refining other OVC services such as educational support, it

is recommended that AIM staff first become knowledgeable of the home environment from which each child comes.

Another critical question regarding the future of AIM's programs has to do with the long-term sustainability of the sources of funding for each care point. Supporting churches currently commit to support all care point activities for a period of five years, and the possibility of terminating that support exists once this commitment is fulfilled. The research conducted did not determine whether a strategic plan exists to maintain these and other sources of funding beyond the scope of the current commitments, so this remains a critical area of concern to be addressed. The apparent lack of a long-term sustainability plan underscores the need for an effective monitoring and evaluation plan to generate data that demonstrates the efficacy of AIM's programs to both current and future donors.

During the research phase it was determined that at least 18 of the care points do not maintain a garden, and at least 12 do not have a functioning borehole. Based on recommendations from multiple organizations these two areas are opportunities for immediate improvement to be made at the care points that can directly impact the health of the OVC. The Children's Cup staff often mentioned the notable improvement in the health of OVC at their care points after the installation of a reliable water source occurred. Access to clean water through a borehole is critical because it not only provides water for the daily care point activities, but also provides a source of clean water for homesteads where the OVC stay. (This assumes the water source is available to the community after care point hours of operation.) Furthermore, produce from care

point gardens can be used to supplement the fortified rice or maize meal served to the OVC in order to improve their nutritional status, and excess produce can generate additional revenue for other care point activities.

It is strongly recommended that the AIM medical staff carefully consider how to leverage visits from short-term missionaries and visitors with medical training. This might include developing a brief training that familiarizes visiting clinicians with national medical protocols and procedures, and gives an overview of AIM's medical activities at the care points and how their service fits into the larger scope of AIM's health program. Additionally, AIM medical staff should develop a document that explicitly states which medical supplies, equipment, and medications are useful at the care points, and how they should be appropriately transported/packed based on international regulations. This document should also include the local prices of the materials in Swaziland, and preference should be given to purchasing supplies within Swaziland when possible. Dental hygiene is also a meaningful area where visiting teams could contribute to the medical objectives at the care points through the provision of basic dental supplies.

During the research phase of the project AIM staff were unable to provide complete data for all 33 care points over a two-month period, though numerous inquiries were made to multiple departments (see Appendix Table 3). This poor record keeping underscores the dire need for a trained M&E officer to manage the health data and demographic data for each care point. This person should be hired to oversee the administrative department and would collaborate with the medical director and other upper level AIM staff. It is believed that great improvements made to

generate accurate care point data would improve donor relations and it would allow AIM to track the progress and impact of its programs.

One critical element of the OVC health program is developing standard operating procedures (SOP) for the program, and disseminating those procedures to all AIM staff members. A preliminary SOP was drafted for the purposes of this Special Studies Project, but this document should be amended based on the final program strategy to be adopted by AIM (see Appendix Form 9). Additionally, AIM medical staff should give special attention to the protocols for treatment of community members and other AIM staff and volunteers, areas that were largely unaddressed in this document.

Conclusion

Numerous sources of information were consulted for this special studies project in response to AIM's request for a health program proposal. Research began with a search through primary literature, grey literature, national program documents, grant proposals, and other publications from non-governmental and multinational organizations. Additionally an organizational assessment of AIM, a competitor analysis of five organizations providing exemplary OVC health services, and key informant interviews were conducted in Swaziland. These data sources were analyzed, and the findings were used with the preliminary research to inform the development of the OVC health program presented in this document. At this stage only conservative estimates could be made regarding the cost of implementing the health program, and the success of the proposed program also assumes that numerous current AIM staff will play a role in the new program. Given these assumptions, the program is broken into phases so that a more accurate

program budget can be determined on a per care point basis, and to pilot the program on a small scale initially to identify necessary adjustments to be made. Though the program will require additional inputs of funding, staff, and training, and the ultimate costs of a comprehensive program are imprecise, the potential impact on the health of more than 6,000 OVC under AIM's care make it worth initiating.

Appendices

Appendix Table 1: Comparison of Organizations Providing Medical Care to OVC in Swaziland								
Organization	**Location**	**Medical Staff**	**Patient Load**	**Services**	**Referrals**	**Funding**	**OVC Housing**	**Partners**
Baylor College of Medicine	Mbabane, Manzini, Hlatikhulu	(8) Physicians plus additional nurses and support staff	4,284 patients enrolled on ART	Pediatric HTC, TB Screening, ART Initiation	Refer to Mbabane government hospital and RFM	Grants, Private Donations, Government	None	MOH, ICAP, USAID
Cabrini Ministries	St. Philips in Mhlatuze	(22) Health Care (65 Total Staff)	2,071 medical services from 10/2013-09/2014	Comprehensive services including HIV, TB, and primary care	Refer out surgical cases and child delivery	1/3 Large Grants, 1/3 Cabrini International, 1/3 Small Grants	(80) Children live in Cabrini hostel	MOH, ICAP
Children's Cup	Offices in Manzini and Mbabane plus (19) care points nationwide	(2) U.S. Nurses (2) HTC Counselors	3,500 OVC	First aid, basic medication, annual physicals, HTC, and malnutrition screening at care points	(135) Children and caregivers transported monthly to Baylor for ART	Churches and Private Donations	None	Baylor, RFM, MSF Matsapha
CHIPS/Kudvumisa Trust	Mbabane, Maphiveni, Vuvulane	(4) HTC Counselors, (1) Nurse, (3) Admin, (1) M&E Officer	1,665 HIV or TB patients in 2014	HTC, TB Screening, CD4 Count, ART Initiation	Refer to Good Shepherd Hospital and cover transportation costs	USAID Grants	None	MOH, ICAP, USAID
The Luke Commission	Miracle Campus In Sidvokodvo	(7) Clinicians (90 total staff)	274,117 medical services provided in 2014	Comprehensive medical care through 1 day medical camps	Refer all follow up to appropriate local health facility	USAID Grants, Churches, Private Donations	None	Baylor, ICAP, EGPAF, PEPFAR, USAID
Information Source: Competitive Analysis of Organizations Providing OVC Services in Swaziland								

Appendix Table 2: Key Swaziland Contacts						
Organization	**Contact**	**Position**	**Office Phone**	**Mobile**	**Email/Website/Address**	**Notes**
Baylor	Makhosazana Hlatshwayo	Director	2409-6000	7802-5569	mhlatshwayo@baylorswaziland.org.sz	Contact Baylor for difficult medical cases.
		Consultation Hotline	7848-5571			
Children's Cup	Jessie Bohannon	Nurse		7602-5626	jessie@childrenscup.org	Ms. Carson is now the new medical director and she is the first point of contact.
	Jennifer Carson	Medical Director/Nurse			jennifer.carson@childrenscup.org	
Kudvumisa Trust	Daran Rehmeyer	Director		7602-5992	daran@kudvumisaglass.com	Contact Ms. Malaza for M&E questions and Mr. Rehmeyer for program planning.
	Lungile Malaza	M&E Officer			me-officer@kudvumisafoundation.org	
Cabrini Ministries	Ben Kickert	M&E/Admin/Programs		7683-3330	ben.kickert@gmail.com	Contact Mr. Khumalo for medical questions and Mr. Kickert for data and M&E questions.
	Bongani Khumalo	Medical Director			k.bongani@yahoo.com	
The Luke Commission	Brian Schmelzenbach	Staff Development Discipleship Pastor	2540-0071 / 7613-8814 (Patients)	7802-0282	brian@lukecommission.org	Call the patient office number for inquires about wheelchairs and assistive devices.
PACT					http://www.pactworld.org/country/Swaziland	This organization gives out small grants with some strings attached in order to help develop local recipient organizations.
TASC			505-4790		director@tasc.org.sz http://www.living-with-aids.org/Swaziland/TASC.html	Contact this organization for HTC training in Manzini.
Phalala Fund		Office located within Mbabane Government Hospital.			http://www.gov.sz/index.php?option=com_content&view=article&id=574&Itemid=583	This organization refers difficult medical cases to SA and subsidizes the entire process.
Rocking Horse		Organization frequently partners with Baylor.	2404-8375	7635-5152	office@realnet.co.sz http://off356.wix.com/rockinghorseproject	Provides funding for double orphans who require chronic medical care.
Bantwana	Thulani Earnshaw	Country Director	2505-2848	7643-2289	thulani_earnshaw@sz.worlded.org	Connected to multiple governmental health programs.
Graphic Printers Ltd.			2518-7369		Tabankulu St., Matsapha	Company to contact for printing medical ledgers.

Healthy Child Physicals 2015

Registration Sheet

Personal Information:					
Is the patient a child or guardian? ☐ **Child** ☐ **Guardian**					
Name:	**Surname:**			**AKA:**	
DOB (D/M/Y):	**School / Grade:**			**Sex:**	
Area:	**Chiefdom:** ☐ **Mamba** ☐ **Gamedze** ☐ **Ngcamphalala** ☐ **Other:** _____				
Location of Homestead:					
Head of Homestead:	**Cell #:**				
Relationship of Head of Homestead to Child:	☐ **Father** ☐ **Mother** ☐ **Paternal Grandparent** ☐ **Maternal Grandparent** ☐ **Sibling** ☐ **Other:** _____				
Child Status: ☐ **Single orphan** ☐ **Double Orphan** ☐ **Vulnerable** ☐ **N/A**					
Cabrini Enrolled?	**Yes / No**	**Program:**			
Birth Certificate?	Yes / No	?	**Immunisation Card?**	Yes / No	?
Name of CHM:	**Cell #:**				

Registration Notes:				
Who is present with the child today? What is his or her relationship to the child?				
Does Cabrini Ministries provide care to any close relatives of this child? Please list names and type of care.				
Do you believe there might be any child protection issues on the homestead? Please describe.				
Are there any past or present miners in this child's family? If Yes, please list name(s):				
Other Notes:				
Referral:	☐ Family Services	☐ Childcare	☐ Education	☐ Healthcare
Specific Referral Details:				

Height: cm		**Weight:** kg	**BMI:**	**MUAC:** cm	**Bilateral Edema:** Y / N
Level:	€ Red- Acute	€ Orange- Moderate		☐ White (children)- ok ☐ Green (adults) - ok	☐ Yellow- risk
Other:					

Healthy Child Physicals 2015

Clinical Information Sheet

TB Screening:	**Number:**	**Sputum?**	YES	NO	**X-Ray?**	YES	NO

Questions:

1. Do you or the child have any health concerns or worries?
2. Does the child have a persistent cough?
3. Is there any problem when going to the toilet?
4. Any diarrhoea/constipation?
5. Does the child have any sores or skin problems?
6. Has the child lost any weight?
7. Does the child have any fever (currently or history of)?
8. Has the child collapsed or fallen and lost consciousness?

Eyes € Ok € Red,discharge € Opaque cornea, jaundice € Follow finger (squinting) € Other.....	**Mouth:** € Ok € Candida € Gingivitis € Cheilosis € Kaposi's sarcoma (lift tongue) € Other.....	**Abdomen:** € Ok € Hepatomegaly € Splenomegaly € Scarring € Other.....
Ears: € Ok € Red,discharge € Indrawn eardrums € Acuity € Other.....	**Lymph nodes:** € Ok € Neck € Underarms € Groin € Other.....	**Feet:** € Ok € Oedema (press on dorsal of foot) € Other.....
Hair: € Ok € Lice € Sores € Hair texture € Other.....	**Skin:** € Ok € Ulcers € Fungal issues € Inflammation € Seborrheic dermatitis (healing/not healing) € Other.....	**Cough:** € Ok € Listen to chest (particularly if at risk of TB) € Heart murmur € Raised Respiratory rate € Other.....

Additional Medical Notes:

Healthy Child Physicals 2015

Clinical Information Sheet

Recommend HTC	☐ Yes	☐ No	
Healthcare Follow Up?	☐ Yes	☐ No	
Referral?	☐ Family Services	☐ Childcare	☐ Education
Follow Up or Referral Details:			

TLC Registration Form | Box 41, Sidvokodvo | 7613 8814

W/C - ❑ White ❑ Blue 13 / 17 / 19 ❑ TB Screen
❑ PET ❑ Crank ❑ Child ❑ Pull ❑ Xray of _____

Date ____/____/____ T -

First Name_____ Surname _____

Age _____ // D.O.B ____/____/_____ // Sex M / F // Cell _____

Marital Status Married / Single / Widowed / Divorced // Religion _____

Home Area _____ // Chief _____ // Nearest Clinic _____

Last time at local clinic _____ // Last time at traditional healer _____

Last grade completed _____ // Able to read Y / N // How many at homested _____

Spouse or partner circ / un // Interest in M.C. Y / N // # children had _____ // Still living _____

Work status Empl / Un // Relation to H of H _____ // H of H Work status Empl / Un

Homestead monthly income E _____ // # of meals yesterday _____ // This normal Y / N

Drinking water from lake / river / well in dry river / spring / rainwater / water department / borehole

Multiple concurrent partn okay Y / N // Curr condom use A / S / N // Care for others with HIV Y / N

Patient of a miner Y / N // Family of a miner Y / N // Patient been treated by ~~TLC before~~ Y / N

PMH: History of BP Y / N // pills taking _____ // Took pills today Y / N

History of Diabetes Y / N // Circle if taking pills / injection // Took medicine today Y / N

Date (m/yr) of last HIV test _____ // Result _____ // Number of HIV tests _____

Date (m/yr) of last CD4 _____ // Result _____// Taking CTX Y / N // Taking ARVs Y / N

Date (m/yr) of last TB scrn/treatmt _____ // Result _____ // Complete treatmt Y / N

BP _____ / _____ P _____ BS _____ // Pregnant Y / N

1) _____ how long _____ Sometimes/Always

2) _____ how long _____ Sometimes/Always

3) _____ how long _____ Sometimes/Always

(circle if yes): Chest / stomach pain with food | Vomiting | Diarrhea -blood | Constipation | Bilharzia
Cough - how long _____ - blood - at night - with activity only | Asthma | Headache - nausea
Womb pain - periods only - white discharge | Genital warts - sores | Mouth sores - inside / outside
Eyes itch - discharge - red/brown | Itching skin - rash | Muscle cramps | Painful urination | Bilharzia

---

2 or more wks: cough / night sweats / fever // 4 or more wks: weight loss // Chest pain // Init _____

Rx: (Vitamins) // (Albendazole) // (Panado) // Panado-extra // Ibuprofen // Diclofenac // Rub-rub
ORS // Mayogel // Cimetidine // Bisacodyl // Loperamide // Hemorr. supp // Metronidazole-other
Promethazine // Promethazine syrup // GV paint // Glycerine Thymol // Nystatin oral // Waxsol
HCTZ // Captopril // ASA // Metformin // Phenobarbital // Amitriptyline // P paint // Prednisone
Cotrim // Cotrim-other // Cotrim susp // Pen VK // Amox susp // Griseofulvin-adult / child
Cipro // Doxycycline // Metronidazole // Diflucan // Praziquantel // Benzyl Benzoate // Calcium
C+F // DPH syrup // Mist Tussi // Chlorpheniramine // Asthavent // Salbutamol-tabs / syrup
Saline eye drops // Choramphen. eye oint // ABC // AFC // Steroid cream // Acyclovir

Doctor's Initials _____

Name_____ T -

Age_____Preg Y|N CTX O|E ARVs O|E

Y | N | K ☐ T.O
Couns_____ ☐ TB
Lab_____ Doc_____

Date last HIV test _____ result_____

BP _____/_____ P_____ BS _____

1) _____how long_____ S/A

2) _____how long_____ S/A

3) _____how long_____ S/A

≥2 wks: Cough | Night sweats | Fever || ≥4 wks: Weight loss | Chest pain

Chest / stomach pain with food | Vomiting | Diarrhea -blood | Constipation
Cough - how long _____ -blood -at night or with activity only | Asthma
Womb pain -periods only -white dischrg | Eyes itch -discharge -red/brown
Genital warts - sores | Mouth sores - inside / outside | Itching skin - rash
Headache - nausea | Muscle cramps | Painful urination | Initials _____

Age_____ Y / N / K

BP / P

BS Init____

Free Comprehensive Health Services Provided in Rural Communities

Free Outreach Services Provided	2006	2007	2008	2009	2010	2011	2012	2013	2014	to date
Medical Patients Treated	7,159	7,668	22,122	16,024	19,553	19,744	24,410	36,412	53,680	**206,772**
Eye Glasses Fitted	2,730	3,017	10,339	6,236	7,704	4,219	4,524	6,842	11,099	**56,710**
Blood Pressure & Sugar Tested	5,570	5,776	15,783	14,553	15,134	15,238	17,653	24,326	32,627	**146,660**
Surgeries Sponsored	12	23	67	124	145	132	24	43	38	**608**
Patients Tested & Counseled for HIV		247	3,200	4,112	5,862	5,766	6,619	7,196	11,012	**44,014**
Wheelchairs/Adaptive Equipment Fitted		5	24	147	144	158	305	320	525	**1,628**
Cataracts Referred			153	147	135	93	65	52	36	**681**
HIV/TB Referrals Tracked				457	892	1,558	1,280	1,532	680	**6,399**
Laboratory Services Rendered				1,778	3,304	2,837	2,546	1,547	658	**12,670**
TB Screenings Completed					4,567	8,119	10,543	11,689	18,644	**53,562**
Prevention-of-Mother-to-Child HIV Service Provided					247	236	221	132	58	**894**
MC/HIV Community Education & Counseling					7,475	20,616	29,067	64,780	141,645	**263,583**
HIV ARV Adherence Counseling Sessions Delivered					1,054	1,178	876	650	452	**4,210**
Patients Counseled, Tested, Serviced at Campus					756	779	173	112	89	**1,909**
Chronic Care Patients						11	24	38	30	**103**
X-rays Obtained							504	554	596	**1,654**
Male Circumcisions Performed							943	1,286	2,201	**4,430**
Minor Procedures Completed							21	32	47	**100**
Total Medical Services Provided	**15,471**	**16,736**	**51,535**	**43,431**	**66,972**	**79,421**	**99,649**	**157,543**	**274,117**	**804,875**
Medication Packets Dispensed	53,600	70,500	170,000	152,000	166,201	167,824	189,300	218,472	322,080	**1,509,977**
Bibles Distributed	1,951	4,174	6,338	1,906	1,215	1,050	1,120	900	1,469	**20,123**
Scripture Booklets/Book of Hope Disbursed	18,300	21,700	58,200	84,100	65,275	45,876	27,705	50,105	55,700	**426,961**
Orphans & Vulnerable Children Given Clothes /Shoes	4,145	2,420	11,546	15,172	12,195	15,662	5,412	132,350	107,500	**306,402**
Operation Christmas Child Boxes Delivered			22,000	9,896	8,050	2,535				**42,481**

Appendix Form 4. Children's Cup Care Point Medical Encounter Form.

CHILDREN'S CUP SWAZILAND

Teacher Medical Treatment Form

CAREPOINT: _____

Date: _____ MOM: _____ **Teacher**

Name: _____ Birthdate/Age: _____ **Signature:** _____

CHIEF COMPLAINT:

TREATMENT GIVEN:

(Explain any extra treatment given)

	ILLNESS	***X***	***MEDICINE***
	Cough		*Cough syrup:* 1 tsp 2x a day as needed for cough
	Dehydration		*ORS:* 1 sachet in a 2 litre bottle of water
	Fever or Pain		
	Under 1year		*Paracetamol syrup:* ½ tsp every 4-6 hours as needed for fever or pain
	Between 1-4years		*Paracetamol syrup:* 1 tsp every 4-6 hours as needed for fever or pain
	Between 4-6years		*Paracetamol syrup:* 2 tsp every 4-6 hours as needed for fever or pain
	Over 6years		*Paracetamol 500 mg:* 1 tab every 4-6 hours as needed for fever or pain
	Itching		*Calamine Lotion:* apply to area 2x a day
	Malnutrition		*Multi Vitamin Syrup:* ½ tsp once a day
	(for non-MoM kids)		*Multi Vitamin tablets:* 1 tab on Monday, Wednesday, and Friday
	Ringworm		*Whitfield (antifungal):* apply 2x a day
	Scabies		*B&B Lotion:* apply for 2 nights, wash off each morning
	Skin Infection		*Bap ointment:* apply 2x a day
	Skin Rash/Itching		*Hydrocortisone Cream:* apply to area 2x a day
	Wound cleaner		*Hydrogen Peroxide:* rinse wound 1x a day, rinse medicine out with clean water
	MEDICAL SUPPLY		***Circle ones used:*** Bandages/gauze, Cotton Balls, Plasters, Rubber gloves

Date: _____ MOM: _____ **Teacher**

Name: _____ Birthdate/Age: _____ **Signature:** _____

CHIEF COMPLAINT:

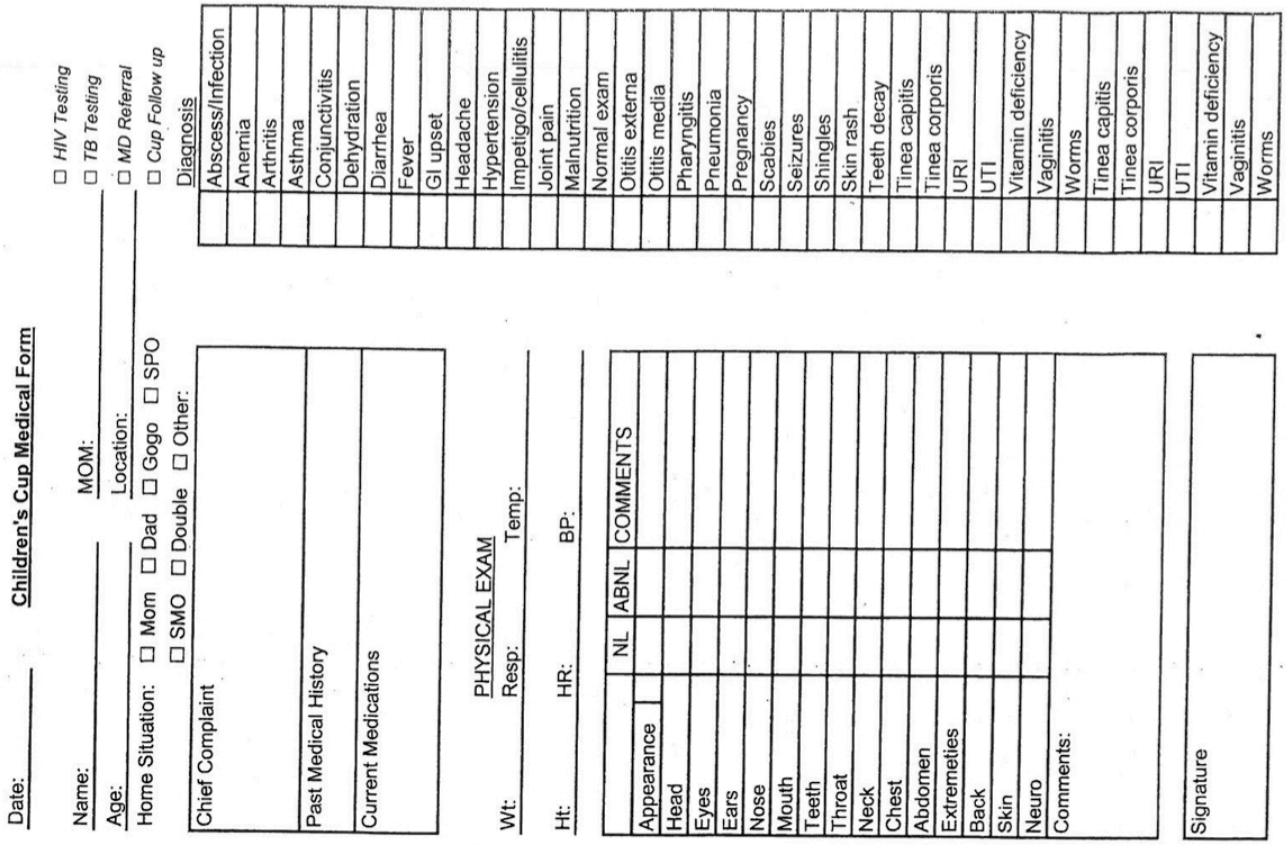
TREATMENT GIVEN:

(Explain any extra treatment given)

	ILLNESS	***X***	***MEDICINE***
	Cough		*Cough syrup:* 1 tsp 2x a day as needed for cough
	Dehydration		*ORS:* 1 sachet in a 2 litre bottle of water
	Fever or Pain		
	Under 1 year		*Paracetamol syrup:* ½ tsp every 4-6 hours as needed for fever or pain
	Between 1-4 years		*Paracetamol syrup:* 1 tsp every 4-6 hours as needed for fever or pain
	Between 4-6years		*Paracetamol syrup:* 2 tsp every 4-6 hours as needed for fever or pain
	Over 6years		*Paracetamol 500 mg:* 1 tab every 4-6 hours as needed for fever or pain
	Itching		*Calamine Lotion:* apply to area 2x a day
	Malnutrition		*Multi Vitamin Syrup:* ½ tsp once a day
	(for non-MoM kids)		*Multi Vitamin tablets:* 1 tab on Monday, Wednesday, and Friday
	Ringworm		*Whitfield (antifungal):* apply 2x a day
	Scabies		*B&B Lotion:* apply for 2 nights, wash off each morning
	Skin Infection		*Bap ointment:* apply 2x a day
	Skin Rash/Itching		*Hydrocortisone Cream:* apply to area 2x a day
	Wound cleaner		*Hydrogen Peroxide:* rinse wound 1x a day, rinse medicine out with clean water
	MEDICAL SUPPLY		***Circle ones used:*** Bandages/gauze, Cotton Balls, Plasters, Rubber gloves

October 2008

Appendix Form 5. Children's Cup Child Medical Encounter and Follow Up Forms.



Children's Cup Medical Form

Date: _____ Name: _____ MOM: _____ Age: _____ Location: _____

Home Situation: ☐ Mom ☐ Dad ☐ Gogo ☐ SPO ☐ SMO ☐ Double ☐ Other:

Chief Complaint | Past Medical History | Current Medications

PHYSICAL EXAM

Wt: _____ Resp: _____ Temp: _____

Ht: _____ HR: _____ BP: _____

	NL	ABNL	COMMENTS
Appearance			
Head			
Eyes			
Ears			
Nose			
Mouth			
Teeth			
Throat			
Neck			
Chest			
Abdomen			
Extremeties			
Back			
Skin			
Neuro			

Comments:

Signature

☐ HIV Testing ☐ TB Testing ☐ MD Referral ☐ Cup Follow up

Diagnosis

	Abscess/Infection
	Anemia
	Arthritis
	Asthma
	Conjunctivitis
	Dehydration
	Diarrhea
	Fever
	GI upset
	Headache
	Hypertension
	Impetigo/cellulitis
	Joint pain
	Malnutrition
	Normal exam
	Otitis externa
	Otitis media
	Pharyngitis
	Pneumonia
	Pregnancy
	Scabies
	Seizures
	Shingles
	Skin rash
	Teeth decay
	Tinea capitis
	Tinea corporis
	URI
	UTI
	Vitamin deficiency
	Vaginitis
	Worms
	Tinea capitis
	Tinea corporis
	URI
	UTI
	Vitamin deficiency
	Vaginitis
	Worms

CHILDREN'S CUP SWAZILAND

Facilitator Medical Follow Up Form

Date: _____ CarePoint: _____ **Facilitator**

Name: _____ Birthdate/Age: _____ **Signature:** _____

WHY CHILD SEEN IN CLINIC:

HOW CHILD IS TODAY:

(Explain if improving, same or worse. Paint word picture of child's health)

Questions	***X***	***ACTION***
Is the child at home?		
How is child illness?		
Have they missed school?		
Baylor HIV testing		*Does caregiver agree to get child tested?*
YES or NO Answers		*Does caregiver need visit from medical team?*
		Have you called Thabo or Jessie about date for transport? *Date:*
Medication Given		*1.* ***Tablets left:*** ***Taken properly:***
Caregiver aware of		*2.* ***Tablets left:*** ***Taken properly:***
medication? **Y N**		*3.* ***Tablets left:*** ***Taken properly:***
		4. ***Tablets left:*** ***Taken properly:***
COMMENTS		
WHO'S AT HOME		*Teacher & #:*
VISIT		*Care giver & #:* *Other:*

Did the Caregiver receive you well? **Do they need more medical follow up?**

Appendix Form 6. Children's Cup Diagnostic Form.

DIAGNOSIS		
Abscess/ Infection		Cephalexin 125mg/5ml: 1tsp 3x/day x 7 days
	<4yo	Cephalexin 250mg: / 1 tab 2x/day x 7 days
	>4yo<6yo	Cloxacilin 125 mg / syrup tsp 4x day for 5 days
	>6yo	Cloxaxillin 250mg: / 1 tab 4x/day x 5 days
		Cloxaxillin 500mg : Q10
Allergies		Promethezine Syrup / 1 tsp. 2x day
		Promethezine 25 mg / 1 tab 2x day
		Rhinton / Chlorpheniramine 4mg 1 tab 2x day
Anemia >6yo		Ferrous sulphate/folic acid: 1 tab a day x 30
Arthritis		Ibuprofen 200 mg: 2 tabs q4-6hrs prn pain
		Ibuprofen 400 mg: 2 tabs q4-6hrs prn pain
		Methyl Salicilate Rub PRN
Asthma		Go Pain Gel
	>3yo	Venteze inhaler: 1 puff as needed
	>3yo<6yo	Venteze syrup: 1 tsp 2x/day x 30 days
		Prednisone / Trolic 4mg : 1 tab 1xday
		Salbutamol 4mg: 1 tab 3x/day x 30 days
Conjunctivitis		Chloraphenicole Eye Drops
		Chlora Eye Ointment
		Cromoglycate Eye Dropys
		Saline Eye Drops
Dehydration		Oral rehydration: 1 sachet in 2 liter of water
Diarrhea		6 mths + // Zinc: 1 tablet/day x 14 days
	Acute	Metrondazole 200mg: 1 tab a day x5 days
	Chronic	Metronidazole 400mg: 1 tab 2x/day x 5 days
		Oral rehydration: 1 sachet in 2 liter of water
Fever		
	>1yo<4yo	Paracetamol syrup: 1 tsp q4-6hrs prn fever
	>4yo<6yo	Paracetamol syrup: 2 tsp q4-6hrs prn fever
	>6yo	Paracetamol 500 mg: 1 tab q4-6hrs prn fever
GI Upset		Myogel / AntiAcid 1 tsp 3x day
Headache		Paracetamol 500mg: 1 tab q4-6hrs prn pain
Hypertension		Hydrochlorothiazide 25mg: 1 tab a day x 30
Impetigo/Cellulitis		
	<4yo	Cephalexin 125mg/5ml: 1 tsp 3x/day x 7 days
	>4yo<6yo	Cephalexin 250mg: 1 tab 2x/day x 7 days
	>6yo	Colxacillin 250 mg 1 tabe 4x day for 7 days
Malnutrition		Doxycycline 100 mg. BID x 7
	<2yo	Multivitamins: 1 tsp q day x 30 Syrup
Otitis Externa		Multivitamins: 1 tab Mon, Wed, Fri
		Chloamphenicol Ear Drops
		Neopan ear drops: 1 drop in ear 2x/day

DIAGNOSIS		PRESCRIPTION
Otitis Media		Amoxicillin 125mg/5ml: 1 tsp 3x/day x 7 days
	>2yo<6yo	Amoxicillin 250 mg/ 1 tab 2x day x 5-7days
	>6yo	Amoxicillin 500 mg/ 1 tab 2x day x 5-7days
Chronic Otitis Media		Ampicillin 500 mg. 2x daily
Pharyngitis		Erythromycin 500mg 1tab 2x day
	>2ye<6yo	Amoxicillin 125mg/5ml: 1 tsp 3x/day x 5 days
	>6yo	Ampicillin 500mg: 1 tab 3x/day x 5 days
		Amoxicillin 500 mg/ 1 tab 2x day x 5-7days
Pneumonia		
	>2yo<6yo	Amoxicillin 125mg/5ml: 1 tsp 3x/day x 7 days
	>6yo	Amoxicillin 250 mg. BID
		Amoxicillin 500 mg. TID
		Erythromycin 250mg: 1 tab 3x/day x 5 days
PCP		Erythromycin 500mg 1tab 2x day
		Coltrim Suspension Tablets
Pregnancy		Ferrous sulphate/folic acid: 1 tab a day
Ring Worm		Antifungal cream: apply 2x a day
	<6yo	Griseofulvin 250mg: once a day x 30 days
	>6yo	Griseofulvin 500mg. 1 x Day x 30 days
Scabies		Benzyl Benzoate: apply x2 PM, wash off in AM
Shingles >6yo		Acitop Cream (Lip) 4 x day
		Acylovir 200mg: 2 tabs 2x/day x 5 days
Skin rash		Acylovir 400 mg: 2 tabs 2x day x 5 days
	Bacterial	Anitbiotic cream/Bap: apply 2x a day
	Fungal	Doxycycline 100mg : 1 tab 2x day
	Herpes	Cyclovax (acyclovir) cream: apply 2x a day
	Itching	Calamine lotion: apply to area 2x a day
Teeth decay		
	<6yo	Metronidozole 200mg: 1 tab 3x/day x7 days
	>6yo	Metronidazole 400mg: 1 tab 3x/day x 7 days
Thrush		
	Oral	Nystatin syrup: swish and swallow 3x a day
UTI	>6yo	TMP/SMX: 1 tab once a day x 7 day
		TMP/ SMX: 1tab twice a day x 7 days
		Cotrim suspension
URI	<2yo	MistTussi: 1 Tsp 2x day x 5 days
	>2yo<6yo	Cold and Flu Tabs / 1 tab 2x day x 5 days
	>6 yo	DPH Syrup / give at night
	>6yo	Betaphlem Syrup
Vaginistis		
STI		Canex V
Worms -Maintenance		Canex T
Active Case		Mebendazole 100mg: 1 tab once
		Mebendazole 100mg: 1 tab 2x/day x 3 days

NAME *First/Surname*:

M/F: Age:

MOM ☐

DATE	DX	MEDICATIONS	COMMENTS	FlwUp	Signature

NAME: **M/F:** **Age:**

Address/Community:

Caregiver: **Relationship:** **Phone #:**

Caregiver: **Relationship:** **Phone #:**

Caregiver: **Relationship:** **Phone #:**

Medical HX:

CHRONIC ILLNESS HX:

☐ Asthma ☐ HIV ☐ Seizures ☐ TB

☐ Disability ☐ Malnutrition ☐ Skin disease ☐ Other__________

☐ ***TB TREATMENT*** - Clinic: Start Date: End Date:

☐ ***BAYLOR CLINIC*** - Tested: Baylor Transport:

Baylor #: Start Date: ARVs:

Medications:

COMMENTS:

Appendix Form 8. Swaziland National HTC Form.

Swaziland HTC Client Record

No 100235

Form will be in triplicate (original copy to be given to client, 1st copy to be given to the referral point, 2nd copy to remain in client HTC book)

HTC Settings:

Health Facility (name) ☐☐☐☐☐☐☐☐☐☐ ☐ VCT ☐ Home ☐ Community

Other (specify) ☐☐☐☐☐☐☐☐☐☐

Date of Visit D D / M M / Y Y Y Y Provider name: ☐☐☐☐☐☐☐☐☐☐

Client Information:

Client first name ☐☐☐☐☐☐☐☐☐☐☐☐ Surname ☐☐☐☐☐☐☐☐☐☐☐☐

Client Code ☐☐☐☐☐☐☐☐☐☐☐☐ Date of Birth D D / M M / Y Y Y Y

Physical address Contact number ☐☐☐☐☐☐☐☐☐☐

Region ☐☐☐☐☐☐☐☐☐☐☐☐

Client Gender ☐ Male ☐ Female Marital Status ☐ Single ☐ Married with one partner ☐ Polygamous ☐ Widowed

Client can be contacted in future? ☐ Yes ☐ No ☐ Separated ☐ Divorce ☐ Cohabiting with one partner

Can next of kin be contacted if client could not be reached? ☐ Yes ☐ No

If YES, name of next of kin ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Contact number for next of kin ☐☐☐☐☐☐☐☐☐

HIV Testing Information:

Ever tested for HIV? ☐ Yes ☐ No

If yes, when was your most recent HIV M M / Y Y Y Y

If yes, what was your most recent HIV test result?

☐ NR ☐ R ☐ Indeterminate ☐ Never collected result

Consent for testing:

(Where verbal consent is given, provider should tick box and request for signature)

I agree that I/my relative/child may be tested for HIV today ☐

Ngiyavuma kuhlolwa simo sami sengati/sihlobo sami/umntfwana

Sign: _____ Thumb print

If HIV positive:

Have you attended an HIV care facility for care and treatment in the last 3 months?

☐ Yes Name of facility ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

☐ No (******Client should be referred to care and treatment******)

Pre -Test Risk Assessment

Are you or your partner pregnant? ☐ Yes ☐ No

Have you had genital sores or discharge? ☐ Yes ☐ No

Are you or your partner circumcised? ☐ Yes ☐ No

Have you talked to your partner about HTC? ☐ Yes ☐ No

Have you ever been treated for TB/partner ? ☐ Yes ☐ No

Have you had contact with human blood? ☐ Yes ☐ No

If Yes ☐ Tattoo ☐ Transfusion ☐ Caring ☐ Needle use

What is your partner's recent HIV status ☐ NR ☐ R ☐ Unknown

When ever you have sex,do you use condoms? ☐ Always ☐ Sometimes ☐ Never

How many sexual partners did you have in the last 6 months? ☐☐☐

When was your recent unprotected sexual exposure? D D / M M / Y Y Y Y

Anticipated HIV results ☐ NR ☐ R ☐ Unknown

Post Test Session

Client received results ☐ Yes ☐ No Tested as: ☐ Individual ☐ Couple

Final confirmation results if indeterminate ☐ NR ☐ R Return date for indeterminate results D D / M M / Y Y Y Y

Client coping mechanism ☐ Yes ☐ No Final HIV test results ☐ NR ☐ R ☐ Indeterminate

Risk reduction plan for (tick each that applies): Client to disclose results ☐ Yes ☐ No (If no, encourage disclosure)

☐ Condoms ☐ Male Circumcision ☐ Partner reduction

☐ Abstain ☐ Other ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

If client tested negative and has risk factors that indicates the need for re-testing within two months: ☐ Yes ☐ No If Yes: Date D D / M M / Y Y Y Y

Follow up counselling session scheduled? ☐ Yes ☐ No Condom usage skills built and condoms provided? ☐ Yes ☐ No

Referrals:

Client referred for:

☐ Care and treatment services ☐ Nutritional Support ☐ Home based care ☐ TB Services

☐ STI screening and/or treatment ☐ Medical Male Circumcision ☐ Psychological and/or Social Support Groups ☐ Repeat testing for inconclusive results

☐ PMTCT services ☐ Family Planning Services ☐ DNA PCR ☐ Other (Specify)

Client prefers to go to the following health facility for HIV services (This section can be filled in by an additional counsellor where available):

Name of health Facility ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Date the client is expected at referal point: D D / M M / Y Y Y Y *** within 2 weeks of HIV test ***

TO BE FILLED IN BY RECEIVING POINT STAFF:

Receiving Point Name ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Date client seen D D / M M / Y Y Y Y

* TB screening should be conducted to every client attending HTC

** A negative test is only valid for 2 months from date of testing.

Appendix Form 9. Sample AIM Medical SOP (Page 1 of 5).

ADVENTURES IN MISSIONS – MEDICAL STANDARD OPERATING PROCEDURES

Swaziland

SOP No: 01

SOP Title: Medical

SOP Number **Draft**

SOP Title **Swaziland - Medical**

	NAME	TITLE	SIGNATURES	DATE
Author	Claud Crosby	Consultant from the Rollins School of Public Health, Emory University		
Reviewers	Greg Mullins & Matthias Gerber	AIM Medical Director and Country Director in Swaziland		
Authoriser	Scott Borg	AIM Director of Swaziland Programs in Gainesville		

Effective Date:	July 1, 2015
Review Date:	July, 1 2015

READ BY			
NAME	**TITLE**	**SIGNATURE**	**DATE**

ADVENTURES IN MISSIONS – MEDICAL STANDARD OPERATING PROCEDURES **Swaziland**

SOP No: 01

SOP Title: Medical

1. PURPOSE

To outline the standard operating procedures for all health related activities of Adventures In Missions in Swaziland.

2. INTRODUCTION

Adventures In Missions operates in multiple regions of Swaziland, and facilitates a network of thirty-three care points, serving roughly 6,000 OVC. Due to extreme poverty and disease, children often present to the care points with various acute and chronic illnesses that require medical attention. In order to address the health needs of these children AIM hired a full time health care worker in April of 2015. Beginning in July of 2015 AIM will implement of system to document all medical activities conducted by the nurse and other AIM staff. Therefore, it is necessary to develop standardized operating procedures to guide AIM staff members in addressing any health related issues encountered at the care points.

3. SCOPE

This SOP addresses the following topics:

- Health care procedures for OVC and Swazi volunteers at AIM/CHC care points.
- Referrals for the abovementioned groups for medical services beyond the scope or ability of AIM's trained health care staff.
- Emergency medical needs related the abovementioned groups.

This SOP does not specifically address the following:

- Health care needs of paid AIM staff, visiting missionaries, or partners.
- Emergency procedures involving American or South African citizens.

4. DEFINITIONS & ABBREVIATIONS

AIM Adventures in Missions

CHC Children's Hope Chest

CHW Community Health Worker

OVC Orphaned or Vulnerable Children

5. RESPONSIBILITIES

- Greg Mullins: Oversight of the medical program and subsequent reporting to the directors of AIM Swaziland.
- Wisile: Diagnosis and treatment of all OVC and volunteers presenting to AIM care points with acute and chronic illness, or injuries. Referral manager.

- CHWs: Treatment of minor illness and injury at each respective care point. Administration of the care point emergency referral fund. Completion of documentation for all medical encounters at the care point.
- Care Point Shepherds: Weekly collection of care point data and entry into the AIM Access database.
- Short-term AIM/CHC teams/missionaries: All short term teams are to be informed about AIM medical policies, and they are expected to refer cases to the appropriate AIM medical staff member on site.

6. SPECIFIC PROCEDURES

OVC Presenting to AIM Care Points

1. OVC presenting to AIM care points with acute or chronic illnesses are to be assessed by the care point community health worker (CHW).
2. Acute illness or injury within the scope of the CHW's training is to be treated on site and the appropriate forms should be filled out to document the encounter.
3. Any illness or injury beyond the scope of the CHW's training should be handled in one of the following manners:
    a. Emergency cases should be transported to the nearest government hospital through use of the emergency referral fund.
    b. In cases of an unknown acute or chronic illnesses contact should be made with the AIM nurse via mobile phone to determine the severity of the illness and the appropriate next steps.
4. Cases that are referred to a local clinic or government hospital should be documented on the appropriate referral form. The care point CHW should accompany the child during the referral process, as well as a parent or guardian from the homestead of the OVC when possible.
5. The CHW or care point shepherd should report the use of the emergency referral funds and submit the appropriate documentation to the AIM medical director, who will subsequently replenish the account for that care point.
6. The resulting diagnosis of all referrals should be documented on the referral form, and chronic conditions requiring on-going treatment should be followed up with the guardian of the child, and a plan of treatment should be agreed upon. This plan should include follow-up visits from the CHW to ensure adherence to treatment protocols for chronic conditions.
7. The physicians at the Baylor Clinic in Mbabane should be consulted for any cases that are unable to be treated at the government hospitals. The AIM nurse should make the initial consultation via the Baylor hotline, and subsequent visits are made in person, accompanied by the AIM nurse or medical director and a legal guardian when possible.
8. Cases that are diagnosed by Baylor but unable to be treated in Swaziland are then referred to the Phalala fund in Mbabane government hospital for approval to

be treated in South Africa. (The referral to the Phalala Fund will require a physician's note from Baylor or another government hospital.)

9. Cases that are not approved by the Phalala Fund will be reviewed on a case-by-case basis by AIM's Medical Director (Greg Mullins), Country Director (Matthias Gerber), and Swaziland Director (Scott Borg). A subsequent treatment plan will be agreed upon through consultation with the Baylor staff in Mbabane.
10. Annual wellness visits will be performed for each enrolled OVC at all AIM care points by a registered nurse or physician.
11. Receipts for any payments made to a medical facility should be retained for documentation purposes.

Swazi Volunteers Serving at AIM Care Points

1. Volunteers presenting to AIM care points with acute or chronic illness are to be assessed by the care point community health worker (CHW).
2. Acute illness or injury within the scope of the CHW's training is to be treated on site and the appropriate forms should be filled to document the encounter.
3. Any illness or injury beyond the scope of the CHW's training should be handled in one of the following manners:
    a. Emergency cases should be transported to the nearest government hospital through use of the emergency referral fund.
    b. In cases of unknown acute or chronic illnesses contact should be made with the corresponding AIM nurse via mobile phone to determine the severity of the illness and the appropriate next steps.
4. Cases that are referred to a local clinic or government hospital should be documented on the appropriate referral form. AIM will cover the cost of transportation to the referral facility, and volunteer will be expected to cover the cost of consultation and treatment.
5. The resulting diagnosis of all referrals should be documented on the referral form, and chronic conditions requiring on-going treatment should be followed up by AIM medical staff and a treatment plan should be agreed upon.

Other Community Members Presenting to AIM Care Points (Or Encountered during Home Visits)

1. Community members presenting to the care point with chronic or acute illnesses should be referred to the appropriate government health facility.

ADVENTURES IN MISSIONS – MEDICAL STANDARD OPERATING PROCEDURES **Swaziland**

SOP No: 01

SOP Title: Medical

7. FINANCIAL POLICIES

Medical Care Subsidized by AIM		
OVC Presenting to Care Points or Encountered on Home Visits	**Swazi Care Point Volunteers**	**Community Members**
•Emergency Referrals •Referral Transportation Costs •Consultation Fees* •Cost of Treatment/Procedures within Swaziland* •Transportation for Chronic Care	•Emergency Referrals •Referral Transportation Costs	•None
*In cases where a child has an adult guardian present at the homestead, the guardian will be requested to cover the cost consultation and treatment when possible.		

8. FORMS/TEMPLATES TO BE USED

a. Acute Encounter/Referral Form

b. Annual Wellness Visit Form

c. Emergency Referral Form

9. CHANGE HISTORY

SOP no.	Effective Date	Significant Changes	Previous SOP no.
1		Initial Version	N/A

Appendix Table 3: Care Point Demographics (Incomplete)								
Care Point	Shepherd	Children	Bomake	Borehole	Borehole Broken	Garden	Other Project (eg-poultry)	Closest Clinic
Thulwane	Sebentile Dlamini	230	5	Yes	.	yes	no	Gilgal
Timbutini	Sfiso Mlotsa	210	10	yes	.	no	no	Gilgal
Timbutini 2	S'dumo	225	10	Yes	.	no	no	Gilgal
Ntabamhloshana	Xolani Ndwandwe	155	5	Yes	.	yes	Greenhouse	.
Bhobokazi	Mduduzi Simelane	125	5	Yes	.	no	no	.
Bhalekane	Lindokuhele Maziya	300	7	Yes	.	yes	Greenhouse	.
Mkhombokati	Mpendulo Dlamini	210	5	Yes	.	yes	Greenhouse	.
Ludlati	Mbuso Shoba	135	7	Yes	Broken		.	.
Bheveni	Bhutana Kunene	225	7	Yes	.	yes	no	.
Lesibovu	Thuli Dlamini	266	5	Yes	.	no	no	.
Thembeni	Tumvelo Gamedze	213	7	Yes	.	no	no	.
Enaleni	Somandla Shongwe	175	5	Yes	Broken	no	no	.
Ngungwane	Hlobi Nkondi	135	5	Yes	.		.	.
Mpholi	Londiwe Dlamini	145	6	Yes	.	no	no	.
Ekudzeni	S'phiwe Dladla	220	7	Yes	.	no	no	.
Fountain of Life	Welcome Dlamini	119	4	Yes	.	no	no	.
Mankayane	Londiwe Simelane	145	4	Yes	.	no	no	.
Gege	Hlengiwe Mabuza Bongekile Masuku	190	3	yes	Broken	no	Poultry Egg	.
Anchor Center	.	.	.	yes	.	yes	.	Anchor Center
Mbutfu	.	.	.	no	.	no	.	Anchor Center
Ngunya	.	.	.	yes	.	yes	.	Anchor Center
Madabukeni	.	.	.	no	.	no	.	Anchor Center
Mabantaneni	.	.	.	no	.	yes	.	Anchor Center
Mahangeni	.	.	.	yes	.	no	.	Anchor Center
Eskhaleni	.	.	.	yes	Broken	no	.	Anchor Center
Mahlabaneni 2	.	.	.	no	.	no	.	Anchor Center
Joyela	.	.	.	no	.	no	.	Anchor Center
Mabantaneni	.	.	.	no	.	yes	.	Anchor Center
Mpaka	Bongiwe Mabuza	.	.		.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
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