Monitoring and Evaluation in Global Social Development Programs:
A Case Study of a Scholarship Program for HIV+ Young Adults in Uganda

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Abstract

As access to anti-retroviral therapy (ART) expands globally, extending survival and rendering HIV a chronic disease rather than an acute condition, care and treatment for persons living with HIV/AIDS (PLWHA) becomes more complex. Treatment now includes ensuring quality of life as well as medical treatment via ART. As with any vulnerable population, PLWHA have social needs that can significantly influence their health related quality of life (HRQOL). Social needs in this context can include education, peer support, microfinance, etc. The benefit of vocational education training (VET) and other social development programs has yet to be explored extensively in the literature. However, it is believed that VET programs for PLWHA, have the ability to address these social needs and improve the physical and mental health of PLWHA. These improvements are linked to increased self-esteem, which can significantly influence HRQOL and even increase the likelihood of ART compliance (Takanda, 2012). The Holzworth Scholarship Program (HSP), based in Kampala, Uganda, is a unique VET program for young PLWHA that helps address the skill and education gaps found in this population due primarily to poverty and illness. Given the lack of literature surrounding VET programs for PLWHA, it is important that this program be carefully monitored and evaluated to help prove the value of such programs for similar vulnerable populations. Monitoring and evaluation (M&E) in conjunction with continuous quality improvement (CQI) provide a framework for assessing the impact of educational programs such as the HSP. The HSP is presented as a case study in this paper to illustrate how M&E and CQI can be applied to assess the local impact of this innovative VET program and ideas are discussed for how to extrapolate the program in the global community.
Glossary

HIV  Human Immunodeficiency Virus
HIV+  The state of testing positive and living with HIV
AIDS  Acquired Immunodeficiency Syndrome
HRQOL  Health Related Quality of Life
PLWHA  Person(s) Living with HIV/AIDS
ART  Anti-Retroviral Therapy
M&E  Monitoring and Evaluation
CQI  Continuous Quality Improvement
HSP  Holzworth Scholarship Program
IDI  Infectious Diseases Institute, an NGO in Kampala, Uganda
VET  Vocational Education Training
UNDP  United Nations Development Program
PDCA  Plan-Do- Check- Act
RBM  Results Based Management
ROI  Return on Investment
TC  Transitions Clinic
Introduction: Social Development Programs in Vulnerable Populations

Beginning in the 1980’s the world faced an explosion of one of the most challenging infectious diseases—Human Immunodeficiency Virus (HIV). HIV is a sexually transmitted disease that if untreated leads to Acquired Immunodeficiency Syndrome (AIDS) (CDC, 2013). Enhancing health-related quality of life (HRQOL) in people living with HIV/AIDS (PLWHA) has become a priority especially as access to anti-retroviral therapy (ART) expands globally, extending survival and rendering HIV a chronic disease (Takanda, 2012). The global burden of disease is estimated at 34 million PLWHA (WHO, 2013). Once on medication, individuals who remain compliant with their drug regimen are capable of living longer healthy lives. However, PLWHA then face a number of social challenges that impede their ability to live healthy productive lives. These challenges include obtaining basic economic and social resources, which are believed to significantly impact HRQOL, particularly in low resource settings and vulnerable populations (Anand and Hanson, 1997). Consequently, in addition to traditional health issues there is a significant need for programs that address social issues facing this population.

The term social development program refers to

... the array of programs designed to improve the quality of life by improving the capacity of citizens to participate fully in social, economic, and political activities at the local or national level...these programs may focus on improving physical well-being and access to services; protecting vulnerable groups... or providing education literacy and employment and income-generating opportunities. “ (UNDP, 2008, p. 13).
Evidence suggests that social issues have the potential to dramatically decrease the psychosocial wellbeing of PLWHA. Such social issues include increased stress, fear, anxiety, and depression, all of which are problems in themselves but can impact one’s ability to manage HIV/AIDS and result in poor ART compliance (Bogart, et al., 2008; Tsai, et al. 2012; Steward, et al, 2008; Simbayi, et al., 2007; Rintamaki, et al, 2006). Therefore an integrated approach that addresses the clinical and social needs of PLWHA is needed to empower this population to live healthy productive lives.

PLWHA in developing countries are often characterized by factors such as poverty, urbanization, low socio-economic status and low levels of education (Furber, et al, 2004). These factors when combined with HIV-stigmatization lead to poor self-esteem and low HRQOL (Greeff, 2010). According to the Global Compact on Learning, education is an essential component for human development (Brookings, 2011). As with those who do not have HIV, one’s ability to work is found to be positively associated with education level and results in improved economic wellbeing and improved HRQOL (Wagner, et al, 2009; Rosen, et al., 2010).

Current social development programs are able to address many needs for PLWHA but fail to adequately address these individuals’ lack of employable skills. This gap in skills is reiterated on a global scale when you look at the amount of charity that is donated to education programs in comparison to the total global health contribution (W. van Fleet, 2011). Additionally, these funds allocated to education tend to be uncoordinated and scattered with a narrow focus on one-fits-all strategies (Brookings, 2012). Thus there is a clear need for social development programs to emphasize, education and specifically VET programs.
My interpretation of Takanda’s work, which is central to the theme and goals of this paper, is presented in Figure 1. This figure is a graphical representation of the flow of outcomes from educationally focused social development programs for PLWHA. This diagram shows how education programs build social support networks, knowledge and skills that lead to employment and economic stability. These factors then positively influence self-esteem and self-efficacy translating to increased health outcomes and a better quality of life (Takanda, 2012).

![Diagram of outcomes from social development programs in PLWHA](adapted from the work of Takanda, 2012)

There is significant economic motivation for educationally focused social development programs for PLWHA particularly in developing countries where HIV poses a threat to economic stability by reducing the available workforce and contributing to
poverty and unemployment levels (Dixon, et. al, 2002). With the PLWHA population continuing to grow, it makes sound economic sense for developing countries to consider developing and/or expanding social development programs for PLWHA. A review of the literature indicates that there is only limited documentation of the benefits of educationally focused social development programs for PLWHA. In order to better document the impact of current programs and for these programs to set the standard for subsequent programs they must be carefully monitored and evaluated.

One of the key goals of this paper is to explain how monitoring and evaluation (M&E) is applied in social development programs, with particular emphasis on the challenges of doing this in developing countries and special populations. In addition I will describe how M&E lays the foundation for ongoing improvements and further evaluation using a continuous quality improvement (CQI) framework. To illustrate this process I will discuss an example of the use of M&E in a VET program in a low-resource setting. This experience is based on my MPH practicum, working with the Holzworth Scholarship Program (HSP) for HIV+ young adults at the Infectious Disease Institute (IDI) in Kampala, Uganda. Lastly, I will hypothesize about the applicability of these principles, both M&E and CQI, in low-resource settings and make recommendations for future study.

**Educational Social Development Programs in Low-Resource Countries**

In doing a literature search for similar social development programs for PLWHA, it became apparent there is a lack of published evidence-based research available about VET programs in developing countries. This knowledge gap further emphasizes the importance of a well-designed M&E and CQI processes to provide the evidence necessary for HSP to be a model for future programs. Despite this absence of research, it is important to include
past learning’s from similar programs as guidance in designing M&E for the HSP program. 

Since the literature search for VET and educational programs for PLWHA in developing countries yielded few findings, the literature related to VET training and generic scholarships programs in developed countries was also explored.

*VET Programs in Developing Countries*

Although limited, there are some reports that illustrate that the use of VET programs in other low-resource settings is an effective method for empowering lower income populations and helping to address unemployment issues. For example, a randomized study done in developing countries in Latin America proved that VET programs for disadvantaged populations are highly successful at decreasing unemployment rates (Attanasio, Kugler, and Meghir, 2009). Specifically the program in Colombia known as "Jóvenes en Acción" (Youth in Action), which was introduced in 2001 and is one of the few randomized studies done from VET programs. The results of this experiment concluded that those who received training did better in the labor market in comparison to those with no VET training (Attanasio, Kugler, and Meghir, 2009).

Other authors suggest that employment for PLWHA redirects their attention from the patterned social role of being sick and allows them to be a contributing members of society; employment is linked to increased self-image, confidence, and productivity (Brooks and Klosinski, 1999; Seebohm and Secker, 2003). But these programs are based in developed countries and not in developing countries where the highest concentration of individuals living with HIV exists.

The recent report on learning emphasized the importance of education and training for developing countries that desire sustained economic growth (Brookings, 2011).
Vocational work programs specifically for PLWHA in the US have been explored in the literature but have little data. In preliminary reports, they find that PLWHA that are actively employed in HIV/AIDS community programs have a better quality of life (Egan and Hoagland, 2005). VET programs have been shown to meet the needs of PLWHA but data proving these claims through well-designed M&E guidelines is necessary to gain widespread support.

There has also been some historical evidence reported that provides guidance on how to better design VET programs and emphasize the need for careful monitoring and evaluation. For example, one report on VET programs in developing countries reviewed the number of uneducated and unemployed youth in the 1960’s through-1980’s and analyzed key learning’s from efforts to address these issues. Going back as far as the 1960’s, VET programs were intended to help target the needs of disadvantaged populations. Analysis revealed that many of these programs quickly became institutionalized and served privileged populations or became insolvent rendering them unable to effectively target disadvantaged populations (Corvalan-Vasquez, 1983). Corvalen-Vasquez also reported that many of the early VET programs often focused on teaching skills that were not particularly useful to the population thus affirming that programs for PLWHA should be dynamic, flexible, and customized to the needs of the population (1983).

Scholarship Programs in Developing Countries

Review of scholarship program evaluation literature revealed scholarship programs were primarily based in developed countries. However, key learning’s from such articles proved valuable in shaping monitoring and evaluation design for the HSP. Lamont laid out steps for effectively evaluating scholarship programs at prestigious Universities in
developed countries (2002). While these scholarships are quite different from the VET scholarships provided by HSP, Lamont discussed four questions that all scholarship programs must consider in determining effectiveness: 1) Appropriate framework for evaluation, 2) Organizational mechanics of the program, 3) Cultural determinants of success and 4) Structural determinants of success. He also suggested that scholarship programs must "be perceived as equitable and effective by recipients and non-recipients alike..." (Lamont, 2002, p. 34).

Additionally, a study done in Washington DC randomly selected high school students to receive a scholarship and compared them to individuals who were not selected for the scholarship. This study found that recipients who were randomly selected for the scholarships were more likely to graduate from their educational programs than their non-scholarship counterparts despite having no significant differences in scores or grades. This study suggests that being a recipient of a scholarship attributes to a better perception of and ultimately retention in the program (Wolf and Silverberg, 2010).

**Monitoring and Evaluation in Developing Countries**

Educational programs fall under the general heading of social development programs and according to the United Nations Development Program (UNDP), the main intention of social development programs is to make improvements in people's lives by providing opportunities for them (UNDP, 2008). In order to make these real improvements, UNDP recommends good planning and M&E (2008). Monitoring and evaluations are used in many different settings but for this paper, monitoring and evaluation will be described in general terms and then discussed in reference to social
development programs in developing countries. Monitoring is defined as the regular tracking of key performance measures through record-keeping, reporting, surveillance, observation and client surveys (GlobalFund, n.d.). Monitoring is internal project management that is divided into two categories: input monitoring and output monitoring. Input monitoring determines whether the project has been implemented as planned and output monitoring is whether the services or products are being delivered as intended (Ahmed and Bamberger, 1989). The overall intention of monitoring is to ensure the program is achieving its goals within the planned timeframe and budget.

Evaluation is defined as the assessment of activity effectiveness in helping reach stated goals and objectives (UNDP, 2008). Evaluation can be used to “assess and improve the performance of an ongoing project or to estimate the impacts and evaluate the performance of complete projects or programs” (WorldBank, 1994, p. 25). The most relevant types of evaluation for social development programs are: process, outcome, and impact evaluations.

Process evaluations look at the implementation and development of a program and determine if targets were met and implemented as planned (WorldBank, 1994). Process evaluations look at the program from beginning to end and assess whether there is a causal relationship between the program and outcomes. This type of evaluation is useful for determining the program’s future i.e. to continue, expand, refine or eliminate. Outcome evaluations measure the short-term changes resulting from a program. For social development programs, such outcomes include changed behaviors, jobs found etc. (UNDP, 2008). Impact evaluations focus on the long-term changes from a program, which in the
social development program context means measuring the effect on participants’ lives over time (UNDP, 2008).

Many international programs treat M&E as two distinct activities and fail to complete meaningful evaluations and underutilize data—which could be used to improve future projects (UNDP, 2008). If done correctly, M&E can engage the funders, service providers and clients of the intervention alike by linking program success to contextual factors. The WorldBank recommends that monitoring and evaluation be thought of as an ‘integrated system’ with evaluation taking place continuously or periodically throughout the lifecycle of the program (WorldBank, 1994). Monitoring and evaluation together are fundamental to the success of current and future programs by: providing data on program progress and effectiveness, improving program management and decision-making, maintaining engaged stakeholders, delivering quality products and services, and informing future program design.

There are several models that can be used to carry out M&E for social development programs. One that has been demonstrated to be particularly applicable to educational programs, which is the primary emphasis of this paper, is the Kirkpatrick model. Donald Kirkpatrick first introduced this model in 1959 for evaluating instructor-led training programs (Kirkpatrick, 1996). Further details of this model will be presented later in this paper, when it is applied to the HSP case study in Uganda. When effective program planning and solid M&E framework are combined the methodology can be defined as results-based management (RBM). Good RBM is an ongoing process resulting in “constant feedback, learning and improving” (UNDP, 2008, p. 11). This ongoing process is known as
the RBM cycle, which is iterative cycle of doing, learning and improving that is central to Continuous Quality improvement (CQI) (UNDP, 2008; Joint Commission, 1991).

For the purposes of this paper, M&E will be explained as a process that sets the stage for CQI. CQI is a concept that was first introduced in the product manufacturing industry, where it was initially called Total Quality Management. Over time it has been applied to healthcare services and most recently in the public health field. (Sollecito and Johnson, 2013). At the root of both M&E and CQI is quality, which is defined as “embodying notions of efficiency, effectiveness and customer satisfaction” (Lethbridge, Parish and Hagard, 1996).

**CQI**

The overall goal or objective of CQI in public health is to “have continuous evaluation of public health practices, programs and policies that produce and promote desired results while giving significant additional attention to those that need to be improved” (DHHS, 2008, p. 4). According to the quality improvement subgroup in applying this definition in the context of public health, CQI means

... a continuous and ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality in services or processes which achieve equity and improve the health of the community. (Accreditation Coalition Quality Improvement Subgroup Consensus, 2009, p. 4)

Across fields of study, CQI has a common set of initiatives including: 1) localized improvement efforts, 2) organizational learning, 3) process reengineering and 4) evidence-based practice and management (Sollecito and Johnson 2013). A number methods and
concepts are used to formally apply CQI processes; one of the most well known and successful is the Plan-Do-Check-Act (PDCA), a cyclical plan that emphasizes iterative changes resulting from monitoring and evaluation findings. PDCA is an ongoing process that emphasizes direct study and planning for a change to be implemented, followed by action, then reassessment and further action (Joint Commission, 1991). The first step of the PDCA cycle is to plan a change or improvement to a process or service, the second is to implement said improvement, the third is to observe the positive and negative results of the implementation and the fourth is to decide whether to keep the change as is, or to continue the try something different (Kahan and Goodstadt, 1999). A key requirement of PDCA, and CQI in general, is measurement of process effects to determine program impact; this is another important similarity with M&E.

Some of the direct benefits of CQI are: more effective and useful results, streamlining of efforts, increased accountability, improved morale and teamwork, improved services and customer satisfaction, and lastly reducing economic inefficiency and ultimately promoting general well being. CQI is becoming more widely adopted in public health because it promotes quality within public health systems and interventions with special emphasis on health equity and eliminating health-related disparities (DHHS, 2008). This is important because it coincides with the values underlying public health work, which are the right to health, the collaborative nature of public health, social interdependent nature of humans, maintaining the public’s trust. These values parallel those of educational programs such as the HSP.
CQI in Low-Resource Countries

A significant gap exists between health outcomes in developing and developed nations. Many developing countries lack the resources to address these disparities but optimizing delivery of public health initiatives should increase health outcomes regardless of resource level. Until recently adoption of CQI principles in low-resource settings has been limited (Smits, Leatherman, Berwick, 2002). CQI principles are more typically thought of as being associated with macro-level programs in developed countries, but this idea of effectiveness of CQI in public health should not “be an extravagance reserved for more affluent countries” (Leatherman, et al., 2010, p.241). The use of continuous measurement and feedback on intervention progress is critical and highlights the need for implementation of CQI in low-resource setting (Leatherman, et al., 2010).

Successful implementation of CQI will require adaptation of proven models, like PDCA, that are used in developed countries with careful attention to barriers, contexts and constraints specific to low resource settings. A recent review of several WHO and UNICEF programs concluded that future program effectiveness relies on “clear, consistent and evidence based technical guidelines… couple (d) with expanded capacity to develop, implement, monitor and assess better combinations of interventions provided through locally-designed delivery strategies.” (Bryce et al., 2003, p. 163).

Some of the barriers that need to be addressed when implementing public health interventions in developing countries are the lack of appropriately trained staff and insufficient infrastructure and resources. Infrastructure insufficiency entails unreliable physical structures, transportation, electricity, roads, equipment, etc. Outside of resource issues, public health initiatives are greatly affected by political instability and unrealistic
restrictions placed on grants and donor money that fail to consider the true needs of the population and setting. (Smits, Leatherman, Berwick, 2002).

CQI methods have the ability to fill in the gaps and provide the framework for success. CQI also has the potential to optimize limited resources and coupled with improvements in quality has the potential to encourage future investments (Leatherman, et al., 2010). It is suggested that in order for CQI programs to work in developing countries motivation to apply CQI processes must be established among key stakeholders and barriers to adoption must be addressed (Leatherman, et al., 2010). CQI is rooted in simplifying complex process and as Berwick suggests, program success is rooted in pragmatic simplified approaches (Berwick, 2004). Therefore it is reasonable to assume that the application of the simplified PDCA cycle framework will be the most successful in low-resource settings. Quality improvement in health care and public health initiatives has existed for several decades and such quality should not be limited to high-resource countries. Thus it is imperative that we include these principles in health systems and programs in developing countries.

Some authors have asserted that CQI approaches are not aligned with the reality of low-resource settings suggesting a lack of context-specific evidence to support such investment (Spies, 2006). However, others believe that because the quality of care in low-resource countries is far from adequate, rendering room for CQI to have even greater potential in improving health outcomes (Leatherman, et al., 2010).
The economic case for CQI in low-resource countries

The mission of the World Bank emphasizes that financial empowerment of the lower 40% of a country’s population will promote shared prosperity and economic growth (WorldBank, 2013). Social development programs that promote social equity and justice through enabling impoverished individuals to provide for themselves will benefit the entire economy. Such social development programs need to be in tune with the real needs of the community or population and be contextually grounded in order to be financially advantageous.

In terms of return on investment (ROI), it is a financially sound decision to invest in social development programs that have Quality Improvement. In developed countries use of CQI principles is linked to higher gross domestic product (GDP), increased stakeholder retention and satisfaction, and higher quality products and services (CEBR, 2012). When evaluating the ROI of VET programs it is important to understand that “Economic growth and poverty reduction depend on an educated and skilled workforce.” (Brookings, 2011). It is estimated that in developing countries one additional year of education adds 10 percent to a person’s earnings.” (Psacharopoulos and Patrinos, 2002). Furthermore, no developing country has had sustained high rates of growth without investing in education (Brown, 2011). HIV/AIDS is known to reduce labor supply and productivity and thus hurt the economy of a country. Therefore treatment and prevention programs coupled with VET programs can limit the economic effects of HIV and result in a larger, more capable workforce (Dixon, et al., 2002).

Since the need for education programs in developing countries and in the PLWHA population is so great it is particularly important to utilize resources effectively, an idea
inherent in CQI principles (Sollecito and Johnson, 2013). Thus developing countries’ economies are likely to be more dramatically affected by programs that increase the availability of trained workforce leading to a stronger economy. Such investments are expected to produce a high ROI for donors and governments in low-resource settings.

**HSP Case Study**

*Ugandan Context*

The case study described in this paper is based on the Holzworth Scholarship Program (HSP), which, as introduced earlier, is a VET program that takes place in Kampala, Uganda and is the setting for the MPH practicum that is the basis for this Masters Paper. Before describing the details of the HSP M&E plan, it is important to understand the contextual background in Uganda. In 2008, Uganda had the world’s highest youth unemployment rate, estimated at 83% (YLTTPA, 2011). Young adult unemployment numbers contribute to economic instability, increased violence and crime (The Republic of Uganda, 2012). The World Bank warned Uganda that their high rate of unemployment was creating instability to which Uganda responded by creating jobs and they were able to decreased this rate significantly by 2010 to 32.2% (YLTTPA, 2011). Despite their best efforts, a 32% unemployment rate is still a significant problem and has been referred to as a ‘ticking time bomb’ (Ashaba and Katusiimeh, 2013, p. 3).

It is important to understand why a significant percentage of young adults between the ages of 18 and 35 are still unemployed. Research in other countries that face similar socio-economic and health challenges, such as Nigeria and neighboring Tanzania, indicate that the primary cause of high unemployment is rapid and large population growth that
quickly saturated the labor market coupled with a broad mismatch of skills necessary to meet the demand of employers (Kakwagh and Ikwuba, 2010; Mcgrath 1999; Kent and Mushi, 1995). When combining these factors with a poor education system many students, particularly those in disadvantaged groups, including PLWHA, are unable to acquire the education/skills necessary for employment. Two decades of war and civil conflict led to years of neglect for the Ugandan education system (Uganda MOES, 2001). This neglect resulted in poor quality schools, low enrollment, and high dropout rates and disproportionately hurt children from low-income families.

Another significant problem is that the primary education system is rigid. This rigidity is characterized by a strict time-table preventing children who have any other responsibilities from attending school, further exacerbating low education levels and consequently leading to high youth unemployment (Ugandan MOES, 2001). For many children in developing countries like Uganda, primary school attendance is erratic due to factors like poor health and the high opportunity costs of school attendance. When such factors are combined with an inflexible primary education system many children are forced to drop out (Brookings, 2011). Thus it is clear that focusing on educational social development programs can help address the needs of this unique population in Uganda.

The poverty cycle is also major barrier to addressing unemployment in PLWHA in developing countries like Uganda. Many PLWHA are poor because of their illness or acquire HIV/AIDS because they are poor and this vicious cycle prevents them from obtaining the education they need to land or maintain jobs (Slotznick, 2012). This situation is exacerbated by the lack of apprenticeships or practical training programs available to young-people, leaving them unprepared for the working environment. Other barriers to
receiving education or obtaining jobs are the lack of access to transportation and food. (YLTTPA, 2011).

The Ugandan government is aware of this continuing problem and have enacted policies, such as the National Youth Policy, that promote equity of opportunity to education (YLTTPA, 2011). Uganda is also planning to enact is the National Employment Policy, which would ensure that young people have access to small loans to start or continue businesses, but both of these policies currently lack the guidelines and infrastructure for widespread success (The Republic of Uganda, 2012).

UNAIDS estimates that prevalence rates of HIV/AIDS in Uganda for adults aged 15-49 is 7.2% with 1.4 million adults over the age of 15 are living with HIV (UNAIDS, 2012). Although rates of new infections in children under 15 years of age have dropped in the last 3 to 4 years the overall prevalence rate has increased 2.2% (UNAIDS, 2012). Women have an unfair proportion of the HIV burden with a prevalence rate of 7.7% while men are 5.6% (UNAIDS, 2012). Consequently, it is not only important to emphasize education for this vulnerable population but it is important that there is a focus on gender equity in these social development programs as well. As the Ugandan Ministry of Education admits, accessing disadvantaged populations has been difficult thus elucidating the true need for VET programs to address the needs of PLWHA. Privately funded social development programs like the HSP are the ideal solution to help address the needs of this young adult population by providing VET and associated resources with the intention of making students better prepared to secure meaningful employment.
Holzworth Scholarship Program

HSP is a program that is managed by the IDI, which is a non-governmental organization that is funded by public and private donors (IDI, 2012). The IDI provides integrated clinical and social care for the treatment and prevention of HIV and related infectious diseases free of charge. After encountering differing needs between older and younger HIV patients the IDI established a transition clinic (TC) specifically for young adults. The TC provides a safe environment for the specific clinical and social needs of HIV+ young adults. One of the issues the TC encountered was that the patients in the clinic lacked the education skills to provide for themselves and so the HSP was developed to meet this need. This lack of skills forced many to give up on school due to poverty and illness.

The primary goal of the HSP program is to provide technical education skills and a support network to address the education deficit and faced by these HIV+ young adults in the TC. By using donor funds to enroll these young adults in VET programs the ultimate goal is that the individuals will obtain full time employment and serve as role models for the TC. The program also provides food and transportation, enabling students to focus on their studies rather focusing on the details that so often derail education dreams in these young adults. It is the program’s intention that improving these individual’s skills in conjunction with providing access to the programs’ peer network support structure will promote economic stability and self-sufficiency. The program’s target population is HIV+ young adults from within the TC, typically of low socio-economic status, that have minimal education/vocational skills but are stable with their anti-retroviral therapy.

HSP is coordinated by IDI on the ground in Kampala and has established working relationships with various vocational schools in the area. These schools cover several
different vocational tracts including: hairdressing, tailoring/sewing, computer training, electrical training and baking/catering skills.

Current status of the HSP

The HSP program began in July of 2012 advertisements were posted and the entire young adults clinic was notified about the start of the program and were asked to fill out an application for consideration. A selection committee reviewed the applications and selected twenty young adults for participation in the first cohort of the HSP. These individuals were enrolled in VET programs that were suited to their abilities and interests. As this paper is written, in the fall of 2013, the entire first cohort has finished their training program and most are in internship programs where they are applying and refining the skills learned in the program. This first cohort will complete their internships by December 2013 and will receive small business kits to help equip them with the tools necessary for employment. Several individuals have already started their own enterprises or have been offered full time paid employment. One of the primary objectives for the program is that greater than 50% will achieve this goal by using the practical skills learned from the program. The application process for the second cohort is in progress and applications are being reviewed, which will be quickly followed by training programs will be selection for each individual (Please see Figure 2 below for program trajectory and timeline for each of the cohorts and also see Appendix A for more detailed program plan).
As mentioned earlier, in low resource settings it is important to optimize the use of resources for programs that are the most effective. For donation-based programs, like HSP, it is important that money be spent on achievable realistic goals and that these goals are being met. In order to determine if the program is effective and meeting its goal of enabling young adults to be independent and provide for themselves, M&E methods must be adopted and implemented by the IDI.

The M&E plan for the second HSP cohort has been developed and will be fully implemented at the start of the second cohort. Due to the timing of this paper only the
design of M&E plan, not the results of its implementation will be discussed. This M&E plan along with the logic model with stakeholder analysis (for logic model with stakeholder analysis see Appendix B) was developed after the initiation of the program, towards the end of the completion of first cohort; as a result limited relevant data was collected from individuals in the first cohort; thus post-intervention data will be used exclusively in the evaluation of the first year of the program. However, for the second cohort, the M&E plan will include collection and analysis of pre and post-intervention data to be used in the evaluation. A primary evaluation will be conducted several months after the first cohort has completed their internships, with a more formal evaluation of the program after the second cohort has completed their internship. It is expected that the results of this formal evaluation will be written up and presented at a later date.

The goals of the M&E plan for the second cohort are to monitor critical processes in the program and evaluate the program’s ability to address the education gap and economic needs found in these HIV+ young adults. As mentioned earlier, PLWHA in developing countries typically have lower education levels and SES than their non-HIV counterparts and this program seeks to reduce this disparity by providing the tools necessary to improve their chances for employment. Given the strong link between economic wellbeing and health outcomes, this evaluation will show at least some evidence of an improvement in the health outcomes of individuals in the program (Rosen, et al. 2010). However the time required to fully detect such changes is also a subject that will need further review and may be an important outcome of the CQI stage of this plan.

The preliminary evaluation of the program will result in small modifications and adjustments to be implemented in order to ensure the program is adequately meeting
expectations; thus the findings from the first cohort will be used in the continuous quality improvement stage of the program. However, a decision for continuation will be determined after the formal evaluation that will take place several months after the second cohort completes their program. If this evaluation does indeed provide evidence to support continuation, the iterative PDCA cycle of this M&E process will begin thereby starting the process of CQI within the program.

**Detailed M&E Plan**

The evaluation plan for the HSP will utilize the framework of the four-level Kirkpatrick model. The choice to use the Kirkpatrick framework in the development of the HSP M&E plan was based on the concurrence among several authors about the value of this four-level model to simplify the complex process of training evaluation (Kirkpatrick, 1996; Bates, 2004). The Four-level Kirkpatrick model is depicted in Figure 3 and can be summarized as follows: level 1- reaction to the program; level 2- skills learned; level 3- skills applied in a career setting or if a job is acquired; and level 4- the overall effectiveness of the program (Kaufman, 1996).

The details of what each level captures are as follows. Level 1 assesses how well the scholars liked the particular program; participants are most commonly asked questions addressing satisfaction with instructors, or usability of training. Level 2 assesses skills learned as determined by quantifiable indicators of learning measured throughout the duration of the program. (Bates 2004). Level 3 uses behavioral outcomes to measure the extent that skills are being applied or result in meaningful employment. Lastly, level 4 provides some measure of the impact of the scholarship program; in most programs this would be assessed through financial gains of the institution providing the training, but
since this scholarship is a humanitarian effort, various behavioral markers in the TC community will be measured instead.

**Evaluation Strategy**

As part of this M&E plan a mixed methods quasi-experimental evaluation design will be used that incorporates use of quantitative and qualitative measures assessing relative endpoints geared towards capturing the four levels outlined in the Kirkpatrick framework (Shadish, Cook, Campbell, 2002). The model makes use of control subjects to allow for study-control comparisons to assess program effects. Quantitative information about grades and attendance will be collected throughout the program. Qualitative information including beliefs and expectations about the program and personal narratives capturing program relevant information will be collected at the baseline for all cohorts going forward, then again at a midpoint and finally at the end of course completion. Some qualitative information will also be collected from other stakeholders, including the staff at IDI running the program and the partnering education institutions to ensure the program is operating efficiently. While this information does not contribute to the final outcome of
the evaluation of the program collecting this type of information is imperative for CQI efforts. Table 1 below outlines the evaluation design for the program:

<table>
<thead>
<tr>
<th>Time</th>
<th>T1 (Baseline)</th>
<th>VET Program (Year-long)</th>
<th>T2 (Interim reports)</th>
<th>T3 (End of courses)</th>
<th>T4 (Post-completion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Cohort 1</td>
<td></td>
<td>P2, P3</td>
<td>P2, P3</td>
<td>P4</td>
<td>P5</td>
</tr>
<tr>
<td>Student Cohort 2</td>
<td>P1</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Group 1</td>
<td></td>
<td>C1</td>
<td></td>
<td>C1</td>
<td></td>
</tr>
<tr>
<td>Control Group 2</td>
<td></td>
<td>C2</td>
<td></td>
<td>C2</td>
<td></td>
</tr>
</tbody>
</table>

*P&C are observations*

*X is implementation of program*

*Table 1: HSP Evaluation Design layout*

The study groups are comprised of the students from both cohort one and two of the HSP; the control groups are comprised of sex and age-matched individuals, from the TC who were not part of the HSP and were questioned as controls at corresponding time points. Pretest-posttest comparisons of job status will be made in each cohort; data collected at baseline (T1) will be compared with post completion data (T4) for cohort two and this will be back compared with the information recalled from cohort one. This analysis will be followed by a comparison of pre and post-intervention data of the student cohort with the control group (C1 and C2 vs. P1 and P5). This comparison will promote the internal validity of the evaluation and post-completion observations of individuals’ job status will provide evidence for modification and/or continuation of the program (Shadish, et al, 2002).

In all cohorts going forward additional information, including expectations and beliefs about the program, will be collected in the form of a questionnaire (See Appendix C for examples of questions), which will be delivered by the counselors in the TC. Since most of these young adults will remain at the IDI following their program, the counselors at the TC will ask posttest questions (see Appendix C). This will help assess the program's success
at filling the vocational skills gap in Uganda. If beliefs and expectations about the program need to be addressed, which are contained within the first level of the Kirkpatrick model, additional evaluation methods such as focus groups may be considered.

Quantitative information about participant performance including: grades, attendance, health status and program completion will be collected by IDI and the vocational institutions throughout duration of the program. These findings will be used to help address the second tier or skills learned portion of the Kirkpatrick model and will provide guidance on where possible changes should be made to ensure the students training is meeting the needs of the students.

Questions about career status and income will be asked by counselors in the TC, which will help assess level three and four of the Kirkpatrick model. From the donor’s perspective understanding all aspects of the program including the experiences of the students, vocational schools and the staff at IDI combined with measures of impact, increase the likelihood that additional funding will be provided. It is expected that collecting input from all stakeholders and implementing small changes in response to this input will not only result in improvements, but also positively increase knowledge and perception of the program. Implementing these M&E processes will help ensure that all parts of the program are running efficiently, meeting expectations, and delivering a successful service that is beneficial to all involved stakeholders. The implementation of a CQI framework going forward will continue to be a primary goal but will be dependent on the positive results from the M&E process. Therefore CQI implementation is beyond the scope of this paper and will be presented in the future after the M&E plan has been implemented.
Discussion

The extensive literature about HIV includes many studies specific to medical treatments, psychological effects and prevention but little information is available on topics related to employment and VET programs (Kielfofner, et al., 2004; Kohlenberg, 2003). Over time as HIV therapy has evolved, so have the organizations that deliver HIV care; there is now an increasing focus on quality of life while PLWHA are living much longer with the disease (Egan and Hoagland, 2005). This is primarily due to the availability and use of antiretroviral therapy to extend the survival of PLWHA so much so that many now consider HIV to be a chronic disease (Takanda, 2012; Volberding & Deeks, 2010).

Literature suggests that social development programs that address the hardships of living with HIV in developing countries are effective at increasing HRQOL (Takanda, 2012). Therefore it is reasonable to assume that programs that have the ability to provide PLWHA with the vocational skills necessary to provide for themselves have the potential to greatly increase their HRQOL. With little direct research proving this link, this M&E plan is designed to outline a strategy that will carefully link results and outcomes to the HSP program design. The primary purpose of this discussion is to emphasize the importance of a strong monitoring and evaluation plan for HSP and explore the impact this could have on PLWHA in developing countries. In addition, the limitations of this study design and evaluation strategy will also be reviewed.

The Kirkpatrick framework for this evaluation plan was a clear choice for evaluating the reaction to the program, skills learned, application of skills, and impact of the program. While this is known as the best framework for reviewing education programs, critics argue that it is limited in its ability to address causal impact (Bates, 2004). However the strengths
of this well-established model outweigh its weaknesses and make this the best choice for the HSP evaluation.

Other limitations in this study include time needed to assess outcomes, deciphering the most useful aspects of the program, and potential selection bias. The amount of time available to determine whether students have secured employment is short (2-6 months) but it is anticipated that the internship period will provide adequate time and networking opportunities to pre-arrange employment. Given the interactive nature of the programs it will be hard to flesh-out whether increases in HRQOL are due to the vocational training aspect of the program or the social support structure inherent in program design.

Lastly, given the limited pool of candidates in the TC that this program selects from, it is reasonable to assume that the first cohorts of the program might be uncharacteristic of the greater population thereby leading to selection bias. Careful selection of comparison groups, within the TC must be made to address this issue. Through rigorous evaluation, using the quasi-experimental design described in Table 1, it is anticipated that the effect of many of these confounding factors will be eliminated but it is impossible to address these completely without a randomized control trial design, which is infeasible in this setting. (Shadish, et al, 2002). By controlling for these confounding factors an objective assessment can be made of the plausibility of the hypothesis that this program is indeed increasing employment opportunities and thereby increasing the HRQOL for young adults living with HIV in Uganda.

Debate about the effectiveness of VET programs in developing countries underscores the importance of M&E in this setting. In 1998 the World Bank issued a report and updated agenda suggesting that public based VET programs in sub-Saharan Africa
were ineffective and that they were to cease funding these endeavors (Bennell and Segerstrom, 1998). But their final recommendation was that private industry should fund VET especially since private industry funded programs have been found to be more effective than publicly funded VET (Bennell and Segerstrom, 1998). This recommendation lends credence to our privately funded VET model and emphasizes why a carefully designed M&E effort is needed. While most literature suggests that primary education is most effective at reducing unemployment rates, this leaves those that can’t attend primary education behind, including PLWHA. Again this is particularly a problem in Uganda where there are 1.4 million people living with HIV/AIDS and compounded further by the rigid Ugandan primary education system leaving many unable to attend primary school and without a suitable alternative option (UNAIDS, 2012; YLTTPA, 2011).

Well-designed monitoring and evaluation programs lay the groundwork for CQI processes and together have the potential to yield higher quality results and services to all stakeholders. The HSP evaluation will be based on the first two cohorts of the program, which will provide enough information for a go, no-go decision. After the second cohort completes their internship and adequate time is given for them to secure employment the formal evaluation will take place. The exact length of this time period after internship for the students to acquire employment is estimated at 2-6 months but this is dependent on the findings from the first cohort and deadlines required by funding decisions. This evaluation will determine if the program is effective at helping these young adults land meaningful employment. If a success, the results from the evaluation will become the starting point for CQI as the appropriate framework for continuing forward. Moreover, the
M&E process will elucidate which metrics are useful or missing thereby defining clear and vetted metrics for CQI in program continuation.

Given the challenges with HIV/AIDS, social development programs like HSP may be instrumental in reducing the cycle of poverty and addressing the big picture for impoverished PLWHA. Utilizing solutions outlined in public health quality consensus meeting, which was grounded in CQI theory, could dramatically benefit the global community as well as the local community in Uganda by providing evidence for a model that can be replicated in other low-resource countries.

The Ministry of Education in Ugandan recognizes that their education system is failing low-income students and in 2001 put together a plan to begin to address critical issues (Ugandan MOES, 2001). Since then, they have made significant progress and as the Ugandan education system continues to improve it is likely that the need for such VET scholarship programs will decline, but until that point HSP has the potential to address this education disparity found in PLWHA in Uganda (Ugandan MOES, 2012). This VET model has the potential to increase HRQOL directly for those enrolled in the program and these individuals will, in turn, have the ability to serve as role models for the community thereby indirectly influencing others’ HRQOL as well.

If HSP is deemed successful it is intended that it will serve as a model for scale-up but in order for this to happen, a careful M&E plan must be designed and implemented followed by the implementation of a CQI framework to ensure continued success. For HSP and other similar new programs, M&E is the ideal lead into CQI, because as mentioned it is typical that when programs undergo evaluation the results are rarely shared or fed back into the program for quality improvement. This process of implementing M&E and CQI
could be universally applicable in any social development program helping to ensure that money is spent efficiently with a high return on investment both in social and financial terms. Whether in social development programs addressing education gaps in HIV+ young adult populations or in larger public health interventions addressing other pressing health related concerns, properly designed M&E is an essential program component that must not be ignored. Monitoring and evaluation when used in conjunction with CQI methods has the ability to ensure continued success, reduce inefficiencies, and eliminate redundancies thereby maximizing health and quality-of-life.
Appendix A: Project Plan and Timeline

First Cohort
- Advertisement about the scholarship program
- Create application documents; Application process
- Selection of committee members
- Selection of candidates
- Selection of schools
- Enrollment of scholars in schools
- Scholars Internship
- Monitoring
- Evaluation of the program

Second Cohort
- Advertisement about the scholarship program
- Modify application documents; Application process
- Selection of candidates
- Selection of schools
- Enrollment of scholars in schools
- Scholars Internship
- Monitoring
- Evaluation of the program
### Appendix C: Example Questions for Program Evaluation

<table>
<thead>
<tr>
<th>Population</th>
<th>Time period</th>
<th>Sample Questions</th>
</tr>
</thead>
</table>
| **Student Cohort** | Questions before the program (during the application process) | • What is your current employment or source of income?  
  o Is this a full or part time job?  
  o What is your weekly income?  
 • Please explain your previous employment experiences (if any)  
 • Please explain your family unit and any support you receive from this unit  
 • How do you plan to use the knowledge learned from this program?  
 • How do you plan to personally benefit from this program?  
 • Tell us about your career intentions both over the next five years and long term?  
 • What is your gender/race/ethnicity?  
 • Education Level (grade level or otherwise)? |
| **Student Cohort** | After application process but before program initiation (to be asked by counselors) | • What changes do you expect in your life as a result of the program?  
 • Do you think anything will prevent you from doing well in this program? (Family responsibilities, other commitments, etc.)  
 • What difficulties do you anticipate you’ll have with the program? (Handling stress, transportation, meals, childcare, etc.)  
 • What are you most excited about in your program? What makes you nervous about starting your program?  
 • What do you think will be most helpful part of this learning program?  
 • How will this training help you? |
| **Control Cohort** | Same time as above cell | • Are you currently employed (source of income)?  
  o Is this part time or full time?  
 • Previous employment (if any) and explain.  
 • What is your weekly income?  
 • Please explain family unit or support network.  
  o What support do you receive from this unit? (money, care, food, transportation, love, etc)  
 • What are your life goals/dreams and do you have career aspirations?  
  o If yes, please explain.  
 • Do you have the skills or education necessary to provide for yourself financially?  
  o If yes, please explain.  
  o If no, please explain and be sure to discuss what skills you would like to learn? |
| **Student Cohort** | 2-6 months after program completion | • Are you using the skills you learned in your program, if yes, which skills and how often are you using them (daily, weekly, or monthly)?  
 • Are you currently employed?  
  o If so, what kind of job do you have and is this related to the skills learned in your program?  
  o If not, what are you doing for a living? |
<table>
<thead>
<tr>
<th>Population</th>
<th>Time period</th>
<th>Sample Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Cohort</td>
<td>Same time as above</td>
<td>• What are your day-to-day activities?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Can you talk about your previous employment and if what you are doing now is different than before?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Was the program useful for you?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o If so, please explain what impact it has had on your life.</td>
</tr>
<tr>
<td>VET institutions</td>
<td>Before program initiation</td>
<td>• What is your current employment (source of income)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o Is this different than when we asked you about a year ago?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• What is your weekly income?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Have your life goals changed within the last year?</td>
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<tr>
<td>IDI</td>
<td>After program completion</td>
<td>• How do you keep track of students after they complete the program?</td>
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<td></td>
<td></td>
<td>• Do you have a graduation rate or employment rate and if so what are they?</td>
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<td></td>
<td></td>
<td>• What do you see as barriers to success?</td>
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<tr>
<td></td>
<td></td>
<td>• Enablers of success?</td>
</tr>
</tbody>
</table>
References


Ugandan MOES. (2012). *The education and sports sector annual performance report.* Ugandan MOES.


