



# Uganda Sustainable Clubfoot Care Project

UPDATE 2005



Makerere University  
University of British Columbia  
Canadian International Development Agency  
Association of Universities and Colleges of Canada  
Children's Orthopaedic Rehabilitation Unit (CORU)  
Ministry of Health, Government of Uganda  
Christian Blind Mission International



Association of Universities  
and Colleges of Canada



Association des universités  
et collèges du Canada



**Steps towards a normal childhood for children born with clubfoot**

**NORMAL CHILDHOOD**

**STEP 1  
CLUBFOOT  
DETECTION**



**BIRTH**



**INFANCY**



**STEP 2**

**CORRECTION OF DEFORMITY  
THROUGH MANIPULATION  
AND CASTING**

**MAINTENANCE  
OF CORRECTION**

**CONTINUOUS CAREGIVER  
EDUCATION & SUPPORT**

**HEALTH CARE WORKER  
EDUCATION & SUPPORT**

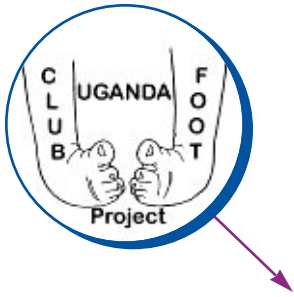
**STEP 3  
MAINTAIN  
CORRECTION  
OF DEFORMITY  
THROUGH BRACING**



**TODDLER**



**Uganda Sustainable Clubfoot Care Project**



# UGANDA SUSTAINABLE CLUBFOOT CARE PROJECT

JANUARY 1, 2005 – SEPTEMBER 30, 2010

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Uganda Sustainable Clubfoot Care Project S61268-486

## First Annual Progress Report 2004 - 2005

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### 1) Project profile

Lead Canadian Partner	Lead Developing Country Partner
<p>The University of British Columbia Canadian project director: Dr. Shafique Pirani</p> <p>Professor, Department of Orthopaedics Surgery</p> <p>Phone number: (604) 522-2332 E-mail address: piras@aol.com</p>	<p>Makerere University, Uganda Developing country project director: MR. Edward Naddumba</p> <p>Head, Department of Orthopaedic Surgery</p> <p>Phone number: 011-041-542332 E-mail address: enaddumba@yahoo.com</p>

#### Link to Uganda's national development priorities

The Uganda Poverty Eradication Plan states that ill health is the most frequently cited cause and consequence of poverty in the country. Its four pillars of action include actions that directly improve the quality of life of the poor and actions that directly increase the ability of the poor to raise their incomes. The Uganda Ministry of Health has expressed the desire to incorporate the principles of clubfoot management espoused by this project within its next five-year strategic plan (2005-2010).

#### Project purpose

The project purpose is to make available in a sustainable fashion a universal, effective, efficient, and safe treatment of the congenital clubfoot deformity in Uganda.

#### Expected outcomes

The project will reduce the consequences of disability from neglected clubfeet by institutionalizing the Ponseti Method of clubfoot treatment throughout the Ugandan health care system and will train health care personnel to detect and treat the deformity.

#### Beneficiaries

The main beneficiaries will be children affected by clubfoot and their families.

#### Key activities

Key activities include an ethno-cultural survey, an evaluation of perceptions and incidence survey, the development of an awareness program, clubfoot conferences in Uganda as well as workshops for orthopaedic officers, technicians and local health care personnel to provide treatment with a method that is socially acceptable and economically viable.

## 2) Key team members and stakeholders

Team Member/Institution	Responsibilities
Dr. Jackson Amone Senior Medical Officer Integrated Curative Division Ministry of Health, Uganda	<ul style="list-style-type: none"> <li>• Regular support supervision to the hospitals to ensure that:               <ul style="list-style-type: none"> <li>- All hospitals budget for and purchase</li> <li>- supplies for clubfoot treatment</li> <li>- There is constant availability of Plaster of Paris and braces in the clubfoot clinics</li> </ul> </li> <li>• Health workers sensitization on detection and referral of children with clubfoot</li> </ul>
Ms. Sue Cutts UBC, Canada	<ul style="list-style-type: none"> <li>• Program Administration in Canada</li> </ul>
Dr. Fulvio Franceschi Children's Orthopaedic Rehabilitation Unit Uganda	<ul style="list-style-type: none"> <li>• Supervision of Ponseti Method Workshops</li> <li>• Financial Records/Budgets</li> <li>• Research supervisor</li> </ul>
Professor Joseph Konde-Lule Institute of Public Health, Uganda  Professor Richard Mathias UBC, Canada	<ul style="list-style-type: none"> <li>• Public health/primary care focus of the intervention within the Ugandan health care system</li> <li>• Research supervisor</li> <li>• The design of the mid-term and final evaluation studies</li> <li>• Data input, analysis, interpretation and dissemination to the Project Directors</li> <li>• Quality assurance of the overall evaluation</li> <li>• Working with the Ministry of health re screening of newborns for clubfoot deformities and their referral for definitive diagnosis at the appropriate health center level focusing on the integration of this requirement into the existing health care system through the well baby visits, immunization programs and other primary health interventions in place in the Ugandan health care system</li> </ul>
Dr. Kenneth McGillivray UBC, Canada	<ul style="list-style-type: none"> <li>• Member of Steering Committee</li> <li>• Assistance in capacity building issues related to the region as well as how the program can be expanded in Africa/elsewhere</li> </ul>

Team Member/Institution	Responsibilities
Mr. Winston Miller Enable Canada	<ul style="list-style-type: none"> <li>Committed ongoing logistical and in-country support of training and treatment programs through its extensive network of partners in Uganda</li> </ul>
MR. Edward Naddumba Country Project Director Head of Orthopaedics MR. Ben Mbonye, Hon Lecturer Uganda	<ul style="list-style-type: none"> <li>Research supervisors</li> <li>Curriculum content of Ponseti Method teaching modules for all the training institutions and Ponseti Workshops for orthopaedic officers in the community</li> </ul>
Professor Shafique Pirani Project Director  Dr. Norgrove Penny Dept Orthopaedics UBC Canada	<ul style="list-style-type: none"> <li>Uganda liaison</li> <li>Research supervisors</li> <li>Curriculum content of Ponseti Method teaching modules for all the medical and paramedical training programs as well as the Ponseti Method Provider and Support Supervision Workshops for orthopaedic officers in the community</li> <li>Report Preparation</li> </ul>
Ms. Marieke Steenbeek-Dreise Children's Orthopaedic Rehabilitation Unit, Uganda Department of Orthopaedics Makerere University Medical School, Uganda	<ul style="list-style-type: none"> <li>Program Administration in Uganda</li> </ul>



## 3) Status of results template

Intended Results	Indicators	Cumulative outcome & outputs achieved (use indicators)
<p><b>Outcome 1 (institutional)</b> By 2010, 80% schools of Higher Learning in Uganda (Medical Schools, Nursing schools, Paramedical Training Schools – that educate &amp; train Uganda’s future healthcare workers) will have strengthened capacities to teach how to detect and treat the congenital clubfoot deformity in a sustainable manner within the Ugandan social, cultural &amp; economic context.</p>	<p><b>Outcome Indicators 1</b> <u>Indicator 1.1:</u> Number of institutions in Uganda having improved capacities in the teaching the care of the congenital clubfoot deformity. <u>Indicator 1.2:</u> Level of success in the teaching of the treatment of clubfoot deformity of practitioners trained through the targeted institutions.</p>	
<p><u>Outputs 1</u> <u>Outputs 1.1:</u> Makerere and Mbarara Medical Schools undergraduate syllabus in Musculo-skeletal health upgraded to include module for the Ponseti method of treating the congenital clubfoot deformity by 2005</p>	<p><u>Output indicators 1</u> <u>Indicator 1.1:</u> Number of medical students benefiting each year from the upgraded syllabus. Assessment of quality of teaching module by survey</p>	<p>Outputs 1.1 to 1.4: Preliminary teaching materials available and being used informally. Workshops for formal module production scheduled in June and to follow.</p>
<p><u>Output 1.2:</u> Makerere Medical School postgraduate syllabus in orthopaedic surgery and general surgery upgraded to include module for the Ponseti method of treating the congenital clubfoot deformity by 2005.</p>	<p><u>Indicator 1.2:</u> Number of postgraduate students in general and orthopaedic surgery benefiting each year from upgraded syllabus. Assessment of quality of teaching module by survey.</p>	
<p><u>Output 1.3:</u> Mulago Paramedical School of Orthopaedic Officers syllabus upgraded to include a module for the Ponseti method of treating the congenital clubfoot deformity by 2005</p>	<p><u>Indicator 1.3:</u> Number of trained orthopaedic officers benefiting from new modules each year. Assessment of quality of teaching module by survey.</p>	
<p><u>Output 1.4:</u> Mulago Paramedical School of Orthopaedic Technologists training upgraded to include a module on Steenbeek Foot Abduction Brace by 2005</p>	<p><u>Indicator 1.4:</u> Level of satisfaction of technicians benefiting from new module. Assessment of quality of teaching module by survey.</p>	
<p><u>Output 1.5:</u> By 2006 80% of in-service technicians currently in government and NGO have been trained in the Ponseti Method with a specific focus on the role of the Orthopaedic Technician through workshops in Uganda.</p>	<p><u>Indicator 1.5:</u> Number of in-service technicians trained and actually using new capacities in their practice.</p>	<p>Output 1.5: Training Workshops to begin Sept 05.</p>
<p><u>Output 1.6:</u> Clubfoot screening module designed, introduced and taught by 80% of nursing and midwifery schools by 2006.</p>	<p><u>Indicator 1.6.1:</u> Clubfoot screening module approved by nursing and midwifery council of Uganda for all nursing and midwifery schools by 2005.</p>	
	<p><u>Indicator 1.6.2:</u> 80% of nursing and midwifery students benefiting from new module by 2006. Assessment of quality of teaching module by survey.</p>	<p>Output 1.6: Clubfoot screening module for nursing and Midwifery Schools to be developed in July &amp; Aug 2005, and to be ready for approval by nursing and midwifery council of Uganda by the end of 2005.</p>



Intended Results	Indicators	Cumulative outcome & outputs achieved (use indicators)
<p><b>Output 1.7:</b> By 2010, 720 medical students (80 at MUMS and 40 at UMMS each year for six years) will benefit from new knowledge and skills in the detection and management of congenital clubfoot in Uganda with a specific focus on the role of the Medical Officer in the District Hospital.</p>	<p><b>Indicator 1.7:</b> Number of medical students having acquired new knowledge and skills in detection and management of congenital clubfoot in Uganda</p>	<p>Outputs 1.7 – 1.10; too early to achieve any results.</p>
<p><b>Output 1.8:</b> By 2010, 48 surgeons (4 surgeons and 4 general surgeons each year for six years) have acquired new knowledge and skills in the detection and management of congenital clubfoot in Uganda with a specific focus on the role of the General &amp; Orthopaedic Surgeon in the District &amp; Referral Hospital.</p>	<p><b>Indicator 1.8:</b> Number of surgeons having acquired new knowledge and skills and number that are using their new knowledge and skills in their practice.</p>	
<p><b>Output 1.9:</b> By 2010, 120 orthopaedic officers (20 each year for six years) have acquired new knowledge and skills in the detection and management of congenital clubfoot in Uganda with a specific focus on the role of the Orthopaedic Officer in the District Hospital.</p>	<p><b>Indicator 1.9:</b> Number of orthopaedic officers having acquired new knowledge and skills and number of them that are using their new knowledge and skills in their practice.</p>	
<p><b>Output 1.10:</b> By 2010, 80% of nurses (in Uganda seeing infants) will benefit from new knowledge and skills in the screening and detection of congenital clubfoot in Uganda with a specific focus on the role of the nurse at the time of issuance of the “child health card”.</p>	<p><b>Indicator 1.10:</b> Number of nurses having acquired new knowledge and skills</p>	

Intended Results	Indicators	Cumulative outcome & outputs achieved (use indicators)
<p><b>Outcome 2 (community)</b></p> <p>By 2010, the Ponseti method of treating the congenital clubfoot is integrated within the Ugandan healthcare system such that there will be increased capacity within each of Uganda's 56 districts for detection and treatment. By the end of the project there should be high awareness of the deformity within health care workers and the population, the deformity should be routinely recognized, the infants should be taken for treatment, and the treatment be available and effective with improved treatment for up to one thousand infants per year.</p> <p><b>Outputs 2</b></p> <p><u>Output 2.1:</u> Ministry of Health approval of Clubfoot Treatment Protocol for Uganda by 2005, with necessary resources for District Hospital Clubfoot care</p> <p><u>Output 2.2:</u> By 2006, all of Uganda's 56 Districts to have at least one Orthopaedic Clinical Officer trained in the Ponseti Method of Treating the Congenital Clubfoot</p> <p><u>Output 2.3:</u> By 2006, a manual for District Hospitals for the management of the congenital clubfoot deformity has been produced and distributed to all hospitals in Uganda.</p> <p><u>Output 2.4:</u> By 2007, all of Uganda's 56 Districts' birthing clinics and immunization centers to be sensitized in clubfoot detection</p> <p><u>Output 2.5:</u> Over the life of the project, a variety of studies (Outcome Evaluations) and surveys (Incidence Survey, Ethno-Cultural Survey) are planned. This output focuses on data collection and interpretation (Incidence Survey-2005, Ethno-Cultural Survey-2005, Outcome Evaluation-2007 &amp; 2010) presentation at conferences (24 presentations anticipated by end of project) and publications in peer-reviewed academic journals (12 anticipated by end of project). In addition 2 conferences are planned in Uganda (in 2008 &amp; 2010) to disseminate the results of the Project</p>	<p><b>Outcome Indicators 2</b></p> <p><u>Indicator 2.1:</u> Actual compared to expected rates of referral to District Hospitals based on incidence data by sex.</p> <p><u>Indicator 2.2:</u> Number of District Hospitals using Ponseti Method as treatment of choice for clubfeet.</p> <p><u>Indicator 2.3:</u> Pirani Clubfoot Scores for up to a thousand clubfeet per year.</p> <p><b>Output indicators 2.1</b></p> <p><u>Indicator 2.1:</u> Official approval of Clubfoot treatment protocol by MoH with satisfactory arrangement for necessary resources for District Hospital clubfoot care by 2005</p> <p><u>Indicator 2.2:</u> Number of Uganda's District's with Orthopaedic Officer trained in managing clubfoot by the method of Ponseti over time (by end of 2006)</p> <p><u>Indicator 2.3:</u> The number of hospitals that have received the manual and that are using it as a key reference for treating clubfoot deformity.</p> <p><u>Indicator 2.4:</u> Percentage of Uganda's birthing clinics and immunization clinics sensitized in clubfoot detection over time by end of year 2007.</p> <p><b>Indicators 2.5:</b></p> <ol style="list-style-type: none"> <li>1. Incidence Survey completed-2005,</li> <li>2. Ethno-Cultural Survey-completed-2005</li> <li>3. First Outcome Evaluation completed-2007</li> <li>4. Final Outcome Evaluation completed-2010</li> <li>5. Clubfoot Conference 2008</li> <li>6. Clubfoot Conference 2010</li> <li>7. 24 Conference Presentations</li> <li>8. 12 Peer Reviewed Publications</li> </ol>	<p>Output 2.1: Uganda's Vice President has said "I therefore recommend that the Ministry of Health adopt this cheaper method of treatment of congenital clubfoot in all its hospitals." Details for resources are being worked out.</p> <p>Output 2.2: The National Clubfoot Clinic runs every Thursday at Mulago Hospital. Regional Clubfoot Clinics have now started at the following Regional Referral Hospitals (Jinja, Mbale, Gulu, Mbarara, and Msaka) with training of their medical (March) and paramedical (April) staff already having been completed. The next stage will be to gradually to start opening clubfoot clinics at the District level Hospitals.</p> <p>Output 2.4: too early to have any results yet.</p> <p>Output 2.5: Ethno-Cultural Survey organized and ready to start fieldwork Aug 2005. Incidence Survey being organized and to start data collection Sep 2005.</p>

#### 4) Analysis of project results

##### *Project context*

This Project aims to change the outcome of this disease for an entire nation (albeit a developing one). As the Project follows its plotted course, it will be subject to the winds and tides of social, economic, cultural and political changes in Uganda. These influences may be both positive and challenging. Those experienced to date (along with adaptive measures taken, if any,) are outlined below.

##### Challenges

1. The following press release from May 24th 2005, gives a flavor of the government opposition's viewpoint of the current situation in Uganda.

“Meanwhile, the Uganda Peoples Congress this morning condemned the recent report that the Uganda dictatorship is spending \$700,000 of Uganda’s limited public funds in attempts to polish its shattered image abroad. Uganda Peoples Congress said it is unacceptable to throw away such a huge amount of money to a foreign public relations firm simply to save the image of a discredited leader of a discredited one party system, when unemployment in Uganda is running at 65%; when Makerere University can close anytime due to shortage of funds; when surgery at Mulago Hospital was halted for two weeks due to lack of facilities; when most teachers have not been paid for several months and above all; when 1.6 million of Ugandans continue to live in squalid conditions in concentration camps in northern Uganda; when it is official that without foreign aid Uganda would collapse in six months.”

##### Positive

1. The pilot to the USCCP was the UCP (Uganda Clubfoot Project), a Rotary funded initiative from 1999 to 2004. There has been ongoing support from UCP for USCCP activities. This has reduced USCCP expenses in Uganda during the quarter Jan-Mar 2005 (see quarterly report).
  - a) \$US 6000 Teaching Models
  - b) \$US 4000 Project Launch
  - c) \$US 2000 March Training Workshop
2. The speech of the Vice President of Uganda, Professor Gilbert Bukenya (formerly Dean of Medicine at Makerere University School of Medicine) at the Launch of the Project in Kampala on Feb 22nd 2005 at Mulago Hospital, was very supportive for the goals of the project.

“The Public Health approach in the treatment of clubfoot disabilities should therefore involve sensitization and mobilization of the communities to ensure that all the children born with clubfoot are detected and referred for treatment. Together the Project and the Ministry of Health will build capacity of the health workers through refresher courses in the Ponseti Method for those in the field, and introduce teaching modules for treatment of clubfoot using Ponseti Method in all health training institutions in the country. In doing so there should be political commitment for this project to attain its goal and ensure sustainability at the end.

I therefore recommend that the Ministry of Health adopt this cheaper method of treatment of congenital clubfoot in all its hospitals. Surgery should only be done when manual manipulation and casting fails. Uganda will be a role model in championing this method of treatment of congenital clubfoot deformity in the region. I am proud to be associated with this project.”

Annual results**1. Project Launch (Uganda) February 22, 2005**

Our Ugandan Partners went to considerable efforts to plan and execute a colorful formal launch to the project, attended by many dignitaries. There was an exhibition entitled “The Clubfoot in Uganda” showing not only the history of clubfoot treatment in Uganda but also its future with the Ponseti Method). There were a number of patients and parents present who very kindly gave their feelings and thoughts about clubfeet in Uganda. They answered questions. Media were invited. The Project was formally launched by the Minister of Health (for the Vice President who was called away at the last moment), and he gave the Vice President’s speech. The Deputy Vice Chancellor of Makerere University also gave a speech. (See appendix for pictures of the Launch, the speeches, the program, and media articles.) The effort put into the launch by our Ugandan Partners, I believe, is an expression of their ownership and deep commitment to this project.

**2. Management Committee Meeting Uganda February 16-18, 2005**

This was the first formal meeting of the Management Committee of the Project following its approval in January 2005. Its roles and responsibilities were reviewed and delegated (see attached committee structure), with each project activity having a “chair” or most responsible person. (In some cases an activity has two “co-chairs”.) The quarterly and annual plans and budgets for each activity were discussed.

**3. Computers & Communication Workshop February 23-24 2005**

This Project involves teams collaborating between continents and 10-11 time zones apart (depending on the season) on capacity development and data collection activities in Uganda, and data analysis in British Columbia. A strategy was needed that would allow easy communication between teams and their computers over the internet. Makerere University has recently put into place internet access for staff and students. The partners chose Apple Macintosh computers and Ichat/Isight and Mac to facilitate this. A Computers and Communication Workshop was held on February 23-24 2005 to start the implementation of this strategy. (see appendix)

**4. Workshop for Regional Clubfoot Clinic Coordinators March 17-18 2005**

The National Clubfoot Clinic runs every Thursday at Mulago Hospital. Regional Clubfoot Clinics have now started at the following Regional Referral Hospitals (Jinja, Mbale, Gulu, Mbarara, and Msaka) with training of their medical staff in March. and paramedical staff scheduled for April. District level clinics training is planned in due course.

*Results variance*

There has not been a significant difference between results expected and actual results achieved to date.

*Implementation variance*

The Project Start was delayed to February 2005. As such, all activities have also been delayed. This should not however impact the overall goal of the project, as activity schedules have been altered accordingly.

*Spin-off activities and unexpected results*

1. UBC Department of Orthopaedics has an annual 2-day "Orthopaedic Update" for orthopaedic surgeons in British Columbia (as well as some attending from NW, USA and Alberta). This year the topics included, "Live Surgery - Limitedl Incision and Minimal Invasive Hip Replacement Surgery" followed by the eponymous KS Morton Lecture, "The Neglected Clubfoot in Uganda – From Quandary to Opportunity". With our capabilities with Ichat, we were able to do a live transmission of both of these events from Vancouver to Uganda on May 5, 2005.

**5) Communication products**

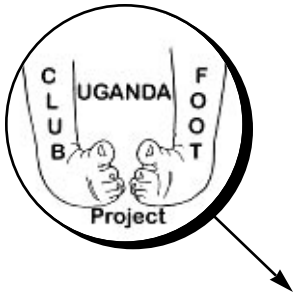
1. **New Vision** – The New Vision is one of Uganda's leading daily newspapers. They sent a reporter to the official Launch of the Project, and have reported on the Ponseti Method in Uganda previously. Provided in the appendix are two articles dated 26th Nov 2001 and 9th March 2005.
2. **Speech of Vice President of Uganda**, Professor Gilbert Bukenya, read at the official Launch of the Project in Kampala on 22nd Feb 2005.
3. **Speech of Deputy Vice Chancellor of Makerere University**, read at the official Launch of the Project in Kampala on 22nd Feb 2005.
4. **Letter of President of UBC**, Dr. Martha Piper on occasion of Project Launch in Uganda.

**Appendices** (included on a CD attached to the back cover)

1. **Uganda Clubfoot Project Manual**  
One of the key activities of the Uganda Clubfoot Project was to train Orthopaedic Officers in the Ponseti Method of treating congenital clubfoot deformity. This manual was the syllabus. This manual and the Staheli Manual (see below) will form the basis of the teaching modules for outputs 1.1 to 1.3 of USCCP.
2. **Production Manual for the Steenbeek Foot Abduction Brace**  
Another key activitiey of the Uganda Clubfoot Project was to train Orthopaedic Technicians in the manufacture of the Steenbeek Foot Abduction Brace. This manual was the syllabus. This manual will form the basis of the teaching module for outputs 1.4 & 1.5 of USCCP.
3. **Staheli Manual**  
This is a 32-page booklet on the Ponseti Method, edited by Lynn Staheli, that follows on from the UCP manual. It will also be a basis for the teaching modules for outputs 1.1 to 1.3 of USCCP.

4. **Proposal for a study entitled “Knowledge, Attitude and Beliefs about Clubfeet”**  
The pattern of community beliefs and attitudes related to clubfoot in various parts of Uganda has not been established. The positive or negative outcomes of any such beliefs are also not known. This study will seek to fill this gap so as to facilitate the implementation of the Uganda Sustainable Clubfoot Care Project. The Objectives of the study are: (1) To establish and describe the knowledge, beliefs and perceptions and attitudes of different ethnic groups and communities in Uganda regarding clubfeet; and (2) To establish the health seeking behaviour of mothers with children who have club feet. This is one of the key initial activities scheduled for the USCCP.
5. Pictures from the official Launch of the Project in Kampala on 22nd Feb 2005.
6. **Proposal for Awareness Program**  
The awareness program is intended to sensitise the health workers in all the health facilities in the country on how to identify clubfoot deformity in a new born baby. The awareness program will be conducted in phases. The first phase will involve the sensitisation of the health workers in the above regions. When the project has taken root in these regions, then sensitisation will be done in the other parts of the country. This is another key initial activity scheduled for the USCCP.

Respectfully Submitted  
Dr. Shafique Pirani  
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6th June, 2005  
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# UGANDA SUSTAINABLE CLUBFOOT CARE PROJECT



JANUARY 1, 2005 – SEPTEMBER 30, 2010

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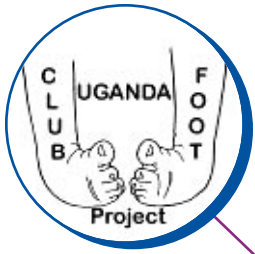
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# UGANDA SUSTAINABLE CLUBFOOT CARE PROJECT

JANUARY 1, 2005 – SEPTEMBER 30, 2010

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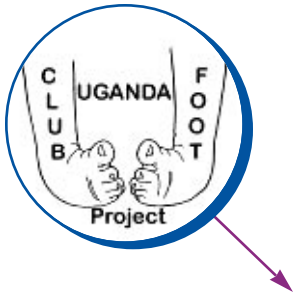
Dr. Norgrove Penny  
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# UGANDA SUSTAINABLE CLUBFOOT CARE PROJECT

JANUARY 1, 2005 – SEPTEMBER 30, 2010

## NARRATIVE PROJECT DESCRIPTION

## 1) BACKGROUND INFORMATION

Uganda is one of the least developed nations and has one of the highest birth rates on Earth (50 per thousand population). Its population is largely rural (90%) and dependent mostly on subsistence farming for their daily needs. In an agrarian society, disability is a major cause of the developmental challenges of ill health and poverty. Affected individuals are socially and economically disadvantaged with reduced educational and employment opportunities. Affected females are further disadvantaged (less likely to marry - more likely to suffer abuse). The burden of care of the disabled child falls on the mother, who has less time for other children, domestic, agricultural and economic activity.

## 2) THE PROBLEM ADDRESSED

An estimated one thousand infants are born every year in Uganda with one or both feet affected with a birth defect known as congenital clubfoot. Usually the deformity is not diagnosed, or if diagnosed it is neglected, as the conventional treatment of surgical correction is simply not possible with the resources available. In 1994, there were an estimated 10,000 children in Uganda with neglected clubfeet (Atria). Congenital deformities (mostly clubfeet) are responsible for 30 % of musculoskeletal ill health and disability in children in Uganda. (Lutwama, 2002).

Children with neglected clubfeet are destined to grow up with deformed and painful feet, leading to physical disability. Untreated, this disability affects an individual's mobility and threatens their potential productivity. The neglected clubfoot deformity results in disability for the individual, a reduced standard of living for the entire family, and a burden to the

community.

Professor Ponseti from the University of Iowa has developed a non-invasive method of correcting the clubfoot deformity, with an efficacy rate of 98% in compliant patients (Morcuende – Iowa City). It is appealing where surgical resources are scarce. In 1999, a Canadian led Rotary funded pilot project introduced the Ponseti method of treating the clubfoot into selected areas of Uganda by increasing awareness of the deformity and training suitable health workers in the method. Results of treatment at the Mulago Hospital Clubfoot Clinic were very encouraging.

This project's goal is to reduce the consequences of disability from neglected clubfeet in Uganda by institutionalizing the Ponseti Method of clubfoot treatment throughout the Ugandan healthcare system and provide universal Ponseti clubfoot treatment.

### 3) THE LINK BETWEEN THE PROJECT AND THE NATIONAL PRIORITIES

This project's objectives - to institutionalize the method throughout the Ugandan healthcare system and provide universal Ponseti clubfoot treatment - will directly address the Orthopaedic Department's concern re insufficient surgical resources, and help address Uganda's concerns (and at the same time Canada's ODA priorities) regarding poverty eradication, gender equality and provision of basic human needs.

This project's goal (to reduce the consequences of disability from neglected clubfeet in Uganda) is an issue of relevance to the Ugandan Government and specifically to the Ministry of Health. *The Uganda Poverty Eradication Plan* (3/2002) states that Ill health was the most frequently cited cause and consequence of poverty. Its four pillars of action include "actions which directly improve the quality of life of the poor, and actions which directly increase the ability of the poor to raise their incomes." By preventing this disability, this project's objectives will directly help affected individuals to improve their quality of life and increase their ability to improve their incomes. The Ministry of Health has already expressed the desire to incorporate the principles of clubfoot management espoused by this project within their next five year plan (HSSP2 – Health Sector Strategic Plan 2: 2005-2010)

### 4) THE RELEVANCE AND SCOPE OF THE PROPOSED PROJECT

In 1997, The Ministry of Health in Uganda released an information booklet "Making A Difference For Persons With Disabilities: Learn More About Disability & Rehabilitation" to provide more information on disability and

rehabilitation of PWD (persons with disability) in Uganda so that "all Ugandans including the disabled participate in the goal of health for all." In this booklet, the Ministry points out that Uganda is a signatory to the many United Nations resolutions that have been passed to guide nations re their approach to the provision of services to PWD. One such document is the Standard Rules for Equalization of Opportunities for PWD. The booklet states 3 of 22 rules. One rule on medical care is excerpted below.

#### Rule 2-"Medical Care"

1. States should ensure the provision of effective medical care to PWD
2. States should work towards the provision of programs by multidisciplinary teams of professionals
3. States should ensure that all medical and paramedical personnel related personnel are adequately trained and equipped to give medical care to PWD and they have access to relevant treatment methods and technology.

In 1997, The Ministry of Health in Uganda released a set of standards to help Districts in Uganda develop services that meet the needs of persons with disabilities (Essential Services for Rehabilitative Health Care for Persons with Disabilities in The District). This document elaborates on disability and Rehabilitation health services to be available at the district level according to the National Health Policy's "Uganda National Minimum Healthcare Package." Strategies for strengthening these services include decentral-ization, raising public awareness, capacity building of medical personnel to new approaches, and incorporating rehabilitation in the basic and in-service curricula for health workers.

The Uganda Sustainable Clubfoot Care Project works hand in hand with these standards and strategies by

1. Aiming to raise awareness of the clubfoot deformity throughout Uganda
2. Training local healthcare personnel to provide treatment with a method that is socially acceptable and economically viable for Uganda.

## 5) PROJECT METHODOLOGY

This project has three methodology foci:

- a. Enhance the capacity to detect the deformity.

The detection of deformity will ideally occur at or soon after birth. When delivery occurs in a health facility (about 40% of deliveries) the nurse midwife will be trained in detection. For births outside a health facility it is Ministry policy that newborns are to be taken to a health care facility for birth registration at which time a well baby check and immunization will be done and a “Child Health Card” issued. This project will work with the Ministry to supply in-service training and materials to those health professionals (usually a nurse) already in the community first seeing the at risk population (at the time of issuing the Child Health Card) in detection and referral of abnormal screened children. This project will also strengthen the curricula of the Nursing and Midwifery Schools in Uganda with training modules on clubfoot detection.

- b. Enhance the capacity to treat the deformity

The **Orthopaedic Officer** is primarily responsible for musculoskeletal abnormality management at the district level. It is this officer who will examine the screened

children to confirm the diagnosis of clubfoot and then initiate management. Therefore all orthopaedic officers already in the community need to be sufficiently trained and supervised to be able to carry out Ponseti treatment of clubfoot. This will be done with a series of Ponseti Method Workshops throughout Uganda. This project will also strengthen the curricula of the School of Orthopaedic Officers with training modules on clubfoot treatment by the Ponseti method. Medical Officers, General Surgeons and Orthopaedic Surgeons working at the district and regional level are an integral part of the management of these cases as there is a need for a minor surgical procedure to release the Achilles tendon by severing it and then allowing it to heal with the foot in the functional position. These doctors will be given continuing medical education materials explaining the method and their role in it, through the orthopaedic officers at the time that the intervention is needed. Education and training will be offered during their training. Medical students in the country’s medical schools will be given a module on their role in the management of clubfoot deformity in Uganda. Residents in the general surgery program assigned to orthopaedics during their training will be exposed to Ponseti Clubfoot treatment at the Mulago Clubfoot Clinic. Clubfoot exposure for Orthopaedic residents will continue at each weekly clubfoot clinic for a total of four months during the their second year of training.

- c. Cultural Perceptions/ Incidence Survey and Evaluation.

i) **Cultural perceptions;** Although it is well known that having a visible disability results



in discrimination, the cultural context of this discrimination is not well documented in Uganda (or elsewhere). The cultural and gender context of the discrimination, particularly in the different tribal groups (5 main tribal groups are present in the country), will be described. As the cultural perception of the disability and gender may affect not only the initial presentation for assessment but also the compliance with the treatment regimen, a survey will be done using focus group methodology to explore in different tribal groups the perceptions of clubfoot, the causes of the deformity and the need for treatment. These groups will also explore the differences in the disability and the responses to it in boys and girls. Directed by a qualified Ugandan social scientist, focus groups will be carried out in each of the main tribal groups. Culturally sensitive educational materials for the treating health professionals and for the public can then be prepared to maximize detection and fully compliant treatment. The reaction of the parent to a malformation in a newborn is within the cultural context of the parent. This project will carry out a socio-anthropological study of clubfoot in the Ugandan context to determine how the context of the disability is associated with the referral and treatment of clubfoot. Differences in the context of girls and boys will also be explored in this study.

ii) **Incidence Survey:** Pilot data show a sex ratio of five males for every female infant presenting for treatment at the Clubfoot clinic at Mulago Hospital. A widely quoted figure worldwide for sex incidence in clubfoot is 2.5 males for every female. It is unknown whether the Mulago data represent a different sex incidence of clubfeet in the Ugandan population or a bias within the population to seek treatment by sex. An incidence survey of clubfoot in all live births over one year in Uganda's eight principle

hospitals is planned to evaluate this question. This group of infants with clubfeet will then form the cohort that will be followed for final outcome (see below).

iii) There will be two main evaluation activities, a mid-term evaluation done by the study team and an end of project evaluation. The mid-term evaluation will be carried out starting in year three and will be a process evaluation. It will use a stratified random sample as the basis of a survey of villages. The village survey will be done to determine the numbers of children with undetected clubfoot deformity, the number of un-referred children and the number of children that while referred did not come for treatment. Attention will be paid to referral rates by gender to detect gender bias in the treatment of clubfoot. This evaluation will also follow up children who were non-compliant to determine the reasons for not completing treatment, again by gender. Although monitoring the referrals and treatment plans of children will be an ongoing quality assurance and surveillance aspect of the program, a report of these findings will be prepared and circulated by the mid-term evaluation team. The rates of referral will be compared by district to determine if case finding is occurring at the same rates in all districts for boys and girls. If a district is significantly lower than the mean, the reasons will be determined. The final evaluation will be an outcome-oriented evaluation to determine the effectiveness of the treatment of clubfoot. As the full treatment course takes up to four years, this evaluation will be based on following a stratified random sample of treated children to determine the outcome. This will allow an estimate of the effectiveness of the method to be made. This is crucial to the goal of using this method in other settings and countries.

## 6) ACTIVITIES PLANNED

(see Workplan for details)

- a) Clubfoot Conferences
- b) Awareness Program
- c) Module Production
- d) Fellowship Support
- e) Orthopaedic Officer and Technicians Workshops
- f) Rural Support/Supervision
- g) District FPD and Nursing Trainers Workshops
- h) Outcome Evaluation
- i) Incidence Survey
- j) Ethno-Cultural Survey
- k) Public Engagement Video
- l) Mid-Term Evaluation
- m) Purchase Capital Equipment and Library
- n) Management Committee Meetings
- o) Advisory Committee Meetings

## 7) THE RISKS & MITIGATING STRATEGIES (IN BRACKETS) TO THE PROJECT

- a) Lack of resources within MOH to supply plaster and braces to districts, (advocacy and sensitizing of health care administrators in value of the treatment)
- b) Parental compliance with treatment (to be specifically researched, and parental education strategies developed if necessary)
- c) Political instability in the country, and insurgency in rural areas
- d) Lack of resources within teaching institutions to effectively teach detection

and treatment of clubfeet (teaching modules designed to be effective)

- e) Long distances between partners (clear and effective communication strategies)

## 8) SUSTAINABILITY STRATEGY

This project's theme is sustainability. As stated above, *"the Uganda Sustainable Clubfoot Care Project works hand in hand with these standards and strategies by*

- *Aiming to raise awareness of the clubfoot deformity throughout Uganda*
- *Training local healthcare personnel to provide treatment with a method that is socially acceptable and economically viable for Uganda."*

The project partners have emphasized this to policy makers within the Ministry of Health and the Ministry has already expressed the desire to incorporate the principles of clubfoot management espoused by this project within their next five year plan (HSSP2 – Health Sector Strategic Plan 2: 2005-2010)

## 9) ROLES AND RESPONSIBILITIES OF PARTICIPATING INSTITUTIONS

Team Member/Institution	Responsibilities
Dr. Jackson Amone Ministry of Health	<ul style="list-style-type: none"> <li>• As a Senior Medical Officer with the Integrated Curative Division, Ministry of Health, his role in the Ministry of Health with respect to this project will be regular support supervision to the hospitals to ensure that:               <ul style="list-style-type: none"> <li>- All hospitals budget for and purchase supplies</li> <li>- There is constant availability of Plaster of Paris and braces in the hospitals</li> <li>- Health workers are sensitized on detection and referral of children with clubfoot</li> </ul> </li> </ul>
Dr. Fulvio Franceschi CORU	<ul style="list-style-type: none"> <li>• Supervision of Ponseti Method Workshops</li> <li>• Financial Records/Budgets</li> <li>• Research supervisor</li> </ul>
Dr. Joseph Konde-Lule Dr. Richard Mathias /UBC	<ul style="list-style-type: none"> <li>• Public health/primary care focus of the intervention within the Ugandan health care system</li> <li>• Research supervisor</li> <li>• The design of the mid-term and final evaluation studies</li> <li>• Data input, analysis, interpretation and dissemination to the Project Directors</li> <li>• Quality assurance of the overall evaluation</li> <li>• Working with the Ministry of health regarding screening of newborns for clubfoot deformities and their referral for definitive diagnosis at the appropriate health center level focusing on the integration of this requirement into the existing health care system through the well baby visits, immunization programs and other primary health interventions in place in the Ugandan health care system</li> </ul>
Dr. Kenneth McGillivray /UBC	<ul style="list-style-type: none"> <li>• Member of Steering Committee</li> <li>• Assistance in capacity building issues related to the region as well as how the program can be expanded in Africa/elsewhere</li> </ul>

Team Member/Institution	Responsibilities
Mr. Winston Miller /Enable Canada	<ul style="list-style-type: none"> <li>Committed ongoing logistical and in-country support of training and treatment programs through its extensive network of partners in Uganda</li> </ul>
MR. Edward Naddumba (Program Country Project Director) and MR. Ben Mbonye/ Makerere	<ul style="list-style-type: none"> <li>Research supervisor</li> <li>Curriculum content of Ponseti Method teaching modules for all the training institutions and Ponseti Workshops for orthopaedic officers in the community</li> </ul>
Dr. Shafique Pirani (Project Director) & Dr. Norgrove Penny / UBC	<ul style="list-style-type: none"> <li>Uganda liaison</li> <li>Research supervisor</li> <li>Curriculum content of Ponseti Method teaching modules for all the medical and paramedical training programs as well as the Ponseti Method Provider and Support Supervision Workshops for orthopaedic officers in the community</li> <li>Report preparation</li> </ul>

## 9) PROJECT MANAGEMENT STRUCTURE

- a) The Project Director will be Dr. Pirani reporting to Ugandan/Canadian Steering Committee, which will meet annually. (Members TBA)
- b) The project will have a Management Team (meeting semi-annually) comprised of:
  - i) Dr. Jackson Amone, Ministry of Health Senior Medical Officer, Integrated Curative Services Division;
  - ii) Dr. Fulvio Franceschi, Paediatric Orthopaedic Surgeon and Head of the Children's Orthopaedic Rehabilitation Unit;
  - iii) Professor Joseph Konde Lule, Head of Department of Epidemiology & Biostatistics, Institute of Public Health, Kampala;
  - iv) Professor Richard Mathias, Department of Healthcare & Epidemiology, UBC;
  - v) MR. Ben Mbonye, Orthopaedic Surgeon, Mulago Hospital;
  - vi) Mr. Winston Miller, Enable Canada;
  - vii) MR. Edward Naddumba, (Head of Department of Orthopaedics, Makerere Medical School), and the Project Director;
  - viii) Dr. Norgrove Penny, Orthopaedic Surgeon, Victoria.

Its roles will include:

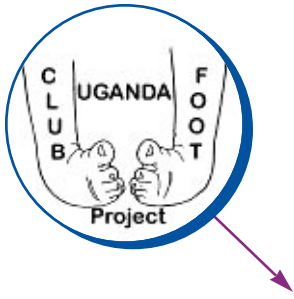
- i) Guided by the Narrative Project Description, LFA, Annual Workplan, Annual Budget, Quarterly Report & Forecast, to supervise the project by establishing priorities, setting targets and reviewing progress reports;
- ii) To evaluate and monitor the meeting of targets and performance indicators;
- iii) To review and approve the budget forecasts for the following quarters;
- iv) To facilitate liaison with other involved local agencies.

Local (Uganda) project management will be the overall responsibility of the Department of Orthopaedics under the leadership of MR. Naddumba, but day to day activities in the specific areas will be controlled as follows:

- CORP (Orthopaedic Officer Workshops/ Data input / Financial records/ Budgets)
- IPH (Surveys/ Evaluations/ Data analysis & processing)
- MOH (Awareness/ Sensitization/ Continuing Health Education/ Quality assurance)
- Department of Orthopaedics (Create/maintain a library of clubfoot reference and educational materials; Undergraduate/Postgraduate education)

Management Team members may be involved in planning, development and monitoring activities of the project, but the intention is that most of the work be carried out by Ugandans with appropriate knowledge and skill sets, thereby promoting the development of capacity of Ugandan personnel to identify, plan, develop and execute solutions for musculoskeletal health problems.





# UGANDA SUSTAINABLE CLUBFOOT CARE PROJECT

JANUARY 1, 2005 – SEPTEMBER 30, 2010

## VIP LETTERS IN SUPPORT OF THE PROJECT



SPEECH OF

**H.E. The Vice President,  
Prof. Gilbert Bukenya**

PRESENTED AT THE OFFICIAL LAUNCH OF

**UGANDA SUSTAINABLE  
CLUBFOOT CARE PROJECT  
USCCP**

AT

THE DEPARTMENT OF ORTHOPAEDICS

MULAGO HOSPITAL

TUESDAY, FEBRUARY 22ND, 2005

Distinguished Guests,

Ladies and Gentlemen,

I am very much honored to be invited as the Guest of Honor at the launch of the Uganda sustainable Clubfoot Care Project (USCCP) whose goal is to reduce disability in the country. Disability is a big problem in Uganda and needs to be prevented. It is both a cause and consequence of poverty. The issues that constitute the cycle of disability and poverty are the same developmental concerns that are faced by low income individuals, communities and countries.

In the National Health Policy and the Health Sector Strategic Plan, the Government of Uganda and the Ministry of Health is committed to the improvement of health status of the population in order to lead a healthy and productive life. The ministry has registered some improvement in the health indices and all efforts will be made to strengthen and sustain this.

I have been ably informed that there are 1,000 children born in Uganda every year with clubfoot deformity. Many of these children have never had any treatment for their deformity. Most of the families in the rural villages are unaware that the treatment is even possible. Very few health workers in these rural areas are trained to recognize clubfoot deformities let alone suggest treatment options. Thus, this congenital deformity is usually not diagnosed due to either lack of awareness or neglect by the community. Even when the clubfoot deformity is diagnosed the health facilities may lack the resources for surgical intervention.

Children with neglected clubfoot are destined to grow up with deformed painful feet, physical disability, dependency, and are demoralized. The affected individuals are socially and economically disadvantaged in life with reduced education and employment opportunities because of selection bias and transportation difficulties. In the case of the females with disability, they are less likely to get married.

The burden of care of the disabled children falls mainly on the mothers who spend more time looking after them and therefore will have less time for the other children or for domestic, agricultural and economic activities. This often compromises the productivity of the mothers in national development. The neglected clubfoot deformity results in disability for the individual, a reduced standard of living for the entire family and a burden to the whole community.

To achieve the goal of early detection of the clubfoot deformity, mothers should be encouraged to deliver in the health facilities. The role of the midwives will be to do a proper examination of the new born in order to identify the congenital abnormality such as the clubfoot. This will then allow for immediate referral of the children with clubfoot and early treatment using the Ponseti method.

The Public Health approach in the treatment of clubfoot disabilities should therefore involve sensitization and mobilization of the communities to ensure that all the children born with clubfoot are detected and referred for treatment. Together the Project and the Ministry of Health will build capacity of the health workers through refresher courses in the Ponseti Method for those in the field, and introduce teaching modules for treatment of clubfoot using Ponseti method in all health training institutions in the country. In doing so there should be political commitment for this project to attain its goal and ensure sustainability at the end.

I therefore recommend that the Ministry of Health adopt this cheaper method of treatment of congenital clubfoot in all its hospitals. Surgery should only be done when manual manipulation and casting fails. Uganda will be a role model in championing this method of treatment of congenital clubfoot deformity in the region. I am proud to be associated with this project.

Finally, I want to thank the Canadian Government for sponsoring this project through Canadian International Development Agency (CIDA), the staff of University of British Columbia (UBC), Enable Canada and our local institutions of Children Orthopaedics Rehabilitation Unit (CORU) at Mengo Hospital and the Department Orthopaedic Surgery, Makerere University Medical School.

I congratulate all the individuals who worked tirelessly to make the Uganda Sustainable Clubfoot Project a reality.

It is now my pleasure to officially launch the Uganda Sustainable Clubfoot Care Project.

Thank you.



**The Deputy Vice Chancellor**  
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Kampala, Uganda

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**Dr. L. Tibatemwa-Ekirikubinza**  
LL.B(MUK), Dip L.P.(LDC),  
LLM.(Commercial Law)(Bristol)  
,Ph.D. (Copenhagen)  
(Associate Professor of Law)

Thursday, February 24, 2005

The Honorable Minister Dr. Alex Kamugisha,  
The Director General Health Services,  
Professor Omaswa,  
Director of Melago Hospital,  
Future Director of Melago Hospital,  
Professor Pirani,  
Dr. Naddumba,  
All Heads of various unites present here,  
Invited Guests,  
Ladies and Gentlemen:

I do bring greetings from the Vice Chancellor of the University, Professor Livingston Luboobi, who is unable to be with us today because he is out of the country.

As the Deputy Vice Chancellor in charge of academic medical affairs, it is my pleasure to be present here, in person today when we launch what I consider a very significant project for Uganda and for Makerere University.

On behalf of Makerere University I congratulate you Professor Pirani for the vision of the Uganda Sustainable Clubfoot Care Project. We indeed are very proud of you. We indeed are very grateful. I understand that the project's goal is to reduce the consequences of disability from neglected clubfeet



in Uganda using the public health approach and the Ponseti method of treatment. I'm informed that the project among other things beholds capacity building. This will be through training of graduate students, training of undergraduate students and indeed training of Orthopaedics, through medical schools of Orthopaedics.

Through this report, I'm sure that Uganda shall be able to develop enough capacity for early detection and treatment. I do believe that all of you have realized during the process that we have gone through today that one of the most important things is early detection. Therein lies success: early detection. So Makerere University is indeed proud to be associated with this project and I also note that of course if we are talking about training, if we are talking about research, then the project is contributing to Makerere's core duty of training relevant human resource, in order that we solve real problems in the community. Many of you who live in Uganda are aware that one of the catch phrases today is to call upon Makerere University to remain relevant. I do believe that this project is indeed showing everybody that Makerere has never ceased to be relevant and for that we are very proud.

We've already been promised by Dr. Naddumba that the Department of Orthopaedics will revise the curriculum in order to include teaching modules of the Ponseti method.

Again, this is in line with Makerere's day to day activities. Makerere today strives to be relevant and to be relevant you must consistently review, upgrade and revise curriculum. We are certainly behind the Department in that goal of reviewing the whole curriculum.

When you look at this project we also realize that involves another component which is called the Makerere's mandate for research and that is research for regeneration of knowledge and we are not only talking about generation of knowledge that remains at the ivory tower we are talking about knowledge which goes to the people, knowledge that solves problems in society. In that we are already aware and I do recall Professor Pirani has already mentioned it, the need for quality assurance. Whenever we do research at Makerere, whenever we train at Makerere we must have one goal, ensuring academic excellence and as long as we are talking about academic excellence, we are certainly talking about quality assurance.



Makerere University values collaborative leads with universities of worth and universities of accolades, such as the University of British Columbia. We therefore congratulate Makerere's medical school for realizing the need to link up with universities of worth such as the University of British Columbia and indeed we recognize and we are proud that you have linked up with a person of worth, in the person of Professor Pirani. I therefore congratulate you.

I think it's also important to realize that in yesteryear's Makerere University was the only university in Uganda. Today we are operating in an environment of high competition and since we are operating in an environment of high competition, it is extremely important that Makerere offers something above what other universities are offering. We do believe that through this collaboration and indeed other collaborations we will certainly be offering something above what other universities are offering, and again of course that means we continue to be relevant.

So we thank you and we are proud as a medical school for seeing what other people may not have seen. On behalf of Makerere University on the Uganda Clubfoot Care Project I pledge to support for the work that is being done here today and on behalf of the management and the university community I promise that we will insure sustainability of the project.

Makerere's contribution is mainly in the form of infrastructure and human resources which is perhaps equivalent to \$100,000.00 Canadian dollars for the lifetime of the project. But I do believe that all of you recognize and know that human resources invaluable, perhaps talking about Canadian dollars does not really express it but maybe the world of economic people understand figures relevant talking about human resources so at this juncture I would like to thank all the organizations: CIDA, Enable Canada, CORU of Mengo who have contributed in very generous ways towards this project. I thank you all.

Dr. L. Tibatemwa-Ekirikubinza

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**Martha C. Piper**, Ph.D.  
*President and Vice-Chancellor*

The Honourable Gilbert Bukenya  
Vice-President of Uganda  
and  
Professor Livingston Luboobi, Vice Chancellor  
Makerere University  
Kampala, Uganda

February 11, 2005

Dear Vice-President Bukenya and Vice Chancellor Luboobi:

It gives me great pleasure to extend congratulations to you on the launch of the Uganda Sustainable Clubfoot Care Project. This partnership between the Department of Orthopaedics at Makerere University Medical School, the Ugandan Ministry of Health, the Children's Orthopaedic Rehabilitation Project, Enable Canada and the University of British Columbia is a wonderful collaborative effort.

I admire the work that is being undertaken by each of the partner institutions in particular the leadership shown by Mr. Edward Naddumba from Mulago Hospital Complex and Dr. Shafique Pirani from UBC. I know that this project will successfully treat thousands of patients currently suffering with severe deformities. Uganda has led the way in medical management for children for many years, through the work of people such as Dr. Huckstep and Professor Sewankambo. The work that you are undertaking now provides a foundation for sustainable methods to treat clubfoot throughout the developing world.

The Uganda Sustainable Clubfoot Care Project is a tremendous way for the University of British Columbia to build strong networks with our colleagues in Uganda, particularly through Makerere University. I hope to have the opportunity to visit in the future. Once again, please accept my sincere congratulations on this significant occasion.

Yours sincerely,

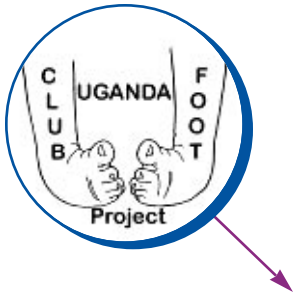
Martha C. Piper

MCP:cc

cc: Dr. Ken McGillivray, Acting Associate Vice-President, International, UBC







# UGANDA SUSTAINABLE CLUBFOOT CARE PROJECT

JANUARY 1, 2005 – SEPTEMBER 30, 2010

## INSTRUCTIONAL LOGICAL FRAMEWORK ANALYSIS

## UPCD Program - Tier 2 - Full Proposal Application Form

**Instructional Logical Framework Analysis**

Country/Region	Uganda/Africa	Project No.	Tier 2 project S61268-486H
Project Title	Uganda Sustainable Clubfoot Care Project	Project Budget	\$1,800,000
CI	University of British Columbia	CI Project Director	Pirani
DCETO	Makerere University	Project Team Members	Amone, Franceschi, Konde-Lule, Mathias, Mbonye, Miller, Naddumba, Penny

Narative Summary	Expected Results	Performance Measurement	Assumptions/ Risk
Project Goal	Impact	Performance Indicators	Assumptions/ Risk
To contribute to eliminating the neglected clubfoot as a significant cause of musculoskeletal disability and poverty in Uganda (in accordance with the first of the UN's Millenium Developmental Goals of "The Eradication of Extreme Poverty and Hunger."	<ol style="list-style-type: none"> <li>1. Children born with clubfeet in Uganda return to the same life-course trajectory as their peers.</li> <li>2. Women status in Uganda is improved (by reducing the burden of care of the disabled child by mothers, improving marriage potential and reducing potential for abuse of afflicted females.)</li> <li>3. Project benefits extend to other developing nations with the problem of neglected clubfeet as the Ponseti method is recognized as an appropriate strategy for the management of the congenital clubfoot deformity in developing nations with insufficient surgical resources.</li> </ol>	<ol style="list-style-type: none"> <li>1. The number of children who enter the educational system at the same time as their peers, particularly girls.</li> <li>2. Level of satisfaction of mothers whose children have been treated with the Ponseti method.</li> <li>3. Other countries adopting the Ponseti method of treating the Congenital Clubfoot Deformity.</li> </ol>	Ongoing support and resources from the Ministry of Health/Low
Project Purposes	Outcomes	Performance Indicators	Assumptions/ Risk

The project purpose is to make available in a sustainable fashion, universal, effective, efficient, and safe treatment of the congenital clubfoot deformity in Uganda

Outcome 1 (institutional)  
By 2010, 80% schools of Higher Learning in Uganda (Medical Schools, Nursing schools, Paramedical Training Schools – that educate and train Uganda's future healthcare workers) will have strengthened capacities to teach how to detect and treat the congenital clubfoot deformity in a sustainable manner within the Ugandan social, cultural and economic context.

Outcome 1:  
Indicator 1.1 Number of institutions in Uganda having improved capacities in the teaching the care of the congenital clubfoot deformity.

Indicator 1.2 Level of success in the teaching of the treatment of clubfoot deformity of practitioners trained through the targeted institutions.

Acceptance of this approach of clubfoot management by Uganda's School's of Higher Learning/Low

Project Purposes	Outcomes	Performance Indicators	Assumptions/Risk
	<p><u>Outcome 2 (community)</u> By 2010, the Ponseti method of treating the congenital clubfoot is integrated within the Ugandan healthcare system such that there will be increased capacity within each of Uganda's 56 districts for detection and treatment. By the end of the project there should be high awareness of the deformity within health care workers and the population, the deformity should be routinely recognized, the infants should be taken for treatment, and the treatment be available and effective with improved treatment for up to one thousand infants per year.</p>	<p><u>Outcome 2:</u> <u>Indicator 2.1</u> Actual compared to expected rates of referral to District Hospitals based on incidence data by sex. <u>Indicator 2.2</u> Number of District Hospitals using Ponseti Method as treatment of choice for clubfeet. <u>Indicator 2.3</u> Pirani Clubfoot Scores for up to a thousand clubfeet per year.</p>	Robustness of Ugandan Healthcare System deliverables/Mod

Resources	Outputs	Performance Indicators	Assumptions/Risk
<p>\$ 6380,000 in kind contribution from UBC</p> <p>\$100,000 of in kind contribution from Makerere University, The Institute for Public Health and The Ministry of Health, Government of Uganda.</p> <p>\$90,000 contribution from Enable Canada</p> <p>\$980,000 from CIDA</p>	<p><b><u>Institutional Outputs</u></b> <u>Output 1.1:</u> Makerere and Mbarara Medical Schools undergraduate syllabus in Musculo-skeletal health upgraded to include module for the Ponseti method of treating the congenital clubfoot deformity by 2005</p> <p><u>Output 1.2:</u> Makerere Medical School postgraduate syllabus in orthopaedic surgery and general surgery upgraded to include module for the Ponseti method of treating the congenital clubfoot deformity by 2005.</p> <p><u>Output 1.3:</u> Mulago School of Orthopaedic Officers syllabus upgraded to include a module for the Ponseti method of treating the congenital clubfoot deformity by 2005</p> <p><u>Output 1.4:</u> Mulago School of Orthopaedic Technicians training upgraded to include a module on Steenbeek Foot Abduction Brace by 2005</p>	<p><u>Indicator 1.1.</u> Number of medical students benefiting each year from the upgraded syllabus. Assessment of quality of teaching module by survey</p> <p><u>Indicator 1.2.</u> Number of postgraduate students in general and orthopaedic surgery benefiting each year from upgraded syllabus. Assessment of quality of teaching module by survey.</p> <p><u>Indicator 1.3.</u> Number of trained orthopaedic officers benefiting from new modules each year. Assessment of quality of teaching module by survey.</p> <p><u>Indicator 1.4.</u> Level of satisfaction of technicians benefiting from new module. Assessment of quality of teaching module by survey.</p>	Outputs 1.1 to 1.4 New Modules on Clubfeet well accepted by students and teachers/low

Resources	Outputs	Performance Indicators	Assumptions/Risk
	<u>Output 1.5:</u> By 2006 80% of in-service technicians currently in government and NGO have been trained in the Ponseti Method with a specific focus on the role of the Orthopaedic Technician through workshops in Uganda.	<u>Indicator 1.5:</u> Number of in-service technicians trained and actually using new capacities in their practice.	Technicians in Government and NGO workshops will be able to change their ways/mod.
	<u>Output 1.6:</u> Clubfoot screening module designed, introduced and taught by 80% of nursing and midwifery schools by 2006.	<u>Indicator 1.6.1:</u> Clubfoot screening module approved by nursing and midwifery council of Uganda for all nursing and midwifery schools by 2005.	Approval of Clubfoot screening module by nursing and midwifery council of Uganda by 2005/low
		<u>Indicator 1.6.2:</u> 80% of nursing and midwifery students benefiting from new module by 2006. Assessment of quality of teaching module by survey.	New Module well accepted by students and teachers/low
	<u>Output 1.7:</u> By 2010, 720 medical students (80 at MUMS and 40 at UMMS each year for six years will benefit from new knowledge and skills in the detection and management of congenital clubfoot in Uganda with a specific focus on the role of the Mmedical Oofficer in the District Hospital.	Indicator 1.7. Number of medical students having acquired new knowledge and skills in detection and management of congenital clubfoot in Uganda	New Module well accepted by students and teachers/low
	<u>Output 1.8:</u> By 2010, 48 surgeons (4 surgeons and 4 general surgeons each year for six years) have acquired new knowledge and skills in the detection and management of congenital clubfoot in Uganda with a specific focus on the role of the General & Orthopaedic Ssurgeon in the District & Referral Hospital.	<u>Indicator 1.8:</u> Number of surgeons having acquired new knowledge and skills and number that are using their new knowledge and skills in their practice.	New Module well accepted by students and teachers/low
	<u>Output 1.9:</u> By 2010, 120 orthopaedic officers (20 each year for six years) have acquired new knowledge and skills in the detection and management of congenital clubfoot in Uganda with a specific focus on the role of the Orthopaedic Officer in the District Hospital.	<u>Indicator 1.9:</u> Number of orthopaedic officers having acquired new knowledge and skills and number of them that are using their new knowledge and skills in their practice.	New Module well accepted by students and teachers/low
	<u>Output 1.10:</u> By 2010, 80% of nurses (in Uganda seeing infants) will benefit from new knowledge and skills in the screening and detection of congenital clubfoot in Uganda with a specific focus on the role of the nurse at the time of issuance of the “child health card.”	<u>Indicator 1.10:</u> Number of nurses having acquired new knowledge and skills	

Resources	Outputs	Performance Indicators	Assumptions/Risk
	<b>Community Outputs</b>		
	<u>Output 2.1:</u> Ministry of Health approval of Clubfoot Treatment Protocol for Uganda by 2005, with necessary resources for District Hospital Clubfoot care.	<u>Indicator 2.1:</u> Official approval of Clubfoot treatment protocol by MoH with satisfactory arrangement for necessary resources for District Hospital clubfoot care by 2005	Effectiveness & reach of sensitization activities in rural areas/mod
	<u>Output 2.2:</u> By 2006, all of Uganda's 56 Districts to have at least one Orthopaedic Clinical Officer trained in the Ponseti method of treating the Congenital Clubfoot	<u>Indicator 2.2:</u> Number of Uganda's District's with Orthopaedic Officer trained in managing clubfoot by the method of Ponseti over time (by end of 2006)	Official approval of Clubfoot treatment protocol by MoH with satisfactory arrangement for necessary resources for District Hospital clubfoot care/low
	<u>Output 2.3:</u> By 2006, a manual for District Hospitals for the management of the congenital clubfoot deformity has been produced and distributed to all hospitals in Uganda.	<u>Indicator 2.3:</u> The number of hospitals that have received the manual and that are using it as a key reference for treating clubfoot deformity.	Ability of MoH to recruit and retain Orthopaedic Officers to Rural Areas/low to Med
	<u>Output 2.4:</u> By 2007, all of Uganda's 56 Districts' birthing clinics and immunization centers to be sensitized in clubfoot detection	<u>Indicator 2.4:</u> Percentage of Uganda's birthing clinics and immunization clinics sensitized in clubfoot detection over time by end of year 2007.	Acceptance of the manual as a key reference for the treatment of clubfoot by the receiving hospital/low
	<u>Output 2.5:</u> Over the life of the project, a variety of studies (Outcome Evaluations) and surveys (Incidence Survey, Ethno-Cultural Survey) are planned. This output focuses on data collection and interpretation (Incidence Survey-2005, Ethno-Cultural Survey-2005, Outcome Evaluation-2007 & 2010) presentation at conferences (24 presentations anticipated by end of project) and publications in peer-reviewed academic journals (12 anticipated by end of project). In addition 2 conferences are planned in Uganda (in 2008 & 2010) to disseminate the results of the Project.	<u>Indicators 2.5:</u> 1. Incidence Survey completed-2005, 2. Ethno-Cultural Survey- completed - 2005 3. First Outcome Evaluation completed-2007 4. Final Outcome Evaluation completed-2010 5. Clubfoot Conference 2008 6. Clubfoot Conference 2010 7. 24 Conference Presentations 8. 12 Peer Reviewed Publications	Effectiveness & reach of sensitization activities in rural areas/mod  No serious impediments to data collection/low-med.