

**Uganda
Sustainable
Clubfoot Care Project
Final Report
2005 - 2013**

**Makerere University
The 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
(AUCC Agreement S61268-486H)**

Report from the Project Directors

The Project Directors are pleased to present the final report of the Uganda Sustainable Clubfoot Care Project (USCCP).

The Project purpose was to make available in a sustainable fashion, a universal, effective, efficient, and safe treatment of the congenital clubfoot deformity in Uganda, thereby contributing to the eradication of neglected clubfoot as a significant cause of musculoskeletal disability in Uganda. The Project's methodology was to build capacity for Ponseti clubfoot treatment within Uganda's health and higher education systems. This largely non-surgical treatment has high reported efficacy for good outcomes, and can be administered by specially trained paramedics, thereby alleviating the burden of treatment from scarce doctors and surgeons. Ponseti clubfoot treatment is economically and socially suitable for Uganda. The Project also had an evaluative component to inform project methodology and measure outcomes of treatment.

USCCP has exceeded all of its targets. The Project had targeted, by project completion, to have:

1. 80% of Uganda's schools of higher learning have strengthened capacity to teach Ponseti clubfoot treatment in a sustainable manner within the Ugandan social, cultural, and economic context.
2. Ponseti clubfoot treatment integrated within the Ugandan healthcare system such that there will be increased capacity within each of Uganda's districts for detection, treatment, and better outcomes for more than 1,000 children per year.

We are happy to report that:

1. All 39 schools of healthcare have accepted the USCCP clubfoot training module within their curricula, and that to date 3,149 students have benefitted from training.
2. USCCP has trained staff and opened 40 clubfoot clinics in Ministry of Health and NGO hospitals across Uganda. By March 31, 2011, 1,076 healthcare workers have benefitted from training and 3,227 children have received treatment (1,128 in the Project's last year).

Children are accessing treatment that is effective. The Project has monitored outcomes of treatment in 399 patients with 632 clubfeet. 86.3% of feet corrected with casting in infancy. A sample of parents of children treated for clubfoot were surveyed at three to four years following treatment. 90% of parents surveyed were satisfied with the appearance and function of their children's treated feet.

The Project's influence has extended beyond Uganda. The World Health Organization recognizes USCCP as one of the approaches used by countries worldwide to enable people with disabilities to access services, infrastructure, information, and jobs.

"In Uganda, the Uganda Sustainable Clubfoot Care Project improves detection and rehabilitation of children with clubfoot by raising awareness that clubfoot is correctible, improving provision of foot orthotics, training primary healthcare personnel, and subsidizing transport costs." - World Health Organization, The World Report on Disability 2011, and The World Report on Disability news release June 9, 2011

A number of other nations have started Ponseti clubfoot treatment programs incorporating the Uganda model, including India, Pakistan, and Bangladesh – three of the world's most populous countries (Appendices B, F, G, H, I, J). In March of 2013, CIDA announced its contribution of \$4.3

million to Sustainable Clubfoot Care in Bangladesh, whose five-year goal is to build a clubfoot program in Bangladesh based on the Uganda model.

The Project's last activity was to develop evidence-based guidelines for the management of clubfoot in developing nations. The development of these guidelines is well underway, and funding for their completion is secured.

The Project Directors wish to acknowledge the Association of Universities and Colleges (AUCC), the Canadian International Development Agency (CIDA), and Enable Canada for their funding support.

Respectfully submitted by,

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Uganda Project Director

Project Profile

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 Ponseti clubfoot treatment and its teaching into Uganda's health and higher education systems.

Beneficiaries

Beneficiaries include children affected by clubfeet, their families, and healthcare professionals treating children with clubfeet.

Key activities

Key activities include an ethno-cultural survey, an incidence survey, the development of an awareness program, the development of Ponseti clubfoot teaching modules for healthcare schools, clubfoot conferences in Uganda as well as training workshops for healthcare personnel providing clubfoot treatment.

Key results to date (as posted on the web):

The Uganda Ministry of Health approved Ponseti clubfoot treatment for all its hospitals, raised awareness that clubfoot can be treated and that treatment is free, and opened 40 clubfoot clinics across Uganda's four regions. By March 31, 2011, 3,277 children have received treatment (1,128 in the last year).

Uganda's medical and paramedical schools developed a comprehensive Ponseti Method training module for medical and paramedical schools and in-service training of healthcare professionals. 1,076 healthcare professionals have benefitted from in-service training (23 surgeons, 101 nursing trainers, 750 nurses, 21 physiotherapists, 155 orthopaedic officers, and 26 orthopaedic technicians).

3,149 students (927 undergrad medical, 68 post grad medical, 728 orthopaedic officers, 213 orthopaedic technicians, and 1,213 nurses) have benefitted from training at 39 schools of healthcare.

Incidence and ethnocultural surveys of clubfoot have been completed. Outcome studies show 83% deformity correction rate and high rates of parental satisfaction for foot appearance and function.

Key Team Members and Stakeholders

Ministry of Health, Government of Uganda

To provide the policies, guidance and standards; facilitate district health services and manage nationally based health services. To ensure the attainment of a good standard of health by all people in Uganda in order to promote a healthy and productive life.

Makerere University

Makerere University is Uganda's premier institution of higher learning. With a student population of over 30,000, it ranks as one of the largest in East and Central Africa.

The University of British Columbia

The University of British Columbia, aspiring to be one of the world's best universities, will prepare students to become exceptional global citizens, promote the values of a civil and sustainable society, and conduct outstanding research to serve the people of British Columbia, Canada, and the world.

Mulago Hospital

Mulago Hospital is an urban, tertiary care facility located in Kampala, Uganda. It is the largest government referral hospital, the main teaching hospital of Makerere University and the site of the main Clubfoot Clinic of the USCCP.

Children's Orthopaedic Rehabilitation Unit (CORU)

CORU is one of the departments of Mengo Hospital working in the field of paediatric orthopaedics and plastic surgery. CORU's mandate is to prevent disability and to restore ability, or at least decrease the limiting effects of disabling physical condition. The main focus of CORU is children with physical disabilities.

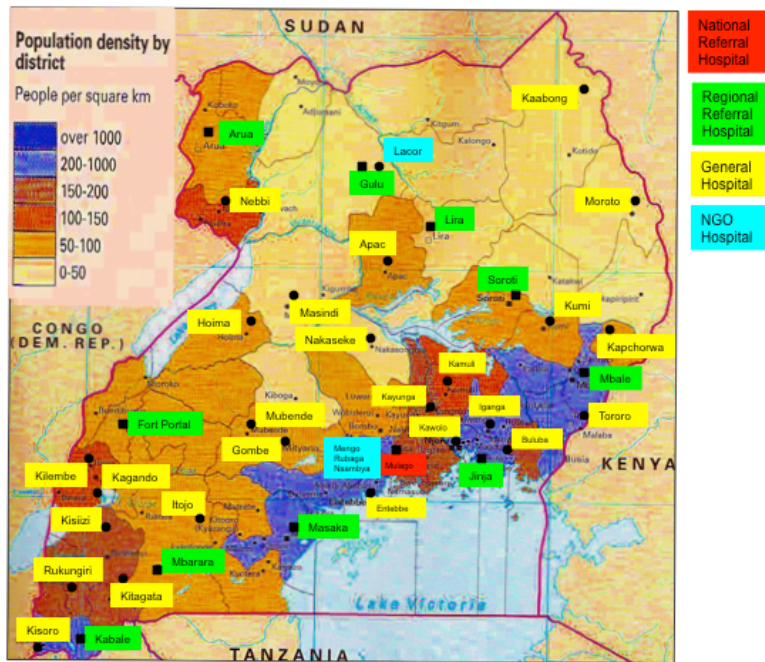
Enable Canada

To rescue and restore people trapped in poverty by disability. These are the most forgotten people in the world.

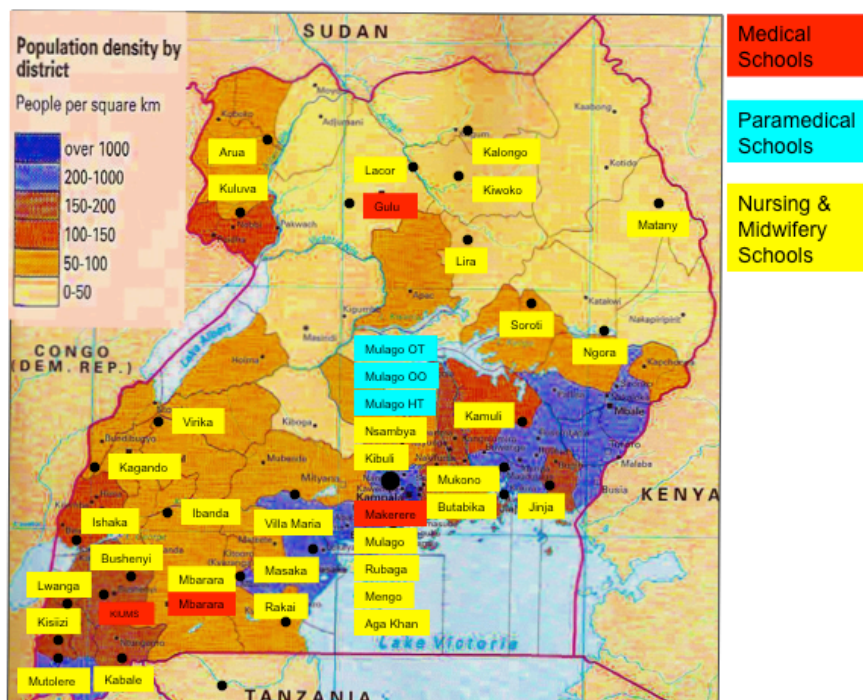
Team Member / Institution	Responsibilities
<p>Dr. Jackson Amone Chair - USCCP Sub-Committee Assistant Commissioner Integrated Curative Division Ministry of Health, Uganda Plot 6 Lourdel Road, Wandegeya Kampala, Uganda</p>	<ul style="list-style-type: none"> • Regular support supervision to the hospitals to ensure that: <ul style="list-style-type: none"> ○ All hospitals budget for and purchase supplies for clubfoot treatment ○ There is constant availability of Plaster of Paris and braces in the clubfoot clinics • Health worker sensitization on detection and referral of children with clubfeet
<p>Mrs. Susan Cutts Director of Administration Department of Orthopaedics University of British Columbia #3114-910 West 10th Avenue Vancouver, BC V5Z 4E3 Tel: (604) 875-4156 Fax: (604) 875-4677 Sue.cutts@vch.ca</p>	<ul style="list-style-type: none"> • Program administration in Canada.
<p>Dr. Fulvio Franceschi Children's Orthopaedic Rehabilitation Unit, Uganda Mengo Hospital, PO Box 20146 Kampala, Uganda Tel: (256) 041273752 Mobile: 077 674098 / 553555</p>	<ul style="list-style-type: none"> • Supervision of Ponseti Method Workshops • Financial Records / Budgets
<p>Professor Joseph Konde-Lule Chair - USCCP Sub-Committee for Evaluations Institute of Public Health Uganda</p>	<ul style="list-style-type: none"> • Public health / primary care focus of the intervention within the Uganda health care system • Research supervisor • The design of the mid-term and final evaluation studies • Data input, analysis, interpretation and dissemination to the Project Directors • Quality assurance of the overall evaluation • Working with the Ministry of Health regarding; <ul style="list-style-type: none"> ○ Screening of newborns for clubfoot deformities and their referral for definitive diagnosis at the appropriate health centre level ○ Focusing the integration of this require into the existing health care system through the well baby visits, immunization programs and other primary health interventions in place in the Uganda health care system
<p>Professor Richard Mathias Department of Epidemiology University of British Columbia Canada</p>	
<p>Mr. Winston Miller Enable Canada Director Overseas Services Christian Blind Mission International 3844 Stouffville Road, Box 800 Stouffville, Ontario L4A 7Z9</p>	<ul style="list-style-type: none"> • Assistance to capacity building issues related to the region as well as how the program can be expanded in Africa/ elsewhere

<p>Tel: (905) 640-6466 Fax: (905) 640-4332 Email: wmiller@cbimicanada.org</p>	
<p>Mr. Edward Naddumba Project Director – Uganda Chair - Sub-Committee of Quality Assurance Senior Consultant, Ministry of Health Orthopaedic Surgeon, Mulago Hospital Mulago Hospital Complex PO Box 7051, Kampala, Uganda Tel: 041 542332 Fax: 041 532591 Email: naddumba@yahoo.com</p>	<ul style="list-style-type: none"> • Overall responsibility for Uganda activity • Research supervisor • Curriculum content of Ponseti Method teaching modules for all the training institutions and Ponseti Workshops for orthopaedic officers in the community
<p>Mr. Titus Beyeza Chair – Sub-Committee for training Head of Orthopaedics Makerere University Medical School Uganda</p>	<ul style="list-style-type: none"> • Research supervisor • Curriculum content of Ponseti Method teaching modules for all the training institutions and Ponseti Workshops for orthopaedic officers in the community
<p>Mr. Ben Mbonye Hon. Lecturer Makerere University Medical School Uganda</p>	<ul style="list-style-type: none"> • Research supervisor • Curriculum content of Ponseti Method teaching modules for all the training institutions and Ponseti Workshops for orthopaedic officers in the community
<p>Ms. Stella Nyange Department of Orthopaedics Makerere University Medical School Uganda</p>	<ul style="list-style-type: none"> • Program Administration in Uganda
<p>Professor Shafique Pirani Project Director Department of Orthopaedics #205 – 245 East Columbia Street New Westminster, BC V3L 3W4 Tel: (604) 522-2332 Fax: (604) 522-7686 Email: spirani@me.com</p>	<ul style="list-style-type: none"> • Uganda liaison • Research supervisor • 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 • Report preparation
<p>Dr. Norgrove Penny Paediatric Orthopaedic Surgeon Canada</p>	

Uganda: Population Density & Clubfoot Clinics



Healthcare Schools with Clubfoot Curriculum



Status of Results - Cumulative

Reporting period April 2004 – Mar 2012	Canadian lead institution University of British Columbia	Country Uganda
Project number Tier 2 project S61268-486H	Project title Uganda Sustainable Clubfoot Care Project	
Intended results	Indicators	Cumulative Outcome and outputs achieved (use indicators)
<p>Outcome 1 By 2010, 80% schools of higher learning in Uganda (medical, nursing, & paramedical) that educate & 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 & economic context.</p>	<p>Outcome Indicators 1 Number of schools of higher learning in Uganda having improved capacities in the teaching of the care of the congenital clubfoot deformity.</p>	<p>Outcome 1 Results 39 Schools with improved capacity to teach care of congenital clubfoot deformity:</p> <ol style="list-style-type: none"> 1. The Aga Khan University School of Nursing 2. Arua School of Nursing 3. Butabilka School of Mental Health Nursing 4. Gulu Medical School 5. Ibanda School of Nursing and Midwifery 6. Ishaka 7th Day Adventist School of Nursing 7. Jinja School of Nursing and Midwifery 8. Kabale Regional Referral Hospital School of Enrolled Comprehensive Nursing 9. Kagando School of Nursing 10. Kalongo School of Midwifery 11. Kampala International University Medical School 12. Kampala International University (KIU) School of Nursing 13. Kamuli School of Midwifery 14. Kibuli School of Nursing 15. Kisiizi School of Nursing 16. Kiwoko School of Nursing 17. Kuluva School of Nursing 18. Lacor School of Nursing 19. Lira School of Enrolled Comprehensive Nursing 20. Makerere University Medical School 21. Masaka School of Comprehensive Nursing 22. Matany School of Nursing 23. Mbarara University Department of Nursing 24. Mbarara University of Science and Technology School of Medicine 25. Mengo School of Nursing and Midwifery 26. Mulago Health Tutors College, Kampala 27. Mulago Paramedical School of Orthopaedic Technology 28. Mulago School of Midwifery and Nursing 29. Mutolere School of Nursing and Midwifery, Kisoro 30. Ngora School of Nursing 31. Nsambya School of Nursing and Midwifery 32. Rakai Community Nursing School 33. Rubaga School of Nursing and Midwifery 34. School of Orthopaedic Officers, Mulago 35. Soroti School of Comprehensive Nursing 36. St. Karoli Nakibale School of Nursing and Midwifery 37. Uganda Christian University, Mukono 38. Villa Maria School of Nursing 39. Virika School of Nursing and Midwifery
<p>Output 1.1 Makerere, Mbarara, Gulu and Kampala International University Medical Schools’ undergraduate syllabus in Musculoskeletal health</p>	<p>Output indicator 1.1 Makerere, Mbarara, Gulu and Kampala International University Medical Schools’ with undergraduate syllabus in Musculoskeletal health</p>	<p>Output 1.1 Results Makerere, Mbarara, Gulu and Kampala International University Medical Schools’ undergraduate syllabi in Musculoskeletal health upgraded to include the Ponseti Method.</p>

upgraded to include module for the Ponseti method of treating the congenital clubfoot deformity by 2008	upgraded to include the Ponseti method. Assessment of quality of teaching module by survey.	Survey not completed due to methodological concerns.
Output 1.2 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.	Output Indicator 1.2 Makerere Medical School postgraduate syllabus in orthopaedic surgery and general surgery upgraded to include the Ponseti method. Assessment of quality of teaching module by survey.	Output 1.2 Results Makerere Medical School postgraduate syllabus in orthopaedic surgery and general surgery upgraded to include the Ponseti Method. Survey not completed due to methodological concerns.
Output 1.3 Mulago Paramedical School of Orthopaedic Officers syllabus upgraded to include a module for the Ponseti method of treating the congenital clubfoot deformity.	Output Indicator 1.3 Mulago Paramedical School of Orthopaedic Officers syllabus upgraded to include the Ponseti method. Assessment of quality of teaching module by survey.	Output 1.3 Results Mulago Paramedical School of Orthopedic Officers syllabus upgraded to include the Ponseti method. Survey not completed due to methodological concerns.
Output 1.4 Mulago Paramedical School of Orthopaedic Technology training upgraded to include Steenbeek Foot Abduction Brace module.	Output Indicator 1.4 Mulago Paramedical School of Orthopaedic Technology training upgraded to include Steenbeek Foot Abduction Brace module. Assessment of quality of teaching module by survey.	Output 1.4 Results Mulago Paramedical School of Orthopaedic Technology training upgraded to include Steenbeek Foot Abduction Brace module. Survey not completed due to methodological concerns.
Output 1.5 Clubfoot screening module designed, introduced, and taught by 80% of nursing and midwifery schools	Output Indicator 1.5 Clubfoot screening module approved by Nursing and Midwifery Council of Uganda for all nursing and midwifery schools. Number of nursing schools with syllabus upgraded to include Ponseti method.	Output 1.5 Results Clubfoot screening module approved. 32 nursing schools have upgraded syllabus to include Ponseti method. They are: <ol style="list-style-type: none"> 1. The Aga Khan University School of Nursing 2. Arua School of Nursing 3. Butabilka School of Mental Health Nursing 4. Ibanda School of Nursing and Midwifery 5. Ishaka 7th Day Adventist School of Nursing 6. Jinja School of Nursing and Midwifery 7. Kabale Regional Referral Hospital School of Enrolled Comprehensive Nursing 8. Kagando School of Nursing 9. Kalongo School of Midwifery 10. Kampala International University (KIU) School of Nursing 11. Kamuli School of Midwifery 12. Kibuli School of Nursing 13. Kisiizi School of Nursing 14. Kiwoko School of Nursing 15. Kuluva School of Nursing 16. Lacor School of Nursing 17. Lira School of Enrolled Comprehensive Nursing 18. Masaka School of Comprehensive Nursing 19. Matany School of Nursing 20. Mbarara University Department of Nursing 21. Mengo School of Nursing and Midwifery 22. Mulago School of Midwifery and Nursing 23. Mutolere School of Nursing and Midwifery, Kisoro 24. Ngora School of Nursing 25. Nsambya School of Nursing and Midwifery 26. Rakai Community Nursing School 27. Rubaga School of Nursing and Midwifery

	Assessment of quality of teaching module by survey.	<p>28. Soroti School of Comprehensive Nursing</p> <p>29. St. Karoli Nakibale School of Nursing and Midwifery</p> <p>30. Uganda Christian University, Mukono</p> <p>31. Villa Maria School of Nursing</p> <p>32. Virika School of Nursing and Midwifery</p> <p>77 (13M, 64F) Nursing School students assessed the quality of teaching module by survey using "DREEM" Approach.</p>
<p>Output 1.6</p> <p>By 2010, 1350 medical students (100 at Makerere University Medical School, 60 at Mbarara University of Science & Technology, 60 at Gulu, and 30 at Kampala International University Medical Schools, 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>Output Indicator 1.6</p> <p>Number of medical students having acquired new knowledge and skills in detection and management of congenital clubfoot in Uganda.</p>	<p>Output 1.6 Results</p> <p>927 students in total (326M, 179F) Makerere University Medical School, (96M, 12F) Gulu Medical School, (17M, 8F) Bushenyi Medical School and (200M, 89F) Mbarara University of Science & Technology students have benefited from the upgraded syllabus.</p>
<p>Output 1.7</p> <p>By 2010, 24 newly trained residents (2 orthopaedic residents and 2 general residents 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 & Orthopedic Surgeon in the District & Referral Hospital.</p>	<p>Output Indicator 1.7</p> <p>Number of residents having acquired new knowledge and skills in the detection and management of congenital clubfoot in Uganda.</p>	<p>Output 1.7 Results</p> <p>68 in total (30 M, 3F) postgraduate orthopaedic and (32M, 3F) postgraduate general residents have benefited from the upgraded syllabus.</p>
<p>Output 1.8</p> <p>By 2010, 300 student orthopedic officers (50 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 Orthopedic Officer in the District Hospital.</p>	<p>Output Indicator 1.8</p> <p>Number of student orthopedic officers having acquired new knowledge and skills in the detection and management of congenital clubfoot in Uganda.</p>	<p>Output 1.8 Results</p> <p>728 (502M, 226F) student orthopaedic officers have benefitted from new modules in the detection and management of congenital clubfoot in Uganda.</p>
<p>Output 1.9</p> <p>Mulago Paramedical School of Orthopedic Technology training upgraded to include Steenbeek Foot Abduction Brace module.</p>	<p>Output Indicator 1.9</p> <p>Number of student orthopedic technicians trained in the manufacture of the Steenbeek Foot Abduction Brace.</p>	<p>Output 1.9 Results</p> <p>213 (155M, 58F) student orthopedic technicians have benefitted from training in making the Steenbeek Foot Abduction Brace.</p>
<p>Output 1.10</p> <p>80% of schools of nursing and midwifery have syllabus upgraded to include module for the Ponseti method of treating the congenital clubfoot deformity.</p>	<p>Output Indicator 1.10</p> <p>Number of student nurses and midwives have acquired new knowledge and skills in the detection and management of congenital clubfoot in Uganda</p>	<p>Output 1.10 Results</p> <p>1,213 (236M, 977F) student nurses and midwives have benefitted from new modules in the detection and management of congenital clubfoot in Uganda.</p>
<p>Outcome 2</p> <p>By 2010, integrate the Ponseti method of treating the congenital clubfoot within the Ugandan healthcare system and within each of Uganda's districts for detection and treatment. There should be high awareness of the deformity</p>	<p>Outcome Indicator 2.1</p> <p>Actual compared to expected rates of referral to clubfoot clinics based on incidence data by sex.</p> <p>Outcome Indicator 2.2</p> <p>Number of General Hospitals using Ponseti Method as treatment of</p>	<p>Outcome 2.1 Results</p> <p>Unable to calculate at this time due to difficulty in establishing denominator.</p> <p>Outcome 2.2 Results</p> <p>Hospitals using Ponseti Method as treatment of choice for clubfeet:</p>

<p>within health care workers and the population; newborns should routinely be screened for foot deformities, positive infants taken to clubfoot clinics and treatment, if needed, be available and effective.</p>	<p>choice for clubfeet.</p>	<ol style="list-style-type: none"> 1. Apac District Hospital 2. Arua Regional Referral Hospital 3. Buluba Hospital 4. Entebbe District Hospital 5. Gombe District Hospital 6. Gulu Regional Referral Hospital 7. Hoima Regional Referral Hospital 8. Iganga District Hospital 9. Itojo Hospital 10. Jinja Regional Referral Hospital 11. Kabale Regional Referral Hospital 12. Kabarole Hospital 13. Kabong Hospital 14. Kagando Hospital 15. Kamuli Hospital 16. Kapchorwa District Hospital 17. Kawolo Hospital 18. Kayunga District Hospital 19. Kilembi Hospital 20. Kisiizi Hospital 21. Kisoro District Hospital 22. Kitagata Hospital 23. Kumi District Hospital 24. Lacor Hospital 25. Lira Regional Referral Hospital 26. Masaka Regional Referral Hospital 27. Masindi District Hospital 28. Mbale Regional Referral Hospital 29. Mbarara Regional Referral Hospital 30. Mengo Hospital 31. Moroto District Hospital 32. Mubende District Hospital 33. Mulago National Referral Hospital 34. Nakaseke District Hospital 35. Nebbi District Hospital 36. Nasambya Hospital 37. Rubaga Hospital 38. Rukungiri Hospital 39. Soroti Referral Hospital 40. Tororo District Hospital
<p>Output 2.1 Ministry of Health approval of Clubfoot Treatment Protocol for Uganda, with necessary resources for clubfoot clinics.</p>	<p>Output Indicator 2.1 Approval of clubfoot treatment protocol by Ministry of Health with satisfactory arrangement for necessary resources for clubfoot clinics.</p>	<p>Output 2.1 Results Vice President Professor Gilbert Bukenya's speech at the official launch of the USCCP (Feb 22, 2005) approving Ponseti treatment in all Uganda's hospitals. Directive by Director General of Health Services Uganda, (Dr. Sam Zaramba) to Medical Superintendents re: Supplies for Rehabilitation of Clubfeet in Children.</p>
<p>Output 2.2.1 By 2010, 40 of Uganda's hospital will have at least one Orthopedic Officer and Medical Officer or Surgeon, trained in the Ponseti Method of treating the congenital clubfoot.</p>	<p>Output Indicator 2.2.1 Number of Uganda's Hospitals with Orthopaedic Officer and Medical Officer or Surgeon trained in managing clubfoot by the method of Ponseti.</p>	<p>Output 2.2.1 Results 40 hospitals with Orthopedic Officer and Medical Officer or Surgeon trained in managing clubfoot by the method of Ponseti:</p> <ol style="list-style-type: none"> 1. Apac District Hospital 2. Arua Regional Referral Hospital 3. Buluba Hospital 4. Entebbe District Hospital 5. Gombe District Hospital 6. Gulu Regional Referral Hospital 7. Hoima Regional Referral Hospital 8. Iganga District Hospital 9. Itojo Hospital 10. Jinja Regional Referral Hospital 11. Kabale Regional Referral Hospital

		<ol style="list-style-type: none"> 12. Kabarole Hospital 13. Kabong Hospital 14. Kagando Hospital 15. Kamuli Hospital 16. Kapchorwa District Hospital 17. Kawolo Hospital 18. Kayunga District Hospital 19. Kilembi Hospital 20. Kisiizi Hospital 21. Kisoro District Hospital 22. Kitagata Hospital 23. Kumi District Hospital 24. Lacor Hospital 25. Lira Regional Referral Hospital 26. Masaka Regional Referral Hospital 27. Masindi District Hospital 28. Mbale Regional Referral Hospital 29. Mbarara Regional Referral Hospital 30. Mengo Hospital 31. Moroto District Hospital 32. Mubende District Hospital 33. Mulago National Referral Hospital 34. Nakaseke District Hospital 35. Nebbi District Hospital 36. Nasambya Hospital 37. Rubaga Hospital 38. Rukungiri Hospital 39. Soroti Referral Hospital 40. Tororo District Hospital
<p>Output 2.2.2 By 2010, 40 of Uganda hospitals will have clubfoot clinic and casting area using the Ponseti Method of treating the congenital clubfoot.</p>	<p>Output Indicator 2.2.2 Number of Uganda's hospitals with functioning clubfoot clinic and casting area for managing clubfoot by the method of Ponseti.</p>	<p>Output 2.2.2 Results 40 hospitals with functioning clubfoot clinic and casting area for managing clubfoot by the method of Ponseti.</p> <ol style="list-style-type: none"> 1. Apac District Hospital 2. Arua Regional Referral Hospital 3. Buluba Hospital 4. Entebbe District Hospital 5. Gombe District Hospital 6. Gulu Regional Referral Hospital 7. Hoima Regional Referral Hospital 8. Iganga District Hospital 9. Itojo Hospital 10. Jinja Regional Referral Hospital 11. Kabale Regional Referral Hospital 12. Kabarole Hospital 13. Kabong Hospital 14. Kagando Hospital 15. Kamuli Hospital 16. Kapchorwa District Hospital 17. Kawolo Hospital 18. Kayunga District Hospital 19. Kilembi Hospital 20. Kisiizi Hospital 21. Kisoro District Hospital 22. Kitagata Hospital 23. Kumi District Hospital 24. Lacor Hospital 25. Lira Regional Referral Hospital 26. Masaka Regional Referral Hospital 27. Masindi District Hospital 28. Mbale Regional Referral Hospital 29. Mbarara Regional Referral Hospital 30. Mengo Hospital 31. Moroto District Hospital

		<p>32. Mubende District Hospital 33. Mulago National Referral Hospital 34. Nakaseke District Hospital 35. Nebbi District Hospital 36. Nasambya Hospital 37. Rubaga Hospital 38. Rukungiri Hospital 39. Soroti Referral Hospital 40. Tororo District Hospital</p>
<p>Output 2.3.1 By 2008, a manual for District Hospitals for the management of the congenital clubfoot deformity has been produced.</p>	<p>Output Indicator 2.3.1 Manual called "Ponseti Clubfoot Treatment - A teaching manual for healthcare providers in Uganda" to be produced.</p>	<p>Output 2.3.1. Results "Ponseti Clubfoot Treatment - A teaching manual for healthcare providers in Uganda" was produced. 10,000 copies printed and distributed.</p>
<p>Output 2.3.2 By 2008, a manual for the management of the congenital clubfoot deformity has been distributed to all hospitals in Uganda; along with all related Ponseti Method of treating the congenital clubfoot training materials.</p>	<p>Output Indicator 2.3.2 Number of hospitals with clubfoot clinics, regional surgeons and training institutions using the manual as a key reference for treating clubfoot deformity by 2008.</p>	<p>Output 2.3.2 Results 40 hospitals with clubfoot clinics, regional surgeons and training institutions using the manual as a key reference for treating clubfoot deformity.</p> <ol style="list-style-type: none"> 1. Apac District Hospital 2. Arua Regional Referral Hospital 3. Buluba Hospital 4. Entebbe District Hospital 5. Gombe District Hospital 6. Gulu Regional Referral Hospital 7. Hoima Regional Referral Hospital 8. Iganga District Hospital 9. Itojo Hospital 10. Jinja Regional Referral Hospital 11. Kabale Regional Referral Hospital 12. Kabarole Hospital 13. Kabong Hospital 14. Kagando Hospital 15. Kamuli Hospital 16. Kapchorwa District Hospital 17. Kawolo Hospital 18. Kayunga District Hospital 19. Kilembi Hospital 20. Kisiizi Hospital 21. Kisoro District Hospital 22. Kitagata Hospital 23. Kumi District Hospital 24. Lacor Hospital 25. Lira Regional Referral Hospital 26. Masaka Regional Referral Hospital 27. Masindi District Hospital 28. Mbale Regional Referral Hospital 29. Mbarara Regional Referral Hospital 30. Mengo Hospital 31. Moroto District Hospital 32. Mubende District Hospital 33. Mulago National Referral Hospital 34. Nakaseke District Hospital 35. Nebbi District Hospital 36. Nasambya Hospital 37. Rubaga Hospital 38. Rukungiri Hospital 39. Soroti Referral Hospital 40. Tororo District Hospital
<p>Output 2.4 By 2009, 80% of nurses, midwives and other healthcare workers (in Uganda seeing infants) will benefit from new knowledge and skills in</p>	<p>Output Indicator 2.4 Number of Uganda's nurses, midwives, and other healthcare workers sensitized in clubfoot detection by 2009.</p>	<p>Output 2.4 Results 851 (157M, 694 F) nurses, midwives and other healthcare workers sensitized in clubfoot detection.</p>

<p>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>Production of awareness raising materials.</p>	<p>Awareness raising campaign (“clubfoot can be treated, treatment is free”) for public by Project in conjunction with Ministry of Health.</p>
<p>Output 2.5 Over the life of the project, a variety of studies (Outcome Evaluations) and surveys (Incidence Survey, Ethno-Cultural Survey) are planned. USCCP expects to present papers at 24 conferences, publish 12 peer-reviewed papers, and organize 2 conferences.</p>	<p>Output Indicators 2.5</p> <ol style="list-style-type: none"> 1. Completion of Incidence Survey 2. Completion of Ethno-Cultural Survey 3. Completion of Outcome Evaluation 4. Clubfoot Conferences in Uganda 5. Invited Presentations at Conferences and Meetings 	<p>Output 2.5 Results</p> <ol style="list-style-type: none"> 1. Incidence Survey completed (2006) 2. Ethno-Cultural Survey completed (2006) 3. Outcome Evaluation completed (2011) 4. Clubfoot conference as part of the East Africa Medical Association and East African Health and Scientific Conference (2007) 5. 59 Conference Presentations: <ol style="list-style-type: none"> 1. “The Neglected Clubfoot – From Quandary to Opportunity – Gordon Murray Lecture”, 4th Annual Bethune Round Table on International Surgery, Gallie Days, University of Toronto 2004. (Dr. S. Pirani) 2. “The Uganda Sustainable Clubfoot Care Project” – UPCD Tier 2 Project, UBC Forum For Global Citizenship And Global Health, University of British Columbia, Canada, Jan 2005. (Dr. S. Pirani) 3. “The Neglected Clubfoot – From Quandary to Opportunity”, Orthopaedic Update, University of British Columbia, Department of Orthopaedics, May 2005 (Dr. S. Pirani) 4. “The Uganda Sustainable Clubfoot Care Project”, Pacific Island Surgical Association 2006. (Dr. S. Pirani) 5. “The Ponseti Method in Uganda and Malawi: Challenge to Opportunity” Keynote Speaker, Ken Morton Lecturer, UBC Orthopaedic Days, May 2005. (Dr. S. Pirani) 6. “Building capacity on a national level to manage the clubfoot in a developing country: The Uganda Sustainable Clubfoot Care Project”, Keynote Speaker, STEPS Ponseti Conference, Wits Medical School, Johannesburg, July 2006. (Dr. S. Pirani) 7. “The congenital clubfoot in Uganda – from quandary to opportunity” Keynote Speaker, Ponseti Method for Clubfoot Treatment, 16th Annual Baltimore Limb Deformity Pre-Course, Sinai Hospital of Baltimore, Maryland, August 2006. (Dr. S. Pirani) 8. “The Uganda Sustainable Clubfoot Care Project”, Ponseti Method Workshop at University Teaching Hospital, Lusaka, Zambia 2006. (Dr. S. Pirani) 9. “The Uganda Sustainable Clubfoot Care Project”, International Forum on Universities and Participatory Development at University of British

Columbia 2006. (Dr. E. Naddumba)

10. "Understanding Clubfoot in Uganda", Makerere University Institute of Public Health, October 2006, (Sheba Gitta).
11. "Building Capacity on a National Level to Manage the Clubfoot in a Developing Country: The Uganda Sustainable Clubfoot Care Project." Keynote Speaker, Nairobi Orthopaedic Club, Nairobi, Kenya October 2006. (Dr. S. Pirani)
12. "The Ponseti Method" at Uganda Medical Association Conference, Kampala Uganda Dec.2006 (MR. G. Waiswa)
13. "Clubfoot in Uganda", Uganda Medical Association Conference, Kampala Uganda Dec 2006 (MR. E. Naddumba)
14. "Preventing Neglected Clubfoot in Uganda", Association of Surgeons of East Africa Conference, Blantyre Malawi Dec.2006 (MR. E. Naddumba)
15. "The Uganda Sustainable Clubfoot Care Project " Keynote Speaker, 1st Egyptian Conference on Clubfeet, University of Mansoura, February 2007 (Dr. S. Pirani)
16. "Clubfoot, the success story of the Ponseti Method", 1st East African Community, Health & Scientific Conference Presentation: 1st Annual Uganda Orthopaedic Conference and Arthroplasty Workshop at Hotel Africana, Mulago Hospital, Kampala, March 2007 (MR. G. Waiswa)
17. "The Clubfoot in Uganda: From Quandary to Opportunity" Invited Speaker, 20th National ORNAC Conference, Victoria Conference Centre, Victoria, April 2007. (Dr. S. Pirani)
18. "The Uganda Sustainable Clubfoot Care Project (2004-10)" Invited Speaker: 19th IUHPE World Conference on Health Promotion and Education, Vancouver, June 2007. (Dr. S. Pirani)
19. "The Clubfoot Deformity – a Global Perspective", "Ethno-cultural survey of the congenital clubfoot in Uganda", "Increasing the rate of detection of clubfeet at birth, and improving midwives knowledge about detection and treatment of clubfeet: the value of a focused CME program", "The Uganda Sustainable Clubfoot Care Project", "Resource allocation for clubfoot management in Uganda", Invited Speaker: 3rd International Conference on Birth Defects and Disabilities in the Developing World, Rio de Janeiro, Brazil, June 2007. rani, MR. E. Naddumba, Dr. J. Amone)
20. "Ethno-cultural Survey in Uganda for Clubfeet", 3rd International Conference on Birth Defects and Disabilities in the Developing World, Rio de Janeiro Brazil June 2007 (Professor J. Konde Lule)

21. The Value of Focused CPE, 3rd International Conference on Birth Defects and Disabilities in the Developing World, Rio de Janeiro, Brazil June 2007(MR. G. Waiswa)
22. "The Clubfoot Can Be Treated: The Uganda Sustainable Clubfoot Care Project" Keynote Speaker, Israeli Paediatric Orthopaedic Association, Annual Meeting, July 2007. (Dr. S. Pirani)
23. "From Quandary to Opportunity: The Neglected Clubfoot in Uganda", Invited Speaker: Canadian Association of Physicians of Indian Heritage Conference, Vancouver, August 10th, 2007. (Dr. S. Pirani)
24. The Value of focused Continued Professional Education (CPE) Iowa USA Sept 2007(MR. G.Waiswa)
25. "Accelerated Ponseti Method", Iowa USA Conference, September 2007(MR. E. Naddumba).
26. "Evolution of Care of the Congenital Clubfoot in the Developing World", Iowa USA, Sept 2007 (EK Naddumba)
27. "The Uganda Sustainable Clubfoot Care Project" Clubfoot Research in Uganda – Incidence and Ethno-cultural Surveys "Keynote Speaker, 6th German Course on the Conservative Treatment of Clubfeet with the Ponseti Method, Berlin, October 27, 2007 (Dr. S. Pirani)
28. "Clubfoot – A Nation At A Time" Keynote Speaker, 4th Manchester International Clubfoot Conference and Ponseti Method Workshop, November 2007 (Dr. S. Pirani)
29. "Accelerated Ponseti Method", Association of Surgeons of East Africa Conference Mombasa, Dec 5, 2007. (Dr. Isidor)
30. "The Uganda Sustainable Clubfoot Care Project" Visiting Lecturer: The Centre for International Child Health 2008 series of Highlighting Local Contributions to Global Child Health, BC Children's Hospital, Vancouver, B.C. January 16, 2008 (Dr. S. Pirani)
31. "Uganda Sustainable Clubfoot Care Project", Visiting Lecturer: Grand Rounds for Health Care & Epidemiology, University of British Columbia, February 8, 2008 (Dr. S. Pirani)
32. "The Ugandan Project", Keynote Speaker, Kasr Al-Ainy International Clubfoot Course, Cairo University, February 2008 (Dr. S. Pirani)
33. "Clubfoot in Uganda – From Quandary to Opportunity", Invited Speaker: Global-HELP Celebration Dinner, University of Washington Club, Seattle, April 5, 2008 (Dr. S. Pirani)
34. "Accelerated Versus Standard Ponseti Protocol:

- Case Controlled Study”, Invited Speaker: Annual Bethune Round Table Conference, Vancouver, May 9, 2008 (Dr. I. Ngayomela)
35. “Clubfoot Treatment in Developing Countries”, 2nd Zurich International Clubfoot Symposium, Schulthess Klinik, Switzerland September 26-27, 2008. (Dr. S. Pirani)
 36. CTEV Workshop “Towards Effective Ponseti Clubfoot Care – Uganda Sustainable Clubfoot Care Project” “The 12th G.C.C./13th Pan Arab Orthopaedic Congress, Muscat, Sultanate of Oman November 26-29, 2008 (Dr. S. Pirani)
 37. “The Burden of Neglected Clubfoot in Uganda”, Makerere College of Health Sciences Research Conference at Hotel Africana, January 14, 2009, (MR. E. Naddumba)
 38. “Toward Effective Ponseti Clubfoot Care: The Uganda Sustainable Clubfoot Care Project”, Invited Speaker: Paediatric Orthopaedic Society of North America Annual Meeting, Boston, Massachusetts, April 29 – May 2, 2009 (Dr. S. Pirani)
 39. “The Uganda Sustainable Clubfoot Care Project”, Invited Speaker: Third International Conference - Treatment of Congenital Foot Deformities in Children, Yaroslavl, Russia, May 8-9, 2009 (Dr. S. Pirani)
 40. “Toward Effective Ponseti Clubfoot Care: The Uganda Sustainable Clubfoot Care Project”, Invited Speaker: Salter Society Meeting, Toronto, Canada, May 29, 2009. (Dr. S. Pirani)
 41. “Towards Effective Clubfoot Care – The Uganda Sustainable Clubfoot Care Project”, Visiting Lecturer: 18th Orthopaedic Summer School, 1st Nordic Ponseti Clubfoot Course, ORTON Orthopaedic Hospital, Helsinki, Finland, July 30-31, 2009 (Dr. S. Pirani)
 42. “Can It Work? Will It Work? Is It Worth It?” Guest Lecturer, Gallie Lecture Canadian Surgery Forum, Victoria Conference Centre, September 11 2009 (Dr. S. Pirani)
 43. “MRI evaluation of clubfoot”, “The Ugandan Project”, Invited Speaker: British Orthopaedic Association Annual Congress, Manchester, England September 15-18, 2009 (Dr. S. Pirani)
 44. “Public health principles incorporated within design of USCCP”, “Building capacity to treat and to teach how to treat congenital clubfoot with the Ponseti Method”, “Investigations proposed and performed by USCCP”, Invited Speaker: II International Clubfoot Symposium, Bone and Joint Decade Global Network Conference, Washington DC, October 24, 2009 (Dr. R. Mathias, Dr. S. Pirani)
 45. “The Uganda Sustainable Clubfoot Care Project – Treating and Teaching How to Treat Clubfeet in

Uganda”, Invited Speaker: Global Health Speaker Series, presented by UBC Centre for International Health, University of British Columbia, Vancouver, B.C. November 19, 2009 (Dr. S. Pirani)

46. “Performance of Clubfoot Clinics in Uganda”, Bethune Round Table on International Surgery, University of Calgary, Alberta, May 15, 2010 (Dr. E. Naddumba)
47. “Clubfoot: The Uganda Clubfoot Care Project”, Invited Speaker: Orthopaedica Belgica, Oostende, Belgium, May 19-21, 2010 (Dr. S. Pirani)
48. “Ponseti Clubfoot Treatment in Uganda – Can it work? Will it work? Is it worth it?”, Invited Speaker: Orthopedic Society of Minas Gerais, Belo Horizonte, Brazil, August 11-12, 2010 (Dr. S. Pirani)
49. “The Uganda Sustainable Clubfoot Care Project”, Invited Speaker: 9th Ponseti Clubfoot Symposium, in combination with the 13th Basel Pediatric Orthopaedic Symposium, Pediatric Orthopaedic Department University Hospital, Basel, Germany, September 2, 2010 (Dr. S. Pirani)
50. “How Did I Take the Ponseti Method to Uganda With a Public Health Perspective?”, Invited Speaker and Instructor: The 21st Annual Meeting of the Japanese Pediatric Orthopaedic Association, Tokushima City, Japan, November 26-27, 2010 (Dr. S. Pirani)
51. “The Uganda Sustainable Clubfoot Care Project”, Invited Speaker: Nordic Advanced Instructional Clubfoot Course/2nd Nordic Ponseti Clubfoot Course, St. Olvas Hospital, Trondheim, Norway, April 28-29, 2011 (Dr. S. Pirani)
52. “Ponseti Clubfoot Treatment by Orthopaedic Officers: Prospective Cohort Study in Uganda”, “The Uganda Sustainable Clubfoot Care Project”, Invited speaker: 6th International Clubfoot Congress, XXV SICOT Triennial World Congress, Prague, Czech Republic, September 6-9, 2011 (Dr. S. Pirani)
53. “The Uganda Sustainable Clubfoot Care Project”, Invited speaker: 1st Ukrainian Ponseti Method Course, Odessa, Ukraine, September 15-16, 2011 (Dr. S. Pirani)
54. “Teaching the Ponseti Method: Ugandan Experience”, Keynote speaker: South African Paediatric Orthopaedic Association, Cape Town, South Africa, May 4-5, 2012 (Dr. S. Pirani)
55. “Recent Advances in Clubfoot Management in Developing Nations: The Uganda Sustainable Clubfoot Care Project”, Keynote speaker: Pediatric Orthopaedic Society of North America Annual Meeting, Denver Colorado, May 19, 2012 (Dr. S. Pirani)
56. “The Uganda Sustainable Clubfoot Care Project”,

	6. Peer reviewed publications	<p>Keynote speaker: 10th Ponseti Course, Karolinska University, Stockholm, Sweden, July 7, 2012 (Dr. S. Pirani)</p> <p>57. “The Uganda Sustainable Clubfoot Care Project”, Keynote speaker: 66th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, Toronto, Canada, September 4, 2012 (Dr. S. Pirani)</p> <p>58. “Public Health Effective National Clubfoot Program”, Invited speaker: Aga Khan University Hospital, Lahore, Pakistan, December 3-4, 2012 (Dr. S. Pirani)</p> <p>59. “The Uganda Sustainable Clubfoot Care Project”, Invited speaker: Pakistan Orthopaedic Association – Orthocon 2012, Karachi, Pakistan, December 6-9, 2012 (Dr. S. Pirani)</p> <p>6. 5 peer reviewed publications:</p> <ol style="list-style-type: none"> 1. Factors Affecting Compliance in the Treatment of Congenital Clubfoot: the Uganda Clubfoot Project. <i>Journal of Investigative Medicine</i> 12/2005; 54(1):S114-S115 2. Understanding the barriers to clubfoot treatment adherence in Uganda: A rapid ethnographic study. <i>Disability and Rehabilitation</i>, June 2007; 29(11-12):845-855 3. A public health approach to prevent neglected clubfoot. <i>Mera III</i>, July 2007 4. Towards Effective Ponseti Clubfoot Care – The Uganda Sustainable Clubfoot Care Project. <i>Clin Orthop Relat Res</i> (2009) 467:1154-1163, May 2009 5. Incidence of Clubfoot in Uganda. <i>Can J Public Health</i> 2010; 101(4): 341-344
<p>Output 2.6 By 2008 80% of in-service technicians currently in government and NGO orthopaedic workshops have been trained in manufacture of the Steenbeek Foot Abduction Brace and on the role of the Orthopaedic Technician in clubfoot treatment in Uganda.</p>	<p>Output Indicator 2.6 Number of in-service technicians trained.</p>	<p>Output 2.6 Results 26 in-service technicians trained.</p>

Analysis of Project Results

Project Context

Constraints within the Ministry of Health continue to influence the activities of USCCP. At project outset the Ministry of Health had committed to providing service delivery, whereas USCCP's mandate has mainly been to build capacity. Ministry constraints continue to affect the availability of necessary supplies. When supplies are insufficient, parents have to buy the supplies themselves from local pharmacies.

Positive influences are the willingness of local organizations to support the activities of clubfoot care in Uganda. An example of this is the Rotary Club of Kampala North who have partnered with the Rotary Club of Burnaby to make an application to the Rotary Foundation for funding for equipment, training materials, awareness raising materials, and braces for clubfoot clinics in Uganda (Appendix A). The total value of funding received is \$58,500 US.

Annual Results 2012-2013

KEY ACTIVITIES	OUTPUTS ACHIEVED	OUTCOMES ACHIEVED
TRAINING		
Regular Training Workshops, Teaching Sessions and Continuing Professional Education Seminars	Output 1.6:	Towards Outcome 1 By 2010, 80% schools of higher learning in Uganda (medical, nursing, & paramedical) that educate & 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 & economic context.
	Output 1.7:	
	Output 1.8:	
	Output 1.9:	
	Output 1.10:	
	Output 2.4	Toward Outcome 2
RESEARCH		
	Output 2.5	Toward Outcomes 1 and 2
AWARENESS		
		Toward Outcome 2
MODULE PRODUCTION		
		Toward Outcomes 1 and 2
SUPPORT SUPERVISION		
		Toward Outcome 2
KEY ACTIVITIES	OUTPUTS ACHIEVED	OUTCOMES ACHIEVED
NEW CLINICS		
Opening of clubfoot clinics		Towards Outcome 2
CONFERENCE PRESENTATIONS		
		Towards Outcomes 1 and 2

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|--|--|---|
| | | <ol style="list-style-type: none"> 1. "Teaching the Ponseti Method: Ugandan Experience", Keynote speaker: South African Paediatric Orthopaedic Association, Cape Town, South Africa, May 4-5, 2012 (Dr. S. Pirani) 2. "Recent Advances in Clubfoot Management in Developing Nations: The Uganda Sustainable Clubfoot Care Project", Keynote speaker: Pediatric Orthopaedic Society of North America Annual Meeting, Denver Colorado, May 19, 2012 (Dr. S. Pirani) 3. "The Uganda Sustainable Clubfoot Care Project", Keynote speaker: 10th Ponseti Course, Karolinksa University, Stockholm, Sweden, July 7, 2012 (Dr. S. Pirani) 4. "The Uganda Sustainable Clubfoot Care Project", Keynote speaker: 66th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, Toronto, Canada, September 4, 2012 (Dr. S. Pirani) 5. "Public Health Effective National Clubfoot Program", Invited speaker: Aga Khan University Hospital, Lahore, Pakistan, December 3-4, 2012 (Dr. S. Pirani) 6. "The Uganda Sustainable Clubfoot Care Project", Invited speaker: Pakistan Orthopaedic Association – Orthocon 2012, Karachi, Pakistan, December 6-9, 2012 (Dr. S. Pirani) |
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Results Variance

Expected Results	Results Achieved	Explanation of Variance
Outcome 1	Outcome 1 Results	No variance
Output 1.1	Output 1.1 Results	No variance
Output 1.2	Output 1.2 Results	No variance
Output 1.3	Output 1.3 Results	No variance
Output 1.4	Output 1.4 Results	No variance
Output 1.5	Output 1.5 Results	No variance
Output 1.6	Output 1.6 Results	No variance
Output 1.7	Output 1.7 Results	No variance
Output 1.8	Output 1.8 Results	No variance
Output 1.9	Output 1.9 Results	No variance
Output 1.10	Output 1.10 Results	No variance
Outcome 2	Outcome 2 Results	No variance
Output 2.1	Output 2.1 Results	No variance
Output 2.2.1	Output 2.2.1 Results	No variance
Output 2.2.2	Output 2.2.2 Results	No variance
Output 2.3.1	Output 2.3.1. Results	No variance
Output 2.3.2	Output 2.3.2 Results	No variance
Output 2.4	Output 2.4 Results	No variance
Output 2.5	Output 2.5 Results 1 clubfoot conference, 59 conference presentations, and 5 peer reviewed publications	2 nd clubfoot conference will take place during development of guidelines. 4 more manuscripts are planned for publication.
Output 2.6	Output 2.6 Results	No Variance

Spin-off activities and unexpected results

Spin Off Activities	Unexpected Results
<p>The National Clubfoot Conference was held in Delhi, India on February 9-10, 2013. The event was organized by CURE International India Trust in partnership with State governments to raise awareness on the prevalence of the condition of clubfoot. Among the participants were over 200 orthopaedic surgeons from 20 different Indian states who gained the benefit of presentations led by internationally known experts. The Vice President of India, the Honorable Sri. M. Hamid Ansari, addressed the participants, as did the Chief Minister of Delhi Health, Smt. Sheila Dikshit, and the Director of India's National Rural Health Program, Ms. Anuradha Gupta IAS. The USCCP Project Director was invited to give guest lectures on the Uganda experience. (Appendix B)</p>	<p><u>Recognition of the role of USCCP in the care of children born with clubfoot</u> In June 2011, the World Health Organization published its first World Report on Disability. The report provides the first global estimates of persons with disabilities in 40 years and an overview of the status of disability in the world. New research shows that almost one-fifth of the estimated global total of persons living with disabilities, or between 110-190 million, encounter significant difficulties. The report stresses that few countries have adequate mechanisms in place to respond to the needs of people with disabilities. Barriers include stigma and discrimination, lack of adequate health care and rehabilitation services; and inaccessible transport, buildings and information and communication technologies. As a result, people with disabilities experience poorer health, lower education achievements, fewer economic opportunities and higher rates of poverty than people without disabilities.</p> <p>The report highlights USCCP as one of five examples of approaches used by countries worldwide to enable people with disabilities to access services, infrastructure, information and jobs. The report states that in Uganda, USCCP improves detection and rehabilitation of children with clubfoot by raising public awareness that clubfoot is correctable, by improving the provision of foot orthotics, training primary health personnel, and subsidizing transport costs. Further details are given on page 99 (Box 4.2) of the World Report on Disability (Appendix I). http://www.who.int/disabilities/world_report/2011/en/index.html</p>
<p>Mulago Health Tutors College syllabus upgraded to include the Ponseti Method.</p>	<p><u>Sustainable Clubfoot Care in Bangladesh (SCCB)</u> There are about 5,000 children born with clubfoot each year in Bangladesh. Health systems face similar constraints to those in Uganda. Children born with clubfoot face similar problems in accessing treatment for their clubfeet as children did in Uganda prior to USCCP.</p> <p>In response to the Canadian International Development Agency's (CIDA) Call For Proposals for its Partnerships With Canadians Branch (PWCBC) in June of 2011, the University of British Columbia (UBC) developed a clubfoot teaching and treatment project (SCCB) for children born with clubfoot in Bangladesh, using the USCCP model, and building on lessons learned. The application was successful, with CIDA agreeing to a cash contribution of \$4,320,160 with a total project value of \$5,787,052 (Appendices J, K).</p>
<p>Dr. Shafique Pirani was presented with the 2012 American Academy of Orthopaedic Surgeons '2012 Humanitarian Award' in recognition for his work to improve the function and quality of life of Ugandan children afflicted with clubfoot, through the Uganda Sustainable Clubfoot Care Project in February of 2012 (Appendices C, D). http://www.aaos.org/news/aaosnow/mar12/youraaos9.asp</p>	<p>The Government of Kenya and Clubfoot Care Kenya are in partnership to treat all children for free at selected health facilities countrywide. Referral hospitals, general hospitals, and district hospitals spread across the country offer treatment of clubfoot using the Ponseti Method (Appendices L, M). file://localhost/(http://www.nation.co.ke:News:Relief-for-babies-with-twisted-feet-:1056:1331708-:g37v5lz-:index.html)</p>
<p>Dr. Shafique Pirani and Dr. Norgrove Penny were presented with the 2012 Humanitarian Award from the Pediatric Orthopaedic Society of North America in May of 2012 for their service to the underserved children of Uganda with clubfeet through the Uganda Sustainable Clubfoot Care Project, (Appendix E). http://www.posna.org/research/awards/HumanitarianAwardHistory.asp</p>	<p>The Ugandan Ministry of Health 'Child Health Card' now includes a tick box for birth defects, with another field for details (Appendix N)</p>
<p>The Pakistan Orthopaedic Association is collaborating with the Governments of Sindh and North-West Frontier Province to develop provincial clubfoot programs (Appendices F, G, H)</p>	<p>USCCP Project Director, Dr. Shafique Pirani, was appointed as Chair of the Medical Advisory Board for the Ponseti International Association (http://www.ponseti.info/about-us/ponseti-international/medical-advisory-board.html)</p>

Communication Products

Breaking the Mould. Reader's Digest, October 2009 (Appendix O)

Stepping up: Help for disabled children in Uganda. UniWorld, December 2012 (Appendix P)

A Running Start. TREK Online, the Magazine of the University of British Columbia, Fall/Winter 2012 (Appendix Q) (<http://trekmagazine.alumni.ubc.ca/2012/fallwinter-2012/features/a-running-start/>)

Other Information

Relevant anecdote

E-mail from Diriisa Kitemagwa, Orthopaedic Officer, Mulago Hospital Clubfoot Clinic, Kampala, Uganda. Subject: Why were you born late? (Appendix R)

Success story

Letter and photos from parent of child born with bilateral clubfeet treated at the Mulago Hospital Clubfoot Clinic (Appendices S, T)

Appendices

- A. Approval of Rotary Global Grant for USCCP (joint proposal by Rotary Kampala North and Rotary Club of Burnaby)
- B. CURE International India, National Clubfoot Conference program, February 9-10 2013
- C. Shafique P. Pirani, MD, Receives Humanitarian Award. AAOS Now, 2012 Annual Meeting News, February 2012
- D. Canadian Orthopaedic Surgeon, Shafique P. Pirani, MD, Honored for Creating Clubfoot Treatment Program in Uganda. AAOS press release, February 2012
- E. Clinical Faculty Members Receive Humanitarian Awards. The University of British Columbia, Faculty of Medicine press release, May 22 2012
- F. Minutes of Meeting: Ponseti International Association, Ponseti Group of Paediatric Orthopaedic Forum, Pakistan Orthopaedic Association with Special Secretary Health, Government of Sindh. December 6 2012
- G. Letter from the Minister for Health, North-West Frontier Province, Pakistan
- H. Letter from the Pakistan Orthopaedic Association
- I. WHO World Report on Disability, news release June 2011
- J. Sustainable Clubfoot Care in Bangladesh proposal award letter from the Partnerships with Canadians Branch, Canadian International Development Agency
- K. UBC media release re: Sustainable Clubfoot Care in Bangladesh
- L. Relief for babies with twisted feet. Daily Nation, February 20 2012

- M. Clubfoot Care For Kenya Report: October 2005 – December 2009
- N. Republic of Uganda, Ministry of Health 'Child Health Card'
- O. Breaking the Mould. Reader's Digest, October 2009 issue
- P. Stepping up: Help for disabled children in Uganda. UniWorld, December 2012 issue
- Q. A Running Start. TREK Online, Magazine of the University of British Columbia, Fall/Winter 2012
- R. E-mail from Diriisa Kitemagwa, Orthopaedic Officer, Mulago Hospital Clubfoot Clinic, Kampala, Uganda. Subject: Why were you born late?
- S. Letter from parent of child born with clubfoot treated at the Mulago Hospital Clubfoot Clinic
- T. Photos of child born with clubfoot treated at the Mulago Hospital Clubfoot Clinic
- U. Factors Affecting Compliance in the Treatment of Congenital Clubfoot: the Uganda Clubfoot Project. *Journal of Investigative Medicine* Jan 2006; 54(1):S114-S115
- V. Understanding the barriers to clubfoot treatment adherence in Uganda: A rapid ethnographic study. *Disability and Rehabilitation*, June 2007; 29(11-12):845-855
- W. A public health approach to prevent neglected clubfoot. *Mera III*, July 2007
- X. Towards Effective Ponseti Clubfoot Care – The Uganda Sustainable Clubfoot Care Project. *Clin Orthop Relat Res* (2009) 467:1154-1163, May 2009
- Y. Incidence of Clubfoot in Uganda. *Can J Public Health* 2010; 101(4): 341-344
- Z. Ponseti Clubfoot Management: Teaching Manual For Healthcare Providers in Uganda. Global HELP Publications, 2008. ISBN-13 #978-1-60189-050-4
(http://www.global-help.org/publications/books/book_ponsetiuganda.html)