

Africa Clubfoot Training

Train The Trainer Course

Basic Clubfoot Treatment Provider Course

Advanced Non-Surgical Clubfoot Treatment Provider Course

9<sup>th</sup>-13<sup>th</sup> April, Dar Es Salaam, Tanzania

## COURSE REPORT



## 1. Executive Summary

### Background:

Early 2016, after identifying the need for better training and trainers, the Medical Advisor of Tanzania Clubfoot Care Organization (TCCO), Dr Isidor Ngayomela, attended the Africa Clubfoot Training (ACT)-Pilot-Train the Trainers Course (TTT)-Course in Ethiopia.

Back in Tanzania, together with other members of a TCCO-Training-Task group, he made first plans of holding a TTT in Tanzania. While following the further development and pilot phase of the ACT- Curriculum with great interest, waiting for the official launching of the ACT- training material, various efforts were made in Tanzania to strengthen capacity of clubfoot providers and supervisors. Among these efforts were the development of a fellowship-training program, which provided one-on-one training to new providers and was piloted at two high volume Clubfoot Clinics in the Northern-and Southern Zone of Tanzania.

Finally, after attending the official launch of the ACT-TTT-Course in London in September 2017, a group of coordinators and Program Managers from MiracleFeet, ACT, TCCO and CCBRT (Hospital of Comprehensive Community Based Rehabilitation in Tanzania) jointly started organizing the first Tanzanian ACT-TTT.

The Africa Clubfoot Training (ACT) course was held in Dar es Salaam, Tanzania from the 9<sup>th</sup>-13<sup>th</sup> April 2018. The theory sessions were held at the Best Western Peninsula and Mayfair Hotels and practical sessions were held at the CCBRT-Hospital. The Course consisted of:

- a two-day Train The Trainer (TTT) course,
- a two-day Basic Clubfoot Treatment Provider Course (BC) and
- a one-day Advanced Non-Surgical Clubfoot Treatment Provider Course (AC).

## 2. Participants:

**Team 1:** A senior faculty team consisting of both African based and visiting international experts of whom some were involved in developing and piloting the ACT-TTT-Concept.

**Team 2:** The participants for the Train The Trainer course were selected and invited by various organizations, representing 10 national clubfoot programmes from across the continent. All are experienced Ponseti practitioners who will play an active role in training others in Ponseti, either in clinic settings or on courses in their respective country programmes.

**Team 3:** Basic Clubfoot Course Trainees. Local health workers, all working in Tanzania in the Ponseti method of treating clubfoot. Most of them have had no or minimal previous training before attending the course. Team 3 was selected and invited mainly by Tanzania Clubfoot Care Organization. Three Participants were from the International Committee of the Red Cross (ICRC) and from Humanity & Inclusion (HI).

**Advanced course participants:** Team 2 and one Team 3. Almost all participants attending the Advanced course have previous clubfoot training in the Ponseti Method and experience in managing clubfoot.

**Observers:** Throughout the week, a group of international observers from Asia, Africa, Latin America and the United States were present with the objective to identify if and how the ACT-TTT-Concept can be adopted and rolled out by clubfoot programs in other parts of the world.

**Organizers:** The organizing group consisted of the ACT-Program Manager, coordinators and Program Managers from MiracleFeet, TCCO and CCBRT.

### 3. Concept:

The Train The Trainers Course was delivered by the **Team 1** Faculty members to the Team 2 who then delivered the Basic Course to the **Team 3** providers whilst mentored by the Team 1. The Advanced Course was delivered by the Team 1 faculty members to the Team 2.



#### 4. Overall ACT-TTT-Course objectives:

General course design principles	<ul style="list-style-type: none"> <li>• The training materials package for each course comprises presentation materials (i.e. slides and handouts), a participants' manual and a trainers' manual</li> <li>• Courses are delivered in <b>modules</b>, in a clinic setting</li> <li>• All courses are linked to <b>follow-up mentoring and supervision in clinics</b> to consolidate skills and improve and maintain quality of treatment</li> <li>• Designed simple and clear with the aim of being consistent on issues such as scoring, hand holds, classification.</li> <li>• The course is not accredited. The attendees of the basic and advanced courses should be supported by mentors and supervisors in clinics after the course to practise and consolidate skills and receive constructive feedback.</li> </ul>
Train The Trainer Course (9 <sup>th</sup> -10 <sup>th</sup> April 2018)	<p><b>Participants: Team 1 Faculty delivers the course to the Team 2</b></p> <p>3 Course Objectives</p> <ul style="list-style-type: none"> <li>• Develop <b>understanding and skills in effective clubfoot training course delivery</b> (e.g. principles of adult learning, delivering interactive lectures, teaching practical skills, giving and receiving feedback etc.),</li> <li>• Develop <b>understanding and skills in delivering the ACT Basic and Advanced Clubfoot Treatment Provider Courses</b></li> <li>• Develop <b>understanding and skills in measuring and improving treatment quality and clinic quality</b> in a clubfoot programme i.e. being a trainer and mentor in a clinic setting</li> </ul> <p>Expected outcome:</p> <ul style="list-style-type: none"> <li>• Increase clubfoot training capacity in the region, to be able to train more providers</li> <li>• Increase clubfoot mentoring skills in the region, to be able to help improve and maintain quality of care</li> </ul>
Basic Clubfoot Treatment Provider Course (11 <sup>th</sup> -12 <sup>th</sup> April 2018)	<p><b>Participants: Team 2 deliver the course to the Team 3 whilst mentored in this process by Team 1</b></p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>• To give hands-on practice in manipulation, scoring, casting, bracing (and tenotomy where relevant) on training models and patients</li> <li>• To be accessible to multi-cadre health care workers (doctors, physiotherapists, paramedical staff) with a variable level of previous medical education</li> </ul>

	<ul style="list-style-type: none"> <li>• Aimed at trainees with no or limited experience of Ponseti treatment</li> <li>• To give a simple introduction to the core concepts and technique of the Ponseti method</li> </ul>
Advanced Clubfoot Treatment Provider Course (13 <sup>th</sup> April 2018)	<p><b>Participants: Team 1 deliver the course to the Team 2</b></p> <ul style="list-style-type: none"> <li>• To refresh understanding and skills in basic clubfoot management using the Ponseti Method</li> <li>• Introduction to management of complicated cases (relapse, older child, atypical clubfoot)</li> <li>• To share tips and tricks through case discussion of complicated cases</li> <li>• To establish a common approach to measuring and improving quality of care in clinics, to encourage reflection on what is (and isn't) working well in own practice/clinic setting, and to identify priority actions</li> </ul>





## 5. Course objectives of the Tanzania Course

- Train specialists from Tanzania and other regional African countries to become Ponseti trainers, through the TTT course
- Strengthen the capacity of African based faculty (Team 1) to deliver future TTT's.
- Train a cadre of health workers in Tanzania as Ponseti providers
- Familiarize the new trainers with the standardized, tested Ponseti providers training course material (basic and advanced) so as to enable them delivering future courses utilizing this material

## 6. Background to course materials:

The ACT Basic and Advanced courses are based on previously developed training materials including the Global HELP Red Book, the GCI Ponseti for clubfoot training materials, the CURE clubfoot training resources and many others.

Stakeholder input: The ACT Provider Courses Working Group have developed these materials to incorporate:

- a. Survey data and key informant interviews from consultation with key trainers in the region
- b. Feedback from members of the UK Clubfoot Consensus Group (UKCCG) who are reviewing the scientific and clinical content
- c. Feedback from members of an Africa Technical Advisory Group (ATAG) set up to review the draft course materials for suitability for Africa and training methodology



## 7. Patients

Patients from the CCBRT-Hospital were seen during the Basic and Advanced courses on the 11<sup>th</sup> and 12<sup>th</sup> April:

Total of 39 patients = 54 feet

5 for brace review = 8 feet

2 for tenotomy = 3 feet

32 for serial casting = 43 feet



## 8. Course Assessment

All course attendees completed a pre-course and post-course multiple-choice questionnaire to assess knowledge of key content covered in the course and a self-assessment of confidence in key skills.

**TTT Course:** Feedback from the regional clubfoot trainers highlighted many had never attended a course on adult learning principles or how to teach both theory and practical skills. This is reflected in an average increase of 21% in knowledge and 22% in confidence from pre- to post training.

**Table 1: Knowledge and Confidence of TTT participants**

	Number of participants	Pre-course knowledge	Post course knowledge	Pre-course confidence	Post course confidence	After delivery of basic course - Confidence
TTT Course	18	55%	76%	68%	90%	90.21%

**Basic and Advanced courses:** The pre- and post-course test for both Basic and Advanced course practitioners included questions that reflected knowledge of anatomy, clinical reasoning and practice. The outcomes are presented in the table below.

**Table 2: Knowledge and Confidence Basic course participants**

	Number of participants	Pre-course knowledge	Post course knowledge	Pre-course confidence	Post course confidence
BASIC Course	19	65%	80.70%	54%	86.53%

## **9. Next steps and conclusion**

Tanzania Clubfoot Care Organization (TCCO), partnering with MiracleFeet, wish to adopt the ACT-Curriculum for future TTT's and Basic and Advanced Provider Courses.

Furthermore, through the positive feedback from the participants, MiracleFeet is confident that this curriculum can be adapted to be appropriate for programmes in Asia and Latin America and will pursue the roll-out to other regions and programs over the next year. The Basic and Advanced materials have been translated into French, and Portuguese and Spanish translations of the Basic and Advanced courses are underway.

The curriculum will be one of many tools that will be introduced to improve treatment quality. Other tools such as support supervision and one-on-one mentoring of the new trainers and the new providers will be strengthened as well.

E-learning modules (mACT), based on the ACT-methodology, are under development and is planned to be launched in 2019. mACT will be an adjunct to the ACT course, available on mobile devices and be an interactive experience for providers through videos, animations, and virtual 3-D models.

MiracleFeet's goal is that through this innovative toolkit of training resources, more healthcare providers will be trained to provide treatment and that quality of treatment will meet or surpass global standards.



## 10. Acknowledgements

We would particularly like to thank our hosts Tanzania Clubfoot Care Organization (TCCO) and the Hospital of Comprehensive Community Based Rehabilitation in Tanzania (CCBRT) for their valuable and fruitful cooperation in planning and running this course.

We thank the ACT project partners (University of Oxford, CURE Clubfoot, Global Clubfoot Initiative) for their efforts in the development of the training materials (originally funded by the UK Department for International Development through the Health Partnership Scheme). We especially are grateful to the donors of MiracleFeet and the ACT OxReach crowdfunding campaign supporters.

We are also especially grateful to the faculty members who gave their time to teach on this course; they have contributed highly to the success of this course, and to their sending organizations/hospitals.

All participants of the Train the Trainers Course as well as the Basic and Advanced Course are acknowledged for their great interest and enthusiasm in the learning process.

Trine Boe Heim,  
Course Organizer  
Technical Coordinator  
Miraclefeet

Grace Le  
Course Organizer  
Program Manager  
University of Oxford

Appendices

**Appendix 1: Participants lists**

**Appendix 2: Program of the Train The Trainers Course**

**Appendix 3: Basic Clubfoot Treatment Course Timetable**

**Appendix 4: Advanced Clubfoot Treatment Course Timetable**

## Appendix 1: Participants lists:

### Faculty-Team 1: (9)

Ms Tracey Smythe, Physiotherapist, London, UK, chair of ACT Provider Course Working Group  
 Ms Denise Watson, Paediatric Orthopaedic Physiotherapy Practitioner, Chelsea and Westminster Hospital  
 Mr Guy Atherton, Consultant Orthopaedic Surgeon, Bristol Royal Children's Hospital  
 Mr. Isidor Ngayomela, Orth. Surgeon, Medical Advisor, Tanzania Clubfoot Care Organization,  
 Mr. Henry Musoke, Clinical Orth. Officer, National Clubfoot Program of Uganda  
 Mr. Emmanuel Kowero, Physiotherapist, Mbeya Zonal Referral Hospital, Tanzania  
 Mr. Michiel Steenbeek, Senior Advisor Physical Impairment & Rehabilitation, CBM, Rwanda  
 Mr. Ryan Sean Bathurst, Director, Zimbabwe Sustainable Clubfoot Program  
 Mr. Nicholas Veltjens, Program Manager, Physiotherapist, Mercy Ships

### 1. Team 2: (18)

Mr.	Simon Gakunju	Field Rehabilitation Worker, Handicap International	Kenya
Mr.	Matthias Mahenge	Physiotherapist, Head of Physiotherapist Unit	Tanzania
Mr. Dr.	Prosper Alute	Orth. Surgeon	Tanzania
Mr.	Khuzi Ncube	Chief Physiotherapist	Zimbabwe
Mr.	Tarik Khamis Ali	Orthopaedic Technologists, Administrator clubfoot Program Zanzibar	Tanzania
Ms.	Sempa Hellen Jennifer	Senior Orthopaedic Officer	Uganda
Ms.	Rumbidzai Ndekere	Principal Physiotherapist	Zimbabwe
Mr.	Phenias Mathias Mashahu	Physiotherapist Officer	Tanzania
Mr.	Mathew John Shayo	Physiotherapist	Tanzania
Ms.	Lilian Felix Kimaro	Occupational Therapist	Tanzania
Ms.	Honorina Mfoi	Physiotherapist	Tanzania
Mr.	Goodluck Pallangyo	Physiotherapist, Clubfoot Clinic Coordinator	Tanzania
Mr.	G. Bannie Wonyon	Technical and Training Coordinator MF, Orth. Technologist	Liberia
Ms.	Elia Bernabeu Mira	Physiotherapist	Spain/Sudan
Mr. Dr.	Oubda Bangda Abdoul Karim Faical	Physician, Burkina Cure Clubfoot Program Manager	Burkinabe
Mr.	Erick Munanyimbo	Physiotherapist, Clubfoot Clinical Supervisor	Zambia
Mr.	Tawina Dziwani	Clinical Officer, Clubfoot Clinical Supervisor	Malawi
Mr.	Romuald Melchior Cakpo	Physiotherapist, Program Manager	Beninese

## 2. Team 3: (20)

Ms.	Coralie Sylviane Rey-Mermier	Physiotherapist	Syria
Mr.	Ayoub Zablon Kissiva	Nurse	Tanzania
Ms.	Mariana P. Mwacha	Physiotherapist	Tanzania
Ms.	Franscisca Mustapha	Nurse attendant	Tanzania
Mr.	Moshi Saidi	Support Staff	Tanzania
Ms.	Oida Luguwa	Enrolled Nurse	Tanzania
Dr.	Zainabu Illonga	Doctor	Tanzania
Ms.	Veronica C. Kisiri	Physiotherapist	Tanzania
Ms.	Veronica Marishay	Physiotherapist	Tanzania
Mr.	Honori Minde	Physiotherapist	Tanzania
Ms.	Beatrice Byukusenge	Physiotherapist	Rwanda
Mr.	Edgar B. Nannyambe	Physiotherapist	Tanzania
Mr.	Rogathe Lema	Medical Doctor	Tanzania
Mr.	Justus Rumanyika	Enrolled nurse	Tanzania
Mr.	Seif Moh'd Omar	Physiotherapist	Tanzania
Dr.	Hilary H. Senga	Medical Doctor	Tanzania
Ms.	Lilian Lonjino	Physiotherapist	Tanzania
Mr.	Goodluck Mengi	Physiotherapist	Tanzania
Mr.	Mohamed Mahamudi Ally	Physiotherapist	Tanzania
Ms.	Laura Blake Vouilloz	Physiotherapist	Tanzania

## Advanced Course participants (19)

The participants for the Advanced Course were the Team 2 (see table above), Laura Blake (from Team 3).

### Observers: (10)

Ms. Chesca Colloredo-Mansfeld, Executive Director of MiracleFeet

Ms. Jen Everhart, Deputy Director of Programs, MiracleFeet

Ms. Marieke Dreise, Program Manager, MiracleFeet

Mr. Robert Mhina, Consultant Orth. Surgeon, Chair Tanzania Clubfoot Care Organization

Mr. Paul Warren Wade, Program Director, Walk for Life, Myanmar

Mr. Prem Edward Saggurthi, Physical Rehab. Programme Manager, ICRC

Ms. Beatrice Byukusenge, Head of Physiotherapy department, Gatagara Center, HI, Rwanda

Mr. Tilman Hannig, HR Officer, Training Coordinator, CCBRT

Mr. Mario Somoza, Consultant Orth. Surgeon, Nicaragua Clubfoot Program

Mr. Luijisyo Raphael Mwakalukwa, Head of Orth. Department, CCBRT

### Organizers: (5)

Ms. Trine Boe Heim, Miraclefeet, Technical Coordinator

Miss Grace Le, Oxford, ACT project manager, UK-organizer

Ms. Rachel Nungu, National Coordinator of Tanzania Clubfoot Care Organization

Mr. Tilman Hanning, HR Officer, Training Coordinator, CCBRT

Ms. Ansila Thadeo Kituli, Principal Nurse, Orthopaedic OPD Supervisor, CCBRT

## Appendix 2: Train The Trainer Course Timetable

Monday 9<sup>th</sup> & Tuesday 10<sup>th</sup> April 2018

#	Start	Mins	Session
			<b>Day 1 – Monday 9 April 2018</b>
	08.30		Registration
1	09.00	30	Welcome & Introduction
2	09.30	15	Pre-Course Assessment
3	09.45	20	Meet your TTT Mentoring Group
4	10.05	30	Effective Training and Learning 1: Learning Theory
5	10.35	30	Effective Training and Learning 2: Interactive Teaching
	11.05	20	Tea
6	11.25	30	Leading Small Group Discussions
7	11.55	30	<b>PRACTICAL 1: Leading Small Group Discussion</b>
8	12.25	40	Giving Effective Feedback
	13.05	55	Lunch
9	14.00	30	Teaching a Practical Skill
10	14.30	60	<b>PRACTICAL 2: Teaching a Practical Skill and Giving Feedback</b>
	15.30	15	Tea
11	15.45	30	Giving a Large Group Presentation with Slides
12	16.15	45	Organizing Clubfoot Courses
13	17.00	15	<b>PREPARATION FOR PRACTICAL 3: Teaching Large Groups (Assign Mini-Lectures)</b>
14	17.15	15	Closing Session Day 1
15	17.30	30	Meet with Mentors (as needed for preparation of mini-lectures)

			<b>Day 2 – Tuesday 10 April 2018</b>
16	09.00	15	Opening Session Day 2
17	09.15	45	Supervision and Mentoring
18	10.00	60	Measuring Clubfoot Treatment and Clinic Quality
	11.00	20	Coffee
19	11.20	105	<b>PRACTICAL 3: Teaching Large Groups and Giving Feedback (Give Mini-Lectures)</b> (Comfort break halfway)
	13.05	55	Lunch
20	14.00	15	Post-Course Assessment
21	14.15	15	Pre- and Post-Course Assessment – Correct Responses
22	14.30	15	Reflection in Mentoring Groups
23	14.45	15	Closing Session Day 2, Including Evaluation Forms
24	15.00	30	Basic Provider Course Standardization
	15.30	15	Tea
25	15.45	60	Briefing Session on Teaching the Basic Clubfoot Treatment Provider Course
26	16.45	30	Meet with Basic Course Mentors (as needed for preparation of Basic Course allocated sessions)



### Appendix 3: Basic Clubfoot Treatment Course Timetable

Wednesday 11 and Thursday 12 April 2018.

Start	Mins	Number	Session
			<b>DAY 1</b>
08:00	30"		Registration
08:30	15"	1	Day 1 Opening Session (Welcome, course overview, introductions, ice-breaker, & formation of small groups)
08:45	15"	2	Pre-course Assessment
09:00	30"	3	Introduction to Clubfoot and the Ponseti Method
09:30	30"	4	Anatomy and Definitions
10:00	20"	5	The Clubfoot Deformity – CAVE
10:20	30"		<b>Tea</b>
10:50	30"	6	How to Assess the Severity of a Clubfoot Using the Pirani Score
11:20	40"	7	The Ponseti Method of Manipulation
12:00	30"	8	<b>Practical Session 1:</b> Small group hands-on manipulation of rubber models and skeleton models
12:30	30"	9	Applying Clubfoot Casts
13:00	45"		<b>Lunch</b>
13:45	15"		<b>Walk to CCBRT</b>
14:00	45"	10	<b>Practical Session 2:</b> Demonstration of Pirani score and casting (with patients) <sup>4</sup>
14:45	30"	11	<b>Tea Break / Room Set up for Practical Session 3</b>
15:15	90"	12	<b>Practical Session 3:</b> Casting on rubber models (in small groups of 3)
16:45	15"	14	Day 1 Closing Session

			<b>DAY 2</b>
08:30	20"	15	Day 2 Opening Session (Review)
08:50	30"	13	<b>Practical Session 4:</b> Ponseti video
09:20	30"	16	The Tenotomy and When to Do it
09:50	40"	17	Maintenance Phase: Bracing and Relapse
10:30	30"	20	When to Stop and Rethink Treatment
11:00	55"		<b>Lunch</b>
12:00	15"		<b>Walk to CCBRT</b>
12:15	150"	18	<b>Practical Session 5:</b> Pirani score, manipulation, and casting with patients (in small groups of 3 or 4)
14:45	30"		<b>Tea</b>
15:15	90"	19	<b>Practical Session 6:</b> (Parallel session) Group 1: Brace fitting ; Group 2: Tenotomy (theory & practical)
16:45	15"	21	Post-course Assessment
17:00	15"	22	Day 2 Closing Session (Review, evaluation forms, and certificates)

#### Appendix 4: Advanced Clubfoot Treatment Course Timetable

Friday 13 April 2018

	mins	#	Session
09.00-09.30	30	1	Welcome, intro, MCQs
09.30-10.00	30	2	Review of Ponseti Method
10.00-10.30	30	3	Advanced Ponseti method for idiopathic clubfoot
10.30-11.00	30	4	Common Errors
11.00-11.30	30		<b>Tea</b>
11.30-12.15	45	5	Atypical Cases inc video
12.15-12.45	30	6	Relapse inc case study
12.45-13.15	30	7	Treating Older Children inc case study
13.15-14.00	45		<b>Lunch</b>
14.00-15.15	75	9	Practical 1: Part 1 is refresher of casting (on rubber legs), and part 2 is demo and practise new handholds & atypical casting
15.15-15.30	15		<b>Tea</b>
15.30-16.00	30	8	Secondary/syndromic cases
16.00-16.15	15	10	Parent education and compliance
16.15-16.45	30	11	Clinic and treatment quality
16.45-17.00	15	12	Closing session - MCQs, Review of the day, Evaluation forms, and Certificates