



Primary Trauma Care Course, Addis Ababa, Ethiopia

September 21st – 26th 2009

Executive summary

- A team of PTC instructors from the UK, South Africa and The Netherlands went to Addis Ababa, Ethiopia, to teach Primary Trauma Care.
- The local coordinator of the course had selected 20 participants, consisting of specialists in general and orthopaedic surgery, gynaecology, anaesthesiology, paediatrics and internal medicine as well as nurses, all from the Addis Ababa metropolis, to follow the initial foundation course. For the subsequent course 16 Participants were selected from hospitals outside Addis.
- Following two two-day PTC founding courses, a one-day instructors' course was run, and it was there and then decided that PTC would be part of emergency service delivery in Ethiopia under the auspices of the Federal Ministry of Health.

Purpose of the visit

To visit Addis Ababa in Ethiopia to teach a PTC founding course and an instructors' course to senior specialists and nurses of different hospitals, to assist in establishing PTC as the standard trauma management system in the country.

Background

Following a request by the Ethiopian Society of Anaesthesiologists, it was decided that Paul Borgdorff would present and discuss PTC during their 2nd annual conference on the 1st and 2nd of November 2008. Dr Borgdorff gave an overview of PTC, its aims, its content and international perspective. He stressed the importance of a joint request from anaesthesiologists, surgeons and orthopaedic surgeons in order to plan a PTC founding course, including an instructors' course, in Ethiopia. During the discussion most doctors and nurses stated that the trauma management in the hospitals is either sub-standard or virtually non-existent. Additionally pre-hospital ambulance facilities are scarce. Dr. Kunuz

Abdela of the WHO said that what Ethiopia needs most is increased road safety and awareness of the public. This is of course a long road and he supported the need for improved trauma management. All agreed that PTC could boost the sense of urgency amongst decision makers in the country regarding trauma.

On the 24th of March 2009 the Addis Ababa University Medical Faculty and the Federal Ministry of Health jointly requested the PTC foundation to run a PTC founding course and to discuss the implementation of PTC as the trauma management system.

Healthcare provision with respect to Trauma

Ethiopia is one of the oldest countries in the world and with 80 million people Africa's second-most populous nation. Ethiopia has only 1 to 2.5 medical doctors per 100,000 people, and a total of 20 anaesthesiologists.

In 1999 trauma was one of the most common reasons to visit the casualty department of Black Lion Hospital in Addis Ababa (the national referral hospital), representing 25% and 62% of the surgical and orthopaedic admissions respectively.

A one-year (July 2005-June 2006) retrospective descriptive audit of injuries in public health facility of Addis Ababa was conducted using external causes of injury codes on the district health information system. A total of 1,044,025 patients were seen at the out-patient departments of health facilities under the health bureau of Addis Ababa city administration during the twelve months between July 2005 and June 2006 (health centers and hospitals). About 30% of all first emergency visits to any health facility in Addis Ababa were trauma related. This figure increased to 60% if only the hospitals were considered. Falls were the most common cause of first emergency visits and accounted for 37.7% of cases. They were exceptionally common in females aged over 65 years (52.2% of their injury related complaints). 34% of the first emergency visits were related to road traffic accidents. The majority of the patients, 26,854 (65.9%), were in the age groups of 15-44 years.

Of all patients who were admitted for trauma, 35% and 8% was following a road traffic accident and a fall respectively. Pedestrians are especially vulnerable to accidents, as well as men working in building construction, where weak wooden scaffolding is usual. Though from the statistics it seemed that mortality due to trauma was low, (6 over the 12-months study period), this was due to underreporting. We were told that in Addis every day six people die in road traffic accidents alone. Some of the contributing factors include poor ambulance services, refusal of hospitals to accept patients and poor resuscitation facilities at some hospitals. It is striking that Ethiopia has the highest death rate per 10,000 vehicles per year of Africa and maybe of the world. Statistics vary between 114 and 180 deaths/10,000 vehicles annually. This compares very unfavourably with countries like Zimbabwe or South Africa each with 17 deaths/10,000 vehicles/year.

It was concluded that road traffic accidents are the most common reason for trauma in Addis Ababa, followed by falls. It is suggested that road safety should be improved and also that data collection and statistics should improve in order to draw meaningful conclusions.

Key staff involved in planning and co-ordinating

- **Local:**

Dr. Assefu Woldetsadik was the local coordinator, responsible for inviting the participants, liaising with the WHO and the ministry, organizing venue, food and drinks and arranging medical supplies and animals. Dr. Aklilu, internist and acting dean, Dr Kunuz Abdella representative of the WHO and Dr Abraham Endesh, deputy Director of Health Services of the Ministry of Health collaborated with Dr.Assefu organizing and financing the course.

- **International:**

Dr. Paul Borgdorff was the convenor and director of the course; the other instructors were Dr. Sarah Bakewell, Dr David Oloruntoba and Dr. Paul Breedveld. The chairperson of the Education Committee of the WFSA, Jannicke Mellin-Olsen has been involved from the onset.

Overall Timetable 19th to 29th September

Saturday 19 th	Arrival of faculty in Addis Ababa
Sunday 20 th	Preliminary discussion with Dr. Assefu and a visit to Black Lion Hospital casualty dept and intensive care
Monday/Tuesday 21 st /22 nd	Initial PTC foundation course
Wednesday/Thursday 23 rd /24 th	Subsequent PTC instructors' course
Friday 25 th	Instructors' course
Saturday 29 th	Return flights to UK, South Africa and Holland

Foundation Course Participants

Before the faculty left for Ethiopia the wish of the local organizers was discussed that all participants of the PTC course would participate in the instructors' course on Friday. The reason for this request was the fact that participants from both courses were all senior, the only difference being that those in the first group would come from Addis, while those in the second group would come from other cities in Ethiopia. This would mean that the group during the instructors' course would be quite large and that the newly trained instructors would not have the opportunity to practice what they had just learned. Nevertheless, for practical reasons it was decided to train the whole group of 40 participants on Friday. Twenty senior specialists in general and orthopaedic surgery, gynaecology, anaesthesiology, paediatrics and internal medicine as well as nurses, all from the Addis Ababa metropolis attended the

foundation course on Monday and Tuesday. Sixteen specialists from mixed specialisms and nurses, all from hospitals in the different states in Ethiopia attended the PTC course on Wednesday and Thursday. Almost all attended the instructors' course on Friday. The names of the participants of the two courses are listed in full below.

Monday and Tuesday course:

St Paul Hospital	Dr. Seyoum Assefa Dr. Ayelign Tsehay	Anesthesiologist Surgeon
Black Lion Hospital	Dr. Bahiru Bezabih	Orthopedics
Addis Ababa University	Dr. Dereje Negash Dr. Haileyesus Adam	Orthopedics Paediatrics
Armed Force	Nurse Hintsa Nega	Nurse
AAU-MF	Dr. Mersha Abebe Dr. Nebyou Seyoum Dr. Adane Haile Dr. Sisay Teklu Dr. Assefu W/Tsadik Nurse Behailu T/Mariam Dr. Robel Fikre Nurse Sirak Gugsu Nurse Tafesse Bekele Dr. Tesfaye Alemu Dr. Muluwork Tefera Dr. Haile	Neurosurgeon Surgeon Surgeon Gynaecologist Anaesthesiologist Anaest. nurse GP Nurse Anaest. nurse Paediatrics Paediatrics Orthopedics
Police hospital	Dr. Abiy Mulugeta	Anaesthesiologist
MOH	Dr. Abraham Endesh	Dep.Dir. Health Services

Wednesday and Thursday course:

AAU-MF	Dr. Abenezer Tirsit	GP
Minilik II Hospital	Dr. Biniyam Getu	GP
	Nurse Eyaya Taregne	Anaest. nurse
Armed force	Dr. Mekonnen Wordofa	Orthopedics
AAU-MF	Dr. Aklilu Azash	Internist
	Dr. Philipos Kidane	GP
	Dr. Tsegazeab Laeke	GP
	Dr. Azarias Kassahun	GP
Deder Hospital	Dr. Seid Salih	Surgeon
Jimma University Hospital	Dr. Yemane Ayele	Anaesthesiologist
Gondor University Hospital	Dr. Amezene T.	Surgeon
	Dr. Sahlu Wondimu	Surgeon
Mekelle	Dr. Asmamaw Mirutse	Surgeon
Haramaya	Dr. Gashaw Seid	GP
Hawassa	Dr. Shimelis Assefa	Surgeon
	Dr. Chuchu Girma	

Course Instructors

The visiting instructors were:

- Dr Paul Borgdorff, Consultant in Anaesthesia and Pain Management, Utrecht, Netherlands
- Dr Sarah Bakewell, Consultant in Anaesthesia and Pain Management, Gloucester, UK
- Dr Davis Oloruntoba, Consultant in Orthopedics, Umtata, South Africa
- Dr Paul Breedveld, Consultant in Trauma Surgery and Intensive Care, Maastricht, Holland

Contents and venue of the Foundation Primary Trauma Care Course

The subjects which were presented during the founding PTC course are outlined below. Course content was similar to what is advised in the PTC manual. The instructors used different styles of lecturing and different audiovisual aids, like PowerPoint, whiteboard and group discussion. The venue in Black Lion hospital was a comfortable lecture hall, with excellent audiovisual aids like a digital projector, an overhead projector, and a whiteboard. The hall was large enough to accommodate twenty or more people. Besides, we could make use of several spaces on the same floor for scenarios and workshops.

PTC Course Program

The final program was as follows:

Monday 21st and Wednesday 23rd September

0910-0920	Welcome address	Dr. Abraham Endesh
0920-0930	Vote of thanks	Dr Kunuz Abdella
0930-0950	Introduction to PTC and MCQ	Dr. Paul Borgdorff
0950-1010	Local Trauma Perspective	Dr. Aklilu Azash
1010-1040	ABCDE of Trauma and Primary Survey	Dr. Paul Breedveld
1040-1110	Airway and Breathing	Dr. Sarah Bakewell
1110-1130	Tea Break	
1130-1200	Circulation and Shock	Dr. David Oloruntoba
1200-1320	Skill stations	all
	- Airway (basic)	Dr. Sarah Bakewell
	- Cervical spine and log-roll	Dr. Paul Borgdorff
	- Chest drains	Dr. Paul Breedveld
	- Surgical airway	Dr. David Oloruntoba
1320-1400	Lunch	all
1400-1430	Chest injuries	Dr. Sarah Bakewell
1430-1500	Abdominal injuries	Dr. Paul Breedveld
1500-1515	Tea break	
1515-1645	Scenarios	all
1645-1700	Overview and Summary	Dr. Paul Borgdorff

Tuesday 22nd and Thursday 24th September

0900-0910	Introduction to Day 2	Dr. Paul Borgdorff
0910-0940	Head and Spinal Injuries	Dr. Sarah Bakewell
0940-1005	Paediatrics and Obstetrics	Dr. Paul Borgdorff
1005-1030	Burns and Limb Injuries	Dr. Davis Oloruntoba
1030-1045	Tea Break	
1045-1115	Secondary survey	Dr. Paul Borgdorff
1115-1130	Demonstration scenario	
1130-1300	Workshops:	
	- Analgesia	Dr. Sarah Bakewell
	- Transportation	Dr. David Oloruntoba
	- Neuro assessment	Dr. Paul Breedveld
	- Paediatrics	Dr. Paul Borgdorff
1300-1400	Lunch	
1400-1420	Disaster management	Dr. David Oloruntoba
1420-1550	Scenarios	all
1550-1600	Tea break	
1600-1615	Multiple choice paper	
1615-1630	Feedback and summary	Paul Borgdorff
1630-1645	Certificates and close	all

Instructor course, Sunday 28th November

Following the two 2 day PTC courses all the participants proceeded to take part in the PTC instructor course, which was convened by Paul Borgdorff. This used the PTC instructor materials and a programme based on that in the Instructor manual, with presentations in the morning by all faculty on Adult Learning, Feedback and Questioning, Language Issues as well as the various teaching and presentation styles. Following this the course split into four large groups and did practical sessions on giving a lecture (coordinated by Paul Breedveld), teaching a skill (David Oloruntoba), leading a discussion group (Sarah Bakewell) and running a scenario (Paul Borgdorff). The day finished with a feedback session and then a discussion on the practicalities of running further courses. After a lengthy discussion, in which Dr Kunuz Abdela(WHO), Dr Abraham Endesh (MoH), the faculty and all participants took part, it was decided that PTC is the method of choice for the whole of Ethiopia for the management of patients with severe trauma. On the issue of establishing a PTC committee, it was decided that a present body, consisting of representatives of the different trauma units in Addis Ababa and of the Ministry of Health will be used for organizing PTC courses and for advancing PTC in Ethiopia. It was also concluded that during the next course a reduced number of overseas faculty should be present for assistance and monitoring.

Notes on delivery of the Courses and lessons learnt

- Different presentation styles were used during the Foundation course and instructor day to provide modelling for future courses, many of which will be taught in locations without complex AV equipment.

Evaluation of the success and relevance of the visit

Remarks made by the participants on the evaluation forms and during the evaluation session can be found below. In general the course was much appreciated, however, as with most PTC courses, the participants would value more time for practicing scenarios.

Positive points:

Well- organized, relevant, informative.

Interactive, good feedback, culture sensitivity

Enthusiastic, smart, friendly, harmonious faculty with good presentations and improvisation skills

Location, food, audiovisuals, materials used and transport were all good.

Points which deserve improvement:

More scenario practice

Video presentations could be used to teach skills

CPR training could be included

Multiple Choice Questions

At the beginning and the end of the PTC course the participants were asked to fill in the MCQ's, which appear in the instructor's manual. The average pre-test score was 14.6 and 15 correct answers out of 23 questions in the first and second group respectively. The average post-test score was 19.5 and 21 in the first and second group respectively. The questions on CPR were excluded because this is not core course content.

Media coverage

There was no coverage in the Ethiopian media of this course.

Teaching materials provided

At the end of the PTC course a number of CDs of the electronic copies of the PTC materials together with the trauma picture slides was left with the founding committee.

Acknowledgements

Most local arrangements were done by Dr Assefu Woldetsadik, who did an outstanding job to make this course a success. We would like to thank her for this, often last-minute arrangements, and her great hospitality. We also wish to acknowledge Dr Aklilu for all the preparations. We would like to thank Dr Kunuz Abdella of the World Health Organization and Dr Abraham Endesh of the Ministry of Health for their support and financial assistance.

Finally I would like to thank my fellow instructors Sarah Bakewell, David Oloruntoba , and Paul Breedveld for dedicating their time to PTC and for their invaluable input during the course.

*Dr Paul Borgdorff
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Course director*