



## **Primary Trauma Care Course, Maseru, Lesotho**

**April, 4<sup>th</sup>-8<sup>th</sup>, 2005**

### ***Executive summary***

- A team of PTC instructors from the Netherlands went to Maseru, Lesotho, to teach Primary Trauma Care.
- A preliminary discussion about the PTC program between the overseas instructors and the local organizing committee was held.
- The local coordinators of the course had selected 20 participants, consisting of surgeons, orthopaedic surgeons, nurses and paramedics to follow the founding course.
- A two-day PTC founding course, a one-day instructors' course, and a second PTC-course were run.
- A local PTC committee consisting of doctors was set up during the instructors' course.
- A presentation about trauma in developing countries and Primary Trauma Care was organized to introduce the concept to key health officials and medical specialists of Lesotho.

### ***Purpose of the visit***

To visit Maseru, the capital of Lesotho to teach a PTC founding course, an instructors' course and a second PTC course to doctors and nurses of different hospitals, to discuss the establishment of an ongoing PTC program in Lesotho and to assist in forming a PTC founding committee to implement such a program.

### ***Background***

Some years ago Dr. Henk Haisma was approached by Dr. Oloruntoba, orthopaedic surgeon of Queen Elizabeth II hospital in Maseru, requesting a PTC founding course for Lesotho. Dr. Oloruntoba had already designed a program for the treatment of musculo-skeletal trauma in district hospitals, and believed that this program might combine well with Primary Trauma Care. The request for PTC was forwarded to Dr. Paul Borgdorff, who had worked in Lesotho before. In August 2004, during his holiday trip to Lesotho, he met Dr. Letsie of the Disease Control Unit and member of the executive committee of the Lesotho Medical Association. On behalf of the Lesotho Medical Council (LMA), she invited PB to present the PTC concept during a meeting of the LMA on the 15<sup>th</sup> August 2004. The presentation was supported with a custom-made PowerPoint slide show, summarizing the most important aspects of PTC. Thanks to the efforts of Dr. Letsie PB was (re)introduced to the then Director General of Health Services (DGHS), Dr. Ramatlapeng, to discuss PTC in her office on the 24<sup>th</sup> of August. We had a fruitful discussion about trauma in general, and PTC and ambulance services in particular. Dr. Ramatlapeng agreed that trauma is

indeed a major health problem in Lesotho and stressed the importance of including a continuous education program regarding PTC in the annual budget of the Ministry of Health (MoH). PTC supports this idea fully: the PTC foundation will pay whatever possible to get PTC started. A continuous program, however, is better managed and budgeted for by the MoH.

On the 12<sup>th</sup> of March 2005 the PTC faculty held a meeting in Utrecht to discuss the content of the course and practical arrangements. Following this, the team travelled to Maseru to teach the course as described below.

### ***Healthcare provision with respect to Trauma***

Lesotho is a land-locked country, roughly of the size of Belgium, and is completely surrounded by South Africa. The population is estimated to be 2 million. One-third of the country consists of flat land and foothills, the remainder is very mountainous with peaks up to 3400 meter. This makes a large proportion of the country difficult to access. Health is provided by a referral hospital in Maseru, with specialist care available, 18 district hospitals, both government and mission, clinics which are run by specialized nurses and village health posts, run by Village Health Workers.

Trauma is a significant problems, and is after AIDS the most important cause of death of the population in the age group 16-45 years. The most common cause of death in trauma patients is head injury, caused by motor vehicle accidents and human inflicted violence (assault). An estimated 400 people die each year in motor vehicle accidents, thus showing the highest traffic accidents mortality rate in Africa after Ethiopia. Ambulance services are only used for inter-hospital transfer of patients. Patients are brought to the emergency department by relatives or bystanders.

### ***Key staff involved in planning and co-ordinating***

- **Local:**

Dr. David Oloruntoba has been the initiator of PTC in Lesotho. He approached Dr. M. Letsie for assistance of the Lesotho Medical Council and the Ministry of Health. They selected the venue, approached participants and arranged all materials for the lectures and the skill stations.

- **International:**

Dr. Paul Borgdorff, anaesthesiologist, was the director of the course; the other instructors were Dr. Henk Haisma, Dr. Kees Punt, both anaesthesiologists, and Dr. Paul Breedveld, surgeon. Mrs. Diane Wilkinson came over from South Africa to teach the instructors course.

### ***Overall Timetable***

Saturday 2 <sup>nd</sup> April	Arrival of faculty in Maseru, course planning
Sunday 3 <sup>rd</sup> April	Meeting with the local organizing committee to plan the course
Monday/Tuesday 4 <sup>th</sup> /5 <sup>th</sup>	PTC foundation course
Wednesday 6 <sup>th</sup> April	PTC instructors' course and in the evening an introduction of PTC to key health officials and most senior specialists by Dr. Paul Borgdorff
Thursday/Friday 7 <sup>th</sup> /8 <sup>th</sup>	PTC course
Saturday 9 <sup>th</sup> April	Visit to the casualty department, surgical wards and operating

theatres of Queen Elizabeth II hospital and return flight to The Netherlands

### ***Foundation Course Participants***

Nine senior doctors, three anaesthetic nurses, three paramedics and one general nurse attended the founding PTC course. Eight doctors attended the instructors' course with great enthusiasm. They had been selected by the local organizers. The names of the participants are listed in full below. The eight doctors who attended the instructors course elected a PTC founding committee amongst themselves at the end of the instructors' course. The members of the PTC committee are indicated with an asterisk

<b>Disease Control Unit</b>	Mrs. Khasiane, K.	Nurse
<b>QE II</b>	Dr. Mojela, A.M.* Dr. Oloruntoba, D.O.* Dr. Mohapi, T.* Dr. Adnan, S.M.* Dr. Kingu, H.J.* Dr. Wani, N.L. Mr. Mara	Orth. Surgeon Orth. Surgeon General Surgeon General Surgeon General Surgeon General Surgeon Anest. Nurse
<b>Mokhotlong Hospital</b>	Dr. Mayiza, M.R.	MD
<b>St. Joseph, Roma</b>	Dr. Samson-Akpan, U.* Dr. Mohapi, M.	Obstetrician Anest. Nurse
<b>Mohale Clinic</b>	Dr. Mabathoana, M.C.*	MD
<b>Scott Hospital, Morija</b>	Dr. Namane, L.	Anest. Nurse
<b>Makoanyane Hospital</b>	Mr. Ntoana Mr. Sehoho Mr. Bereng	Paramedic Paramedic Paramedic

### ***Course Instructors***

The visiting instructors were:

- Dr Paul Borgdorff, Consultant in Anaesthesia and Pain Management, Utrecht, Netherlands
- Dr Henk Haisma, Consultant in Anaesthesia and Intensive Care, Groningen, Netherlands

- Dr Kees Punt, Consultant in Anaesthesia and Intensive Care, Heerlen, Netherlands
- Dr Paul Breedveld, Consultant in Surgery and Intensive Care, Maastricht, Netherlands
- Mrs. Diane Wilkinson, Educator and educationalist, Oxford, UK

***Contents and venue of the Foundation Primary Trauma Care Course***

The course was opened by the Director General of Health Services, Dr. Moorosi. 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, flip-overs and group discussion.

The venue in Ba'mbata Tsita, a lecture hall in a large sports arena convention centre, was smaller than anticipated, with audiovisual aids like a digital projector and flip-over sheets. We could make use of several spaces on the same floor for scenarios and workshops. Most participants were accommodated in the same conference centre.

**PTC Course Maseru April 2005**

The final program was as follows:

***Monday 4<sup>th</sup> April (PTC founding course)***

0945-1000	Welcome address	Dr. Letsie
1000-1030	Introduction to PTC and MCQ	Paul Borgdorff
1030-1050	Local Trauma Perspective	Paul Breedveld
1050-1110	ABCDE of Trauma and Primary Survey	Paul Borgdorff
1110-1125	Tea Break	
1125-1145	Airway and Breathing	Kees Punt
1145-1200	Official opening	Dr. Moorosi, Director General of Health Services
1200-1245	Circulation and shock	Henk Haisma
1245-1330	Skill stations - Airway (basic and advanced) - Cervical spine and log roll - Chest drain insertion - Intravenous access	Kees Punt Henk Haisma Paul Borgdorff Paul Breedveld
1330-1415	Lunch	
1415-1500	Skill stations (continued)	all
1500-1530	Chest injuries	Kees Punt
1530-1545	Tea break	
1545-1615	Abdominal injuries	Paul Breedveld
1615-1715	Scenarios	All
1715-1730	Overview and Summary	Paul Borgdorff

***Tuesday 5<sup>th</sup> April***

0900-0910	Introduction to Day 2	Paul Borgdorff
0910-0940	Head and Spinal Injuries	Henk Haisma
0940-1000	Paediatrics and Obstetrics	Paul Breedveld
1000-1030	Burns and Limb Injuries	Kees Punt
1030-1045	Tea Break	

1045-1145	Secondary survey	Paul Borgdorff
1145-1130	Demonstration scenario	
1130-1300	Workshops:	
	- Analgesia	Paul Borgdorff
	- Transportation	Paul Breedveld
	- Neuro assessment	Henk Haisma
	- Paediatrics	Kees Punt
1300-1400	Lunch	
1400-1420	Disaster Management and triage	Henk Haisma
1420-1550	Scenarios	all
1550-1600	Tea break	
1600-1615	MCQ	
1615-1630	Feedback, certificates and close	Dr. Letsie and Paul Borgdorff

### *After the course*

The founding course was closed by Dr. Letsie, who thanked all the participants for their hard work and dedication. She thanked the faculty for their assistance in founding PTC in Lesotho. Following that the certificates were handed to the participants by her and Paul Borgdorff. During the evening of Wednesday 6<sup>th</sup> April the PTC team were given the opportunity to introduce the PTC concept to key health officials. Paul Borgdorff gave a presentation about the origins of PTC, its philosophy and content. During the dinner that followed the presentations, we received several very enthusiastic remarks, and the general feeling amongst the visitors was that PTC is a very good concept which deserves implementation throughout Lesotho.

### *Instructor course, Wednesday 6<sup>th</sup> April*

Following the 2 day PTC course 8 out of ten doctors in the founding course proceeded to take part in the PTC instructor course. On Tuesday Diane Wilkinson arrived at the Maseru Bridge Border Post, and she directed the instructors' course. This one-day course used the recently finalised 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 groups and did practical sessions on giving a lecture and leading a discussion group (DW and KP), teaching a skill and running a scenario (HH and PB). The day finished with a feedback session and then a discussion on the practicalities of running further courses, during which an executive committee among the Foundation Faculty was established.

### *Wednesday 6<sup>th</sup> April (Instructors course)*

0900-0905	Introduction	Paul Borgdorff
0905-0920	How adults learn	Diane Wilkinson
0920-0935	Asking questions	Paul Breedveld
0935-1000	Giving feedback	Diane Wilkinson
1000-1145	How to give presentations	
	- General introduction	Diane Wilkinson
	- Lecture	Kees Punt
1040-1055	Tea break	
	- Discussion group	Diane Wilkinson
	- Teaching a skill	Paul Borgdorff

1145-1445	- Scenario Workshops	Henk Haisma
	- Lecture	Kees Punt
	- Discussion group	Diane Wilkinson
1245-1345	Lunch	
	- Teaching a skill	Paul Borgdorff
	- Scenario	Henk Haisma
1445-1500	Tea break	
1500-1515	Language issues	Paul Breedveld
1515-1545	Instructor course evaluation	Paul Borgdorff
1545-1615	Where to go from here	Paul Borgdorff

***PTC course, Thursday 7<sup>th</sup> April***

On Thursday, the eight instructors, who were trained on Wednesday conducted a second PTC course for the participants mentioned below, directed by Dr. Oloruntoba and supervised by the overseas faculty. Again, doctors, nurses and paramedics were trained, 22 in total. The format of the course was the same as the PTC founding course. All the lectures were presented by the local instructors

<b>Road safety department</b>	Khoapha Makhele Kinini Mathews	
<b>QE II</b>	Ntoetse Theko Phano Masia	Nurse Anest. Nurse
<b>Berea Hospital</b>	Mamabea Ratsiu	Nurse
<b>St. Joseph, Roma</b>	Dr. Ekofo Lofembe Valentine Mantutle	M.D. Nurse
<b>Mohale's Hoek</b>	Dr. M.C. Makhube	Priv. practitioner
<b>Mafeteng Hospital</b>	Esther Mohlalisi Lisebo Tsenoli	Nurse Nurse
<b>Makoanyane Hospital</b>	Abi Kou Ntone Mahamo Mahlomola Kutoane	Paramedic Paramedic Paramedic
<b>Motebang Hospital</b>	Lineo Makhasane Monethi Mafeta	Anest. Nurse Anest. Nurse

<b>Ntseche Hospital</b>	Masenate Posholi	Nurse
	Mabahlakoana Molapo	Nurse
<b>US Peace Corps</b>	Palesa Ralatoone	
<b>Quthing Hospital</b>	Ntsabeng Ntsoako	Nurse
	Mamolibeli Fokotsane	Nurse
<b>Qoaling Filter Clinic</b>	Malisebo Phantsi	Nurse
	Maletsie Matsora	Nurse

**Thursday 7<sup>th</sup> April (PTC course)**

0900-0905	Opening	Paul Borgdorff
0905-0930	Introduction to PTC and MCQ	Dr. Oloruntoba
0930-0950	Local Trauma Perspective	Dr. Mohapi
0950-1020	ABCDE of Trauma and Primary Survey	Dr. Oloruntoba
1020-1050	Airway and Breathing	Dr. Mabathoane
1050-1115	Tea Break	
1115-1145	Circulation and shock	Dr. Mojale
1145-1300	Skill stations - Airway (basic and advanced) - Cervical spine and log roll - Chest drain insertion - Intravenous access	
1300-1400	Lunch	
1400-1430	Chest injuries	Dr. Mohapi
1430-1500	Abdominal injuries	Dr. Kingu
1500-1515	Tea break	
1515-1645	Scenarios	
1645-1700	Overview and Summary	Paul Borgdorff

**Friday 8<sup>th</sup> April**

0900-0910	Introduction to Day 2	Dr. Oloruntoba
0910-0940	Head and Spinal Injuries	Dr. Adnan
0940-1000	Paediatrics and Obstetrics	Dr. Samson-Akpan
1000-1030	Burns and Limb Injuries	Dr. Kingu
1030-1045	Tea Break	
1045-1145	Secondary survey	Dr. Oloruntoba
1145-1130	Demonstration scenario	
1130-1300	Workshops: - Analgesia	all

	- Transportation - Neuro assessment - Paediatrics	
1300-1400	Lunch	
1400-1420	Disaster Management and triage	
1420-1550	Scenarios	all
1550-1600	Tea break	
1600-1615	MCQ	
1615-1630	Feedback, certificates and close	Dr. Oloruntoba

### ***Notes on delivery of the Courses and lessons learnt***

- There was a good mix of lectures and skill stations. It is was felt as a great advantage that the whole PTC course was held in one location.
- The lecture hall was relatively small, except on the last day. However the participants coped very well.
- A more uniform composition of the participants would be beneficial.
- 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.
- The local butcher was not able to provide a sheep chest or trachea for the founding course. However a sheep chest was available for the second PTC course.

### ***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:

*Refreshing, focused, practical.*

*No need for fancy equipment, use of appropriate technology, this course will change practice, moral boost.*

*The instructors mentioned: professional teachers were created in the process of teaching, the importance of planning was stressed, standardization, general improvement of communication skills.*

*The course should be repeated and taken around the country. Instructors were competent and flexible; time-keeping was good (remarks on Friday).*

*Good food.*

Points which deserve improvement:

*In some cases there was a big gap between the knowledge of the instructors and the participants. Terminology should be simplified.*

*MCQ's should be marked individually.*

*Abbreviations should be avoided.*

*The course was too short.*

*The instructors mentioned: Could the instructors manual be made smaller, could there be more time for workshops.*

*The manual should be handed out well beforehand.*

Plans for the future:

- A PTC course within the next 3 months for doctors & nurses in the referral hospital.
- Identify at least 6 new instructors for an instructors course. (2 have been identified already)
- Depending on the outcome of the first course, plan for a 2<sup>nd</sup> one before the end of the year.

### ***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 scores at the beginning of the founding course was 11.6 correct answers out of 23 questions (53%). At the end this improved to 17.7 correct answers (78%).

In the PTC course (Thu and Fri) the average pretest score was 38.4% correct answers. Average posttest score was 68.7% correct answers.

The questions on CPR were excluded because this is not core course content

### ***Media coverage***

Dr. Letsie, Dr. Mojale and Dr. Borgdorff were interviewed by Lesotho Television and the interview was broadcasted during the evening news.

### ***Teaching materials provided***

Each member of the Foundation Course were presented with a copy of the PTC manual.

One set of the PTC OHP transparencies and a set of the Instructor slide transparencies were left with the PTC founding committee. The OHP's were used in teaching the course against a white background during a power failure and the instructors were encouraged to use OHP's as well, since the District hospitals will often not have facilities for PowerPoint. Nevertheless, also a full set of the PTC and Instructors' course PowerPoint slides were left with all committee members.

In addition PB took out around 180 trauma picture slides on CD (with thanks to James de Courcy) which were used as a resource for the course, and Diane Wilkinson's and JdeC's final draft Instructor slide set on Teaching the Teachers was used in the Instructor course. 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 together with the OHP acetates.

### ***Acknowledgements***

Most local arrangements were done by Dr. Letsie and Oloruntoba, who did an outstanding job making this course a success. We would like to thank them for their excellent arrangements, and their hospitality. We also extend our thanks to the Lesotho Medical Association and the Ministry of Health. I would like to thank Dr Oloruntoba for directing the second PTC course: well organized and excellent time-keeping! We wish to acknowledge Dr. Moorosi for the time he took to open the PTC course officially. The support of the Ministry of Health is invaluable for a successful PTC program in Lesotho. We wish to thank Dr. Mohapi for showing us several departments in QE II hospital. We wish to acknowledge the generous support by the Association of Anaesthetists of Great Britain and Ireland and the Dutch Society of Anaesthesiology. Their help is much appreciated.

Finally I would like to thank my fellow instructors Henk Haisma, Kees Punt, Paul Breedveld and especially Diane Wilkinson, for their assistance in making all the necessary arrangements and for

their invaluable input during the course. The course would not have been such a success if it were not for them.

*Dr Paul Borgdorff  
Consultant in Anaesthesia and Pain Management  
Utrecht, The Netherlands  
Course director*