REPORT ON THE
MANAGEMENT OF SURGICAL EMERGENCIES
COURSE
and preceding
TRAIN THE TRainers COURSE
hosted by
The Surgical Society of Zambia
20th to 25th October 2013
at
Lusaka University Teaching Hospital
In consensus with the WHO & the IFSC

Convener
RHS Lane MS FRCS Eng FRCS Ed (ad.hom) FACS FWACS (Hon) FCS (ECSA)
Project Director - DFID (UK) / THET LPIP Grant
Programme Director for International Development &
Past President Association of Surgeons of Great Britain & Ireland
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Introduction

The Association of Surgeons of Great Britain and Ireland (ASGBI) undertook a successful Pilot Course on the Management of Surgical Emergencies (MSE) in Lusaka in October 2011 (for report see www.internationalsurgery.org.uk) and as a result successfully applied, together with the College of Surgeons of East, Central and Southern Africa (COSECSA), to the Department for International Development (DFID) for a Large Paired Institutional Partnership Grant with the aim of improving emergency surgical care and capacity across the nine member countries of COSECSA by delivering appropriate multi-level accredited training courses at agreed sites across the Region over a period of two and a half years. The application was successful and it was therefore planned to hold three MSE courses in Lusaka for participants from countries in the southern half of the Region and three in Nairobi for countries in the northern half of the Region.

A one day Training the Trainers (TTT) Course was designed and scheduled to be held immediately prior to the five day MSE Course. All equipment to undertake the above was provided ahead of the first course held in Lusaka in February 2013 (for report see www.internationalsurgery.org.uk).

The outline of the Courses has not fundamentally changed since. Minor adjustments were made with regard to pre course information, the assessment process and time keeping. An official opening ceremony was organised to raise awareness amongst the University Teaching Hospital, the Medical School and the Ministry of Health.

Acknowledgements

I should like to thank the UK Department for International Development (DFID) and the Tropical Health and Education Trust (THET) for awarding the Surgical Foundation of the Association of Surgeons of Great Britain and Ireland and the College of Surgeons of East, Central and Southern Africa (COSECSA) a Large Paired Institutional Partnership Grant to undertake a total of 36 surgical training courses across East, Central and Southern Africa. These comprise 6 Management
of Surgical Emergencies Courses and 6 Basic Surgical Skills Courses preceded by 12 Train the Trainers Courses and in addition 12 Theatre Nurse Training Workshops.

I acknowledge the Veta Bailey Charitable Trust for assisting trainers and trainees from outside Zambia with their travel and accommodation expenses, Johnson & Johnson Professional Export for awarding an Educational Grant to provide sutures for all the above courses, Limbs & Things for contributing in a number of ways to the success of the project and to Tim Beacon and his team at Medical Aid Overseas Ltd for sourcing and shipping all the instruments and manikins to Lusaka.

A special thank you to Dr. Laston Chikoya, Chairman, Surgical Society of Zambia under whose auspices the Courses were run, Dr. James Munthali (Head of Department of Surgery) for allowing us to use the Department of Surgery as our main venue, Dr. Robert Zulu for his considerable efforts to ensure the success of the Course, to Ms Angela Garrity (Key Travel), Mrs Bhavnita Borkhatria Patel (Project Manager) and Mrs Jane Gilbert (Executive Assistant to RHSL) for their assistance, patience and support.

Finally, I owe immense gratitude to the visiting faculty who continue to work extremely hard in updating the Course and making it fit for purpose. Their undoubted commitment is a lesson to us all especially as the majority have to use up part of their valuable annual leave to support surgical training in Africa.

Robert Lane
Visiting UK Faculty

Convener
Robert Lane

Critical Care
Module Lead
Fanus Dreyer
Martin Clark
Alastair Brown

General Surgery
Module Lead
Paul Gartell
Russell Lock

Orthopaedics / Trauma
Module Lead
Yogesh Nathdwarawala

Urology
Module Lead
Shekhar Biyani

Obstetrics / Gynaecology
Module Lead
Malarselvi Mani
## Train the Trainers Course
### Sunday 20 October 2013

### 13 Trainers

<table>
<thead>
<tr>
<th>Name</th>
<th>Hospital</th>
<th>Specialty</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bruce BVULAMI</td>
<td>UTH Lusaka, Zambia</td>
<td>Paediatric Surgery</td>
<td>Consultant</td>
</tr>
<tr>
<td>Roy CHAVUMA</td>
<td>UTH Lusaka, Zambia</td>
<td>Gen. Surgery</td>
<td>Consultant</td>
</tr>
<tr>
<td>Alex MAKUPE</td>
<td>Ndola Centre Hospital, Zambia</td>
<td>Gen. Surgery</td>
<td>Consultant</td>
</tr>
<tr>
<td>Mabula MCHEMBE</td>
<td>Muhimbili University, Dar es Salaam, Tanzania</td>
<td>Gen. Surgery</td>
<td>Consultant</td>
</tr>
<tr>
<td>Maynard MARIKANO</td>
<td>Gweru, Zimbabwe</td>
<td>Gen. Surgery</td>
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<td>James MUNTHALI</td>
<td>UTH Lusaka, Zambia</td>
<td>Orthopaedic Surgery</td>
<td>Consultant</td>
</tr>
<tr>
<td>Andrew NDONGA</td>
<td>Mater Hospital and Jomo Kenyatta University, Kenya</td>
<td>Gen. Surgery</td>
<td>Consultant</td>
</tr>
<tr>
<td>Craig ORANMORE-BROWN</td>
<td>UTH Lusaka, Zambia</td>
<td>ICU</td>
<td>Consultant</td>
</tr>
<tr>
<td>Happiness RABIEL</td>
<td>Selian Lutheran Hosp, Arusha, Tanz.</td>
<td>Gen. Surgery</td>
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</tr>
<tr>
<td>Michael SILUMBE</td>
<td>UTH Lusaka, Zambia</td>
<td>Urology</td>
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</tr>
<tr>
<td>Carlos VARELA</td>
<td>Kamuzu Central Hosp, Lilongwe, Malawi</td>
<td>Gen. Surgery</td>
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</table>
The aim of this Train the Trainers (TTT) Course is to introduce the basic concepts of how to run a successful MSE Course. Our objective is to do this in a systematic way which is easy to understand and put into practice and will enable the participant to become a competent trainer.

The MSE Course has been designed to show one safe way of accomplishing procedures and trainers need to abide by this and not be overly critical of the content. The Module Leads have spent a lot of time in designing the MSE Course and distilling the important aspects that can be taught in the time available.

Thirteen trainers registered; 8 from Zambia, 2 from Tanzania and 1 each from Zimbabwe, Kenya and Malawi. All were pre-screened to assess motivation, previous training, experience, willingness to work as a team and long term commitment to future MSE Courses. Their position, specialty and place of work were recorded and this gave an indication as to their workload. For instance, a general surgeon in Lusaka University Teaching Hospital (LUTH) will only deal with general surgery whereas a general surgeon in Ndola or Livingstone may also have to manage fractures, obstetric and urological emergencies. The distinction has relevance with regard to which specialty module they wish to become competent in.

The background as to why such a TTT course was deemed necessary was discussed and furthermore that it is not intended to be an opportunity to update specialty knowledge but rather to specifically learn how to run a module within the Course. The trainers were given a USB stick which contained all the presentations in the TTT course.

It was emphasized that trainers must attend the whole of the TTT Course and their chosen module(s) in their entirety on each day. They will not be recommended for accreditation as an MSE trainer unless this is so. The trainers themselves will be assessed on general performance during the one day course (Sunday) and then by the module lead during their participation in their chosen module(s) and, if satisfactory, recommendation will be made to COSECSA for accreditation as a trainer for the MSE Course.
The first presentation was on the Art of Lecturing (Bob Lane) which covered a number of scenarios including large audience lecturing, presenting material on a training course and small group discussions. This was followed by a presentation on the Assessment Process, including feedback, monitoring and evaluation (Fanus Dreyer). These are very important aspects of the course especially for each individual trainee for without proper feedback and evaluation we shall never know whether the course is fit for purpose.

The coffee break was followed by a brief presentation by (Bob Lane) on the background, scope and structure of the MSE Course. The objective is to learn how to assess signs and symptoms of common surgical emergencies and initiate an immediate management plan based upon sound principles of clinical practice. The
maximum number of trainees is 18 and these are broken down into three groups of six each. Ideally, all should have attended a Basic Surgical Skills course (BSSC). The best time to attend the MSE course is during the first year of a postgraduate residency programme or during the first or second year of the MCS programme. The timetable allows for five days of activity; Monday and Tuesday are devoted to Critical Care and Wednesday, Thursday and Friday to the specialties of General Surgery, Orthopaedics and Trauma, Urology and Obs/Gynae. General Surgery and Orthopaedics are undertaken over a whole day whereas Urology and Obs/Gynae over half a day each. Thus three groups of six rotate through the specialties over the three days. The trainees undertake pre and post course MCQ’s and complete a module specific feedback form. At the end of the course on Friday afternoon they complete a whole course generic evaluation form.

Formative assessment is undertaken by the faculty concerned during each specialty module. This covers technical and non-technical aspects such as judgement and decision making, communication and teamwork. The need for small group assessment is essential to identify poorly performing trainees and to rectify problems at the time. The assessment results and any outliers are considered at the evening debriefing meeting.

Thereafter each module lead described their module in detail and this was a worthwhile exercise for at the end the Trainers knew exactly how the course would be conducted and their particular role within their chosen module.

The meeting then broke for lunch and thereafter the trainers undertook role playing and critiquing exercises.

These involved the following:

- How to make Origami boats and knot tying to demonstrate the difference in teaching a simple multistep task and more complex procedures.
- How to cope with a participant who is disruptive during a module.
- How to counsel a participant who has been told that he/she has failed the course and who is very reluctant to accept this.
Clinical scenarios involving teamwork, such as an individual suddenly collapsing on the floor and the trainer has to explain how he/she is going to cope with the situation.

These are some examples of role play during which the other participants critique performance. This activity is very important and brings out a lot of non-technical skills such as decision making, judgement, communication and team work.

After the tea break Fanus Dreyer gave a very informative lecture based on the WHO “Safe Surgery Saves Lives” guidelines but with many additional examples illustrating technical and non-technical skills or lack of them; some of which were truly frightening!

The Trainers then discussed which modules they would prefer to be involved in. 6 chose Critical Care, 4 General Surgery, 2 Orthopaedics/Trauma, 2 Urology and 2 Obstetrics/Gynaecology. In addition 4 of the Trainers who chose Critical Care also chose one of the following:- General Surgery, Orthopaedics/Trauma, Urology or Obstetrics/Gynaecology. This arrangement was possible because the Critical Care module does not clash in time with the specialty modules.

The Convener and Dr Robert Zulu discussing tactics
TTT Course Feedback – Sunday 20 October 2013

13 Trainers

The TTT Course was rated overall from 0 - 10 (0 = useless, 10= excellent) where the average score was 9 with a mode and median of 9.

<table>
<thead>
<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neutral</th>
<th>Satisfied</th>
<th>Very satisfied</th>
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<td>General Surgery Module</td>
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<td>Orthopaedics &amp; Trauma Module</td>
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<td>Role Play &amp; Critiquing</td>
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<td>Safe Surgery</td>
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<tr>
<td><strong>Average %</strong></td>
<td><strong>1.8%</strong></td>
<td><strong>46.3%</strong></td>
<td></td>
<td><strong>51.9%</strong></td>
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</table>

It was very gratifying that 98.2% of responses revealed that the trainers were either **satisfied** or **very satisfied** with the lectures and exercises. The authors of the module presentations which did not do quite so well will be asked to review the content for future courses.
What went well?

Safe surgery lecture (4)
Clear structured presentations (3)
Role play and critiquing (2)
Interaction between faculty and trainers (1)
Knowledgeable presenters (1)
Specialty presentations (1)

What could have been better?

Time keeping (2)
More time on skills teaching techniques (1)
One or two of the specialty lead presentations (1)
Cell phone silence (1)

Other comments

Course very useful
Enjoyed the training and happy to be part of the team.
Course evaluation by Faculty

What went well?

The concept of a Train the Trainers course for the MSE is now well established.

Re-arranging the timetable such that most of the presentations are before lunch meant that there was more time in the afternoon to undertake the Role Play and Critiquing exercises.

Having Paul Gartell present his module presentation first, which included much general information concerning the modules, prevented excessive duplication in the other module presentations. However, this did result in one or two module presentations being exceptionally short which was not appreciated quite as much by the trainers!

All trainers attended all module presentations and having a 20 minute breakout session thereafter allowed trainers an opportunity to discuss each module with the Lead for those they wished to pursue in addition, or not, to Critical Care.

The lecture on Safe Surgery, which includes personal observations by Fanus Dreyer will need to be replaced by the original WHO version for use by the local faculty after the third and final course.

The refreshments were again excellent and were on time.

The introduction of the feedback and evaluation forms as a means of assessing the course was successful.

What could have been better?

Pre course information was still a problem. The Trainers would have liked to have received the USB information before the Course started as opposed to on the morning of the course. There is some reluctance by module leads to disseminate information which is still in a state of evolution. I can understand this reluctance and
perhaps it would be best to wait until we have finished the MSE courses completely and written a definitive manual for both the Trainers and Trainees which will include Flow Charts etc.

**Recommendations for future courses**

Advertise widely and early at least three months prior to courses and this by means of posters and fliers.

Insist on punctuality and 100% attendance.

Provide trainers with relevant PowerPoint presentations for modules in which they are going to train at the end of the TTT day and this so that they can prepare presentations accordingly. This particularly for the Specialty Modules.

It has been suggested that there be a briefing at the *beginning* of each day so that the respective trainers know exactly what their role is to be during that day.

The introduction of a module debrief at the end of each day should continue.

Reinforce the fact that the trainers course is not for them to increase their knowledge but to learn how to train others.

The course shows **ONE** way of performing tasks / exercises; not necessarily the **ONLY** way. Trainers must be aware of this and not introduce other ways which could lead to confusion and be counterproductive.

The third and final MSE course will take place in March 2014. This will be run primarily by the local faculty with visiting faculty acting very much as mentors.
Management of Surgical Emergencies

Course

21\textsuperscript{st} to 25\textsuperscript{th} October 2013

at

Dept. of Surgery, UTH, Lusaka

Course objectives

To learn how to assess signs and symptoms of common surgical emergencies and how to initiate an immediate management plan based upon sound principles of clinical practice.

Course content

The course began promptly at 08:30 each morning.

\textbf{Monday and Tuesday} were devoted to the management of the critically ill surgical patient and involved lectures, demonstrations, DVD’s and practice of procedures, discussion of images and case studies, role play and, finally, critiquing each other’s performance.

15 trainees registered for the MSE Course and were together for these two days but were split into 3 groups for rotation through some teaching stations with each group being allocated a mentor for this part of the course.

\textbf{Wednesday, Thursday and Friday} were run in a different manner. The trainees were divided into three groups with as near equal numbers in each which allowed for more supervised tuition.

On \textbf{Wednesday}, one group spent all day devoted to general surgical emergencies whilst another spent all day devoted to orthopaedics and trauma. Finally the last group spent the morning devoted to urological emergencies and the afternoon to Obs/Gynaee emergencies.
The groups switched over on **Thursday and Friday** such that they rotated through all the specialties during the three days. Mini lectures, DVD’s, demonstrations, case scenarios and much “hands on” practical tuition were the essence of these Specialty modules.

### Trainees

<table>
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<tr>
<th>Name</th>
<th>Specialty</th>
<th>Hospital / Place of work</th>
<th>Grade + Year</th>
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<tr>
<td>Wone BANDA</td>
<td>Gen Surgery</td>
<td>QECH Blantyre, Malawi</td>
<td>Registrar</td>
</tr>
<tr>
<td></td>
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<td>MMed MCS</td>
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<td></td>
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<td>FCS MMed</td>
</tr>
<tr>
<td>Ernest CHIPASHA</td>
<td>Ortho/Trauma Surgery</td>
<td>UTH Lusaka, Zambia</td>
<td>Orth Reg</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Jane KABWE</td>
<td>Anaesthesiology</td>
<td>UTH Lusaka, Zambia</td>
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<tr>
<td>Nancy MALAMBO</td>
<td>ENT Surgery</td>
<td>UTH Lusaka, Zambia</td>
<td>Sen Res.</td>
</tr>
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<td></td>
<td></td>
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<tr>
<td>Stephen MHANGO</td>
<td>Gen Surgery</td>
<td>Nchanga South Hosp. Chingola Zambia</td>
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<tr>
<td>Takura MUKABETA</td>
<td>Ortho/Trauma Surgery</td>
<td>Harare Central Hosp. Zimbabwe</td>
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<tr>
<td></td>
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<tr>
<td>Josephine NAMUGENYI</td>
<td>Gen Surgery</td>
<td>Mulago Teaching Hosp. Kampala, Uganda</td>
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<td></td>
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<td>Mudanisa ZIWA</td>
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Enquiry into previous BSS Course attendance.

12 out of 15 Trainees had successfully completed a BSS course.

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<th>Position held at time</th>
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<th>How many days duration</th>
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<td>Charles MABEDI</td>
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<td>Takura MUKABETA</td>
<td>Yes ✓</td>
<td>SRMO</td>
<td>Parirenyatwa Hosp. Harare</td>
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<td>Patrick MUSONDA</td>
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<td>MO</td>
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<td>Michael PHIRI</td>
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<td>Resident PGY1</td>
<td>QECH Blantyre</td>
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<td>SHO</td>
<td>UTH Lusaka</td>
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The average rating (from 1-5) for the courses that were undertaken was 4.4 with a Mode of 5 and a Median of 4.5.
**Management of Surgical Emergencies Experience Form**

Each trainee is asked to complete a form which outlines the subjects to be discussed in the four specialty modules. The aim of this is to give the Module Lead information as to how much experience each trainee has *before* attending the course and this so that relevant tuition can be provided. This was of particular relevance to the Orthopaedic Module where those orthopaedic trainees who were already experienced in simple fracture management were tutored in more advanced aspects such as external fixation.

**Pre-Course Experience Form (Example)**

**NAME-**

We aim to provide maximum benefit with this course for you and should be grateful if you could provide information about how many of these procedures you have performed yourself (with or without senior help) in the last two years.

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<tr>
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<td>Circumcision</td>
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</table>
Critical Care Module Report

Visiting Faculty

Lead Fanus Dreyer

Martin Clark
Alastair Brown

Local Faculty

Craig Oranmore-Brown
Matthew Wazara
Joseph Musowoya

TTT Trainers

Alex Makupe
Carlos Valera
Mabula Mchembe
Happiness Rabiel
Martha Lungu
Maynard Marikano

21\textsuperscript{st} – 22nd October 2013

Venue: Tissue Lab & adjacent breakout rooms, Dept. of Surgery, UTH.
**PRE-COURSE DAY (Sunday 20 October):**
Registration for MSE and pre-course MCQ’s were undertaken in the afternoon.

**Programme**

**DAY 1 (Monday 21 October):**
Registration for the day 08.10 - 08.40
1.1 Welcome & Introduction 08.40
1.2 Introduction to Critical Care: 09.10
1.3 **ASSESSMENT OF CRITICALLY ILL SURGICAL PATIENT** 09.30
   ➢ A. Practical demonstrations by faculty (20 min)
   ➢ B. Lecture (20 min)
1.4 **CPR** (A) BLS/ALS tutorial and 10.10 - 10.45
   (B) BLS demonstration

**Refreshments** 10.45 - 11.05

1.5 **ALS** Practical (Practice CPR in groups of 3 under guidance) 11.05 - 11.50
1.6 **ALS** in Children (tutorial) 11.50 - 12.15

**Lunch** 12.15 - 13.00

Meet with Mentors 13.00 - 13.15

**AIRWAY, BREATHING:** Rotate through 3 tutorials (30 min each) 13.15 - 14.45
   ➢ 1.7 Advanced Airway management
   ➢ 1.8 Trauma causes of breathlessness:
     o life threatening respiratory injuries
   ➢ 1.9 Post-operative hypoxia in surgical patients

**Refreshments** 14.40 - 15.05

**CIRCULATION:** Rotate through 3 tutorials 15.05 - 17.00
   (35 min each with 5 minute break between each rotation)
   ➢ 1.10 Shock and Haemorrhage
   ➢ 1.11 New approaches to fluid therapy and Oliguria
   ➢ 1.12 Cardiac complications in surgical patients

**Feedback with Mentors** 17.00 - 17.20
DAY 2 (Tuesday 22 October):

2.1 Introduction 08.00

DISABILITY: Rotate through 3 tutorials (30 min each) 08.10 - 09.40
  ➢ 2.2 Confusion in surgical patients
  ➢ 2.3 Head injuries
  ➢ 2.4 Spinal injuries and patient transfer

2.5 Practical: Log roll, transfer etc 09.40 - 10.10

Refreshments 10.10 - 10.30

Rotate through 3 tutorials (35 min each) 10.30 - 12.15
  ➢ 2.6 Surgical Sepsis
  ➢ 2.7 Obstetric critical care for surgeons
  ➢ 2.8 Emergency care of Burns

Lunch 12.15 - 13.00

Rotate through 3 tutorials (30 min each): 13.00 - 14.30
  ➢ 2.9 Anaesthesia for surgeons: Ketamine; Local and
    o Regional anaesthesia
  ➢ 2.10 Pain management
  ➢ 2.11 Monitoring in critical care

Refreshments 14.30 - 14.50

EXTRAS: Rotate through 3 stations (30 min each): 14.50 - 16.20
  ➢ 2.14 SBAR Communication intro + scenarios (2 tutors): PRACTICAL
  ➢ 2.15 Quality control in critical care (tutorial)
  ➢ 2.16 End-of-life care in critical illness (tutorial)

10 minute break

TEST: MCQs and EMQs 16.30 - 17.00

2.18 Course Summary and Feedback 17.00 - 17.20

END OF CC COURSE
Course Delivery

Three travelling faculty members for the critical care module met up in Glasgow on Friday 18 October 2013 to travel to Heathrow to meet up with the rest of MSE travelling faculty and then on to Lusaka. These were Fanus Dreyer, Alistair Brown and Martin Clark

At the Training the Trainers course on Sunday 20 October six new local trainers signed up as observing faculty in critical care for Monday and Tuesday. These were Alex Makupe, Carlos Valera, Mabula Mchembe, Happiness Rabiela, Martha Lungu and Maynard Marikano. Craig Oranmore-Brown also signed up as an observer but because we had utilised him as faculty in 2011 and because we were short on teaching local faculty we decided to use him as teaching faculty. He was joined by Matthew Wazara and Joseph Musowoya.

On Monday and Tuesday (21-22/10/2013) the CC module was delivered without any difficulty. There were 15 course participants. The local teaching faculty were paired with the travelling faculty as participants rotated in 3 groups of 5 through each tutorial. This allowed local tutors to take control of teaching very quickly. The course material had by now become well established; this being the 5th CC course since December 2012 (3rd MSE CC module in 2013). A faculty handbook for CC had been published before travelling by Alba CCCD (ISBN 978-0-9927099-0-7) which standardised presentations and content. Handbooks were made available free of charge to all teaching faculty.

Assessment of participants depended largely on continuous assessment, with satisfactory scores in CPR proficiency an absolute requirement. At the end of the two days a 30-minute "best answers" written test on complex clinical scenarios was conducted with participants allowed to discuss scenarios in their groups before answering individually. This was a difficult test and scores of 21-32/40 were obtained. All participants achieved continuous scores of 6-9/10 for continuous assessment, except for one participant who was rated at 4/10. This was flagged up to other module leads on the Tuesday night debriefing so that special attention could be given to this participant during training in the surgical specialties'. In summary all participants passed the critical care module.
Strong and weak points of participants were discussed with specialty module leads and observing faculty were also discussed with strong recommendations to use four in critical care teaching in future. Mr Joseph Musowoya was also recommended as future module convenor for critical care for the MSE course in Lusaka, with Dr Craig Oranmore-Brown in support.

On Wednesday 23 October the three travelling faculty members for CC conducted critical care nurses' teaching at the UTH School of Nursing from 09h30-15h30. Informal feedback was again very positive.

**Positive new developments**

1. The critical care module contents and presentation methods are now well established through repeated feedback from participants and local faculty. Travelling faculty have now all taught the same material on a minimum of four CC courses, although not all in MSE.

2. The finalisation of a CC faculty handbook, published with ISBN, and copyright held through Alba Critical Care Course Design SCIO.

3. A large bank of local faculty keen to teach on the CC module in future, with two very competent people to lead the module in Joseph and Craig. The module can be run exclusively by local faculty at the next course in March 2014 with a travelling faculty member acting as moderator and adviser only.

**Essential points for future courses**

1. The more difficult topics to teach such as SBAR Communication, Audit/Clinical Governance and End-of-Life Care need some refinement in the presentations. This is being done by the UK faculty pool.

2. To make the participants CC manual available as soon as possible, based on the CC review articles published online at [www.ptolemy.ca](http://www.ptolemy.ca).

3. To simplify the assessment system further and have a local enthusiast to oversee the assessment process for all modules.
4. To keep some academic input from the original course developers into course contents, written material, course delivery, assessment and course evaluation processes but in a way that is acceptable to local faculty and COSECSA.

5. Travelling faculty to continue to teach critical care and theatre nurses at the UTH School of Nursing on 1-2 days after the CC module, as arranged locally.

6. To develop an ongoing programme of critical care teaching for all health care providers in surgery for the future in liaison with local anaesthetic and surgical leadership.

Lastly, I wish to again thank Mr Bob Lane for his trust and support, travelling and local critical care faculty for their valuable input and enthusiasm, the head of department and other faculty members from the UTH Dept of Surgery for accommodating us and their excellent support and especially the participants for making this teaching such a pleasure.

Fanus Dreyer
**Critical Care Module collated feedback scores**

All scores have a maximum of **5 points** and are in reply to the question

“How satisfied are you with what you learned on…?”

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Trainee comments

What went well?

“Attitude/participation of faculty.” (x7)

“Introductions to make everyone comfortable.”

“Tutorials/Small group teaching. (x6)”

“Organisation.”

“Group interactions.”

“Practical sessions/demonstrations.” (x5)

“Concepts simplified.” (x2)

“Time keeping.” (x3)

“SBAR.”

“Quality control/patient safety.”

What could have been better?

“Proper handbook/More notes/make ptolemy articles more accessible/ available earlier. (x6)”

“More practical demonstrations.”

“Use videos/diagrams more.” (x2)
“Stronger/safer chairs.” (x2)

“Time allocation for written test too short/give test on paper.” (x2)

“In monitoring, discuss invasive methods as well.”

“More time.”

“Include ENT.”

Other comments?

“Time allocation for sessions too short.”

“Very relevant material.” (x2)

“Increase the length of the course.”

“Too much attention on assessment impairs learning opportunities.”
Requirements per Course

Equipment: Basic life support, CPR
2 x Resus Annie Torso Basic with soft pack. Laerdal (31000640)
1 x Ambu Spur II adult breathing system. Ambu

Equipment: airway management
1 x intubating manikin, adult. Deluxe Difficult Airway Trainer*. Laerdal
1 x Ambu Spur II adult breathing system. Ambu

Air Easy™ Guedel airways. color-coded. Smiths Medical
(Green 80 mm 2018) and (Yellow 90mm 2019) and (Red 20mm 2020)
Each in box of 10.

Nasopharyngeal airways. Smiths Medical
(6.0mm 100/210/060) and (7.0mm) (100/210/070) Each in box of 10.

Classic Laryngeal Mask Airways, cLMA Basic™. Intavent Direct
1 x (Size3 1113090) and 1x (Size4 1114100) and 1 x (Size 5 1115120)

Laryngoscope, MAC 4 and 5 (curved blade) with batteries(2C type). Proact Medical
1 x Proact Mac 4 Metal Max 90 laryngoscope blade and handle set. (HMM 90MAC4)
1 x Proact Mac 5 Metal Max 90 laryngoscope blade and handle set. (HMM 90MAC5)

Tracheal tubes, standard cuffed, sizes 6.0, 7.0, 8.0mm Smiths Medical
Endotracheal tubes, clear PVC/oral/nasal, soft seal, cuffed.
2 x 6.0mm (100/199/060) NB can be used for cricothyroidotomy training Box of 10
2 x 7.0mm (100/199/070) Box of 10
2 x 8.0mm (100/199/080) Box of 10

Tracheal introducer, (“bougie”) Cook Medical Box of 10
Frova Intubating Introducer, without stiffener, without rapi-fit adapter. (C-CAE-14.0-65-FIC)

Syringe 10 x 10cc., sourced easily
Lubricant Laerdal (250-21050)

The sizes of some of the airway tubes listed are chosen to fit the dimensions of the manikins. (bigger sizes jam)

Scalpel Handles (small) 1 x No 3

Size 11 Blades x 3

Tracheal Retractors (Large curved blunt) x 2.
General Surgery Module Report

Visiting Faculty

Lead Paul Gartell
Russell Lock

Local Faculty

Matthew Wazara
Chadwick Ngwisha
Robert Zulu

TTT Trainers

Andrew Ndonga
Roy Chavuma
Chris Mwikisa
Martha Mwewa

Wednesday 23rd – Friday 25th October 2013

Venue: Tissue laboratory and hot room, Dept of Surgery, UTH
Programme

0800 – 0830  Registration
0830 – 0845  Welcome and introduction to the day
0845 – 0930  Blast injury a mixture of blunt and penetrating trauma
  ABC
  Triage
  Tension pneumothorax
0930 – 1000  Chest trauma blunt and sharp
1000 – 1030  Burr hole surgery
1030 – 1100  Refreshments
1100 – 1300  Indications for laparotomy
  “The 45 minute Laparotomy”
  Liver packing and suturing
  Splenectomy
  Diaphragmatic hernia
  Bowel injury management
  Management of the grossly contaminated abdomen
1300 – 1345  Lunch
1345 – 1445  GI haemorrhage
DU & Varices
Underrunning of bleeding vessel
Pyloroplasty
Sengstaken tube

1445 – 1545  Bowel obstruction
Adhesions
Deflation of Sigmoid Volvulus
Colostomy
Ileostomy

1545 – 1600  Refreshments

1600 – 1700  Vascular injury

1700 – 1715  Management of post op complications

1715 – 1730  Summary & MCQ
What went well?

- The Course was delivered as planned and on time.

- The trainees arrived on time apart from the first day.

- The Faculty worked well together providing an interactive and informal atmosphere which was much appreciated by the trainees.

- The refurbishment of the second room leading off from the Tissue Lab was a great success and meant that General Surgery could have one of the rooms and the other was occupied by Urology in the morning and O&G in the afternoon. This meant that we did not have to use the Apex Medical School Anatomy department which was a long way from the department of surgery and not ideally suited to our purposes. The facilities were much improved on the previous courses with plenty of space, air conditioning, an overhead theatre light and facilities to wash hands and clean instruments. Having access to 2 rooms was essential to allow preparation of the pig, cleaning up after practical procedures and to allow trainees to sit in an aroma free area during presentations. Flies were not a problem.

- The computers and projector worked well apart from 1 short power cut.

- We had all the necessary instruments and sutures to run the course.

- The course content was well received and had very good feedback.

- The pigs arrived by 0800hrs each day and had been well prepared having been cleaned and de-haired. They were the appropriate sex and size (approx. 50kg males). The urology team were able to remove the urinary tract without disturbing our dissections and the orthopaedic team removed the trotters during the blast Injury presentation.
Removing the colon before the practical sessions considerably reduced malodour.

Having all 3 modules working in close proximity and close to the refreshment area minimised the time wastage during the breaks. The morning and afternoon refreshments worked well with hot and cold drinks and biscuits / snacks and the lunches were of good quality and well received.

The feedback from the trainees was extremely positive and complimentary.

The pre-course MCQs showed considerable variation in knowledge which had largely disappeared from the post-course MCQs.

Faculty debrief at the end of the day worked well with no disagreement. Debrief was expeditiously performed by identifying the outliers first. The assessment correlated well with the MCQ scores.

2 excellent Local Faculty and 1 very good TTT trainer enhanced sustainability of the course. 2 further TTT trainers are still keen but want more exposure before committing. All faculty were involved in delivering the course from Day 2.

What could have been better?

Less time on presentations and more time for practical work.

Give the TTT trainers the presentations on Sunday so they can look at the module.

Create a flow chart of tasks to help Faculty plan the day.

Write more notes in the PowerPoint slides to aid the presenters.
➢ Keep a log of which member of Faculty is leading the presentation or practical so we can match it with the feedback comments. It was noted that the feedback on many topics changed from day to day with different presenters.

➢ The Tissue Laboratory was extremely hot on Day 1

➢ The pre-course inventory revealed no Kelly retractors and 6 toothed forceps rather than 3 toothed and 3 DeBakey forceps as requested.

➢ The pre-course experience sheets need the addition of split skin graft.

➢ Really need better plastic aprons – sturdy green.

➢ Pig head not ideal for burr hole part of the module. A human cadaveric skull would be better.

➢ The trainees on the first day were late and less responsive - possibly to do with issues arising from their accommodation and the heat in the Tissue Laboratory on Day 1.

➢ The Welcome Ceremony on Wednesday disrupted the afternoon causing us to run late on that day.

➢ The chairs in the Tissue Laboratory were dangerous – several broke.
Burr hole underway

Laparotomy in process
Pre & Post Course MCQs (%)

Trainees

Trainee Feedback

Blast injury

Very dissatisfied  Dissatisfied  Neutral  Satisfied  Very satisfied

1  5  9
Abdominal trauma

Intestinal obstruction

Liver suturing
Comments by trainees

What went well?

“Simple, practical and interactive.”

“Practical sessions.”

“Clear presentations.”

“Burr hole.”

“Everything.”

“The interactive way of teaching was excellent.”

“New techniques learnt.”

“Good demonstrations by faculty.”
“All practical demonstrations.”

“I enjoyed pretty well all the sessions. My best being liver packing and suture and splenectomy.”

“Group interaction and sharing of practical experience.”

What could have been better?

“All participants to be given a chance to do stomas.”

“More time and including other specialties.”

“More time allocated for practicals followed by further discussion.”

“May be videos for surgical procedures.”

“Strong chairs to avoid falling.”

Other comments

“I have enough courage to manage surgical emergencies now.”

“The course is just too good and important and more practical hence easy to learn and follow what is going on.”

“Well organised course.”

“The teaching was very helpful.”

“Thank you so much.”

“Good course. Keep it up.”
## Requirements per Course

<table>
<thead>
<tr>
<th>Instruments for General Surgery</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEEDLE HOLDERS</strong></td>
<td></td>
</tr>
<tr>
<td>Mayo Hegar</td>
<td>2</td>
</tr>
<tr>
<td>Crile Wood</td>
<td>4</td>
</tr>
<tr>
<td><strong>FORCEPS</strong></td>
<td></td>
</tr>
<tr>
<td>Waugh's Fine Toothed</td>
<td>6</td>
</tr>
<tr>
<td>Adson Fine Non-Toothed</td>
<td>5</td>
</tr>
<tr>
<td>Lane Dissecting</td>
<td>1</td>
</tr>
<tr>
<td>Spencer Wells Curved Normal</td>
<td>6</td>
</tr>
<tr>
<td>Mosquito (Halstead)</td>
<td>26</td>
</tr>
<tr>
<td>Lahey (Sweet)</td>
<td>2</td>
</tr>
<tr>
<td>Roberts (Artery Curves)</td>
<td>2</td>
</tr>
<tr>
<td>Babcocks</td>
<td>2</td>
</tr>
<tr>
<td><strong>SCALPEL HANDLES</strong></td>
<td></td>
</tr>
<tr>
<td>No 3 (Small)</td>
<td>1</td>
</tr>
<tr>
<td>No 4 (Large)</td>
<td>2</td>
</tr>
<tr>
<td><strong>SCISSORS</strong></td>
<td></td>
</tr>
<tr>
<td>Mayo</td>
<td>8</td>
</tr>
<tr>
<td>Angled Flat Dural (Scheiden Taylor)</td>
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</tr>
<tr>
<td>Potts De Martell</td>
<td>4</td>
</tr>
<tr>
<td>Metzenbaum</td>
<td>6</td>
</tr>
<tr>
<td><strong>KNIVES</strong></td>
<td></td>
</tr>
<tr>
<td>Humby Knife</td>
<td>1</td>
</tr>
<tr>
<td>Blades (10)</td>
<td>1</td>
</tr>
<tr>
<td><strong>NEUROSURGICAL INSTRUMENTS</strong></td>
<td></td>
</tr>
<tr>
<td>Hudson Drill Brace (+2 Bits)</td>
<td>1</td>
</tr>
<tr>
<td>Hudson Spherical burr</td>
<td>1</td>
</tr>
<tr>
<td>Cushing Flat drill</td>
<td>1</td>
</tr>
<tr>
<td>Nibbler - Northfield</td>
<td>1</td>
</tr>
<tr>
<td>Sewall Elevator</td>
<td>1</td>
</tr>
<tr>
<td>Adson - Baby self retaining clamp</td>
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</tr>
<tr>
<td><strong>SMALL BOWEL CLAMPS</strong></td>
<td></td>
</tr>
<tr>
<td>Kocher Straight</td>
<td>2</td>
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<tr>
<td>Kocher Curved</td>
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</table>
## Sutures for General Surgery

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Code</th>
<th>Quantity</th>
<th>Box Details</th>
</tr>
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<tbody>
<tr>
<td><strong>CHEST DRAIN</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>W6327</td>
<td>1 BOX</td>
<td>12 Sutures</td>
<td>2/0 Mersilk, reverse cutting, taper (CS-245)</td>
</tr>
<tr>
<td><strong>LIVER INJURY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W3709</td>
<td>2 BOXES</td>
<td>24 Sutures</td>
<td>1 Ethiguard blunt point Monocryl Suture</td>
</tr>
<tr>
<td><strong>SPLENECTOMY</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>W9026</td>
<td>1 BOX</td>
<td>12 Sutures</td>
<td>0 Vicryl (150cm) Ligs</td>
</tr>
<tr>
<td>W9025</td>
<td>1 BOX</td>
<td>12 Sutures</td>
<td>2/0 Vicryl (150cm) Ligs</td>
</tr>
<tr>
<td>W9136</td>
<td>1 BOX</td>
<td>12 Sutures</td>
<td>2/0 Vicryl – (½ c) R.B.</td>
</tr>
<tr>
<td><strong>COLOSTOMY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W328H</td>
<td>2 BOXES</td>
<td>72 Sutures</td>
<td>3/0 Mersilk reverse cutting</td>
</tr>
<tr>
<td><strong>VASCULAR REPAIR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W8845</td>
<td>2 BOXES</td>
<td>24 Sutures</td>
<td>4/0 Prolene</td>
</tr>
<tr>
<td>W8830</td>
<td>2 BOXES</td>
<td>24 Sutures</td>
<td>5/0 Prolene</td>
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<td><strong>GI HAEMORRHAGE</strong></td>
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<tr>
<td>W9136</td>
<td>2 BOXES</td>
<td>24 Sutures</td>
<td>2/0 Vicryl (½ c)</td>
</tr>
<tr>
<td>W9130</td>
<td>2 BOXES</td>
<td>24 Sutures</td>
<td>3/0 Vicryl (½ c)</td>
</tr>
<tr>
<td>W9025</td>
<td>1 BOX</td>
<td>2/0 Vicryl Ties</td>
<td></td>
</tr>
<tr>
<td><strong>PYLOROPLASTY</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>W9130</td>
<td>2 BOXES</td>
<td>24 Sutures</td>
<td>3/0 Vicryl (½ c)</td>
</tr>
</tbody>
</table>
### Re-usable items for General Surgery

<table>
<thead>
<tr>
<th>Item</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cork Tiles, size 300mm x 300mm x 4mm thick</td>
<td>3</td>
</tr>
<tr>
<td>Push Pins IV stationary <a href="mailto:ltd.sales@ivstationary.com">ltd.sales@ivstationary.com</a></td>
<td>24</td>
</tr>
<tr>
<td>2.5 litre Plastic Paint Kettle</td>
<td>3</td>
</tr>
<tr>
<td>0.5 litre approx adjustable nozzle, trigger flower spray</td>
<td>1</td>
</tr>
<tr>
<td>Oxygen Tubing 2 metres</td>
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</tr>
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</table>

### Disposable items for General Surgery

<table>
<thead>
<tr>
<th>Item</th>
<th>No. (per course)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SURGICAL BLADES</strong></td>
<td></td>
</tr>
<tr>
<td>No 10</td>
<td>48</td>
</tr>
<tr>
<td>No 22</td>
<td>15</td>
</tr>
<tr>
<td>No 11</td>
<td>9</td>
</tr>
<tr>
<td><strong>GENERAL</strong></td>
<td></td>
</tr>
<tr>
<td>Pauls tubing 12cm</td>
<td>10</td>
</tr>
<tr>
<td>Sleek</td>
<td>1 Roll</td>
</tr>
<tr>
<td>Sharp's Bins 1/2 litre</td>
<td>3</td>
</tr>
<tr>
<td>Gloves - latex free, Small, Medium &amp; Large</td>
<td>1 Box of each</td>
</tr>
<tr>
<td>Aprons - white roll of 200 per roll</td>
<td>30</td>
</tr>
<tr>
<td>Black disposable bags</td>
<td>3</td>
</tr>
<tr>
<td>Milton Tabs query quantity, need about 60</td>
<td>6</td>
</tr>
<tr>
<td>Marker Pen - (Burr Hole + Escharotomy)</td>
<td>1</td>
</tr>
</tbody>
</table>
Orthopaedics & Trauma Module

Report

Visiting Faculty

Lead - Yogesh Nathdwarawala

Local Faculty

Dr Michael Mbelenga
Dr Joseph Musowoyo

TTT Trainers

Dr James Munthali
Dr Maynard Marikano

23rd – 25th October 2013

Venue: Conference Room, Dept of Surgery, UTH
Programme

8.00  Introduction
8.05  Compartment syndrome work shop
8.40  Septic arthritis Osteomyelitis
9.00  Tendon repair & practical
9.30  Fracture reduction & plaster talk
9.40  Closed reduction work shop
         Distal radius
         Ankle
         Supracondylar
         Tibial
         Shoulder, elbow, hip reductions
10.10  Refreshments
10.25  Plastering exercise
         B/E back slab
         B/E POP cast
         Demo B/K POP, A/K POP and wedging
11.20  Traction talk
11.30  Skin traction Thomas splint work shop
12.00-12.30  Skeletal traction exercise
                  (Tibial, calcaneal, femoral pin)
12.30  Lunch
13.15  Pelvic fracture and binder
13.35  External fixation talk (including open fracture)
13.45  External fixation exercise
14.55-15.10  Refreshments
15.10-15.20  Internal fixation talk
15.20  Internal fixation exercise
           Lag screw
           DCP
           Ankle
16.30-17.00  MCQ

**Preparation and Delivery**

There has been continuous improvement in the Course and a number of suggestions from the previous courses have been incorporated.

On **Saturday 19th October 2013** the first meeting took place. A number of important points were discussed. The concept of the pre-course experience form has been taken on board by all. Mr Lane, in his unique style, kindly printed the pre-experience form using various colours to make them easier and more practical to use. He went through the equipment list and provided the sutures. The concept of preparing a flow chart for the module was introduced. This would be a practical step by step chart that would help the trainers deliver the course in a systematic and consistent way. Obviously the flow chart can be modified as we go along. Discussion about the Modules and sustainability took place. Mr Dreyer informed the group that manuals can be registered for ISBN numbers that would classify them as a book.

The **Training the Trainer Course** on **Sunday 20th October** went well. There was an initial delay waiting for projector. However, the attendance was good. In
Orthopaedics Dr Munthali and Dr Maynard joined as Orthopaedic trainers.

On **Monday 21st October** we visited the hospital to check the equipment and facilities. All the equipment left at the time of the last course was in a satisfactory condition. Disposables such as bandages and plaster of Paris were ordered from the local supplier. Dr Michael Mbelenga and Dr Joseph Musowoyo joined me as the co-trainers for the course. The Conference Room which was used previously was again allocated to the orthopaedic module.

**Tuesday 22nd October** Dr Mbelenga and I taught the theatre nurses. The topics covered were internal fixation, traction, skeletal traction and external fixation. The teaching was practical and gave opportunity for nurses to have hands on experience. Overall it was a very interactive, enjoyable and educational time. Thank you Judy and Kay for organising the session.

On the same evening there was a debriefing with the critical care team. The information about the trainees and facilities were discussed. This was the first such debriefing session and appeared to be a good platform for other module trainers to gain information about the trainees from the critical care team who had the first exposure of the group.

I discussed the various presentations among the orthopaedic trainers. Michael and Joseph decided which talks they would like to deliver.

For a variety of reasons all the 18 places for the trainees were not filled and we only had 15 trainees.

The Course was delivered as planned over three days, *(23rd, 24th and 25th of October).*

This year we were fortunate to have a compartment syndrome model for the first time. The model was kindly given by Professor Ian Pallister, an eminent trauma surgeon from Swansea. The model gave an excellent opportunity for trainees to practice the compartment release in the leg. The specific evaluation survey for the model was also collected by the request of Mr Pallister.
The first day finished early as the group was very small. In the debriefing meeting it was highlighted that facilities to wash hands in the room would be highly desirable. Dr Zulu kindly bought a plastic barrel with a tap to enable hand washing for the subsequent two days. On Thursday and Friday the groups came slightly late. However, due to the small size of the groups the course was adequately covered.

What went well?

- We had two enthusiastic and knowledgeable trainers, Dr James Munthali and Dr Maynard. They took larger and larger roles as the course progressed. The co-trainers, Dr Mbelenga and Dr Musowoyo, contributed tremendously in the delivery of the course.

- The compartment syndrome release model was satisfactory and was extremely well received.

- The flow chart helped in anticipating the next task on the Course and helped in preparation. All the Trainers utilised the flow chart as they felt appropriate.

- The pre-course experience forms were very useful and enabled us to give the best possible training to individual trainees.

- The registration process was handled superbly by Mr Bob Lane.

- The debriefing meetings towards the end of critical care course as well as on everyday were very constructive and a number of valid points were exchanged.

- The equipment for the course was satisfactory and so was the material obtained locally.

- Towards the end of each day we managed to discuss the answers of the MCQs that was specifically requested by the candidates.

- At the end of each day, assessment was jointly carried out by all the five Trainers.

- Accommodation, transport, food and drinks were satisfactory.
Overall the course was very well received and this is reflected in the feedback by the trainees. The feedback given by the Trainers was also very valuable and positive.

**What could have been better?**

- For a variety of reasons 3 out of 18 trainee places were not filled. We should ensure that all the places are filled for future courses.

- The Course needs to start on time to enable us to cover all the topics satisfactorily.

- At the end of the Course on Friday evening the situation became somewhat rushed. There are additional tasks at the conclusion of the course with distribution of certificates, packing and labelling the equipment etc. There is no additional time allocated for these tasks and solution needs to be found for this. The next course in Lusaka will be the last one and needs to have adequate time and opportunity for a proper handover to the local Trainers.

**Sustainability**

The points noted in the report for the May 2013 Nairobi course are applicable in Lusaka as well. We are making good headway in training the Trainers. The financial module for each course needs to be drawn up to allow local Trainers to estimate the cost of the disposables and other expenses for each course. The financial module would not only help the course in the long run but can also help at this stage to make provisional financial planning for courses after the project is finished. In addition to the finances, information about the source of the disposables should be identified for future courses. The mechanism should also be in place to repair/replace/maintain any training material that would be left at the end of our project.
Overall, the course appears to be getting refined and well-structured adding value to its sustainability and consistent delivery in future.

*Explaining how to employ a Thomas's Splint*
Flow Chart for the Orthopaedic module.

On the previous day

- Charge power drills.
- Projector and seating area.
- Analyse pre course experience forms.
- Analyse pre course MCQ results.
- Check list of instruments and disposables.
- Request animal material.
- Apply bubble wrap and brown tape to the plastic bones.

On the day of the course

- Welcome.
- Explain the programme.
- Give feedback and attendance forms.
- Request to switch mobiles to silent mode.
- MCQ structure and tips.

- **During the compartment syndrome talk** distribute marking pens, scalpel handles without the blades, scissors. Show pain on passive stretching.

- **During septic arthritis / osteomyelitis talk** set up for the tendon repair, give out corkboards, needles, pig’s trotters, scalpel blades, scissors, sutures, gloves, apron, sharp boxes etc.

- **During the fracture reduction and plaster talk**, clear the tables from the previous practical (sharps, clear waste and clean instruments) and prepare for the plastering if time permits.

- Closed reduction workshop would include reduction of Colles’ fracture, forearm fractures, elbow dislocation, ankle fractures and tibial fractures in individual groups.
• Reduction of the shoulder and hip needs to be demonstrated to the whole group. Traction and counter traction method along with the Kochars and Hippocrates methods. Mention iv canula for dislocation reduction.

• **During the coffee break** put the plasters, wool, bandages, water buckets on the table.

• Put nine 4 inch plaster bandages on each table. Keep three 4 inch plaster bandages and three 6 inch plaster bandages for demonstration.

• Put nine 4 inch wool rolls on each table. Keep seven 4 inch wool and two 6 inch wool for demonstration.

• Put seven 4 inch crepe bandages on each table.

• Apply protective plastic sheets.

• Put the plaster cutter, splitters and scissors on the table.

• During the plastering exercises the candidates will be doing below elbow back slab and below elbow plaster.

• Below knee plaster of Paris needs to be demonstrated along with wedging.

• Small wooden pieces and tape would be required for wedging.

• **During the traction talk** clear the plastering material.

• Put 2 skin tractions, marking pens, elastoplast, gauze and traction cord on tables. Prepare Thomas’s splint.

• **During the lunch break** get the skeletal traction material ready.

• Power drills, T handles, 4 Steinman’s splint and 1 Denham pin on each table.

• Marking pen, plastic syringe and artery clip with a scalpel handle without the blade on each table.

• Plastic bones - 1 tibia, 1 femur and 1 calcaneum on each table.

• Fix the clamps to the table.

• Cover the bones with brown tape and bubble wrap if not already done.

• **During the talk on pelvic fractures** clear the table to lie down. Prepare 2 crepe bandages and cloth for pelvic binding. A pillow would be useful.

• Prepare the pelvic external fixation if not done so.
- **During the external fixation talk** include the open fracture discussion in between using a flip chart.

- During the talk prepare the external fixation material. Put one external fixation set on each table.

- Towards the end prepare the plaster bandages to demonstrate pins and plaster external fixation.

- **During the coffee break** clear the tables and put internal fixation practical exercise material on each table. This would include the plates, screws, drills, taps, measuring guides, plastic bones etc.

- **During the MCQ's** clear the tables.

- Put the drills for charging.

- Collect the assessment forms.

- Mark the MCQ’s.

- Discuss the answers of the MCQ’s and any questions arising from the trainees.

- Assessment forms.

- Debriefing.

- Look back with satisfaction and chill out !!!!

*Managing fractures*
Pre and Post course MCQ (%)

Trainees

Trainee Feedback

Pelvic Injuries

Very dissatisfied  Dissatisfied  Neutral  Satisfied  Very satisfied

5  10
Trainee Comments

What went well?

“Hands on experience, ability to do what you are being taught”.

“Small group so that everyone had a chance”.

“The practical sessions”.

“Everything went well”.

Compartment Syndrome

Osteomyelitis
“Demonstration and practical increased the confidence. Lectures were basic but with full information relevant to clinical practice”.

“Practical demonstrations, lectures”.

“Practical sessions”.

“I enjoyed the traction techniques and closed reduction”.

“The practical sessions were very good and interactive”.

“The practicals were very good and a chance was given to all the trainees to practice the skills”.

“Everything”.

“Management of pelvic fracture and tendon repair”.

“Very practical and relevant topics”.

“The practical aspect of the course as well as the demonstrations”.

What could have been better?

“Have no complaints”.

“Various methods of treatment can be taught so that the participant chose what fits in clinical practice”.

“Don’t think we need to do more”.

“This is a good course”.

“More time allocated - most things were hurried”.

“More into internal fixations”.

“None”.

“I think that everything was good”.

“If the incisions are not pre made it would give participants more practice and confidence. If they are allowed to do the procedures themselves”.

“Actual demonstration on patients could have been better”.

62
What would you have liked to learn more about in this Course?

“All the important things were already covered”.

“As an Orthopaedic Surgeon biomechanics and biology in more detail in the manuals would help”.

“Intramedullary nailing”.

“Arthrotomy of the hip and knee approaches”.

“Internal fixation”.

“Spinal injuries - the early management”.

“I was satisfied with the course”.

“Arthrotomy – particularly hip for septic arthritis. Surgical procedure to long bones”.

“Internal fixation”.

Other comments.

“Good course – keep it up”.

“Need a refresher letter”.

“The course was very helpful, thank you”.

“I liked everything and enjoyed the session”.

“Very informative course”.

“Very good talk, thank you”.

“It has been a very organised facility”.

“The course was well organised with lots of hands on skills practice”.

“The facility was very good and very knowledgeable”.

“Thank you the skills will definitely improve my care for the patients”.
### Requirements per Course

#### Instruments for Orthopaedics /Trauma

<table>
<thead>
<tr>
<th>Item</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEEDLE HOLDERS</strong></td>
<td></td>
</tr>
<tr>
<td>Mayo Hegar</td>
<td>4</td>
</tr>
<tr>
<td>Crile Wood</td>
<td>4</td>
</tr>
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<td><strong>FORCEPS</strong></td>
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<tr>
<td>Waugh Fine Toothed</td>
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<td>4</td>
</tr>
<tr>
<td>Spencer Wells Curved</td>
<td>4</td>
</tr>
<tr>
<td>Mosquito (Halstead)</td>
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<tr>
<td><strong>SCALPEL HANDLES</strong></td>
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<tr>
<td>No 4 (Large)</td>
<td>8</td>
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<tr>
<td><strong>SCISSORS</strong></td>
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<tr>
<td>Mayo</td>
<td>4</td>
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<tr>
<td>Bergmann Plaster Scissors</td>
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<tr>
<td><strong>OTHER</strong></td>
<td></td>
</tr>
<tr>
<td>Plaster Shears Stille-Aesculap</td>
<td>1</td>
</tr>
<tr>
<td>Hennig Plaster Spreader</td>
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</tr>
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</table>

#### Sutures for Orthopaedics /Trauma

<table>
<thead>
<tr>
<th>DEBRIDEMENT</th>
<th>W328H</th>
<th>1 BOX</th>
<th>36 Sutures</th>
<th>3/0 Mersilk braided, 3/8 reverse cutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>TENDON REPAIR</td>
<td>W8845</td>
<td>2 BOXES</td>
<td>24 Sutures</td>
<td>4/0 Prolene (1/2 c) double needle</td>
</tr>
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</table>

#### Re-usable items for Orthopaedics /Trauma

<table>
<thead>
<tr>
<th>Item</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cork Tiles, size 300mm x 300mm x 4mm thick</td>
<td>3</td>
</tr>
<tr>
<td>Push Pins IV stationary <a href="mailto:ltd.sales@ivstationary.com">ltd.sales@ivstationary.com</a></td>
<td>24</td>
</tr>
<tr>
<td>2.5 litre Plastic Paint Kettle</td>
<td>3</td>
</tr>
<tr>
<td>0.5 litre approx adjustable nozzle, trigger flower spray</td>
<td>1</td>
</tr>
<tr>
<td>Item</td>
<td>No</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Surgical Blandes No. 22</td>
<td>18</td>
</tr>
<tr>
<td>Pauls tubing 12cm</td>
<td>9</td>
</tr>
<tr>
<td>Sharps Bins 1/2 litre</td>
<td>3</td>
</tr>
<tr>
<td>Gloves - latex free, Small, Medium &amp; Large</td>
<td>1 Box of each</td>
</tr>
<tr>
<td>Aprons - white roll of 200 per roll</td>
<td>3</td>
</tr>
<tr>
<td>Scrubbing brushes small - for debridement</td>
<td>3</td>
</tr>
<tr>
<td>Non sterile gauze swabs (packets)</td>
<td>6</td>
</tr>
<tr>
<td>Black disposable bags</td>
<td>3</td>
</tr>
<tr>
<td>Large white/green IV 16G needles</td>
<td>20</td>
</tr>
<tr>
<td>Rolls plastic sheeting</td>
<td>To be issued</td>
</tr>
<tr>
<td>Velband/cotton wool roll padding, 60 x 4&quot; 2.7mt rolls</td>
<td>60 Rolls</td>
</tr>
<tr>
<td>Velband/cotton wool roll padding, 6 x 6&quot;</td>
<td>6 rolls</td>
</tr>
<tr>
<td>Elastoplast /Adhesive plaster, 6 x 4&quot;, 4.5mt rolls</td>
<td>6</td>
</tr>
<tr>
<td>Crepe Bandage 10 x 4&quot;</td>
<td>10 Rolls</td>
</tr>
<tr>
<td>Milton Tabs</td>
<td>6</td>
</tr>
</tbody>
</table>
Urology Module Report

Visiting Faculty

Lead - Chandra Shekhar Biyani
Nick Campain

Local Faculty

Nenad Spasojevic

TTT Trainers

Alex Makupe
Michael Silumbe
Bruce Bvulani

19th October to 25th October 2013

Venue: Tissue Lab, Breakout Room, Dept of Surgery, UTH
Programme

08.15 Welcome and introduction
08.30-08.45 Catheterisation
08.45 – 09.00 Acute Scrotum
09.00 – 10.00 Practical (Suprapubic cystostomy & scrotal exploration)
10.01 – 10.10 Refreshments
10.10 – 10.25 Circumcision & Priapism
10.25 – 10.45 Ureteric, Bladder & Urethral trauma
10.45 – 12.00 Practical
12.00 – 12.15 MCQ (Ureteric repair, renorrhaphy & circumcision)
12.15 Feedback
Acknowledgements

I am thankful to Mr Bob Lane, Convener & Programme Director for International Affairs at ASGBI for his continued guidance and to Dr Robert Zulu for his tireless efforts in facilitating this visit. I could not have done without the excellent support from Nick Campain and Dr Nenad Spasojevic.

I should like to express my sincere appreciation to Dr Alex Makupe, Dr Michael Silumbe, Dr Bruce Bvulani for their help with the urology module.

I am grateful to Mr Ru MacDonagh Chairman, UROLINK, for his continued support.

Finally, I would like to acknowledge Limbs & Things Ltd, Sussex Street, St Philips, Bristol, UK for donating circumcision models for the workshop at very short notice and sincere thanks to Mr Nick Gerolemou, Marketing Manager and Ms Clare Rangeley, Sculptor, Limbs & Things.

Background

Mr Bob Lane, Convener & Programme Director for International Affairs at the ASGBI, submitted an application for a grant to the Department for International Development UK, to deliver Multi-level Training for Healthcare Workers to improve emergency surgical care in the COSECSA region which was successful. The pilot “Management of Surgical Emergencies” (MSE) course delivered in October 2011 consisted of five clinical teaching modules, these being; critical care, general surgery, orthopaedics and trauma, urology and obstetrics. The plan is to deliver 6 courses in the COSECSA region within two and half years.

Mr Lane’s office coordinated all UK faculty members and the first course was organised at the end of February 2013.
Saturday 19th October 2013

Faculty members from the UK arrived for the Course in the early morning. Mr Lane arranged a meeting at 3:00pm. All faculty members attended the meeting and went through the programme.

Sunday 20th October 2013

We reached the hospital early in the morning at 8:00am. Dr Zulu came to the hotel to pick faculty members up. The Training the Trainers session started at 9:00am following registration. There were 14 trainers. Nick Campain (Urology, UROLINK Educational Fellow) also joined us. He arrived late on the Saturday night. After an initial introduction Mr Lane gave a presentation on the art of lecturing. Mr Fanus Dreyer gave a talk on assessment and the importance of assessment in training. This was followed by presentations by the module lead about the structure of their respective module. After lunch we had a session on role play and critiquing. Local trainers were divided into two groups. The first group did the role play which involved how to deal with a difficult trainee. The second group was asked to teach knot tying to each other. After 45 minutes, the groups were swapped. This was followed by a talk on safe surgery by Mr Fanus Dreyer. His talk was very interesting and everyone enjoyed it. At the end of the session we had a group photograph. We arrived back to the hotel at around 6:30pm.

Monday 21st October 2013

I left the hotel early along with the critical care team and nursing team. I was asked to give a lecture to 20 nurses from theatre. I gave a talk on “Errors in Theatre”. Before the talk, a short survey on safety aspects in theatre was given. I finished at lunchtime and came to the hospital to check over the equipment and instruments for the course with Nenad and Nick. I agreed to give a talk on how to read an X-ray to 5th year medical students at Nenad’s request.
Tuesday 22\textsuperscript{nd} October 2013

We left the hotel at 6:45am. There were 20 medical students. I gave a lecture on Imaging in Urology. We finished at 8:00am. After this, Nick and I joined Nenad for the ward round. There were patients with a variety of conditions such as urethral stricture, hypospadias repair, bladder extrophy repair and a lady with bilateral cutaneous urethrostomy and colostomy for a bladder cancer, condylomata and post-op case of open prostatectomy. There were four residents in the urology department and we had a good chat with them. Nick agreed to talk to them separately for an hour just to give them a flavour of training in urology in the UK. We finished at nearly 2:00pm and came back to the hotel. I went back to the hospital at 4:30pm as there was a debriefing session for the critical care module. All faculty members joined this and Mr Fanus Dreyer gave his impression of candidates and new trainers from the last two days. We all came back to the hotel at 7.00 p.m. I went through our programme with Nick for Wednesday and showed him the circumcision model.

Dr Spasojevic with Nick and urology residents
Wednesday 23\textsuperscript{rd} October 2013

Nick and I left the hotel at 7:00am. Nenad came to pick us. We drove to the skills centre at UTH. All participants arrived at 8:00am. Nenad went down to get the bladder ureter and kidney from the pig. There were six participants for the urology module. Nick and I set up the models for a suprapubic cystoscopy and circumcision. There were five topics for the module. I gave a presentation on troubleshooting and catheters. This was followed by a video on circumcision. After presentation, participants did some hands-on training with models. Michael, Bruce and Alex joined us for the urology module as future trainers. All three were involved in teaching along with Nenad and Nick. After an hour of hands-on training, I presented three videos; the first one was on acute scrotum and testicular fixation, the second was on end-to-end ureteric anastomosis and the last one demonstrated ureteric re-implantation. These were prepared at the education centre at Pinderfields General Hospital. Following these presentations participants did end to end ureteric anastomosis, ureteric re-implantation and testicular fixation on pig’s bladder, ureter and scrotum. After the practical sessions all candidates were asked to repeat the MCQ’s. Nick managed to get some feedback on the circumcision model. We finished our session at 12:30pm. I sat down with all the trainers to mark each participant on the global rating scale.

[Image of Urology faculty members]

Urology faculty members
There was an Opening Ceremony after lunch at 2:00pm. Dr Lisulo Walubita, Deputy Director- Clinical Care from the health ministry and Dr Laston Chikoya the President of the Zambia Surgical Society were present. This lasted for 20 minutes. Dr Zulu, local co-ordinator, introduced guests to the delegates and faculty members. In the afternoon, I marked all the MCQs along with Nick and Nenad. We came back to the hotel around 4:00pm.

**Thursday 24th October 2013**

We arrived at UTH 7:30am with Nenad. It was nice to see all local faculty members taking a lot of interest. Nenad took Alex for harvesting biological material from a pig. Nick helped Bruce and Michael to set up circumcision models and suprapubic cystostomy model. Only 4 delegates were allocated for this session. Although 24th October was Independence Day, they all arrived on time. I presented a talk on trouble shooting with urethral catheterisation. This was followed by a video presentations and practicals. All delegates managed to do various procedures. At the end the post-course MCQ test was done. MCQ papers were marked with the rest of the faculty members. We discussed how on Friday local faculty would be delivering the module. Michael agreed to do the presentation on catheters, Bruce opted for acute scrotum, Alex decided on circumcision and Nenad presented the video on ureteric repair.

**Friday 25th October 2013**

On Friday we had 5 candidates. Nenad took the Lead and Bruce and Michael agreed to do harvesting. Nenad outlined the programme for the morning to all participants. All topics were delivered by the local faculty including practical aspects. Nenad showed renorraphy to participants and allowed them to practice as there was enough time. It was delivered very well. At the end candidates were asked to do post-course MCQs. I had discussed with local faculty about peer assessment and they all agreed to do it (Appendix 1). We, therefore, did this at the conclusion. All candidates were marked by the local faculty.
Dr Silumbe teaching suprapubic cystostomy.

Dr Makupe discussing the acute scrotum.

Dr Bvulani helping a candidate with testicular fixation

Mr Lane keeping an eye!

Dr Spasojevic discussing ureteric injury

Pig’s scrotum for exploration

We had a closing ceremony at the end. Unfortunately Mr Lane could not attend due to an important engagement. Mr Gartell took the Lead and distributed certificates to
all trainees and new trainers. A debriefing session about the course along with new trainers was done after the ceremony.

We arrived at the hotel 7:00pm. Mr Jay Patel had arranged dinner with Mr Scott, Vice President of Zambia at the hotel. Mr Scott arrived with his wife and had a dinner with all UK faculty members.

### Saturday 26th October 2013

The return journey was uneventful.

**What went well?**

**MSE Course**
- Better participation by new local trainers
- Improved awareness among local trainers about the Course
- Much better facilities to deliver the Course
- Included training nurses

**Urology module**
- Room to deliver urology module was adequate
- Support from Nick Campain was outstanding
- Audio-visual equipment worked well
- Excellent support from Nenad, Bruce, Alex and Michael
- Introduction of Peer Observation Feedback form
- Circumcision model worked well
What could have been better?

MSE Course

- Active participation of local faculty members in organisation
- To improve room facilities e.g. chairs
- To email module contents to delegates at least 6 weeks in advance
- To consider introduction of peer assessment for a session

Urology module

- More biological materials to allow each participant to do complete procedure
- To improve model for a suprapubic cystostomy
- There is a lack of storage facilities. We should have shelves in the room to keep equipment and instruments properly after the course

Pre & Post Course MCQ’s (%)

![Pre MCQ% and Post MCQ% graph]

Trainees
Trainee Feedback

Suprapubic cystostomy

Very dissatisfied | Dissatisfied | Neutral | Satisfied | Very satisfied
---|---|---|---|---
1 | 2 | 12

Ureteric injury

Very dissatisfied | Dissatisfied | Neutral | Satisfied | Very satisfied
---|---|---|---|---
 | 2 | | | 13

76
Trouble shooting urethral catheter

Very dissatisfied  Dissatisfied  Neutral  Satisfied  Very satisfied

Acute scrotum

Very dissatisfied  Dissatisfied  Neutral  Satisfied  Very satisfied

Circumcision

Very dissatisfied  Dissatisfied  Neutral  Satisfied  Very satisfied
Trainee comments

What went well?

“Faculty was very good.”

“It was very practical and relevant. Most common urological emergencies.”

“Circumcision and practice from the lectures.”

“The practical aspect of the module has been very helpful, detailed and informative.”

“Tutors were clear and elaborate.”

“Practical application on dummies, scrotum and ureter.”

“The module was adequately covered.”

“The arrangement of first having to watch demonstration then followed by a practical session.”

“The most informative, educative talk of all the MSE course.”

“Very practical and reproducible.”

“Teaching with good practice for all trainees.”

“Everything was good.”

“Models were good.”

“Teaching methods.”

“The demonstration and practical session was very useful.”

“More practice than tutorial.”

“Very relevant and common topics covered.”

“Ureteric and bladder injury anastomosis and re-implantation.”

“Videos prior to practical sessions.”
“Demonstration and videos of the procedures.”

“Lecture on scrotal exploration.”

**What could have been better?**

“Course materials to be sent in good time ie 3/12 before the course.”

“If suprapubic cystostomy model could simulate the normal anatomy better.”

“More time and more surgical emergency courses.”

“Some exercises did not have a practical aspect.”

“For now I can't think of anything.”

“Nothing.”

“Include renal and bladder trauma.”

“More video demonstration.”

“May be more time and topics on urology.”

“More time allocated to the practical session.”

“Practice on the suprapubic model.”

**Other comments**

“It was a very good course. I can handle a lot of emergencies as they come.”

“The course was very enjoyable and fulfilling. Well done.”

“The lectures were produced and presented well.”

“Well done and well demonstrated.”

“Urology to run the whole day.”

“This was very beneficial teaching, thank you very much.”
“Learnt a lot. More confident now to manage urological emergencies. Need to continue these trainings and if possible refresher course after some time.”

“Thank you very much. This is totally great.”

“Overall good experience and learnt quite a lot.”

“More time for practice session.”

### Requirements per Course

<table>
<thead>
<tr>
<th>Instruments for Urology</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEEDLE HOLDERS</strong></td>
<td></td>
</tr>
<tr>
<td>Mayo Hegar</td>
<td>8</td>
</tr>
<tr>
<td><strong>FORCEPS</strong></td>
<td></td>
</tr>
<tr>
<td>Waughs Fine Toothed</td>
<td>6</td>
</tr>
<tr>
<td>Adson Fine Non Toothed</td>
<td>6</td>
</tr>
<tr>
<td>Spencer Wells Curved Normal</td>
<td>12</td>
</tr>
<tr>
<td>Spencer Wells Straight</td>
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</tr>
<tr>
<td>Babcocks</td>
<td>12</td>
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<tr>
<td><strong>SCALPEL HANDLES</strong></td>
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<tr>
<td>No 3 (Small)</td>
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<tr>
<td><strong>SCISSORS</strong></td>
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</tr>
<tr>
<td>Mayo</td>
<td>6</td>
</tr>
<tr>
<td>Metzenbaum</td>
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### Re-usable items for Urology

<table>
<thead>
<tr>
<th>Item</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cork Tiles, size 300mm x 300mm x 4mm thick</td>
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<tr>
<td>Push Pins IV stationary <a href="mailto:ltd.sales@ivstationary.com">ltd.sales@ivstationary.com</a></td>
<td>48</td>
</tr>
<tr>
<td>2.5 litre Plastic Paint Kettle</td>
<td>1</td>
</tr>
<tr>
<td>0.5 litre approx adjustable nozzle, trigger flower spray</td>
<td>1</td>
</tr>
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</table>

### Sutures for Urology

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>W9136</td>
<td>3 BOXES 36 sutures 2/0 Vicryl (1/2 c) RB</td>
<td>3 BOXES</td>
</tr>
<tr>
<td>W193</td>
<td>3 BOXES 36 sutures 2/0 Silk Ligatures</td>
<td>4 BOXES</td>
</tr>
<tr>
<td>W9970</td>
<td>4 BOXES 36 sutures 4/0 Vicryl (1/2 c) RB</td>
<td>4 BOXES</td>
</tr>
</tbody>
</table>

### Disposable Items for Urology

<table>
<thead>
<tr>
<th>Item</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Surgical Blades No. 11</td>
<td>24</td>
</tr>
<tr>
<td>50 ml syringes to wash out bladder</td>
<td>2</td>
</tr>
<tr>
<td>Sharps Bins 1/2 litre</td>
<td>3</td>
</tr>
<tr>
<td>Gloves - latex free, Small, Medium &amp; Large</td>
<td>1 Box of each</td>
</tr>
<tr>
<td>Aprons</td>
<td>30</td>
</tr>
<tr>
<td>Black disposable bags</td>
<td>3</td>
</tr>
<tr>
<td>Rolls plastic sheeting</td>
<td>To be issued</td>
</tr>
<tr>
<td>Milton Tabs</td>
<td>6</td>
</tr>
</tbody>
</table>
Obstetrics & Gynaecology Module Report

Visiting Faculty
Lead - Mani Malarselvi

Local Faculty
Gracilia Mkumba

TTT Trainers
Happiness Rabiel
Carlos Valera
Therese Nkole

Wednesday 23rd - Friday 25th October

Venue: Tissue Lab, Dept of Surgery, UTH
Programme

Introduction 5 minutes

13.20 - 14.00 Lectures (20 mins x 2)
- Obstetric emergencies (cord prolapse / dystocia/breech)
- PPH (atonic / traumatic)

14.00 - 15.00 Stations
- Shoulder dystocia +breech
- PPH (B Lynch, packing, inversion)

15.00 - 15.30 Refreshments

15.30 - 16.00 Stations
- Symphysiotomy / gynae surgery

16.00 - 16.30 Caesarean section (video/discussion)

16:30 - 17.00 MCQs

17.00 - 17.20 General Q&A 'mop up'

Last 10 minutes: Debrief/summary
**Introduction**

All the faculty members met at Heathrow on 18.10.13 and departed for Lusaka by British Airways. We arrived in Lusaka on 19.10.2013. At Lusaka airport we were met by Dr. Robert Zulu and his colleagues who transported us to the Taj Pamodzi Hotel. This MSE course is the penultimate one before the final course in March 2014. It was already decided to gradually withdraw the UK Faculty and there will only be one UK Faculty in each module this time. Ms Irani provided me the great opportunity of being the module lead for this course. I was excited and a little apprehensive but was confident of running the module smoothly.

**Saturday 19th October**

We had a faculty meeting to discuss the Course at 3pm. The logistics of running the Course were finalised. We were quite satisfied with the arrangements made by Dr Zulu for the smooth running of the Course. It was decided that the O&G, Urology and the Surgical modules would be held in the Tissue Lab where the air conditioning facilities are very good.

It was decided to have a debrief meeting with module leads at the end of each day to discuss the trainees and the day’s events. This was unanimously welcomed by all the faculty members.

**Sunday 20th October**

The Training the Trainers Course was held at the University Teaching Hospital (UTH). All the faculty members gathered inside the lecture theatre around 8am. There were 13 trainers whose main specialities were surgery, orthopaedics and urology. Unfortunately there was no one with an O&G interest.

Mr Lane outlined the objectives and content of the Training the Trainer course. He then gave a very interesting talk on the Art of Lecturing. This was followed by an informative lecture on the Assessment process by Mr Dreyer.
After the mid-morning break each module Lead presented the content and delivery of their Module. It was very disappointing to see that there were no volunteers [trainers] for the O&G module.

Dr Jacqueline Mulundika, who participated enthusiastically as the local trainer in February 2013 and also agreed to be the local trainer for future O&G module did not attend. Several attempts to contact her was unsuccessful.

I was very delighted and relieved to see Dr Gracilia Mkumba who was the other local faculty member for our module in Feb 2013. She is an experienced senior Obstetrician and Gynaecologist with a special interest in teaching. Dr Mkumba promised to explore the possibility of getting another trainer to attend the course.

I expressed my concerns to Mr Lane and Dr Zulu about the lack of local trainers for the O&G module which will have severe implications on the sustainability of the O&G module in the future. We managed to convince Dr Happiness Rabiel and Dr Carlos Valera to be the local trainers of our module. Both of them are general surgeons.

At the end, local trainers were allocated to different modules.

After lunch, there were scenario based role playing exercises for the local trainers. This was followed by an excellent lecture on Safe Surgery and Non-Technical skills by Dr Dreyer.

At 3pm we were joined by 15 trainees. Most of them were in their 1st and 2nd year of Postgraduate training. However, there were 3 trainees who were in their 3rd year of surgical training. After registration all the trainees completed the pre course MCQs. Trainees were allocated to Red [5], Orange [6] and Green [4] groups.

I discussed with Dr Mkumba about the content and the logistics of conducting the module
Monday 21st October

Dr Mkumba and myself went to the venue to check the instruments and the Manikins. They were in good condition. The faculty had a debriefing meeting in the evening. The Critical Care team gave us a report about the day’s events and the trainees performance.

The faculty had a team debriefing meeting at the end of each day attended by Mr Lane, and the module leads for surgery, orthopaedics, urology and O&G.

Tuesday 22nd October

I gave a lecture for the local nurses and theatre assistants on Post Partum Haemorrhage and Practical Demonstration of Perineal suturing and it was well received.

Wednesday 23rd to Friday 25th October

The O&G module was scheduled from 1 to 5pm from Wednesday to Friday. We were a little uncertain about the starting time on Wednesday as the Official Inauguration of the MSE Course was to be held in the afternoon. However we started the course on time at 1pm. We paused for one hour to attend the Inaugural meeting which commenced at 2pm. The meeting was presided over by the representative from the Health Ministry and also by The President of the Zambian Surgical Society. The rest of the O&G session went relatively smoothly.

After introduction, we had 2 short lectures on common Obstetric emergencies and the Management of Obstetric Haemorrhage. There were 6 trainees in this group. This was followed by practical sessions with the manikins; management of shoulder dystocia, vaginal breech delivery and the management of post-partum haemorrhage with the demonstration of how to do a brace suture. After a short coffee break, there was a video on 'How to do a Caesarean Section' and a hands on / practical session on symphysiotomy, management of ectopic pregnancy, miscarriages and pelvic
abscess. The course was conducted by myself and Dr MKumba. Dr Valera and Dr Rabiel were observing but with active interaction. Dr Mkumba also managed to convince Dr Therese Nkole, a Senior Registrar in O&G at UTH to attend the course and be a local trainer for the module. Dr Nkole actively participated without any inhibition or hesitation. She was very confident and enthusiastic. Now we are fortunate to have 4 local trainers and 2 of them are specialists in O&G.

**Lecture by Dr Therese Nkole on Obstetric emergencies**

Dr Mkumba suggested that we include Manual Vacuum Aspiration [MVA] technique in the management of incomplete miscarriage. This was a very useful and a valid suggestion. She got the equipment from the Gynaecology department at UTH. MVA was a new addition to the content of our module.

The trainees did the Post course MCQs and feedback at the end of each day. We discussed the MCQs with the trainees which helped reinforce take home messages and also helped identify misinformation - this was very useful for us. Again at the
end of the session myself and the 4 local trainers marked the candidates and completed their formal assessments.

**On Thursday, the 24th**, it was the Independence Day of Zambia. The session commenced at 1pm after lunch. Dr Mkumba was leading the O&G session under my supervision. Dr Nkole, the local trainer, gave the lecture on management of obstetric haemorrhage, Caesarean section and also conducted the practical session on shoulder dystocia. Dr Carlos and Dr Rabiel conducted the practical session on Management of PPH and Dr Mkumba conducted the practical session on symphysiotomy, ectopic pregnancy and gynaecological emergencies. There were 5 trainees in the group. Dr Mkumba conducted the session with confidence and maturity. The day ended with a group photograph of all the trainers and trainees.

All the local trainers from all the modules were invited by Mr Lane for a drink at the hotel in the evening.

**On Friday afternoon**, there were 5 trainees. The course was completely run by the local trainers under the leadership of Dr Mkumba. Lectures and the practical sessions on shoulder dystocia, breech delivery, ectopic pregnancy and other gynaecological emergencies were taught by Dr Mkumba and Dr Nkole. Dr Valera and Dr Rabiel independently conducted the practical session on PPH and ran the session on shoulder dystocia with my guidance.

The lectures and the practical sessions were clear and very interactive.

On all the 3 days we managed to finish on time and the faculty members got on well.

The day ended with post course assessments, presentation of certificates to the trainers and trainees.

The faculty had a team debrief meeting in the evening at the hotel and were satisfied with overall performance of the local faculty.

The faculty had dinner with the Vice President of Zambia, Mr Guy Scott and his wife, at the hotel on Friday evening, which will hopefully raise the profile of the MSE course and improve the support from the local administration at UTH.
Conclusion

Overall the course was well organised with improved facilities and was delivered smoothly. The venue and the catering facilities were excellent. The trainees generally appreciated and were satisfied with the content of the course. Although we had the initial hiccup of lack of local trainers for the O&G module, it was well compensated by 4 excellent local trainers. Dr Mkumba and Nkole were extremely knowledgeable and demonstrated excellent training skills. Dr Valera and Dr Rabiel are the other faculty members with a surgical background. No doubt that they will be valuable faculty members/trainers with appropriate guidance and support.

I have provided the trainers with all the presentations, MCQs, TTT content and the logistics of the O&G module.

The future of the O&G module very much depends on the continued commitment, enthusiasm and support from the local faculty. This is the 2nd MSE course in Lusaka and it is a pity that there are no local O&G trainers attending the TTT course. I have requested Dr Mkumba and Dr Nkole to raise awareness of the MSE course in the amongst O&G postgraduate trainees at UTH.

I am grateful to Ms Irani and Mr Lane for giving me this valuable opportunity. I was able to conduct the O&G module successfully with the guidance and support of Ms Irani.

I would like to express my sincere appreciation to all the UK faculty members for supporting me. My special thanks to Dr Zulu and his team for their efforts to run the course efficiently.

Finally we departed for London Heathrow on 26.10.13. by the last ever BA flight from Lusaka. We were given a warm farewell by the children of an orphanage supported by BA.
Pre & Post Course MCQ’s (%)

Trainees

Trainee Feedback

Antepartum Haemorrhage
Trainee Comments

What went well?

“The teachings with demonstrations and the time to practice.”

“I liked the shoulder dystocia and symphysiotomy plus cord prolapse.”

“The methods of teaching [practicals, videos].”

“Group participation.”

“The practical aspect was very good. Information was basic but adequate.”
“Clear presentations. Practical aspects on breech delivery.”

“Shoulder dystocia and breech presentation.”

“The ectopic pregnancy and symphysisotomy demonstrations.”

“Postpartum Haemorrhage.”

“The material presented and the demonstrations. Also the opportunity to do /participate.”

“Practical demonstrations by video/faculty.”

“The tutorial on MVA.”

“The demonstrations and videos.”

What could have been better?

“Including management of hypertensive emergencies in pregnancy.”

“More time allocation.”

“We did not tackle pre-eclampsia and proper management of such patients.”

“Probably might need a simulation module for the uterus to demonstrate surgical management of PPH abdominal pregnancy.”

“Symphysiotomy, cord Prolapse.”

“Model for CS practice.”

“Fistula repair.”

“The tutorials were practical, may be more time.”

“Better models for practicing.”
Other Comments

“It has been well conducted.”

“Thank you very much. [God Bless You].”

“Good course needs to continue. Arrange for refresher course in future.”

“Course well structured.”

“The faculty were great to work with.”

“Generally very beneficial course Tutors were precise.”
## Requirements per Course

### Instruments for Obstetrics & Gynaecology

<table>
<thead>
<tr>
<th>Item</th>
<th>No</th>
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<tbody>
<tr>
<td><strong>NEEDLE HOLDERS</strong></td>
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</tr>
<tr>
<td>Mayo Hegar</td>
<td>4</td>
</tr>
<tr>
<td><strong>FORCEPS</strong></td>
<td></td>
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<tr>
<td>Spencer Wells curved Long</td>
<td>2</td>
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<tr>
<td><strong>SCISSORS</strong></td>
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<td>Mayo</td>
<td>4</td>
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<tr>
<td>Blades (10)</td>
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<td><strong>SPONGE HOLDER</strong></td>
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<tr>
<td>Rampley</td>
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### Sutures for Obstetrics & Gynaecology

<table>
<thead>
<tr>
<th>Item</th>
<th>2 BOXES</th>
<th>24 Sutures</th>
<th>1 Vicryl (½ cc) Taper cut RB</th>
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</thead>
<tbody>
<tr>
<td>W9377</td>
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### Re-usable items for Obstetrics & Gynaecology

<table>
<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>Rusch Balloon</td>
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### Disposable items for Obstetrics & Gynaecology

<table>
<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>Roller Gauze pack</td>
<td>2</td>
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<tr>
<td>Sharps Bins 1/2 litre</td>
<td>1</td>
</tr>
<tr>
<td>Gloves - latex free, Small, Medium &amp; Large</td>
<td>1 Box of each</td>
</tr>
<tr>
<td>Black disposable bags</td>
<td>1</td>
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Principles of assessment

Principles of assessment were unchanged from the previous courses. MSE remains a Pass or Fail course. Course participants were expected to meet the same minimum criteria, as previously agreed to by all module leads, to successfully complete the course and receive a certificate, which were attendance at all sessions, active participation in discussions and skills sessions, proficiency in cardio-pulmonary resuscitation (CPR) skills, satisfactory scores in continuous assessment and acceptable scores in written tests.

Although primarily a skills course, participants were assessed in the educational domains of knowledge, judgement and decision making, technical skills and communication and teamwork. Different teaching stations focused on different skills and the assessment process was adjusted accordingly. Daily assessment scores were collated from performance in different domains of learning.

Methods of Assessment

Written tests
Consisted of a mixture of multiple choice questions (MCQs), extended matching questions (EMQs) and best answer questions. The structure and style of questions were different for different modules modified to best fit the teaching methods and contents in each specialty. In critical care the total value of written test points was 40, in general surgery and orthopaedics 30 each, and in urology and obstetrics 20 each.

Critical Care
Only post-course scores were used to record performance in written tests as explained in previous reports. Participants were asked four complex questions, as in
the previous courses, addressing a series of complex problems in critical care. The written test scores did not correlate satisfactorily with individual continuous assessment scores.

**General Surgery, Orthopaedics, Urology and Obstetrics**

One hundred points were available from a variety of MCQs, 30 each from General Surgery and Orthopaedics, 20 each from Urology and Obstetrics. Questions were asked in a pre-course test on the Sunday afternoon preceding the course, and a selection from the same questions were asked again in each module every day after the module; the post-course questions changed each day.

**Continuous assessment**

The previously described instruments were used for both formative and summative scores, as in previous courses.

**CPR proficiency**

All participants had to demonstrate that they can do CPR according to current protocol as this is an essential skill in managing emergencies.

**Final Scores**

A total maximum score of 200 was possible. These were compiled from 140 points for written tests (critical care 40, general surgery 30, orthopaedics 30, urology 20, obstetrics 20), 10 points from CPR proficiency and 50 points from continuous assessment (10 per module).

This meant that each module's contribution to the final score was: Obstetrics 15%, Urology 15%, Orthopaedics 20%, General Surgery 20% and Critical Care 30% (including 5% from CPR proficiency assessment).

Again participants were expected to attain a score of 60% to pass the course.

**Outcomes**

All course participants passed the course overall without any difficulty. One participant performed poorly in CC continuous assessment due to rash decision making and this was flagged up at the faculty meeting on handover to the specialties. Special attention was given to this participant's performance in the specialties but there were no further concerns and his other scores were good.
Table 1: Anonymised collated assessment scores

<table>
<thead>
<tr>
<th>PostModule MCQ</th>
<th>CPR</th>
<th>Continuous Assessment</th>
<th>P/F</th>
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<td>CC</td>
<td>GS</td>
<td>Orth</td>
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<td>16</td>
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</table>

| 40 | 30 | 30 | 20 | 20 | 10 | 10 | 10 | 10 | 10 |

Feedback

Participants were given the opportunity for course feedback similar to previously. Overall feedback was very good with participants being "satisfied" or "very satisfied" with their learning in almost all topics.

Individual feedback scores and comments were to be included by module leads within their respective module reports.

Recommendations for Future Courses

1. Calculating a total score per participant based on written tests and continuous scoring in different domains of learning continues to work well and give a balanced reflection of individual participants' strengths and weaknesses. The weighting for different modules also continues to work well.

2. It is recommended that the assessment framework and scoring system remains unchanged. All assessment tools must continue to be valid, reliable, transferable and evidence-based.
3. The continuous assessment sheet and scoring systems worked well and can remain unchanged.

4. A decision should be taken about the place of written tests for when COSECSA takes over the course in 2015 e.g. where would the bank of MCQs come from?

5. Feedback opportunity should be unchanged in future and results analysed in detail per topic to keep on improving the course.

**Summary**

Overall the assessment framework worked well and it continues to allow identification of outstanding and less strong participants. For almost all participants there was little variation in scores in different modules per individual participant. Within the group the distribution curve of scores was flatter which is difficult to interpret; it could either mean that the group was more homogenous or that there is some assessment fatigue amongst faculty meaning that the same and simpler questions were used throughout.

*Post Course MCQ's*
Trainers Overall Evaluation of the MSE Course

(12 Replies)

All were requested to answer the following questions:

1. In the light of the last 6 days how prepared are you to become a Faculty member of your preferred specialty as a Trainer for the Management of Surgical Emergencies Course.

8 Trainers were prepared to become a Faculty member in their preferred specialty.

4 Required exposure to one more course and this will be arranged.

2. Do you have any suggestions to improve your training ability with reference to involvement in your Specialty module.

➢ There is a need for a preparatory meeting of trainers in their module each day so that involvement can be discussed.

➢ Need access to presentations beforehand.

➢ Need to spend more time in a teaching environment i.e. UTH.

3. Please give your suggestions to improve the content or delivery of the MSE course material with reference to your preferred specialty.

➢ Include local case samples.

➢ Include tracheostomy.

➢ Attend more than one Specialty module.

➢ More emphasis on what surgeons can do with limited resources.

➢ Content of some of the presentations could be trimmed.

➢ Good base to derive confidence and exact curiosity to learn more.
➢ Need lecture on eclampsia.

➢ More practicals in Critical Care.

4. **Please comment on any other aspect of the MSE course**

➢ Very good course.

➢ Well organised and instructional.

➢ Very helpful. Learnt practical skills. Facilitators wonderful.

➢ Excellent course. Emphasis on practical aspects made it really useful.

➢ Had fun and looking forward to being involved in future training.

➢ Well-tailored to general emergencies in surgery.

➢ Very excited about attending this course. I improved my teaching techniques.

➢ Well run and co-ordinated. Debriefing very good.
Trainees overall evaluation of the MSE Course

(15 replies)

The average rating for the course from 0 – 10 was 8.9 with a mode and median of 9.

Have you found the course useful?

All did so with the most useful aspects being Urology (5), all the course, Orthopaedics & Trauma and the practical aspects (4 each), General Surgery and Critical Care (3 each), breech delivery and resuscitation before intervention (1 each).

Which part of the course did you find least helpful?

9 trainees reported no part of the course was least helpful, Obs & Gynae (3), General Surgery, Critical Care, (1 each).

How would you improve the course ie what would you like added or removed?

Most of the comments related to the Obstetric Module and in particular more added material on traumatic injury during pregnancy and eclampsia. There were other comments relating to the manikins etc. Request for chest drain insertion and tracheostomy were noted but these are covered in the Basic Surgical Skills Course. There was a request for more pictures, videos and diagrams in the lectures and this point has been noted. Finally a request to include emergency hernia repair.

Other comments

5 trainees from outside Zambia criticised the accommodation and this was changed accordingly.
“More time for practical sessions.”

“Hands on tutors made trainees feel free to contribute.”

“Loved the urological models.”

“A very good and helpful course well delivered.”

“Best course I have been on. I am now confident to manage surgical emergencies effectively. Thank you.”

“Encourage this course nationwide.”

“Wonderful course, detailed enough and yet very diverse. Thank you very much.”

“Critical Care to produce a handbook with summaries of important points in the articles.”
THEATRE NURSE TRAINING COURSE

Lead - Judy Mewburn

Kay Wandless

21 – 25 October 2014

Introduction

This was the first time we had run a formal five day course for the nurses and it proved to be a huge success. It was also the first time I was able to take another theatre nurse with me. I would like to thank Kay Wandless for her invaluable and ever present support, it made my life a lot easier!

The nurses who attended were all from UTH and there were senior Sisters who had done a theatre course, nurses who were learning on the job and student nurses. The student nurses had a tutor, Mildred, and she was present for the full five days. Buddug Nelson who was a tutor at the Lusaka Health Institute attended for the full five days and although not a theatre nurse she said she had learned a lot and would be able to incorporate this knowledge into her future teaching. We also had a midwife from the new Chongwe hospital who attended on day one. It would be good to have more nurses from outlying districts in the future.

Judith Munthali was in charge of organisation for the nursing staff. We should like to thank her for her organisation of the nurses who attended and for printing out the
feedback forms. We hope she will be arranging the course in March 2014 with the help of some of the senior staff at UTH.

On **day one** we registered the nurses then started with a SWOT analysis. This proved, as always, a fascinating insight into the problems faced by the nurses. Shekhar Biyani then gave a very well received lecture on errors in the theatre. He looked at the root cause analysis model and how to put actions to remedy error into place. The feedback was mostly five out of five.

In the afternoon Russell Lock gave a lecture on imperforate anus which is fairly common in Africa. He had slides but also some really good drawings which helped hugely. His upside down baby test had everyone thinking! He also touched on Day Surgery; a concept which has yet to hit UTH but I am sure it will come.

Paul Gartell talked about laparoscopic surgery. At the moment they do very little laparoscopic work but will no doubt be doing more in the future. He also talked about diathermy, Ohm’s law and the dangers of electricity. A topic which cannot be repeated too often as the complete lack of understanding of diathermy is mind blowing! Both of these lectures gained mostly fives with a few fours.

**Day two** - Yogesh captured everyone’s imagination with his talk on orthopaedic surgery. He organised practicals in bone drilling, how to screw in plates, and how do put on skin traction. In all the practicals he was helped by Micheal, one of the trainers for the surgeons. Everyone felt they had learned a lot and Yogesh got straight fives on the score sheet!

In the afternoon Malar Selvi gave a totally fascinating talk on post partum haemorrhage. She had a wonderful knitted uterus which was good at illustrating all the aspects of her talk. The methods of stopping the haemorrhage were many and the nurses felt that their knowledge base had really been broadened. We then did suturing of an episiotomy and the nurses were very keen to learn these skills. Again a score of straight fives!
Day three - Fanus Dryer and his team of Alistair and Martin covered all the aspects of the Care of the Critically ill patient. As Kay and I spent the day in the operating theatre we were not able to be present at the lectures. However the score was again very high. I should like to thank all of them for giving their time and expertise to teach the nurses. It added a huge new dimension to the Course and I hope they can be asked again.

From three o'clock to five we did a suturing workshop for the nurses. They learned to do interrupted, mattress and subcuticular suturing. There were prizes for the best suturing and the competition was fierce. There was almost complete silence for a whole hour as they perfected their suturing. At the end we gave six prizes for the best and second best in each category and they were happy winners.

Day four - was Zambian Independence Day. The nurses did not want to come in so they had a day off to celebrate. Kay and I went in to the Gynae theatre and also to the Emergency theatres. Fanus's team had given us two large bags of consumables which we distributed to the theatres. All the staff expressed their thanks.

Kay was very pleased to have visited the theatres as she had never been inside an African theatre. I think it was all a huge shock but it gave her insight into the problems faced by the staff.

Day five - we went through the entire theatre course. There was as usual a lot of discussion on the topics covered. We did some practicals moving and turning a patient, support of the unconscious patient, positions for recovery etc. We had an infection control quiz with prizes, a quiz on terminology, looked at the setting up of instruments and their handling, ENT emergencies and Recovery. We also did Cardio Pulmonary Resuscitation which took up a large amount of time. The nurses then filled in their feedback forms and we had a group photograph.

The feedback on the Theatre course all scored at 5 and there where many favourable and encouraging comments. Suggestions for future topics include ophthalmology, psychological care of patients undergoing surgery, assessment tool for staff nurses, head injuries and the Glasgow Coma Scale, diabetes, receiving a
patient from the ward and handover post surgery, interdepartmental communication, neonatal resuscitation, care of specimens, ventilation and intubation, cut down procedures, ENT instrumentation, recovery, dignity and respect. If any of the surgeons involved would like to do a talk on any of these subjects please do let me know. Again, many thanks for all of your support and effort.

Farewell from a local orphanage for the last BA flight out of Lusaka – and we were on it!