Management of Surgical Emergencies: a Course for Surgical Residents.


Author
David Ball, Critical Care Course Faculty.
Consultant Anaesthetist, Dumfries and Galloway Royal Infirmary, Dumfries, UK.

Venue
University Teaching Hospital, Lusaka, Zambia.

Date
17-21 October, 2011.

Host
The Surgical Society of Zambia.

Organiser
The Educational and Training Programme of the Association of Surgeons of Great Britain and Ireland.

Convenor
RHS Lane, Secretary General of the International Federation of Surgeons.

Sponsors
The Association of Surgeons of Great Britain and Ireland.
The Association of Anaesthetists of Great Britain and Ireland.

Faculty (Critical Care)
Fanus Dreyer, Consultant Surgeon, Dumfries, UK.
David Ball, Consultant Anaesthetist, Dumfries, UK.
Jonathan Hannay, Surgical Trainee, Glasgow Rotation, UK.

Support
The Association of Surgeons of Great Britain and Ireland
The Association of Anaesthetists of Great Britain and Ireland
Ethicon UK for surgical materials for the practical part of the course.

Competing Interests
None declared.
Thanks

Mr Robert Zulu, Surgical Society of Zambia, UTH
Prof. Mohamed Labib, Chair Education and Scientific Committee, COSECSA
Dr James Munthali, Chair, Clinical Surgery, UTH
Prof. Andrew Howard, University of Toronto.

Thanks also to our sponsors and to our hosts in Lusaka for their friendly support, and the Association of Surgeons and Anaesthetists for generous financial support.

Introduction

An increasing problem for Africa is the burden of trauma, which now accounts for 10% of all adult deaths. For children over 5 years, trauma kills more than HIV/AIDS, malaria and TB combined. Inability to provide Caesarian delivery remains a problem, a continuing cause of maternal and neonatal death.

A 2007 survey of anaesthesia and critical care provision in Zambia highlighted that services were “...under-developed and under-resourced”. This survey asked respondents to suggest ways to improve the situation. 40% called for “theoretical and practical training” [1].

“Management of Surgical Emergencies: a Course for Surgical Residents” is designed to address these training issues. A principle of the course is to realign attitudes from the primary focus on “procedure” to include the important dimensions of “patient”, “problems” and “planning”.

The course is a marriage of a two day course on principles of critical care and a three day course of practical surgical skills: the whole being the first course of this type.

This was jointly sponsored and supported by the Associations of Surgeons and Anaesthetists of Great Britain and Ireland, hosted by the Surgical Society of Zambia under the auspices of COSECSA (Committee of Surgeons of East, South and Central Africa).

The course was held in the Surgical Department at UTH (University Teaching Hospital), Lusaka in October 2011
Zambia: Overview

The republic of Zambia is a land-locked African nation, neighbouring (clockwise, from the north) Congo, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. The population is about 13 000 000, the average life expectancy is 46 years for men and 50 years for women. Of 1000 children born, 141 do not live beyond 5 years of age. 68% of urban and 32% of the rural population do not have access to sanitation. About 13% of the adult population carry HIV. Zambia is ranked 166 (out of 177 countries) on the Human Development Index [2]. See also Zambia: health profile, Appendix 1.

Zambia: Anaesthesia and Critical Care Provision

Based on Jochberger’s 2007 survey of anaesthesia and critical care provision, there are 29 recognised critical beds for the nation, with about half of the hospitals surveyed (h=87) have organised emergency management [1]. Surgery is directed towards obstetrics, gynaecology, and for abdominal pathology. As mentioned, demand for trauma management is increasing.

Anaesthesia provision is either sub-arachnoid (spinal) block where feasible, or dissociative general anaesthesia with ketamine. About 80% of anaesthetics are given by “technicians” (non-physician staff) [1].

In common with most African countries, the great majority of medical, surgical, anaesthetic and critical care is under-developed and under-resourced. Most hospitals are remote with shortages of equipment, drugs and disposables. Recruitment and retention of trained staff is a major issue.
**The course**

The main objective is “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” [Appendix 2]

Our students were medically-qualified surgical residents, of varying experience (one to five years of postgraduate training). 24 students were enrolled with 6 nurses as course observers. Students and observers were divided into three groups, for rotation. Our course was classroom based, held within the surgical department of UTH, Lusaka.

The course was divided into two, the critical care component (two days), followed by surgical course (three days): one day for surgical emergencies, one day for orthopaedics and trauma, half day for urology and a half day for obstetrics. This report focuses on the critical care component.

**Course assessment**

Both parts of the whole course were assessed. The students were assessed by faculty and vice-versa. Student assessment was two-fold. Firstly, each was ranked by faculty by a “generic assessment scores” form, based on knowledge (of the course material), technical ability and non-technical skills. Secondly, each student completed a multiple-choice questionnaire, based on the course material. Successful students received a “certificate of completion”. Faculty was assessed by students for all course components using anonymous four point satisfaction scale with option for free text reporting.

**The critical care course**

Three faculty members delivered this course: Fanus Dreyer (course director) Jonathan Hannay and David Ball. The critical care course is based on two delivered in Awassa, Ethiopia by faculty members. It was primarily developed by Fanus Dreyer, subsequently adapted and revised by faculty. This is the 8th version.

The educational strategy for the course is based on two core principles.

*First*: systematic management of critically ill and injured patients based on assessment and treatment based on the “Airway-Breathing-Circulation” strategy.

*Second*: the application if non-technical skills to improve decision making, teamwork and communication in complex, risky and time-sensitive situations.

The Critical Care Course curriculum is shown in Appendix 3. It consists of a mix of lectures, demonstrations, scenario teaching, tutorials and practical work for students. Nurse observers were given access to all educational opportunities. All met together
for lectures and in three groups for the other components. The syllabus was deliberately tailored for the working environment of the students with emphasis on pragmatic and practical responses based in context. Impractical, “high tech” solutions were not publicised.

Lectures covered Assessment of the critically ill surgical patient, Shock and haemorrhage, Surgical sepsis and SIRS, Spinal injury, Burns, Snakebite, Shock in paediatrics and obstetrics, Anaesthesia and Pain relief. These were delivered by powerpoint style presentation with laptop and projector supplied by faculty.

Tutorials. These were delivered to small groups (8 students, 2 observers) and covered Airway management, Surgical airway, Obstetric and paediatric resuscitation, Chest trauma, Hypoxia, Fluid therapy, Monitoring, Cardiac complications, Oliguria, Confusion, Adult and paediatric head injury, Pancreatitis, Wound management, Musculoskeletal trauma, Burns in children, Nutrition, Communication and Patient preparation.

Practical, “hands on” stations included CPR (using manikins), Handling of patients with spinal injury, Burrholes (using coconuts), Skin grafting and Communication.

Non technical skill teaching was specifically addressed by a practical station and tutorial communication with emphasis on the “SBAR” system. (this is an acronym Situation-Background-Assessment-Recommendation and is designed to enhance concise and clear communication). These principles were continually reinforced during the other components of the course.

Testing of the critical care component was done throughout the course and by MCQ at the end of the second day.

Results. All students successfully completed both the critical care and surgical components of the course, achieving a “certificate of satisfactory completion”

Feedback – student and observer feedback is shown in Appendix 4.

Course Faculty met during each day to review and revise if needed. Formal Faculty feedback in the form of reports by the Critical Care Course Director, this author’s initial report and by the Convenor is shown in Appendices 5, 6, and 7.

Challenges

Some issues mentioned by Faculty included time pressures to deliver the course content, gaining time for leave from jobs in the UK and the risk of illness from food and water-borne disease (two faculty were ill). Heat and fatigue was an issue. There were travel uncertainties and delay. The return flight was delayed by over two days and an unscheduled rescue flight took Faculty to South Africa to allow our journey home.

Future Plans

Subject to satisfactory review by the sponsors and hosts, we anticipate that this course be revised and newer versions be delivered to the host countries of COSECISA. Revision of the Critical Care component would consider greater emphasis on non-technical skills (communication, teamwork and decision-making),
reducing course content to account for student feedback, include more scenario-based teaching and training host country faculty.

A series of on-line, free review articles, based on the course curriculum has been commissioned by “Ptolemy”, an educational foundation programme of the University of Toronto [4]. Three articles are to be posted by the end of 2011. There is a future option to release the completed series as a manual to the World Health Organisation.

Summary

Improving patient safety has three components: “a guiding set of principles, a body of knowledge and a collection of tools” [3]. This pilot five day course was considered a success by all, students, observers and faculty. All completed the course and all students gained their Certificate of Satisfactory Completion.

All consider that the course be resourced and repeated.
References


4 [http://www.ptolemy.ca](http://www.ptolemy.ca) (accessed 10/1/11)

Appendices


2 Lane RHS. *Management of Surgical Emergencies*.


5 Dreyer F. *Management of Surgical Emergencies. Critical Care*

6 Ball DR. *Critical Care Course: Lusaka. Brief Report*

7 Lane RHS. *Evaluation Report. Pilot Course on the Management of Surgical Emergencies*. 
## Zambia: health profile

### Selected indicators (2009)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Country</th>
<th>Regional average</th>
<th>Global average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (thousands)</td>
<td>12,935</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Population living in urban areas (%)</td>
<td>36</td>
<td>38</td>
<td>50</td>
</tr>
<tr>
<td>Gross national income per capita (PPP int. $)</td>
<td>1,280</td>
<td>2,561</td>
<td>10,599</td>
</tr>
</tbody>
</table>

### Per capita total expenditure on health

- Average exchange rate (US$)
- 1995: 12
- 2005: 80
- 2010: 100

### DTP3 immunization among 1-year-olds

- Percentage
- 1990: 0%
- 2010: 80%

### Mortality and burden of disease

- **Life expectancy at birth (years)**
  - Male: 46
  - Female: 50
  - Both sexes: 48
- **Maternal mortality ratio** (per 100,000 live births)
  - Male: 620
  - Female: 670
  - Both sexes: 600
- **Prevalence of HIV** (per 1000 adults 15-49 years)
  - Male: 135
  - Female: 47
  - Both sexes: 80
- **Prevalence of tuberculosis** (per 100,000 population)
  - Male: 309
  - Female: 475
  - Both sexes: 201

### Distribution of years of life lost by causes (2008)

- **Communicable**
  - Country: 75
  - Regional average: 78
- **Noncommunicable**
  - Country: 15
  - Regional average: 15
- **Injuries**
  - Country: 10
  - Regional average: 7

### Distribution of causes of deaths in children under-5 (2008)

- **Other**
  - Country: 17
- **Diarrhoea**
  - Country: 15
- **Malaria**
  - Country: 15
- **Pneumonia**
  - Country: 15
- **Prematurity**
  - Country: 7
- **Birth asphyxia**
  - Country: 6
- **Neonatal sepsis**
  - Country: 6
- **Injuries**
  - Country: 3
- **Congenital abnormalities**
  - Country: 2
- **Measles**
  - Country: 1

### Children aged under-5 stunted

- Data refers to 2008.
- Last update: 4 April 2011.
### Zambia: health profile

#### Utilisation of health services*

<table>
<thead>
<tr>
<th></th>
<th>Contraceptive prevalence</th>
<th>Antenatal care (4+ visits)</th>
<th>Births attended by skilled health personnel</th>
<th>Measles immunization in 1-year-olds</th>
<th>Smear-positive TB treatment-success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>41</td>
<td>24</td>
<td>60</td>
<td>47</td>
<td>48</td>
</tr>
<tr>
<td>Regional average</td>
<td>44</td>
<td>60</td>
<td>69</td>
<td>85</td>
<td>88</td>
</tr>
<tr>
<td>Country</td>
<td>24</td>
<td>60</td>
<td>60</td>
<td>69</td>
<td>88</td>
</tr>
<tr>
<td>Regional average</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
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</table>

#### Population using improved water and sanitation

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Improved sanitation facilities</td>
<td></td>
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</tr>
</tbody>
</table>

**Place of residence**

- **X** Urban
- **★** Total
- **+** Rural

* Data refer to latest year available from 2000. For specific years and references, visit the Global Health Observatory at www.who.int/gho.

** For data sources and years, see the World Health Statistics 2011.

Last update: 4 April 2011.

#### Health workforce*

<table>
<thead>
<tr>
<th>Physicians</th>
<th>Nurses &amp; midwives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Female</td>
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<tr>
<td>Male</td>
<td>Female</td>
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</tbody>
</table>

#### Tobacco smoking (adults 15+) (2006)

<table>
<thead>
<tr>
<th>Country</th>
<th>Regional average</th>
<th>Country</th>
<th>Regional average</th>
<th>Country</th>
<th>Regional average</th>
<th>Country</th>
<th>Regional average</th>
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<tbody>
<tr>
<td>0.6</td>
<td>2.3</td>
<td>7.1</td>
<td>10.9</td>
<td>4.6</td>
<td>2.8</td>
<td>7.0</td>
<td>11.1</td>
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</table>

#### Obesity (adults 20+) (2008)

<table>
<thead>
<tr>
<th>Country</th>
<th>Regional average</th>
<th>Country</th>
<th>Regional average</th>
<th>Country</th>
<th>Regional average</th>
<th>Country</th>
<th>Regional average</th>
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<tbody>
<tr>
<td>31</td>
<td>83</td>
<td>91</td>
<td>84</td>
<td>89</td>
<td>88</td>
<td>94</td>
<td></td>
</tr>
</tbody>
</table>

#### Inequities in health service utilization**

<table>
<thead>
<tr>
<th>Country</th>
<th>Rural</th>
<th>Urban</th>
<th>Poorest 20%</th>
<th>Wealthiest 20%</th>
<th>Country</th>
<th>Rural</th>
<th>Urban</th>
<th>Poorest 20%</th>
<th>Wealthiest 20%</th>
</tr>
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MANAGEMENT OF SURGICAL EMERGENCIES

A course for Surgical Residents

To be hosted by

The Surgical Society of Zambia

17 – 21 OCTOBER 2011

at

LUSAKA UNIVERSITY TEACHING HOSPITAL

This is a new course designed by the Association of Surgeons of Great Britain and Ireland as part of their commitment to support COSECSA with their Educational and Training Programme.

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 will begin promptly at 08:30 each morning. Monday and Tuesday will be devoted to the management of the critically ill surgical patient and will involve lectures, demonstrations, DVD’s and practice of procedures, discussion of images and case studies, role play and, finally, critiquing each other’s performance.

All participants will be together for these two days but will be split into 3 groups for rotation through some teaching stations with each group being allocated a mentor for this part of the course.

Wednesday, Thursday and Friday will be run in a different manner. The participants will be divided into three groups with equal numbers in each which will allow for more supervised tuition.

On Wednesday, one group will spend all day devoted to general surgical emergencies whilst another will spend all day devoted to orthopaedics and trauma. Finally the last group will be divided into two, with one half spending the morning devoted to urological emergencies and the other to obstetric emergencies, with each swapping over in the afternoon.

The groups will switch over on Thursday and Friday such that they will rotate through all the specialties during the three days. Mini lectures, DVD’s, demonstrations, case scenario discussions and much “hands on” practical tuition will be the essence of these Specialty modules.

Assessment
All participants will undergo assessment throughout the course. On Tuesday afternoon there will be formal (summative) assessment of critical care knowledge through MCQs (multiple choice questions) and EMQs (extended matching questions). On Friday afternoon there will be formal assessment of knowledge of the surgical specialties (days 3-5) through MCQs.
During the critical care block, students will be assessed continuously on non-technical skills (e.g. communication skills, decision making, teamwork, leadership, enthusiasm and participation).

During the surgical, orthopaedic, urological and obstetric rotations participants will also be assessed on their technical skills.

Each participant will receive individual feedback on his/her strong and weak points.

A Certificate will be awarded to those who have satisfied the Specialty Leads with regard to their knowledge and competence. It is therefore important that each participant is punctual and attends every day of the course. The expectation is that participants who attend all the sessions and actively participate in the programme should learn enough to be in a strong position to pass the course.

Participants will be asked to complete an evaluation form at the end of the course.

RHS Lane, Convenor,
September 2011.
Welcome & Introduction 08h30

1. General Introduction to course by Mr Bob Lane
2. Introduction of students and faculty (ALL)
3. Allocation of groups (3 of 8) and mentors for critical care (FD, DB, JH)

1.1 Introduction to Critical Care: FD* 08h50
Lecture (15min)

1.2 Assessment of Critically ill surgical patient 09h05
Practical demonstrations by faculty (20 min) FD, DB, JH, Judy
Lecture (15 min) FD*

1.3 AIRWAY Practical Skills Stations 09h40-10h50

1.3.1 CPR:
1.3.1.1 ALS tutorial DB* 09h40-09h55

TEA 09H55-10H10

1.3.1.2 Practice CPR in 8 groups of 3(5 min/group) DB,CB 10h10-50

1.3.2 AIRWAY ADJUNCTS Tutorials 10h50-11h50
Rotate in 3 groups of 8 (20 minutes each) A→ B→ C...
A: Airway management skills  
ALL Students must demonstrate individually that they can do this

B: Surgical airway  
Indications; Technical points; risks; ?videos of crico, trache

C: Paediatric +Obstetric resuscitation/special requirements DB**

1.4 BREATHING  
11h50-12h50

Tutorials: Respiratory problems in Surgery

1.4.1: Chest Trauma: life threatening respiratory injuries  
11h50
Lecture: Trauma related causes of breathlessness: show CXR of each, Q&A on treatment; short video’s. (40 min)  
JH*

1.4.2: Hypoxic post-op patient  
12h30
Tutorial on physiology of oxygen transport and pathophysiology of hypoxia; to follow logical sequence when solving cause of hypoxia. (20 min).  
FD**

LUNCH  
12h50-13h30

1.5 CIRCULATION  
13h30-15h30

1.5.1: Shock & Haemorrhage lecture  
13h30-14h00
Scenario based Q&A lecture to illustrate critical points. Main focus is to understand pathophysiology and need to effectively intervene early.

1.5.1.1: Shock in Obstetrics and Paediatrics DB 14h00-10
1.5.2 Cardiovascular Practical scenario’s: 14h10-15h10
Rotate in 3 groups of 8 (20 minutes each)  DÆEÆF...

D: Fluid therapy  JH*
Requirements (normal post-op; special situations), fluid types, etc

E: Monitoring in critical care  DB**/Craig

F: Cardiac complications  FD/DB**
Acute cardiac failure and Inotropes; post-op MI; arrhythmias [AF, VT]

1.5.3 Tutorial: Oliguria in Surgery  FD** 15h10-15h30

TEA  15h30-15h45

1.6: DISABILITY  15h45-17h00

1.6.1 Tutorial: Confusion in Surgical patients  FD 15h45-16h00
DIMTOP = a simple mnemonic I teach to help students think of all the critical causes of confusion, especially hypoxia and hypoglycaemia. (15 min).

1.6.2: Head Injuries: Tutorials  16h00-17h00

1.6.2.1 Mechanisms of head injury, Imaging, Pathophysiology; Physiological support and prevention of secondary brain injury.  JH** 16h00-16h35

1.6.2.2 Paediatric aspects of head injuries  DB 16h35-16h45

1.6.2.3 Burr holes: Indications, risks  PG/FD* 16h45-17h00

FEEDBACK DAY 1  17h00-17h20
Open discussion with mentors: In 3 groups of 8 (Mr Lane to attend if possible).
DISABILITY (continued) 08h00-12h30

1.6.3: Spinal cord injuries: 08h00-09h00

G: Lecture (30 min)

Assessment of Spinal Cord Injuries, Risks, Complications & Safe Transfer of patients with serious head or spinal injury.  FD

H: Practical (30 min)

Handling of patients with potential spinal injuries: JH, DB, FD

Practice Log roll, transfer to and from trauma board etc.

5 MINUTE BREAK

1.7: SURGICAL SEPSIS 09h05-10h35

1.7.1 Lecture: FD 09h05-09h35

Scenario-based: pathophysiology, SIRS, principles of organ support and management of septic focus

1.7.1 Tutorials: Potential triggers of SIRS 09h35-10h35

Rotate in 3 groups of 8 (20 minutes each) K→L→M...

K: Musculoskeletal trauma complications: FD**
Fat embolism, Compartment syndrome, Myoglobinuria
**L:** Surgical wounds & Stoma complications  
**M:** Pancreatitis

**TEA**  
10h35-10h50

1.7.2 *Snakebite: Lecture*  
*FD* 10h50-11h15

1.8 **BURNS**  
11h15-12h30

1.8.1 *Burns Lecture*  
*JH**/SM 11h15-11h45  
Mechanisms of injury, pathophysiology, severity assessment (calculations of depth and surface area), Resuscitation, especially fluid requirements

1.8.2 *Tutorials*  
11h45-12h30  
Rotate in 3 groups of 8 (15 minutes each)  
N → P → Q...

**N:** Burns in Children  
*SM(FD**)  

**P:**Extras: infection, nutrition, contractures, rehabilitation  
*JH(FD**)  

**Q:** Skin grafting, Escharotomy  
*FD**

**LUNCH**  
12h30-13h10

1.9 **Practical Stations**  
13h10-14h40

Rotate in 3 groups of 8 (30 minutes each)  
R→ S→ T...

**R:** Burr Holes Practical  
*PG/FD*

**S:** Skin grafting Practical  
*SM*

**T:** Anaesthesia Tutorial  
*DB*

Ketamine; Local and Regional anaesthesia
1.10 Anaesthesia related topics: Tutorials 15h00-15h45
Rotate in 3 groups of 8 (15 minutes each)  U → V → W...

U: Pre-operative patient preparation  JH**/CB
V: Pain relief  DB
W: Communication [SBAR-scenario’s]  FD*/Judy

1.10 Patient Safety in Surgery (Lecture)  FD* 15h45-16h25
Covers WHO checklist, Non-Technical Skills, Audit of Outcomes

5 MINUTE BREAK

TEST  ALL***  16H30-16H50

FINAL SUMMARY  FD**  16h50-17h05

FEEDBACK  ALL  17h05-17h30
Individual feedback to students from mentors (in 3 groups of 8); Feedback forms to be completed by students, etc.

(END CRITICAL CARE PART OF COURSE)
STUDENT FEEDBACK RESULTS

ASGBI-COSECSA
Zambia 2011
Feedback by sub-course

- Critical Care
- General Surgery
- Orthopaedics
- Obstetrics & Gynaecology
- Urology
- Nurses.
Student feedback

CRITICAL CARE
Airway tutorials

- Very dissatisfied: 0
- Dissatisfied: 0
- Neutral: 1
- Satisfied: 9
- Very satisfied: 13

Chest trauma

- Very dissatisfied: 0
- Dissatisfied: 0
- Neutral: 4
- Satisfied: 9
- Very satisfied: 11
Post-op hypoxia

- Very dissatisfied: 0
- Dissatisfied: 0
- Neutral: 2
- Satisfied: 14
- Very satisfied: 8

Shock

- Very dissatisfied: 0
- Dissatisfied: 0
- Neutral: 2
- Satisfied: 12
- Very satisfied: 10
Cardiovascular support in critical care

Oliguria
Spinal Cord

- Very dissatisfied: 0
- Dissatisfied: 0
- Neutral: 1
- Satisfied: 6
- Very satisfied: 15
Surgical Sepsis

Triggers of SIRS
Burr Holes

Skin Grafting
What was very good?

The group discussions & demonstrations
The individual attention paid to all the class members
Content, summarizing
The zeal and commitment of teachers to teaching. The demonstrations during teaching.
The course content
Timing was good. Alternating between lectures and tutorials kept us awake.
The combination of theory and practical demonstration. Very good linkage of information.
The practical session in groups. The communication skills of the speakers.
It was very interactive.
The lecture on surgical sepsis. SBAR communication was eye opening.
The SIRS component was very good and helped me understand what was happening in my pts.
The practical aspects attached to the above topics. Real-life situations used as examples.
BLS+ALS. SBAR. Skin graft. Burrhole.
Very good course all round. Excellent team - good teachers, approachable, non-judgemental, helpful.
Skin grafting, SBAR, safe surgery, Burr holes and spinal cord injuries.
The discussion & demonstration.
The practical sessions give a hands-on experience which made learning better.
Interactive hands-on approach. Facilitators are very approachable & actively encourage participation.
1. Re-emphasis of points..., 2. Practicals very helpful to..., 3. good range of topics.
The alternating of tutorials and practicals sessions during the training helps cement concepts learned.
Surgical sepsis, shock, and SBAR communication.
SBAR, pain management, anaesthesia.
ALS & CPR.
All went very well. Please keep it up.
What could be better?

<table>
<thead>
<tr>
<th>Topic</th>
<th>Suggestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time management and tea breaks</td>
<td>Time. Need a lot more time to cover critical care component.</td>
</tr>
<tr>
<td>Facilitation, time management</td>
<td>Limited time for some demonstrations.</td>
</tr>
<tr>
<td>The timing of some tutorials was not adequate.</td>
<td></td>
</tr>
<tr>
<td>More depth into subject matter</td>
<td></td>
</tr>
<tr>
<td>A few more breaks. More practical sessions.</td>
<td></td>
</tr>
<tr>
<td>To elaborate further with diagrams and more scenarios.</td>
<td></td>
</tr>
<tr>
<td>The lecture on anaesthesia was not very detailed.</td>
<td></td>
</tr>
<tr>
<td>The monitoring course could be much better, more lively.</td>
<td>Cardiovascular support in cc should be better done with more preparation for the presenter.</td>
</tr>
<tr>
<td>Reduce lectures and increase practical sessions after lunch.</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular lecture too rushed and not concise.</td>
<td>More time should be allocated to it. More practice for participants: skin graft, burr hole.</td>
</tr>
<tr>
<td>Some stations rushed, not everyone gets a turn.</td>
<td></td>
</tr>
<tr>
<td>Reducing on speed of presentations.</td>
<td></td>
</tr>
<tr>
<td>The programme was very compressed, need for added time.</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular should have taken into account the rarity of ECG at UTH.</td>
<td></td>
</tr>
<tr>
<td>1. more time for practicals, 2. lecture notes.</td>
<td></td>
</tr>
<tr>
<td>If time allocation for tutorials could be increased to allow extensive discussion.</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular support.</td>
<td></td>
</tr>
<tr>
<td>Cardiac complications of surgical patient.</td>
<td></td>
</tr>
</tbody>
</table>
Other comments?

<table>
<thead>
<tr>
<th>Make sure the lecturer is in control. I noticed times when some student tried to teach. Not good at all!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course is well structured however needs more time allocation with emphasis on practical aspects.</td>
</tr>
<tr>
<td>Spreading the critical care theoretical part over the 5 days - mornings for lessons / tutorials and afternoons for practicals.</td>
</tr>
<tr>
<td>Course was worthwhile and very beneficial. Presenters were very clear. Learnt a number of things that I never knew.</td>
</tr>
<tr>
<td>Keep it up!</td>
</tr>
<tr>
<td>The course is very helpful and educative and applicable. Please continue the good work. Include post-op care and evaluation / assessment as well.</td>
</tr>
<tr>
<td>Overall the critical care component was an eye-opener to things that we take for granted in daily practice.</td>
</tr>
<tr>
<td>Very helpful course content.</td>
</tr>
<tr>
<td>Day2 better than Day1. More practical time needed. 15 min not enough.</td>
</tr>
<tr>
<td>Generally, the course was very helpful to my career. The tutorial on communication was of great help.</td>
</tr>
<tr>
<td>1. section on cardiovascular should be revised. Make it relevant.</td>
</tr>
<tr>
<td>Very comprehensive training and well conducted.</td>
</tr>
<tr>
<td>Could consider skin graft tutorial be removed and increase time on sepsis / SIRS and shock tutorials.</td>
</tr>
<tr>
<td>Good practicals.</td>
</tr>
<tr>
<td>I wish such training to be more frequent in other surgical areas eg vascular, and ICU. Thanks for every bit of the training.</td>
</tr>
</tbody>
</table>
Student feedback

GENERAL SURGERY
Blast Injury

Thoracic Trauma
**Abdominal Trauma**

- Very dissatisfied: 0
- Dissatisfied: 0
- Neutral: 0
- Satisfied: 7
- Very satisfied: 16

**Intestinal Obstruction**

- Very dissatisfied: 0
- Dissatisfied: 0
- Neutral: 0
- Satisfied: 10
- Very satisfied: 14
Upper GI Bleeding

Vascular Repair
What was very good?

I enjoyed all the sessions today. Informative and gave practical knowledge and advice while practicing procedures.
Abdominal trauma. Colostomy (and ileostomy stump)
Abdominal trauma lecture and practical were very good.
The demonstrations were good including the patience of teachers to students.
Was practical and straight to major points.
The practical sessions.
It was more practical and goal oriented.
All except for vascular repair.
Enjoyed obstruction and upper GI bleeding especially the V-Y advancement flap pyloroplasty.
The practical demonstration on the pig was very helpful.
The physiology behind the trauma, and reason for each particular intervention.
All excellent. Good hands on. Loved the abdo stuff. New tricks learned all round.
The use of a pig as a dummy.
Practical training programme. Theory and practical sessions well balanced. On hands experience and mentoring very good. Adaptability of training to mix of students: the group.
Suturing hepatic lacerations, ICD insertion, colostomy.
Very practical course with practical approach to the subject. Work with the pig helped emphasise the points & enabled practice. The teachers were straight to the point and highlighted important points.
Sessions were brief and brought out the important clinical applications.
The fact that there was 'Mr Piggie' simulating a human body.
Practical experience very interactive with good teaching aid.
Upper GI bleeding.
Practical sessions & facilitation
The laparotomy demonstration. The clear explanations during the lectures.
What could be better?

It would have been nicer if we had more specimen for each of us to have a go at each procedure.
Bowel reanastomosis was not done under intestinal obstruction.
Vascular repair video.
A component on bowel anastomosis would come in handy.
Giving an opportunity to everyone to perform tasks.
More models for all participants to participate.
Intestinal obstruction - you could have included bowel resection and anastomosis. Blast injury could have included the face.
Vascular repair.
Include more on thoracic trauma management.
More models on the management of upper GI bleeding would be beneficial.
More practical sessions on vascular repair. It's a common finding in most RTA victims.
It would be good to do a practical on how to open the chest. Pts with chest trauma don't do well here. We do chest drains all the time but don't know what to do for major chest bleeding. Worth opening or not?
Ensuring each student got a feel of the pig. Anastomosis of bowel within the pig abdomen.
Would have liked to be taught bowel anastomosis because it's something we often are expected to do. Also would loved to have see how a splenectomy is done & practice it.
More practice. We all worked on one pig. Wider topic range to cover more of the emergencies we face, bowel anastomosis,
Addition of a session on bowel anastomosis would not be a bad idea. Maybe going through basic surgical skills too.
4 people per table / specimen - visualising was not so adequate.
More time to be allocated.
Content of the presentations.
More specimens in order to allow more practice at the same time. More time for questions.
The tutors were very interactive and casually approachable which makes learning easier and fun.
It was great to learn about the dysfunctional stump ileostomy.
All I have to say is much of my thanks for the skills imparted so far. Hoping to learn more from you.
Enjoyed workshop offered.
Keep it up!!
The rich clinical experience of the faculty was evident and very beneficial.
I wouldn't mind to do this course over and over again. Repetition is the cornerstone of learning.
Well organized training. Many thanks.
More specimens: maybe goats or porkers so every person gets to put a colostomy, laparotomy.
Otherwise excellent facility, patient, and eager to teach.
Should address aspects of surgical team in emergencies. Had a very good time in the course. Can't thank you enough.
Thank you for the lessons.
Other wise a very good teaching session: far more than we experience here.
Good overview of the topics however, would like more detailed content & more practicals.
The teaching was very clear, thorough, and applicable. Please keep up the good work.
Student feedback

ORTHOPAEDICS
Internal Fixation

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
</tr>
<tr>
<td>Satisfied</td>
<td>4</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>21</td>
</tr>
</tbody>
</table>

Tendon Repair

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
</tr>
<tr>
<td>Satisfied</td>
<td>1</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>24</td>
</tr>
</tbody>
</table>
What was very good?

Use of skin traction, Thomas splint, and lag screw.
The supervision was very good and was comfortable enough to ask questions. Supervisors are very patient and ensure we understand.
The simplicity of demonstrative skills by the tutors.
There was time to attend to every individual student. Individual attention was good.
The models; the actual tendon repair has given me confidence to perform a repair.

Very practical and interesting training. Very useful for career development and emergency management. Well arranged for hands-on experience. Many new things learnt.

Excellent teaching. Great hands-on experience. Relevant for our setting.
Very practical, and easy to follow through.
Every practical session was very good. The patience of the teachers was very excellent.
The plate and screwing was very, very good.

All the topics were brief and to the point. It was very practical.

Very practical course. Very relevant material. Material given in a very colleague-like manner.
Session very practical, excellent guidance, faculty very patient and willing to help & assist.
The practicals were very practical and everyone got to participate.
The discussions and the many demonstrations were well presented.

Tendon repair
Facilitation & mentoring.
The sessions were very practical
The ability to practice all topics today.

All went very well.
Practical & participation opportunities available.

Tendon repair
Tendon repair

Very interactive & practical. Well explained principles.
The tendon repair, external & internal fixation. This session was very practical and interactive.
The lectures were rather packed in terms of information. Will be nice to bring out just basics of the practical sessions. More time. A whole week of orthopaedics would be enjoyable.

A bit more time to allow data to sink in.

I would appreciate it if there could be diagrams for fasciotomy, as handouts. Provision of notes (lecture notes) will complete the training and serve as guide for further reading.

Not much!

More time allocated to the session.

Everything was well done

More of such workshops to impart more skills and experience.

Keep up the good work. Such presentations should be more often to help us with knowledge and practical application.

More time. Could do over several days. Practicals with closed reductions. ?real patients.

We require more time for it.

Time was short: it should have been longer.

Period would be longer.

More time to allow for practicing on more internal fixators i.e. different types of plates, K-nailing etc.

N/A

To incorporate techniques commonly used at participants station eg - K-nailing.

To include nerve injury repairs.

The literature component: if it could be given in advance.

Include nerve repair as well.

It was very good overall and has little to change.
I would recommend for help to our institution for teaching aids like we had today. Improves confidence and experience. Enjoyed the course. I learnt new things to make my work easier. Finally understand the concept of internal fixation and lag screws.

Keep it up, and more medical officers need to be trained - especially those who work in General and District Hospitals. It would be very beneficial to attend an ortho theatre session to see the techniques applied on actual patients (internal & external fixation)

Very relevant training especially at the beginning of surgical training.

Really enjoyable day.

Feel more equipped to do a lot of things.

The trainers in this session were extremely clear, patient, and very good. Kindly keep it up!

The period could be more of the time and days.

Thanks very much.

Really enjoyed this.

Enjoyed the sessions & congratulations to both surgeons.

The teachers are very willing to teach even the slow learners with no criticism.

One of the best days of the program.

Need some more video.

Keep it up.

I've very much appreciated everything. Keeping it to practical level actually absorbs the skills into the brain. Training of this technical nature should be in this direction.

The composition of the course was very good and of great benefit to me as a future general surgeon.

It was a very good session.

Dr Yogesh & Naidu are very good teachers and patient.
Student feedback

OBSTETRICS & GYNAECOLOGY
Very dissatisfied | Dissatisfied | Neutral | Satisfied | Very satisfied
---|---|---|---|---
Traumatic PPH | 0 | 1 | 3 | 8 | 10
Caesarian Section | 0 | 0 | 5 | 5 | 13
Shoulder Dystocia

<table>
<thead>
<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neutral</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>22</td>
</tr>
</tbody>
</table>

Breech Presentation; Twins

<table>
<thead>
<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neutral</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>
What was very good?

The demonstrations were lively and good.
Breech presentations.
Practical sessions very helpful. Choice of topics wide and relevant.
Practical sessions made the informations very applicable.
Facilitation.
The practical demonstrations.
Sessions very practical & faculty very helpful: open & easy to relate to.
Yes it was very good.
The caesarian section tutorial was very good.
Atonic PPH
Interactive & practical sessions.
The practical session on B-Lynch.
Demonstrations on shoulder dystocia and neonatal resuscitation.
All went well.
Practical & precise.
The sessions on symphysiotomy and atonic uterus were informative. Good interaction.
Demonstrative skills were very clear and interactive.
The use of the manikins.
Explanations were simplified and to the point. Simple manoevers were taught that make a huge difference in saving both mother & baby's lives.
Very balanced theoretical and practical training.
The models & the hands-on sections were very good.
Things that are considered simple... are actually the most important. Good emphasis.
The whole course was excellent. Supportive teaching. Hands-on was great. Things are nicely broken down to 'do-able' steps.
How to deliver a baby with shoulder dystocia and management of cord prolapse.
What could be better?

More time allocated to the session.
Some videos.
Add things like hypertension or seizures - what to do initially.
Include a practical session on caesarian section to handle some challenges that come up.
Content on some topics.
More time to be allocated for questions and answers.
More time for practice.
Obviously a real demonstration but under the circumstances it was good.
May be you should try to include cervical tears on PPH.
The course provides adequate information on obstetric emergencies.
Include subtotal hysterectomy.
More models and more time for practical sessions.
More models for practice.
More time.
Probably a section on gynae emergencies such as ectopic pregnancy would be good.
Video presentations would be an added advantage.
Could appreciate more clinical scenarios looking at the various emergencies.
Other comments?

<table>
<thead>
<tr>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very nicely organised material.</td>
</tr>
<tr>
<td>Brief and well structured presentations.</td>
</tr>
<tr>
<td>Excellent work. Please team, keep up the good teaching work.</td>
</tr>
<tr>
<td>If I weren't an orthopaedic surgeon OBS would be my choice if faculty</td>
</tr>
<tr>
<td>were like you both.</td>
</tr>
<tr>
<td>I am an orthopaedic but if obs emergency arises I can surely manage.</td>
</tr>
<tr>
<td>Gives me confidence.</td>
</tr>
<tr>
<td>Allocate more time to obstetric haemorrhage.</td>
</tr>
<tr>
<td>Please thanks so much, but try to add more topics in obstetrics and</td>
</tr>
<tr>
<td>some on gynaecology.</td>
</tr>
<tr>
<td>This session has helped revise obstetric emergencies.</td>
</tr>
<tr>
<td>Keep it up and teach more people especially in the rural districts</td>
</tr>
<tr>
<td>where there are, most of the time, no obstetricians.</td>
</tr>
<tr>
<td>Appreciated the fact that they were concise and to the point.</td>
</tr>
<tr>
<td>Very good mentorship. Thank you.</td>
</tr>
<tr>
<td>Presenters were encouraging and interesting.</td>
</tr>
<tr>
<td>More time and more hands-on experience.</td>
</tr>
<tr>
<td>So sorry Mike was not feeling well.</td>
</tr>
<tr>
<td>The content was good especially for me in general surgery training.</td>
</tr>
</tbody>
</table>
Student feedback

UROLOGY
Very dissatisfied | Dissatisfied | Neutral | Satisfied | Very satisfied
---|---|---|---|---

Urethral Catheters

Suprapubic Catheters
Renal Colic & Urosepsis

Scrotal Emergencies
**What was very good?**

<table>
<thead>
<tr>
<th>Faculty were very clear and concise. Enjoyed the practical part: real feel for procedure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. More hands-on with practicals, not enough time to practice</td>
</tr>
<tr>
<td>2. The scenarios ... topics interesting.</td>
</tr>
<tr>
<td>Yes it was very good.</td>
</tr>
<tr>
<td>Facilitation.</td>
</tr>
<tr>
<td>Priapism &amp; bladder injury.</td>
</tr>
<tr>
<td>The scenarios &amp; practical sessions.</td>
</tr>
<tr>
<td>Absolutely precise &amp; practical sessions.</td>
</tr>
<tr>
<td>The sessions were very informative and specially enjoyed bladder injury and scrotal emergency.</td>
</tr>
<tr>
<td>The topics are well good.</td>
</tr>
<tr>
<td>Very interactive &amp; practical.</td>
</tr>
<tr>
<td>Sessions were very practical.</td>
</tr>
<tr>
<td>Illustration of bladder repair and suprapubic catheterisation.</td>
</tr>
<tr>
<td>The first 3 tutorials (catheters &amp; urosepsis).</td>
</tr>
<tr>
<td>Enjoyed principle in urethral catheterisation.</td>
</tr>
<tr>
<td>Good enthusiastic teaching with hands on.</td>
</tr>
<tr>
<td>Huge volume of information compressed well and adapted well to our group.</td>
</tr>
<tr>
<td>Urologist simplifies things and makes us group facts easily.</td>
</tr>
<tr>
<td>Demonstrations</td>
</tr>
<tr>
<td>The talk was very good.</td>
</tr>
<tr>
<td>New information was given that is very helpful.</td>
</tr>
</tbody>
</table>
What could be better?

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>More specimens</td>
<td>so everyone has a go at it. Session on first 3 topics too long esp that it was more of a lecture.</td>
</tr>
<tr>
<td>More time to practice</td>
<td></td>
</tr>
<tr>
<td>Yes if there could be several samples e.g. bladders and scrotums</td>
<td>so that everyone can practice at the same time.</td>
</tr>
<tr>
<td>Content on some topics was superficial.</td>
<td></td>
</tr>
<tr>
<td>More time</td>
<td></td>
</tr>
<tr>
<td>Limitation with time</td>
<td></td>
</tr>
<tr>
<td>Light in the room</td>
<td></td>
</tr>
<tr>
<td>Full demonstration of the Winter's shunt in the management of priapism.</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>More time for urology practical</td>
<td></td>
</tr>
<tr>
<td>Last day training shouldn't be compressed.</td>
<td>Extra provision for last day so as not to miss out on any practical exercise.</td>
</tr>
<tr>
<td>More time was needed</td>
<td></td>
</tr>
<tr>
<td>More scenarios</td>
<td></td>
</tr>
<tr>
<td>More time to practice scrotal emergencies would have been great.</td>
<td></td>
</tr>
<tr>
<td>More time: a whole day of urology, not an afternoon.</td>
<td></td>
</tr>
<tr>
<td>Comment</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Practical session should be longer. Urological session requires all day not rushed due to lack of time.</td>
<td></td>
</tr>
<tr>
<td>Well structured course.</td>
<td></td>
</tr>
<tr>
<td>It's good. Am glad I came and it gives me confidence to do urological emergencies.</td>
<td></td>
</tr>
<tr>
<td>Course is good, however, will need more time &amp; practical sessions.</td>
<td></td>
</tr>
<tr>
<td>The course is very well structured and ideal for my practice.</td>
<td></td>
</tr>
<tr>
<td>Sincere thanks to all. Kindly make this annual for the next 3-5 years.</td>
<td></td>
</tr>
<tr>
<td>This course has been very practical.</td>
<td></td>
</tr>
<tr>
<td>Increase more of the topics. Thanks a lot.</td>
<td></td>
</tr>
<tr>
<td>The tutorials were very eye-opening and very inspiring.</td>
<td></td>
</tr>
<tr>
<td>Improve on practical time so that we could all have a go on it.</td>
<td></td>
</tr>
<tr>
<td>Huge field to cover in one afternoon.</td>
<td></td>
</tr>
<tr>
<td>Very good practical training and mentorship.</td>
<td></td>
</tr>
<tr>
<td>Consultant urologist is simply excellent.</td>
<td></td>
</tr>
<tr>
<td>Keep it up!!</td>
<td></td>
</tr>
<tr>
<td>The Indian consultant was very exciting and encouraging.</td>
<td></td>
</tr>
<tr>
<td>Enjoyed the course. Found it beneficial.</td>
<td></td>
</tr>
</tbody>
</table>
Nurse feedback

NURSES
What was good?

The lectures and practical sessions.
Most topics were very much helpful in our daily nursing care of the patients eg. Burns & management, surgical sepsis & head injuries.
Explanations of conditions and how to manage them in an emergency.
The day was OK. We learnt a lot except time was short for some sessions.
What could be better?

Lectures were too fast and compact.
It could be better if the facilities are available eg. Better ambulance facility and good staffing.
To reduce your speed of teaching so that everyone understands well.
Demonstrations and practical sessions were well explained & organised. The tea breaks and teaching methods were okay.
**Other comments?**

<table>
<thead>
<tr>
<th>Doctors &amp; nurses work together therefore it is important to acquire the same knowledge for smooth running of operative procedure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshops of the same nature to be extended to those who haven't attended and better facilities to be secured if possible for us to tender critical care to patients.</td>
</tr>
<tr>
<td>We are so thankful that we were included as observers in this workshop and learnt quite a lot. We really appreciate the gesture. We only hope you will call for more workshops.</td>
</tr>
<tr>
<td>What could be better is to lengthen the theory and practical demonstrations from 2 days to 3 days to avoid too much compacted work in a session which makes participants lose concentration at some point.</td>
</tr>
</tbody>
</table>
“Overall the critical care component was an eye-opener to things that we take for granted in daily practice.”
“The rich clinical experience of the faculty was evident and very beneficial.”
“I wouldn’t mind doing this course over and over again.”
“Very practical course ... Work with the pig helped emphasize the points & enabled practice. The teachers were straight to the point and highlighted important points.”
“Finally understand the concept of internal fixation and lag screws.”
“The whole course was excellent. Supportive teaching. Hands-on was great. Things are nicely broken down to 'do-able' steps.”
“If I weren’t an orthopaedic surgeon OBS would be my choice if faculty were like you both.”
“The Indian consultant was very exciting and encouraging.”
“More time, more time, more time!”
“Sincere thanks to all. Kindly make this annual for the next 3-5 years.”
Thank you.
The critical care course component for surgeons in training was well received by all 24 participants (students), with consistently high rankings of the course components. All students successfully completed the course and passed their MCQs.

The inclusion of nurse observers added to the educational reach. Their participation was especially welcome during the session on communication skills (SBAR).

All three core faculty members for critical care are honoured to have been part of this. We are indebted to ASGBI and Mr Bob Lane for placing trust in us. In spite of some hitches and stressful events it has been a real pleasure to teach this course.

What went well:

1. All students turned up for the course on time.
2. Students were enthusiastic and keen to learn.
3. Faculty were well prepared, know each other well and are familiar with the course content.
4. The introduction, allowing students to say something about themselves and indicating their village/town of origin on a map, worked very well to break the ice and relax everybody. It also led well into the introduction on critical care.
5. The content was relevant to learning needs and students' clinical practice.
6. A full set of topics in critical care was covered, not unlike that covered in UK based critical care courses. The content (topics and scenarios) had been adapted to an African context as much as possible.
7. A systematic system following ABCD worked well for the course syllabus.
8. The programme ran reasonably on time and did not finish too late.
9. Excellent lunch was served both days.
10. Martha, Dr Munthali’s secretary, and her assistants were of tremendous help in managing last-minute administrative matters.

11. Feedback on course contents was very positive, with one or two pockets that need to be reviewed.

12. The ALS practical station was highly rated.

13. The SBAR communication station with real-life scenarios to practice was very much valued. The concept of assertive but non-aggressive communication was an eye-opener for many students. They discussed respect and stopping humiliation in the workplace. Some felt that they could take these concepts forward to create a different way of talking to each other and colleagues, i.e. bring behavioural change. Students felt that the scenarios selected were very real for their working environment.

14. Students were very helpful in completing feedback forms and non-technical assessment forms on each other.

15. Faculty enjoyed teaching these students.

**What did not go well enough:**

1. The programme was too full. This was in large part due to adding topics or stations linked to practical surgery e.g. burr holes, skin grafting, traction for spinal fractures.

2. Some of the critical care focus was lost for sections of the course due to this.

3. The course content was too much for 3 core faculty.

4. The distance between practical station rotations was too far and these sessions all overran. Students then felt that the teaching to every group at each station was not equivalent.

5. The lecture room was very crowded and very hot. During interactive lectures it was also too difficult for the lecturer to get close to some students due to the room layout.
6. There were not enough faculty for 24 students; mentored groups of 8 were too large and the tutors never got to know the students well enough.

7. Some tutorials were actually mini-lectures.

8. For me (JSD) all the work to prepare for assessment in the surgical specialties interfered with my interaction with the students; I was never able to talk to them during tea or lunch time. Some MCQs for surgical specialties were only received after the CC course had started which made it impossible to prepare the specialties' test in advance.

9. At the end of day one the CC faculty arrived tired, hot and sweaty at the hotel. We were made to sit down at a feedback meeting immediately which was not considerate enough. It would have been more productive to wait 30 minutes, allowing us to change clothes, have a quick shower or swim, get a cold drink and gather our thoughts. At the end of day 2 there was no time for a feedback meeting (when it would have been more valuable) due to an early evening dinner appointment off site. These two events made me specifically feel under extra peer pressure which was not productive.

10. Due to the student-tutor ratio and other time pressures faculty did not leave with a clear global view of each student’s knowledge and insight.

To retain in future courses:

1. The two day format.

2. The core course curriculum.

3. The systematic approach to assessment and management.

4. The mix of lectures, tutorials, demonstrations and practical stations.

5. The option of a stand-alone course or one integrated with surgical specialties.

6. The opportunity for ICU/HDU/Admissions unit nurses to attend as observers.

7. The option to modify course content and delivery for surgical trainees, nurses or health/clinical officers.

8. A validated form of student assessment.
9. Student feedback forms.

**Changes for future courses:**

1. Minimum core faculty must be four: to reduce individual workload; to always have at least one faculty member floating for timekeeping and to have an overview of progress; to provide contingency in case of illness.

2. Students will then be maximum 6 per mentor and per practical station which will allow more personal interaction and tuition.

3. Slow down the whole two days through curriculum review.

4. Keep contents to critical care core, i.e. teach students how to look after ill surgical patients without getting into the detail of surgical management. Examples from clinical surgery e.g. pancreatitis, wounds and stomas exist to illustrate principles of critical care support and are not for discussion of surgical management. This means probably taking out burr holes, skin grafting, some aspects of burns management, possibly snakebite.

5. Review of stations that had poor feedback, e.g. cardiac complications, monitoring. Redesign or rewrite presentations and format of stations.


7. More time to practice communication scenarios and other non-technical skills.

8. Try to provide pre-course reading material, coupled to a pre-course MCQ.

9. Then change to continuous formative in-course assessment only.

10. Involve potential “host faculty” as observers and guest tutors to progress to full faculty members in future.

11. If course runs with surgical specialties, give at least a one-day break in between, e.g. run critical care Thursday-Friday or Friday-Saturday, with specialties starting on Monday.

_Fanus Dreyer, Dumfries, 12 November 2011_
The critical care course for surgeons in training was well received by all 24 course members, with consistently high rankings of the course components. All students successfully completed the course and passed their MCQ.

The inclusion of 6 nurse observers added to the educational reach.

I suggest we retain:

- The two day format
- The course curriculum
- The systematic approach to management
- The mix of lectures, demonstrations and tutorials
- The option of nurse observers
- The option of a stand alone course or one linked to the practical surgical course
- The relevance of the course to either medical, nursing or allied students
- The student feedback forms

I suggest we consider these revisions:

- Increase faculty to four: this reduces faculty workload to a reasonable level and provides contingency in the event of illness
- Reduce first day content – for example, remove or move “Monitoring”, “Burr holes”
- More scenario based teaching, especially for tutorials (many tutorials were lectures for a small group)
- Increase the “Non technical skill” components (eg SBAR, communication)
- Consider providing pre-course reading material; if so, provide a pre-course MCQ.
- If this course is linked to the practical surgery course, give students one day’s rest in between.
- Consider “host observers” as potential faculty in the future.

David Ball   October 2011
Evaluation Report

Pilot Course on The Management of Surgical Emergencies

There were 24 participants who scored an average of 8.7 out of 10 with a range from 7 to 10.

They all found the course useful and the following aspects were reported as being most useful – orthopaedics/trauma (10), critical care (8), general surgery (8), all (5), practical aspects (5), urology (5), obstetrics (2).

Five participants reported no least helpful aspects but those that were reported included vascular skills (3), orthopaedic plating (2), ICU (1), monitoring in critical care (1), CVS resuscitation (1), “ECG’s could have been better handled” (1), urology “too theoretical” (2), urology (1), “leave time for more urological emergencies” (1), O&G (1) and finally “parts where we would sit and listen for more than two hours – mind wandered” (1).

Suggestions for improving the course included:-

More practical sessions (3)
More time for O/G (2)
Shorten the final day because of MCQ’s (2)
Pre course material sent to participants (2)
Add a basic surgical skills element (2)

The following were mentioned once each:-

Intubation for neonates
ECG interpretation
More on chest trauma
Allocate more time to specific specialty
Theory given before practical sessions

More simulation on critical care scenarios
More critical care in general
Ventilation (mechanical)
Bowel resection
Nerve repair
General Paediatric emergencies
More pigs.

Other comments were highly complimentary and included the following:-

A very well organised course, excellent mentorship, practical sessions very good, learned beyond my expectation, should like to have this course every year, more time to be spent on communication skills, do the BSS first and tailor to specific grades of trainees.