



REPORT
ON THE
BASIC SURGICAL SKILLS COURSE
and preceding
TRAIN THE TRAINERS COURSE
held at
QUEEN ELIZABETH CENTRAL HOSPITAL,
BLANTYRE, MALAWI
8th to 10th April 2013

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The Association of Surgeons of Great Britain & Ireland

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HELP WITH OVERSEAS SURGICAL TRAINING

The Association of Surgeons of Great Britain and Ireland is keen to foster links with developing countries who would like assistance with surgical training and capacity development. We wish to encourage contacts between individuals and institutions in the UK and their counterparts in the developing world so that a range of surgical skills courses can be undertaken together with bedside teaching, formal lectures and, where appropriate, operative surgery. All courses will be monitored, assessed and evaluated.

We hope that by promoting a hub for the exchange of such information it will facilitate and improve communication to the benefit of all and smooth the way for a more co-ordinated approach to surgical training in the developing world.

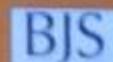
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Introduction

Faculty

Robert Lane – Convener

Paul Gartell

Serena Sabato Ceraldi

Paul Rowe

Jim Turner

This was the second of six such courses to be held as part of a Large Paired Institutional Partnership Grant (LPIP) between the Association of Surgeons of Great Britain and Ireland (ASGBI) and the College of Surgeons of East Central and Southern Africa (COSECSA) awarded by the UK Department for International Development (DFID) in 2012 and managed by the Tropical Health and Education Trust (THET). The goal of this grant is to enhance surgical outcomes across the COSECSA Region by means of multi-level training courses in order to increase the number of health workers competent to undertake emergency surgery.

This was our second visit to run a Basic Surgical Skills (BSS) course in Blantyre and so the venue at the Surgical Skills Lab, Queen Elizabeth Centre Hospital (QECH) and the personnel were well known to us. Dr. Wakisa Mulwafu was the local lead and organised all the requirements. However, it transpired that not all the instruments were available but we were able to get around this by sharing and using alternative options. The sutures required for the course were brought out from the UK. Communication with potential trainers and trainees was good and attendance was 100%.

Serena Sabato Ceraldi and Paul Rowe attended their first BSS course and their contribution was very much appreciated. We also had on site Jim Turner who is the current Orthopaedic Fellow at the Beit Cure Hospital. His contribution was excellent. Paul Gartell has been a stalwart of these courses for many years and his contribution is exemplary. Unfortunately there was no Theatre Nurse Training course on this occasion as Sister Judy Mewburn was not available due to family illness.

The aim of running a Train the Trainers (TTT) course is to allow sustainability of the BSS courses for the future. As it seems likely that COSECSA will make the BSS course mandatory prior to sitting the Membership of the College of Surgeons exam this will necessitate many **more** such courses throughout the Region and thus many **more** trained trainers to undertake these courses. Hence the rationale for our presence.

The assessment process has been improved since our last visit and the course is now fit for purpose. Dr. Wakisa Mulwafu organised a freshly sacrificed pig to be available for our use.

We were fortunate to have Dr. Jaymie Henry, a founder member of the International Collaboration for Essential Surgery, present together with two colleagues from South Africa, who filmed the TTT and BSS courses. The work they accomplished was outside the remit of the Grant and was financed separately.



Film Crew – Diego, Jaymie & James

Acknowledgements

I should like to acknowledge UK aid (DFID) and THET for their support, Dr. Wakisa Mulwafu for inviting us to Blantyre and for his assistance and hospitality throughout our stay, Johnson & Johnson Professional Export for awarding an educational grant to supply the sutures, The Royal College of Surgeons of England for their permission to use the BSS course DVD, Mrs Bhavnita Borkhatria Patel, ASGBI Project Manager (UK), for her assistance in booking the flights, general administrative duties and for arranging for the expenses to be reimbursed promptly, Mrs Jane Gilbert, (Executive Assistant to RHSL) for her excellent assistance and for keeping the preparation on course prior to departure, the visiting Faculty and also Jim Turner for their unstinting support, enthusiasm and hard work which made the TTT and BSS courses so successful.

A special acknowledgement to Dr. Jaymie Henry, James Carroll and Diego Ollivier for their support, patience and encouragement.

Itinerary

Outward journey

The visiting Faculty met at London Heathrow Airport at 17:15 on Friday 5th April and checked in at the Ethiopian Airways desk without problems. We were allowed two bags of up to 23 kg each and so there was no need to obtain extra allowance. ET 701 departed on time at 20:15. The flight was uneventful and arrived at Bole Airport, Addis Ababa at 06:15 on Saturday morning, 6th April. We had a three hour wait which went by quite quickly before ET 875 took off at 09:20 for Lilongwe, Malawi. We arrived on time at 12:30 and were met by Jacob Luciano who had arranged our ground transport in Malawi.

We drove from the airport to Kamuzu Central Hospital where we met the following:

- Dr. Carlos Valera – Consultant General Surgeon, Surgical Director of Kamuzu Central Hospital and Director of Surgical Training Program
- Dr. Leonard Banza – Consultant Orthopaedic Surgeon and Director of Orthopaedic Training Program
- Dr Sven Young – Consultant Orthopaedic Surgeon, Haukeland University Hospital, Bergen, Norway. Currently on a two year contract.
- Dr Gife Mulima – Senior Trainee in General Surgery and Trainee Representative.

We were shown around the hospital which was undergoing extensive refurbishment. It is spacious and relatively modern in pleasant surroundings. It certainly looked a more modern

hospital compared to parts of QECH in Blantyre. We had a long discussion concerning their needs which are quite extensive. There is only one Consultant General Surgeon to train 8 Residents. There are in addition two Orthopaedic Residents and on top of this there is the Undergraduate training to be undertaken. There are just not enough feet on the ground to do all this. They are keen to be involved in research but do not know how they can get time to do that either. They are therefore looking for links with Institutions in the UK (or elsewhere). I promised to take up their case with the Surgical Colleges in the UK and with THET.

We set off from Lilongwe at 15:00 and five hours later arrived at the Leslie Lodge in Blantyre.

Return journey

Serena returned to Lilongwe on Thursday 11th April to visit colleagues and friends and then met Paul Gartell and I to catch ET 875 on Saturday 13th April which departed Lilongwe at 13:10 with a one hour stopover at Lubumbashi before arriving in Addis Ababa, Bole airport at 20:20. We then had a long wait until ET 700 departed at 01:35 for London Heathrow arriving at 08:15 on Sunday 14th April. Paul Rowe left Blantyre on Thursday 11th April to spend time with his daughter on the Lake and returned to UK a week later.

Accommodation

We stayed at the Leslie Lodge where we had been during the last BSS course in 2011. We were very impressed then and were very impressed now. Ray and Lynne Finch were excellent and very helpful. It was like staying from home to home and we feel that they are good friends. All our rooms were very good and nothing was too much to ask for. The garden was fantastic and we wished we had more time to spend there. The rates were very reasonable.

On Sunday 7th April I went to meet to Jaymie and her two colleagues from South Africa at the Mount Pleasant Inn which is five minutes from the Leslie Lodge. I was introduced to James Carroll who is the Producer and Diego Olivier who is Director of Photography. We had a long chat and then transferred to the Leslie Lodge to meet the rest of the Faculty and then to TJ's Bar, five minutes away, for lunch. We seemed to spend the afternoon talking about Africa, surgery and our aspirations. That evening we went to Chez Maky for dinner and thence an early night.



View of Leslie Lodge



A friendly Duiker who visited during breakfast!

Train the Trainers Course
for
The Basic Surgical Skills Course

Monday 8th April

6 Trainers

Name	Hospital	Specialty	Post Held
Christopher Finye	Malawi College of Health Sciences	Gen. Surgery	Lecturer in Surgery
Tiyamike Chilunjika-Kapalamula	QECH	Paed. Surgery	4 th Year Resident
Jonathan Waluza	QECH	Neurosurgery	Surgical Registrar
Lughano Kalongolera	QECH	Gen. Surgery	4 th Year Resident
Nohakhelha Nyamulani	QECH	Orthopaedic Surgery	2 nd Year Resident
Takondwa Itaye-Kamangira	QECH	General Surgery	4 th Year Resident

Introduction

This is a new course designed by ASGBI as part of their commitment to support COSECSA with their educational and training programmes. The aim is to introduce basic concepts of how to run a successful BSS course and also to introduce the WHO Safe Surgery Checklist. Our objective is to do this in a systematic manner which is easy to understand and put into practice and which will enable one to become a confident trainer.



Paul making the connections!

Schedule for the day

The Convener introduced the Train the Trainers Course and the programme. He then went on to deliver a talk on the Art of Lecturing with specific examples pertinent to the BSS course. This was followed by a lecture on the Assessment process which is important in determining whether the course is fit for purpose. One of the main roles of the trainer is to identify weak trainees, counsel them and make sure that they can perform the exercises concerned. This aspect should become apparent in the assessment exercise and be discussed at the end of each day. Trainers should also take the lead in various aspects of the BSS course over the next two days under the watchful eye of the visiting Faculty.



Lectures under way

This was followed by a coffee break. Thereafter there was a lecture on the structure of the BSS course emphasizing the importance of time keeping, preparation, delivery and a suggested timetable. The refreshments can be a problem and it was suggested that the morning and afternoon breaks comprise cold drinks. This was followed by role playing exercises which are always popular with the trainers. Three scenarios were undertaken:-

1. How to deal with the increased pressure and stresses caused by becoming a trainer.
2. Dealing with a difficult trainee.
3. Teaching the art of knot tying.

This was followed by lunch, after which the BSS DVD was shown omitting various aspects that we do not include in the course. It was emphasized that the DVD was shown as an example of how to train and not to show the content specifically which should have been well known to the trainers. Also the DVD shows one **safe way** of performing an exercise but not necessarily the **only way**. Trainers have to accept this premise.

We ended the afternoon with a debriefing which was followed by an evaluation exercise by the Trainers.

Trainer Evaluation

The average mark out of **10** was **9.15** with a median and mode of **9**.

All six trainers found the course to be well organised, well balanced and with many useful tips. The role playing exercises were particularly commended.

Additional comments

A helpful course, needs to be done at undergraduate level.

DVD materials 'need to be given to trainees as well as trainers'.

Good course and I should gain in confidence to teach others.

Well organised.



Trainers hard at work

Faculty Evaluation of the TTT Course

It was interesting that Nohakhelha Nyamulani and Takondwa Itaye-Kamangira undertook the MSE course in Lusaka in February 2013.

Of the six trainers, five were on Residency Programmes and one was a General Surgical Tutor at the Malawi College of Health Sciences.

The presentations on The Art of Lecturing and the Assessment Process were well received. However, we do need to define the role of the Trainer during the BSS course more accurately. Ideally we should allocate one trainer to a pair of trainees and rotate them after each module. Their main role is to ensure that the course runs smoothly and through continuous assessment be aware of poorly performing trainees. It is important that details are accurately recorded on the formative assessment sheets and, if necessary, the convener should be notified of each situation as it occurs.

The next lecture on the Structure of the BSS course elicited useful discussion. In future we need to avoid detailed lists which are all on the USB stick provided.

There then followed the role play and critiquing exercises which were deemed highly successful by the trainers and indeed were very worthwhile and are discussed in detail.

1. How to deal with the increased pressure and stresses caused by becoming a trainer

Approach: Brainstorming exercise where delegates were asked to notate:-

- What are the challenges that they might face?
- Strategies for coping with them.

The topic encouraged lively discussion. The participants concentrated on organization and managerial issues. Most of the groups highlighted how “planning in advance” would reduce their stress levels. They realised that not all problems can be discussed or analysed. It is important to realize how the new role will be received by the trainers and let them think about how to incorporate this in their work patterns.

2. Dealing with a difficult trainee

Encouraging the importance of:-

- Learning anatomy, procedure, complications of operations, attending and assisting in Theatre.
- Practice knot tying at home
- Saying how this is how we, the facilitators, learnt
- Dealing with the trainee who does not do this
- Dealing with the trainee who is late and rude to patients and colleagues
- Trainers assisting trainees on the course who are slow and less experienced
- Movement of trainers around the trainees.

Knot tying

- A well tried and tested exercise for teaching a practical skill
- Allows introduction of unknown knowns
- Enables faculty to assess the skill of the Trainers.
- A difficult task to teach in the time.
- Can become an exercise in 'how to tie a knot' rather than the steps of teaching a practical skill.
- Need jigs

After lunch the main elements of the DVD Course were shown as examples of how to train the trainees and not to show or advise on content. We concentrated on the practical areas of the course. The Trainers were aware of the non-practical aspects of the DVD which were on the USB stick. In future it was decided to omit the section on sutures and replace it with an Ethicon hand-out.

It was intended to show the WHO Safe Surgery Checklist but unfortunately there was not time and this is something we must include for the future.

We finally addressed the duties of the local Convener and emphasized the aspects connected with advertising, registration, fees and the need to be aware of all the instructions relating to the course. There is also the need to advise trainees with regard to punctuality and that they must attend **all** sessions. These two areas are vital to timekeeping and the smooth running of the Course.

Basic Surgical Skills Course

Tuesday 9th & Wednesday 10th April

11 Trainees

Name	Hospital	Specialty	Post Held
Clara-Chiku Mpanga	QECH	Orthopaedics	2 nd Year Resident
Gregory Khwimani	QECH	Gen. Surgery	1 st Year Resident (Clinical Officer)
Wone Banda	QECH	Gen. Surgery	2 nd Year Resident
Davis Mpando	QECH	Gen. Surgery	1 st Year Resident
Augrey Chombo	QECH	Gen. Surgery	1 st Year Resident (Clinical Officer)
Rodrck Vale-Banda	QECH	Gen. Surgery	1 st Year Resident
Charles Mabedi	KCH	Gen. Surgery	2 nd Year Resident
Dumbo Njera	QECH	Gen. Surgery	Intern Clinical Officer
Michael Phiri	KCH	Gen. Surgery	1 st Year Resident
Vanessa Msosa	KCH	Gen. Surgery	1 st Year Resident
Palesa Chisala	Blantyre DH Office	District MO	-

Venue

The Surgical Skills Lab is excellent. There is good lighting, seating, AV facilities and ventilation.

Introduction

This course was introduced to sub-Saharan Africa in 2000 by the Association of Surgeons of Great Britain and Ireland (ASGBI) and since then we, personally, have run over 40 such courses. Ethicon GB were impressed by our efforts and decided to sponsor Surgical Skills Centres in both East and West Africa. There are currently 12 within the COSECSA Region, including QECH and all are now running two day Basic Surgical Skills Courses.

The aim of the BSS Course is to train young surgeons in basic surgical skills which are appropriate to **any** branch of surgery whether in the emergency or elective situation.

Course Objectives

- To learn safe operating techniques.
- To understand that careful and sound aspects of technique are more important than simple manual dexterity or speed.
- To understand the importance of universal precautions for safe theatre practice, especially in emergency situations.
- To understand the principles of handling tissue and sound anastomotic techniques recognising differing requirements for different sites, eg: bowel and vascular tissue.
- To understand the principles of assessing contaminated soft tissue, wound debridement and primary surgical management including drainage and appropriate closure.
- To understand the principles of identifying and managing injury to tendons, including tendon repair, handling of tissues and subsequent management.
- To understand the principles of fracture assessment, stabilisation and plaster techniques.

At the end of the course the participant will be **proficient** in the principles of safe surgery, knot tying, suturing, bowel anastomoses, abdominal wall closure, tracheostomy, chest drain insertion, split skin grafting, vascular trauma, debridement, tendon repair and the management of fractures.

There will be feedback, evaluation and summative assessment, which involves pre and post course MCQ's, together with formative assessment during the course.

Successful participants will be awarded a Certificate to show that they have attained an satisfactory level of competence in Basic Surgical Skills.

Tuesday 9th April

We started at 08:30. The objectives were emphasised so that the trainees knew exactly what the course entailed and, more importantly, what it did not. All trainees had been sent a manual beforehand. The pig, on the large side, proved quite an effort for Paul, ably assisted by Serena, to dissect and our second-rate knife was completely ruined but nonetheless they produced what we required with great skill.



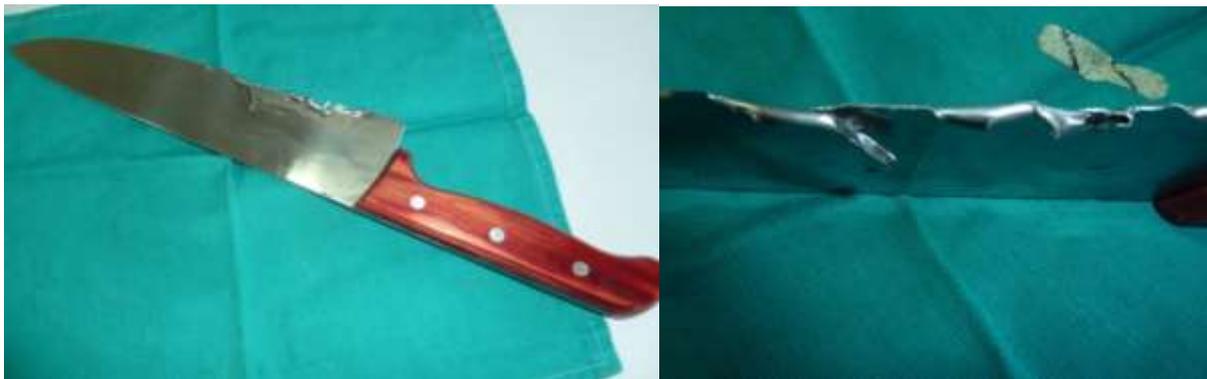
Paul - a man on a mission!



Serena - ready to start!



Dissection underway



Dissection and knife finished!

The exercises most well appreciated were those related to knot tying and suturing. The jigs provided by Limbs and Things were excellent. Each participant was given suture material to practice at home. The pads were extremely good for teaching skin suturing by using interrupted, continuous and vertical and horizontal mattress techniques.

During the afternoon the trainees practiced bowel anastomoses incorporating interrupted and continuous end to end approaches and an end to side method.



Skills in action



Preparing for an anastomosis

During the day the trainers assiduously assessed each trainee's performance and gave feedback when necessary.

At the end of the day the trainers and faculty assessed each trainee as to how they performed with regard to the exercises during that day. The trainees that we had on this course were particularly adept and there was little discussion as to their commitment, performance or attitude. It was interesting that there was no difference whatever as to whether the trainee was a medically qualified doctor or a clinical officer; both performed equally as well.

Wednesday 10th April

Punctuality was maintained and the arterial exercises undertaken successfully. It is interesting that trainees always enjoy these exercises and conduct them surprisingly skilfully and this especially when they have not undertaken them before. This may be due to the suture material (4.0 and 5.0 prolene) or it may simply be due to their own intuition.



Successful vein patch application

The three breakout sessions after the tea break on tracheostomy, chest drain insertion and split skin grafting all went well. We try and allow as many trainees to undertake these exercises as possible and restricting the numbers to no more than 12 allows us to do so.



Tracheostomy exercise



Chest Drain insertion

The orthopaedics / trauma module began after lunch and is always popular. The tendon repair exercise especially so as well as the application of POP for fractures of the forearm and lower leg. I suspect this simply reflects the attraction of orthopaedics in that it is a very “hands on” specialty and furthermore much can be accomplished at a fairly junior level.



Jim Turner checking the AV



POP exercise

Thereafter the trainees undertook post course MCQ's and whilst these were being marked they filled in their course evaluation forms.

The formative and summative assessments of the 11 trainees were undertaken fairly rapidly and all had satisfied the Faculty with regard to their competence and were thus awarded a Certificate of Satisfactory Completion by Dr. Wakisa Mulwafu.



Award of Certificate by Dr. Wakisa Mulwafu

Trainee Evaluation of the course overall

The average score out of **10** was **8.73** with a mode and median of **9**.

Trainee evaluation of specific exercises

	NEUTRAL	SATISFIED	VERY SATISFIED
Theatre Safely		5 45%	6 54%
Gowning & Gloving	2 18%	5 45%	4 35%
Instrument handling	1 9%	4 30%	6 54%
Knot tying			11 100%
Suturing techniques		3 27%	8 72%
Bowel Anastomoses		3 27%	8 72%
Abd. Wall closure		4 36%	7 63%
Vascular		4 36%	7 63%
Tracheostomy		5 45%	6 54%
CDI		3 27%	8 72%
SSG		2 18%	9 81%
Wound debridement		2 18%	9 81%
Tendon repair			11 100%
Plastering Techniques		4 36%	7 63%
TOTAL	3 / 154 = 2%	44/154 = 28.6%	107/154 = 69%

It is very gratifying that 98% of responses revealed that the trainees were satisfied or very satisfied with the exercises. Those that did not score quite so highly related to gowning, gloving and instrument handling but nonetheless they are important topics and we shall look at ways of presenting these aspects in a more enlightened way.

All trainees found the course useful.

The **most useful** aspects were reported as being tendon repair (5), bowel anastomoses (4), knot tying (4), POP application (3) and arteriotomy and vein patch (2).

The **least helpful** aspects reported were none (9), arterial repair (1) and theatre gowning (1).

Aspects to improve, and/or remove were nil (4), omit presentation on sutures (3) and this we take on board and shall replace with a handout. The other comments related to lack of appropriate instruments which were beyond our control and discussed with the local course Convener who appreciated the problems.

Other comments included

Well organised course with hands on practical skills.

Request British trainers on future courses.

Please know that the passion with which you delivered the teaching sessions is much appreciated.

It is very helpful, my training just got easier, keep it up, a lot more surgeons need this course. Thank you.

I think the course was v helpful. The trainers were very helpful in teaching us other approaches and techniques.

We all enjoyed the course.

This is the most important Basic Surgical Skills training which needs to be attended by any health worker in a surgical department. Should be done when juniors start their surgery future.

Evaluation by Faculty

Tracheostomy

- Excellent presentation by both ENT Consultant & Trainer
- Not enough time for all trainees to practice. Needs longer session

Chest Drain insertion

One member of Faculty was supervising / facilitating a newly trained trainer (Noa) to run the session. A pig chest wall was prepared and available for practice. Every trainee had previous experience of the procedure.

- It gives an opportunity for the trainee to review the procedure and practice a safe chest drain insertion technique.
- Every trainee practised this exercise once.
- This gave the newly trained trainer an opportunity to teach and supervise the procedure. To meet the time limitation it might be best approached as an exercise run in couples where one delegate performs the chest drain insertion and the other talks through the technique and critiques the operator.

Split skin grafting

- Advantage to be able to teach and demonstrate the technique on a pig model
- However, the Humby knife was blunt and the replacement blade was not the correct size. Had to borrow equipment from theatres.
- Pig was large and the skin so thick that it was impossible to get a graft of the correct thickness. However, the principles of SSG were demonstrated and were well appreciated.

What went well?

- The pre course organisation by the local Convener, Dr. Wakisa Mulwafu, was very good bar the lack of some instruments.
- The pig, although large, provided excellent material for dissection.
- Timing of refreshments was generally good although the lunch time breaks were a bit variable. However, the food was good.
- All trainees attended punctually and this made an enormous difference to the timing of events during the course.
- All the local trainers performed satisfactorily.

- The three scenarios (tracheostomy, chest drain insertion and skin grafting), went well.

What could we do better?

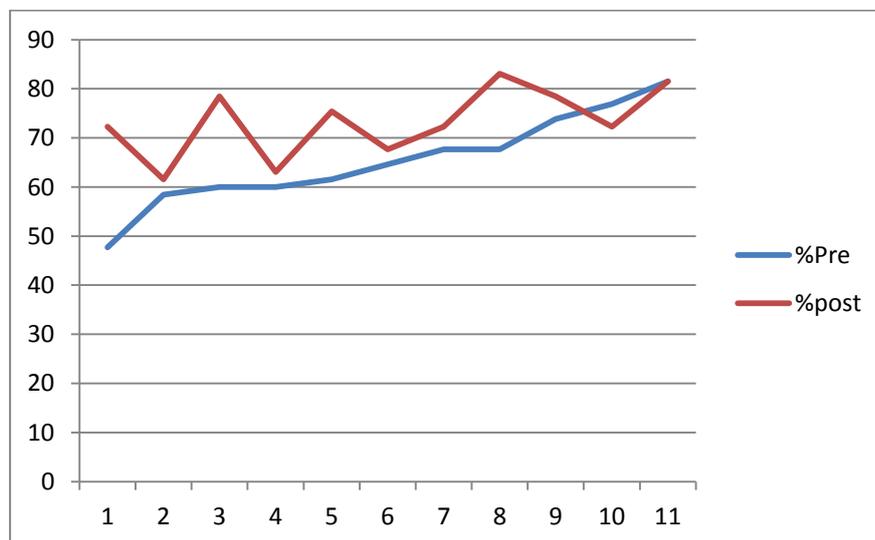
- The knife to dissect the pig was of low quality and has now been replaced.
- We only need the trachea, as opposed to a lung-heart preparation, for the tracheostomy exercise.
- The timing of lunch needs to be addressed.
- We need a firm policy with regard to mobiles which kept going off during the Course.
- 11 is an odd number and this meant that one individual had no partner to practice with. This was an encumbrance on the Faculty as well as the trainee. It meant that one member of the Faculty had to accompany the single trainee which meant he or she was not available for other duties.
- The lack of instruments and disposables were a problem and this is something which the local Convener will address. He has all the appropriate lists and will see that this is corrected for the future.
- The formative assessment went well although could have gone better. It is difficult for the trainers to get round each pair and report accordingly. We shall rethink the process.
- We shall also obtain a new data projector with an LED bulb which will be lighter and less likely to breakage.
- We need to obtain a new blade for the Humby Knife and a new knife for the pig dissection.



Grasshoppers galore! RL left the lights on and the windows open overnight...?

Assessment

MCQ Results (%)



Trainees

Conclusion

The Course, by all accounts, was deemed a success by the trainees, the local trainers and the visiting Faculty. This is helped by the fact that the Skills Centre is excellent and all credit to Professor Eric Borgstein, former Head of Department of Surgery at QECH, and Ethicon who provided sponsorship. We found no difficulty in training medically qualified trainees and clinical officers together. In fact they were indistinguishable. The initial part of the Royal College of Surgeons DVD never seems to be very popular. I think this is because it is related to gowning, gloving and instrument handling which the trainees have all been acquainted with and been taught prior to the course. Certainly the section on suture material and usage etc. is even less popular and this will be omitted in future and replaced with an Ethicon handout on sutures and their utilisation. Timing on this course is very tight and anything that can be legitimately omitted is a bonus and allows more time for the practical sessions.

It is of interest to note that Jaymie Henry and her two colleagues, James Carroll and Diego Olivier, were extremely impressed by not only the standard of education and training in the

Department of Surgery but also by the enormous clinical load across the specialties. It is hoped to use the footage for future courses and as a means of raising awareness on our website, etc.

This was yet again a very successful course in QECH. Many acquaintances were cemented and new friends found. Thanks once again to Wakisa for arranging such a successful course.



Group photo