

# Emergency Life Support (ELS) Courses

## Myanmar - 2013

February 11-12<sup>th</sup> and 14-15<sup>th</sup>

### Course reports

Prepared by Dr Phil Hungerford. FACEM.

Course Convenor



## Introduction

In the week of February 11-15<sup>th</sup> 2013 there were 2 Emergency Life Support (ELS) courses held in Myanmar (Burma) at the University of Medicine (1) Yangon.

In addition, on the day separating these 2 courses, there was a train the trainer session held.

Each of the ELS courses consisted of two days of alternating lectures and skill stations. The content and structure of the courses were similar but the instructors, participants, and intent of the 2 courses were all quite different.

These courses were very successful on a number of different levels. Hopes are high for the future development, propagation, and ownership of a local version of the ELS course by a burgeoning emergency medicine community in Myanmar.

A number of organisations and individuals provided financial and other types of support for these courses - this report is to provide information and feedback to these supporting organisations and individuals.

## Aims of the courses

1. To introduce to the future emergency medicine (EM) leaders of Myanmar (the so called "EM 18" – see **Appendix D**), a standardised approach for stabilising and managing seriously ill and undifferentiated patients.
2. To capacity build by having the EM 18 take ownership of the ELS course in Myanmar so that they may continue to deliver the course into the future.

These aims were to be achieved through the following steps:

1. Establish a cache of dedicated training equipment which would reside in Myanmar for use at future ELS courses
2. Have the EM 18 participate in the Emergency Life Support course as trainees.
3. Train the EM 18 to be ELS course instructors.
4. Have the EM 18 then deliver the course (under supervision) to a different group of Myanmar doctors.
- 5.

## Outline of the courses

**ELS course 1** was a modified version of a well-established Australian designed and run ELS course. This course was designed to teach a standardised approach, as well as the skills required, to stabilize and manage seriously ill and undifferentiated medical patients.

The lectures and skill stations from the Australian course were revised prior to the Myanmar course to enhance their relevance and usefulness in a different country with a different culture and health system.

The program for ELS course 1 is attached as **Appendix A**

The course was conducted by a visiting international faculty made up of six Australian Emergency Specialists as well as an anaesthetist and surgeon from Hong Kong. The visiting faculty were all senior clinicians with significant experience in short course teaching.

All of the visiting faculty were volunteers who donated their time and expertise free of charge.

**Appendix B** lists the personnel.

**Train the trainer day** consisted of:

- revising the EM 18s training lectures
- small group discussions and coaching for the EM 18 in the areas of teaching in small groups and giving lectures
- the EM 18 practicing delivering the course skill stations

**ELS course 2** was then conducted by the EM 18 with the visiting international faculty supervising as required.

ELS course 2 was a further modified version of course 1 following feedback from instructors and participants from course 1 and the train the trainer day.

The program for ELS course 2 is attached as **Appendix C**

### Course Participants

**ELS course 1** was attended by a group of 21 Myanmar doctors.

18 of these doctors were the so called "EM 18" who are specialists from other sub-specialties who have been chosen to be the future emergency leaders in Myanmar.

**Appendix D** lists these doctors. This cohort of doctors includes 9 orthopaedic surgeons, 2 paediatricians, 1 medical physician, 5 anaesthetists, and 1 general surgeon.

The other 3 doctors making up the 21 were specialist physicians from that country.

**ELS course 2** was attended by 20 specialist physicians. **Appendix E** lists these doctors.

### Financial Support for the courses

2 organisations assisted with financial support for this project:

- **The International Skills and Training Institute in Health (ISTIH)**  
This was the principal financial sponsor for these courses. ISTIH contributed **\$28,800** towards airfares, accommodation, subsistence allowances and printing costs.
- **Australasian College for Emergency Medicine (ACEM)** - contributed **\$15,000** for purchase of the equipment pool which was subsequently donated to the University of Medicine (1) of Yangon to reside at the university and be used for future ELS courses.

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## **Course evaluations and participant feedback**

Feedback and evaluation of the course was sought on several occasions. Verbal feedback was sought from all participants during the closing sessions at the end of each day and in addition, structured written evaluation forms were completed at the end of each course.

### **ELS course 1 - summary of feedback and evaluation (EM 18 + 3 physicians)**

Data collated from evaluation forms (n=21) by Dr Kerry Hoggett.  
Full presentation of data in **Appendix F**

- **Knowledge and skills (self-reported) before and after course completion:** These improved significantly across all subjects taught during the course, with the exception of obstetric emergencies where raw data suggested a trend to improvement, but calculations were hampered by missing data.
- **Presentation of the course:** The presentation of the course was rated as “Good” or “Excellent” by 20 of the 21 candidates. Candidates felt that the use of a structured approach to the emergency management of a seriously ill patient became more familiar.
- **Usefulness of the course to current practice:** All candidates felt the course provided information they could use in their current work
- **Enjoyment of the course:** The course was rated as “Good” or “Excellent” by all candidates.
- **Time allocation:** 76% of candidates felt sufficient time was allocated to the course.
- **Recommendation of the course to colleagues:** All Candidates said that they would recommend this course to their colleagues.  
Comments included:
  - “The Blueprint...is the way [to] save lives”
  - “All doctors must attend this course.”
  - “To [allow us to] speak the same language to improve the health system.”
  - “It needs to involve... junior doctors in government services (especially [those] who are working in A&E departments of all levels of hospitals).”
- **Strengths of the Lecture format:** Common responses emphasised concise, comprehensive and clear presentation emphasising a systematic approach to patient management by knowledgeable instructors. The lectures were thought to be locally applicable and challenging with the addition of case scenarios.
- **Strengths of the Skills stations:** Common responses involved the ability to learn basic skills such as ACLS, ECG and airway management in small interactive groups, and the availability of excellent, systematic and complete teaching resources.

- Potential improvements: Most responses to this question involved the provision of more resources and funding to reach all doctors working in Myanmar, both junior and senior, city and rural, at public and government institutions. Some candidates would like more skills stations, scenarios and practical work with more time at each station for discussion and practice. Other suggestions included:  
Use of a unique slide background with an ELS trademark  
Inclusion of major disease processes seen in Myanmar: HIV, Tuberculosis and Malaria
- Interest in becoming a presenter in future courses: All candidates indicated a willingness to be involved in presentation of future courses.
- Other comments: Overall, candidates were appreciative of the knowledge they gained from the course and the instructors, especially the emphasis on application of the blue print, with suggestions to run 3-4 courses a year to reach a wide population of doctors in Myanmar.

### **ELS course 2 - Summary of feedback and evaluation (physicians)**

Data collated from evaluation forms (n=20) by Dr Kerry Hoggett.  
Full presentation of data appears below **Appendix G**

- Knowledge and skills (self-reported) before and after course completion: These improved significantly across all subjects taught during the course. Airway skills stations, the sick child, triage, team approach and the structured approach to the sick patient showed the greatest increases in mean/median scores, while the means for medical skills (ECG, CXR, ACLS, Toxicology, and Malaria) showed less difference.
- Presentation of the course: Presentation was rated as “Good” or “Excellent” by 18 of the 20 candidates.
- Usefulness of the course to current practice: All candidates felt the course provided information they could use in their current work.
- Enjoyment of the course: All participants rated the course as “Good” or “Excellent”
- Time allocation: In contrast to Course 1, only 21% of candidates felt adequate time was allocated to the course. Other candidates felt the course was rushed, and one suggested changing to a longer course over 1 week

- Recommendation of the course to colleagues: All candidates would recommend this course to their colleagues. Comments included:
  - “Need wide coverage of this course”
  - “Please train others from my college”
  
- Strengths of the Lecture format: Common responses emphasised concise, comprehensive and clear presentation emphasising a systematic approach to patient management.  
“Short and sweet”. “Captures the point”
  
- Strengths of the Skills stations: Common responses involved the ability to learn skills such as basic and difficult intubation and airway management in small interactive groups.
  
- Potential improvements:  
Most responses to this question involved the provision of more resources, public education and funding to reach all doctors working in Myanmar, both junior and senior, city and rural. Many candidates requested more skills stations, role play scenarios and practical work with more time at each station for discussion and practice. Other suggestions included:
  - “More equipment, more practice, more courses”
  - “Equipment should be widely available to rural areas”
  - “The lecturer should be specialised in his particular field”
  - “The course should include what to do in resource-poor conditions”
  - “Refresher courses should be at least every two years”
  
- Interest in becoming a presenter in future courses: Only one candidate indicated opposition to being involved in presentation of future courses.
  
- Other comments: Overall, candidates were appreciative of the knowledge they gained from the course and the instructors, especially the emphasis on application of the blue print and the ability to learn and perform “hands on” skills.

## Discussion / Future plans

The 2 ELS courses and the train the trainer day held in Myanmar in February 2013 were very successful and achieved the stated aims.

Both groups of doctors enthusiastically adopted the standardised approach to stabilising and managing seriously ill and undifferentiated medical patients.

Also, there was a great interest in, and willingness shown, in taking ownership of the course in that country and to continue to deliver the course into the future.

A cache of training equipment was successfully sourced, purchased and transported to Myanmar.

This equipment pool was donated to the University of Medicine (1) of Yangon to reside at the university and be used for future ELS courses.

An unexpected positive outcome of the courses was the high level of interest and enthusiasm demonstrated by the 20 physician participants at course 2.

Engaging this group of doctors in the process of developing Emergency Medicine as a discipline in Myanmar is essential.

There is a tentative plan to run 2 more ELS courses in January 2014 with 21 participants at each course.

There are 2 different groups of doctors who are the target audience for these courses.

The first group will be specialist physician trainees.

The second group will be Civil Assistant Surgeons (CASs) who are doctors 3 years post graduate who are indentured to work in rural hospitals for 2 years. These doctors represent an important part of the target audience for the ELS course i.e. doctors who deliver first line emergency care in isolated environments.

Such doctors and their patients will benefit greatly from the skills and knowledge taught at an ELS course.

There have also been preliminary discussions about having nurse observers at the courses in 2014.

The instructors for the 2 courses in 2014 will be the Myanmar doctors who were identified at the 2013 courses as having long term potential as ELS course instructors.

The Myanmar instructors will be supervised by an overseas faculty - ideally 5 in number.

The 2013 ELS courses were an important and successful first step in establishing the ELS course in Myanmar in way which is self sustaining in all aspects including admin; logistics; running the courses; and the quality maintenance of the courses.









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**Appendix A – ELS Myanmar Course 1 Format**

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<b>Day 1 – Monday 11th February 2013</b>		
0800	Introduction and housekeeping (60')	<b>Dr. Phil Hungerford</b>
0900	<b>Lecture – The Emergency Management of Seriously Ill Patients (45') -</b>	<b>Dr. Phil Hungerford</b>
0945	Introductory Skill Station (50')	
1035	<b>Morning Tea (20')</b>	
1055	Skill Station Rotation (50')	
1145	<b>Lecture – Acute Coronary Syndromes (50')</b>	<b>Dr. Michael Augello</b>
1235	<b>Lunch (45')</b>	
1320	Skill station Rotation (50')	
1410	<b>Lecture / Discussion – The Team Approach and Triage practice (40')</b>	<b>Dr. James Kong</b>
1450	Skill Station Rotation (50')	
1540	<b>Afternoon tea (20')</b>	
1600	Skill Station Rotation (50')	
1650	<b>Lecture – Poisoning and Envenomation (40')</b>	<b>Dr Kerry Hoggett</b>
1730	Closure / Finish	
<b>Day 2 – Tuesday 12th February 2013</b>		
0800	<b>Lecture – Respiratory Emergencies (50')</b>	<b>Dr. Michael Bastick</b>
0850	Skill Station Rotation (50')	
0940	<b>Morning Tea (20')</b>	
1000	<b>Lecture – Seizures and pain management (45')</b>	<b>Dr. Shona McIntyre.</b>
1045	Skill Station Rotation (50')	
1135	<b>Lecture – Shock including obstetric shock (45')</b>	<b>Dr. YF Chow</b>
1220	<b>Lunch (45')</b>	
1305	Skill Station Rotation (50')	
1355	<b>Lecture – Malaria and Sepsis (45')</b>	<b>Dr. Rose Klein</b>
1440	Individual Assessment Scenarios + <b>afternoon tea (60')</b>	
1540	<b>Course Closure</b>	<b>Dr. Phil Hungerford</b>
1640	<b>FINISH</b>	

### Course 1 Skill Stations and instructor allocations

Introductory Station	All
Basic intubation	Dr Hoggett
Difficult intubation	Dr YF Chow
IV Fluids and difficult venous access	Dr Kong / Hungerford
ECG interpretation	Dr McIntyre
BCLS / ACLS	Dr Augello
Sick Child	Dr Klein
Breathing Emergencies	Dr Bastick

## Appendix B – Course 1 International instructor faculty

### Note:

All of the visiting faculty were volunteers who donated their time and expertise free of charge.

- **Dr Michael Augello**, FACEM. Emergency Specialist. Director of Emergency Medicine Training St. Vincent's Hospital, Melbourne.  
Honorary lecturer, University of Melbourne. Australia.
- **Dr Michael Bastick**, FACEM. Emergency and Intensive Care specialist. Senior Staff Specialist, Intensive Care. Gosford Hospital. NSW. Australia.  
Director of Central Coast Regional Retrieval Service
- **Dr. Yu Fat CHOW**. MB BS (HK), FANZCA, FHKCA  
FHKAM (Anaesthesiology). Msc (Health and Hospital Mgt), Birm., UK  
PG Dip of Perioperative and Critical Care Echo, Uni Melb., Australia. Anaesthetic Specialist.  
Chief of Service, Department of Anaesthesiology & OT Services, Queen Elizabeth Hospital  
Hon Clinical Associate Professor, Faculty of Medicine, HKU  
President Hong Kong College of Anaesthesiologists
- **Dr Kerry Hoggett**, FACEM, Emergency Specialist. GCert ClinTox, Emergency Specialist  
and Clinical Toxicologist, Royal Perth Hospital. Australia.
- **Dr Phil Hungerford**, Emergency Specialist. Director of Critical Care, Tamworth Hospital.  
Australia. Chairman ELS Committee of Management (Australia).  
Myanmar ELS course convener.
- **Dr James HB Kong** FRACS. Surgical Specialist.  
International Program Director (Myanmar) PTC & Emergency Medicine Development.  
Hong Kong.
- **Dr Shona McIntyre**, FACEM - Emergency Specialist. Western and Sunshine Hospital,  
Melbourne, Victoria. Australia.
- **Dr Rosanne Skalicky-Klein**, FACEM. Emergency Specialist. Tanzania, Africa.

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## Appendix C – ELS Myanmar Course 2 Format

Day 4 – Thursday 14th February 2013		
0800	Introduction and housekeeping (60')	Dr Phil Hungerford
0900	<b>Lecture – The Emergency Management of Seriously Ill Patients (45')</b>	Dr. Maw Maw Oo
0945	Introductory Skill Station (50')	
1035	<b>Morning Tea (20')</b>	
1055	Skill Station Rotation (50')	
1145	<b>Lecture – Acute Coronary Syndromes (50')</b>	Dr. Naing Win Aung
1235	<b>Lunch (45')</b>	
1320	Skill station Rotation (50')	
1410	<b>Lecture / Discussion – The Team Approach (20')</b>	Dr. Than Latt Aung Terry
1430	<b>Lecture / Discussion – Triage practice (20')</b>	Dr. Win Kyaw
1450	Skill Station Rotation (50')	
1540	<b>Afternoon tea (20')</b>	
1600	Skill Station Rotation (50')	
1650	<b>Lecture – Poisoning (20')</b>	Dr. Aung Myo Naing
1710	<b>Lecture – Snakebite (20')</b>	Dr. Yi Sanda Thein NPT (Ne Naing Htun )
1730	Closure / Finish	
Day 5 - Friday 15th February 2013		
0800	<b>Lecture – Respiratory Emergencies (50')</b>	Dr. Ni Ni Aye
0850	Skill Station Rotation (50')	
0940	<b>Morning Tea (20')</b>	
1000	<b>Lecture – Seizures (25')</b>	Dr. Nyein Chan
1025	<b>Lecture – Pain management (20')</b>	Dr. Khine Shwe Wah
1045	Skill Station Rotation (50')	
1135	<b>Lecture – Shock (25')</b>	Dr. Shein Myint Han
1200	<b>Lecture – Obstetric shock (20')</b>	Dr. Aye Thiri Naing
1220	<b>Lunch (45')</b>	
1305	Skill Station Rotation (50')	
1355	<b>Lecture – Sepsis (25')</b>	Dr. Tin Kyaw
1420	<b>Lecture – Malaria (20')</b>	Dr. Nyi Nyi Tin
1440	Individual Assessment Scenarios + <b>afternoon tea (60')</b>	
1540	<b>Course Closure</b>	
1640	<b>FINISH</b>	


### Course 2 Skill Stations and instructor allocations


Introductory Station	All
Basic Intubation	Drs Khine Shwe Wah, San Moe
Difficult Intubation	Drs Yi Sanda Thein and Thandar Win Nwe
IV therapy	Drs Maw Maw Oo, Win Kyaw , Than Latt Aung Terry
ECG	Drs Tin Kyaw, Shwe Kyaw Oo , and Nyi Nyi Tin
ACLS	Drs Naing Win Aung ,Shein Myint Han, Aung Myo Naing
Sick Child	Drs Aye Thiri Naing and Thanda Oo
Breathing Emergencies	Drs Ni Ni Aye, Ne Naing Htun, and Nyein Chan






## Appendix D - The “EM 18”


### From Yangon


	<b>“Maw”</b>	<b>Dr Maw Maw Oo</b>
	<b>Specialty-Orthopaedics</b>	Junior Consultant, Yangon General Hospital

	<b>“Naing”</b>	<b>Dr Aye Thiri Naing</b>
	<b>Specialty-paediatrics</b>	Junior Consultant, Yangon Children Hospital


	<b>“Thanda”</b>	<b>Dr Thanda Oo</b>
	<b>Specialty - paediatrics</b>	Specialist Assistant Surgeon, Yankin Children Hospital


	<b>“Nyi”</b>	<b>Dr Nyi Nyi Tin</b>
	<b>Specialty – orthopaedics</b>	Specialist Assistant Surgeon, Hintharda Hospital
	<b>“Win”</b>	<b>Dr Win Kyaw</b>
	<b>Specialty – Surgery</b>	Specialist Assistant Surgeon, Yangon General Hospital


	<b>“San”</b>	<b>Dr Khin San Moe</b>
	<b>Specialty – Anaesthesia</b>	Junior Consultant, Yankin Children Hospital

	<b>“New”</b>	<b>Dr Thandar Win Nwe</b>
	<b>Specialty – Anaesthesia</b>	Junior Consultant, Thantwe Hospital





	<b>“Aung”</b>	<b>Dr Aung Myo Naing</b>
	<b>Specialty – Orthopaedics</b>	Specialist Assistant Surgeon, Yangon General Hospital


	<b>“Khaing”</b>	<b>Dr Khaing Shwe Wah</b>
	<b>Specialty – Anaesthesia</b>	Lecturer, University of Medicine (2), Yangon, Dental Hospital Anaesthesia.


	<b>“Terry”</b>	<b>Dr Than Latt Aung</b>
	<b>Specialty – Orthopaedics</b>	Junior Consultant, Phyar Pon District Hospital

## From Nay Pyi Taw (NPT)


	<b>“Sanda”</b>	<b>Dr Yi Sanda Thein</b>
	<b>Specialty – Anaesthesia</b>	Junior Consultant, Naypyitaw 1000 bedded Hospital



	<b>“Oo”</b>	<b>Dr Shwe Kyaw Oo</b>
	<b>Specialty – Orthopaedics</b>	Specialist Assistant Surgeon, Naypyitaw 1000 bedded Hospital


	<b>“Shain”</b>	<b>Dr Shein Myint Han</b>
	<b>Specialty - Orthopaedics</b>	Specialist Assistant Surgeon, Naypyitaw 1000 bedded Hospital

	<b>“Naing”</b>	<b>Dr Naing Win Aung</b>
	<b>Specialty – Medicine</b>	Junior Physician, Naypyitaw 1000 bedded Hospital

## From Mandalay

	<b>“Chan”</b>	<b>Dr Nyein Chan</b>
	<b>Specialty – Orthopaedics</b>	Specialist Assistant Surgeon, Mandalay Orthopaedic Hospital

	<b>“TK”</b>	<b>Dr Tin Kya</b>
	<b>Specialty - Orthopaedics</b>	Specialist Assistant Surgeon, Mandalay Orthopaedic Hospital
	<b>“Nay”</b>	<b>Dr Nay Naing Htun</b>
	<b>Specialty – Orthopaedics</b>	Specialist Assistant Surgeon, Mandalay General Hospital

	<b>“Ni Ni”</b>	<b>Dr Ni Ni aye</b>
	<b>Specialty – anaesthesia</b>	Lecturer, University of Medicine (Mandalay)

**Appendix E – participants for ELS course 2**

<b>No</b>	<b>Name</b>	<b>Rank</b>	<b>Org</b>
1	<i>Dr Nay Myo Aung</i>	<i>Consultant physician</i>	<i>University of Medicine (Magway)</i>
2	<i>Dr Kyi Khine</i>	<i>Specialist Physician (AS)</i>	<i>Magway General Hospital</i>
3	<i>Dr Wai Wai Lwin</i>	<i>Consultant Physician</i>	<i>Yangon General Hospital</i>
4	<i>Dr Hla Hla Yee</i>	<i>Specialist Physician (AS)</i>	<i>Yangon General Hospital</i>
5	<i>Dr Sanda Shein</i>	<i>Specialist Physician (AS)</i>	<i>Yangon General Hospital</i>
6	<i>Dr Swe Yee Tint**</i>	<i>Specialist Physician (AS)</i>	<i>Yangon General Hospital</i>
7	<i>Dr Thida Soe</i>	<i>Specialist Physician (AS)</i>	<i>Yangon General Hospital</i>
8	<i>Dr Cho Mar**</i>	<i>Specialist Physician (AS)</i>	<i>Yangon General Hospital</i>
9	<i>Dr Soe Mon Mon</i>	<i>Consultant Physician</i>	<i>Neuro - medical Unit YGH</i>
10	<i>Dr Nyo Nyo Wah</i>	<i>Consultant Physician</i>	<i>West Yangon General Hospital</i>
11	<i>Dr Nay Myo Oo</i>	<i>Specialist Physician (AS)</i>	<i>Mandalay General Hospital</i>
12	<i>Dr Phyu Sin Aye</i>	<i>Specialist Physician (AS)</i>	<i>Mandalay General Hospital</i>
13	<i>Dr Hpone Ko Ko Soe</i>	<i>Specialist Physician (AS)</i>	<i>Mandalay General Hospital</i>
14	<i>Professor Mar Mar Kyi**</i>	<i>Professor of Medicine</i>	<i>Insein General Hospital UM2</i>
15	<i>Dr Phyo Thida</i>	<i>Specialist Physician (AS)</i>	<i>North Okkalapa General Hospital</i>
16	<i>Dr Aye Soe Tun</i>	<i>Specialist Physician (AS)</i>	<i>North Okkalapa General Hospital</i>
17	<i>Dr Khin Zar Hlaing**</i>	<i>Specialist Physician (AS)</i>	<i>Thingangyun Sanpya General Hospital</i>
18	<i>Dr Tin Win Aung</i>	<i>Specialist Physician (AS)</i>	<i>Thingangyun Sanpya General Hospital</i>
19	<i>Dr Win Win Myint</i>	<i>Specialist Physician (AS)</i>	<i>New Yangon General Hospital</i>
20	<i>Dr Sanda Soe</i>	<i>Specialist Physician (AS)</i>	<i>New Yangon General Hospital</i>

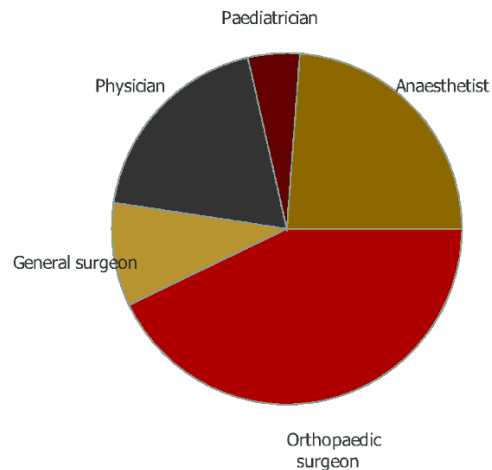
## Appendix F - ELS Myanmar course evaluation (Course 1) 11-12 February 2013

First ELS Myanmar course run on 11<sup>th</sup> and 12<sup>th</sup> February involved the EM18 and 3 physicians with an international faculty. Data collated from evaluation forms (n=21) by Dr Kerry Hoggett.

### **Participants:**

Participants were drawn from the EM18, with the addition of 3 Physicians.

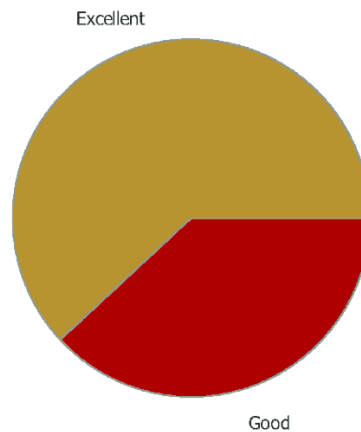
**Participant's specialty**  
ELSi Myanmar (Course 1) 11-12 February 2013



### **Enjoyment of the course:**

The course was rated as "Good" or "Excellent" by all candidates.

**Enjoyment of the course**  
ELSi Myanmar (Course 1): 11-12 February 2013



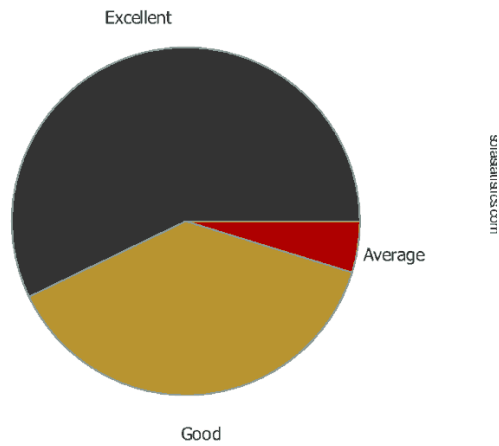
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**Presentation of the course:**

Presentation of the course was rated as “Good” or “Excellent” by 20 of the 21 candidates.

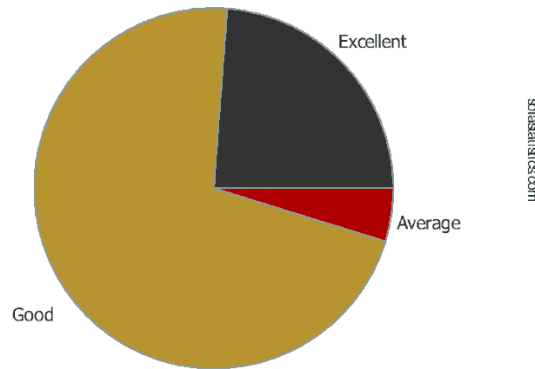
**Presentation of the course**  
ELSi Myanmar (Course 1): 11-12 February 2013



**Usefulness of the course to current practice:**

All candidates felt the course provided information they could use in their current work.

**Usefulness to current practice**  
ELSi Myanmar (Course 1): 11-12 February 2013



## Time allocation:

76% of candidates felt sufficient time was allocated to the course. Of the others, all wanted more time. "Tight schedule and timing makes... it a bit stressful in keeping up with time."

### Satisfaction with Time allocation

ELSi Myanmar (Course 1) 11-12 February 2013

	Freq	Col %
Adequate time	Yes	16 76.2%
	No	1 4.8%
	Maybe	4 19.0%
	TOTAL	21 100.0%

## Recommendation to colleagues:

All Candidates would recommend this course to their colleagues. Comments included: "All doctors must attend this course."

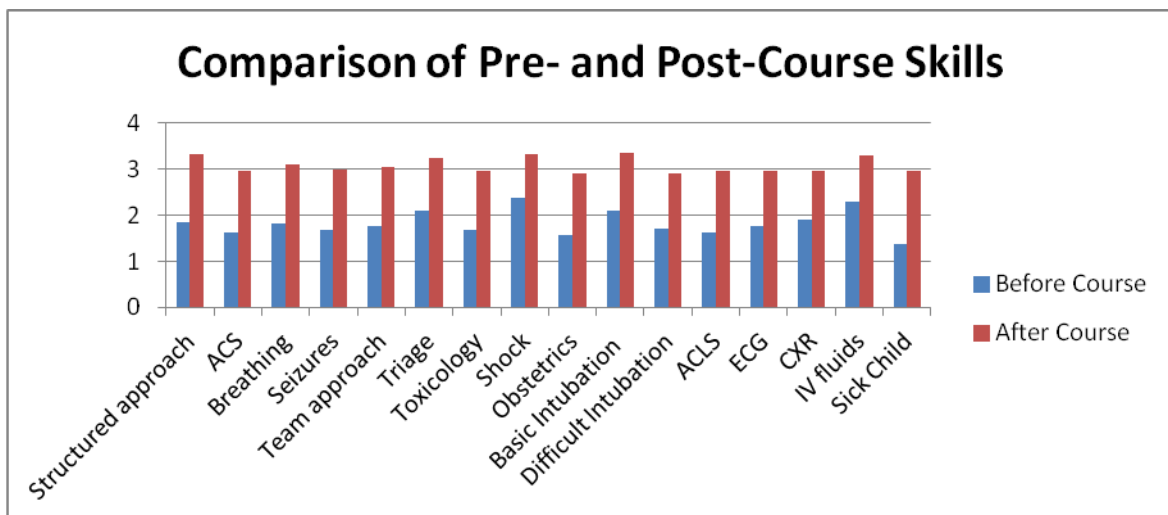
"To [allow us to] speak the same language to improve the health system."

"It needs to involve... junior doctors in government services (especially [those] who are working in A&E departments of all levels of hospitals)."

"The Blueprint...is the way [to] save lives"

## Self-reported knowledge and skills before and after course completion:

The mean self-rated values for knowledge and skills on the Likert Scale improved significantly across all subjects taught during the course (Appendix 1), with the exception of obstetric emergencies where raw data suggested a trend to improvement, but calculations were hampered by missing data. Importantly, candidates felt that the use of a structured approach to the emergency management of a seriously ill patient became more familiar with a pre-course mean of 1.83 and a post course mean of 3.33 ( $p < 0.001$ ).





### Strengths of the Lecture format:

Common responses emphasised concise, comprehensive and clear presentation emphasising a systematic approach to patient management by knowledgeable instructors. The lectures were thought to be locally applicable and challenging with the addition of case scenarios.

### Strengths of the Skills stations:

Common responses involved the ability to learn basic skills such as ACLS, ECG and airway management in small interactive groups, and the availability of excellent, systematic and complete teaching resources.

### Potential improvements:

Most responses to this question involved the provision of more resources and funding to reach all doctors working in Myanmar, both junior and senior, city and rural, at public and government institutions. Some candidates would like more skills stations, scenarios and practical work with more time at each station for discussion and practice. Other suggestions included:

Use of a unique slide background with an ELS trademark

Inclusion of major disease processes seen in Myanmar: HIV, Tuberculosis and Malaria

### Interest in becoming a presenter in future courses:

All candidates indicated a willingness to be involved in presentation of future courses.

### Other comments:

Overall, candidates are appreciative of the knowledge they have gained from the course and the instructors, especially the emphasis on application of the blue print, with suggestions to run 3-4 courses a year to reach a wide population of doctors in Myanmar.

### Calculation of pre- and post-course knowledge differences

#### Results of Paired Samples t-test of "Structured approach before course" vs "Structured approach after course"

p value: <0.001<sup>1</sup>

t statistic: -10.292

Degrees of Freedom (df): 17

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Structured approach before course	18	1.833	0.618	0.0	3.0
Structured approach after course	18	3.333	0.485	3.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

#### Results of Paired Samples t-test of "Acute coronary syndromes before course" vs "Acute coronary syndromes after course"

p value: <0.001<sup>1</sup>

t statistic: -7.429

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Acute coronary syndromes before course	20	1.6	0.94	0.0	3.0
Acute coronary syndromes after course	20	2.95	0.686	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "Breathing emergencies before course" vs "Breathing emergencies after course"

p value: < 0.001 <sup>1</sup>

t statistic: -10.177

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Breathing emergencies before course	20	1.8	0.616	1.0	3.0
Breathing emergencies after course	20	3.1	0.553	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "Seizures before course" vs "Seizures after course"

p value: < 0.001 <sup>1</sup>

t statistic: -10.283

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Seizures before course	20	1.65	0.671	0.0	3.0
Seizures after course	20	3.0	0.649	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "Team approach before course" vs "Team approach after course"

p value: < 0.001 <sup>1</sup>

t statistic: -8.85

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Team approach before course	20	1.75	0.716	1.0	3.0
Team approach after course	20	3.05	0.686	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "Triage before course" vs "Triage after course"

p value: < 0.001 <sup>1</sup>

t statistic: -8.759

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Triage before course	20	2.1	0.641	0.0	3.0
Triage after course	20	3.25	0.444	3.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

## ELS Myanmar 2013 Convenor's Report



### Results of Paired Samples t-test of "Toxicology before course" vs "Toxicology after course"

p value: < 0.001 <sup>1</sup>

t statistic: -6.296

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Toxicology before course	20	1.65	0.933	0.0	3.0
Toxicology after course	20	2.95	0.686	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "Shock before course" vs "Shock after course"

p value: < 0.001 <sup>1</sup>

t statistic: -7.877

Degrees of Freedom (df): 18

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Shock before course	19	2.368	0.496	2.0	3.0
Shock after course	19	3.316	0.478	3.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Wilcoxon Signed Ranks Test of "Obstetrics before course" vs "Obstetrics after course"

Two-tailed p value: 0.012 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
Obstetrics before course	9	2.0	1.0	2.0
Obstetrics after course	9	3.0	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

### Results of Paired Samples t-test of "Basic intubation before course" vs "Basic intubation after course"

p value: < 0.001 <sup>1</sup>

t statistic: -6.571

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Basic intubation before course	20	2.1	0.912	0.0	3.0
Basic intubation after course	20	3.35	0.587	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "Difficult intubation before course" vs "Difficult intubation after course"

p value: < 0.001 <sup>1</sup>

t statistic: -6.0

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Difficult intubation before course	20	1.7	1.129	0.0	3.0
Difficult intubation after course	20	2.9	0.968	1.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "ACLS before course" vs "ACLS after course"

p value: < 0.001 <sup>1</sup>

t statistic: -8.304

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
ACLS before course	20	1.55	0.759	0.0	3.0
ACLS after course	20	2.95	0.686	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "ECG interpretation before course" vs "ECG interpretation after course"

p value: < 0.001 <sup>1</sup>

t statistic: -7.667

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
ECG interpretation before course	20	1.7	0.657	1.0	3.0
ECG interpretation after course	20	2.85	0.671	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "CXR interpretation before course" vs "CXR interpretation after course"

p value: < 0.001 <sup>1</sup>

t statistic: -6.85

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
CXR interpretation before course	20	1.85	0.745	1.0	3.0
CXR interpretation after course	20	2.95	0.605	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

## ELS Myanmar 2013 Convenor's Report



### Results of Wilcoxon Signed Ranks Test of "IV fluid and access before course" vs "IV fluid and access after course"

Two-tailed p value: < 0.001 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
IV fluid and access before course	20	2.0	1.0	3.0
IV fluid and access after course	20	3.0	3.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

### Results of Wilcoxon Signed Ranks Test of "The sick child before course" vs "The sick child after course"

Two-tailed p value: < 0.001 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
The sick child before course	20	1.0	0.0	2.0
The sick child after course	20	3.0	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

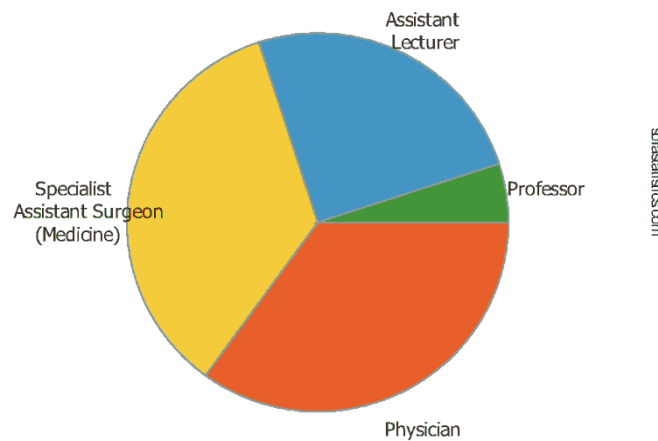
<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

The second ELSi Myanmar course run on 14<sup>th</sup> and 15<sup>th</sup> February involved physicians of varying postgraduate experiences with the EM18 and 3 physicians as faculty, supported by the international visitors. Data collated from evaluation forms (n=20) by Dr Kerry Hoggett.

**Participants:**

Participants were physicians from teaching hospitals and Universities of Medicine 1 and 2.

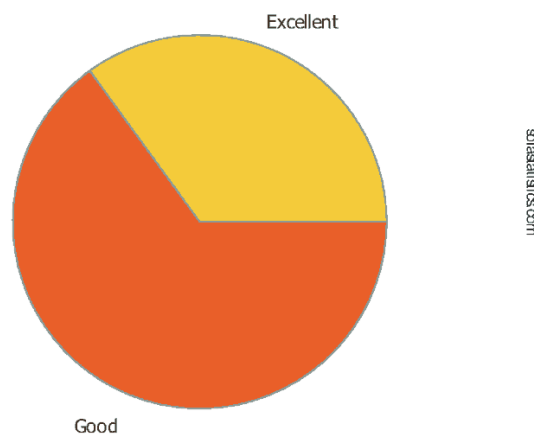
**Participant's Specialty**  
ELSi Myanmar (Course 2) 14-15 February 2013



**Enjoyment of the course:**

All participants rated the course as “Good” or “Excellent”

**Enjoyment of course**  
ELSi Myanmar (Course 2) 14-15 February 2013

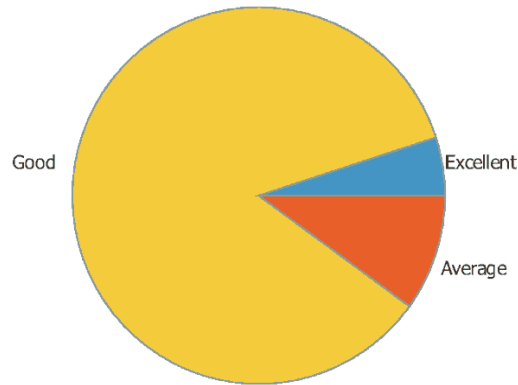


**Presentation of the course:**

Presentation of the course was rated as “Good” or “Excellent” by 18 of the 20 candidates.



**Presentation of the Course**  
ELSi Myanmar (Course 2) 14-15 February 2013

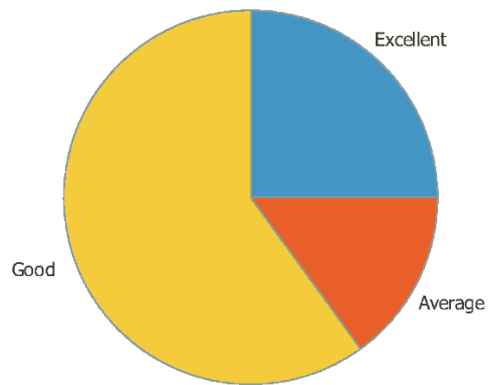


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**Usefulness of the course to current practice:**

All candidates felt the course provided information they could use in their current work.

**Usefulness of the Course**  
ELSi Myanmar (Course 2) 14-15 February 2013



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### Time allocation:

In contrast to Course 1, only 21% of candidates felt adequate time was allocated to the course. Other candidates felt the course was rushed, and one suggested changing to a longer course over 1 week

**Satisfaction with Time Allocation**  
ELSi Myanmar (Course 2) - 14-15 February 2013

		Freq	Col %
Adequate Time	Yes	4	21.1%
	No	5	26.3%
	Maybe	10	52.6%
	TOTAL	19	100.0%

### Recommendation to Colleagues:

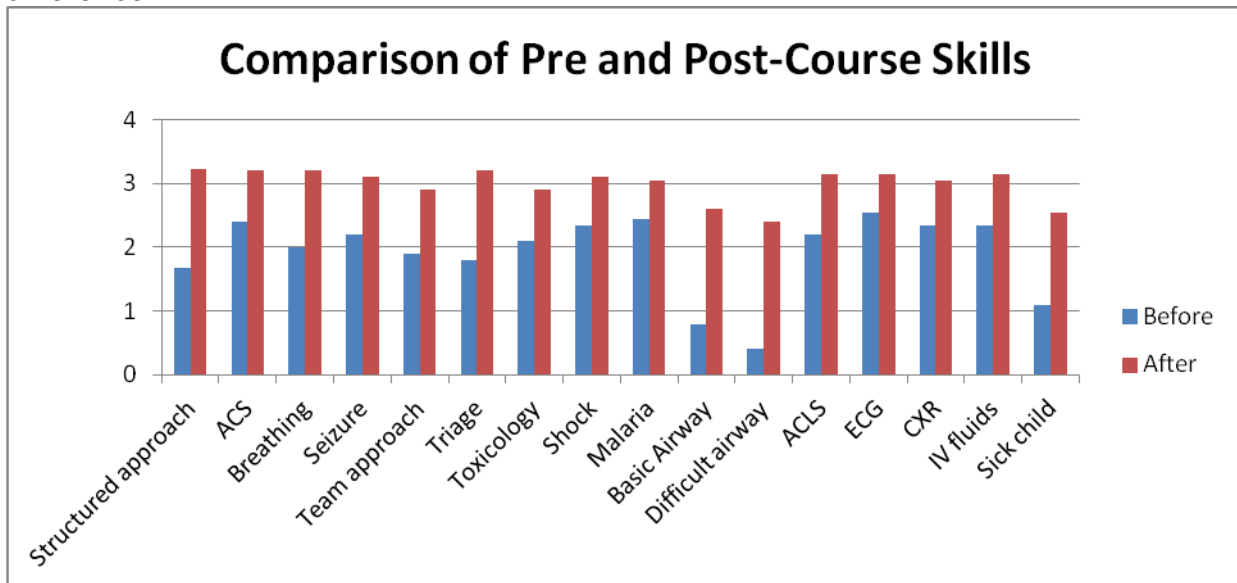
All candidates would recommend this course to their colleagues. Comments included:

“Need wide coverage of this course”

“Please train others from my college”

### Self-reported knowledge and skills before and after course completion:

The mean self-rated values for knowledge and skills on the Likert Scale improved significantly (5% level) across all subjects taught during the course (Appendix 1). Airway skills stations, the sick child, triage, team approach and the structured approach to the sick patient showed the greatest increases in mean/median scores, while the means for medical skills (ECG, CXR, ACLS, Toxicology, Malaria) showed less difference.



**Strengths of the Lecture format:**

Common responses emphasised concise, comprehensive and clear presentation emphasising a systematic approach to patient management.

“Short and sweet. Captures the point”

**Strengths of the Skills stations:**

Common responses involved the ability to learn skills such as basic and difficult intubation and airway management in small interactive groups.

**Potential improvements:**

Most responses to this question involved the provision of more resources, public education and funding to reach all doctors working in Myanmar, both junior and senior, city and rural. Many candidates requested more skills stations, role play scenarios and practical work with more time at each station for discussion and practice. Other suggestions included:

“More equipment, more practice, more courses”

“Equipment should be widely available to rural areas”

“The lecturer should be specialised in his particular field”

“The course should include what to do in resource-poor conditions”

“Refresher courses should be at least every two years”

**Interest in becoming a presenter in future courses:**

Only one candidate indicated opposition to being involved in presentation of future courses.

**Other comments:**

Overall, candidates are appreciative of the knowledge they have gained from the course and the instructors, especially the emphasis on application of the blue print and the ability to learn and perform “hands on” skills.

## Calculation of pre- and post-course knowledge differences

### Results of Wilcoxon Signed Ranks Test of "Structured approach before course" vs "Structured approach after course"

Two-tailed p value: < 0.001 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
Structured approach before course	18	2.0	0.0	3.0
Structured approach after course	18	3.0	3.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

### Results of Paired Samples t-test of "Acute coronary syndromes before course" vs "Acute coronary syndromes after course"

p value: < 0.001 <sup>1</sup>

t statistic: -4.825

Degrees of Freedom (df): 18

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Acute coronary syndromes before course	19	2.421	0.607	1.0	3.0
Acute coronary syndromes after course	19	3.211	0.419	3.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "Breathing emergency before course" vs "Breathing emergency after course"

p value: < 0.001 <sup>1</sup>

t statistic: -8.718

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Breathing emergency before course	20	2.0	0.562	1.0	3.0
Breathing emergency after course	20	3.2	0.523	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Paired Samples t-test of "Seizures before course" vs "Seizures after course"

p value: < 0.001 <sup>1</sup>

t statistic: -5.107

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Seizures before course	20	2.2	0.616	1.0	3.0
Seizures after course	20	3.1	0.308	3.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

### Results of Wilcoxon Signed Ranks Test of "Team Approach before course" vs "Team approach after course"

Two-tailed p value: < 0.001 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
Team Approach before course	20	2.0	1.0	3.0
Team approach after course	20	3.0	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

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## Results of Wilcoxon Signed Ranks Test of "Triage before course" vs "Triage after course"

Two-tailed p value: < 0.001 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
Triage before course	19	2.0	1.0	3.0
Triage after course	19	3.0	3.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

## Results of Paired Samples t-test of "Toxicology before course" vs "Toxicology after course"

p value: < 0.001 <sup>1</sup>

t statistic: -5.141

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Toxicology before course	20	2.1	0.553	1.0	3.0
Toxicology after course	20	2.9	0.553	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

## Results of Paired Samples t-test of "Shock before course" vs "Shock after course"

p value: < 0.001 <sup>1</sup>

t statistic: -4.682

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Shock before course	20	2.35	0.587	1.0	3.0
Shock after course	20	3.1	0.447	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

## Results of Wilcoxon Signed Ranks Test of "Malaria before course" vs "Malaria after course"

Two-tailed p value: 0.008 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
Malaria before course	20	2.5	1.0	3.0
Malaria after course	20	3.0	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

## Results of Wilcoxon Signed Ranks Test of "Basic intubation before course" vs "Basic intubation after course"

Two-tailed p value: < 0.001 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
Basic intubation before course	20	1.0	0.0	2.0
Basic intubation after course	20	3.0	1.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

## Results of Paired Samples t-test of "Difficult intubation before course" vs "Difficult intubation after course"

p value: < 0.001 <sup>1</sup>

t statistic: -12.329

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
Difficult intubation before course	20	0.4	0.598	0.0	2.0
Difficult intubation after course	20	2.4	0.681	1.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

## Results of Paired Samples t-test of "ACLS before course" vs "ACLS after course"

p value: < 0.001 <sup>1</sup>

t statistic: -5.146

Degrees of Freedom (df): 19

Group	N	Mean	Standard Deviation <sup>2</sup>	Min	Max
ACLS before course	20	2.2	0.616	1.0	3.0
ACLS after course	20	3.15	0.489	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Standard Deviation measures the spread of values.

## Results of Wilcoxon Signed Ranks Test of "ECG Interpretation before course" vs "ECG Interpretation after course"

Two-tailed p value: 0.005 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
ECG Interpretation before course	20	3.0	1.0	4.0
ECG Interpretation after course	20	3.0	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

## Results of Wilcoxon Signed Ranks Test of "CXR Interpretation before course" vs "CXR Interpretation after course"

Two-tailed p value: 0.002 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
CXR Interpretation before course	20	2.0	1.0	4.0
CXR Interpretation after course	20	3.0	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

## Results of Wilcoxon Signed Ranks Test of "IV fluids and access before course" vs "IV fluids and access after course"

Two-tailed p value: 0.001 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
IV fluids and access before course	20	2.0	1.0	3.0
IV fluids and access after course	20	3.0	2.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.

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## Results of Wilcoxon Signed Ranks Test of "Sick child before course" vs "Sick child after course"

Two-tailed p value: < 0.001 <sup>1</sup>

Wilcoxon Signed Ranks statistic: 0.0 <sup>2</sup>

Variable	N	Median	Min	Max
Sick child before course	20	1.0	0.0	2.0
Sick child after course	20	3.0	1.0	4.0

<sup>1</sup> If p is small, e.g. less than 0.01, or 0.001, you can assume the result is statistically significant i.e. there is a difference.

<sup>2</sup> Different statistics applications will show different results here depending on the reporting approach taken.