Report

Primary Trauma Care Course

Gondar, Ethiopia

June 2017

Respectfully submitted

Dr. Mensur Osman (Course Director)

Dr. Richard Simons (Visiting International Faculty)

Gondar University Hospital in Gondar, Ethiopia hosted its forth Primary Trauma Care (PTC) course on June 8-9, 2017.

Course Faculty: This course was, organized by the local faculty led by course director, Dr. Mensur Osman, supported by Dr. Richard Simons, a visiting international surgeon from Vancouver and previous Gondar course instructor. All course faculty had previously taken the course and instructor training. Faculty are listed in table 1. Dr Miklol is seen opening the course in the top picture on the title page of the report, with Dr Simons and Dr DeGirolamo in background. Course participants are seen in the lower picture.

Table 1. PTC course Instructors /Faculty

Course Instructors

No.	Name
1	Dr. Richard Simons (International)
2	Dr. Mensur Osman (Director)
3	Dr. Miklol Mengistu (Dept Head)
4	Dr. Mohammed Alemu
5	Dr. Dr. Mohammed Yesuf
6	Mr. Habtamu Getinet (Anesthesia)
7	Dr. Andinet Desalegn
8	Dt. Esayas Adefris (Neurosurgery)

Course participants: Course participants were drawn from the local programs and the majority were residents from the Gondar surgery residency program along with two GUH anesthetists. Most of the residents were in their 3rd or 4th year, reflecting the gap between this course and the previous one in June 2015. For the most part the ATLS principles were well understood by these residents as reflected in their high pretest scores. It was felt that future courses would be better served targeting the more junior residents. For the first time for a GUH PTC course, participants were also invited from feeder primary hospitals and were supported by GUH to enable their participation. This added a new and valuable dimension to the course with highly informative discussions on the realities of rural surgical care and barriers to transportation. This initiative is a facet of the planned outreach educational efforts that GUH has committed to. As part of this vision, it is hoped that the GUH faculty will be able to take this course out to the bigger primary hospitals in the Amhara region in the near future where the need is perhaps the greatest.

Table 2. PTC course Trainees

No.	Name	Hospital
1	Dr. Kebetie Gebremedhin	Abrahajira Primary
2	Dr. Ashenafi Negash	UoG
3	Dr. Adem Ibrahim	UoG
4	Dr. Menarguachew Atanaw	UoG
5	Dr. Masresha Bereket	UoG
6	Dr. Michael Albert Cosmos	UoG
7	Dr. Aderajew Mequanint	UoG
8	Dr. Sileshi Genetu	UoG
9	Habtu Adane	UoG / Anesthesia
10	Misganaw Wondimeneh	Debarik Primary
11	Mulugeta Melkie	Aykel Primary
12	Dr.Solomon Melkamu	UoG
13	Bezawit Haile	UoG / Anesthesia
14	Dr. Elshaday Mulugeta	Metema Primary
15	Dr. Tilahun Temesgen	UoG
16	Kassaw Yigzaw	Delgi Primary

Course content and format: The 2015 version of the course was used with close adherence to the lectures, skill stations and interactive sessions in the recommended order and format. The level of interactivity, both from the faculty and participants, was good leading to a lively and enjoyable course. Many excellent questions were posed, particularly in the interactive sessions, where there was a high level of willingness to participate.

Materials for skill stations were provided locally and were generally adequate though as previously identified, could be improved and augmented over time for subsequent courses. Airway mannequins and equipment were readily available although showing a fair bit of wear and tear. If PTC foundation money is available for equipment, GUH

would certainly benefit from upgrade. Both lecture and skill station were well taught by local anesthetist Mr. Habtamu, shown in picture below. The chest tube skill station was taught by Dr Miklol and centered around the provided PTC course video along with discussion supplemented with some hands on familiarization with some equipment although fell short of a full simulation which would have been ideal. Vista type C spine collars were available and log roll was demonstrated using the method described by ATLS, which locks the neck and head with the torso to prevent cervico-thoracic movement. The PTC shock lecture was delivered as provided, although after the lecture there was a lengthy discussion of the principles of Damage Control (Balanced) Resuscitation where the principles of early use of blood products and curtailing of crystalloid were covered.

Course Budget: A detailed course budget is not available at this time. Previous PTC courses had been supported by the PTC Foundation although funding from that source was not available for this course. The CEO of Gondar University Hospital agreed to provide significant support for this course funding catering as well as out of town participant travel and accommodation. Faculty stipends and some incidental administration costs were supported by the UBC Branch for International Surgery (Total $412 US). Course funding is seen as somewhat precarious as local support tends to be sporadic and without long term commitment. Outside support is still seen as necessary for sustainability. The course was delivered in the CNIS building on the GUH campus at no expense.

Participant Evaluation: Participants were evaluated entirely on their performance in the MCQ pre- and post- tests as per the course design. Pre course scores were generally high reflecting the seniority of the residents participating. Post scores reflect

an overall improvement in trauma care knowledge with a leveling of performance within the group – i.e. the weaker students (based on pre-test scores) achieved results closer to the higher performers in the post test. Level of performance within the scenario skill stations was variable though this did not enter into the final student evaluation. Future potential instructors were informally identified based on their overall performance, level of engagement and enthusiasm. Pre and post course test Scores are listed in Table 3.

Table 3. Pre and Post Test Scores

(Table deleted for website)

Course evaluation: The course was well received and appreciated, particularly the skill stations, which were identified as an aspect that could be augmented in future courses. Detailed feedback on the course by the participants is shown in tables 4 to 6.

Table 4. ***Post-Course Confidence Matrix***

1 = not confident at all 5 = completely confident How confident do you feel in managing:

(TOTAL RESPONDENTS = 14/16)

		1	***2***	***3***	***4***	***5***
A	*A 5 year old child with a fractured pelvis*				*2*	*12*
B	*A 30 year old week pregnant woman with a fractured femur*	*1*				*13*
C	*A 25 year old man with a knife in his abdomen*			*1*		*13*
D	*A 60 year old female with 40 % burns*	*1*	*1*			*12*
E	*A 50 year old man unconscious with a fixed dilated pupil*				*3*	*11*
F	*A 20 year old male who is conscious but cannot move his legs*				*2*	*12*
G	*A 2 year old child with major haemorrhage from a traumatic amputation of his leg*				*2*	*12*
H	*A 50 year old man cyanosed from a tension pneumothorax*					*14*

Table 5. Post-Course Trauma Management Questions

(These are given answers and comments. Numbers in parenthesis indicate the frequency of similar answers given by different respondents)

a. What is the most useful thing you have learned on this course?

- *Primary survey*
- *Secondary survey*
- *Logroll*
- *Neurologic exam*

- *Systematic and organized approach to trauma victim (8)*
- *Hypotensive resuscitation*
- *ABCDE and definitive management approach*
- *Trauma in adults, pediatric, pregnant and burn*
- *Disaster management and trauma unit establishment (2)*
- *Guideline to referring patients*
- *Managing trauma based on PTC survey*
- *Protection before detection!*
- *Short term training can build our capacity*

b. *What **TWO** things do you plan to change in your trauma management as a result of this course?*

- *Follow ABCDE protocol (2)*
- *Establish trauma team and unit, Train staff (6)*
- *Examination in neutral position, cervical protection and logroll (4)*
- *Head and spine examination*
- *Skillful, coordinated, systemic trauma approach (6)*
- *Prepare to manage disaster*
- *How to approach different trauma causes*
- *Prepare help trauma victims*
- *Repeated sound evaluation (3)*
- *Routine patient evaluation*

c. *Thinking about the last trauma case that you worried you (described in the pre- course*

questionnaire at the beginning of this course) would you change anything in your management? Please explain.

- *Pelvic sling addition*
- *Hypotensive resuscitation (3)*
- *Thoraco abdominal gun shot injury*
- *Needle thoracotomy for pneumothorax*
- *Managing pregnant and pediatric cases*
- *Blood transfusion*
- *Logroll*
- *Chest tube insertion*
- *Consolidation what learned in the course*
- *Organized approach*

Table 6. Course Feedback Questions

DAY 1	***V.Poor 1***	***Poor 2***	***Average 3***	***Good 4***	***V.Good 5***
Local trauma perspective				*4*	*10*
The ABCDE of trauma and Primary Survey				*2*	*12*
Airway and breathing				*3*	*11*
Circulation and shock				*2*	*12*

Skill stations			*1*	*6*	*7*
Secondary Survey				*3*	*11*
Demonstration scenario by instructors			*1*	*1*	*12*
Scenarios Practice			*1*	*2*	*11*
Chest trauma				*4*	*10*

DAY 2					
Head trauma				*3*	*11*
Spinal trauma			*2*	*4*	*8*
Abdominal trauma			*1*	*3*	*10*
Limb trauma			*1*	*4*	*9*
Trauma in children			*2*	*6*	*6*
Trauma in pregnancy			*3*	*7*	*4*
Burns				*7*	*7*
Workshops			*1*	*4*	*9*
Disaster management				*2*	*12*
Scenarios practice Day 2				*2*	*12*
MCQ Exam				*3*	*11*

What was the best part of the course?

- *Systemic approach*
- *Given by senior experts*
- *All were important and relevant*
- *Scenario part (6)*

- *Workshops and practical*
- *Presentations: Short, precise and to the point*
- *Circulation and shock*
- *Having multiple trainers*
- *Primary survey and ABCDE (3)*
- *Primary survey should always be fast!*
- *Discussion part and disaster management*
- *Practicals*
- *Penetrating thoraco abdominal injury*

What would you change? (And additional comments given)

- *Approach to sine injury*
- *Build trauma team and management program*
- *Especially change my skill, Improve skill*
- *More practical skill stations and workshops*
- *Be time based (frequent) and increase number of participants*
- *Another basic Surgical skill training (Laparotomy, anastomosis, elevation----)*
- *ABCDE approach for any trauma patient*
- *Personal commitment*
- *PTC should be a teamwork to be successful*
- *Work show C-Spine protection*
- *Practice and teach endo tracheal intubation*

In summary, a very good 4th course for Gondar University Hospital which now has a large cadre of PTC trained surgeons able to promulgate this course in the future although they would like to preserve the precedent of having at least one international surgeon for their GUH courses. Course funding remains an obstacle to full independence as a course site.