UGANDA SUSTAINABLE

USTOP

TRAUMA ORTHOPAEDIC PROGRAM

Trip Report | September 28 - October 19, 2012

a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

p. 4 USTOP TRIP SCHEDULE

Contents

Personnel

Orthopaedics
Dr. Piotr Blachut, Vancouver General Hospital
Dr. Lane Dielwart, resident, UBC
Florin Gheorghe, MSc student, UBC
Alicia Green, nurse, Vancouver General Hospital
Genelle Leifso, nurse, CNIS
Franca Mossuto, nurse, Hamilton Health Sciences
Nathan O'Hara, coordinator, UBC
Dr. Mykola Nosa, Vancouver General Hospital
Dr. Rubini Pathy, resident, McMaster University
Dr. Brad Petrisor, McMaster University
Dr. Darius Viskontas, Royal Columbian Hospital

Plastic Surgery
Dr. Nicholas Carr, Vancouver General Hospital
Dr. Jordan Hayerthornthwaite, resident, UBC
Amanda Ho, hand therapist
Dr. Mark Hill, Vancouver General Hospital
Joanne Smith, hand therapist
Dr. David Ward, Valley Surgery Centre

The team would like to especially thank our local coordinator, Ms. Monica Kabagambe, for her tireless efforts in organizing the visit.

Schedule

October 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Ortho Schedule Plastics Schedule				27	28 CNIS Nursing Course	29
30 Bioskils Course	1 Ward 7 Theatre Casualty Theatre	2 Hospital Rounds Casualty Theatre	3 Ward 7 Theatre Casualty Theatre	4 Ward 7 Theatre Casualty Theatre	5 Outpatient Clinic -LT Follow up Casualty Theatre Depart for Soroti pm	6 Trip to Soroti
7 Flap Course Trip to Soroti	8 Ward 7 Theatre Casualty Theatre Plastics Clinic	**9 Uganda Holiday** Hospital Rounds w/ Plastics Casualty Theatre	10 Ward 7 Theatre Casualty Theatre Mulago Burns OR	11 Ward 7 Theatre Casualty Theatre Mulago Burns OR	12 Outpatient Clinic Casualty Theatre Mulago Burns OR	
14	15 Clinic with CoRSU	16 CoRSU Mulago Burns OR	17 CoRSU Mulago Burns OR	18 CoRSU Mulago Burns OR	19	20
21	22	23	24	25	26	27

Courses

CNIS Safe Surgery Save Lives Perioperative Nursing Course
September 28 - 29, 2012

The Canadian Network for International Surgeons collaborated with USTOP to offer a two-day interactive course. Using the structure of the World Health Organization's Safe Surgery Checklist, the participants learn why each component of the checklist is vital, how to collaborate and assist the team in safe patient care, as well as specific perioperative skills – correct scrubbing, gowning, and gloving, and performing surgical counts. After teaching the course, the Canadian instructors provide in-theatre coaching for at least two days. The course was attended by 24 nurses primarily from the operating rooms and assigned to the Ward 7, Casualty, and Burns and Plastics Theatres.

Orthopaedic Bioskills Workshop
September 30, 2012

This is the third time that USTOP has offered a basic bioskills workshop at Mulago Hospital. The course was attended by 55 trainees from the Orthopaedic and Surgery departments as well as staff from theatre nursing and rehabilitation services. The workshop provided participants with hands-on training in basic fracture care with modules on external fixation, buttress plating, dynamic compression plating, position screws, lag screws, tension band principles and IM nailing principles.

Lower Limb Flap Course
October 7, 2012

Members of the UBC Division of Plastic Surgery provided a training course on lower limb flap reconstruction. The training gave a morning of didactic presentations followed by an afternoon of hands-on training in the Anatomy cadaver lab. There were 60 participants representing Orthopaedics, Surgery and theatre nursing.

External Fixation & Perioperative Nursing | Soroti Hospital
October 7, 2012

Members of the USTOP team had an opportunity to give a condensed perioperative nursing course to theatre staff at Soroti Regional Referral Hospital and a course on external fixation to the hospital's surgeons, interns and orthopaedic officers.

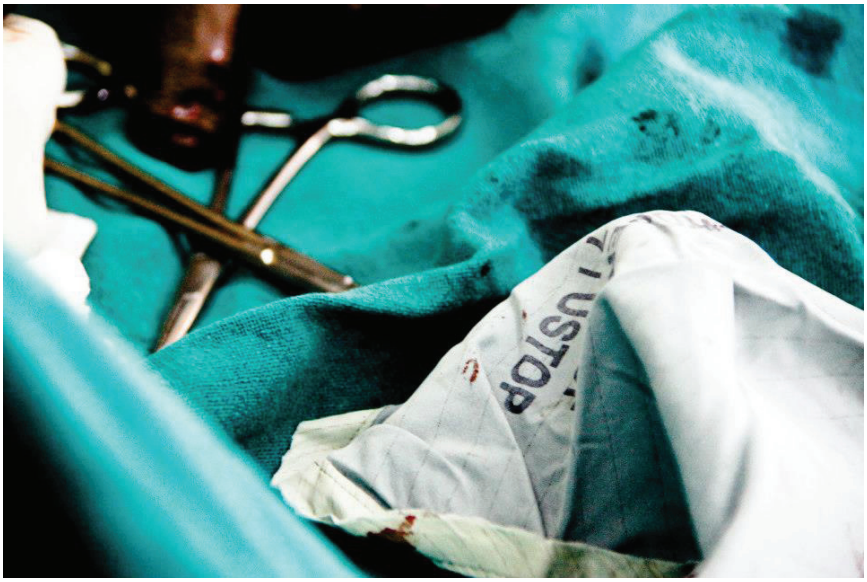
Nursing

Community participation / contributions
A review of the perioperative nursing report written after the February 2012 USTOP trip was very valuable. Not only did it provide background to this practice environment, but it also gave some information on the issues identified and solutions proposed at that time. This became very helpful when beginning to assess and evaluate whether practice changes were taking place, in particular the basic perioperative practices on which we would focus during this trip.

Franca Mossuto, an orthopedic perioperative nurse who came with the group from Hamilton was keen to be involved with the course. Although she has not taken the authorized CNIS Instructor's Course, she was most helpful in assisting the groups with their discussions and role-play activities. She will be a great addition to the instructor pool once she has been certified.

While previous Canadian perioperative nurses identified Mulago Hospital perioperative nursing leaders, communication with them prior to our arrival was minimal. It is possible that their contact information was not correct, or perhaps they were not comfortable in responding to a nurse they did not know. It is also possible that they have limited Internet access in the workplace or at home. In addition, nursing leadership in the Ward 7 and Burns and Plastics Theatres had changed since February 2012 (now, Sr. Vickie is head nurse in Ward 7 Theatre). It is not clear whether these roles are routinely rotated since the former "head nurses" are still working in the setting.

Resources brought to Uganda included perioperative nursing texts and Operating Room Nurses Association of Canada Standards (donated by BCIT and Vancouver Coastal perioperative faculty). These items were given to the Burns and Plastics theatre because similar resources were given to the Casualty and Ward 7 Theatre staff in February 2012.



Results (factors, causes)
The SSSL course was held in the recently completed CNIS-sponsored Surgical Skills Lab, in the School of Medicine building. This was the first time the space had been used for a course, and it easily accommodated the participants. Placement of some seats needed to take into consideration several supporting pillars, which blocked the view of the screen at the front of the room.

In this course the majority of the nursing participants claimed more than 5 years of perioperative nursing experience. This may have been due to the fact that leaders from these areas were given preference.

Needed changes (i.e. changes in teaching strategies, planning)
The course was delivered as written, using the updated (3rd ed.) Instructors Manual. There were no particular difficulties with the course delivery, although we did find that with the number of non-perioperative nurses, some of the skill sessions were particularly difficult to do because there were so many

questions. In fact, we ran out of time, and so, did not have everyone do the scrub, gown, glove exercise. This became something that we needed to walk the individuals through as we engaged in coaching, especially since many of the nurses and surgeons with whom we were working had not had the benefit of the course.

As with previous courses, the need for further training was identified. The most pressing relate to post-anesthesia patient care (Recovery Room nursing) and sterile processing (addressed by a certified specialist in this area). In addition, a course reviewing basic principles of asepsis and offering organizational "tips" focused on best practices would be helpful not only for the perioperative nurses, but also for the surgical residents who often work in the Casualty Theatre without the assistance of a scrub nurse. The residents we observed there were frequently seen to break sterile technique (e.g. open gloving, inadequate prep and draping, strike-through of drapes due to bloody sponges and irrigation fluid).

Data collection this year was enhanced after consultation with CNIS evaluation specialist, Bonnie Molloy. Both pre and post-course questionnaires were collected, as were additional evaluation forms. While she will be providing more complete evaluation of the data, feedback on the course was predominantly "excellent". The amount of paperwork now required takes the students considerable time as some struggle with comprehending written English. The pre/post-test questions need to be reviewed to ensure that they are not confusing to the participants and that the answers accurately reflect their pre and post-course knowledge.

As members of this USTOP team, at the conclusion of the time at Mulago we were able to share some of our recommendations with local leadership (surgeons and nurses). In exchanging feedback with the theatre nurses in attendance, it was apparent that they were prepared to make some practice changes based on the course content (e.g. Patient identification, checklist for every patient). Making these changes lasting and sustainable will require the participation of the entire perioperative team.

Unanticipated problems/solutions

One of the ongoing challenges when running this course, is encouraging participants to be punctual. At Mulago Hospital, many of the nurses travel for 1-2 hours in order to get to the hospital from their homes. The first morning of the course there was very heavy rain and that was cited as contributing to the traffic jams that are a recurrent problem in Kampala. As a result we began late, and participants straggled in for the first two hours.

There was also some confusion regarding attendance. Some nurses who had been registered for the course were on "leave" and thought they would just come for one day. Monica assisted by calling these individuals and explaining that they needed to attend both days (mornings and afternoons) to receive the certificate. As a result, several gave up their leave to attend. We believe that this requirement was clearly relayed to the organizers. The organizers and participants now realize that this requirement will be strictly enforced. USTOP's provision of nutrition breaks and lunch for the participants meant that they stayed at the course site over the breaks. This helped facilitate punctuality after these breaks, although at the end of the first day several wandered off after the tea break (likely due to the fact that Monica began distributing the day's transportation money immediately after the tea break) and didn't return for the final session.

During our subsequent days working with the USTOP surgeons, the problems related to sterilization of surgical instruments and supplies became obvious to us. While the autoclaves must be repaired, replaced, or removed and ongoing maintenance monitored, the Infection Control Nurses (Doreen and Joyrine) asked Genelle to provide some additional education for the nurses working with sterilizers in their units. The result was a two-hour seminar held in the telemedicine room. The Infection Control nurses recruited participants; there were about 30 attendees at each session (including the Deputy Commissioner of Nursing on the final morning). At the request of the Infection Control nurses, the PowerPoint presentation (with accompanying speakers notes) was left with them so that they could continue education of their staff on this important topic.

Lessons learned

Overall, the participants were very keen. They worked well within their groups and participated in the discussions to the best of their ability. This is the first course at this site, and many of the nurses attending were not working directly in the perioperative environment. In addition, these nurses had more difficulty with the interdisciplinary role play exercises, which are an integral part of the course.

The attendance tracking documents were used successfully in this setting, even though USTOP determined that they would provide nourishment and lunch breaks, and transportation money, rather than a daily per diem for course participants. There were no complaints from the participants, even though running the course on Friday and Saturday, meant that they were giving up a weekend day for this continuing education opportunity. (It was impressive to note that some of these same nurses also attended the Bioskills Workshop on Sunday.)

It is clear that some practice change occurred as a result of the February 2012 instruction by Vickie, Alicia, and Samantha. Some changes we observed:

- Signs on doors to "sterile" rooms re keeping the doors closed. Of course, signage doesn't make something happen in Uganda anymore than it does in Vancouver.
- Signs not to water down scrub and prep solution. We did not observe this happening.
- Some scrub nurses working in Ward 7 Theatre were using closed gloving.
- In Ward 7 Theatre, decontamination and disinfection of instruments is continuing according to the process instituted by Samantha. Now, it needs to be disseminated to the other hospital theatres.
- The correct chemical indicator tape for steam sterilization was being used.

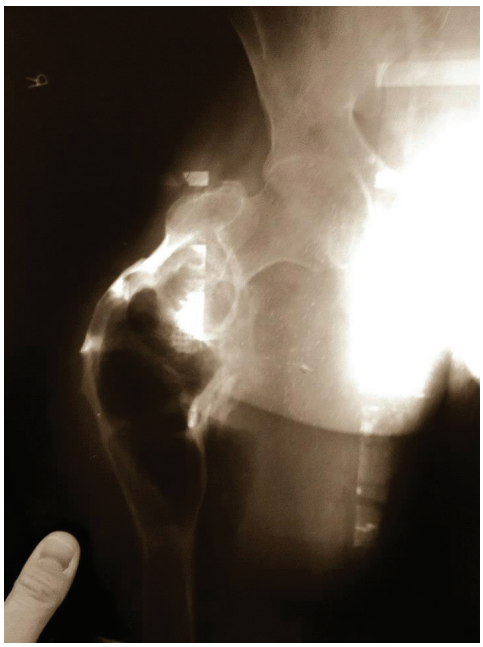
The coaching days following the course allowed us to model Checklist behavior and to continue teaching the participants and the surgeons in its use. We also witnessed the effectiveness of certain aspects of our teaching. It was inspiring to see the nurses practicing what they had just learned. Obviously those who took the course felt that the knowledge they gained was important and useful. In particular we noticed increased assertiveness and confidence of the perioperative nursing staff while communicating with and instructing other members of the surgical team to do the "right" thing. Their increased awareness of patient safety issues was also noted (e.g. more postoperative care and patient identification "plaster").

Many participants expressed their thanks for this course personally, during the wrap-up, or in their evaluation feedback. As in previous courses, these nurses are very interested in having relevant continuing

education or professional development. New employees in the ORs sites only receive on-the-job training, which may not be adequate; there is no specialized perioperative nursing course in Uganda. Therefore, while this course is an important step in identifying aspects of safe patient care (as articulated within the parameters of the SSSL Checklist), we believe that additional information and training could improve the perioperative practice of these nurses.

Clinical Involvement

As in previous visits, the orthopaedic team worked concurrently with Ugandan colleagues in Ward 7, Casualty Theatre, Main Theatre and in the orthopaedic outpatient clinic at Mulago Hospital. The team also travelled to Soroti Regional Referral Hospital to support the provision of orthopaedic trauma care. Plastic surgery team members worked with Ugandan colleagues in the Burns Unit Theatre and Main Theatre at Mulago Hospital, as well as worked with colleagues at CoRSU Hospital.



A continually increase in the number of trainees within the Orthopaedic training program at Makerere University has had an immense impact on the ability to manage the overwhelming volume of orthopaedic trauma patients admitted to Mulago Hospital. The team participated in less surgical treatment of femur fractures than in previous trips and was able to provide clinical training on more complex cases. Scare supplies and equipment continue to be a limitation on patient care and surgical output.

Surgical Education

The USTOP team participated in daily teaching sessions with the orthopaedic residents in the Department offices. Residents would bring x-rays of recent admissions to be discussed as a group. This presented an excellent educational opportunity and enabled careful planning of upcoming surgical procedures.

A USTOP faculty member would also accompany the on-call residents on their morning admission rounds. This was another tremendous opportunity to discuss what treatment would be the most appropriate for a given injury. The team embarked on a systematic review of skeletal injuries, focusing on basic anatomy injury classification, non-surgical management, indication for surgical management and some of the technical aspects of the surgical treatment. The focus of this trip was on upper extremity injuries and the plan is to continue this exercise for lower extremity injuries.

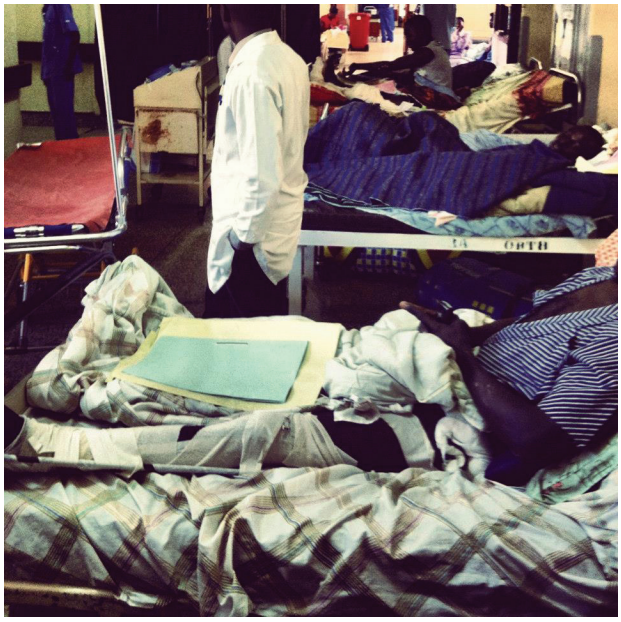
The USTOP team partnered with Ugandan staff in ward rounds with bedside teaching as a means to assisting the care management of admitted patients. This included two full days of the trip spent on hospital wide rounds. Overall the orthopaedic residents were very engaged, keen to learn and a pleasure to work with.

Recommendations

Training

- History and physical examination module in curriculum at the beginning of residency if not already there
- Basic surgical skills (sterile technique / soft tissue handling / suturing / casting) training for residents prior to starting clinical work
- Daily case discussion / systematic ortho trauma review during USTOP visits
- Continue basic Bioskills workshops on USTOP visit – look at adding more advanced module for more senior residents
- Develop another perioperative course on "Sterile Processing: Decontamination, Disinfection, and Sterilization"

Clinical Care



- Process to review cases managed by ortho officers in casualty
- Supervision of residents in casualty (at a minimum 3rd year residents need to be in attendance for all cases in casualty – optimally it would be staff)
- More attention to history and physical examination in admission rounds (implement post admission education round during USTOP visits)
- Better triage system for emergency patient access to operating room
- Run separate fracture and orthopaedic clinics
- More supervision of residents in the clinic (USTOP activity during visits)
- Improve patient safety through increased capacity for post-anesthetic recovery
- Ensure surgical team has appropriate personal protective equipment and adequate sharps disposals

Resources

- Equipment management and inventory process
- Need to have equipment made available for casualty 24/7
- Provide power tools for casualty (hydraulic system in casualty and others in ward 7 or vice versa / or cordless drills with sterile bags)
- Get complete sets and get patients to buy replacement of implants used (for those patients that are asked to buy implants)
- Change in sterile processing for casualty instruments

For more information on the Uganda Sustainable Trauma Orthopaedic Program, please visit:

http://orthosurgery.ubc.ca/index_ustop.html

or access the site through the QR code below:

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