REPORT OF THE 2015 INTERNATIONAL SURGICAL EDUCATION SCHOLAR’S TOUR OF THE UNITED STATES OF AMERICA
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Introduction
I would like to express my appreciation to the American College of Surgeon for the support they gave me in funding the travel and the logistics around the educational travel including air fare, accommodation and meals.

I was appointed program director in the Department of Surgery for postgraduate studies by the Chief (Chair) of Surgery in 2012. The appointment came about because we had been asked to prepare a manual for the postgraduate studies with two other colleagues. One of the colleagues became chair and made the appointment.

In the manual, we had suggested the role of Program Director. This of course means the Program Director is not a university position and the office has no authority derived from university statutes. However, that does not make it less functional: one can still function given the authority from the Chair of Surgery.

It is in this context that when applying for the scholarship, I wanted to learn what a Program Director really does apart from what I had read. How is surgical education delivered in other contexts? What can we learn and contextualize in our environment?

The journey
Kate Early really helped in the preparation and in connection to the people in the sites I would be visiting. The journey began from Nairobi’s Jomo Kenyatta International Airport on 2nd October, 2015 at 23.45pm through Schiphol in the Netherlands to O’Hare International Airport in Chicago, arriving at 1.30pm 3rd, October, 2015 local time. The Blue Line train to downtown Chicago dropped me off at Jackson Station, and then I pulled my bag through the streets to Essex Inn Hotel. Due to jetlag, I settled and slept up to midnight.

Chicago
The meetings began the very next day, on 4th at 7.00am with a well arranged transport from the hotel to McCormick Place for registration and the education session that I was registered for. This session took the whole day. The session was entitled “Surgical Education: Principals and Practice.” I attended Surgical Education IV and V as well as the Meet the Expert session on emotional intelligence on issues to do with surgical education.
I also attended the following sessions

1. Named lectures
   i. Opening Ceremony/Martin Memorial Lecture
   ii. Charles G. Drake History of Surgery Lecture
   iii. Scudder Oration on Trauma

2. Scientific
   i) Breast
   ii) International scholars

MGH
I flew to Boston Airport on the 8th of October, from 5pm, arriving at 8pm local time. The following day I took a taxi to Brigham and Women to attend a training session on operating room team communication. The team comprised of surgeons, anaesthesiologists, nurses and operating room technical people. I participated in one of the scenarios, but they performed three scenarios with debriefs in between. This was at STRATUS (Simulation, Training, Research and Technology Utilization System)
The following week, after the Monday Holiday, I was in Massachusetts General Hospital (MGH) from Tuesday very early in the morning with Dr Roy Phitayakorn. After the morning rounds we had the resident surgical education council to review the program attended by the Chief of Surgery and the Program Director among others. The discussion was on the reports required by ACGME and on innovations for feedback at operating sessions – an application called SIMPL.

I had an opportunity to watch a teaching session for the final year graduate student and met with a number of people who are important in education:

i. Program Director of General Surgery Residency  
ii. Director of Surgical Education  
iii. Surgical Education Researcher  
iv. Program Director of Internal Medicine Residency  
v. Director of Graduate Medical Education for Partners  
vi. Program Director of Anaesthesiology Residency and Director of Partner's Center of Excellence in Medical Education  
vii. Director of Quality and Safety and Simulation for Anaesthesia Department  
viii. Director of Surgical Simulation
The discussions in these meetings included how education takes place at the MGH, mainly the role of assessment, feedback, formative evaluation and the place for teaching technical and technical skills. The point that came out is that most of the teaching of technical and non-technical skills takes place in the simulation lab.

I also had a chance to meet people who are responsible for the policy:

i. Sr. Vice President, Anaesthesia, Emergency Services and Clinical Business Development

ii. Chief of Surgery

iii. Associate Visiting Surgeon - Surgical Oncology Department

iv. Designated Institution Official

v. Director of Graduate Medical Education for Partners

vi. Director of Healthcare Research and Policy Development in the Codman Center

vii. Director, MGH Center for Global Health and Disaster response

viii. Division Chief, Global Health and Human Rights

The discussion with these groups was around what I came to learn and the possibilities of collaboration.

I had the opportunity to see learning process at the simulation centre, conferences - morbidity and mortality and grand rounds as well as classroom set-up. I had opportunity to meet the staff from the Center for Medical Simulation (CMS).

**BWH**

I returned to Brigham and Women’s Hospital on the 19th, with a meeting at STRATUS to see how they do their planning for the teaching within month and the planning. They also put down a system to process the requests from units within BWH and outside. I also had an opportunity to observe an assessment of ultrasound guided central line by medical students. I watched open surgery skills, i.e. small gut anastomosis and Advanced Trauma Life Support training performed at the STRATUS.
I had an opportunity to attend the operating room to observe OR teaching and observe two operations. I also had the opportunity of attending a cultural dexterity conference, where a team from the Center for Surgery and Public Health was developing a curriculum to teach cultural competency in surgery with a group from other universities within the United States. This was preceded by a dinner where the rich cultural history of surgery within the United States was shared.

I also had a meeting with the Clerkship Director in which we discussed how they train undergraduates in surgery. The major difference is that they place one student per staff for about a month with requirement of assessment. They offer no institutional exams apart from assessment and teaching of skills and non-skills.

I had opportunity to watch morbidity and mortality conference, surgical grand rounds with a visiting surgeon from New Zealand talking about the need to work as a team in OR and the researches around that. After that I attended two surgery didactic sessions where the attending surgeon went through SCORE MCQs then taught around that subject.
At the end of the stay, we sat down with Dr Douglas Smink to share out what I came to learn and what I felt I came out with over lunch.

**Emory**

I travelled to Atlanta on Friday and arrived in the evening. That means I stayed weekend without attending to any educational program. On Monday the program started with meetings and observations.

I had a meeting with the following personnel:

1. Associate Program Director of breast oncology fellowship.
2. Associate Director of Education, Department of Surgery,
3. The Coordinator of the residency program.
4. Directors of Medical Education in surgery
5. Program Director of the surgical residents
6. Director of clerkship
7. Director of Simulation Center
8. Medical Illustrator
9. Director of the Avon Breast Cancer Center in Grady Hospital
10. T3 Laboratory Coordinator
The discussions were on how they teach surgery to both undergraduate and postgraduate students, which is mainly through simulation, didactics and clerkship. In all these areas there are feedback and evaluation performed that enable the students to improve their knowledge, attitude and skills.

**What did I learn?**

Surgical education in the United States focuses on producing a surgeon who is well rounded and not limited in knowledge. The simulation lab has become the centerpiece of training for both technical skills and non-technical skills - teamwork, communication and professionalism.

Assessment of the students and residents in the wards and in operating room is an essential part of what permits one to proceed to the next level. The examination from ABSITE is part of assessment but is not given room. In some schools such as Harvard (Massachusetts General Hospital), it forms just 10% of the total grade, and the progress to the next level is determined by evaluation from faculty, peers, auxiliary staff and the practical assessments.
Patient safety is practiced through the continuum of study. The resident/student must practice in the simulator laboratory before they are allowed to touch a patient. Simulation has the advantage of

i) Being able to make mistakes that are not fatal to patients
ii) Being repeated
iii) Mimicking situations that one meets occasionally to prepare for it.

Learning in the operating room also is broken down to pieces so that the student is gradually given responsibility from stitching to opening to doing the actual operation in steps. The infrastructure for education includes not only the head of department but program directors who are charged directly with education, especially assessments and feedback. They are well funded and have coordinators to help them function well.

Learning materials are standardized for skills, knowledge and attitude across board. The philosophy is to have a surgeon who is not only knowledgeable but seeks to improve the outcomes for his patients as well as institution/country. This is in built-in education through elective terms that allows resident and medical student to choose how they would like to be involved.

Laboratory work in Emory is part and parcel of innovation in surgical techniques, medical devices and drugs. It gives an opportunity for doctors to work in basic sciences during training and those who choose to do research.

Possible areas of collaboration:
1. The possibility of collaboration with the surgeon from Massachusetts General and Brigham and Women on research
2. Collaboration on faculty development with MGH
3. Simulation lab collaboration with MGH/BWH

ACGME has defined what kind of surgeon need to be trained at whatever training institution in the United States, they have then defined what is required in the institution to train that kind of surgeon and have put in place an infrastructure to monitor and evaluate the progress. The institutions have the mandate to train while another institution will verify the training.

What is new?
1. The seriousness by which non-technical skills is taken
2. The fact that knowledge alone is not significant in determining progress
3. Support and infrastructure for education and assessment
4. Centrality of simulation lab for the teaching of both non-technical and technical skills
5. The doors of collaboration on research at comparative level
6. The board examination is not a must but then for purposes of insurance payment, everyone does the board examination and renewal every so often.

What need to be done
Defining the kind of surgeon we should train as a country
Have final assessment body different from the training institution
Have an infrastructure recognized by the University for assessment of students not only in knowledge and technical issues but beyond that, knowing a doctor needs more than knowledge and technical skills
What input from the institutions might be needed
The university needs to recognize that the making of a doctor requires more than knowledge and skills; we need doctors who will take lead in their workplaces for the betterment of patient care and health outcomes. So, we need to consider how we could mainstream communication, professionalism, systems-based management into our assessment of the doctor.

We need to recognize the place of the infrastructure (the Program Director office) for education other than the chairman’s and thematic head of unit office. We need to fund educational processes including the Program Director’s office. The university needs to realize there is more to enable education than space and students. We will need more personnel who have a commitment to enabling learning.

The Society of Surgeons in Kenya
Define the kind of surgeon we need to have in Kenya
Conclude on the discussion on the possibilities of having a national board and council

American College of Surgeons
Network with the members who are keen to help in surgical education field