Mengo Hospital Trip
Kampala, Uganda

Urolink Visit report by Shekhar Biyani	
Country visited	Uganda
Institution	Mengo Hospital
Dates of visit	16th – 23rd March 2024
Team members	Shekhar Biyani Mike Kimuli

Pre-visit planning

Mr. John Dalton, Chair, UK Friends of Mengo Hospital Committee, Consultant Gynaecologist, Leeds Teaching Hospitals NHS Trust (LTHT), approached me about forging a link and supporting Mengo Hospital in the development of urological services. Mr. Dalton informed me that general surgical and anaesthetic colleagues from LTHT are also joining the trip. I felt that, as the visiting team is going to be multi-specialty, therefore, any service development would be a bit easier. After an initial discussion with Mr. Dalton, I contacted Dr. Henry Luweesi (Consultant Surgeon, Mengo Hospital) and inquired about surgical services at the hospital. I was told that they have 3 visiting urologists, and minimal endoscopic procedures are done at this stage. The hospital is very keen to develop urological services. Following discussion with the Urolink members, I booked my tickets to visit the hospital. I then approached my colleague, Mr. Michael Kimuli, Consultant Urologist, LTHT, because of his family connections to Uganda. I was very pleased that he agreed to join me. Our objectives were to assess the needs and facilities and develop links with the urology team.

A week before the trip, the program for the week was shared by Dr. Luweesi (Appendix 1).

Visiting Team

Ms. E. Cooper (colorectal surgeon, Winchester)

Mr. J. Dalton (O & G, Leeds)
Dr. L. Eyre (anaesthetist, Leeds)
Mr. M. Kimuli (urologist, Leeds)
Mr. A. Peckham-Cooper (EGS, Leeds)
Prof. G. Toogood (EGS, Leeds)

Uganda and Urological services

East Africa's Uganda is a low-income nation. Uganda is separated into 15 sub-regions, which are further divided into four regions: Central, Eastern, Northern, and Western. Eleven cities, including Kampala, and 135 districts make up Uganda. According to WHO estimates, there are 44.4 million people living in Uganda, and the country's population is growing by 3.0% per year. Of the total population, 51% are female and 49% are male. The population is made up of 22% of youth (those between the ages of 18 and 30) and about 55% of children (those under the age of 18).[1]

Healthcare Delivery System

Health care in Uganda is delivered through a decentralised framework, with the district responsible for all structures within the district. Health care services are provided by both the public and private sectors, with each sector covering about 50% of the standard units of output.
The national health system consists of National Referral Hospitals, Regional Referral Hospitals, and the district health system. The district health system is further divided into health sub-districts. It includes District General Hospitals, Health Centres IV, III, and II, and Village Health Teams (Figure 1). The significant causes of death include malaria, HIV/AIDS, neonatal and maternal-related deaths, stroke, tuberculosis, road traffic injuries, and respiratory infections.

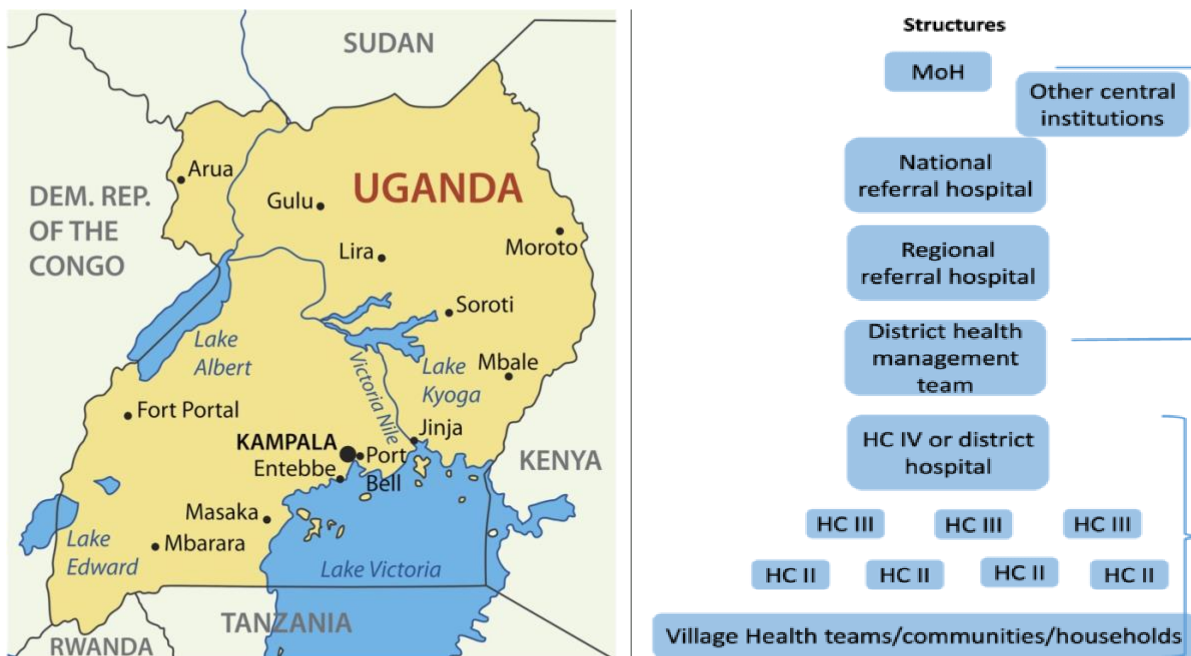

Figure 1. Uganda health service structure.

Government hospitals are divided into three categories: national referral, regional referral, and district general hospitals. District general hospitals are staffed with general doctors. Regional referral hospitals are teaching hospitals and have specialists in specific fields. Finally, there are five national referral hospitals: Mulago Specialised Hospital, Butabika Hospital, Kawempe, Kirudu, and Naguru, located in Kampala district. These are also research or teaching hospitals that provide comprehensive specialist services.[2]

Uganda faces a high unmet need for surgery, with few operating theatres (OTs) (0.2 major OTs per 100,000 people) and a low surgeon density of 0.73 surgeons per 100,000 people. Uganda and the East African region have significant inequalities in specialised care, with generally few medical specialists and an uneven distribution of the different medical specialties. There are approximately 20 qualified urologists in the country, and most of them are based in Kampala. The burden of urologic disorders in Uganda is not very well reported in the literature. A study noted the prevalence rates for moderate and severe LUTS were 40.5% and 20%, respectively, in men >55. Mild, moderate, and severe LUTS occurred in 39.5%, 40.5%, and 20% of the population, respectively.[3]Another study found the national pooled prevalence of urinary tract infection in Uganda to be 24.92% (95% CI: 23.407-26.479; I2 = 98.85 [98.56% - 99.08%]), with Northern Uganda having the highest pooled prevalence of 71.94% (63.70 - 79.23).[4] In Uganda, prostate cancer is also the most common cancer among men, with an age-standardised incidence rate of 41.6 per 100,000.[5]

Mengo Hospital

Mengo Hospital is a private, not-for-profit health institution. It is a former missionary, faith-based, community-teaching hospital and the pioneer hospital in Uganda and East Africa. It was started by Dr. Sir Albert Ruskin Cook on February 22, 1897. The UCU School of Medicine at Mengo has been recently established and it's second cohort of students have graduated. Mengo sits on 22 acres of land, but the buildings are scattered, and this presents a challenge for monitoring and managing the services. It is guided by values, mission, and vision. With 300 beds available, 6 operating theatres, 4 ICU beds, 10000 admissions, 7000 procedures, and 30000 general outpatients' visits, with 38% of them being children. The eye clinic treats close to 6,000 patients a month, does 360 general procedures, and performs 415 deliveries monthly.

16 March, Saturday, 2024

At the Leeds airport, I met Prof. Toogood and Dr. Eyre. We travelled to Entebbe via Amsterdam. Dr. Henry Luweesi and Dr. Billy were at the airport to receive us. Our accommodation was arranged at the Namirembe Guest House. We arrived at the guest house after midnight.

17 March, Sunday, 2024

Mr. Dalton had travelled to Uganda 3 days before our arrival. We took a number of kits to the hospital and visited the operating theatre to assess the existing equipment for surgery on

Monday. In addition, the case histories of patients on the Monday list were also discussed (Figure 2). In the afternoon, Mr. Dalton took us all to explore the city.

Figure 2. Preworkshop team brief and theatre visit by the visiting team.

18 March, Monday, 2024

The morning started with a worship service at the chapel on the hospital campus. After worshipping, we took a guided tour of the hospital. I was asked to meet with Dr. Jackson (Medical Officer) for simulation training. Dr Jackson took me to the skills centre after lunch. The general surgical team started laparoscopic cases in the theatre. In the skills centre, we could manage to set up only one lap box for training as there was a problem with cables to set up other boxes. I took the abdominal wall model to teach open access techniques for the camera port. We also created a station for laparoscopic instruments.

19 March, Tuesday, 2024

Mr. Kimuli and I arrived along with Dr. Jackson at the skills centre around 8:30 a.m. From 9 a.m. onwards, trainees started to come. I did a presentation on the basic laparoscopic skills, and Mr. Kimuli discussed physiological changes with pneumoperitoneum. This was followed by hands-on training (Figure 3). There were 20 trainees, and they were divided into

groups to have basic lap skills training (Appendix 2). We were told that 3 urologists support urological services.

Figure 3. Basic lap skills training in the new skills centre.

After lunch, we met Dr. Leonard and Dr. Vincent. Dr. Badru, the third urologist could not make it.
Visiting Urologists
Dr. Odoi Leonard started 18 months ago (clinic on Wednesday)
Dr. Medeyi Vincent started 12 months ago (clinics on Monday and Tuesday)
Dr. Ssekitooleko Badru started 24 months ago (clinics on Thursday and Friday)

The urology workload is mainly benign prostate disease and urethral stricture. They perform monopolar TURP procedures with 5% dextrose. There is a urology clinic every day, and 10-15 cases are seen in the clinic. Exposure to urology cases and teaching is minimal at the undergraduate level. The urology services are limited by the lack of theatre capacity and equipment and the absence of a full-time urologist.

After our meeting, I came back to the skills lab to set up other boxes. Dr. Jackson contacted the IT team and requested that they come to the simulation lab. I was surprised to see Dr. Simon Peter Nsingo (Medical Director) in the skills lab. He made sure that all 4 lap simulation training devices were working.

20 March, Wednesday, 2024

Mr. Kimuli and I came to the skills lab around 8:30 a.m. Once again, we provided laps skills training to 12 trainees including, medical students. After lunch, we went to the medical school to meet Dr. Gerald Tumusiime, Dean, Uganda Christian University. Dr. Tumusiime took us on a tour of the medical school. The medical school was started 5 years ago, and currently has an intake of 50 students every year. At this stage, there is no postgraduate training.
Dr Jackson collected feedback on the lap training session (Appendix 3).

Figure 4. Dr Peter (Medical Director) testing his lap skills (B) and supervising the set up (C).

After the training session, we attended the dinner organised by Dr. Simon Peter Nsingo (Medical Director). Mr Kimuli and I arrived at the venue a bit early and managed to have a long discussion with the management team. It was a nice opportunity to meet up with the hospital management team and understand their vision (Figure 5).

Figure 5. Mr Dalton (Group Lead) giving a vote of thanks for the wonderful evening.

21 March, Thursday, 2024

Meeting with the Medical Director and the Management Team
Dr. Simon Peter Nsingo (Medical Director), Dr. Annet Khingi, Mr. Joe Oroni, Prof. Robinson

Mr. Kimuli and I had a meeting with the team for nearly 90 minutes. Dr. Nsingo was appointed as a medical director in December 2023. Dr. Nsingo provided an overview of the history of Mengo Hospital. He also presented the vision for the hospital. It was very refreshing to see the commitments from the whole management team. We shared issues raised by visiting urologists. We recommended that the focus should be on the low-complexity, high-volume conditions (flexible cystoscopy, TP prostate biopsy and TURP) in the short-term. We also stressed that a permanent urologist employed by the hospital is a must for any development of urological services. It was pleasing to see that the medical director agreed with our suggestions and assured us that there would be someone in the post by July 2024. Dr Khingi was nominated as a lead for the development of urological services.

In the afternoon, Mr. Kimuli and I went to the medical school and delivered teaching to 4th year medical students. There were 48 students, and I divided them into 3 groups. Dr. Eyre (Consultant Anaesthetist, LTHT) kindly agreed to do a session on the assessment of a critically ill patient (Figure 6). Mr. Kimuli discussed the management of acute scrotum, and I focused on catheterisation. Groups were rotated after an hour, and in 3 hours, we covered all students.

Figure 6. Teaching sessions with the 4th Year medical students with a focus on urology and critical care.

22 March, Friday, 2024

Mr. Kimuli was not available on Friday; therefore, I approached Prof. Toogood and Mr. Peckham-Cooper to help with the teaching session. Prof. Toogood agreed to talk about biliary disease, and Mr. Peckham-Cooper discussed the acute abdomen (Figure 7). I focused on the lower urinary system. Once again, informal feedback was very good, although we had a number of interruptions due to power cuts. Dr Jackson collected feedback on the teaching session as well (Appendix 4).

Figure 7. Teaching sessions on general surgical topics.

For the evening, the hospital management had organised a dinner at the Ndere Cultural Centre. This was an incredible experience! I loved every minute of it, every dance, and every drumbeat! We saw many different types of dances from across Uganda, and the buffet dinner was exquisite (Figure 8).

Figure 8. Fantastic cultural music and dances.

23 March, Saturday, 2024

In the morning, I met Dr. JP Bagala Obstetrician and Gynaecologist working at the Ministry of Health. We had a long discussion on various issues related to healthcare and how we could help especially on the subject of strengthening surgical systems and training in the Kampala Metropolitan area. We left the guesthouse mid-afternoon to reach Entebbe. We stopped at a hotel for dinner and took our return flight around 11:30 p.m. Mr. Kimuli joined us back at the airport.

SWOT Analysis for the Development of Urological Services

Strengths

- Young, dynamic management team.
- The Leeds Hospital-Mengo hospital link is developing well.
- Committed surgical team (surgeons and theatre staff).
- Simulation training facilities.
- Mr. Kimuli's support.
- Support from Friends of Mengo Hospital UK

Weaknesses

- Absence of a full-time urologist.
- Lack of endoscopic kits.
- Lack of trained theatre staff.
- Poor referral system.
- Unsatisfactory logistic supply (equipment, power, drugs).
- Challenges with equipment maintenance.

Opportunities

- Existence of the National Development Plan with the Programme on Human Capital Development.
- Ministry of Health Strategic Plan 2020/21 – 2024/25.
- Partnerships with universities and other teaching and research institutions.
- To reduce referrals to Mulago Hospital (Referral Hospital) for basic endoscopic procedures (cystoscopy and TURP).
- Opportunity to provide urology fellowships at Mengo in the future to host COSECSA trainees.

Threats

- High attrition rate of well-trained medical officers and specialists to other countries for a better quality of life and job satisfaction.
- Inadequate funding of the health sector.

Urolink and Mengo Hospital Link

The underdeveloped urological services at Mengo Hospital need radical solutions and strong commitments from the management to break the current impasse in urology service delivery. The hospital management should consider appointing a full-time urologist as a first step. This would allow the Urolink team to formulate a plan for further development in urological services. We feel that the focus should be on developing lower urinary tract (benign and malignant prostate) diagnostic and treatment facilities.

Acknowledgement

Trips and training sessions like these would not be possible without major assistance with event planning and funding. We'd especially like to thank the following:

- Mr John Dalton (Consultant O & G, Leeds Teaching Hospitals NHS Trust)
- Urolink
- Dr Henry Luweesi (Consultant Surgeon, Mengo Hospital) and the organising team at Mengo Hospital
- Dr Waiswa Jackson (Medical Officer, Mengo Hospital)

References

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4. Makeri D, Dilli PP, Nyaketcho D, Pius T. Prevalence of Urinary Tract Infections in Uganda: A Systematic Review and Meta-Analysis. Open Access Library Journal, 2023;10:e10490.
5. Asasira J, Lee S, Tran TXM, Mpamani C, Wabinga H, Jung SY, Chang YJ, Park Y, Cho H. Infection-related and lifestyle-related cancer burden in Kampala, Uganda: projection of the future cancer incidence up to 2030. BMJ Open. 2022;12(3):e056722.

Appendix 1

PROGRAM FOR LAPAROSCOPIC SURGICAL CAMP

DATE	TIME	ACTIVITIES	VENUE	LEAD PERSONS
SAT 16TH MARCH	09:00 AM	THEATRE SET UP	GOTH	
	10:40 PM	ARRIVAL OF UK DOCTORS (GT,LORNA,BIYANI)	EBB AIRPORT, NAMIREMBE GUESTHOUSE	BILLY HENRY
SUN 17TH MARCH	02:00PM	THEATRE LIST DISCUSSION, THEATRE READNESS INSPECTION	GOTH	CAROL BILLY HENRY
	10:40 PM	ARRIVAL OF UK DOCTORS (APC)	EBB AIRPORT	HENRY, HENRY
MON 18TH MARCH	8:00am	CHAPEL SERVICE & DEDICATION OF THE CAMP.	MENGO HOSP CHAPEL	CHAPLAIN DR ANNET RACAHEL
	9:30am	BREAKFAST MEETING	MENGO HOSP	PRO DENIS, PNO, RUTH, KIGGUNDU
	11:30am	HOSP TOUR, UCUSOM	HOSP CAMPUS	PRO DENIS, DR ANNET, DEAN UCUSOM
	01:00pm	LUNCH	GOTH	RUTH, CHRISTINE
	02:00pm	GENERAL SURGERY LIST	GOTH	MWANJE HENRY
TUE 19TH	9:00 AM	GENERAL SURGERY LIST	GOTH	MWANJE HENRY
MARCH				SAMUEL
	9;00AM	LAP SIMULATION	ORTHO	DR WAISWA
			CENTRE	DR BIYANI
				DR KIMULI
	2:00AM	ROUNDTABALE MEETING	HOD OFFICE	DR BADRU

		WITH MENGO UROLOGY		DR ODOI
		TEAM		DR MEDEI
				DR WAISWA
WED 20TH MARCH	09:00am	GENERAL SURGERY LIST	GOTH	HENRY MWANJE SAMUEL
	09:00am	LAP SIMULATION	ORTHO THEATRE	JACKSON DR BIYANI Dr Kimuli
	5:00 pm	MD'S DINNER	HERA HOTEL	PENINAH

THUR 21ST MARCH	09:00am	GYNAE LIST	GOTH	BILLY , PAUL
	11;00 am	Urologists meeting with Directors	BOARDROOM	DR ANNET
	2:00pm	Urology Lecture	UCOSOM	DEAN
FRI 22ND MARCH	09:00am	GYNAE LIST	GOTH	DR BILLY DR PAUL
	2:00pm	Urology Lecture	UCUSOM	DEAN
	6:00pm	CLOSING DINNER	ONOMO HOTEL	ALL

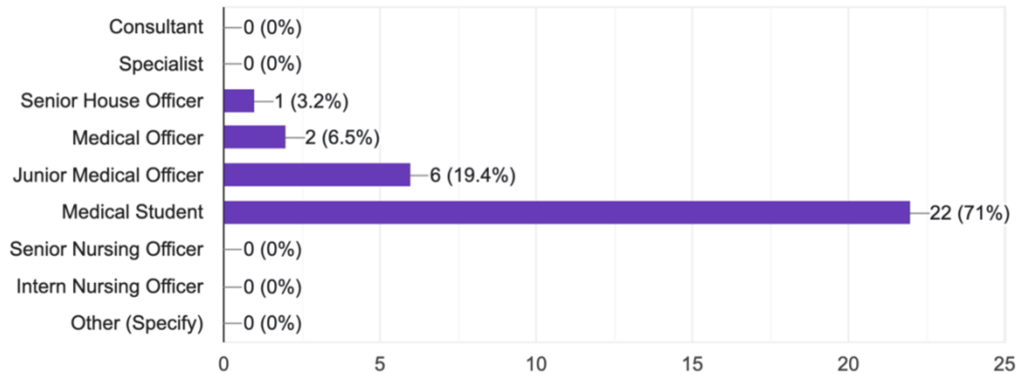
Appendix 2: Participants list

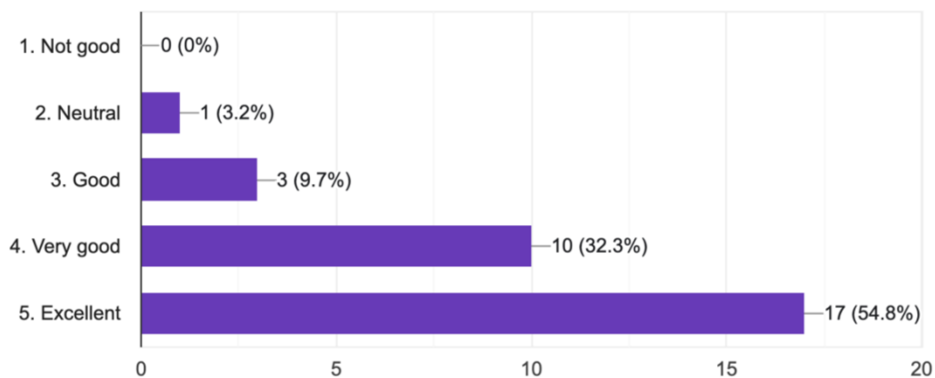
LAPAROSCOPIC UROLOGY
SIMULATION ATTENDENCE LIST
17th | 03 | 024

NAME	TEL NO.	EMAIL	DEPT
Dr. Gilbert Arigasha			Surgery
Dr. Nakyejjwe Pauline			Surgery
DR. SSEMAGA DEOGRATIUS		...m	SURGERY.
DR. Odoi Leonard			Surgery/URO
Dr. Kamoga Nsigamba		...com	Surgery
Kihumuro Peace Patricia (MB...		...com	Surgery
MULAMBA MULINGI JEMIMAH (MBChB V)			Surgery
NAMUTEBI MIREMBE DEBORAH (MBChB)		...m	surgery
MWESIGWA JOY (MBChB III)			Surgery
DORCAS CHIZARAM OKEKE (MB...		...m	Surgery.
MIREMBE DOROTHY KEREN (MBC...		...om	surgery.
Namanya Naboth		...@gmail.com	
Dr. Muraya. Moses		...gmail.com	
Kamyuka Solomon		...l.com	Surgery.
Nakibuuka Betty. K.		...com	Surgery.
Namugosa Joria Elizabeth			Surgery.
MFDETI VINCENT		...oo.com	Urologist
Musinguzi Jonathan		...com	POPD.
ATUGONZA PRISCILLA		...m	Surgery

Appendix 3

Laparoscopic Surgery Basic Skills Training, March 2024 Evaluation Form





If yes, what did you like about the training? (put N/A if you answered no)

31 responses

It was very practical and simplified undestanding the basics of not only LAP but also open surgery
The hands on sessions
The new knowledge
I liked that Professor allowed us to all try laparoscopy practically and he was so kind through it
Hands on
The fact that we started with basics
Concepts were clarified in well.
The interaction
The facillitators were clear
The interaction and participation

The hand-on training and simulations.
Very practical sessions but with basics.
It was interactive
The interactive studying
Really informative and practical things that were taught. It was not utterly new information but it was really enlightening, correcting and confirming to hear most of the content expressed during.
It was interactive and I enjoyed the practical session
The teaching techniques
Informative and applicable
I liked the fact that we were given to try and use the instruments, and the instructors(Drs) were encouraging us and guiding us on the right way to use the instruments.
I liked it was physical and we were able to interact
Adequate transfer of knowledge and willingness of the facilitators.
Practicality and intriguing
I liked that we were divided into small groups and that the sessions were interactive...I also liked that they taught us topics that people would think are very easy and obvious yet so many people don't do them well for example catheterisation and the Primary survey for the critically ill patient..so for me it was really so productive..I also liked the topic of the scrotal examination and diseases..generally I enjoyed the sessions.
I liked the teachings. They were very understandable even to a student. The simulations were also beautiful
Training materials were good and made me interactive
The ability to teach us from the known to unknown for proper understanding
The practical session of critical care for surgery patients
The tutors were very helpful
The interactive session with the different doctors.
Everything
All of the topics were thought well by the various Doctors and it was also mixed with clinical cases

If no, what did you not like about the training? (put N/A if you answered yes)

31 responses

N/A
Nothing
NA
Yes
The time was limited
The limited time, which made them rush through the sessions
N
Time allocation for hands on not adequate
Little training time
None

Make suggestions on what can be done to improve the training

31 responses

Make the simulation lab more available to us
More hands on and less slide presentation
More accessibility to the simulation
Having more practice stations
More hands on
Maybe improve on the port simulator
None
Skills demonstration
We need more sessions
Nothing really, so far so good
Access to the simulations could be made easier to keep training and get the hands-on experience a bit more. Online sessions from the tutors can be scheduled every month to enable continuous exposure to laparoscopic surgery and learn the new advancements in the field.
More real-life simulation such as with virtual reality.
An outline of what is being done before hand would be beneficial or a work book.
Sharing slides with students
It's a bit too fast
Better timing. Because the hrs chosen were hours that are quite busy on the wards. So attendance becomes difficult
More sessions to enable more learning
Including hands on
Please leave the instruments so that we can keep practicing since practice makes perfect
To add videos for better learning
Do more frequent sessions.
To be carried out more frequently
I think it would be helpful if these training sessions are made more regular ..if possible every semester and maybe models brought for instance like catheterisation we could have had a model and practised what we had learnt
More sessions
Time table for training should be drawn pined on walls with goals to be achieved
More time dedicated to the training
More practical and hands-on sessions
It could be done more often. A permanent training station can also be put up and made accessible
It was excellent, no suggestions on my side.
Surgical skill for practice
Hands on

Did you have enough hands-on experience during the training?

31 responses

Yes
No

Yes
Yes but more is needed
I got one try, happy i did
Alot
Fairly
Not really
Just enough
Nope
No I didn’t
YES
Not really.
Given the topics we had I think the hands on experience was adequate
Not enough
More is welcome

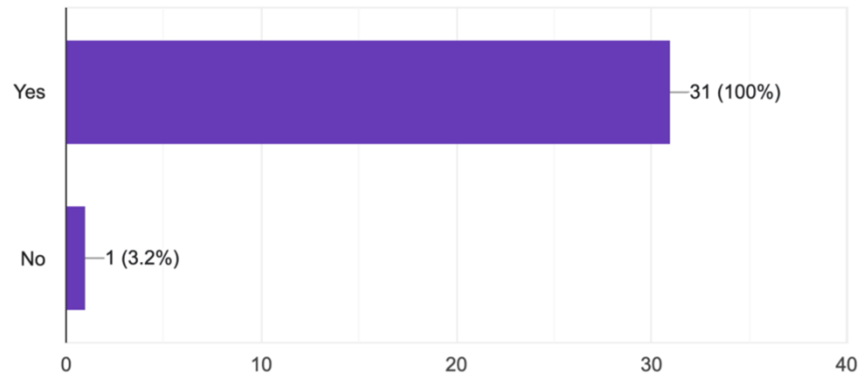
Did you learn something new from the training?

31 responses

Yes
Quite alot
Yes, the names of some of the instruments and how to handle them
Enough
Yes i did
Yes. I knew theoritically that it is more convinient than open surgery, and was able to witness it in the theatre.
Yes, a lot.
Yes I did
Yes, I learnt a lot of new things
YES
Yes, I did, a lot.
Yes I did,
True I learnt something
Yes. The concept of laparoscopic surgery was new to me
Yes I did.

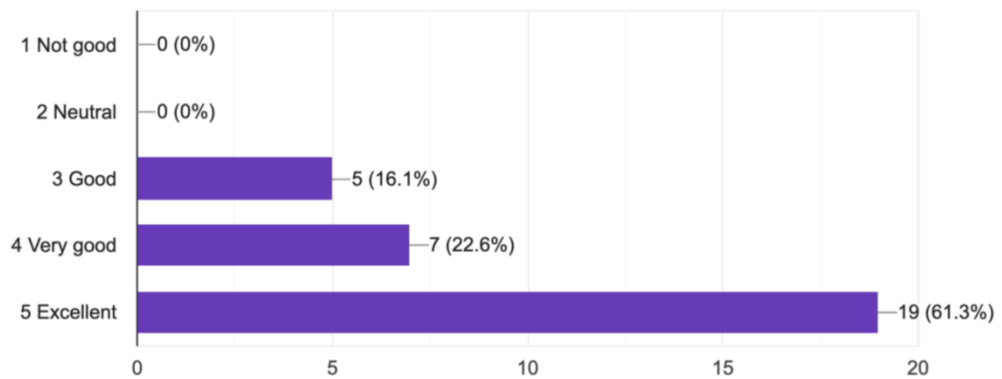
Would you recommend a colleague to attend the sessions?

31 responses



How do you rate the training?

31 responses

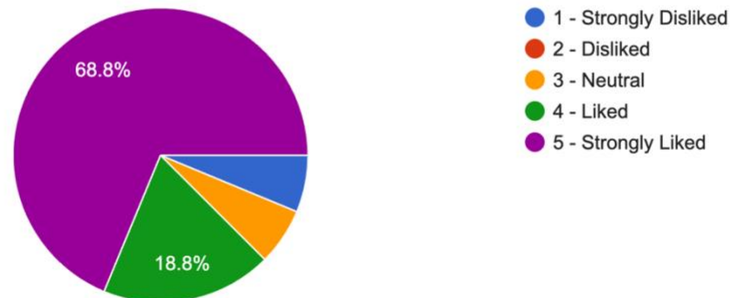


Appendix 4

Fourth Year Medical Students Feedback Survey for Lessons on Topics Delivered by Surgeons from Leeds at Uganda Christian University, March 2024

How much did you like the lessons?

16 responses



What did you like about the lessons?

16 responses

Everything

Brief and informative

The teachers are very gentle and supportive. They contrary to what we are used to, they do not shade us for lacking some knowledge.

There were informative

The interactive sessions and having a chance to ask questions

The interactive approach

They were simplified and easily understandable

There was more interaction and videos for understanding procedures

Interractions

They are involving and informative

Learned a lot

They were interactive

Very good

The tutors just made it all easy and we covered a lot in a short time

They were chronologically delivered and very easy to understand

What did you not like about the lessons?

16 responses

Nothing

Nothing

We rushed through them

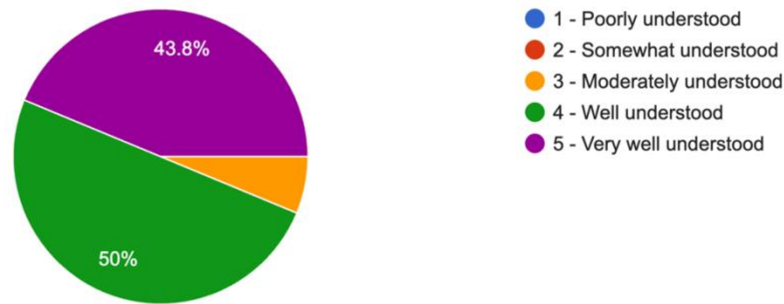
It would have been nicer to prepeare us for the topic to expect in each particular room/lesson. Not just to enter and start learning whatever.

The limited time

Little hands on practice

The time, they were conducted in hot afternoons

Nothing to dislike
N/A
We had little time allocated for some topics.
Too rapid, though not all.
No comment
The fact that they had to end so soon



What topic do you feel you understood most? 16 responses

Acute Abdomen
Right upper quadrant pain
All of them
Catheterization , BPH, Critical care
Right Upper quadrant pain
BPH
Scrotal examination and gallstone
LUTS and RUQ pain
Benign prostatic hyperplasia
Acute abdomen
Biliary colic
Biliary disease
Biliary colic (disease)
Biliary colic and catheterisation
Acute abdominal pain, LUTS, ALS
Scrotal examination

What can be done to improve about the lessons?

16 responses

Make it more practical
More time
We could be given a list of the topics to be taught so that we can prepare. The sessions can be put on different days so we have more time for each session. For better understanding. Because jumping from session to session doesn't really allow me to grasp the nitty-gritties
More sessions

Needs more time and days
Having them in the mornings
Lessons should be more practical
Request to have them back
Practicals
Hands on skills (practical for examinations)
I think they're just fine, we could do with less slides I guess. Because it encourages interactive sessions.
No comment
Nothing
Having them earlier in the day
Prior knowledge of the topics to be taught