

KAGERA REFRESHER COURSE

SAFE OBSTETRIC ANAESTHESIA

24 – 26 January 2018

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Delivering safe anaesthesia
to the world's poorest people



THE ASSOCIATION OF ANAESTHETISTS
of Great Britain & Ireland

KAGERA REFRESHER COURSE

SAFE OBSTETRIC ANAESTHESIA

DATE: Wednesday 24th to Friday 26th January 2018
VENUE: ELCT BUKOBA HOTEL, KAGERA, TANZANIA
FUNDERS: Diamedica (UK) Ltd and Safe Anaesthesia Worldwide
DONORS: Lifebox Foundation and Association of Anaesthetists of Great Britain and Ireland
APPROVAL: SATA, REGIONAL MEDICAL OFFICER KAGERA

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List of abbreviations:

AAGBI	Association of Anaesthetists of Great Britain and Ireland
BEmONC	Basic Emergency Obstetric and Neonatal Care
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
CUHAS	Catholic University of Health and Allied Sciences - Bugando
CME	Continuing Medical Education
CS	Caesarean Section
KCMC	Kilimanjaro Christian Medical Centre
MoHCDEC	Ministry of Health Community Development, Gender, Elderly and Children
SATA	Society of Anaesthesiologists of Tanzania
SAWW	Safe Anaesthesia Worldwide

Background:

The field of anaesthesia has grown significantly and has made anaesthesia provision for surgical services extremely safe in high income countries. This is not the case in middle and low-income countries like Tanzania.

Maternal death is a huge problem in many African countries, including Tanzania. In this large country, with a population of more than 50 million, women who have complications during childbirth often arrive late for health care. The main reason for this is that there are relatively few health centres, even for emergency health care, and patients in remote areas have to travel long distances to reach them. To help solve this problem the Ministry of Health Community Development, Gender, Elderly and Children (MoHCDEC) (Tanzania) has increased the number of health facilities where mothers can go for help, including emergency Caesarean sections (CS). This has huge implications for the anaesthetic workforce.

Anaesthesia for emergency CS and postoperative care of these women is one of the most challenging tasks, even for a well trained anaesthesiologist from a high income country. In Tanzania, non-physicians provide the majority of anaesthesia services. These are nurse anaesthetists who have received one year's training and for some it has been more than 30 years since they graduated. They work often in isolation, without any Continuing Medical Education (CME), limited equipment and drugs, low pay and eventually many become demotivated. Various problems that occur during anaesthesia that contribute to maternal deaths, are a result of some of these difficulties.

To reduce maternal death the MOH started a training initiative of Basic Emergency Obstetric and Neonatal Care (BEmONC) and Comprehensive Emergency Obstetric and Neonatal Care (CEmONC). This training program has started in the Kagera region (north west Tanzania), that is 1600 km from the capital Dar es Salaam with a population of about 2,700,000 people. This region has 13 hospitals and 16 health centres. Most of these perform both CS and general surgery (6 health centres perform only CS).

Mr Philbert-John, a well trained and experienced nurse anaesthetist from Bukoba Referral Regional Hospital, was appointed to supervise and mentor the anaesthetists in the health centres and hospitals and to evaluate the problems with anaesthesia in July and August 2016. He identified that a lack of competency in obstetric anaesthesia was likely to be contributing to morbidity and mortality in the Kagera region.

The main reasons were identified as:

- Hemorrhage and shock
- High spinal
- Poor general anaesthesia and airway management skills

Dr Bernard Kenemo, who is also involved in auditing centers in Kagera region, confirmed morbidity and mortality from anaesthesia as a problem.

Education, as well as availability of equipment and drugs, is urgently needed to support the current workforce and improve quality in obstetric anaesthesia. Recently there have been initiatives to update the knowledge of anaesthetic nurses (SATA, SAFE course at KCMC (Moshi), and Bugando (Mwanza)). However nurses in the Kagera region have not been able to

attend these courses because of long distances they would be required to travel and lack of funds.

It was therefore important to organize a local sponsored course for anaesthetic nurses of Kagera region. In addition such a local course would improve regional collaboration between anaesthetic nurses of Kagera region and between the nurses and anaesthesia faculty of KCMC and Bugando. It was important to organize the course with a mainly Tanzanian faculty because they know the specific local challenges involved.

There is a clear need for continuous local refresher trainings to fill this knowledge gap in practical aspects of safe obstetric anaesthesia and increased peer support.

Preparation of the Course

Sponsorship was obtained from Diamedica (UK) Ltd and the charity Safe Anaesthesia Worldwide, and approval was obtained from Society of Anaesthesiologists of Tanzania (SATA). The majority of the faculty was from Tanzanian.

It was decided to prepare a 3 day course on obstetric anaesthesia, consisting of one theoretical day and 2 practical days with on site visits to hospitals.

Dates were confirmed for January 24 to 26, 2018 and the venue as ELCT Bukoba Hotel. Hospitals for onsite visits to be Kagera Regional Hospital, Bukoba and St Joseph Hospital, Kagondo. There course format would be a mix of teaching methods: scenarios, case study discussions, skill stations, lectures and practice in theatre. A test of theoretic knowledge was made for pre- and -post testing.

Attachments:

- 1: List of participants
- 2: Timetable
- 3: Pre and post-test scores

In addition, the course would be evaluated on the practical impact on the anaesthetic practice at the hospitals/ health centres . Following this, a Commitment to Change form was created. The sponsors kindly supplied textbooks, pulse oximeters, bags and pens for all the participants . The AAGBI donated 25 copies each of Obstetric Anaesthesia in Developing Countries and the Oxford Handbook of Anaesthesia. Lifebox Foundation donated 25 Lifebox pulse oximeters. These goods were sent in December 2017 by DHL and arrived just in time (there were some delays in clearance).

Objectives:

The main objective was to provide refresher training to nurse anaesthetists who practice anaesthesia in Kagera region. The main theme was learning how to provide safe obstetric anaesthesia in resource limited areas and to enable the nurse anaesthetists themselves to set goals for overcoming common challenges that most anaesthetists face in their daily activities. The other objective was to enable them to perform proper emergency procedures and to execute resuscitation appropriately for the common emergencies occurring in obstetrics.

Participant information

The course involved nurse anaesthetists from across the Kagera Region. The inclusion criteria include health centers and hospitals that provide surgical services, particularly Caesarean section. There are numerous such facilities but with random sampling we invited participants from 18 health facilities that provide CEmONC. Due to unavoidable reasons, two participants did not manage to attend, mainly because the facility had only one anaesthesia provider and their absence would mean there was no one to provide services.

Faculty information

1. Dr Henriette Willigers, Anaesthesiologist and lecturer from The Netherlands
2. Dr Bernard Kenemo, Anaesthesiologist and Head of Anaesthesia and ICU, Bugando Medical Centre, Mwanza, Tanzania.
3. Dr Mwemezi Kaino, Anaesthesiologist and Head of Anaesthesia and ICU at Kilimanjaro Christian Medical Centre (KCMC), Moshi, Tanzania.
4. Dr Debora Madyedye, Second year Anaesthesia resident, Catholic University of Health and Allied Sciences - Bugando, Mwanza, Tanzania.
5. Philibert-John Tegambirwa, Chief nurse anaesthetist, Kagondo Hospital, Kagera, Tanzania.
6. Jesca John, Chief nurse anaesthetist, Kagondo hospital, Kagera, Tanzania.

Summary of the workshop

Precourse activities: The faculty arrived at the venue one day before the start of the course in order to prepare the venue and discuss the training and timetable. The venue was considered suitable for the course, a projector and flip charts were available in the main room. Two smaller rooms were prepared as skill stations with materials brought by faculty (adult and neonate resuscitation manikins, material for airway management and materials for simulation sessions). The only material lacking was an intubation head.

Day One: All participants arrived on time and after the introduction the pre-test was taken. The day went according to plan although time keeping was an issue. In the afternoon there was a visit from local representative Ministry of Health: Dr THOMAS RUTA. He made a very nice speech on the importance of anaesthesia providers for making surgery safe.

Tea breaks and lunch were very well organized. The atmosphere was very good; all participants and teachers were enthusiastic and questions and problems the participants face in their practice were discussed in a very constructive way.

Day Two: The participants started with the post-test and they and the faculty were divided into 2 groups to visit each of the hospitals. Bukoba hospital was within walking distance and Kagera hospital about one hour drive. During the visit to the operating theatre in each hospital some of the participants could practice anaesthesia on patients under supervision of the local staff nurse and with explanation to the group from the faculty. In addition; set up of theatre, preparation for anaesthesia, equipment and importance of communication with the surgical team were demonstrated and discussed. After lunch the 2 groups returned to the venue to discuss their experiences from the practical hospital visit and from these discussions, take home messages were summarized by the faculty.

Day Three: Each group visited the other hospital with discussion at the venue afterwards. After this there was the handover of the Lifebox pulse oximeters and training in their use, by using the

Lifebox teaching materials. Finally, all participants were asked to fill in the Commitment to Change forms and return them within 2 weeks to Philibert-John. At the end of the course, certificates of attendance were distributed to all participants and photos were taken. Almost all participants expressed their gratitude for receiving a lot of knowledge and support from this course.

Assessment

Theory: To test the effect of the theoretical teaching, participants were asked to fill a pre-post test questionnaire at the beginning and the end of end of Day 1.

Practice: To evaluate the practical effect of the course we distributed Commitment to Change forms which had to be filled in and returned 2-3 weeks after the course. The participants were asked to write on the forms what changes they intended to make in their practice as a result of the course. The aim is to check if their commitments have resulted in any improvement in anaesthetic practice and if not, why not.

Practically: Philibert-John will phone every 4-6 weeks all participants to ask about their proceedings with their commitment and make a report on this. In addition, an on-site visit will be planned for several hospitals and health centers.

Feedback from the participants

Participants appreciated the training course very much and they were very eager to learn. They were enthusiastic, arrived on time, and asked many questions. They spontaneously told the faculty that they were very happy with the course and they felt it had improved their knowledge and skills. Also they had learned from the on-site visits about set-up of theatre, equipment and communication. They appreciated the importance of not accepting substandard help from their hospital administration.

Participants said they felt less isolated as a result of the course because of increased peer support and support from the head of departments of anaesthesia in two teaching hospitals. This resulted in the creation of a Whatsapp group among participants and teachers. The aim of this Whatsapp group is to share problems and discuss questions related to anaesthesia. Below are some quotes in this group on how the course was judged.

“In fact the course was very interesting although it was for a very short time we refreshed a lot, we give thanks again, suggest such refreshment to be done twice a year if possible but if not at least once a year. “ Mectilda William

“For sure the refresher course was very important for our job continuity, for me for example it took me about 22 years in anaesthesia practice without any refreshment, for sure you resuscitated me in a manner way, so as since I left from the seminar I'm providing anaesthesia in a standard and scientific way. For the sponsors I would like to ask them that it is most important if they can arrange for regular workshops of this kind to keep as updated, It would sound much better if it can be arranged once every year”. Thanks so much.” Dr. Severine

Overall evaluation of the project

Successes

- The course was very well received; participants reported increased knowledge and skills in relation to practical obstetric anaesthesia. The teaching methods and timetable of this course were good. Local teachers and organizers helped to tailor the course to the needs of the anaesthetists of the region. Finally, the open constructive atmosphere during the course contributed significantly to its appreciation.
- The course was well organized, there were no major logistic issues. The strong logistic support of the local anaesthetists seemed to be of major importance to this success.
- The course helped in forming networks among nurse anaesthetists from Kagera region and between the participants and the teaching faculty. For example one of the participants created a Whatsapp group named “Kagera Anaesthetist”.
- All participants received anaesthesia books and a Lifebox pulse oximeter.

Challenges

- Lack of reliable internet connections, lack of smartphone / computers. This makes communication between organizers and participants difficult. Hence, evaluation of commitment to change and exchange of problems in relation to anaesthesia is more difficult. In addition a lack of computers / internet connections implies that most of the participants have no reliable access to online sources of knowledge and soft copies of books. So hard copies are needed, but these are heavy and expensive.
- It would be ideal to evaluate a potential decrease in anaesthesia related morbidity from the course. However there is no database on anaesthesia related morbidity in the hospitals /health centers where the participants work.
- The participants face very different working conditions and some may have difficulty to work according to the protocols taught during the refresher course. This may potentially cause frustration. For example, some hospitals / health centers lack adequate anaesthetic equipment, drugs and anaesthetic nurses.
- Only one nurse from each hospital / health centre attended the course. It would be better if all anaesthetic nurses from each center received the same training.
- This course did not include all hospitals / health centers.
- The course was short, so there was not enough time to cover more subjects. A solution would be to repeat courses like this on a regular basis.
- The teaching faculty has a lot of other commitments so there is little time to prepare, evaluate, and improve courses like this.
- The on site visits to the hospitals were successful. However this success was dependent on patients being in theatre. For the future it is important to think about an alternative program when there are no patients. For example scenario training (which implies additional preparation in an already busy schedule).

Conclusions and recommendations for future training:

In general the Safe Obstetric Anaesthesia Refresher Course, Kagera region, Tanzania (24-26 January 2018) was successful because the participants reported increased knowledge and skills and they felt less isolated. Also it was a local /regional course within one day's travelling distance and it was sponsored, so a representative portion of the anaesthetic nurses working in

the region could attend. The course was adapted to local need and conditions by the mainly Tanzanian faculty who were aware of the challenges faced by the nurses in the region. The support from abroad was important to help with some of the logistics in organizing such a course and with sponsorship.

There is an ambitious plan to evaluate the commitment to change, in order to look at the practical effect of the course. This evaluation plan faces difficulties regarding communications and Philbert-John has an important role to play in contacting the participants at regular intervals. It is likely that an on-site visit will show more clearly the effect of the course. Further sponsorship has been secured from SAWW to enable follow-up on-site evaluation.

Also we would like to recommend repeating the course for anaesthetic nurses of the region who have not attended this one. This will increase the number of nurses in Kagera region who have refreshed their knowledge and skills, and will feel part of a supportive anaesthetic community. If the evaluation of this course (and potentially a second course) shows beneficial effects on anaesthetic practice for obstetric anaesthesia in the region, it would support the idea of disseminating a similar course to other regions in Tanzania. Of major importance is that a local champion like Philbert-John helps with organizing such a course.

Word of thanks

At this note; on behalf of organizing committee, I would like to thank everyone who participated from the stage of proposal through the actual workshop. Special thanks to Dr. Riaz Aziz from Medical Mission Germany (now in the United Kingdom), Carol Newman from Diamedica UK for steering all the meetings and financing. Also, very special thanks are given to Philbert-John, as it was his original idea and efforts that brought everyone together to undertake this course.

Table 1: List of Participants

S.No	PARTICIPANT'S NAME	SEX	HOSPITAL
1.	SR.DAFROZA C. KABONESA	F	NYAKAIGA
2.	PASCHAL M. KATUNZI	M	MUGANA DDH
3.	DAVID KATONDA	M	RUBYA
4.	SR. LETITIA H. RWEKUNDA	F	KAJUNGUTI H/C
5.	MARKO P. KASUMBI	M	NYAMIAGA HOSP
6.	HASSAN M. SALIM	M	NYAKAHURA H/C
7.	MECTILDA W. KAMEGUZI	F	RULENGE HOSP
8.	MAHEMBO KIJA	M	NYAKANAZI H/C
9.	MATONDANE PAUL	M	BIHARAMULO HOSP
10.	EVODIUS G. BAZILA	M	ISINGIRO HOSP
11.	DENASTER K. ISSAYA	F	KAGERA SUGAR H/C
12.	SEVERINE S. BAMSHARA	M	NKWENDA H/C
13.	ELIZEUS GORDIAN KAJAGE	M	IZIMBYA CDH
14.	SATURUNINI STEPHEN	M	MURGWANZA CDH
15.	SR. VERENA RWEZAULA	F	KAGONDO HOSP
16.	CLAVERY ISAYA	M	NDOLAGE HOSP

Table 2: Time table

DAY ONE			
TIME	SUBJECT	SUBJECT	RESPONSIBLE PERSON
9:00-9:45	Registration		Debora/ Jesca
9:45-9:55	General Introduction		Kenemo
9:55-10:10	Pretest		All participants
10:15-10:30	Lecture ABCDE concept		Henriette
10:30-10:55	Skill discussion: ABCDE		Henriette+faculty
10:55-11:05	Lecture ACLS		Kenemo
11:05-11:15	Lecture Neonatal resuscitation		Debora
11:15-11:30	TEA BREAK		
11:30-11:50	Skill adult resuscitation Grp 1	Skill neonatal resuscitation Grp 1	Debora/Kenemo+ faculty
11:50-12:10	Skill neonatal resuscitation Grp 2	Skill adult resuscitation Grp 2	Debora/Kenemo+ faculty
12:10 -12:25	Lecture-Spinal anaesthesia		Kaino
12:25-12:45	Skill: Spinal anaesthesia		Kaino+Faculty
12:45-13:00	Lecture discussion General anaesthesia in obstetrics		Kenemo
13:00-13:20	Airway skill:		Kenemo+faculty
13:20-13:35	Lecture: Maternal bleeding		Kaino
13:35-14:05	LUNCH BREAK		
14:05-14:20	Scenario: Bleeding		Kaino+Faculty
14:20-14:35	Preeclampsia/Eclampsia Lecture		Debora
14:35-14:55	Preeclampsia/Eclampsia Discussion		Debora + faculty
14:55-15:10	Lecture: Indications for C-section and team communication		Henriette
15:10-15:55	Scenario-team communication		Henriette+faculty
15:55-16:05	Day one conclusion note		Kenemo
16:05-16:20	Special speech		Philibert
16:20-16:35	Forming groups		Debora/Kenemo
DAY TWO			
8:00-8:30	Registration		All
8:30-9:00	Tea		All
9:00-9:30	Going to clinical sites		All
9:30-14:30	Clinical session		All
14:30-15:00	Returning to seminar room		All
15:00-15:20	Discussion		All
DAY THREE			
8:00-8:30	Registration		All
8:30-9:00	Tea		All
9:00-9:30	Going to clinical sites		All
9:30-14:30	Clinical session		All
14:30-15:00	Returning to seminar room		All
15:00-16:00	Discussion		All
16:00-16:15	Post test		All
16:15-16:30	Speech/Certificate hand over		Henriette
16:30-17:00	Speech/Commitment to change		Philibert

Table 3: Summary of Pre- & Post Test score

S.No	PARTICIPANT'S NAME	PRETEST SCORE	POST TEST SCORE
1.	SR.DAFROZA C. KABONESA	67	62
2.	PASCHAL M. KATUNZI	55	60
3.	DAVID KATONDO	62	73
4.	SR. LETITIA H. RWEKUNDA	80	81
5.	MARKO P. KASUMBI	58	62
6.	HASSAN M. SALIM	58	71
7.	MECTILDA W. KAMEGUZI	80	80
8.	MAHEMBO KIJJA	58	67
9.	MATONDANE PAUL	58	67
10.	EVODIUS G. BAZILA	71	67
11.	DENASTER K. ISSAYA	76	78
12.	SEVERINE S. BAMSHARA	67	73
13.	ELIZEUS GORDIAN KAIJAGE	71	76
14.	SATURUNINI STEPHEN	76	78
15.	SR. VERENA RWEZAULA	64	64
16.	CLAVERY ISAYA	42	47

Photos

Dr Kaino oversees a hands-on teaching scenario



Dr. Debora Madyedye gives a lecture



Visits to local hospitals for clinical training in the operating theatre



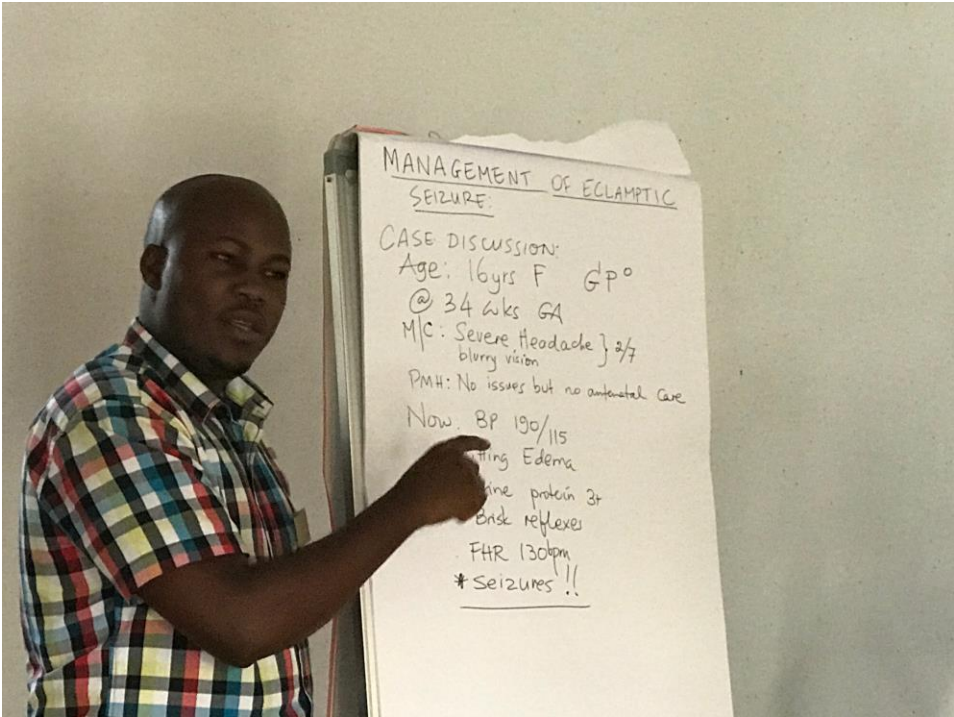
In the operating theatre on a hospital visit



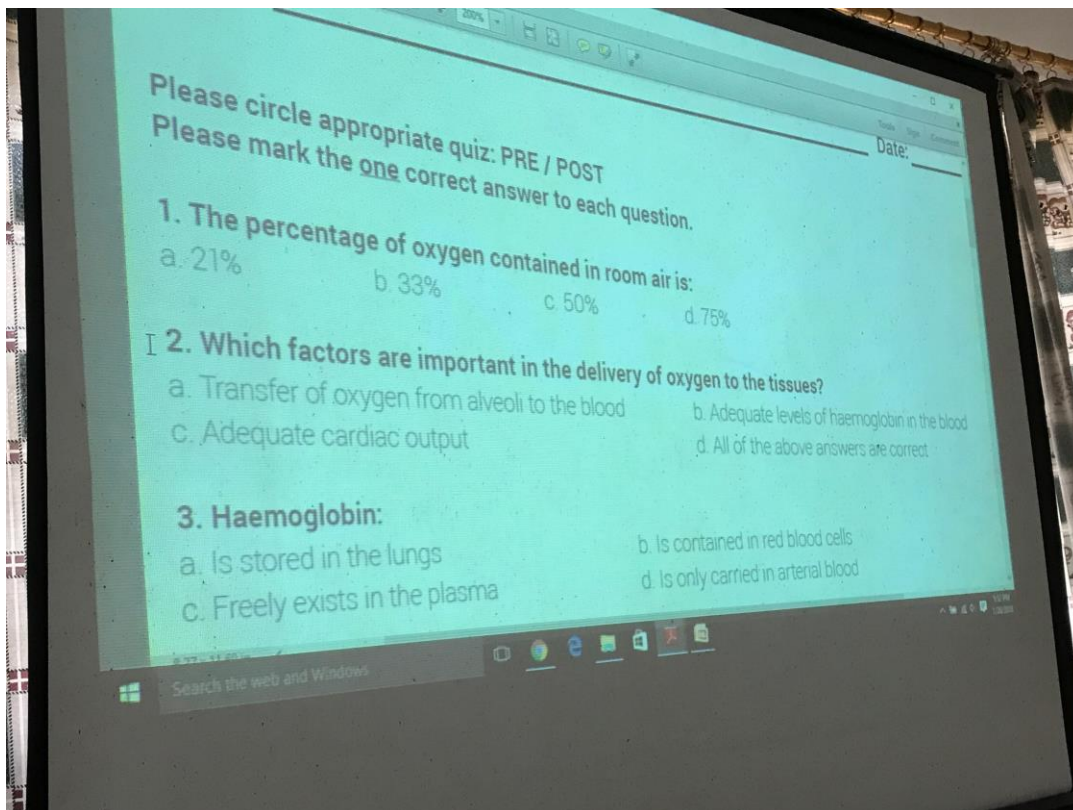
Dr Henriette Willigers pleased with the progress being made with clinical training



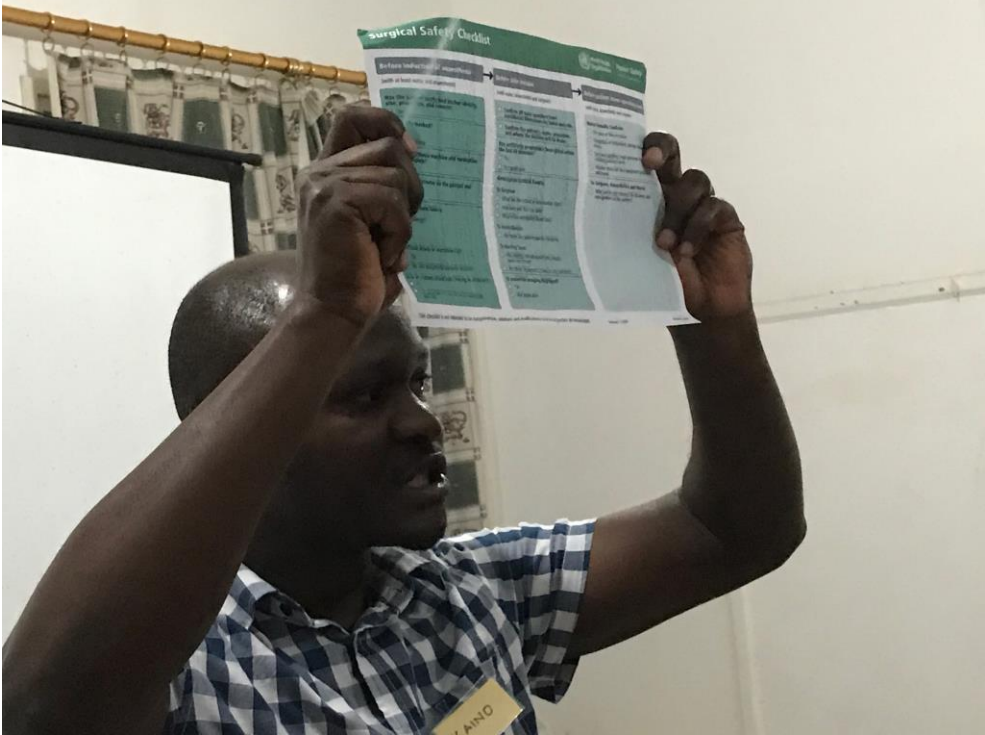
Dr Kenemo Teaches management of eclamptic seizure



Participants receive their Lifebox pulse oximeters and training in how to use them to ensure patient safety



Dr Kaino explains the importance of the Surgical Safety Checklist



The class receive their certificates



Locations Map

The Kagera region of Tanzania is a remote, poor and largely rural area in the north west of the country, some 1,600 kilometers from the capital, Dar es Salaam. It has a population of around 2.6 million

