



Hospital visits enable theory to be put into practice

Anaesthesia champions driving change in Tanzania

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Bukoba is the capital of Kagera region, an area of lush landscapes in the far north west corner of Tanzania. It was from Bukoba that an email sent by a determined nurse anaesthetist to the Kent-based charity Safe Anaesthesia Worldwide (SAWW) initiated the first obstetric anaesthesia refresher course to be held in this remote, rural region.

Philibert-John Tegambirwa is the Chief nurse anaesthetist at Bukoba Hospital, a 300 bed referral hospital for the Kagera region. The region is some 1600 km (1000 miles) from the Tanzanian capital Dar es Salaam and has a population of 2.7 million people.

As part of the Tanzania government's commitment to lowering maternal and neonatal mortality, health centres across the country are being upgraded to offer safe caesarean sections. As a result

health centres have to adapt to provide surgical services.

In 2016, Philibert-John was appointed to supervise and mentor anaesthetists in the Kagera region and evaluate anaesthesia practice. He identified problems including morbidity from haemorrhage and shock; high spinal; poor general anaesthesia and airway management skills and concluded that a lack of competency in obstetric anaesthesia was likely to be a contributing factor.

Anaesthesia in Tanzania is administered mainly by nurse anaesthetists as there are fewer than 30 physician anaesthetists to serve a growing population of 59 million people. These nurses have usually completed one year's training in anaesthesia, after which they are responsible for running anaesthetic services in remote hospitals often without further training.

Recent initiatives to increase the competency of nurse anaesthetists in Tanzania have included SAFE (Safer Anaesthesia from Education) courses and the Society of Anaesthesiologists of Tanzania (SATA) annual meeting in Dar es Salaam. However, nurses in the Kagera region have not been able to attend because of the long distances and lack of funding.

Realizing the necessity of a local refresher course in obstetric anaesthesia for nurses in the Kagera region, Philibert-John approached SAWW for financial support. SAWW was impressed by the thoroughness and quality of Philibert-John's funding application, as well his enthusiasm.

Philibert-John attended the 2017 SATA annual congress in Dar es Salaam, a 36 hour bus journey from his home, with financial support from SAWW. At this congress equipment manufacturer Diamedica (UK) Ltd arranged a meeting for Philibert-John with key individuals, including both Tanzanian and international anaesthetists, to discuss plans for a local refresher course.

It was agreed that such a sponsored local refresher course in obstetric anaesthesia for nurse anaesthetists could potentially help

to decrease obstetric morbidity and mortality in Kagera region. The course would be organised and delivered by a predominantly Tanzanian teaching faculty because they know the local challenges and this would increase collaboration between individual nurses and with the teaching hospitals.

A three-day obstetric anaesthesia refresher course was prepared that consisted of one theoretical day in Bukoba and two practical days in operating theatres of hospitals in Bukoba and Kagondo. Approval for the course was obtained from SATA and funding was secured from SAWW and Diamedica, whilst Lifebox donated pulse oximeters and the AAGBI supplied suitable text books.

Nurse anaesthetists from 18 hospitals and health centres from across the region were invited, although only 16 were able to attend as in two instances the anaesthesia provider's absence would have left the hospital with no anaesthesia services.

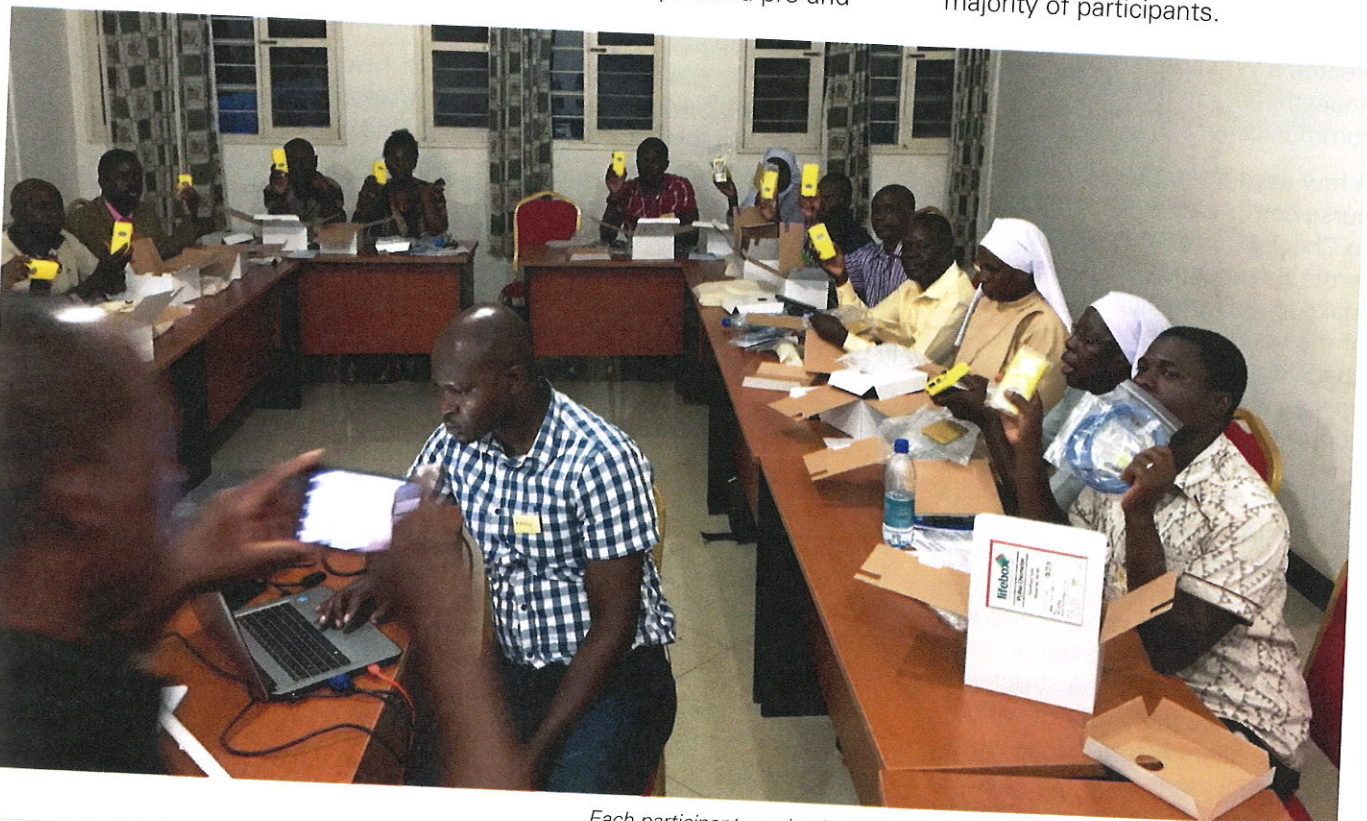
The course took place in January 2018. A mixture of teaching methods was used, including scenarios, case study discussions, skill stations, lectures and practice in theatre. All participants received books and completed a pre-and

post-course theoretical knowledge questionnaire.

The main objectives were to refresh nurse anaesthetists' knowledge of safe obstetric anaesthesia practices in resource limited areas; enable them to overcome challenges; and to respond correctly to emergencies in obstetrics.

During the hospital visits, set up of theatre, preparation for anaesthesia, equipment, and importance of communication with the surgical team were all demonstrated. Some participants practiced anaesthesia under supervision, whilst the rest of the group observed. Afterwards participants discussed their experiences with the teaching staff and "take home messages" were identified. On the final day, Lifebox pulse oximeters were distributed to each participant and they were trained in their use.

The overall atmosphere on the course was excellent with participants and teachers engaging enthusiastically and openly. Questions and problems that nurse anaesthetists face in their practice were discussed in a constructive way, giving them confidence in their skills and ability to make decisions. Post test scores showed improvement in knowledge of the majority of participants.



Each participant received a Lifebox pulse oximeter to take back to their hospital



Kagera Refresher Course 2018

Post course developments

The course helped to establish networks among the nurse anaesthetists in the region and many reported that they felt less isolated knowing that they had the support of their peers and anaesthesia departments at KCMC and Bugando. One participant created a WhatsApp group - Kagera Anaesthetist - to facilitate future communications.

A few days after the course each nurse completed a "Commitment to Change" form, on which they wrote the changes they intend to make in their practice as a result of the course. The aim was to check during an on-site follow-up visit after 6 months if these commitments have resulted in any improvements in anaesthesia practice and if not, why not. Thanks to the unflagging energy of anaesthesia champion, Philibert-John, this evaluation has recently been completed. Every participant nurse anaesthetist has been evaluated with help of a structured 12-page evaluation form of which the results are being analysed.

On 19 March 2018, the Tanzania Government published their National Surgical, Obstetric and Anaesthesia Plan (NSOAP) setting out the road map for improvements that aim to ensure all Tanzanians can access safe surgical care by 2025. NSOAP is ambitious, but also realistic and acknowledges that huge challenges have to be overcome. An efficient approach will be to upskill the current anaesthesia and surgical workforce through CME.

In conclusion, there is a need for continuous refresher training to fill the gap in competency in performing safe obstetric anaesthesia. It is our hope that the relatively small scale local intervention described here demonstrates that locally arranged refresher courses can improve anaesthesia skills, lessen the feeling of isolation and improve morale. Such courses are relatively inexpensive and can be sustainably expanded to other areas.

Other members of the teaching faculty:

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