

Promoting Excellence in Hernia Care in Sub-Saharan Africa Through Training the Trainer. Competence Based Hernia Training in Sub-Saharan Africa, the Ugandan Experience

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Abstract

The college of surgeons of East central and southern Africa in collaboration with operation hernia a charity from the United Kingdom have been conducting an operative hernia skills training workshop since 2016 This as a result has trained to excellent levels of competence residents and fellows in open anterior hernia repair techniques.

Aim

We aimed to design and conduct a train the trainer engagement with the aim of ensuring that, we equip surgeons in the region with skills on how to train other doctor's operative surgical skills in order to ensure we impact the quality of surgical skills training in the region.

Materials and methods

A structured training program was held in Uganda in June 2018 and February 2026 and this provided the materials included in this review and study.

The train the trainer courses are conducted alongside the resident hernia workshop, as this serves two purposes .one is It ensures that similar materials and patients needed for both the trainings which is cost effective and secondly It provided the opportunity for the participants in the train the trainer course the ability to be assessed practically on how they are able to train the residents that are participating in the Resident hernia training workshop

Conclusion

Competence based skills training using the hernia model to train surgeons will go a long way in ensuring impactful surgical skills acquisition within the sub-Saharan Africa. It is imperative for the region to adapt to the changes in the modalities of safe skills training to benefit surgical patients in the region and improve overall patient care.

Introduction

The college of surgeons of East central and southern Africa in collaboration with operation hernia a charity from the United Kingdom have been conducting an operative hernia skills training workshop since 2016[1]

This as a result has trained to excellent levels of competence residents and fellows in open anterior hernia repair techniques [1].

Right from inception, operation hernia and the College of Surgeons of East Central and Southern Africa (COSECSA) identified the need to have these methods of skills training and competence assessment and evaluation further disseminated into routine surgical skills training with in the sub-Saharan African region.

In order to address this, several hernia training missions and camps have been held in many places in sub-Saharan Africa where active teaching of skills is part of the care package offered in these places [1, 2].

This has resulted into different programs within the sub-Saharan region focused on training the local doctor, this has led to the existence of multiple charities including Legacy of hope Rwanda which has trained medical officers in hernia repair skills [3], operation hernia missions to Botswana, Nigeria, Ghana and Tanzania [2].

All these have ensured that the local doctor is trained to competently handle inguinal hernia repairs.

The challenge right from inception of these skilling efforts have been how to positively contribute at a higher level to the quality of surgical skills training and competence assessment within the sub-Saharan region.

We aimed to design and conduct a train the trainer engagement with the aim of ensuring that, we equip surgeons in the region with skills on how to train other doctor's operative surgical skills in order to ensure we impact the quality of surgical skills training in the region.

OBJECTIVE:

The program was entirely dedicated to training in hernia repair using mesh and non-mesh techniques and training of trainers with service being a useful by-product

Methods and Materials

The training was carried out in Uganda at Mother Kevin post graduate medical school, Uganda martyrs university a university teaching hospital in Kampala that handles the lecture module that are designed with feedback sessions for the surgeon trainees and a practicum held at the hope and healing Centre Hospital located in Iganga central Uganda a distance of 200 kilometers from the capital city Kampala where the surgeons are mentored on how to train surgeons at a rural facility with Real-time feedback.

A structured training program was held in Uganda in June 2018 and February 2026 and this provided the materials included in this review and study.

The train the trainer courses are conducted alongside the resident hernia workshop, as this serves two purposes .one is It ensures that similar materials and patients needed for both the trainings which is cost effective and secondly It provided the opportunity for the participants in the train the trainer course the ability to be assessed practically on how they are able to train the residents that are participating in the Resident hernia training workshop

The trainee surgeons received a one-day theoretical module on how to train and skill a doctor to competent level and this training is conducted along with the general processes and procedures that take place during the operation hernia camps [1, 2, 3]

The curriculum vitae is obtained from the surgeons and of note is any previous experience in training fellow surgeons and Doctors as well as nurse and leadership experience is noted as well.

The trainee then observes the surgeon conducting the procedure with specific attention on how the resident trainee is being trained.

After the procedure, the Trainee surgeon is then allowed to scrub and teach the procedure to the resident while being observed and a feedback session is held after the training.

Highlighted in Table 1 is the lecture module that covers the different aspects and knowledge necessary to be an effective surgical trainer.

Table 1

Personal introductions
Objectives of Training the Trainers
Surgical Training in Uganda/COSECSA
Surgical Training in Africa
Hernia Training Model
How to Communicate Effectively with Trainees
Reflective Practice & Managing the Poorly Performing Trainee
Presentation Skills
The Role of Effective Feedback
Assessment of Competency
How I am Going to Develop My Training and Assessment Skills

The above module is aimed at equipping the surgeon trainees with the necessary skills in how to train surgeons to an acceptable level of competence.

Table 2.

Table 2
above shows the parameters used in competence assessment in hernia skills training during the course

Parameters for training and assessment
Knowledge of anatomy
Recognition of structures
Ability to administer LA
Tissue handling
Use of instruments
Exposure of inguinal canal, identification of structures including nerves
Dissection of sac
Insertion of mesh
Ability to deal with complications

Hernia operation skills training has followed a standard model that has been validated as effective in ensuring competence in performance of the procedure is attained.

Figure 1. Hands on training model depicting the format of the adopted training programme

Discussion

Since 2016 at the inception of the Operation hernia UK, COSECSA Collaboration. The need to have more trainers equipped in the skilled on how to train surgeons and residents skills to an acceptable level of competence was identified. It has therefore been imperative to train surgeons on how to train a skill to others and how to monitor and evaluate that training. The hernia training workshops are conducted using a hernia training model that is based on the competence based model. That is increasingly being used in skilling many surgical procedures.

The train the trainer module includes the hernia training model that has been used to train residents across the region and has proved effective in skilling [1, 2, 3, 4]

As it has been noted in many studies many surgery curricula in sub-Saharan Africa have been designed on the apprenticeship model that is time bound and has been shown to lack measures to ensure competences are attained across board [2].

To further compound this many surgeons in Sub Saharan Africa region belong to Academic programs and end up having to train residents, medical officers in operative skills and yet have not had a training on how to teach, this is in contrast to many places in the Europe where surgeons transitioning into training are trained and certified to teach, and are equipped with skills on, how to make a presentation,

generation of learning objectives, competence training and assessment, feedback and how to handle weak and difficult trainees among others.

The American College of surgeons has for long demonstrated the role of Academic surgeons and the need to pay attention to how surgical skilling and competence is obtained and maintained [5], this has been mainly as a result of the increase complexity of many procedures, the reduced half-life of surgical literature and the constant innovation of new platforms and modalities of performing procedures that have different learning curves. Six surgeons have been trained, five males and one female and these have been equipped in how to be effective trainers.

Over the century, the old known Adage of “see one do one and teach one” popularized by Halstead has stood the test of time, it has allowed for practice while training, however over time there has been an exponential increase in the surgical knowledge, modalities of operations with varying complexity and an increase in the number of trainees, this has as a result led to various solutions and a need to have objective ways of attaining and assessing competences in a procedure [5]. Patient safety and minimizing risk while training has taken Centre stage [5]

There has long been a call to move from procedure numbers to competence based models as they have proven to be an effective way to train surgeons

Conclusion

Competence based skills training using the hernia model to train surgeons will go a long way in ensuring impactful surgical skills acquisition within the sub-Saharan Africa. It is imperative for the region to adapt to the changes in the modalities of safe skills training to benefit surgical patients in the region and improve overall patient care.

Declarations

Conflict of interest

We declare no conflict of interest

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Publishers note.

All claims expressed in this article are from the authors and do not in any way represent those of the affiliate organizations, editors and reviewers.

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Ethical Approval; -

this study was approved by the Research and ethics committee of st Francis Hospital Nsambya

Consent; -

written Consent was obtained from the participants of this study.

Consent to publish;-

all Authors have given consent for this work to be published.

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Figures

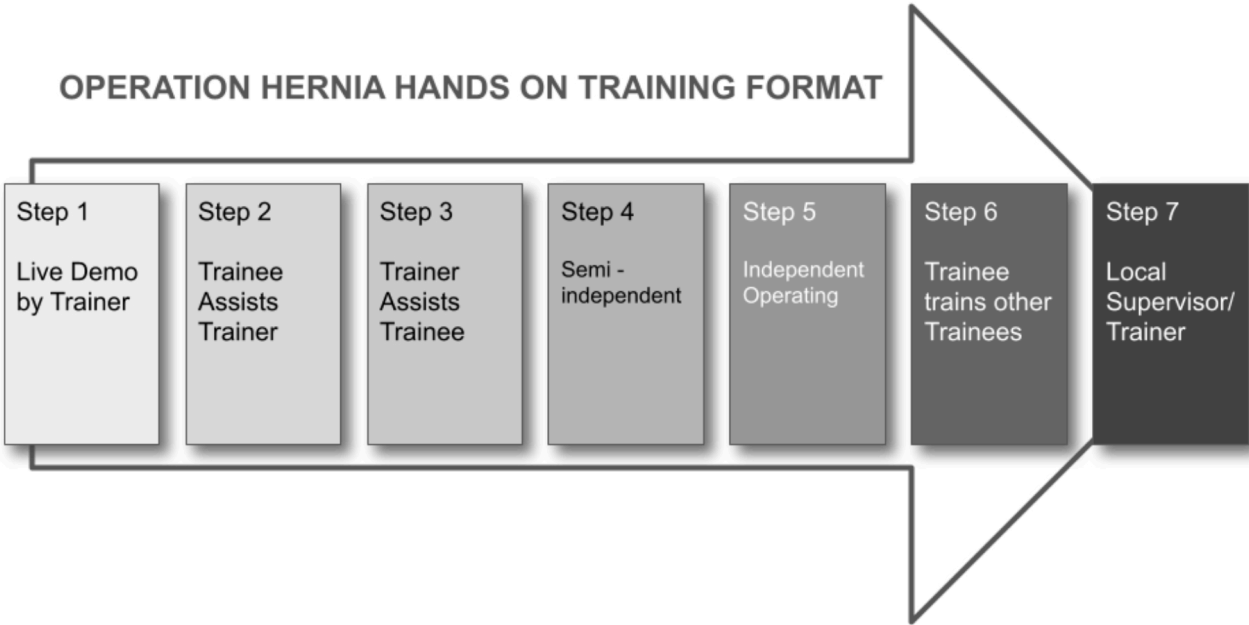


Figure 1

Hands on training model depicting the format of the adopted training programme