

BUILDING CRITICAL CARE CAPACITY IN A LOW-MIDDLE INCOME COUNTRY

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SCALE

Strengthening Health Workforce Capacity through Global Learning in Critical Care

The SCALE Project is a collaborative health workforce capacity development initiative between the Ministry of Health, Uganda and the NHS in the UK.

SCALE Critical Care Uganda is a collaborative project supporting the development of critical care in Uganda. It is supported by the Ministry of Health, Uganda, Makerere University College of Health Sciences, the Association of Anaesthesiologists, Uganda, the Uganda UK Health Alliance, the Royal College of Anaesthetists, Health Education England, University of Cambridge and Cambridge Global Health Partnerships.

SCALE – Critical Care has been established to enhance skills and knowledge of Ugandan and UK critical care health providers through peer-to-peer learning and exchange.

[Critical Care – SCALE – Cambridge Global Health Partnerships \(cambridgeghp.org\)](http://cambridgeghp.org)

Background and Rationale

Access to critical care is a crucial component of healthcare systems. Low- and middle-income countries face a rising burden of critical illness and premature death yet the capacity to provide care for critically ill patients in intensive care units (ICUs) is critically low.

The outbreak of the COVID 19 pandemic has further stretched the existing critical care capacity leaving thousands of severely ill patients with limited access. There is an urgent need for significant investment to develop health system capacity in these countries to address this burden.

Uganda had severe shortage of functional Intensive care units across the country with only 55 ICU beds across the country (1.3 ICU beds per million population) (Atumanya et al, 2020). In the wake of the COVID 19 Pandemic, the health sector has made significant Investments in increasing the number of ICU beds and expanding critical care services to 14 regional referral hospitals.

The country is now faced with a critical need for human resources to deliver critical care especially in newly equipped facilities that have already been faced with overwhelming numbers of COVID 19 patients in need of critical care.

The Project

The Strengthening Workforce Capacity through global Learning in Critical Care (SCALE-Critical Care) is expected to develop human resource capacity to deliver intensive care at facility level as well as drive health system improvement. The program will further create opportunities for virtual learning and global placements to UK professionals and trainees to learn from a clinically rich environment in Uganda.

The overall goal of the programme is to increase critical care capacity through workforce development between Uganda and the UK.

Specific Objectives

1. To develop distant learning in critical care between training institutions in Uganda and the UK.
2. To enable Ugandan health workers to benefit from the Medical Training Initiative (MTI) scheme and other training & scholarship pathways in the UK for critical care
3. To offer global placement opportunities for UK professionals to support critical care training, practice and research in Uganda.



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TRAINING APPRAISAL

Observership

- Will only be able to observe
- Can do some tasks under supervision like student nurses.
- Can attend in house foundation program days – theoretical knowledge.
- could not complete competency as can not practice
- Would be a short stay two to 3 months.

1 year

- Complete IELTS program prior to arrival in UK
- Will be able to practice as a registered nurse once they have completed the OCSE program. 8-12 weeks - exam. Issued NMC PIN.
- Will complete step one competencies – nationally recognized.
- Will attend the in-house foundation program. 12 study days over 8-10 months.

2-2.5 years

- IELTS, OSCE and gain NMC PIN
- Will practice as a band 5 registered nurse
- Will complete step one competency can take up to a year.
- Can complete step two and three competencies.- this normally runs in conjunction with critical care course and is 1 academic year.
- Possibly complete critical care course at degree or masters level at University of East Anglia. Will need to have a nursing degree or diploma with top up.

online

- Provide online education program. CUH critical care in-house foundation program.
- Program supports the learning around the step one competencies.
- Can take 8 - 10 months to complete. Days are ran repeatedly through out the year to provide flexible access for staff. Must complete essential days to be awarded Step one competent.
- Supported with face to face teaching in Uganda twice a year.
- Need to develop a train the trainer session to invest in mentors on the floor in Uganda - can be supported online - purpose developed session on mentoring and when in Uganda face to face Peer support for Mentors.

SUSTAINABILITY AND ETHICS

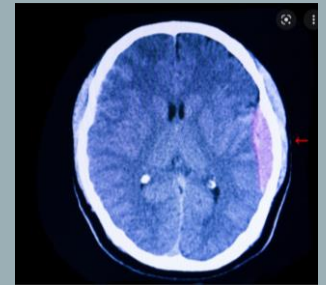
- Two/four nurses to trial 2.5 year program - train and return - every two years. (What impact would that have?)
- UEA step one module to be completed in home country with 8 week observership at CUH.
- One CUH nurse to work in Uganda full time for 1 months to embed skills and train – trainers.
- Support with online teaching/simulation from CUH team – this can be every other month.
- Nursing grand rounds to be every 3 months.
- Build online relations with key nursing staff in hospitals – regular online meetings.
- Opportunity for CUH staff to teach in Uganda – funding dependent.



Topic: Traumatic brain injury

NHS
Cambridge
University Hospitals
NHS Foundation Trust

SCALE CRITICAL CARE NURSING GRAND ROUNDS



Chair: Lisa Enoch
Speakers: Osire John Andrew & Martha Alupo - Mulago
Vicky Campbell - CUH

Date: 12th October
Time: 2pm UK / 4pm Uganda

COME JOIN US:



VIRTUAL SIMULATION

Two sessions streamed over Zoom

One TBI and one trauma major haemorrhage

Recorded so other people could watch at later point

One hour for both sessions

High fidelity SIM man with monitor controlled remotely

SET UP



CHALLENGES

- Connectivity
- WIFI issues Uganda
- Sound
- Audience size using one laptop due lack of devices
- Lack of smart phones or data in audience meaning limited feedback

FEEDBACK

- Sent electronically
- Answered via smart phone or laptop
- Low response rate as multiple users using same device
- 84% found very useful and 16% useful
- Enjoyed real life scenarios and sharing of knowledge
- What could be improved, sound and more time

PLAN

- Future sessions
- More time for sessions to allow greater debrief and discussion
- Uganda presenting SIM
- Meeting OWL to improve sound quality with headset for nurse acting in SIM
- Link SIM sessions to grand rounds
- Build on learning from SIM's with 2 day teaching program for critical care nurses

UGANDA TWO DAY TEACHING PROGRAM

- 72 nurses attended from ICU's around Kampala
- Based on CC3N step competencies
- System based approach
- Class split one half classroom teaching and one putting learning into practice on the ICU at Mulago hospital
- Multi modal teaching, lectures, games, group work and scenarios to apply learning to clinical practice

The Deteriorating Patient in Critical Care

Two day teaching program:

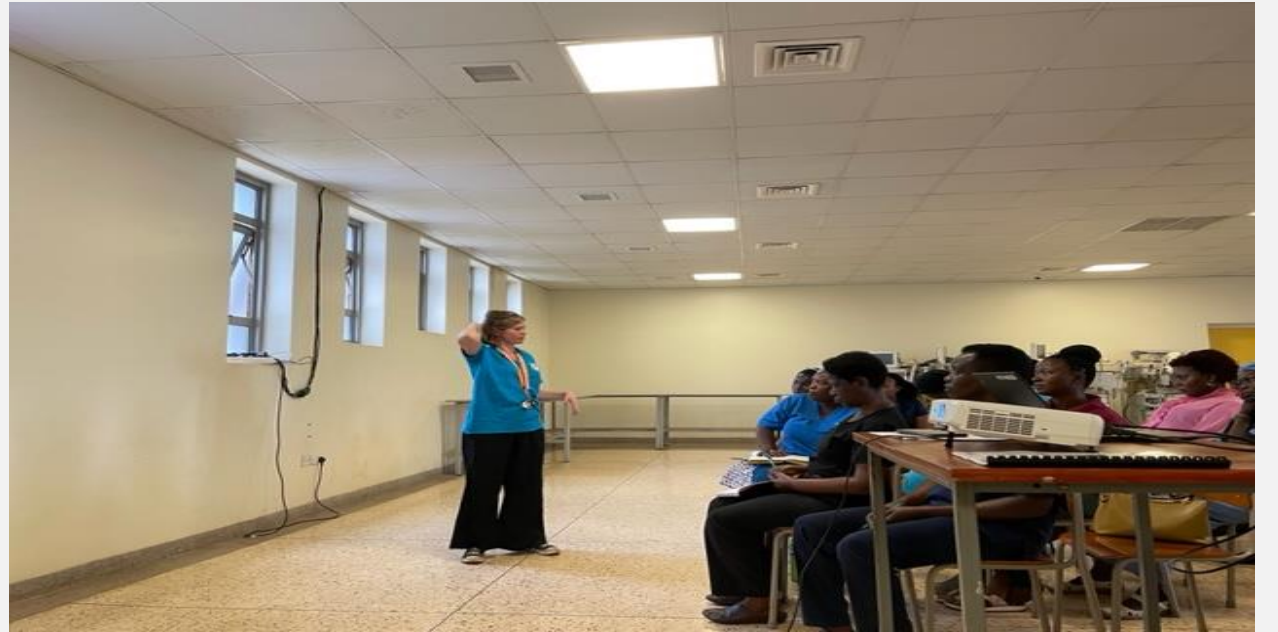
An overview of all the vital systems

Day 1

Class room – (12-15 students).

| Time | Content | Platform | Delivering |
|---|---|--|-------------------|
| 08.30 – 9.00 (13.30 – 14.00) | Assessments ABCDE approach early warning scores | ILS approach | Gayle and Kathryn |
| 9.00 – 9.45 (14.00 – 14.30) | Deteriorating respiratory patient role of nurse in intubation | Presentation | Gayle |
| 9.45 – 10.30 (14.30-15.00) | Scenario Respiratory | These will cover deteriorating self-ventilating patient and dislodged tracheostomy modified scenarios from <u>resp</u> 1 and 2 Gayle to modify | Gayle |
| 10.30 – 10.45 (15.00-15.15) | Coffee break | | |
| 10.45 – 11.30 (15.15 – 16.30) | Care of patient with raised ICP care of trauma patient with haemorrhage | Presentation | Kathryn |
| 11.30-12.15 (16.30 – 17.15) | Scenario raised ICP | Round table discussion and scenarios | Kathryn |
| 12.15 – 12.30 (17.15 -17.30) | Care of ventilated patient VAP and delirium | Presentation with discussion | |

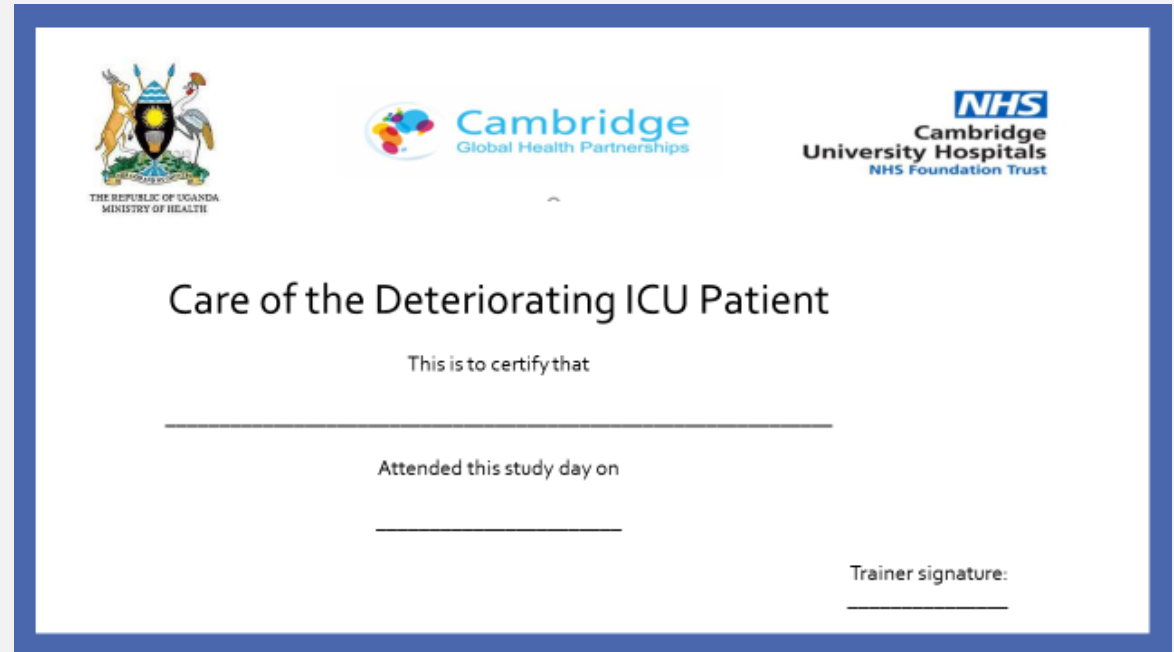
This is repeated for 2nd cohort in the afternoon. Hence times in brackets.





CHALLENGES

- Time
- Differing level of knowledge and experience
- Lack of WIFI
- Large group sizes
- Not enough facilitators for on unit teaching



FEEDBACK

- Paper feedback form
- 100% found scenario and group work useful
- 100% would be interested in an online educational platform
- Verbal feedback from attendees overwhelmingly positive

We need more training.

When are you coming back?

Can it be over a longer period.

A lot of content for two days.

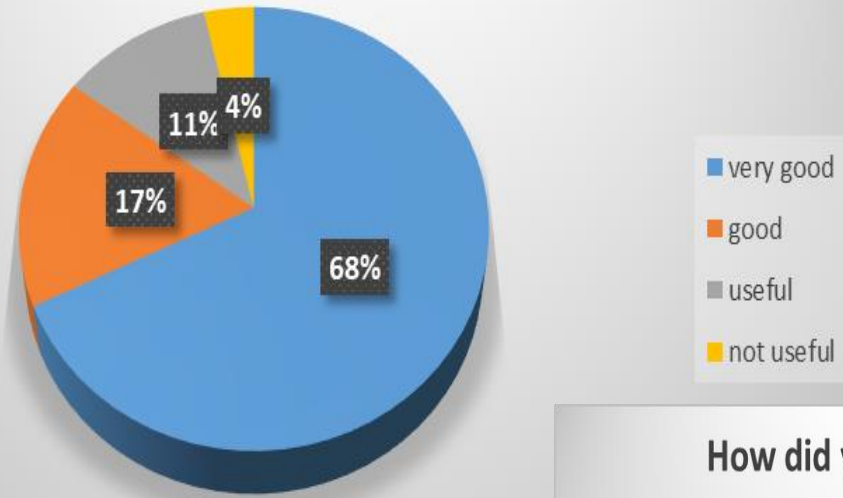
Needed more practical sessions, really enjoyed working on a different unit.

Enjoyed the practical sessions.

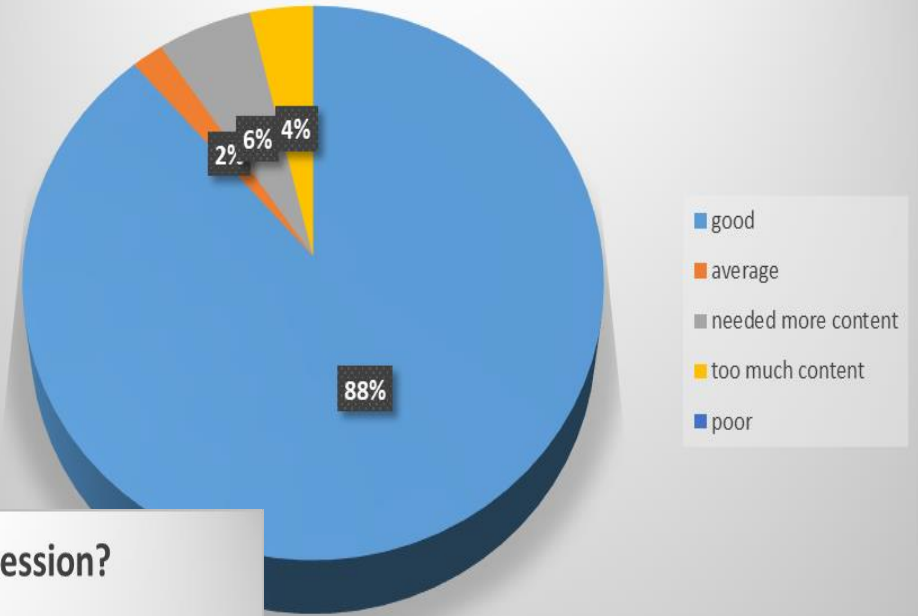
Some of the content was really difficult.

Some was too easy.

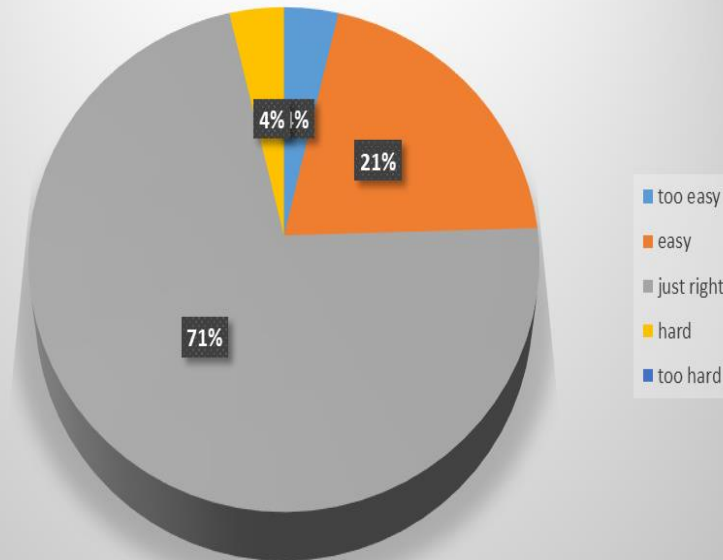
Did you find the practical session useful



How did you find the course?



How did you find the theory session?



FEEDBACK FROM FACILITATORS

- *"It was a really intense week and although it was incredibly hard work I've returned feeling really relaxed and rejuvenated and ready to start teaching on the wards again. Having the opportunity to teach in a different environment, observe different people and ways of working was really inspiring. It was an amazing experience"*
- *"I have been blown away by the resilience these nurses have. There is clear bidirectional learning taking place, the nurses are extremely adaptable with a huge breadth of experience"*

PLANS

- Return trip October 4 nurses
- In situ simulation – taking 3 low fidelity mannequins
- One nurse in Kampala for 4 weeks to embed teaching
- Working with behaviour scientists to help change culture
- Nursing research looking at the impact of teaching and being taught

REFERENCES

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