

Increasing Patient Safety through Point-of-Care Ultrasound (POCUS) in Malawi – iPSUM



**HOSPITAL
PARTNERSHIPS**

University Medical Center Hamburg-Eppendorf, the College of Medicine and the Queen Elizabeth Central Hospital in Blantyre, Malawi

The challenge

Life expectancy in Malawi, at 57 years for men and 60 years for women, lags far behind the global average (WHO, 2015).

The increasing prevalence of non-communicable diseases notwithstanding, communicable diseases such as malaria and HIV/AIDS are posing serious problems for the health system in Malawi. Chronic undernourishment, deficiencies in the health care system and inadequate access to clean drinking water and sanitation facilities are also factors contributing to low life expectancy.

According to the Malawi Ministry of Health, one of the major challenges facing the health care system is, first and foremost, the lack of qualified personnel and the absence of laboratory and imaging services.

In addition to the use of diagnostic imaging to identify the symptoms of an illness, this also includes imaging for medical interventions. For instance, at the College of Medicine in Blantyre, invasive diagnostic and therapeutic interventions such as pericardiocentesis, pleuracentesis and paracentesis are routinely performed without imaging guidance. Patient safety is directly compromised by inaccurate diagnosis and the lack of imaging in interventions. It has been proven that the complication rate in an ultrasound-guided puncture is three times lower

Partnership activities

In order to increase patient safety at Queen Elizabeth Central Hospital (QECH), a mixed team of Malawian and German clinicians are introducing Point-of-Care Ultrasound (POCUS) in daily clinical routine.

To this end, and taking account of local conditions and needs, curricula have been developed for the College of Medicine to facilitate the use of POCUS. The curricula will include the use of diagnostic ultrasound in emergencies and for providing guidance in interventions, in addition to facilitating training in using fully hygienic puncture techniques.

For the ultrasound to be incorporated into the daily routine at the hospital, German doctors will train their Malawian counterparts in using POCUS. Standard operating procedures (SOPs) will also be developed to ensure the safe application of POCUS. A few months after the introduction of the ultrasound system, two young and talented doctors will be selected and trained to be trainers, the aim being to ensure the sustainability of the partnership. Both individuals will also play a role in developing and adapting the SOPs and in launching the curriculum for the College of Medicine.

'The partnership will improve the quality of care by providing access to medical imaging and to more accurate diagnostics.'

Dr. Benno Kreuels, University Medical Center Hamburg-Eppendorf

The goal of the partnership is to ensure the continuous and consistent use of POCUS in order to improve the quality of care at Queen Elizabeth Central Hospital.



POCUS being used in daily clinical routine © GIZ / Benno Kreuels



Federal Ministry
for Economic Cooperation
and Development





POCUS Training © GIZ / Benno Kreuels

Financing

The funding program University and Hospital Partnerships in Africa makes part of the Hospital partnerships Initiative – Partners strengthen health. The Initiative is funded by the Federal Minister of Economic Cooperation and Development and Else Kröner-Fresenius Foundation and is a member of the ESTHER Alliance.

Results

- POCUS is continuously used at Queen Elizabeth Central Hospital
- 90% of all pericardiocentesis and pleuracentesis procedures are performed with the help of POCUS.
- POCUS is included in the teaching curriculum at the College of Medicine and two trainers are trained in its use.

The partners

This is a new partnership.

Institutions in Malawi

The College of Medicine (COM) in Blantyre offers a 5-year Bachelor's programme in medicine and surgery. The Department of Medicine also offers a 4-year Master's programme in medicine.

Queen Elizabeth Central Hospital is a 1.500-bed tertiary hospital that serves as a teaching hospital for the College of Medicine. Around 9.500 inpatients are treated every year in the Department of Internal Medicine and more than 20.000 patients are seen in the outpatient department.

Institution in Germany

The I. Medical Clinic of the University Hospital Hamburg-Eppendorf is one of the largest departments for tropical medicine in Germany. In cooperation with the Bernhard-Nocht-Institute for Tropical Medicine, it conducts numerous research projects on infectious diseases such as malaria and viral diseases.

Overview

Name	Increasing Patient Safety through Point-of-Care Ultrasound (POCUS) in Malawi – iPSUM	
Impact	Continuous use of POCUS in diagnostic imaging and in minimally invasive therapeutic and diagnostic interventions	
Countries	Malawi	Germany
Cities	Blantyre	Hamburg
Institutions	The College of Medicine Queen Elizabeth Central Hospital	University Medical Center Hamburg-Eppendorf
Term	July 2017 – April 2019	
Budget	109.940 EURO	

Contact person for the partnership

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