



Live Web Event: Improving Health Service Quality through Health Partnerships

Better patient care with Point-Of-Care Ultrasound

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implemented by



On behalf of



UNIVERSITY OF MALAWI
COLLEGE OF MEDICINE



Universitätsklinikum
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What is Point-of-Care Ultrasound (POCUS)?

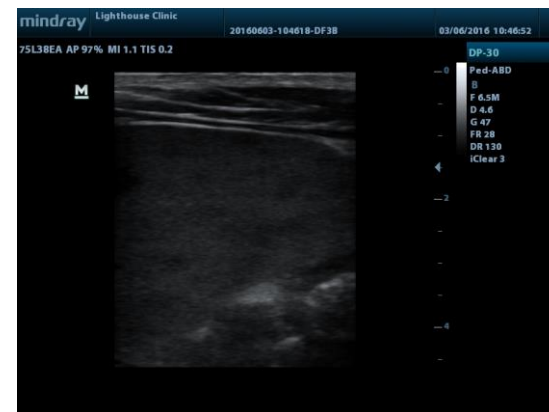
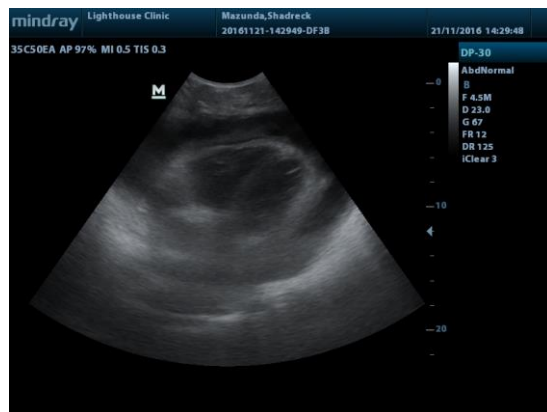
- ultrasound for clinical evaluation **wherever** the patient is being treated
- **answers a specific clinical question** to direct patient care
- easily learned/ performed, recognizable findings

What POCUS is NOT

- **POCUS is not**
 - a comprehensive study
 - performed by radiologists/radiographers
 - limited to use in the hospital or at the bedside

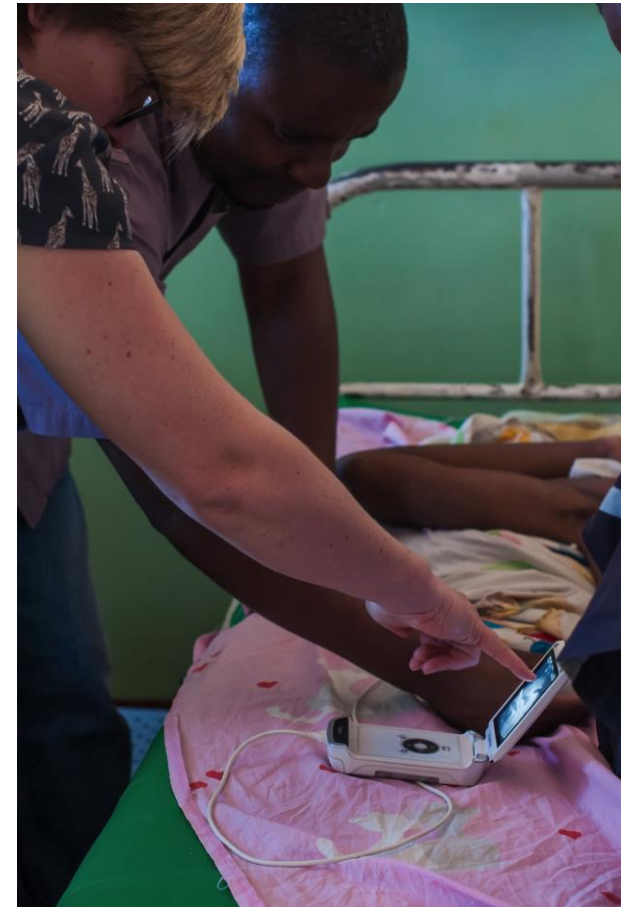
What questions can POCUS answer?

- Is there free fluid (pleura, peritoneum, pericardium)?
- Does the patient have abnormal cardiac function?
- Is a pneumothorax the cause of this patient's SOB?
- Is this patient suffering from disseminated tuberculosis?



How can POCUS improve patient safety and quality of care?

- Make medical imaging more widely available
- Shorten time to diagnosis and treatment
- Shorten duration of hospital admission
- Reduce rate of complications during procedures



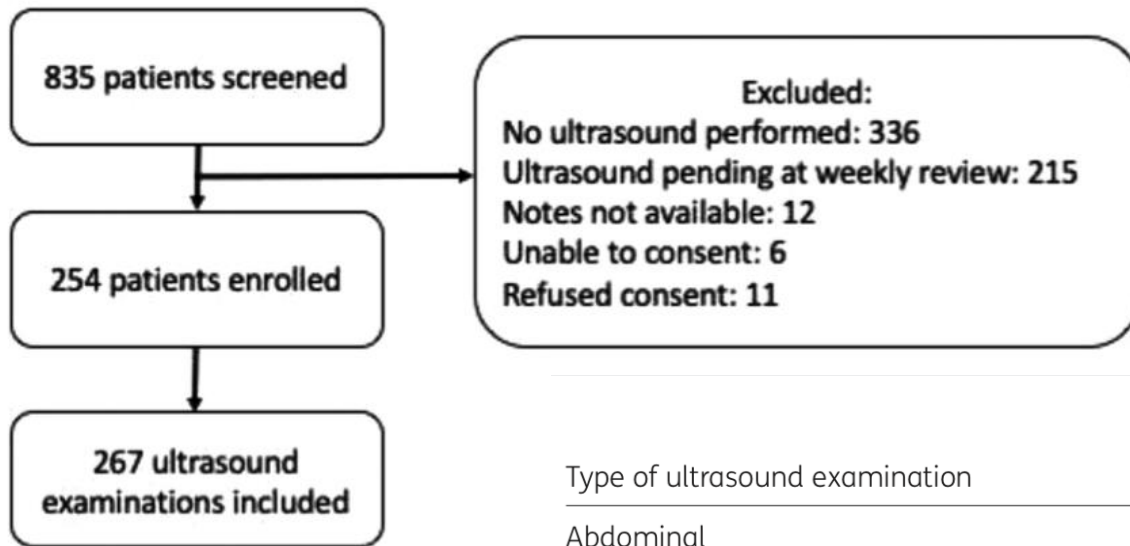


COM and UKE: History of the partnership

- **01/2017** Initial idea developed during ward rounds in Malawi
- **07/2017** Partnership implemented
- **12/2017** Needs assessment and curriculum development
- **03/2018** First short course conducted
- **02/2020** 58 clinicians trained as POCUS users
12 trained as trainers
4 trained as lecturers

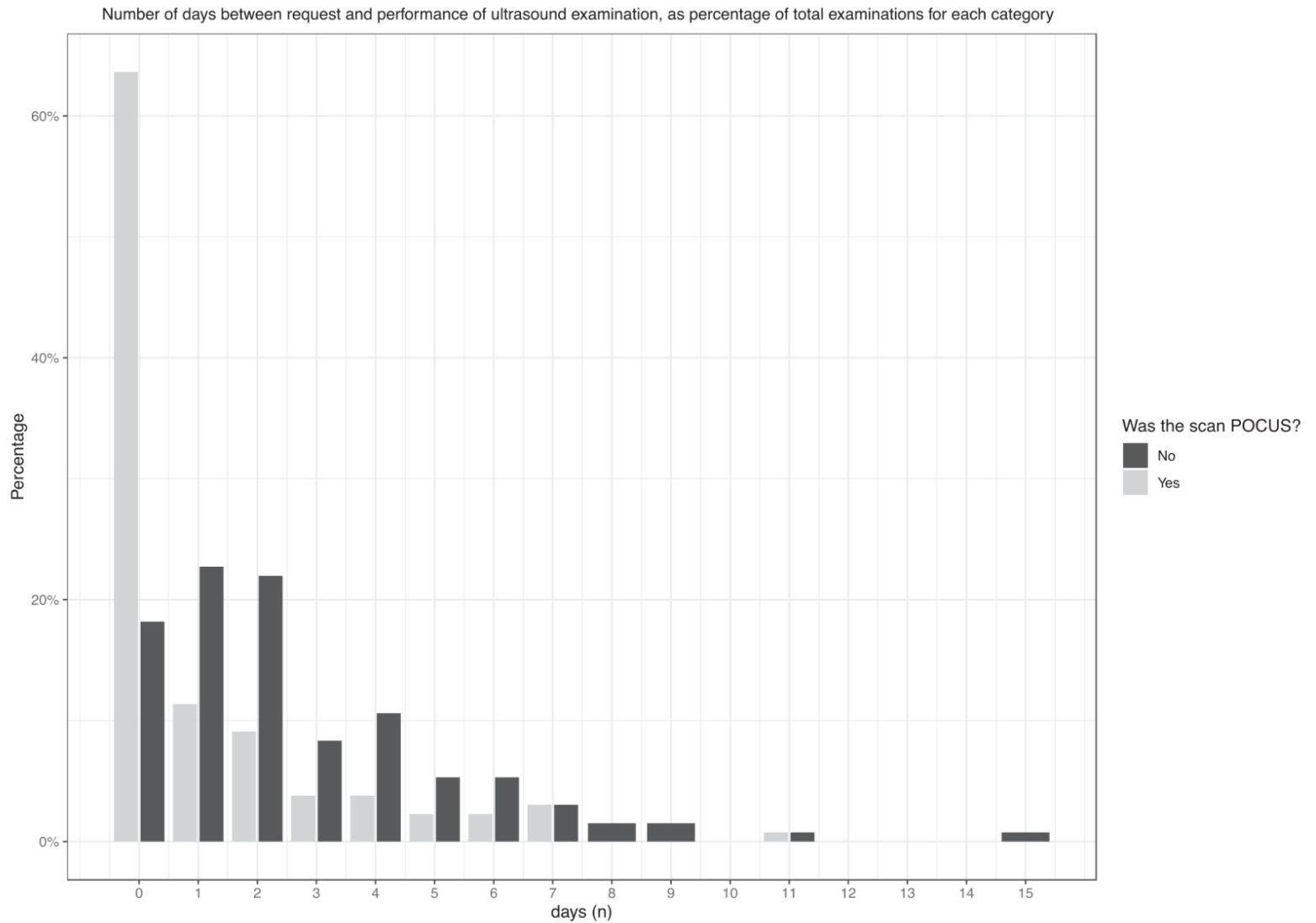
Diagnostic point-of-care ultrasound in medical inpatients at Queen Elizabeth Central Hospital, Malawi: an observational study of practice and evaluation of implementation

Fumbani Limani^{a,b,†}, Dingase Dula^{a,b,†}, Alexander J. Keeley^{c,†}, Elizabeth Joeke^d, Tamara Phiri^{a,b}, Ephraim Tembo^b, Luis Gadama^{b,e}, Victoria Nnensa^{b,e}, Sabine Jordan^f, Jane Mallewa^{a,b}, and Benno Kreuels^{id a,f,*}



Type of ultrasound examination	Number of examinations performed, n	Number (percentage) of examinations performed as POCUS, n (%)
Abdominal	81	22 (27)
Echocardiogram	93	31 (33)
FASH	66	60 (90)
Chest	13	12 (92)
Vascular/DVT assessment	9	6 (67)
Others	5	3 (60)

Type of examination	Treatment started	Treatment altered
POCUS:		
Abdomen (n=22)	3 (13.6)	8 (36.4)
Chest (n=12)	4 (33.3)	2 (16.7)
ECHO (n=31)	15 (48.4)	7 (22.6)
FASH (n=60)	12 (20.0)	17 (28.3)



Benefits for both partners

- **German partners**
 - New collaborative research opportunities
 - Capacity building in clinical tropical medicine and infectious diseases for German doctors

- **Malawi Partners**
 - continuous education and staff development built in POCUS program
 - improved quality of care
 - early decision making
 - reduced length of stay
 - ongoing roll out/wide buy-in beyond Internal Medicine dept

Current status and future perspectives

- **Sustainable improvement in quality of care** – POCUS is now mandatory part of postgraduate training in medicine at COM
- **Interdisciplinary approach** – buy-in from other departments (e.g. Obstetrics, paediatrics)

Current status and future perspectives

- **Scale-up and decentralization** – provision of training as blended learning using a moodle based mobile phone app (ePOCUS)
- **National and international collaborations** – UK based NGO, GIZ Malawi, Uganda, Gabon, Nigeria
- **Research projects** – Sepsis, Lassa, Cardiology

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