Improving Pediatric Access to Ultrasound in a Tertiary Care Hospital in Malawi
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Introduction
- Malawi is a landlocked country in southeast Africa with one of the lowest GDP/capita in the world and one of the highest rates of HIV/AIDS in the world
- Mix of public and private healthcare
- A pediatric death audit at the public tertiary hospital Kamuzu Central Hospital in the country's largest city, Lilongwe, showed disparity in access of timely radiology studies, particularly ultrasound, for pediatric patients
- Many pediatric patients died before they were able to be evaluated with ultrasound, clouding the cause of death and underlying diagnoses these patients had
- In addition to HIV/AIDS, high prevalence of other infectious diseases such as TB, schistosomiasis, malaria, yellow fever
- KCH is staffed with multiple radiographers who double as sonographers. Currently two attending radiologists, one of whom is permanent and one whom is a visiting professor
- Radiology equipment is currently one portable XR, one stationary XR, one stationary ultrasound machine with ECHO capabilities, and two portable ultrasound machines one of which is ECHO capabilities
- Partnership between RAD-AID, UNC RAD-AID Chapter, and KCH started in 2013 after a radiology readiness assessment was completed
- Partnership between RAD-AID and Malawi Children’s Initiative began in 2019. The first volunteers traveled in August-December 2019 (of which I was included)

Goals/Objectives
- Improve access to ultrasound studies for pediatric patients
- Improve technical skills of local radiographers
- Improve sonography curriculum

Methods
- Identified a cohort of learners of which to provide longitudinal mentorship to adapt and manage the needs of the local healthcare environment
- Ensure sustainability of intervention by qualifying learners to have ability to train future technologists
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Results/Conclusions
- Improvement in evaluation scores over the course of 4-5 months of hands-on teaching
- Validation of education goals by learners passing POCUS exams
- Sponsorship of Mr. Hastings Banda to receive master’s level education in sonography in Uganda. Formal sonography education is not available in Malawi

Future Directions
- Immediate future plans torpedoed by COVID-19 pandemic
- RAD-AID, MCI to continue to send volunteers to KCH from physician, resident, and radiology technician sides
- Continued virtual lectures on various topics related to local needs - infectious disease, pediatrics
- Continued participation on WhatsApp thread sharing cases and taking on difficult cases with group input

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