

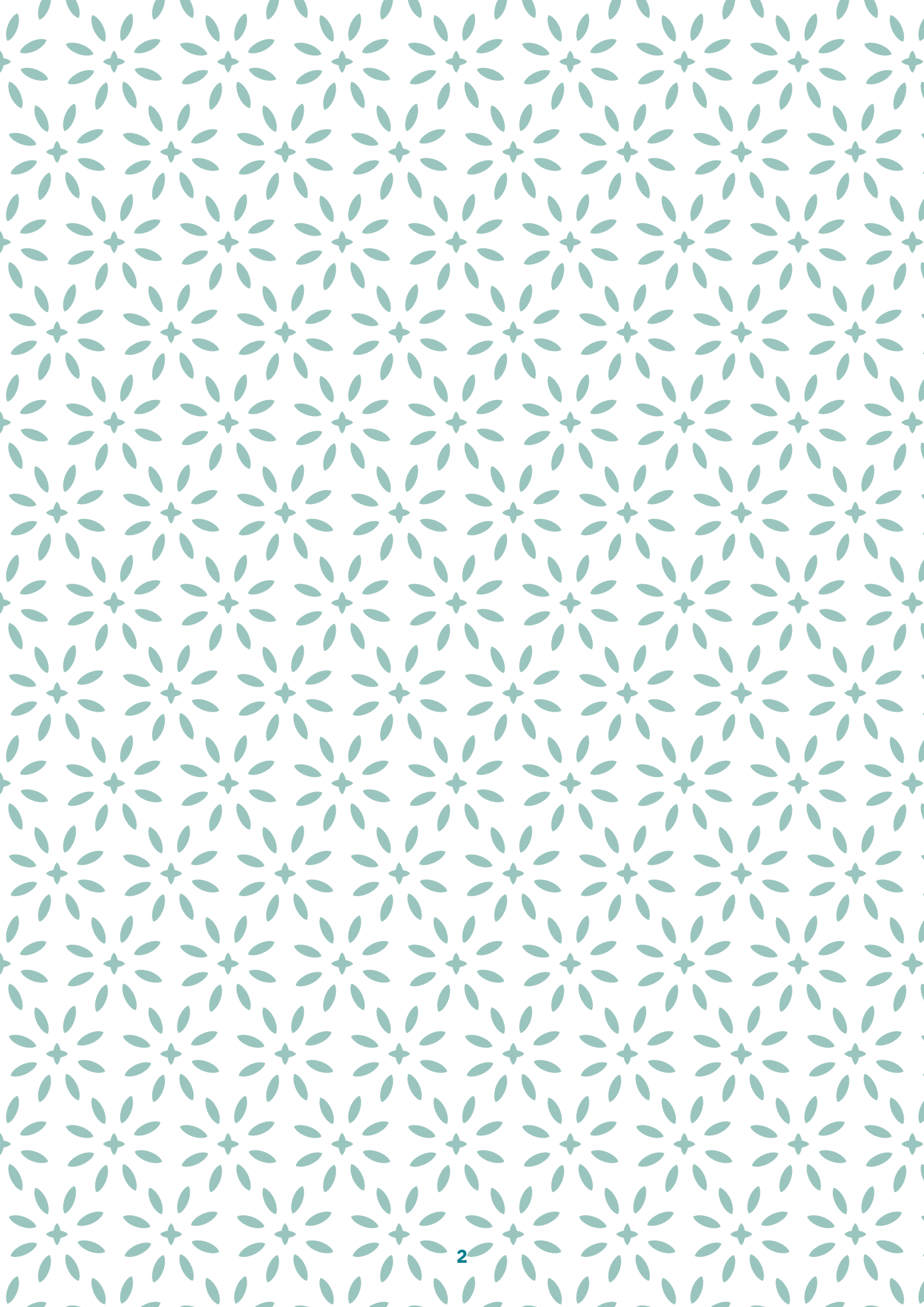
Uganda

Annual Progress Report

July 2022 – June 2023



Seed
GLOBAL HEALTH



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Letter From The Advisory Board Chair

Dear Colleagues,

Seed Global Health's guiding principle is "strengthening the healthcare workforce to ensure quality and dignified care for everyone." This mantra serves to focus the organization's employees on its core mission of improving health outcomes. Similar to Seed Global Health, many organizations have compelling and memorable mottos. However, only a select few truly embody and uphold their guiding principles. Seed Global Health proudly falls within this exclusive category. The organization remains dedicated to enhancing the healthcare landscape in Uganda through health workforce development, focusing on enabling policies, education, improved quality of care, and professionalism in service delivery. This commitment includes enhancing and supporting both pre-service and in-service training for healthcare professionals, quality improvement initiatives, bolstering documentation practices, improving the use of data in healthcare decision making, and various other impactful programs. Seed Global Health has consistently excelled and continues to fulfill its promises.

Throughout the year, Seed Global Health has placed significant emphasis on translating training into clinical care and elevating patient outcomes. This has been achieved through the implementation of quality improvement projects and a more deliberate use of data to inform interventions. As board members, we are pleased to see the positive developments in patient outcomes at our partner institutions.

On behalf of the Board and myself, I extend our heartfelt congratulations to Seed Global Health Uganda for yet another successful year. We take pride in our contributions to and affiliation with this success. We extend special gratitude to our fellow Board members for their unwavering commitment to improving healthcare in Uganda.

I warmly invite you to read this annual report to gain deeper insights into the exceptional work that Seed Global Health Uganda is accomplishing.

A handwritten signature in black ink, appearing to read "Vincent Oketcho".

Sincerely,

Dr. Vincent Oketcho

Advisory Board Chair



Letter From The Country Director

Dear Colleagues,

I take this opportunity to welcome you to our annual report. The year 2022–2023 has marked yet another successful period for Seed Global Health Uganda. Within this report, you will discover how we have continued to enhance the healthcare landscape in Uganda through our fundamental pillars of Education, Practice, and Policy. Under the Education pillar, this report emphasizes our primary programs, interventions, and partnerships aimed at building a robust and resilient healthcare workforce tailored to the needs of Uganda. We share our ongoing efforts to support and foster new academic disciplines in Uganda, such as the introduction of master's degree programs in emergency medicine and midwifery science.

I am also excited to share our expanded program for in-service healthcare professionals. We have equipped health professionals with the skills to identify issues and implement quality improvement projects within their healthcare facilities. We also remain dedicated to engaging with policymakers and key stakeholders on both the national and international levels. We understand the importance of creating a supportive policy environment for the health workforce to achieve their potential and save lives.

Through ongoing partnerships, including our involvement in the Ebola response efforts, the emergency care ECHO program, and the establishment of the ReACT program, we have ignited a growing demand for Seed to expand its scope of work in Uganda, particularly in the realm of tailored, purpose-driven training. This demand for expansion aligns perfectly with our ongoing efforts to incorporate the lessons learned over the past five years while crafting Seed's new five-year strategy for 2024–2029.

I wish to express my heartfelt appreciation to the Advisory Board, our dedicated staff, our valued partners, and our generous donors, without whom this work would be impossible.

A handwritten signature in dark ink, appearing to read 'Irene Atuhairwe'. The signature is fluid and cursive, written in a professional style.

Sincerely,
Irene Atuhairwe
Country Director



Overview

Our Vision

Seed envisions a world in which every country is strengthened by a robust health workforce to best meet the health needs of its population.

Our Mission

Seed Global Health educates a rising generation of health professionals to strengthen access to high-quality care with a goal of saving lives and improving health.

Our Goal in Uganda

Seed's theory of change is grounded in the belief that people are among the most important levers of change in the health system. Physicians, nurses, and midwives, among other health workers, have the expertise critical to addressing the triple burden of communicable and noncommunicable diseases and emerging threats — like COVID-19, Ebola, and climate change — with which Uganda grapples. Our goal in Uganda is to enable access to high-quality emergency care and maternal, newborn, and child health services that improve the well-being of those who seek them.

Our Strategic Pillars

Seed has served as a partner to the Government of Uganda since 2013. We work in all regions of the country alongside partners ranging from the Ministry of Health, to health facilities, to public academic institutions to strengthen the health system through evidence-based and locally-led solutions. We work with students, faculty, clinical providers, institutions, and policy makers nationally across three core interrelated pillars: education, practice, and policy.



Education: Strengthen health professional education by engaging partner institutions and their faculty and staff so that they are better able to provide quality teaching/training in medicine, nursing, and midwifery.



Practice: Enhance the quality of clinical practice by strengthening the skills of local health providers, faculty, and students/trainees through mentorship and training.



Policy: Advocate nationally and globally to elevate policies that support strong health professional education and practice, and create an enabling environment for health workers to deliver care.

Our Approach

Seed works upon invitation from the national government within each of its focus countries. Seed then develops close partnerships with government, academic, and health leaders to offer bespoke training and support to address their greatest health system challenges.

Some of the ways we do this is through:

Educators: Seed recruits highly skilled, experienced health professionals who embed with our partner institutions, offering dedicated training and mentorship to emerging doctors, nurses, and midwives as well as faculty and preceptors. Seed educators help their trainees move from theory to practice, working hand-in-hand with them at the bedside, caring for patients, in a teaching hospital-style model.



Outgoing 2022–2023 Seed Educators with Country Director, Irene Atuhairwe.

Package of services: Seed bridges acute needs essential to enrich the classroom and clinical environment to maximize educator inputs and patient outcomes. This includes teaching materials, training support, travel, and convening costs.

Seed supports partners to build their skills in simulation through the Simulation For Life program.





Advocacy: Seed advocates locally and globally for increased investment in HRH and health, accelerating the path to impact including infrastructure, supplies, health worker absorption, and retention.



Institutional Partnerships

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Clinical & Training Sites



Map of Uganda's five institutional partnerships.

Our work in Uganda between July 2022 – June 2023 continued to strengthen Seed's relationship with the Ministry of Health, our five institutional partnerships, and other public sector entities. In Seed's ongoing institutional partnerships, Ebola response efforts, emergency care ECHO program, and ReACT program, we've focused on upskilling and educating providers in our two

priority areas of **emergency care** and in **maternal, newborn, and child health (MNCH)**. A focus of our institutional partnerships this past year has been initiating change and demonstrating impact through quality improvement (QI) initiatives in the clinical setting.

The Year in Numbers

11,000 health workers attended emergency medical services ECHO sessions



8,000 Ebola contacts traced in the outbreak epicenter



6,342 patients directly served by Seed educators



3,021 health workers trained in maternal, newborn, and child health topics



19 ReACT teams formed at national and referral hospitals

13 Seed educators served in Uganda



11 QI projects undertaken by Seed's institutional partners

2 national policies and strategies supported by Seed



Progress & Achievements:

Emergency Care

In low- and middle-income countries (LMICs), a strong emergency care system is a proven and cost-effective way of reducing preventable deaths and disabilities. However many LMICs face a shortage of health workers trained in emergency care. In Uganda, fewer than nine percent of emergency ward staff have received specific training on management of medical emergencies, fewer than 27 percent of all medical facilities have permanent staff in their emergency units, and less than 25 percent of high-volume health centers offer 24-hour emergency care.

Since 2018, Seed Global Health has partnered with the Ugandan Ministry of Health to build the emergency care workforce and improve education and training for frontline responders. In 2022–2023, Seed continued to deepen its commitment to advancing emergency care in Uganda, offering sustained emergency care training and mentorship, embedding physician and nurse educators at regional hospitals and academic institutions, and growing national-level emergency response programs.

Seed supports the only two emergency medicine residency programs in the country – at Makerere University and Mbarara University of Science and Technology. With Seed’s support, the country has moved from having zero Ugandan trained emergency physicians to 19 in 2023.

Seed has also continued to expand the Emergency Medical Services ECHO to provide clinical learning opportunities for emergency care providers in health facilities nationwide. Seed has trained 11,000 providers in more than 800 health facilities in Uganda on its emergency care curriculum, and in 2022, established Resuscitation Action Teams (ReACT) at regional and national-level hospitals.

POPULATION (2020) **45.7 MILLION**
DEATHS (EMERGENCIES) **1,191/100,000**
DALYS* (EMERGENCIES) **52,441/100,000**

*Disability Adjusted Life Year



National Collaborations

Response to the Ebola Outbreak



In partnership with the World Health Organization and Ministry of Health, Seed coordinated a multi-day virtual Ebola training reaching hundreds of health workers.

On the heels of the COVID-19 pandemic, in September 2022, and for the first time in more than a decade, Uganda declared an outbreak of the Ebola virus. Within days of the news, the Minister of Health of Uganda reached out to Seed Global Health for urgent support for contact tracing, strengthening national coordination and administration for case management, training in infection prevention and control (IPC) for frontline health workers, and provision of personal protective gear.

Between September and December 2022, Seed and partners provided extensive support to Ebola response efforts. We supported tracing of more than 8,000 contacts; printed and distributed more than 6,000 copies of Ebola informational materials; trained more than 4,000 health workers ranging from laboratory professionals to hygienists to health professionals on IPC and management of Ebola; provided more than 2,500 pieces of PPE to eight districts; and supported the ambulance transfer of more than 800 patients in the epicenter of the outbreak.

On January 11, 2023, Uganda was declared Ebola-free.



Health workers at Mulago National Referral Hospital practicing hand washing skills as part of the IPC training by Seed Global Health and the Ministry of Health.

Emergency Medical Services ECHO

Seed Global Health and the Ministry of Health launched the Emergency Medical Services (EMS) ECHO program in November 2021 to scale emergency expertise across the country. ECHO is a licensed and trademarked telementoring program, founded by the University of New Mexico in 2003, that brings together health workers and subject matter experts virtually “using videoconference technology, brief lecture presentations, and case-based learning, fostering an ‘all learn, all teach’ approach.”

Since November 2021, the EMS ECHO has trained 11,000 providers across 800 health facilities in Uganda. Professional councils in Uganda, including the Uganda Medical and Dental Practitioners Council and the Uganda

Nurses and Midwives Council, have accredited this program as a continuous professional development (CPD) provider, which counts towards renewal of practicing licenses. Across the last year, we held approximately 24 EMS ECHO sessions, bringing the total to 40. In the last module, which wrapped up on April 28, 2023, 351 participants qualified for a CPD certificate in trauma management.

In 2022, Seed and MOH colleagues conducted a mixed-methods evaluation of the EMS ECHO program and found that it improved health worker knowledge and skills and developed a virtual community of practice, which helped diminish feelings of professional isolation among health workers.



Moderators and panelists, including a Seed educator, pause for a photo during an ECHO session.

Resuscitation Action Teams (ReACT)

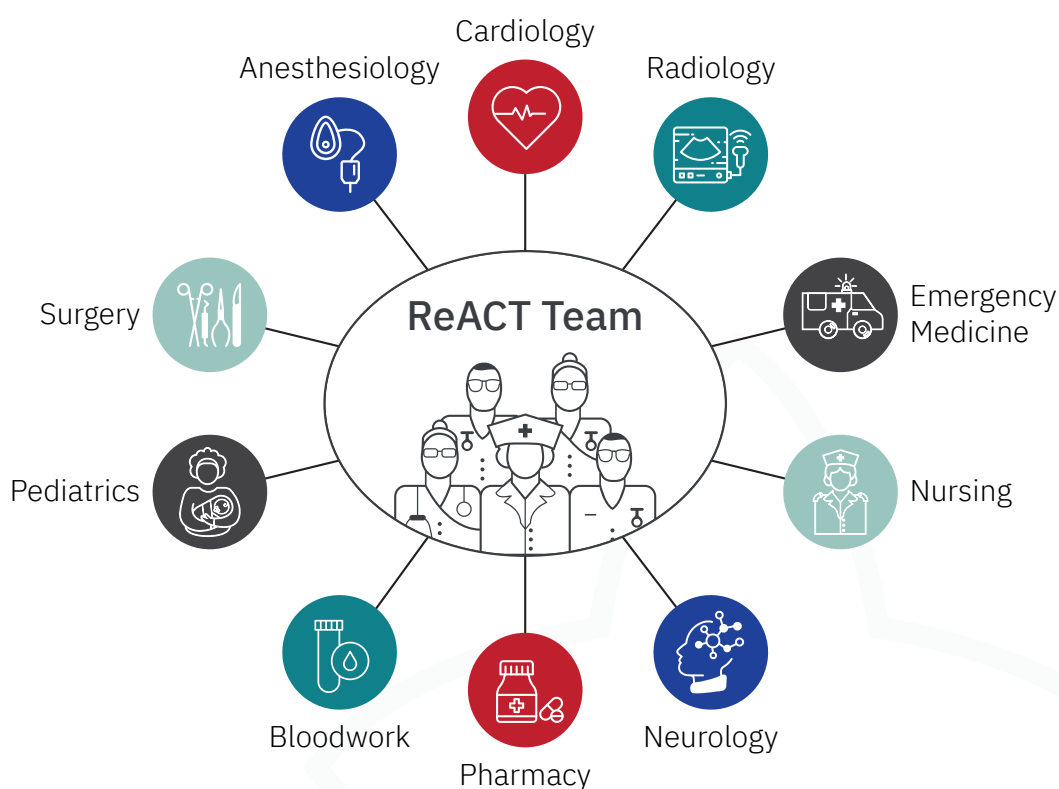


Dr. Emuron, Emergency Physician at Katakwi General Hospital and Dr. Simon, the District Health Officer for Katakwi District, receive an emergency kit for their local ReACT team.

While the EMS ECHO filled a gap in knowledge and skills training for healthcare providers in emergency care, there remained a gap in coordinating services in emergency units to provide timely, comprehensive care to patients. To address this, Seed and the Ministry of Health developed Resuscitation Action Teams (ReACTs) in 2022 in national and regional

tertiary hospitals to integrate patient care with facility-wide operational response. ReACTs are multidisciplinary teams, composed of ten to fifteen members including internal medicine, nursing, surgery, anesthesiology, laboratory, pharmacy, radiology, and other specialists, that work together as one functional unit to reduce response time to emergencies and improve referral of patients.

Building on the clinical focus of the EMS ECHO, ReACT teams receive in-person training and hands-on mentorship on response coordination and guidelines to frequently-encountered emergencies and on trouble-shooting operational challenges. Additionally, ReACT teams receive supplies such as emergency kits to facilitate their work. To date, ReACT teams have been developed at 19 regional and national referral hospitals, with 250 providers on board.



Contributions to National Guidelines & Data

Seed has continued to be a close partner to the Ministry of Health, supporting work aligned with emergency care and MNCH. In January 2023, Seed contributed to the MOH's National IPC Strategy & Guidelines, which Uganda is in the final stages of developing.

Seed also participated in the review and revision of the EMS indicators and data collection tools. The Ministry of Health (MOH) underwent a process to review the health management information system (HMIS) indicators to appropriately represent key patient and performance indicators of the emergency system. This took place with support from Seed and was used as an opportunity to reflect work done by emergency teams at facility level. Indicators such as mortality in the first 24 hours, response time, discharges from emergency units, and more were included and accepted by the MOH health informatics team. Our senior Program & MEL manager was present to provide technical support to guide the process.

The MOH of Uganda is currently implementing the National Emergency Medical Services Strategic Plan 2020/21–2024/25 that operationalizes the Emergency Medical Services Policy, 2021. The Government of Uganda has identified the expansion of service delivery, training, monitoring, and evaluation of emergency care service provision in the country as a key priority. In alignment with government priorities, Seed is working with the MOH to conduct a national-level needs assessment for effective delivery of emergency medical care for the next strategic period. This needs assessment will highlight the state of emergency care in Uganda, including challenges and opportunities, and will guide how to best improve the quality of health services, health policy, and patient care. To lead this effort, Seed hired a research manager in 2023, Dr. Andrew Twineamatsiko to coordinate the needs assessment that will be carried out between September 2023 and January 2024.



Dr. Andrew Twineamatsiko

Institutional Collaborations

Makerere University

Goal

By 2025, Makerere College of Health Sciences students and faculty demonstrate competency in research, teaching, and clinical practices in emergency care and establish the Intensive, Perioperative and Emergency Care (INSPIRE) institute.

Objectives

- 1 By 2025, emergency medicine residents are trained to become competent emergency care practitioners.
- 2 By 2025, undergraduate nursing students acquire and practice key emergency care knowledge and clinical skills.
- 3 By 2025, the master's degree program in emergency nursing is approved by the University Council and NCHE and is ready for implementation.
- 4 The INSPIRE Institute and emergency medicine and nursing departments support and improve didactic and clinical teaching in emergency care at teaching sites.

Select Achievements:

- Creation of a revised emergency medicine Master of Medicine degree curriculum with ultrasound and simulation as key teaching and training components.
- Departmental approval of curriculum for master's degree in emergency and critical care nursing.
- Delivery of bi-weekly simulation sessions for EM residents and undergraduate nursing students.
- Procurement of two ECG machines.
- Strengthened bedside teaching and clinical supervision skills by EM residents through rotations with undergraduate medical students: over 20 mentorship sessions performed with undergraduates at Mulago National Referral Hospital (MNRH).
- Expanded research mentorship for EM residents; mentors hail from the World Health Organization to Yale University to University of Edinburgh and beyond.
- Increased emergency care knowledge and clinical skills for undergraduate nursing students through training in basic emergency care and IPC.
- Development and implementation of a monthly continuing medical education (CME) program benefiting 50 nurses at MNRH.
- Creation of the INSPIRE Institute structure; operationalization is underway.



Makerere emergency medicine residents strengthen their skills to perform an electrocardiogram with support from a Seed educator.

Mbarara University of Science & Technology (MUST) and Mbarara Regional Referral Hospital

Goal

By 2025, MUST residents, faculty, and clinical staff deliver quality emergency care to patients at Mbarara Regional Referral Hospital's emergency department.

Objectives

- 1 MUST EM residents acquire knowledge and skills to deliver emergency care by 2025.
- 2 The MUST/Mbarara Regional Referral Hospital emergency medicine department has improved capacity to deliver quality emergency care by 2025.
- 3 MUST EM residents advocate for emergency care locally and nationally.

Select Achievements:

- Graduated five emergency care physicians.
- Established a formal EM residency elective rotation with Calgary University in Canada.
- Strengthened global scholarship and research partnerships. Outcomes included invitation for faculty to attend a toxicology course and conference in Australia; two residents participated in observership at Royal College of Emergency Medicine; one resident chosen to develop research skills under Brown University's Global Emergency Medicine program.
- Established formal mentorship program for EM residents.
- Re-established a formal triage process at Mbarara Regional Referral Hospital.
- Improved emergency care clinical skills and documentation practices for interns, nurses, and other hospital staff through triage training and CME sessions.
- By June 2023, 85% of patients attending the emergency department were triaged and HMIS data completion was at 92%.

A Seed educator conducts a simulation session for Mbarara University of Science and Technology's emergency medicine residents.



Perspective

Joseph Emuron, MUST Alumnus



Choosing a career in emergency medicine at Mbarara University of Science and Technology was a decision made amidst uncertainty about emergency medicine's future as a field. However, upon completing my training in 2022 I was presented with numerous opportunities to begin a rewarding career.

Despite the allure of well-organized healthcare settings, I decided to return to Katakwi Hospital in the Eastern region, where my professional journey had started. Eager to make a meaningful impact, I conducted a baseline assessment

of the hospital's emergency care capacity. This assessment revealed critical gaps, including a lack of dedicated emergency management space, limited knowledge and skills in emergency care, and delayed and uncoordinated responses to emergencies. I shared these findings with relevant stakeholders, leading to discussions on practical solutions to address these issues.

As part of initiatives to improve emergency care, I am supporting the delivery of continuous medical education sessions, establishment of a rapid response team, creation of a functional triage system, an upgrade of the resuscitation room, promotion of ambulance access, and advocacy for the re-establishment of an emergency room within the existing infrastructure.

Enabling universal access to high-quality emergency care not only saves lives but also reduces unnecessary morbidity. My choice to graduate from MUST and return to Katakwi Hospital reflects my unwavering dedication to advancing emergency care at the grassroots level and fostering health equity.

Dr. Joseph Emuron, MMed, MBBS

Progress and Achievements:

Maternal, Newborn, and Child Health

Uganda has made steady progress in reducing maternal mortality rates over the past few years. According to the 2022 Uganda Demographic Health Survey, the maternal mortality ratio declined from 336 deaths per 100,000 women in 2016 to 189 deaths per 100,000 in 2022. However, there is still work to do to reach the Sustainable Development Goal target of 70 per 100,000. Progress toward reducing the newborn mortality rate has proven more difficult. Due to obstetric and newborn emergencies such as bleeding, hypertensive disorders, sepsis, and birth asphyxia, newborn mortality only declined from 27 per 1,000 in 2016 to 22 per 1,000 in 2022.

This past year, Seed Global Health continued its work to build the health workforce to address the high rates of maternal and newborn mortality in Lira, Arua, Mbale, and beyond, training over 3,000 health workers in maternal, newborn and child health topics. At Lira University, Seed not only continued support to the Bachelor of Science in Midwifery degree program, but also helped launch the region's first Master of Midwifery Science program in September 2022. Seed educators provided intensive support to prepare and operationalize the master's degree curriculum, and have been actively teaching as faculty both in the classroom and clinical settings since the program's launch.

POPULATION (2020) 45.7 MILLION
MATERNAL MORTALITY 189/100,000
NEONATAL MORTALITY 22/1,000





Ms. Felister Apili, Head of Lira University's Department of Nursing and Midwifery presents 'Experiences and lessons learned from twinning between Seed Global Health and Lira University to launch a Master of Midwifery Program in Uganda' at the International Confederation of Midwives (ICM), Bali, Indonesia.

At Muni University in Arua, the partnership has focused on building the capacity of hospital staff at Arua Regional Referral Hospital and faculty at Muni University. Key focus areas in the past year have included simulation, quality improvement, and patient-centered care at facilities and in the community.

At Busitema University, the priority over the last year has been on improving patient outcomes in the emergency pediatric and maternity wards. Together with students, faculty, and clinical staff, Seed rolled out quality improvement initiatives in the wards to improve the consistency, completeness, and accuracy of clinical documentation to better understand the quality of care patients receive, and to identify critical areas of focus.

Institutional Collaborations

Lira University

Goal

By 2025, Midwifery graduates from Lira University's Master of Midwifery Science (MMS) and Bachelor of Midwifery Science degree programs demonstrate skills in emergency management of obstetric and newborn care (EmONC).

Objectives

- 1 Between 2022 and 2025, Lira University enrolls and trains at least 25 students per year in the MMS program.
- 2 By 2025, at least 90% of staff (faculty and clinical preceptors) are competent in the use of EmONC simulation.
- 3 By 2025, at least 50% of faculty and clinical preceptors practice mentorship and student-centered teaching to enhance EmONC skills.
- 4 By 2025, at least 95% of midwifery students demonstrate competence in EmONC in clinical settings.

Select Achievements

- Launched the MMS program with eight enrollees.
- Established and operationalized the Lira University Research and Ethics Committee (LUREC).
- Initiated a journal club to build knowledge and applied research skills with an average attendance of 23 participants.
- Presented at international and national conferences: ICM conference in Bali, Indonesia, International Day of the Nurses conference, International Day of the Midwife conference.
- Developed checklists and simulation scenarios for obstetric emergency training.
- Developed quality improvement teams (QITs), work improvement teams (WITs) and a Lira University Teaching Hospital QI action plan.
- Finalized mentorship and student-centered teaching guidelines.
- Hosted a student-led, patient-centered care symposium.
- 100% of students who were assessed were competent in EmONC.



Lira University's Faculty of Nursing and Midwifery advertise for their newly-created journal club.

Perspective

Rita Matte, Seed Educator at Lira

Domiciliary or community midwifery is care that is given to a pregnant woman in her home by skilled health workers. The services offered may include pre-natal, intranatal, and postpartum management. There is less of a chance of problems occurring as both baby and mother are monitored, resulting in early detection of any ailments.

At Lira University, Year Three midwifery students spend the recess semester practicing community midwifery. Each student is required to take care of a mother from the first stage of labor, assist the delivery, and take care of the mother and baby during the first 24 hours while in the health facility. The student then accompanies the mother and the baby home on discharge and continues daily visits for seven days under the supervision of a faculty member.



Seed midwife educator Rita Matte visits a family during Lira's community midwifery course.

These visits offer students the opportunity to interact with other family and community members, including those who are in need of health care but aren't sure where to go. During one community midwifery visit, a 20 year-old neighbor, who has two young children, approached a Lira student whom I was supervising. This young mother was scared of conceiving again and wanted to know more about family planning. We gladly spoke with her about family planning

and made appropriate referrals. The woman successfully went to the hospital and is now on a family planning method of her choice. She is not worried about another unplanned pregnancy and said she would share the information that she received at the family planning clinic with other women in her community.

As a midwife and public health professional, I recommend that community midwifery be rolled out beyond midwifery students. Having midwives in the community helps to develop trust and confidence in the health system as a whole, building mutual understanding between the community and health workers.

Florence 'Rita' Matte, PhD, MPH, M.Ed., BScN, PHN, RN, RM

Busitema University, Mbale College of Health Sciences and Mbale Regional Referral Hospital

Goal

By 2025, Faculty, students, and clinical staff at Mbale Regional Referral Hospital have strengthened their capacity to deliver EmONC services.

Objectives

- 1 By 2025, Faculty and clinical staff apply best practices in training students in and delivering EmONC services.
- 2 By 2025, Students demonstrate skills in the provision of EmONC services.
- 3 By 2025, Mbale Regional Referral Hospital has strengthened capacity to provide evidence-based MNCH standards of care on the pediatric and maternity wards.

Select Achievements

- Graduation of the first class of pediatricians at Busitema.
- Creation of a preceptorship manual to improve the clinical teaching of students by health workers.
- Procured training equipment and refurbished the skills lab.
- Revised pediatric and OB/GYN teaching modules to include delivery of EmONC services.
- Conducted routine medical simulation training for over 100 faculty, staff, and students.
- Developed and implemented four QI projects on postpartum hemorrhage, clerkship, partograph use, and managing pediatric case files.
- Strengthened ability of preceptors to deliver training for students through conducting routine maternal and perinatal death reviews, monthly CMEs, and journal club sessions.
- Presented work at the Joint Annual Scientific Conference, National Safe Motherhood Conference, Nurses Day Commemoration, Uganda Science Week Exhibition, and the International Day of the Midwife conference.
- 100% of Year 4 students were assessed as competent in delivering EmONC services.

An Mbale College of Health Sciences student participates in a simulation exercise.



Muni University and Arua Regional Referral Hospital

Goal

Muni University nursing faculty, students, and Arua Regional Referral Hospital clinical staff apply best practices in delivering patient-centered MNCH services and emergency care in Arua Regional Referral Hospital by 2025.

Objectives

- 1 Muni nursing faculty, students, and Arua clinical staff demonstrate patient-centered care in Arua Regional Referral Hospital between 2019–2025.
- 2 By 2025, Muni faculty and Arua Regional Referral Hospital clinical staff demonstrate competency in teaching EmONC and basic emergency skills (BEC, BLS, ETAT).
- 3 By 2025, students from Muni University demonstrate competency in EmONC skills.
- 4 By 2025, students from Muni University demonstrate basic emergency care skills (BEC, BLS, ETAT).

Select Achievements

- Integrated patient-centered care topics into clinical teaching, community outreach, and clinical rotation student competencies.
- Facilitated 120 radio messages on patient-centered care and engaged 680 adults and 55 health workers during outreach sessions.
- Organized the 2023 National Nurses and Midwives Challenge quiz; Muni emerged best overall in the country.
- Facilitated a WHO Basic Emergency Care course for 12 Muni faculty and ARRH staff.
- Participated in a national simulation symposium; presented three research papers; received two awards related to simulation implementation.
- Designed 60 simulation scenarios in medical and surgical nursing, pediatrics, midwifery, and psychiatric nursing.
- Initiated QI projects in the emergency department, skills lab, NICU, and maternity wards.
- The new Bachelors of Midwifery curriculum was approved by the Uganda Nurses and Midwives Council and National Council for Higher Education.
- Conducted an Emergency Triage Assessment and Treatment (ETAT) training for 31 students; 96.7% of the students scored above 60% in the post-test compared with 25.8% in the pre-test.
- Procured key equipment for Muni University and Arua Regional Referral Hospital including nebulizers, laryngoscope, and training models.
- 100% of Year 4 students were competent in delivering EmONC services.



Seed Country
Director presents
Muni partners with
supplies.

Perspective

Lukia Kabitanya, Nurse at Mbale Regional Referral Hospital

Mbale Regional Referral Hospital (MRRH) is tackling challenges concerning workforce development, improving emergency obstetric and newborn care, and building a more resilient health system.

Through a partnership with Seed Global Health, Busitema University and Mbale College of Health Sciences, MRRH staff have received training and mentorship that has resulted in improved health services at the facility and in the community.

The hospital has benefited in the areas of:

- Research, such as through the Nurses & Midwives Research Hub and journal club, that live as landmarks for MRRH and beyond. The culture of knowledge sharing was not being practiced in many hospitals in this region, but this partnership has helped to build relationships and clinical competence hence improving patient safety. Nurses are now mentors to students and other doctors.
- Maternal and perinatal death surveillance reviews (MPDSRs), including using MPDSR tools to critically look at causes and missed opportunities, and working on recommendations to change course and reduce maternal mortality.
- Training to improve QI skills among nurses, midwives, obstetricians, medical officers, and pediatricians. The work flow at my department is much clearer than before.

Personally, I have improved in identifying and providing care to high-risk mothers. I directly get time to work with the Seed educators, who have mentored me and other staff, resulting in improved skills and helping us build confidence as we save mothers and babies. The combination of students' increased skills in resuscitation, supporting bleeding mothers after delivery, and having the right equipment has helped the hospital reduce its institutional maternal mortality ratio.

The presence of Seed Global Health's partnership at Mbale Regional Referral Hospital in our department of obstetrics and gynecology is palpable.

Sr Kabitanya Lukia, Senior Assistant Nursing Officer, Obstetrics & Gynecology Department



Progress and Achievements:

Other Health Workforce Initiatives

Student-Led Initiatives

MedXMentor

MedXMentor is a student-led hybrid mentorship program for professional healthcare students that focuses on enhancing the personal, academic, and professional growth of aspiring healthcare professionals through mentorship. MedXMentor connects professional health students with experienced mentors, providing them with guidance and support in their academic and soft skills development. In the first graduated cohort, 52% reported they increased their

managerial skills, 68% increased their critical thinking skills, and 95% are confident in their career path choices. Seed has supported this initiative through mentorship of the student leaders, identification of mentors, provision of counsel and guidance to MedXMentor leaders, and facilitation of training for mentees.



MedXMentor's second cohort was launched in May 2023.



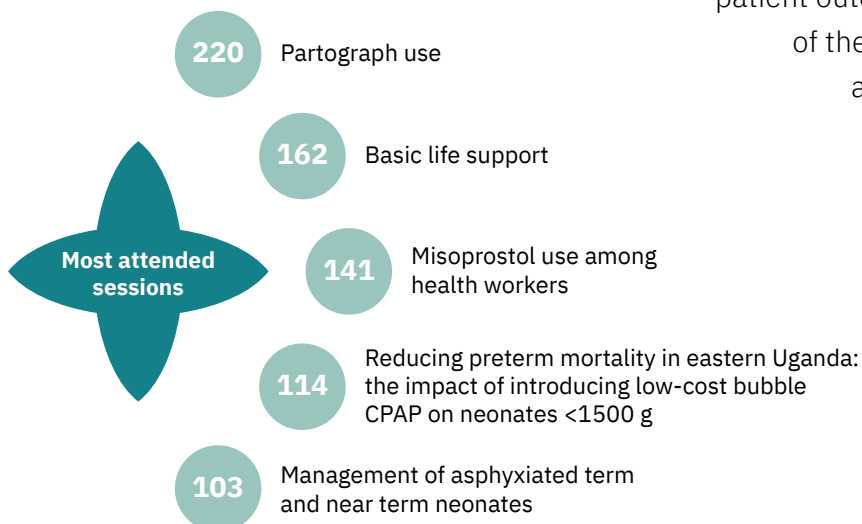
Patient-Centered Care Movement Africa

The goal of Patient-Centered Care Movement Africa (PaCeM) is to equip health worker trainees with knowledge and skills to deliver patient-centered care (PCC). This student group currently has over 1,000 members involved in chapters across Africa. In 2022–2023, they established a patient-centered care research hub and held an inaugural Patient-Centered Care Africa conference, which Seed supported. Since its founding just a few years ago in Uganda, Seed is happy to report there has been a tremendous increase in PCC knowledge across the student community. Seed has supported the student chapters at various partner institutions and provided a platform for leadership meetings, mentorship, counsel, and guidance for the student leaders.

Health Worker-Led Initiatives

Nurses and Midwives Research Hub

In 2022, Seed and partners established the Nurses and Midwives Research Hub in response to requests to form a community of practice to hone nurses' and midwives' research and critical analysis skills. The goal of this group is to improve patient outcomes through implementation of the latest clinical evidence in nursing and midwifery. This hub serves as a base for clinical research and best practices for the design and implementation of projects to improve quality of care. Since its establishment in 2022, the hub has held more than 25 sessions with close to 1,500 participants.



On The Horizon



Seed Uganda's Advisory Board

As Seed's programs have grown and evolved over the past year, so too have our operations and strategy to ensure we have the right support systems to sustain and advance our mission.

This year:

- We celebrated the promotion of longtime Seed team member Dr. Bonaventure Ahaisibwe to managing director of impact and innovation, leading all of our program work.
- In February, the Uganda team welcomed a new clinical advisor, Dr. Brian Agaba.
- In June, we welcomed Andrew C. Musoke as our first-ever chief operating officer, part of a longer-term strategy to expand Seed's global reach, operations, programming, and impact. Andrew brings to the role a notable career in health systems strengthening and nonprofit management, with a focus on operational excellence.
- In July, we welcomed Dr. Andrew Twineamatsiko as the research manager to coordinate the MOH Emergency Medical Services Assessment.

Seed is embarking on the development of a new strategic plan for 2024–2029. Although we do not anticipate significant changes to our overall vision or mission, and remain as committed to our partnerships as ever, this process will allow us to refine our strategy in order to deepen and accelerate our impact.



Appendix I –

2022–2023 Publications and Presentations by Seed and Partners

Agaba, B., Kanyike, A., Nsubuga, A., Balizzakiwa, T., Nakatudde, P., Kisengula, I., Ewing, H., Ellis, R., & Atuhairwe, I. (2023, August 1-3). *Use of an online training model to build capacity of health workers in Ebola virus disease case management during the 2022 outbreak in Uganda: A case for technology-based training in health emergency situations*. The African Forum for Research and Education in Health (AFREhealth), Maputo, Mozambique.

Apili, Felister (2023, June 12). Experiences and lessons learned from twinning between Seed Global Health and Lira University to launch a Master of Midwifery Programme in Uganda. International Confederation of Midwives 2023 Triennial Congress, Bali, Indonesia.

Athieno Odakha, J., Harborne, D., & Chen, H. (2022). Predictors of mortality in emergency centre patients with acute pesticide poisoning in Uganda, *African Journal of Emergency Medicine*, 12(3), 242-245.

Atuhairwe, I., Ngabirano, A. A., Ahaisibwe, B., Nsubuga, A., Kanyike, A. M., Kihumuro, R. B., ... & Waniaye, J. B. (2023). Leveraging tele-mentoring and remote learning to strengthen the emergency care capacity of health workers in Uganda. *African Journal of Emergency Medicine*, 13(2), 86-93.

Atuhairwe, I., & Mcwhitere, E. (2023, September 18-21). Supporting Global Nurse Leadership and Building Capacity in Nursing with the ECHO Model. Virtual Panel. MetaECHO 2023 Global Conference, Albuquerque, New Mexico.

Atuhairwe, I., Alenyo Ngabirano, A., Ahaisibwe, B., Nsubuga, A., Kanyike, A., Kihumuro, R., Balizzakiwa, T., Ewing, H., Ellis, R., Nakyeeyune, M., & Waniaye, J. (2023, August 1-3). *Leveraging Tele-mentoring and Remote Learning to Strengthen the emergency care capacity of health workers in Uganda*. The African Forum for Research and Education in Health (AFREhealth), Maputo, Mozambique.

Ellis, R. (2023, September 18-21). *Using ECHO to Educate Health Workers about Ebola Virus Disease in Uganda During the 2022 Outbreak*. MetaECHO 2023 Global Conference, Albuquerque, New Mexico.

Ellis, R. (2023, September 18-21). *Global innovations in emergency medicine ECHOs: Uganda and US Indian Health Service*. MetaECHO 2023 Global Conference, Albuquerque, New Mexico.

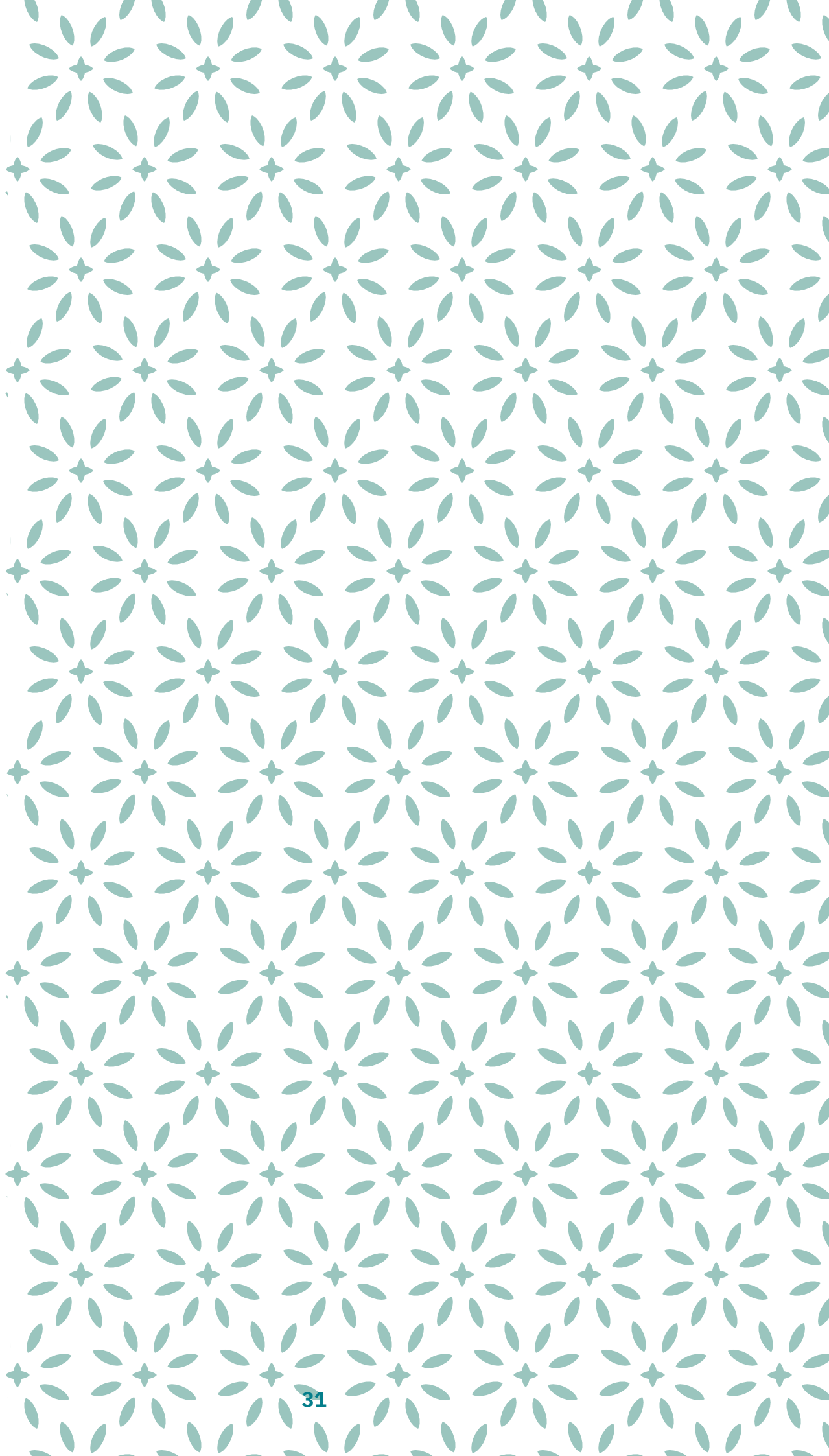
Kajjimu, J., Odakha, J. A., Makai, C., Kaginda, B. T., Nakachwa, J., Karungi, A., ... & Tagg, A. (2023). The role of emergency medicine interest groups in the development of emergency medicine: A case of Mbarara University of Science and Technology—Emergency Medicine Interest Group (MUST-EMIG) in Uganda. *African Journal of Emergency Medicine*, 13(3), 217-220.

Kalanzi, J., Wallis, L., Nabukenya, M., Okello, E., Okong, D., & Namirembe, S. (2023). Injury patterns in patients with severe traumatic brain injuries from motor crashes admitted to Mulago hospital accidents & emergency unit. *African Journal of Emergency Medicine*, 13(2), 94-100.

Kawala Kagoya, E., Nsubuga, A., Atuhairwe, I., Nakatudde, P., Kizito, P., Ronald, K., Jesca, A., Okibure, A., Okello, F., Nyangoma, F., Namara, R., Nakabaale, M., Nakawuki, A., Waako, P., Wandabwa, J., Musaba, M., & Barugahare, B. (2023, September 12-15). Community perspectives regarding preparedness, response and prevention of Ebola virus disease amidst Covid 19 pandemic, an exploratory descriptive qualitative study using a community engagement approach (ces) in Mbale City. Video presentation. The 7th International Conference on Prevention & Infection Control (ICPIC), Geneva, Switzerland.

Kibuuka, R., Kawala Kagoya, E., Nsubuga, A., Atuhairwe, I., Nakatudde, P., Kizito, P., Jesca, A., Okibure, A., Okello, F., Nyangoma, F., Namara, R., Nakabaale, M., Nakawuki, A., Waako, P., Wandabwa, J., Musaba, M., & Barugahare, B. (2023, September 12-15). *Ebola virus disease: Knowledge, attitude and prevention practices - the case of Uganda*. Poster presentation. The 7th International Conference on Prevention & Infection Control (ICPIC), Geneva, Switzerland.

Kizito, P., Bagonza K., Odakha, J., Nalugya, L., Opejo, P., Muyingo, A., Chen, H., & Harborne, D. (2023). Diagnostic performance of point of care ultrasound compared to chest x-ray in patients with hypoxia at a teaching hospital emergency department in Uganda. *African Journal of Emergency Medicine* 13, 61–67.



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