

ANTIBIOTIC TIMEOUT FELLOW - Nov. 7, 2023

POSITION DETAIL

Role: Antibiotic Timeout Fellow

Location: Rwanda with regular travel to implementation sites

Reporting to: Clean Cut Clinical Lead

Key relationships: Lifebox's program and clinical team; Clean Cut teams at selected facilities, UGHE program coordinator

Time commitment: 3 days a week, from February 2024-January 2025

BACKGROUND

Lifebox Overview

Lifebox is a global nonprofit founded in 2011 to tackle the crisis of unsafe surgery. By investing in tools, training, and partnerships, we address the critical gaps in surgical systems to make surgery and anesthesia safer worldwide. Lifebox's work focuses on three core areas: anesthesia safety, surgical teamwork, and reducing surgical infection. By working alongside local partners, we provide the training and tools needed to save lives through safer surgery. Lifebox has worked in over 116 countries, trained more than 12,000 healthcare providers, and made 60 million surgeries safer. www.lifebox.org

Antibiotic Timeout Program

The World Health Organization and the Lancet Commission on Global Surgery reported that 5 billion people lack access to safe surgical and anesthesia care. Surgical site infections represent a major cause of postoperative morbidity and mortality particularly in low- and middle-income countries (LMICs). Surgical site infections (SSI) have been shown to prolong hospital stays, create more complications, and increase costs, morbidity, and mortality. SSIs are also one of the most common healthcare-associated infections in African countries. High SSI rates are associated with high rates of antibiotic prescribing, worsening antimicrobial resistance, which is estimated to be associated with nearly 5 million deaths in 2019. Worldwide, approximately 1 in 6 inpatient antibiotic prescriptions are for surgical prophylaxis, including postoperative prophylaxis. The World Health Organization (WHO) recommends against postoperative antibiotic prophylaxis for preventing SSI. However, this continues as common practice in many resource-constrained settings and is reinforced by beliefs that international recommendations do not apply in these contexts where sterility practices are variable and SSI rates are much higher. Reducing surgical infections and addressing antibiotic stewardship are two initiatives that offer opportunities to improve surgical care and slow antimicrobial resistance.

Lifebox's Clean Cut program is a 6 month surgical infection prevention quality improvement (QI) program that reduced the relative risk of SSI by 35% at five hospitals pilot sites in Ethiopia between 2016-2018. It reduces surgical site infections by improving standards of infection that are key aspects of the WHO Surgical Safety Checklist. Clean Cut works by sequentially 1) engaging a multidisciplinary team, 2) mapping out current processes at each hospital, and 3) identifying gaps

and opportunities for improvement, and generating locally derived solutions at the hospital level. Throughout this iterative process, data are collected on intraoperative adherence to the standards, as well as subsequent patient outcomes.

The Antibiotic Timeout is a quality improvement program that was implemented at a single site in Ethiopia as a standalone pilot program. It was built with the aim of integrating with Lifebox's Clean Cut program, addressing overprescribing of antibiotics after surgery, a gap that was identified in prior Clean Cut implementation. It focused on reducing the use of unnecessary postoperative antibiotic prophylaxis in surgical patients centered around the use of an "antibiotic timeout" to motivate practice changes around antibiotic stewardship and engage multidisciplinary teams. The use of a timeout was paired with educational sessions and formation of hospital-context specific antibiotic stewardship practices that adapt international practice guidelines to local supply chains and resource limitation. Through this multimodal approach, we showed a 19% reduction in patients receiving unnecessary antibiotics after surgery. Although the Antibiotic Timeout was piloted as a stand-alone program in Ethiopia, it has not yet been implemented as a component of Clean Cut. From November 2023-2024 it will be integrated and implemented as a component of the larger Clean Cut program.

POSITION DESCRIPTION

This fellow will join members of the Lifebox Clinical team in developing and implementing the Antibiotic Timeout as an integrated component of the Clean Cut program. This will involve mentorship from the team that implemented the initial pilot program and an opportunity to lead adaptation of the Antibiotic Timeout to the Rwandan context. This fellow will work closely with a Rwandan Clean Cut fellow who will be involved in Clean Cut implementation and training delivery. In the first half of the fellowship, this fellow will receive in-person support from an additional Lifebox fellow with experience implementing the Antibiotic Timeout to allow the fellow to master the program details.

Candidate requirements

The Antibiotic Timeout Fellow should be an individual with a background in public health, medicine, or surgery who is living and working in Rwanda for the duration of the fellowship. Masters students in public or global health disciplines and individuals currently in clinical training or who have recently completed clinical training looking to learn more about research and quality improvement would be strong candidates. Clinical experience in nursing, surgery, or anesthesia is beneficial but not required. Experience in quality improvement or research is also beneficial. Candidates should have basic research skills, including the ability to do a literature review and a basic understanding of study design and evaluation. They should also have strong communication and problem solving skills, adaptability, attention to detail, and the ability to work independently and collaboratively across teams, including with program managers, coordinators, and the larger Lifebox and UGHE teams. The fellow should also be able to dedicate three days a week to fellowship activities, two of which should be work days. They should also be able to travel to partner sites regularly.

Roles and responsibilities

The Antibiotic Timeout Fellow will follow and support the implementation of all phases of the Antibiotic Timeout at all selected hospitals in Rwanda. They will play a key role in forming the hospital team at each implementing hospital and leading implementation efforts, including:

- Providing training workshops on antibiotic resistance, the use of verbal communication in critical safety processes, and infection prevention and control (IPC) practices for surgeons

- Identifying candidate trainers for and building training capacity for future workshop delivery in Rwanda
- Facilitate antibiotic stewardship guideline development and approval by hospital facilities

The fellow will also oversee data collection and assuring data quality by conducting regular data quality checks in collaboration with site leads, data collectors, and Lifebox M&E, program, and clinical staff. They will use this data to lead discussion on Antibiotic Timeout components at monthly Clean Cut action planning meetings and participate in program evaluation, data analysis, and ultimately publication of results related to the Antibiotic Timeout. They may also be asked to present the program status at Lifebox/UGHE-related research or quality improvement sessions.

Deliverables

- Monthly reports of activities and time spent on them
- Monthly reports of data collected as part of the antibiotic timeout program as well as reports of all training delivered.
- Required tracking of research projects as a member of the Lifebox Clinical Team
- Participation in research development as part of the Lifebox Clinical Team, including development of concept notes for future projects, proposal writing, and abstract submission.
- Attendance and participation in all team meetings include bimonthly Clinical Team meetings, month Program/Clinical Team meetings, bimonthly All Team meetings, and monthly Clean Cut Team meetings. The fellow may be asked to present at any of these meetings throughout their fellowship.

Duration and accountability

The fellowship will last for 12 months from January 2024-December 2024. Direct accountability is to the Global Clean Cut Clinical Lead but will closely work with the Head of Programs for East and Southern Africa, program manager, M&E personnel, as well as UGHE program coordinator.

Stipend

A stipend of \$10,000 will be provided for the duration of the fellowship to be directly transferred every two months to cover costs associated with the role.

Skill development opportunities associated with the role

This fellow will have an opportunity to build skills and experience in quality improvement, training, human-centered design, operations management, and research in safe surgery and anesthesia. During the initial months of the program, this fellow will work directly with prior Lifebox fellows on program implementation and will have the opportunity to be mentored through the details of the program and its implementation, prior to taking the lead on the Antibiotic Timeout at future hospitals. They will also receive mentorship from the Clean Cut Lead, Global Clinical director, senior fellows of Lifebox and other members of the clinical team, technical support from the program team members, and have exposure to program development, delivery, and implementation, aspects of international development work, the impact of device distribution, training and education pedagogy and delivery, and the workings of a global nonprofit. Through Lifebox, they will have access and opportunity to collaborate with a robust international network of top-quality clinicians, research institutes, and other stakeholders engaged in ongoing programmatic work.

The Antibiotic Timeout Fellow will also be involved in the publication and dissemination of research generated from this project and will have the opportunity to initiate their own impactful, publishable academic work that will improve how surgical and anesthetic care is delivered.

APPLICATION PROCESS

To apply please email your CV and a cover letter as a single document explaining your motivation and how you are best suited for this position to opportunities@lifebox.org.

Please note the following:

Correspondence will only be entered with candidates who have been short-listed. If you have not received a reply within two weeks of the closing date, please consider your application as unsuccessful.

Closing date: 1 December 2023

Lifebox is an equal opportunity employer and values diversity