

## Jonathan Kalungi

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Jonathan Kalungi is a dynamic and passionate healthcare professional from Uganda, with a robust background in medical practice and clinical research. With over five years of hands-on experience and a Bachelor of Medicine and Surgery from Makerere University, he brings a wealth of expertise in clinical service delivery and research leadership. Throughout his career, he has made significant contributions to ground-breaking studies such as HPTN 084, HPTN 084-1, and INSIGHT, demonstrating his commitment to advancing evidence-based medicine. At MUJHU CARE LTD/MUJHU Research Collaboration, Jonathan excelled as a Medical Officer-Research, ensuring the highest standards of patient care within research protocols. His role involved supervising clinical teams and meticulously maintaining data accuracy to uphold research integrity. Driven by a passion for scientific inquiry, he is currently pursuing a Masters in Microbiology at Makerere University, with an interest in emerging and re-emerging infectious diseases and antimicrobial stewardship and a mycology bias. This academic pursuit reflects his dedication to staying at the forefront of medical innovation.

As a Continuing Medical Education (CME) Coordinator, Jonathan championed professional development initiatives and independently managed diverse patient populations in both outpatient and inpatient settings. His leadership skills were instrumental in optimizing healthcare delivery and fostering a culture of excellence within his team. Beyond his clinical and research capabilities, he possesses strong leadership, analytical, and communication skills. He is fluent in English and Luganda, with proficiency in Rutooro, Runyoro, and Runyankore. Outside of Jonathan's professional endeavors, he is actively engaged in sports, cinema, and public speaking, which underscores his well-rounded approach to life and work. He is deeply committed to leveraging his skills and experiences to make impactful contributions to the field of medicine. Jonathan is eager to bring his blend of clinical expertise, research acumen, and leadership abilities to a progressive healthcare environment.

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## Project

### **Candida auris colonization and antifungal susceptibility patterns among intensive care patients at Mulago Hospital**

**Background:** *Candida auris* is an emerging multidrug-resistant fungal pathogen posing a significant global health threat, particularly in healthcare settings. The accurate identification of *C. auris* is challenging using conventional laboratory methods, leading to underestimation of its prevalence and impact, especially in African healthcare systems.

**Research Gap:** Limited data exist regarding the prevalence and antifungal susceptibility patterns of *C. auris* colonization among intensive care unit (ICU) patients in Uganda, highlighting the need for comprehensive studies to inform infection control strategies and optimize patient care.

**Objectives:** This prospective cross-sectional study aims to:

1. Determine the prevalence of *C. auris* colonization among neonatal and adult ICU patients at Mulago National Referral Hospital.

2. Describe epidemiological factors associated with *C. auris* colonization in the ICU setting.
3. Assess the antifungal susceptibility patterns of *C. auris* isolates to commonly used antifungal agents.

**Methods:** Over a 6-month period, all consenting neonatal and adult ICU patients admitted to Mulago Hospital will be sampled upon admission and weekly thereafter using swabs from nares, axilla, groin, and perineum. Environmental swabs from high-touch surfaces within the ICUs will also be collected. Swabs will be cultured on CHROMagar™ Candida Plus for identification and confirmed *C. auris* isolates will undergo antifungal susceptibility testing using E test kits and qPCR. Clinical and demographic data will be collected from patient records and analyzed to identify risk factors associated with *C. auris* colonization using logistic regression analysis.

**Expected Outcomes:** This study anticipates providing critical insights into the prevalence of *C. auris* colonization, associated epidemiological factors, and antifungal susceptibility profiles among ICU patients at Mulago Hospital. The findings will inform evidence-based infection control measures and guide the selection of appropriate antifungal therapies in this healthcare setting. Furthermore, this study will serve as a foundation for future research collaborations and public health interventions aimed at combating *C. auris* infections in Uganda and beyond.