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Mpox in Africa: Evolving Epidemiology and Urgent Priorities for Action.

Building sustainable Interventional Radiology training and research infrastructure in East Africa.

Prostate Cancer in Africa: Addressing Diagnostic Gaps and Treatment Challenges on the Continent

Empowering Village Health Workers to provide community-based geriatric support in rural Ugandan villages

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Contents

Vol 48 No.2 April 2025



Editorial

03 Double Burden of disease.
Elsie Kiguli-Malwadde

Opinion

06 Addressing quality gaps in African health systems
Francis Omaswa highlights the challenge of weak quality assurance mechanisms in health systems in Africa with examples from the laboratory

Features

07 Medical Education Conference in Rwanda.

09 CUGH 2025, Atlanta Georgia, USA

10 Mpox in Africa: Evolving Epidemiology and Urgent Priorities for Action.
Nachega outlines the emergency of Mpox, from zoonosis to human transmission. He highlights the gaps in surveillance, diagnosis, and treatment and gives policy and Public Health recommendations

13 Global Day to focus on women facing devastating childbirth injuries. Worldwide Fistula Fund Reflects on 30 Years in the Fight, as we look to International Day to End Obstetric Fistula.

14 The World Medical Association: structure, influence, African and women leadership and Dr. Kitulu's journey to WMA leadership
A narrative on WMA and women leadership highlighting the journey of Dr. Kitulu's rise to presidency

17 Building sustainable Interventional Radiology training and research infrastructure in East Africa.
Nabawanuka et al give us a glimpse into the power of collaboration both global and regional in the development of Interventional Radiology in East Africa.

20 Fake medicines killing over 100,000 Africans annually

22 Prostate Cancer in Africa: Addressing Diagnostic Gaps and Treatment Challenges on the Continent
Experts Call for Urgent, Coordinated Action to Tackle Africa's Rising Prostate Cancer Burden.

26 Empowering Village Health Workers to provide community- based geriatric support in rural Ugandan villages.
Iraguha et al describe a successful grass root intervention project that is changing the lives of elderly persons in Uganda.

30 Mpox Outbreak in Uganda: Insights and Lessons Learnt
The World Health Organization Uganda Country Office team shares their experiences, challenges, and lessons learned from managing the Mpox outbreak in the country.

33 Eulogy of Professor Ignatius Kakande

35 Global One Health and Infectious Diseases: An Interdisciplinary Practitioner's Guide

Medicine Digest

36 Abstracts from Renowned Journals

CPD Challenge

40 Test Yourself

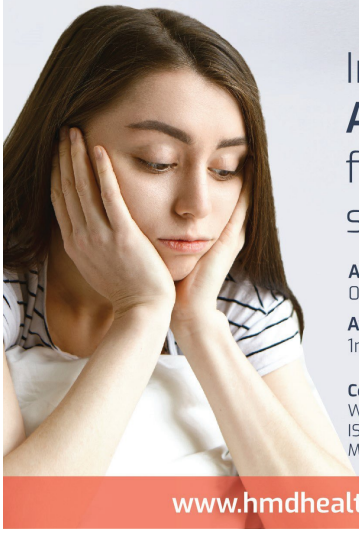
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Double Burden of disease



The April issue addresses several topics that underscore Africa's double burden of disease, comprising both communicable and non-communicable diseases. Two articles focus on the resurgence of Mpox in Africa, and another highlights the growing concern of prostate cancer. These themes informed the title of this month's editorial.

Prof. Francis Omaswa shares an insightful opinion piece based on his extensive experience. He discusses the critical gaps in African health systems, particularly within laboratory services, and advocates for the adoption of a Quality Assurance approach across all health sectors.

This issue also covers two major conferences: the inaugural Advancing Medical Education in Africa Conference (MedEdAfrica 2025), organized by the University of Global Health Equity (UGHE) in collaboration with Rwanda's Ministry of Health, and the 16th Annual Consortium of Universities for Global Health (CUGH) Conference held in Atlanta, Georgia, co-hosted by Emory University, the University of Georgia, and the University of Alabama at Birmingham.

As mentioned, two articles explore Mpox. One by Dr. Nachega outlines the emergence of Mpox, tracing its evolution from zoonotic origins to human transmission. He identifies critical gaps in surveillance, diagnosis, and treatment, offering policy and public health recommendations. The second article, authored by the WHO Uganda Country Office team, shares their experiences, challenges, and lessons learned during Uganda's Mpox outbreak response. These articles highlight the ongoing struggle Africa faces with emerging and re-emerging infectious diseases. Notably, in April, Malawi reported several Mpox cases, contributing to a broader continental surge, with over 52,000 infections and nearly 1,800 deaths across 16 countries this year. The Africa CDC estimates that 6.4 million vaccine doses are needed, yet only 1.3 million have been received so far.

The issue also includes three short reports. The first marks the Global Day for women affected by childbirth injuries, with the Worldwide Fistula Fund reflecting on 30 years of fighting to end obstetric fistula. The second raises alarm over the deadly impact of counterfeit medicines, particularly fake antimalarials on the continent. The third discusses new research linking oral and gut bacteria to brain changes and cognitive decline in Parkinson's disease.

Elsie Kiguli-Malwadde, Editor: Africa Health Journal,
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A feature article by the president of the World Medical Association (WMA) offers a historical overview of the WMA since its founding in 1947. It also highlights women's leadership in global health, spotlighting Dr. Kitulu's inspiring journey to the presidency.

Nabawanuka et al. present a compelling article on building sustainable interventional radiology training and research infrastructure in East Africa. This piece underscores the power of both global and regional collaboration in advancing this emerging field. This approach shows that south to south collaboration can meaningfully contribute to development in the African region. Many times Africa looks to the north for expertise while they could help each other gain expertise without leaving the region. This is a great example to emulate within our region.

In a follow-up to a previous article on prostate health, experts from the Pan-African Urological Surgeons Association's Institute for Urological Training in Africa (PIUTA), based at the Ibadan Centre, call for urgent and coordinated action to address Africa's escalating prostate cancer burden.

Another notable article addresses the growing challenges faced by the elderly in Africa, especially amidst limited resources. Iraguha et al. describe a successful grassroots intervention in Uganda that takes a holistic approach to disability management and socio-economic empowerment among the elderly, a scalable model for broader implementation across Africa.

Prof. Omaswa also pens a heartfelt tribute to his late friend and colleague, Professor Ignatius Kakande—a revered teacher, surgeon, and family man, whose legacy lives on through the many patients he treated and students he mentored.

This issue introduces a new feature: a book review of Global One Health and Infectious Diseases: An Interdisciplinary Practitioner's Guide. Reviewer Will Sander commends the book for integrating the wide-ranging topics essential for global health practitioners working at the intersection of human and animal health, particularly in developing regions.

We also include our usual Medicine Digest, quiz, news updates, and advertisements. The Africa Health Journal (AHJ) is available as an open-access, web-based publication at Africa-health.com. The site is updated daily and actively engages audiences via social media platforms like Twitter and Facebook. Advertisers are encouraged to utilize both the print and digital formats of the AHJ, following the provided guidelines.

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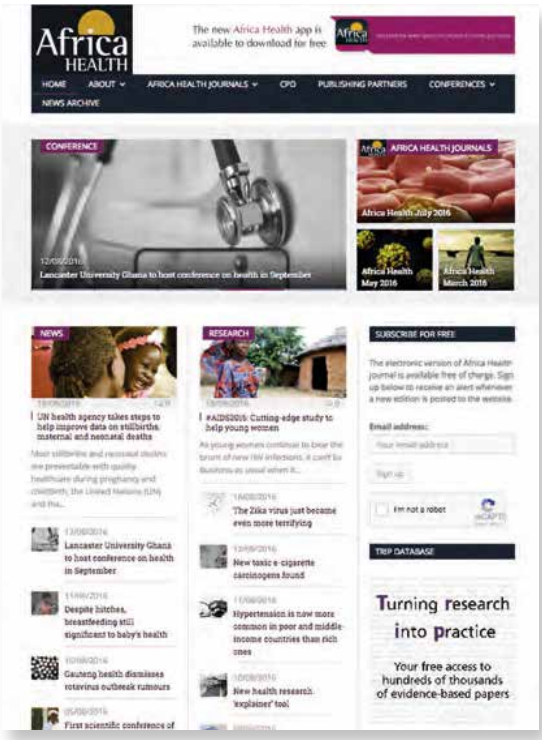
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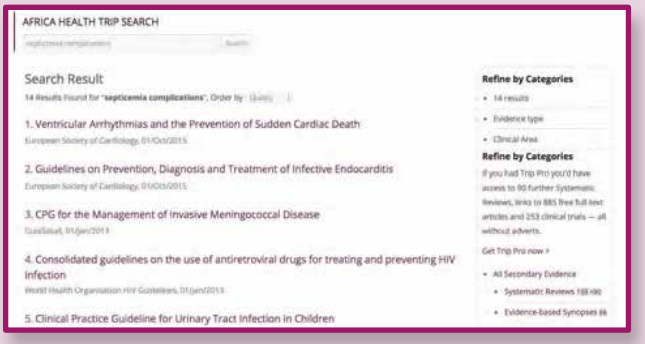
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Addressing quality gaps in African health systems



Francis Omaswa highlights the challenge of weak quality assurance mechanisms in health systems in Africa with examples from the laboratory.

In the social media and during networking with colleagues, there are concerns expressed about the quality of health care in our countries. Examples range from unqualified individuals acting as registered medical practitioners when they have never undergone medical training, there are reports of surgical procedures gone wrong or undertaken when they are not indicated both by practitioners with inadequate training or no formal training at all.

The public is trusting and undergo these experiences sometimes not even aware that something wrong has happened to them or their loved ones in their health system.

The challenge we face is weak quality assurance mechanisms in our health systems. There are many people whose medical problems are caused or made worse by poor quality health care. How can we strengthen and institutionalize quality in our health systems? Some years ago, I was the Head of the Quality Assurance program in the Ministry of Health in Uganda and I undertook training on the subject of quality assurance of health care including launching a movement on this subject located at the East, Central and Southern African Health Community. We encouraged all countries to adopt the Quality Assurance Approach in their health systems and we set up the Regional Center for Quality of Health Care at Makerere University and authored a Q A Handbook.

Quality has many definitions and relevant ones include "Performing according to set standards," "Meetings the needs of clients", "Best performance with available resources" and "Doing the right thing the right way at the right time" etc. A continuous quality improvement approach requires leadership from the top including the Health Ministers and senior leadership teams all of whom should undergo appropriate orientation. It calls for pursuit of excellence and total rejection of errors. It is also dependent on country context including politics, culture and resources. It calls for the establishment of strong regulatory bodies, strict and independent accreditation programs for health services delivery institutions and for individuals. Regular supportive supervision at all levels of the health system that wins the rust and respect of those who are supervised and encourages routine self-assessment.

Equally important is educated demand for quality from the population served who will be the first to point out weaknesses and lapses in quality of health care and can provide joint solutions.

A colleague recently expressed this concern regarding the quality of laboratory services as follows:

"Unchecked Labs, Uncertain Results: The Need for Diagnostic Standards in Healthcare

Across the country, medical laboratories and diagnostic centers are multiplying rapidly—but without adequate regulation. While access has improved, many of these labs operate without meeting established standards, leading to unreliable and sometimes dangerously misleading results.

A troubling example involves a couple who turned to DNA testing to resolve a sensitive family issue. The emotional burden was heavy, yet results from two different labs were contradictory—raising serious concerns about accuracy, ethics, and potential manipulation.

Even routine tests show unacceptable variation. One patient recently received a hemoglobin result of 5 g/dL from one lab and 10 g/dL from another. These discrepancies are not trivial—they can determine whether a patient receives urgent care or is falsely reassured.

Worryingly, some clinicians have begun relying more on lab results than on clinical judgment, forgetting that diagnostics are meant to aid—not replace—sound medical reasoning.

To rebuild trust in diagnostics, we urgently need to enforce national standards and strengthen reference laboratories to ensure consistency, accountability, and quality. It's ironic that market scales used to be strictly regulated, yet we allow life-saving medical tests to go unchecked. This must change.

African health and development indices are lagging far behind those of other regions. We need to mobilize leadership at all levels. We have what it takes to close quality gaps in our health systems if we care and feel the pain and shame.

Francis Omaswa, Founding Executive Director for the African Centre for Global Health and Social Transformation (Kampala) and the Global Health Workforce Alliance WHO; and Publisher of Africa Health

Medical Education Conference in Rwanda



Deans-who attended the MedEdAfrica conference

From March 24 to 25, 2025, the Kigali Convention Centre in Rwanda hosted the inaugural **Advancing Medical Education in Africa Conference (MedEdAfrica 2025)**. Organized by the University of Global Health Equity (UGHE) in collaboration with the Rwanda Ministry of Health, the conference brought together medical educators, healthcare professionals, policymakers, students, and innovators from across the continent and beyond. The central theme, "Innovation in Medical Education Practices," underscored the urgent need to transform Africa's medical education systems to better address the continent's health challenges in Medical Education.

The subthemes were: New Technologies, Artificial Intelligence (AI) and Simulation, Leadership in Medical Education, Integrating Modern Global Health Challenges in Medical Curricula and Embracing Social Medicine in Medical Education

The conference brought together over 600 delegates, including deans and faculty from 115 medical schools across 32 countries, 36 student leaders, senior policymakers, international partners, and experts in global health and education. Together, they shaped a shared vision to strengthen medical education systems across the continent through innovation, collaboration, and leadership grounded in Africa's realities and potential. The rich program included several formats in form of plenaries, breakout sessions and poster presentations.

The conference addressed a number of issues:

Addressing Africa's Health Workforce Crisis

Africa bears 24% of the global disease burden yet possesses only 4% of the world's medical workforce. This stark disparity was a focal point of the conference, emphasizing the necessity to expand and enhance medical training across the continent. The conference aimed to catalyze efforts to build a robust healthcare system capable of meeting the diverse needs of African populations.

Embracing Technological Innovations

One of the key themes explored was the integration of new technologies and simulation in medical education. Discussions centered on the adoption of artificial intelligence, e-learning platforms, big data analytics, and virtual/augmented reality to revolutionize medical training. These technologies are seen as pivotal in decentralizing education and making high-quality training accessible across various regions in Africa.

Integrating Social Medicine and Global Health Challenges

Sessions delved into the integration of social and community medicine into medical curricula, highlighting the importance of community-based models and liberal arts in developing well-rounded healthcare professionals. Additionally, the conference addressed the incorporation

of global health issues such as One Health, climate change, and pandemics into medical training, preparing students to tackle emerging health threats.

Promoting Research and Faculty Development

The conference underscored the need to promote research and evidence-based practices in medical education. Strategies to empower faculty development were discussed, aiming to enhance medical education strategies that curb the migration of healthcare practitioners and skilled educators to regions outside Africa.

Strengthening Leadership and Collaboration

The conference emphasized the importance of unified leadership among African medical schools. A significant milestone was the formation of the Consortium of Medical Schools in Africa (CoMSA). This consortium aims to foster ongoing collaboration, shared learning, and the advancement of educational innovations.

Consortium of Medical Schools in Africa (CoMSA)

This conference marked the official launch of the Consortium of Medical Schools in Africa (CoMSA), a continent-wide platform aimed at transforming medical education across Africa. After the launch of CoMSA, the founding members elected the consortium's first leadership team to guide its development as follow:

- Prof. Lionel Green-Thompson – President, University of Cape Town, South Africa
- Dr. Yvonne Akotoa Dei-Adomakoh – Vice President & Chair, Audit and Compliance Committee, University of Ghana, Ghana
- Prof. Abebe Bekele – Secretary General & Chair, Advocacy and Partnerships, University of Global Health Equity, Rwanda
- Dr. Salma Abdi Mahmoud – Deputy Secretary General, University of Zanzibar, Tanzania
- Dr. Angela Frank-Briggs – Treasurer & Chair, Finance Committee, College of Health Sciences, University of Port Harcourt, Nigeria
- Prof. Lukoye Atwoli – Chair, Leadership & Professional Development Committee, Aga Khan University, Kenya
- Prof. Titus Ibekwe – Chair, Research and Innovations Committee, University of Abuja, Nigeria
- Prof. Choukem Simon Pierre – Chair, Education and Curriculum Committee, University of Dschang, Cameroon

Conclusion

MedEdAfrica 2025 marked a significant step towards transforming medical education in Africa. By embracing innovation, fostering collaboration, and addressing systemic challenges, the conference laid the groundwork for a more equitable and effective healthcare education system across the continent. The establishment of the deans' consortium and the emphasis on integrating technology and social medicine into curricula signal a promising future for medical education in Africa. The plan is to have this conference annualy.



CUGH 2025, Atlanta Georgia, USA.

The 16th Annual Consortium of Universities for Global Health (CUGH) Conference convened in Atlanta, Georgia, from February 20–23, 2025, drawing over 1,800 participants from more than 60 countries. Hosted at the Hilton Atlanta and co-organized by Emory University, the University of Georgia, and the University of Alabama at Birmingham, the event centered on the theme "Innovating and Implementing in Global Health for a Sustainable Future.

A Global Gathering for a Sustainable Future

CUGH 2025 served as a nexus for global health professionals, researchers, students, and policymakers to address pressing health challenges. The conference featured over 230 speakers and more than 40 panel sessions, covering topics such as non-communicable diseases, health systems, public health, primary and surgical care, and maternal, sexual, and reproductive health.

Pre-conference workshops on February 20 were free and open to all, offering 15 sessions that provided attendees with opportunities to build skills and knowledge in various global health domains. The domains included implementation science, pedagogy and curricular, sustainability and equity in Global Health, Mental Health and Humanitarian Emergencies, Health Workforce data and how to get a job in Global Health and many others.

At this conference it was noted that, the new US administration's executive orders are devastating the lives of people around the world. They have shuttered overseas development programs, and have stopped lifesaving aid from getting to some of the most vulnerable people in the world. They have shattered United States Agency for International Development (USAID), and profoundly weakened National Institute of Health (NIH), Centers for Disease Control and Prevention (CDC), Environmental Protection Agency (EPA), National Oceanic and Atmospheric Administration (NOAA), the Department of Education and other U.S. government agencies that are vital to the health and security of Americans and the world. As well as devastated the lives of civil servants who have dedicated their lives to creating a healthier, more secure future for all. Furthermore, the politicization of the public service, removal of independent oversight mechanisms and the undermining of Congress, along with the trashing of global alliances, will make the US weaker, poorer and sicker. The CUGH leadership assured its members that they were dedicated to reversing these damaging orders and proposing ways in which US global health investments and policies can improve lives around the world and in the US.

Highlights and Keynote Speakers

The conference featured prominent keynote speakers, including Paige Alexander, CEO of The Carter Center; Rhonda Sealey-Thomas, Assistant Director of the Pan American Health Organization (PAHO); Monika Kosinska, Global Head of Economic and Commercial Determinants at the World Health Organization (WHO); and Jorge Saavedra, Executive Director of the AHF Global Public Health Institute in Mexico .

Notably, Ugandan leaders such as Christian Acemah, Executive Secretary of the Uganda National Academy of Sciences, and Nelson Sewankambo of Makerere University and President The African Forum for Research and Education in Health (AFREhealth) as well as Elsie Kiguli-Malwadde, immediate past president of AFREhealth , contributed to discussions on strengthening global health partnerships.

Engaging Sessions and Workshops

The conference agenda included over 500 abstract presentations, with sessions focusing on bridging research to policy, innovation, and implementation science. The Pulitzer Center Film Festival on February 22 showcased short films that visualized global health challenges, providing a platform for storytelling and raising awareness on critical issues .(cugh.org)

Awards and Recognitions

CUGH 2025 recognized outstanding contributions to global health through various awards. The CUGH Distinguished Leadership Award honored individuals demonstrating long-term commitment and exceptional contributions to global health. The Dr. Thomas Hall-Dr. Nelson Sewankambo Mid-Career Leadership Award acknowledged professionals aged 30 to 50 who have significantly impacted global health education, research, advocacy, or service

Looking Ahead

CUGH 2025 emphasized the importance of interdisciplinary collaboration and innovation in addressing global health challenges. The conference fostered connections among attendees, encouraging the development of partnerships and the exchange of ideas to improve health outcomes worldwide.

For more information on the conference and to access session recordings and materials, visit the official CUGH 2025 website at www.cugh2025.org.

Mpox in Africa: Evolving Epidemiology and Urgent Priorities for Action.

Nachega outlines the emergency of Mpox, from zoonosis to human transmission. He highlights the gaps in surveillance, diagnosis, and treatment and gives policy and Public Health recommendations.

Introduction

Since the eradication of smallpox in 1980, mpox (formerly monkeypox) has emerged as the most serious orthopoxvirus threat to human health. Caused by the monkeypox virus (MPXV), the disease is characterized by fever, lymphadenopathy, a vesiculopapular rash, and a high risk of bacterial superinfection. Two genetically distinct viral clades—Clade I, which predominates in Central Africa, and Clade II, seen mostly in West Africa—differ in clinical severity. Clade I carries a case fatality ratio (CFR) of up to 10%, while Clade II is associated with CFRs of less than 3% [1].

For over four decades, mpox outbreaks in Africa were mostly zoonotic, with limited human-to-human transmission. However, this changed dramatically in 2022 when Clade IIb (lineage B.1) caused a global outbreak involving more than 95,000 confirmed cases across 117 countries [1,2,3]. This event exposed the epidemic potential of MPXV and highlighted critical gaps in global preparedness and response.

While the Clade IIb epidemic has subsided in most non-endemic settings, Clade I outbreaks have intensified in Africa, especially in the Democratic Republic of Congo (DRC), which reported a record 14,753 suspected cases in 2023 [1]. This surge is a warning sign that mpox remains a growing public health threat on the continent and demands urgent attention from health authorities, policy makers, and researchers alike.

From Zoonosis to Human Transmission: A Shifting Paradigm

Historically, Clade I MPXV transmission was primarily zoonotic, occurring through contact with wild animals such as rodents and non-human primates. Human cases were usually limited to forested areas, with only sporadic secondary transmission [1]. That began to change with the 2017 Clade II outbreak in Nigeria, which was the first to show sustained human-to-human transmission, including through suspected sexual contact [2].

Jean B. Nachega, MD, PhD, MPH, FAAS[1,2,3],Departments of Epidemiology, Infectious Diseases and Microbiology, University of Pittsburgh School of Public Health, Pittsburgh, PA, USA[1]; Departments of Epidemiology and International Health, Johns Hopkins School of Public Health Baltimore, MD, USA[2]; and [3]Department of Medicine, Stellenbosch University Faculty of Medicine and Health Sciences, Cape Town, South Africa

Genomic analyses of the 2022 global outbreak virus (Clade IIb B.1) revealed a striking pattern of APOBEC3-driven mutations, indicating sustained human adaptation and non-canonical evolution over time[4,5]. These findings suggest that Clade IIb may have been circulating silently among humans since at least 2015. The epidemic demonstrated how human-to-human transmission, particularly in networks of men who have sex with men (MSM), can fuel widespread outbreaks across continents.

As global attention centered on Clade IIb, Clade I infections surged in remote and conflict-affected areas of Central Africa. The DRC has consistently reported the highest number of mpox cases globally, but the recent upsurge signals a shift from zoonotic spillover to increasingly efficient person-to-person spread, particularly in household and community settings [1].

Emergence of Clade Ib in Eastern DRC and Beyond

In October 2023, an outbreak of mpox was reported for the first time in Kamituga Health Zone, a densely populated mining town in South Kivu Province. Epidemiological investigations led by Katoto et al. [6] revealed a pattern of transmission centered around high-risk populations such as sex workers and miners, with strong evidence of human-to-human spread, including sexual transmission.

Sequencing efforts by Masirika and colleagues [7] identified a novel Clade I sub-lineage among infected individuals, genetically distinct from previously circulating Clade I strains. Further analysis by Vakaniaki et al.[8] confirmed that this lineage—provisionally named Clade Ib—showed APOBEC3-linked mutations, consistent with efficient human adaptation. These findings mirror the evolutionary criteria used to define Clades IIa and IIb [4]. The emergence of Clade Ib marks a critical development, potentially representing a transitional form of MPXV that combines the high virulence of Clade I with increased transmissibility among humans. Its spread beyond the Eastern DRC—the epicenter of the epidemic—to neighboring countries and beyond, along with the re-emergence of Clade IIb outbreaks in Nigeria and South Africa, led to the WHO's 2024 declaration of a Public Health Emergency of International Concern. This underscores the urgent need to strengthen prevention, treatment, and research efforts (Figure 1).

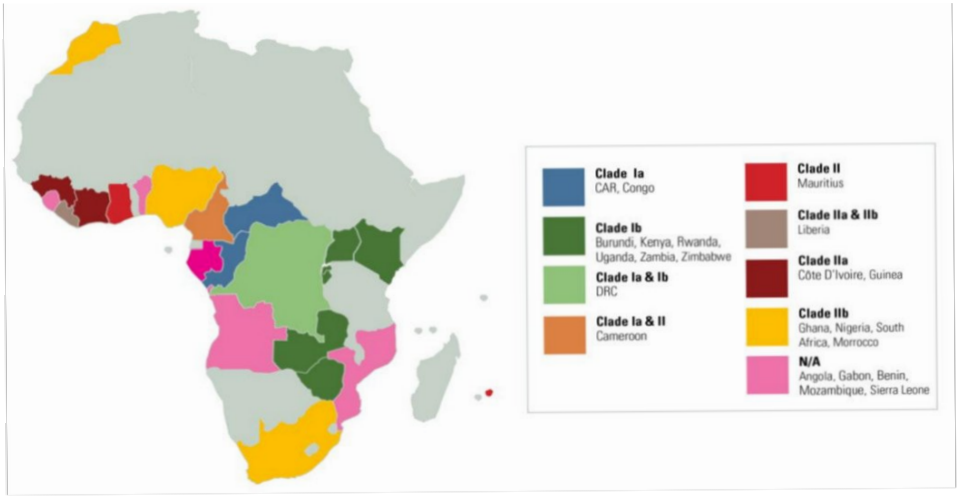


Figure 1: Geographic expansions of mpox in African countries as of February 2025. Source: Africa CDC

A Disproportionate Burden on Children—and Emerging Threats in Adults

Despite increasing recognition of sexual and close-contact transmission among adults, particularly MSM and sex workers, children continue to bear the brunt of mpox cases and deaths in Africa [1]. This is likely due to a combination of biological, social, and healthcare access vulnerabilities. Pediatric cases often present with more severe disease and are less likely to receive timely care.

Whittles et al. [9] recently modeled age-specific CFRs and found that the risk of death from Clade I mpox sharply declines with age. This pattern may reflect partial immunity in older individuals due to past smallpox vaccination campaigns. However, children born after 1980 have no such protection, and vaccination coverage remains virtually nonexistent in endemic areas.

Co-infections—especially with HIV—are another emerging concern. During the 2022 Clade IIb outbreak, individuals with advanced HIV disease were at significantly increased risk for severe mpox and death [1]. With high HIV prevalence in parts of Central and Eastern Africa, there is a critical need to understand the interaction between immunosuppression and Clade Ib infections.

Gaps in Surveillance, Diagnosis, and Treatment

Africa's response to mpox is hampered by major deficiencies in diagnostics, surveillance, and clinical care. Access to confirmatory testing is extremely limited, often requiring transport of samples to central laboratories with turnaround times of several days to weeks[1]. While the GeneXpert platform has been adapted for MPXV detection, its deployment remains sparse and inconsistent.

Surveillance efforts rely heavily on syndromic case definitions that are difficult to distinguish from other common febrile rash illnesses, including chickenpox and bacterial skin infections. Under-reporting and misclassification are likely, especially in rural and insecure regions. The lack of systematic community-level surveillance further obscures the true scale of transmission [1].

There are also limited treatment options. Although tecovirimat (TPOXX) is approved for compassionate use in severe mpox cases in some countries, recent trial data have questioned its effectiveness, particularly against Clade I MPXV. Results from the STOMP trial in the United States and the PALM007 trial in the Democratic Republic of the Congo found that tecovirimat did not significantly reduce the time to lesion resolution in patients infected with Clade Ia MPXV. However, no major safety concerns were reported [10]. These findings underscore the urgent need to develop alternative therapeutics and to evaluate treatments specifically targeting Clade I and emerging lineages such as Clade Ib.

Vaccines, including MVA-BN (JYNNEOS), have been used for post-exposure prophylaxis in high-income countries but remain largely inaccessible in endemic regions. With limited vaccines and effective antivirals, African countries are left to manage outbreaks with limited tools

Research and Response: Building Momentum through MpoxReC

To address these gaps, the Mpox Research Consortium (MpoxReC) was established in 2023, bringing together African and global partners to strengthen evidence-based responses to mpox. The consortium includes researchers, clinicians, virologists, and public health leaders with deep expertise in outbreak response and genomic surveillance [1].

One of MpoxReC's flagship projects is a prospective cohort study in South Kivu Province, Eastern DRC. This study will follow patients infected with Clade Ib over a two-year period to assess transmission dynamics, disease progression, and outcomes, including among children, MSM, and persons living with HIV. The study also incorporates genomic sequencing to monitor viral evolution and identify emerging variants.

MpoxReC is working closely with Africa CDC and national health authorities to expand laboratory



Mpox patient - istock, courtesy of Mustafa Kaya

capacity, deploy point-of-care diagnostics, and train local surveillance teams. These investments are critical not only for mpox, but also for broader pandemic preparedness efforts in the region.

Policy and Public Health Recommendations

Given the rapidly changing mpox landscape in Africa, the following strategic priorities are recommended for national governments and regional stakeholders:

1. Strengthen Surveillance Systems

Mpox should be designated a notifiable disease in all African Union member states. Integrated Disease Surveillance and Response (IDSR) platforms must be expanded to include real-time reporting and laboratory confirmation of mpox cases.

2. Expand Diagnostic Access

Decentralize MPXV testing through the roll-out of rapid molecular platforms such as GeneXpert. Build capacity in regional labs and ensure cold-chain logistics for sample transport.

3. Targeted Vaccination Strategies

Prioritize vaccine access for high-risk groups, including health workers, contacts of confirmed cases, and vulnerable populations in outbreak zones. Leverage global procurement mechanisms to secure MVA-BN supply.

4. Integrate Mpox and HIV Services

Screen for mpox in HIV clinics and vice versa. Offer mpox education and contact tracing in sexual health services and expand syndromic management protocols to include mpox indicators.

5. Invest in African-led Research

Fund longitudinal studies, social science research, and clinical trials in endemic regions. Support consortia like MpoxReC to foster local innovation and sustainable response capacity.

Conclusion

Mpox in Africa is no longer a sporadic zoonosis. The rise of Clade Ib in Eastern DRC signals a new phase of the epidemic—one that combines high virulence with growing potential for sustained human transmission. Without urgent action, this could evolve into a broader regional health crisis.

Strengthening surveillance, diagnostics, and vaccine access—while investing in African research networks—is essential to reverse current trends. With coordinated leadership and global solidarity, we can contain the threat of mpox and build more resilient health systems for the future.

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Global Day to focus on women facing devastating childbirth injuries. Worldwide Fistula Fund Reflects on 30 Years in the Fight, as we look to International Day to End Obstetric Fistula.

What is Maternal Mortality Ratio (MMR)?

Estimates

With organizations facing cuts to funding in recent months across the globe, Worldwide Fistula Fund (WFF) is steadfast in its mission to support women facing or recovering from childbirth injuries by helping recognize this important day.

In 2012, the United Nations established May 23rd as an International Day of Observance to raise awareness about obstetric fistula, a severe childbirth injury affecting women in many low-resource settings worldwide. The Worldwide Fistula Fund (WFF) supports this initiative, recognizing the need to work together as global partners to end obstetric fistula.

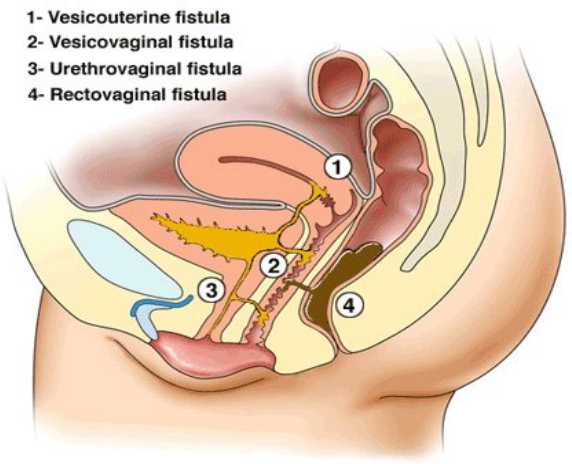
In our 30th year, we reflect on our progress and the work that remains, with 50,000-100,000 childbirth injuries occurring annually in under-resourced regions. Fistulas are mostly preventable and 100% treatable. Mary Rose Keller, WFF's Board Chair, wants people to know that "*for WFF's partners, it costs less than $1,000 to completely repair the trajectory of these women's lives, and we feel that we have the expertise to support improvements for not just these women, but for maternal healthcare in the communities we serve.*"

The Worldwide Fistula Fund board is comprised of a diverse group of accomplished individuals with knowledge and experience in the care needed by women who sustain obstructed labor injuries. We support partners on the ground that care for the whole women in a holistic approach, not just the physical needs of fistula repair, but the associated psychosocial, economic and reproductive health care needs. This is accomplished through active clinical, research and educational initiatives currently in 5 countries.

WFF identifies and develops the capacity of country leaders, with current programs in Burkina Faso, Uganda, Kenya, Niger, and Ethiopia. From partnering with Mekelle University's Urology program in Ethiopia to running a women's community hospital in Uganda, our grantees provide life-changing services and education.

Since 2013, our achievements include:

- Reaching over 2 million people through prevention and treatment outreach
- Performing more than 5,285 surgeries to repair obstetric fistulas and other childbirth injuries, all free of charge to patients
- Providing reintegration support to over 6,900 women, including vocational training, solidarity groups, and individualized psycho-social support



Obstetric-Fistula courtesy of Healing Hands clinic

- Training more than 3,300 leaders and medical professionals in childbirth injury prevention and treatment

These numbers highlight the impact of our holistic model, which not only addresses the physical aspects of these injuries but also helps women reintegrate into their communities and reclaim their futures. The average cost for surgery, plus 2 weeks of hospital stay for recovery, in 2024 was $905. With help from our partners these survivors can return to their families, hold a job or start their own business, and provide for their families.

Please help spread the word and support this important initiative. Every mother deserves the right to safe delivery of their baby and quality after-birth care.

About Worldwide Fistula Fund:

Established in 1995, the Worldwide Fistula Fund's mission is to protect and restore the health and dignity of the world's most vulnerable women by preventing and treating devastating childbirth injuries. For more information about WFF, visit www.worldwidefistulafund.org.

About International Day to End Obstetric Fistula:

You can read more about the observance of International Day to End Obstetric Fistula (IDEOF) on the United Nations site by clicking here.

The World Medical Association: structure, influence, African and women leadership and Dr. Kitulu's journey to WMA leadership

A narrative on WMA and women leadership highlighting the journey of Dr. Kitulu's rise to presidency.



Figure 1: World Medical Association Executive Committee 2025 during the WMA council meeting in Montevideo, Uruguay

Introduction

Medical societies have been present since the 17th Century. Dr. John Coakley Lettson founded the Medical Society of London providing an opportunity for practitioners to meet and compare their observations and their thoughts mutually, taking notes of new discoveries(1) Professional associations provide an opportunity for members to remain connected in a meaningful way by facilitating structured opportunities for networking and continued medical education opportunities[(2)]. They have shaped medical ethics, supported advocacy for improved healthcare and stimulated the advancement of research.

The World Medical Association

The World Medical Association (WMA), widely known for its central and foundational role in developing the International Code of Medical Ethics through the Declaration of Helsinki, is a global organization that brings together physicians from across the world to advance medical practice. As part of the Declaration of Helsinki, WMA developed and adopted the physician pledge, which serves as the modern version of Hippocratic Oath. The physician pledge provides moral and ethical guidance to all physicians globally. The association WMA statements and declarations influence national laws, bioethics policies, and professional codes of conduct in many countries.

The WMA was founded in 1947 in response to the need for an independent, global organization that could represent physicians and promote ethical standards in medicine, particularly after the medical atrocities committed during World War II. It currently represents over 9 million physicians worldwide through 115 medical associations. Additionally, WMA accepts associate membership from individual physicians. The mission of WMA is "To serve humanity by endeavoring to achieve the highest international standards in medical education, medical science, medical art and medical ethics, and health care for all people in the world." (WMA, 2025).

Structure

The World Medical Association (WMA) leadership structure comprises a Council elected by constituent members, a chairperson (political head), and a President (ceremonial head) elected by the General Assembly, with representatives from seven regions. The council and chairperson of the council are elected every two years, whereas the president is elected annually. Additionally, the association has a Secretary General and a treasurer. The Secretary-General, appointed by the Council, is the Chief Executive responsible for the day-to-day operations of the WMA Secretariat, which is based in Ferney-Voltaire, France.

The main decision-making body of WMA is the General Assembly, which meets annually with delegation from constituent members (National medical Associations) and representatives of associate members.

Dr. Jacqueline Kitulu is the World Medical Association President, jkitulu@gmail.com. Dr. Elizabeth Gitau Director of Programs, HECTA consulting ltd, a healthcare consulting firm in Nairobi, Kenya, Dr. Marie-Claire Wangari global health advocate and medical doctor



Figure 2: WMA JDN leadership with WMA executive committee team during a past meeting

The WMA Council is supported by three primary standing committees that provide reports during every council meeting.

1. **Medical Ethics Committee**: Responsible for developing and revising ethical guidelines and policies that govern medical practice globally.
2. **Finance and Planning Committee:** Oversees the financial health and strategic planning of the WMA, ensuring resources are allocated effectively to support its mission.
3. **Socio-Medical Affairs Committee**: Addresses social determinants of health, public health issues, and the broader societal context in which medicine operates.

Each committee is composed of Council members and may include additional members elected from the WMA's regional groups. These committees meet regularly to discuss pertinent issues and make recommendations to the council.

In addition to council members, each standing committee may appoint official advisors. These advisors are experts in their respective fields and provide specialized knowledge to the committees.

World Medical Association Junior Doctors Network (WMA JDN)

The **WMA JDN** is a vibrant platform that brings together early-career doctors from around the world to engage in global health discourse, professional development, and advocacy. As an official entity of the World Medical Association (WMA), the JDN provides junior doctors with a structured avenue to contribute to the mission of promoting the highest standards in medical ethics, education, and patient care. Through a diverse and inclusive membership spanning continents, the network cultivates emerging physician leaders by offering opportunities to participate in high-level policy discussions, lead international initiatives, and represent the voice of young doctors within the broader WMA ecosystem.

The WMA JDN operates through working groups focused on key themes such as medical education, medical ethics, pandemic preparedness, planetary health, antimicrobial resistance, global surgery, and primary healthcare. These working groups serve as incubators for collaboration, research, and policy input, reinforcing the WMA's commitment to multigenerational engagement in global health governance. By bridging the gap between young professionals and senior stakeholders, the JDN not only ensures continuity in leadership but also strengthens the WMA's responsiveness to evolving health challenges. Its activities underscore the value of empowering junior doctors as catalysts for change within national and global medical associations.

WMA roles in Shaping Health Policy and Advocacy

The WMA promotes health-related human rights for all people and supports physicians as human rights advocates. The WMA plays a key role in shaping global health policies and strategies, collaborating with other organizations such as the World Health Organization (WHO) to address issues like health equity, access to healthcare, and public health emergencies.

The organization works with various human rights bodies to advocate for the highest standards of health for all people. Through the Istanbul Protocol, the WMA condemns any involvement of physicians in torture which is against the International Code of Ethics. The Istanbul Protocol has been adopted by the United Nations. Other key organizations, the WMA collaborate with include but not limited to : (i) the International Labour Organization (ILO) to promote physician working conditions and health workforce rights. (ii) World Federation for Medical education (WFME) to promote high standards in medical education and accreditation and (iii) Doctors without borders (MSF) to coordinate medical ethics in humanitarian work. (WMA, 2025)

To protect prisoners, the WMA developed minimum rules for the treatment of prisoners, which were later renamed "Nelson Mandela Rules," providing guidance on humane treatment of prisoners and advising physicians to refrain from participating in torture or ill treatment of prisoners.

The WMA advocates for women's right to the highest standards of health and condemns violence against women and has issued statements on female genital mutilation and WMA resolution on violence

against women and girls, encouraging national medical associations to advocate for an end to violence against women in their countries.

The WMA advocates for more medical research focused on women's health issues. Historically, medical research has often neglected gender-specific health concerns, and the WMA works to ensure that conditions like breast cancer, cervical cancer, osteoporosis, and autoimmune diseases, which disproportionately affect women, receive adequate attention. This includes encouraging the inclusion of women in clinical trials and addressing the unique health needs of women at various life stages.

Supporting African leadership at WMA

The WMA initiated the African Forum Project to bolster the capacity of African National Medical Associations (NMAs). This five-year project, which ran from 2015 to 2020, focused on areas such as organizational strengthening, medical education, universal health coverage, and addressing brain drain. Through regional workshops and collaborative partnerships, the project aimed to empower NMAs to influence national health systems effectiveness. This support has improved the participation of African leaders in WMA and increased their impact in their advocacy at country level.

Despite these advancements, African physicians have historically held fewer senior leadership positions within the WMA. Since its inception in 1947, fewer than 10 African physicians have served in senior roles.

To support regional collaborations, the African leaders formed the Coalition of National Medical Associations to provide a unified approach to addressing Africa's healthcare challenges. Through strategic partnerships, capacity-building initiatives, and collective advocacy, the coalition aims to strengthen the role of African NMAs in shaping the continent's health policies and practices.

Women leadership

While the WMA has historically had fewer women in top leadership roles compared to men, there have been significant efforts in recent decades to encourage female participation and leadership within the organization. Many female physicians and medical professionals have worked on committees, advocated for women's health, and contributed to the WMA's ethical guidelines and global health policies, particularly regarding reproductive health, maternal health, and the inclusion of women's health issues in medical research.

WMA elected its first female president Dr Kati Myllymaki a GP from Finland in 2002 - 2003 and their first African female President in 2013, with the election of Prof. Margaret Mungherera, a physician from Uganda, after which in 2020 Dr Heidi Stensmyren was elected and in 2022. Dr Lujain Alqodmani became President. Dr. Jacqueline Kitulu was elected in 2024 and will be serving her term starting October 2025. Dr. Ardis Dee Hoven, former president of the American Medical Association, became the first female chair of the WMA during its 200th council meeting.

Dr. Jacqueline Kitulu' s Journey to WMA

Dr. Kitulu made history as the first Kenyan and second African woman to be elected President of the WMA. Her tenure will focus on fostering inter-regional collaboration within WMA, advocating for strengthening primary healthcare systems, and mentorship for junior physicians.

Dr. Kitulu embarked on her medical career after earning her Bachelor of Medicine and Bachelor of Surgery (MBchB) degree from the University of Nairobi in 1998.

Dr. Kitulu has held several leadership positions in Kenya's healthcare sector: including at Kenya Medical Association (KMA) where she served as the first female President from 2016 to 2020, previously holding roles as Assistant National Secretary (2012–2014) and National Vice Chair (2014–2015); Kenya Medical Women's Association (KMWA) as National Chairperson from 2008 to 2012; Kenya Red Cross Society where she served as Deputy Governor (2019–2022) and Finance Committee member (2010–2019); Board member at National Hospital Insurance Fund (NHIF) and Kenya Medical Practitioners and Dentists Council (KMPDC) .

Dr. Kitulu draws her inspiration to participate in WMA leadership from the late Dr. Margaret Mungherera from Uganda, who served as the first African female President of World Medical Association. Dr. Mungherera made it clear that creating change often means taking a seat at tables far away from one's professional associations and



Figure 3 : Dr. Jacqueline Kitulu during her election as WMA president in Helsinki in October 2024

countries, highlighting that the world is a global village. Dr. Kitulu quotes Sir Isaac Newton "If I have seen further, its by standing on the shoulders of giants".

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Building sustainable Interventional Radiology training and research infrastructure in East Africa.

Nabawanuka et al give us a glimpse into the power of collaboration both global and regional in the development of Interventional Radiology in East Africa.



Dr. Nabawanuka doing a bilateral percutaneous nephrostomy

Background

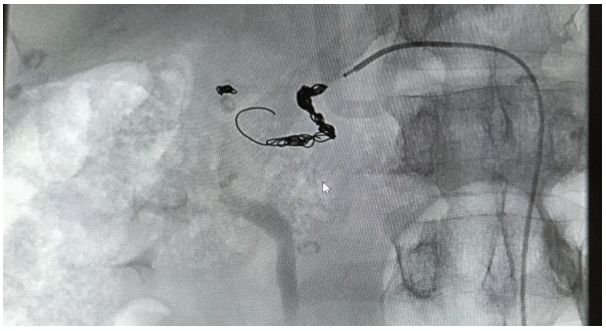
Interventional radiology (IR) is a subspecialty of radiology that uses minimally invasive, image-guided procedures to diagnose and treat various medical conditions. IR has transformed modern medicine by reducing the need for major surgery and improving outcomes for a broad range of conditions, including vascular disease, infection, cancer, and trauma [(1)]. While there have been several published studies worldwide demonstrating the benefit of IR in the implementation of care, there continues to be a lack of awareness of IR has a specialty and its role in patient care regardless of setting location or resources [(2)].

And yet, it is hard to imagine any hospital system in the US, East Asia, or Europe functioning without basic IR procedural services. The advantages provided by IR include lower complication rates, decreased need for general anesthesia, shorter hospitalization, decreased post-procedural pain, and in many cases, ability to treat on an outpatient basis [(2)]. Many procedures, which were previously managed by open surgery, are now almost exclusively treated via minimally invasive, image-guided techniques by IR [(2)].

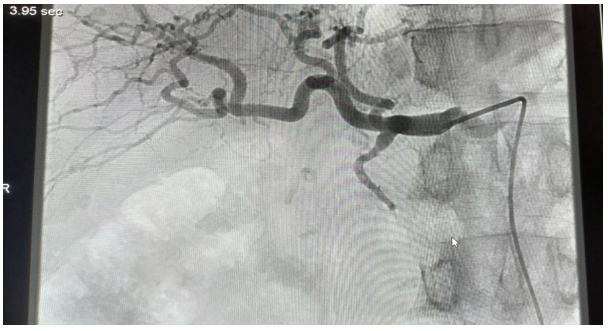
Unfortunately, over half of the global population does not have access to even the most basic Interventional Radiology procedures which are required for improving outcomes for a broad range of indications[(3)]. This disparity is most exaggerated in Sub-Saharan Africa (SSA), where recent publications suggest there is lack of trained Interventional Radiologists in most countries and the majority of the population of 1.2 billion lack access to care [(4)]. To address this need, SSA's first documented training program was established by the Road2IR Foundation, in 2018 at Muhimbili National Hospital in Tanzania. The training model is based on high-frequency teaching trips of international IR faculty, nurses, and technologists, providing hands-on procedural training in-country to Tanzanian IR trainees and staff [(5)]. This program has resulted in 10 fellows graduating with a certificate of Interventional Radiology between September 2021 and August of 2022 with additional fellows, though unpublished as of yet having graduated in the class of 2023 and 2024. Additionally, Tanzania's largest public tertiary referral and academic teaching center, now offers the full range of minimally invasive IR procedures to Tanzanian patients with a total of 1595 procedures reported as performed as of July of 2024 [(4)].

Based on Tanzania's model, a partner training program has been created at Makerere University College of

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Coeliac Artery angiogram showing the Gastroduodenal Artery prior to embolisation



Fluoroscopic image showing coils in the embolised Gastroduodenal Artery

Health Sciences (MakCHS) in Uganda, with visiting IR faculty, nurses and technologists from North America, Europe and Africa. Uganda's first sub specialty radiology fellowship training curriculum was approved by Uganda Medical and Dental Practitioners Council and the pioneer class of three trainees is set to graduate in August 2025. Hands-on training at Mulago National Referral Hospital (MNRH) is provided by international visiting faculty, nurses, and technologists combined with didactic online lectures and other teaching activities. While the majority of visiting teams in Tanzania came from the US, there is now an increased emphasis on regional exchange of knowledge in Uganda, with a higher proportion of teams coming from Tanzania and other African nations. While still lacking robust data in IR specifically, the implementation of regional exchange of teaching facilitates increased inter-continental collaboration which potentially decreases costs, optimizes the use of local resources, and decreases brain drain.

Progress made

The first three Ugandan IR trainees and several of their prospective IR nurses and technologists traveled to Tanzania for one-month observer ships starting in early 2023. In August 2023, training trips with IR faculty, nurses and technologists commenced at MNRH in Kampala. A total of 23 international teaching teams have completed trips to Uganda since program establishment.

During this time, several critical steps have been taken to ensure sustainability and safety while implementing the new program. There have been steps taken to ensure appropriate radiation protection of patients and personnel. Additionally, protocols for commonly performed procedures have been established and a quality assessment program has been implemented. The clinical service is run by the IR trainees, the local radiography and nursing staff with visiting faculty acting as mentors. The local trainees provide longitudinal care in order to assure a sustained service. Ultimately, the first and only public clinical IR service in the country at MNRH has been established. This center is the largest tertiary referral center and training facility for Makerere College of Health Sciences.

A total of 1,389 consultations had been made as of December 2024, resulting in 1,072 IR procedures. The procedures included biopsies (n = 694), thoracocenteses and paracenteses (n=99) abscess drainages (n=56), fine needle aspirations (n=71), sclerotherapy (n = 9), nephrostomies (n =71), biliary drains (n=51) and vascular studies (n=21). Modalities used were Ultrasound (n = 841), fluoroscopy (n = 123), and CT (n = 108). Overall, 372 (34.7%) of these procedures were performed independently, while 700(65.3 %) were performed under direct supervision of visiting teaching faculty.

In order to facilitate continue learning and peer-review to ensure internationally published outcome standards are being met; a peer-review and quality assessment program was implemented in parallel. A comprehensive patient registry with patient demographics, procedure details, adverse events, and clinical outcomes have been continuously documented in a hospital compliant fashion. Additionally, all complications both minor and major as categorized by Society of Interventional Radiology grading criteria are reviewed with visiting faculty.

This ensures a system that has the ability to track and monitor procedural and clinical outcomes for the sake of long-term sustainability and safety of the specialty in Uganda. This has also facilitated regular iterative and adaptive modifications to the structure of the program so that patient needs in the specific setting of Uganda are met.

Collaboration

The development of this program is a collaborative effort of the Road2IR Foundation, the Ugandan Ministry of Health, MNRH, MakCHS, and several partner institutions in the US, including Emory, Harvard, and Yale Universities.

The training institutions in Uganda and Tanzania have a long history of collaboration with strong support by radiology and hospital leadership on both sides.

We are further supported by the Association of Radiologists of Uganda (ARU) and the Society of African Interventional Radiology and Endovascular Therapy (SAFIRE) as well as the European Institute for Biomedical Imaging Research (EIBIR).

What we have versus what we can get

While there have been 1072 procedures performed at the time of manuscript preparation, there are still several on-going challenges that will need to be addressed. For example, a 62-year-old male was referred to MNRH from one of the private facilities in the city following



Mulago IR team doing the first Gastroduodenal Artery (GDA) embolization in the country at the Uganda Heart Institute facility

three weeks hospitalization with progressive vomiting of blood and passing black stools. A computed tomography scan done had showed a blood clot in the duodenum and a diagnosis of upper gastrointestinal hemorrhage had been made. The patient was scheduled for surgery but was not stable enough for the procedure, and Interventional Radiology was consulted for bleeding control. Interventional radiology was able to perform catheter directed therapy via a small needle access into the right common femoral artery and block the bleeding gastro duodenal artery with coils. The patient stabilized and was discharged home 2 days after the procedure.

While the above procedure illustrates the ability of IR to treat patients in acute settings, there are several challenges which are still being evaluated. Currently, complex procedures can only be done at the Uganda Heart Institute which results in limited equipment availability and long patient wait times even in bleeding or unstable patients. The above patient required a week long wait before he was able to be treated. In more acute cases such as postpartum hemorrhage (PPH) or massive pulmonary embolism, this type of waiting time would not be feasible although IR could rapidly treat those patients without surgery. While access to imaging equipment is still a limitation, there are several ongoing discussions regarding improving access to imaging infrastructure to improve patient care. Additionally, there are on-going challenges with access to consumable equipment due to cost, lack of direct engagement, and lack of locally produced equipment. These needs are in an on-going state of discussion with direct engagement with some manufacturers to facilitate lower cost and more easily available consumable equipment.

Impact

Through international collaboration, the institution has successfully leveraged experiences from Tanzania and replicated this training model in Uganda. The infrastructure for organizing safe, efficient, and cost-effective travel to East Africa via Road2IR is already in place and there is a large and ever-growing network of IR physicians, nurses, and technologists from which to recruit.

The training program in Uganda will serve as a catalyst for the development of additional IR programs in Africa, thereby creating a domino effect with growing infrastructure, scientific environment, specialty societies, academic exchange, local production of IR equipment, and associated economic opportunities.

Most importantly, clinical outcomes have been improved by interventional radiology for the people of Uganda.

Conclusion

Global health efforts enhance transfer of interventional radiology knowledge and skills to trainees in resource limited settings in an evidence based and sustainable manner.

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Fake medicines killing over 100,000 Africans annually

Nairobi, Kenya Friday 13th, 2025; A newly released white paper publication indicates that the use of falsified antimalarials is causing over 100,000 unnecessary deaths in Africa.

The Publication by CFAO, a major pharmaceutical distributor in Africa and the OPALS Foundation shows that one in three medicines circulating in Africa may be fake.

In Kenya, where over 70% of medicines are imported, a fragmented distribution network and rising cases of fake drugs are exposing patients to life-threatening risks.

The most falsified drugs in Africa are those considered essential: antibiotics, HIV-AIDS antiretrovirals, antimalarials, pain killers, opioids, among others.

The white paper titled "Securing the Medicine Distribution Network in Africa" indicates that women are excessively exposed with African women being 130 times more likely to die from complications related to pregnancy or childbirth than European and North American women.

For economic, geographical or cultural reasons, or due to unavailability of quality medicines in pharmacies, many African women result to the informal market posing an immense and intolerable risk to them. As a result, for example, a pill that was banned in Kenya ten years ago is still circulating covertly.

The CFAO white paper raises awareness on the critical role of official medicine distribution networks across Africa, and specifically in Kenya. It explores key actors, existing frameworks, and highlights the urgent need for a reliable, traceable supply chain to guarantee the integrity of medicines reaching patients.

Speaking at the release of the white paper, Ken Accajou, Deputy CEO, CFAO Healthcare & Head of English and Portuguese-speaking Area Retail said, "The medicine distribution crisis in Africa is not just a supply chain issue but a matter of life and death. "While Kenya is doing well because of a strong private sector, this white paper is a call to action: we must strengthen official channels and empower local health systems to better protect their people."

The publication is grounded in robust data, expert analysis, and testimonials from across the healthcare ecosystem including government agencies, pharmacists, NGOs, and medical laboratories. These insights are aimed at driving actionable change and fostering a safer, more accessible and efficient pharmaceutical system for all.

"Kenya has made great strides in healthcare, but the fight against counterfeit medicines remains a major challenge," added Gavin Pearson, CEO of CFAO Healthcare Kenya. "By bringing together government, regulators, and private sector players, we can build a safer and more transparent pharmaceutical supply chain. Our goal at CFAO Healthcare Kenya is to ensure that every patient receives genuine, high-quality medicine, no matter where they are."

The white paper also highlights the factors that fuel the illegal pharmaceutical market in Africa: limited access to affordable medicines, supply chain gaps, and the unchecked rise of street markets where unverified drugs are sold. In Kenya, such parallel networks have grown in areas with poor regulatory reach- endangering lives and draining trust from the formal healthcare system.

With 30% of medicines consumed in Kenya already produced locally, expanding domestic pharmaceutical manufacturing offers significant economic and public health benefits, including strengthened supply chains and reduced exposure to substandard and falsified medicines.

The full white paper is available for download at www.cfaohealthcare.com and www.opals.asso.fr/faux-medicaments.

About CFAO Healthcare

CFAO Healthcare is a Pan-African leader in pharmaceutical distribution, committed to securing access to high-quality medicines for all African countries. CFAO Healthcare supplies medicines and pharmaceutical products in 24 African countries and 6 French Overseas Territories. Product integrity is maintained throughout the logistical import chain, from storage to pharmacy, notably through the Laborex network, which delivers daily to over 11,000 pharmacies in French-speaking Africa, English-speaking Africa, and the French Overseas Territories. CFAO Healthcare also manufactures licensed medicines in Morocco and Algeria and assembles and distributes generic medicine kits and medical consumables for Africa. Its expertise is built on complete control of the supply chain, adhering to the highest quality and traceability standards, from production and import to the pharmacy and ultimately to the patient. www.cfaohealthcare.com.

About the OPALS Foundation

The OPALS Foundation (Organisation PanAfricaine de Lutte pour la Santé) combines the objectives and resources of the Chirac Foundation and the OPALS Association. Its mission is to combat the scourge of trafficking in counterfeit medicines, vaccines, and medical devices; denounce health fraud in all its forms; and improve access to quality healthcare for all. It relentlessly leads the mobilization for quality medicine, for all, delivered by qualified professionals, with approved medicines, controlled vaccines, and certified medical devices. The OPALS Foundation is protected by the Fondation de l'Académie de Médecine (FAM). For more information, visit opals.asso.fr/faux medicaments/

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22-24 SEPTEMBER, 2025 | SALY, SENEGAL

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The African Forum for Research and Education in Health welcomes abstract submissions for the 8th Annual AFREhealth Symposium.

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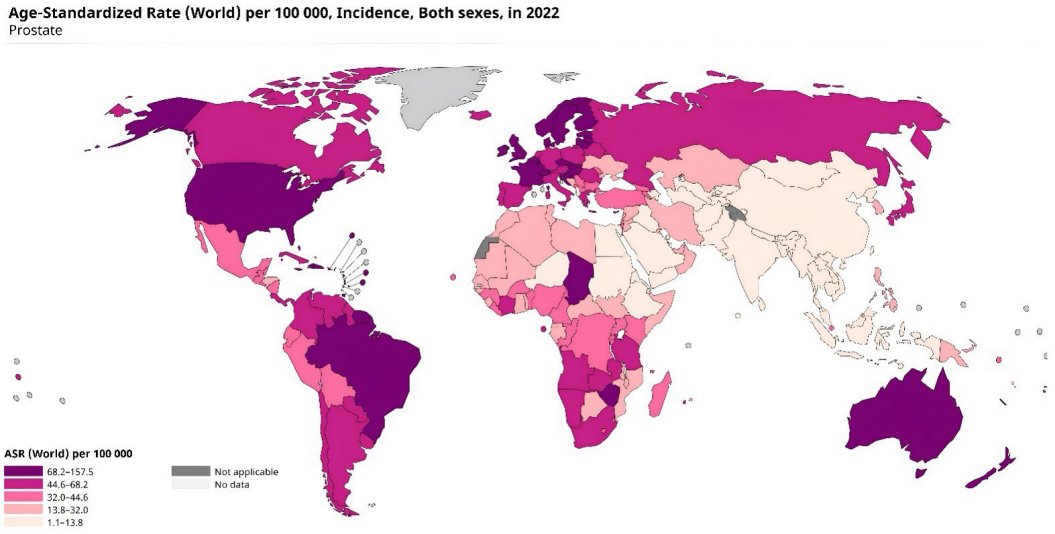
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Prostate Cancer in Africa: Addressing Diagnostic Gaps and Treatment Challenges on the Continent

Experts Call for Urgent, Coordinated Action to Tackle Africa's Rising Prostate Cancer Burden.



Age-Standardized Incidence Rate (World) of Prostate Cancer (2022)
Source: GLOBOCAN 2022
Available from: https://gco.iarc.fr/today/en/dataviz/maps-heatmap?mode=population&cancers=27

Prostate cancer has emerged as a major health concern among men worldwide, and in Africa, it is increasingly recognized as a silent but significant threat to public health. According to data from the Global Cancer Observatory, while prostate cancer incidence appears to be lower in African regions compared to Europe and the Americas, mortality rate of the disease was paradoxically higher in Africa[1]. In Southern Africa, prostate cancer kills almost one in three men who have the disease according to 2022 GLOBOCAN. The real burden is believed to be even higher due to poor cancer registration systems in many African countries. As populations age and awareness of non-communicable diseases grows, the incidence and mortality of prostate cancer are expected to rise further unless critical gaps in diagnosis and treatment are urgently addressed.

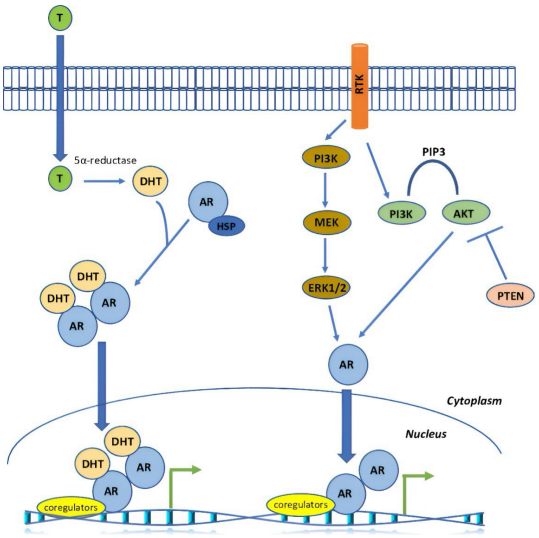
Several factors contribute to the uniquely high burden and poor outcomes associated with prostate cancer in African settings. These include late-stage diagnosis, limited awareness, under-resourced health systems, and significant financial and logistical barriers to care. Moreover, men of African descent have been found to be at higher genetic risk for more aggressive forms of prostate cancer, compounding the challenges of early detection and effective treatment[2]. A comprehensive approach that targets these multifaceted issues is essential to improving prostate cancer care and survival outcomes across the continent.

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Epidemiological and Genetic Landscape of Prostate Cancer in Africa

Prostate cancer (PCa) remains a significant public health concern in Africa, characterized by high incidence and mortality rates that often surpass global averages. According to GLOBOCAN 2022, there were approximately 103,050 new PCa cases and 55,744 deaths in Africa, corresponding to age-standardized incidence and mortality rates (ASRs) of 30.3 and 17.3 per 100,000 men, respectively[3]. Within the continent, regional disparities are evident. Southern Africa reported the highest incidence rate at 59.9 per 100,000, while Central Africa had the highest mortality rate at 27.2 per 100,000. Eastern and Western Africa exhibited moderate incidence rates of 28.0 and 36.9 per 100,000, respectively, but still faced substantial mortality rates of 16.8 and 23.5 per 100,000. In contrast, Northern Africa had the lowest incidence and mortality rates, at 16.1 and 6.9 per 100,000, respectively[3].

Globally, the highest PCa incidence rates were observed in Northern Europe (82.8 per 100,000), Australia/New Zealand (78.1), and North America



Summary of the main androgen receptor signaling pathways in metastatic prostate
Dihydrotestosterone (DHT) binds to the androgen receptor (AR) in the cytoplasm. Upon binding, the AR translocates into the nucleus where it binds to its target genes and regulates their expression. The AR can also be activated in the absence or low levels of DHT wherein activating signals can arise from other mechanisms including extracellular growth factors like EGF or intracellular signaling pathways like testosterone (T). HSP – Heat Shock Protein; PI3K – Phosphoinositide 3-Kinase; RTK – Receptor Tyrosine Kinase; MEK – Mitogen-Activated Protein Kinase Kinase; ERK1/2 – Extracellular Signal-Regulated Kinases 1 and 2; PIP3 – Phosphatidylinositol-3,4,5-trisphosphate; AKT – Protein Kinase B; PTEN – Phosphatase and Tensin Homolog

Source: *MYRIA GALAZI*
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(73.5). However, these regions reported relatively low mortality rates, such as 12.4 per 100,000 in Northern Europe and 8.3 in North America, likely due to advanced healthcare systems and early detection programs. Conversely, regions like the Caribbean and sub-Saharan Africa exhibited both high incidence and mortality rates, underscoring disparities in healthcare access and cancer management.

Genetic factors also contribute to the PCa burden in Africa. Men of African descent are more susceptible to aggressive PCa forms, potentially due to genetic variations such as BRCA1/2 mutations and single-nucleotide polymorphisms affecting androgen receptor signaling. These genetic predispositions, combined with limited access to screening and treatment, exacerbate the disease's impact on African populations.

Diagnostic Gaps and Barriers to Early Detection

Prostate cancer outcomes in Africa remain poor largely due to delays in diagnosis and lack of early detection strategies. The standard screening methods—prostate-specific antigen (PSA) testing and digital rectal examination (DRE)—are not routinely done in many African countries, particularly at the primary healthcare level. Studies have shown that limited availability of screening services, especially in rural and under-resourced areas, contributes to late-stage presentation when symptoms such as pain and urinary obstruction are already severe and prognosis is poor[4].

Awareness of prostate cancer is also alarmingly low among African men. A study conducted in Oyo State, Nigeria, found that less than half (43%) of the respondents had heard of prostate gland, only 29% were aware of prostate cancer; and only about one-fifth had ever been screened, highlighting a gap between awareness and action[5]. Cultural and social beliefs significantly influence health-seeking behaviour. In many communities, prostate-related symptoms are attributed to aging, divine punishment, or spiritual afflictions. These misconceptions contribute to delays in presentation and diagnosis, even among educated populations. The stigma surrounding male reproductive health further silences discussions and reduces openness to screening.

Structural deficits in diagnostic infrastructure compound these challenges. There is a shortage of trained personnel—including urologists, pathologists, and radiologists—and advanced diagnostic tools are often limited to a few urban tertiary hospitals[6]. Consequently, rural patients must travel long distances to access essential services such as imaging, biopsy, and histopathology. Even when biopsies are performed, delays in pathology report turnaround—often taking several weeks—impede timely treatment initiation.

Cost is another formidable barrier. In most African settings, prostate cancer screening and diagnosis rely heavily on out-of-pocket payments. With minimal health insurance coverage, many men cannot afford the PSA test, imaging, or biopsy. This financial exclusion prevents timely diagnosis and makes early detection a luxury rather than a public health standard.

Treatment Challenges and Systemic Weaknesses

Despite the increasing prostate cancer incidence in Africa, treatment remains severely limited by systemic weaknesses and infrastructural deficits. Curative options like radical prostatectomy, external beam radiotherapy (EBRT), and brachytherapy are restricted to a few high-



3D Image-guided Brachytherapy Suite
***Source**: SIEMENS Healthlineers*
***Available from**: https://www.siemens-healthineers.com/nl-be/computed-tomography/news/mso-image-guided-brachytherapy.html*

level tertiary facilities, primarily located in urban centres. As of 2020, over 25 African countries still lack access to a single functioning radiotherapy machine, severely curtailing the continent's ability to treat localized and advanced-stage prostate cancer[7]. The few existing radiotherapy centres often suffer from equipment breakdowns, understaffing, and long waiting lists, delaying care and reducing survival outcomes.

Surgical treatment is similarly hindered by workforce shortages and outdated infrastructure. Access to urologists remains severely limited in many African countries, with ratios as low as one urologist per 3.8 million people in Nigeria and 2.5 million in Ghana—drastically lower than in high-income countries like the United States (1:27,000) and the United Kingdom (1:90,000)(8). Limited surgical equipment, frequent power outages, and poorly equipped operating theatres further restrict access to timely surgeries. In many facilities, delays of several months are common for patients requiring curative surgery, often leading to disease progression before treatment begins.

Hormonal therapy is often used for advanced or metastatic cases due to its relatively non-invasive nature. However, key medications are expensive and frequently unavailable in public hospitals. Many patients must purchase these drugs out-of-pocket from private pharmacies, making long-term treatment unaffordable for the majority. Similarly, chemotherapy, used in hormone-refractory prostate cancer, faces barriers such as limited drug availability, lack of trained oncologists, and poor supportive care to manage side effects.

A major systemic challenge is the absence of national clinical guidelines for prostate cancer in many African countries. This gap results in inconsistent treatment approaches, with care varying widely between institutions. Lack of standardized training for healthcare workers further contributes to suboptimal treatment and inadequate follow-up. Palliative care services remain grossly underdeveloped. Regulatory barriers to opioid access, coupled with limited pain management training, mean that many advanced-stage patients endure unmanaged pain and psychological distress.

Strategies for Bridging the Gaps: Toward Equity in Cancer Care

Tackling the diagnostic and treatment challenges of prostate cancer in Africa requires a coordinated and multifaceted approach. First, there must be increased investment in cancer infrastructure and human resource development. Training programs for urologists, oncologists, pathologists, and oncology nurses need to be scaled up. Innovations like task-shifting—empowering nurse practitioners and clinical officers to conduct screenings and provide basic care—can improve access in rural and underserved areas.

Enhancement of data gathering and disease surveillance systems will enable evidence-based interventions. Currently, cancer registries are limited or

underdeveloped in many African countries, resulting in substantial data gaps that hinder effective planning and policy-making[6]. Strengthening national cancer registries and integrating prostate cancer into routine health surveillance will enable more accurate incidence and mortality tracking, risk stratification, and resource allocation tailored to population needs.

The development and institutionalization of national prostate cancer care guidelines is another critical step toward standardizing and improving care. In many African nations, the absence of context-specific, evidence-based clinical guidelines leads to wide variability in care quality, delayed diagnoses, and inconsistent treatment pathways. By adapting global best practices to local realities—accounting for available resources, workforce capacity, and prevalent comorbidities—national guidelines can improve early detection, guide staging and risk assessment, and optimize treatment decisions, particularly in settings with limited access to specialized care such as radiotherapy or robotic surgery.

Governments should prioritize the integration of prostate cancer services into national cancer control plans, ensuring that screening, diagnosis, treatment, and palliative care are addressed comprehensively. Policy reforms must also address financing barriers. Expanding health insurance coverage is essential for equitable access to prostate cancer services. As earlier stated, out-of-pocket expenses remain a major barrier to care across much of the continent, often resulting in late presentation or treatment abandonment. Strengthening national health insurance schemes to cover prostate cancer screening, diagnosis, and treatment will reduce financial hardship and enable earlier and more consistent access to care. Such reforms are especially vital for rural populations and those in the informal economy, who are often excluded from existing insurance structures.

Public education is another critical area requiring special attention. Community engagement through culturally sensitive campaigns can improve awareness and promote early detection[5]. Health outreach programs delivered through churches, mosques, and community leaders have demonstrated success in encouraging screening uptake. Engaging men in open conversations about health, masculinity, and aging can also help to dismantle stigma and encourage preventive care.

Diaspora collaborations and public-private partnerships (PPPs) are emerging as powerful strategies to bridge gaps in prostate cancer diagnosis and treatment across Africa. Diaspora health professionals contribute expertise, mentorship, and investment, supporting initiatives such as radiotherapy center development in Nigeria. Simultaneously, PPPs are enhancing access to oncology care, as seen in Nigeria's expansion of radiotherapy services[9]. Collaborative models like these, when aligned with national health priorities, offer sustainable pathways for technology transfer, capacity building, and service delivery. Organizations like African Organization for Research and Training in Cancer (AORTIC) further facilitate diaspora engagement and South-South cooperation, amplifying efforts toward equitable, locally driven cancer control on the continent[6].

Conclusion

Prostate cancer is no longer a silent threat on the African continent—it is a growing epidemic that demands urgent attention. The combination of biological susceptibility, limited awareness, weak health systems, and financial constraints creates a deadly cocktail that leads to delayed diagnosis, suboptimal treatment, and avoidable deaths. However, this reality can be changed.

African governments, healthcare leaders, and international partners must rise to the challenge of transforming prostate cancer care. This transformation must begin with improving diagnostic capabilities, expanding treatment access, and ensuring equitable care for all men, regardless of geography or income. Public education, policy reform, and investment in human capital are essential ingredients of this change. By addressing the diagnostic and treatment challenges head-on, African countries can reduce prostate cancer mortality, improve quality of life for survivors, and set a precedent for comprehensive cancer care across the continent. It is time to bring prostate cancer out of the shadows and make it a public health priority, backed by commitment, collaboration, and compassion.

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Empowering Village Health Workers to provide community-based geriatric support in rural Ugandan villages

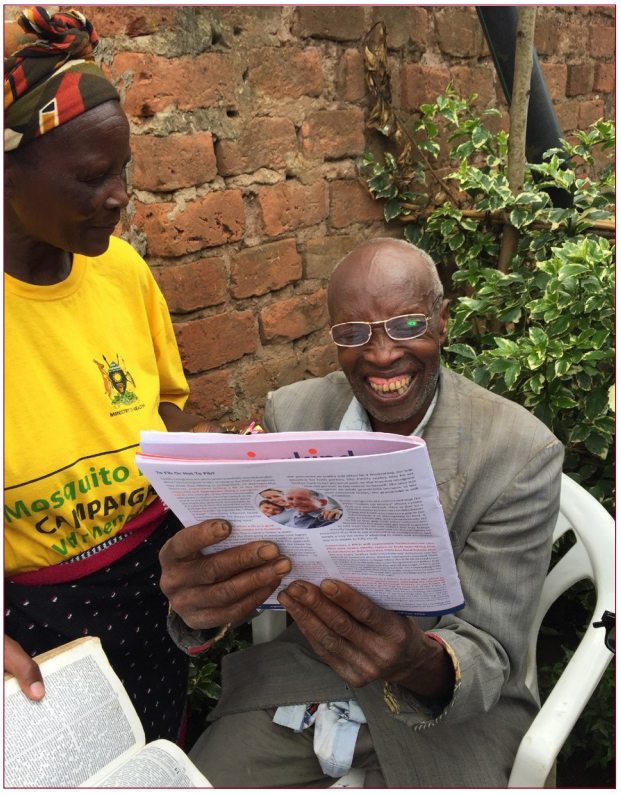
Iraguha et al describe a successful grass root intervention project that is changing the lives of elderly persons in Uganda.

Background

The entire world is aging rapidly. Currently, 9% of the world's individuals are over age 65; by 2050, this proportion will rise to 17%. By 2050, there are projected to be 2 billion people in the world over age 60, with 80% of them in developing countries. Uganda, one of the youngest countries in the world, anticipates that the number of individuals over the age of 60 will increase dramatically from 1.3 million in 2013 to 5.5 million in 2050. Like much of Sub-Saharan Africa, 90% of older Ugandans live in rural areas, many in abject poverty (<$2 USD/day). Public services and economic opportunities are scarce, and in many cases, middle-aged adults have migrated to the cities for work, leaving older adults unsupported and often with the burden of caring for their grandchildren. Although health care services may exist in towns and cities, barriers to care, such as lack of transportation, lack of an escort, and high costs, limit access to care for older adults.

Village Health Workers (VHWs) or Community Health Workers (CHWs) have been seen as an important sector of health care systems, vital to the goal of attaining universal health care and endorsed by the World Health Organization and the United Nations to improve health outcomes, especially in low-resourced countries. VHWs are trusted members of the community with limited medical training who can provide basic health care, preventive services, and health promotion and education.

Uganda is a low-income country with a critical shortage of skilled healthcare professionals, only 0.2 physicians per 1,000 people, according to the World Bank in 2020. There were initiatives by the Ministry of Health to mobilize Village Health Teams (VHTs) in 2001 and Community Health Extension Workers (CHEWs) in 2019 to increase health care access and improved outcomes, but success proved unattainable due to insufficient training, poor supervision, reliance on volunteerism, and lack of resources. A Ministry of Health document in 2022 noted 282,504 VHTs in the country, an average of 3-4 per village, many of whom were mobilized to assist during the COVID-19 pandemic, when they were paid an average of 100,000 Ush as a one-time incentive. It proposed short, medium, and long term plans, including a payment of 10,000 Ush per month to 2 VHTs per village with Primary Health Care funds, the revitalization of the VHT workforce, and the development over time of an extensive network of CHEWs.



Elderly gentleman happy with his new reading glasses
Courtesy of Patricia Bloom

Beginnings of the Kisoro Elders Project

The Kisoro Elders Project was established in 2017 with the goal of empowering VHWs to provide community-based geriatric care for rural older adults who lacked access to health care and social services. Accompanying goals were that the project be low cost, provide immediate benefit to health and quality of life, be sustainable by Ugandan health professionals and VHWs, and be an exportable model which could benefit other communities in developing countries. The term "Elders" was chosen for its traditional meaning of respect and wisdom.

Kisoro District in southwest Uganda is home to approximately 300,000 people, 86% subsistence farmers, in the district capital Kisoro and 513 villages. The Kisoro VHW program was established in 2007

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as one facet of a partnership between Kisoro District Hospital (KDH) and the community-based organization Doctors for Global Health (DGH) Uganda. VHWs have been providing preventive and clinical care, and health education to 52 villages in two surrounding subcounties for 18 years. VHWs were elected by their neighbors, are farmers, mostly women with a primary school education, highly respected and trusted in their communities.

A team of six clinical supervisors, all clinical officers or nurses from KDH, mentored by DGH's Global Health physicians from Albert Einstein College of Medicine in New York, USA, provided the initial training in six areas of health: children's health, women's health, non-communicable diseases, sanitation and hygiene, acute illness, and community health. Training took place over 6 days per month for 1-2 years and prepared VHWs to address acute problems (fever, cough, diarrhea), monitor and dispense medications for hypertension, diabetes, and other chronic diseases through the Chronic Disease in the Community (CDCom) program, provide prenatal care, other maternal/child care, and follow up care after hospitalization, and educate families. There are monthly continuing education sessions. VHWs receive modest stipends for each service and are visited twice monthly by a clinical supervisor to validate stipend sheets, monitor performance, and provide ongoing education. VHWs and other DGH staff perform a biennial health census during which the health status of all households in the village is assessed, including updated demographics, hospitalizations, screening for chronic disease, malnutrition, and risk factors such as households headed by adolescents or solitary elders, households with three or more children under age five, or those lacking of clean water or sanitation. Data are electronically collated into a family health sheet (FHS) carried by the VHW in a village binder, as well as a POCR (problem-oriented cross reference) book which contains lists of villagers with specific characteristics or health issues, such as chronic diseases, mental illnesses, recent hospitalizations or living alone.

Before the Kisoro Elders Program began in 2017, some village older adults were followed for their chronic diseases by their VHW and clinical supervisors during CDCom monthly village-based clinics, but most received little to no attention. Walking 5-10 km to district hospital clinics over rocky, hilly terrain was an insurmountable barrier for most. Prior to the initiation of the Kisoro Elders Project, focus groups were conducted by VHWs and the project leadership with village older adults and village leadership. Discussions revealed that older adults confronted challenges to their everyday function due to problems with vision, hearing, mobility, pain, isolated living without a source of light, and depression. Depression is common in older adults in Africa, often rooted in poverty, hunger, loss of family, loneliness, neglect, or abuse, physical, psychological, or financial. Project leadership, with input from VHWs and village chiefs, conceptualized low-cost strategies to address these needs. The strategies would layer geriatrics skills onto the already well-established skills of the VHWs.



Proud recipient of a solar light unit
Courtesy of Jonathan Wallen

Training in Screenings and Interventions

Intensive 2-day training modules were conducted between February 2018 and February 2019 by the authors (IM, PB, HB) and a mental health nurse specialist, supported by the clinical supervisor team and a cadre of eight senior VHW "co-supervisors". VHWs learned about the focus areas of the project, the screening tests for each problem area, simple therapeutic interventions, and criteria for referral for more specialized attention. Village adults over the age of 60 were recruited by VHWs to participate in large group screenings for vision, hearing, mobility and pain problems if they or their family suspected deficits in these areas. Groups of 20-30 older adults gathered at designated times at village meeting places, such as a field or storage building. Vision screening utilized an E-chart for far vision and tasks such as reading a Bible, threading a needle, or sorting beans from stones for near vision. Hearing screening utilized the standardized and validated Whisper Test, plus an otoscopic exam of the ear canals, mobility and risk of falls was assessed by history and using the validated and timed Up and Go Test, and pain was assessed using standardized questions and a numerical scale. VHWs administered the validated PHQ-9 screening tool for depression during one-on-one sessions with older adults with perceived depressive features. Lack of lighting was



VHW conducting ear inspection with otoscope
Courtesy of Jonathan Wallen

established by home surveys. VHWs also learned to administer the Six-Item Dementia Scale for Africa with older adults suspected of cognitive problems.

Interventions for identified problems are simple, low-cost items which provide immediate benefit. For problems with near vision, reading glasses are provided in three magnifications, +1.75, +2.00, or +2.50. The glasses to date have been purchased in the US and transported to Kisoro by various members of the DGH team. Efforts to source the glasses directly from merchants in Kisoro are underway. Older adults with significant far vision problems have been recorded in a data base; a system of referral to an optometrist for further testing and intervention with refractive lenses or cataract surgery is still in development. Elders with identified hearing loss undergo otoscopic exam and an ear washout if cerumen impaction is identified. It is often necessary to soften the wax with water or cooking oil drops for three days before the washout is successful. The otoscopes are available from online vendors, and the washout spray bottles have been transported from the US. Elders with profound hearing loss are provided with simple listening devices called "listenators", based on an ear horn model and sourced from an Asian manufacturer of products for older adults. Elders at risk of falls are measured for proper cane height, provided a customized sturdy cane made by the village carpenter, and given instructions for proper use. Despite initial concern that older adults would be reluctant to use canes in place of traditional walking sticks, the canes have proven extremely popular, and have given rise to a thriving carpentry business in town. Pain level was evaluated using questionnaires and numerical pain scales. Almost all older adults have musculoskeletal pain after a lifetime of digging in their fields; most have never had pain medication and so are quite responsive to Panadol (paracetamol), which the VHWs dispense in limited quantities. VHWs are also able to dispense non-steroidal anti-inflammatory drugs under clinical supervision. The program also employs an acupuncturist part-time, who conducts acupuncture clinics in the villages.

After initial group screenings, VHWs have used their POCR data base to monitor which older adults still needed screening, and conducted screenings and interventions during home visits. Home visits are also required for follow-up assessments of how well and with what benefits the interventions are being utilized. All group and home visits are incentivized by stipends and monitored by clinical supervisors.

Six pilot villages were initially identified for a depression intervention, based on the perceived potential for VHWs to be trained to be peer counselors. Village elders identified by the PHQ-9 to be mildly to moderately depressed were offered participation in small support groups. Those with severe depression or suicidality were immediately referred to the Mental Health Outreach team. Small groups of 6-10 participated in 8-week Interpersonal Therapy (IPT) groups. IPT is a peer counseling intervention developed for low-resourced countries and previously field-tested in Uganda, and in the US with older adults. The IPT methodology was adapted to be culturally appropriate for the Kisoro older adult population, and was taught in Rufumbira, the local language.

Although the prevalence of dementia in Uganda is not known, it is not rare among older adults in Kisoro, and is often attributed mistakenly to curses or spirits. VHW geriatric training sessions include instruction about signs of dementia, behavioral and personality changes, and communication strategies for interacting with people with dementia. This training is used to deliver a "home talk" to the families of persons with dementia, one of a series of 25 topics in the VHW home talk repertoire. VHWs make supportive home visits older adults and families needing special attention: those with dementia, or who are bedbound, frail, or isolated. The visits, like other tasks, receive a stipend.

In 2019, individual solar light units were added as an intervention to address energy poverty and social isolation, through a partnership with the US foundation Let There Be Light International.

DGH census data and VHW observational home visits were used to identify older adults in need of safe lighting. The lights are solar powered, can be easily recharged, and can illuminate a room throughout the night.

A geriatric data set was added to the biennial census, which identifies all older adults in the villages, their living situation, level of functional disability (using the Katz

Activities of Daily Living Scale), and level of participation in family and community affairs (using a Contributive Function Scale developed by the authors).

2024 saw the addition of an exciting new effort, the Healthy Foods for Healthy Aging Project, meant to address the dual problems of malnutrition and the climate crisis. A local international expert in sustainable agriculture, Mr. Gerald Nkusi, is teaching VHWs how to plant model family gardens that use improved agricultural techniques to grow more and healthier crops, while enriching the soil and providing carbon capture to reduce carbon emissions. 2 demonstration gardens and 10 family gardens have been planted, with much interest expressed in expanding the numbers.

Outcomes

Since the inception of the Kisoro Elders Program in 2017, the following screenings and interventions have been delivered to a population of approximately 5100 older adults:

Vision: 3895 screened, 2687 received reading glasses; Hearing: 2240 screened, 2175 wax removals , 93 listenators; Mobility/pain: 4891 screened, 702 received canes, 4747 received Panadol, 1056 acupuncture treatments; Depression 106 in 13 IPT groups; 1743 solar lights distributed.

Although it was beyond the scope of the project to measure the effect of interventions with scientific rigor, on follow-up home visits, beneficiaries of interventions for vision, hearing, mobility and pain problems almost universally reported improvements in function. Reading glasses enabled them to read, sew, prepare food, sort harvested crops, and perform personal care; earwax washouts and listenators improved hearing; canes provided improved stability on rocky and hilly terrain; pain medications improved musculoskeletal pain and acupuncture treatments often alleviated the need for medication for 1-4 months after treatment. Older adults who participated in depression support groups almost universally reported great improvement in their mood, with some likening their improvement to a miracle, and requesting that the groups be continued. Currently monthly socialization groups, with added members, have been continued, and an expanded depression group supervisory team, made up of 5 university trained supervisors, is expanding the number of groups and conducting a study of quantitative and qualitative results. Solar lights have been the most universally acclaimed intervention of the project. They reduce isolation, as family members are drawn into the home at night to study or converse, and improve safety and health by replacing dangerous kerosene candles, known to cause house fires and respiratory diseases.

The modest budget for the project depends on philanthropic contributions from the US. The project also benefits significantly from the pre-existent VHW and clinical supervision programs of DGH, and the operational infrastructure of DGH.

The Center for Aging in Uganda at Kisoro District Hospital was established in 2024 to advocate for the health and social wellbeing of older adults in Uganda and beyond. All of the VHW training materials for the Kisoro Elders Project are available on its website: aginginuganda.org

Project leadership is available to other communities interested in adopting any elements of the Kisoro Elders Program, and a limited number of scholarships are available for community leaders to learn more about the program by visiting it. For more information, contact the Corresponding Author or use the Contact tab on the website.

The Kisoro Elders Project demonstrates the feasibility of VHWs providing community-based geriatric support at low cost. Parts or all of it are adaptable to meet the needs of individual communities, utilizing the VHT, CHW, or VHW personnel available. This would help to address the needs of the rapidly expanding population of older adults for health and social service support in their communities.

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A Happy eldelry lady

Mpox Outbreak in Uganda: Insights and Lessons Learnt

The World Health Organization Uganda Country Office team shares their experiences, challenges, and lessons learned from managing the Mpox outbreak in the country.



Training the community

Introduction

On July 24th, 2024, Uganda declared an Mpox outbreak, kickstarting a comprehensive response spearheaded by the Ministry of Health (MoH) with extensive support from the World Health Organization (WHO) and partners. By 16th April 2025, the country had reported 5,431 Mpox cases with 40 deaths, representing a case fatality rate of 0.74%.

The outbreak in Uganda is driven by Clade1b, which is also prevalent in Central Africa and the Democratic Republic of Congo. The 2022–2023 global outbreak was fueled by the Clade IIb strain and affected countries such as Nigeria, Cameroon, and South Africa. It continues to circulate at low levels in several countries.

Uganda's vulnerability to zoonotic diseases such as Mpox stems from multiple factors, including its geographical location in the epidemic-prone tropical belt of the Congo basin, high cross-border movements, and increased human-to-animal interaction. Population pressures and reliance on cultural practices, such as seeking treatment from traditional healers during illnesses, that delay early detection and treatment of outbreak diseases exacerbate the situation.

Although Uganda's vast experience in managing viral disease outbreaks such as Ebola and Marburg has strengthened the country's health systems to respond effectively, the Mpox outbreak has presented a unique set of challenges, including engaging and dealing with marginalized and key populations such Commercial Sex Workers (CSWs), drug users, and men who have sex with men. This article explores some of the critical insights and lessons drawn from Uganda's response to Mpox, which hopefully will contribute to strengthening the country's resilient health system even further.

Multisectoral and multi-level Coordination are Vital

Upon declaring the Mpox outbreak, the Ministry of Health, supported by WHO, established and operationalized the Public Health Emergency

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Operations Centre (PHEOC) Situation Room, equipping it with essential infrastructure and technology for coordinated incident management. The PHEOC supports communication and coordination between national, regional, and district-level teams.

Through its operation, the PHEOC has held regular high-level meetings, produced a 4W matrix (Who is doing What, Where, and When), and distributed situation reports. These have ensured transparency and minimized duplication, improving resource targeting as all stakeholders are informed and engaged in the response. To augment the PHEOC, WHO has also deployed 15 technical officers to support the Incident Management Team (IMT) and 16 districts countrywide to establish their response units.

Yet despite such achievements, the coordination and resource mobilization team has not been able to close an acute funding gap of over 53%. This has constrained the implementation of many planned activities, contributing to the continued spread of the infection. In addition, limited engagement of civic and political leaders and limited multisectoral collaboration hinder the full implementation of response plans.

A key insight from the PHEOC's operations is the critical role of multisectoral and multilevel coordination in outbreak management and leadership, which are inadequate in the current Mpox outbreak. Multisectoral and multilevel coordination must always be harnessed and integrated for an agile and sustained outbreak response.

Community Engagement for early Outbreak detection

WHO and MoH activated surveillance structures nationally and in the affected districts, deploying 16 epidemiologists and training 783 health workers to identify cases and trace contacts. Tools like case definitions, investigation forms, and contact follow-up templates were developed and distributed, including at Points of Entry (PoEs).

One major innovation was the school-based surveillance effort and Village Health Teams' (VHTs) orientation to support active community-level case searches. This has improved awareness levels and increased community alerts. More than 2,500 Mpox alerts have been received from communities. The decentralized surveillance structure has enabled real-time case mapping and informed targeted risk communication strategies, which are critical to suppressing the spread.

Key surveillance challenges have centered around delays in clinician data entry affecting real-time tracking and the need for more clinicians trained in digital data systems. At the same time, it was apparent that strengthening community-based surveillance and rapid response should be at the frontline of outbreak containment.



Protective gear for health workers

Decentralize and equip laboratory systems for timely diagnosis and outbreak control

WHO supported MoH in procuring and distributing sample collection kits, DNA extraction kits, and PCR reagents, in addition to facilitating the training of 2002 health workers in sample handling, biosafety, and biosecurity. Results dispatch systems were also activated, enhancing efficiency. However, the centralized nature of laboratory testing and reliance on routine transport schedules revealed a key bottleneck. WHO's proposed solution included activating mobile laboratories like the one in Adjumani and incorporating backup vehicles into the National Specimen Transport Referral Network to cut turn-around times, which is currently a big challenge. From this, the need for decentralized and well-equipped laboratory systems for timely diagnosis and outbreak control comes out clearly.

Holistic and Decentralized Case Management is essential for effective outbreak response

WHO worked closely with MoH to reactivate the case management pillar with sub-components addressing clinical care, infection prevention and control (IPC), nutrition, emergency services, Mental Health & Psycho-Social Support. The pillar developed and disseminated a national clinical guideline toolkit and a screening/triage algorithm to health facilities nationwide. In addition, mortality audits provided insights into areas that needed improved clinical response, while WHO's supportive supervision across the 16 health regions helped standardize care. National databases of case managers and specialists were created to guide response and capacity building. To improve sustainability, WHO assessed regional referral hospitals using the STAR-H tool and supported the construction of more permanent isolation units, a shift away from temporary structures. This has resulted



A health worker taking a sample

in a 99.46% recovery rate from Mpox, a significant public health success. Consequently, it is noted that case management requires a holistic, decentralized clinical care model, including mental health, which is essential for effective outbreak response.

Infection Prevention and Control (IPC) should be context-specific, well-resourced, and rapidly scalable

WHO and MoH developed and disseminated standardized mpox IPC training tools to boost IPC efforts and conducted assessments in 109 facilities. The organization also defined IPC supply needs for setting up isolation units. Stock-outs of sample kits and delays in test results due to rigid transport systems were key challenges in ensuring adequate IPC. A significant learning was the need to integrate IPC training early and broadly across health facilities, especially with Mpox's skin lesion presentation posing a high risk of cross-infection. In other words, IPC needs to be context-specific, well-resourced, and rapidly scalable.

Risk Communication and Community Engagement (RCCE) should leave no one behind.

WHO and MoH used multi-pronged risk communication and community engagement approaches, including conducting anthropological studies that assessed community perception and informed RCCE strategies through evidence-informed messaging, especially targeting key populations often facing stigma and misinformation. RCCE structures were activated in high-risk districts, supported by WHO-trained RCCE officers. Using other RCCE approaches such as strategic placement of Information, Education and Communication (IEC) materials in local languages, mass media campaigns, use of digital vans and engagement of journalists, community influencers, and peer educators, health teams were able to reach various audiences, including the hard-to-access key populations. However, the shortage of IEC materials and limited resources to engage stakeholders have dogged deeper community engagement activities.

From the RCCE activities, it was clear that engaging and working with marginalized and key populations such as Commercial Sex Workers (CSWs), drug users, and men who have sex with men using existing community platforms and ensuring culturally sensitive communication are key to building community trust and participation in outbreak response.

Prevent and respond to Sexual Exploitation, Abuse, and Harassment (PRSEAH)

WHO and MoH staff also took proactive steps to embed PRSEAH across all response structures by briefing deployed personnel and peers of key populations on PRSEAH. Reminder educational materials such as bracelets, T-shirts, and "No Excuse" cards were distributed to respective audiences. PRSEAH was integrated PRSEAH into the Incident Management System and the Inter-agency PRSEA Network. However, PRSEAH activities were hindered by limited trained structures at district and regional levels and weak integration with government systems. It is important to note that PRSEAH is a key aspect of any outbreak response as it builds accountability, trust, credibility, and safety in public health systems.

Recommendations

For effective coordination, it is critical to incorporate lessons learned from evaluating the response intra- or after into related plans and policies to sustain, adapt, and promote key elements of the response and inform public health policies and programmes. The coordination team should also scale up resource mobilization and advocacy with UN partners and integrate PRSEAH and multisectoral collaboration into all district-level responses.

Regarding surveillance, the overall aim should be to eliminate human-to-human transmission of mpox by anticipating, detecting, preparing for, and responding to mpox outbreaks and taking action to reduce zoonotic transmission, as appropriate. The National and District Surveillance team should train more clinicians on data entry and boost community-level surveillance using VHTs and digital tools. Quantifying resource needs is essential as this will contribute to timely detection and response to outbreaks and community transmission. Most importantly, including mpox as a notifiable disease in the national integrated disease surveillance and response (IDSR) system is vital.

IPC response teams should advise individuals suspected or known to have pox or who may be a contact of a case to adhere to measures to avoid exposing others. Procurement and distribution of surge IPC supplies must be quick and timely to reach the frontline health workers who need them to protect themselves and their patients. Related to this is the urgent need to finalize and distribute national IPC guidelines, which are lacking in this Mpox response.

Laboratory is a key pillar in any outbreak response, and efforts should be made to strengthen diagnostic capacity at all levels of the health care system and point-of-care diagnostics for confirmation of Mpox cases. Emphasis should be put on activating mobile labs, procuring diagnostic reagents, and fast-tracking community sample collection guidance.

Regarding case management, measures should be taken to ensure optimal clinical care, with infection prevention and control practices in place for suspected and confirmed pox in all clinical settings. Health care providers should be trained accordingly and provided with adequate and appropriate personal protective equipment. Most importantly, Mpox detection should be integrated into prevention, care and research within HIV and sexually transmitted disease prevention and control programmes, and other appropriate health services. Clinical training at lower-level health facilities should be enhanced, as should the construction of more permanent isolation infrastructures at the district level. Mental health and psychosocial support are often overlooked in outbreak response, yet they are critical not only in resettling recovered patients but also in addressing stigma and discrimination in communities.

This Mpox outbreak has demonstrated the critical role of using trusted local personalities or influencers to reach key and marginalized groups. RCCE teams should use these influencers to communicate risk, build awareness, and engage with affected communities and at-risk groups. Local, religious, cultural, and civic leaders, health authorities, and traditional healers, among others, should never be left behind. The real-time collection of community insights should be integral to all disease outbreak interventions and the production and dissemination of local language and easy-to-use IEC material. This will help prevent stigma and discrimination against any individuals or groups affected by Mpox.

The Mpox vaccine is now available in Uganda, albeit in inadequate quantities for primary prevention (pre-exposure) and post-exposure vaccination for persons and communities at risk of Mpox. The vaccine is important in this response but is not yet the magic bullet, meaning that there is a need to build and retain capacity in resource-limited settings and among marginalized groups, where mpox transmission continues to occur, to improve understanding of modes of transmission.

Finally, some response efforts globally have been challenged by sexual exploitation, Abuse, and Harassment of the responders or the beneficial communities. The government, WHO, partners, and actors in the disease outbreak space should own and enforce PRSEAH training and structures of its implementation. This should be continuous and integrated into all levels of the response.

Conclusion

An upsurge of Mpox in Uganda has spread to 109 districts and is majorly transmitted through close contacts. The outbreak of the Sudan Virus Disease presented a double jeopardy and slowed down the response to Mpox, given the virulent nature of Ebola. Through the relentless, coordinated actions explained above, decentralized capacity building, targeted outreaches, especially to marginalized groups, and vaccination, Uganda has achieved an impressive 99.46% recovery rate among Mpox patients. However, challenges still abound, such as inadequate logistics, community mistrust, and difficulties in the healthcare system that must be addressed.

Eulogy of Professor Ignatius Kakande

(February 1, 1942 – February 18, 2025)

I have known Professor Ignatius Kakande since we met as school boys in 1958 at St Mary's College Kisubi (SMACK), one of the top schools in Uganda 68 years ago. We were the smallest boys in the class along with the late Professor Roy Mugerwa. His death came as a shock and a surprise to me. We had spoken on the phone two weeks before on the day that he was participating in the accreditation of Mengo Hospital as a training site for the College of Surgeons of East Central and Southern Africa (COSECSA). During the first week of December 2024, we had travelled on the same plane to Harare, Zimbabwe to celebrate the Silver Jubilee of this College. It was therefore quite devastating to wake up in the morning to learn that Ignatius had passed on during the previous night.

He is someone who is held in the highest esteem by the profession. He has a clean heart and means well for everyone. He has time to listen, to empathize and to help everyone who is in need. As an illustration, during 2024, I spent time working with him to help one of the postgraduate students to complete their course which had been interrupted by misunderstandings with the teachers.

He has had an illustrious career in medicine in the East, Central and Southern African countries as evidenced by the following engagements in reverse chronological order:

He has been Professor of Surgery at the Uganda Martyrs University, Nkozi- Uganda from November 2010 to the present time· He was Academic Coordinator, Department of Surgery at the post graduate school based at Nsambya hospital, Uganda where he was also a practicing surgeon. Professor of Surgery at the National University of Rwanda from 2007 to 2010 · Head of Department of Surgery at Makerere University from 1992 to 1998.

He also served as Lecturer in Surgery at the University of Nairobi, Kenya from 1977 to 1982· This is the time when there was political upheavals and a mass exodus of Ugandan professionals and many ended up in Kenya and other African countries as highly respected practitioners. He also worked for a Faith Based hospital in Nyeri, Kenya before returning to Uganda.

He was always active in the affairs of the professional associations of surgeons. He was a key player in the launch of the College of Surgeons of East, Central and Southern Africa (COSECSA). While I led the negotiations with the Council of Health Ministers of the East, Central and Southern African Health Community to establish the College for training surgeons, the

Francis Omaswa, Founding Executive Director for the African Centre for Global Health and Social Transformation (Kampala) and the Global Health Workforce Alliance WHO; and Publisher of Africa Health



Prof. Kakande

Ministers asked for a copy of the curriculum for this course. Prof. Kakande took his annual leave and spent this time writing up this curriculum which was presented to the Health Ministers and enabled them to give the clearance for COSECSA to be launched. A Task force of three of us including Professor Josephat Mulimba from Nairobi, Ignatius Kakande and myself coordinated the process for the launch of the COSECSA and I was elected as the first President.

Later, Prof. Kakande served for a very long time as the Editor of The East and Central African Journal of Surgery (ECAJS), which recently reflected on the remarkable contributions of Professor Ignatius Kakande, as the second editor-in-chief and a guiding force behind the journal's conception, birth and growth. Professor Kakande's legacy is deeply woven into the fabric of ECAJS and COSECSA, where his influence as a senior professor in surgery, a mentor, and fatherly figure has left an indelible mark on countless colleagues and students alike. His commitment to building a platform for African surgical voices has transformed ECAJS into a respected journal, showcasing the innovations, challenges, and triumphs of surgical practice across the continent. He received an award for this during the December 2024, COSECSA Conference in Harare.

At family level, he was married to Bridget with whom they have six children, all of whom are very bright and are successful professionals. Some of them are very close friends with our own children. I also got to know the wider family of Kakande. His first civil service job of was serving as a Medical Officer at Atutur hospital which is not too far from my family home in Eastern Uganda and at that time he paid a visit to my village home and got to meet and know my wider family.

Uganda, Africa and the world have lost a great pillar in Ignatius Kakande. It is my prayer that his legacy of caring, loving and being available to help will be emulated by generations to come. May His Soul Rest in Eternal Peace.

Global One Health and Infectious Diseases: An Interdisciplinary Practitioner's Guide

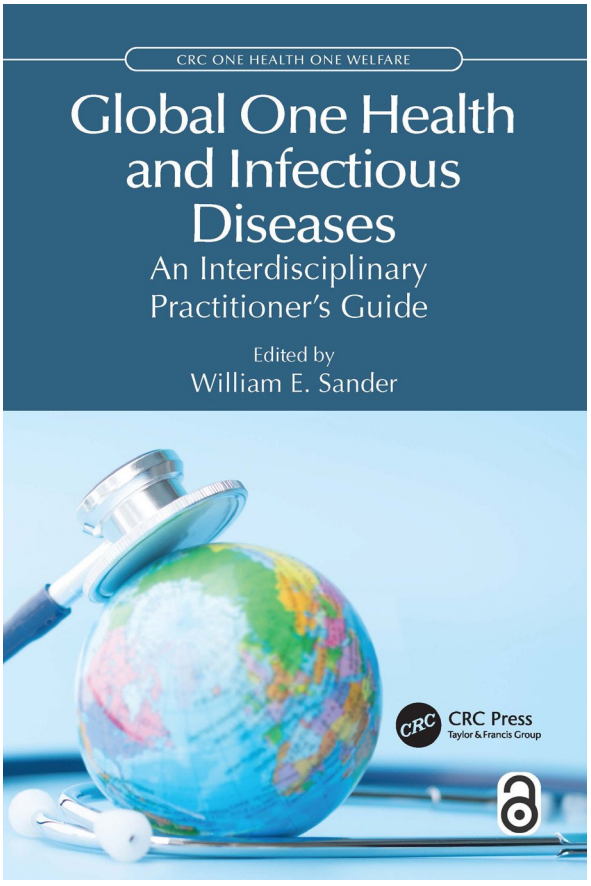
Through the lens of infectious disease, the book, Global One Health and Infectious Diseases: An Interdisciplinary Practitioner's Guide, brings together the diverse range of topics necessary to be an effective global health practitioner at the intersection of human and animal health, particularly in developing countries. It explores what an aspiring or mid-career practitioner should be aware of when working with infectious diseases, including technical skills, cultural competency, capacity building, big data, and understanding the landscape and history of global health. Each chapter focuses on a specific area of necessary knowledge with background information, case examples, and resources to use moving forward.

The aspiring global health practitioner has been appealing for decades and even centuries long before the term global health came into being. Missionaries dating back to the 13th and 14th centuries, as part of the Crusades and many other Western explorations, not only brought religion but also attempts at improving livelihoods often in caring for those who were sick. This drive has shaped much of how the world is today both in some of the improvements as well as some of the large disparities. While the idea of international health or global health often originates from those of developed or Western countries bringing expertise and solutions to those of other areas of the world, this idea has shifted more recently. The recognition of imperialism still existing through medicine and health has sparked a change in mindset. However, this shift has been variable across initiatives in the global health field and much of what is called helicopter medicine is often practiced.

At the same time, the term One Health, or the integration of human, animal, and environmental health, has grown with the recognition that complex problems in health require multidisciplinary efforts. Additionally, these problems are often driven by many different factors from across sectors. While many terms relate to One Health (e.g., planetary health, one medicine, etc.), the idea remains the same to think outside a chosen area of specialty and be able to work collaboratively as part of a team to better solve and improve health status around the world. This involves the collective effort of physicians, veterinarians, public health practitioners, ecologists, anthropologists, social workers, economists, and many others. Collectively, these are the global one health practitioners.

Within the realm of global one health, infectious diseases are a key component that draws from all of these disciplines and the focus of this book. Often an expert in one area that touches global one health has not considered the other components necessary for successful programs, initiatives, and outcomes in the targeted areas. One cannot just focus on technical aspects like surveillance, metrics, investment, and training, but must also consider the upstream and downstream components like ecosystem services, nutrition, climate change, and migration as well as the interactive and relationship components like the role of gender, cultural competency, and consensus building. Without an understanding of these pieces prior to engagement, the chances of success diminish as do the chances of sustainability after a program or intervention concludes or funding ends.

An important reference for upper-level undergraduate students, graduate students, and early practitioners in human, animal, and public health, this text highlights the competencies rather than focusing on the problems in Global One Health. It provides a blueprint of areas that the reader should pay attention to, particularly in the realm of infectious diseases.



Book Cover

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General Medicine

Mpox after COVID-19 in Africa: Different epidemic, similar challenges

Africa faces again a new outbreak of mpox, heavily burdening the Democratic Republic of Congo (DRC). Factors such as biological and ecological changes in the virus, waning of immunity to smallpox, socio-economic challenges, and global economic strain are fueling this epidemic. To analyse the drivers of the mpox outbreak in DRC, review the international and local response, and draw lessons from the COVID-19 pandemic to propose strategies for building epidemic-resilient healthcare systems in the region. The focus is on the DRC, where the mpox epidemic is concentrated, and the broader African region, assessing both rural and urban healthcare contexts. This study synthesises epidemiological data, global health policies, and local health system responses. Key insights are drawn from COVID-19 case studies, and assessment of access to diagnostics and vaccines. The DRC hosts over 95% of Africa's mpox cases, with significant challenges in human-wildlife interactions, poverty, and weakened healthcare systems exacerbated by COVID-19. Vaccine shortages, diagnostic delays, and uneven international support reflect a repeat of challenges seen during COVID-19. Localised vaccine and diagnostics production, improved risk communication, and digital health tools are highlighted as critical interventions. An epidemic-resilient healthcare framework, leveraging local production of medical products, regulatory empowerment, and real-time data collection, is essential for controlling mpox and future outbreaks. This study underscores the need for African-led solutions, addressing socio-economic drivers, enhancing local capacities, and fostering international solidarity to mitigate future epidemic threats.

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A critical review of mpox outbreaks, risk factors, and prevention efforts in Africa: lessons learned and evolving practices

This comprehensive literature review evaluates the burden, risk factors, and management strategies associated with Mpox in Africa. The authors identify key risk factors, including contact with bushmeat, lack of smallpox vaccination, HIV-positive status, and close physical contact with infected individuals. The review emphasizes the need for improved community education, vaccination, disease surveillance, and infection control measures to prevent and control Mpox outbreaks effectively.

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Forty-two years of responding to Ebola virus outbreaks in Sub-Saharan Africa: a review Original research

Ebola virus disease (EVD) is among the most lethal hemorrhagic fevers affecting humans and non-human primates. Since its identification in 1976, Africa has experienced 34 EVD outbreaks, resulting in 34,356 cases and 14,823 deaths across 11 countries, with an overall case fatality rate of 66%. This comprehensive review analyzes 42 years of EVD outbreaks in Sub-Saharan Africa, focusing on challenges and opportunities for control and prevention. The study utilized literature searches from PubMed, Web of Science, and Google Scholar, reviewing articles from 1976 to 2019. Data extraction emphasized outbreak year, geographical spread, virus strain, case numbers, fatalities, and management strategies. The findings indicate persistent challenges in EVD control, including epidemiological, sociocultural, and health system factors. Notably, there has been no significant change in case fatality rates over the decades. The study underscores the necessity of a broad-based, One Health approach, effective communication, social mobilization, and strengthened health systems to prevent future EVD outbreaks.

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Ebola Virus Diseases in Africa: a commentary on its history, local and global context

Ebola Virus Disease (EVD) started as a minor infection in Uganda in 1974 and has been frequent in Central Africa Region for the past 40 years. For over 40 years, Ebola was treated as an African disease, called a fever and known by other names where occurrences have been frequent. EVD has become a global public health threat following the most recent outbreak in West Africa. By December 31, 2014, Ebola has infected more than 23,500 people in West Africa and killed over 9,500, nearly all in the three worst-affected countries of Guinea, Liberia and Sierra Leone. It is transmitted through blood, vomit, diarrhea and other bodily fluids but cultural attributes associate its etiology to man-made and supernatural causes, hence stemming public health approaches to contain EVD difficult. Distrust and conflict between two healing systems are rife necessitating an African Model of EVD care and prevention. The African model remains indispensable to understand EVD and developing appropriate EVD containing approaches.

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Innovative Laboratory Methods for Improved Tuberculosis Diagnosis and Drug-Susceptibility Testing

The laboratory plays a vital role in the diagnosis of all clinical forms of tuberculosis (TB), from microbiological confirmation of Mycobacterium tuberculosis to drug-susceptibility testing (DST) and treatment monitoring. For many decades, laboratory diagnosis of tuberculosis was based on conventional methods such as smear microscopy and culture-based methods. However, Mycobacterium tuberculosis is a slow-growing organism, requiring 2–4 weeks or longer for cultures to yield results. Therefore, the evaluation of novel and rapid diagnostic methods has been a priority for research and development.

Frontiers

In the beginning of the 1990s, molecular-based diagnostics became widely available, providing rapid detection, identification, and DST of M. tuberculosis. In this paper, we review some of the new diagnostic methods introduced in the clinical laboratory for the diagnosis of tuberculosis. With the global goal of ending TB as a public health challenge by 2030, enhancing diagnostic capabilities for latent and active TB, along with improving DST, would improve identification and management of cases, reducing transmission rates and curbing the spread of drug-resistant strains. These innovations promise to transform TB control efforts, bringing us closer to eradicating this persistent global health threat.

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Maternal-Child Health

Prevalence and materno-fetal outcomes of preeclampsia/eclampsia amongst pregnant women at a teaching hospital in north-central Nigeria: a retrospective cross-sectional study.

Preeclampsia/eclampsia (PE/E) contributes significantly to maternal and perinatal morbidity and mortality in Nigeria. This study aimed to ascertain the prevalence, materno-fetal outcomes, and sociodemographic factors associated with PE/E at a teaching hospital in north-central Nigeria from September 2014 to August 2019. A retrospective cross-sectional design was employed, analyzing de-identified secondary data of women managed for PE/E. Descriptive statistics determined sample characteristics and outcome estimates. Bivariate analysis tested associations between sociodemographic factors and PE/E outcomes, while logistic regression assessed the magnitude of these associations. The significance level was set at $P < 0.05$. The prevalence of PE/E was 3.60%, with preeclampsia diagnosed in 3.02% and eclampsia in 0.58% of cases. The case fatality rate was 3.9%, and the stillbirth rate was 10.7%. Notably, 85.4% of women did not experience maternal complications or unfavorable outcomes. However, 67.7% of babies weighed less than 2500 g, and birth weight was the only sociodemographic factor significantly associated with fetal outcome ($X^2 = 15.6$, $P < 0.001$). The study concludes that PE/E prevalence is high and associated with significant maternal and perinatal deaths. Most cases and fatalities occurred in women with no formal education, unbooked, and referred to the hospital with worsening conditions. The findings underscore the need for community-focused research on factors associated with PE/E to enhance prevention and early management strategies.

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Prevalence and risk factors associated with severe pre-eclampsia among postpartum women in Zanzibar: a cross-sectional study.

Hypertensive disorders in pregnancy, including preeclampsia, are leading causes of maternal morbidity and mortality globally, accounting for approximately 14% of all maternal deaths. In sub-Saharan Africa, preeclampsia contributes significantly to maternal mortality, with reported prevalence ranging from 1.8% to 16.7%. This cross-sectional study aimed to assess the prevalence and risk factors of severe preeclampsia among postpartum women in Zanzibar. The study was conducted at Mnazi Mmoja Referral Hospital, the main tertiary hospital in Zanzibar, Tanzania. Data were collected from postpartum women diagnosed with severe preeclampsia, defined by criteria including systolic blood pressure >160 mmHg, diastolic >110 mmHg, proteinuria, edema, visual disturbances, severe headaches, epigastric pain, or pulmonary edema. The study found that severe preeclampsia was reported in 25.8% of potential life-threatening conditions and 13.5% of maternal near-miss events. Additionally, severe preeclampsia contributed to approximately 21.4% of maternal deaths. Risk factors identified included advanced maternal age, obesity, chronic hypertension, diabetes, nulliparity, adolescent pregnancy, multiple pregnancies, and a history of preeclampsia. The study highlights the significant impact of severe preeclampsia on maternal health in Zanzibar and underscores the need for improved diagnostic capabilities, healthcare provider training, and community awareness to mitigate the risks associated with hypertensive disorders in pregnancy.

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Survival Patterns Among Patients With Breast Cancer in Sub-Saharan Africa: A Systematic Review and Meta-Analysis

Breast cancer remains a significant public health concern in Sub-Saharan Africa (SSA), characterized by high mortality rates and limited access to timely diagnosis and treatment. This systematic review and meta-analysis aimed to assess survival patterns among breast cancer patients in SSA. A comprehensive search of relevant databases identified 49 studies encompassing 14,459 patients. The pooled survival rates were estimated at 79% at 1 year, 56% at 3 years, and 40% at 5 years post-diagnosis. Notably, survival rates were lower in countries with low Human Development Index (HDI) compared to those with middle or high HDI. An improvement in survival was observed in studies conducted in more recent years, suggesting progress in breast cancer management. However, the overall survival rates in SSA remain substantially lower than global averages, underscoring the need for enhanced cancer care infrastructure, early detection programs, and access to effective treatments. The study highlights disparities in breast cancer outcomes within SSA and emphasizes the importance of targeted interventions to improve survival rates. Future research should focus on identifying barriers to care and developing context-specific strategies to address the unique challenges faced by breast cancer patients in SSA.

Reference

Limenih MA, Mekonnen EG, Birhanu F, et al. Survival Patterns Among Patients With Breast Cancer in Sub-Saharan Africa: A Systematic Review and Meta-Analysis. JAMA Netw Open. 2024;7(5):e2410260. doi:10.1001/jamanetworkopen.2024.10260.

Emerging breast cancer epidemic: evidence from Africa.

Breast cancer incidence is rising in Africa, presenting a growing public health challenge. This review examines the emerging epidemic of breast cancer on the continent, exploring risk factors and potential future trends. The increase in breast cancer cases is attributed to factors such as increased life expectancy, urbanization, changes in reproductive behavior, and lifestyle modifications, including diet and physical activity. The lack of systematic population-based cancer registries in many African countries has limited the availability of accurate epidemiological data, often relying on small clinical and pathology case series. This has influenced the current understanding of breast cancer patterns and characteristics in Africa. The review also discusses the hormone receptor subtypes of breast cancer in African populations, suggesting that reported differences compared to other populations may be due to poor tissue handling and laboratory processing practices rather than true biological differences. The authors emphasize the need for improved cancer registration systems, public health education, and access to early detection and treatment services to address the rising burden of breast cancer in Africa. They advocate for collaborative efforts to enhance research infrastructure and capacity, enabling more accurate data collection and better-informed public health strategies. Addressing these challenges is crucial for developing effective interventions and improving outcomes for breast cancer patients across the continent.

Reference

Akarolo-Anthony SN, Ogundiran TO, Adebamowo CA. Emerging breast cancer epidemic: evidence from Africa. Breast Cancer Res. 2010;12(Suppl 4):S8. doi:10.1186/bcr2737.

Barriers to cervical cancer screening in Africa: a systematic review. BMC Public Health.

Cervical cancer remains a significant public health concern in Africa, with high incidence and mortality rates largely attributed to low screening uptake. This systematic review aimed to identify and synthesize barriers to cervical cancer screening across the continent. A comprehensive search of databases including PubMed, EMBASE, CINAHL, and Scopus was conducted up to May 2019, yielding 24 studies from 11 African countries that met inclusion criteria. The studies encompassed various methodologies: eight qualitative, 13 quantitative, and three mixed-methods. Thematic analysis revealed multifaceted barriers at individual, interpersonal, community, and systemic levels. Key individual barriers included limited awareness and knowledge about cervical cancer and its screening, fear of diagnosis, and misconceptions. Interpersonal factors such as lack of spousal support and cultural beliefs further impeded screening uptake. At the community level, stigma and socio-cultural norms discouraged women from seeking screening services. Systemic barriers encompassed inadequate access to screening facilities, shortage of trained healthcare providers, lack of equipment and supplies, and insufficient political commitment. The review underscores the necessity for holistic interventions that address these barriers concurrently. Recommendations include community-based education programs to raise awareness, training and deployment of healthcare workers to underserved areas, and policy initiatives to improve infrastructure and resource allocation. Engaging stakeholders at all levels is crucial to enhance the acceptability, availability, accessibility, and affordability of cervical cancer screening services in Africa. Addressing these barriers is imperative to reduce the burden of cervical cancer and improve women's health outcomes across the continent.

Reference

Mantula F, Toefy Y, Sewram V. Barriers to cervical cancer screening in Africa: a systematic review. BMC Public Health. 2024;24:525. doi:10.1186/s12889-024-17842-1.

Uptake and barriers to cervical cancer screening among human immunodeficiency virus-positive women in Sub-Saharan Africa: a systematic review and meta-analysis.

Women living with HIV in Sub-Saharan Africa (SSA) face a heightened risk of cervical cancer, yet screening uptake remains suboptimal. This systematic review and meta-analysis aimed to assess the prevalence of cervical cancer screening and identify associated barriers among HIV-positive women in SSA. A comprehensive search of databases including PubMed, EMBASE, CINAHL, and Scopus was conducted up to February 2023,

identifying 18 studies encompassing a total of 12,345 HIV-positive women across various SSA countries. The pooled prevalence of cervical cancer screening among this population was found to be 21.5% (95% CI: 17.3%–25.7%), indicating a significant gap in preventive care. Key barriers identified included limited awareness and knowledge about cervical cancer and its screening, fear of positive results, stigma associated with both HIV and cancer, lack of spousal or community support, and logistical challenges such as distance to healthcare facilities and associated costs. Healthcare system-related barriers encompassed inadequate integration of cervical cancer screening into HIV care services, shortage of trained personnel, and lack of necessary equipment and supplies. The findings highlight the need for targeted interventions to improve screening uptake among HIV-positive women in SSA. Recommendations include integrating cervical cancer screening into routine HIV care, community-based education programs to raise awareness, training healthcare providers, and implementing policies to reduce logistical and financial barriers. Addressing these multifaceted barriers is essential to enhance early detection and reduce the burden of cervical cancer among HIV-positive women in the region.

Reference

Mengesha MB, Chekole TT, Hidru HD. Uptake and barriers to cervical cancer screening among human immunodeficiency virus-positive women in Sub-Saharan Africa: a systematic review and meta-analysis. BMC Womens Health. 2023;23:338. doi:10.1186/s12905-023-02479-w.

Health Systems

Strengthening health professions education in Sub-Saharan Africa: Lessons from the Medical Education Partnership Initiative (MEPI

Strengthening health professions education in Sub-Saharan Africa: Lessons from the Medical The Medical Education Partnership Initiative (MEPI) is a 5-year initiative to support medical education and research in sub-Saharan Africa, awarded by the US President's Emergency Plan for AIDS Relief (PEPFAR) and the National Institutes of Health. MEPI supports 13 medical schools in 12 African countries and their collaborating partners. It aims to increase the quality, quantity, and retention of medical graduates with specific emphasis on the capacity to deliver HIV/AIDS care. The initiative seeks to achieve institutional change through innovation and improved infrastructure in medical education and research. The program emphasizes local ownership, partnership among African and U.S. institutions, and community engagement.The initiative supports major improvements in curriculum development, faculty development, e-learning, skills labs, community-based education, and postgraduate training. Moreover, it has sparked collaboration among medical schools across the continent, facilitating the formation of networks, such as the African Forum for Research and Education in Health (AFREhealth). This collective effort enhances peer learning and sustainability.The article reviews the early outcomes of MEPI, including new postgraduate programs, regional research hubs, faculty exchanges, and cross-institutional innovations. MEPI also encourages research relevant to local health priorities, which supports evidence-based policy and practice. Despite challenges such as faculty shortages and infrastructure gaps, MEPI's locally driven model offers a new paradigm for strengthening medical education in Africa.The authors conclude that the MEPI experience offers a compelling example of how international funding and collaboration, when driven by African leadership and local priorities, can transform health professions education and ultimately strengthen health systems in sub-Saharan Africa.Education Partnership Initiative (MEPI)

Reference

Mullan F, Frehywot S, Omaswa F, et al.Strengthening health professions education in Sub-Saharan Africa: Lessons from the Medical Education Partnership Initiative (MEPI): Academic Medicine, 2012; 87(11):1559–1564.DOI: 10.1097/ACM.0b013e31826adfa4.

Health workforce development and retention in post-conflict settings: Lessons from a cross-sectional study in Northern Uganda.

The shortage of health workers in post-conflict Northern Uganda remains a critical barrier to the delivery of essential health services. This study aimed to assess the factors influencing health workforce recruitment and retention in this setting and to explore strategies to address the challenges. A cross-sectional survey was conducted in Gulu, Kitgum, and Pader districts among 145 health workers and 26 health facility managers. The study used structured questionnaires and in-depth interviews to collect data on demographic profiles, motivations, challenges, and retention strategies. Findings revealed that health workers were predominantly young, with over 60% below the age of 35, and a significant number were recruited through emergency humanitarian programs. Despite improved security, many health workers cited inadequate housing, poor remuneration, limited career development opportunities, and high workloads as reasons for attrition or reluctance to work in rural areas. Female health workers reported additional challenges related to family separation and insecurity. Participants emphasized the need for financial incentives, professional development, supportive supervision, and improvements in working conditions to boost retention. Community recognition and local recruitment also emerged as critical motivators. Health managers reported that while government programs such as the Human Resources for Health (HRH) strategic plan existed, implementation was slow due to funding constraints and poor coordination. The study concludes that strengthening health systems in post-conflict regions requires a multi-pronged approach addressing both systemic and individual-level factors. Tailored retention strategies, local recruitment, and a focus on equitable distribution of health personnel are necessary to rebuild trust and sustain health service delivery in fragile settings.

Reference

Orach CG, Otim G, Aporomon J, Okello T, Odong J, Burnham G, Health workforce development and retention in post-conflict settings: Lessons from a cross-sectional study in Northern Uganda:Human Resources for Health, 2015; 13:72.DOI: 10.1186/s12960-015-0072-8

CPD Challenge

Questions

Q1 Please indicate whether the following statements about Laboratory Methods for Tuberculosis Diagnosis are TRUE or FALSE:

a. Laboratory diagnosis of tuberculosis still relies predominantly on conventional methods such as smear microscopy and culture-based methods. .
b. Given that Mycobacterium tuberculosis is a slow-growing organism, requiring 2–4 weeks or longer for cultures to yield results, the evaluation of novel and rapid diagnostic methods has been a priority for research and development.
c. Since the beginning of the 1990s, molecular-based diagnostics became widely available, providing rapid detection and identification of M. tuberculosis. .
d. Molecular-based diagnostics are superior for rapid diagnosis of active tuberculosis and detection of drug resistance but are not typically used for diagnosing latent M. tuberculosis. .
e. Although molecular-based diagnostics have improved identification of tuberculosis, they remain less applicable in the management of cases and are not superior in reducing transmission rates or curbing the spread of drug-resistant strains.

Q2 Indicate whether the following statements concerning barriers to cervical cancer screening are TRUE or FALSE:

a. Key individual barriers include limited awareness and knowledge about cervical cancer and its screening, fear of diagnosis, and misconceptions. .
b. Interpersonal factors such as lack of spousal support and cultural beliefs are important, but do not ordinarily impede screening uptake.
c. At the community level, stigma and socio-cultural norms discourage women from seeking screening services.
d. Systemic barriers encompass inadequate access to screening facilities, a shortage of trained healthcare providers, lack of equipment and supplies, and insufficient political commitment.
e. Key barriers among women living with HIV include healthcare system-related challenges such as poor integration of cervical cancer screening into HIV care, shortage of trained personnel, and lack of necessary equipment and supplies.

Q3 Which of the following statements are TRUE or FALSE about mpox outbreaks in Africa?

a. The Democratic Republic of the Congo (DRC) accounts for over 95% of Africa's mpox cases, with human-wildlife interactions, poverty, and weakened healthcare systems—further strained by COVID-19—contributing to the spread.
b. Key risk factors for mpox include contact with bushmeat, lack of smallpox vaccination, HIV-positive status, and close physical contact with infected individuals. .
c. Contributing factors to the epidemic include biological and ecological changes in the virus, waning immunity to smallpox, socio-economic challenges, and global economic strain.
d. Effective control measures include community education, vaccination, disease surveillance, and infection control strategies.
e. The spread of mpox is exacerbated by vaccine shortages, diagnostic delays, and uneven international support.

Q4 Please indicate whether the following statements are TRUE or FALSE based on lessons learned from Ebola Virus Disease (EVD) outbreaks in Africa:

a. Since its identification in 1976, Africa has experienced 34 EVD outbreaks, resulting in 34,356 cases and 14,823 deaths across 11 countries, with an overall case fatality rate of 66%.
b. Persistent challenges in EVD control include epidemiological, sociocultural, and health system factors.
c. There has been no significant change in case fatality rates over the decades.
d. Effective future responses to EVD outbreaks will require a One Health approach, strong communication, community mobilization, and robust health systems.
e. While EVD is transmitted via blood, vomit, diarrhea, and other bodily fluids, cultural beliefs often attribute its cause to man-made or supernatural forces, complicating public health interventions.

Q5 Please indicate whether the following statements about breast cancer epidemiology in Sub-Saharan Africa (SSA) are TRUE or FALSE:

a. The increase in breast cancer cases in SSA is attributed to factors such as increased life expectancy, urbanization, changes in reproductive behavior, and lifestyle modifications including diet and physical activity.
b. The lack of systematic, population-based cancer registries in many African countries has not limited the availability of accurate epidemiological data, with most information derived from small clinical and pathology case series.
c. Overall breast cancer survival rates in SSA remain substantially lower than global averages, highlighting the need for improved cancer care infrastructure, early detection programs, and access to effective treatments.
d. There are generally limited disparities in breast cancer outcomes within SSA, suggesting that uniform interventions across all countries are sufficient to improve survival rates.
e. Future research should focus on identifying barriers to care and developing context-specific strategies to address the unique challenges faced by breast cancer patients in SSA.

Answers

1. a). F, b). T, c). T, d). T, e) F
2. a). T, b). F, c). T, d). T, e) T
3. a). T, b). T, c). T, d). T, e) T
4. a). T, b). T, c). T, d). T, e) T
5. a). T, b). F, c). T, d). F, e) T

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The 2014 Namibian Guidelines for Antiretroviral Therapy and The World Health Organization recommend Fixed-Dose Combination Therapy
Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection. Geneva, World Health Organization, 2013, (http://www.who.int/hiv/pub/guidelines/arv2013/en)

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