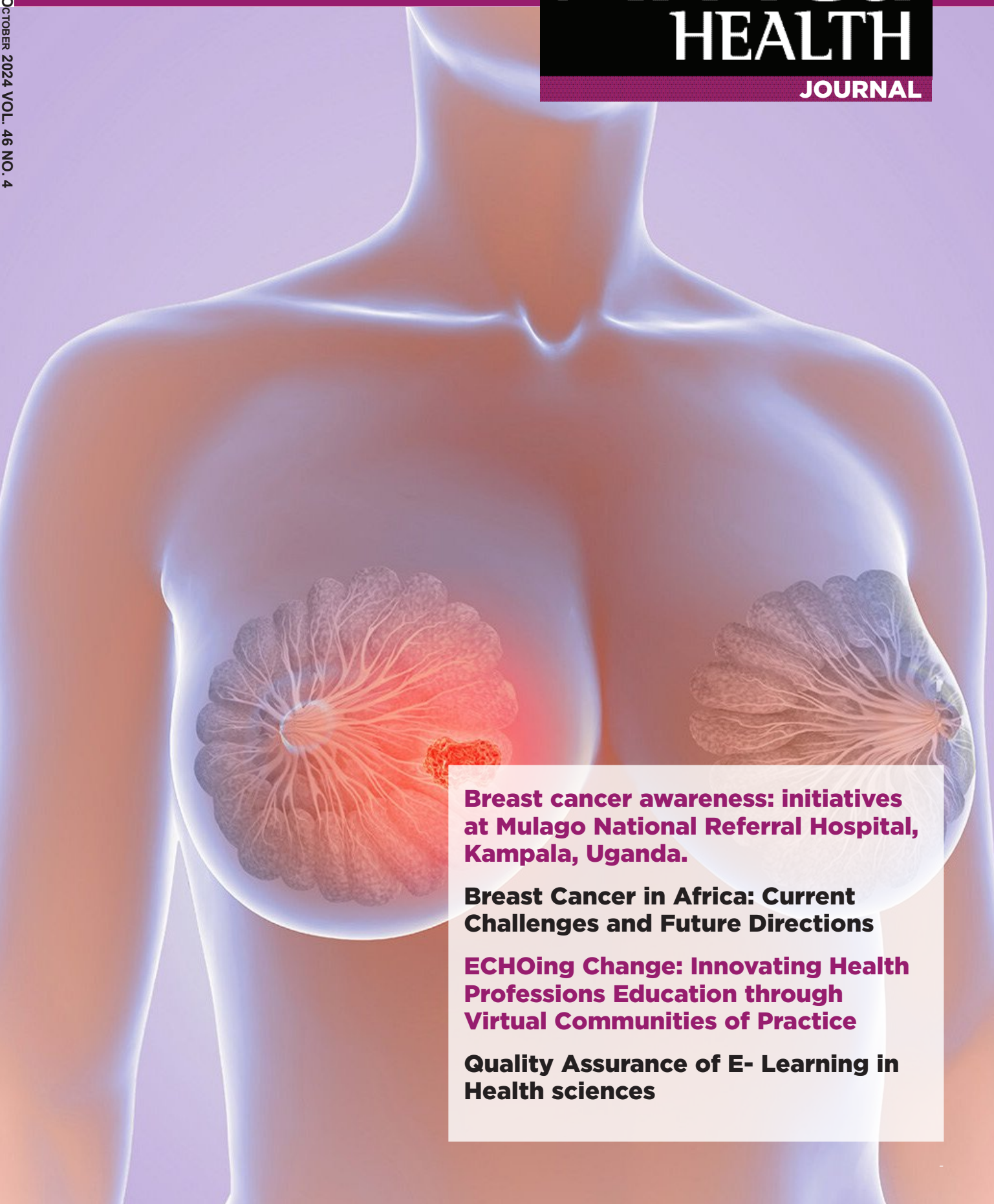
Africa Health October 2024 Vol. 46 No. 4

October 2024 Volume 46 Number 4

Africa HEALTH JOURNAL



Breast cancer awareness: initiatives at Mulago National Referral Hospital, Kampala, Uganda.

Breast Cancer in Africa: Current Challenges and Future Directions

ECHOing Change: Innovating Health Professions Education through Virtual Communities of Practice

Quality Assurance of E- Learning in Health sciences

Africa Health is a journal of continuing medical education information for health professionals, health managers and political leaders in Africa and globally

Published four times a year by the

African Centre for Global Health and Social Transformation

Plot 13B, Acacia Avenue, Kololo
P.O. Box 9974, Kampala, Uganda
Tel: +256 414237225/414250022
Fax: +256 414237226
Email: africahealth@achest.org

www.africa-health.com

Publisher
Francis Omaswa

Accounts Manager
Josephine Amuron

Editor/Production Manager
Elsie Kiguli-Malwadde

Consulting Editor
Bryan Pearson

Business Development Director
David Okello

Layout
Elvis Muyanja

Website Managers
Charles Imalingat
Abraham Okoine

Printed by Elysian Printers in Kampala and Multinational Concepts Ltd in Lagos







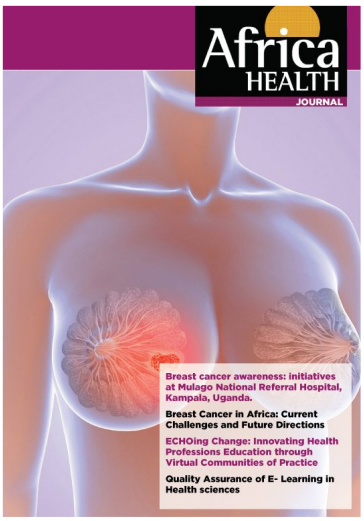


Africa Centre for Global Health and Social Transformation
All contents are © 2021

ISSN 0141-9536 (print)
ISSN 2053-4760 (online)

Contents

Vol 46 No. 4 October 2024



Editorial

03 Important Issues in Africa, Health Workforce and Breast cancer

Elsie Kiguli-Malwadde

Opinion

06 Health Workforce (HWF) Leadership and Governance: A weak point in achieving UHC in Africa

Francis Omaswa

Features

07 The 7th African Forum for Research and Education in Health.

Elsie Kiguli-Malwadde

08 The Network TUFH Conference

09 Remembering Dr. Matthew Lukwiya and other fallen health care workers: There is an urgent need to protect frontline health care workers

Ambrose Otau Talisuna highlights the epidemics and pandemics that have occurred in Africa and proposes concrete actions to safeguard frontline health workers.

11 Breast cancer awareness: initiatives at Mulago National Referral Hospital, Kampala, Uganda.

A team of diagnostic imaging experts outlines initiatives undertaken to raise breast cancer awareness in Uganda.

17 Breast Cancer in Africa: Current Challenges and Future Directions

21 Quality Assurance of E- Learning in Health sciences:

Florence Githinji gives her insight on fostering competence and safety of future healthcare professionals in the context of the Digital Education Revolution

22 Transforming Dental Training: From Guinea into the Continent of Africa

David Ugai narrates his experience with dental training and highlights the importance of practical training facilities in addressing the challenges faced by dental schools in Africa.

26 Universal Health Coverage at UNGA 79 – What we should be discussing

Allan Pamba discussed the current state of funding for achieving Universal Health Coverage (UHC) in Africa, with a particular focus on diagnostics. He also proposed actionable steps to address the challenges and pave the way forward.

28 ECHOing Change: Innovating Health Professions Education through Virtual Communities of Practice

Caroline Kisa describes a revolutionary model that transforms how healthcare knowledge is disseminated across the globe by leveraging technology.

32 Transforming health professions education in Africa

Medicine Digest

34 Abstracts from Renowned Journals

CPD Challenge

38 Test Yourself

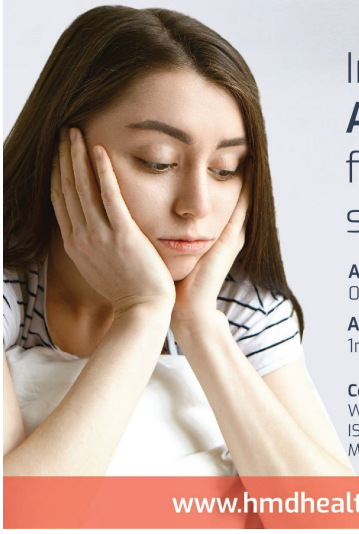
Below is our Publishing Partner. HMD has demonstrated its commitment to health in Africa by supporting this publication throughout the year.

KOJAK® SELINGE

HMD

When you are being Injected make sure you are not being Infected





Insist on using
Auto Disable Syringe
for assurance and safe injections

Available for Immunization
0.1ml, 0.2ml, 0.25ml, 0.3ml, 0.5ml

Available for Therapeutic
1ml, 2ml, 3ml, 5ml, 10ml, 20ml

Certification:
WHO PQS
ISO 13485
MDSAP



Kojak Safety Box
For collection of sharps - used syringes/needles/ blades, 5L/10L

www.hmdhealthcare.com

Your Defence Against AIDS/Hepatitis

Sharpen your cause of death certification skills and help improve your country's mortality data.

Enroll in the Medical Certification for Cause of Death (MCCOD) eLearning course.

Physicians in some countries can earn continuing medical education credit for this course.

TO REGISTER, PLEASE VISIT
https://www.train.org/main/course/1078859/

For additional information, please email CRVSinfo@vitalstrategies.org

SUPPORTED BY

Bloomberg Philanthropies · DATA FOR HEALTH INITIATIVE · Vital Strategies

Africa HEALTH

Subscription information

We run a two-tier system for paper-based subscriptions to Africa Health Journal, and there are options for payment in local currency in some African countries.

International subscribers: If you reside within the European Union: $ 100 or € 83 or £ 75 per annum. Elsewhere in the world: $ 140 or € 124 or £ 113 (airmail).
Health professional's resident in Africa: $ 50 or € 42 or £ 38 per annum.

Payment Options
Payment can be made by Wire Transfer to the following Account Details.
Account Name: African Centre for Global Health and Social Transformation

Bank Name:	Bank of Baroda (Uganda) Ltd
Account No:	95010200002110
Currency:	US Dollars
Branch:	Plot 18 Kampala Road, P.O Box 7197 Kampala, Uganda
Swift Code:	BARBUGKAXXXX

For more information, please contact us on africahealth@achest.org.

Important Issues in Africa, Health Workforce and Breast cancer.

This issue is dominated by two important topics, health workforce training and breast cancer. They are two distinct topics, each with its own significance for Africa. The continent still faces major challenges of significant health workforce shortage. While breast cancer disease burden seems relatively lower in Sub Saharan Africa (SSA), survival is staggeringly low, with disproportionately high mortality rates, Therefore this makes it an important issue to focus on considering that October is breast cancer awareness month.

Francis Omaswa emphasizes Health Workforce (HWF) leadership as a weak link in achieving UHC in Africa, citing a lack of trained HWF managers. He urges stakeholders to develop specialized managers capable of planning and managing health workers effectively. This followed a WHO Africa meeting (Lusaka, Zambia, November 12–14, 2024), participants focused on competency-based curricula for training health workers. They highlighted the need for practical skills over theoretical knowledge. This culminated in the Lusaka Statement on Health Professions Education (HPE), featured in this issue, stressing the importance of equipping future HWFs to meet population health needs.

Two significant African conferences are highlighted. The 7th AFREhealth Symposium took place from August 6–8, 2024, in Nairobi, Kenya, with 225 global participants. Under the theme "Progress towards SDGs in Africa: Celebrating Milestones and Overcoming Challenges," members emphasized learning from both successes and setbacks. They advocated leveraging technology, advancing research, and addressing healthcare gaps to build a sustainable future. Achieving the SDGs requires collective effort, and Africa must lead with purpose to realize this vision.

The second conference, the Network Towards Unity for Health (TUFH) and Rural WONCA joint event, was held on September 10–13, 2024. Named "Ubuntu 2024" (meaning "I am, because you are"), it marked TUFH's 45th anniversary and the 20th WONCA World Rural Health Conference. Ubuntu 2024 underscored interconnectedness, emphasizing collective identity, inclusivity, and the value of interpersonal bonds. The conference concluded with the Ubuntu 2024 Declaration, reflecting these principles and promoting a holistic approach to global health.

Next we have an article by Ambrose Otau Talisuna which highlights the epidemics and pandemics that have occurred in Africa and proposes concrete actions to safeguard frontline health workers. It is in remembrance of Dr. Matthew Lukwiya and other fallen health care workers who died during Ebola pandemics in Uganda and elsewhere in the African continent. It brings to light the importance of the urgent need to protect frontline health care workers and proposes concrete actions to safeguard frontline health workers.

It has been said that Africa is faced with a double burden of diseases; both the communicable and non-Communicable diseases are still a challenge in Africa. The next two articles are written by experts on breast cancer. The first one written by a team of imaging experts describes initiatives undertaken to raise breast cancer awareness in Uganda. They note that early detection and access to effective treatment remain a challenge for countries with limited resources, despite there being proven and cost-effective interventions. They describe programs they have put together to promote early detection and support those affected by this disease among health workers and the public. Another article on breast cancer also emphasizes the fact that breast cancer represents a significant and growing health concern. It tells us about the factors contributing to the burden of breast cancer in Africa, the efforts that have been made to address breast cancer in Africa as well as some future directions and Recommendations.

The rest of the articles are on health professions education. They all elaborate on different Methods of training and their attributes. One is by Florence Githinji, a Quality Assurance Officer who gives her insight on fostering competence and safety of future healthcare professionals in the context of the Digital Education Revolution. She describes the evolution of eLearning and discusses the quality assurance mechanisms that need to be put in place to foster e-Learning for Health. She concludes that eLearning in has the potential to transform healthcare education in Africa, but its success depends on the implementation of effective quality assurance practices. There is an article by the director of Mercy Ships, Guinea on transforming dental training in Africa. He discusses the importance of having appropriate spaces for skills training for the dentists which are often inadequate in many training institutions in Africa. He describes efforts that have been put in place to overcome this issue in Guinea, which are scalable in other African countries. Allan Pamba in another article discussed the current state of funding for achieving Universal Health Coverage (UHC) in Africa, with a particular focus on diagnostics. He also proposed actionable steps to address the challenges and pave the way forward. Caroline Kisia, Africa ECHO Director crowns it with a revolutionary model that transforms how healthcare knowledge is disseminated across the globe by leveraging technology. Project ECHO has a philosophy: "All Teach, All Learn." This principle underscores the idea that both experts and learners contribute to the learning process. It is a must read.

There's our usual medicine digest and quiz, along with plenty of news and advertisements. The AHJ is available online as an open-access web-based publication (Africa-health.com). This website is active daily, sharing current affairs and engaging through social media platforms like Twitter and Facebook, drawing a large audience. Those interested in advertising are welcome to utilize both the print and electronic channels of the AHJ, following the guidelines provided in the journal.



Elsie Kiguli-Malwadde
(kigulimalwadde@achest.org)

The Africa Health website

The website includes:

- The latest issue, and the back issues of Africa Health
- Latest news
- The TRIP searchable database for evidence based articles and guidelines
- Continuing Professional Development courses
- Conference and meetings calendar
- An insight into African scientific publishing
- Subscription information
- Banner advertisements

Search the TRIP database for free

Here is a free database which gives you access to millions of articles, all indexed and uniquely ranked.

Content is entirely evidence-based and peer-reviewed, and in addition to the scientific articles on every medical subject you can imagine; the database also includes a host of guidelines on treatment and management protocols.

Crucial in the use of the database is the need to understand the filtering options (see image to the right) or you will find yourself

Africa HEALTH



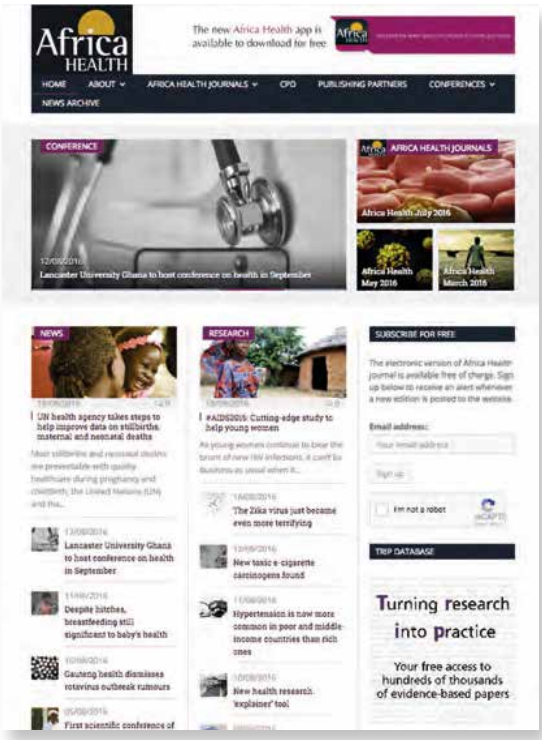
Get Africa Health on the go

The Africa Health app is available to download. You can now read the latest edition and archived editions of Africa Health on the go.

You can find the Africa Health app is available for both iPhone and Android via the app stores.

The app and it's content is completely free to download from the app store.

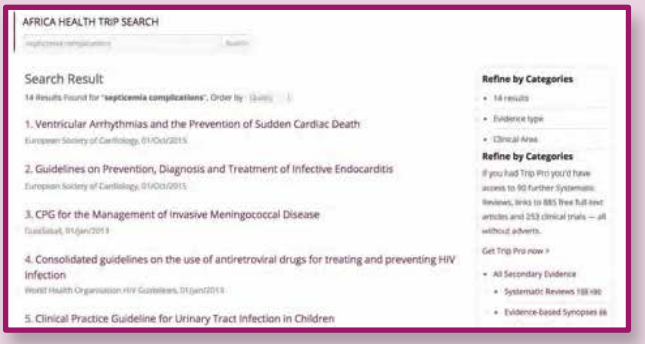
Please note that the app currently shows a couple of years worth of journals. More of the archive will be added in due course.



View the latest edition and back issues of the Africa Health journal

Subscribe for free to the Africa Health e-alerts. This enables you to read every edition online as soon as they are available

with a 'selection' of several thousand papers. Having carefully chosen the search words (be as specific as you can) you will then see (down the right hand side) a number of refinements that you can make to your search. You'll then have a much more manageable and relevant search outcome.



www.africa-health.com

Health Workforce (HWF) Leadership and Governance: A weak point in achieving UHC in Africa



Francis Omaswa urges stakeholders to work together to create a pool of specialized HWF managers with capabilities to plan, develop and manage health workers that respond to population health needs.

The World Health Organization (WHO) Afro convened a meeting in Lusaka, Zambia 12 – 14 November, 2024 on developing competency-based curricula for the education and training of health workers in Africa. This activity is part of the drive to implement the Africa Health Workforce (HWF) Investment Charter, adopted in Windhoek, Namibia in June 2024. The outcome of this meeting is captured in the Lusaka Statement, also published in this issue of the Africa Health Journal.

While I am encouraged by this emerging African momentum on the HWF agenda, I remain concerned by the long journey that still lies ahead to achieve our vision of enabling "access to skilled, motivated and supported health workers by every person in every village everywhere".

The African region has the worst health and development indices and the gap between Africa and other regions, such as South East Asia is big. This should be a source of embarrassment and shame to us in Africa. Yet some of the South Asian countries, that are performing much better, had similar health and development indices to African countries when we all got independence from colonialism some 60 years ago. What is the problem?

The immediate pre and post-independence era in Africa was hopeful, confident and ambitious and significant progress was registered in many countries. This was regrettably overturned into dependency not only for money but also for ideas and loss of the "can do attitude". This resulted from bad governance; characterized by military governments, condoned and facilitated by the cold war between the western countries and the Soviet Union. African countries were reduced to beggar-hood as "Highly Indebted Poor Countries (HIPCs). African indigenous knowledge and value systems were demonized and sidelined, making Africans dependent and helpless. Wrong solutions to many African problems were imposed, resulting in retarded development. This debate continues under the banner of decolonization of global health but is in reality a call to African health leaders and countries to take charge of their agenda and recover the "can-do attitude".

The answer lies in strengthening leadership and governance of health and the HWF agenda. This is the first pillar of the Kampala Declaration and Agenda for Global Action (AGA) on HWF which was adopted at the First Global Forum on HWF in 2008.

In many African countries, the individuals who manage HWF in the Ministries of Health or Public Service are generally trained Human Resources managers who do not have the specialized training to link HWF skills to the health needs of the population. For example, if the country has one million births annually, how many midwives, obstetricians and pediatricians are needed and how should they be deployed? There is a tool known as Workload Indicators of Staffing Need (WISN) which requires special training and experience for determining staffing needs in health. HWF planning is a specialized function for which most ministries of health are not equipped. HWF managers in African countries know how to maintain files on health staff and follow if they have taken annual leave or are due for salary upgrade or retirement but not how to link their skills and performance to the country disease burden and population health needs. There is need to establish in every Ministry of Health an office at a senior level that is responsible for HWF planning, development and management whose core mandate is focused on linking HWF skills to the population health needs.

There is also an urgent need to reform education and training to competency-based model that equips training skills to perform tasks as opposed to acquiring knowledge that is not translated into performance of tasks. The training should ideally take place in an environment which enables learning to take place as apprenticeship by following and observation of the routine work of the teachers and mentors. For example, clinical excellence should be the foundation for teaching clinical skills. If the teachers are not practicing it is not possible for them to teach effectively and to be role models. In some countries I have learnt about the tension and strained relations that exist between teachers and students. Ideally this should be a parental relationship where there is friendship and trust enabling trainees to feel at home to ask questions to learn by observation and the example of professional mentors.

In conclusion, I call upon WHO, academic institutions, professional associations and Ministries of Health and relevant sectors to work together to create a pool of specialized HWF managers with capabilities to plan, develop and manage health workers that respond to population health needs. This will make it possible for Africa to achieve UHC and SDGs as well as close the shameful gap between Africa's health indices and those of other regions.

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

The 7th African Forum for Research and Education in Health.

The 7th African Forum for Research and Education in Health (AFREhealth) Symposium was held from August 6th to 8th, 2024, in Nairobi, Kenya, bringing together 225 professionals from around the world. The event focused on the theme: "Progress towards SDGs in Africa: Celebrating Milestones and Overcoming Challenges." The symposium's subthemes were:

1. Harnessing Digital Technology and Innovation for Health Professions Education towards attainment of SDGs.
2. Research towards attainment of SDGs.
3. Efforts to bridge gaps: Achieving Universal Health Coverage (UHC).
4. Leadership and Advocacy towards sustaining the momentum of SDGs.

AFREhealth is an interdisciplinary network that collaborates with ministries of health, training institutions, and stakeholders to improve healthcare quality in Africa through research, education, and capacity building. Its membership spans individuals, institutions, associations, and networks across Africa's diverse linguistic and geographic regions: Anglophone, Francophone, Lusophone, and Arabophone. The organization welcomes both African and global stakeholders committed to strengthening Africa's health systems.

A Platform for Reflection and Progress

The annual symposium provides a vital platform for AFREhealth members and partners to reflect on health challenges and progress in Africa and globally. This year's theme emphasized Africa's journey toward achieving the Sustainable Development Goals (SDGs), celebrating successes while addressing persistent challenges with renewed determination.

The program was thoughtfully structured, featuring nine plenary sessions, including opening and closing ceremonies, six interactive workshops, and 30 breakaway sessions. These formats facilitated deep engagement, with plenary sessions focusing on key subthemes and breakaway sessions allowing for more detailed exploration and discussions.

Subtheme 1: Harnessing Digital Technology and Innovation

This subtheme highlighted the transformative potential of digital technology in health professions education, critical for achieving SDG 3 (*Good Health and Well-being*). Africa has made significant progress in leveraging virtual communities of practice, applying artificial intelligence (AI) in teaching, and adopting eLearning strategies. These innovations are driving accessibility, collaboration, and resource-sharing, equipping health professionals with tools to address regional health challenges.

Subtheme 2: Research Driving Sustainable Development

Research is foundational to sustainable development, driving innovation, shaping policies, and addressing unique challenges. Africa's growing commitment to locally relevant and globally impactful research has yielded advancements in combating infectious diseases like malaria and HIV/AIDS and tackling non-communicable diseases such as diabetes and hypertension. Presentations explored mental health, patient-centered care, aging, vaccines, and innovations in health professions education, showcasing the region's research contributions to global health.

Subtheme 3: Bridging Gaps for Universal Health Coverage (UHC)

Achieving UHC is central to the SDGs, ensuring equitable access to health services without financial hardship. Despite progress, significant disparities persist, particularly in rural and marginalized communities. Discussions centered on strengthening health systems, improving quality of care, training health workers, and addressing non-communicable diseases. The urgency of equitable resource allocation and innovative solutions to healthcare gaps was emphasized.

Subtheme 4: Leadership and Advocacy for Sustaining Momentum

Leadership and advocacy are critical in advancing the SDGs. Effective leadership entails setting a vision, mobilizing resources, building partnerships, and ensuring accountability, while advocacy raises awareness, influences policy, and engages stakeholders. Civil society, the private sector, and the media play pivotal roles in amplifying the urgency of the SDGs, fostering collective action, and driving sustainable change.

Unique Plenary: Global Workforce Dynamics

A notable plenary session addressed *"The New US Alternative Models for Licensure of International Medical Graduates and Their Potential Impact on People's Health and Wellness in Low-Resource Settings."* This sparked vibrant discussions on health worker migration and the global human resource crisis, emphasizing ethical recruitment and retention strategies to strengthen local health systems.

Celebrating Milestones and Addressing Challenges

The symposium celebrated AFREhealth's milestones, including advancements in health professions training, regionally relevant research, and enhanced South-South collaboration. These achievements highlight the resilience, innovation, and partnerships driving progress in African healthcare.

However, significant challenges remain. The COVID-19 pandemic exposed the fragility of health systems, underscoring the need for investment and reform. Climate change, economic inequality, and political instability pose additional threats to sustainable development. Yet, these challenges call for innovation, collective action, and unwavering commitment.

Moving Forward: A Call to Action

The symposium concluded with a call to action, urging participants to draw inspiration from past successes while addressing persistent gaps. Harnessing the power of technology, championing research, bridging healthcare disparities, and fostering leadership are essential strategies for advancing the SDGs.

The journey toward achieving the SDGs is a shared responsibility. By working collaboratively, the AFREhealth community and its partners can overcome challenges and build a prosperous, equitable, and sustainable future for Africa and the world.

Elsi Kigul-Malwadde, past President AFREHealth

The Network TUFH Conference



The Network Towards Unity for Health (TUFH)

The Network Towards Unity for Health (TUFH) held its yearly symposium on 10-13 September 2024 jointly with Rural WONCA (The Working Party on Rural Practice). This joint conference was named Ubuntu 2024 meaning "I am, because you are". It brought together the TUFH 2024 Annual Conference for TUFH, which celebrated its 45th anniversary in 2024, and the 20th WONCA World Rural Health Conference!

This conference was uniquely co-hosted by 5 partners in Cape Town, South Africa: University of the Western Cape; University of Cape Town; Stellenbosch University; Cape Peninsula University of Technology, and the Department of Health and Wellness – Western Cape Government. The conference was held at the University of the Western Cape (UWC) , an esteemed public research institution located in Bellville, in close proximity to Cape Town, South Africa.

The main theme was "People, Place, and Policy for Community Wellness" People: community, professionals, partnerships, and interpersonal, Place: rural and urban, global north and global south. The Subthemes were:

- Building Equity for Rural Health
- Community Engagement for Local and Global Health
- Social and Health Policies for the Public Good
- Educating the Health Workforce

The Network: Towards Unity for Health (TUFH) is an international, intersectoral, intergenerational organization that fosters equitable community-oriented health services, education, and research with the goal of improving health locally and globally. It convenes innovative health care organizations, universities, community institutions, and thought leaders from all over the world.

Rural WONCA (The Working Party on Rural Practice) is an active network of rural family doctors and rural academics from each of the world's regions: Europe, Asia, Africa, North America, South America, Australasia/Pacific. Members of the working party are engaged and active in contributing to the vision of "Health for All Rural People" globally through: Repositioning and relationships, Education and Research, Activism and Advocacy and Conferencing and Communication.

The conference was attended by 346 participants and 72 virtual participants form 45 countries. A rich program was put together with 39 workshops, 184 oral presentations, 5 Ubuntu Documentaries, 16 Ubuntu Talks and 43 free paper sessions as well 4 keynote speakers. One of the key highlights of the conference is the site visits; there were 17 sites from which the participants chose. These showcased the work that is being done in the Western Cape, one of the provinces in South Africa. There was a variety so one was spoiled for choice, from community centers, community and projects, centers for the blind, deaf and people with disabilities.

This was all crowned off by the Ubuntu 2024 declaration which emphasized the concept of Ubuntu as a humanist African philosophy that derives from a profound Zulu phrase "Umuntu ngumuntu ngabantu" (a person is a person because of other people), this emphasises the intrinsic connection among people, asserting that a person becomes complete through their relationship with others. Ubuntuism underscores the interconnectedness of all aspects of existence, weaving together spiritual dimensions, collective and personal identities, familial inclusivity, and the profound value of interpersonal bonds.

The "Ubuntu 2024 Declaration" emphasizes the interconnectedness of people, place, and policy in fostering health and wellness, focusing on four key themes:

- Building Equity in Rural Health: Prioritizing equity, the declaration calls for equitable distribution of health resources across rural areas, adequate funding for primary healthcare, and development of a well-distributed, diverse rural health workforce. Actions include community involvement in policy-making, immersive education in rural settings, and addressing research gaps and emergency preparedness.
- Community Engagement for Local and Global Health: The declaration highlights the importance of community engagement, urging the development of community capacity, public-private partnerships, and culturally relevant education. It emphasizes community involvement in chronic disease management, mental health support, and climate change mitigation, promoting a collaborative approach to future public health emergencies.
- Social and Health Policies for the Public Good: Policies should promote social justice, address health inequities, and integrate social determinants of health, climate change, and planetary health. The declaration advocates for co-created, inclusive policies reflecting the needs of marginalized communities, with a focus on sustainability, resilience, and health advocacy.
- Educating the Health Workforce: Emphasizing interprofessional education, the declaration calls for curricula that address climate change, digital health, and community engagement. It highlights the importance of training health workers in rural settings and supporting community-based health workers. Education models should incorporate technology while maintaining core values of communication and continuity.

The declaration urges stakeholders to implement these recommendations locally, address fundamental service inequities, and collaborate with organizations like The Network: TUFH and Rural WONCA to measure progress and impact.

Elsi Kigul-Malwadde, past Secretary General, The Network TUFH

Remembering Dr. Matthew Lukwiya and other fallen health care workers: There is an urgent need to protect frontline health care workers

Ambrose Otau Talisuna highlights the epidemics and pandemics that have occurred in Africa and proposes concrete actions to safeguard frontline health workers.

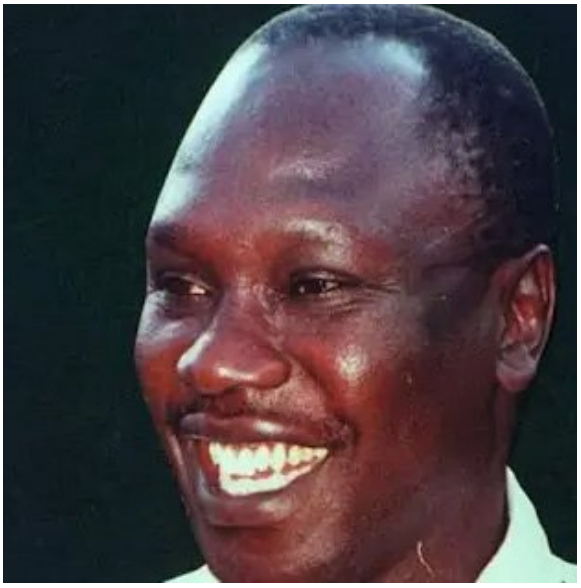
Introduction.

Infectious disease epidemics and pandemics (worldwide epidemics) continue to threaten the health of populations worldwide. In the 20th century, there were three pandemics of influenza in 1918, 1957, and 1968. All three of them were informally identified by their presumed sites of origin, which is presently not recommended because it creates stigma, but they are now known to represent three different antigenic subtypes of the influenza A virus, namely: H1N1, H2N2, and H3N2, respectively [1].

The World Health Organisation (WHO), International Health Regulations (IHR, 2005) as amended in 2024 define a *"pandemic emergency" as "a public health emergency of international concern that is caused by a communicable disease and: (i) has, or is at high risk of having, wide geographical spread to and within multiple States; and (ii) is exceeding, or is at high risk of exceeding, the capacity of health systems to respond in those States; and (iii) is causing, or is at high risk of causing, substantial social and/or economic disruption, including disruption to international traffic and trade; and (iv) requires rapid, equitable and enhanced coordinated international action, with whole of-government and whole-of-society approaches"* [2].

Several new and old infectious diseases have emerged in new regions suggesting that humanity will continue to face future epidemics. Examples of large epidemics in Africa include HIV/AIDs, Cholera, Ebola Virus Disease, Marburg Virus Disease, Malaria, Tuberculosis (both drug susceptible and drug resistant), and most recently, COVID-19 and Mpox[3-12]. The COVID-19 pandemic is the greatest challenge that humankind has faced in generations-costing millions of lives, causing trillions of dollars in economic loss, and disrupting communities [3].

Africa is a hot bed for public health emergencies. As of 30th September 2024, there were 150 ongoing public health events across the WHO African region, including 107 infectious disease epidemics and 43 humanitarian crises. The WHO was supporting Member States to respond to 18 distinct graded emergencies in multiple countries across the African region. These included: epidemics of Anthrax in 3 countries, Cholera in 15 countries, Dengue in 11 countries, Diphtheria in 1 country, Marburg Virus Disease in 1 country, Mpox in 14 countries, and circulating vaccine-derived poliovirus type 2 in 8 countries. In addition, there were climate change related health emergencies due to floods in 3 countries, food insecurity in the horn of Africa due to drought, and complex humanitarian emergencies due to armed conflicts in several countries across the Sahel region, the horn of Africa, the Democratic Republic of the Congo (DRC), Chad, Sudan, and South Sudan[11].



Dr. Matthew Lukwiya

On the 5th of December 2000, Uganda lost Dr Matthew Lukwiya during the first Ebola Virus Disease (EVD) epidemic in the country[13]. Many health care workers (HCWs) were lost over the period October 2000 to February 2001, many of them from Lacor hospital in Gulu district. All the fallen HCWs are heroes but the leading hero for that response was Dr Mathew Lukwiya.

In memory of Dr Matthew Lukwiya and other HCWs who have lost their lives in the line of duty, the Uganda National Association for Community and Occupational Health (UNACOH) has since 2002, held the annual Dr Matthew Lukwiya Memorial Lecture (DMLML). The UNACOH launched its first conference on the 26th of September 1987. However due to teething challenges

Ambrose Otau Talisuna is a medical doctor, epidemiologist, and public health expert in global health.

the next conference did not take place until September 1993. Since then, except during the COVID-19 pandemic lockdowns in 2020, UNACOH has held an annual scientific conference.

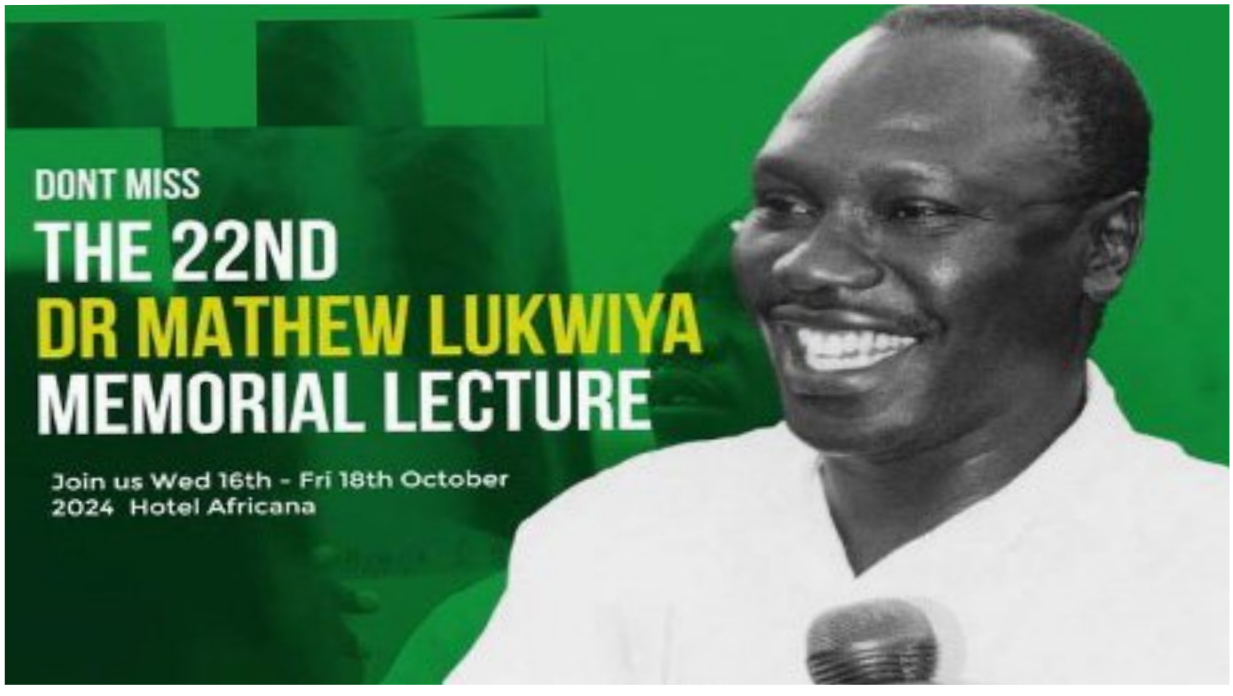
The 2000 annual scientific conference was attended among others by a Master of Public Health (MPH) degree post graduate student-Dr Matthew Lukwiya. Shortly after, on the 8th of October 2000, a mysterious disease, later confirmed to be the first Ebola Virus Disease epidemic in Uganda was reported from Gulu District[13]. Dr Lukwiya who had just completed his MPH degree and was in Kampala was informed about the mysterious disease in Gulu. He travelled from Kampala to Lacor hospital and was the first to make the alarm about a possible Viral Haemorrhagic Disease (VHD) epidemic. He swiftly set up an isolation ward for the management of cases. He also initiated health education of Lacor hospital staff about barrier nursing (as it was called then) and infection prevention and control (IPC) measures. He was one of three doctors, along with Dr Zabulon Yoti, who volunteered to work in the isolation ward from the start of the epidemic. His presence strengthened the response to the epidemic. Unfortunately, Dr Mathew Lukwiya contracted the disease and on the 5th of December 2000, he died, despite medical efforts and nation-wide prayers for God to spare his life.

The first Ebola Virus Disease in Uganda commenced on the 8th of October 2000. The epidemic was characterized by fever and haemorrhagic manifestations and affected HCWs and the general population of Rwot-Obillo, a village 14 km north of Gulu town[13]. Later, the epidemic spread to other parts of the country including Mbarara and Masindi districts. Response measures were instituted including, surveillance, community mobilization, case, and logistics management. Three coordination committees were formed- a National Task Force (NTF), a District Task Force (DTF) and an Inter-ministerial Task Force (IMTF). The NTF and DTF were responsible for coordination and follow-up of implementation of activities at the national and district levels, respectively, while the IMTF provided political direction and handled sensitive issues related to stigma, trade, tourism, and international relations[13]. The international response was coordinated by the WHO under the umbrella organization of the Global Outbreak and Alert Response Network (GOARN) [13].

The epidemic lasted up to 16 January 2001 and a total of 425 cases with 224 deaths were reported countrywide (Case fatality ratio of 53%). The epidemic was finally declared over on the 27th of February 2001, 42 days after the last case was reported[13].

From the 16th - 18th of October 2024, the 18th Joint Annual Scientific Health (JASH) conference, the 30th UNACOH conference and the 8th Uganda Medical Association (UMA) Grand Doctors Conference (GDC) and Annual General Meeting (AGM) was held, culminating in the ***22nd Dr Mathew Lukwiya Memorial Lecture***. The theme for the 2024 conference, that was held at Hotel Africana in Kampala Uganda, was ***"Global Health Security: Partnerships for Epidemic Response and Control in sub-Saharan Africa"***. I was humbled and honored to deliver the 22nd Dr Matthew Lukwiya memorial lecture, on the 18th of October 2024, titled ***Global Health Security: The urgent need for expanding partnerships and protecting frontline health workers***.

In this paper I propose some concrete actions to protect frontline health workers. In 2000, when the first EVD epidemic occurred in Uganda, I was Principal Epidemiologist at the Uganda Ministry of Health (MoH) and I led the surveillance and data management technical working group (TWG) on the NTF led by Dr Sam Okware (then Commissioner for Community Health Services), with overall technical stewardship from Professor Francis G. Omaswa (then Director General of Health Services-DGHS) and political stewardship from Dr Chrispus W,C,B. Kiyonga (then Minister for Health). So, the outstanding role and ultimate sacrifice paid by



Dr Matthew Lukwiya and other HCWs is still painfully etched in my mind.

In 2007, when the Bundibugyo epidemic occurred, I was Assistant Commissioner for the Epidemiology and Surveillance Division. We initially sent blood samples to the US Centers for Disease Control and Prevention (US-CDC) in Atlanta, Georgia, the National Institute of Communicable Disease (NICD), in South Africa, the Kenya Medical Research Institute (KEMRI), Kenya, but the first samples were reported negative for Ebola Virus Disease. However, HCWs continued to get infected, which did not add up to the differential diagnosis of Rift Valley Fever, a vector borne disease. A second rapid response team (RRT) led by Dr Joseph Wamala was redeployed to conduct further investigations and collect additional samples that were sent to the US CDC in Atlanta and this time round it turns out that it was Ebola due to a Novel strain-Bundibugyo[14]. So, the brave role and ultimate sacrifice paid by Dr Jonah Kule and other HCWs is also still painfully etched in my mind.

The urgent need to protect frontline health care workers

It is close to 24 years ago when Dr Matthew Lukwiya (MHSRIEP) said ***"I am going to die now, I pray no one has to die of this disease again"***. Yet even today as the world lionizes HCWs, we fail to keep them safe as they work to keep others safe and alive. Sadly, outbreaks continue to take a toll on HCWs. The COVID-19 pandemic unraveled inadequacies in protecting HCWs[15.16]. As the virus swept the globe, public displays of support for overburdened HCWs were common and yet lack of protections for HCWs, and their consequences, were clear. There were hundreds of thousands of HCW infections because of lack of personal protective equipment (PPE). There was an uptick in mental health issues and suicides, because of the strain on HCWs due to ill-prepared public health systems[15]. The WHO estimates that between 80 000 and 180 000 health and care workers could have died from COVID-19 in the period between January 2020 to May 2021, converging to a medium scenario of 115 500 deaths[17].

Health care worker infections hamper epidemic control efforts. First, HCW infection sideline necessary staff; second, they make HCWs and by proxy, hospitals, and other health care facilities vectors for spreading disease; third, they deplete the health care workforce and finally, they impede provision of routine care. In the Sierra Leone-2014–2016 Ebola outbreak for example, loss of HCWs translated to a 23% reduction in health services[17].

Failing to protect HCWs weakens health care systems and moves us away from the goal of universal health coverage (UHC) and the sustainable development goal 3 (SDG-3)-good health and wellbeing. Inadequate preparedness for epidemics and inadequate protection of HCWs is a failure, not only of governments, but also of international institutions and donors. We need collective responsibility and accountability for the well-being of our HCWs. Knowing is not enough-We must apply: Willing is not enough-We must do.

Ten urgent concrete actions

I propose ten urgent concrete actions that are needed now to protect frontline HCWs.

1. Scale up infection prevention and control (IPC) and water sanitation and hygiene (WASH) programmes at national and facility level. This should include a review and update of tools, indicators and score cards for IPC and WASH, as well as provision of adequate support for IPC and WASH, including sufficient PPE supplies and funding.
2. Invest in training, tools and resources for a safer health care workforce and ensure HCWs have sufficient IPC training, safe work environment and safety equipment.
3. Create a career path for IPC professionals. In the complex world of health care, IPC is crucial to keeping everyone safe. IPC helps protect healthcare professionals and reduces patients' risk for healthcare-associated infections (HAIs), which they can get while or soon after receiving care. There is an urgent need to create a career path for IPC professionals.
4. Improve data collection and accountability by tracking and reporting HCW illnesses, deaths, and impacts on employment in outbreak contexts and the underlying causes of illness and deaths.
5. Review laws and legislation to protect HCWs from attack and stigma. Workplace violence against HCWs is increasing all over the world. Due to the COVID-19 pandemic, violence against HCWs increased rapidly. While the causes are multiple, unfortunately, HCWs feel helpless when this happens. Therefore, legal protection towards HCWs in case of workplace violence is needed.
6. Provide HCWs with mental health and psychosocial support. The term 'mental health and psychosocial support' (MHPSS) refers to any type of local or outside support that aims to protect or promote psychosocial well-being or prevent or treat mental health conditions. MHPSS is not confined to a single sector but requires a multi-sectoral approach with involvement of partners in health, education, and protection. Addressing MHPSS issues for HCWs requires that emergency responses are safe, dignified, participatory, community owned, and socially and culturally acceptable. HCWs should be enabled to attend to their own well-being and that of others in their families and communities. There is a need to ensure that HCWs distressed by mental health and psychosocial problems have access to appropriate support and care and those with moderate or severe mental health conditions should have access to essential mental health services and to social care.
7. Develop and implement effective national health care workforce strategies and plans to improve readiness so that there is adequate HCWs density per population as per WHO standards.
8. Monitor progress and improvements using WHO monitoring frameworks at the national and facility level, such as the Joint External Evaluation (JEE) and State Party Self-Assessment Annual Report (SPAR).
9. Ensure availability of surge capacity and ready to

deploy multi-disciplinary surge teams

10. Build and sustain global health security capacities and resilient health systems. The WHO defines Global Health Security as *"the activities required, both proactively and reactively, to minimize the vulnerability to any public health emergencies that endanger the collective health of populations living across geographical regions and international boundaries" [18].*

Health security becomes a general security and development concern when it threatens a nation's ability to function and safeguard its citizens' welfare, including provision of basic services. The rapid spread of the COVID-19 pandemic demonstrates this new critical concern. It also necessitates the adoption of a holistic approach to health, reflecting both a health security approach (controlling the health emergency) and a health development approach (tackling upstream causes and determinants). Although investments in health security are crucial, including early warning systems and laboratory networks, adequate health work force and adequate clinical care, health security alone is not sufficient because it leads to verticalizing infectious disease prevention and control, often overlooking the broader health systems that are chronically underfunded, fragmented, under resourced and inequitable. The COVID-19 pandemic has brough to the surface the crucial relationship between health system capacities and effective health security response.

In most countries, health system deficiencies hindered effective response. These include a lack of emergency planning and leadership, inadequate health work force, shortages of infrastructure and equipment, disruptions to medical supply chains, limited scale-up capacity to respond to increases in caseloads, inadequate information on health systems capacities, as well as a weak engagement of the private sector providers with governments in national pandemic responses. The sad reality is that there can be no genuine and resilient global health security system without strong and resilient health systems with fit for purpose essential public health functions and adequate resources at all levels. Health systems that can effectively leverage both robust global health security core capacities -for instance risk communication, surveillance, and laboratories- and fundamental universal health coverage interventions such as primary health care, accessible health facilities, health worker force and affordable medicines and supplies, are in a better position to protect their citizens against the social and economic impacts of the epidemics and pandemics.

During epidemics we often witness disruptions to many programmes including those for maternal and child health, communicable disease control, routine immunization, and non-communicable disease control. These disruptions are largely attributed to inadequate progress on universal health coverage and limited consideration for the role of primary health care in preparedness and response to epidemics. Thus, overall health outcomes are unlikely to improve without simultaneously addressing both universal health coverage and global health security. Thus, mobilizing investments in a health system approach therefore represents a "double-win".

Conclusion

Dr Mathew Lukwiya has been and continues to be a symbol that represents all HCWs who have lost their lives in the course of saving the lives of other Ugandans. The COVID-19 pandemic gives further significance to this year's Dr Lukwiya Memorial lecture in view of the numbers of HCWs that have lost their lives because of inadequate capacities in their work environment. In closing, the role of our health care workers is to save lives and alleviate the suffering of patients. It is not to get infected and die because of poor working environments and limited capacities to Prevent, Detect and Respond to epidemics. I call upon the government and Uganda's development partners to act now to stop health care workers infections and deaths during their line of duty.

.

References:

1. Kilbourne, Edwin D (2006). Influenza Pandemics of the 20th Century: Emerg Infect Dis. 12(1):9-14: https://stacks.cdc.gov/view/cdc/16102
2. World Health Organisation (WHO) (2024). International Health Regulations (IHR), amendments, 2024.
3. African Union (AU). Impact of COVID 19 on the African Economy. Accessible at: https://au.int/fr/node
4. World Health Organisation (WHO), Regional Office for Africa . HIV/AIDs. Accessed at : https://www.afro.who.int/health-topics/hivaids.
5. World Health Organisation (WHO), Official Updates-Cholera, accessible at: https://www.who.int/news-room/fact-sheets/detail/cholera?gad_source=
6. US Centers for Disease Prevention and Control. Ebola Disease basics. Accessible at: https://www.cdc.gov/ebola/about/index.html
7. World Health Organisation (WHO), Marburg Virus Disease-Rwanda, accessible at: https://www.who.int/emergencies/disease-outbreak-news/item/2024-DON540,
8. World Health Organisation (WHO), World Malaria Report 2023, accessible at: https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2023.
9. US Centers for Disease Prevention and Control. Clinical Overview of Drug-Resistant Tuberculosis Disease, accessible at: https://www.cdc.gov/tb/hcp/clinical-overview/drug-resistant-tuberculosis-disease.html
10. World Health Organisation (WHO), Corona Virus Disease. Accessible at: https://www.who.int/health-topics/coronavirus#tab=tab_1
11. World Health Organisation (WHO), Mpox, accessible at: https://www.who.int/news-room/fact-sheets/detail/mpox
12. World Health Organisation (WHO) Regional Ofice for Africa. Weekly Bulletin for Emergencies. Accessible at: https://www.afro.who.int/health-topics/disease-outbreaks/outbreaks-and-other-emergencies-updates
13. S I Okware 1 , F G Omaswa, S Zaramba, A Opio, J J Lutwama, J Kamugisha, E B Rwaguma, P Kagwa, M Lamunu (2002). An outbreak of Ebola in Uganda. Trop Med Int Health, 12:1068-75. doi: 10.1046/j.1365-3156.2002.00944.x.
14. Joseph F Wamala, Luswa Lukwago 1,2,3, Mugagga Malimbo 1,2,3, Patrick Nguku 1,2,3, Zabulon Yoti 1,2,3, Monica Musenero 1,2,3, Jackson Amone 1,2,3, William Mbabazi 1,2,3, Miriam Nanyunja 1,2,3, Sam Zaramba 1,2,3, Alex Opio 1,2,3, Julius J Lutwama 1,2,3, Ambrose O Talisuna 1,2,3, Sam I Okware. Ebola Hemorrhagic Fever Associated with Novel Virus Strain, Uganda, 2007–2008. Emerg Infect Dis . 2010 Jul;16(7):1087–1092. doi: 10.3201/eid1607.091525
15. Resolve to Save lives. Protecting Health Care Wotkers. A need for Urgent Action, accessible at: https://preventepidemics.org/covid19/resources/protecting-hcw/
16. Talisuna A, Yoti Z, Lee C, et al. The urgent need for a global commitment to protect healthcare workers. BMJ Global Health 2020;5:e004077. doi:10.1136/ bmjgh-2020-004077
17. Health Worker Deaths During Covid-19. Accessible at: https://www.who.int/news/item/20-10-2021-health-and-care-worker-deaths-during-covid-19
18. World Health Organisation (WHO).Health security> accessible at: https://www.who.int/health-topics/health-security#tab=tab_1
19. Wamala, JF, Luswa L, Mugagga, M, Nguku P, Yoti Z, Musenero, M, Amone, J, Mbabazi, W, Nanyunja, M, Zaramba, S, Opio, A, Lutwama, JJ, Talisuna, AO, Okware, SI. Ebola Hemorrhagic Fever Associated with Novel Virus Strain, Uganda, 2007–2008. Emerg Infect Dis . 2010, 16:1087–1092. doi: 10.3201/eid1607.091525

Breast cancer awareness: Initiatives at Mulago National Referral Hospital, Kampala, Uganda.

A team of diagnostic imaging experts outlines initiatives undertaken to raise breast cancer awareness in Uganda.



Opening of the breast cancer awareness week

Introduction

Similar to many other low-income countries, breast cancer continues to place a significant burden on the healthcare system in Uganda. The age standardized incidence and mortality rate of breast cancer is 21.3 per 100,000 and 10.3 per 100,000 respectively[1]. While 80% of Ugandan women present with advanced disease ,50% experience diagnostic delays of more than a year between symptoms and diagnosis. Worse still, 50% of women diagnosed with breast cancer will die from their disease within 5 years [2,3,4]. Recent data from the pathology department, Mulago National Referral Hospital MNRH revealed 201 new cases of breast cancer in 2022 and 283 cases in 2023.

Mulago National Referral Hospital (MNRH) is the largest public hospital in Uganda with 1200 beds. It is located in Kampala, the capital city of Uganda. It is also the teaching hospital for Makerere University College of Health Sciences.

Though, there is an increasing incidence of breast cancer in Uganda, the uptake of mammography is low only a few health facilities have this equipment. A review of patients' returns for mammography in 3 hospitals in Kampala, showed an average of 1-2 patients per month. The majority of patients who seek this investigation are symptomatic

With the limited resources and suboptimal health systems, early detection and access to effective treatment remain a challenge. Therefore during the breast cancer awareness month of October, MNRH has taken initiatives to raise awareness about breast cancer, to promote early detection and support those affected by this disease among health workers and the public. It used known cost effective interventions which can enhance breast cancer control

Initiatives at MNRH

In 2021 the World Health Organization established the Global Breast Cancer Initiative (GBCI), to provide guidance to governments on health systems strengthening for breast cancer. It brings together stakeholders from

Zeridah Muyinda, Senior Consultant Radiologist[1] zeridahm@yahoo.com, Rosemary Byanyima[1], Senior Consultant Radiologist, John R. Scheel, Professor Radiology & Radiological Sciences, Vice Chair of Global Health Radiology & Radiological Sciences[2], Elsie Kiguli-Malwadde, Radiologists[4], Mulago National Referral Hospital, Uganda[1], Vanderbilt University Medical Center, USA[2], Kampala Imaging Centre, Uganda[3], Kampala Imaging Center[4].

around the world and across sectors with the shared goal of reducing breast cancer by 2.5% per year, which over a 20-year period would save 2.5 million lives. GBCI employs 3 key strategies to achieve these objectives: health promotion and early detection; timely diagnosis; and comprehensive breast cancer management[5].

Effective early detection and access to effective treatment remain a challenge for countries with limited resources, despite there being proven and cost-effective interventions. Substantial improvements in global cancer control can be achieved by implementing what we already know works. MNRH has taken initiatives to raise awareness about breast cancer, promote early detection and support those affected by this disease among health workers and the public.

Policy action

During the scheduled biweekly top level management meetings at MNRH, identification of the previous and current efforts to access breast health care in particular mammography was done. The members made an assessment of breast health services and community partnerships with the institution. The target group was health workers and the general public. The top level managers set objectives, which included raising awareness about breast cancer, promoting early detection and support of those affected by this disease among health workers and the public. The directorate of diagnostics was selected to lead the breast cancer awareness drive.

Breast health awareness, education and community outreach:

In a bid to increase breast cancer awareness, MNRH held a breast cancer awareness camp for 5 days. Educational talks about breast health were conveyed by health professionals during patient encounters. They were educated about the signs and symptoms of breast cancer and encouraged to quickly report any breast concerns to a healthcare provider. Demonstrations of self-breast examination were performed. Studies have shown that patient education and community outreach can improve participation in early detection programs and reduce misconceptions about breast cancer and breast cancer treatment[6]. This time around, the breast care awareness camp targeted the health workers and general public. Free mammography and breast ultrasound services were offered to the participants. In several low-resource countries, Uganda inclusive, there is a lack of trust and confidence in the health system for cure of cancers, which discourages patients from presenting for evaluation of a breast disease. Breast cancer awareness camp is one of the effective ways to address these issues by educational talks and providing services directly to the patients.

Collaboration

MNRH collaborated with Uganda Women's Cancer Support Organization (UWACASO). Its current membership is 35 breast cancer survivors. This group is crucial for the effective creation and dissemination of breast health awareness messages. The survivors who participated in the breast camp focused on educating the population on the importance of early diagnosis and treating of breast cancer. They also educated the participant of the importance of routine screening and self breast examination SBE. The participants were taught how to do self-breast examinations through demonstrations by the survivors. In addition, testimonies of cancer survivors help reduce psychosocial barriers to treatment

Opportunistic screening:

In opportunistic screening, additional diagnostic services are offered by the healthcare team. The primary focus of the health camp was breast cancer awareness. MNRH partnered with Makerere University Joint Aids Program MJAP. MJAP plays a vital role in the Uganda Health care system and has strong links to Ministry of health. It offers support to TB and HIV services in districts, regional referral hospitals and public health facilities in the country. MJAP was able to offer other screening tests, that is routine counselling test for HIV and random blood sugar. This is cost effective especially in low resource setting

Medical training, Research and Clinical Breast Examination (CBE)

There are mounting efforts to improve the expertise and quality of the human workforce that is radiologists, radiographers and sonographers through education and training. In 2016 , Uganda Society for Advancement of Radiology and Imaging USOFARI, an umbrella professional body for medical imaging practitioners adopted and adapted the use of Breast imaging and reporting system BIRADS for ultrasound and mammography. This has been incorporated in the curricula of medical imaging trainees.

MNRH has customized breast ultrasound and mammography report templates using BIRADS. This eases the communication of the breast imaging reports and management recommendations. It also makes it easy to measure the outcome of the findings

Endocrine surgeons participated in the breast cancer awareness event. During the surgical consultations, clinical breast examination CBE was done on the women who attended the camp. CBE screening is cheap, less resource intense compared to mammographic screening especially in unscreened populations. CBE can also be performed by performed by trained non-physician providers especially in low-resource settings.

The training curriculum for the surgery residents has incorporated CBE and counselling in the management of breast cancer to reduce discomfort and anxiety.

Multidisciplinary approach to diseases improves management plans and reduce duplication of care. MNRH supports multidisciplinary interactions of health professional in the management of breast cancer through grand rounds. A session was facilitated by a multidisciplinary team which included radiologist, surgeon and pathologist during the camp. A male and female patient with breast cancer were presented to physicians and medical students. Peculiar clinical problems were presented. The participants were able to

update their knowledge of diagnosis, innovate treatment and advances in research. Emphasis on coordination of multidisciplinary care was underscored. This environment fosters continuous professional development.

Since 2014, more than 10 research articles on breast health have been published in scholarly journals by multilateral collaborations with the department of radiology[6].The breast health research work which has been done at MNRH has significantly contributed to the knowledge and advances in this field [7].

Coordination of care, work flow and patient navigation:

MNRH is a complex institution with several subunits of health care. Similarly, breast cancer care is complex and requires series of investigations. The directorate of diagnostics at MNRH offers medical imaging, clinical laboratory and pathology services. All these departments are located on different levels of the institution. Navigating this process can be challenging for patients and their attendants where there are no referral networks. The patients face delays, lack information about their investigations the next to follow. Worse still, in low resource countries, most patients travel long distances to access tertiary care. However, a retrospective study done at MNRH, using patient navigation to reduce time diagnosis of breast cancer between the departments of radiology and pathology revealed markedly decreased time to diagnosis and rates of loss to follow up [8].

MNRH, therefore can justify the role of patient navigators who can assist patients in navigating the system by helping with appointment scheduling and coordination of care.

Financing models and User fees

One of the barriers of access to breast health care in Uganda is the high costs. UBOS 2022 reveals that 30.1% of the population live below the poverty line and subsequently the health financing is out of pocket. Studies done on health policy and planning in Uganda in 2005 revealed abolition of cost sharing is pro poor [9]. Abolition of user fees in clinical laboratory and pathology department at MNRH has improved access to healthcare. While there is still low allocation to the national health budget, the government should consider financing models that target populations for breast cancer programs and other cost intensive management. Alternative financing models, for example insurance schemes, prepayment and conditional cash payments may reduce financial barrier to access to health care

Advocacy and communication

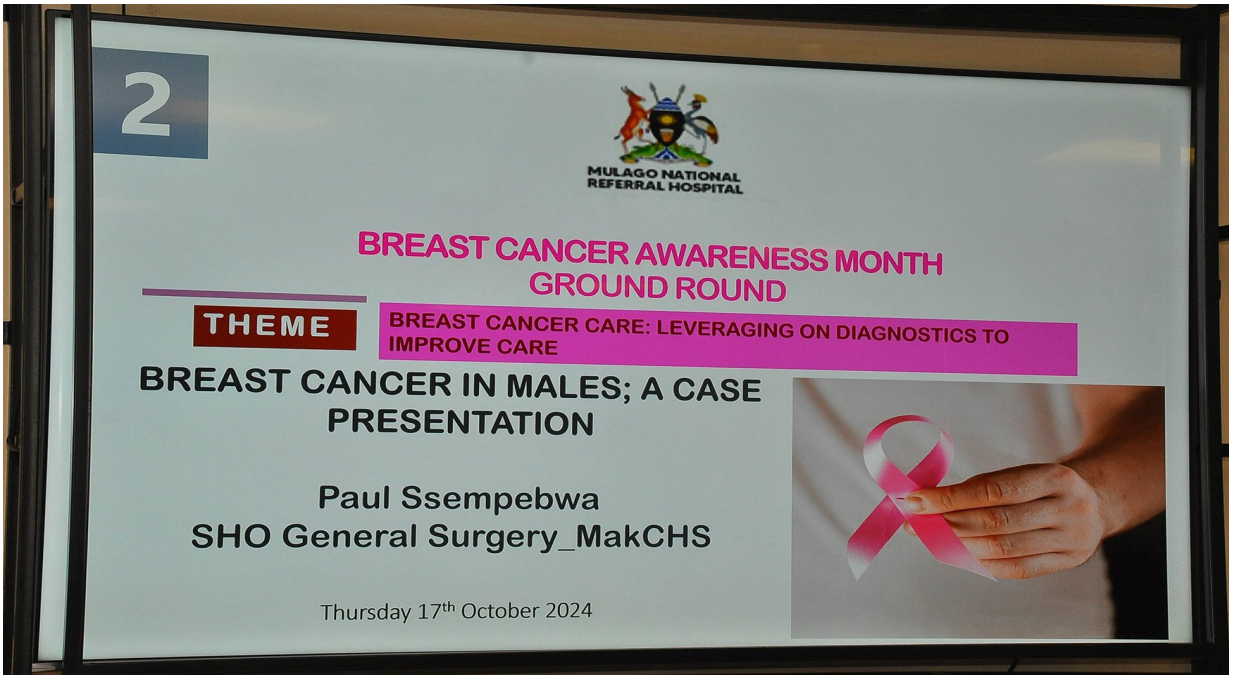
MNRH engaged Ministry of Health (MOH) to participate in the breast cancer awareness event. The participation of political figures and top-level technocrats in the ministry amplifies the priority of breast cancer on the public health agenda. National and private media got an opportunity to cover the stories at breast cancer awareness event. This improved the coverage of awareness and understanding of the breast cancer to larger communities, as the information was shared on television, radio and social media.

Healthy living

In 2023 , MNRH started physical health programs for members of staff. The hospital dedicates 2 days per week for physical exercise. The activity is scheduled for 1 hour . Regular exercises reduces the risk of developing cardiac diseases, diabetes, cancer and obesity. Physical exercise also increases self esteem and confidence and decreases stress and anxiety.



A nurse conducting a breast cancer awareness talk



Presentation on breast cancer in males

FUTURE ASPECTS

Teleradiology

The MOH set up a teleradiology centre at Mulago National Referral Hospital to assist with the transmission of CT images located in 16 Regional Referral Hospitals. Uganda still has a shortage of radiologists. Teleradiology can be used to bridge the gap of the lack of radiologist expertise for breast imaging services in the regional referral hospitals , Implementation of teleradiology can also provide learning opportunities to medical professionals as well as transform the patient care in these regions by lowering the turnaround time for diagnosis, improving quality by encouraging subspecialist evaluation and reducing healthcare costs.

Artificial intelligence

MNRH should explore AI solutions in breast imaging, interpretation and research. AI is reported to assist the radiologist in detecting suspicious findings in imaging exams, diagnosis, choosing a personalized patient protocol and minimizing diagnostic errors. The future of AI in radiology is promising.

Fellowship training

One of the strategic objectives of MNRH is to strengthen capacity for research and training. Investing in human resources capacity is crucial. Supporting fellowship training of breast radiology will enable the trainees to acquire advanced knowledge and skill hence improve the management of breast diseases in the hospital and country

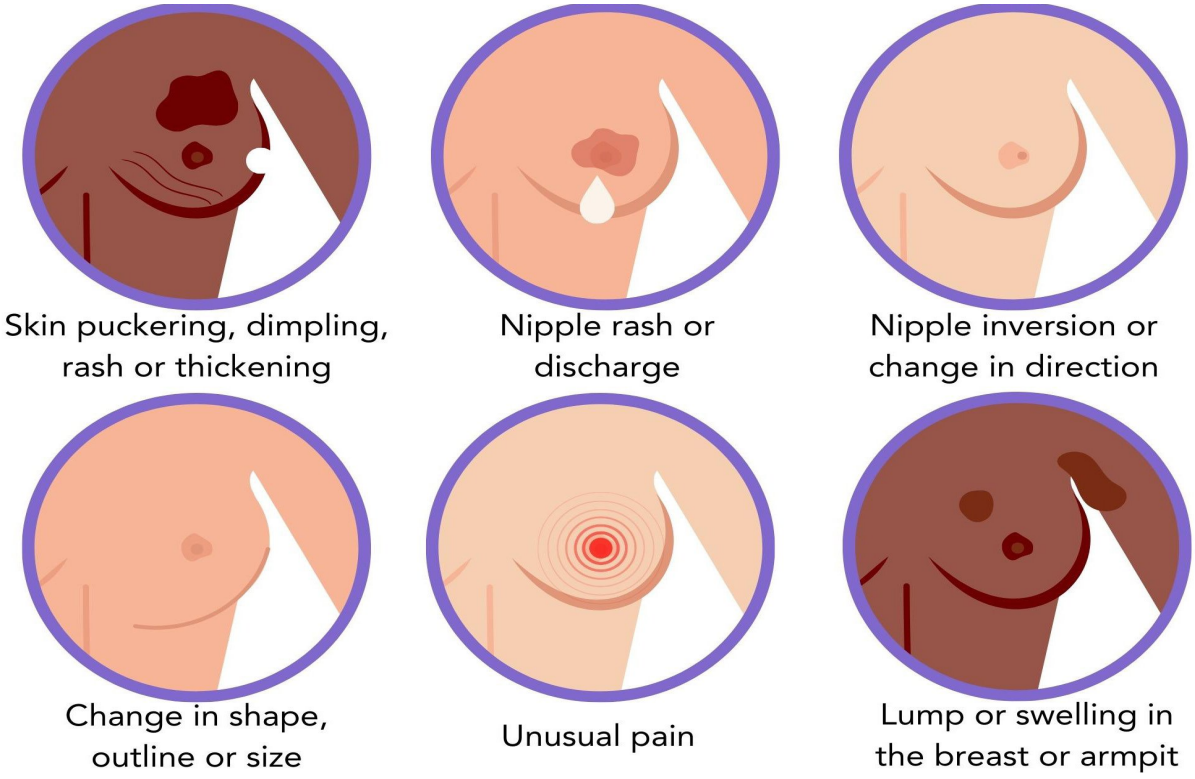
Conclusion

The Initiatives of MNRH, towards breast cancer awareness stem from commitment of the leadership of the institution. The efforts of the hospital are geared towards raising awareness about breast cancer, promoting early detection and supporting those affected by this disease among health workers and the public.

References:

1. Scheel, J. R., Anderson, J., Steel, E., Galukande, M., Nakiyingi, J., Makumbi, T., & Muyinda, Z. (2020). Breast cancer early detection and diagnostic capacity in Uganda. Journal of Global Oncology, 6(1), 1-10. https://doi.org/10.1200/JGO.19.00305
2. GLOBAL CANCER OBSERVATORY (2020) https://gco.iarc.fr/
3. Foerster, M., Anderson, B. O., McKenzie, F., et al (2021). Dissecting the journey to breast cancer diagnosis in sub-Saharan Africa: Findings from the multicountry ABC-DO cohort study. *International Journal of Cancer, 148*(2), 340-351. https://doi.org/10.1002/ijc.33223
4. Asasira, J., Wabinga, H., Mbonye, M., et al (2022). Infection-related and lifestyle-related cancer burden in Kampala, Uganda: Projection of future cancer incidence up to 2030. Cancer Epidemiology, 76, 102079. https://doi.org/10.1016/j.canep.2022.102079
5. World Health Organization. (n.d.). Global Breast Cancer Initiative. Retrieved October 28, 2024, from https://www.who.int/initiatives/global-breast-cancer-initiative
6. Anderson BO, Yip CH, Smith RA, et al. Guideline implementation for breast healthcare in low-income and middle-income countries: overview of the Breast Health Global Initiative Global Summit 2007. Cancer. 2008 Oct 15;113(8 Suppl):2221-43.
7. Africa Health. (2022). Breast imaging in sub-Saharan Africa: Challenges and opportunities. Africa Health, 44(1), 32-35. Retrieved from https://africa-health.com/wp-content/uploads/2022/02/AH-2022-01-32-breast-imaging.pdf
8. Muyinda Z, Davis M K, Kalungi S et al (2024) Using Patient Navigation to Reduce Time to Diagnosis of Breast Cancer in Uganda, @2024 American College of Radiology. PMID: 38461912 DOI: 10.1016/j.jacr.2024.03.006)
9. Meessen, B., Van Damme, W., & Tashobya, C. K. (2020). Abolition of user fees: The Uganda paradox. Health Policy and Planning, 35(1), 79-90. Retrieved from https://research.itg.be/en/publications/abolition-of-user-fees-the-uganda-paradox

Breast Cancer in Africa: Current Challenges and Future Directions



Signs of breast cancer

Introduction

Breast cancer is the most common cancer among women globally, and in Africa, it represents a significant and growing health concern. Despite advancements in breast cancer awareness, diagnosis, and treatment worldwide, the disease's burden in Africa remains disproportionately high. Several factors contribute to this, including late diagnosis, limited access to quality healthcare, socio-economic barriers, and cultural stigmas. This article explores the current state of breast cancer in Africa, highlighting its prevalence, challenges, and potential solutions.

Prevalence and Epidemiology

Breast cancer is the most prevalent cancer among women in Africa, accounting for approximately 25.5% of all cancer cases diagnosed on the continent [1]. According to the Global Cancer Observatory (GLOBOCAN), in 2020, over 168,690 new cases of breast cancer were reported across Africa, with an estimated 74,072 deaths [2]. Unlike in high-income countries where breast cancer is more common in older women, in many African nations, the disease affects younger women, often between the ages of 35 and 49 [3].

The reasons for this demographic pattern are multifaceted, involving genetic, environmental, and lifestyle factors. Additionally, the incidence of breast cancer in Africa is projected to increase due to population growth, aging, urbanization, and adoption of a more Western lifestyle, which includes higher consumption of processed foods, reduced physical activity, and increased obesity rates[4].

Factors Contributing to the Burden of Breast Cancer in Africa

1. Late Diagnosis

One of the most critical challenges in managing breast cancer in Africa is the high rate of late-stage diagnosis. Approximately 70% to 90% of breast cancer cases in sub-Saharan Africa are diagnosed at an advanced stage (Stage III or IV)5. In comparison, less than 30% of cases are detected at late stages in high-income countries. This discrepancy is primarily due to the lack of regular screening programs, limited awareness, and cultural beliefs that discourage women from seeking medical care.

Authors: Jane Fualal Odubu Senior Consultant Surgeon[1], Victoria Walusansa, Deputy Director of the Uganda Cancer Institute (UCI)[1], Israel Luutu, Senior Consultant radiation oncologist at UCI[1], and Elsie Kiguli-Malwadde, Senior Radiologist, Kampala Imaging Center, Uganda.[1] Mulago Hospital



Signs of advanced beast cancer

2. Limited Access to Diagnostic and Treatment Services

Access to diagnostic facilities, including mammography and biopsy services, is limited in many parts of Africa, particularly in rural areas. Moreover, many healthcare systems lack the infrastructure to provide adequate treatment, including surgery, chemotherapy, and radiotherapy. For instance, while the World Health Organization (WHO) recommends one radiotherapy machine per 250,000 people, several African countries have fewer than one machine per 5 million people6.

3. Socio-economic Barriers

Poverty is a significant determinant of health outcomes, and this is evident in the context of breast cancer in Africa. Financial constraints often prevent women from accessing early diagnostic services or completing recommended treatments. Additionally, the cost of drugs, even when subsidized, remains prohibitive for many, leading to high drop-out rates from treatment regimens.

4. Cultural Beliefs and Stigma

Cultural factors also play a significant role in the late presentation of breast cancer. In some communities, there is a stigma attached to the disease, with myths linking breast cancer to curses or supernatural causes. These beliefs discourage women from seeking timely medical attention. Furthermore, the concept of screening for diseases in the absence of symptoms is not well understood or accepted in some cultures7.

Efforts to Address Breast Cancer in Africa

Despite these challenges, several efforts have been made to improve breast cancer care in Africa:

1. Awareness Campaigns

Increasing awareness about breast cancer, its risk factors, and the importance of early diagnosis has been a priority for various health organizations and non-governmental organizations (NGOs). Initiatives like 'Pink October,' which encourages breast cancer awareness during the month of October, have helped to educate women on self-breast examinations and the importance of routine check-ups.

2. Improving Screening and Early Detection

Efforts to implement more widespread screening programs are ongoing. For example, mobile mammography units have been introduced in some countries to reach women in rural areas. These units have been instrumental in early diagnosis and have increased breast cancer survival rates by facilitating diagnosis and timely treatment8.

3. Training Healthcare Professionals

Training more healthcare professionals in breast imaging, oncology and improving the quality of care provided at primary healthcare facilities are essential steps in combating breast cancer. Some countries have started integrating breast cancer education into their health professional training curricula to improve the capacity for early detection and treatment[9,10].

4. Strengthening Health Systems

Investments are being made to strengthen health systems, including building new cancer treatment centers and improving existing ones. Countries like Kenya, Nigeria, and South Africa have taken significant strides in this regard, with governments investing in radiotherapy machines and other cancer care facilities. Additionally, partnerships between local health ministries and international organizations have led to the establishment of oncology training programs for healthcare providers.

Future Directions and Recommendations

Addressing breast cancer in Africa requires a comprehensive, multi-pronged approach:

1. Policy Interventions

Governments should prioritize cancer care by allocating more resources to breast cancer screening and treatment programs. Implementing national cancer control plans, which include regular screening, will help ensure that women are diagnosed at earlier, more treatable stages.

2. Public-Private Partnerships

Public-private partnerships can help bridge the gap in resources and expertise. For example, collaborations between governments, NGOs, and pharmaceutical companies can help provide affordable diagnostic services and treatments, including chemotherapeutic agents and targeted therapies.

3. Community Engagement

Engaging communities in health education campaigns is vital to dispel myths and reduce stigma associated with breast cancer. Local leaders, religious figures, and community health workers can play crucial roles in spreading awareness and encouraging women to seek medical care early.

4. Research and Data Collection

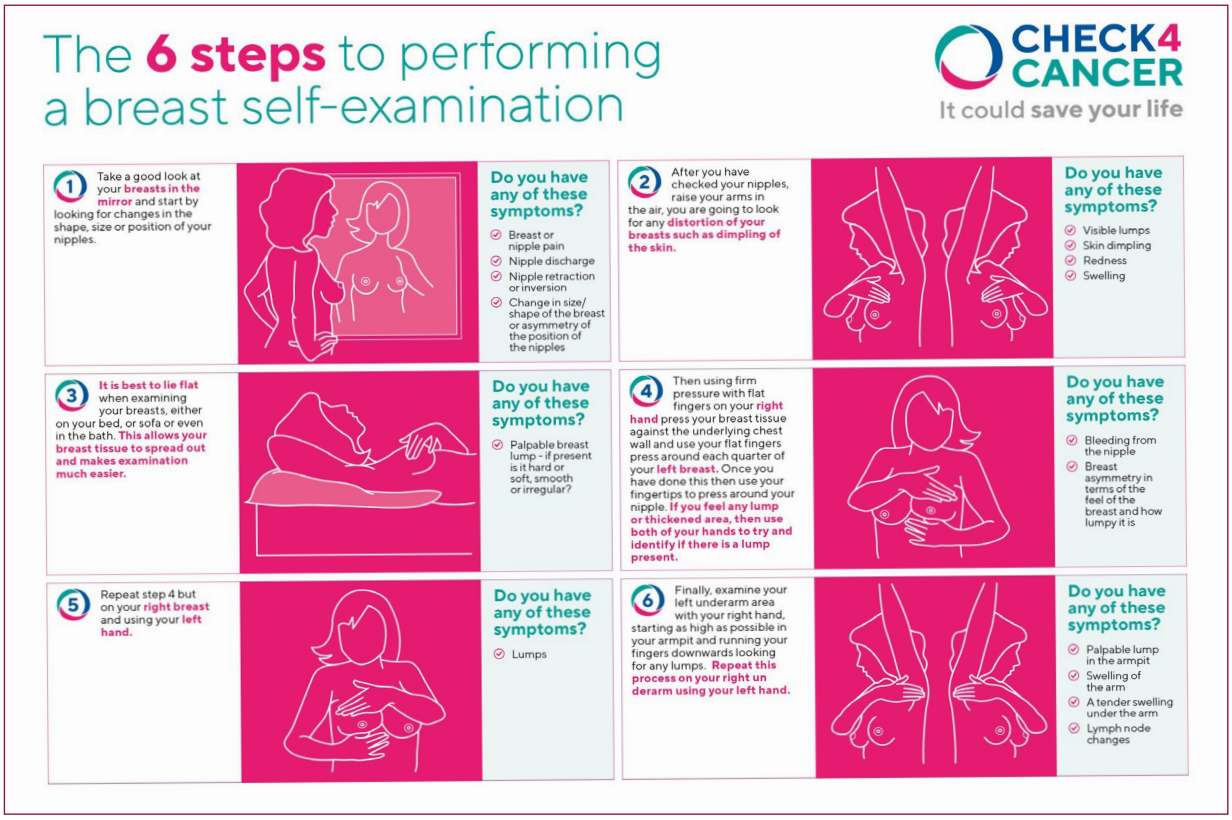
More research is needed to understand the epidemiology of breast cancer in Africa, including genetic studies that could shed light on why the disease tends to affect younger women on the continent. Robust data collection will also help track the progress of interventions and identify gaps that need to be addressed.

Conclusion

Breast cancer remains a major health challenge in Africa, with many women facing late diagnosis, limited access to care, and socio-cultural barriers. However, there is hope. Increased awareness, better screening programs, healthcare worker training, and investments in cancer treatment infrastructure have started to make a difference. With sustained efforts, policy interventions, and international collaboration, the future can hold better outcomes for women facing breast cancer across the continent.

References

1. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin. 2018;68(6):394-424.
2. Sung H, Ferlay J, Siegel RL, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA Cancer J Clin. 2021;71(3):209-249.
3. Jedy-Agba E, McCormack V, Adebamowo C, dos-Santos-Silva I. Stage at diagnosis of breast cancer in sub-Saharan Africa: a systematic review and meta-analysis. Lancet Glob Health. 2016;4(12):e923-e935.
4. Abuidris DO, Elsheikh A, Ali M, et al. Breast-cancer screening with trained volunteers in a rural area of Sudan: a pilot study. Lancet Oncol. 2013;14(4):363-370.
5. Gakunga R, Parkin DM, African Cancer Registry Network. Cancer in Sub-Saharan Africa. Oxford University Press; 2017.
6. Ndlovu N. Radiotherapy treatment in cancer control and its important role in Africa. Ecancermedicalscience. 2019;13:942.
7. Akuoko CP, Armah E, Sarpong T, Quansah DY, Amankwaa I, Boateng D. Barriers to early presentation and diagnosis of breast cancer among African women living in sub-Saharan Africa. PLoS One. 2017;12(2):e0171024.
8. Akinyemiju TF, Ogunsina K, Sakhuja S, Ogbhodo V, Braithwaite D. Comparative analysis of breast cancer knowledge and awareness among women in Africa and the United States: Findings from the World Breast Cancer Survey. BMC Cancer. 2019;19(1):1-10.
9. Stewart BW, Wild CP. World Cancer Report 2020. International Agency for Research on Cancer; 2020.
10. Zeridah Muyinda, Katie M. Davis, Samuel Kalungi, et al Using Patient Navigation to ReduceTime to Diagnosis of Breast Cancer in Uganda. J Am Coll Radiol 2024;21:1180-1187



PRE-ECLAMPSIA FACT SHEET

Act Early! Screen Early!

1. What is pre-eclampsia?

Pre-eclampsia is a pregnancy complication that is characterized by high blood pressure. The 'disease' frequently occurs during pregnancy after 20 weeks (5 months) of pregnancy but can also occur after delivery. It can cause damage to many organs and/or systems in the mother's body, especially the liver, kidneys, brain, lungs, and the coagulation system. It can affect the unborn baby leading to complications before and after delivery.

2. Why is pre-eclampsia such a big issue/problem for everyone?

- Pre-eclampsia affects 5-8% of all pregnancies worldwide
- Globally, 16% of all mothers who die during pregnancy or childbirth do so due to pre-eclampsia. This translates to over 76,000 maternal deaths per year.
- Pre-eclampsia also significantly contributes to the death of new-borns, causing over 500,000 new-born deaths per year,
- Pre-eclampsia is currently the second leading cause of death in women during pregnancy and childbirth in Uganda.
- Pre-eclampsia was responsible for 15 % of maternal deaths in Uganda (MPDSR report of 2020/2021). The contribution is higher at national and regional referral Hospitals.

3. What causes pre-eclampsia

The exact cause of pre-eclampsia is not known but several factors are believed to contribute to the development of the disease. Experts believe that one of the major factors is the poor development of the placenta— the organ that nourishes the fetus and also clears its waste products. As the pregnancy progresses the poorly developed placenta is not able to properly support the growing fetus leading to complications in the mother and / or unborn baby.

4. Who is at risk of getting pre-eclampsia?

Any woman who gets pregnant has the potential to get pre-eclampsia. However, the following categories of women are at increased risk of suffering from pre-eclampsia when they get pregnant:

I. Women who are carrying a pregnancy for the first time (primigravida)

II. Women who had pre-eclampsia in a previous pregnancy

III. Women who are too "young" (less than 20 years) and too "old" (more than 40 years)

IV. Women who have a family history of pre-eclampsia (either the mother or maternal aunties or siblings have ever had p re-eclampsia)

V. Women who already have high blood pressure before pregnancy (chronic hypertension)

VI. Women who are suffering from long-term diseases such as diabetes mellitus (sugar disease), kidney disease, and sickle cell disease.

VII. Women who are obese (too much weight for the person's height)

VIII. Women who carrying 2 or more fetuses (multiple pregnancy)

IX. Women who delay for more than 10 years to conceive after a previous pregnancy (long inter pregnancy interval)

X. Women who are carrying an abnormal pregnancy without a baby (molar pregnancy)

Women who have a new partner fathering that pregnancy

Women who conceive through assisted reproductive technologies (IVF)

Etc.

5. What symptoms do women who suffer from pre-eclampsia exhibit?

- A number of women who get pre-eclampsia may not show any symptoms. Those who show symptoms may exhibit one or more of the following:
- Persistent and / or severe headache that will not go away even with painkillers
- Visual disturbances (photophobia, blurred vision, or temporary blindness)
- Upper abdominal (epigastric pain)
- Altered mental status (confusion, altered behavior, or agitation)
- Dyspnea or difficulty in breathing
  Swelling of the face, hands, and feet
- Nausea with or without vomiting after the mid-pregnancy
- Excessive weight gains or sudden increase in weight (more than 5kg per week)



6. Is there a cure for pre-eclampsia?

At present, the ultimate cure for pre-eclampsia is delivery. There are also treatments to minimize some of the complications that could occur as a result of pre-eclampsia.

7. What are the immediate and long-term consequences or complications of pre-eclampsia to the mother?

Immediate complications of pre-eclampsia to the woman include:

Quality Assurance of E- Learning in Health sciences:

Florence Githinji gives her insight on fostering competence and safety of future healthcare professionals in the context of the Digital Education Revolution.



Figure 1 : Simulation of managing PPH by Nursing students at Clarke International University

The Evolution of e-Learning in Health Sciences

The rapid expansion and integration of e-learning in health sciences has transformed education delivery, making it more accessible, flexible, and scalable. The increased reliance on digital education in health sciences has both opportunities and challenges. To ensure that future health care professionals are adequately prepared, it's essential to focus on fostering their competence and safety. Practical activities based on local institutional creativity and regional issues can reinvigorate the links between clinical practice and the health of people, through quality assurance and promotion. One form of a practical activity that can be identified is through the use of e-learning and technology. With the new generation of health professionals, some skills such as diagnosing and treating an array of diseases has become complex and challenging. These Health professionals also seem to portray other transferable skills which can be embedded with future curricular through the use of e-learning.

Florence Wamuyu Githinji, fgithinji@ciu.ac.ug; Quality Assurance Officer; Clarke International University (CIU), General Secretary ; Ugandan universities Quality Assurance Forum (UUQAF)

E-learning encompasses a wide range of formats, including online courses, virtual simulations, online Project Based Learning (PBL) webinars, and digital resources. These tools have enabled the development of innovative pedagogical approaches, such as flipped classrooms, blended learning, and competency-based education, which have proven effective in enhancing learners' engagement and knowledge retention. Simulation videos are a popular form of media that allows individuals and organizations to create virtual environments and scenarios that mimic real-life situations. These videos are created using computer-generated graphics, animations, and visual effects to replicate various scenarios, ranging from scientific simulations to training exercises. They offer a unique and immersive way to convey information and simulate experiences that may be difficult or costly to achieve in real life.

Online Project Based Learning has a platform for learners to participate in real time problem solving and knowledge construction virtually. Ensuring the quality of e-learning programs has become a critical concern thus crucial to guarantee the competence and safety of future healthcare professionals. QA is an ongoing process that requires continuous monitoring, evaluation, and



Figure 2; Simulation of Cardiopulmonary Resuscitation (CPR) by student of Clinical medicine at Clarke International University

Challenges in e-Learning for Health Sciences

Despite the adoption and the advantages of e-learning, there are several challenges that need to be addressed to ensure its effectiveness in health sciences education; Digital divides with the disparity in internet access and digital literacy across different regions in Africa limits the reach of e-learning programs; the vast Western contexts, which may not align with the unique health challenges and cultural contexts of African countries. Also, maintaining learner engagement in an online environment can be difficult, the lack of face-to-face interaction and the potential for isolation can lead to lower retention rate. In addition, assessing the competencies of health science students in a virtual environment poses challenges, particularly in practical and clinical skills. Faculty Development is still a challenge to provide adequate support for faculty to transition to online teaching effectively. This is partly due to the absence of standardized QA frameworks for e-learning in health sciences, still a significant concern, which has also affected the credibility and recognition of qualifications.

Quality Assurance mechanisms in Fostering e-Learning for Health Sciences

Quality assurance in e-learning for health sciences involves a systematic process of evaluating and improving the quality of educational programs. Learners are able to access knowledge anywhere, anytime and virtually. In the context of health sciences education, we have witnessed that such curricula have changed, in order to meet the evolving demands of the healthcare system. Thus institutions offering e- learning in health sciences must demonstrate institutional commitment and governance by establishing clear policies, allocating resources, and ensuring the involvement of stakeholders in the QA process; as well as design curriculum to meet the specific needs of health sciences students, with a focus on relevant content, appropriate pedagogy, and alignment with professional standards. There is a need for continuous faculty development on online teaching methods, technical skills, and the use of digital tools. Providing Timely assessments and constructive feedback is also essential to support student learning; A reliable and scalable technology infrastructure is fundamental to the success of e-learning programs; A strengthened QA and M&E systems Institution for collecting and analyzing data on program performance, student outcomes, and stakeholder feedback to inform CQI initiatives. It university's responsibility to effectively prepare future health professionals to address health related issues with evolving changes within the healthcare landscapes through enhanced student involvement

Advocacy in Ensuring Quality in e-Learning for Health Sciences

Policy makers play a crucial role in the QA of e-learning in health sciences. This includes; Establishing clear QA guidelines for e-learning programs, including accreditation standards, program approval processes, and periodic reviews; Promoting collaboration among educational institutions, professional bodies, and industry partners to share best practices and resources for QA in e-learning; Investment in digital infrastructure, such as broadband internet access and e-learning platforms, is essential to support the expansion and quality of



A student learning online

e-learning programs; Ensuring Equity and Access to address the digital divide by implementing policies that promote equitable access to e-learning opportunities for all students, regardless of their geographical location or socio-economic status; and , ensuring continuous monitoring and evaluation of e-learning programs are necessary to ensure they meet the desired quality standards.

Conclusion;

E-learning in health sciences has the potential to transform healthcare education in Africa, but its success depends on the implementation of effective QA practices. By implementing these strategies and addressing the challenges, we can ensure that future healthcare professionals are equipped with the necessary competence and skills to provide safe and effective care in a digital age. The quality assurance of e-learning in health sciences is a critical issue that requires the attention and collaboration of all stakeholders, including policy makers, educators, and healthcare professionals. Therefore these key stakeholders must work together to ensure that e-learning programs are of the highest quality, meet the needs of learners, and contribute to the overall improvement of healthcare in Africa.

Acknowledgement: This work was supported by *Clarke International University(CIU) and Health Education Partnership Initiativen (HEPI), Makerere university

References

1. Bates, A. W. (2020). _Teaching in a Digital Age: Guidelines for Designing Teaching and Learning_. Open Textbook.
2. Jogerst, K., B. Callender, V. Adams, J. Evert, E. Fields, T. Hall, J. Olsen, V. Rowthorn, S. Rudy, J. Shenand L. Simon. 2015. Identifying interprofessional global health competencies for 21st-century health professionals. Annals of Global Health 81(2): 239□247.
3. Laurillard, D. (2013). _Rethinking University Teaching: A Conversational Framework for the Effective Use of Learning Technologies_. Routledge.



E-Learning lights up Africa

Transforming Dental Training: From Guinea into the Continent of Africa

David Ugai narrates his experience with dental training and highlights the importance of practical training facilities in addressing the challenges faced by dental schools in Africa.



Courtesy of istockphoto

Introduction and background

TJust days away from the opening of a new training facility at Guinea's only dental school on September 25th that will more than double its capacity, Dr. David Ugai reflects on the transformative journey he and the Université Gamal Abdel Nasser of Conakry have embarked upon together, and the power of collaboration.

Dental care is not a luxury; it is a crucial component of essential healthcare. Without it, not only is people's health jeopardized, but their lives are at risk. Don't just take my word for it—look at the tragic outcomes in nations without sustainable access to dental care, where the result is often inoperable tumors, dental abscesses and early deaths.

The root problem lies in the stark imbalance between the population and the healthcare workforce. In the WHO African Region, there are an average of just 3.3 dentists per 100,000 people () – a figure that's around one-tenth of the global ratio . In nations like Guinea, this leaves much of the population, particularly those living in rural areas, unable to access timely dental care when they need it. The need is particularly high among children, with the WHO citing that 40% of those aged 1-9 in Guinea have untreated cavities. This unsustainable ratio leaves vast segments of the population without even basic dental care. Without addressing this fundamental issue, other efforts will remain inadequate.

In my career as a dental professional, I've gained valuable insights into the crucial role healthcare practitioners play in transforming communities, especially in Africa, where access to quality care can make a profound difference. From the experience of working in different countries, including Guinea, Cameroon, Haiti, and Belize, I encountered a wide range of healthcare challenges and began volunteering with Mercy Ships in 2012.

Here in Guinea, with Mercy Ships, I have felt the strongest calling—to work alongside this nation's experts to help address the pressing gaps in dental education and healthcare that persist within this region. My motivation is driven by faith, a guiding principle that has shaped my career and my desire to give back to communities in need.

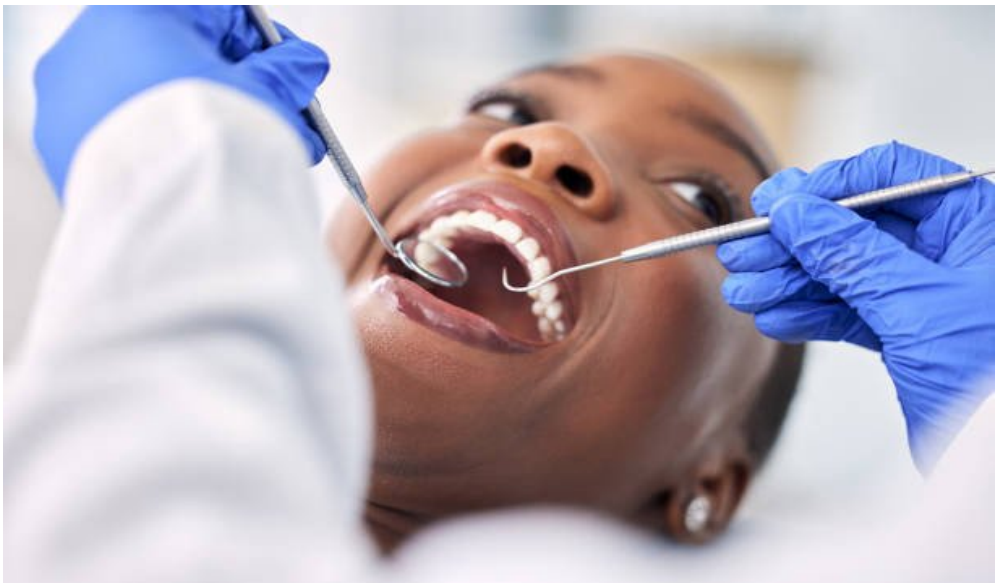
When we examine Africa, the state of oral health is deeply concerning. A staggering 44% of the population suffers from oral diseases, according to a World Health Organization (WHO) report 1. Over the last three decades, the region has seen the steepest rise in oral diseases globally, yet spending on treatment remains shockingly low.

Severely underserved

Like many other African nations, Guinea faces a significant shortage of dental professionals, resulting in a concerning public health issue. We are making progress, but many rural areas are severely underserved, with people forced to travel long distances for basic dental services. Access to proper training and education is limited, which in turn affects the quality of care available to the population.

Currently, one of the most pressing issues in dental healthcare in Guinea, and Africa at large, is the prevalence of dental cavities. The increasing consumption of sugar and carbohydrates, exacerbated by the rise of sugary beverages and processed foods, has led to a surge in dental

Dr. David Ugai, Country Director for Guinea, Mercy Ships (www.MercyShips.org), CONAKRY, Guinea



Courtesy of istockphoto

decay. Left untreated, dental cavities can result in serious health complications, such as abscesses that may become life-threatening. Unlike in more high-income countries, where healthcare systems are robust enough to prevent such outcomes, in Guinea, many people lack access to timely dental care, resulting in preventable fatalities.

To tackle these issues, we must go beyond individual treatment and focus on comprehensive solutions.

When I first visited Guinea as a Mercy Ships volunteer in 2012-2013, fresh out of dental school, the dental crisis here hit me hard. I was particularly struck by the lack of hands-on training for dental students. Unlike my education, their studies were almost entirely theoretical, with little practical experience until after graduation.

Many students had to rely on their initiative, seeking private dentists or online resources to fill the gaps in their education. This has resulted in a disparity where only the most motivated students were able to succeed, while others fell behind due to a lack of resources and support. This should not be the case.

This is where the importance of partnership becomes clear, and it is the foundation upon which Mercy Ships' work in Guinea is built. When I returned in 2018, we launched a partnership with Guinea's only public dental school at the Université Gamal Abdel Nasser of Conakry (UGANC), where all the dentists in the country are trained. This collaboration has evolved significantly, and in September 2024, we're expanding the clinical training facility.

Our vision is to provide every student with access to high-quality training that aligns with global accreditation standards. This ensures that when they graduate, they are well-prepared to treat patients not only in Guinea but in any part of the world.

The expansion of the clinic and the addition of practical training facilities are critical in addressing the challenges faced by dental schools in Africa. Funding remains a major issue, impacting infrastructure, human resources, and equipment. Ensuring that teachers are well-compensated and that students have access to necessary materials is essential, as dentistry is a costly field to support. Additionally, there are shortages of specialized faculty and resources.

Our expanded clinical training building will more than double our capacity for students. This expansion aims to provide the resources and real-world experience needed to overcome these challenges and develop skilled dentists. We have also achieved accreditation from the Ministry of Higher Education in Guinea, which helps maintain quality standards.

Impact

Looking ahead, we plan to pursue international or sub-regional accreditation within the next 5 to 10 years to further enhance the program's quality and impact. Our goal is to ensure that every student, regardless of their background, receives the training required to excel and contribute to improving dental care throughout Africa.

The work we are doing at the dental school is not a quick fix, nor do we claim to solve all of Africa's dental care challenges. However, by focusing on training and expanding the health workforce, and empowering local health professionals, we can begin to close the gap. As more dentists are trained and equipped to practice in rural and underserved regions, we will see a ripple effect. These dentists, trained to meet the needs of their local populations, will be the ones to shape the future of dental care in Guinea and beyond.

The partnership continues to expand with UGANC and specializations in a leading dental postgraduate program in Morocco. Today, students at UGANC and its related program in Morocco come from various African nations, including Benin, Madagascar, Guinea-Bissau, and Sierra Leone.

As I emphasized, dental care is not a luxury but a critical frontline in essential healthcare. These confident professionals will return to their countries, establishing new schools and strengthening dental care in the region.

Gamal's new extended clinic is due to open on Sept 25th. Press and other interested parties can follow the story by registering here https://apo-opa.com/gamal-dental-clinic-en/

Universal Health Coverage at UNGA 79 – What we should be discussing

Allan Pamba discussed the current state of funding for achieving Universal Health Coverage (UHC) in Africa, with a particular focus on diagnostics. He also proposed actionable steps to address the challenges and pave the way forward.



UNGA 79

On 10 September, the world gathers for the 79th United Nations General Assembly (UNGA 79), and as 2030 approaches, the focus on health has never been more critical. 2030 is a deadline that all United Nations Member States have set to achieve universal health coverage (UHC) as part of the Sustainable Development Goals. The goal of UHC is to ensure that all people can access the health services they need without suffering financial hardship (WHO) [1,2].

We have just over five years to go and are at a critical stage when investment in health systems in low-to-middle-income countries, many of which are in Africa, is paramount. This includes investments in infrastructure, access to diagnostics and essential medicines, workforce capacity and robust health technologies. It is not a goal that any country can achieve in isolation. *This UHC goal is also not likely to receive an excessive amount of new international funding to expedite the process* [1,2].

So, while pursuing new funding streams from international organisations is undoubtedly still a significant priority, *perhaps governments should first look inward and scrutinise more effective use of currently existing health budgets to deliver more healthcare*.

Where we stand today

It has been 23 years since 55 African Union states signed the Abuja Declaration, committing to spend at least 15% of their national budgets on healthcare. On average, member countries only spent 7.35% of their national budgets on healthcare that year.4 By 2021, only two countries met the Abuja target. These were Cabo Verde (15.75%) and South Africa (15.29%) – well done both![3]

Diagnostics are the bedrock of effective healthcare. Last year's WHO Resolution on Strengthening Diagnostics Capacity acknowledges that diagnostics enable early detection, accurate treatment and efficient disease management, leading to improved health outcomes and budget cost-effectiveness6.

It is regrettable that the median availability of diagnostics is only 19% in basic primary care facilities surveyed in low-income and lower-middle-income countries. *No surprises there, because currently, only 2% of healthcare spending is allocated to Diagnostics*.[4,5]

Dr. Allan Pamba is the Executive Vice President, Diagnostics, Africa, at Roche Diagnostics



UNGA General Assembly

What we have vs what we can get

The recent *OECD (Organisation for Economic Co-operation and Development)* Report, "Investing in Health System Resilience," highlights the necessity of targeted investments to withstand future health crises. *Prioritising preventative care – particularly enhancing disease awareness and diagnostic capacity – is crucial for improving health outcomes and driving economic growth*.[6]

Given this context, perhaps we could consider that healthcare financing in Africa is FIRST about how we better apportion currently available funding and only SECOND about how we raise new funding.

Trading up to achieve UHC

Looking ahead to UNGA 79 in September and anticipating the discussions regarding healthcare financing, two key areas emerge: optimising existing health budgets in general, and more specifically, appropriately balancing budgets between diagnostics and treatment.

Before new funding streams are secured, policymakers must make a "trade-off" – or trade-up. First, governments must ensure the efficient use of health budgets. With visionary leadership, there is significant scope to reduce wastage of public finances and harness public-private partnerships to stretch available budgets.

Although not perfect, programmes such as Kenya's managed equipment services (MES), financed by the World Bank, have shown potential for elevating healthcare standards expeditiously. MES ensures that public hospitals have access to modern health infrastructure, equipment and services over an agreed period, with the government making regular, pre-arranged payments to private sector vendors based on agreed performance parameters.7

Where there is political will, visionary leadership and committed partners, anything is possible, including UHC! One of Africa's finest – and most recent – examples of public-private synergy in action is Egypt's seemingly unprecedented triumph over hepatitis C, a major cause of liver cancer. This cancer was once a leading cause of death in the country and a severe threat to national productivity. In partnership with the World Bank and Roche Diagnostics, among other key stakeholders, Egypt has effectively eliminated hepatitis C in under a decade and is the first country to achieve "gold tier" status on the path to eliminating hepatitis C as per the designated WHO criteria.8

Many African families are living on the edge of survival. Like Damocles' sword, a single catastrophic health event spirals the family into abject poverty, often never to return. New financing models could be co-created to pool risks. These would provide populations with protection by enabling access to necessary interventions without spiralling into abject poverty – read, Universal Health Insurance.

Five years and counting – closing thoughts

African Governments should claw back from the unyielding effort to be the dominant player in healthcare delivery. After 60 years of this model, it is time to accept it is too challenging from an efficiency perspective. The role of government should instead be heavier on setting strategic direction and priorities, regulation, creating health markets and ensuring equity. This shift would allow the private sector to deliver healthcare services, filling critical capacity gaps more efficiently. Donor funding should be integrated into national health strategies, moving from vertical programmes to more holistic approaches that address multiple health needs.

UNGA 79 promises to deliver many eye-opening discussions about achieving the 2030 UHC goal in time. The next five years will require consensus and a concerted effort from all stakeholders to prioritise healthcare financing, strengthen diagnostic capacity and establish public-private partnerships to get us over the finish line.

Strong Political will, more efficient use of available resources and innovative financing models will be essential in making UHC a reality, particularly in regions like Africa that face unique challenges – but also harbour many opportunities.

Further reading

1. WHO Universal Health Coverage
2. UN SDG Goals
3. Abuja Declaration
4. WHO Resolution on Strengthening Diagnostics Capacity
5. Medtech – Value of Diagnostic Information
6. OECD – Investing in Health System Resilience
7. World Bank Blog – How Managed Equipment Services in Kenya help the private sector contribute to healthcare
8. How Egypt Won its Battle Against Hepatitis

ECHOing Change: Innovating Health Professions Education through Virtual Communities of Practice

Caroline Kisa describes a revolutionary model that transforms how healthcare knowledge is disseminated across the globe by leveraging technology.



An ECHO-trained health care provider treats a patient in Cote D'Ivoire

In an era of increasing healthcare challenges, particularly in underserved and rural communities, the need for innovative solutions to deliver healthcare education has never been more pressing. Traditional models of education, characterized by in-person, didactic training, are often expensive and geographically limiting. Project ECHO (Extension for Community Healthcare Outcomes) is a revolutionary model that transforms how healthcare knowledge is disseminated across the globe. By leveraging technology, Project ECHO shifts the paradigm from moving patients to moving knowledge, connecting experts and frontline healthcare providers to share expertise and through ongoing tele mentoring to address complex real world health issues.

Origins of Project ECHO

Founded in 2003 by Dr. Sanjeev Arora, a gastroenterologist at the University of New Mexico (UNM), Project ECHO was originally created to address the Hepatitis C crisis in rural New Mexico. At the time, Hepatitis C patients in underserved areas faced lengthy waiting times to see specialists, and the scarcity of specialists meant that many patients went without treatment altogether. Dr. Arora realized that a more effective way to manage the growing epidemic was to mentor local primary care providers (medical officers and nurse practitioners), teaching them how to treat patients with Hepatitis C and thereby expanding access to care without requiring patients to travel to specialists. By utilizing simple video conferencing technology, Dr. Arora and his team mentored these providers, creating a virtual community of practice. A study conducted and published in the New England Journal of Medicine in 2011 showed similar patient outcomes for patients treated by specialists at the UNM Hepatitis C clinic and patients treated by the primary healthcare providers.

This approach led to the development of the ECHO model in all instances, which emphasizes collaborative problem-solving and peer learning through case-based discussions and didactic teaching. Rather than focusing solely on treating individual patients, ECHO empowers healthcare workers at the local level, providing them with the knowledge and confidence to manage cases within their communities. As the model matured, it quickly became clear that its benefits extended beyond Hepatitis C and could be applied to a wide range of health issues, from chronic diseases to public health emergencies.

Dr. Caroline Kisa, Africa ECHO Director

The ECHO Model in all instances: All Teach, All Learn

At the heart of Project ECHO is its philosophy: "All Teach, All Learn." This principle underscores the idea that both experts and learners contribute to the learning process. The ECHO model in all instances uses a hub-and-spoke design, where a centralized "hub" of experts connects with a network of healthcare providers ("spokes") via videoconferencing. During each session, healthcare providers present patient cases, which are then discussed by both the hub experts and the other providers in the network. This collaborative learning environment enables participants to learn from each other's experiences, fostering a rich exchange of knowledge and practical solutions.

A typical ECHO session lasts between one and two hours and includes both a didactic lecture and a case-based discussion. The format allows for continuous feedback and ensures that the learning is tailored to the specific needs of the participants. By creating a structured yet flexible learning environment, the ECHO model in all instances supports healthcare providers in gaining the skills and knowledge they need to address the health challenges in their communities.

Unlike traditional telemedicine, where specialists directly manage patients remotely, ECHO sessions focus on mentoring and empowering local providers to deliver care. This distinction is critical, as it allows Project ECHO to scale its impact across large populations without the need for specialists to be directly involved in patient care for every case. Instead, the responsibility for patient management remains with the local providers, who are now equipped with the knowledge to provide high-quality care.

Technology and Flexibility in the ECHO Model in all instances

One of the key strengths of the ECHO model in all instances is its reliance on simple, widely available technology. The core technology required to participate in an ECHO session includes videoconferencing software, a stable internet connection, and basic audio-visual equipment. This makes the model highly accessible, even in resource-limited settings. The ECHO model's technology platform, known as iECHO, supports the management of sessions and provides a resource library that allows participants to access recorded sessions and supplementary materials at any time. This accessibility ensures that healthcare providers, regardless of their location, can participate in ECHO sessions and benefit from the knowledge shared.

The flexibility of the ECHO model in all instances is another key advantage. It can be integrated with other learning formats, such as webinars, asynchronous learning, and in-person training. This adaptability allows the model to be tailored to the needs of different healthcare systems and populations. For example, in regions where internet connectivity may be unreliable, ECHO sessions can be recorded and accessed later, allowing participants to engage with the material at their convenience. In addition, ECHO can complement traditional training programs by providing ongoing



ECHO-trained health care workers support Sudanese patients impacted by war

mentorship and support, ensuring that healthcare providers have access to continuous learning rather than one-time training events.

This adaptability has made the ECHO model in all instances particularly valuable during public health emergencies, such as the COVID-19 pandemic. As healthcare systems around the world were overwhelmed by the pandemic, Project ECHO quickly mobilized to provide training and support to frontline healthcare workers, offering real-time guidance on managing COVID-19 patients and implementing infection prevention measures. The model's ability to rapidly scale and respond to emerging health threats has made it an indispensable tool in global health. It has since been applied to the Ebola, M-pox and Marburg outbreaks.

Scaling Impact Across Africa

Since its inception, Project ECHO has expanded globally, with a significant presence in Africa. The first African country to adopt the ECHO model in all instances was Namibia in 2015. The Namibian Ministry of Health implemented the ECHO model in all instances to strengthen the capacity of healthcare providers in managing HIV/AIDS. Initially, the program connected 10 locations for a nine-month pilot, during which between 80 and 120 participants joined weekly sessions with Namibian HIV experts. The sessions served as a triage and referral system for advanced cases, dramatically reducing waiting times and improving access to care. Today, Namibia's ECHO network has expanded to nearly 60 sites and addresses a wide range of health issues, including tuberculosis, drug resistance, COVID-19, Quality Improvement, and more recently has started being used for health in correctional facilities.

The success of the ECHO model in all instances in

Namibia has inspired other African countries to adopt the model, and it has since grown to address dozens of health priorities across the continent. ECHO hubs have been established in 30 African countries, where 210 hubs are running over 250 programs, and have had over 908,000 attendances by 290,000 unique participants from all 54 countries on the continent. Zambia and Côte d'Ivoire serve as "Superhubs" that provide training and support to other countries in the region, serving the anglophone and francophone countries respectively. These Superhubs play a crucial role in scaling the ECHO model in all instances across Africa by training other hubs in Africa to work with healthcare providers and enabling capacity building in areas where healthcare resources are scarce.

One of the most pressing challenges facing African healthcare systems is the severe shortage of healthcare workers. Sub-Saharan Africa, which bears nearly a quarter of the global disease burden, is home to only 3% of the world's healthcare workforce . This imbalance has led to poor health outcomes and millions of preventable deaths each year. While expanding the healthcare workforce is a long-term goal, the ECHO model in all instances provides an immediate solution by enabling the existing workforce to expand their expertise and deliver high-quality care. By tapping into local expertise and amplifying the voices of local healthcare providers, ECHO helps to build capacity in a way that is sustainable and scalable.

A Sustainable and Scalable Model

The sustainability of the ECHO model in all instances lies in its simplicity and cost-effectiveness. Unlike traditional in-person training programs, which can be prohibitively expensive due to travel and accommodation costs, ECHO sessions eliminate the need for travel, making them accessible to providers in even the most remote areas. According to data from Project ECHO, the average marginal cost of training using multipoint video technology is just $20.96 per participant, compared to $820.29 per participant using traditional training methods. This drastic reduction in cost makes the ECHO model in all instances an attractive option for ministries of health and other stakeholders looking to improve healthcare training without incurring significant expenses.

In addition to its cost-effectiveness, the ECHO model in all instances is highly adaptable and can be integrated into existing healthcare systems. Ministries of Health in several African countries have incorporated ECHO into their national health strategies, using it to support ongoing professional development for healthcare workers. By embedding ECHO within national health systems, countries can ensure that healthcare providers have access to continuous learning and mentorship, which is essential for improving the quality of care and health outcomes.

Another key factor contributing to the sustainability of the ECHO model in all instances is its emphasis on local ownership. While the model was originally developed in the United States, it has been successfully adapted to local contexts around the world. In Africa, ECHO hubs are led by local experts who understand the unique challenges and opportunities in their communities. This local ownership ensures that the model is culturally appropriate and responsive to the needs of the population. Furthermore, by engaging the African diaspora, ECHO provides an opportunity for experts living abroad to contribute to healthcare improvement in their home countries.

The Broader Impact of the ECHO Model

Project ECHO's impact extends beyond healthcare. The model has been adopted to address a wide range of social and environmental challenges, including education, agriculture, and disaster response. For example, ECHO has been used to train educators in underserved areas, helping to improve the quality of education in rural schools. Similarly, the model has been applied to agriculture, where it is used to train farmers in sustainable farming practices and improve food security. The versatility of the ECHO model in all instances makes it a powerful tool for addressing complex challenges across multiple sectors.

The success of the ECHO model in all instances is also reflected in the growing body of evidence supporting its effectiveness. More than 600 peer-reviewed publications have documented the impact of the ECHO model in all instances across a variety of health conditions and settings. Studies have shown that ECHO improves provider confidence, skills, and knowledge, leading to better patient outcomes. In addition, the model has been shown to be highly effective in building collaborative networks of healthcare providers, fostering a sense of community and shared responsibility for improving healthcare.

Looking Ahead: ECHO's Vision for Africa

Looking to the future, Project ECHO has set ambitious goals for its work in Africa. By 2030, ECHO aims to improve health outcomes for 300 million people across the continent by empowering 20 million frontline healthcare workers. This vision is aligned with the United Nations Sustainable Development Goals (SDGs), which focus on health equity, education, and the reduction of poverty. By addressing the social determinants of health and strengthening healthcare systems, ECHO is working to create a more equitable and just world where everyone can have access to high-quality care.

Project ECHO's vision for Africa is not only about improving health outcomes but also about building a sustainable healthcare system that is resilient to future challenges. The model's emphasis on collaboration, peer learning, and continuous mentorship ensures that healthcare providers are equipped to respond to both current and emerging health threats. As the world continues to face new challenges, from pandemics to climate change, the ECHO model in all instances offers a flexible and scalable solution that can adapt to the evolving needs of healthcare systems around the world.

Conclusion

The ECHO model in all instances represents a transformative approach to healthcare education, providing a scalable and sustainable solution to the global health workforce crisis. By leveraging technology, fostering collaboration, and promoting peer learning, ECHO is empowering healthcare providers to deliver high-quality care in some of the world's most underserved communities. Its success in Africa demonstrates the power of this model to address pressing health challenges and improve health outcomes at scale. As Project ECHO continues to expand its reach, its vision of improving health for millions of people and building a more equitable world is becoming a reality.

sysmex | Lighting the way with diagnostics

XN-31

Be confident fighting malaria



- Results you can rely on – reliable and objective malaria information using the technology of fluorescence flow cytometry
- Results from 1 mL blood or less without sample pretreatment
- Enhance and standardise your malaria testing
  - ✔ Fast with 24/7 availability
  - ✔ Quality of result independent of the skills of the operator

Transforming health professions education in Africa



We, senior health professionals, health professions education experts, policy-makers, health professions regulators, professional associations, representatives of Member States, and key partners across the health education and public service sectors, attending the inaugural Africa Health Professions Education Dialogue in Lusaka, Zambia from 12 to 14 November 2024, convened by the World Health Organization:

Noting with concern that while some of the 2.5 million preventable deaths in the region are due to lack of access, almost 48% are related to poor quality health services attributed to the quality of the health workforce, among other factors;

Further noting that the African region is lagging behind in the achievement of Universal Health Coverage and other indicators of human development;

Appreciating the achievements of governments, educators and stakeholders in operationalizing the Global Strategy on Human Resources for Health: Workforce 2030 and its African regional framework through the expansion of capacity to train health workers, which has increased by 70% from 150 000 graduates in 2018 to more than 255 000 in 2022, due to increased investments in health workforce training from over 4000 institutions and programmes;

Welcoming the progress made in expanding the implementation of competency-based education of health workers with about 30 countries implementing the WHO prototype curricula for nursing, midwifery and eye health, and the WHO Global Competencies and Outcomes Framework for Universal Health Coverage;

Mindful of current evidence that many countries in the region are still implementing curricula that are not aligned with population health needs, and have inadequate training infrastructure, resulting in a mismatch between the competencies and the evolving health care needs of the populations;

Recognizing that regulation and quality assurance of health professions education is critical but suboptimal, with 32 of the 47 Member States of the African region having functional regulatory bodies or authorities in the face of the increasing establishment of health professions education institutions;

Noting that competency-based education emphasizes outcome-based learning that aligns education programmes with population health needs and focuses on mastering the competencies required for effective health care delivery;

We therefore:

1. **Acknowledge** that health professions education is the single most important contributor to the development of a health workforce that responds to the health needs of Africa;

2. **Reaffirm** the need to transform health professions education curricula in the region to be competency-based and fit for purpose, to tackle the health-related challenges of our time, both in peacetime and during emergencies;

3. **Draw attention** to the Africa Health Workforce Investment Charter, whose goal is to align and stimulate investments in health worker education, employment, retention and mobility, in order to tackle the projected 6.1 million shortage of health workers and reduce inequalities in access to health workers in Africa by 50%;

4. **Acknowledge** the relevance of the following factors in transforming health professions education:
   a. competency-based curricula must meet local health needs while aligning with regional, continental and global standards;
   b. faculty skills development in competency-based and health professions education is



WHO meeting participants, Lusaka , Zambia

essential for their effective implementation;

c. digital technology should be leveraged to address the needs of educators and trainees;
d. leadership and governance in health professions must be strengthened at all levels;
e. interprofessional education is crucial for fostering collaborative practice;

We hereby:

5. **Call upon** all stakeholders to:
   a. support the transformation of health professions education in Africa;
   b. adopt competency-based education;
   c. strengthen regulation and quality assurance of health professions education;
   d. support health professional associations and networks to promote this agenda;
   e. support ministries of health to professionalize and strengthen leadership, planning and management of the health workforce;

6. **Call upon** the World Health Organization to regularly convene stakeholders to advance this transformative agenda for health professions in the Region;

7. **Extend** our appreciation to the Government and people of Zambia for hosting the Dialogue;

8. **Convey our** thanks to the World Health Organization for convening the Dialogue.

Africa HEALTH JOURNAL

Africa Health Journal (AHJ) is a review journal that does not publish original articles with some exceptions. The target audience is frontline health practitioners and policy makers in governments. Teachers and students in academic institutions will also find the content of the AHJ of interest. Online and print editions are published quarterly. There are also dedicated social media platforms with a big following from a global audience.

The journal seeks to cover a wide range of subjects from clinical care topics to health services management, education, and has a section on CPD related to the content in the current issue. The AHJ covers anything of relevance to a busy physician or senior health professional practising in Africa.

Articles of 1800-2100 words are most commonly published. Illustrations and photographs are important, (we deliberately try not to be too text intensive) and these are best sent as JPEG or PDF files (please submit high resolution (300dpi) CMYK illustrations and photographs, Images taken from websites are of a low resolution and not suitable for print.

Please send the article by email to africahealth@ achest. org. Articles should be saved as a Microsoft Word document. Illustrations and photographs should be sent as additional attachments to the Word document.

Referencing should be numerical and in the Vancouver style. If you prefer, it is acceptable to simply append a list of 'For further reading' rather than adopting the more formal referencing style.

Please note that all articles submitted to AHJ are deemed to have been offered exclusively to the journal, unless otherwise stated. Copyright in papers published will be vested in the publish-ers. The Editor reserves the right to alter articles at his discretion.

Health Workforce & Training

The health workforce status in the WHO African Region: findings of a cross-sectional study.

A survey conducted by the WHO Regional Office for Africa assessed the health workforce (HWF) across 47 countries in the region to establish a baseline for implementing the Global Strategy for HWF by 2030. Using a cross-sectional survey and data collection from January 2018 to April 2019, the study identified approximately 3.6 million health workers, with 37% being nurses and midwives, 9% doctors, and 14% community health workers. The findings highlighted a significant imbalance in the distribution of health workers, with most (85%) employed in the public sector. Regional densities of physicians, nurses, and midwives were low, averaging 1.55 per 1,000 people, with only four countries surpassing the benchmark of 4.45 per 1,000. The study underscored persistent challenges, including workforce shortages and uneven distribution, which hinder progress toward universal health coverage. It emphasized the need for increased investment in the health workforce, guided by evidence-based planning to address current and future healthcare demands.

Reference

Ahmat A, Okoroafor SC, Kazanga I, et alThe health workforce status in the WHO African Region: findings of a cross-sectional studyBMJ Global Health 2022;7:e008317.

Educational interventions and their effects on healthcare professionals' digital competence development: A systematic review

The digitalization of healthcare necessitates that professionals possess adequate digital competencies, supported by continuing education. This systematic review aimed to assess educational interventions designed to enhance digital skills among healthcare professionals. A comprehensive search across five databases identified 20 studies, with participants mainly being nurses. The interventions varied in duration, ranging from brief sessions to six-month programs, and were delivered through traditional, blended-learning, and videoconferencing methods. Educational methods included lectures, group work, case studies, discussions, and practical exercises, with a focus on building knowledge, skills, and confidence.

The review found that these interventions effectively improved digital competence, including knowledge, skills, attitudes, self-efficacy, and output quality. Results emphasized the benefits of a multi-method approach combining traditional teaching with hands-on practice and peer interaction. The findings suggest that digital competence training should be accompanied by organizational support, tailored guidance, and opportunities for practical application. This approach can enhance the digital readiness of healthcare professionals, enabling them to deliver high-quality, technology-integrated care.

Reference

E. Kulju, E. Jarva, A. Oikarinen, M. Hammarén, O. Kanste, K. Mikkonen, Educational interventions and their effects on healthcare professionals' digital competence development: A systematic review, International Journal of Medical Informatics, Volume 185, 2024, 105396, ISSN 1386-5056, https://doi.org/10.1016/j.ijmedinf.2024.105396.

Mentorship in health research institutions in Africa: A systematic review of approaches, benefits, successes, gaps and challenges

In Africa, the shortage of skilled researchers, limited funding, and scarce mentorship opportunities have contributed to a gap in research output. This review explored existing mentorship approaches in health research across the continent, identifying challenges, successes, and gaps to provide insights for enhancing mentorship programs.

The systematic review, registered under CRD42021285018, searched six databases and additional resources, ultimately including 21 studies focusing on mentorship programs for health researchers across 12 African countries. Most programs targeted early-career researchers, with some including mid-career and senior professionals. Programs were categorized into three types: international collaborations, regional or in-country partnerships, and specialized capacity-building initiatives.

The review highlighted several benefits, including stronger collaborations, enhanced research capacity, improved skills and confidence, increased publications, and successful grant applications. However, gaps included limited funding, a lack of established mentorship culture, negative perceptions toward research careers, and insufficient prioritization of mentorship.

The findings emphasize the need for locally driven mentorship initiatives to strengthen health research capacity across Africa, moving away from dependence on external support to more sustainable, regional models that can address unique local challenges.

Reference

Ng'oda M, Gatheru PM, Oyeyemi O, Busienei P, Karugu CH, Mugo S, et al. (2024) Mentorship in health research institutions in Africa: A systematic review of approaches, benefits, successes, gaps and challenges. PLOS Glob Public Health 4(9): e0003314. https://doi.org/10.1371/journal.pgph.0003314

The prevalence of mental health problems in sub-Saharan adolescents: A systematic review

Most research regarding child and adolescent mental health prevention and promotion in low-and middle-income countries is undertaken in high-income countries. This systematic review set out to synthesise findings from epidemiological studies, published between 2008 and 2020, documenting the prevalence of mental health problems in adolescents from across sub-Saharan Africa. A systematic search of multiple databases (MEDLINE, PsycINFO, Scopus) and Google Scholar was conducted guided by the Joanna Briggs Institute (JBI) Reviewer's manual for systematic reviews of observational epidemiological studies. Studies included reported prevalence outcomes for adolescents aged 10–19 using

either clinical interviews or standardized questionnaires to assess psychopathology. Clinical samples were excluded.

The search yielded 1 549 records of which 316 studies were assessed for eligibility and 51 met the inclusion criteria. We present a qualitative synthesis of 37 of these 51 included articles. The other 14 studies reporting prevalence rates for adolescents living with HIV are published elsewhere. The prevalence of depression, anxiety disorders, emotional and behavioural difficulties, posttraumatic stress and suicidal behaviour in the general adolescent population and selected at-risk groups in 16 sub-Saharan countries (with a total population of 97 616 adolescents) are reported.

This systematic review draws attention to the gaps that remain in knowledge regarding the burden of mental disorders among youth in sub-Saharan Africa. Although there is wide variation in estimates of common mental disorders and symptoms in youth on the continent, it is evident that rates are high with and require concerted attention at both clinical and policy level.

Reference

Jörns-Presentati A, Napp A-K, Dessauvagie AS, Stein DJ, Jonker D, Breet E, et al. (2021) The prevalence of mental health problems in sub-Saharan adolescents: A systematic review. PLoS ONE 16(5): e0251689. https://doi.org/10.1371/journal.pone.0251689

DH&TI

Expanding telemedicine to reduce the burden on the healthcare systems and poverty in Africa for a post-coronavirus disease 2019 (COVID-19) pandemic reformation

The coronavirus disease 2019 (COVID-19) global public health emergency, has exposed the fragility of health systems. Access to healthcare became a scarce commodity as healthcare providers and resource-poor populations became victims of the novel corona virus. Therefore, this study focuses on Africa's readiness to integrate telemedicine into the weak health systems and its adoption may help alleviate poor healthcare and poverty after COVID-19. We conducted a narrative review through different search strategies in Scopus on January 20, 2021, to identify available literature reporting implementation of various telemedicine modes in Africa from January 1, 2011 to December 31, 2020. We summarized 54 studies according to geographies, field, and implementation methods. The results show a willingness to adopt telemedicine in the resource-poor settings and hard-to-reach populations, which will bring relief to the inadequate healthcare systems and alleviate poverty of those who feel the burden of healthcare cost the most. With adequate government financing, telemedicine promises to enhance the treating of communicable and non-communicable diseases as well as support health infrastructure. It can also alleviate poverty among vulnerable groups and hard-to-reach communities in Africa with adequate government financing. However, given the lack of funding in Africa, the challenges in implementing telemedicine require global and national strategies before it can yield promising results. This is especially true in regards to alleviating the multidimensionality of poverty in post-COVID-19 Africa.

Reference

Akintunde TY, Akintunde OD, Musa TH, Sayibu M, Tassang AE, Reed LM, Chen S. Expanding telemedicine to reduce the burden on the healthcare systems and poverty in Africa for a post-coronavirus disease 2019 (COVID-19) pandemic reformation. Glob Health J. 2021 Sep;5(3):128-134. doi: 10.1016/j.glohj.2021.07.006. Epub 2021 Jul 24. PMID: 36338822; PMCID: PMC9625850.

The role of digital health in revolutionizing healthcare delivery and improving health outcomes in conflict zones

The provision and planning for healthcare delivery in conflict is a pressing imperative. Healthcare within these environments is naturally complex, given the entanglement of affected populations, militaries and oft-deteriorating public services. The field of digital health, placed at the intersection of healthcare and technology, has the power to revolutionize healthcare delivery and improve health outcomes worldwide. Its impact is particularly significant in conflict zones, where it can address the unique challenges faced by these regions. Violence, damaged infrastructure, restricted mobility, forced migration, and overstretched healthcare facilities are all hallmarks of conflict zones that demand novel approaches to addressing them. Health care delivery is being revolutionized by the introduction of digital health technology in conflict zones, which are improving access, emergency response capacities, health information management, and mental health assistance. Doctors and aid organizations can more easily overcome challenges and reach out to underserved populations in these regions because to digital technological improvements. Recent decades have seen a shift in the nature of conflict, and with it, a corresponding shift in the range of digital health solutions available to address geographical, epidemiological, and clinical gaps. The purpose of this letter is to inquire into the application of digital health in conflict zones and its potential to lessen the pressing healthcare needs of affected communities.

Reference

Ahmed SK, Hussein S, Chandran D, Islam MR, Dhama K. The role of digital health in revolutionizing healthcare delivery and improving health outcomes in conflict zones. Digit Health. 2023 Nov 30;9:20552076231218158. doi: 10.1177/20552076231218158. PMID: 38047160; PMCID: PMC10693218.

NCDs

Non-communicable disease burden among inpatients at a rural district hospital in Malawi

The burden of non-communicable diseases (NCDs) is high in Malawi. However, resources and training for NCD care remain scarce, especially in rural hospitals. Current care for NCDs in the developing world focuses on the WHO's traditional 4×4 set. However, we do not know the full burden of NCDs outside of that scope, like neurological disease, psychiatric illness, sickle cell disease, and trauma. The goal of this study was to

understand the burden of NCDs among inpatients in a rural district hospital in Malawi. We broadened our definition of NCDs beyond the traditional 4×4 set of NCDs, and included neurological disease, psychiatric illness, sickle cell disease, and trauma.

We conducted a retrospective chart review of all inpatients who were admitted to the Neno District Hospital between January 2017 and October 2018. We broke patients down by age, date of admission, type, and number of NCD diagnoses, and HIV status, and constructed multivariate regression models for length of stay and in-hospital mortality.

Of 2239 total visits, 27.5% were patients with NCDs. Patients with NCDs were older (37.6 vs 19.7 years, $p<0.001$) and made up 40.2% of total hospital time. We also found two distinct populations of NCD patients. The first were patients 40 years and older with primary diagnoses of hypertension, heart failure, cancer, and stroke. The second were patients under 40 years old with primary diagnoses of mental health conditions, burns, epilepsy, and asthma. We also found significant trauma burden, accounting for 40% of all NCD visits. In multivariate analysis, carrying a medical NCD diagnosis was associated with longer length of stay (coefficient 5.2, $p<0.001$) and a higher risk of in-hospital mortality (OR 1.9, $p=0.03$). Burn patients also had significantly longer length of stay (coefficient 11.6, $p<0.001$).

There is a significant burden of NCDs in a rural hospital in Malawi, including those outside of the traditional 4×4 set. We also found high rates of NCDs in the younger population (under 40 years of age). Hospitals must be equipped with adequate resources and training to meet this burden of disease.

Reference

Olds P, Kachimanga C, Talama G, Mailosi B, Ndarama E, Totten J, Musinguzi N, Hangiwa D, Bukhman G, Wroe EB. Non-communicable disease burden among inpatients at a rural district hospital in Malawi. Glob Health Res Policy. 2023 Feb 22;8(1):4. doi: 10.1186/s41256-023-00289-z. PMID: 36810123; PMCID: PMC9945353.

Can digital health apps provide patients with support to promote structured diabetes education and ongoing self-management? A real-world evaluation of myDiabetes usage

Structured diabetes education has evidenced benefits yet reported uptake rates for those referred to traditional in-person programmes within 12 months of diagnosis were suboptimal. Digital health interventions provide a potential solution to improve diabetes education delivery at population scale, overcoming barriers identified with traditional approaches. myDiabetes is a cloud-based interactive digital health self-management app. This evaluation analysed usage data for people with type 2 diabetes focusing on digital structured diabetes education.

Descriptive quantitative analyses were conducted on existing anonymised user data over 12 months (November 2019–2020) to evaluate whether digital health can provide additional support to deliver diabetes education. Data was divided into two equal 6-month periods. As this overlapped the onset of COVID-19, analyses of its effect on usage were included as a secondary outcome. All data was reported via myDiabetes. Users were prescribed myDiabetes by National Health Service healthcare primary care teams. Those who registered for app use within the study period (n=2783) were assessed for eligibility (n=2512) and included if activated.

Within the study period, n=1245/2512 (49.6%) registered users activated myDiabetes. No statistically significant differences were observed between gender ($p=0.721$), or age ($p=0.072$) for those who activated (59.2 years, SD 12.93) and those who did not activate myDiabetes (57.6 years, SD 13.77). Activated users (n=1119/1245 (89.8%)) viewed 11,572 education videos. No statistically significant differences were observed in education video views across age groups ($p=0.384$), gender ($p=0.400$), diabetes treatment type ($p=0.839$) or smoking status ($p=0.655$). Comparison of usage pre-COVID-19 and post-COVID-19 showed statistically significant increases in app activity ($p\leq0.001$).

Digital health is rapidly evolving in its role of supporting patients to self-manage. Since COVID-19 the benefits of digital technology have become increasingly recognised. There is potential for increasing diabetes education rates by offering patients a digital option in combination with traditional service delivery which should be substantiated through future research.

Reference

Blythin AM, Elkes J, van Lindholm T, et al. Can digital health apps provide patients with support to promote structured diabetes education and ongoing self-management? A real-world evaluation of myDiabetes usage. DIGITAL HEALTH. 2023;9. doi:10.1177/20552076221147109

MCH

A realist review of interventions targeting maternal health in low- and middle-income countries

Maternal mortality is disproportionately higher in low- and middle-income countries compared to other parts of the world. International research efforts are reflective of the urgency to improve global maternal outcomes. The existing literature of maternal health interventions in low- and middle-income countries targets a variety of populations and intervention types. However, there is a notable lack of systemic reviews that examine the wider contextual and mechanistic factors that have contributed to the outcomes produced by interventions. This article aims to use realist synthesis design to identify and examine the relationships between the contexts, mechanisms and outcomes of maternal health interventions conducted in low- and middle-income countries. This will inform evidence-based practice for future maternal health interventions. In May 2022, we searched four electronic databases for systematic reviews of maternal health interventions in low- and middle-income countries published in the last 5 years. We used open and axial coding of contexts, mechanisms and outcomes to develop an explanatory framework for intervention effectiveness. After eligibility screening and full-text analysis, 44 papers were included. The majority of effective interventions

reported good healthcare system contexts, especially the importance of infrastructural capacity to implement and sustain the intervention. Most intervention designs used increasing knowledge and awareness at an individual and healthcare-provider level to produce intended outcomes. The majority of outcomes reported related to uptake of healthcare services by women. All mechanism themes had a relationship with this outcome. Health system infrastructure must be considered in interventions to ensure effective implementation and sustainability. Healthcare-seeking behaviours are embedded within social and cultural norms, environmental conditions, family influences and provider attitudes. Therefore, effective engagement with communities and families is important to create new norms surrounding pregnancy and delivery. Future research should explore community mobilization and involvement to enable tailored interventions with optimal contextual fit.

Reference

Abraham JM, Melendez-Torres GJ. A realist review of interventions targeting maternal health in low- and middle-income countries. Womens Health (Lond). 2023 Jan-Dec;19:17455057231205687. doi: 10.1177/17455057231205687. PMID: 37899651; PMCID: PMC10617292.

A global analysis of the determinants of maternal health and transitions in maternal mortality

The reduction of maternal mortality and the promotion of maternal health and wellbeing are complex tasks. This Series paper analyses the distal and proximal determinants of maternal health, as well as the exposures, risk factors, and micro-correlates related to maternal mortality. This paper also examines the relationship between these determinants and the gradual shift over time from a pattern of high maternal mortality to a pattern of low maternal mortality (a phenomenon described as the maternal mortality transition). We conducted two systematic reviews of the literature and we analysed publicly available data on indicators related to the Sustainable Development Goals, specifically, estimates prepared by international organisations, including the UN and the World Bank. We considered 23 frameworks depicting maternal health and wellbeing as a multifactorial process, with superdeterminants that broadly affect women's health and wellbeing before, during, and after pregnancy. We explore the role of social determinants of maternal health, individual characteristics, and health-system features in the production of maternal health and wellbeing. This paper argues that the preventable deaths of millions of women each decade are not solely due to biomedical complications of pregnancy, childbirth, and the postnatal period, but are also tangible manifestations of the prevailing determinants of maternal health and persistent inequities in global health and socioeconomic development. This paper underscores the need for broader, multipronged actions to improve maternal health and wellbeing and accelerate sustainable reductions in maternal mortality. For women who have pregnancy, childbirth, or postpartum complications, the health system provides a crucial opportunity to interrupt the chain of events that can potentially end in maternal death. Ultimately, expanding the health sector ecosystem to mitigate maternal health determinants and tailoring the configuration of health systems to counter the detrimental effects of eco-social forces, including though increased access to quality-assured commodities and services, are essential to improve maternal health and wellbeing and reduce maternal mortality.

A global analysis of the determinants of maternal health and transitions in maternal mortality.

Reference

Souza, João Paulo et al. The Lancet Global Health, Volume 12, Issue 2, e306 - e316

Infectious Diseases

Advancing the use of LongActing Extended Delivery formulations for HIV prevention in subSaharan Africa: challenges, opportunities, and recommendations

The burden of HIV in sub□Saharan Africa (SSA) remains unacceptably high, and disproportionately affects girls and women. While the introduction of oral HIV pre□exposure prophylaxis (PrEP) in 2012 revolutionized HIV prevention, its effectiveness is dependent on user adherence and its implementation in SSA has faced numerous challenges. Patient□level, interpersonal and structural barriers, including, for example, daily pill burden, side effects, lack of partner support, testing and disclosure, and costs have been found to reduce adherence to oral PrEP. Long□acting extended delivery (LAED) formulations for PrEP, such as injectable long□acting cabotegravir (CAB□LA) and dapivirine vaginal ring (DPV□VR) are critical additions to the HIV prevention toolkit and are especially important for populations such as adolescent girls and young women (AGYW) and other key populations who remain at significant risk of HIV acquisition while facing substantial barriers to preventive services. These LAED formulations have been shown to result in better adherence and fewer side effects, with CAB□LA being superior to oral PrEP in reducing the risk of HIV acquisition. They can be used to overcome user burden and adherence challenges. However, the successful rollout of the DPV□VR and CAB□LA may be hampered by issues such as a shortage of healthcare providers (HCPs), inadequate parenteral medication infrastructure, increased workload for HCPs, patient concerns, the price of the medications and the possibility of drug resistance. SSA must develop laboratory capabilities for monitoring patients on LAED formulations and enhance research on developing more non□injectable LAED formulations. There is a need to train and retain more HCPs, implement task shifting, invest in healthcare infrastructure and integrate healthcare services. To reduce costs and improve availability, the region must advocate for patent license waivers for LAED formulations and procure drugs collectively as a region.

CPD Challenge

Questions

Q1 Which of the following statements about efforts to reduce maternal mortality and promote maternal health and well-being are TRUE or FALSE?

a. The preventable deaths of millions of women are solely due to biomedical complications of pregnancy, childbirth, and the postnatal period.
b. Expanding the health sector to address maternal health determinants and adapting health systems to counter the negative effects of eco-social factors—through increased access to quality assured commodities and services—is essential for improving maternal health and well-being and reducing maternal mortality.
c. Social determinants of maternal health, individual characteristics, and health system features do not significantly contribute to maternal health and well-being.
d. Comprehensive, multipronged actions that combine health system enhancements, address social determinants, and tackle biomedical factors are crucial for improving maternal health and well-being and achieving sustainable reductions in maternal mortality.
e. All of the above statements are TRUE.

Q2 Which of the following interventions targeting maternal health in low- and middle-income countries are TRUE or FALSE?

a. Health system infrastructure must be considered in interventions to ensure effective implementation and sustainability.
b. Healthcare-seeking behaviors are embedded within social and cultural norms, environmental conditions, family influences and provider attitudes.
c. Effective engagement with communities and families is important to create new norms surrounding pregnancy and delivery.
d. Community mobilization and involvement to enable tailored interventions with optimal contextual fit
e. Increasing knowledge and awareness at an individual and healthcare-provider level to produce intended outcomes.

Q3 Please indicate whether the following statements about the prevalence of mental hea lth problems in adolescents in sub-Saharan Africa are TRUE or FALSE.

a. There are currently significant gaps in knowledge regarding the burden of mental disorders among youth in sub-Saharan Africa.
b. Despite wide variations in estimates of common mental disorders and symptoms among youth in sub-Saharan Africa, it is clear that rates are high and require concerted attention at both clinical and policy levels.
c. The prevalence of depression, anxiety disorders, emotional and behavioral difficulties, post-traumatic stress, and suicidal behavior in the adolescent population is generally low and not well documented.
d. Most research on child and adolescent mental health prevention and promotion in low- and middle-income countries is primarily conducted in high-income countries.
e. All of the above statements are TRUE.

Q4 Which of the following statements regarding the use of Long-Acting Extended Delivery (LAED) formulations for HIV prevention in sub-Saharan Africa are TRUE or FALSE?

a. The introduction of oral HIV pre-exposure prophylaxis (PrEP) in 2012 revolutionized HIV prevention; however, its effectiveness depends on user adherence, and its implementation in sub-Saharan Africa has faced numerous challenges.
b. Barriers at the patient level, interpersonal level, and structural level—including daily pill burden, side effects, lack of partner support, testing and disclosure issues, and costs—have been shown to reduce adherence to oral PrEP.
c. Long-acting extended delivery (LAED) formulations for PrEP, such as injectable cabotegravir (CAB-LA) and the dapivirine vaginal ring (DPV-VR), are critical additions to the HIV prevention toolkit, especially for populations at significant risk, such as adolescent girls and young women (AGYW) and other key populations facing substantial barriers to preventive services.
d. The successful rollout of the DPV-VR and CAB-LA may be hindered by factors such as a shortage of healthcare providers, inadequate parenteral medication infrastructure, increased workload for providers, patient concerns, the cost of medications, and the potential for drug resistance.
e. Currently, sub-Saharan Africa has developed advanced laboratory capabilities for monitoring patients on LAED formulations and enhancing research on non-injectable LAED formulations, which should help improve HIV prevention delivery.

Answers

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

wissner-bosserhoff

LINET®

Members of LINET Group



SPRINT 100

Meet the new premium transport stretcher by LINET

5 FEATURES FOR SAFETY AND COMFORT

- ✓ IV&Drive – The world's first handles integrated into IV poles .
- ✓ CardiacChair – Easily adjustable for better treatment, safety and comfort.
- ✓ FlexiDrive – A shock-absorbing spring-loaded 5 th castor.
- ✓ SoftDrop – A smooth, silent and safe movement of siderails.
- ✓ EasyBrake – A four-sided braking system for easier accessibility.

www.linet.ae

LinkedIn

I need you here...

Taking your HIV medication EVERY DAY can help you be here when I grow up. I heard there's a "Triple Pill" that can make it easier.



Take a Triple a Day.
Every Day.

Ask your Doctor if there is a Triple Pill for YOU.

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)

erongomed
making a difference

PEPFAR

USAID
FROM THE AMERICAN PEOPLE

SHOPS
Strengthening Health Outcomes through the Private Sector

Mylan
Seeing is believing