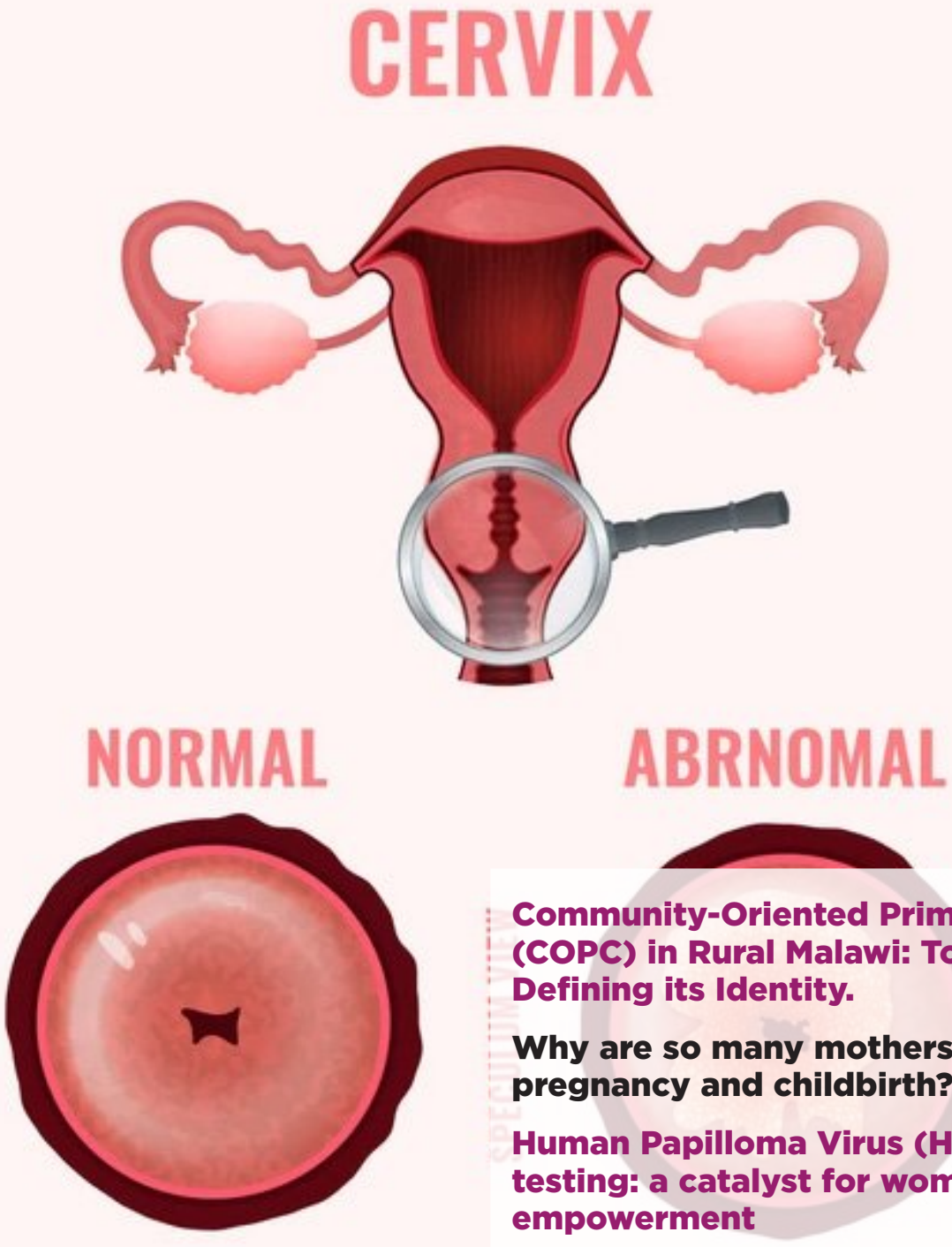
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Africa HEALTH JOURNAL



Community-Oriented Primary Care (COPC) in Rural Malawi: Towards Defining its Identity.

Why are so many mothers dying in pregnancy and childbirth?

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Recommendations on Incorporating Artificial Intelligence in Medical Education

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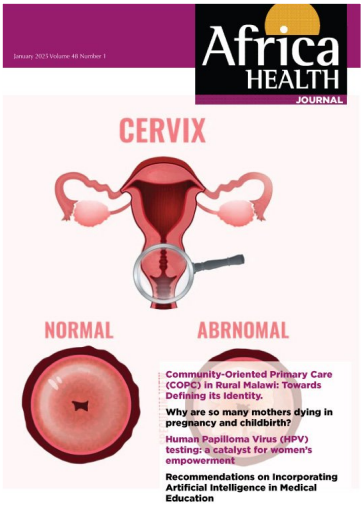


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Contents

Vol 48 No.1 January 2025



Editorial

03 Global Health at a Crossroads: Navigating Uncertain Times.
Elsie Kiguli-Malwadde

Opinion

06 Where does Africa go from here?
Modai Mnenula, mmnenula@kuhes.ac.mw, Dalitso Chilambe, Prosper Lutala, Department of Family Medicine, School of Medicine and Oral Health, Kamuzu University of Health Sciences Blantyre, Malawi.

Features

08 Community-Oriented Primary Care (COPC) in Rural Malawi: Towards Defining its Identity.
Modai Mnenula, mmnenula@kuhes.ac.mw, Dalitso Chilambe, Prosper Lutala, Department of Family Medicine, School of Medicine and Oral Health, Kamuzu University of Health Sciences Blantyre, Malawi.

11 Why are so many mothers dying in pregnancy and childbirth?
Marleen Temmerman discusses why women and babies die in Africa, using WHO data, she elaborates what the situation is like in Africa and what could be done to improve the situation. With a focus on some developments in Kenya, she highlights what could be done to reduce maternal and new born mortality in Africa.

14 A Review of the Trend in Maternal Mortality Ratio Between 2000 and 2020 in Low- and Middle-Income countries: A Recipe for Continued Improvement for Uganda.
Kizito Omona, Senior Lecturer, Faculty of Health Sciences, Uganda Martyrs University, Kampala, Uganda, kizitoomona@gmail.com.

17 Human Papilloma Virus (HPV) testing: a catalyst for women's empowerment
Dr Allan Pamba, Executive Vice President, Diagnostics, Africa at Roche Diagnostics

20 Recommendations on Incorporating Artificial Intelligence in Medical Education
David Mukunya*, Kennedy Pangholi, Ritah Nantale, Elizabeth Ajalo, Frank Kayemba, Jonathan Babuya, Faith Oguttu, Joshua Epuitai, Milton W. Musaba , Department of Community and Public Health, Busitema University.

23 The END Fund and Reaching the Last Mile Celebrate the Elimination of River Blindness in Niger
Victoria Miguda, vmiguda@endfund.org , Media contact, The End Fund, Jairus Korir, P&L Consulting, korir@p-l.co.ke.

25 COVID-19 Deaths and Vaccination in Nigeria
Emmanuel O. Okoro

28 The END Fund and Reaching the Last Mile Celebrate the Elimination of River Blindness in Niger
Rebecca George, Rebecca@georgepr.com.

29 Imaging in conditions of the male urogenital tract at Ernest Cook University, Kampala, Uganda.
Michael G Kawooya[1] (Prof), kawooyagm@yahoo.co.uk, AMPURIIRE Nyakubaho[1,2] (M.D.), Ssebaggala Frank[1], Department of Radiology, Ernest Cook University (ECU)[1], Department of Anatomy, Ernest Cook University (ECU)[1], Kampala, Uganda.

33 A Formidable Female Surgeon: The Journey of Dr. Fualal Jane Odubu

Medicine Digest

36 Abstracts from Renowned Journals

CPD Challenge

40 Test Yourself

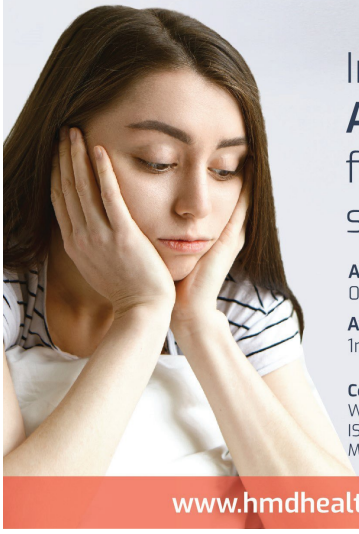
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Global Health at a Crossroads: Navigating Uncertain Times.

It is my pleasure to present to you our first issue of 2025. This edition comes at a critical time as the new U.S. administration continues to issue numerous decrees that have significantly impacted global health. Recent decrees by the U.S. administration are changing global health landscape, particularly in funding, policy, and international collaboration. Changes in foreign aid policies are affecting healthcare programs in low-resource countries, including reproductive health, infectious disease prevention, and pandemic preparedness. Adjustments to trade and pharmaceutical regulations are influencing global drug access and pricing. Immigration policies are also affecting the healthcare workforce, limiting the movement of medical professionals. Additionally, shifts in climate and environmental policies are impacting global health through effects on air quality and disease patterns. These decrees are shaping health equity, research, and international partnerships worldwide.

Though most of the articles in this journal issue were submitted before the new US administration, they demonstrate the fact that the issues discussed will be greatly affected by the changes in Global Health. The opinion submitted by Francis Omaswa, a global health leader emphasizes the fact that global solidarity is declining. It takes us through the different changes that have happened in health in Africa over the years and recommends that Africa needs to havd a mindset change to be able to navigate the times ahead.

Next, Modai Mnenula et al describes what Community-Oriented Primary Care (COPC) is , its models and challenges in sub Saharan Africa with an example from rural Malawi. They describe the educational model of COPC within the Family Medicine department at the Kamuzu University of Health Sciences in Malawi.

This is followed by two articles on maternal and neonatal health. The question Marleen Temmerman asks is "Why are so many mothers dying in pregnancy and childbirth?" She goes on to discusses why women and babies die in Africa; and using WHO data, she elaborates what the situation is like in Africa and what could be done to improve the situation. With a focus on some developments in Kenya, she highlights what could be done to reduce maternal and new born mortality in Africa. From the neighboring country Uganda, Kizito Omona describes what maternal mortality is and also answers the question by Marleen Temmerman and gives recommendations as to what could be done by Uganda and other low resourced countries to improve the situation. The next article is about Women's health as well highlighting the danger of Human Papilloma Virus (HPV) and still showing that this could be prevented through HPV testing and immunization. All these three article's show that we have the solutions but unfortunately women still die of preventable causes in Africa.

The next article shifts gears a bit to go on to technological advance. David Mukunya et al give us insight into the use of artificial intelligence (AI) in medical education and recommendations on how to use it responsibly. They recommend that institutions in sub-Saharan Africa and other LMICs should proactively engage with AI so that they should be co-creators and not mere users of this great technology.

Neglected Tropical Diseases (NTDs) continue to cause havoc in Africa. However this story about Niger gives hope. Niger has managed to eliminate river blindness. The story describes the dividends that will come out of this. It shows that this can be replicated in other countries. This is indeed a success story.

The COVID 19 mortality and vaccination Coverage in Nigeria is well researched and modeled using actual data. It is a must read as it clearly highlights the need for re-calibration of global interventions to local realities, if such interventions are to represent the best-value for money from available options and minimize severe unintended consequences, if not averted.

The next article announces the news that WHO has renewed official relations status with the International League of Dermatological Societies (ILDS) as a Key Partner in Advancing Global Skin Health.

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)

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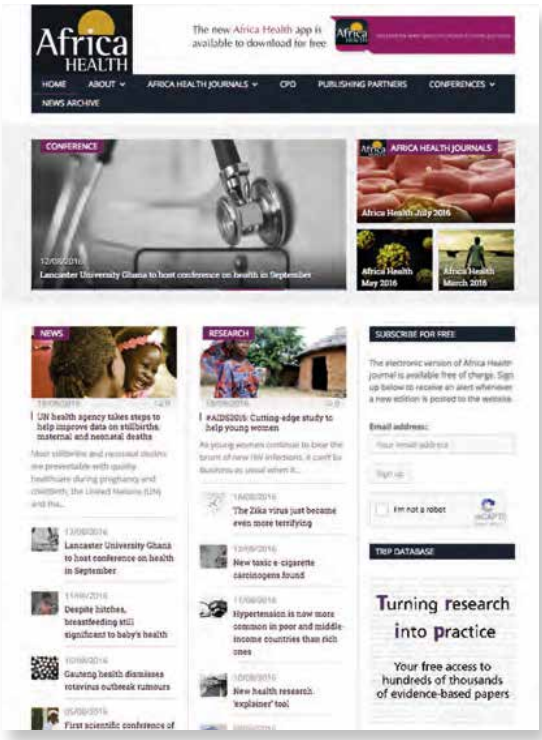
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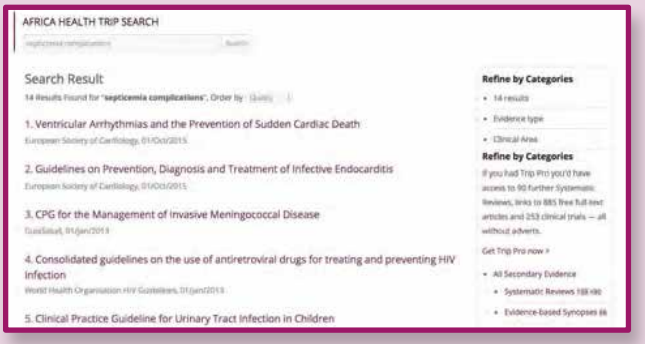
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Where does Africa go from here?

Francis Omaswa narrates Africa's pre- and post-colonial experiences and calls upon elites and politicians to unite in building a self-sufficient continent.



We live in uncertain times. The spirit of global solidarity which united us through the United Nations and its agencies is giving way to nationalism and "my country first". Global solidarity was also expressed through the work of non-government actors; individuals, charitable bodies including religious organizations and professional associations which supported our common humanity for its own sake. This kept us hopeful about the future of humanity and the planet earth.

Over the time, we have gone through slave trade, colonialism, two military world wars, the cold war between the east and the west, decolonization and the African renaissance with OAU, the African Union and African CDC. We have also gone through economic imbalances with unfair trade practices that widened the gap between the rich and poor countries and resulting in the phenomenon of the need for Aid and donor-hood with accompanying aid dependency and weakened spirit of ownership and self-determination among Aid recipients.

Currently, development indices in the African region are far worse than those in other regions of the world as illustrated by child mortality figure below. The maternal mortality ratio gap is more embarrassing and outrageous where the African region average is about 300 deaths per 100,000 live births as opposed to other regions where the maternal mortality ration is as low as only five deaths per 100,000 births. This gap between Africa and other regions extends to other development indices as well such as access to water, electricity and education. So, what is the problem and what do we do?

During July, 2019, our organization, the African Center for Global Health and Social Transformation (ACHEST) convened African thought leaders in Kampala to answer this question. The report of this meeting can be accessed at and it states that "The African mindset is a key determinant of outcomes. The immediate pre and post-independence era in Africa was hopeful, confident and ambitious and significant progress was registered in many countries including the establishment of the OAU. This was regrettably thwarted and reshaped by global governance practices that condoned anti-people leadership in Africa and power and economic imbalances that reduced African governments to beggar hood; shamefully codenamed as Highly Indebted Poor Countries (HIPCs). This situation promoted a mindset of dependency in African countries not only for money but also for vision, ideas and local solutions. This was fertile ground for minds that had been programmed by a history of slavery, colonialism and cultural invasion where African indigenous knowledge systems were demonized and sidelined which made Africans feel dependent and helpless. The African self-confidence and the can-do-attitude of the immediate post-independence period was accordingly eroded with imposition of inappropriate solutions to Africa's problems."

How do we get out of this and regain the "can do attitude" and the hopefulness that was strong and prevalent around the time we got independence in Africa? I know this because I was old enough at the time to follow and be part of the hopefulness and ambition. We believed that we had been held back by colonialism and would now be free and able to accelerate our development and catch up with our colonial masters quickly.

We need to start with mindset change to ambition and social accountability among the African intellectual class. This group has acritical mass of individuals with some of the best education and skills in the world. They are world class experts and professionals but the majority are spectators and not change agents. Many have left Africa for a better life for themselves; leaving their kith and kin in hopelessness and poverty. I want to call upon this group of Africans wherever they are, to engage with their communities to research and identify solutions to their development needs. Together and side by side with their communities they should engage their political class and present the solutions that have been identified by the African intellectuals in partnership with their communities and demand action and funding from the political leaders. Many of the intellectuals should also become politicians and not despise politics as is common at the present time.

The challenge is how to cultivate social responsibility and accountability from the intellectual class. One way I know is through professional associations. I was brought up professionally under the Association of Surgeons of East Africa (ASEA). This was led at the time by expatriate surgeons who travelled to upcountry stations every quarter during long weekends to support the surgeons and doctors who worked in remote settings. I was touched by the concern that they demonstrated for the quality of surgical services in rural settings. This group later got me to take my anesthetist wife and young family to a remote mission hospital in Eastern Uganda for five years to demonstrate how to deliver pro-poor surgical services. The ASEA paid my salary at this time and it was this experience that moved me to mobilize for the establishment of the College of Surgeons of East Central and Southern Africa (COSECSA) which is now the largest college of surgeons in Africa. Can we have more of this in all possible sectors?

Let me also call upon the African political class to seek out and partner with the African educated elite, experts and professionals in identifying and implementing solutions for the problems of African communities.

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


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Community-Oriented Primary Care (COPC) in Rural Malawi: Towards Defining its Identity

Modai Mnenulaet al describes what Community-Oriented Primary Care (COPC) is , its models and challenges in sub Saharan Africa with an example from rural Malawi.

Introduction and Definition

Community-Oriented Primary Care (COPC) integrates primary care services with community engagement to comprehensively address local health needs. It emphasizes prevention, community involvement, and accessibility. A key feature of COPC is the integration of health services with community participation, ensuring healthcare is both accessible and responsive to the unique challenges of local populations (1). This approach also underscores the significance of addressing social determinants of health, actively involving community members in decision-making, fostering trust, and improving health outcomes (2). However, definitions of COPC vary across countries, reflecting differing priorities and desired outcomes. In Malawi (and in many sub-Saharan African countries), while the explicit term "COPC" may not be widely used, several features illustrate its application within diverse organisations.

Models and Challenges of COPC in sub-Saharan Africa

In sub-Saharan Africa, COPC is characterized by principles that address local health challenges through community-centered strategies. COPC across the continent must overcome the following barriers: limited integration within the health system, resource constraints (including workforce shortages), and lack of standardized frameworks and guidelines, insufficient community engagement and ownership, fragmented identity, and challenges in monitoring and evaluation (3).

Community Health Worker (CHW) programs are integral to PHC, providing household-level care for conditions such as HIV, tuberculosis, and non-communicable diseases (NCDs). These programs have expanded to address broader health needs, including family planning and antenatal care, resulting in improved chronic care adherence and increased antenatal care attendance (2). Efforts to integrate chronic disease management, including NCDs, into PHC settings continue but are constrained by workforce shortages and inadequate facilities. Community engagement initiatives mobilize rural populations by promoting culturally appropriate health education and fostering self-help motivation (4). Task-shifting is a key strategy for managing chronic and infectious diseases. Programs such as HIV outreach have significantly improved health indicators in Malawi. COPC also prioritizes comprehensive and continuous care, integrating prevention, treatment, and health promotion, with growing attention to mental health services.

The educational model of COPC within the Family Medicine department at the Kamuzu University of Health Sciences in Malawi focuses on patients seen in clinics at hospitals with cases of interest to consultants. A resident attached to the patient takes a holistic



Figure 1: Teenage mother visited by registrar, Dr Chilambe to understand more on health related challenges faced by teenage mothers, COPC program in Jalasi Community, Mangochi District, Malawi.

Modai Mnenula, mmnenula@kuhes.ac.mw, Dalitso Chilambe, Prosper Lutala, Department of Family Medicine, School of Medicine and Oral Health, Kamuzu University of Health Sciences Blantyre, Malawi.



Figure 2 : Community participation: a group discussion on enablers of teenage pregnancies in Jalasi community of Mangochi District, Malawi.

approach to ensure proper management of the current disease episode and continuity of care. Briefly, the model encompasses clinical management, follow-up at home, family assessments, and the collection of relevant elements from the patient's environment. One of the Family Medicine resident, Dr. Chilambe adopted Jalasi community within Mangochi District. He does COPC visits within Jalasi since he started post graduate training in Family Medicine. One day, Dr Chilambe was running post-natal check-up clinic at Jalasi Health. This day he was looking after a 15 year-old that had come for check-up three weeks post-delivery. After the clinic he arranged for a home visit (see figure 1) for this client in order to deepen understanding of health related problems that teenage mothers go through in this community. Upon visiting client's household, he was welcomed by a number of teenage mothers who happen to be friends of the index client. This astonished Dr Chilambe and decided to organize a stakeholders meeting at Jalasi Community, invitees were: village health committee, primary school teachers, chiefs, religious leaders and non-governmental organisations in health sector. Three groups of about five to six people, each representing key stakeholders in health sector at Jalasi composed these groups. They brainstormed and accepted teenage pregnancy is really an issue at Jalasi later on looked triggers and potential solutions to reduce prevalence of teenage pregnancies in this community. (see figure 2). The findings from the meeting was later presented to Family Medicine COPC and district health leadership for possible integration into the district health system as an intervention to reduce teenage pregnancies in Jalasi Community in Mangochi district, Malawi.

However, the connection between primary care and public health remains limited to the family environment due to resources' constraints. In Mangochi District, this has been possible due to the presence of family medicine post-graduate training program run under the Department of Family Medicine of the Kamuzu University of Heath Sciences (KuHeS) with support from SEED Global Health Malawi.

In summary, COPC in sub-Saharan Africa incorporates characteristics such as community engagement, task-shifting, and comprehensive care to overcome health system challenges.

Challenges and the State of COPC in Malawi

Community-Oriented Primary Care (COPC) in Malawi encompasses several key components critical to effective health service delivery. At its core, COPC integrates primary care with community health initiatives to holistically address population health needs. Health Surveillance Assistants (HSAs) (community health workers in Malawi) are central to this integration, serving as primary links between health facilities and communities. They provide essential services such as health education,



A team interracting with a teenager on issues of reproductive health

disease prevention, and basic healthcare. HSAs are particularly vital in rural areas where access to healthcare facilities is limited; ensuring that primary care reaches underserved populations (5).

Another significant component of COPC in Malawi is the emphasis on community engagement and participation. Effective COPC models prioritize community involvement in health decision-making processes, fostering ownership and accountability (6), another attribute of COPC in Malawi. This participatory approach tailors health interventions to specific community needs, improving health outcomes and reducing disparities (6). The incorporation of mental health services into primary care is another critical aspect of COPC in Malawi. Mental health is often neglected in primary care settings despite its significance. Programs integrating mental health care into primary health services have been developed, focusing on training HSAs and other healthcare workers to recognize and manage mental health conditions (7). This integration addresses the high prevalence of mental health disorders in Malawi, particularly in rural areas where stigma and lack of awareness hinder access to care (7). However, Malawi primary care (PHC), while foundational, faces challenges such as resource maldistribution, service fragmentation, and staff shortages that limit its effectiveness.

Continuous evaluation and adaptation of COPC programs are essential for their effectiveness and sustainability. Using assessment tools such as the Primary Care Assessment Tool (PCAT) allows measurement of primary care performance dimensions, including community orientation, comprehensiveness, and continuity of care (8). A key limitation remains the limited reach of this approach, as several districts lack a well-defined community approach that aligns primary care and public health under a unified team with shared objectives and standardized methodologies.

Way Forward

Strengthening COPC in Malawi requires concerted efforts to integrate it into the national health strategy, develop standardized guidelines, increase resource allocation, and promote community ownership. Addressing these gaps and defining a clear identity for COPC can enhance its potential to improve health outcomes and equity in Malawi.

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References:

1. Maher D, Sekajugo J, Harries AD, Grosskurth H. Research needs for an improved primary care response to chronic non-communicable diseases in Africa. Trop Med Int Health. 2010 Feb;15(2):176-81. doi: 10.1111/j.1365-3156.2009.02438.x.
2. Callaghan M, Ford N, Schneider H. A systematic review of task- shifting for HIV treatment and care in Africa. Hum Resour Health. 2010 Mar 31; 8:8. doi: 10.1186/1478-4491-8-8.
3. Kok, M.C., Namakhoma, I., Nyirenda, L. et al. Health surveillance assistants as intermediates between the community and health sector in Malawi: exploring how relationships influence performance. BMC Health Serv Res 16, 164 (2016). https://doi.org/10.1186/s12913-016-1402-x
4. Ibiloye, O., Masquillier, C., Jwanle, P., Belle, S., Olmen, J., Lynen, L., … & Decroo, T. Community-based art service delivery for key populations in sub-saharan africa: scoping review of outcomes along the continuum of hiv care. Aids and Behavior. 2022; 26(7): 2314-2337. https://doi.org/10.1007/s10461-021-03568-3
5. McBride K, Moucheraud C. Rural-Urban Differences: Using Finer Geographic Classifications to Reevaluate Distance and Choice of Health Services in Malawi. Health Syst Reform. 2022 Jan 1;8(1):e2051229. doi: 10.1080/23288604.2022.2051229.
6. Savage Hoggard CL, Kaufman A, Michener JL, Phillips RL Jr. Academic Medicine's Fourth Mission: Building on Community-Oriented Primary Care to Achieve Community-Engaged Health Care. Acad Med. 2023 Feb 1; 98(2):175-179. doi: 10.1097/ACM.0000000000004991.
7. Wright J, Common S, Kauye F, Chiwandira C. Integrating community mental health within primary care in southern Malawi: a pilot educational intervention to enhance the role of health surveillance assistants. Int J Soc Psychiatry. 2014 Mar; 60(2):155-61. doi: 10.1177/0020764012471924.
8. Dullie L, Meland E, Hetlevik Ø, Mildestvedt T, Gjesdal S. Development and validation of a Malawian version of the primary care assessment tool. BMC Fam Pract. 2018 May 16; 19(1):63. doi: 10.1186/s12875-018-0763-0.

Why are so many mothers dying in pregnancy and childbirth?

Marleen Temmerman discusses why women and babies die in Africa, using WHO data, she elaborates what the situation is like in Africa and what could be done to improve the situation. With a focus on some developments in Kenya, she highlights what could be done to reduce maternal and new born mortality in Africa.

> Women are not dying because of untreatable diseases. They are dying because societies have yet to make the decision that their lives are worth saving: We have not yet valued women's lives and health highly enough.
>
> Prof Mahmoud Fathalla, 2006.

Maternal mortality, one of the key indicators of inequity and injustice, remains unacceptably high. According to WHO, 287 000 women died during and following pregnancy and childbirth in 2020, over 90% in low and lower middle-income countries, and most preventable. The maternal mortality rate (MMR) in low-income countries was 430 per 100 000 live births versus 13 per 100 000 live births in high income countries1. The high number of maternal deaths in some areas of the world reflects inequalities in access to quality health services and lack of women agency, decision power and reproductive rights[1].

Women die because of complications during and following pregnancy and childbirth, and most of these are preventable or treatable. Major complications that account for nearly 75% of all maternal deaths are severe bleeding, infections, high blood pressure during pregnancy (pre-eclampsia and eclampsia), complications from delivery and unsafe abortion[1].

To avoid maternal deaths, prevention of unintended pregnancies as well as quality of care are the two main interventions. All women, including adolescents, need access to contraception, safe abortion services to the full extent of the law, and quality post-abortion care and all women need access to high quality care in pregnancy, and during and after childbirth. Maternal health and newborn health are closely linked as timely management and treatment can make the difference between life and death for the women as well as for the newborns[1].

Progress in maternal health has been made, but too little, too late, too slow and even reversing in some parts of the world. The Millenium Development Goals (MDGs) were launched in 2001, with MDG5 aiming at reducing the maternal mortality ratio by three-quarters and ensure universal access to reproductive healthcare by 2015. Between 1990 and 2010, maternal mortality decreased globally by nearly 50%, from 543 000 maternal deaths per year to 287 000, with the greatest reductions in the second half of this period. A major catalyst for this progress was the target set by MDG5. Later, a second target on reproductive health was added, which has undoubtedly contributed to accelerated progress. In tandem, countries and the international community enhanced their commitment to support, develop, and implement effective interventions to improve the health of women, especially during pregnancy and childbirth, and post-partum[2].

Strategies to implement targeted interventions to reduce maternal mortality need to address more than the clinical causes of death—they should respond to changing demographics, meet the specific needs of women for reproductive health, and address contextual features such as challenges in health-care systems. Universal access to high-quality health services, including family planning and information and services for reproductive health (especially for vulnerable and at-risk populations), should be put at the centre of efforts to achieve the vision of ending maternal deaths[2].

In 2014, a Global Investment Framework for Women's and Children's Health demonstrated how investment in women's and children's health can secure high health, social, and economic returns. Increasing health expenditure by just $5 per person per year up to 2035 in 74 high-burden countries could yield up to nine times that value in economic and social benefits. These returns include greater gross domestic product (GDP) growth through improved productivity, and prevention of the needless deaths of 147 million children, 32 million stillbirths, and 5 million women by 2035[3].

Marleen Temmerman, Professor Obstetrics and Gynaecology, Director Centre of Excellence in Women and Child Health, Aga Khan University East Africa, based in Nairobi, Kenya. AKU-UNESCO Chair on Youth Leadership in Science, Health, Gender and Education.

Recently, Ian Askew and colleagues published a strong and comprehensive overview on the importance of integrating contraceptive services within maternal and newborn health programs and policies. They show that "Family planning saves lives has been a popular and influential slogan for three decades as it recognizes and seeks to communicate the long-established scientific evidence that use of contraception contributes to the survival of women before and during childbirth and to the health of their babies".

Their paper underlines that still "24% (218 million) of women wanting to avoid pregnancy have an unmet need for modern contraception; among adolescents this proportion is higher at 43%. If all this need could be met, the number of unintended pregnancies would be reduced to 35 million each year resulting in 21 million fewer unplanned births, 46 million fewer abortions (of which 26 million would still be unsafe because of legal restrictions), 8 million fewer miscarriages, and 0.7 million fewer stillbirths"[4].

In the next paragraph, I focus on some developments in Kenya, my second home country where I live for many years and work with many partners in the area of maternal and perinatal health. In 2013, the Government of Kenya introduces the Free Maternity Service Policy in all public health facilities. Hospital costs were a major expense incurred by most women, and a barrier to maternity care utilization. Langat et all, showed sustained increase in the use of skilled care during pregnancy and childbirth since the launch of the program[5].

Another study from Kenya showed that women's ability to make decisions (voice, agency, and autonomy) is critical for gender equality, empowerment and an important determinant of access and utilization of services. Individual agency, immediate relational agency, and distance relational agency all play crucial roles in shaping women's decision-making power and control over their utilization of maternal health services. This study offers valuable insights emphasizing the critical need for developing context-specific strategies to promote women's voices for sustained use[6].

Despite the increased use of antenatal care (over 90%) and the high rate of facility deliveries in Kenya (88%) the MMR is still high, mainly due to lack of quality care and referrals[7].

It is important to note that Kenya has embraced EWENE, Every Women, Every Newborn, Everywhere, launched at the International Maternal Newborn Health Conference (IMNHC) in May 2023 and bringing together both the WHO Every Newborn Action Plan (ENAP) initiative and the strategies for Ending Preventable Maternal Mortality (EPMM). As underlined by Askew et all, there is an alarming stagnation and setbacks since maternal and newborn health were prioritized in the Sustainable Development Goals for Health in 2015: preventable maternal deaths, stillbirths and newborn deaths remain unacceptably high in all regions of the world and they are still declining too slowly to reach the SDG targets for 2030. To save more maternal and newborn lives, a significant change in the way health systems address the determinants of maternal and newborn mortality is needed[8].

We know what needs to be done. We have learned from the successes of the MDGs that political will, leadership and coordination, are key factors to improve health and reduce maternal and perinatal mortality. However, almost 20 years after Prof Mahmoud Fathalla's legendary words we need to do more, and to push even harder to create a world in which every women, every child, and every adolescent is able to survive, thrive, and transform.

In the twenty-first century, the complex relationship between women's health and rights has been influenced by a range of interconnected challenges, including



A delapidated labour ward in rural Africa



A midwife examining a pregnant lady

gender inequity, reproductive health disparities, maternal mortality and morbidity, and women's inability to access life-saving, high-quality healthcare services including family planning.

Going forward, the world needs to find ways to implement the unfinished agenda of the International Conference on Population and Development (ICPD) 1994 where women's reproductive rights were recognized, as well as the unfinished agenda of the Sustainable Development Goals (SDGs), thus prioritizing health and rights for women and girls as essential not only to their survival but also to their progress and empowerment. It is also important to consider the interconnection between women's health and rights and climate change, with its disproportionate impact on the well-being of girls and women, and to address the impact and opportunities afforded by digital technologies. By embracing a holistic approach, societies might be able to advance the cause of women's health and rights in a more inclusive and sustainable manner[9].

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References:

1. WHO https://www.who.int/news-room/fact-sheets/detail/maternal-mortality
2. Bustreo F, Say L, Koblinsky M, Pullum TW, Temmerman M, Pablos-Méndez A. Ending preventable maternal deaths: the time is now. Lancet Glob Health. 2013 Oct;1(4):e176-7.
3. Stenberg K, Axelson H, Sheehan P, Anderson I, Gülmezoglu AM, Temmerman M, Study Group for the Global Investment Framework for Women's Children's Health Advancing social and economic development by investing in women's and children's health: a new Global Investment Framework. Lancet 2014 Apr 12;383(9925):1333-1354.
4. Askew I, Raney L, Kerrigan M, Sridhar A. Family planning saves maternal and newborn lives: Why universal access to contraception must be prioritized in national maternal and newborn health policies, financing, and programs. Int J Gynaecol Obstet. 2024 Feb;164(2):536-540.
5. Lang'at EC, Mwanri L, Temmerman M. Effects of implementing free maternity service policy in Kenya: an interrupted time series analysis. BMC Health Serv Res. 2019 Sep 6;19(1):645.
6. Olwanda E, Opondo K, Oluoch D, Croke K, Maluni J, Jepkosgei J, Nzinga J. Women's autonomy and maternal health decision making in Kenya: implications for service delivery reform - a qualitative study. BMC Womens Health. 2024 Mar 19;24(1):181.
7. KDHS 2022; https://dhsprogram.com/pubs/pdf/PR143/PR143.pdf
8. EWENE https://platform.who.int/data/maternal-newborn-child-adolescent-ageing/every-woman-every-newborn-everywhere-dashboard
9. Ojong SA, Temmerman M, Khosla R, Bustreo F. Women's health and rights in the twenty-first century. Nat Med. 2024 Jun;30(6):1547-1555.



Prof. Ahmoud Fatallah with Dr. Temmerman at the ICPD conference

A Review of the Trend in Maternal Mortality Ratio Between 2000 and 2020 in Low- and Middle-Income countries: A Recipe for Continued Improvement for Uganda.

Kizito Omona examines the global burden of maternal mortality, exploring its causes and preventive measures, with a specific focus on Uganda..

What is Maternal Mortality Ratio (MMR)?

World bank [1] defines maternal mortality ratio (MMR) as the number of women who die from pregnancy-related causes while pregnant or within 42 days of pregnancy termination per 100,000 live births. This means if a country has 500 maternal deaths and 100,000 live births in a year, the MMR would be 500/100,000 * 100,000 = 500 per 100,000 live births. The indicator, MMR, represents the risk associated with each pregnancy. It depicts the risk of maternal death relative to the number of live births. WHO [2] defines maternal deaths as the annual number of female deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, expressed per 100,000 live births, for a specified time period. Similarly, live birth is defined as the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Global Burden of Maternal Mortality

According to WHO[3,4], maternal mortality is unacceptably high. In the year 2020, about 287,000 women died during and following pregnancy and childbirth globally. Of this figure, almost 95% of all maternal deaths occurred in low and lower middle-income countries. With good healthcare, most of these deaths could have been prevented. Sub-Saharan Africa (SSA) and Southern Asia accounted for around 87% (253,000) of the estimated global maternal deaths that year 2020. Sub-Saharan Africa alone accounted for around 70% of maternal deaths (202,000), while Southern Asia accounted for around 16% (47,000).

Meanwhile, elsewhere, between 2000 and 2020, Eastern Europe achieved the greatest overall reduction in maternal mortality ratio: a decline of 70% (from MMR of 38 to MMR of 11). Despite its very high MMR in 2020, sub-Saharan Africa also achieved a substantial reduction in MMR of 33% between 2000 and 2020.

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Why do women die? Causes of Maternal Mortality

Women die as a result of complications during and following pregnancy and childbirth [2]; all of which are preventable with good healthcare. These complications develop during pregnancy although some of them may exist before pregnancy but are worsened during pregnancy, especially if not managed as part of the woman's care. The major complications that account for nearly 75% of all maternal deaths are;

1. Postpartum hemorrhage (severe bleeding after childbirth)
2. Puerperal sepsis (infections after childbirth)
3. Hypertensive disorders in pregnancy (pre-eclampsia and eclampsia)
4. Obstructed labor (complications from delivery)
5. Unsafe abortion

How Do We Prevent these Deaths?

All women need access to high-quality care in pregnancy, during pregnancy, and after childbirth[2-4]. All childbirths must be attended by skilled health professionals, as timely management and treatment can make the difference between life and death of women and newborns.

1. Postpartum hemorrhage - Severe bleeding after birth can kill if left unattended to. Injecting oxytocics immediately after childbirth effectively reduces the risk of bleeding.
2. Puerperal sepsis - Infection after childbirth can be eliminated by practicing good hygiene, early detection of signs of infection and timely treatment with antibiotics.
3. Hypertensive disorders in pregnancy - Pre-eclampsia should be detected at antenatal care and appropriately managed before the onset of convulsions (eclampsia) and other life-threatening complications. Administration of magnesium sulfate for pre-eclampsia can lower a woman's risk of developing eclampsia.
4. Obstructed labor – All obstructed labor should be timely detected, and an emergency cesarean section should be done.
5. Unsafe abortion - Managing unsafe abortion involves providing prompt and comprehensive post-abortion care, including treatment of complications like infection and incomplete abortion, and ensuring access to contraception to prevent future unintended pregnancies.



A mother receiving postnatal care courtesy of Eleanor Whitehead

Factors that Prevent Women from Receiving or Seeking Care During Pregnancy and Child-birth in Low- and Middle-Income Countries

Poor women in remote areas are the least likely to receive adequate health care [5]. This is due to relatively low numbers of skilled healthcare providers, as seen in Sub-Saharan Africa and Southern Asia. Studies have shown that in most high-income and upper-middle-income countries, approximately 99% of all births benefit from the presence of a trained midwife, doctor or nurse but only 68% in low-income and 78% in lower-middle-income countries are assisted by such skilled health personnel [4].

Therefore, the factors that prevent women from receiving or seeking care during pregnancy and childbirth in low- and middle-income countries are:

1. Health system failures which eventually translate to (i) poor quality of care, including disrespect, mistreatment and abuse, (ii); insufficient numbers of and inadequately trained health workers, (iii); shortages of essential medical supplies; and (iv) the poor accountability of health systems
2. Social determinants, including income, access to education, race and ethnicity, that put some populations at greater risk
3. Harmful gender norms and/or inequalities that result in a low prioritization of the rights of women and girls, including their right to safe, quality and affordable sexual and reproductive health services
4. External factors that contribute to political instability and health system fragility, such as climate and humanitarian crises.

This means to improve maternal health, these barriers that limit access to quality maternal health services must be identified and addressed at both health system and societal levels.

Trends of Maternal Mortality Ratio for Uganda, Sub-Saharan Africa and the Global Estimates

The maternal mortality ratio in Sub-Saharan Africa has improved from 802 in 2000 to 536 in 2020. Figure 1 shows that maternal mortality in Sub-Saharan Africa is still far higher than the world average while Uganda is faring much below SSA although it is higher than the global average, as well.

Thus, from 2000 to 2020, the global maternal mortality ratio (MMR) declined by 34 percent – from 339 deaths to 223 deaths per 100,000 live births [6,7]. This translates into an average annual rate of reduction of 2.1 percent. Even though this decline seems substantive, it is only about one third of the 6.4 percent annual rate needed to achieve the Sustainable Development Goal (SDG) of 70 maternal deaths per 100,000 live births by 2030 (7). With the global MMR of 223 per 100000 live births in 2020, achieving a global MMR below 70 by the year 2030 will requires an annual rate of reduction of 11.6%.

For Uganda, the maternal mortality rate for 2020 was 284, meaning that there was a 2.74% decline from that of 2019 which was 292 deaths per 100,000 live births. Between 2017 and 2018, there was a 9.58% decline. This rate of decline is still quite small if the Sustainable Development Goal (SDG) of 70 maternal deaths per

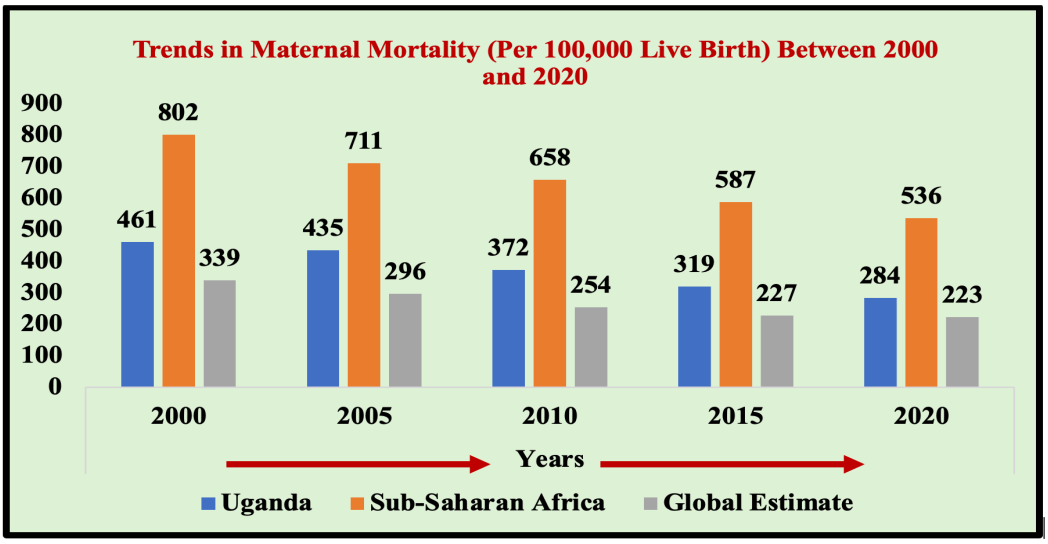


Figure 1:Trend in MMR (Data Source: World Bank, 2023)

100,000 live births by 2030 is to be achieved [8, 9].

Conclusion and Lessons Learned

With the recent and sustained surge focused on assuring the delivery of effective obstetric emergency care to reduce maternal mortality, it has led to the development of an intellectual framework that is largely applicable to global emergency. This revolves around seeking care, reaching care and receiving care all geared to address the three levels of delays.

Thus, reviving emergency systems, emergency services and care proved effective in many countries. Emergency systems are all organizations, institutions and resources whose primary purpose is to promote, restore and/or maintain health in medical and/or surgical emergencies.

Emergency services are the sum of all efforts to deliver effective health action in response to extreme risk under intense time pressure, including interventions at both the population level and the individual level.

Recommendations

To significantly improve maternal mortality in Uganda, and all other low- and middle-income countries, the author recommend;

1. Increasing skilled birth attendance – Ministry of health must ensure access to trained healthcare providers, promote institutional delivery and investing in training programs for health work force.
2. Increasing accessibility of essential Obstetric Care – This can be through expanding access to facilities, directly provide essential obstetric care and ensuring timely referral.
3. Service Quality Improvements – This involves ensuring that health facilities have adequate infrastructure, including clean water, sanitation, and electricity. It also involves enhancing data collection and monitoring and implementing quality improvement initiatives.
4. Adequate Antenatal Care – This involves encouraging mother for early and frequent antenatal visits and ensuring access to essential antenatal services
5. Postpartum Care - Comprehensive postpartum care must be provided to all mothers, as well as addressing postpartum complications and promoting breastfeeding
6. Safe post abortion care - Ensure access to safe abortion services.
7. Family Planning - Promote family planning services and address unmet needs for family planning
8. Community Mobilization - Engage communities, raise community awareness about the problem and empower women about their rights to quality healthcare.

References:

1. World Bank, Metadata Glossary, 2025. Available at https://databank.worldbank.org/metadataglossary/gender-statistics/series/SH.STA.MMRT
2. World Health Organization. Maternal mortality ratio (per 100,000 live births), 2024. Available at https://www.who.int/data/gho/indicator-metadata-registry/imr-details/26
3. WHO. Trends in maternal mortality 2000 to 2020: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division. Executive summary. Geneva: World Health Organization; 2023. Available at: https://iris.who.int/bitstream/handle/10665/372247/9789240069251-eng.pdf
4. World Health Organization and United Nations Children's Fund. WHO/UNICEF joint database on SDG 3.1.2 Skilled Attendance at Birth. Available at: https://unstats.un.org/sdgs/indicators/database/.
5. Samuel O, Zewotir T, North D. Decomposing the urban–rural inequalities in the utilization of maternal health care services: evidence from 27 selected countries in sub-Saharan Africa. BMC Reproductive Health 18, 216 (2021). https://doi.org/10.1186/s12978-021-01268-8
6. World Bank. Sub-Saharan Africa, 2023. Available at: https://genderdata.worldbank.org/en/regions/sub-saharan-africa
7. UNICEF. Maternal mortality, 2025. Available at: https://data.unicef.org/topic/maternal-health/maternal-mortality/
8. Birabwa C, Banke-Thomas A, Waiswa P, et al. Maternal health in cities: analysis of institutional maternal mortality and health system bottlenecks in Kampala City Uganda, 2016-2021. Journal of Global Health Reports. 2024;8:e2024006. doi:10.29392/001c.116248
9. Anonymous. Uganda Maternal Mortality Rate 2000-2025, 2025. Available at: https://www.macrotrends.net/global-metrics/countries/uga/uganda/maternal-mortality-rate

Human Papilloma Virus (HPV) testing: a catalyst for women's empowerment

A call to action to speed up HPV testing.

An old proverb from the Congo says, "*A mother is like a kernel, crushed by problems but strong enough to overcome them*". Throughout Africa, mothers, sisters – the continent's primary caregivers – are expected to be strong. Indeed, their resilience is the glue that holds our families and economies together. Yet, women in the African Region are more vulnerable to many more life-threatening diseases and health conditions than women in other regions.[1,2]

Among these illnesses is cervical cancer (caused by HPV – the Human Papillomavirus), which remains the leading cause of death in women in Sub-Saharan Africa – even though it is preventable. January, marking Cervical Cancer Awareness Month[1], comes around every year – and every year, we move closer to the WHO (World Health Organization) 2030 "90-70-90" cervical cancer elimination targets[2]. That is, 90% of girls fully vaccinated with the HPV vaccine; 70% of women screened with a high-performance test by age 35 and again at 45; and 90% of women identified with cervical disease receiving treatment (90% of women with invasive cancer managed). We still have a long way to go.[2]

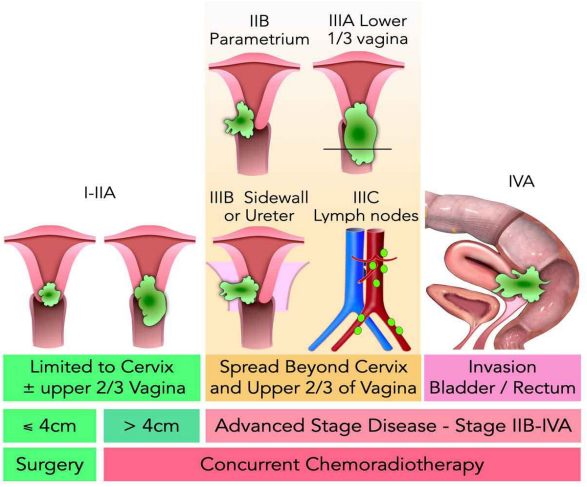
The economic case for investment in HPV screening

With fewer than five years left to achieve the 90-70-90 targets, we're in a race against the clock. To make the case for urgent action for African women's health, let's consider that none of us exists in a vacuum. A cycle of cause and effect starts in the smallest corners of our communities and escalates to the most significant factors influencing our economies.

When a family's primary caregiver or breadwinner becomes a casualty of cervical cancer, an entire family system collapses. According to estimates, for every 100 mothers who die from cervical or breast cancer in resource-poor settings, 14 children die before their 10th birthday, and 210 become maternal orphans.[3]

As a young physician serving in rural communities in my home country, Kenya, I observed the cycle firsthand. Children left behind suffer enhanced exposure to malaria, tuberculosis, pneumonia or even malnutrition because their mother is not there to care for them. Beyond the awful tragedy this represents for good, hardworking people, this also perpetuates a domino effect that trickles down to local economies.

In Africa, women comprise an estimated 50% of the agricultural sector labour force, power over 50% of all SMEs (as per IFC data), and support families (African Development Bank). Valuable members of our society, their children and their families are at risk. These are all potentially valuable contributors to our society and economy. Logically, for Africa to realise its full economic potential, we must prioritise women's health.[4]



Stages of Cervical Cancer

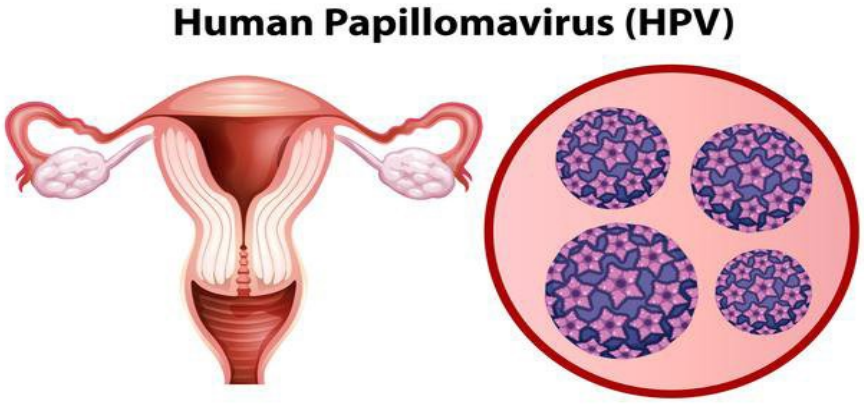
Ending the cycle

There are currently two methods of testing; the traditional method is a pap smear, which many women will be familiar with. In addition to its low sensitivity and need to be conducted more often, the method leaves many women feeling embarrassed or vulnerable during the sample collection process. However, a second option empowers women to avoid the perceived indignity of a pap smear. This relatively recent innovation is the HPV-DNA testing with the self-collection kit – now available from many healthcare providers. [6,7]

According to the WHO[3], self-collection has proved to be as reliable as samples collected by healthcare providers. The most significant benefit of self-collection is that once the self-collection kit has been picked from your nearest healthcare facility, sample collection can be done in the privacy of your home. Lancet[4] and other participating laboratories provide lists of local locations where kits are available.

Currently, lack of access to national HPV screening, vaccination, testing and treatment programs as well as lack of education and social and economic inequities prevent women from taking their cervical health into their own hands, leaving many at risk. We can change this.[9]

Bio: Dr Allan Pamba, Executive Vice President, Diagnostics, Africa at Roche Diagnostics



Human papilloma virus with explanation

Partnerships powering progress

Governments and policymakers worldwide are becoming more committed to prioritising diagnostics. This commitment was bolstered by the 2022 adoption of the WHO Resolution on Strengthening Diagnostics Capacity by participating member states at the World Health Assembly[5].

The Resolution prompts government stakeholders to drive equitable access to diagnostics, ultimately driving universal healthcare for all people. To accomplish the WHO goals, however, we need a collective effort – from our communities, the private and public sectors, healthcare practitioners and anyone else who can make the time to have the necessary conversations about HPV.

Cervical cancer doesn't just impact the individual—it affects entire communities. In low and middle-income countries, the financial burden of late-stage treatment falls heavily on families and national healthcare systems. Advanced treatments like chemotherapy are costly and often unattainable for many, driving households into poverty.

By contrast, early diagnosis through HPV testing alleviates these financial pressures. It reduces the cost of treatment, eases the strain on overburdened healthcare systems and enables women to remain active contributors to their families and the economy.

When women thrive, so do the communities they support. Early testing for HPV is their open 'secret weapon' – and our roadmap to 90-70-90.

References:

1. WHO Women's Health https://www.emro.who.int/noncommunicable-diseases/campaigns/cervical-cancer-awareness-month-2024.html
2. WHO Investment Case Series – Cervical Cancer, https://www.afro.who.int/sites/default/files/2024-03/WHO%20AFRO%20Investment%20Case%20Series_Cervical%20Cancer%20and%20HPV%20Vaccination.pdf
3. Singh D, et al. Global estimates of incidence and mortality of cervical cancer in 2020 https://www.who.int/news-room/fact-sheets/detail/cervical-cancer
4. https://www.lancet.co.za/hpv-self-testing-kit/
5. https://apps.who.int/gb/ebwha/pdf_files/WHA76/A76_R5-en.pdf

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.

sysmex | Lighting the way with diagnostics

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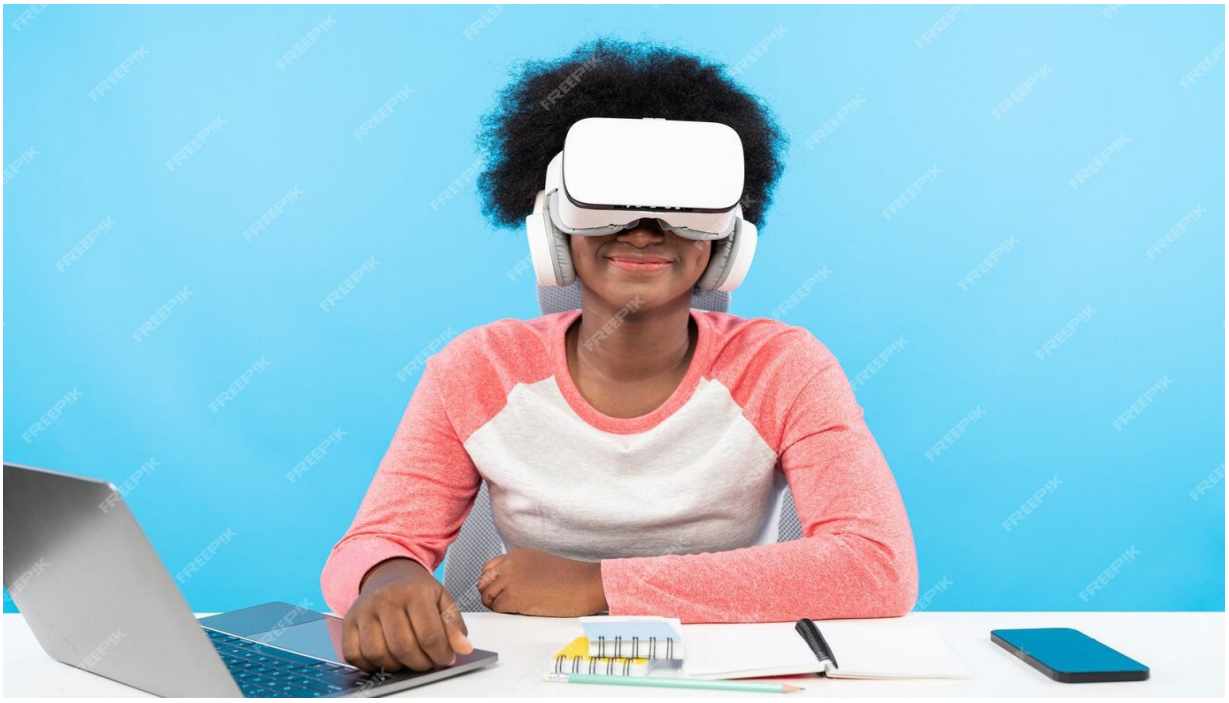
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Recommendations on Incorporating Artificial Intelligence in Medical Education

David Mukunya et al give us insight into the use of AI in medical education and recommendations on how to use it responsibly.



A student using Simulation facilities

Background

Generative Artificial intelligence (AI) tools offer opportunity and challenges for medical education. These tools offer quick access to information and could potentially bridge the low teacher to student ratio in resource limited settings. On the other hand, these tools can be used to facilitate academic malpractice among students as it can enhance cheating in assignments and exams. In addition, there are genuine concerns that students might lose critical thinking capacity and innovativeness because of over reliance on these readily available and easy to access tools.

We have recently completed a study that explored perceptions to artificial intelligence in medical education among four medical schools in Uganda [1, 2]. We explored experiences and recommendations on incorporating AI in medical education in low and middle income countries (LMICs) among medical students and faculty [1, 2]. `Below, we share thoughts from our participants on ways to promote responsible AI use. The list is not intended to be exhaustive but an stimulant of a conversation on this subject in LMICs.

David Mukunya*, Kennedy Pangholi, Ritah Nantale, Elizabeth Ajalo, Frank Kayemba, Jonathan Babuya, Faith Oguttu, Joshua Epuitai, Milton W. Musaba , Department of Community and Public Health, Busitema University.

Recommendations on responsible AI use

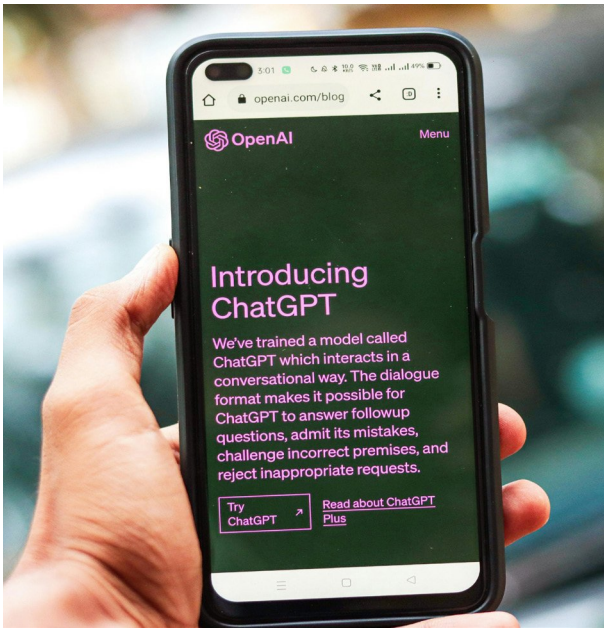
1. Urgently develop policies to guide responsible use of AI: In all the Universities we studied [1, 2], none had a policy on AI and none had started the process of developing one. This is in stark contrast to Universities in South Africa, and the West that already have AI guidelines [3-7]. There is an urgent need to embrace that AI is here, and it is here to stay; and that both students and faculty are in dire need of guidance on how to exploit it. In addition, a sustainable infrastructure is required because AI policy reviews need to be more frequent given the rapid advancements in the field.
2. Train students and faculty on responsible AI use: Our studies revealed several misconceptions, scepticism and reluctance on AI use [1, 2]. There is urgent need to train both students and faculty on AI use to build

their capacity and to promote use of AI in health professional education.

3. Encourage ethical use of AI: AI use in health professional education has inadvertently introduced ethical concerns including examination malpractice, privacy, and plagiarism[8]. These underscore the importance to undergird ethical use of AI and the integrity of examination processes. Providing guidelines for students and faculty can help provide clarity on ethical use of AI [9]. AI detectors and plagiarism software such as Turnitin's may be crucial to prevent abuse of AI, safe guard, and monitor ethical use of AI [10].
4. Aim to contextualise AI in the global South: Most of the AI tools are western centric [11]. In one of our study, students were concerned by the scarcity of local data on AI tools [2]. Therefore, there is need to train models with local and contextual data from LMICs. This should probably be led by scientists from the global south with contextual understanding of resource-limited settings.
5. Students should be at the center of AI use: AI tools are readily accepted among students than faculty. Maximising students' enthusiasm towards technology and AI may promote AI use in Health Professions Education. AI tools need to be tailored and developed to meet the needs of students.
6. Modify Health Professions Education curricula and training. The inevitability of AI use in health professionals' education underscores the critical importance of modifying pedagogical approaches, methods and strategies. While traditional curricula in health professions program have little or no consideration for AI, there is need to revise the curricula to incorporate AI use. Pedagogical approaches and methods of teaching need to embrace the transformational benefits of AI in Health Professions Education. The methods of assessment need to be adjusted to accommodate the ubiquitous use of AI in Health Professions Education. The era of take home written exams that focus on knowledge and facts is over. Many that are still giving such take home exams are caught up in the unfortunate situation of having to mark AI essays thinking they are marking their students work [12]. Newer examinations must use of clinical scenarios and assignments that encourage critical thinking and reasoning.
7. Investment in AI infrastructure and resources: In order to progress as active participants in the AI conversation, we ought to invest in AI infrastructure and human capacity development. Countries that are leading in the AI race are not riding on overnight successes or luck; they have been investing in this realm. Actually, it is akin to a new arms race in technological advancement among the top five economies in the global North [13].

Conclusion

Institutions in sub-Saharan Africa and other LMICs should proactively engage with AI so that they are co-creators and not mere users of this great technology. We pray that this piece is not taken as a comprehensive list of suggestions but a stimulant to a conversation that has taken too long to start



Example of Use of AI courtesy of sanketgraphy

References

1. Mukunya D, Nantale R, Kayemba F, Ajalo E, Pangholi K, Babuya J, et al. Utilisation of ChatGPT and other Artificial Intelligence tools among medical faculty in Uganda: a cross-sectional study. MedEdPublish. 2025;14(245):245.
2. Ajalo E, Mukunya D, Nantale R, Kayemba F, Pangholi K, Babuya J, et al. Widespread use of ChatGPT and other Artificial Intelligence tools among medical students in Uganda: A cross-sectional study. PLoS One. 2025;20(1):e0313776.
3. Intelligence AOORA. Generative AI guidelines at South African universities 2024 [Available from: https://www.africanobservatory.ai/social/generative-ai-guidelines-at-south-african-universities.
4. Ulster University. A Guide for Students: Should I use AI? 2023 [cited 2024 8/04/2024]. Available from: https://www.ulster.ac.uk/learningenhancement/cqe/strategies/ai/guidance-for-students.
5. Harvard University. Initial guidelines for the use of Generative AI tools at Harvard 2023 [cited 2024 8/04/2024]. Available from: https://huit.harvard.edu/ai/guidelines.
6. Rosario Ud. Guidelines for the Use of Artificial Intelligence in University Courses 2023 [Available from: https://juangutierrez.co/wp-content/uploads/2023/08/guidelines-for-the-use-of-artificial-intelligence-in-university-contexts-v5.0.pdf.
7. Birmingham Uo. Student guidance on using Generative Artificial Intelligence tools ethically for study [Available from: https://intranet.birmingham.ac.uk/student/libraries/asc/student-guidance-gai.aspx.
8. Masters K. Ethical use of artificial intelligence in health professions education: AMEE Guide No. 158. Medical Teacher. 2023;45(6):574-84.
9. Moorhouse BL, Yeo MA, Wan Y. Generative AI tools and assessment: Guidelines of the world's top-ranking universities. Computers and Education Open. 2023;5:100151.
10. Ibrahim K. Using AI-based detectors to control AI-assisted plagiarism in ESL writing: "The Terminator Versus the Machines". Language Testing in Asia. 2023;13(1):46.
11. Rudd J, Igbrude C. A global perspective on data powering responsible AI solutions in health applications. AI and Ethics. 2024;4(4):1039-49.
12. Birks D, Clare J. Linking artificial intelligence facilitated academic misconduct to existing prevention frameworks. International Journal for Educational Integrity. 2023;19(1):20.
13. Marr B. The New Global AI Arms Race: How Nations Must Compete On Artificial Intelligence 2025 [Available from: https://bernardmarr.com/the-new-global-ai-arms-race-how-nations-must-compete-on-artificial-intelligence/.

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The END Fund and Reaching the Last Mile Celebrate the Elimination of River Blindness in Niger

The WHO's verification of the elimination of river blindness transmission in Niger makes it the first country in Africa to eliminate this NTD.



Riverblindness is a cause of disability

Africa, January 31, 2025 –The END Fund and Reaching the Last Mile celebrate the World Health Organization's (WHO) verification that Niger has eliminated transmission of river blindness, an achievement in part made possible through the support of the Reaching the Last Mile Fund (RLMF).

RLMF is a multi-donor fund co-founded by Reaching the Last Mile, a global health initiative driven by the philanthropy of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the United Arab Emirates, and the Bill & Melinda Gates Foundation. In partnership with countries and with support from other funders, RLMF aims to accelerate the elimination of river blindness and lymphatic filariasis (LF). RLMF in its first phase was hosted by the END Fund.

The WHO's verification is the culmination of nearly fifty years of collaboration in West Africa to control or eliminate river blindness. RLMF partnered with Niger's Ministry of Health to collect and file the evidence to support the claim for the elimination of transmission of this debilitating neglected tropical disease (NTD).

"Niger is a country rich in natural resources but, for decades, river blindness prevented its people from being able to plant vegetables, rice, and other foods and mobilize partners for greater economic benefit," said Dr. Salissou Adamou Batchiri, National Coordinator of Onchocerciasis and Lymphatic Filariasis, Niger Ministry of Public Health. "The disappearance of this disease has created a happier and healthier population, both physically and economically and encourages Niger to continue working to eliminate other NTDs. I want to thank not only the local authorities, but also the courageous community who lived in the formerly endemic area for their dedication and contributions towards the successful elimination of this disease."

By eliminating river blindness, Niger has created an estimated USD$2.3 billion in economic benefits. The country added more than 17.8 billion working hours as families with river blindness-infected members were able to rejoin the workforce, boosting GDP. Women who make up a disproportionate percentage of caregivers have been able to work again and have reinvested 90 percent of their earnings (USD$111 million) in their families and communities. Additionally, young girls treated for river blindness are likely to achieve higher levels of education and therefore higher wages in their lifetimes.i

NTDs are treatable, preventable parasitic and bacterial infectious diseases that needlessly hold back the lives and livelihoods of more than 1.6 billion people. River blindness, also called onchocerciasis, is a NTD that is the fourth leading cause of preventable blindness globally. Transmitted by the repeated bite of black flies that live along rivers and streams, the infection causes severe skin disease, visual impairment, and, in its most advanced form, irreversible blindness.

Globally, nearly 246 million people across 31 countries still require annual treatment for river blindness. Those living with the disease experience disrupted education and livelihoods, which affects their families

Victoria Miguda, vmiguda@endfund.org , Media contact, The End Fund, Jairus Korir, P&L Consulting, korir@p-l.co.ke

and communities. Prior to the rollout of control and elimination programs, the risk of blindness due to the disease in West Africa affected up to 50 percent of adults. Entire communities abandoned their fertile river valleys to avoid the primary areas of transmission, increasing famine in affected regions.

"As a boy I grew up seeing firsthand the deleterious impacts river blindness can have on individuals and communities and thought that was just the way it was until I began my career in river blindness control," said Dr. Daniel Boakye, Senior Technical Advisor, Programs, the END Fund. "Nearly fifty years later, we have moved from controlling the disease to this historic verification, a testament to the power of partnership and the tireless work of many, and especially to the Niger government's commitment to its citizens, who will no longer experience river blindness as a way of life."

Established in 2017, RLMF began as a ten-year, USD$100 million fund, dedicated to ending river blindness and lymphatic filariasis in seven countries in Africa and Yemen through the delivery of mass drug administration (MDA), disease elimination mapping and training for lab technicians. Building on its successes including in Niger, its founders in December 2023 announced the expansion of RLMF to a target USD$500 million in support of an ambitious new vision: the elimination of the two diseases from Africa and Yemen by 2030.

"Niger's elimination of river blindness is an extraordinary victory and a source of hope for many other nations still fighting this devastating disease," said Nassar Al Mubarak, Chief Executive Officer of Reaching the Last Mile. "This feat demonstrates that with country leadership and the sustained support of partners, an Africa free of neglected tropical diseases is within our grasp. Now is the time for us to rally together to achieve it."

About Neglected Tropical Diseases (NTDs)

Neglected tropical diseases (NTDs) are caused by parasites (helminths, protozoa, ectoparasites), bacteria, viruses, fungi, and toxins. These diseases and conditions can cause effects such as deformed legs and blindness and can contribute to childhood malnourishment, cognitive impairment, stunted growth, and the inability to attend school. Social isolation and physical ailments make it difficult for people with NTDs to work, creating a cycle of poverty. Over forty percent of the world's NTD burden is concentrated in Africa, where the END Fund focuses the majority of its work.

About the END Fund

The END Fund is a leading collaborative philanthropic initiative dedicated to ending neglected tropical diseases (NTDs) that limit the lives and livelihoods of 1.6 billion people globally. Through our partners, we support country-led programs that control and eliminate intestinal worms, schistosomiasis, lymphatic filariasis, river blindness, trachoma, and visceral leishmaniasis. The fund puts private capital to work, advocating for NTD programs that are innovative, integrated, and cost-effective. It facilitates strong partnerships with the private



African man a victim of river blindness

sector, government partners, and local implementing partners to collaboratively support national disease programs. This is done through a proven implementation model that is tailored to meet the needs of individual countries with the aim of fostering healthier communities that are

protected from the risks of NTDs. Since its founding in 2012, along with partners, the END Fund has distributed over 1.8 billion treatments in 37 countries, performed over 143,000 life-changing surgeries, and trained 6.4 million health workers to preempt and treat NTDs. Learn more at www.end.org.

About Reaching the Last Mile (RLM)

Reaching the Last Mile (RLM) is a portfolio of global health programs, investments, and initiatives driven by the philanthropy of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the United Arab Emirates. Through innovative and collaborative investments, RLM focuses on advancing health equity, on ending preventable diseases that disproportionately affect impoverished communities, and on building resilient and inclusive health systems that meet the needs of the communities they serve. More at www.reachingthelastmile.com.

COVID-19 Deaths and Vaccination in Nigeria

Emmanuel O. Okoro et al discuss COVID-19 Mortality and Vaccination Coverage in Nigeria (2020-2023).

BACKGROUND

The COVID-19 global pandemic reached Nigeria in early 2020 and triggered a series of responses from policy makers and stakeholders. Given the sustained pattern of low mortality which emerged early as the pandemic unfolded in Africa even before vaccines became available, the question as to whether, the country ought to continue vaccination towards 70% coverage as the only pathway to ending the emergency was never too far . While clinical trials results showed COVID-19 vaccines as very efficacious in diminishing the risk of severe disease from SARS-CoV-2 infection which informed their emergency use as global best practice; the impact of vaccination on COVID-19 deaths trajectory, were largely projections[1] as the pandemic unfolded; with one widely published estimates[2] indicating that by 2021 ending, more COVID-19 deaths as a share of the vulnerable population had occurred in countries in Africa, including Nigeria than elsewhere due to inadequate vaccination. With the global emergency declared over on 05 May 2023, we compared COVID-19 deaths before, and after vaccination commenced to explore whether there was any decline in COVID-19 mortality in the vaccination era relative to the pre-vaccination period. A preliminary communication was orally presented to Nigerian Academy of Science in Lagos, Nigeria, January, 2024.

METHOD

Data acquisition: COVID-19 cases, deaths, and vaccination rates from the Nigeria Centre for Disease Control, as recorded in the WHO database[3], from the date the first local case was documented on 29th February 2020 up to 7th June 202; nearly one month after the crisis was declared over globally. Other variables of interest in open-sources[4-5] were extracted and aggregated over the pre-vaccination and vaccination eras.

Simple statistics (percentages, case counts, death counts, and rates) were computed for the two periods. Case Fatality Rate (CFR) per 1,000 persons was also computed for the period prior to vaccination (CFR1) and the period after vaccination commenced (CFR2) to see how fatality reported from SARS-CoV-2 infections changed over the period of the emergency. The computation of the CFR was done this way for convenience because it captures the overall trajectory of the CFR computed for smaller periods (daily, weekly or monthly).

The case fatality rate for a specified period was computed as

$$CFR = \frac{Number\ of\ reported\ deaths}{Total\ number\ of\ reported\ cases} \times 1000$$

Statistical and graphical analyses of the data were carried out using IBM SPSS Version 23 and Microsoft Excel packages. The results of the analysis were summarized in Table 1 and Figure 1.

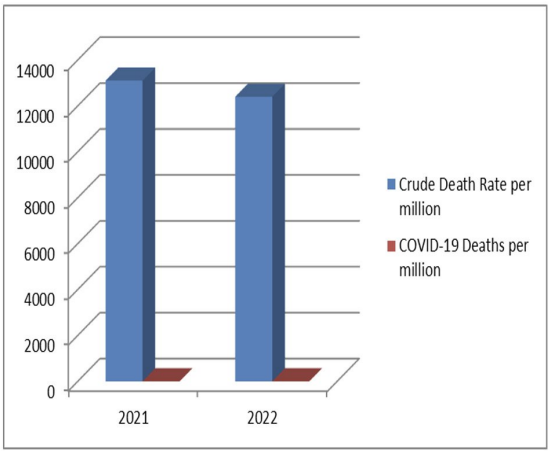


Figure 1: COVID-19 MORTALITIES VERSUS ANNUAL NATIONAL CRUDE DEATH RATES (CDR)

RESULT

Majority (61.84%) of the 3,155 COVID-19 deaths as at 07 June 2023 were recorded in the almost one year before vaccination commenced on 05 March 2021 i.e. after the first domestic case was reported on 29 February, 2020 (Table 1).

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TABLE 1: COVID-19 VACCINATION AND MORTALITY IN NIGERIA

VARIABLE	VALUE
Date first case was reported	29/02/2020
Date COVID-19 Vaccination started	05/03/2021
Cumulative cases at start of vaccination	157671
Cumulative cases as at June 7, 2023	266675
Cumulative deaths when vaccination commenced	1951
Cumulative deaths/ million when vaccination commenced	8.927
Duration of period before vaccination commenced (in months)	12 months
Duration of period after vaccination commenced up to June 7, 2023	27 months
Cumulative deaths, 1 year after vaccination started and the corresponding % change from deaths at the start of vaccination (in brackets)	3142 (61.04%)
Cumulative deaths, 2 years after vaccination started and the corresponding % change from deaths at the start of vaccination (in brackets)	3155 (0.67%)
Cumulative deaths as at June 7, 2023 since pandemic started and the corresponding % change from deaths at the start of vaccination (in brackets)	3155 (0%)
Cumulative deaths/ million at June 7, 2023 since pandemic started	14.437
Overall % change in deaths since vaccination started	61.71%
Persons with incomplete vaccination per 100	39.94
Persons vaccinated with a complete primary series per 100	33.86
Persons vaccinated with at least one booster or additional dose per 100	5.97
CFR1 per 1000	12.37
CFR2 per 1000	11.05

The percentage distribution of COVID-19 mortality by era was unchanged regardless of whether absolute mortality figures or after correction for population size (per million) were used in the calculation. The lower numbers of COVID-19 deaths recorded was over two years of mass vaccination which overlapped with partial, primary and booster rates of 39.94%, 33.86% and 5.97% respectively as at 07 June 2023 (Table 1). Of note, COVID-19 mortality of 8.93/million at the end of the pre-vaccination period (February 29th 2020 to March 5th 2021) jumped to 14. 44/ million as at 07 June 2023 (Table 1). Thus 5.51/million additional COVID-19 deaths accumulated over the vaccination era, showing a 38.3% decline in COVID-19 deaths relative to the pre-vaccines era. When disaggregated into the first year, second year, and third year up to June 7, 2023, the data revealed 98.92% of the additional COVID-19 deaths (1,191) occurred within the first year post-vaccination, with 13 deaths (1.08%) recorded subsequently (Table 1).

Compared against the average national crude death rate (CDR) of 13.5 deaths per 1,000 persons for 2011-2022, the reported COVID-19 deaths (Table 1, Fig.1) approximated 1,000 folds less than the annual CDRs of years 2011 to 2022, just as the calculated CFR1 and CFR2 were 12.37 and 11.04 deaths per 1,000 respectively.

COMMENT

Unlike previous studies[1-2] on the impact of vaccination on COVID-19 deaths based on mathematical modeling with their inherent limitations and biases[6], this analysis utilized actual cases and deaths uploaded to WHO databases by observers on ground in Nigeria as the pandemic unfolded which also informed decision-making. The results showed majority (61.8%) of cumulative COVID-19 deaths up to 07 June 2023 were before vaccination commenced. And at the time pandemic emergency was declared over in 2023, vaccination rates in Nigeria (Table 1) was low and far below the 70% coverage prescribed[2] to end COVID-19 emergency everywhere. This observation raises the question as to whether mass vaccination as deployed in March 2021 contributed anything further in bending a COVID-19 death trajectory already on a downward trend soon after the first wave as the CFR1 versus CFR2 values (Table 1) also suggest.

Specifically, the 38.3% less COVID-19 deaths over the vaccination era relative to the pre-vaccination mortality can accentuate the hypothesis that vaccination may have contributed to the declining COVID-19 mortality in the population (Table 1, Figure 1); and further promote a

patently flawed narrative that only vaccination could have been effective in driving the COVID-19 mortality down. The counter-argument is that the very low vaccination coverage in Nigeria could not have elicited the needed reduction in COVID-19 mortality going by expert body prescription. Incidentally, a similar reduction (33%) in COVID-19 deaths as in Table 1 had been projected to occur pre-vaccines[2] while others attributed such mortality reduction to the over two years of public vaccination in Nigeria. Significantly, between December 2020 and March 2021 when vaccination commenced, almost 8 out of 10 individuals surveyed had tested positive to SARS-CoV-2 antibodies[7] suggesting recent exposure with the possibility of high population immunity acquired naturally that is known to be as protective as 70% vaccination coverage; if not more so[8]. This position is reinforced by a pattern of low COVID-19 mortality throughout the global health crisis with one study[1] reporting a 44.4% sero-prevalence by 31 December 2021 in Nigeria when vaccination rate was barely 2.2% while another[2] reported a 78.9% sero-prevalence rate nationwide when just 5.2% of the households were vaccinated. Further, despite widespread apprehension of an impending doom before the first case was documented in Nigeria, COVID-19 emergency largely played out in the population in accordance with widely published data at the start of the pandemic showing over 80% of deaths from SARS-CoV-2 infection were among the elderly (≥ 65 years) especially men with pre-existing chronic conditions. Of note, the entire cumulative COVID-19 deaths (Table 1) in over three years (2020-2023) of the global emergency, relative to Nigeria's background death rates progressively declining since 2011[5] and mortality from major pre-existing public health conditions like Malaria seem almost unobservable [Fig.1]. This has since been confirmed by emerging global data showing COVID-19 mortality was about the lowest in Africa, Nigeria inclusive with largely no impact on life expectancies in the region which actually increased even at the peak of the pandemic unlike other jurisdictions despite high vaccination.

Given the foregoing and Nigeria's predominantly young population, and data available throughout to guide policy choices, the national COVID-19 response including pursuing a one-size–fits-all vaccination approach made in the image of other people's need would seem at variance with the foreseeable risk the population faced from the virus. The response was draconian, and wasteful including diverting badly needed funding away from conditions killing more Nigerians, disrupted regular health services and economic activities. Especially as the data to tailor response to local needs were consistently available and repeated calls[2] made to that effect. Put differently, the impact of COVID-19 on all-cause-mortality is sometimes overstated and ought not to be a public health priority in Nigeria as the evidence was available for policy makers and decision-makers at the start of the outbreak and as the pandemic progressed.

CONCLUSION

Nigeria's cumulative COVID-19 mortality was mostly pre-vaccines and minimal, despite low vaccination coverage far under the 70% target prescribed everywhere at the time the global emergency was declared over. This outcome aligned with a pattern of minimal COVID-19 mortality evident throughout the crisis, therefore, future unified approach aimed at decelerating global health risk would require re-calibration to local realities, if such interventions are to represent the best-value for money from available options and minimize severe unintended consequences, if not averted.

DATA AVAILABILITY

The datasets for this analysis are open-sources as defined in the method section; but the combined dataset for the analysis is also available on request.

AUTHORS CONTRIBUTION

ACKNOWLEDGEMENT

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Further reading

1. Cabore JW, Karamagi HC, Kipruto HK, Mungatu JK, Asamani JA, Droti B, Wahebine AB, Kidane SN, Gueye AS, Moeti MR (2022). COVID-19 in the 47countries of the WHO Africa region: a modeling analysis of past trends and future patterns, Lancet Glob Health 10(8): e1099-E1114.
2. Watson OJ, Bamsely G, Toor J, Hogan AB, Winskill P, Ghani AC. Global impact of the first year of COVID-19 Vaccination: a mathematical modeling study, Lancet Infect. Dis 2022, 22(9), 1293-1302. DOI: https://doi.org/10.1016/S1473-3099(22)00320-6
3. WHO COVID-19 Global Data https://covid19.who.int. Accessed last on June 11, 2023
4. Our World in Data, COVID-19 Deaths https://ourworldindata.org/covid-deaths. Accessed last on June 11, 2023.
5. Crude Death Rates in Nigeria, Available: https://knoema.com/atlas/Nigeria/Death-rate. Accessed last on June 11, 2023
6. Okoro EO, Ikoba NA. EXCESS MORTALITY (2020-2023)-as Proxy for COVID-19 Deaths?, Epidemiology, Biostatistics , and Public Health, 2024, 19(2), https://doi.org/10.54103/2282-0930/27538
7. Kolawole OM, Tomori O, Agbonlahor D, Ekanem E, Bakare R, Nasidi A, Eka B, Uzochukwu B, Rafindadi A, Bello S, Shehu S, Gureje O, Lecky M, Onwujekwe O, Onyedum C, Ezeoke A, Bukbuk D, Ashir G, Anyaehie BA, Habib A, Ufere J, Azodo N (2022), SARS CoV-2 Seroprevalence in Selected States of High and Low Disease Burden in Nigeria, JAMA Netw Open; 5(10) ;e2236053. DOI: https://doi.org/10.1001/jamanetworkopen.2022.36053.
8. Rossi MA, Cena T, Binala J, Alessi D, Scotti L, Faggiano F, Evaluation of the risk of SARS-CoV-2 infection and hospitalization in Vaccinated and previously infected subjects based on real world data, Scientific Reports (2023) 13-2018 https://doi.org/10.1038/s41598-023-28129-7.
9. Additional references also available on request

WHO Renews Official Relations Status with the International League of Dermatological Societies (ILDS)

WHO reaffirms ILDS as a Key Partner in Advancing Global Skin Health.

The World Health Organization (WHO) has renewed the 'Official Relations' status of the International League of Dermatological Societies (ILDS) for a further three-year term, from 2025 to 2027. This renewal underscores the ILDS's vital role in promoting skin health around the world.

The only dermatology-focused organisation to hold this prestigious status, the ILDS comprises more than 200 member societies from 104 countries, representing more than 200,000 dermatologists globally. In collaboration with its charitable foundation, the International Foundation for Dermatology (IFD), the ILDS delivers a range of impactful initiatives to expand access to dermatological care. These include grant programmes, awards, training, and awareness campaigns aimed at reducing the burden of skin diseases, particularly in underserved regions.

Official Relations status is a privilege granted by the WHO's Executive Board to non-governmental organisations, international bodies, and other non-state actors that have consistently contributed to advancing public health goals through sustained and effective collaboration with the WHO. It allows the ILDS to actively support the WHO in specific areas of public health and engage in key WHO meetings, including the annual World Health Assembly, where global health policies and strategies are shaped.

Professor Lars French, Past President of the ILDS and Chair of the society's WHO Committee, said: "Since the ILDS was first granted Official Relations Status with the WHO, we have collaborated in a range of key areas including the eleventh revision of the WHO's International Classification of Diseases (ICD-11); its Model Lists of Essential Medicines and in its work to tackle Neglected Tropical Disease, Non-Communicable Diseases and Occupational Diseases. We are delighted to be able to continue this work and develop new areas of collaboration."

Professor Henry W. Lim, President of the ILDS, also welcomed the renewal. He said: "With 3,000 skin diseases affecting more than three billion people at any one time, these diseases are a major contributor to the global disease burden. They can also be life-changing, placing immense strain on affected individuals, healthcare systems and economic productivity. Addressing them is essential to achieving WHO's universal health coverage goals.

"We are honoured that the WHO has reaffirmed our Official Relations status, strengthening our ability to advocate for skin health as a global priority. We look forward to continuing to work closely with the WHO and





(LEFT) Professor Henry W. Lim, current President of the ILDS. and (RIGHT) Professor Lars French, Past President of the ILDS and Chair of its WHO Committee

global health leaders to drive meaningful change and improve outcomes for those affected by skin diseases."

He added: "I commend the ILDS' WHO Committee, led by Professor French, for its outstanding efforts over the past three years which have secured the renewal of our Official Relations status."

The renewal was confirmed during the 156th session of the WHO Executive Board in February 2025. Moving forward, the ILDS will implement a structured three-year plan aligned with WHO's strategic priorities, reinforcing its commitment to improving skin health worldwide.

Founded in 1948, the World Health Organization (WHO) is the United Nations agency that connects nations, partners and people to promote health, keep the world safe and serve the vulnerable. It leads global efforts to expand universal health coverage, directing and coordinating the world's response to health emergencies and promoting healthier lives.

Skin diseases, which can lead to disability, social isolation and economic burden, are a significant yet often overlooked component of public health.

About the ILDS

The International League of Dermatological Societies (ILDS) comprises more than 200 member societies in 104 countries, representing more than 200,000 dermatologists worldwide. It is a leading advocate for the integration of skin health into global health policies and is dedicated to advancing education, clinical care, research, and innovation to improve dermatological outcomes worldwide.

For more information about ILDS and its initiatives, visit www.ILDS.org.

About the IFD

The International Foundation for Dermatology (IFD), established by the ILDS, works to improve skin health in underserved regions. It supports projects in Africa, the Asia-Pacific, and South America, contributing to the ILDS mission of 'Skin Health for the World.'

Rebecca George, Rebecca@georgepr.com

Imaging in conditions of the male urogenital tract at Ernest Cook University, Kampala, Uganda

Kawooya et al provide an overview of imaging findings in male urogenital tract conditions at a selected center in Kampala, Uganda. They highlight the indications for imaging, the techniques employed, and both normal and abnormal findings observed in the patients studied.

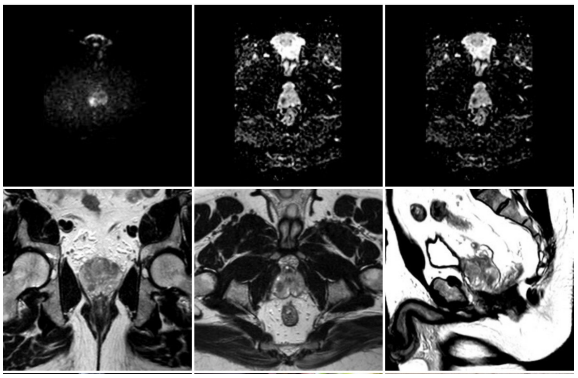
Introduction

Imaging of the male urogenital tract is becoming a common indication in Uganda given the increase in availability of Ultrasound, and MRI equipment in the country, increased awareness by the population and availability of more specialized doctors and health facilities. It accounts for approximately 2-5% of all imaging done at Ernest Cook University/Mengo Hospital Department of Radiology and 25% of all MRI examinations done at the Ernest Cook University/ Kampala MRI Center. These observations could imply the increasing dependency on imaging by referring clinicians for more targeted treatment of male urogenital conditions and the significant contribution to treatment outcomes.

Quality and usefulness of imaging studies of the male urogenital tract requires trained and experienced imaging personnel, Ernest Cook University (ECU), formerly Ernest Cook Ultrasound Research and Education Institute (ECUREI), has been training medical imaging personnel for the last 20 years. This includes training in ultrasound ranging from certificates to Masters degree training in imaging technology (radiography) from diploma to Masters degree and Training of specialist radiologists to Masters of Medicine in Radiology (M.Med). Together with Makerere University, ECU and Makerere University train the over 90% of Medical Imaging personnel in Uganda. This training base ensures constant provision of competent imaging personnel.

Awareness by the public of the need for early diagnosis and treatment of conditions of the male urogenital tract is on the increase especially in urban areas evidenced by the higher proportion of men presenting with prostate specific antigen (PSA) below 13ng/dl at the Ernest Cook University and Kampala MRI Center1. This awareness is intentionally being partly fostered by ECU through prostate cancer screening camps, radio talks, TV and newspapers. ECU in conjunction with the Buganda Kingdom are conducting 5-10 prostate and breast cancer screen camps in the central region in different locations yearly . Other players in the awareness campaign include other health facilities and institutions. During these camps, prostate and breast screening using ultrasound is performed in addition to PSA testing.

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A suspicious nodule in the prostate in right apex posterior corner, with fluid restriction on the Diffusion Weighted Imaging (DWI) sequences.

Objectives

The objective of this paper is to give an overview of imaging findings in conditions of the urogenital tract in males at a selected center in Kampala, Uganda. The paper highlights the indications for imaging, the technique used, the normal findings and the abnormal findings in these patients.

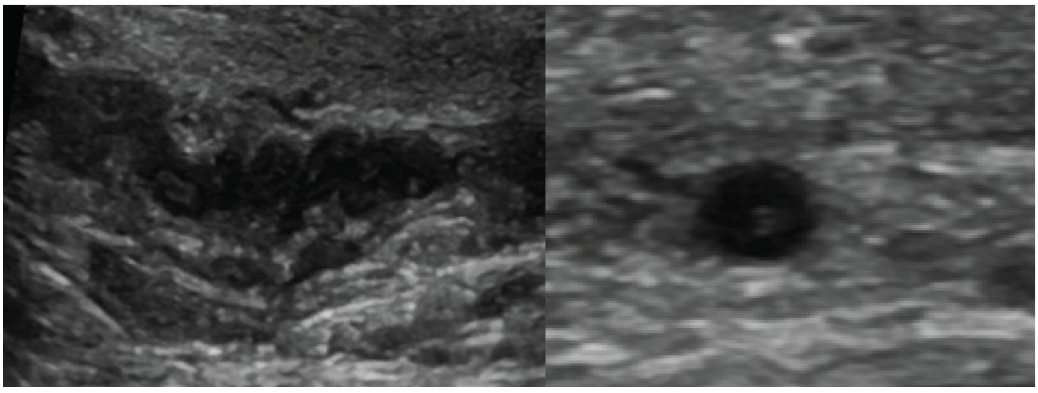
Inflammatory conditions

The commonly seen imaging impression of the male urogenital tract at ECU are epididymal-orchitis and chronic prostatitis. The primary imaging modality in imaging patients suspected to have prostatitis and orchitis is ultrasound. At ECU ultrasound machines from a variety of vendors are used; commonly using a 4-14 MHz Linear transducer.

Imaging in epididymal orchitis

Ultrasound is the imaging modality of choice for acute and chronic epididymal orchitis. Its sensitivity is about 78% or more and a specificity of 90% or more[2].

The commonest form of epididymal orchitis referred to ECU is the chronic type. Men with epididymal orchitis are commonly referred with scrotal pain or discomfort and scrotal swelling. Standard scrotal ultrasound examination is performed observing for tenderness, scrotal size, echogenicity and echotexture presence of calcifications, Doppler color flow, the tunica vaginalis/ albuginea, and presence of a hydrocele. Next, the epididymis is scanned noting the size and echogenicity of the epididymal head, body and tail. We search for the



Longitudinal and axial scans of the spermatic cord showing thick and tortuous vas deferens

appendix testis, and we do doppler ultrasound of the scrotal veins to look for varices.

The normal scrotal ultrasound may show a testis of 3-5 cm in diameter, with a volume of approximately 20cc and a texture which is homogeneous or slightly heterogeneous.

Imaging may not be necessary for patients suspected to have acute epididymal orchitis but may be done if the clinical picture is not certain or there are suspected complications.

Findings in acute epididymal orchitis include: testicular enlargement, patchy or uniform hypo-echogenicity, heterogenous echotexture, thickening of the tunica, increased blood flow in the testis at color Doppler, enlarged and rounded head of the epididymis, enlargement of the entire epididymis, increased blood flow in the epididymis, hydrocele or pyocelle. There may be thickening of the peri-testicular soft tissues and at times necrosis due to spermatic cord swelling and by the impairment of blood flow [3, 4].

In chronic epididymal orchitis, the testicular size may be enlarged, normal or small. The echo texture may be heterogeneous. There may be calcifications in the testicular parenchyma or in the tunica albuginea, the epididymis may be large or of normal size. There may be epididymal calcifications and a hydrocele.

Tuberculous epididymal orchitis is due to hematogenous and lymphatic spread. It is commoner in the tail of the epididymis possibly because it has a higher blood supply. It maybe unilateral or bilateral and may involve the epididymis and testis or just the epididymis. Involvement of the testis alone is rare. Initially the pathology is caseous necrosis and granulomas may heal by fibrosis or calcification. The patient may present with a painful or non-painful scrotal swelling. Diagnosis may be confirmed with fine needle aspiration of the suspected area and subjecting the specimen to ZN stain or culture 5,6,7,8. For the epididymis, the tail is usually the first part to be involved. The disease may spread to the rest of the epididymis or be limited to the tail. There may be diffuse involvement of the entire epididymis or there may scattered be nodular involvement. In most cases, the epididymis may be enlarged and diffusely and heterogeneously hypointense or enlarged and diffusely and homogeneously hypointense. It may be enlarged with foal nodular areas of hypo-echogenicity. Kim et all and Chung Et.al have suggested that an enlarged heterogeneously hypointense epididymis helps to differentiate TB from non-TB epididymal orchitis 8 ,9.

The testis is usually involved due to spread of the tuberculosis from the epididymis. At ultrasound, the entire testis may be enlarged and diffusely and heterogeneously hypointense or enlarged and diffusely and homogenously hypointense. It may be enlarged with nodular areas of hypoechogenicity. In some cases, the testicular involvement may be of miliary pattern with multiple small scattered hypointense areas. The tunica albuginea may be thickened or show areas of calcification.

Color doppler may show increased flow in the involved structures which may be the epididymis, testis or both.

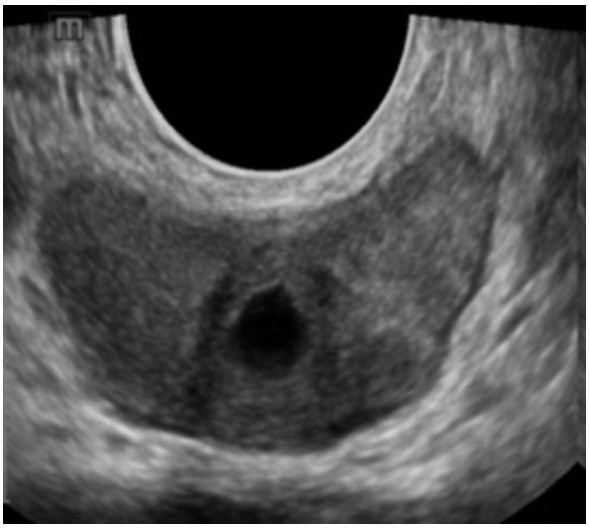
Epididymitis or epididymal orchitis may be accompanied by a hydrocele which may show septations. The peri-testicular areas may be thickened and may show areas of calcification.

Imaging in Chronic prostatitis

Chronic prostatitis often eludes diagnosis. This is because the clinical picture may be non-specific, laboratory analysis of urine or semen is usually negative and ultrasound findings have not adequately been explored. At ECU, referral for transrectal ultrasound of the prostate in patients with clinically suspected chronic prostatitis are relatively frequent especially following our work on transrectal ultrasound-guided intra-prostatic injection therapy for treatment of chronic prostatitis in which we not only detailed the technique and success of this method but also described the transrectal appearance of the prostate in patients referred to our center with symptoms pointing to chronic prostatitis10 .

In our series of 131 patients, the commonest findings in chronic prostatitis at transrectal ultrasound were heterogeneous echotexture of the prostate in all patients, ejaculatory duct thickening and dilatation (98%), prostatic urethral thickening (A77%), periurethral echogenicities (65%) and prostate calcifications (43%). A unique finding, which up to now had not been published is the thickened or and dilated ejaculatory duct, which we propose is characteristic for chronic prostatitis. We also noted that the left ejaculatory duct was most affected in comparison to the right.

Treatment of Chronic Prostatitis using



A coronal image showing a dilated ejaculatory duct in chronic prostatitis

Transrectal Ultrasound-guided Intra-prostatic Injection therapy

In our article we describe a novel and effective method of treatment of chronic prostatitis using trans-rectal ultrasound to guide intraprostatic injection of a cocktail of antimicrobial agents, steroid and local anesthesia 10 . Treatment of chronic prostatitis has been a challenge for decades. This is because most antimicrobial agents don't penetrate the prostate capsule enough to give therapeutic drug concentrations. Oral or parenteral administrative has been elusive for most patients. Building on the findings of Toth et al and Oishi et al, 11 ,12 we came up with a systematic method of treatment using a cocktail of antimicrobial agents, steroids and local anesthesia. Using the symptom index domains as a measure of wellness, for all the 131 patients in the study, the symptom index reduced following treatment. The 131 patients had started with either severe symptoms {score of 19-31} or moderate symptoms {score of 18-10}, but by one year following the treatment, the symptoms had fallen to the mild score {0-9}. The outcome score of 0-9 in all out 131 patients shows that this treatment is effective in almost all our patients who receive it.

Neoplastic conditions: Cancer of the prostate

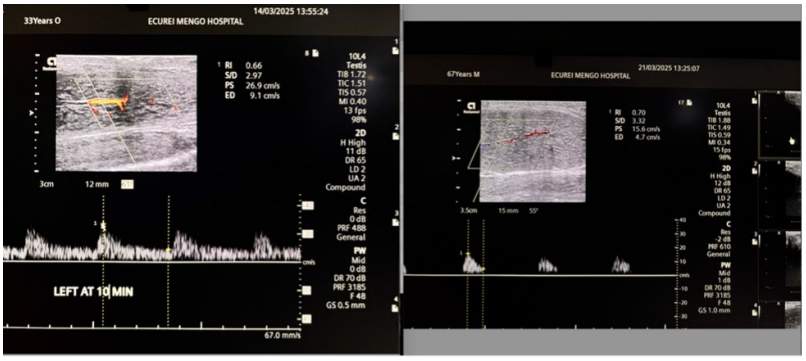
Cancer of the prostate is the commonest cancer among Ugandan men, and Uganda and Zambia have the highest incidence in Africa. Its incidence in Africa is 29.7 per 100,000 population and for Uganda, this incidence is increasing rapidly by 5.2 % per annum 13. ECU in partnership through a joint venture with Kampala Imaging Center acquired the first high field strength MRI in Uganda in 2014. Soon after the installation of the MRI, we started receiving referrals for prostate screening aimed at early detection of prostate cancer. We adopted the PIRADS screening protocol in 2017 and further transitioned to the PIRADS version 2.1 14 which further strengthened our ability for accurate detection of the cancer. This coupled with the fact that laboratory screening for prostate specific antigen (PSA) and prostate biopsy in the same facility, made ECU/Kampala Imaging Center a reliable facility for screening, diagnosis and biopsy for patients suspected to have prostate cancer. The Center has performed over 1000 prostate MRI since installation. Analysis of these results shows that the accuracy for detection of prostate cancer even in early stages, is almost comparable to that in other parts of the world with area under the ROC curve (AUC) of 0.71 to 0.73 1. Our findings show that the mean age of presentation of our patients is 65 years. The average PSA at presentation is 13ng/dl. Up to 48% of all the patients presenting for MRI screening turn out to have cancer prostate. The proportions of cancer in PIRADS, 3, 4, and 5 is 31%, 50% and 71 %, respectively. More than 50% of cancers are detected in the peripheral zone. Unpublished data from our center shows that most patients with histologically confirmed prostate cancer have a Gleason score of 6 { 55%}. Furthermore, the unpublished data suggests a high prevalence of changes due to chronic prostatitis in our patients. The low Gleason score in most patients coupled with a high prevalence of changes due to chronic prostatitis may be impacting the accuracy of our PIRADS scores in screening for cancer prostate. It is also postulated, though not confirmed that prostatitis may have an association with the high incidence of prostate cancer in the out-patient population 15 .

Spermatic cord and Male infertility

Up to 60 patients per year with symptoms related to infertility and some with laboratory evidence of low sperm count are referred to the department of radiology at ECU/Mengo Hospital for sonographic assessment of the urogenital tract. These undergo scrotal ultrasound, ultrasound of the spermatic cord and transrectal ultrasound of the prostate. The spermatic cord is scanned to look at the vas deferens (VD) using a "Hockey-stick" transducer of 8 to 18MHz. The proximal (juxta-testicular or supra-scrotal), mid and distal segments of the VD are examined for wall thickness, luminal diameter, echogenicity of the wall and mucosa and calcifications. At ECU, we consider the normal outer outer-to-outer diameter of the VD to be1.5-2.7 mm with a mean diameter of 1.9 mm. The luminal normal diameter is considered to be 0.2-0.7 mm with a mean of 0.4 mm.[16][17]. The wall should be uniformly and markedly and uniformly hypoechoic or anechoic to the surrounding structures and should have no calcifications or echogenic foci. The normal mucosa of the VD lumen is thin and moderately hyperechoic compared to the muscular wall and should not show any areas of calcification or echogenic foci. Soon to be published data shows that the commonest abnormality in patients with clinical and laboratory suspicion of vas deferens obstruction is luminal narrowing with about 12.88% cases on the right 82.59% on the left and about 4.56% having obstruction in both.

Penile ultrasound cavernosometry in erectile dysfunction

Up to 50 patients per year with symptoms of erectile dysfunction are referred to the department of radiology at ECU/Mengo Hospital for penile doppler ultrasound cavernosometry (PUC). These undergo Penile ultrasound



A cavernosometry waveforms indicating arterial insufficiency and venous leak respectively

cavernosometry which involves doppler assessment of the carvenosal arteries following intrapenile injection of alprostadil (Caverject) which is PGE1. The penis is scanned using a high frequency transducer 5-12 MhZ. The scanning is done with the penis in the ventral position noting the echotexture and echogenicity of the corpora carvenosa and any plaques, foci of echogenicity or calcification. The arteries and veins in the corpora carvenosa as examined noting their anatomical pattern, the diameters of the arteries, arterial wall thickness and echogenicity, presence of calcification of the corpora carvenosal arteries and the color and spectral wave pattern. At ECU we consider peak systolic velocities (PSV) of > 30 cm/sec as normal, 25-30 cm/sec as non-specific and below 25 cm/sec as arterial insufficiency. A difference of > 10 cm/sec between the left and right carvenosal artery PSV is also considered as arterial insufficiency. We consider end systolic velocity (EDV) of, 5 cm/sec as normal. EDV of > 5cm/sec as venous insufficiency (if the patient has normal arterial function). The resistive index >0.9 is considered normal and < 0.8 as venous dysfunction18, 19,20.

Soon to be published data shows that the commonest abnormality in patients with erectile dysfunction show that arterial insufficiency, followed by mixed pattern are the commonest cause of ED with venous insufficiency being the least contributor.

CONCLUSION

Imaging is a crucial diagnostic tool in male patients presenting with conditions of the urogenital tract. Ultrasound is used to image the major anatomical structures in the urogenital which include the scrotum, spermatic cord, prostate and the penis. MRI is useful in investigating the prostate in screening and diagnosis of prostate cancer.

References

1. M. Kawooya, S. Watya, S. Kaggwa, S. Kamya, and R. Malumba, "Value of PIRAD 2 Scoring System in screening for Cancer Prostate in a Sub-Saharan African Population," 2019.
2. T. Zitek, O. Ahmed, C. Lim, R. Carodine, and K. Martin, "Assessing the utility of ultrasound and urinalysis for patients with possible epididymo-orchitis – a retrospective study," Open Access Emergency Medicine, vol. 12, 2020, doi: 10.2147/OAEM.S234413.
3. A. Pilatz et al., "Acute epididymitis in ultrasound: Results of a prospective study withbaseline and follow-up investigations in 134 patients," Eur J Radiol, vol. 82, no. 12, 2013, doi: 10.1016/j.ejrad.2013.08.050.
4. M. Suciu, O. Serban, G. Iacob, C. Lucan, and R. Badea, "Severe Acute Epididymo-Orchitis Complicated with Abscess and Testicular Necrosis-Case Report," Ultrasound Int Open, vol. 3, no. 1, 2017, doi: 10.1055/s-0042-122149.
5. M. Muttarak, W. C. G. Peh, B. Lojanapiwat, and B. Chaiwun, "Tuberculous epididymitis and epididymo-orchitis: Sonographic appearances," American Journal of Roentgenology, vol. 176, no. 6, 2001, doi: 10.2214/ajr.176.6.1761459.
6. D. Andrew, J. Johny, and K. Shyam, "Ultrasound findings in a patient with tuberculous epididymo-orchits," 2020. doi: 10.1136/bcr-2020-237832.
7. Kollu R, Kala P, Ramprakash HV, and D. A. Varunya M, "Tubercular Epididymitis and Epididymo-Orchitis: Ultrasound appearances.," 2018.
8. J. J. Chung, M. J. Kim, T. Lee, H. S. Yoo, and J. T. Lee, "Sonographic findings in tuberculous epididymitis and epididymo-orchitis," Journal of Clinical Ultrasound, vol. 25, no. 7, 1997, doi: 10.1002/(SICI)1097-0096(199709)25:7<390::AID-JCU7>3.0.CO;2-5.
9. S. H. Kim, H. M. Pollack, K. S. Cho, M. S. Pollack, and M. C. Han, "Tuberculous epididymitis and epididymo-orchitis: Sonographic findings," Journal of Urology, vol. 150, no. 1, 1993, doi: 10.1016/S0022-5347(17)35404-6.
10. Michael G. Kawooya, Richard Malumba, Mary Kaakyo, Kasule Steven, Frank Ssebaggala, and Henry Dabanja, "Transrectal ultrasound-guided intraprostatic injection therapy for treatment of chronic prostatitis in a Ugandan population," 2024.
11. A. Toth, F. M. Guercini, D. M. Feldthouse, and J. C. Zhang, "Injection therapy for chronic prostatitis: A retrospective analysis of 77 cases," 2018. doi: 10.4081/aiua.2018.1.34.
12. M. Oishi et al., "PD62-02 INTRA-PROSTATIC INJECTION THERAPY FOR CHRONIC PROSTATITIS: A PILOT STUDY.," Journal of Urology, vol. 199, no. 4S, 2018, doi: 10.1016/j.juro.2018.02.2838.
13. F. Okuku, J. Orem, G. Holoya, C. De Boer, C. L. Thompson, and M. M. Cooney, "Prostate Cancer Burden at the Uganda Cancer Institute," J Glob Oncol, vol. 2, no. 4, 2016, doi: 10.1200/jgo.2015.001040.
14. B. Turkbey et al., "Prostate Imaging Reporting and Data System Version 2.1: 2019 Update of Prostate Imaging Reporting and Data System Version 2," 2019. doi: 10.1016/j.eururo.2019.02.033.
15. K. N. A. Nagel et al., "Differentiation of prostatitis and prostate cancer by using diffusion-weighted MR imaging and MR-guided biopsy at 3 T," Radiology, vol. 267, no. 1, 2013, doi: 10.1148/radiol.12111683.
16. W. D. Middleton, N. Dahiya, C. K. Naughton, S. A. Teefey, and C. A. Siegel, "High-resolution sonography of the normal extrapelvic vas deferens," Journal of Ultrasound in Medicine, vol. 28, no. 7, 2009, doi: 10.7863/jum.2009.28.7.839.
17. T. Puttemans, A. Delvigne, and D. Murillo, "Normal and variant appearances of the adult epididymis and vas deferens on high-resolution sonography," Journal of Clinical Ultrasound, vol. 34, no. 8, 2006, doi: 10.1002/jcu.20257.
18. C. G. Varela, L. A. Mateos Yeguas, I. C. Rodríguez, and M. D. Durán Vila, "Penile Doppler ultrasound for erectile dysfunction: Technique and interpretation," 2020. doi: 10.2214/AJR.19.22141.
19. D. Golijanin, E. Singer, R. Davis, S. Bhatt, A. Seftel, and V. Dogra, "Doppler evaluation of erectile dysfunction - Part 2," 2007. doi: 10.1038/sj.ijir.3901478.
20. J. Anderson, "Radiology Illustrated: Uroradiology," Australas Radiol, vol. 49, no. 4, 2005, doi: 10.1111/j.1440-1673.2005.01485.x.

A Formidable Female Surgeon: The Journey of Dr. Fualal Jane Odubu

A Tribute to Dr. Jane Odubu: Surgeon, Mentor, Pioneer, Educator and leader in Surgery.

Introduction

Dr. Fualal Jane Odubu's life is a powerful story of resilience, service, and leadership in a field historically dominated by men. Born in Kampala, Uganda, at Mulago Hospital, she is the fifth of twelve children in a humble, loving Alur family from Zombo district. Her upbringing in large household fostered early values of discipline, teamwork, and perseverance, qualities that would define her remarkable career in surgery.

Early Life and Family Influence

Raised by principled and devoted parents, Jane's childhood was a blend of structure and creativity. Her father, Michael Bipenjonga Odubu, a disciplined Senior Police Officer, emphasized integrity and service, while her mother, Bertha Cenge Odubu, was a nurturing homemaker with a flair for crafts and storytelling. These contrasting yet complementary role models left an indelible imprint on her character.

Despite financial hardships, her parents prioritized education. The family maintained strong ties to their ancestral roots in Zombo, where cultural values and community life enriched Jane's sense of identity. Her early curiosity and love for learning shaped by her parents' examples, ignited her ambition to pursue a meaningful and impactful career.

Education and Determination

Jane's academic path began in Kampala, moving through schools like Police Children Primary School, St. Joseph's Nsambya, and Nyapea Girls' School. Her stellar performance there prepared her for secondary school at Sacred Heart Secondary School, Gulu, where she embraced discipline and leadership.

Facing the challenge of limited science teachers, she transitioned to Caltec Academy Makerere, facilitated by Rev. Fr. Tiboni. Although late for term start, her emotional appeal to the principal secured her admission to the coveted Physics, Chemistry, and Biology combination. Her determination and diligence earned her a place at Makerere University Medical School, the only one in Uganda at the time.

Medical school was rigorous, but she thrived, trekking long distances daily while juggling intense studies and clinical rotations. This period deepened her commitment to medicine, not just as a career, but as a calling rooted in empathy and service.



Dr. Jane Fualal Odubu

Launching a Surgical Career

Her internship at St. Mary's Hospital Lacor in Gulu exposed her to real-life clinical pressures and built her confidence. Under mentors like Dr. Lucille Corti and Dr. Matthew Lukwiya, she learned the essence of patient-centered care. As a Medical Officer at Arua Regional Referral Hospital, Jane honed her surgical skills, successfully operating on her first patient a three-week-old baby with a strangulated hernia.

Initially aspiring to become an obstetrician, Jane found her true calling in surgery, thanks to supervisors like Dr. Bruno Turri and Dr. John Omagino. She went on to pursue a Master of Medicine in Surgery at Makerere, joining a cohort of five and as the only woman. During these years, she managed the dual roles of trainee surgeon and mother to two toddlers, even navigating severe pre-eclampsia during pregnancy.

Trailblazers and Mentorship

Inspired by icons like Dr. Speciosa Wandera Kazibwe and Dr. Olivia Kobusingye, Jane saw a reflection of her potential. Despite surgery being male-dominated, she drew strength from these role models and the solid foundation instilled by her parents.

Mentors such as Prof. Alexander Mwa Odonga and Prof. Ignatius Kakande emphasized professionalism and humane care in surgery. Their teachings shaped



Dr. Jane Fualal hosted the President of Uganda at the 2019 COSECSA Graduation in Kampala

Jane's own mentorship style and her belief in cultivating self-esteem among female surgeons.

Family: Her Pillar of Strength

Jane's journey has always been anchored in her family. The death of her husband two decades ago left her to raise three children alone, a responsibility she embraced with strength and devotion. Today, her children Edwin, Tracy, and Mary Anne have continued the legacy of service and healing, a source of deep pride for her.

Kyatoko village in Rukungiri, their family home, symbolizes both heritage and hope, a quiet palace for rest and reflection.

A Lifelong Career at Mulago Hospital

Jane's professional home for three decades has been Mulago National Referral Hospital. She rose through the ranks from Red Firm to Green Firm, eventually becoming the first female head of what is now the Breast and Endocrine Surgery Unit. As a clinician, teacher, and examiner, she has mentored generations of surgeons.

Teaching has been her passion. Whether in lecture halls, clinics, or operating rooms, Jane emphasized not just technical skill but compassion, communication, and critical thinking. She believes medical education must be holistic, blending theory and humanity.

Pioneering the Endocrine Surgery Unit

In 2002, Dr. Fualal established Uganda's first Endocrine Surgery Unit. With support from leaders like Mr. Antony Gakwaya and international mentors Prof. John Adieng Adwok and Prof. Goran Akerstrom, the unit gradually gained recognition.

Major cases included thyroid disorders, prevalent due to iodine deficiency and complex surgeries on the adrenal and parathyroid glands. Jane spearheaded outreach camps with AMREF and the Ministry of Health in remote districts like Nebbi, Kapchorwa and Kisoro, ensuring access to specialized care in underserved communities. Operating under local anesthesia due to limited resources, she innovated and improvised to deliver quality care and train others on the job.

Surgical Innovation and Teamwork

Among the unit's notable achievements was the routine management of pheochromocytomas, a rare adrenal tumor once considered daunting. By building a multidisciplinary team, Jane helped make these surgeries safer and more successful. She also gained international exposure, observing parathyroid surgeries in New York, and applied this knowledge to local contexts.

Her experiences with rare conditions like insulinomas and neuroendocrine tumors underscored her commitment to continual learning and specialized surgical care.

Leadership and Advocacy

Jane's impact extended beyond the operating room. She took on leadership roles, including Treasurer of the Uganda Medical Association in West Nile and President of the Association of Surgeons of Uganda in 2003, the first woman to do so.

In 2023, she became the first female President



Dr. Fualal as a young surgeon

of the College of Surgeons of East, Central, and Southern Africa (COSECSA), promoting collaboration, education, and surgical excellence across the region.

As Patron of Women in Surgery Africa (WiSA), she champions mentorship, research, and empowerment for women surgeons—still vastly underrepresented. Her leadership has opened doors for many young female doctors who now walk the path she helped pave.

Facing and Overcoming Challenges

Jane's journey wasn't without obstacles. Unequal access to specialized surgical care in rural areas and the persistent brain drain of talent presented significant challenges. But she responded with solutions: training programs, outreach efforts, and consistent mentorship aimed at retaining talent and expanding access.

She firmly believes Africa can become a hub for super-specialized care, reducing dependence on foreign treatment and strengthening local capacity. Her efforts have laid a foundation for this vision to become reality.

Philosophy and Reflections

Dr. Fualal believes in the power of teaching to surpass oneself, not for ego, but for legacy. Her goal has always been to raise surgeons who are better, kinder, and more innovative than her. She also advocates for balance: recognizing the risk of burnout, she stresses self-care through faith, hobbies, and nature.

She encourages African professionals to travel and learn, not to flee but to return equipped to contribute. Knowledge gained abroad, she says, should be brought home to build systems, educate others, and lead transformation from within.

To her, success is not measured in accolades but in the people uplifted along the way. "Lift others as you climb," she says a mantra she's lived out with every student, patient, and colleague she's mentored.

A Life of Service and Legacy

Though she may not have pursued ground breaking research, Jane has been a formidable clinician, an influential teacher, and a visionary leader. Her life's work has touched countless lives from urban hospitals to remote villages.

As she approaches retirement, she finds fulfillment in watching her mentees lead, innovate, and thrive. Her road has been long and filled with challenges, but also triumphs, growth, and deep purpose. She encourages others to embrace their journey, knowing that every challenge is a chance to rise.

Conclusion

Dr. Fualal Jane Odubu's life is a testament to courage, resilience, and unwavering service. She has walked a pioneering path in Ugandan surgery, breaking barriers and building bridges for others to cross. Her legacy is not just in procedures performed or titles held, but in lives transformed through care, mentorship, and vision.

To future doctors, leaders, and dreamers, she offers this final wisdom: "Be bold, be innovative, be compassionate and above all, remain true to yourself and your purpose."

Prevention

Individual health-disease phase diagrams for disease prevention based on machine learning.

Early disease detection and prevention methods based on effective interventions are gaining attention. Machine learning technology has enabled precise disease prediction by capturing individual differences in multivariate data. Progress in precision medicine has revealed that substantial heterogeneity exists in health data at the individual level and that complex health factors are involved in the development of chronic diseases. However, it remains a challenge to identify individual physiological state changes in cross-disease onset processes because of the complex relationships among multiple biomarkers. Here, we present the health-disease phase diagram (HDPD), which represents a personal health state by visualizing the boundary values of multiple biomarkers that fluctuate early in the disease progression process. In HDPDs, future onset predictions are represented by perturbing multiple biomarker values while accounting for dependencies among variables. We constructed HDPDs for 11 non-communicable diseases (NCDs) from a longitudinal health checkup cohort of 3,238 individuals, comprising 3,215 measurement items and genetic data. Improvement of biomarker values to the non-onset region in HDPD significantly prevented future disease onset in 7 out of 11 NCDs. Our results demonstrate that HDPDs can represent individual physiological states in the onset process and be used as intervention goals for disease prevention.

Reference

Nakamura K, Uchino E, Sato N, Araki A, Terayama K, Kojima R, et al. Individual health-disease phase diagrams for disease prevention based on machine learning. arXiv preprint arXiv:2205.15598 [Internet]. 2022 May 31 [cited 2025 Jan 31]; Available from: https://arxiv.org/abs/2205.15598

Data-Driven Allocation of Preventive Care With Application to Diabetes Mellitus Type II

Abstract: Problem Definition. Increasing costs of healthcare highlight the importance of effective disease prevention. However, decision models for allocating preventive care are lacking. Methodology/Results. In this paper, we develop a data-driven decision model for determining a cost-effective allocation of preventive treatments to patients at risk. Specifically, we combine counterfactual inference, machine learning, and optimization techniques to build a scalable decision model that can exploit high-dimensional medical data, such as the data found in modern electronic health records. Our decision model is evaluated based on electronic health records from 89,191 prediabetic patients. We compare the allocation of preventive treatments (metformin) prescribed by our data-driven decision model with that of current practice. We find that if our approach is applied to the U.S. population, it can yield annual savings of $1.1 billion. Finally, we analyze the cost-effectiveness under varying budget levels. Managerial Implications. Our work supports decision-making in health management, with the goal of achieving effective disease prevention at lower costs. Importantly, our decision model is generic and can thus be used for effective allocation of preventive care for other preventable diseases.

Reference

Kraus M, Feuerriegel S, Saar-Tsechansky M. Data-Driven Allocation of Preventive Care With Application to Diabetes Mellitus Type II. arXiv preprint arXiv:2308.06959 [Internet]. 2023 Aug 14 [cited 2025 Jan 31]; Available from: https://arxiv.org/abs/2308.06959

Leveraging Online Shopping Behaviors as a Proxy for Personal Lifestyle Choices: New Insights into Chronic Disease Prevention Literacy

Abstract: bjective: Ubiquitous internet access is reshaping the way we live, but it is accompanied by unprecedented challenges in preventing chronic diseases that are usually planted by long exposure to unhealthy lifestyles. This paper proposes leveraging online shopping behaviors as a proxy for personal lifestyle choices to improve chronic disease prevention literacy, targeted for times when e-commerce user experience has been assimilated into most people's everyday lives. Methods: Longitudinal query logs and purchase records from 15 million online shoppers were accessed, constructing a broad spectrum of lifestyle features covering various product categories and buyer personas. Using the lifestyle-related information preceding online shoppers' first purchases of specific prescription drugs, we could determine associations between their past lifestyle choices and whether they suffered from a particular chronic disease. Results: Novel lifestyle risk factors were discovered in two exemplars--depression and type 2 diabetes, most of which showed reasonable consistency with existing healthcare knowledge. Further, such empirical findings could be adopted to locate online shoppers at higher risk of these chronic diseases with decent accuracy [i.e., (area under the receiver operating characteristic curve) AUC=0.68 for depression and AUC=0.70 for type 2 diabetes], closely matching the performance of screening surveys benchmarked against medical diagnosis. Conclusions: Mining online shopping behaviors can point medical experts to a series of lifestyle issues associated with chronic diseases that are less explored to date. Hopefully, unobtrusive chronic disease surveillance via e-commerce sites can grant consenting individuals a privilege to be connected more readily with the medical profession and sophistication.

Reference

Wang Y, Liu X, Börner K, Lin J, Ju Y, Sun C, et al. Leveraging Online Shopping Behaviors as a Proxy for Personal Lifestyle Choices: New Insights into Chronic Disease Prevention Literacy. arXiv preprint arXiv:2104.14281 [Internet]. 2021 Apr 29 [cited 2025 Jan 31]; Available from: https://arxiv.org/abs/2104.14281

Optimal prevention strategies for chronic diseases in a compartmental disease trajectory model

Abstract: n countries with growing elderly populations, multimorbidity poses a significant healthcare challenge. The trajectories along which diseases accumulate as patients age and how they can be targeted by prevention

efforts are still not fully understood. We propose a compartmental model, traditionally used in infectious diseases, describing chronic disease trajectories across 132 distinct multimorbidity patterns (compartments). Leveraging a comprehensive dataset from approximately 45 million hospital stays spanning 17 years in Austria, our compartmental disease trajectory model (CDTM) forecasts changes in the incidence of 131 diagnostic groups and their combinations until 2030, highlighting patterns involving hypertensive diseases with cardiovascular diseases and metabolic disorders. We pinpoint specific diagnoses with the greatest potential for preventive interventions to promote healthy aging. According to our model, a reduction of new onsets by 5% of hypertensive diseases (I10-I15) leads to a reduction in all-cause mortality over a period of 15 years by 0.57 (0.06)% and for malignant neoplasms (C00-C97) mortality is reduced by 0.57 (0.07)%. Furthermore, we use the model to assess the long-term consequences of the Covid-19 pandemic on hospitalizations, revealing earlier and more frequent hospitalizations across multiple diagnoses. Our fully data-driven approach identifies leverage points for proactive preparation by physicians and policymakers to reduce the overall disease burden in the population, emphasizing a shift towards patient-centered care.

Reference

Ledebur K, Kautzky-Willer A, Thurner S, Klimek P. Optimal prevention strategies for chronic diseases in a compartmental disease trajectory model. arXiv preprint arXiv:2403.14296 [Internet]. 2024 Mar 21 [cited 2025 Jan 31]; Available from: https://arxiv.org/abs/2403.14296

Monotone function estimation in the presence of extreme data coarsening: Analysis of preeclampsia and birth weight in urban Uganda.

Abstract: his study proposes a Bayesian hierarchical model to characterize the relationship between birth weight and maternal pre-eclampsia across gestation at a large maternity hospital in urban Uganda. Key scientific questions include: 1) how pre-eclampsia compares to other maternal-fetal covariates as a predictor of birth weight; and 2) whether the impact of pre-eclampsia on birth weight varies across gestation. The model addresses statistical challenges such as encoding prior medical knowledge that birth weight should vary smoothly and monotonically with gestational age, avoiding assumptions about functional form, and accounting for the high proportion (83%) of birth weights rounded to the nearest 100 grams. The proposed non-parametric regression model, Projective Smooth BART (psBART), builds upon the Bayesian Additive Regression Tree (BART) framework, capturing complex nonlinear relationships and interactions, inducing smoothness and monotonicity in a single target covariate, and providing a full posterior for uncertainty quantification. Results show that pre-eclampsia is a dominant predictor of birth weight in this urban Ugandan setting, making it an important risk factor for perinatal mortality.

Reference

Starling JE, Aiken CE, Murray JS, Nakimuli A, Scott JG. Monotone function estimation in the presence of extreme data coarsening: Analysis of preeclampsia and birth weight in urban Uganda. arXiv preprint arXiv:1912.06946 [Internet]. 2019 Dec 14 [cited 2025 Jan 31]; Available from: https://arxiv.org/abs/1912.06946

Open access publication of obstetrics and gynecology research in Africa: A dalliance between poverty and paywalls.

Abstract: This article discusses the challenges faced by researchers in Africa regarding open access publication in obstetrics and gynecology. It highlights the financial barriers and the impact of paywalls on the dissemination of research findings, emphasizing the need for more accessible publishing models to enhance knowledge sharing and improve healthcare outcomes in the region.

Reference

Ubom AE, Ota E, Tobe-Gai R, Mori R. Open access publication of obstetrics and gynecology research in Africa: A dalliance between poverty and paywalls. Int J Gynaecol Obstet [Internet]. 2023 Jan [cited 2025 Jan 31]; Available from: https://obgyn.onlinelibrary.wiley.com/doi/full/10.1002/ijgo.14976

Evaluating the Financial Factors Influencing Maternal, Newborn, and Child Health in Africa..

Abstract: This study investigates the impact of healthcare system efficiency on the delivery of maternal, newborn, and child services in Africa. Data Envelopment Analysis and Tobit regression were employed to assess the efficiency of 46 healthcare systems across the continent. Results revealed that only 26% of countries exhibited efficiency, highlighting a significant proportion of 74% with inefficiencies. Financial determinants such as current health expenditures, comprehensive coverage index, and current health expenditure per capita were found to have a negative impact on the efficiency of maternal-child services. These findings underscore a marginal deficiency in technical efficiency within Africa's healthcare systems, emphasizing the necessity for policymakers to reassess the roles of both human resources and financial dimensions in enhancing healthcare system performance..

Reference

Er-Rays Y, M'dioud M. Evaluating the Financial Factors Influencing Maternal, Newborn, and Child Health in Africa. arXiv preprint arXiv:2402.14939 [Internet]. 2024 Feb 22 [cited 2025 Jan 31]; Available from: https://arxiv.org/abs/2402.14939

Obstetric fistula in Africa: A preventable tragedy.

Abstract: his article examines the prevalence and causes of obstetric fistula in Africa, emphasizing that it is a preventable condition resulting from prolonged obstructed labor without timely medical intervention. The paper discusses strategies for prevention, including improving access to quality maternal healthcare, increasing community awareness, and enhancing surgical repair services for affected women.

Reference

Fistula Care Plus. Obstetric fistula in Africa: A preventable tragedy. Int J Gynaecol Obstet [Internet]. 2023 Mar [cited 2025 Jan 31]; Available from: https://obgyn.onlinelibrary.wiley.com/doi/full/10.1002/ijgo.15000

Screening and management of pre-eclampsia and eclampsia in low-resource settings: A review of the evidence

Abstract: his review focuses on the screening and management of pre-eclampsia and eclampsia in low-resource settings in Africa. It evaluates current evidence on effective interventions, including the use of magnesium sulfate, antihypertensive therapy, and timely delivery. The paper also highlights challenges such as limited healthcare infrastructure and proposes recommendations to improve maternal and neonatal outcomes. hese articles provide insights into various aspects of obstetrics, with a focus on challenges and solutions pertinent to the African context.

Reference

Smith JH, Muleta M. Screening and management of pre-eclampsia and eclampsia in low-resource settings: A review of the evidence. Afr J Reprod Health [Internet]. 2023 Jun [cited 2025 Jan 31]; Available from: https://www.ajrh.info/index.php/ajrh/article/view/2000

Health Professions Education

Fostering Professional Identity Formation and Motivation for Joining Nursing and Midwifery Programmes among Undergraduate Nursing/ Midwifery Students and Recent Graduates in Uganda. Annals of Global Health

ABSTRACT Introduction: The development of a strong professional identity is influenced by the motivation behind enrolling in a nursing or midwifery programme. Professional identity is a driving force that sustains the commitment of nurses and midwives to nursing/ midwifery and their dedication to the well-being of those they serve. This study evaluated Ugandan students' reasons for enrolling in nursing and midwifery programmes. Furthermore, we investigated the nurse/ midwifery practices that support professional identity creation in recent graduates and undergraduate nursing/ midwifery students. Methods: A mixed-method research approach was employed amongst nursing/midwifery students of Makerere University and Mbarara University of Science and Technology and recent nursing/midwifery graduates from Mulago National and Mbarara Regional referral hospitals. We collected quantitative data from 173 participants, and for qualitative data, we conducted six focus group discussions among recent graduates and students of nursing/midwifery. We used descriptive statistics and thematic analysis to analyse the quantitative and qualitative data. Results: Nearly all – 95.4% (165/173) – of the participants were motivated to undertake nursing/midwifery as their programme of study, and 94.2% (163/173) participants identified as nurses/midwives, all with an average score above 3. They also strongly agreed that they took up the programmes because they wanted to learn new things [111/173 (64.2%)] and considered nurses' groups important [68.8% (119/173)]. Participants proposed measures to promote the formation of professional identity among students and graduates, including the improvement of clinical education, the phasing out of certain levels of practice, the empowerment and embedding of ethical principles, KEYWORDS: Professional identity, Motivation, Nursing, Midwifery, Fostering CORRESPONDING AUTHOR: Scovia Nalugo Mbalinda College of Health Sciences, Makerere University Kampala, Uganda P. O. Box 7072, Kampala snmbalinda@gmail.com TO CITE THIS ARTICLE: Mbalinda SN, Livingstone K, Najjuma JN, Gonzaga AM, Lusota D, Musoke D, Owusu-Sekyere S. Fostering Professional Identity Formation and Motivation for Joining Nursing and Midwifery Programmes among Undergraduate Nursing/ Midwifery Students and Recent Graduates in Uganda. Annals of Global Health. 2024; 90(1): 61, 1–14. DOI: https://doi.org/10 .5334/aogh.4435 Mbalinda et al. 2 Annals of Global Health DOI: 10.5334/ aogh.4435 recognition and motivation, mentorship, leadership, career guidance and the inclusion of men and challenging of gender stereotypes. Conclusion: Participants were motivated to work in nursing. The ways to promote professional identity included the improvement of clinical education, the phasing out of certain levels of practice, the empowerment and instillation of ethical principles, recognition and motivation, mentorship, leadership, career guidance and male inclusiveness and the challenging of gender stereotypes. Nursing and midwifery leadership needs to provide guidance, mentorship and empowerment; challenge gender stereotypes in nursing/ midwifery practice; and give support while advocating for ethical practice.

Reference

Mbalinda SN, Livingstone K, Najjuma JN, Gonzaga AM, Lusota D, Musoke D, Owusu-Sekyere S. Fostering Professional Identity Formation and Motivation for Joining Nursing and Midwifery Programmes among Undergraduate Nursing/ Midwifery Students and Recent Graduates in Uganda. Annals of Global Health. 2024; 90(1): 61, 1–14. DOI: https://doi.org/10 .5334/aogh.4435

Exploring pre-requisites for clinical learning indicators: A scoping review

Background: Understanding how clinical learning takes place and what could stand as an indicator of clinical learning is crucial. There are existing challenges in the clinical learning environment that require clinical indicators. These serve as accountability standards in settings that have challenges of human resources and material poverty. Thus, clinical indicators are pre-requisites for selfregulation and self-directedness to promote lifelong learning. The reality that exists in today's Malawian health education institutions and clinical settings requires that those in training receive support and guidance on how essential competencies and skills can be acquired during training. Objectives: The objective of this scoping review was to identify current literature on clinical learning indicators among health professional students. Method: The Joanna Briggs Institute's (May 2020) standards for scoping reviews including narrative synthesis were followed in the conduct of this review. The protocol was registered in the Open Science Framework https://osf.io/yj9nr. Results: The results generated seven themes on clinical learning process and these are (1) planning for learning, (2) awareness of self-directedness in clinical learning, (3) knowledge of achievement of

learning outcomes, (4) educators' evidence of students' clinical learning, (5) students' perspective on clinical learning, (6) students' knowledge of achievement in practice and (7) impact of prior knowledge on clinical learning. Conclusion: Clinical learning indicators among undergraduate health professionals are essential and clinical learning should be a planned endeavour by the students before the clinical placement settings. Contribution: This study contributed to understanding clinical learning indicators and selfregulated learning practices among healthcare students. Keywords: clinical learning; clinical learning indicators; self-regulation; self-directed learning; competency-based education.

Reference

Chilemba, E.B., Chiundira, F., Phiri, C. & Chisoni, F., 2024, 'Exploring pre-requisites for clinical learning indicators: A scoping review', Curationis 47(1), a2540. https://doi.org/10.4102/ curationis.v47i1.2540

Exploring the Positive Feeling of Physical and Mental Energy among Struggling Preclinical Medical Students in Nigeria: A pilot Observational Study

Objective: The pursuit of medical education is reputed to be demanding and research has increasingly shown that successful completion of medical studies entails fostering the mental well-being of medical students. However, medical students' subjective vitality which is a critical component of their metal well-being is grossly underexplored. This study aimed to estimate the positive feeling of physical and mental energy among struggling medical students in Nigeria. Methods: Academic performance was evaluated through continuous assessment test (CAT) scores in basic physiology. Struggling medical students, defined as those with CAT scores less than 45%, were compared with control counterparts, whose CAT scores were ≥50%. The impact on physical and mental energy was assessed using the Subjective Vitality Scale (SVS) validated questionnaire. The study was conducted at Nnamdi Azikiwe University, Awka, Nigeria. Statistical comparisons between groups were conducted using the Wilcoxon test. Data were analyzed utilizing SPSS version 26, with a two-sided p-value <0.05 considered statistically significant. Results: The study recruited 144 participants, with 19 (18.0%) identified as struggling students and 125 (82.0%) non-struggling students. The mean rank for subjective vitality scale (SVS) among struggling students was 63.13, compared to 73.92 among non-struggling students (p=0.293). Struggling students reported significantly lower scores specifically in the domain of feeling alive and vital at the moment compared to their counterparts with higher CAT scores (P = 0.011), suggesting diminished vitality. No significant differences occurred in the other six SVS items of struggling medical students when compared to their non-struggling counterparts Only age of the students significantly predicted their subjective vitality (□= – 0.172, t = -2.004, p = 0.047). Conclusion: Struggling students reported significantly lower scores on the SVS domain of feeling alive and vital at the moment compared to their counterparts with higher CAT scores This pilot study underscores the importance of understanding the relationship between academic struggles and the subjective experience of physical and mental energy among preclinical medical students in Nigeria. Further research with larger samples across multiple time points can help explain observed connections between educational challenges and vitality. Supportive interventions for students should be developed using this information.

Reference

Eleje, George & Ikwuka, David & Nwosu, Kingsley & Eleje, Lydia & Sani, Nasiru & Niyoyita, Jean & Okesina, Kazeem & Dimkpa, Uchechukwu & Ikwuka, Obiageli & KEVIN, NWANNA & Bassey, Archibong & Twizeyimana, Eric & Divekar, Niranjan & Ifedioranma, Ogenyi & Ochayi, Okwute & Bushaku, Marcus & Ani, Elemi & Nwaogu, Kingsley & Onaadepo, Olufunke & Nwobodo, Edwin. (2024). Exploring the Positive Feeling of Physical and Mental Energy among Struggling Preclinical Medical Students in Nigeria: A pilot Observational Study. International Journal of Research and Innovation in Social Science. VIII. 4610-4622. 10.47772/IJRISS.2024.803336S.

A global matchmaking web platform facilitating equitable institutional partnerships and mentorship to strengthen health workforce training capacity.

The critical human resources deficit in the healthcare sector in low-resource settings (LRS) has an overwhelming impact on health outcomes and disparities in growth and development of the global healthcare workforce. There is a lack of qualified trainers and mentors and this makes it challenging to connect existing capacity gaps with existing expertise and established programs. Through global health partnerships, training programs, and mentorship, individuals and institutions from around the globe can connect to share training resources and strengthen clinical and research capacity in LRSs. Global health partnerships focused on capacity building face many challenges including; unequal access to information about potential partners and training opportunities, a lack of transparency regarding each institutions training priorities, and inequity and absent reciprocity within global health partnerships that have disproportionate power division between high-resource and LRSs. This initiative, the Consortium of Universities for Global Health Capacity Strengthening Platform (CUGH-CPS) (CUGHCapacityBuilding.org), aims to empower institutions and individuals in LRSs to address these challenges and drive partnership engagement through avenues that are beneficial to the LRS agent needs and context by leading the prioritization of training capacity development across clinical and research domains. The CUGH-CPS helps to identify and create a platform for the dissemination of training and mentorship needs from LRS institutions and share this information with the global community. This manuscript describes this new initiative officially launched to a global audience at the April 2023 CUGH meeting.

Reference

Dykens JA, Martin K, Kiguli-Malwadde E, Kupfer L, Chen ZA, Reynolds NR, Behere A, Bhattarai S, Peterson CE and Weine SM (2023) A global matchmaking web platform facilitating equitable institutional partnerships and mentorship to strengthen health workforce training capacity. Front. Educ. 8:1170247. doi: 10.3389/feduc.2023.1170247

CPD Challenge

Questions

Q1 Please indicate which of the following statements are TRUE or FALSE with respect to Neglected Tropical Diseases (NTDs):

a. NTDs cause significant morbidity and mortality and contribute to the perpetuation of poverty in sub-Saharan Africa.
b. Helminth infections, though widespread among children in rural communities, constitute only a small fraction of all the NTDs in sub-Saharan Africa.
c. Endemic zoonotic NTDs, such as cystic echinococcosis, fascioliasis, and brucellosis, are mainly confined to sub-Saharan Africa.
d. Dengue, Rift Valley fever, and Alkhurma hemorrhagic fever are rarely detected in the Middle East and North Africa.
e. Nearly 40% of individuals affected by NTDs live in Africa, especially in the poorest, most vulnerable, and hard-to-reach areas.

Q2 Please indicate what is TRUE or FALSE concerning Africa's contribution to the science of the COVID-19/ SARS-CoV-2 pandemic:

a. Africans contributed to approximately 3% of the global share of publications on SARS-CoV-2/ COVID-19 at 10 months into the pandemic.
b. The dominant African COVID-19 publication co-authorship clusters have primarily come from South Africa, Egypt, and Nigeria.
c. African publications on COVID-19 are not important, as most locally relevant knowledge to address the pandemic is already known.
d. Based on available published data, the spread of COVID-19 in Africa appears to differ and potentially has a less severe outcome compared to other regions.
e. Collaborative networks within Africa on the COVID-19 response have been limited and have not been utilized to impact preparedness for future emerging infections.

Q3 Please indicate TRUE or FALSE statements in the management of Obstetric Gestational Diabetes Mellitus:

a. Gestational diabetes mellitus (GDM) is a rare metabolic disorder during pregnancy and is not frequently associated with premature delivery, macrosomia, or postpartum complications.
b. The use of insulin aspartate can effectively control blood sugar levels and reduce adverse pregnancy outcomes in the treatment of gestational diabetes mellitus.
c. The impact of insulin aspartate on the mother and child is relatively small and does not affect breastfeeding, highlighting its importance in managing gestational diabetes.
d. To date, a comprehensive analysis of the pharmacological properties and clinical applications of insulin aspartate remains limited, and its use in gestational diabetes mellitus is still being evaluated.
e. All the above statements are FALSE.

Q4 The following are pre-requisites for effective clinical learning: Please indicate TRUE or FALSE answers:

a. A clinical learning environment requires clinical indicators that serve as accountability standards in settings with challenges related to human resources and material poverty.
b. There are no standard clinical indicators for self-regulation and self-directed learning to promote lifelong learning.
c. Given the current realities in health education institutions and clinical settings, it is crucial for trainees to receive support and guidance on acquiring essential competencies and skills.
d. The critical criteria for effective clinical learning only include planning for learning, self-directedness in clinical learning, and the impact of prior knowledge.
e. Clinical learning should be a planned endeavor by the students before entering clinical placement settings.

Q5 Please indicate what is TRUE or FALSE in the application of artificial intelligence (AI) techniques to advance clinical practice::

a. AI techniques have been used to assist with fetal growth monitoring via ultrasound (US) imaging.
b. AI techniques play a crucial role in predicting fetal diseases and identifying fetal anatomical structures during pregnancy.
c. AI has shown extensive implications for the incidence and management of numerous diseases, as well as in analyzing changes in disease transmission, testing, and reporting during global health crises.
d. AI has not contributed to addressing the persistent prevalence of high-incidence diseases like AIDS, gonorrhea, and syphilis, nor predicting the potential disappearance of diseases with lower incidence rates like cholera, encephalitis B, and measles.
e. AI has played a critical role in advanced predictive analytics, enhancing global preparedness and response mechanisms, and strengthening the resilience and adaptability of public health frameworks against emerging infectious disease threats.

Answers

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

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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.



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Every Day.

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

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