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Africa HEALTH

JOURNAL

- Localizing and ownership for Social Determinants of Health (SDH)
- Long COVID: A brief introduction
- Barriers to Access to Postnatal Care at Six Hours and Six Days in West Nile, Uganda
- Understanding Community Health Workers' Motivation, Function and Role in Uganda

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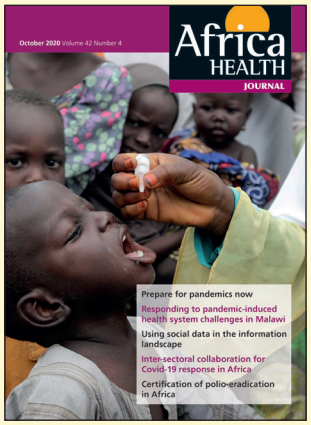

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From COVID 19 to Monkeypox and many other matters

Elsie Kiguli-Malwadde
(kigulimalwadde@achest.org)

The African Health Journal July issue has a range of articles on climate change, reproductive health and infectious diseases specifically Monkeypox. It also has specific short highlights on important issues like personal attributes or characteristics of a good counselor using the acronym 'WELCOME' for family planning, a fact sheet on Pre-eclampsia and what a critical incidence is and how to deal with it. All these are important for front line health workers as they give them quick summaries to look at.

The opinion piece highlights how climate change is affecting the social and environmental determinants of health like clean air, safe drinking water, sufficient food and secure shelter. Omaswa elaborates on how this crisis threatens to undo the last fifty years of progress in development, global health, and poverty reduction, and how it further widens existing health inequalities between and within populations. He also notes that it severely jeopardizes the realization of Universal Health Coverage (UHC.)

Two conferences have been reported on one was global and hybrid (physical and virtual) while another was regional in Africa and virtual. Both addressed the post COVID 19 period and discussed its effects on society. Prof Gostin and Prof Oyewale give a narrative on the activities shaping up health security in Africa. This was as a precursor to the 75th World Health Assembly. The 75th WHA, focused on how to handle public Health Emergencies of international concern in the future. For the first time Network Towards Unity for Health (TUFH) held a regional conference for Africa with a theme "Building Better Together in Africa". Though TUFH is an international organization, it has realized that it is important to think globally and also act locally because regions have their unique aspects. That is why they are holding regional conferences in all the WHO regional blocks to address local matters.

A team of experts from UNICEF have contributed 3 articles based on their work in West Nile, Uganda on reproductive health. Two others were published in the April issue. In the current issue, one is on the role of postnatal care in reproductive health, an area that is often neglected. Some of the reasons why it is neglected being due to inadequate human resource, inappropriate and/or insufficient logistics, and cultural obstacles. All these could easily be handled or improved leading to a reduction in maternal deaths. The second article is on a study they carried out on the uptake of first trimester Antenatal Care (ANC) that showed that investment in health education and communication to community members and mothers is essential to improving ANC attendance. ANC has been shown to improve the quality of maternal and child health outcomes at delivery. The authors investigated the barriers, enablers, and relationships with health workers at the community and facility levels. The third article is on understanding Community Health Workers'(CHWs) motivation, function and role in Uganda. The role of CHWs has been a hot topic of discussion in the African region, therefore it is important to do research on this topic to inform policy. They note that investing in a financial incentive package for the community health workforce requires significant cost over the medium to long-term. Therefore, the government should take the time to consider the evidence, the position of stakeholders, the gender implications, and the long-term financing sustainability to avoid a high risk of getting it wrong.

Omaswa in his article on the Social Determinates of Health explains how the role of the individual person and the community calls for more discussion and attention when discussing health. He says that in order to promote health and keep healthy people healthy, individuals need to know what the right thing to do is. He quotes a message he coined many years back but which remains relevant today "Health is made at home and only repaired in health facilities when it breaks down".

Monkeypox, a zoonotic infectious illness caused by the monkeypox virus, it has given the world another scare after COVID 19 and something to speculate on. While it has been seen before, the fact that it was coming up in regions where it was not been endemic has been puzzling. Dr. Talisuna from WHO describes what Monkey pox is, how to recognize it, its modes of transmission, how to diagnose it, how to mitigate its spread, how to treat it, the vaccine availability and what actions WHO is taking to stop its spread. All in all, infectious diseases continue to greatly impact the livelihoods and economies of communities and countries. Looking at outbreaks like plague, yellow fever, influenza, Ebola, and COVID-19 to mention a few that have disrupted lives from time to time.

There is our usual medicine digest and quiz, plenty of news and advertisements.

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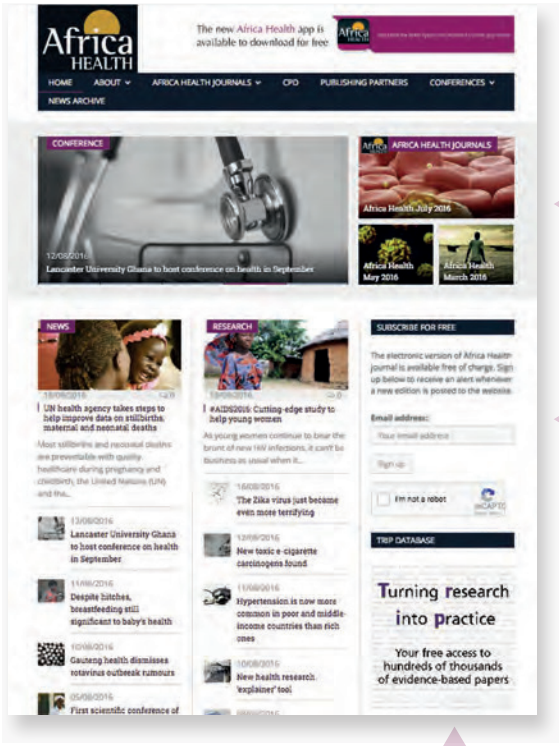

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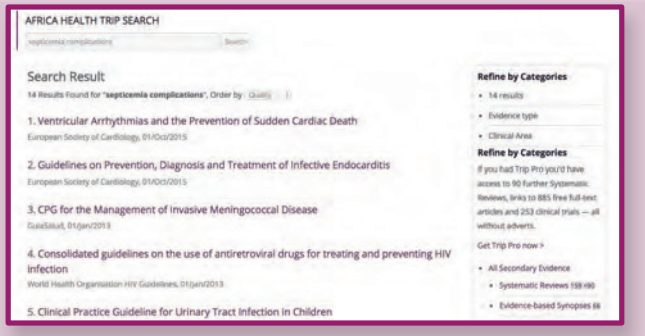

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Climate change is here; please take action!

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

During the last few weeks, the impact of Climate change in the daily lives of the people round the world has been very visible in the news. We have seen graphic pictures of starving children, and dying animals from drought and food shortage. We have seen wild fires destroy homes and disrupt livelihoods and we have seen pictures of rising sea levels threatening to wipe out small island nations. We have heard of epidemics of malaria and other diseases attributed to climate change. Yes, we have seen how the Antarctic ice sheet is melting away and separating.

At personal level, I have a farm where I grow entirely rain-fed crops. The rains have failed twice consecutively along with accompanying food crop failure and I have lost money in the process. While the local population is short of food. My concern is that while Climate change is the single biggest health threat facing humanity, African populations are not being actively informed and educated about this threat.

While no one is safe from these risks, the people whose health is being harmed first and worst by the climate crisis are the people in rural Africa who contribute least to its causes, and who are least able to protect themselves and their families against it.

Climate change is affecting the social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter which we have discussed elsewhere in this journal. It is estimated that between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress.

Countries with weak health infrastructure such as those in developing countries will be the least able to cope. Our countries can already respond by reducing emissions of toxic greenhouse gases through better transport, food and energy-use choices can result in improved health, particularly through reduced air pollution which is an issue in many of our cities.

The climate crisis threatens to undo the last fifty years of progress in development, global health, and poverty reduction, and to further widen existing health inequalities between and within populations. It severely jeopardizes the realization of Universal Health Coverage (UHC) in various ways – including by compounding the existing burden of disease and by exacerbating existing barriers to accessing health services, often at the times when they are most needed.

What therefore should our countries be doing to create climate resilient health systems? Governments and Civil Society should raise the visibility of this crisis among the population. Our academic institutions should undertake research on climate change, health vulnerability and adaptation assessments at population and health care facility level to generate evidence to support advocacy and plan the response. Our governments should develop National Adaptation Plans targeting population health which should be widely disseminated among the population. Our Parliaments should enact laws on climate change

and appropriate resources to ensure that the implementation of the laws is fully funded.

Health professionals should become advocates for climate action and equip themselves with the necessary data to influence public opinion and national policy as well as acquire the technical competence to prepare the health system and the workforce to respond to the Climate Change generated disease burden.

Collectively we should all join the global movement and campaign to cause the big carbon emitting economies to take action to curb emissions faster than is being done now and meet the targets on keeping global temperature rise to the required levels.

Climate change is affecting the social and environmental determinants of health –

2022 The Network Towards Unity for Health (TUFH) Virtual Regional Conference for Africa

Africa Holds its first ever regional TUFH conference.

The 2022 TUFH Virtual Regional Conference for Africa was hosted by The Network: TUFH, TUFH partnered with the University of the Western Cape (South Africa), Student Network Organization (SNO), African Forum for Research and Education in Health (AFREHealth), African Center for Global Health and Social Transformation (ACHEST) (Uganda), University of Cape Town (South Africa), Busitema University (Uganda), Nelson Mandela University (South Africa), University of Kwazulu-Natal (South Africa) and, Jomo Kenyatta University of Agriculture and Technology (Kenya). The conference was through the ZOOM platform. The conference run from 17th May to 19th May 2022.

TUFH is an international, interprofessional, and intergenerational organization that fosters equitable community-oriented health services, education and research with the goal of improving health locally and globally.

This is the first ever regional TUFH Conference. TUFH has strategically decided to meet the needs of their members by helping them act locally and think globally. The main theme was "Building Better Together in Africa" with 4 Subthemes:

- COVID 19 Pandemic; Lessons Learned & Way Forward.
- Developing Africa's Health Workforce.
- Technology to Improve Healthcare and Education.
- Interprofessional Education and Team Based Care for Africa.

It was attended by 70 participants with the largest numbers coming from Uganda and South Africa. There were 3 keynote speeches, 2 workshops and numerous oral presentations.

At the opening ceremony Dr. Elsie Kiguli-Malwadde, the Secretary General of TUFH highlighted the fact that Africa has over the years, been well represented at TUFH through many Universities and organizations. She noted that TUFH had grown and is now not limited to annual symposium but have many other interesting activities throughout the years that are beneficial to the members. These include TUFH academies and fellowships, in partnership with TUFH 2021 Fellows and Global Content Leaders, TUFH curated and launched 16 TUFH Faculty and Student Academies in 2022 on topics such as Social Accountability, Interprofessional Education and Team Based Care, Social Determinants of Health, Innovation, Active Learning Communities, Indigenous Health to mention but a few. She also informed them that TUFH had adapted the ISAT-Institutional Self-Assessment Social Accountability Tool and in partnership with Pan American Health Organization, Beyond Flexner Alliance, THEnet, and Global Consensus for Social Accountability had launched the tool and guidelines for Institutional Self Assessments and published the profiles of the leading 9 institutions. In addition, symposium and workshops are being held on different topics. She also talked about the Education for Health (EFH)

Journal which is a peer reviewed journal for TUFH as well as the Social Innovation Journal which is mainly for sharing best practices that may not necessarily fit in EFH. She urged members to take advantage of these activities. She informed them that this will all culminate into the TUFH 2022 conference in Vancouver, BC, Canada with a theme "Moving Forward Together: Unity for Health for All": August 16-19, 2022 and she urged them to be there.

At the end of the conference a way forward was formulated that included ensuring building on the synergy created from the conference, preparing to share mentorship across Africa, prepare to share institutional collaborative experiences from Africa. TUFH Africa was requested to promote capacity building through South -South, North-South collaboration and to specifically create collaboration with other organisations with a similar vision like The Africa Interprofessional Education Network (AfriPEN)and AFREhealth. Building on the success of SNO Africa,TUFH Africa was encouraged to develop action plans and create committees to execute /implement ideas generated from the brainstorming session and also harness the expertise from the sub regional hubs, Eastern, Western and Southern Africa. The need for strengthening evidence-based practice through collaboration was highlighted as well as creating interprofessional teams beyond medical students. Therefore, intensify efforts and advocate and enhance the capacity of faculty and students on the topic of Interprofessional Education and collaborative practice. This could be done by creating contacts though the country representatives. Break language barriers by accommodating the Franco and Lusophone countries was also put across as a way of ensuring inclusion. The need to create more awareness of the vast resources that TUFH provides and utilize them was fortified.

Lessons learnt from the conference included, the need for Africa to have a Health Workforce from and for underserved communities by having quotas specifically for students from underserved communities in Health professions education and training. The need to focus on community health workers and optimizing their training should not be neglected and they therefore should be considered as part of the health workforce. It was noted that community engagement is central to Primary Health care and Universal Health Coverage. That South to South, North to south and public private partnerships are key to better health in Africa. That TUFH Africa should work with the media, understand the Africa Union (AU) agenda 2063 and the WHO Regional office activities and devise ways of working with them.

It was noted that faculty and students perceive Interprofessional implementation in Health Profession Education differently. The need to collaborate intentionally across the different African countries so as to better understand IPECP in Africa was agreed on. The production and dissemination of Africa owned information across disciplines was emphasized.

There is a need to deal with the equity and inequality issues appropriately, this includes the asymmetries between the professions across the different professions. Health professions and institutions need a stronger presence in society through proactive engagement and partnering with social actors.

All in all it was a successful event.

Elsie Kiguli-Malwadde is the Secretary General of the Network Towards Unity For Health (TUFH).

Barriers to Access to Postnatal Care at Six Hours and Six Days in West Nile, Uganda

A team of experts highlight the role of postnatal care in Reproductive health in West Nile, Uganda.

Introduction

The postnatal period is critical in the continuum of care, with the timing and quality of care received by the mother and new-born being key. Almost half of the maternal deaths occur within the first 24 hours and during the first week following delivery. Uganda's Ministry of Health (MoH) recommends a minimum 24-hour stay in the health facility after delivery. According to ministry guidelines, the mother and newborn are expected to be reviewed at six hours, six days and six weeks.

The primary aim of this paper is to assess the key bottlenecks that affect postnatal care at six hours and six days; address the barriers as well as evaluate the platforms used to track and document postnatal care for mothers at six hours and six days and how they can be improved.

Accessing postnatal care at six hours and six days in West Nile, Uganda
Photo Credit © UNICEF/UN0232750/Adriko

Study design

The study adopted a mixed-method approach using quantitative and qualitative data as follows:

Quantitative data	The Household Baseline survey in West Nile was conducted under the UNICEF Health System Strengthening (HSS) study. Secondary data from the National Health Management Information Systems (HMIS).
Qualitative data	24 Key Informant Interviews (KIIs) from midwives and District Health Team (DHT) members.

Study result

Objective 1: Estimate the percentage of mothers and newborns who received Post Natal Care (PNC) at six hours and six days

A total of 91,488 live births were registered in 2019 in 16 catchment districts, with 62 per cent (56,658) from intervention and 38 per cent (34,830) from the counterfactual districts. The reported proportion of mothers and neonates receiving PNC within six hours was higher in the counterfactual (77%) compared to intervention districts (58%).

	6 hours			6 days		
	Intervention	counterfactual	Total	Intervention	counterfactual	Total
All mothers	76	57	133	27	28	55
More than half	6	2	8	32	9	41
About half	6	1	7	13	10	23
Less than half	5	2	7	16	14	30
None	37	26	63	42	27	69
Total	130	88	218	130	88	218

Objective 2: Identified key bottlenecks affecting postnatal care for mothers at six hours and six days

Bottleneck	Actions to address
A.Human Resources (Number of midwives) **Midwives reported staffing gaps vis-à-vis the workload.**	
"You find one midwife in the maternity ward covering all shifts. She spreads her arm thin by discharging mothers, going to the theatre to receive babies, and offering medications. So, you find that this midwife would be torn apart and would not have time to really observe these mothers."	Provision of additional staffing. "To offer this packageverwell [requires] at least two staff per shift. One staff member will handle antenatal and family planning and the other postnatal and delivery. Then, at night, one can concentrate on observation while the other is on deliveries and other conditions."
In some cases, mothers eventually left without receiving services, which discouraged subsequent visits.	Identification of a focal person to be responsible for postnatal services to ensure the service is provided in time, which will reduce the long waiting time for mothers at health facilities.
B. Attitudes	
Lack of motivation **Midwives revealed that sometimes they forget to attend to mothers or do not follow ministry of health guidelines due to busy schedules.** **"In the case where midwives are two, one feels since the mother has delivered, there is no need to her.They think if she has problems, she will come back yet there could be a mother bleeding severely."**	**Training and mentorship for midwives** The need to strengthen capacity through training was highlighted.
Lack of awareness: "I think mothers don't have enough information, or if they do, they don't prioritise attending postnatal days." **Poor documentation: The documentation of PNC within six days was poor in some intervention districts, which leads to inadequate follow-ups.** **Health workers' negative attitudes towards mothers: "Sometimes staff treated patients improperly, which demotivated them."**	**Awareness creation:** Participants suggested educating mothers and other community members about the availability and importance of PNC services at six days in health facilities. Community outreaches/dialogues and using media (radios), as well as the involvement of key stakeholders such as VHTs and TBAs are crucial in increasing awareness. **Incentives:** The provision of incentives such as mosquito nets and soap to mothers has boosted morale and enhanced mothers' attendance of PNC at six days. Likewise, promising support for further education enhanced staff morale. **Improving follow-up:** Follow-up of mothers in their communities by professional health workers is important. "If it were possible, it would be better for the midwife to follow the mother on the sixth day if they stay extremely far. For example, today I delivered seven mothers which means on the sixth day I will have seven mothers to follow up, including those who deliver during the day – 10 mothers who can be followed up in a day."
C. Limited equipment, supplies and infrastructure	
Limited bed space and inconsistent availability of equipment and supplies such as PNC registers and functioning blood pressure machines.	**Improving the supply chain:** Having in place updated equipment inventory as well as routine monitoring of commodity stock levels. Availability of PNC registers and documentation tools.
Stock out of essential supplies, such as vaccines and equipment for immunization, demotivated health workers and mothers from PNC utilization. Additionally, due to the lack of space at health facilities, mothers end up sitting under trees or squeezing in the corridors; this discourages their peers from visiting the facilities for PNC.	Improving follow-up: Follow-up of mothers in their communities by professional health workers was viewed as important.
D. Low awareness and knowledge among midwives and mothers/caretakers	

Knowledge gaps: Insufficient awareness and practice of standardised PNC services by both midwives and mothers. Mothers' desire to be discharged: Some mothers forced midwives to discharge them.	**Strengthening education on PNC and birth preparedness:** "There is a need to stress the importance of postnatal care both to the mothers and the health workers." **Enhancement of community initiatives:** This was particularly important in targeting mothers in distant places and involved community dialogues with midwives, as well as targeted fathers.
E. Cultural awareness and beliefs	
Negative cultural beliefs: The cultural requirement for the grandmother to be present at initiation of breastfeeding affected PNC services, particularly breastfeeding, at six hours.	**Community awareness** "We have been doing community dialogues addressing different things, including culture."
Cultural norms and practices: In some districts, mothers are not allowed to go out until the baby's umbilical cord has healed, thus preventing mothers from seeking PNC services at six days. **Influence of TBAs:** While MoH policy bans traditional birth attendants (TBAs), they continue to deliver mothers in communities. *"There are some TBAs that tend to delay with the mothers and when they see things getting out of hand then they refer them to our nearest health facility. Sometimes this referral is after six days."*	**Tracking and reminding mothers using SMS messages:** Given the inadequate transport and heavy workload of midwives that limits them from reaching mothers in their communities, using SMS messages to track mothers to attend PNC on Day Six would be vital. **Promote and educate TBAs:** Continuous support to orient TBA to promote delivery and PNC at health facilities.

Objective 3: Platforms used to track PNC for mothers at six days and how they helped to track and document PNC at six days

Platforms used	How they helped to track
Home visits by Village Health Teams (VHTs) The most widely used platform for tracking PNC at six days was the home visits by VHTs. "VHTs are supposed to know who has given birth in the community so that they can easily follow up with the midwife." Nonetheless, midwives reported that the VHT home visit system was wanting: "The VHTs were not sending mothers for postnatal care. They only send them for antenatal care."	**Reminders during home visits** While mothers' awareness of PNC at six days was still low, midwives noted that reminders about PNC at six days were reiterated during home visits. However, limited access to health facilities due to limited transportation undermines the efficacy of the reminder system.
Use of telephone calls and SMS This platform was reported to have been used in 13 districts. *"For mothers who have phones when a midwife has not gone to the community, we call them or their partners to remind them to come."* However, the use of SMS was noted to have worked below expectations. *"I don't know whether it needs more facilitation, but it wasn't helpful."*	**Quick access to mothers via telephone calls** The midwives reported quicker access to mothers because of the use of telephones and VHTs. "Calling enabled us to reach some mothers, but it also had limitations… airtime, sometimes you find you have no airtime for calling or telephones are switched off."
Meeting of VHTs and health workers The midwives said the health facility quarterly meetings presented opportunities for sharing information, evaluating work carried out, tracking PNC and seeking guidance. *"There are meetings with VHTs, where they share with them their experience, challenges and plans for the next quarter. Solutions to their challenges are discussed and reported to the higher authority."*	**Accompanying mothers to health facilities** Enhanced tracking of mothers was noted to have revealed mothers that required additional support from their VHTs. Some VHTs reported escorting mothers to health facilities to ensure they arrived. More availability and use of the PNC reporting forms and files supported VHTs/health facilities in working together on data collection, documentation and reporting.

Objective 4: Key considerations for tracking and documenting postnatal care services

Tackling the barrier of communication by using telephone calls and SMS to track Postnatal care for mothers. Photo Credit: © UNICEF/UN0563581/Abdul

Strengthening the capacity of human resources
Village Health Teams (VHTs) play a pivotal role in supporting home visits and community approaches. For instance, midwives worked closely with VHTs to reach mothers and babies at the parish level to promote reproductive health awareness, referral to health facilities and follow-up on Post Natal Care (PNC) visits. Recognition for and appreciation of VHT activities by health workers should not be neglected so that VHTs feel motivated and proud that their voluntary work in the community matters.

In addition, regular refresher training of VHTs to enable them track targeted mothers and newborns in a timely and qualitative manner will enable them to competently support mothers. Midwives also suggested using SMS reminders for appropriate follow-up on PNC services. More importantly, adequate incentives, such as a monthly stipend and transportation allowance, would enable VHTs and health workers to promote community outreach activities.

Mapping mothers for health promotion and education
Mothers in West Nile have a tendency to migrate, which hinders the current system of tracking and follow-up. Therefore, adequate mapping of mothers and reproductive women is necessary to provide continuous education on reproductive health. Antenatal care registers/cards are also effective tracking tools for midwives and mothers as well as essential in promoting community awareness of PNC visits.

Conclusion

The findings from this study revealed that PNC use and access by mothers and neonates at six hours and six days is not universal in the West Nile and Northern Uganda districts and that the quality of PNC services varies. Inadequate human resource skills in health facilities, inappropriate and/or insufficient logistics, and cultural obstacles are the major challenges to PNC visits at six hours and six days.

Uganda has a long history of making efforts to enhance the scope and quality of Reproductive Maternal, New-born, Child and Adolescent Health (RMNCAH) services. Overall, antenatal care and service delivery have been prioritised, while lagging behind in terms of pre-conception and postpartum care.

Insufficient human resources can be attributed to the low rate of health workers per capita as well as health worker knowledge, skills, attitudes, and work culture. Most interviewed District Health Teams (DHTs) and midwives highlighted that the workload surpassed the capacity of the staff even when staffing norms were above 75 per cent. Adequate staffing should be based on Workload Indicators of Staffing Need (WISN) advocated by the Ministry of Health Human Resource Division and partners. Continuous effort is required to mitigate the underlying causes of low postnatal care visits to reduce risk factors for mothers and their babies.

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Uptake of Antenatal Care (ANC) in the first trimester in West Nile: Ascertaining the supply side gaps and tackling the barriers

A team of experts examine the uptake of first trimester ANC in West Nile, Uganda

Prenatal care has been shown to improve the quality of maternal and child health outcomes at delivery. The revised Uganda Ministry of Health (MoH) guidelines for Antenatal Care (ANC) recommend at least eight ANC contacts, with emphasis on an initial visit during the first trimester. Early ANC facilitates the early identification of risk factors and remedial actions for better pregnancy outcomes. However, the uptake of ANC in the first trimester is challenging due to various factors, such as lack of maternal education, limitations to female decision-making power, fear of early disclosure and associated witchcraft, and the quality of ANC service provision by health facilities.

Interventions such as FamilyConnect aim to improve uptake of ANC. The FamilyConnect tool sends targeted SMS messages to pregnant women and heads of households, including male partners and caregivers, with educational information and peer support. This aims at improving mother and new-born care and motivating behaviour change during the first 1,000 days of life. The system also strengthens the referral chain by sending SMS reminders to community health workers for the purpose of tracking.

This study examines the supply-side gaps in receiving the first ANC in the first trimester. Specifically, we analysed factors affecting knowledge and uptake of ANC, including barriers, enablers, and relationships with Village Health Teams (VHTs) and health workers at the community and facility levels in the West Nile region of Uganda.

Findings

Objective 1. Prevalence of ANC1 services in the first trimester and association with the supply side gaps at different levels of care

Uptake of ANC services in the first trimester in catchment area 2019		
	Intervention	Counterfactual
Household survey	77.7%	78.2%
HMIS/DHIS2 Data	19%	27%

Availability of ANC services and essential medicines at the health facility level

	Intervention					counterfactual				
	ANC					ANC				
Level	N	%	Folic acid/ Iron	Meben dazole	Sulphadoxine/ Pyrimethamine	N	%	Folic acid/ Iron	Meben dazole	Sulphadoxine/ Pyrimethamine
RRH	1	69.6	100	100	100	1	100	100	100	100
GH	11	70.5	31	31	23	7	86.8	60	60	80
HC IV	14	74.0	54	52	52	4	94.3	69	60	60
HC III	54	75.3	56	64	56	34	79.6	60	57	62
HC II	55	49.9	33	33	33	45	58.1	71	71	57
Overall	135	67.5	51	53	50	45	58.1	64	60	62

Overall, the proportion of health facilities that provided ANC services following MoH standards during 2019 was consistently higher in the counterfactual at 74 per cent, compared to intervention districts at 67.5 per cent. Across intervention and counterfactual districts, compliance with ANC service availability standards was highest at Regional Referral Hospitals (RRH) at 84.8 per cent and lowest at health centres II (HC IIs) at 54.0 per cent.

Essential Medicines and Health Supplies (EMHS) stock cards for 2019 were reviewed to assess whether the medicines and health commodities required to provide ANC services according to MoH standards were in stock. The average availability of medicines and health commodities at the intervention and counterfactual health facilities during 2019 is presented below.

Most health facilities did not offer the full range of medicines and health commodities required. The availability of medicine and health supplies was better in the counterfactual districts than in the intervention districts (see table below). Ideally, folic acid should be taken before conception and at least during the first month of pregnancy to prevent the occurrence of congenital defects. In the intervention districts, folic acid and iron were the least available in health centres IV (HCIV) and hospitals.

Availability of laboratory services at the health facility level

Level		Blood grouping reagents	Complete blood count	HIV rapid testing kits	Liver function tests	Malaria rapid diagnostic	Syphilis (TPHA) test	Urine dipstick
Intervention	RRH			100%	100%	100%	100%	100%
	HC IV	77%	54%	100%		85%	85%	77%
	HC III			98%		100%	100%	96%
	HC II			100%	90%	92%	100%	100%
	Overall	77%	54%	99%	91%	96%	98%	94%
counterfactual	RRH			100%	100%	100%	100%	100%
	HC IV	100%	100%	100%		100%	100%	100%
	HC III			97%		100%	97%	91%
	HC II			100%	100%	83%	100%	100%
	Overall	100%	100%	98%	100%	98%	96%	92%

The basic laboratory investigations during the first trimester enable screening for conditions for which advice on prevention can be given or treatment scheduled.

Blood grouping reagents were only available at HCIV in all sampled facilities in the counterfactual and only 77% in the intervention districts. The lack of blood grouping reagents at other levels of care, compromises the opportunity to screen for potential blood grouping incompatibilities with the unborn child and undermines preparation for emergencies where a transfusion may be needed. Similarly, most facilities were also not able to conduct a complete blood count as these were only registered at HCIV (100% in counterfactual and 54% in the intervention facilities). As shown above, urine dipsticks, HIV test kits, and syphilis tests had high availability in both intervention and counterfactual health facilities.

Key bottlenecks from the supply side

Improvements to the procurement and delivery systems were identified as key to ANC attendance, as mothers become discouraged when they show up and are not given the required drugs. The above findings were further confirmed by the Health Systems Strengthening Baseline Report, which revealed that the availability of required ANC medicines and commodities was only 51.7% in intervention districts and 61.8% in counterfactual districts in 2019.

Targeted health education: The attendance of ANC was noted to have been affected by negative practices. For instance, mothers in some districts would not go for ANC until pregnancies were visible to other people. In light of this, more targeted health education was viewed as vital.

Improving service delivery by building staff capacity: District Health Team (DHT) members from some intervention districts expressed concern that health facilities did not provide the full range of ANC services, which turned mothers away. Moreover, mothers stated that ANC services were not available on the weekends. To address these barriers, the DHT members proposed staff capacity building and improvements in work scheduling.

Determining the association between knowledge and ANC-1 uptake during the first trimester

In the West Nile districts, mothers who knew that they were expected to attend four or more ANC visits were more likely to attend ANC1 in the first trimester. In contrast, there was no clear pattern between the knowledge of how many times a mother was supposed to attend ANC and if they attended ANC1 in the first trimester in the counterfactual districts. This suggests that supply-side factors may be the main drivers of or barriers to early ANC1 in these districts.

The relationship between knowledge and ANC 1 attendance in the first trimester

Knowledge question	Intervention	Counterfactual
How many times is a pregnant woman supposed to attend antenatal care?		
1-3 times, N (%)	62 (60%)	37 (78%)
4 times, N (%)	394 (76%)	375 (77%)
5-7 times, N (%)	515 (83%)	328 (79%)
8 and above, N(%)	682 (76%)	232 (79%)
Sources of information on health and nutrition services		
Public health facility, N(%)	1,545 (78%)	924 (78%)
Private health facility, N(%)	180 (84%)	186 (65%)
Community Health worker, N(%)	103 (81%)	29 (86%)
Traditional birth attendant, N(%)	47 (96%)	3 (67%)

An equal proportion of mothers in the intervention in West Nile and northern Uganda counterfactual districts named a public health facility as their source of knowledge for when to attend ANC1. Overall, mothers in both groups had other sources of information. The most common source among mothers in the West Nile was traditional birth attendants (TBA), followed by private health facilities and community health workers, while the least was the public health facility. In the counterfactual districts, the most commonly named source was the community health worker, followed by public health facilities, private health facilities, and the least TBAs.

	Barriers	Findings
Supply factors	Limited access to health facilities	Mothers in both the intervention and counterfactual districts revealed that the long distances they travelled to reach health facilities were a hindrance to ANC access.
	Drug stock-outs	Mothers, mainly in counterfactual districts, revealed that they were discouraged by the drug stock out.
	Insufficient follow-up and outreach services	A number of mothers from counterfactual districts said this had negated the use of ANC services. Inadequate facilitation of VHTs was viewed as the main cause. Outreaches by professional health workers were also viewed as inadequate yet they were key in increasing access to ANC-related services.
	Low staffing at health facilities	Mothers in counterfactual districts indicated that the numbers of health workers in most health facilities were insufficient. This increased the waiting time for mothers and discouraged them from seeking ANC services.
Demand factors	Low male/husband involvement	It was noted that poverty or busy schedules limited men's attendance of ANC to only the late stages of the pregnancy.
	Poverty	Mothers across the board expressed concern that poverty deterred women from obtaining some items needed to put ANC knowledge into practice.
	Negative attitudes and lack of interest	Cultural beliefs were reported as limiting the use of ANC knowledge. Likewise, lack of interest or laziness was said to constrain the translation of knowledge about ANC into practice.
	Alcoholism	Mothers in intervention districts were silent about the effect of alcoholism on ANC use while those in counterfactual districts, especially Amuru, revealed that alcoholism limited the use of ANC services.

Identified appropriate channels of communication by VHTs and health workers

Participating mothers were asked about their preferred channels/platforms of communication used by VHTs and health centre staff to convey ANC information. Mothers in both intervention and counterfactual districts had similar perceptions, expressing preference for VHTs' home visits, community trainings and during distribution of Mama-kits and mosquito nets. Additional channels of communication included church leaders, marketplaces, adhoc meetings like funerals, radios, and education sessions during antenatal visits. However, some participants in counterfactual districts stressed that most of the health information was directed to women and children.

Perceptions of the role of FamilyConnect in antenatal care

Mothers in intervention districts where the FamilyConnect tool was applied revealed its key role in enhancing ANC attendance through sharing information on nutrition during pregnancy, ANC visits and preparation for delivery.

Whilst a few mothers in Amuru, one of the counterfactual districts, were aware of the FamilyConnect platform, ANC attendance was not enhanced. This is due to inadequate experience with the tool. The penetration of FamilyConnect was also limited to a few districts, even in the intervention area. However, overall, FamilyConnect was vital for promoting ANC.

Discussion

Knowledge was an important predictor of ANC use. Mothers who had attended four or more ANC visits were more likely to be found in intervention districts where mothers were aware that a higher number of ANC visits was required. There was also an inverse relationship between supply-side factors and the use of ANC1 services in the first trimester, although this did not reach statistical significance.

The provision of ANC services according to the MoH standards varied but was slightly higher in counterfactual districts. The provision of a standard ANC service is shown to enhance its attendance, and therefore, appropriate measures should be taken into account to enhance compliance with the required standards. The study identified the need for more targeted health education in order to reach more mothers and other community members with ANC.

Conclusion

This study showed that investment in health education and communication to community members and mothers is essential to improving ANC attendance. Furthermore, applying various means of communication such as FamilyConnect and TBAs is also critical in reaching the larger population through a community-based approach and empowering women to freely access information and maternal health services.

Boda Boda Rider on arrival with an expectant mother at Midigo Health Centre IV /. Photo Credit UNICEF: © UNICEF/UNI358283/Emorut

The HSS baseline study was comparative cross-sectional and mixed methodology in 11 districts (Arua, Adjumani, Maracha, Madi Okollo, Moyo, Pakwach, Obongi, Koboko, Nebbi, Zombo and Yumbe) in the West Nile region of Uganda Nile and six counterfactual districts in the Acholi (Gulu, Kitgum, Nwoya and Amuru) and Lango (Apac and Kole) regions.

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Localizing and ownership for Social Determinants of Health (SDH)

Francis Omaswa highlights the importance of the role of the individual, family, community in partnering with the health system and governments in contributing to population health outcomes.

Social Determinants of Health are defined by WHO as the conditions in which people are born, grow, live, work and age . These conditions are impacted by the quality of social cohesion and support networks, economics, education, physical environment, employment as well as access to health care. What has not received sufficient attention in the discussions on this topic is the role of the individual, family, community in partnering with the health system and governments in contributing to population health outcomes.

In particular the role of the individual person calls for more discussion and attention. In order to promote health and keep healthy people healthy, do individuals know what the right thing to do is? Do they know how to do the right thing to keep healthy? Are they actually able to do it? The importance of personal agency and autonomy in being in control of their lives and the choices make in life is critical. Are individuals and communities facilitated to make the right choices for healthy living? For example, is the most easily availabchoice of food the correct or the wrong food. Is the most easily available source of water also the source of ill health? Is the most easily accessible and affordable public transport also the least safe. An example is the case of the highly accident-prone motor cycle taxis popularly known as bodaboda in some countries?

There is a need for a partnership to be created between individuals, their families and communities on the one hand and the health systems and government on the other hand.
Health is made at home

"Health is made at home and only repaired in health facilities when it breaks down". Be clean, eat well, and do not share accommodation with animals. This is a message from the Director General of Health Services".
In 2000, as Director General of Health Services in Uganda, I had this statement recorded and played several times a day in different radio stations in the country. The starting point is that 94% of people are born completely normal and healthy, without birth defects and can live in good health for long periods of time without needing medical care. This is because the human body is capable on its own of making highly informed decisions on how to maintain well- being and protect itself from health risks. In physiology, we are taught about Homeostasis by which the body's internal environment is maintained in a steady state through very complex feed-back mechanisms. For example, when it is hot, we sweat so that the sweat evaporates and cools us; when it is cold, we shiver to generate heat, when we are short on water, we feel thirst and when we have too much water in the body, the kidneys produce urine to get rid of excess water and other unwanted metabolites, when we need food we feel hungry. Effortlessly, daily the body's state of well-being is maintained through these in-built mechanisms.

It is therefore evident that the primary responsibility, ownership and accountability for maintaining uninterrupted healthy life through the life course rests on the shoulders of individuals, households, families and communities . The mothers, fathers, clan, other cultural and religious leaders, and local administrators are the faces of the key actors. Each individual should not take their health for granted but should appreciate and celebrate the fact that they have health and are working to protect it and support the body's own internal homeostatic mechanisms in ensuring that their healthy status is not lost.

This is social responsibility which calls upon individuals to be accountable for fulfilling their civic duty, to benefit society while the society also supports individuals. Social responsibility also calls upon individuals to take an active part in the governance of their communities; ensuring that their needs are addressed by governments. The Alma Ata Declaration on Health for All includes a call for individuals to participate actively in the planning and management of their health services as both a duty and a right.

The key role of the health system should be to ensure that individuals continue to remain healthy and do not lose their health and will not need avoidable health care. This can be achieved by promoting and awareness also known as health literacy and embedding health seeking behavior into the routine of life of the population, supporting individuals to identify and avoid health risks. This can be achieved by removing the risk and facilitating behavior that favors health. The health system should actively engage in salutogenesis which is the practice of creating health through advocacy for social prescribing of activities such as exercise, promoting importance of social relationships, access to nature, having meaning and purpose in our lives which holistically addresses physical and mental health. The public health system should take interest in the design of physical environment of communities and rural settings, define the key elements of model homes which enhance healthy living and enforce compliance with set standards for such homes.

Governments are responsible for ensuring that the conditions and systems exist that allow people to be as healthy as they can be. These include maintaining security, law and order, providing safe water, education and personal and public health services.

Governments, the world over, face the challenge of getting the right balance in investing in public and personal health services. The pressures to society and governments to pay more attention to the needs of repairing and restoring lost individual and community health are stronger than those to promote and protect existing health. For example, an injured person has to be attended to immediately, a baby must be born now, a child convulsing from an attack of malaria has to be rushed to a health facility straight away as does a middle-aged man who has had an attack of intestinal obstruction. An epidemic in one country puts the whole world on alert. As a result, this drama of providing health care is the more visible face of the health system receiving more attention and more resources than the more important function of promoting and maintaining individual and population health.

Global governance and collaboration for health has a major role to play in country health systems and in determining health outcomes in African countries. Apart from global public health goods such as health security and pandemic control there are bilateral and multilateral players who influence health policies, systems and health financing in Africa. Key among these are country governments, the UN Family and Global Health Initiatives such as the Global Fund to Fight Aids, TB and Malaria, GAVI, Roll Back Malaria among others. Harnessing the governance of these partners to cohesively support social determinants of health in countries calls first and foremost on

strong country governments especially the ministries of health. While partnership principles have been agreed through several conventions such as the Paris Declaration on Aid Effectiveness , strong and clear country leadership" in my experience is the key determinant of outcome. External partners will find it expeditious to work with clearly laid out and effectively implemented policies and programs in partner countries. On the other hand, lack of clarity and weak implementation capacity at country level often leads to donor led interventions with all the perceived negative implications. The debate on decolonization of health governance in my view and experience is all about the quality of country leadership.

Getting this balance right calls for partnership between the government, individuals and communities. The role of government as a protector of the public interest requires that the Ministry of Health as a steward must do more than ensure that care is delivered. It must work effectively across government—with ministries of finance for resources; ministries of education on health professions training and health education in schools; with ministries of economic development, water, agriculture, housing and transportation, as well as with those ministries effecting decisions on centralization and decentralization of government and civil service reform and with parliament to gain political support for healthy policies. Ministries must also relate to specialized parastatal agencies often created to perform government functions such as those that regulate drug quality; conduct and commission research; perform disease surveillance functions; and operate health care services among others in this complex environment, government cannot meet its responsibilities alone. Health ministries must also work effectively with an increasing number of non-governmental actors; civil society, business, philanthropy, professional associations, academia, donors, academies of medicine and science, the public and with regional and international organizations.

Monitoring performance

Finally, in order to ensure accountability for results, performance monitoring is essential. This means acquiring data to find out what is happening, where, and to whom. Analysis and review of the data to establish whether commitments have been kept by all stakeholders. The third element of accountability is action or remedy on what needs to be done to put things right or maintain and accelerate progress. This cyclical process of monitoring, review, and action publicly recognizes success, draws attention to good practice, identifies shortcomings, and recommends what needs to be done. This framework applies at all levels, individual, community, government, country stakeholders and the international community. According to Charles Boelen the following constitute the domains of Social accountability: relevance to ensure that the priorities of societal needs are met, quality to ensure that the interventions are achieving objectives, cost effectiveness to ensure that there is value for money and finally equity to ensure that no one in society is left behind. Metrics are at the center of accountability which means that countries need to have robust and effective Information Systems for health and that relevant indicators need to be agreed and used both for health status and as coverage that are segregated to address the equity domain of accountability.

Conclusion:

Localizing and focusing the effort on promoting the roles of the individuals, families and communities in influencing SDH holds potential to fast track the achievements of UHC and health for all. Up to now most of the effort has been pointed at the roles of governments and development partners and the UN family. The concepts of Health is made at home, health creation and keeping healthy people healthy through health systems that prioritize health seeking behavior has received more lip service that active support. The time for this to change is now and this is a call to action that rides on others such that by Nigel Crisp in his books such as Health is Made at Home and Turning the World Upside Again .

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

Figure1: An example of Community Engagement in Uganda

Community Engagement for COVID-19 and Health in Uganda

Objective:
All people in Uganda are aware, empowered and are participating actively in the prevention and control of the outbreak of COVID-19 as both a duty and a right, using existing structures, systems and resources as much as possible.

Guiding principle:
Empowering individuals and communities is based on the premise that good health starts with, and is created by individuals, their families and the communities, and is supported, where necessary, by skills, knowledge and technology of the professionals. Individuals have the primary responsibility for maintaining their own health and that of their communities.

Strategy:
Strengthen the existing Community Health Systems for Integrated People Centered Primary Health Care as the National COVID-19 response in Uganda. This will facilitate and ensure that infections are minimized or do not occur in the community and if they occur, will enable prompt identification, testing, treatment and rehabilitation as needed.

Results:
. Reduction in hygiene associated disease conditions like diarrhea, eye diseases, intestinal worms
. Increased ANC attendance with more male involvement.
. Increased hospital deliveries, no reports of TBA deliveries.
. Increased OPD attendance especially for the under 5 children.
. Improved community surveillance that led to a decrease in covid cases.
. Improved working relationship between HFs and community.

Lessons learnt
. Organized Communities are capable of owning and taking responsibility for their health including achieving Social Cohesion through regular Community dialogue sessions -
Organized communities improve relations with the health facilities and the performance of the community health system and PHC
. Equipping, training, supervising and paying VHTs is essential for them to perform better
. District health plans should be developed and implemented using bottom-up and "three ones" approach
. District Health performance benefits from regular Supportive Supervision from the Center

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Long COVID: A brief introduction

Amity Eliaz and Mike Reid give an overview of what is known so far on Long COVID.

Introduction

Since the onset of the coronavirus disease 2019 (COVID-19) pandemic, patients' clinical presentations have varied widely both in terms of symptoms and time course. While many patients fully recover to their baseline health following Severe Acute Respiratory Syndrome Coronavirus[2] (SARS-CoV-2) infection, others experience ongoing sequelae. The persistent sequelae have important implications for patient health and quality of life, and are therefore of great importance for patients and providers.[1]

The constellation of persistent COVID-19 symptoms several weeks after infection is referred to by several terms including "Long haul COVID," "Long COVID," or "post COVID-19 condition." Many medical professionals refer to it as 'Post-Acute Coronavirus Disease Syndrome' (PACS). According to the World Health Organization (WHO) 'Post COVID-19 condition occurs in individuals with a probable or confirmed SARS-CoV-2 infection, usually 3 months from the onset of COVID-19 with symptoms that last for at least two months and cannot be explained by an alternative diagnosis.'2 In contrast the US Center for Disease Control and Prevention (CDC) and the UK defines Long COVID as persistent, returning, or new symptoms at least four weeks following SARS-CoV-2 infection. [3,4]

Epidemiology

Given the variable definitions of Long COVID, the true burden of disease remains unknown. However, current estimates of the prevalence of Long COVD range from 20% percent to 75%. Among over 500,000 patients in the United Kingdom (UK), 37.7% reported one or more symptoms at least 12 weeks after COVID-19.[5] Similarly, in a prospective cohort study in the United States (US), Logue et al. found that approximately 30% of patients in the outpatient setting reported ongoing symptoms at three to nine months following an episode of COVID-19.[6]

Comparatively, among a cohort of 968 adult patients in France, 10% experienced Long COVID following severe SARS-CoV-2 infection.3 Eighty five percent of the patients who were symptomatic at two months following infection remained symptomatic at one year.3 Similarly, in another study in the UK, 13.3% of patients with COVID-19 reported symptoms lasting at least four weeks.[7] In addition, the authors reported an association between Long COVID and the occurrence of over five symptoms during the initial week of infection.[7]

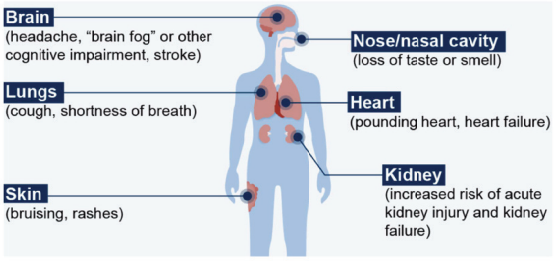
Nasserie et al. conducted a systematic review evaluating persistence of COVID-19 symptoms following SARS-CoV-2 infection among patients in China, the UK, Spain, Italy, France, the US, Germany, Canada, the Netherlands, Austria, Ireland, Norway, Turkey, Belgium, England, and Bangladesh.8 The authors found that 72.5% of patients experienced at least one symptom at 30 days following infection.[8] Commonly reported symptoms included dyspnea (36%), fatigue or exhaustion (40%), and insomnia (29.4%).[8] Comparatively, in a systematic review of 41 studies by Chen et al., the pooled global prevalence of Long COVID was 43%.[9]

Unfortunately, little data exists currently describing the burden of Long COVID in Africa; although several research studies are underway in South Africa to characterize the disease burden in that country.

Pathophysiology

A variety of mechanisms are speculated to underlie the development of Long COVID (Figure 1).[10,11] Data supports the hypothesis that some people may harbor virus in their tissue after the resolution of the initial infection and this lingering virus can both cause direct damage to cells and leak viral particles into the blood, where they can cause microclots, activate inflammation and ultimately cause more damage. Other research suggests that SARS-CoV-2 may dysregulate gene expression, metabolism, and immunity, which may in turn contribute to the occurrence of Long-term sequelae following infection.[12] Even prior to the COVID-19 pandemic, studies demonstrated persistent sequelae following other coronavirus infections.[12] In the case of Long COVID, it may be that both immune dysregulation and tissue injury from lingering virus contribute to ongoing symptoms.[12] Vijayakumar et al. report ongoing immunological abnormalities in patients experiencing Long COVID characterized by pulmonary symptoms.[13] Patients with Long COVID were found to have significantly increased CD8+ and CD4+ T cells on evaluation of bronchoalveolar lavage (BAL) compared to healthy controls, as well as proteomic abnormalities suggestive of persistent epithelial injury, apoptosis, and tissue repair.[13]

Figure 1.

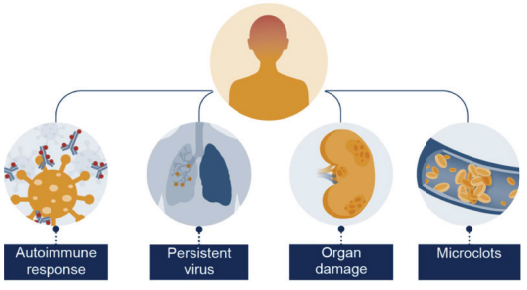


Source: GAO analysis of Centers for Disease Control and Prevention information and medical literature. | GAO-22-105666

Signs and Symptoms

Long COVID symptoms vary widely in terms of character, severity, and time course. As illustrated in Figure 2, Long COVID can present with a range of symptoms affecting many different organ systems. Persistent symptoms range from general malaise to shortness of breath to chest pain. In addition, while some patients may experience persistence of their acute COVID-19 symptoms, other patients report entirely new symptoms.

Figure 2.



Source: GAO analysis of medical literature. | GAO-22-105666

In their living systematic review and meta-analysis, Michelen et al. reported the most common Long COVID symptoms were weakness (41%), general malaise (33%), fatigue (31%), impaired concentration

(26%), and breathlessness (25%).14 Importantly, the authors noted that 37% of patients reported decreased quality of life compared to their baseline.14 Additionally, 26% of studies in the review reported decreased pulmonary function among patients with Long COVID.[14]

What is clear across all these studies is that the symptoms can range from mild to debilitating. In the US it is estimated that Long COVID has resulted in 1.1 million Americans not working at any given time and another 2.1 million workers reducing their hours rather than taking time off.

Diagnosis

Researchers are working to develop methods to reliably diagnose and treat Long COVID. Healthcare providers may use COVID-19 antibody tests in an attempt to confirm previous infection, then rule out other conditions that may cause other symptoms. Blood tests should be ordered selectively and for specific indications after care history and examination; the patient may not need any. Anemia should be excluded in the breathless patient. Elevated biomarkers including C reactive protein, white cell count and ferritin may be useful in highlighting evidence of infection or inflammatory response.

Clinical Management

Every Long COVID patient is different, as such, every patient will need treatments specific to their symptoms. Clinical evaluation and management of patients with Long COVID should be driven by their signs and symptoms following

careful history and physical examination.[15] For example, patients with significant ongoing respiratory illness may undergo follow-up chest x-ray and a referral to pulmonary rehabilitation.[15] By contrast, patients with Long COVID chest pain should be carefully evaluated for cardiovascular disease risk factors and may require urgent referral to cardiology for further assessment.[16]

The UK's National Institute for Health and Care Excellence recommends a holistic, person-centered approach to assessment of patients with persistent symptoms following COVID-19.[17] After ruling out urgent conditions, patients should be referred for multidisciplinary assessment and rehabilitation services as local resources permit.[17] For patients not admitted to intensive care, the British Thoracic Society guidance on follow up on COVID-19 patients who have hard significant respiratory illness proposes follow up with a chest X-ray at 12 months. For those with evidence of lung damage (such as persistent abnormal chest X-ray) referral to pulmonary specialist and pulmonary rehabilitation probably aids recovery.[15]

There are no drugs to prevent or treat Long COVID. However, for mild symptoms presumed to be related to Long COVID, treatments include over the counter medication, advice on self-treatment strategies, caregiver support and education, support groups, stress management, and lifestyle changes (including a healthy diet, graded exercise and return to normal activity over an adequate period of time).

When possible, continuity of care should be optimized for patients experiencing Long COVID. [16] Most patients can expect a gradual, if sometimes protracted, improvement in energy levels and breathlessness. They should be supported by careful pacing, prioritization and modest goal setting. Post-COVID-19 symptoms in the elderly tend to be more severe than in younger patients and support for older patients should be personalized with input from the multidisciplinary team.

Vaccines

Current evidence supports vaccination as a means of protection against Long COVID to varying degrees. A recent study by Al-Aly et al. suggests that vaccination prior to SARS-CoV-2 infection confers partial protection against persistent symptoms.[18] The authors evaluated patients in theUS Department of Veterans Affairs and found that patients with breakthrough infections following vaccination had lower risk of ongoing COVID-19 sequelae compared to unvaccinated patients.18

Antonelli et al. conducted a prospective, community-based, nested case-control study of adults in the UK with confirmed infection with SARS-CoV-2 following vaccination.[19] Participants who had received two doses of vaccination prior to COVID-19 had approximately half the odds of persistent symptoms lasting four weeks or Longer compared to participants who received only one dose.19 A recent study in Israel also found that COVID-19 vaccination was associated with reduced risk of Long COVID.20 Among 951 patients following SARS-CoV-2 infection, vaccinated patients reported significantly decreased risk of COVID-19 symptoms.[20]

Summary

Long COVID is common and broad in its impact on the body, making it incredibly difficult to diagnose and challenging to manage. What is clear though is that this is a major global public health problem and will continue to have impacts for years to come, even if cases of acute SARS-CoV-2 dwindle in the coming months. Given the prevalence of persistent symptoms following COVID-19, Long COVID carries important implications for healthcare providers across Africa. From the limited current evidence, it appears that many patients with Long COVID recover through a holistic and paced approach. Nonetheless, the long-lasting effects of the syndrome require an interprofessional, community-facing, holistic approach to management. In turn, this places new burden son healthcare systems and health workforce capacity.21 As the understanding and management of Long COVID evolve, accessible primary care will likely play a critical role in the care of patients with persistent COVID-19 sequelae.[22]

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The "W-E-L-C-O-M-E" attributes of a good family planning counselor

Prof. Ani Etokidem summarizes the personal attributes or characteristics of a good counselor using the acronym 'WELCOME'.

Introduction

This paper summarizes the personal attributes or characteristics of a good counselor using the acronym 'WELCOME'. This is based on experience gained from many years of counseling family planning clients. These attributes would also be found useful by counselors generally. **'W'** represents 'Warmth', **'E'** represents 'Empathy', **'L'** represents 'Listen/ Language', **'C'** represents 'Confidence/Confidentiality', **'O'** represents 'Objectivity', **'M'** represents 'Mannerism' while **'E'** represents 'Emotional balance'.

Family planning counsellors are familiar with 'G-A-T-H-E-R.' (1). While 'G-A-T-H-E-R' deals with the approach to family planning, 'W-E-L-C-O-M-E' deals with the characteristics of the counsellor. Both 'G-A-T-H-E-R' and 'W-E-L-C-O-M-E' can complement each other and make family planning counselling easy for the counselor and acceptable to the counselee.

W-E-L-C-O-M-E

W=WARMTH

A good counselor displays warmth towards the client and therefore gives them a warm welcome. This will facilitate establishment of confidence and rapport compared to a cold reception which will make the establishment of rapport difficult, if not impossible. There are instances when clients find it difficult to voice out what they want, even to tell the counsellor that they want to have family planning services. Lack of rapport may disorientate the client. There are situations where clients tell the family planning provider something like: 'Sorry, I think I am in the wrong place, I actually wanted to complain about headache. I can't tell how I managed to find myself in the family planning section'' whereas in reality, they needed family planning but were put off and or confused by the cold reception accorded to them by the counselor/provider.

E=EMPATHY

An empathic (not sympathetic) counselor will be careful in the choice of words and approach to the client. This is because the provider/counselor has been able to imagine and share the feelings of the client; they have been able to wear the clients' shoes. Blaming the client for the previous pregnancy which would have been prevented by family planning or blaming her for coming late to the clinic would only disorientate and confuse the client and cause them to lose confidence in the health system. This may result in their refusal to utilize the services.

L=LISTEN/ LANGUAGE

"L" stands for listen. Good counselors are good listeners. They listen to the client and allow them time to express themselves. The counselor listens with attention to the client's questions, queries, concerns and provides the answers to the issues raised. Where the counselor does not understand the issues raised by the client, they can ask the clients to repeat or clarify. If there are issues the counselor cannot handle but which some other staff can, there is nothing wrong with referring the client to that staff.

'L' can also stand for ''Language'' The good counselor avoids unnecessary professional jargons that may end up confusing the client. The counselor should come down to the level of the client and avoid the use of foul language that may hurt the client's feelings. It may be necessary to explain certain issues or terminologies in the client's language, if the counselor is well versed in it and, especially if the client is not well versed in the official language. For providers who work in foreign lands and may not be well versed in the local language, it may be necessary to get an interpreter. Every step must be taken to ensure that the interpreter will maintain confidentiality of information obtained from the client.

C=CONFIDENCE/CONFIDENTIALITY

The good counselor displays self-confidence while talking to the client. This should not be mistaken for arrogance. For this to happen, the counselor must have a good knowledge of the subject matter. In family planning for instance, the good counselor should know the basics of how the method works. They should also understand issues around side effects and how to explain them to the client. The counselor must be able to address issues raised by the client with confidence. In these days where there is a lot of false medical information in the social media and in the internet, a counselor that does not have a firm grip of the subject matter may be easily jolted when the client asks questions or presents some ''facts'' they have obtained from these sources.

The good counselor assures the client of confidentiality and maintains this confidentiality even after the client is no longer alive.

O= OBJECTIVITY

An objective, non-judgmental counsellor will achieve the desired results. As a display of objectivity, the good counselor ensures that their personal feelings about the client do not influence the counseling process. The counselor should not allow personal biases to becloud professional conduct. In most African societies for instance, having children is taken as an insurance for old age. A situation where the counselor starts wondering why the client who has not yet had children or who is newly married is requesting for family planning can lead to a missed opportunity. Some counselors display personal preferences for certain family planning methods and they try to force such preferences on their clients. This should not be so.

M=MANNERISM

A well-mannered, non-radical attitude is a pre-requisite for effective counseling. Good mannerism involves respect for the client as a person, respect for their views, even if they are wrong. Clients are very sensitive to the countenance, nuances and gestures of counselors. Some of these may be very suggestive to clients. Clients may interpret some of these differently from their intended meanings. Depending on their interpretation, clients may be put off completely. This could lead to a missed opportunity and even loss in confidence in the entire system.

E=Emotional intelligence/balance

An emotionally-intelligent counselor is more likely to display the above-mentioned characteristics than one that is the opposite. A counselor's level of emotional intelligence will influence the choice of words, gestures and nuances. Emotionally unstable counselors may allow happenings around them, their family challenges, work-related challenges, the work environment and other stressors, to influence, (often negatively), the care they give to their clients. Emotionally intelligent counselors are able to handle personal challenges in a way that does not interfere with the care they give to their clients

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Obstetric Fistula Landscape in Kenya

Dr. Weston Khisa reflects on obstetric fistula in Kenya

Back in 2004, the World Health Organization reported a view that the etiology of Obstetric fistula follows the global maternal morbidity and mortality landscape. The years have flown by yet that position has not changed: for decades! The burden of Obstetric Fistula continues to be concentrated in Africa where maternal morbidity and mortality is common place. In very rare occasions you may find a fistula occurring in developed nations; even then the fistula is often associated with malignancies, radiation and abdominal surgeries. When these events occur, the fistula is closed quickly such that the woman is not exposed to shame and ridicule associated with this debilitating condition. A far cry from what we see here in Africa where Obstetric Fistula is common place in the midst of limited specialized care and support for the women experiencing fistula. Few skilled hands in Africa continue to illuminate women's lives through reconstructive surgeries at no cost to the patient. We salute fistula teams in all the affected countries including Kenya, my home country.

Looking back at my formative years as a trainee fistula surgeon, my mentors told me to follow the principles of fistula surgery if I ever wanted to help the women living with fistula achieve continence. For seven years, I followed the guidelines to the letter, where I used my surgical experience and patient's clinical presentation in making surgical related decisions. Although I did not have a standardized way of documenting all profiles of the patients operated, I begun to slowly observe a pattern where almost all patients returned post operatively to appreciate the positive changes in their lives. It then occurred to me that there may be other factors associated with fistula healing other than the documented: fibrosis and fistula type/location. In itself, the high success rate of my patients fueled my search for wider areas of service including training, mentorship and community involvement in fistula care and support.

Today, Obstetric Fistula is taking its rightful place at the archives of Kenya's history. At the same breath, we all know that every cloud has a silver lining, we constantly strive to rekindle women's lives through fistula surgery and community support. At a closer look, Obstetric Fistulas continue to occur albeit at a lesser degree compared to years gone by. For many years, the burden of obstetric fistula was not well documented. Estimates indicated that over three thousand women developed new fistulas each year in Kenya alone. Out of which only 7.5% women were operated at designated centres; which were mainly at the capital city and some provincial hospitals. In our previous scientific writing, we did report that most women with a fistula diagnosis were young primigravidae, with low literacy levels and no income. The prevailing stigma especially at community level made it difficult for women to sustain jobs and their marriages; often partners were abusive pushing women to depressive illnesses.

The good news is that things have evolved a lot! Unlike yester years, fistula centres are now spread out far and wide from the cities to the country side; with young surgeons, nurses and paramedics getting engaged. This new development has helped in creating a block of young service providers whose mission is to rekindle Womens lives at no cost as seen in this file picture when Kenyan Obstetricians; Dr. Mutiso and Dr. Matasi trained as Fistula Surgeons.

In addition to capacity building drives, there has been a major paradigm shift within the Ministries of Health and other country departments in Kenya. For instance, in 2019, the Ministry of health, launched the very first Fistula Framework. This framework provides a blue print for prevention and care for women experiencing obstetric in the country. To actualize this framework, the government of Kenya put in place structures that allow free access to fistula surgery for women who need fistula care and support within our borders. This initiative has increased access to fistula care for many women who would never have stepped in any hospital because of fear, lack of service fee and commodities. The advent of free maternity care services in the country significantly increased access to skilled birth attendance. This translates to better care for women especially during child birth.

Even as we celebrate a new dawn, we also face a challenge with emerging fistula aetiologias. Currently, a new wave of iatrogenic fistulas has emerged, which is a deviation from the past when most providers would encounter obstetric fistulas related to home/vaginal deliveries. Fistula associated with cesarian section or hysterectomies are on the rise. Leaving providers with unanswered question like what happens next and do we share the same care protocols across the divide? To mitigate for these gaps, we need a serious mental shift and a holistic approach to manpower development.

Lastly, I am for the opinion that the best approach to fistula care and prevention rests with the African midwife! Advocacy for midwifery stand-alone training policy is long overdue. This is because in Africa, Midwives are easily accessible from the community level to tertiary level. Besides, Midwives work in hard-to-reach areas, making it possible for them to deliver quality services to most women especially; before, during and after fistula develops. Therefore, investing in a highly skilled Midwife will increase access to both skilled birth attendance and fistula care in the region. Regular joint curriculum reviews for: Mentors, Clinicians, Midwives and other health professionals will help augment clinical supervision for young clinicians to help strengthen skills transfer. Such strategies will significantly contribute to delivery of quality maternal health services including fistula care and prevention in affected countries.

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Health Security in Africa: A National, Regional, and Global Imperative

Prof Gostin and Prof Oyewale give a narrative on the activities shaping up public health security in Africa.

Africa has historically faced major public health threats , often bearing disproportionate health burdens. From HIV/AIDS, tuberculosis, and malaria through to Ebola and tropical diseases, the continent has lost many lives that could have been saved, and has suffered unnecessary profound economic impact from preventable public health catastrophes like the West African Ebola epidemic.

Thus far, most of Africa has had lower death rates from COVID-19 compared with Europe and North America, but the continent has been shortchanged when it comes to global public goods, including diagnostics, personal protective equipment (PPE) (masks and gloves), vaccines, and now therapeutics. To date, the continent has fully vaccinated just 17% of its population compared with about 60% worldwide , and much higher in many high-income states. Further, Africa relies almost exclusively on imports of medical resources, and the entire region relies heavily on external assistance to stem existential threats such as the COVID-19 pandemic.

The World Health Assembly is taking up a global proposal to negotiate a pandemic treaty, and our Independent Panel for a Global Public Health Convention (PGHC) has proposed a bold path to address these gaps in the global health security architecture and strengthen pandemic prevention, preparedness and response systems through a new pandemic treaty or agreement. Many high-level recommendations call for a system governed at the heads of state level where compliance with agreed upon preparedness standards, alert protocols, and response efforts are overseen by an independent monitoring and assessment body at arm's length to the World Health Organization (WHO). While WHO's leadership is vital, an independent body is needed to ensure that countries are accountable for obligations under international law, chief among them: capacity building, public health surveillance, and emergency response.

The COVID-19 pandemic is not the first instance where experts and political leaders have called for reform to strengthen regional capacity to detect, contain, and respond to infectious disease threats inside this continent. The present pandemic as well as other serious international health emergencies, like the 2014-2016 Ebola outbreaks in West Africa, have underscored the need for concerted action to build national health systems, strengthen surveillance systems and regional laboratory capacity, and develop effective cross-border coordination for preparedness and response.

The African Union (AU) is establishing vital regional collaborations like the AU COVID-19 Response Fund to strengthen the continent's response to COVID-19, and the African Vaccine Acquisition Taskforce to help countries vaccinate at least 400 million people . The WHO, coordinating with CDC Africa, also is supporting efforts like the South African mRNA technology transfer hub at Afrigen to build capacity in low-and middle-income countries to produce mRNA vaccines. These are the kinds of collaborations that are needed from a new pandemic treaty to ensure that global health security is established and maintained at the country, regional, and international levels.

Countries must be provided with the funds that they need. This requires a forward-looking vision that is well-tailored to individual countries and regions. Solutions to these problems cannot be viewed in a vacuum. They must integrate economic development, sharing technical knowhow and technology, training people on the ground, and most importantly, sustained political commitment to harness the resolve needed to implement long-term reforms that may not yield immediate results.

Predictable multilateral financing and funding is essential to ensure that countries are able to adequately prevent, prepare for, and respond to infectious disease outbreak without incurring catastrophic debt. Countries must also be given access to tools and countermeasures necessary to effectively address major public health threats inside their borders. In addition to vaccines, equitable access to test kits, oxygen, PPE, therapeutics, and other tools must be ensured as part of a new global health architecture. Without access to these tools, countries are severely hindered in their capacity to address major health emergencies and, by extension, the entire ecosystem of nations is threatened as result.

It's important to stress that, beyond international financing, Africa must also play her role in ensuring robust health systems and equitable distribution of medical resources. African governments must contribute to, and invest equitably in, national and regional security. African leaders must make a sustained political commitment to build and maintain core health system capacities, including universal health coverage.

A new Pandemic Treaty provides a unique opportunity for nations to come together, set ambitious goals, and create mechanisms to ensure that governments remain accountable to their commitments over time. Working together to address existing gaps in the global health architecture is necessary to stop pathogens at their source. The stakes are too high, and the cost of half-measures is unacceptable in light of the lessons learned from the COVID-19 pandemic and other public health disasters of our time.

Mutual solidarity is required to achieve these objectives. Countries must be accountable at every stage: from prevention and detection through to response. No country will be safe from COVID-19, or future health crises, until all countries are safe. We can do better with a new international system that is anchored in transparency, accountability, and equity that is capable of enabling countries at every income level to detect, report, and respond to future outbreaks to prevent them from becoming pandemics.

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Multi-country Monkeypox outbreaks: The world needs to be prepared and ready for emerging and re-emerging infectious diseases everywhere.

Dr. Talisuna gives an overview on Monkeypox.

Background

Monkeypox is a rare, viral, zoonotic orthopoxvirus disease that has a similar but milder disease presentation like the eradicated Smallpox in humans. It is usually a self-limiting disease, with case-fatality ratio of 3-6%.[1] Monkeypox has primarily been occurring in the tropical rain forests in West and Central Africa.[1] The primary animal reservoir is still not known but it has been detected in a range of small mammal species, particularly rodents, and monkeys. Animal species in which evidence of the monkeypox virus has been found include C. gambianus (the Gambian pouched rat), different squirrel species of the genus Funisciurus and Heliosciurus, G. kelleni (African dormice) and various species of non-human primates.[1, 2]

Monkeypox is an emerging disease which has become the most prevalent orthopoxvirus since the global eradication of smallpox that was declared by the World Health Assembly in 1980.[3-5] This is partly because smallpox vaccination which was cross-protective for other orthopoxviruses was discontinued at the time. Consequently, younger people no longer have vaccine-induced immunity.[4, 5]

Human monkeypox was first identified in humans in 1970 in the Democratic Republic of Congo which remains the country that routinely reports the highest number of cases (>1,000) annually since 2005.[6,7] Other countries that have reported human cases since 1970 include Sierra Leone, Liberia, Cote d'Ivoire, Nigeria, Cameroon, Gabon, Republic of Congo, Central African Republic and Sudan (in an area that is now South Sudan).7 Since late 2016 there have been increasing reports of monkeypox cases from countries that have not seen any for the past 40 years.[7, 8]

Clinical recognition, particularly differential diagnosis with other rash and fever illnesses such as chickenpox, laboratory-based diagnosis and prevention remain critical challenges in endemic areas. Two distinct clades or subtypes have been identified. It is believed that infection with a West African strain of monkeypox virus causes a less severe infection, fewer deaths, and lower rates of human-to-human transmission as compared to outbreaks involving Central African strains.[7] The incubation period of monkeypox is 6-16 days (range 5–21). The infection can be divided into two periods: (1) invasion period (0-5 days) characterized by fever, intense headache, lymphadenopathy (swelling of the lymph node), back pain, myalgia (muscle ache) and an intense asthenia (lack of energy); and (2) skin eruption period (1-3 days after appearance of fever) where the various stages of the rash

appear, often beginning on the face and then spreading elsewhere on the body. The most distinguishing symptom of monkeypox is lymphadenopathy. The face (in 95% of cases), and palms of the hands and soles of the feet (in 75% of cases) are most affected by the rash. Evolution of the rash from maculo-papules (lesions with flat bases) to vesicles (small fluid-filled blisters), pustules, followed by crusts occurs in approximately 10 days. Three weeks might be necessary before the complete disappearance of the crusts.[1,7]

Varicella (chickenpox) is often confused with monkeypox but can be distinguished from monkeypox and smallpox by its much more superficial lesions, their presence more on the trunk than on the face and extremities, and by the development of successive crops of lesions in the same area. Fever and rashes occur simultaneously in chickenpox and develop more rapidly; with death being a rare complication. Co-infection with both, varicella and monkeypox virus, has been reported. However, the frequency of this phenomenon, relationship and impact between the viruses' pathogenesis and epidemiology is not clear.[9]

Since May 2022, several non-endemic countries in four WHO regions have reported monkeypox cases. Rare cases of monkeypox in other countries are usually linked to travel to endemic countries. However, most of the current cases do not have any history of travel to endemic countries. Therefore, the current outbreaks are unusual and different from previous travel-related outbreaks.[8]

Monkeypox is a zoonosis

MonkeyPox is part of the Orthopoxvirus genus which includes variola virus (smallpox) and cowpox virus. There are two main strains, one more virulent and transmissible (Congo Basin clade) than the other (West African clade). The less virulent West African clade has been identified among the current cases. The reservoir host is still unknown, although rodents are suspected to play a part in endemic settings.1,

Recognising MonkeyPox

Monkeypox is usually a self-limited disease and typically lasts 2 to 4 weeks. It may be severe in children, pregnant women or persons with immune suppression due to other health conditions. Typical symptoms include fever, headache, muscle aches, backache, lack of energy, swollen lymph nodes and a skin rash or lesions. Swelling of the lymph nodes is a distinctive feature of monkeypox compared to other diseases that may initially appear similar (chickenpox, measles). The skin eruption begins within 1 to 3 days after fever onset. The rash often begins on the face, then spreads to other parts of the body. The rash evolves from macules (lesions with a flat base) to papules (slightly raised firm lesions), vesicles (lesions filled with clear fluid), pustules (lesions filled with yellowish fluid), and crusts which dry up and fall off. The case fatality ratio has been reported to be around 3% in the African setting, with most deaths occurring in younger age groups.[1]

Modes of transmission

A person with monkeypox remains infectious while they have symptoms, normally for between 2 and 4 weeks. Monkeypox virus is transmitted from one person to another by close contact with lesions, body fluids and contaminated materials such as bedding, clothing or eating utensils. Ulcers, lesions or sores in the mouth can also be infectious, meaning the virus can spread through saliva. People who closely interact with someone who is infectious, including health workers, household members and sexual partners are at greater risk of infection. Transmission can also occur via the placenta from mother to the foetus (which can lead to congenital monkeypox) or during close contact during and after birth.[1]

Diagnosis

If monkeypox is suspected, health workers should collect a lesion sample and transport it safely to a laboratory with appropriate capability. Optimal diagnostic samples for monkeypox are from skin lesions, the roof or fluid from vesicles and pustules and dry crusts. Lesion samples must be stored in a dry, sterile tube and kept cold.[1,7]

Protecting yourself and others

Avoid close contact with people who have suspected or confirmed Monkeypox. When caring for a person with Monkeypox, encourage them to cover any lesions with a light bandage or clothing. Wear a medical mask and ask the patient to wear one as well. Avoid skin-to-skin contact and use disposable gloves, clean hands regularly with soap and water or an alcohol-based hand rub, especially after contact with patients or contaminated materials such as beddings, clothing or eating utensils. Wash clothes, towels, bedsheets and eating utensils with warm water and detergent. Wear a mask when handling any clothes or bedding and clean and disinfect any contaminated surfaces and dispose of contaminated waste. [1,7]

Mitigating spread

Any person with suspected or confirmed Monkeypox should be isolated until their lesions have crusted and the scabs have fallen off. As soon as a suspected case is identified, contact tracing should be initiated. Contacts should be monitored daily for the onset of symptoms for a period of 21 days. Asymptomatic contacts should not donate blood, cells, tissue, organs, breast milk, or semen while they are under symptom surveillance. Asymptomatic contacts can continue daily activities such as work and school (i.e., no quarantine is necessary). Health workers who have unprotected exposures (i.e., not wearing appropriate PPE) to patients with Monkeypox or contaminated materials do not need to be excluded from work if asymptomatic, but should undergo active surveillance for symptoms, at least twice daily for 21 days following the exposure. 1.7

Clinical care and therapeutics

Skin care: Wash skin lesions with soap and water or povidone-iodine solution. Treat secondary bacterial infections with topical or oral antibiotics as needed.

Eye care: Prevent corneal scarring and visual impairment with vitamin A supplementation where needed. Administer protective eye pads and ophthalmic antibiotics or antivirals as needed.

Mouth care: Wash mouth with warm clean salted water. Use oral analgesic medication to minimize mucosal pain from mouth sores and encourage food and fluid intake. [1,7]

Tecovirimat, an antiviral, has been approved for the treatment of Monkeypox by the European Medicines Agency (EMA) in January 2022.10 However, it is not yet widely available. Provide Vitamin A supplements according to standard recommendations, especially for children as it plays an important role in all stages of wound healing and eye health.

Vaccines

At the present time, the original smallpox vaccines are no longer available to the general public. Research has yielded several safer vaccines for smallpox. In 2019, one new vaccine was approved for the prevention of smallpox and Monkeypox.1,7 Availability of this two-dose vaccine remains limited. Member States may want to consider vaccination of close contacts as post-exposure prophylaxis or pre-exposure vaccination of laboratory personnel and health workers.[1,7]

WHO actions

WHO and partners are working with Member States to understand the source and characteristics of the current multi-country outbreaks to raise awareness of the Monkeypox symptoms and protective measures. WHO has also developed surveillance case definitions and new guidance for laboratory testing for the current Monkeypox outbreak in non-endemic countries. Public health investigations are ongoing, including extensive case finding and contact tracing, laboratory investigation, clinical management and isolation provided with supportive care. Genomic sequencing has been undertaken to determine the monkeypox virus clade(s) in this outbreak. Vaccination for Monkeypox is being deployed in some countries to manage close contacts, such as health workers and the WHO is convening experts to discuss recommendations on vaccination.[7]

On 23 June 2022, the Director-General (DG)

Photo Courtesy of-Melina Mara, The Washington Post

of WHO convened the first meeting of the Emergency Committee under Article 48 of the IHR (IHR-EC) regarding Monkeypox.11, 12 While the experts at the first IHR-EC were concerned about the outbreak, they agreed by consensus that at that time the event did not constitutes a Public Health Emergency of International Concern-PHEIC.12 Under the WHO IHR (2005), a Public Health Emergency of International Concern (PHEIC) is a formal declaration by the WHO DG of "an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response", formulated when a situation arises that is "serious, sudden, unusual, or unexpected", which "carries implications for public health beyond the affected state's national border" and "may require immediate international action.11 However, the experts recommended that this decision should be reviewed in one month's time.

At the time of writing this paper, the WHO DG has called for the convening of a second meeting of the IHR-EC on Monkeypox to take place on 21 July 2022. The objectives of this meeting are to: 1) Provide views to the WHO DG on whether the event constitutes a public health emergency of international concern, pursuant to Articles 1, 12, 48, and 49 of the IHR, and 2) Provide views to the DG on the proposed potential Temporary Recommendations, pursuant to Articles 1, 12, 48, and 49 of the IHR.11 A WHO statement giving an account of the consultation and its conclusions, will be posted on the WHO public website (Monkeypox IHR Emergency Committee (who.int).

Summing up

Infectious diseases continue to greatly impact the livelihoods and economies of communities and countries. This impact has been demonstrated by the numerous infectious disease outbreaks-plague, yellow fever, influenza, Ebola, and COVID-19 to mention a few. To address infectious diseases and other health problems, in 1948, following the second World War, the World Health Organization (WHO) was established. WHO has led multiple campaigns to eradicate (stopping transmission globally) specific infectious diseases. One of the most notable efforts was the vaccination campaign against smallpox, a highly infectious viral disease that was eradicated by 1980. The smallpox campaign led to optimism in the ability to combat and control infectious diseases worldwide.

However, despite this great achievement, infectious diseases still pose a considerable threat today, accounting for at least a quarter of the global mortality or an estimated ~15 million deaths per year-the majority of them children less than 5 years of old, in low to middle incomes countries in Africa.

From the H1N1 pandemic of 1918, to the devastating 2013-2016 West Africa Ebola Virus Disease outbreak, to the ongoing COVID-19 pandemic and the current multi-county monkeypox outbreaks, epidemics and pandemics continue to have devastating social and economic impacts. These epidemics and pandemics have clearly demonstrated that we cannot predict with certainty which pathogen will cause the next one or where it will occur, nor how dire the effects will be. But if humans, animals, the environment and infectious disease pathogens coexist, epidemics and pandemics will continue to occur. What is urgently required is for all countries and all communities, irrespective of where they are located, to be prepared and ready to prevent, timely detect and promptly mount an effective response to mitigate their impacts. This is the only sure way to protect and save the lives of vulnerable populations, protect our health care workers and save national economies from collapsing.

Editors note: The Director General of WHO following the second meeting of IHR commitee on Thursday, 21 July 2022 determined that the multi-country outbreak of monkey pox constitutes a PHEIC

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I need you here...

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

Take a Triple a Day.
Every Day.

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

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

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What to do if you experience a critical incident

Dr Linda Wagener gives a concise overview on critical incidents.

What is a critical incident?

Critical incidents are events that threaten our fundamental well-being. They are very often sudden and unanticipated. Accidents, life-threatening illnesses, physical and sexual assaults, robberies, suicide, murder or other death of a loved one and natural disasters are examples of critical incidents that can happen to almost anyone, anywhere.

However, in some parts of the world, the risk of encountering a critical incident increases due to war, famine, civil unrest, or other geopolitical factor. The list of common critical incidents in these contexts is very long and can include shootings, bombings, hostage taking, mob riots, rapes, car-jackings disappearances of loved ones. One needs only to turn on the nightly news to see multiple examples.

What happens during a critical incident?

If we are suddenly faced with an acute threat, our instinctual brain takes over and activates a flood of physical changes that help us to defend ourselves in the moment. Just a few examples include the flush of adrenaline and glucose to our muscles to give us energy to run or fight, changes in our blood cells to increase clotting in case we are wounded, release of endorphins to protect us from pain and fear, dilation of our pupils to let in more light so we can see more clearly. We often will experience an intense urgency that results in a flight, fight or freeze response. However, our instinctual brain is not very good at observing and analyzing the situation. For that reason, we often need to slow our instincts down in order to make a good decision about how to best survive the incident.

What you can do in the moment:

- Breathe slowly and deeply
- Calm yourself
- Connect with others
- Observe your surroundings
- Get to safety

The aftermath

There are many normal reactions that people have after experiencing a critical incident. We need to be prepared for the fact that people may react very differently than we expect. It is common to be jumpy, irritable, have sleep and appetite disturbances, nightmares, inability to concentrate, memory problems, and even "blackouts." Some people may want to avoid thinking or talking about the event, while others may want to talk about it over and over. It is important to have patience and compassion with ourselves and others. These reactions can continue for weeks and even months after the event.

What you can do:

- Be with people, even if your tendency is to isolate. It's ok to just sit together or go for a walk.

- Process what happened to you through talking, writing, or just thinking through the event. Allow yourself time to deal with the memories.

- Get exercise if you can to help burn off the stress hormones that are lingering in your system.

- Make self-care a priority.

- Restrict caffeine. Sleep and rest are critical.

- Avoid over use of substances.

- Surround yourself with reminders that you are safe.

- Don't be afraid of your emotions. Be kind and patient with yourself and others.

- Seek help if you are feeling compulsions to harm yourself or others, if you feel profoundly depressed or you experience a sense of being cut off from reality.

- How to build your resilience?

- Resilience is our ability to bounce back from critical incidents. There are ways to engage in a healthy life style that helps us to build our resilience so we are better prepared to survive and even grow if we encounter difficulties.

What you can do:

- Build your relationships so that you have a solid network of social connections.

- Live a healthy life style that includes good diet, exercise, and sleep.

- Make sure that you have many positive experiences in your life to counteract the negative things that you have experienced. Look for moments of goodness, beauty, and awe every day. Find spiritual resources that deepen your connection to life. Practice gratitude.

- Make sure you have activities and hobbies that you enjoy.

- Use stress management tools for coping such as meditation or yoga.

Dr Linda Wagener, Head of Psychology, Longboat Rönd, has decades of experience in clinical psychology, with a particular focus on trauma management. Her expertise includes: mental functioning in hostile and extreme environments, gender security, critical incident staff care, and creating a positive work climate for all types of organisations.

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The 75TH WORLD HEALTH ASSEMBLY (WHA75)

Patrick Kadama and Carol Natukunda share key insights on the World Health Assembly

The 75th World Health Assembly held this year in May, was the first gathering of Member State delegates, civil society representatives and global health experts, since the COVID-19 pandemic began in 2020 to discuss current priorities and next solutions on vital global public health issues, as the decision-making body of WHO . It delivered a long-awaited broad agreement that, the world needs a stronger WHO and support for a better framework to manage health crises, with a firm leadership which Member States overwhelmingly expressed through a unanimous and uncontested vote of confidence for the Director-General, Dr. Tedros Adhanom Ghebreyesus, to hold a second term of office, up to 2027. The main functions of WHA are to determine the policies of the Organization, appoint the Director-General, supervise financial policies, and review and approve the proposed program-budget for technical support of global paradigms to shift towards preventing disease and promoting health and reorientation of health systems towards primary health care as the foundation of universal health coverage.

This assembly paved way, for a quicker and lighter response for WHO action during international health emergencies. The assembly enabled Member States in the Executive Board to unanimously agree to the establishment of a Standing Committee on Health Emergency (Pandemic) Prevention, Preparedness and Response. This panel will enhance oversight of WHO's work in emergencies by regularly monitoring and assessing performance and helping to ensure a faster, more efficient response when a "Public Health Emergency of International Concern" is declared. Strategic round table discussions led to consensus on amendments proposed for International Health Regulations (IHR) and implications for global health security despite divergent views, from experiences with COVID-19 and scrutiny by experts. IHR was first negotiated in 1968 and most recently modified in 2005, in response to the H5N1 avian influenza. After much deliberation, the amendment, submitted by the United States (to Article 59 of the IHR), was adopted by consensus. This amendment will make the IHR a more flexible legal instrument and build a strong foundation for the future efforts of the above Member State-led Working Group on IHR, which will continue deliberating on changes to the regulations over the next two years aiming to improve global health and health security centered around global health security reform IHR.

The assembly agreed to adopt a landmark decision to improve the World Health Organization's financing model . Recommendations were adopted, of a Sustainable Financing Working Group made up of WHO's Member States, which was set up in January 2021. In one of the key recommendations in the Working Group's report to the Health Assembly, Member States target a gradual increase of their assessed contributions (membership dues) to represent 50% of WHO's core budget by the 2030–2031 budget cycle, at the latest. In the last budget biennium, 2020–2021, assessed contributions represented only 16% of the approved programmes-budget! Member States will also consider a replenishment model to finance the remainder of the base budget and to establish a Member State task team to oversee ongoing reforms to WHO's transparency, efficiency, accountability, and compliance efforts. It is essential to change the financing structure for WHO to recruit and retain top talent, increase funding flows to the country level, and ensure that budget allocations are based on scientific evidence and programmatic need.

In line with this year's theme, Health for Peace and Peace for Health, the consequences of conflict were a top concern. Participants noted the physical and mental health impacts of violence and conflict, which exacerbate existing vulnerabilities and plague communities in every corner of the world. Prevention of Sexual Exploitation and Abuse and Sexual Harassment (PSEAH), as well as safeguarding and investing in health and care workers, were highlighted and over 100 countries co-sponsored the resolution on human resources for health to adopt the Working for Health 2022-2030 Action Plan focusing upon (i) planning and financing; (ii) education and employment; (iii) protection and performance as well as the related Global Health and Care Worker Compact that aims at preventing harm; providing support; inclusivity; and safeguarding rights.

Other knock-on effects of conflicts, especially the spread of infectious disease, increasing climate vulnerabilities, and global food insecurity and malnutrition, to which the African continent is particularly susceptible were key concerns. The assembly therefore also approved a record number of recommendations relating to noncommunicable diseases (NCDs) such as cancers, diabetes, heart and lung diseases, as well as to mental health, and their risk factors . For the first time for example, the assembly agreed to the creation of global targets for addressing diabetes. The targets are part of a new comprehensive set of recommendations to strengthen and monitor national diabetes responses. It is the aim of WHO to ensure the achievement of UHC.

The 75th World Health Assembly held this year in May, was the first gathering of Member State delegates, civil society representatives and global health experts, since the COVID-19 pandemic began in 2020

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Understanding Community Health Workers' Motivation, Function and Role in Uganda

Literature review on Village Health Teams in Uganda

Introduction

Uganda has a large-scale Community Health Worker (CHW) programme known as Village Health Teams (VHTs) which has been operational since 2001. The programme is primarily voluntary with small financial incentive introduced over the years, mainly for reimbursement of transport costs or social mobilization events. A range of non-financial material incentives have been introduced by different programmes in specific areas. With heavy reliance on external funding, there has been very little standardization in the VHT programme for the past 20 years.

From 2018, a new cadre of Community Health Extension Workers (CHEWs) were to be introduced to augment the existing VHTs and provide a stronger link between the community and health facility. CHEWs were to be paid a monthly consolidated allowance. Despite this policy development, the support for the CHEW approach has faltered and the policy has not been approved by the Government.

The commitment to a fully institutionalised and remunerated CHW programme remains evident, and it has been the response to the COVID-19 pandemic and the development of National Communication Engagement Strategy for COVID-19 response that has created an opportunity to establish a monthly allowance to a formerly volunteer cadre of VHT. A COVID-19 focused package of tools has been outlined and considered as necessary enablers to perform their tasks. Beyond the initial commitment of three months, it is not yet known how long this package of incentives is planned for.

It is within this shifting context that research into the motivated structure for community frontline workers is now much needed. Understanding the complexities of factors that affect CHW motivation and designing the right combination of incentives and support structures is essential for the MoH in Uganda to institutionalize the CHW programme at scale and allocate sustainable financing beyond immediate needs of the resilient health systems in Uganda.

This paper examines understanding the motivation of existing community health cadres focusing on CHWs' roles, functions and motivations to attain one of the key objectives of the Ugandan Community Health Acceleration Roadmap.

Methodology

A global and local literature review was conducted, and 32 global studies and 15 local Ugandan studies were included. The aim of this literature review is to summarize key findings from global approaches and Ugandan studies that analyze motivation for CHWs along with the role and function this plays in health service delivery. This study was supported by UNICEF's commitment to community health systems strengthening under the intelligent Community Health Systems (iCoHS) initiative, a partnership with The Rockefeller Foundation.

Results and Discussion

This section applies the findings of the literature review to the Uganda context and considers options for increasing motivation and retention in the national VHT programme. The Uganda specific literature review has been centred around the existing VHT programme (in all its various forms) but must take into account the development and recent stalling of the CHEW policy.

This policy could still have far reaching implications for the future of VHT programme. Very little policy attention has been given to developing the incentive package for VHTs for the last few years despite much energy focused on garnering financial support for the CHEWs implementation

By 2021 the situation had changed significantly, the CHEW policy was not passed by parliament, the country was rapidly mobilizing to respond to COVID-19 and the country advanced the decentralization agenda with the Parish Development Model that promotes greater local government and community engagement in the provision and monitoring of services including health.

It is in this context that UNICEF is supporting a re-examination of global and local literature related to motivation and retention of CHW programmes in order to develop recommendations in the form of a policy brief for MoH and Government of Uganda stakeholders in community health.

Literature shows that motivation is complex and attention must be given to hardware and software factors. The consensus is that some form of commensurate financial remuneration is required. This must be consistent and fair or it runs the risk of demotivating and creating tension. However, relying on financial incentives is insufficient as it cannot compensate for motivation generated by community acceptance, trust and valuing of positive contribution. Investments in programme enablers and support could have a significant effect on motivation and can even off set demands for financial packages. This is an important option for countries where a long-term financial commitment to the CHW programme cannot yet be materialized. Material but non- financial incentives such as T-shirts, bags and gumboots are important but unlikely to be sufficient to sustain motivation over time. Supportive supervision, retraining and community acknowledgement are increasingly being understood to hold much weight in long term motivation.

Health sector enabling environment has not been conducive to motivating and standardizing the VHT programme. Findings on how CHW expectations affect motivation are particularly relevant for Uganda. Themes of broken promises, delayed payment and inconsistencies are very much in evidence in the Uganda specific studies. A fragmented programme environment has developed where different incentive and support packages are available to different cadres of CHWs. Whilst NGOs may have been trying to fill gaps in government investment in the VHTs programme, there is considerable evidence of the damage that short lived project-based support can do to VHT motivation. Studies have shown that a lack of standardized support has led to demotivation, loss of trust and high attrition rates.

However, one positive result from the lack of standardization is that Uganda has a diverse experience with CHW incentives based on different modes of engagement across different focus areas and supported by different development partners. If well consolidated, these can offer important insights into motivational factors and can guide a more harmonized policy environment.
Motivation of CHW programmes reflects the values of the society around volunteerism and the broader issue of how governments and its citizens should interact in promoting health and well- being. Ugandan studies generally valued the VHT model and whilst many national researchers concluded that the volunteering spirit has been eroded over time, this was due to the basic needs of the programme not being met. Very few researchers critiqued the fundamental basis of the VHT programme. It is likely that the failure of the CHEW policy was in part related to resistance to change the nature of the VHT programme. The Political Economy Analysis (PEA) indicates that while the introduction of a new slimline and more efficient cadre makes sense from a health systems point of view to drive forward primary health care and UHC agenda, the Ministry of Health and partners may have misjudged the support for the VHT programme from local government and communities. The PEA also makes reference to the VHTs as being part of the local political process as they are considered to be significant influencers and mobilizers within their communities.

Overall, there was positive appreciation for the scale and the reach of the VHT programme, in that it provided 4-5 VHTs per village. Most of the studies framed this within the context of the chronic shortage of health workers to reach dispersed rural communities. However, authors concurred that the VHTs' role was to bridge the gap between the service providers and the community. For instance, studies in Uganda described the success of the VHTs as mobilizers around behaviour change for protective health behaviours, rather than providers of curative services. The CHEW policy only made provision for 2 CHEWs at the parish level and would have fundamentally changed the landscape for community based primary health care.
This finding is very much in line with the idea that incentive hardware has to be considered with an appreciation of the software, i.e. the relationships, trust and expectations between VHTs and the communities that they serve. Health system supply side solutions which tend to prioritise monetary incentives should not be developed at the expense of ignoring the underlying nature of the Uganda CHW program.

Community Health Worker motivation is increasingly seen from a multi-sectoral lens and under the purview of local government. The 2018 Astana declaration on Primary Health Care promotes multisectoral action, engaging relevant stakeholders and empowering local communities to strengthen health and well-being. At the local level, countries on the path towards universal health coverage are striving for better integration between actors for community health, social care/social protection, environmental health and elimination of harmful gender norms including child marriage and Gender Based Violence. The literature clearly demonstrates that funding of CHWs has a bearing on how communities see the CHWs. This is particularly important in the Ugandan situation where there is evidence of conflict between how much VHTs are seen as part of the community or part of the health system. Studies describe high levels of distrust between communities and the health system in Uganda. Incentive packages provided by local governments that align with other community workers is an important way of defusing this issue. Local governments and communities can also bring other resources to bear to support community health workers based on flexible local needs. Both financial and non-financial incentives from the parish level structures could include material/branding support, peer supervision, cross learning, training on communications skills, social rewards and career opportunities.

Indeed, the response to COVID-19, has also moved beyond health sector actors and whilst acknowledging the primacy of the health system, the 2021 Community Engagement Strategy is implementing a multi-sectoral model of COVID Task Committees. There has also been a willingness for local government funds to be used to support and motivate VHTs to manage the covid response at the village level. Further exploration of this model on motivation levels and relationships between the 4-5 VHTs themselves is an important next step.

There is a lack of discussion in the literature on expected retention rates and what might be reasonable for a large-scale volunteer programme. A number of studies in Uganda have demonstrated fairly high levels of retention, with VHTs staying in service on average between 5-10 years. Some researchers have concluded this is a very positive situation given the key challenges faced by lack of investment in the programme and the increasing workload which has had important opportunity costs for other income generating activities.
With only a few studies attempting to understand the reasons for attrition, there is little information for policy makers to go on to design incentives that actually respond to VHT realities. In the Uganda context, income generation opportunities to offset the impact of volunteering are not well explored in the literature and few models have emerged. In particular, gender differences in reasons for leaving have been noted in the literature such as divorce or lack of husband/family approval, but very little attention is paid to gender sensitive incentives that promote women to stay as volunteers longer.

Exploring gender sensitive incentives and motivational support in Community Health Worker Programmes has the potential to improve programme outcomes and raise the bar on empowerment for female health workers. There is significant debate about whether female-only CHW programmes such as in India, Pakistan and Ethiopia are empowering women or reinforcing traditional gender roles and women's limited status and position. Jackson (2019) describes how Ethiopia has chosen a culturally acceptable approach for its community health workforce. Given women's limited power at the bottom of the hierarchy, they are forced to operate within existing gender norms but lack a meaningful voice in community health policy and discussions on remuneration and institutionalization.
For Uganda, where a mix of both genders is generally acceptable, and in the context of the shift from a voluntary to a financially remunerated CHW programme, there are now important opportunities for identifying and addressing gender barriers that affect motivation and retention

Conclusion

In summary, as shown by the recent costing analysis of the CHW programme, investing in a financial incentive package for the community health workforce requires significant cost over the medium to long-term. Without taking the time to consider the evidence, the position of stakeholders, the gender implications, and the long-term financing sustainability, there is a high risk of getting it wrong. Undoubtedly some planners and decision makers are looking for quick wins, a package of financial and non-financial material incentives that can be doled out through the health sector as a magic bullet to remedy years of underinvestment and disharmonious practice. However gathering of evidence and opinions should increasingly include VHTs and their communities as part of the dialogue, if the gains for VHTs are to be sustained.

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Prof Rachel Nandawula Musoke, Neonatologist, Associate Professor of Paediatrics and Child Health, Faculty of Health Sciences, University of Nairobi, 1944-2022

Colleagues of the late Prof Musoke give an account of a life well lived.

We are saddened by the sudden death of Prof Rachel Musoke so soon after her retirement and relocation back to Uganda. She will be remembered for her distinctive contribution to African Neonatal Practice, breastfeeding, child nutrition, hospital care of sick newborn, and treatment and care of children infected and affected by HIV. Prof Musoke was faculty at University of Nairobi for 43 years (1977-2020) and for most of that time Head of Neonatology at the Kenyatta National Hospital. She was a highly respected doctor, teacher, mentor and colleague in the two institutions.

Prof Musoke`s contribution to science and Practice of Medicin

Rachel was an active academic. Her first publication was in 1968 in the East African medical Journal, and the most recent just 6 days before she rested. She had 124 publications listed in Research Gate, 16 of them as first author, 15 book chapters and contribution to many training manuals and care guidelines. Her contribution to breastfeeding is vast and supported integration of important strategies for survival of the newborns, training on lactation, consulting on many government and NGO forums to develop policies and guidelines that are used widely in our region and beyond.

In 1990 she published a ground-breaking paper demonstrating that it is possible to exclusively feed low birth weight infants on mother's own milk and achieve adequate weight gain and the babies had fewer infections, especially gastrointestinal and respiratory infections. In the same paper she demonstrating that it is possible to sustain lactation through manual expression during the period that the mother is not nursing her infant directly on the breast and that cup rather than bottle feeding protected babies from suffering nipple confusion and so mothers were able to continue breastfeeding after discharge from the hospital, providing the best chance for survival.1 This work immortalized by the UNICEF video on feeding the low birth weight infant paved the way to a public health approach in upscaling the use of expressed breastmilk for all categories of at-risk infants and enabled legislation to protect breastfeeding for the newborn baby. [1RN Musoke. Breastfeeding promotion: Feeding the low birth weight infant. Int J Gynecol Obstet 1990; 31 (suppl 1) 56]. On the day she passed on there was a whole page feature in a leading local newspaper in Kenya celebrating her contribution to introduction and scale-up of Kangaroo Care for very low birth weight infants in Kenya a cost effective, affordable method of ensuring low birth weight infants survive and thrive in very limited resource settings. Her contribution into the Kenya Ministry of health Clinical Practice manuals on care of the preterm and sick babies for different levels of healthcare settings and which at the Kenyatta National Hospital, is referred to as the Prof Musoke guideline will be an enduring legacy.

Prof Rachel Musoke as an Educator - Prof taught 42 cohorts of undergraduate and postgraduate doctors and mentored as many cohorts of nursing students doing their attachment in the Kenyatta National hospital Newborn Unit. She supervised 89 Master's degree in Paediatrics and Child Health (MMED) dissertations at the University of Nairobi, a number were published in peer reviewed journals and others informed health policy in Kenya. Her students have learned and more students continue to learn from textbooks that she contributed into substantively such as the African Textbook of Clinical Psychiatry and Mental Health ed. D.M. Ndetei AMREF 2006, and the Primary Health Care Manual, a text developed and used in five University Department of Paediatrics in the East and

Southern Africa region.

Development of Newborn care services
For many years, the name Prof Musoke was synonymous with the Kenyatta National Hospital Newborn Unit. She led the development of neonatology syllabi for medical doctors at undergraduate, post-graduate, and Fellowship level as well as post-basic training in neonatal nursing. She sought out opportunities for further training for her mentees in overseas institutions and to come back and set up/improve the services. Her students, most of them Kenyan citizens went on to set up decent neonatal units in many rural and urban hospitals and observed is a gradual increase in survival

of pre-term infants. The Kenyatta National Hospital Neonatal Unit, the Unit she led for many years is one of the first of only two Neonatal Intensive Care Units of its kind in Kenya and the one of the very few in the ECSA region. Her students from many other African countries, including among others Zimbabwe, Mauritius, South Sudan, Uganda and Sierra Leone, have been the vehicle for south-to-south transfer of skills in newborn care.

Responding to the disaster of the HIV/AIDS epidemic
Prof Musoke contributed to the response towards the HIV/AIDS epidemic in Kenya. She was part of a team that wrote a manual to support the pioneer programs on integration of prevention of mother-to-child transmission of HIV into health services in sub-Saharan Africa. Prof Musoke wrote the sections on infant feeding and the code, and in less than 3 years the bulk of that manual was adopted by WHO, improved and then brought back as the standard WHO guideline on PMCT which has been used to train health workers everywhere to integrate this as part of the maternal child health services. She also served as the consultant paediatrician coordinating the clinical services for the Lea Toto Community Program, a child centered HIV program, the first to offer anti-retroviral treatment (ART) to Kenyan children. Launched in 1998, this hybrid institution and home-based care program in Nairobi's informal settlements provided HIV+ children and their families with medical attention, prevention education, counseling, and self-help skills in eight communities reaching more than 5000 children. She also regularly provided medical care to children living with HIV/Aids at the Nyumbani Children's Centre in Nairobi with devotion for many years, even after retiring from the University of Nairobi.

God blessed Prof Musoke with good health to the end, she was able to see the smooth transition of the services she built to those she trained and who are equally passionate about newborns. Her CV which is on the internet is illustrative of the different areas one can serve to protect the interests of children. We will surely miss Prof Musoke. We thank her family and her nation of Uganda for sharing her with us.

May her soul rest in everlasting eternal peace.

From Medical School Classmate
Rachel studied in the same Medical school class with me from undergraduate, internship and Master of Medicine degrees in which she studied Paediatrics while I did General Surgery. Rachel was low key, social and passed all her examinations easily. After her return to Uganda after an outstanding career in Nairobi, she contacted me and joined my organization, African Center for Global Health and Social Transformation (ACHEST) as a Consultant. She attended our weekly staff meetings and was in the process of developing a project on Neonatology a subject to which she was totally committed to. Rachel has gone too soon. May the Lord rest her soul in eternal peace.

Francis Omaswa, Executive Director, ACHEST.
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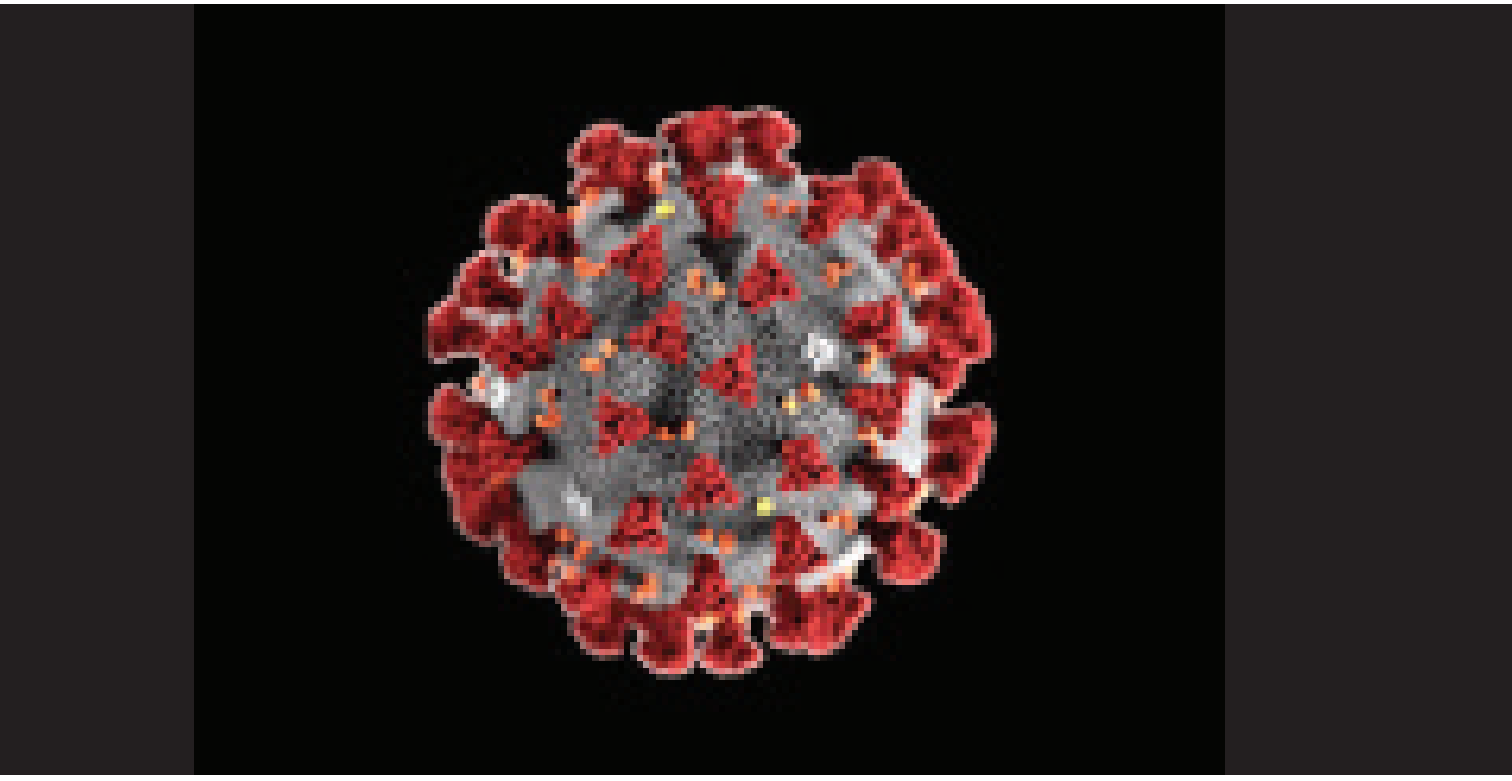
Her first publication was in 1968 in the East African medical Journal, and the most recent just 6 days before she rested. She had 124 publications listed in Research Gate, 16 of them as first author, 15 book chapters and contribution to many training manuals and care guidelines.

Prof Ruth Nduati, Professor and Past Chair [1], Prof Grace Irimu - Chair Department [1], Prof Aggrey Wasunna Neonatologist and Past Chair[1], Department of Paediatrics and Child health, University of Nairobi1

Updates on COVID-19



Updates on the role of early treatment with Ivermectin among patients with Covid-19

We still do not have conclusive evidence on the efficacy of ivermectin in preventing hospitalization among outpatients with symptomatic coronavirus disease 2019 (Covid-19). In a recent investigation, researchers, through a double-blind, randomized, placebo-controlled trial, studied rates of hospitalization due to Covid-19 within 28 days after randomization or an emergency department visit due to clinical worsening of Covid-19 among 3515 symptomatic SARS-CoV-2–positive adults in Brazil who had symptoms lasting not more than 1 week and at least one risk factor for disease progression. Participants received a dose of ivermectin 400 µg per kilogram once daily for 3 days or placebo, in addition to other treatments. They found no significant difference in the primary outcome or in rates of adverse events. They concluded that treatment with ivermectin did not reduce the risk of hospital admission among outpatients with an early diagnosis of Covid-19.

Reis G, Silva EASM, Silva DCM, et al. "Effect of Early Treatment with Ivermectin among Patients with Covid-19". N Engl J Med. 2022 May 5;386(18):1721-1731. doi: 10.1056/NEJMoa2115869.

Trajectory of long COVID symptoms after COVID-19 vaccination

Long Covid is responsible for prolonged morbidity among a significant proportion of patients after they recover from active covid-19 disease. It is not clear if covid-19 vaccination alters the trajectory of long Covid symptoms. Researchers, through a prospective cohort study observed 28,356 adults in the UK who had received at least one dose of covid-19 vaccine after testing positive for SARS-CoV-2 infection, for presence of long Covid symptoms at least 12 weeks after infection. Participants were followed for a median of 141 days from first vaccination (all participants) and 67 days from second vaccination (83.8%). An initial 12.8% decrease in the odds of long Covid was observed with the first dose but was not sustained in all participants. With the second dose an initial 8.8decrease and a subsequent decrease by 0.8% per week was observed. They concluded that the data suggested sustained improvement after a second dose of covid-19 vaccination, at least over the median follow-up of 67 days and recommended longer follow-up periods during further studies.

Ayoubkhani D, Bermingham C, et al. "Trajectory of long Covid symptoms after covid-19 vaccination: community based cohort study". BMJ. 2022 May 18;377:e069676. doi: 10.1136/bmj-2021-069676. PMID: 35584816; PMCID: PMC9115603.

Risks of deep vein thrombosis, pulmonary embolism, and bleeding after covid-19: nationwide self-controlled cases series and matched cohort study

Previous research on the risk of COVID-19-associated venous thromboembolism (VTE) has shown conflicting results. Researchers sought to quantify the risk of deep venous thrombosis, pulmonary embolism, and bleeding after Covid-19. A total of 1,057,174 participants from the National registries in Sweden, who tested positive for Covid-19 were compared to 4,076,342 control participants through self-controlled case series and matched cohort study. The researchers found that Covid-19 was a risk factor for VTE, and the risk was increased at 70 days, 110 days, and 60 days after Covid-19 for deep venous thrombosis, pulmonary embolism, and bleeding respectively. The risk was higher in severe Covid-19, co-morbidities, and in the first pandemic wave. The researchers found these results compelling and could impact strategies against VTE following Covid-19.

Katsoularis I, Fonseca-Rodríguez O, et al. Risks of deep vein thrombosis, pulmonary embolism, and bleeding after covid-19: nationwide self-controlled cases series and matched cohort study. BMJ. 2022 Apr 6;377:e069590. doi: 10.1136/bmj-2021-069590. PMID: 35387772; PMCID: PMC8984137.

COVID-19 vaccine hesitancy in six geopolitical zones in Nigeria

Vaccine hesitancy (VH) poses a major challenge for the control of COVID-19. Scientists from Nigeria utilized a cross sectional survey to study the prevalence and factors associated with COVID-19 VH in Nigeria. Health care workers made the biggest proportion (58.4%) of the 1615 respondents, university students and adults in the general population made up the rest. Vaccine hesitancy was defined as expression of unwillingness to receive COVID-19 vaccine in the event of its availability. They found that in this population with 97.4% having at least secondary level of education, and majority 60.5% belonging to the upper social class, the prevalence of VH was 68.5% and 67.2% preferred foreign manufactured COVID-19 vaccines. Health care workers, nurses and pharmacists specifically, were more likely to have VH compared to the general population. Other predictors of COVID-19 VH included geopolitical zones, ethnic group, being a Christian and a lack of confidence in foreign-made vaccines. There is a need for targeted interventions to improve COVID-19 vaccine uptake.

Babatunde Oluwatosin Ogunbosi et al. COVID-19 vaccine hesitancy in six geopolitical zones in Nigeria: a cross sectional survey. Pan African Medical Journal. 2022;42:179. [doi: 10.11604/pamj.2022.42.179.34135]

Does maternal COVID-19 vaccination offer protection to their infant?

Infants under 6-months are at risk of complications from Covid-19 and are ineligible for vaccination. It is hypothesized that trans-placental transfer of antibodies could confer protection against Covid-19. Researchers through this case-control study assessed the effectiveness of maternal vaccination during pregnancy against hospitalisation for Covid-19 in infants under 6 months. The study enrolled infants hospitalised with Covid-19 (cases), and those hospitalised without Covid-19 (controls) and compared the odds of full maternal vaccination. The study found that fewer case infants (16%) compared to the control infants (29%) had been borne to mothers who were fully vaccinated against Covid-19 during pregnancy, with overall vaccine effectiveness against infant hospitalization for COVID-19 of 52%. They concluded that maternal vaccination with 2 doses of mRNA vaccine was associated with a reduced risk of Covid-19 hospitalisation in infants.

Maternal vaccination and risk of hospitalization for COVID-19 among infants. New England Journal of Medicine (06/22/22) Halasa, Natasha B.; Olson, Samantha M.; Staat, Mary A.; et al.

General Medicine

Treatment for urinary tract infections in primary healthcare facilities in Cape Town, South Africa

Appropriate antibiotic prescription for common infections is very important especially with the growing global burden of Antibiotic resistance. Scientists in South Africa described treatment practices for urinary tract infections (UTIs) in adults receiving primary care in the public sector in Cape Town, South Africa. They reviewed laboratory and treatment records of patients who had been diagnosed with a UTI. They found that the majority (74.1%) of the 401 UTI episodes that were studied were complicated. Nitrofurantoin was the most frequently (57.1%) prescribed antibiotic, followed by ciprofloxacin (39.7%). Compliance with urine microscopy recommendations was low (6.7%), and antibiotics were suitably prescribed in 75.0% of uncomplicated and 70.0% of complicated UTI episodes. They highlighted a need for interventions to improve compliance with treatment guidelines for selecting the appropriate antibiotic, duration of therapy and urine microscopy findings.

N Keuler, Y Johnson, R Coetzee, Treating urinary tract infections in public sector primary healthcare facilities in Cape Town, South Africa: A pharmaceutical perspective. South African Medical Journal 2022;112(7):487.

Restriction of Intravenous Fluid in ICU Patients with Septic Shock

Much as intravenous fluids are recommended in septic shock, higher volumes have been associated with harm in patients admitted to the intensive care unit (ICU). This study sought to assess the safety of a restricted-intravenous fluid therapy approach. Researchers equally randomized 1554 patients with septic shock in the ICU to receive restricted or standard intravenous fluid therapy. The endpoint was all-cause mortality 3 months after randomisation. The study found a similar occurrence of death in both groups at 3 months; that is 42.3% in the restrictive-fluid group, and 42.1% in the standard-fluid group. The researchers concluded that intravenous fluid restriction when compared to standard fluid therapy does not result in fewer deaths at 3 months.

Tine S. Meyhoff, Peter B. Hjortrup, et al. "Restriction of Intravenous Fluid in ICU Patients with Septic Shock" N Engl J Med 2022; 386:2459-2470 DOI: 10.1056/NEJMoa2202707

Metabolic syndrome among HIV patients on Antiretroviral Therapy and ART-Naïve Patients

Despite the progress made in HIV care with the increasing availability of antiretroviral therapy (ART), drug related metabolic complications remain a challenge. Researchers in Nigeria, through a cross sectional study evaluated the prevalence of metabolic syndrome and cardiovascular disease (CVD) among three categories of participants; HIV patients on ART, ART-naïve patients and HIV negative subjects. They found that HIV patients on ART had the highest prevalence of metabolic syndrome, with significant increases in waist to hip ratio, fasting plasma glucose, serum tryglycerides and Low Density Lipoprotein Cholesterol. Low serum levels of High Density Lipoprotein Cholesterol was the most prevalent dyslipidaemia in all three populations. HIV patients on ART also has a significantly higher prevalence of CVD compared to ART-naïve patients. They underscored the need to advise HIV/AIDS patients on ART on lifestyle modifications and the role for regular assessment for cardiovascular risk factors.

Ojong E, Iya B, et al. Metabolic syndrome and its components among HIV/AIDS patients on Antiretroviral Therapy and ART-Naïve Patients at the University of Calabar Teaching Hospital, Calabar, Nigeria. Afri Health Sci. 2022;22(1):410-7. https://dx.doi.org/10.4314/ahs.v22i1.50

Once-Weekly Dulaglutide for the Treatment of Youths with Type 2 Diabetes

Globally, type 2 diabetes mellitus (T2DM) is rapidly increasing among youth and there is a high therapeutic failure rate using metformin. Once-weekly dulaglutide, a glucagon-like peptide-1 receptor agonist could have efficacy on glycemic control in this population. In this study, researchers evaluated the efficacy of dulaglutide in 154 youth who were being treated with metformin, with or without basal insulin or with lifestyle modification alone. Participants were equally randomised into 3 groups to receive: a higher or lower-dose dulaglutide, or placebo, and followed up to 26 weeks. The outcome measure was a change in glycated haemoglobin (HbA1C) at 26 weeks. This study showed a decrease in HbA1C in the dulaglutide group, unlike placebo, with no difference in body mass index (BMI). They concluded that dulaglutide treatment was better than placebo in improving glycemic control, with no effect on BMI.

Arslanian SA, Hannon T, et al. "Once-Weekly Dulaglutide for the Treatment of Youths with Type 2 Diabetes". N Engl J Med. 2022 Jun 4. doi: 10.1056/NEJMoa2204601.

Intravenous Vitamin C in Adults with Sepsis in the Intensive Care Unit: data suggests harm

The role of Vitamin C in sepsis has long been studied and results have been contentious. Researchers through this randomised placebo-controlled trial evaluated the use of Vitamin C in adults with sepsis receiving vasopressor therapy in the Intensive care unit. A total of 872 patients were equally

randomized to receive either Vitamin C infusion or placebo every 6 hours for up to 96 hours. The outcome was a composite of death or organ dysfunction on day 28. In this study, both death and persistent organ dysfunction occurred more in the Vitamin C group than in the placebo group. The researchers concluded that receiving vitamin C in the above patient population was associated with a higher risk of death or persistent organ dysfunction.

Lamontagne F, et al "Intravenous vitamin C in adults with sepsis in the intensive care unit" New Engl J Med 2022; DOI: 10.1056/NEJMoa2200644.

Effect of active vitamin D treatment on development of type 2 diabetes: DPVD randomised controlled trial in a Japanese population.

Lifestyle modification delays the development of type 2 diabetes mellitus (T2DM) in people with pre-diabetes but maintenance of these behavioural changes is difficult, necessitating more sustainable strategies. Researchers in Japan, through a randomized controlled trial assessed whether vitamin D treatment could reduce the development of T2DM among adults with impaired glucose tolerance. Of 1256 participants enrolled, 630 were randomised to the eldecalcitol (an active vitamin D analogue) group and 626 to the placebo group and followed up for 3 years. The results showed that 79 (12.5%) participants in the eldecalcitol group and 89 (14.2%) in the placebo group developed T2DM. The study showed that vitamin D treatment did not significantly reduce the T2DM incidence in pre-diabetes but showed benefit in those with insufficient insulin secretion.

Tetsuya Kawahara, Gen Suzuki, et al. " Effect of active vitamin D treatment on development of type 2 diabetes: DPVD randomised controlled trial in Japanese population". BMJ 2022; 377 doi: https://doi.org/10.1136/bmj-2021-066222 (Published 25 May 2022) BMJ 2022;377:e066222

A multifaceted intervention to reduce haemodialysis catheter-related bloodstream infections

Care bundles, a set of evidence-based interventions are widely used in medicine to reduce clinical variations and improve outcomes. Their utility in the reduction of catheter-related bloodstream infections (CRBIs) is uncertain. Researchers in Australia used a stepped-wedge cluster-randomised trial involving 37 renal units, to assess the effect of a care bundle (elements of catheter care) on the rate of CRBSIs. After a period of observation, the intervention was implemented at randomly assigned time points. The outcome measure was the rate of CRBSIs in observation compared with intervention phases. The study showed a similar rate of CRBSIs between baseline and intervention phases, that is 0.21 versus 0.29 per 1000 days respectively. Researchers concluded that care bundles to reduce CRBSIs might not be effective in clinical practice settings.

Sradha Kotwal, Alan Cass, et al. "Multifaceted intervention to reduce haemodialysis catheter related bloodstream infections: REDUCCTION stepped wedge, cluster randomised trial".BMJ2022;377:e069634 http://dx.doi.org/10.1136/ bmj-2021-069634

Albuterol–Budesonide Fixed-Dose Combination Rescue Inhaler for Asthma

Short-acting β2-agonists like albuterol are frequently used as rescue therapy in uncontrolled asthma. It is postulated that using a fixed-dose combination of albuterol and budesonide might be superior to the use of albuterol alone as the combination addresses worsening inflammation. In this study, researchers compared the use of the fixed-dose combination and albuterol alone as rescue treatment in patients with uncontrolled asthma. A total of 3,132 participants, the majority (97%) adults were enrolled and randomised into 3 groups; higher, and lower-dose combination (albuterol and budesonide) groups as well as an albuterol alone group. The study showed a 26% lower risk of severe asthma exacerbation in the higher-dose combination group compared to the albuterol alone group, without an increase in adverse events.

Papi A, Chipps BE, et al. "Albuterol-Budesonide Fixed-Dose Combination Rescue Inhaler for Asthma". N Engl J Med. 2022 Jun 2;386(22):2071-2083. doi: 10.1056/NEJMoa2203163. Epub 2022 May 15. PMID: 35569035.

Trial Compares Time-Restricted Eating vs Calorie Restriction over 12 Months for Weight Loss

Lifestyle modification, although challenging to maintain is the gold standard of weight management. The safety and efficacy of time-restricted eating in weight loss are uncertain. A study in China assessed this approach compared with daily calorie restriction alone on weight loss and metabolic risk factors in obese patients. Of 139 patients, 69 were in the time-restricted eating group (eating only between 8:00 a.m. and 4:00 p.m.) and 70 in the daily calorie restriction group. The study showed a mean weight loss from baseline of −8.0 kg in the time-restriction eating group and −6.3 kg in the daily-calorie-restriction group, with no differences in metabolic risk factors. Although there was a 1.8 kilogram difference between the groups, it was not a statistically significant difference. The findings suggested that among obese patients, restriction in the window of time one is eating probably wouldn't make a difference to weight loss.

Deying Liu, M.D., Yan Huang, M.S., et al. "Calorie Restriction with or without Time-Restricted Eating in Weight Loss". N Engl J Med 2022; 386:1495-1504 DOI: 10.1056/NEJMoa2114833

Infertility, recurrent pregnancy loss, and risk of stroke

Globally, women are more disproportionately affected by stroke compared to men. Female-specific risk factors, however, have not been well studied to identify women at higher risk of stroke. Evidence on the association of infertility, miscarriage, and still birth with stroke is inconclusive. Researchers in this study pooled data from cohort studies across seven countries, including participants with baseline data on infertility, miscarriage, stillbirth, stroke (fatal or non-fatal) as well as information on covariates. Upon analysis, the researchers found that infertility and recurrent miscarriage, and stillbirth increased women's later risk of stroke. In conclusion, a history of recurrent miscarriage and death or baby loss before or during birth was suggested as a female-specific risk factor for stroke.

Liang C, Chung HF, et al. "Infertility, recurrent pregnancy loss, and risk of stroke: pooled analysis of individual patient data of 618 851 women". BMJ. 2022 Jun 22;377:e070603. doi: 10.1136/bmj-2022-070603. PMID: 35732311.

Maternal-Child health

Long-term impact of prophylactic antibiotic use before incision versus after cord clamping on children born by caesarean section

Administration of prophylactic antibiotics before caesarean section incision has been adopted as a policy to avert maternal post-partum infections. It's hypothesized that exposure of babies to these antibiotics alters their gut microbiota which play a crucial role in the development of their immune system, hence might predispose them to immune-related diseases in childhood. Through this longitudinal observational study, researchers compared the incidence rate ratios of asthma and eczema in children born by caesarean section when antibiotics were administered before or after cord clamping. This study found no association between pre-incision prophylactic antibiotic use and risk of asthma, eczema, or asthma and eczema resulting in hospital admission in early childhood in children born by caesarean section.

Dana Šumilo, Krishnarajah Nirantharakumar, et al. Long-term impact of prophylactic antibiotic use before incision versus after cord clamping on children born by caesarean section: longitudinal study of UK electronic health records BMJ 2022;377:e069704 doi: https://doi.org/10.1136/bmj-2021-069704 (Published 17 May 2022)

Gestational diabetes mellitus and adverse pregnancy outcomes: systematic review and meta-analysis

Globally, gestational diabetes mellitus (GDM) incidence is increasing but its impact on pregnancy outcomes isn't well understood. Researchers conducted a systematic review and meta-analysis of literature reporting complications of pregnancy in women with GDM. Over 156 studies were included and showed increased odds of Caesarean section, preterm delivery, low one-minute Apgar score, macrosomia, and large-for-gestational-age infants among women with GDM, in studies with no insulin use. In those with insulin use, the odds for large-gestational-age infants, respiratory distress syndrome, and neonatal jaundice were still higher than in their non-diabetic counterparts. This study adds to the current understanding of gestational diabetes outcomes while highlighting the need to adjust for a more complete set of prognostic factors in future research.

Ye W, Luo C, et al. "Gestational diabetes mellitus and adverse pregnancy outcomes: systematic review and meta-analysis". BMJ. 2022 May 25;377:e067946. doi: 10.1136/bmj-2021-067946. PMID: 35613728; PMCID: PMC9131781.

Treatment for Mild Chronic Hypertension During Pregnancy

Hypertension is associated with adverse pregnancy outcomes. Whereas there is consensus on the benefit of treatment for severe hypertension in pregnancy, the benefit of treatment for mild chronic hypertension (blood pressure <160/110mmHg) is uncertain. Researchers in the United States through a large randomized control trial, evaluated if targeting a blood pressure of less than 140/90 mmHg in pregnancy was efficacious and safe. A total of 2408 women were enrolled and randomized to receive antihypertensive treatment (case) or not to receive treatment until severe hypertension developed (control). The primary endpoint was a composite of pre-eclampsia, preterm birth, placental abruption, and fetal or neonatal death. The researchers found significantly better pregnancy outcomes in the case group with no increase in the risk of small-for-gestational-age birth weight.

Tita AT, Szychowski JM, et al. "Treatment for Mild Chronic Hypertension during Pregnancy". N Engl J Med. 2022 May 12;386(19):1781-1792. doi: 10.1056/NEJMoa2201295. Epub 2022 Apr 2. PMID: 35363951.

Antenatal Corticosteroids and Neonatal Outcomes in Twins

Multiple pregnancy is a major risk factor for preterm delivery hence antenatal corticosteroids might be beneficial in multiple pregnancy. In this systematic review researchers assessed whether antenatal corticosteroids were associated with improved neonatal outcomes in twins. The reviewers included non-randomised studies comparing antenatal corticosteroid treatment with no treatment in twins, with outcomes of interest being complications of prematurity including neonatal mortality and respiratory distress syndrome (RDS) among others. The meta-analysis showed that antenatal corticosteroids were associated with lower odds of neonatal mortality, and RDS in twins: adjusted odds ratios of 0.59 and 0.70 respectively, but was inconclusive for other outcomes. The researchers concluded that evidence from non-randomised studies suggests a benefit of antenatal corticosteroids in twins as regards neonatal mortality and RDS.

Socha, P., et al. (9900). "Antenatal Corticosteroids and Neonatal Outcomes in Twins: A Systematic Review and Meta-analysis." Obstetrics & Gynecology: 10.1097/AOG.0000000000004835.

Contraceptive acceptability among young women (15-24) living with HIV/AIDS

Previous research among youth 15-24 years living with HIV (LHIV) in central Uganda found that 45% were sexually active while 57% of these did not use any contraception despite wanting to delay pregnancy. Unintended pregnancies account for 21.3% of neonatal HIV infections. In this cross sectional study, researchers described the acceptability of contraceptives and the associated factors among young women living with HIV attending HIV clinics in Kampala. They found contraceptive acceptability at 40.7%. Factors associated with contraceptive acceptability included older age group (20-24 years), age at sex debut ≥ 18 years, having a friend using contraceptives and being married. The researchers found a low acceptability for contraceptives and recommended interventions focusing on the younger age group who are unmarried.

Wani M, Nakigudde J, Nansikombi HT, Orishaba P, Kalibbala D, Kalyango JN, et al. Contraceptive acceptability and associated factors among young women (15-24) living with HIV/AIDS: a hospital-based study in Kampala, Uganda. Afri Health Sci. 2022;22(1):21-7. https://dx.doi.org/10.4314/ahs.v22i1.4

CPD Questions

1. Which of the following statements are TRUE or FALSE concerning the risk of stroke?

a) Globally, women are more disproportionately affected by stroke compared to men.

b) Infertility and recurrent miscarriage, and stillbirth increase women's later risk of stroke.

c) A history of recurrent miscarriage and death or baby loss before or during birth is a female-specific risk factor for stroke.

d) There is no evidence on the association of infertility, miscarriage, and still birth with stroke.

e) ALL TRUE

2. Please indicate what is TRUE or FALSE regarding current experience with response to COVID-19 outbreaks.

a) There is so far no evidence that treatment with ivermectin will reduce the risk of hospital admission among outpatients with an early diagnosis of Covid-19.

b) It is now clear that Covid-19 vaccination alters the trajectory of long Covid symptoms.

c) Severe Covid-19 infection remains a risk factor for deep venous thrombosis, pulmonary embolism, and bleeding.

d) Maternal Covid-19 vaccination with 2 doses of mRNA vaccine is associated with a reduced risk of Covid-19 hospitalization in infants.

e) Health care workers, nurses and pharmacists specifically are more likely to have vaccine hesitancy compared to the general population.

3. Please indicate what TRUE or FALSE concerning the management of urinary tract infections (UTI) in primary healthcare facilities in sub-Saharan countries.

a) Generally, compliance with urine microscopy recommendations remains low among clinicians attending to patients this level.

b) Nitrofurantoin should not be prescribed as the antibiotic of choice.

c) Appropriate intervention should include enforcement of compliance with treatment guidelines for selecting the appropriate antibiotic, duration of therapy and urine microscopy findings.

d) The growing global burden of Antibiotic resistance is not a matter of concern for clinicians attending to patients with UTI.

e) All TRUE

4. Which of the following are TRUE or FALSE concerning the management of sepsis in intensive care unit?

a. Much as intravenous fluids are recommended in septic shock, higher volumes have been associated with harm in patients admitted to the intensive care unit.

b. The role of intravenous Vitamin C in sepsis remains contentious, as it might be associated with a higher risk of death or persistent organ dysfunction.

c. Intravenous fluid restriction is more beneficial to patients with septic shock compared to standard fluid therapy.

d. The use of Vitamin C offers better outcomes in patients with sepsis receiving vasopressor therapy in the Intensive care unit.

e. All TRUE

5. Please indicate TRUE or FALSE statements concerning the benefits of these treatment outcomes in pregnancy

a. Administration of prophylactic antibiotics before caesarean section incision has been adopted as a policy to avert maternal post-partum infections.

b. Exposure of babies to prophylactic antibiotics before caesarean section predispose them to immune-related diseases in childhood.

c. There is no association between pre-incision prophylactic antibiotic use and risk of asthma, eczema, or asthma and eczema resulting in hospital admission in early childhood in children born by caesarean section.

d. Treatment of mild chronic hypertension during pregnancy is not associated with better pregnancy outcomes compared with not receiving any treatment until severe hypertension develops.

e. All TRUE

Answers

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

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